KEENETIC

HERO

BE3600 Mesh Wi-Fi 7 Multi-Gigabit Router with a 6-Port Smart Switch (5 × 2.5G, 1 × 10G SFP+), Multifunctional USB 3.2 and 2.0 Ports

# Command Reference Guide

| | |
|---|---|
| Model | Hero (KN-1013) |
| OS Version | 5.1 |
| Edition | 1.170 06.11.2026 |

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# Preface

This guide contains Command-Line Interface (CLI) commands to maintain the Hero device. This guide provides a complete listing of all possible commands. The other chapters provide examples of how to implement the most common of these commands, general information on the interrelationships between the commands and the conceptual background of how to use them.

## 1 Readership

This guide is for the networking or computer technician responsible for configuring and maintaining the Hero on-site. It is also intended for the operator who manages the Hero. This manual cover high-level technical support procedures available to Root administrators and Hero technical support personnel.

## 2 Organization

This manual covers the following topics:

| | |
|---|---|
| Introduction to the CLI | Describes how to use the Hero Command-Line Interface (CLI), its hierarchical structure, authorization levels and its help features. |
| Command Reference | Provides an alphabetical list of the available CLI commands that you can use to configure the Hero device. |

## 3 Document Conventions

Command descriptions use the following conventions:

| | |
|---|---|
| **boldface** font | Commands and keywords are in **boldface**. Must be typed exactly as shown. Bold font is used as a user input in examples. |
| *italic* font | Arguments for which you supply values are in *italics*. |
| [ *optional* ] | Elements in square brackets are optional. |
| ‹*replaceable*› | Elements in angle brackets are replaceable. |
| (x \| y \| z) | Alternative keywords are grouped in round brackets and separated by vertical bars. |
| [x \| y \| z] | Optional alternative keywords are grouped in brackets and separated by vertical bars. |

Each command description is broken down into the following sub-sections:

| | |
|---|---|
| Description | Description of what the command does. |
| Synopsis | The general format of the command. |
| Prefix **no** | The possibility of using **no** prefix with command. |
| Change settings | The ability of command to change the settings. |
| Multiple input | The possibility of multiple input. |
| Group entry | Name of the group that owns the command. If there is no group, this section does not displayed. |
| Interface type | Type of interface, which can be managed by the command. The section does not displayed, if this context has no meaning for the command.<br><br>Interfaces used in the system and the relationships between them are shown in the diagrams below. |
| Arguments | List of arguments if they exists, and explanations to them. |
| Example | An illustration of how the command looks when invoked. Because the interface is straightforward, some of the examples are obvious, but they are included for clarity. |

Notes, cautionary statements, and safety warnings use these conventions.

Note: Means "reader take note". Notes contain helpful suggestions or references to materials not contained in this manual.

Warning: Means "reader be careful". You are capable of doing something that might result in equipment damage or loss of data.

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# 1

# Product Overview

## 1.1 Hardware Configuration

**CPU** MediaTek MT7987B Aarch64 (ARM64)® Cortex-A53 2,0 GHz, 2 cores / 2 threads

**RAM** 512MB DDR4

**Flash** 256MB

**Ethernet**

| Ports | Chipset | Notes |
|---|---|---|
| 6 | RTL8372 | 5×2.5G RJ-45, 2.5G SFP/10G SFP+ |

| Label | Speed | Notes |
|---|---|---|
| 0 | 2500 Mbps | WAN |
| 1 | 2500 Mbps | LAN port |
| 2 | 2500 Mbps | LAN port |
| 3 | 2500 Mbps | LAN port |
| 4 | 2500 Mbps | LAN port |
| 5 | 10000 Mbps | WAN and SFP/SFP+ combo port |

**USB**

| Label | Speed | Notes |
|---|---|---|
| 1 | USB 2.0 | |
| 2 | USB 3.2 | |

**Wi-Fi**

| Band | Chipset | Notes |
|---|---|---|
| 2.4 GHz | MT7976DA | 802.11be 2x2 |
| 5 GHz | | 802.11be 3x3, Dedicated RX for DFS |

# 2

# Introduction to the CLI

This chapter describes how to use the Hero Command-Line Interface (CLI), its hierarchical structure, authorization levels and its help features.

The primary tool for managing the Hero router is the command line interface (*CLI*). System settings can be defined as a sequence of commands, which can be executed to bring the device to the specified condition.

Hero has three types of settings:

| | |
|---|---|
| Current settings | *running config* is a set of commands describing the current status of the system. Current settings are stored in RAM and reflect every change of the system settings. However, the content of RAM is lost when the device is turned off. To restore the settings after reboot, they must be saved in non-volatile memory. |
| Startup configuration | *startup config* is a sequence of commands, which is stored in a specific partition of the non-volatile memory. It is used to initialize the system immediately after startup. |
| Default settings | *default config* contains factory default settings of Hero. RESET button is used to reset startup configuration to the factory default. |

Files `startup-config` and `running-config` can be edited manually, without participation of the command line. It should be remembered that the lines with `!` in the beginning are ignored by the parser and the arguments which contain spaces must be enclosed in double quotes (for example, ssid "Free Wi-Fi"). Quotes themselves are ignored by the parser.

Responsibility for the accuracy of the changes rests with their author.

## 2.1 Enter commands in the CLI

Command line interpreter in Hero is designed for beginners as well as experts. All command names and options are clear and easy to remember.

Commands are divided into groups and arranged in a hierarchy. Thus, to do a setting, the operator needs to enter a sequence of nested command group names (node commands), and then enter the final command with parameters.

For example, IP-address of the GigabitEthernet1 network interface is set using the **address** command, which is located in the **interface** → **ip** group:

```
(config)>interface GigabitEthernet1 ip address 192.168.15.43/24
Network address saved.
```

### 2.1.1 Entering a group

Some of the node commands (containing a group of child commands) can be “entered” to allow direct executing of the child commands without typing the node name as prefix. In this case the prompt is changed to indicate the entered group.

The **exit** command or [Ctrl]+[D] key combination can be used to exit a group.

For example, after entering the interface group the command line prompt is changed to `(config-if)`:

```
(config)>interface GigabitEthernet1
(config-if)>ip address 192.168.15.43/24
Network address saved.
(config-if)>[Ctrl]+[D]
(config)>
```

## 2.2 Getting Help and auto-completion

To make the configuring process as comfortable as possible, the CLI provides auto-completion of commands and parameters, hinting the operator, which commands are available at the current level of nesting. Auto-completion works by pressing [Tab]. Example:

```
(config)>in[Tab]

 interface - network interface configuration

(config)> interface Gi[Tab]

 Usage template:
 interface {name}

 Variants:
 GigabitEthernet0
 GigabitEthernet0/Vlan1
 GigabitEthernet1

(config)> interface GigabitEthernet0[Tab]

 Usage template:
 interface {name}

 Variants:
 GigabitEthernet0/Vlan1
 GigabitEthernet1

(config)> interface GigabitEthernet0[Enter]
(config-if)> ip[Tab]

      address - set interface IP address
        alias - add interface IP alias
         dhcp - enable dhcp client
```

```
          mtu - set Maximum Transmit Unit size
          mru - set Maximum Receive Unit size
 access-group - bind access-control rules
          apn - set 3G access point name

(config-if)> ip ad[Tab]

     address - set interface IP address

(config-if)> ip address[Tab]

 Usage template:
 address {address} {mask}

(config-if)> ip address 192.168.15.43[Enter]
Configurator error[852002]: address: argument parse error.
(config-if)> ip address 192.168.15.43/24[Enter]
Network address saved.
(config-if)>
```

Hint for the current command can always be displayed by pressing [Tab]. Example:

```
(config)> interface GigabitEthernet1 [Tab]

   description - set interface description
         alias - add interface name alias
   mac-address - set interface MAC address
        dyndns - DynDns updates
 security-level - assign security level
 authentication - configure authentication
           ip - set interface IP parameters
         igmp - set interface IGMP parameters
           up - enable interface
         down - disable interface

(config)> interface GigabitEthernet1
```

# 2.3 Prefix no

Prefix **no** is used to negate a command.

For example, the command **interface** is responsible for creating a network interface with the given name. When used with this command, prefix **no** causes the opposite action — removing of the interface:

```
(config)> no interface PPPoE0
```

If the command is composite, **no** can be placed in front of any member. For example, **service dhcp** enables the *DHCP* service. It consists of two parts: **service** — the group name in the hierarchy of commands, and **dhcp** — the final command. Prefix **no** can be placed either at the beginning, or in the middle. The action is the same in both cases: stopping of the service.

```
(config)> no service dhcp
(config)> service no dhcp
```

# 2.4 Multiple input

Many commands have the property of *idempotence*, which means that multiple input of a command has the same effect as the single input. For example, entering **service http** adds a single line "`service http`" to the current settings, and re-entering does not change anything.

However, some of the commands allow you to add not a single, but multiple records, if they are entered with different arguments. For example, static routing table entries **ip route** or filters **access-list** are added sequentially and appear in the settings as a list:

### Example 2.1. Using a command with multiple input

```
(config)> ip route 192.0.2.0/24 PPTP0
Network::RoutingTable: Added static route: 192.0.2.0/24 via PPTP0.
(config)> ip route 198.51.100.0/24 PPTP0
Network::RoutingTable: Added static route: 198.51.100.0/24 via PPTP0.
(config)> ip route 203.0.113.0/24 PPTP1
Network::RoutingTable: Added static route: 203.0.113.0/24 via PPTP1.
(config)> show running-config
...
ip route 192.0.2.0 255.255.255.0 PPTP0
ip route 198.51.100.0 255.255.255.0 PPTP0
ip route 203.0.113.0 255.255.255.0 PPTP1
...
```

Records from such tables can be removed one by one, using prefix **no** and arguments to identify the record you want to remove:

```
(config)> no ip route 198.51.100.0/24
Network::RoutingTable: Deleted static route: 198.51.100.0/24 via PPTP0.
(config)> show running-config
...
ip route 192.0.2.0 255.255.255.0 PPTP0
ip route 203.0.113.0 255.255.255.0 PPTP1
...
```

# 2.5 Saving to startup settings

Current and startup settings are stored in the files running-config and startup-config, respectively. To save the current settings in the non-volatile memory, copy them as shown below:

```
(config)> copy running-config startup-config
Copied: running-config -> startup-config
```

# 2.6 Delayed restart

If Hero device is located away from the operator and is managed remotely, there is a risk to lose control over it because of a misoperation. In this case it will be difficult to reboot and return to the saved settings.

The **system reboot** command lets you set a delayed restart timer, perform “risky” settings, then turn off the timer and save the changes. If connection to the device is lost during configuration, the operator will be enough to wait for automatic reboot and connect to the device again.

# 3

# Command Reference

## 3.1 Core commands

Core commands are used to manage files on your device.

### 3.1.1 copy

**Description** Copy the contents of one file to another. Used for the firmware updating, saving the current settings, resetting to factory, etc.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **copy** ‹*source*› ‹*destination*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `source` | *`Filename`* | Full path to the file to be copied in <file system>:<path> format |
| `destination` | *`Filename`* | Full path to the directory for the new file. |

**Example** Current settings can be saved as follows:

```
(config)> copy running-config startup-config
```

```
(config)> copy log MyPassport:/log.txt
```

File names in this example are aliases. Full names of the configuration files are `system:running-config` and `flash:startup-config`, respectively.

**History**

| Version | Description |
|---|---|
| 2.00 | The **copy** command has been introduced. |

### 3.1.2 erase

**Description** Delete a file from the Hero device.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **erase** ‹*filename*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| filename | *Filename* | Specifies the file to be removed. |

**Example**

```
(config)> erase ext-opkg:/.dlna_files.db
FileSystem::Repository: "ext-opkg:/.dlna_files.db" erased.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **erase** command has been introduced. |

## 3.1.3 exit

**Description** Leave the command node.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **exit**

**Example**

```
(show)> exit
Core::Configurator: Done.
(config)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **exit** command has been introduced. |

## 3.1.4 grep

**Description** Filter and search for lines containing a match to the given pattern in **show** command output.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> *‹command›* **| grep** [-A *‹a›* ] [-B *‹b›* ] [-C *‹c›* ] *‹pattern›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| command | *String* | Command name. |
| a | *Integer* | Number of lines to show above a match (before the matching line). |
| b | *Integer* | Number of lines to show below a match (after the matching line). |
| c | *Integer* | Nesting depth of XML context. |
| pattern | *String* | A regular expression to search for node names or values in the XML response from the system core. |

**Example**

```
(show)> version | grep dual_image

     ndw:
features: dual_image,wifi_button,usb_3,usb_3_first,
          led_control,wifi5ghz,vht2ghz,bf2ghz,mimo5ghz,
          atf2ghz,atf5ghz,wifi6_5ghz,wifi_ft,wpa3,wsa5ghz,
          hwnat,hwnat_mib,link_agg,cable_diag
```

```
(show)> version | grep -A 1 dual_image

    ndw:
features: dual_image,wifi_button,usb_3,usb_3_first,
          led_control,wifi5ghz,vht2ghz,bf2ghz,mimo5ghz,
          atf2ghz,atf5ghz,wifi6_5ghz,wifi_ft,wpa3,wsa5ghz,
          hwnat,hwnat_mib,link_agg,cable_diag
```

```
(show)> version | grep -B 1 dual_image

       ndw:
  features: dual_image,wifi_button,usb_3,usb_3_first,led_control,
            wifi5ghz,vht2ghz,mimo2ghz,mimo5ghz,atf2ghz,atf5ghz,
            wifi6,wifi_ft,wpa3,wsa5ghz,hwnat,sfp
components: acl,afp,base,chilli,cloudcontrol,corewireless,
            ddns,dhcpd,dlna,dns-filter,dns-https,dns-tls,dot1x,
            easyconfig,eoip,exfat,ext,fat,ftp,gre,hfsplus,igmp,
            ike-client,ip6,ipip,ipsec,l2tp,lang-en,
            lang-ru,mdns,miniupnpd,monitor,mws,nathelper-esp,
            nathelper-ftp,nathelper-h323,nathelper-pptp,
            nathelper-rtsp,nathelper-sip,ndmp,ndns,netflow,
            nextdns,ntce,ntfs,nvox,ocserver,openvpn,opkg,
            opkg-kmod-audio,opkg-kmod-dvb-tuner,opkg-kmod-fs,
            opkg-kmod-netfilter,opkg-kmod-netfilter-addons,
            opkg-kmod-tc,opkg-kmod-usbip,opkg-kmod-video,
           pingcheck,ppe,pppoe,pptp,proxy,sftp,skydns,snmp,ssh,
            sstp,sstp-server,storage,trafficcontrol,
            transmission,tsmb,udpxy,usb,usbdsl,usblte,usbmodem,
            usbnet,usbnet-extra,usbqmi,usbserial-extra,
```

```
            vpnserver,vpnserver-l2tp,webdav,wireguard,wpa-eap,
            zerotier
```

```
(show)> version | grep -C 1 dual_image

       ndw:
  features: dual_image,wifi_button,usb_3,usb_3_first,led_control,
            wifi5ghz,vht2ghz,mimo2ghz,mimo5ghz,atf2ghz,atf5ghz,
            wifi6,wifi_ft,wpa3,wsa5ghz,hwnat,sfp
components: acl,afp,base,chilli,cloudcontrol,corewireless,ddns,
            dhcpd,dlna,dns-filter,dns-https,dns-tls,dot1x,
            easyconfig,eoip,exfat,ext,fat,ftp,gre,hfsplus,igmp,
            ike-client,ip6,ipip,ipsec,l2tp,lang-en,mdns,
            miniupnpd,monitor,mws,nathelper-esp,nathelper-ftp,
            nathelper-h323,nathelper-pptp,nathelper-rtsp,
            nathelper-sip,ndmp,ndns,netflow,nextdns,ntce,ntfs,
            nvox,ocserver,openvpn,opkg,opkg-kmod-audio,
          opkg-kmod-dvb-tuner,opkg-kmod-fs,opkg-kmod-netfilter,
            opkg-kmod-netfilter-addons,opkg-kmod-tc,
           opkg-kmod-usbip,opkg-kmod-video,pingcheck,ppe,pppoe,
            pptp,proxy,sftp,skydns,snmp,ssh,sstp,sstp-server,
            storage,trafficcontrol,transmission,tsmb,udpxy,usb,
            usbdsl,usblte,usbmodem,usbnet,usbnet-extra,usbqmi,
            usbserial-extra,vpnserver,vpnserver-l2tp,webdav,
            wireguard,wpa-eap,zerotier
```

```
(show)> version | grep -C 2 dual_image

          release: 5.00.C.2.0-2
          sandbox: preview
            title: 5.0.2
             arch: aarch64

              ndm:
                exact: 0-a654284
                cdate: 3 Dec 2025

              bsp:
                exact: 0-e7c92fbd89
                cdate: 3 Dec 2025

              ndw:
             features: ►
dual_image,usb_3,usb_3_first,led_control,wifi_button,wifi5ghz,
vht2ghz,mimo2ghz,mimo5ghz,atf2ghz,atf5ghz,wifi6,wifi_ft,wpa3...
           components: ►
acl,afp,base,chilli,cloudcontrol,corewireless,ddns,dhcpd,dlna,
dns-filter,dns-https,dns-tls,dot1x,easyconfig,eoip,exfat...

             ndw3:
              version: 5.0.43

             ndw4:
              version: 5.0.C.2.1
```

```
    manufacturer: Keenetic Ltd.
          vendor: Keenetic
          series: KN
           model: Hero (KN-1013)
      hw_version: 12108000
         hw_type: router
           hw_id: KN-1013
          device: Hero
         consent: EA
          region: EA
     description: Keenetic Hero (KN-1013)
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **grep** filter has been introduced. |

## 3.1.5 ls

**Description** Display list of files from the specified directory.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **ls** [ *‹directory›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Path to the directory. Must contain the name of the file system and path to the folder directly in the following format <file system>:<path>. Examples of file systems — flash, temp, proc, usb. etc. |

**Example**

```
(config)> ls FILES:

              rel: FILES:

            entry, type = D:
                 name: com

            entry, type = R:
                 name: IMAX.mkv
                 size: 1886912512

            entry, type = D:
                 name: speedfan
```

```
            entry, type = D:
                 name: portable

            entry, type = D:
                 name: video

            entry, type = D:
                 name: Новая папка
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ls** command has been introduced. |

## 3.1.6 mkdir

**Description** Create a new directory.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mkdir** *‹directory›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Path to the directory. |

**Example**

```
(config)> mkdir SANDSK:/test
FileSystem::Repository: "SANDSK:/test" created.
```

```
(config)> mkdir SANDSK:/test/onetest
FileSystem::Repository: "SANDSK:/test/onetest" created.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **mkdir** command has been introduced. |

## 3.1.7 more

**Description** Display the contents of a text file line by line.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **more** *‹filename›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| filename | *Filename* | Full path to the file or alias. |

**Example**

```
(config)> more temp:/resolv.conf
nameserver 127.0.0.1
options timeout:1 attempts:1 rotate
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **more** command has been introduced. |

# 3.2 access

**Description**

Set user access for directory on USB storage.

Command with **no** prefix denies access to the directory.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **access** *‹directory› ‹user› ‹mode›* [ **recursive** ]

(config)> **no access** *‹directory› ‹user›* [ **recursive** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Name of directory on USB storage. |
| user | *String* | User name. |
| mode | forbidden | Access denied. |
| | read | Read-only access. |
| | write | Write-only access. |
| | read/write | Access to reading and writing. |
| | inherited | Access rights are inherited from a parent folder. |
| recursive | *Keyword* | Access rights applies to all subfolders. |

**Example**

```
(config)> access 0D5F-1DB6:Downloads test read/write
```

```
(config)> no access 0D5F-1DB6:Downloads test
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **access** command has been introduced. |

# 3.3 access-list

**Description**

Access to a group of commands to configure the selected list of packet filtering rules. If the list is not found, the command tries to create it. Such a list can be assigned to a network interface using **interface ip access-group** command.

Command with **no** prefix removes the list of rules.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-acl)`

**Synopsis**

(config)> **access-list** *‹name›*

(config)> **no access-list** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Filtering rules list name (*Access Control List*, ACL). |

**Example**

```
(config)> access-list test_acl
Network::Acl: "test_acl" access list created.
(config-acl)>
```

```
(config)> no access-list test_acl
Network::Acl: "test_acl" access list removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **access-list** command has been introduced. |

## 3.3.1 access-list auto-delete

**Description**

Enable automatic deletion of the *ACL* rules when deleting an interface. The command is forced on access lists with the `_WEBADMIN_` prefix.

The command cannot be enabled if there are no bound interfaces. The exception is reading the `startup-config`.

Command with **no** prefix disables automatic deletion.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-acl)> **auto-delete**

(config-acl)> **no auto-delete**

**Example**

```
(config-acl)> auto-delete
Network::Acl: Enabled auto-deletion for "_WEBADMIN_Home" access ►
group.
```

```
(config-acl)> no auto-delete
Network::Acl: Disabled auto-deletion for "_WEBADMIN_Home" access ►
group.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **access-list auto-delete** command has been introduced. |

## 3.3.2 access-list deny

**Description** Add a packet filtering deny rule into a specified *ACL*.

Command with **no** prefix removes the rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-acl)> **deny** (**tcp** | **udp**) ‹*source*› ‹*source-mask*›
[ **port**( ( ‹*src-port-operator*› ‹*source-port*› )|
( **range** ‹*source-port*› ‹*source-end-port*› ))]
‹*destination*› ‹*destination-mask*›
[ **port**( ( ‹*dst-port-operator*› ‹*destination-port*› )|
( **range** ‹*destination-port*› ‹*destination-end-port*› ))]

(config-acl)> **deny** (**icmp** | **esp** | **gre** | **ipip** | **ip**) ‹*source*› ‹*source-mask*›
‹*destination*› ‹*destination-mask*›

(config-acl)> **no deny** (**tcp** | **udp**) ‹*source*› ‹*source-mask*›
[ **port**( ( ‹*src-port-operator*› ‹*source-port*› )|
( **range** ‹*source-port*› ‹*source-end-port*› ))]
‹*destination*› ‹*destination-mask*›
[ **port**( ( ‹*dst-port-operator*› ‹*destination-port*› )|
( **range** ‹*destination-port*› ‹*destination-end-port*› ))]

(config-acl)> **no deny** (**icmp** | **esp** | **gre** | **ipip** | **ip**) *‹source› ‹source-mask› ‹destination› ‹destination-mask›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| tcp | *Keyword* | *TCP* protocol. |
| udp | *Keyword* | *UDP* protocol. |
| icmp | *Keyword* | *ICMP* protocol. |
| esp | *Keyword* | *ESP* protocol. |
| gre | *Keyword* | *GRE* protocol. |
| ipip | *Keyword* | *IP in IP* protocol. |
| ip | *Keyword* | *IP* protocol (include *TCP*, *UDP*, *ICMP* and other). |
| source | *IP address* | The source address in the header of IP-packet. |
| source-mask | *IP-mask* | Mask to be applied to the source address in the header of IP-packet before comparison with *source*. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |
| source-port | *Integer* | Source port in the *TCP* or *UDP* header. |
| source-end-port | *Integer* | The end of the source range of ports. |
| src-port-operator | lt | Operator “less” to compare the port with the specified *source-port*. |
| | eq | Operator “equal” to compare the port with the specified *source-port*. |
| | gt | Operator “greater” to compare the port with the specified *source-port*. |
| destination | *IP address* | The destination address in the header of IP-packet. |
| destination-mask | *IP-mask* | Mask to be applied to the destination address in the header of IP-packet before comparison with *destination*. There are two ways to enter the mask: in the canonical form (for example, 255.255.255.0) and in the form of prefix with bit length (for example, /24). |
| destination-port | *Integer* | Destination port in the *TCP* or *UDP* header. |
| destination-end-port | *Integer* | The end of the destination range of ports. |

| Argument | Value | Description |
|---|---|---|
| `dst-port-operator` | `lt` | Operator “less” to compare the port with the specified *`destination-port`*. |
| | `eq` | Operator “equal” to compare the port with the specified *`destination-port`*. |
| | `gt` | Operator “greater” to compare the port with the specified *`destination-port`*. |

**Example**

```
(config-acl)> deny tcp 0.0.0.0/24 port eq 80 0.0.0.0/24 port ►
range 18 88
Network::Acl: Rule accepted.
```

```
(config-acl)> deny icmp 192.168.0.0 255.255.255.0 192.168.1.1 ►
255.255.255.0
Network::Acl: Rule accepted.
```

```
(config-acl)> no deny tcp 0.0.0.0/24 port eq 80 0.0.0.0/24 port ►
range 18 88
Network::Acl: Rule deleted.
```

```
(config-acl)> no deny icmp 192.168.0.0 255.255.255.0 192.168.1.1 ►
255.255.255.0
Network::Acl: Rule deleted.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **access-list deny** command has been introduced. |
| 2.06 | New value `ip` was added to the `protocol` argument. |
| 2.08 | New protocols `esp`, `gre` and `ipip` were added. |
| 2.09.A.2.1 | Port ranges were added. |

## 3.3.3 access-list permit

**Description**

Add a packet filtering permit rule into a specified *ACL*.

Command with **no** prefix removes the rule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-acl)> **permit** (**tcp** | **udp**) ‹*source*› ‹*source-mask*›
[ **port**( ( ‹*src-port-operator*› ‹*source-port*› )|
( **range** ‹*source-port*› ‹*source-end-port*› ))]
‹*destination*› ‹*destination-mask*›
[ **port**( ( ‹*dst-port-operator*› ‹*destination-port*› )|

( **range** ‹*destination-port*› ‹*destination-end-port*› ))]

(config-acl)> **permit** (**icmp** | **esp** | **gre** | **ipip** | **ip**) ‹*source*› ‹*source-mask*› ‹*destination*› ‹*destination-mask*›

(config-acl)> **no permit** (**tcp** | **udp**) ‹*source*› ‹*source-mask*›
[ **port**( ( ‹*src-port-operator*› ‹*source-port*› ) |
( **range** ‹*source-port*› ‹*source-end-port*› ))]
‹*destination*› ‹*destination-mask*›
[ **port**( ( ‹*dst-port-operator*› ‹*destination-port*› ) |
( **range** ‹*destination-port*› ‹*destination-end-port*› ))]

(config-acl)> **no permit** (**icmp** | **esp** | **gre** | **ipip** | **ip**) ‹*source*› ‹*source-mask*› ‹*destination*› ‹*destination-mask*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `tcp` | *Keyword* | *TCP* protocol. |
| `udp` | *Keyword* | *UDP* protocol. |
| `icmp` | *Keyword* | *ICMP* protocol. |
| `esp` | *Keyword* | *ESP* protocol. |
| `gre` | *Keyword* | *GRE* protocol. |
| `ipip` | *Keyword* | *IP in IP* protocol. |
| `ip` | *Keyword* | *IP* protocol (include *TCP*, *UDP*, *ICMP* and other). |
| `source` | *IP address* | The source address in the header of IP-packet. |
| `source-mask` | *IP-mask* | Mask to be applied to the source address in the header of IP-packet before comparison with *source*. There are two ways to enter the mask: the canonical form (for example, `255.255.255.0`) and the form of prefix bit length (for example, `/24`). |
| `source-port` | *Integer* | Source port in the *TCP* or *UDP* header. |
| `source-end-port` | *Integer* | The end of the source range of ports. |
| `src-port-operator` | `lt` | Operator “less” to compare the port with the specified *source-port*. |
| | `eq` | Operator “equal” to compare the port with the specified *source-port*. |
| | `gt` | Operator “greater” to compare the port with the specified *source-port*. |
| `destination` | *IP address* | The destination address in the header of IP-packet. |

| Argument | Value | Description |
|---|---|---|
| `destination-mask` | *IP-mask* | Mask to be applied to the destination address in the header of IP-packet before comparison with *destination*. There are two ways to enter the mask: in the canonical form (for example, `255.255.255.0`) and in the form of prefix with bit length (for example, `/24`). |
| `destination-port` | *Integer* | Destination port in the *TCP* or *UDP* header. |
| `destination-end-port` | *Integer* | The end of the destination range of ports. |
| `dst-port-operator` | `lt` | Operator “less” to compare the port with the specified *destination-port*. |
| | `eq` | Operator “equal” to compare the port with the specified *destination-port*. |
| | `gt` | Operator “greater” to compare the port with the specified *destination-port*. |

**Example**

```
(config-acl)> permit icmp 192.168.0.0 255.255.255.0 192.168.1.1 ►
255.255.255.0
Network::Acl: Rule accepted.
```

```
(config-acl)> permit tcp 0192.168.1.0/24 port eq 443 0.0.0.0/24 ►
port range 8080 9090
Network::Acl: Rule accepted.
```

```
(config-acl)> no permit icmp 192.168.0.0 255.255.255.0 ►
192.168.1.1 255.255.255.0
Network::Acl: Rule deleted.
```

```
(config-acl)> no permit tcp 0192.168.1.0/24 port eq 443 ►
0.0.0.0/24 port range 8080 9090
Network::Acl: Rule deleted.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **access-list permit** command has been introduced. |
| 2.06 | New value `ip` was added to the `protocol` argument. |
| 2.08 | New protocols `esp`, `gre` and `ipip` were added. |
| 2.09.A.2.1 | Port ranges were added. |

## 3.3.4 access-list rule

**Description**

Disable, set operation time by schedule, change the order or set description for the *ACL* rule.

Command with **no** prefix enables the rule, removes schedule and description for *ACL* rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-acl)> **rule** ‹*index*› (**disable** | **schedule** ‹*schedule*› | **order** ‹*new-index*› | **description** ‹*description*›)

(config-acl)> **no rule** ‹*index*› (**disable** | **schedule** | **description**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| index | *Integer* | The ACL rule number. |
| disable | *Keyword* | Disable the ACL rule. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |
| order | *Integer* | New position of the ACL rule in the list. |
| description | *String* | The ACL rule description. |

**Example**

```
(config-acl)> rule 0 disable
Network::Acl: Rule disabled.

(config-acl)> rule 0 schedule acl_schedule
Network::Acl: Rule schedule set to "acl_schedule".

(config-acl)>rule 0 description myacl
Network::Acl: Rule description set to "myacl".

(config-acl)>  rule 0 order 1
Network::Acl: Rule 0 moved to position 1.

(config-acl)> no rule 0 disable
Network::Acl: Rule enabled.

(config-acl)> no rule 0 schedule
Network::Acl: Rule schedule removed.

(config-acl)>  no rule 0 description
Network::Acl: Rule description removed.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **access-list rule** command has been introduced. |

# 3.4 afp

**Description** Access to a group of commands to manage *AFP* server service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-afp)`

**Synopsis**

(config)> **`afp`**

**Example**

```
(config)> afp
Core::Configurator: Done.
(config-afp)>
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **afp** command has been introduced. |

## 3.4.1 afp automount

**Description** Enable automounting of USB storages to access via *AFP*. By default, the function is enabled.

Command with **no** prefix disables the automounting function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-afp)> **`automount`**

(config-afp)> **`no automount`**

**Example**

```
(config-afp)> automount
Afp::Server: Automount enabled.
```

```
(config-afp)> no automount
Afp::Server: Automount disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **afp automount** command has been introduced. |

## 3.4.2 afp permissive

**Description** Enable permissive mode, when all users can access the files on USB storage. By default, the setting is disabled.

Command with **no** prefix disables permissive mode, so access to the files have only users with "afp" tag.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-afp)> **permissive**

(config-afp)> **no permissive**

**Example**

```
(config-afp)> permissive
Afp::Server: Permissive mode enabled.
```

```
(config-afp)> no permissive
Afp::Server: Permissive mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **afp permissive** command has been introduced. |

## 3.4.3 afp share

**Description** Share directory on USB storage. By default, the `timemachine` attribute is enabled for all shares.

Command with **no** prefix removes share. If you use no argument, the entire list of shares will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-afp)> **share** *‹label› ‹mount›* [ *‹description›* ]

(config-afp)> **no share** [ *‹label›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `label` | *String* | Share name, that users will see. |
| `mount` | *String* | Root directory or subdirectory name to share. |
| `description` | *String* | Description of share. |

**Example**

```
(config-afp)> share AFP_TEST2 TEST_NTFS2:/
Afp::Server: Added share "AFP_TEST2".
```

```
(config-afp)> share AFP_TEST2 TEST_NTFS2:/
Afp::Server: Added share "AFP_TEST2".
```

```
(config-afp)> share AFP_TEST3 TEST_NTFS:/components/
Afp::Server: Added share "AFP_TEST3".
```

```
(config-afp)> no share AFP_TEST
Afp::Server: Removed share "AFP_TEST".
```

```
(config-afp)> no share
Afp::Server: All shares removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **afp share** command has been introduced. |
| 4.03 | Argument `timemachine` was removed as obsolete. |

# 3.5 cifs

**Description** Access to a group of commands to manage *CIFS* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-cifs)`

**Synopsis**

(config)> **cifs**

**Example**

```
(config)> cifs
Core::Configurator: Done.
(config-cifs)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **cifs** command has been introduced. |

## 3.5.1 cifs automount

**Description** Enable automounting of USB storages to access via *CIFS*. By default, the function is enabled.

Command with **no** prefix disables the automounting function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-cifs)> **automount**

(config-cifs)> **no automount**

**Example**

```
(config-cifs)> automount
Cifs::ServerTsmb: Automount enabled.
```

```
(config-cifs)> no automount
Cifs::ServerTsmb: Automount disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **cifs automount** command has been introduced. |

## 3.5.2 cifs map-hidden

**Description** Enable *ACL* and hidden files support for *CIFS*. By default, the feature is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-cifs)> **map-hidden**

(config-cifs)> **no map-hidden**

**Example**

```
(config-cifs)> map-hidden
Cifs::ServerTsmb: Map hidden enabled.
```

```
(config-cifs)> no map-hidden
Cifs::ServerTsmb: Map hidden enabled.
```

**History**

| Version | Description |
|---|---|
| 2.14 | The **cifs map-hidden** command has been introduced. |

## 3.5.3 cifs permissive

**Description** Enable permissive mode, when all users can access the files on USB storage. By default, the setting is disabled.

Command with **no** prefix disables permissive mode, so access to the files have only users with "cifs" tag.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-cifs)> **permissive**

(config-cifs)> **no permissive**

**Example**

```
(config-cifs)> permissive
Cifs::ServerTsmb: Permissive mode enabled.
```

```
(config-cifs)> no permissive
Cifs::ServerTsmb: Permissive mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **cifs permissive** command has been introduced. |

## 3.5.4 cifs share

**Description** Share directory on USB storage. By default, the `timemachine` attribute is enabled for all shares.

Command with **no** prefix removes share. If you use no argument, the entire list of shares will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-cifs)> **share** *‹label› ‹mount›* [ *‹description›* ]

(config-cifs)> **no share** [ *‹label›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `label` | *String* | Share name, that users will see. |
| `mount` | *String* | Root directory or subdirectory name to share. |
| `description` | *String* | Description of share. |

**Example**

```
(config-cifs)> share NTFS1 TEST_NTFS:/
Cifs::ServerTsmb: Added share "NTFS1".
```

```
(config-cifs)> share NTFS2 TEST_NTFS:/components/
Cifs::ServerTsmb: Added share "NTFS2".

(config-cifs)> share NTFS3 TEST_NTFS:/misc/ myfiles
Cifs::ServerTsmb: Added share "NTFS3".

(config-cifs)> no share NTFS3
Cifs::ServerTsmb: Removed share "NTFS3".

(config-cifs)> no share
Cifs::ServerTsmb: All shares removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **cifs share** command has been introduced. |
| 4.03 | Argument `timemachine` was removed as obsolete. |

# 3.6 cloud control2 security-level

**Description** Set Cloud Control2 service security level for Keenetic mobile application. By default, `public` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **cloud control2 security-level** (**public** | **private**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the Cloud Control2 is allowed for public, private and protected interfaces. |
| `private` | *Keyword* | Access to the Cloud Control2 is allowed for private interfaces only. |

**Example**

```
(config)> cloud control2 security-level public
CloudControl2::Agent: Security level changed to public.

(config)> cloud control2 security-level private
CloudControl2::Agent: Security level changed to private.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **cloud control2 security-level** command has been introduced. |

# 3.7 cloud webui cdn

**Description** Configure loading of common web interface elements from a high-speed content delivery network (CDN) to improve the quality of remote management sessions. Recommended when using cloud mode over slow connections. By default, the `auto` mode is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **cloud webui cdn** *‹mode›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mode` | `auto` | Web interface content is delivered from the CDN only for requests made via KeenDNS in cloud access mode. |
| | `non-local` | Web interface content is delivered from the CDN for any remote management session. |
| | `disable` | The CDN is not used. The web interface uses only content stored on the device. |

**Example**

```
(config)> cloud webui cdn auto
Core::Executive::Scgi::Parameters: Set CDN mode to auto.
```

```
(config)> cloud webui cdn disable
Core::Executive::Scgi::Parameters: Set CDN mode to disable.
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **cloud webui cdn** command has been introduced. |

# 3.8 components

**Description** Access to a group of commands to manage firmware components.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-comp)`

**Synopsis**

(config)> **components**

**History**

| Version | Description |
|---|---|
| 2.00 | The **components** command has been introduced. |

## 3.8.1 components auto-update channel

**Description**

Set source of components for auto-update feature. By default, value `stable` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-comp)> **auto-update channel** *‹channel›*

(config-comp)> **no auto-update channel**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `channel` | `stable` | Components have been fully tested and recommended for installation. The web interface specifies this channel as `Main`. |
| | `preview` | Components contain the latest features and enhancements, but have not been fully tested yet. The web interface specifies this channel as `Preview`. |
| | `draft` | The components contain the latest features and are used for testing. The web interface specifies this channel as `Dev`. |

**Example**

```
(config-comp)> auto-update channel preview
Components::Manager: Auto-update channel is "preview".
```

```
(config-comp)> no auto-update channel
Components::Manager: Reset an auto-update channel to default.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **components auto-update channel** command has been introduced. |

## 3.8.2 components auto-update disable

**Description**

Components auto-update function. By default, automatic update is enabled.

Command with **no** prefix enables auto-update.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-comp)> **auto-update disable**

(config-comp)> **no auto-update disable**

**Example**

```
(config-comp)> auto-update disable
Components::Manager: Components auto-update disabled.
```

```
(config-comp)> no auto-update disable
Components::Manager: Components auto-update enabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **components auto-update disable** command has been introduced. |

## 3.8.3 components auto-update schedule

**Description** Assign a schedule for the auto-update operation. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-comp)> **auto-update schedule** ‹*schedule*›

(config-comp)> **no auto-update schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-comp)> auto-update schedule Update
Components::Manager: Set auto-update schedule "Update".
```

```
(config-comp)> no auto-update schedule
Components::Manager: Schedule disabled.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **components auto-update schedule** command has been introduced. |

## 3.8.4 components check-update

**Description**

Check the firmware updates for the candidate or member of Modular Wi-Fi System. The command also displays the current software sandbox.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config-comp)> **check-update** [ *force* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `force` | *Keyword* | Check for updates constantly. |

**Example**

```
(config-comp)> check-update

        sandboxes:
              version: 4.03.C.9.0-0
                 name: lts-4.3

        sandboxes:
              version: 5.01.C.5.0-0
                 name: stable

        sandboxes:
              version: 5.01.C.6.0-1
                 name: preview

        sandboxes:
              version: 5.02.A.9.0-0
                 name: draft

          sandbox: draft
          release: 5.02.A.9.0-0
            title: 5.2 Alpha 9
        timestamp: Sep 16 15:39:11
 update-available: no
auto-update-pending: no
auto-update-enabled: no
         checking: no
```

```
(config-comp)> check-update force

        sandboxes:
```

```
              version: 4.03.C.9.0-0
                 name: lts-4.3

        sandboxes:
              version: 5.01.C.5.0-0
                 name: stable

        sandboxes:
              version: 5.01.C.6.0-1
                 name: preview

        sandboxes:
              version: 5.02.A.9.0-0
                 name: draft

          sandbox:
          release:
 update-available: no
auto-update-pending: no
auto-update-enabled: no
         checking: yes
```

**History**

| Version | Description |
|---|---|
| 2.14 | The **components check-update** command has been introduced. |
| 5.00 | Description and Example update. |

## 3.8.5 components commit

**Description** Apply the changes made by **components install** and **components remove** commands.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config-comp)>    commit
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **components commit** command has been introduced. |

## 3.8.6 components install

**Description** Mark component to install. Final installation carried out with **components commit** command.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-comp)> **install** *‹component›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| component | *String* | Component name. List of available components for installation can be displayed with the **components list** command. |

**Example**

```
(config-comp)> install ntfs
Components::Manager: Component "ntfs" is queued for installation.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **components install** command has been introduced. |

## 3.8.7 components list

**Description** Switch to the selected sandbox and mark for installation all the components that require changes to match the version in the sandbox. If you use no argument, the entire list of all components for current sandbox (installed and available) will be displayed. If there is no Internet connection, only the list of installed components will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-comp)> **list** [ *sandbox* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| sandbox | *String* | Remote sandbox, such as stable or beta. |

**Example**

```
(config-comp)> list

        firmware:
             version: 2.13.C.0.0-1

         sandbox: stable

           local:
             sandbox: beta
```

```
       component:
                name: base

            priority: optional
                size: 35233
             version: 2.13.C.0.0-1
                hash: f65428af2a6fd636db779370deb58f40
           installed: 2.13.B.1.0-1

               preset: minimal
               preset: recommended
               queued: yes
       ...
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **components list** command has been introduced. |
| 2.06.A.6 | The *sandbox* parameter has been introduced. The command **components list** should be used in favour of **components sync**. |

## 3.8.8 components preset

**Description**

Select a predefined set of components. Installation of preset is carried out with **components commit** command.

Before preset installation check the latest versions of components on the update server with **components list** command. Internet connection is required.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-comp)> **preset** ‹*preset*›

**Arguments**

Number and names of presets can be changed, so check the list of available presets with help of **preset** [Tab] command.

| Argument | Value | Description |
|---|---|---|
| `preset` | `minimal` | Minimal set of components will be marked. |
| | `recommended` | Recommended set of components will be marked for installation. |

**Example**

```
(config-comp)> preset [Tab]
```

```
 Usage template:
           preset {preset}

   Choose:
         minimal
     recommended
```

```
(config-comp)> preset recommended
lib::libndmComponents error[268369922]: updates are available ►
for this system.
(config-comp)> commit
Components::Manager: Update task started.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **components preset** command has been introduced. |

## 3.8.9 components preview

**Description** Show size of firmware as current set of components selected with **components install** command.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-comp)> **preview**

**Example**

```
(config-comp)> preview

          preview:
                 size: 7733308
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **components preview** command has been introduced. |

## 3.8.10 components remove

**Description** Mark component to remove. Final removal carried out with **components commit** command.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-comp)> **remove** ‹*component*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| component | *String* | Component name. List of available components for removal can be displayed with the **components list** command. |

**Example**

```
(config-comp)> remove ntfs
Components::Manager: Component "ntfs" is queued for removal.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **components remove** command has been introduced. |

## 3.8.11 components validity-period

**Description**

Set a validity period of a local component list. After this time the command **components list** will be automalically executed to get actual list of components from update server. By default, value 1800 is used.

Command with **no** prefix resets period to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-comp)> **validity-period** ‹*seconds*›

(config-comp)> **no validity-period**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| seconds | *Integer* | Validity period of a local component list in seconds. Can take values in the range from 0 to 604800 inclusively. |

**Example**

```
(config-comp)> validity-period 500
Components::Manager: Validity period set to 500 seconds.
```

```
(config-comp)> no validity-period
Components::Manager: Validity period reset to 1800 seconds.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **components validity-period** command has been introduced. |

# 3.9 crypto engine

**Description**

Select the type of *ESP* packets processing with *IPsec*. By default, the hardware mode is used.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto engine** ‹*type*›

(config)> **no crypto engine**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | software | Software mode. |
| | hardware | Hardware mode. |

**Example**

```
(config)> crypto engine software
IpSec::CryptoEngineManager: IPsec crypto engine set to "software".
```

```
(config)> no crypto engine
IpSec::CryptoEngineManager: IPsec crypto engine was disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto engine** command has been introduced. |

# 3.10 crypto ike key

**Description**

Add *IKE* key with remote side ID.

Command with **no** prefix removes specified key.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **crypto ike key** *‹name› ‹psk›* ( *‹type› ‹id›* | **any**)

(config)> **no crypto ike key** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the key. Latin letters, numbers, dots, hyphens and underscores are acceptable. |
| psk | *String* | Password for authentication. Password length can be from 6 to 96 characters. |
| type | address | ID type is IP address. |
| | fqdn | ID type is full domain name. |
| | dn | ID type is domain name. |
| | email | ID type is e-mail address. |
| id | *String* | Value of the remote side ID. |
| any | *Keyword* | Allow the key usage for any remote side. |

**Example**

```
(config)> crypto ike key VirtualIPServer ►
aDjsOC1gvWCsOiE4Ijhs+HRnNPiheGA478 any
IpSec::Manager: "VirtualIPServer": crypto ike key successfully ►
added.
```

```
(config)>  crypto ike key VirtualIPServer ►
aDjsOC1gvWCsOiE4Ijhs+HRnNPiheGA478R4M6d4+O54LLihe any
IpSec::Manager: "VirtualIPServer": crypto ike key successfully ►
updated.
```

```
(config)> no crypto ike key VirtualIPServer
IpSec::Manager: "VirtualIPServer": crypto ike key successfully ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike key** command has been introduced. |

# 3.11 crypto ike mtu

**Description**

Set the *MTU* value to be transmitted to *IKE*. By default, the *MTU* value is inherited from the interface through which the Internet is accessed.

Command with **no** prefix resets the *MTU* value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto ike mtu** (*value*)

(config)> **no crypto ike mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| value | *Integer* | *MTU* value. Can take values in the range from 576 to 1500 inclusively. |

**Example**

```
(config)> crypto ike mtu 1400
IpSec::Manager: IKE MTU value is set to 1400.
```

```
(config)> no crypto ipsec mtu
IpSec::Manager: Reset IKE MTU value.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **crypto ike mtu** command has been introduced. |

# 3.12 crypto ike nat-keepalive

**Description**

Set the timeout between keepalive packets in case of NAT between the client and server *IPsec*. By default, 20 value is set.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto ike nat-keepalive** ‹*nat-keepalive*›

(config)> **no crypto ike nat-keepalive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| nat-keepalive | *Integer* | Timeout between keepalive packets in seconds. Can take values in the range from 5 to 3600 inclusively. |

**Example**

```
(config)> crypto ike nat-keepalive 90
IpSec::Manager: Set crypto ike nat-keepalive timeout to 90 s.
```

```
(config)> no crypto ike nat-keepalive
IpSec::Manager: Reset crypto ike nat-keepalive timeout to 20 s.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike nat-keepalive** command has been introduced. |

# 3.13 crypto ike policy

**Description**

Access to a group of commands to configure selected *IKE* policy. If *IKE* policy is not found, the command tries to create it.

Command with **no** prefix removes *IKE* policy. At the same time references to this *IKE* policy are automatically deleted from all *IPsec* profiles.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-ike-policy)`

**Synopsis**

(config)> **crypto ike policy** *‹name›*

(config)> **no crypto ike policy** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *IKE* policy name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config)> crypto ike policy test
IpSec::Manager: "test": crypto ike policy successfully created.
```

```
(config)> no crypto ike policy test
IpSec::Manager: Crypto ike policy "test" removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike policy** command has been introduced. |

## 3.13.1 crypto ike policy lifetime

**Description**

Set lifetime of *IPsec IKE* association. By default, the value `86400` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config-ike-policy)> **lifetime** *‹lifetime›*

(config-ike-policy)> **no lifetime**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| lifetime | *Integer* | Lifetime of *IPsec IKE* association in seconds. Can take values in the range from 60 to 2147483647. |

**Example**

```
(config-ike-policy)> lifetime 3600
IpSec::Manager: "test": crypto ike policy lifetime set to 3600 s.
```

```
(config-ike-policy)> no lifetime
IpSec::Manager: "test": crypto ike policy lifetime reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike policy lifetime** command has been introduced. |

## 3.13.2 crypto ike policy mode

**Description** Set *IKE* protocol version. By default, the value ikev1 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ike-policy)> **mode** *‹mode›*

(config-ike-policy)> **no mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | ikev1 | Protocol version IKEv1. |
| | ikev2 | Protocol version IKEv2. |

**Example**

```
(config-ike-policy)> mode ikev2
IpSec::Manager: "test": crypto ike policy mode set to "ikev2".
```

```
(config-ike-policy)> no mode
IpSec::Manager: "test": crypto ike policy mode reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike policy mode** command has been introduced. |

## 3.13.3 crypto ike policy negotiation-mode

**Description**

Set exchange mode for IKEv1 (see **crypto ike policy mode** command). By default, the value `main` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ike-policy)> **negotiation-mode** *‹negotiation-mode›*

(config-ike-policy)> **no negotiation-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `negotiation-mode` | `main` | Main mode, protects the identity of the peers. |
| | `aggressive` | Aggressive mode, does not protect the identity of the peers. |

**Example**

```
(config-ike-policy)> negotiation-mode aggressive
IpSec::Manager: "test": crypto ike policy negotiation-mode set ►
to "aggressive".
```

```
(config-ike-policy)> no negotiation-mode
IpSec::Manager: "test": crypto ike policy negotiation-mode reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike policy negotiation-mode** command has been introduced. |

## 3.13.4 crypto ike policy proposal

**Description**

Add reference on existing *IKE* proposal to *IKE* policy. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes reference on *IKE* proposal.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ike-policy)> **proposal** *‹proposal›*

(config-ike-policy)> **no proposal** *‹proposal›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `proposal` | *String* | *IKE* proposal name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config-ike-policy)> proposal test
IpSec::Manager: "test": crypto ike proposal "test" successfully ►
added.
```

```
(config-ike-policy)> no proposal
IpSec::Manager: "test": crypto ike policy proposal "test" ►
successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike policy proposal** command has been introduced. |

# 3.14 crypto ike proposal

**Description** Access to a group of commands to configure selected *IKE* proposal. If *IKE* proposal is not found, the command tries to create it.

A full list of encryption algorithms implemented in the system is provided in the Appendix.

Command with **no** prefix removes *IKE* proposal. At the same time references to this *IKE* proposal are automatically deleted from all *IKE* policy.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-ike-proposal)`

**Synopsis**

(config)> **crypto ike proposal** *‹name›*

(config)> **no crypto ike proposal** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *IKE* proposal name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config)> crypto ike proposal test
IpSec::Manager: "test": crypto ike proposal successfully created.
```

```
(config)> no crypto ike proposal test
IpSec::Manager: Crypto ike proposal "test" removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike proposal** command has been introduced. |

## 3.14.1 crypto ike proposal aead

**Description** Enable *AEAD* cypher mode on *IKE* proposal.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-ike-proposal)> **aead**

**Example**

```
(config-ike-proposal)> aead
IpSec::Manager: "TEST": crypto ike proposal "TEST" enabled AEAD ►
mode.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **crypto ike proposal aead** command has been introduced. |

## 3.14.2 crypto ike proposal dh-group

**Description** Add the selected *DH* group to *IKE* proposal to work in the *PFS* mode. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected group.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ike-proposal)> **dh-group** *‹dh-group›*

(config-ike-proposal)> **no dh-group** *‹dh-group›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dh-group | 1 | *DH* group to work in the *PFS* mode. |
| | 2 | |
| | 5 | |
| | 14 | |
| | 15 | |
| | 16 | |
| | 17 | |
| | 18 | |
| | 19 | |
| | 20 | |
| | 21 | |
| | 25 | |
| | 26 | |
| | 31 | |
| | 32 | |

**Example**

```
(config-ike-proposal)> dh-group 14
IpSec::Manager: "test": crypto ike proposal DH group "14" ►
successfully added.
```

```
(config-ike-proposal)> no dh-group 14
IpSec::Manager: "test": crypto ike proposal "test" group type ►
successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike proposal dh-group** command has been introduced. |

## 3.14.3 crypto ike proposal encryption

**Description**

Add the selected type of encryption to *IKE* proposal. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected type of encryption.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ike-proposal)> **encryption** *‹encryption›*

(config-ike-proposal)> **no encryption** *‹encryption›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| encryption | des | Type of *IKE* encryption. |
| | 3des | |
| | aes-cbc-128 | |
| | aes-cbc-192 | |
| | aes-cbc-256 | |
| | aes-ctr-128 | |
| | aes-ctr-192 | |
| | aes-ctr-256 | |

**Example**

```
(config-ike-proposal)> encryption des
IpSec::Manager: "test": crypto ike proposal encryption algorithm ►
"des" added.
```

```
(config-ike-proposal)> no encryption des
IpSec::Manager: "test": crypto ike proposal "test" encryption ►
type successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike proposal encryption** command has been introduced. |

## 3.14.4 crypto ike proposal integrity

**Description** Add the selected value of *HMAC* signature algorithm to *IKE* proposal. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected algorithm.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ike-proposal)> **integrity** *‹integrity›*

(config-ike-proposal)> **no integrity** ‹*integrity*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| integrity | md5 | *HMAC* signature algorithm of *IKE* messages. |
| | sha1 | |
| | sha256 | |
| | sha384 | |
| | sha512 | |

**Example**

```
(config-ike-proposal)> integrity sha256
IpSec::Manager: "test": crypto ike proposal integrity algorithm ►
"sha256" successfully added.
```

```
(config-ike-proposal)> no integrity sha256
IpSec::Manager: "test": crypto ike proposal "test" integrity ►
type successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ike proposal integrity** command has been introduced. |

## 3.14.5 crypto ike proposal prf

**Description**

Add the selected *PRF* group to *IKE* proposal.

Command with **no** prefix removes the selected algorithm.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ike-proposal)> **prf** ‹*prf*›

(config-ike-proposal)> **no prf** ‹*prf*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| prf | md5 | *HMAC* signature algorithm of *IKE* messages. |
| | sha1 | |
| | aes-xcbc | |
| | sha256 | |
| | sha384 | |

| Argument | Value | Description |
|---|---|---|
| | sha512 | |
| | aes-cmac | |

**Example**

```
(config-ike-proposal)> prf sha256
IpSec::Manager: "TEST": crypto ike proposal prf algorithm ►
"sha256" successfully added.
```

```
(config-ike-proposal)> no prf sha256
IpSec::Manager: "TEST": crypto ike proposal "TEST" prf type ►
successfully removed.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **crypto ike proposal prf** command has been introduced. |

# 3.15 crypto ipsec incompatible

**Description**

Disable *IPsec* tunnels compatibility checking. By default, the setting is disabled.

Command with **no** prefix enables the checking back.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto ipsec incompatible**

(config)> **no crypto ipsec incompatible**

**Example**

```
(config)> crypto ipsec incompatible
IpSec::Manager: Compatibility checks is disabled.
```

```
(config)> no crypto ipsec incompatible
IpSec::Manager: Compatibility checks is enabled.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **crypto ipsec incompatible** command has been introduced. |

# 3.16 crypto ipsec profile

**Description**

Access to a group of commands to configure selected *IPsec* profile. If profile is not found, the command tries to create it.

Command with **no** prefix removes profile. At the same time references to this profile are automatically deleted from all *IPsec* crypto maps.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-ipsec-profile)`

**Synopsis**

(config)> **crypto ipsec profile** *‹name›*

(config)> **no crypto ipsec profile** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *IPsec* profile name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config)> crypto ipsec profile test
IpSec::Manager: "test": crypto ipsec profile successfully created.
```

```
(config)> no crypto ipsec profile test
IpSec::Manager: Crypto ipsec profile "test" removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile** command has been introduced. |

## 3.16.1 crypto ipsec profile authentication-local

**Description**

Set authentication type for local host. By default, value `pre-share` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **authentication-local** *‹auth›*

(config-ipsec-profile)> **no authentication-local**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| auth | pre-share | A single available type of authorization for now. |

**Example**

```
(config-ipsec-profile)> authentication-local pre-share
IpSec::Manager: "test": crypto ipsec profile authentication-local ►
type "pre-share" is set.
```

```
(config-ipsec-profile)> no authentication-local
IpSec::Manager: "test": crypto ipsec profile authentication-local ►
reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile authentication-local** command has been introduced. |

## 3.16.2 crypto ipsec profile authentication-remote

**Description**

Set authentication type for remote host. By default, value pre-share is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **authentication-remote** *‹auth›*

(config-ipsec-profile)> **no authentication-remote**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| auth | pre-share | A single available type of authorization for now. |

**Example**

```
(config-ipsec-profile)> authentication-remote pre-share
IpSec::Manager: "test": crypto ipsec profile ►
authentication-remote type "pre-share" is set.
```

```
(config-ipsec-profile)> no authentication-remote
IpSec::Manager: "test": crypto ipsec profile ►
authentication-remote reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile authentication-remote** command has been introduced. |

## 3.16.3 crypto ipsec profile dpd-clear

**Description**

Set method of action when detecting a dead *IKE* peer. By default, the setting is enabled, which means deleting peer information.

Command with **no** prefix set action to `restart`.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **dpd-clear**

(config-ipsec-profile)> **no dpd-clear**

**Example**

```
(config-ipsec-profile)> dpd-clear
IpSec::Manager: "VPNL2TPServer": crypto ipsec profile DPD action ►
set to "clear".
```

```
(config-ipsec-profile)> no dpd-clear
IpSec::Manager: "VPNL2TPServer": crypto ipsec profile DPD action ►
set to "restart".
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto ipsec profile dpd-clear** command has been introduced. |

## 3.16.4 crypto ipsec profile dpd-interval

**Description**

Set parameters of method to detect a dead *IKE* peer. By default, `interval` is set to 30, `retry-count` is set to 3.

Command with **no** prefix resets settings to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **dpd-interval** ‹*interval*› [*retry-count*]

(config-ipsec-profile)> **no dpd-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | The interval of sending *DPD* packets in seconds. Can take values in the range from 2 to 3600. |
| `retry-count` | *Integer* | Number of attempts to send *DPD* packets. Can take values in the range from 3 to 60. |

**Example**

```
(config-ipsec-profile)> dpd-interval 5 30
IpSec::Manager: "test": crypto ipsec profile dpd retry count is ►
set to 30.
```

```
(config-ipsec-profile)> no dpd-interval
IpSec::Manager: "test": crypto ipsec profile dpd retry count ►
reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile dpd-interval** command has been introduced. |

## 3.16.5 crypto ipsec profile identity-local

**Description**

Set a local identifier of *IPsec* profile.

Command with **no** prefix removes the local identifier.

Note: The `fqdn` type allows you to select a third-party domain certificate (for example, DynDns service) on the system to connect to the router's IKEv2 *IPSec* server.

To return to auto mode, enter the command with the `ndns` keyword:

```
crypto ipsec profile identity-local fqdn ndns
```

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ipsec-profile)> **identity-local** ‹*type*› ‹*id*›

(config-ipsec-profile)> **no identity-local**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `type` | `address` | IP address. |
| | `fqdn` | Full domain name. |
| | `dn` | Domain name. |
| | `email` | E-mail address. |
| `id` | *`String`* | Local ID value. |

**Example**

```
(config-ipsec-profile)> identity-local address 10.10.10.5
IpSec::Config::Profile: "test": set local ID "10.10.10.5" with ►
type "address".
```

```
(config-ipsec-profile)>identity-local fqdn my.example.com
IpSec::Config::Profile: "VPNL2TPServerIKE2": set local ID ►
"my.example.com" with type "fqdn".
```

```
(config-ipsec-profile)> identity-local fqdn ndns
IpSec::Config::Profile: "VPNL2TPServerIKE2": set local ID "ndns" ►
with type "fqdn".
```

```
(config-ipsec-profile)> identity-local dn mydomain
IpSec::Config::Profile: "test": set local ID "mydomain" with ►
type "dn".
```

```
(config-ipsec-profile)> identity-local email my@example.com
IpSec::Config::Profile: "test": set local ID "my@example.com" ►
with type "email".
```

```
(config-ipsec-profile)> no identity-local
IpSec::Config::Profile: "test": reset local ID.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile identity-local** command has been introduced. |
| 5.00 | Added support for custom FQDN as IKEv2 *IPSec* server identity with certificate. |

## 3.16.6 crypto ipsec profile match-identity-remote

**Description** Set remote host identifier for *IPsec* profile.

Command with **no** prefix removes remote host ID.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ipsec-profile)> **match-identity-remote** ( *‹type› ‹id›* | **any**)

(config-ipsec-profile)> **no match-identity-remote**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | address | ID type is IP address. |
| | fqdn | ID type is full domain name. |
| | dn | ID type is domain name. |
| | email | ID type is e-mail address. |
| id | *String* | Remote host ID value. |
| any | *Keyword* | Allow usage of any remote host. |

**Example**

```
(config-ipsec-profile)> match-identity-remote any
IpSec::Manager: "test": crypto ipsec profile ►
match-identity-remote is set to any.
```

```
(config-ipsec-profile)> no match-identity-remote
IpSec::Manager: "test": crypto ipsec profile ►
match-identity-remote reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile match-identity-remote** command has been introduced. |

## 3.16.7 crypto ipsec profile mode

**Description**

Set the mode of operation *IPsec*. By default, tunnel value is set.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **mode** *‹mode›*

(config-ipsec-profile)> **no mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | tunnel | Tunnel mode, when the entire IP packet is encrypted and/or authenticated. |

| Argument | Value | Description |
|---|---|---|
| | `transport` | Transport mode, when only the payload of the IP packet is encrypted and/or authenticated. |

**Example**

```
(config-ipsec-profile)> mode transport
IpSec::Manager: "test": crypto ipsec profile mode set to ►
"transport".
```

```
(config-ipsec-profile)> no mode
IpSec::Manager: "test": crypto ipsec profile mode reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile mode** command has been introduced. |

## 3.16.8 crypto ipsec profile policy

**Description**

Set the reference to existing *IKE* policy (see **crypto ike policy** command).

Command with **no** prefix removes the reference.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **policy** *‹policy›*

(config-ipsec-profile)> **no policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `policy` | *String* | *IKE* policy name. You can see the list of available policies with help of **policy** [Tab] command. |

**Example**

```
(config-ipsec-profile)> policy [Tab]
 Usage template:
           policy {name: {A-Z, a-z, 0-9, ., _, -}}

   Choose:
 VirtualIPServer
   VPNL2TPServer
```

```
(config-ipsec-profile)> policy VirtualIPServer
IpSec::Manager: "TEST": crypto ipsec profile policy set to ►
"VirtualIPServer".
```

```
(config-ipsec-profile)> no policy
IpSec::Manager: "test": crypto ipsec profile policy reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile policy** command has been introduced. |

## 3.16.9 crypto ipsec profile preshared-key

**Description**

Set pre-shared key for *IPsec* profile.

Command with **no** prefix removes pre-shared key.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ipsec-profile)> **preshared-key** *‹preshare-key›*

(config-ipsec-profile)> **no preshared-key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| preshare-key | *String* | Pre-shared key value. |

**Example**

```
(config-ipsec-profile)> preshared-key testkey
IpSec::Manager: "test": crypto ipsec profile preshared key was ►
set.
```

```
(config-ipsec-profile)> no preshared-key
IpSec::Manager: "test": crypto ipsec profile preshared key reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile preshared-key** command has been introduced. |

## 3.16.10 crypto ipsec profile xauth

**Description**

Enable additional authentication *XAuth* for IKEv1 mode. By default, function is disabled.

Command with **no** prefix disables additional authentication.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config-ipsec-profile)> **xauth** ‹*type*›

(config-ipsec-profile)> **no xauth**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `type` | `client` | Client mode. |
| | `server` | Server mode. |

**Example**

```
(config-ipsec-profile)> xauth client
IpSec::Manager: "test": crypto ipsec profile xauth set to ►
"client".
```

```
(config-ipsec-profile)> no xauth
IpSec::Manager: "test": crypto ipsec profile xauth is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile xauth** command has been introduced. |

## 3.16.11 crypto ipsec profile xauth-identity

**Description** Set login for additional authentication *XAuth* in client mode.

Command with **no** prefix removes the login.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ipsec-profile)> **xauth-identity** ‹*identity*›

(config-ipsec-profile)> **no xauth-identity**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `identity` | *String* | Login for *XAuth* client mode. |

**Example**

```
(config-ipsec-profile)> xauth-identity ident
IpSec::Manager: "test": crypto ipsec profile xauth-identity is ►
set to "ident".
```

```
(config-ipsec-profile)> no xauth-identity
IpSec::Manager: "test": crypto ipsec profile xauth identity is ►
deleted.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile xauth-identity** command has been introduced. |

## 3.16.12 crypto ipsec profile xauth-password

**Description**

Set password for additional authentication *XAuth* in client mode.

Command with **no** prefix removes the password.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config-ipsec-profile)>  xauth-password ‹password›
(config-ipsec-profile)> no xauth-password
```

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | Password for *XAuth* client mode. |

**Example**

```
(config-ipsec-profile)> xauth-password password
IpSec::Manager: "test": crypto ipsec profile xauth-password is ►
set.
```

```
(config-ipsec-profile)> no xauth-password
IpSec::Manager: "test": crypto ipsec profile xauth password is ►
deleted.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec profile xauth-password** command has been introduced. |

# 3.17 crypto ipsec rekey delete-delay

**Description**

Set interval before removing the IKE SA after receiving the DELETE command from the remote side. By default, the 10 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto ipsec rekey delete-delay** *‹delay›*

(config)> **no crypto ipsec rekey delete-delay**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| delay | *Integer* | Delay value in seconds. Can take value in the range from 1 to 60. |

**Example**

```
(config)> crypto ipsec rekey delete-delay 1
IpSec::Manager: Rekey delete-delay value is set to 1.
```

```
(config)> no crypto ipsec rekey delete-delay
IpSec::Manager: Rekey delete-delay value is set to 10.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto ipsec rekey delete-delay** command has been introduced. |

# 3.18 crypto ipsec rekey make-before

**Description**

Set the mode when new IKE SA creates before the breaking the old one. By default, the feature is disabled.

Command with **no** prefix disables the mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **crypto ipsec rekey make-before**

(config)> **no crypto ipsec rekey make-before**

**Example**

```
(config)> crypto ipsec rekey make-before
IpSec::Manager: Enable make-before-brake scheme for IKEv2 rekey.
```

```
(config)> no crypto ipsec rekey make-before
IpSec::Manager: Disable make-before-brake scheme for IKEv2 rekey.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto ipsec rekey make-before** command has been introduced. |

# 3.19 crypto ipsec transform-set

**Description** Access to a group of commands to configure selected *IPsec ESP* transformation during Phase 2. If transformation is not found, the command tries to create it.

Command with **no** prefix removes transformation. At the same time references to this transformation are automatically deleted from all *IPsec* crypto maps.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-ipsec-transform)`

**Synopsis**

(config)> **crypto ipsec transform-set** *‹name›*

(config)> **no crypto ipsec transform-set** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *IPsec* transformation name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config)> crypto ipsec transform-set test
IpSec::Manager: "test": crypto ipsec transform-set successfully ►
created.
```

```
(config)> no crypto ipsec transform-set test
IpSec::Manager: Crypto ipsec transform-set "test" removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec transform-set** command has been introduced. |

## 3.19.1 crypto ipsec transform-set aead

**Description** Enable *AEAD* cypher mode on *IPsec*.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-ipsec-transform)> **aead**

**Example**

```
(config-ipsec-transform)> dh-group 14
IpSec::Manager: "TEST": crypto ipsec transform-set "TEST" enabled ►
AEAD mode.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **crypto ipsec transform-set aead** command has been introduced. |

## 3.19.2 crypto ipsec transform-set cypher

**Description**

Add the selected type of encryption to *IPsec* transformation. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected type of encryption.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ipsec-transform)> **cypher** *‹cypher›*

(config-ipsec-transform)> **no cypher** *‹cypher›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cypher | esp-des | Type of *IPsec ESP* encryption. |
| | esp-3des | |
| | esp-aes-128 | |
| | esp-aes-192 | |
| | esp-aes-256 | |

**Example**

```
(config-ipsec-transform)> cypher esp-3des
IpSec::Manager: "test": crypto ipsec transform-set cypher ►
"esp-3des" successfully added.
```

```
(config-ipsec-transform)> no cypher esp-3des
IpSec::Manager: "test": crypto ipsec transform-set "test" cypher ►
successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec transform-set cypher** command has been introduced. |

## 3.19.3 crypto ipsec transform-set dh-group

**Description**

Add the selected *DH* group to *IPsec* transformation to work in the *PFS* mode. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected group.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ipsec-transform)> **dh-group** *‹dh-group›*

(config-ipsec-transform)> **no dh-group** *‹dh-group›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dh-group | 1 | *DH* group to work in the *PFS* mode. |
| | 2 | |
| | 5 | |
| | 14 | |
| | 15 | |
| | 16 | |
| | 17 | |
| | 18 | |

**Example**

```
(config-ipsec-transform)> dh-group 14
IpSec::Manager: "test": crypto ipsec transform-set dh-group "14" ►
successfully added.
```

```
(config-ipsec-transform)> no dh-group 14
IpSec::Manager: "test": crypto ipsec transform-set "test" ►
dh-group successfully removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec transform-set dh-group** command has been introduced. |

## 3.19.4 crypto ipsec transform-set hmac

**Description**

Add the selected value of *HMAC* signature algorithm to *IPsec* transformation. The order of adding has a value for data exchange on the *IKE* protocol.

Command with **no** prefix removes the selected algorithm.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ipsec-transform)> **hmac** *‹hmac›*

(config-ipsec-transform)> **no hmac** *‹hmac›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| hmac | esp-md5-hmac | *HMAC* signature algorithm of *IPsec ESP* transformation. |
| | esp-sha1-hmac | |
| | esp-sha256-hmac | |
| | esp-sha512-hmac | |
| | esp-null-hmac | |

**Example**

```
(config-ipsec-transform)> hmac esp-sha512-hmac
IpSec::Config::TransformSet: "TEST": added auth "esp-sha512-hmac".
```

```
(config-ipsec-transform)> no hmac esp-sha512-hmac
IpSec::Config::TransformSet: "TEST": removed auth ►
"esp-sha512-hmac".
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec transform-set hmac** command has been introduced. |
| 4.02 | Added support for **esp-sha512-hmac** on IKE Phase II. |

## 3.19.5 crypto ipsec transform-set lifetime

**Description** Set lifetime of selected *IPsec* transformation. By default, the value `3600` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ipsec-transform)> **lifetime** *‹lifetime›*

(config-ipsec-transform)> **no lifetime**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `lifetime` | *Integer* | Lifetime of *IPsec* transformation in seconds. Can take values in the range from `60` to `2147483647`. |

**Example**

```
(config-ipsec-transform)> lifetime 8640
IpSec::Manager: "test": crypto ipsec transform-set lifetime set ►
to 8640 s.
```

```
(config-ipsec-transform)> no lifetime
IpSec::Manager: "test": crypto ipsec transform-set lifetime reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto ipsec transform-set lifetime** command has been introduced. |

# 3.20 crypto map

**Description**

Access to a group of commands to configure selected *IPsec* crypto map. If crypto map is not found, the command tries to create it.

Command with **no** prefix removes crypto map.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-crypto-map)`

**Synopsis**

(config)> **crypto map** *‹name›*

(config)> **no crypto map** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *IPsec* crypto map name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

**Example**

```
(config)> crypto map test
IpSec::Manager: "test": crypto map successfully created.
```

```
(config)> no crypto map test
IpSec::Manager: Crypto map profile "test" removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map** command has been introduced. |

## 3.20.1 crypto map connect

**Description**

Enable automatic unconditional *IPsec* connection to the remote host. Setting has no meaning if basic remote host was set to any (see **crypto map set-peer** command). By default, setting is disabled and connection is established when attempting to transmit traffic through the *IPsec ESP* transformation.

Command with **no** prefix disables automatic unconditional connection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **connect**

(config-crypto-map)> **no connect**

**Example**

```
(config-crypto-map)> connect
IpSec::Manager: "test": crypto map autoconnect enabled.
```

```
(config-crypto-map)> no connect
IpSec::Manager: "test": crypto map autoconnect disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map connect** command has been introduced. |

## 3.20.2 crypto map enable

**Description**

Enable selected *IPsec* crypto map. By default, setting is enabled.

Command with **no** prefix disables crypto map.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **enable**

(config-crypto-map)> **no enable**

**Example**

```
(config-crypto-map)> enable
IpSec::Manager: "test": crypto map enabled.
```

```
(config-crypto-map)> no enable
IpSec::Manager: "test": crypto map disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map enable** command has been introduced. |

## 3.20.3 crypto map fallback-check-interval

**Description**

Enable periodic checking of basic host availability and return to it in case of presence basic and backup remote hosts both. By default, setting is disabled.

Command with **no** prefix disables checking.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **fallback-check-interval** ‹*interval-value*›

(config-crypto-map)> **no fallback-check-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval-value` | *Integer* | Period of checking in seconds. Can take values in the range from `60` to `86400`. |

**Example**

```
(config-crypto-map)> fallback-check-interval 120
IpSec::Manager: "test": crypto map fallback check interval is ►
set to 120.
```

```
(config-crypto-map)> no fallback-check-interval
IpSec::Manager: "test": crypto map fallback check interval is ►
cleared.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map fallback-check-interval** command has been introduced. |

## 3.20.4 crypto map force-encaps

**Description**

Enforce the *ESP* packet wrapping mode in *UDP* to bypass the firewall and NAT.

Command with **no** prefix disables the mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **force-encaps**

(config-crypto-map)> **no force-encaps**

**Example**

```
(config-crypto-map)> force-encaps
IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ►
enabled.
```

```
(config-crypto-map)> no force-encaps
IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **crypto map force-encaps** command has been introduced. |

## 3.20.5 crypto map l2tp-server dhcp route

**Description** Assign a route which is transmitted in DHCP INFORM messages to the *L2TP* server clients.

Command with **no** prefix cancels the specified route. If you use no arguments, the entire list of routes will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-crypto-map)> **l2tp-server dhcp route** ‹*address*› ‹*mask*›

(config-crypto-map)> **no l2tp-server dhcp route** [ ‹*address*› ‹*mask*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Network client address. |
| mask | *IP-mask* | Network client mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |

**Example**

```
(config-crypto-map)> l2tp-server dhcp route 192.168.2.0/24
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
added DHCP INFORM route to 192.168.2.0/255.255.255.0.
```

```
(config-crypto-map)> l2tp-server no dhcp route
IpSec::Manager: "VPNL2TPServer": Cleared DHCP INFORM routes.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **crypto map l2tp-server dhcp route** command has been introduced. |

## 3.20.6 crypto map l2tp-server dns-servers

**Description**

Set the *DNS* server that is assigned to clients connecting to the L2TP/IPsec server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **l2tp-server dns-servers** *‹dns1›* [ *‹dns2›* ]

(config-crypto-map)> **no l2tp-server dns-servers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(config-crypto-map)> l2tp-server dns-servers 1.1.1.1
IpSec::L2tp::Manager: Set custom DNS server "1.1.1.1".
```

```
(config-crypto-map)> l2tp-server dns-servers 1.1.1.1 8.8.8.8
IpSec::L2tp::Manager: Set custom DNS servers "1.1.1.1" and ►
"8.8.8.8".
```

```
(config-crypto-map)> no l2tp-server dns-servers
IpSec::L2tp::Manager: Disabled custom DNS servers.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **crypto map l2tp-server dns-servers** command has been introduced. |

## 3.20.7 crypto map l2tp-server enable

**Description** Enable *L2TP* server on *IPsec* crypto map. By default, the setting is enabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server enable**

(config-crypto-map)> **no l2tp-server enable**

**Example**

```
(config-crypto-map)> l2tp-server enable
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
enabled.
```

```
(config-crypto-map)> no l2tp-server enable
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server enable** command has been introduced. |

## 3.20.8 crypto map l2tp-server interface

**Description** Bind *L2TP* server to the specified interface.

Command with **no** prefix unbinds the server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server interface** ‹*interface*›

(config-crypto-map)> **no l2tp-server interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full name or an alias of the interface. You can see the list of available interfaces with help of **l2tp-server interface** [Tab] command. |

**Example**

```
(config-crypto-map)> l2tp-server interface [Tab]

Usage template:
       interface {interface}

  Choose:
        GigabitEthernet1
                     ISP
WifiMaster0/AccessPoint2
WifiMaster1/AccessPoint1
WifiMaster0/AccessPoint3
WifiMaster0/AccessPoint0
             AccessPoint
WifiMaster1/AccessPoint2
WifiMaster0/AccessPoint1
               GuestWiFi
```

```
(config-crypto-map)> l2tp-server interface ISP
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
is bound to ISP.
```

```
(config-crypto-map)> no l2tp-server interface ISP
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
is unbound.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server interface** command has been introduced. |

## 3.20.9 crypto map l2tp-server ipv6cp

**Description**

Enable IPv6 support. DHCP IPv6 pools are created for each *L2TP* server. By default, the setting is disabled.

Command with **no** prefix disables IPv6 support.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **l2tp-server ipv6cp**

(config-crypto-map)> **no l2tp-server ipv6cp**

**Example**

```
(config-crypto-map)> l2tp-server ipv6cp
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
IPv6CP is enabled.
```

```
(config-crypto-map)> no l2tp-server ipv6cp
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
IPv6CP is disabled.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **crypto map l2tp-server ipv6cp** command has been introduced. |

## 3.20.10 crypto map l2tp-server lcp echo

**Description**

Specify the testing rules of the *L2TP* server connections with *LCP* echo tools.

Command with **no** prefix disables *LCP* echo.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **l2tp-server lcp echo** ‹*interval*› ‹*count*›

(config-crypto-map)> **no l2tp-server lcp echo**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | Interval between sending *LCP* echo, in seconds. If within the specified time interval there is no *LCP* echo request from the remote location, the same request will be sent there asking for response *LCP* reply. |
| `count` | *Integer* | The number of consecutive requests *LCP* echo sent, for which no response *LCP* reply was received. If count of *LCP* echo requests goes unanswered, the connection is terminated. |

**Example**

```
(config-crypto-map)> l2tp-server lcp echo 5 3
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
set LCP echo to "5" : "3".
```

```
(config-crypto-map)> no l2tp-server lcp echo
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
LCP echo disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server lcp echo** command has been introduced. |

## 3.20.11 crypto map l2tp-server mru

**Description** Set *MRU* value to be transmitted to *L2TP* server. By default, `1200` value is used.

Command with **no** prefix resets value to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server mru** *‹mru›*

(config-crypto-map)> **no l2tp-server mru**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mru` | *Integer* | *MRU* value. Can take values in the range from 128 to 1500 inclusively. |

**Example**

```
(config-crypto-map)> l2tp-server mru 1500
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
set MRU to "1500".
```

```
(config-crypto-map)> no l2tp-server mru
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
MRU reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server mru** command has been introduced. |

## 3.20.12 crypto map l2tp-server mtu

**Description** Set *MTU* value to be transmitted to *L2TP* server. By default, `1400` value is used.

Command with **no** prefix resets value to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server mtu** *‹mtu›*

(config-crypto-map)> **no l2tp-server mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mtu | *Integer* | *MTU* value. Can take values in the range from 576 to 1500 inclusively. |

**Example**

```
(config-crypto-map)> l2tp-server mtu 1400
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
set MTU to "1400".
```

```
(config-crypto-map)> no l2tp-server mtu
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
MTU reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server mtu** command has been introduced. |

## 3.20.13 crypto map l2tp-server multi-login

**Description**

Allow connection to *L2TP* server for multiple users from one account.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **l2tp-server multi-login**

(config-crypto-map)> **no l2tp-server multi-login**

**Example**

```
(config-crypto-map)> l2tp-server multi-login
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
multiple login is enabled.
```

```
(config-crypto-map)> no l2tp-server multi-login
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
multiple login is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server multi-login** command has been introduced. |

## 3.20.14 crypto map l2tp-server nat

**Description** Enable translation of addresses for *L2TP* server.

Command with **no** prefix disables the translation.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server nat**

(config-crypto-map)> **no l2tp-server nat**

**Example**

```
(config-crypto-map)> l2tp-server nat
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
SNAT is enabled.
```

```
(config-crypto-map)> no l2tp-server nat
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
SNAT is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server nat** command has been introduced. |

## 3.20.15 crypto map l2tp-server range

**Description** Assign a pool of addresses for the clients of *L2TP* server. By default, size `100` is used.

Command with **no** prefix removes a pool.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server range** ‹*begin*› (‹*end*› | ‹*size*›)

(config-crypto-map)> **no l2tp-server range**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `begin` | *IP address* | Start address of pool. |
| `end` | *IP address* | End address of pool. |
| `size` | *Integer* | Pool size. |

**Example**

```
(config-crypto-map)> l2tp-server range 172.16.2.33 172.16.2.38
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
pool range set from "172.16.2.33" to "172.16.2.38".
```

```
(config-crypto-map)> l2tp-server range 172.16.2.33 100
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
pool range set from "172.16.2.33" to "172.16.2.132".
```

```
(config-crypto-map)> no l2tp-server range
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
pool range deleted.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server range** command has been introduced. |

## 3.20.16 crypto map l2tp-server session-logout

**Description** Terminate an active or stalled session on the *L2TP* server.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **session-logout** ‹*session*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| session | *Integer* | Identifier of the L2TP session (can be viewed using the **show crypto map** command). |

**Example**

```
(config-crypto-map)> session-logout 3
IpSec::L2tp::Manager: Session "3" is terminated.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **crypto map l2tp-server session-logout** command has been introduced. |

## 3.20.17 crypto map l2tp-server session-preempt

**Description** Enable to preempt VPN sessions when **crypto map l2tp-server multi-login** option is disabled for the *L2TP* server.

Command with **no** prefix disables the preempt.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **l2tp-server session-preempt**

(config-crypto-map)> **no l2tp-server session-preempt**

**Example**

```
(config-crypto-map)> l2tp-server session-preempt
IpSec::L2tp::Manager: Enabled session preemption.
```

```
(config-crypto-map)> no l2tp-server session-preempt
IpSec::L2tp::Manager: Disabled session preemption.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **crypto map l2tp-server session-preempt** command has been introduced. |

## 3.20.18 crypto map l2tp-server static-ip

**Description** Bind IP address to the user. User account must have `ipsec-l2tp` tag.

Command with **no** prefix removes binding.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **static-ip** *‹user› ‹address›*

(config-crypto-map)> **no static-ip** *‹user›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `user` | *`String`* | Username. |
| `address` | *`IP address`* | IP address to bind. |

**Example**

```
(config-crypto-map)> l2tp-server static-ip admin 172.16.2.33
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
static IP "172.16.2.33" assigned to user "admin".
```

```
(config-crypto-map)> no l2tp-server static-ip admin
IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ►
static IP removed for user "admin".
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map l2tp-server static-ip** command has been introduced. |

## 3.20.19 crypto map nail-up

**Description** Enable automatic renegotiation of *IPsec ESP* transformations at their obsolescence. By default, setting is disabled.

Command with **no** prefix disables automatic renegotiation.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **nail-up**

(config-crypto-map)> **no nail-up**

**Example**

```
(config-crypto-map)> nail-up
IpSec::Manager: "test": crypto map SA renegotiation enabled.
```

```
(config-crypto-map)> no nail-up
IpSec::Manager: "test": crypto map SA renegotiation disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map nail-up** command has been introduced. |

## 3.20.20 crypto map reauth-passive

**Description** Enable passive reauthentication of *IPsec* crypto map. By default, setting is disabled.

Command with **no** prefix disables passive reauthentication.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **reauth-passive**

(config-crypto-map)> **no reauth-passive**

**Example**

```
(config-crypto-map)> reauth-passive
IpSec::Manager: "VPNL2TPServer": crypto map SA passive ►
reauthentication enabled.
```

```
(config-crypto-map)> no reauth-passive
IpSec::Manager: "VPNL2TPServer": crypto map SA passive ►
reauthentication disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **crypto map reauth-passive** command has been introduced. |

## 3.20.21 crypto map set-peer

**Description**

Set basic remote host for *IPsec* connection.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **set-peer** ‹*remote-ip*›

(config-crypto-map)> **no set-peer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `remote-ip` | *String* | IP address or domain name of remote host. |
| | any | Accept any incoming connections. |

**Example**

```
(config-crypto-map)> set-peer ipsec.example.com
IpSec::Manager: "test": crypto map primary remote peer is set ►
to "ipsec.example.com".
```

```
(config-crypto-map)> no set-peer
IpSec::Manager: "test": crypto map remote primary and fallback ►
peer reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map set-peer** command has been introduced. |

## 3.20.22 crypto map set-peer-fallback

**Description**

Set backup remote host for *IPsec* connection. This setting can be made after assignment of basic host (see **crypto map set-peer** command).

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **set-peer-fallback** ‹*remote-ip*›

(config-crypto-map)> **no set-peer-fallback**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| remote-ip | *String* | IP address or domain name of remote host. |

**Example**

```
(config-crypto-map)> set-peer-fallback example.com
IpSec::Manager: "test": crypto map fallback remote peer cannot ►
be set without primary peer.
```

```
(config-crypto-map)> no set-peer-fallback
IpSec::Manager: "test": crypto map fallback remote peer reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map set-peer-fallback** command has been introduced. |

## 3.20.23 crypto map set-profile

**Description**

Set the reference to existing *IPsec* profile (see **crypto ipsec profile** command).

Command with **no** prefix removes the reference.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **set-profile** ‹*profile*›

(config-crypto-map)> **no set-profile**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `profile` | *String* | *IPsec* profile name. You can see the list of available profiles with help of **set-profile** [Tab] command. |

**Example**

```
(config-crypto-map)> set-profile [Tab]

 Usage template:
      set-profile {name: {A-Z, a-z, 0-9, ., _, -}}

   Choose:
            TEST
            MYMY
 VirtualIPServer
   VPNL2TPServer
```

```
(config-crypto-map)> set-profile test
IpSec::Manager: "test": crypto map ipsec profile is set to "test".
```

```
(config-crypto-map)> no set-profile
IpSec::Manager: "test": crypto map ipsec profile reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map set-profile** command has been introduced. |

## 3.20.24 crypto map set-tcpmss

**Description**

Set the limit on the segment size of outgoing *TCP* sessions within *IPsec* tunnel. If the *MSS* value, which is transmitted in the header of SYN-packets, exceeds the specified limit, command changes it. Path MTU Discovery mode allows automatically identifiy *MSS* limit.

Command with **no** prefix removes all limits from *MSS*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **set-tcpmss** ‹*mss-value*›

(config-crypto-map)> **no set-tcpmss**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mss-value` | *Integer* | *MSS* upper limit. Can take values in the range from 576 to 1500. |

| Argument | Value | Description |
|---|---|---|
| | pmtu | Enable Path MTU Discovery mode. |

**Example**

```
(config-crypto-map)> set-tcpmss 1280
IpSec::Manager: "test": crypto map tcpmss set to 1280.
```

```
(config-crypto-map)> no set-tcpmss
IpSec::Manager: "test": crypto map tcpmss reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map set-tcpmss** command has been introduced. |

## 3.20.25 crypto map set-transform

**Description**

Set the reference to existing *IPsec ESP* transformation (see **crypto ipsec transform-set** command).

Command with **no** prefix removes the reference.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **set-transform** ‹*transform-set*›

(config-crypto-map)> **no set-transform**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| transform-set | *String* | *IPsec* transformation name. You can see the list of available transformations with help of **set-transform** [Tab] command. |

**Example**

```
(config-crypto-map)> set-transform [Tab]
 Usage template:
    set-transform {name: {A-Z, a-z, 0-9, ., _, -}}

   Choose:
 VirtualIPServer
   VPNL2TPServer
```

```
(config-crypto-map)> set-transform test
IpSec::Manager: "test": crypto map ipsec transform-set is set ►
to "test".
```

```
(config-crypto-map)> no set-transform
IpSec::Manager: "test": crypto map ipsec transform-set reset.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **crypto map set-transform** command has been introduced. |

## 3.20.26 crypto map traffic-selectors

**Description**

Assign an object group as *IPsec* Phase 2 selectors.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **traffic-selectors** *‹local› ‹remote›*

(config-crypto-map)> **no traffic-selectors**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `local` | *String* | Name of local object group. |
| `remote` | *String* | Name of remote object group. |

**Example**

```
(config-crypto-map)> traffic-selectors ►
_WEBADMIN_IPSEC_VPNL2TPServe-local ►
_WEBADMIN_IPSEC_VPNL2TPServe-remote
IpSec::Config::CryptoMap: "test": set traffic-selectors to ►
"_WEBADMIN_IPSEC_VPNL2TPServer-local": ►
"_WEBADMIN_IPSEC_VPNL2TPServer-remote".
```

```
(config-crypto-map)> no traffic-selectors
IpSec::Config::CryptoMap: "test": reset traffic-selectors.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **crypto map traffic-selectors** command has been introduced. |

## 3.20.27 crypto map tunnel-interface

**Description**

Assign the *XFRM* interface to a crypto map for site-to-site traffic routing.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **tunnel-interface** ‹*interface*›

(config-crypto-map)> **no tunnel-interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full name of the interface. |

**Example**

```
(config-crypto-map)> tunnel-interface XFRM0
IpSec::Config::CryptoMap: "TEST": linked tunnel interface "XFRM0".
```

```
(config-crypto-map)> no tunnel-interface
IpSec::Config::CryptoMap: "TEST": reset tunnel interface.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **crypto map tunnel-interface** command has been introduced. |

## 3.20.28 crypto map virtual-ip dhcp route

**Description** Assign a route which is transmitted in DHCP INFORM messages to the Virtual IP server clients.

Command with **no** prefix deletes the specified route. If you use no arguments, the entire list of routes will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-crypto-map)> **virtual-ip dhcp route** ‹*address*› ‹*mask*›

(config-crypto-map)> **no virtual-ip dhcp route** [ ‹*address*› ‹*mask*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *IP address* | Network client address. |
| `mask` | *IP-mask* | Network client mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |

**Example**

```
(config-crypto-map)> virtual-ip dhcp route 192.168.2.0/24
IpSec::ManagerVirtualIp: "VirtualIPServerIKE2": crypto map ►
Virtual IP server added DHCP INFORM route to ►
192.168.2.0/255.255.255.0.
```

```
(config-crypto-map)> no virtual-ip dhcp route 192.168.2.0/24
IpSec::ManagerVirtualIp: "VirtualIPServerIKE2": crypto map ►
Virtual IP server DHCP INFORM route to 192.168.2.0/255.255.255.0 ►
removed.
```

```
(config-crypto-map)> no virtual-ip dhcp route
IpSec::ManagerVirtualIp: "VirtualIPServerIKE2": crypto map ►
Virtual IP server DHCP INFORM routes cleared.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **crypto map virtual-ip dhcp route** command has been introduced. |

## 3.20.29 crypto map virtual-ip dns-servers

**Description**

Set the *DNS* server that is assigned to clients connecting to the IKEv1 or IKEv2 *IPSec* server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **virtual-ip dns-servers** *‹dns1›* [ *‹dns2›* ]

(config-crypto-map)> **no virtual-ip dns-servers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(config-crypto-map)> virtual-ip dns-servers 1.1.1.1
IpSec::VirtualIp::CryptoMap: Set custom DNS server "1.1.1.1".
```

```
(config-crypto-map)> virtual-ip dns-servers 1.1.1.1 8.8.8.8
IpSec::VirtualIp::CryptoMap: Set custom DNS servers "1.1.1.1" ►
and "8.8.8.8".
```

```
(config-crypto-map)> no virtual-ip dns-servers
IpSec::VirtualIp::CryptoMap: Disabled custom DNS servers.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **crypto map virtual-ip dns-servers** command has been introduced. |

## 3.20.30 crypto map virtual-ip enable

**Description** Enable Virtual IP server mode, when clients receive addresses from a given range. The value of a remote subnet, specified in the corresponding access-list, will be ignored. By default, the setting is disabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **virtual-ip enable**

(config-crypto-map)> **no virtual-ip enable**

**Example**

```
(config-crypto-map)> virtual-ip enable
IpSec::Manager: "test": crypto map Virtual IP mode enabled.
```

```
(config-crypto-map)> no virtual-ip enable
IpSec::Manager: "test": crypto map Virtual IP mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **crypto map virtual-ip enable** command has been introduced. |

## 3.20.31 crypto map virtual-ip interface

**Description** Bind Virtual IP server to the specified interface.

Command with **no** prefix unbinds the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **virtual-ip interface** *‹interface›*

(config-crypto-map)> **no virtual-ip interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config-crypto-map)> virtual-ip interface Bridge0
IpSec::VirtualIp::CryptoMap: "VirtualIPServerIKE2": bound to ►
Bridge0.
```

```
(config-crypto-map)> no virtual-ip interface
IpSec::VirtualIp::CryptoMap: "VirtualIPServerIKE2": unbound.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **crypto map virtual-ip interface** command has been introduced. |

## 3.20.32 crypto map virtual-ip multi-login

**Description**

Allow connection to Virtual IP server for multiple users from one account.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-crypto-map)> **virtual-ip multi-login**

(config-crypto-map)> **no virtual-ip multi-login**

**Example**

```
(config-crypto-map)> virtual-ip multi-login
IpSec::Manager: "VirtualIPServer": crypto map Virtual IP server ►
multiple login is enabled.
```

```
(config-crypto-map)> no  virtual-ip multi-login
IpSec::Manager: "VirtualIPServer": crypto map Virtual IP server ►
multiple login is disabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **crypto map virtual-ip multi-login** command has been introduced. |

## 3.20.33 crypto map virtual-ip nat

**Description**

Enable translation for remote network of Virtual IP extension server.

Command with **no** prefix removes the rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **virtual-ip nat**

(config-crypto-map)> **no virtual-ip nat**

**Example**

```
(config-crypto-map)> virtual-ip nat
IpSec::Manager: "test": crypto map Virtual IP remote pool SNAT ►
is enabled.
```

```
(config-crypto-map)> no virtual-ip nat
IpSec::Manager: "test": crypto map Virtual IP remote pool SNAT ►
is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **crypto map virtual-ip nat** command has been introduced. |

## 3.20.34 crypto map virtual-ip range

**Description** Configure the range of addresses issued to clients in Virtual IP server mode.

Command with **no** prefix removes the range.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **virtual-ip range** *‹begin›* ( *‹end›* | *‹size›* )

(config-crypto-map)> **no virtual-ip range**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| begin | *IP address* | The beginning of the address range. |
| end | *IP address* | The end of the address range. |
| size | *Integer* | Address range size. |

**Example**

```
(config-crypto-map)> virtual-ip range 10.5.0.0 20
IpSec::Manager: "test": crypto map Virtual IP pool range set ►
from "10.5.0.0" to "10.5.0.19" (CIDR 10.5.0.0/27).
```

```
(config-crypto-map)> no virtual-ip range
IpSec::Manager: "test": crypto map Virtual IP pool range deleted.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **crypto map virtual-ip range** command has been introduced. |

## 3.20.35 crypto map virtual-ip session-logout

**Description** Terminate an active or stalled session on the Virtual IP server.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **session-logout** *‹session›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| session | *Integer* | Identifier of the IKE session (can be viewed using the **show crypto map** command). |

**Example**

```
(config-crypto-map)> session-logout 1
IpSec::VirtualIp::Manager: Session "1" is terminated.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **crypto map virtual-ip session-logout** command has been introduced. |

## 3.20.36 crypto map virtual-ip session-preempt

**Description** Enable to preempt VPN sessions when **crypto map virtual-ip multi-login** option is disabled for the IKEv1 or IKEv2 *IPSec* server.

Command with **no** prefix disables the preempt.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-crypto-map)> **virtual-ip session-preempt**

(config-crypto-map)> **no virtual-ip session-preempt**

**Example**

```
(config-crypto-map)> virtual-ip session-preempt
IpSec::VirtualIp::CryptoMap: "VirtualIPServerIKE2": enable ►
session preemption.
```

```
(config-crypto-map)> no virtual-ip session-preempt
IpSec::VirtualIp::CryptoMap: "VirtualIPServerIKE2": disable ►
session preemption.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **crypto map virtual-ip session-preempt** command has been introduced. |

## 3.20.37 crypto map virtual-ip static-ip

**Description**

Bind IP address to the user. User account must have `ipsec-xauth` tag.

Command with **no** prefix removes binding.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-crypto-map)> **virtual-ip static-ip** *‹user› ‹address›*

(config-crypto-map)> **no virtual-ip static-ip** *‹user›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `user` | *`String`* | Username. |
| `address` | *`IP address`* | IP address to bind. |

**Example**

```
(config-crypto-map)> virtual-ip static-ip admin 172.20.0.1
IpSec::ManagerVirtualIp: "VirtualIPServer": crypto map Virtual ►
IP server static address "172.20.0.1" assigned to user "admin".
```

```
(config-crypto-map)> no virtual-ip static-ip admin
IpSec::ManagerVirtualIp: "VirtualIPServer": crypto map Virtual ►
IP server static address removed for user "admin".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **crypto map virtual-ip static-ip** command has been introduced. |

# 3.21 dlna

**Description** Access to a group of commands to manage *DLNA* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-dlna)`

**Synopsis**

(config)> **`dlna`**

**Example**

```
(config)> dlna
Core::Configurator: Done.
(config-dlna)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dlna** command has been introduced. |

## 3.21.1 dlna container

**Description** Set default container for *DLNA* service.

Command with **no** prefix resets the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dlna)> **`container`** *‹container›*

(config-dlna)> **`no container`**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `container` | `browse` | Show the content of browse container by default. |
| | `music` | Show the content of music container by default. |
| | `video` | Show the content of video container by default. |
| | `images` | Show the content of images container by default. |

**Example**

```
(config-dlna)> container browse
Dlna::Server: Set default container to "browse".
```

```
(config-dlna)> no container
Dlna::Server: Reset default container.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **dlna container** command has been introduced. |

## 3.21.2 dlna db-directory

**Description** Specify the directory with database of multimedia content.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dlna)> **db-directory** *‹directory›*

(config-dlna)> **no db-directory**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Name of the directory with database. |

**Example**

```
(config-dlna)> db-directory 46E243F4E243E6B1:/components/dlna/
Dlna::Server: DB directory set.
```

```
(config-dlna)> no db-directory
Dlna::Server: DB directory removed.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **dlna db-directory** command has been introduced. |

## 3.21.3 dlna directory

**Description** Specify the directory with media content.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dlna)> **directory** *‹directory›* [ *media-type* ]

(config-dlna)> **no directory** *‹directory›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Name of the directory with media content. |
| media-type | audio | Content type is audio. |
| | video | Content type is video. |
| | images | Content type is images. |

**Example**

```
(config-dlna)> directory ►
46E243F4E243E6B1:/components/transmission/download/
Dlna::Server: ►
"46E243F4E243E6B1:/components/transmission/download/" directory ►
added.
```

```
(config-dlna)> no directory ►
46E243F4E243E6B1:/components/transmission/download/
Dlna::Server: ►
"46E243F4E243E6B1:/components/transmission/download/" directory ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dlna directory** command has been introduced. |
| 2.06 | Parameter media-type was added. |

## 3.21.4 dlna display-name

**Description**

Assign custom name to *DLNA* server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dlna)> **display-name** *‹display-name›*

(config-dlna)> **no display-name**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| display-name | *String* | Server name to assign. |

**Example**

```
(config-dlna)> display-name MYDLNA
Dlna::Server: Set a display name.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **dlna display-name** command has been introduced. |

## 3.21.5 dlna interface

**Description**

Set the router interface through which media content will be transmitted. You can enter up to 16 interfaces.

Command with **no** prefix removes the defined interface from the list. If you use no argument, the entire list of interfaces will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config-dlna)> **interface** ‹*interface*›

(config-dlna)> **no interface** ‹*interface*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config-dlna)> interface [Tab]

 Usage template:
        interface {interface}

   Choose:
         GigabitEthernet1
                      ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
 WifiMaster1/AccessPoint2
 WifiMaster0/AccessPoint1
                GuestWiFi
```

```
(config-dlna)> interface GigabitEthernet0/Vlan1
```

```
(config-dlna)> no interface GigabitEthernet0/Vlan1
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dlna interface** command has been introduced. |

## 3.21.6 dlna port

**Description**

Set DLNA server port for HTTP (descriptions, SOAP, media transfer) traffic. By default, value `8200` is used.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dlna)> **port** *‹port›*

(config-dlna)> **no port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | The port number. |

**Example**

```
(config-dlna)> port 8999
Dlna::Server: Port changed to 8999.
```

```
(config-dlna)> no port
Dlna::Server: Port reset to 8200.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dlna port** command has been introduced. |

## 3.21.7 dlna rescan

**Description**

Renew info about files in the directory with media content.

Note: If keyword **full** is specified, deleting and recreating of the content database happens. This may take a long time, so it is recommended to do this when the content database structure is damaged.

**Prefix no**

No

**Change settings**

No

**Multiple input** No

**Synopsis**

(config-dlna)> **rescan** [ **full** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| full | *Keyword* | Specifies if rebuilding of database content is needed. |

**Example**

```
(config-dlna)> rescan
```

```
(config-dlna)> rescan full
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dlna rescan** command has been introduced. |

## 3.21.8 dlna sort

**Description** Set the sort criteria for *DLNA* server files.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dlna)> **sort** ‹*key*› [ ‹*order*› ]

(config-dlna)> **no sort**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | class | Sort by class of media content (audio, video, images). |
| | title | Sort by title. |
| | date | Sort by date. |
| | track | Sort by track. |
| | album | Sort by album. |
| order | ascending | Sort files in ascending order. The parameter is used by default. |
| | descending | Sort files in descending order. |

**Example**

```
(config-dlna)> sort date
Dlna::Server: "date by ascending" sort criterion appended.
```

```
(config-dlna)> sort date ascending
Dlna::Server: "date by ascending" sort criterion appended.
```

```
(config-dlna)> no sort
Dlna::Server: Sort criteria removed.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **dlna sort** command has been introduced. |

# 3.22 dns-proxy

**Description** Access to a group of commands to manage DNS proxy service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-dnspx)`

**Synopsis**

(config)> **dns-proxy**

**Example**

```
(config)> dns-proxy
Core::Configurator: Done.
(config-dnspx)>
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **dns-proxy** command has been introduced. |

## 3.22.1 dns-proxy debug

**Description** Enable debug for the DNS proxy service. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dnspx)> **debug**

(config-dnspx)> **no debug**

**Example**

```
(config-dnspx)> debug
```

```
(config-dnspx)> no debug
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **dns-proxy debug** command has been introduced. |

## 3.22.2 dns-proxy filter assign host preset

**Description**

Assign a filtering preset to a network device.

See the list of presets you can with help of **show dns-proxy filter presets** command.

Command with **no** prefix removes the defined preset for host. If you use no argument, the entire list of presets will be cleared for hosts.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter assign host preset** ‹*host*› ‹*preset*›

(config-dnspx)> **no filter assign host preset** [‹*host*›]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *`MAC address`* | Network device MAC address. |
| `preset` | *`String`* | Preset name. |

**Example**

```
(config-dnspx)> filter assign host preset 04:d4:c1:51:b1:59 ►
opendns-family
Dns::Filter::Public: Associated host "04:d4:c1:51:b1:59" with ►
preset "opendns-family".
```

```
(config-dnspx)> no filter assign host preset 04:d4:c1:51:b1:59
Dns::Filter::Public: Removed preset for host "04:d4:c1:51:b1:59".
```

```
(config-dnspx)> no filter assign host preset
Dns::Filter::Public: Removed presets for hosts.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter assign host preset** command has been introduced. |

## 3.22.3 dns-proxy filter assign host profile

**Description**

Assign a filtering profile to a network device.

Add new profile you can with help of **dns-proxy filter profile** command.

See the list of profiles you can with help of **show dns-proxy filter profiles** command.

Command with **no** prefix removes the defined profile for host. If you use no argument, the entire list of profiles will be cleared for hosts.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter assign host profile** ‹*host*› ‹*profile*›

(config-dnspx)> **no filter assign host profile** [‹*host*›]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *`MAC address`* | Network device MAC address. |
| `profile` | *`String`* | Profile name. |

**Example**

```
(config-dnspx)> filter assign host profile 00:d2:c1:54:bc:59 test
Dns::Filter::Public: Associated host "00:d2:c1:54:bc:59" with ►
profile "test".
```

```
(config-dnspx)> no filter assign host profile 00:d2:c1:54:bc:59
Dns::Filter::Public: Removed profile for host "00:d2:c1:54:bc:59".
```

```
(config-dnspx)> no filter assign host profile
Dns::Filter::Public: Removed profiles for hosts.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter assign host profile** command has been introduced. |

## 3.22.4 dns-proxy filter assign interface preset

**Description**

Assign a filtering preset to all devices on segment (exclude ones with already assigned profiles/presets).

See the list of presets you can with help of **show dns-proxy filter presets** command.

Command with **no** prefix removes the defined preset for interface. If you use no argument, the entire list of presets for interfaces will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dnspx)> **filter assign interface preset** ‹*interface*› ‹*preset*›

(config-dnspx)> **no filter assign interface preset** [ ‹*interface*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Network interface name. Must have a private or protected security level. |
| `preset` | *String* | Preset name. |

**Example**

```
(config-dnspx)> filter assign interface preset Bridge0 ►
quad9-security
Dns::Filter::Public: Associated interface "Bridge0" with preset ►
"quad9-security".
```

```
(config-dnspx)> no filter assign interface preset Bridge0
Dns::Filter::Public: Removed preset for interface "Bridge0".
```

```
(config-dnspx)> no filter assign interface preset
Dns::Filter::Public: Removed presets for interfaces.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter assign interface preset** command has been introduced. |

## 3.22.5 dns-proxy filter assign interface profile

**Description**

Assign a filtering profile to all devices on segment (exclude ones with already assigned profiles/presets).

Add new profile you can with help of **dns-proxy filter profile** command.

See the list of profiles you can with help of **show dns-proxy filter profiles** command.

Command with **no** prefix removes the defined profile for interface. If you use no argument, the entire list of profiles for interfaces will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dnspx)> **filter assign interface profile** ‹*interface*› ‹*profile*›

(config-dnspx)> **no filter assign interface profile** [ ‹*interface*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *`Interface`* | Network interface name. Must have a private or protected security level. |
| `profile` | *`String`* | Profile name. |

**Example**

```
(config-dnspx)> filter assign interface profile ►
GigabitEthernet0/Vlan1 DnsProfile0
Dns::Filter::Public: Associated interface ►
"GigabitEthernet0/Vlan1" with profile "DnsProfile0".
```

```
(config-dnspx)> no filter assign interface profile ►
GigabitEthernet0/Vlan1
Dns::Filter::Public: Removed profile for interface ►
"GigabitEthernet0/Vlan1".
```

```
(config-dnspx)>  no filter assign interface profile
Dns::Filter::Public: Removed profiles for interfaces.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter assign interface profile** command has been introduced. |

## 3.22.6 dns-proxy filter engine

**Description** Selects DNS engine.

Command with **no** prefix disables the feature. Config request will return empty value in case of disabled filter.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dnspx)> **filter engine** ‹*engine*›

(config-dnspx)> **no filter engine**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `engine` | `interceptor` | One of available DNS filtering engines. |

| Argument | Value | Description |
|---|---|---|
| | public | |
| | nextdns | |
| | opkg | |
| | skydns | |

**Example**

```
(config-dnspx)> filter engine interceptor
Dns::Filter::Interceptor: Enabled.
```

```
(config-dnspx)> no filter engine
Dns::Manager: Disabled filter engine.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter engine** command has been introduced. |

## 3.22.7 dns-proxy filter profile

**Description**

Create a custom DNS filtering profile.

Command with **no** prefix removes profile.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter profile** *‹name›*

(config-dnspx)> **no filter profile** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Profile name in reduced form, not more than 32 characters. The maximum number of profiles is 8. |

**Example**

```
(config-dnspx)> filter profile test
Dns::Filter::Public: Created profile "test".
```

```
(config-dnspx)> no filter profile test
Dns::Filter::Public: Removed profile "test".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter profile** command has been introduced. |

## 3.22.8 dns-proxy filter profile description

**Description**

Assign description for DNS filtering profile.

Command with **no** prefix deletes the profile description.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dnspx)> **filter profile** *‹name›* **description** *‹description›*

(config-dnspx)> **no filter profile** *‹name›* **description** *‹description›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *`String`* | Profile name. |
| `description` | *`String`* | Arbitrary description of the profile. |

**Example**

```
(config-dnspx)> filter profile test description MyProfile1
Dns::Filter::Public: Set description to profile "test".
```

```
(config-dnspx)> no filter profile test description
Dns::Filter::Public: Cleared description of profile "test".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter profile description** command has been introduced. |

## 3.22.9 dns-proxy filter profile dns53 upstream

**Description**

Add IP address of the DNS server to user-defined filtering profile. Number of servers are limited to 6.

Command with **no** prefix removes the defined server from the list. If you use no argument, the entire list of servers will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter profile** *‹name›* **dns53 upstream** *‹address›* [*:‹port›*]

(config-dnspx)> **no filter profile** *‹name›* **dns53 description** [ *‹address›* [*:‹port›*] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Profile name. |
| address | *IP address* | IP address of the server. |
| port | *Integer* | The server port. |

**Example**

```
(config-dnspx)> filter profile test dns53 upstream  1.1.1.1
Dns::Filter::Public: Added DNS name server 1.1.1.1 to profile ►
"test".
```

```
(config-dnspx)> no filter profile test dns53 upstream
Dns::Filter::Public: Removed DNS name server  from profile "test".
```

```
(config-dnspx)> no filter profile test dns53 upstream  1.1.1.1
Dns::Filter::Public: Removed DNS name server 1.1.1.1 from profile ►
"test".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter profile dns53 upstream** command has been introduced. |

## 3.22.10 dns-proxy filter profile https upstream

**Description**

Add *DNS over HTTPS* server to user-defined filtering profile. Number of servers are limited to 6.

Command with **no** prefix removes the defined server from the list. If you use no argument, the entire list of servers will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter profile** *‹name›* **https upstream** *‹url›* [ **spki** *‹hash›* ]

(config-dnspx)> **no filter profile** *‹name›* **https description** [ *‹url›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Profile name. |

| Argument | Value | Description |
|---|---|---|
| url | *String* | URL of DNS service. |
| hash | *String* | Hash TLS certificate. |

**Example**

```
(config-dnspx)>  filter profile test https upstream ► 
https://dns.google/resolve
Dns::Filter::Public: Added DNS-over-HTTPS name server ► 
https://dns.google/resolve to profile "test".
```

```
(config-dnspx)> no filter profile test https upstream ► 
https://dns.google/resolve
Dns::Filter::Public: Removed DNS-over-HTTPS name server ► 
https://dns.google/resolve from profile "test".
```

```
(config-dnspx)> no filter profile test https upstream
Dns::Filter::Public: Removed DNS-over-HTTPS name server  from ► 
profile "test".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter profile https upstream** command has been introduced. |

## 3.22.11 dns-proxy filter profile intercept enable

**Description**

Enable transit DNS requests interception for filtering profile. By default, the interception is disabled.

Command with **no** prefix disables the interception for filtering profile.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter profile** ‹*name*›**intercept enable**

(config-dnspx)> **no filter profile** ‹*name*›**intercept enable**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Filtering profile name. |

**Example**

```
(config-dnspx)> filter profile DnsProfile0 intercept enable
Dns::Filter::Public: Enabled intercept in profile "DnsProfile0".
```

```
(config-dnspx)> no filter profile DnsProfile0 intercept enable
Dns::Filter::Public: Disabled intercept in profile "DnsProfile0".
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **dns-proxy filter profile intercept enable** command has been introduced. |

## 3.22.12 dns-proxy filter profile tls upstream

**Description**

Add *DNS over TLS* server to user-defined filtering profile. Number of servers are limited to 6.

Command with **no** prefix removes the defined server from the list. If you use no argument, the entire list of servers will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **filter profile** ‹*name*› **tls upstream** ‹*address*› [ ‹*port*› ] [ **sni** ‹*fqdn*› ] [ **spki** ‹*hash*› ]

(config-dnspx)> **no filter profile** ‹*name*› **tls description** [ ‹*address*› ] [ ‹*port*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Profile name. |
| address | *IP address*<br>*FQDN* | Address of the server. |
| port | *Integer* | The server port. |
| fqdn | *String* | Full domain name. |
| hash | *String* | Hash TLS certificate. |

**Example**

```
(config-dnspx)> filter profile test tls upstream 1.1.1.1 8853 ►
sni cloudflare-dns.com
Dns::Filter::Public: Added DNS-over-TLS name server 1.1.1.1 to ►
profile "test".
```

```
(config-dnspx)> no filter profile test tls upstream 1.1.1.1 8853
Dns::Filter::Public: Removed DNS-over-TLS name server 1.1.1.1 ►
from profile "test".
```

```
(config-dnspx)> no filter profile test tls upstream
Dns::Filter::Public: Removed DNS-over-TLS name server  from ►
profile "test".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **dns-proxy filter profile tls upstream** command has been introduced. |

## 3.22.13 dns-proxy https upstream

**Description**

Add *DNS over HTTPS* server.

Command with **no** prefix removes the defined server from the list. If you use no argument, the entire list of servers will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **https upstream** ‹*url*› [ ‹*format*› ] [ **sni** ‹*hash*› ] [ **on** ‹*interface*› ] [ **domain** ‹*domain*› ]

(config-dnspx)> **no https upstream** [ ‹*url*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `url` | *String* | Custom URL of DNS service. |
| `format` | `dnsm` | The format to represent DNS data. |
| | `json` | |
| `hash` | *String* | Hash TLS certificate. |
| `interface` | *Interface* | Interface name to configure. |
| `domain` | *String* | The domain name. |

**Example**

```
(config-dnspx)> https upstream ► 
https://cloudflare-dns.com/dns-query?ct=application/dns-json json
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ► 
"https://cloudflare-dns.com/dns-query?ct=application/dns-json" ► 
(json) added.
```

```
(config-dnspx)> https upstream https://dns.adguard.com/dns-query ► 
dnsm
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ► 
"https://dns.adguard.com/dns-query" (dnsm) added.
```

```
(config-dnspx)> https upstream https://dns.adguard.com/dns-query ► 
dnsm on ISP
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ► 
"https://dns.adguard.com/dns-query" (dnsm) added.
```

```
(config-dnspx)> https upstream https://my.example.com/dns-query ► 
dnsm domain my.lib
```

```
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ►
"https://my.example.com/dns-query" (dnsm) added.
```

```
(config-dnspx)> no https upstream ►
https://dns.adguard.com/dns-query
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ►
"https://dns.adguard.com/dns-query" deleted.
```

```
(config-dnspx)> no https upstream
Dns::Secure::ManagerDoh: DNS-over-HTTPS name servers cleared.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **dns-proxy https upstream** command has been introduced. |
| 3.08 | The `domain` argument was added. |

## 3.22.14 dns-proxy intercept enable

**Description**

Enable transit DNS requests interception for system profile. By default, the interception is disabled.

Command with **no** prefix disables the interception for system profile.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dnspx)> **intercept enable**

(config-dnspx)> **no intercept enable**

**Example**

```
(config-dnspx)> intercept enable
Dns::Filter::Filter: Enable intercept for system profile.
(config-dnspx)> no intercept enable
Dns::Filter::Filter: Disable intercept for system profile.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **dns-proxy intercept enable** command has been introduced. |
| 3.08 | The **dns-proxy intercept enable** command was removed as obsolete. |
| 3.09 | The **dns-proxy intercept enable** command has been added again. |

## 3.22.15 dns-proxy max-ttl

**Description** Set maximum TTL for DNS proxy cached entries.

Command with **no** prefix removes maximum TTL value.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dnspx)> **max-ttl** *‹max-ttl›*

(config-dnspx)> **no max-ttl**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| max-ttl | *Integer* | The maximum value of TTL. Can take values in the range from 1 to 604800000 milliseconds (1 week). |

**Example**

```
(config-dnspx)> max-ttl 10000
Dns::Proxy: Dns-proxy set max-ttl to 10000.
```

```
(config-dnspx)> no max-ttl
Dns::Proxy: Dns-proxy max-ttl cleared.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **dns-proxy max-ttl** command has been introduced. |

## 3.22.16 dns-proxy proceed

**Description** Set interval between concurrent requests, which is sent by DNS proxy to multiple DNS servers. By default, 500 value is used.

Command with **no** prefix resets proceed to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dnspx)> **proceed** *‹proceed›*

(config-dnspx)> **no proceed**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `proceed` | *Integer* | The value of DNS proxy proceed in milliseconds. Can take values in the range from 1 to `50000`. |

**Example**

```
(config-dnspx)> proceed 600
Dns::Proxy: Dns-proxy set 600 msec. proceed.
```

```
(config-dnspx)> no proceed
Dns::Proxy: Dns-proxy proceed timeout reset.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **dns-proxy proceed** command has been introduced. |

## 3.22.17 dns-proxy rebind-protect

**Description**

Enable protect against *DNS rebinding* attacks. By default, `auto` mode is used.

Command with **no** prefix disables protection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dnspx)> **rebind-protect** (**auto** | **strict**)

(config-dnspx)> **no rebind-protect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `auto` | *Keyword* | Block responses that point to IP addresses belonging to `private` network segments. |
| `strict` | *Keyword* | Block responses that point to IP addresses belonging to subnets listed in the IANA IPv4 Special-Purpose Address Registry[1]. |

**Example**

```
(config-dnspx)> rebind-protect auto
Dns::Manager: Enabled rebind protection.
(config-dnspx)> no rebind-protect
Dns::Manager: Disabled rebind protection.
```

[1] https://www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml

**History**

| Version | Description |
|---|---|
| 3.04 | The **dns-proxy rebind-protect** command has been introduced. |

## 3.22.18 dns-proxy route object-group

**Description**

Create DNS routing based on an FQDN object group with automatic name resolution.

Command with **no** prefix removes the DNS route for the specified interface. If you use no arguments, the entire list of routes will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **route object-group** ‹*group*› (( ‹*gateway*› [ ‹*interface*› ]) | ‹*interface*› ) [ **auto** ] [ **reject** ]

(config-dnspx)> **no route** [ **object-group** ‹*group*› ] [ ‹*interface*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `group` | *String* | The FQDN object group name. |
| `gateway` | *IP address* | IPv4 or IPv6 address of the router in a directly connected network. Can be specified along with the interface name, if it is required to specify **interface ip global** priority. If no interface is specified, the systemd determines it automatically based on the current IP settings. |
| `interface` | *Interface* | Interface full name or an alias.<br><br>If priority **interface ip global** is set on the interface, the route is added to the system table only if there is no other higher priority route with the same address. |
| `auto` | *Keyword* | Allows you to apply the route when specified gateway becomes available. |
| `reject` | *Keyword* | Enable route to use only the selected interface for routing the traffic to the specified destination. If the specified interface is not active, the traffic is not sent via other possible routes. This option works only when using the `auto` option and cannot be applied to the default route. |

**Example**

```
(config-dnspx)> route object-group domain-list0 Wireguard0
Dns::Route::Manager: "domain-list0": added DNS route.

(config-dnspx)> route object-group domain-list0 Wireguard0 auto
Dns::Route::Manager: "domain-list0": updated DNS route.

(config-dnspx)> route object-group domain-list0 10.1.111.12 ►
Wireguard0 auto reject
Dns::Route::Manager: "domain-list0": updated DNS route.

(config-dnspx)> route object-group domain-list0 ►
fe80::11a0:e7ff:fef5:6392 Wireguard0 auto reject
Dns::Route::Manager: "domain-list0": updated DNS route.

(config-dnspx)> route object-group domain-list0 Wireguard0 auto ►
reject
Dns::Route::Manager: "domain-list0": updated DNS route.

(config-dnspx)> no route object-group domain-list0 Wireguard0
Dns::Route::Manager: Deleted DNS route to "domain-list0".

(config-dnspx)> no route
Dns::Route::Manager: Cleared all DNS routes.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **dns-proxy route object-group** command has been introduced. |

## 3.22.19 dns-proxy srr-reset

**Description**

Set DNS proxy send-response rating reset time. By default, value `600000` is used.

Command with **no** prefix resets time reset to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dnspx)> **srr-reset** *‹srr-reset›*

(config-dnspx)> **no srr-reset**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `srr-reset` | *Integer* | The value of time reset in milliseconds. Can take values in the range from `0` to `600000`. |

**Example**

```
(config-dnspx)> srr-reset 111
Dns::Manager: Set send-response rating reset time to 111 ms.
```

```
(config-dnspx)> no srr-reset
Dns::Manager: Reset send-response rating reset time to default.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **dns-proxy srr-reset** command has been introduced. |

## 3.22.20 dns-proxy tls upstream

**Description**

Add *DNS over TLS* server.

Command with **no** prefix removes the defined server from the list. If you use no argument, the entire list of servers will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dnspx)> **tls upstream** ‹*address*› [ ‹*port*› ] [ **sni** ‹*fqdn*› ] [ **spki** ‹*hash*› ] [ **on** ‹*interface*› ] [ **domain** ‹*domain*› ]

(config-dnspx)> **no tls upstream** [ ‹*address*› ] [ ‹*port*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | IP address of the server. |
| port | *Integer* | The server port. |
| fqdn | *String* | Full domain name. |
| hash | *String* | Hash TLS certificate. |
| interface | *Interface* | Interface name to configure. |
| domain | *String* | The domain name. |

**Example**

```
(config-dnspx)> tls upstream 1.1.1.1 853 sni cloudflare-dns.com
Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►
added.
```

```
(config-dnspx)> tls upstream 1.1.1.1 853 sni cloudflare-dns.com ►
on ISP
Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►
added.
```

```
(config-dnspx)> tls upstream 203.0.113.143 853 sni my.example.com ►
domain my.lib
```

```
Dns::Secure::ManagerDot: DNS-over-TLS name server ►
203.0.113.143:853 added.
```

```
(config-dnspx)> no tls upstream 1.1.1.1 853
Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►
deleted.
```

```
(config-dnspx)> no tls upstream
Dns::Secure::ManagerDot: DNS-over-TLS name servers cleared.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **dns-proxy tls upstream** command has been introduced. |
| 3.08 | The `domain` argument was added. |

# 3.23 dpn accept

**Description** Accept user agreement *DPN*. Until the license is accepted, the configurator does not accept any command except READ_ONLY.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **dpn accept**

**Example**

```
(config)> dpn accept
Core::Legal: Accepted dpn version 20200330.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **dpn accept** command has been introduced. |

# 3.24 dyndns profile

**Description** Access to a group of commands to configure DynDns profile. If the profile is not found, the command tries to create it. You can enter up to 32 profiles.

Command with **no** prefix removes DynDns profile.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-dyndns)`

**Synopsis**

(config)> **dyndns profile** *‹name›*

(config)> **no dyndns profile** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The profile name. Maximum name length is 64 characters. |

**Example**

```
(config)>  dyndns profile _WEBADMIN
Core::Configurator: Done.
(config-dyndns)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dyndns profile** command has been introduced. |

## 3.24.1 dyndns profile domain

**Description** Assign permanent domain name to the computer. You need to register this domain name on the site dyndns.com[2] or no-ip.com[3] before execution.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dyndns)> **domain** *‹domain›*

(config-dyndns)> **no domain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | The domain name. Maximum domain name length is 254 characters. |

**Example**

```
(config-dyndns)> domain support.ddns.net
DynDns::Profile: "_WEBADMIN": domain saved..
```

```
(config-dyndns)> no domain
ynDns::Profile: "_WEBADMIN" domain cleared.
```

[2] http:\\www.dyndns.com
[3] http:\\www.no-ip.com

**History**

| Version | Description |
|---|---|
| 2.00 | The **dyndns profile domain** command has been introduced. |

## 3.24.2 dyndns profile password

**Description** Set password for access via DynDns.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dyndns)> **password** ‹*password*›

(config-dyndns)> **no password**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | The password for authentication. Maximum password length is 64 characters. |

**Example**

```
(config-dyndns)> password 123456789
DynDns::Profile: "_WEBADMIN": password saved.
```

```
(config-dyndns)> no password
DynDns::Profile: "_WEBADMIN" password cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dyndns profile password** command has been introduced. |

## 3.24.3 dyndns profile send-address

**Description** Enable the necessity of connection IP address indication in DynDns request.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dyndns)> **send-address**

(config-dyndns)> **no send-address**

**Example**

```
(config-dyndns)> send-address
DynDns::Profile: Send address is enabled.
```

```
(config-dyndns)> no send-address
DynDns::Profile: Send address is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **dyndns profile send-address** command has been introduced. |

## 3.24.4 dyndns profile type

**Description**

Set DynDns type depending on the site where the domain name was registered.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dyndns)> **type** *‹type›*

(config-dyndns)> **no type**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | dyndns | The domain name is registered on the account.dyn.com[4] site. |
| | noip | The domain name is registered on the noip.com[5] site. |
| | opendns | The domain name is registered on the opendns.com[6] site. |
| | dnsomatic | The domain name is registered on the dnsomatic.com[7] site. |
| | anydns | The domain name is registered on the anydns.info[8] site. |
| | dnshome | The domain name is registered on the dnshome.de[9] site. |
| | duckdns | The domain name is registered on the duckdns.org[10] site. |

[4] https://account.dyn.com
[5] https://www.noip.com
[6] https://www.opendns.com
[7] https://dnsomatic.com
[8] https://www.anydns.info
[9] https://www.dnshome.de
[10] https://www.duckdns.org

| Argument | Value | Description |
|---|---|---|
| | `dyndnsfree` | The domain name is registered on the dyndnsfree.de[11] site. |
| | `desec` | The domain name is registered on the desec.io[12] site. |
| | `custom` | The domain name is registered on the other site (defined with dyndns profile url command). |

**Example**

```
(config-dyndns)> type noip
DynDns::Profile: "_WEBADMIN": type saved.
```

```
(config-dyndns)> no type
DynDns::Profile: "_WEBADMIN": type cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dyndns profile type** command has been introduced. |

## 3.24.5 dyndns profile update-interval

**Description**

Set the address update interval for DynDns.

Command with **no** prefix cancels the ability to update.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dyndns)> **update-interval** *‹days›* **days [** *‹hours›* **hours ]** **[** *‹minutes›* **minutes ] [** *‹seconds›* **seconds ]**

(config-dyndns)> **no update-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `days` | *Integer* | Interval time in days. |
| `hours` | *Integer* | Interval time in hours. |
| `minutes` | *Integer* | Interval time in minutes. |
| `seconds` | *Integer* | Interval time in seconds. |

[11] https://www.dyndnsfree.de
[12] https://desec.io

**Example**

```
(config-dyndns)> update-interval 5 days 5 hours 5 minutes 5 ► seconds
DynDns::Profile: Interval is set to 450305 seconds.
```

```
(config-dyndns)> update-interval 5 days
DynDns::Profile: Interval is set to 432000 seconds.
```

```
(config-dyndns)> no update-interval
DynDns::Profile: Periodic registration disabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **dyndns profile update-interval** command has been introduced. |

## 3.24.6 dyndns profile url

**Description** Set dynamic DNS service custom URL.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dyndns)> **url** *‹url›*

(config-dyndns)> **no url**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| url | *String* | Custom URL of DNS service. |

**Example**

```
(config-dyndns)> url http://members.dyndns.org/nic/update
DynDns::Profile: "_WEBADMIN": URL saved.
```

```
(config-dyndns)> no url
DynDns::Profile: "_WEBADMIN" URL cleared.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **dyndns profile url** command has been introduced. |

## 3.24.7 dyndns profile username

**Description** Set username for access via DynDns.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dyndns)> **username** *‹username›*

(config-dyndns)> **no username**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| username | *String* | Username for authentication. Maximum name length is 64 characters. |

**Example**

```
(config-dyndns)> username test@gmail.com
DynDns::Profile: "_WEBADMIN": username saved.
```

```
(config-dyndns)> no username
DynDns::Profile: "_WEBADMIN" username cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **dyndns profile username** command has been introduced. |

# 3.25 easyconfig check

**Description** Access to a group of commands to configure Internet access check. To check Internet access, first requests to the default gateway are sent. If the answer is received, then the remote hosts specified in the settings are polled. The duration and frequency of requests are also specified in the settings. If all the checks have been passed, then the Internet access is provided.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (ezconfig-check)

**Synopsis**

(config)> **easyconfig check**

**Example**

```
(config)> easyconfig check
(ezconfig-check)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **easyconfig check** command has been introduced. |

## 3.25.1 easyconfig check exclude-gateway

**Description** Disable default gateway check. By default, the setting is enabled.

Command with **no** prefix enables the check back.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(ezconfig-check)> **exclude-gateway**

(ezconfig-check)> **no exclude-gateway**

**Example**

```
(ezconfig-check)> exclude-gateway
Network::InternetChecker: Gateway checking disabled.
```

```
(ezconfig-check)> no exclude-gateway
Network::InternetChecker: Gateway checking enabled.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **easyconfig check exclude-gateway** command has been introduced. |

## 3.25.2 easyconfig check max-fails

**Description** Specify the number of consecutive failed requests to the cloud service to conclude that the internet is unavailable. By default, value 3 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(ezconfig-check)> **max-fails** *‹count›*

(ezconfig-check)> **no max-fails**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| count | *Integer* | Amount of failed requests. Can take values in the range from 2 to 8 inclusively. |

**Example**

```
(ezconfig-check)> max-fails 5
Network::InternetChecker: A new maximum fail count set to 5.
```

```
(ezconfig-check)> no max-fails
Network::InternetChecker: The maximum fail count reset to the ►
default value (3).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **easyconfig check max-fails** command has been introduced. |

## 3.25.3 easyconfig check period

**Description** Set a period of checking. By default, the value 15 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(ezconfig-check)> **period** *‹period›*

(ezconfig-check)> **no period**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| period | *Integer* | Check interval in seconds. Can take values in the range from 10 to 60 inclusively. |

**Example**

```
(ezconfig-check)> period 20
Network::InternetChecker: A new check period set to 20 seconds.
```

```
(ezconfig-check)> no period
Network::InternetChecker: Check period reset to default (15 ►
seconds).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **easyconfig check period** command has been introduced. |

# 3.26 easyconfig disable

**Description** Disable initial setup wizard. By default, the setting is enabled.

Command with **no** prefix enables initial setup wizard.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **easyconfig disable**

(config)> **no easyconfig disable**

**Example**

```
(config)> easyconfig disable
EasyConfig::Manager: Disabled.
```

```
(config)> no easyconfig disable
EasyConfig::Manager: Enabled.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **easyconfig disable** command has been introduced. |

# 3.27 eula accept

**Description** Accept user agreement *EULA*. Until the license is accepted, the configurator does not accept any command except READ_ONLY.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **eula accept**

**Example**

```
(config)> eula accept
Core::Eula: "20181001" license accepted.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **eula accept** command has been introduced. |

# 3.28 igmp-proxy

**Description** Access to a group of commands to configure *IGMP*.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(igmp-proxy)`

**Synopsis**

(config)> **igmp-proxy**

**Example**

```
(config)> igmp-proxy
(igmp-proxy)>
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **igmp-proxy** command has been introduced. |

## 3.28.1 igmp-proxy fast-leave

**Description**

Enable the *IGMP* fast-leave to immediately remove a port from the forwarding entry for a multicast group when the port receives a leave message.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(igmp-proxy)> **fast-leave**

(igmp-proxy)> **no fast-leave**

**Example**

```
(igmp-proxy)> fast-leave
Igmp::Proxy: Enabled Fast Leave.
```

```
(igmp-proxy)> no fast-leave
Igmp::Proxy: Disabled Fast Leave.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **igmp-proxy fast-leave** command has been introduced. |

## 3.28.2 igmp-proxy force

**Description**

Force old version of *IGMP*. By default, the setting is disabled and the protocol version is selected in automatic mode.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(igmp-proxy)> **force** *‹protocol›*

(igmp-proxy)> **no force**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | igmp-v1 | Apply filtering to incoming packets. |
| | igmp-v2 | Apply filtering to outgoing packets. |

**Example**

```
(igmp-proxy)> force igmp-v1
Igmp::Proxy: Forced protocol: igmp-v1.
```

```
(igmp-proxy)> no force
Igmp::Proxy: Enabled IGMP auto-detect.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **igmp-proxy force** command has been introduced. |

# 3.29 igmp-snooping disable

**Description**

Disable IGMP snooping. Command is available in Client, Repeater or AP modes only.

Command with **no** prefix enables IGMP snooping.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **igmp-snooping disable**

**Example**

```
(config)> igmp-snooping disable
Igmp::Snooping: Disabled.
```

```
(config)> no igmp-snooping disable
Igmp::Snooping: Enabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **igmp-snooping disable** command has been introduced. |

# 3.30 interface

**Description**

Access to a group of commands to configure the selected interface. If the interface is not found, the command tries to create it.

The interface name specifies its class that inherits certain properties, see the diagrams in the Appendix. The commands work in relation to classes. The corresponding interface class is specified in the command description.

Command with **no** prefix deletes the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-if)`

**Synopsis**

(config)> **interface** *‹name›*

(config)> **no interface** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config)> interface [Tab]

Usage template:
        interface {name}

   Choose:
                      Pvc
                     Vlan
              CdcEthernet
                 UsbModem
           RealtekEthernet
              AsixEthernet
                   Davicom
                      Yota
                    Bridge
                     PPPoE
                 MwsMobile
              SSTPEthernet
                     SSTP
                     PPTP
                     L2TP
                  ZeroTier
                 Wireguard
                     Proxy
```

```
                  OpkgTap
                  OpkgTun
                  OpenVPN
              OpenConnect
                     IPIP
                     XFRM
                      IKE
                      Gre
                     EoIP
          TunnelSixInFour
                    Dummy
                     Clat
                     MapT
                  DsLite
          TunnelFourInSix
                   Chilli
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface** command has been introduced. |
| 5.00 | Example has been updated. |

## 3.30.1 interface authentication chap

**Description**

Enable *CHAP* authentication support.

Command with **no** prefix disables *CHAP*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **authentication chap**

(config-if)> **no authentication chap**

**Example**

```
(config-if)> authentication chap
Network::Interface::Supplicant: "PPTP0": added authentication: ►
CHAP.
```

```
(config-if)> no authentication chap
Network::Interface::Supplicant: "PPTP0": removed authentication: ►
CHAP.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication chap** command has been introduced. |

## 3.30.2 interface authentication eap-md5

**Description** Enable EAP-MD5 authentication support.

Command with **no** prefix disables EAP-MD5.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication eap-md5**

(config-if)> **no authentication eap-md5**

**Example**

```
(config-if)> authentication eap-md5
Network::Interface::Ethernet: "GigabitEthernet1": configured ►
authentication: EAP-MD5.
```

```
(config-if)> no authentication eap-md5
Network::Interface::Supplicant: "GigabitEthernet1": removed ►
authentication: EAP-MD5.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication eap-md5** command has been introduced. |

## 3.30.3 interface authentication eap-mschapv2

**Description** Enable EAP-MSCHAPv2 authentication support.

Command with **no** prefix disables EAP-MSCHAPv2, MS-CHAPv2.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication eap-mschapv2**

(config-if)> **no authentication eap-mschapv2**

**Example**

```
(config-if)> authentication eap-mschapv2
Network::Interface::Supplicant: "IKE0": authentication is ►
unchanged.
```

```
(config-if)> no authentication eap-mschapv2
Network::Interface::Supplicant: "IKE0": removed authentication: ►
EAP-MSCHAPv2, MS-CHAPv2.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **interface authentication eap-mschapv2** command has been introduced. |

## 3.30.4 interface authentication eap-ttls

**Description**

Enable EAP-TTLS authentication support.

Command with **no** prefix disables EAP-TTLS.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **authentication eap-ttls**

(config-if)> **no authentication eap-ttls**

**Example**

```
(config-if)> authentication eap-ttls
Network::Interface::Ethernet: "GigabitEthernet1": configured ►
authentication: EAP-TTLS.
```

```
(config-if)> no authentication eap-ttls
Network::Interface::Supplicant: "GigabitEthernet1": removed ►
authentication: EAP-TTLS.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication eap-ttls** command has been introduced. |

## 3.30.5 interface authentication identity

**Description** Specify user name for device authentication on the remote system. Equally often used on PPTP, PPPoE, L2TP and Proxy connections, as well as for UsbQmi interfaces.

Command with **no** prefix deletes the previously specified user name.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication identity** *‹identity›*

(config-if)> **no authentication identity**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| identity | *String* | User name for authentication. |

**Example**

```
(config-if)>  authentication identity mylogin
Network::Interface::Supplicant: "PPTP0": identity saved.
```

```
(config-if)> no authentication identity
Network::Interface::Supplicant: "PPTP0": identity cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication identity** command has been introduced. |

## 3.30.6 interface authentication mschap

**Description** Enable MS-CHAP authentication support.

Command with **no** prefix disables MS-CHAP.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication mschap**

(config-if)> **no authentication mschap**

**Example**

```
(config-if)> authentication mschap
Network::Interface::Supplicant: "PPTP0": added authentication: ►
MS-CHAP.
```

```
(config-if)> no authentication mschap
Network::Interface::Supplicant: "PPTP0": removed authentication: ►
MS-CHAP.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication mschap** command has been introduced. |

## 3.30.7 interface authentication mschap-v2

**Description** Enable MS-CHAPv2 authentication support.

Command with **no** prefix disables MS-CHAPv2.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication mschap-v2**

(config-if)> **no authentication mschap-v2**

**Example**

```
(config-if)> authentication mschap-v2
Network::Interface::Supplicant: "PPTP0": authnentication is ►
unchanged.
```

```
(config-if)> no authentication mschap-v2
Network::Interface::Supplicant: "PPTP0": removed authentication: ►
MS-CHAPv2.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication mschap-v2** command has been introduced. |

## 3.30.8 interface authentication pap

**Description** Enable *PAP* authentication support.

Command with **no** prefix disables *PAP*.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication pap**

(config-if)> **no authentication pap**

**Example**

```
(config-if)> authentication pap
Network::Interface::Supplicant: "PPTP0": added authentication: ►
PAP.
```

```
(config-if)> no authentication pap
Network::Interface::Supplicant: "PPTP0": removed authentication: ►
PAP.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication pap** command has been introduced. |

## 3.30.9 interface authentication password

**Description** Specify password for device authentication on the remote system. Equally often used on PPTP, PPPoE, L2TP and Proxy connections.

Command with **no** prefix deletes the password.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **authentication password** *‹password›*

(config-if)> **no authentication password**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | Password for authentication. |

**Example**

```
(config-if)> authentication password Aihoi2cha1
Network::Interface::Supplicant: "PPTP0": password saved.
```

```
(config-if)> no authentication password
Network::Interface::Supplicant: "PPTP0": password cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication password** command has been introduced. |

## 3.30.10 interface authentication peap

**Description**

Enable *EAP-PEAP* authentication support.

Command with **no** prefix disables *EAP-PEAP*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **authentication peap**

(config-if)> **no authentication peap**

**Example**

```
(config-if)> authentication peap
Network::Interface::Ethernet: "WifiMaster1/AccessPoint0": ►
configured authentication: PEAP.
```

```
(config-if)> no authentication peap
Network::Interface::Supplicant: "WifiMaster1/AccessPoint0": ►
removed authentication: PEAP.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface authentication peap** command has been introduced. |

## 3.30.11 interface authentication shared

**Description**

Enable authentication with a *shared key*. This mode is used only in conjunction with *WEP* encryption. *Shared keys* are specified by **interface encryption key** command.

Command with **no** prefix turns authentication to open mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **authentication shared**

(config-if)> **no authentication shared**

**Example**

```
(config-if)> authentication shared
Network::Interface::Rtx::AccessPoint: "WifiMaster1/AccessPoint0": ►
shared authentication mode enabled.
```

```
(config-if)> no authentication shared
Network::Interface::Rtx::AccessPoint: "WifiMaster1/AccessPoint0": ►
shared authentication mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication shared** command has been introduced. |

## 3.30.12 interface authentication wpa-psk

**Description** Specify the pre-agreed key for authentication via WPA-PSK protocol. It is possible to specify the key as a 256-bit hexadecimal number or as a string of ASCII-characters. In the second case, the string is used as a code phrase to generate the key (passphrase).

Command with **no** prefix removes setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **authentication wpa-psk** *‹psk›*

(config-if)> **no authentication wpa-psk**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| psk | *String* | Pre-agreed key in the form of a 256-bit hexadecimal number, which consists of 64 hexadecimal digits, or in the form of ASCII string of 8 to 63 characters length. |

**Example**

```
(config-if)> authentication wpa-psk Eethaich9z
Network::Interface::Wifi: "WifiMaster1/AccessPoint0": WPA PSK set.
```

```
(config-if)> no authentication wpa-psk
Network::Interface::Wifi: "WifiMaster1/AccessPoint0": WPA PSK ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface authentication wpa-psk** command has been introduced. |

## 3.30.13 interface auto-ssid

**Description**

Generate a custom wireless network name (SSID) based on the router's MAC address.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WifiMaster

**Synopsis**

(config-if)> **auto-ssid** ‹*template*› ‹*prefix*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `template` | `mac4` | Template name — the last 4 or 6 digits of the MAC address to be added to the `prefix`. |
| | `mac6` | |
| `prefix` | *String* | Custom string at the user's choice. |

**Example**

```
(config-if)> auto-ssid mac4 12313213
Network::Interface::AccessPoint: "WifiMaster0/AccessPoint0": ►
generated SSID "12313213207E".
```

```
(config-if)> auto-ssid mac6 12313213
Network::Interface::AccessPoint: "WifiMaster0/AccessPoint0": ►
generated SSID "1231321369207E".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface auto-ssid** command has been introduced. |

## 3.30.14 interface backhaul

**Description**

Enable support of *VLAN* for wireless connection between routers Keenetic in the `trunk` mode. By default, setting is disabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **backhaul**

(config-if)> **no backhaul**

**Example**

```
(config-if)> backhaul
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint1": ►
backhaul mode enabled.
```

```
(config-if)> no backhaul
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint1": ►
backhaul mode disabled.
```

**History**

| Version | Description |
|---|---|
| 3.02 | The **interface backhaul** command has been introduced. |

## 3.30.15 interface band-steering

**Description** Enable *Band Steering* for AP 5 GHz. By default, the setting is enabled.

For correct *Band Steering* operation it is necessary to fulfill the following conditions:

- access points 2,4 GHz and 5 GHz are enabled both
- they have the same SSID's
- they have the same security settings (encryption type, key value, etc.)

Command with **no** prefix disables the *Band Steering*.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **band-steering**

(config-if)> **no band-steering**

**Example**

```
(config-if)> band-steering
Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►
enabled.
```

```
(config-if)> no band-steering
Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **interface band-steering** command has been introduced. |

## 3.30.16 interface band-steering preference

**Description**

Set the band to give a preference in *Band Steering* technology. By default, the value is not defined.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFiMaster

**Synopsis**

(config-if)> **band-steering preference** *‹band›*

(config-if)> **no band-steering preference**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | 2 | 2,4 GHz band. |
| | 5 | 5 GHz band. |

**Example**

```
(config-if)> band-steering preference 5
Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►
preference is 5 GHz.
```

```
(config-if)> no band-steering preference
Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►
preference disabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **interface band-steering preference** command has been introduced. |

## 3.30.17 interface beamforming explicit

**Description**

Enable explicit *Beamforming* (eBF) for AP 5 GHz and AP 2.4 GHz. The feature can be used for 802.11ac clients only and is incompatible with other standards. By default, the setting is enabled.

Command with **no** prefix disables the explicit *Beamforming*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFiMaster

**Synopsis**

(config-if)> **beamforming explicit** [*mu-mimo*]

(config-if)> **no beamforming explicit**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mu-mimo | *Keyword* | Control MU-MIMO flags for explicit Beamforming. Enable control of data flow for multiple users. |

**Example**

```
(config-if)> beamforming explicit
Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ►
beamforming and SU-MIMO enabled.
```

```
(config-if)> beamforming explicit mu-mimo
Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ►
beamforming and MU-MIMO enabled.
```

```
(config-if)> no beamforming explicit
Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ►
beamforming and MIMO disabled.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface beamforming explicit** command has been introduced. |

## 3.30.18 interface beamforming implicit

**Description**

Enable implicit *Beamforming* (iBF) for AP 5 GHz and AP 2.4 GHz. By default, the setting is disabled.

Command with **no** prefix disables the implicit *Beamforming*.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **beamforming implicit**

(config-if)> **no beamforming implicit**

**Example**

```
(config-if)>  beamforming implicit
Network::Interface::Rtx::WifiMaster: "WifiMaster1": implicit ►
beamforming enabled.
```

```
(config-if)> no beamforming implicit
Network::Interface::Rtx::WifiMaster: "WifiMaster1": implicit ►
beamforming disabled.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface beamforming implicit** command has been introduced. |

## 3.30.19 interface cable-diagnostics

**Description** Enable a diagnostic procedure on a port. Multiple starts of diagnostics on the same port ignored with a successfull result until the running precedure finish. Detailed info about connection progress is saved to the system log.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **cable-diagnostics**

**Example**

```
(config-if)> cable-diagnostics
Network::Interface::XGigabitEthernet: "XGigabitEthernet0/0": ►
started a cable diagnostics.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **interface cable-diagnostics** command has been introduced. |

## 3.30.20 interface ccp

**Description**

Enable *CCP* support during establishing connection.

Command with **no** prefix disables *CCP*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **ccp**

(config-if)> **no ccp**

**Example**

```
(config-if)> ccp
CCP enabled.
```

```
(config-if)> no ccp
CCP disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ccp** command has been introduced. |

## 3.30.21 interface channel

**Description**

Set the radio channel (broadcasting frequency band) for wireless interfaces. Wi-Fi interfaces take integers from 1 to 14 (frequency range from 2.412 GHz to 2.484 GHz) and from 36 to 165 (frequency range from 5.180 GHz to 5.825 GHz) as channel numbers. By default, `auto` value is used.

Command with **no** prefix resets to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Radio

**Synopsis**

(config-if)> **channel** *‹channel›*

(config-if)> **no channel**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `channel` | `number` | Number of radio channel. |

| Argument | Value | Description |
|---|---|---|
| | auto | Radio channel number is detected automatically. |

**Example**

```
(config-if)> channel 8
Network::Interface::Rtx::WifiMaster: "WifiMaster0": channel set ►
to 8.
```

```
(config-if)> channel 36
Network::Interface::Rtx::WifiMaster: "WifiMaster1": channel set ►
to 36.
```

```
(config-if)> no channel
Network::Interface::Rtx::WifiMaster: "WifiMaster0": auto channel ►
mode set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface channel** command has been introduced. |

## 3.30.22 interface channel auto-rescan

**Description**

Set a schedule for radio channel automatic scanning. By default, the setting is disabled.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Radio

**Synopsis**

(config-if)> **channel auto-rescan** [ *‹hh›*:*‹mm›* ]**interval** *‹interval›*

(config-if)> **no channel auto-rescan**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interval | 1 | Rescan interval in hours. |
| | 6 | |
| | 12 | |
| | 24 | |

**Example**

```
(config-if)> channel auto-rescan interval 1
Network::Interface::Rtx::WifiMaster: "WifiMaster0": scheduled ►
auto rescan, interval 1 hour.
```

```
(config-if)> no channel auto-rescan
Network::Interface::Rtx::WifiMaster: "WifiMaster0": auto rescan ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **interface channel auto-rescan** command has been introduced. |

## 3.30.23 interface channel width

**Description** Set the bandwidth for a specified channel. By default, `40-below` value is used.

Command with **no** prefix resets to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if)> **channel width** *‹width›*

(config-if)> **no channel width**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `width` | `20` | Set bandwidth equal to 20 MHz. |
| | `40-above` | Expand the bandwidth up to 40 MHz using next channel. |
| | `40-below` | Expand the bandwidth up to 40 MHz using previous channel. |
| | `80-plus-80` | Expand the bandwidth up to 80+80 MHz. |
| | `160` | Expand the bandwidth up 160 MHz. |

**Example**

```
(config-if)> channel width 20
Network::Interface::Rtx::WifiMaster: "WifiMaster0": channel ►
bandwidth setting applied.
```

```
(config-if)> no channel width
Network::Interface::Rtx::WifiMaster: "WifiMaster0": channel ►
bandwidth settings reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **interface channel width** command has been introduced. |

## 3.30.24 interface chilli coaport

**Description** Set *UDP* port to which disconnect requests from the *RADIUS* client are sent.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli coaport** *‹coaport›*

(config-if)> **no chilli coaport**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| coaport | *Integer* | The *CoA* port number. |

**Example**

```
(config-if)> chilli coaport 3940
Chilli::Interface: "Chilli0": coaport set to 3940.
```

```
(config-if)> no chilli coaport
Chilli::Interface: "Chilli0": coaport reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli coaport** command has been introduced. |

## 3.30.25 interface chilli dhcpif

**Description** Assign Chilli interface to the system network interface.

Command with **no** prefix cancels the association.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli dhcpif** *‹dhcpif›*

(config-if)> **no chilli dhcpif**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dhcpif | *Interface* | Full interface name or an alias. |

**Example**

```
(config-if)> chilli dhcpif Bridge1
Chilli::Interface: "Chilli0": bound to Bridge1.
```

```
(config-if)> no chilli dhcpif
Chilli::Interface: "Chilli0": unbound.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli dhcpif** command has been introduced. |

## 3.30.26 interface chilli dns

**Description**

Set IP address of the DNS server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli dns** *‹dns1›* [ *‹dns2›* ]

(config-if)> **no chilli dns**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(config-if)> chilli dns 8.8.8.8 1.1.1.1
Chilli::Interface: "Chilli0": DNS servers set to 8.8.8.8, 1.1.1.1.
```

```
(config-if)> no chilli dns
Chilli::Interface: "Chilli0": DNS servers reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli dns** command has been introduced. |

## 3.30.27 interface chilli lease

**Description** Configure the lease time of the connected client IP addresses. By default, the value `3600` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli lease** *‹lease›*

(config-if)> **no chilli lease**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `lease` | *`Integer`* | Lease time in seconds. The maximum value is 259200. |

**Example**

```
(config-if)> chilli lease 1000
Chilli::Interface: "Chilli0": lease has been set 1000 seconds.
```

```
(config-if)> no chilli lease
Chilli::Interface: "Chilli0": lease has been reset to default ►
(3600 seconds).
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface chilli lease** command has been introduced. |

## 3.30.28 interface chilli login

**Description** Configure authorization to connect to the *RADIUS* server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli login** *‹mac›* [ **username** *‹username›* **password** *‹password›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address for authentication. |
| username | *String* | Username for authentication. |
| password | *String* | The password for authentication. |

**Example**

```
(config-if)> interface Chilli0 chilli login 00:01:02:03:04:05
Chilli::Interface: "Chilli0": sent login request for ►
00:01:02:03:04:05
```

```
(config-if)> interface Chilli0 chilli login 00:01:02:03:04:05 ►
username test password test
Chilli::Interface: "Chilli0": sent login request for ►
00:01:02:03:04:05
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **interface chilli login** command has been introduced. |

## 3.30.29 interface chilli logout

**Description** Force the MAC address of the specified client to be disabled.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli logout** (‹*mac*› | **all**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of the registered client. |
| all | Keyword | Disable all MAC addresses. |

**Example**

```
(config-if)> chilli logout 64:a2:22:51:b4:11
```

```
(config-if)> chilli logout all
Chilli::Interface: "Chilli0": service restarted.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli logout** command has been introduced. |

## 3.30.30 interface chilli macauth

**Description** Enable user authentication option based on MAC address detection only.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli macauth**

(config-if)> **no chilli macauth**

**Example**

```
(config-if)>  chilli macauth
Chilli::Interface: "Chilli0": macauth set to "".
```

```
(config-if)> no chilli macauth
Chilli::Interface: "Chilli0": macauth cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli macauth** command has been introduced. |

## 3.30.31 interface chilli macpasswd

**Description** Set the password for MAC address authentication.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli macpasswd** *‹macpasswd›*

(config-if)> **no chilli macpasswd**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| macpasswd | *String* | The user password. |

**Example**

```
(config-if)> chilli macpasswd 1234567890
Chilli::Interface: "Chilli0": macpasswd set to "1234567890".
```

```
(config-if)> no chilli macpasswd
Chilli::Interface: "Chilli0": macpasswd cleared.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface chilli macpasswd** command has been introduced. |

## 3.30.32 interface chilli nasip

**Description**

Set *RADIUS* option NAS IP Address. Allows you to configure and use an arbitrary IP address.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli nasip** (*‹address›* | **interface** *‹wan›* | **auto**)

(config-if)> **no chilli nasip**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Specific IP address of the server. |
| wan | *Interface* | IP address from the specified WAN interface. |
| auto | *Keyword* | IP address from the current WAN interface. |

**Example**

```
(config-if)> chilli nasip 203.0.113.187
Chilli::Interface: "Chilli0": NAS IP address set to ►
"203.0.113.187".
```

```
(config-if)> chilli nasip interface ISP
Chilli::Interface: "Chilli0": NAS IP interface set to ►
"GigabitEthernet1".
```

```
(config-if)> chilli nasip auto
Chilli::Interface: "Chilli0": NAS IP address set to auto.
```

```
(config-if)> no chilli nasip
Chilli::Interface: "Chilli0": NAS IP address cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli nasip** command has been introduced. |

## 3.30.33 interface chilli nasmac

**Description**

Set MAC address for *RADIUS* Called-Station-ID attribute. By default, MAC address of the guest network is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli nasmac** *‹mac›*

(config-if)> **no chilli nasmac**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | New MAC address for RADIUS Called-Station-ID. |

**Example**

```
(config-if)> chilli nasmac  50:ff:20:00:1e:86
Chilli::Interface: "Chilli0": NAS MAC address set to ►
"50:ff:20:00:1e:86".
```

```
(config-if)> no chilli nasmac
Chilli::Interface: "Chilli0": NAS MAC address cleared.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface chilli nasmac** command has been introduced. |

## 3.30.34 interface chilli profile

**Description**

Assign Chilli profile to the Chilli interface.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli profile** *‹profile›*

(config-if)> **no chilli profile**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| profile | *String* | *RADIUS* server profile name. |

**Example**

```
(config-if)> chilli profile Wi-Fi_SYSTEM
Chilli::Interface: "Chilli0": assigned profile: Wi-Fi.
```

```
(config-if)> no chilli profile
Chilli::Interface: "Chilli0": profile cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli profile** command has been introduced. |

## 3.30.35 interface chilli radius

**Description** Add the *RADIUS* server addresses.

Command with **no** prefix removes the servers.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli radius** *‹server1›* [ *‹server2›* ]

(config-if)> **no chilli radius**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| server1 | *String* | Address of first *RADIUS* server. |
| server2 | *String* | Address of second *RADIUS* server. |

**Example**

```
(config-if)> chilli radius radius.example.net radius2.example.net
Chilli::Interface: "Chilli0": RADIUS servers set to ►
radius.example.net, radius2.example.net.
```

```
(config-if)> no chilli radius
Chilli::Interface: "Chilli0": RADIUS servers cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli radius** command has been introduced. |

## 3.30.36 interface chilli radiusacctport

**Description**

Set accounting UDP-port of *RADIUS* server. By default, value 1813 is used.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli radiusacctport** ‹*radiusacctport*›

(config-if)> **no chilli radiusacctport**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiusacctport | *String* | The port number. |

**Example**

```
(config-if)> chilli radiusacctport 1819
Chilli::Interface: "Chilli0": radiusacctport set to 1819.
```

```
(config-if)> no chilli radiusacctport
Chilli::Interface: "Chilli0": radiusacctport reset to default.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface chilli radiusacctport** command has been introduced. |

## 3.30.37 interface chilli radiusauthport

**Description**

Set authentication UDP-port of *RADIUS* server. By default, value 1812 is used.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli radiusauthport** ‹*radiusauthport*›

(config-if)> **no chilli radiusauthport**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiusauthport | *String* | The port number. |

**Example**

```
(config-if)> chilli radiusauthport 1820
Chilli::Interface: "Chilli0": radiusauthport set to 1820.
```

```
(config-if)> no chilli radiusauthport
Chilli::Interface: "Chilli0": radiusauthport reset to default.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface chilli radiusauthport** command has been introduced. |

## 3.30.38 interface chilli radiuslocationid

**Description**

Set location identifier of *RADIUS* server. It should be in the format `isocc=, cc=, ac=, network=`.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli radiuslocationid** ‹*radiuslocationid*›

(config-if)> **no chilli radiuslocationid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiuslocationid | *String* | Location identifier value. |

**Example**

```
(config-if)> chilli radiuslocationid ►
isocc=,cc=,ac=,network=WiFiSYSTEM,
Chilli::Interface: "Chilli0": radiuslocationid set to ►
"isocc=,cc=,ac=,network=WiFiSYSTEM,".
```

```
(config-if)> no chilli radiuslocationid
Chilli::Interface: "Chilli0": radiuslocationid cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli radiuslocationid** command has been introduced. |

## 3.30.39 interface chilli radiuslocationname

**Description**

Set location name of *RADIUS* server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli radiuslocationname** ‹*radiuslocationname*›

(config-if)> **no chilli radiuslocationname**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiuslocationname | *String* | Location name. |

**Example**

```
(config-if)> chilli radiuslocationname MyHotSpot
Chilli::Interface: "Chilli0": radiuslocationname set to ►
"MyHotSpot".
```

```
(config-if)> no chilli radiuslocationname
Chilli::Interface: "Chilli0": radiuslocationname cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli radiuslocationname** command has been introduced. |

## 3.30.40 interface chilli radiusnasid

**Description**

Set Network Access Server identifier.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli radiusnasid** ‹*radiusnasid*›

(config-if)> **no chilli radiusnasid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiusnasid | *String* | NAS identifier. |

**Example**

```
(config-if)> chilli radiusnasid example_12
Chilli::Interface: "Chilli0": radiusnasid set to "example_12".
```

```
(config-if)> no chilli radiusnasid
Chilli::Interface: "Chilli0": radiusnasid cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli radiusnasid** command has been introduced. |

## 3.30.41 interface chilli radiussecret

**Description** Set shared secret for both *RADIUS* servers.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli radiussecret** ‹*radiussecret*›

(config-if)> **no chilli radiussecret**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| radiussecret | *String* | A secret value. |

**Example**

```
(config-if)> chilli radiussecret 12df34fd
Chilli::Interface: "Chilli0": radiussecret set to "12df34fd".
```

```
(config-if)>  no chilli radiussecret
Chilli::Interface: "Chilli0": radiussecret cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli radiussecret** command has been introduced. |

## 3.30.42 interface chilli uamallowed

**Description**

Specify the resource to which the client has access without first authenticating.

Command with **no** prefix removes the resource from the list. If you use no argument, the entire list of resources will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli uamallowed** *‹uamallowed›*

(config-if)> **no chilli uamallowed** [ *‹uamallowed›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamallowed | *String* | IP-addrress, URL or subnetwork. |

**Example**

```
(config-if)> chilli uamallowed 203.0.113.0/24
Chilli::Interface: "Chilli0": "203.0.113.0/24" added to walled ►
garden.

(config-if)> chilli uamallowed www.example.link
Chilli::Interface: "Chilli0": "www.example.link" added to walled ►
garden.

(config-if)> no chilli uamallowed 203.0.113.0/24
Chilli::Interface: "Chilli0": "203.0.113.0/24" removed from ►
walled garden.

(config-if)> no chilli uamallowed www.example.link
Chilli::Interface: "Chilli0": "www.example.link" removed from ►
walled garden.

(config-if)> no chilli uamallowed
Chilli::Interface: "Chilli0": walled garden cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamallowed** command has been introduced. |

## 3.30.43 interface chilli uamdomain

**Description** Specify the domain name to which the client has access without first authenticating.

Command with **no** prefix removes the domain name from the list. If you use no argument, the entire list of domain names will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli uamdomain** *‹uamdomain›*

(config-if)> **no chilli uamdomain** [ *‹uamdomain›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamdomain | *String* | Domain name of remote host. |

**Example**

```
(config-if)> chilli uamdomain example.net
Chilli::Interface: "Chilli0": "example.net" added to walled ►
garden.
```

```
(config-if)> no chilli uamdomain example.net
Chilli::Interface: "Chilli0": "example.net" removed from walled ►
garden.
```

```
(config-if)> no chilli uamdomain
Chilli::Interface: "Chilli0": walled garden cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamdomain** command has been introduced. |

## 3.30.44 interface chilli uamhomepage

**Description** Set URL of homepage to redirect unauthenticated users to.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli uamhomepage** *‹uamhomepage›*

(config-if)> **no chilli uamhomepage**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamhomepage | *String* | Custom URL. |

**Example**

```
(config-if)> chilli uamhomepage http://192.168.2.1/welcome.html
Chilli::Interface: "Chilli0": uamhomepage set to ►
"http://192.168.2.1/welcome.html".
```

```
(config-if)>  no chilli uamhomepage
Chilli::Interface: "Chilli0": uamhomepage cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamhomepage** command has been introduced. |

## 3.30.45 interface chilli uamport

**Description** Set *TCP* port to bind to for authenticating clients. By default, value 3990 is used.

Command with **no** prefix resets port to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli uamport** *‹uamport›*

(config-if)> **no chilli uamport**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamport | *Integer* | The port number. |

**Example**

```
(config-if)> chilli uamport 3922
Chilli::Interface: "Chilli0": uamport set to 3922.
```

```
(config-if)> no chilli uamport
Chilli::Interface: "Chilli0": uamport reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamport** command has been introduced. |

## 3.30.46 interface chilli uamsecret

**Description**

Set shared secret between *UAM* server and Chilli. The *UAM* secret is used to hash the challenge before password computation.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

(config-if)> **chilli uamsecret** *‹uamsecret›*

(config-if)> **no chilli uamsecret**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamsecret | *String* | A secret value. |

**Example**

```
(config-if)> chilli uamsecret 12df34fd
Chilli::Interface: "Chilli0": uamsecret set to "12df34fd".
```

```
(config-if)> no chilli uamsecret
Chilli::Interface: "Chilli0": uamsecret set to "".
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamsecret** command has been introduced. |

## 3.30.47 interface chilli uamserver

**Description**

Set URL of web server to use for authenticating clients.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** Chilli

**Synopsis**

(config-if)> **chilli uamserver** *‹uamserver›*

(config-if)> **no chilli uamserver**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uamserver | *String* | Custom URL of web server. |

**Example**

```
(config-if)> chilli uamserver ►
https://auth.example.net/hotspotlogin
Chilli::Interface: "Chilli0": uamserver set to ►
"https://auth.example.net/hotspotlogin".
```

```
(config-if)> no chilli uamserver
Chilli::Interface: "Chilli0": uamserver cleared.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface chilli uamserver** command has been introduced. |

## 3.30.48 interface compatibility

**Description** Set the standard for wireless communications, with which a given wireless adapter (the interface) must be compatible. For Wi-Fi interfaces, the compatibility is set by string of Latin letters A, B, G, N, that denote extensions to the standard IEEE 802.11. For example, the presence 'N' in the compatibility line will imply that the given adapter will be able to deal with the 802.11n-compatible devices via radio channel. The set of admissible compatibility lines is defined by the hardware capabilities of a particular adapter and provisions of the relevant additions to the IEEE 802.11 standard.

By default, “BGN” value is used for 2.4 GHz, “AN” — for 5 GHz.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if)> **compatibility** *‹annex›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| annex | B, G, N | For 2,4 GHz. |
| | A, N | For 5 GHz. |

| Argument | Value | Description |
|---|---|---|
| | `A, N+AC` | Additional IEEE standard. |

**Example**

```
(config-if)> compatibility N
Network::Interface::Rtx::WifiMaster: "WifiMaster0": PHY mode set.

(config-if)> compatibility N+AC
Network::Interface::Rtx::WifiMaster: "WifiMaster1": PHY mode set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface compatibility** command has been introduced. |
| 2.06 | New standard AC was added. |

## 3.30.49 interface connect

**Description**

Start the process of connecting to a remote node.

Command with **no** prefix terminates the connection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP, IP

**Synopsis**

(config-if)> **connect** [ **via** *‹via›* ]

(config-if)> **no connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `via` | *`Interface`* | Interface through which remote node is accessed. For PPPoE this option is mandatory. |

**Example**

```
(config-if)> connect via ISP

(config-if)> no connect
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface connect** command has been introduced. |

## 3.30.50 interface country-code

**Description** Assign to the interface a literal country code, which influences the set of radio channels. By default, RU value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if)> **country-code** *‹code›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| code | *String* | The country code. |

**Example**

```
(config-if)> country-code RU
Network::Interface::Rtx::WifiMaster: "WifiMaster0": country code ►
set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface country-code** command has been introduced. |

## 3.30.51 interface debug

**Description** Enable debug mode of *PPP* connection. Detailed info about connection progress is saved to the system log. By default, setting is disabled.

Command with **no** prefix disables the debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **debug**

(config-if)> **no debug**

**Example**

```
(config-if)> debug
Network::Interface::Base: Debug enabled.
```

```
(config-if)> no debug
Network::Interface::Base: Debug disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface debug** command has been introduced. |

## 3.30.52 interface description

**Description**

Assign arbitrary descrption to the specified network interface.

Command with **no** prefix deletes the description.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **description** *‹description›*

(config-if)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| description | *String* | Arbitrary description of the interface. |

**Example**

```
(config-if)> description MYHOME
Network::Interface::Base: "Bridge0": description saved.
```

```
(config-if)> no description
Network::Interface::Base: "Bridge0": description saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface description** command has been introduced. |

## 3.30.53 interface dfs zero-wait

**Description**

Enable zero-wait *DFS* for AP 5 GHz.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **dfs zero-wait**

(config-if)> **no dfs zero-wait**

**Example**

```
(config-if)> dfs zero-wait
Network::Interface::Rtx::WifiMaster: "WifiMaster1": DFS Zero ►
Wait enabled.
```

```
(config-if)> no dfs zero-wait
Network::Interface::Rtx::WifiMaster: "WifiMaster1": DFS Zero ►
Wait disabled.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **interface dfs zero-wait** command has been introduced. |

## 3.30.54 interface down

**Description** Disable the network interface and persist the state “down” to the settings.

Command with **no** prefix enables the network interface and deletes “down” from settings.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **down**

(config-if)> **no down**

**Example**

```
(config-if)> down
Network::Interface::Base: "GigabitEthernet0/2": interface is down.
```

```
(config-if)> up
Network::Interface::Base: "GigabitEthernet0/2": interface is up.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface down** command has been introduced. |

## 3.30.55 interface downlink-mumimo

**Description**

Enable the downlink (explicit) *Beamforming* (eBF) MU-MIMO. The feature can be used for 802.11ac clients only and is incompatible with other standards. The setting cannot be enabled unless **interface beamforming explicit** is set.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFiMaster

**Synopsis**

(config-if)> **downlink-mumimo**

(config-if)> **no downlink-mumimo**

**Example**

```
(config-if)> downlink-mumimo
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ac/ax ►
downlink-mumimo enabled.
```

```
(config-if)> no downlink-mumimo
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ac/ax ►
downlink-mumimo disabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **interface downlink-mumimo** command has been introduced. |

## 3.30.56 interface duplex

**Description**

Set the duplex mode of the Ethernet port. By default, `auto` value is set.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **duplex** (**full** | **half** | **auto**)

(config-if)> **no duplex**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | full | Full duplex protocol. |
| | half | Half duplex protocol. |
| | auto | Auto duplex protocol. |

**Example**

```
(config-if)> duplex full
Network::Interface::Ethernet: "GigabitEthernet0/1": duplex set ►
to "full".
```

```
(config-if)> no duplex
Network::Interface::Ethernet: "GigabitEthernet0/1": duplex reset ►
to default.
```

**History**

| Version | Description |
|---|---|
| 2.06.B.1 | The **interface duplex** command has been introduced. |

## 3.30.57 interface dyndns nobind

**Description**

Disable binding of a request to the WAN-interface.

Command with **no** prefix enables the binding.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **dyndns nobind**

(config-if)> **no dyndns nobind**

**Example**

```
(config-if)> dyndns nobind
DynDns::Client: Disabled bind on interface GigabitEthernet1.
```

```
(config-if)> no dyndns nobind
DynDns::Client: Enabled bind on interface GigabitEthernet1.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface dyndns nobind** command has been introduced. |

## 3.30.58 interface dyndns profile

**Description**

Assign the DynDns profile to the interface. Profile must be created and customized with dyndns profile commands before execution.

Command with **no** prefix unbinds the profile.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **dyndns profile** *‹profile›*

(config-if)> **no dyndns profile**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `profile` | *String* | The name of DynDns profile. |

**Example**

```
(config-if)> dyndns profile TEST
DynDns::Profile: Interface set.
```

```
(config-if)> no dyndns profile TEST
DynDns::Profile: Interface removed.
```

**History**

| Version | Description |
|---|---|
| 2.02 | The **interface dyndns profile** command has been introduced. |

## 3.30.59 interface dyndns update

**Description** Update IP address for DynDns manually. By default command works in accordance with the policy of the DynDns service provider, that is not allows to update too often. Using the keyword `force` allows you to update excluding policy of the service provider.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **dyndns update** [ **force** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `force` | *Keyword* | Not take into account the update rate recommended by service provider. |

**Example**

```
(config-if)> dyndns update
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface dyndns update** command has been introduced. |

## 3.30.60 interface encryption anonymous-dh

**Description**

Enable Anonymous DH for SSTP servers without a certificate.

Command with **no** prefix disables Anonymous DH.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

SSTP

**Synopsis**

(config-if)> **encryption anonymous-dh**

(config-if)> **no encryption anonymous-dh**

**Example**

```
(config-if)> encryption anonymous-dh
Network::Interface::Sstp: "SSTP0": anonymous DH TLS is enabled.
```

```
(config-if)> no encryption anonymous-dh
Network::Interface::Sstp: "SSTP0": anonymous DH TLS is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface encryption anonymous-dh** command has been introduced. |

## 3.30.61 interface encryption enable

**Description**

Enable encryption on the wireless interface. By default, *WEP* encryption is used.

Command with **no** prefix disables wireless interface encryption.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFi

**Synopsis**

(config-if)> **encryption enable**

(config-if)> **no encryption enable**

**Example**

```
(config-if)> encryption enable
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
wireless encryption enabled.
```

```
(config-if)> no encryption enable
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
wireless encryption disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface encryption enable** command has been introduced. |

## 3.30.62 interface encryption key

**Description**

Specify the *WEP* encryption keys. Depending on the bit, the key can be standard 64-bit *WEP* uses a 40 bit key (also known as WEP-40), or 128-bit *WEP* uses a 26 hexadecimal characters (13 characters ASCII). Overall, there can be 1 to 4 encryption keys, with one of them default key must be assigned.

Command with **no** prefix removes key.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

WiFi

**Synopsis**

(config-if)> **encryption key** ‹*id*› ( ‹*value*› [**default**] | **default**)

(config-if)> **no encryption key** ‹*id*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `id` | *Integer* | The key number. Overall, up to 4 keys could be specified. |
| `value` | *String* | The key value as a hexadecimal number, consisting of 10 or 26 digits. |
| `default` | *Keyword* | Indicates that this key will be used by default. |

**Example**

```
(config-if)> encryption key 1 1231231234
Network::Interface::Wifi: "WifiMaster0/AccessPoint0": WEP key 1 ►
set.
```

```
(config-if)> no encryption key 1
Network::Interface::Wifi: "WifiMaster0/AccessPoint0": WEP key 1 ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface encryption key** command has been introduced. |

## 3.30.63 interface encryption mppe

**Description** Enable *MPPE* encryption support.

Command with **no** prefix disables *MPPE* encryption.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPTP

**Synopsis**

(config-if)> **encryption mppe**

(config-if)> **no encryption mppe**

**Example**

```
(config-if)> encryption mppe
MPPE enabled.
```

```
(config-if)> no encryption mppe
MPPE disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface encryption mppe** command has been introduced. |

## 3.30.64 interface encryption owe

**Description** Enable *OWE* security algorithms on the wireless interface. By default, the setting is disabled.

Command with **no** prefix disables *OWE* support.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WifiMaster

**Synopsis**

(config-if)> **encryption owe**

(config-if)> **no encryption owe**

**Example**

```
(config-if)> encryption owe
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
OWE algorithms enabled.
```

```
(config-if)> no encryption owe
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
OWE algorithms disabled.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **interface encryption owe** command has been introduced. |

## 3.30.65 interface encryption tkip hold-down

**Description** Set the "countermeasure" timer value for *TKIP* when the joint use *WPA* and *WPA2* security algorithms on the wireless interface. By default, the value `60` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **encryption tkip hold-down** *‹hold-down›*

(config-if)> **no encryption tkip hold-down**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `hold-down` | *Integer* | Timer value in seconds. Can take values in the range from `0` to `60`. If timer is set to `0`, the setting is disabled. |

**Example**

```
(config-if)> encryption tkip hold-down 10
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
hold-down interval is 10 sec.
```

```
(config-if)> no encryption tkip hold-down
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
hold-down interval is reset to default (60 sec.).
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface encryption tkip hold-down** command has been introduced. |

## 3.30.66 interface encryption wpa

**Description**

Enable *WPA* security algorithms on the wireless interface. Wireless interface can support the joint use of *WPA* and *WPA2*, but supporting *WEP* automatically disables when any of the *WPA* is enabled.

Command with **no** prefix disables *WPA* support.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFi

**Synopsis**

(config-if)> **encryption wpa**

(config-if)> **no encryption wpa**

**Example**

```
(config-if)> encryption wpa
WPA algorithms enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface encryption wpa** command has been introduced. |

## 3.30.67 interface encryption wpa2

**Description**

Enable *WPA2* (IEEE 802.11i, RSN) security algorithms on the wireless interface. Wireless interface can support the joint use of *WPA* and *WPA2*, but supporting *WEP* automatically disables when any of the *WPA* is enabled.

Command with **no** prefix disables *WPA2* support.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** WiFi

**Synopsis**

(config-if)> **encryption wpa2**

(config-if)> **no encryption wpa2**

**Example**

```
(config-if)> encryption wpa2
WPA2 algorithms enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface encryption wpa2** command has been introduced. |

## 3.30.68 interface encryption wpa3

**Description** Enable *WPA3* security algorithms on the wireless interface. Wireless interface can support the joint use of *WPA2* and *WPA3*. By default, the setting is disabled.

Command with **no** prefix disables *WPA3* support.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **encryption wpa3**

(config-if)> **no encryption wpa3**

**Example**

```
(config-if)> encryption wpa3
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
WPA3 algorithms enabled.
```

```
(config-if)> no encryption wpa3
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
WPA3 algorithms disabled.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **interface encryption wpa3** command has been introduced. |

## 3.30.69 interface encryption wpa3 suite-b

**Description** Enable *WPA3* security algorithms to protect sensitive data Suite-B for *WPA Enterprise*. By default, the feature is disabled.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **encryption wpa3 suite-b**

**Example**

```
(config-if)> encryption wpa3 suite-b
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint1": ►
WPA3 SuiteB enabled.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **interface encryption wpa3 suite-b** command has been introduced. |

## 3.30.70 interface esim disable

**Description** Disable *eSIM* support on the modem interface.

Command with **no** prefix enables the feature on the modem interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim disable**

(config-if)> **no esim disable**

**Example**

```
(config-if)> esim disable
Mobile::Interface: "UsbLte0": eSIM disabled.
```

```
(config-if)> no esim disable
Mobile::Interface: "UsbLte0": eSIM enabled.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim disable** command has been introduced. |

## 3.30.71 interface esim profile activate

**Description** Activate the *eSIM* profile.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile activate** ‹*iccid*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| iccid | *String* | The eSIM profile identifier. |

**Example**

```
(config-if)> esim profile activate 8944476500007527505
Mobile::Lpa::Manager: Activate profile 8944476500007527505.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile activate** command has been introduced. |

## 3.30.72 interface esim profile deactivate

**Description** Deactivate the *eSIM* profile.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile deactivate** ‹*iccid*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| iccid | *String* | The eSIM profile identifier. |

**Example**

```
(config-if)> esim profile deactivate 8944476500007527505
Mobile::Lpa::Manager: Deactivate profile 8944476500007527505.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile deactivate** command has been introduced. |

## 3.30.73 interface esim profile delete

**Description** Delete the specified *eSIM* profile.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile delete** ‹*iccid*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| iccid | *String* | The eSIM profile identifier. |

**Example**

```
(config-if)> esim profile delete 89701014173641793753
Mobile::Lpa::Manager: Deleted 89701014173641793753 profile.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile delete** command has been introduced. |

## 3.30.74 interface esim profile download

**Description** Download an *eSIM* profile using the specified QR code data.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile download** ‹*qrcode*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| qrcode | *String* | QR code data used to download the eSIM profile. |

**Example**

```
(config-if)> esim profile download ►
LPA:1$rsp.truphone.com$QRF-SPEEDTEST
progress, name = Esim:ProfileDownload:UsbLte0: 0

        progress, name = Esim:ProfileDownload:UsbLte0: 1

        progress, name = Esim:ProfileDownload:UsbLte0: 12

        progress, name = Esim:ProfileDownload:UsbLte0: 17

        progress, name = Esim:ProfileDownload:UsbLte0: 22

        progress, name = Esim:ProfileDownload:UsbLte0: 28

        progress, name = Esim:ProfileDownload:UsbLte0: 33

        progress, name = Esim:ProfileDownload:UsbLte0: 38

        progress, name = Esim:ProfileDownload:UsbLte0: 43

        progress, name = Esim:ProfileDownload:UsbLte0: 49

        progress, name = Esim:ProfileDownload:UsbLte0: 54

        progress, name = Esim:ProfileDownload:UsbLte0: 59

        progress, name = Esim:ProfileDownload:UsbLte0: 65

        progress, name = Esim:ProfileDownload:UsbLte0: 70

        progress, name = Esim:ProfileDownload:UsbLte0: 75

        progress, name = Esim:ProfileDownload:UsbLte0: 86

        progress, name = Esim:ProfileDownload:UsbLte0: 91

        progress, name = Esim:ProfileDownload:UsbLte0: 96

        progress, name = Esim:ProfileDownload:UsbLte0: 100

Mobile::Lpa::Manager: "UsbLte0": profile downloaded.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile download** command has been introduced. |

## 3.30.75 interface esim profile list

**Description** Display the list of *eSIM* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile list**

**Example**

```
(config-if)> esim profile list
profile:
                iccid: 8944476500007527505
                 name: BetterRoaming
                  spn: BetterRoaming
               active: yes

         profile:
               iccid: 8944476500007527836
                name: BetterRoaming
                 spn: BetterRoaming
              active: no
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile list** command has been introduced. |

## 3.30.76 interface esim profile rename

**Description** Rename the specified *eSIM* profile.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **esim profile rename** ‹*iccid*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| iccid | *String* | The eSIM profile identifier. |

**Example**

```
(config-if)> esim profile rename 8944476500007527836 newname
Mobile::Lpa::Manager: Set alias "newname" for profile ►
8944476500007527836.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface esim profile rename** command has been introduced. |

## 3.30.77 interface flowcontrol

**Description**

Configure Ethernet flow control Tx/Rx. By default, the feature is enabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **flowcontrol on**

(config-if)> **no flowcontrol** [**send**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| send | *Keyword* | Flow control works asynchronously. |

**Example**

```
(config-if)> flowcontrol on
Network::Interface::Ethernet: "GigabitEthernet0/0": flow control ►
enabled.
```

```
(config-if)> no flowcontrol send
Network::Interface::Ethernet: "GigabitEthernet0/0": flow control ►
send disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface flowcontrol** command has been introduced. |

## 3.30.78 interface follow

**Description**

Copy settings from AP on WifiMaster0 (2.4 GHz) to the AP on WifiMaster with an index greater than zero (5 GHz or above).

The follower automatically copies all changes applied to the master access point.

If you change the follower settings, the link with the master access point is terminated.

Warning: The WifiMaster0 access points are always used as a source of settings. They never follow. They can only be followed.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** AccessPoint

**Synopsis**

(config-if)> **follow** ‹*access-point*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `access-point` | *Interface* | The name of an `AccessPoint` interface on the `WifiMaster0` 2.4 GHz. You can see the list of available interfaces with help of **follow** [Tab] command. |

**Example**

```
(config-if)> follow WifiMaster0/AccessPoint0
Network::Interface::AccessPoint: "WifiMaster1/AccessPoint0": set ►
to follow WifiMaster0/AccessPoint0.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **interface follow** command has been introduced. |

## 3.30.79 interface ft enable

**Description**

Enable support of *FT* for Access Point (FT Over the Air, OTA) within the IEEE 802.11r standard. By default, the option is disabled.

For correct *FT* operation between 2,4 and 5 GHz APs it is necessary to fulfill the following conditions:

- access points 2,4 GHz and 5 GHz are enabled both
- they have the same SSID's
- they have the same security settings (encryption type — WPA2 or without password, password value, etc.)

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** AccessPoint

**Synopsis**

(config-if)> **ft enable**

(config-if)> **no ft enable**

**Example**

```
(config-if)> ft enable
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition enabled.
```

```
(config-if)> no ft enable
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface ft enable** command has been introduced. |

## 3.30.80 interface ft mdid

**Description** Set Mobility Domain ID for *FT*. By default, KN value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** AccessPoint

**Synopsis**

(config-if)> **ft mdid** *‹mdid›*

(config-if)> **no ft mdid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mdid | *String* | The value of Mobility Domain ID. Consists of 2 ASCII symbols. |

**Example**

```
(config-if)> ft mdid 1F
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition MDID set to "1F".
```

```
(config-if)> no ft mdid
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition MDID reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface ft mdid** command has been introduced. |

## 3.30.81 interface ft otd

**Description**

Enable support of *FT* Over-the-DS (Distribution System) within the IEEE 802.11r standard. This type of *FT* is used for roaming in outdated subscriber devices, for example, in the iPhone 4s. By default, the setting is disabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

AccessPoint

**Synopsis**

(config-if)> **ft otd**

(config-if)> **no ft otd**

**Example**

```
(config-if)> ft otd
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition OTD enabled.
```

```
(config-if)> no ft otd
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
fast transition OTD disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface ft otd** command has been introduced. |

## 3.30.82 interface hide-ssid

**Description**

Enable hidden *SSID* mode. When using this feature, Access Point will not be displayed in the list of available wireless networks. But if user informed of the existence of this network and know its *SSID*, than he can connect to it. The mode is disabled by default.

Command with **no** prefix disables the mode.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Access Point

**Synopsis**

(config-if)> **hide-ssid**

(config-if)> **no hide-ssid**

**Example**

```
(config-if)> hide-ssid
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
SSID broadcasting disabled.
```

```
(config-if)> no hide-ssid
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
SSID broadcasting enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface hide-ssid** command has been introduced. |

## 3.30.83 interface iapp auto

**Description** Generate *IAPP* key in automatic mode. To assign the key manually, use **interface iapp key** command.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(config-if)> **iapp auto**

**Example**

```
(config-if)> iapp auto
Network::Interface::Rtx::Iapp: Bridge0 autoconfigured.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface iapp auto** command has been introduced. |

## 3.30.84 interface iapp key

**Description** Assign the *IAPP* Mobile Domain key for successful synchronization between Access Points where *FT* works (**interface ft enable** command). Access Points must belong to the same IP-subnet. By default, the key is not assigned.

Command with **no** prefix removes key value.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(config-if)> **iapp key** *‹key›*

(config-if)> **no iapp key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | *String* | The value of *IAPP* key. Maximum key length is 64 characters. |

**Example**

```
(config-if)> iapp key 11223344556677
Network::Interface::Rtx::Iapp: Bridge0 key applied.
```

```
(config-if)> no iapp key
Network::Interface::Rtx::Iapp: Bridge0 key cleared.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface iapp key** command has been introduced. |

## 3.30.85 interface idle-timeout

**Description** Set the interval for the STA client to disconnect from the Access Point by inactivity timeout. By default, `600` value is used.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **idle-timeout** *‹idle-timeout›*

(config-if)> **no idle-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `idle-timeout` | *Integer* | Idle-timeout value in seconds. Can take values in the range from `60` to `2147483646`. |

**Example**

```
(config-if)> idle-timeout 500
Network::Interface::Rtx::WifiMaster: "WifiMaster1": idle timeout ►
value is 500 sec.
```

```
(config-if)> no idle-timeout
Network::Interface::Rtx::WifiMaster: "WifiMaster1": idle timeout ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface idle-timeout** command has been introduced. |

## 3.30.86 interface igmp downstream

**Description**

Enable *IGMP* mode on the interface in the direction of the multicast recipients. **service igmp-proxy** must be enabled on the device. There can be several `downstream` interfaces.

Command with **no** prefix disables the mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **igmp downstream**

(config-if)> **no igmp downstream**

**Example**

```
(config-if)> igmp downstream
```

```
(config-if)> no igmp downstream
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface igmp downstream** command has been introduced. |

## 3.30.87 interface igmp fork

**Description**

Enable the duplication of outgoing packets *IGMP*`upstream` to the specified interface. There can be only one `fork` interface.

Command with **no** prefix disables the mode.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **igmp fork**

(config-if)> **no igmp fork**

**Example**

```
(config-if)> igmp fork
```

```
(config-if)> no igmp fork
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface igmp fork** command has been introduced. |

## 3.30.88 interface igmp upstream

**Description** Enable *IGMP* mode on the interface in the direction of the multicast source. **service igmp-proxy** must be enabled on the device. Only one `upstream` interface is allowed.

Command with **no** prefix disables the mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **igmp upstream**

(config-if)> **no igmp upstream**

**Example**

```
(config-if)> igmp upstream
```

```
(config-if)> no igmp upstream
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface igmp upstream** command has been introduced. |

## 3.30.89 interface include

**Description**

Specify Ethernet-interface name which will be added to the software bridge as a port.

Command with **no** prefix removes the interface from the bridge.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Bridge

**Synopsis**

(config-if)> **include** ‹*interface*›

(config-if)> **no include** ‹*interface*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Name or alias of the Ethernet-interface that should be plugged into the bridge. |

**Example**

```
(config-if)> include ISP
Network::Interface::Bridge: "Bridge0": ISP included.
```

```
(config-if)> no include
Network::Interface::Bridge: "Bridge0": removed ISP.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface include** command has been introduced. |

## 3.30.90 interface inherit

**Description**

Specify the name of the Ethernet-interface which will be added to the program bridge as a port. In contrast with the **include** command, **inherit** command transfers some settings of the interface being added to the bridge, such as IP address, mask and IP-aliases. On removing either the bridge itself or the bridge interface, these settings, even if they have been changed will be copied back to the vacant interface.

The command allows one to add the device control interface to the bridge so that control is not lost.

Command with **no** prefix removes the interface from the bridge, returns the settings that have earlier been inherited by the bridge back to the interface, and resets these settings on the bridge.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Bridge

**Synopsis**

(config-if)> **inherit** ‹*interface*›

(config-if)> **no inherit** ‹*interface*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Name or alias of the Ethernet-interface that should be plugged into the bridge. |

**Example**

```
(config-if)> inherit GigabitEthernet0/Vlan3
Network::Interface::Bridge: "Bridge1": GigabitEthernet0/Vlan3 ►
inherited in Bridge1.

(config-if)> no inherit
Network::Interface::Bridge: "Bridge1": inherit removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface inherit** command has been introduced. |

## 3.30.91 interface ip access-group

**Description** Assign a named list of filtering rules (*ACL*, see **access-list**) to the interface. Parameter `in` or `out` indicates the traffic direction for which the *ACL* will be applied. Several ACLs can be assigned to a single interface.

Command with **no** prefix disables the *ACL* for the specified interface and traffic direction.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-if)> **ip access-group** ‹*acl*› ‹*direction*›

(config-if)> **no ip access-group** [ ‹*acl*› [ ‹*direction*› ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `acl` | *String* | List of filtering rules as previously created using **access-list** command. |

| Argument | Value | Description |
|---|---|---|
| direction | in | Apply filtering to incoming packets. |
| | out | Apply filtering to outgoing packets. |

**Example**

```
(config-if)> ip access-group BLOCK in
Network::Acl: Input "BLOCK" access list added to "CdcEthernet1".

(config-if)> ip access-group BLOCK out
Network::Acl: Output "BLOCK" access list added to "CdcEthernet1".

(config-if)> no ip access-group BLOCK in
Network::Acl: "BLOCK" access group deleted from "CdcEthernet1".

(config-if)> no ip access-group
Network::Acl: All access groups deleted from "CdcEthernet1".
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip access-group** command has been introduced. |

## 3.30.92 interface ip address

**Description**

Change the IP address and the mask of the network interface. If the address automatic configuration service is running on the interface, for instance, DHCP client, (see **interface ip address dhcp**), then the manually set address can be overwritten.

Command with **no** prefix resets the address to `0.0.0.0`.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **ip address** *‹address› ‹mask›*

(config-if)> **no ip address**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | The network interface address. |
| mask | *IP-mask* | The network interface mask. There are two ways to specify the mask: the canonical form (for example, `255.255.255.0`) and the prefix with bit length (for example, `/24`). |

**Example**

The network address, defined by the IP address and mask, can specified in either of the two ways: specify a mask in the canonical form, or set the prefix bit length.

```
(config)> ip address 192.168.9.1/24
Network::Interface::Ip: "Bridge3": IP address is 192.168.9.1/24.
```

```
(config)> no ip address
Network::Interface::Ip: "Bridge3": IP address cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip address** command has been introduced. |

## 3.30.93 interface ip address dhcp

**Description**

Start the DHCP client to automatically configure the network parameters: IP address and mask of the interface, *DNS* servers and default gateway.

Command with **no** prefix stops the DHCP client, removes the dynamically configured settings and restores the previous settings of IP address and mask.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **ip address dhcp**

(config-if)> **no ip address dhcp**

**Example**

```
(config-if)> ip address dhcp
Dhcp::Client: Started DHCP client on ISP.
```

```
(config-if)> no ip address dhcp
Dhcp::Client: Stopped DHCP client on ISP.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip address dhcp** command has been introduced. |
| 4.02 | The optional argument `hostname` has been removed. |

## 3.30.94 interface ip adjust-ttl recv

**Description**

Modify the TTL for all inbound packets on the interface.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **ip adjust-ttl recv** *‹recv›*

(config-if)> **no ip adjust-ttl recv**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| recv | *Integer* | The value of TTL changing. Can take values in the range from 1 to 255 inclusively. |

**Example**

```
(config-if)>  ip adjust-ttl recv 1
Network::Interface::Ip: "CdcEthernet0": incoming TTL set to 1.
```

```
(config-if)> no ip adjust-ttl recv
Network::Interface::Ip: "CdcEthernet0": incoming TTL settings ►
removed.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **interface ip adjust-ttl recv** command has been introduced. Previous command name is **interface ip adjust-ttl**. |

## 3.30.95 interface ip adjust-ttl send

**Description** Modify the TTL for all outbound packets on the interface.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **ip adjust-ttl send** *‹send›*

(config-if)> **no ip adjust-ttl send**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| send | *Integer* | The value of TTL changing. Can take values in the range from 1 to 255 inclusively. |

**Example**

```
(config-if)> ip adjust-ttl send 65
Network::Interface::Ip: "CdcEthernet1": outgoing TTL set to 65.
```

```
(config-if)> no ip adjust-ttl send
Network::Interface::Ip: "CdcEthernet1": outgoing TTL settings ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **interface ip adjust-ttl send** command has been introduced. |

## 3.30.96 interface ip alias

**Description**

Assign an additional IP address and mask to the network interface (alias).

Command with **no** prefix resets the specified alias to `0.0.0.0`. If you use no arguments, the entire list of aliases will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP, Ethernet

**Synopsis**

(config-if)> **ip alias** *‹address› ‹mask›*

(config-if)> **no ip alias** [ *‹address› ‹mask›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Additional address of the network interface. |
| mask | *IP-mask* | Additional mask of the network interface. There are two ways to specify the mask: the canonical form (for example, `255.255.255.0`) and the prefix with bit length (for example, `/24`). |

**Example**

```
(config-if)> ip alias 192.168.1.88/24
Network::Interface::Ip: "WifiMaster1/WifiStation0": alias 0 is ►
192.168.1.88/24.
```

```
(config-if)> no ip alias 192.168.1.88/24
Network::Interface::Ip: "WifiMaster1/WifiStation0": alias 0 reset ►
to 0.0.0.0/0.
```

```
(config-if)> no ip alias
Network::Interface::Ip: "WifiMaster1/WifiStation0": all aliases ►
removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip alias** command has been introduced. |

## 3.30.97 interface ip dhcp client broadcast

**Description**

Set broadcast bit in the DHCP Discover messages, that indicate to a server how the reply should be sent back to the client. By default, the setting is disabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **ip dhcp client broadcast**

(config-if)> **no ip dhcp client broadcast**

**Example**

```
(config-if)> ip dhcp client broadcast
Dhcp::Client: ISP DHCP client request broadcast enabled.
```

```
(config-if)> no ip dhcp client broadcast
Dhcp::Client: ISP DHCP client request broadcast disabled.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **interface ip dhcp client broadcast** command has been introduced. |

## 3.30.98 interface ip dhcp client class-id

**Description**

Specify the device vendor name where *DHCP* client is running (dhcp option 60).

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client class-id** *‹class›*

(config-if)> **no ip dhcp client class-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `class` | *`String`* | Vendor class name, enclosed in double quotes. |

**Example**

```
(config-if)> ip dhcp client class-id "Hero"
Dhcp::Client: ISP DHCP client vendor class is set to "Hero".
```

```
(config-if)> no ip dhcp client class-id
Dhcp::Client: ISP DHCP client vendor class is cleared.
```

**History**

| Version | Description |
|---|---|
| 2.02 | The **interface ip dhcp client class-id** command has been introduced. |

## 3.30.99 interface ip dhcp client debug

**Description** Enable debug mode for DHCP client. Detailed info about DHCP client working is saved to the system log.

Command with **no** prefix disables the debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client debug**

(config-if)> **no ip dhcp client debug**

**Example**

```
(config-if)> ip dhcp client debug
Dhcp::Client: ISP DHCP client debug enabled.
```

```
(config-if)> no ip dhcp client debug
Dhcp::Client: ISP DHCP client debug disabled.
```

**History**

| Version | Description |
|---|---|
| 2.01 | The **interface ip dhcp client debug** command has been introduced. |

## 3.30.100 interface ip dhcp client displace

**Description**

Displace static address of *what* if it conflicts with an address from DHCP client of main interface.

This command is executed automatically when you connect the USB Ethernet adapter. After that the configuration will be saved and device will be restarted.

Command with **no** prefix cancels the displacement for the specified interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Ethernet

**Synopsis**

(config-if)> **ip dhcp client displace** *‹what›* [ **check-session** ]

(config-if)> **no ip dhcp client displace** *‹what›* [ **check-session** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| what | *Interface* | Name or alias of the interface whose static address will be displaced. |
| check-session | *Keyword* | With active SCGI sessions, it does not allow rebooting and changing the router's network address. By default, command is added to default-config. |

**Example**

```
(config-if)> ip dhcp client displace Home
Dhcp::Client: ISP added "Home" displacement.
```

```
(config-if)> ip dhcp client displace Home check-session
Dhcp::Client: ISP added "Home" displacement.
```

```
(config-if)> no ip dhcp client displace Home
Dhcp::Client: ISP deleted "Home" displacement.
```

```
(config-if)> no ip dhcp client displace Home check-session
Dhcp::Client: ISP deleted "Home" displacement.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface ip dhcp client displace** command has been introduced. |

| | |
|---|---|
| 2.15 | Argument `check-session` was added. |

## 3.30.101 interface ip dhcp client dns-routes

**Description** Enable automatic addition of host routes to the DNS server received from the DHCP server. By default, the setting is enabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client dns-routes**

(config-if)> **no ip dhcp client dns-routes**

**Example**

```
(config-if)> ip dhcp client dns-routes
Dhcp::Client: ISP DHCP client DNS host routes are enabled.
```

```
(config-if)> no ip dhcp client dns-routes
Dhcp::Client: ISP DHCP client DNS host routes are disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip dhcp client dns-routes** command has been introduced. |

## 3.30.102 interface ip dhcp client fallback

**Description** Set static IP address in case of DHCP errors.

Command with **no** prefix cancels setting and sets `0.0.0.0.` address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client fallback** *‹type›*

(config-if)> **no ip dhcp client fallback**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `type` | *`String`* | The type of IP address. Currently implemented only one type — `static`. |

**Example**

```
(config-if)> ip dhcp client fallback static
Dhcp::Client: A DHCP address fallback is static.
```

```
(config-if)> no ip dhcp client fallback
Dhcp::Client: A DHCP address fallback set to zero for "ISP".
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **interface ip dhcp client fallback** command has been introduced. |

## 3.30.103 interface ip dhcp client hostname

**Description**

Assign a host name which is sent in DHCP-request.

Command with **no** prefix resets the host name to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **ip dhcp client hostname** ‹*hostname*›

(config-if)> **no ip dhcp client hostname**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `hostname` | *`String`* | The host name to assign. |

**Example**

```
(config-if)> ip dhcp client hostname MYHOME
Dhcp::Client: ISP DHCP client hostname is set to MYHOME.
```

```
(config-if)> no ip dhcp client hostname
Dhcp::Client: ISP DHCP client hostname is reset to default (HOME).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip dhcp client hostname** command has been introduced. |

## 3.30.104 interface ip dhcp client name-servers

**Description** Use *DNS* server addresses which are received via *DHCP*. By default, the function is enabled.

Command with **no** prefix denies using of *DNS* server addresses which are received via *DHCP*.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client name-servers**

(config-if)> **no ip dhcp client name-servers**

**Example**

```
(config-if)> ip dhcp client name-servers
Dhcp::Client: ISP DHCP name servers are enabled.
```

```
(config-if)> no ip dhcp client name-servers
Dhcp::Client: ISP DHCP name servers are disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip dhcp client name-servers** command has been introduced. |

## 3.30.105 interface ip dhcp client release

**Description** DHCP client releases lease IP address and goes into sleep mode. Another execution of this command takes DHCP client to the mode of automatical obtaining of IP address.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client release**

**Example**

```
(config-if)> ip dhcp client release
Dhcp::Client: IP address released.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface ip dhcp client release** command has been introduced. |

## 3.30.106 interface ip dhcp client renew

**Description** DHCP client releases lease IP address and passes in a mode of obtaining a new one.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client renew**

**Example**

```
(config-if)> ip dhcp client renew
Dhcp::Client: IP address renewed.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface ip dhcp client renew** command has been introduced. |

## 3.30.107 interface ip dhcp client routes

**Description** Enable receiving routes from the provider (dhcp options 33, 121, 242). By default it is enabled. In the configuration it is displayed only with **no** prefix.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp client routes**

(config-if)> **no ip dhcp client routes**

**Example**

```
(config-if)> ip dhcp client routes
Dhcp::Client: ISP DHCP client static routes are enabled.
```

```
(config-if)> no ip dhcp client routes
Dhcp::Client: ISP DHCP client static routes are disabled.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **interface ip dhcp client routes** command has been introduced. |

## 3.30.108 interface ip flow

**Description**

Enable *NetFlow* sensor on the specified interface. By default, the setting is disabled.

Command with **no** prefix disables *NetFlow* sensor.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **ip flow** ‹*direction*›

(config-if)> **no ip flow**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `direction` | `ingress` | Collection of incoming traffic. |
| | `egress` | Collection of outgoing traffic. |
| | `both` | Collection of incoming and outgoing traffic both. |

**Example**

```
(config-if)> ip flow ingress
Netflow::Manager: NetFlow collector is enabled on interface ►
"Home" in "ingress" direction.
```

```
(config-if)> ip flow egress
Netflow::Manager: NetFlow collector is enabled on interface ►
"Home" in "egress" direction.
```

```
(config-if)> ip flow both
Netflow::Manager: NetFlow collector is enabled on interface ►
"Home" in "both" direction.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface ip flow** command has been introduced. |

# 3.30.109 interface ip global

**Description**

Set property “global” with a parameter to the interface. This property is necessary to configure the default route, DynDNS client and NAT functioning. Can represent global-interfaces as leading to the global network (the Internet).

Property “global” affects the interface priority in setting the default route. The higher the priority the more desirable it is for the user to access the global network through the specified interface. Internet access backup (WAN backup) functionality is using priority “global”.

By default, setting is disabled.

Command with **no** prefix removes property.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **ip global** ( *‹priority›* | **order** *‹order›* | **auto**)

(config-if)> **no ip global**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| priority | *Integer* | Interface priority to configure the default route. Can take values in the range from 1 to 65534. |
| order | *Integer* | Relative priority between interfaces. It can take values in the range from 0 to 65534, but not more than the number of global interfaces. |
| auto | *Keyword* | Automatic priority calculation of the interface. The interface is located near the end of the list, but above order X. |

**Example**

```
(config-if)> ip global 10
Network::Interface::IP: "L2TP0": global priority is 10.
```

```
(config-if)> ip global order 0
Network::Interface::IP: "L2TP0": order is 1.
```

```
(config-if)> ip global auto
Network::Interface::IP: Global priority recalculated.
```

```
(config-if)> no ip global
Network::Interface::IP: "L2TP0": global priority cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip global** command has been introduced. |
| 2.09 | The `order` and `auto` arguments were added. |

## 3.30.110 interface ip mru

**Description**

Set the value of *MRU* to be transmitted to a remote node during establishing the *PPP* (*IPCP*) connection. By default, `1460` value is used.

Command with **no** prefix resets the *MRU* value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **ip mru** *‹mru›*

(config-if)> **no ip mru**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mru` | *Integer* | *MRU* value. |

**Example**

```
(config-if)> ip mru 1492
Network::Interface::Ppp: "PPPoE0": MRU saved.
```

```
(config-if)> no ip mru
Network::Interface::Ppp: "PPPoE0": MRU reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip mru** command has been introduced. |

## 3.30.111 interface ip mtu

**Description**

Set the *MTU* value on the network interface. When establishing a connection via *PPP* (*IPCP*), packets with defined *MTU* size will be sent to the remote host, even if the host requested a lower *MTU* value.

Command with **no** prefix resets the *MTU* value to that which was before the first use of the command.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **ip mtu** *‹mtu›*

(config-if)> **no ip mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mtu | *Integer* | *MTU* value. Can take values in the range from 64 to 65535 inclusively. |

**Example**

```
(config-if)> ip mtu 1500
Network::Interface::Base: "GigabitEthernet1": static MTU is 1500.
```

```
(config-if)> no ip mtu
Network::Interface::Base: "GigabitEthernet1": static MTU reset ►
to default.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip mtu** command has been introduced. |

## 3.30.112 interface ip name-servers

**Description** Enable the use of *DNS* server addresses on the interface. By default, the function is enabled.

Command with **no** prefix denies using of *DNS* server addresses on the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **ip name-servers**

(config-if)> **no ip name-servers**

**Example**

```
(config-if)> ip name-servers
Dns::InterfaceSpecific: "GigabitEthernet1": accept IPv4 name ►
servers.
```

```
(config-if)> no ip name-servers
Dns::InterfaceSpecific: "GigabitEthernet1": ignore IPv4 name ►
servers.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **interface ip name-servers** command has been introduced. |

## 3.30.113 interface ip nat loopback

**Description**

Enable reverse translation to send local requests to the local server from the Internet. By default, the setting is enabled for the Home segment interfaces (`private` and `protected` security levels).

Command with **no** prefix disables NAT loopback.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **ip nat loopback**

(config-if)> **no ip nat loopback**

**Example**

```
(config-if)> ip nat loopback
Network::StaticNat: NAT loopback is explicitly enabled on "Home".
```

```
(config-if)> no ip nat loopback
Network::StaticNat: NAT loopback is explicitly disabled on "Home".
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip nat loopback** command has been introduced. |

## 3.30.114 interface ip remote

**Description**

Set a remote peer static address.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **ip remote** *‹address›*

(config-if)> **no ip remote**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | A remote peer address. |

**Example**

```
(config-if)> ip remote 192.168.2.19
Network::Interface::Ppp: "L2TP0": remote address saved.
```

```
(config-if)> no ip remote
Network::Interface::Ppp: "L2TP0": remote address erased.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip remote** command has been introduced. |

## 3.30.115 interface ip tcp adjust-mss

**Description**

Set the limit on the segment size of outgoing *TCP* sessions. If the *MSS* value, which is transmitted in the header of SYN-packets, exceeds the specified limit, command changes it. The command is applied to the interface and affects all outgoing *TCP* SYN packets.

Command with **no** prefix removes all limits from *MSS*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-if)> **ip tcp adjust-mss** (**pmtu** | *‹mss›* )

(config-if)> **no ip tcp adjust-mss**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| pmtu | *Keyword* | Set the upper limit of *MSS*, equal to the minimum *MTU* along the path to the remote peer. |
| mss | *Integer* | *MSS* upper limit. |

**Example**

```
(config-if)> ip tcp adjust-mss pmtu
Network::Interface::Ip: "L2TP0": TCP-MSS adjustment enabled.
```

```
(config-if)> ip tcp adjust-mss 1300
Network::Interface::Ip: "L2TP0": TCP-MSS adjustment enabled.
```

```
(config-if)> no ip tcp adjust-mss
Network::Interface::Ip: "L2TP0": TCP-MSS adjustment disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ip tcp adjust-mss** command has been introduced. |

## 3.30.116 interface ipcp address

**Description** Use address from the remote peer.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **ipcp address**

(config-if)> **no ipcp address**

**Example**

```
(config-if)> ipcp address
using address from remote peer
```

```
(config-if)> no ipcp address
not using address from remote peer
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface ipcp address** command has been introduced. |

## 3.30.117 interface ipcp default-route

**Description** Use the remote peer address as default gateway. By default, the setting is enabled.

Command with **no** prefix denies default gateway changing.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **ipcp default-route**

(config-if)> **no ipcp default-route**

**Example**

```
(config-if)> ipcp default-route
Using peer as a default gateway.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipcp default-route** command has been introduced. |

## 3.30.118 interface ipcp dns-routes

**Description**

Use routes which are received via *IPCP*. By default, the setting is enabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **ipcp dns-routes**

(config-if)> **no ipcp dns-routes**

**Example**

```
(config-if)> ipcp dns-routes
DNS routes enabled
```

```
(config-if)> no ipcp dns-routes
DNS routes disabled
```

**History**

| Version | Description |
|---|---|
| 2.02 | The **interface ipcp dns-routes** command has been introduced. |

## 3.30.119 interface ipcp name-servers

**Description**

Use *DNS* servers addresses which are received via *IPCP*. By default, the setting is enabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **ipcp name-servers**

(config-if)> **no ipcp name-servers**

**Example**

```
(config-if)> ipcp name-servers
using remote name servers.
```

```
(config-if)> no ipcp name-servers
not using remote name servers.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipcp name-servers** command has been introduced. |

## 3.30.120 interface ipcp vj

**Description** Enable compression of TCP/IP headers by Van Jacobson's method. By default, the setting is disabled.

Command with **no** prefix disables compression.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **ipcp vj** [**cid**]

(config-if)> **no ipcp vj**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cid | *Keyword* | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> ipcp vj cid
VJ compression enabled.
```

```
(config-if)> no ipcp vj
VJ compression disabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface ipcp vj** command has been introduced. |

## 3.30.121 interface ipsec aggressive

**Description**

Enable aggressive IKEv1 mode for compatibility with FritzBox L2TP/IPsec server.

Command with **no** prefix disables the mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec aggressive**

(config-if)> **no ipsec aggressive**

**Example**

```
(config-if)> ipsec aggressive
Network::Interface::Secure: IKEv1 Aggressive Mode is enabled.
```

```
(config-if)> no ipsec aggressive
Network::Interface::Secure: IKEv1 Aggressive Mode is disabled.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface ipsec aggressive** command has been introduced. |

## 3.30.122 interface ipsec encryption-level

**Description**

Set encryption level for *IPSec* connection that is automatically associated with the tunnel. By default, the `normal` value is used.

A detailed description of each level is given in the Appendix.

Command with **no** prefix resets encryption level to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec encryption-level** *‹level›*

(config-if)> **no ipsec encryption-level**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| level | weak | Weak level, DES and MD5 algorithms enabled. |
| | normal | Level is compatible with most systems, priority is given to AES128 and SHA1. |
| | normal-3des | Level is compatible with most systems, priority is given to 3DES and SHA1. |
| | strong | The strongest level, *PFS* is mandatory, priority is given to AES256 and SHA1. |
| | weak-pfs | The same as weak, but for the second phase *PFS* group 1 and 2 is enabled. |
| | normal-pfs | The same as normal, but for the second phase *PFS* group 2 and 5 is enabled. |
| | normal-3des-pfs | The same as normal-3des, but for the second phase *PFS* group 5 and 14 is enabled. |
| | high | A set of modern algorithms for external providers of VPN services. |
| | strong-aead | The strongest level, priority is given to AES256 and SHA1 with addition of *AEAD* algorithms. |
| | strong-aead-pfs | The strongest level, *PFS* is mandatory, priority is given to AES256 and SHA1 with addition of *AEAD* algorithms. |

**Example**

```
(config-if)> ipsec encryption-level high
Network::Interface::Secure: "IKE0": security level is set to ►
"high".
```

```
(config-if)> no ipsec encryption-level
Network::Interface::Secure: "IKE0": security level was reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface ipsec encryption-level** command has been introduced. |
| 3.07 | New levels of encryption has been added — high, strong-aead and strong-aead-pfs. |

## 3.30.123 interface ipsec force-encaps

**Description**

Enable support of *ESP* forced encapsulation in *UDP* for client tunnels. By default, the feature is disabled.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **ipsec force-encaps**

(config-if)> **no ipsec force-encaps**

**Example**

```
(config-if)> ipsec force-encaps
Network::Interface::Secure: Force ESP in UDP encapsulation ►
enabled.
```

```
(config-if)> no ipsec force-encaps
Network::Interface::Secure: Force ESP in UDP encapsulation ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **interface ipsec force-encaps** command has been introduced. |

## 3.30.124 interface ipsec ignore

**Description** Disable processing incoming *IKE* packets for *IPSec* service on the interface. By default the command is disabled.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **ipsec ignore**

(config-if)> **no ipsec ignore**

**Example**

```
(config-if)> ipsec ignore
IpSec::Manager: Interface "Gre0" added to IPsec ignore list.
```

```
(config-if)> no ipsec ignore
IpSec::Manager: Interface "Gre0" removed from IPsec ignore list.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface ipsec ignore** command has been introduced. |

## 3.30.125 interface ipsec ikev2

**Description**

Enable IKEv2 protocol for *IPSec* connection that is automatically associated with the tunnel. By default, IKEv1 is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec ikev2**

(config-if)> **no ipsec ikev2**

**Example**

```
(config-if)> ipsec ikev2
Network::Interface::Secure: IKEv2 is enabled.
```

```
(config-if)> no ipsec ikev2
Network::Interface::Secure: IKEv2 is disabled, enable IKEv1.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface ipsec ikev2** command has been introduced. |

## 3.30.126 interface ipsec nail-up

**Description**

Enable automatic changes of the secret keys for L2TP/IPsec, EoIP/IPsec, Gre/IPsec, IPIP/IPsec tunnels. By default, setting is enabled.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec nail-up**

(config-if)> **no ipsec nail-up**

**Example**

```
(config-if)> ipsec nail-up
Network::Interface::Secure: SA renegotiation enabled.
```

```
(config-if)> no ipsec nail-up
Network::Interface::Secure: SA renegotiation disabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **interface ipsec nail-up** command has been introduced. |

## 3.30.127 interface ipsec name-servers

**Description**

Use *DNS* server addresses which are received via IKEv1 or IKEv2 *IPSec* server. By default, the function is enabled.

Command with **no** prefix denies using of *DNS* server addresses which are received via IKEv1 and IKEv2 *IPSec* server.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec name-servers**

(config-if)> **no ipsec name-servers**

**Example**

```
(config-if)> ipsec name-servers
IpSec::Interface::Ike: "IKE0": automatic name servers via IKE ►
Configuration Payload are enabled.
```

```
(config-if)> no ipsec name-servers
IpSec::Interface::Ike: "IKE0": automatic name servers via IKE ►
Configuration Payload are disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface ipsec name-servers** command has been introduced. |

## 3.30.128 interface ipsec preshared-key

**Description** Set PSK key for *IPSec* connection that is automatically associated with the tunnel. Command also enables *IPSec* for this tunnel.

Command with **no** prefix resets the key.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **ipsec preshared-key** *‹key›*

(config-if)> **no ipsec preshared-key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | *String* | Secret PSK key value. Latin letters, numbers and equal signs are acceptable. The key length should be between 3 and 72 characters long. |

**Example**

```
(config-if)> ipsec preshared-key gbp1gW3pBQK.g=
Network::Interface::Secure: "L2TP0": preshared key was set.
```

```
(config-if)> no ipsec preshared-key
Network::Interface::Secure: "L2TP0": preshared key was reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface ipsec preshared-key** command has been introduced. |

## 3.30.129 interface ipsec proposal lifetime

**Description** Set lifetime of *IPSec* transformation Phase1 on the interface. By default, the value `28800` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Secure

**Synopsis**

(config-if)> **ipsec proposal lifetime** ‹*lifetime*›

(config-if)> **no ipsec proposal lifetime**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `lifetime` | *Integer* | Lifetime of *IPSec* transformation in seconds. Can take values in the range from `60` to 2147483647. |

**Example**

```
(config-if)> ipsec proposal lifetime 222222
Network::Interface::Secure: IPsec IKE proposal lifetime set to ►
222222 s.
```

```
(config-if)> no ipsec proposal lifetime
Network::Interface::Secure: IPsec IKE proposal lifetime reset ►
to 28800 s.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface ipsec proposal lifetime** command has been introduced. |

## 3.30.130 interface ipsec proposal local-id

**Description**

Set custom local identifier for *IKE*.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec proposal local-id** ‹*local-id*›

(config-if)> **no ipsec proposal local-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `local-id` | *String* | IP address or domain name of local host. |

**Example**

```
(config-if)> ipsec proposal local-id 192.168.8.4
Network::Interface::Secure: Set IKE local ID to "192.168.8.4".
```

```
(config-if)> no ipsec proposal local-id
Network::Interface::Secure: Reset IKE local ID.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface ipsec proposal local-id** command has been introduced. |

## 3.30.131 interface ipsec proposal remote-id

**Description**

Set custom remote identifier for *IKE*.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Secure

**Synopsis**

(config-if)> **ipsec proposal remote-id** ‹*remote-id*›

(config-if)> **no ipsec proposal remote-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `remote-id` | *String* | IP address or domain name of remote host. |

**Example**

```
(config-if)> ipsec proposal remote-id my.example.com
Network::Interface::Secure: Set IKE remote ID to "my.example.com".

(config-if)> no ipsec proposal remote-id
Network::Interface::Secure: Reset IKE remote ID.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface ipsec proposal remote-id** command has been introduced. |

## 3.30.132 interface ipsec transform-set lifetime

**Description**

Set lifetime of *IPSec* transformation Phase2 on the interface. By default, the value `28800` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** Secure

**Synopsis**

(config-if)> **ipsec transform-set lifetime** ‹*lifetime*›

(config-if)> **no ipsec transform-set lifetime**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `lifetime` | *Integer* | Lifetime of *IPSec* transformation in seconds. Can take values in the range from `60` to `2147483647`. |

**Example**

```
(config-if)> ipsec transform-set lifetime 2222222
Network::Interface::Secure: IPsec ESP transform-set lifetime set ►
to 2222222 s.
```

```
(config-if)> no ipsec transform-set lifetime
Network::Interface::Secure: IPsec ESP transform-set lifetime ►
reset to 28800 s.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface ipsec transform-set lifetime** command has been introduced. |

## 3.30.133 interface ipv6 address

**Description** Confgure an IPv6 address on the interface. If the argument is **auto**, address is autoconfigured. Passing a literal address as an argument will assign it statically.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-if)> **ipv6 address** ( ‹*address*› | ‹*block*› | **auto**)

(config-if)> **no ipv6 address** [ ‹*address*› | ‹*block*› | **auto**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *IPv6 address* | The network interface address. |
| `block` | *IPv6 address* | The network interface address with mask. |
| `auto` | *Keyword* | Enable stateless autoconfiguration. |

**Example**

```
(config-if)> ipv6 address 2001:db8:2:612:52ff:20ff:fe00:1e87
Network::Interface::Ip6: "GigabitEthernet1": added static address ►
2001:db8:2:612:52ff:20ff:fe00:1e87.

(config-if)> ipv6 address 2001:db8::1
Network::Interface::Ip6: "GigabitEthernet1": added static address ►
2001:db8::1.

(config-if)> ipv6 address fd08:a648:e303::3/64
Network::Interface::Ip6: "GigabitEthernet1": added static address ►
fd08:a648:e303::3/64.

(config-if)> no ipv6 address 2001:db8:2:612:52ff:20ff:fe00:1e87
Network::Interface::Ip6: "GigabitEthernet1": removed static ►
address 2001:db8:2:612:52ff:20ff:fe00:1e87.

(config-if)> no ipv6 address
Network::Interface::Ip6: "GigabitEthernet1": cleared addresses.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipv6 address** command has been introduced. |

## 3.30.134 interface ipv6 dhcp client pd hint

**Description**

Configure DHCPv6 client prefix delegation hint.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **ipv6 dhcp client pd hint** *‹prefix›*

(config-if)> **no ipv6 dhcp client pd hint**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `prefix` | *Prefix* | Requested IPv6 prefix or only its length if specified as `::/length`. |

**Example**

```
(config-if)> ipv6 dhcp client pd hint fd08:a648:e303::/64
Ip6::Dhcp::Client: "GigabitEthernet1": set a prefix delegation ►
hint to "fd08:a648:e303::/64".

(config-if)> ipv6 dhcp client pd hint ::/64
Ip6::Dhcp::Client: "GigabitEthernet1": set a prefix delegation ►
hint to "::/64".
```

```
(config-if)> no ipv6 dhcp client pd hint
Ip6::Dhcp::Client: "GigabitEthernet1": reset prefix delegation ►
hint.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface ipv6 dhcp client pd hint** command has been introduced. |

## 3.30.135 interface ipv6 id

**Description**

Set the way of IPv6 interface identifier generation. By default, the `eui64` value is used.

Command with **no** prefix resets value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **ipv6 id** ( *‹suffix›* | **eui64** | **random**)

(config-if)> **no ipv6 id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `suffix` | *Suffix* | The static suffix. |
| `eui64` | *Keyword* | The identifier is based on the interface MAC address. |
| `random` | *Keyword* | Random generation of the interface identifier. |

**Example**

```
(config-if)> ipv6 id ::2
Network::Interface::Ip6: "Bridge0": interface ID is set to ::2.
```

```
(config-if)> ipv6 id eui64
Network::Interface::Ip6: "Bridge0": interface ID is set to eui64.
```

```
(config-if)> ipv6 id random
Network::Interface::Ip6: "Bridge0": interface ID is set to random.
```

```
(config-if)> no ipv6 id
Network::Interface::Ip6: "Bridge0": interface ID is reset to ►
default value.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface ipv6 id** command has been introduced. |

## 3.30.136 interface ipv6 name-servers

**Description** Configure retrieval of *DNS* information. When **auto** is set, enables DHCPv6 name-server requests.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **ipv6 name-servers** (**auto**)

(config-if)> **no ipv6 name-servers** [**auto**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| auto | *Keyword* | Enable name-server autoconfiguration. |

**Example**

```
(config-if)> ipv6 name-servers auto
Name servers provided by the interface network are accepted.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipv6 name-servers** command has been introduced. |

## 3.30.137 interface ipv6 prefix

**Description** Configure prefix delegation. When **auto** is set, prefix is requested via DHCPv6-PD.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **ipv6 prefix** ( *‹prefix›* | **auto**)

(config-if)> **no ipv6 prefix** [ *‹prefix›* | **auto**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| auto | *Keyword* | Enable prefix delegation. |
| prefix | *Prefix* | Manual input of prefix. |

**Example**

```
(config-if)> ipv6 prefix 2001:db8:43:ab12::/64
Static IPv6 prefix added.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipv6 prefix** command has been introduced. |

## 3.30.138 interface ipv6cp

**Description**

Enable *IPv6CP* support during establishing connection.

Command with **no** prefix disables *IPv6CP*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **ipv6cp**

(config-if)> **no ipv6cp**

**Example**

```
(config-if)> ipv6cp
IPv6CP enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ipv6cp** command has been introduced. |

## 3.30.139 interface lcp acfc

**Description**

Enable compression negotiation of the *Data Link Layer Address and Control fields*. By default, the feature is disabled.

Command with **no** prefix disables this option and all the remote peer requests for the *ACFC* negotiation will be rejected.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **lcp acfc** [**cid**]

(config-if)> **no lcp acfc**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cid | *Keyword* | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> lcp acfc cid
ACFC compression enabled
```

```
(config-if)> no lcp acfc cid
ACFC compression disabled
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface lcp acfc** command has been introduced. |

## 3.30.140 interface lcp echo

**Description**

Specify the testing rules of the *PPP* connection with *LCP* echo tools.

By default, `interval` is set to `30`, `count` is set to 3.

Command with **no** prefix disables *LCP* echo.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **lcp echo** ‹*interval*› ‹*count*› [**adaptive**]

(config-if)> **no lcp echo**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interval | *Integer* | Interval between sending *LCP* echo, in seconds. If within the specified time interval there is no *LCP* echo request from the remote location, the same request will be sent there asking for response *LCP* reply. |
| count | *Integer* | The number of consecutive requests *LCP* echo sent, for which no response *LCP* reply was received. If count of *LCP* echo requests goes unanswered, the connection is terminated. |

| Argument | Value | Description |
|---|---|---|
| adaptive | *Keyword* | Pppd will send LCP echo-request frames only if no traffic was received from the peer since the last echo-request was sent. |

**Example**

```
(config-if)> lcp echo 20 2
Network::Interface::Ppp: "PPPoE0": LCP echo parameters updated.
```

```
(config-if)> no lcp echo
Network::Interface::Ppp: "PPPoE0": LCP echo disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface lcp echo** command has been introduced. |
| 2.06 | The adaptive keyword has been added. |

## 3.30.141 interface lcp pfc

**Description**

Enable compression negotiation of the *PPP Protocol field*. By default, the feature is disabled.

Command with **no** prefix disables this option and all the remote peer requests for the *PFC* negotiation will be rejected.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

(config-if)> **lcp pfc** [**cid**]

(config-if)> **no lcp pfc**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cid | *Keyword* | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> lcp pfc cid
PFC compression enabled
```

```
(config-if)> no lcp pfc cid
PFC compression disabled
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface lcp pfc** command has been introduced. |

## 3.30.142 interface ldpc

**Description**

Enable the *LDPC* code for AP 5 GHz. By default, the feature is disabled.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WifiMaster

**Synopsis**

(config-if)> **ldpc**

(config-if)> **no ldpc**

**Example**

```
(config-if)> ldpc
Network::Interface::Rtx::WifiMaster: "WifiMaster1": LDPC enabled.
```

```
(config-if)> no ldpc
Network::Interface::Rtx::WifiMaster: "WifiMaster1": LDPC disabled.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **interface ldpc** command has been introduced. |

## 3.30.143 interface led wan

**Description**

Display the interface status by means of LED. `SelectedWan` control should be chosen with **system led** command. By default, function is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **led wan**

(config-if)> **no led wan**

**Example**

```
(config-if)> led wan
Network::Interface::Led: Selected WAN GigabitEthernet1.
```

```
(config-if)> no led wan
Network::Interface::Led: Selected no WAN.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface led wan** command has been introduced. |

## 3.30.144 interface lldp disable

**Description**

Disable *LLDP* agent on interface. By default, the feature is enabled.

Command with **no** prefix enables *LLDP* agent.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **lldp disable**

(config-if)> **no lldp disable**

**Example**

```
(config-if)> lldp disable
Network::DiscoveryManager: LLDP agent is disabled on interface ►
"ISP".
```

```
(config-if)> no lldp disable
Network::DiscoveryManager: LLDP agent is enabled on interface ►
"ISP".
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface lldp disable** command has been introduced. |

## 3.30.145 interface mac access-list address

**Description**

Add a MAC address to the permit/deny filtering list of the interface. Type of access list is set with **interface mac access-list type** command.

Command with **no** prefix removes the specified MAC address from the *ACL*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Access Point

**Synopsis**

(config-if)> **mac access-list address** *‹address›*

(config-if)> **no mac access-list address** *‹address›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *MAC address* | A MAC address to be added to the *ACL*. |

**Example**

```
(config-if)> mac access-list address 64:a2:f9:53:b2:12
Network::Interface::Ethernet: "WifiMaster0/AccessPoint1": added ►
64:a2:f9:53:b2:12 to the ACL.
```

```
(config-if)> no mac access-list address 64:a2:f9:53:b2:12
Network::Interface::Ethernet: "WifiMaster0/AccessPoint1": removed ►
64:a2:f9:53:b2:12 from the ACL.
```

```
(config-if)>  no mac access-list address
Network::Interface::Ethernet: "WifiMaster0/AccessPoint1": ACL ►
cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface mac access-list address** command has been introduced. |

## 3.30.146 interface mac access-list type

**Description**

Set the type for filtering list of the interface. Type is not defined by default (none value assigned).

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Access Point

**Synopsis**

(config-if)> **mac access-list type** *‹type›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | none | Type of filtering list is not defined. |
| | permit | Only approved MAC addresses will be added to the list. |
| | deny | Only restricted MAC addresses will be added to the list. |

**Example**

```
(config-if)> mac access-list type permit
Network::Interface::Ethernet: "WifiMaster0/AccessPoint1": ACL ►
type changed to permit.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface mac access-list type** command has been introduced. |

## 3.30.147 interface mac address

**Description**

Set the MAC address to the specified network interface. Address is specified in hexadecimal format `00:00:00:00:00:00`. The command allows one to assign arbitrary address, but warns the user if the new address “multicast” bit is set or “OUI enforced” bit is cleared.

Command with **no** prefix resets the original MAC addresses on the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

MAC

**Synopsis**

(config-if)> **mac address** *‹mac›*

(config-if)> **no mac address**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | New MAC address of the interface. |

**Example**

```
(config-if)> mac address aa:bb:cc:dd:ee:ff
Network::Interface::Mac: "GigabitEthernet1": MAC address is ►
aa:bb:cc:dd:ee:ff.
```

```
(config-if)> no mac address
Network::Interface::Mac: "GigabitEthernet1": MAC address reset ►
to d1:1c:53:00:3d:f5.
```

```
(config-if)> mac address aa:bb:cc:dd:ee:ff
Network::Interface::Mac: "WifiMaster0/WifiStation0": MAC address ►
is aa:bb:cc:dd:ee:ff.
```

```
(config-if)> no mac address
Network::Interface::Mac: "WifiMaster0/WifiStation0": MAC address ►
reset to d3:1c:53:00:3d:f4.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface mac address** command has been introduced. |
| 4.03 | Added the ability to change the original MAC address for *WISP*. |

## 3.30.148 interface mac address factory

**Description** Set the factory MAC address to the interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** MAC

**Synopsis**

(config-if)> **mac address factory** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | lan | "LAN" MAC address will be assigned to the interface. |
| | wan | "WAN" MAC address will be assigned to the interface. |
| | wlan5 | "WLAN5" MAC address will be assigned to the interface. |

**Example**

```
(config-if)> mac address factory lan
Core::System::UConfig: done.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface mac address factory** command has been introduced. |

## 3.30.149 interface mac band

**Description** Bind a registered host to a 2.4 GHz or 5 GHz frequency band.

Command with **no** prefix removes the binding. If you use no argument, the entire list of bindings will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Bridge

**Synopsis**

(config-if)> **mac band** *‹mac›* *‹band›*

(config-if)> **no mac band** [ *‹mac›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of the registered client. |
| band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |

**Example**

```
(config-if)> mac band c0:b8:83:c2:cb:11 0
Network::Interface::Rtx::MacBand: "Bridge0": bound ►
c0:b8:83:c2:cb:11 to 2.4 GHz.
```

```
(config-if)> mac band c0:b8:83:c2:cb:11 1
Network::Interface::Rtx::MacBand: "Bridge0": bound ►
c0:b8:83:c2:cb:11 to 5 GHz.
```

```
(config-if)> no mac band c0:b8:83:c2:cb:85
Network::Interface::Rtx::MacBand: "Bridge0": unbound ►
c0:b8:83:c2:cb:85 from 2.4 GHz.
```

```
(config-if)> no mac band
Network::Interface::Rtx::MacBand: Unbound all hosts.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **interface mac band** command has been introduced. |

## 3.30.150 interface mac bssid

**Description** Specify the Access Point's MAC address to connect to *WISP*.

Command with **no** prefix removes the MAC address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WifiStation

**Synopsis**

(config-if)> **mac bssid** *‹bssid›*

(config-if)> **no mac bssid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| bssid | *MAC address* | MAC address of WISP Access Point. |

**Example**

```
(config-if)> mac bssid 56:ff:20:00:1e:11
Network::Interface::WifiStation: BSSID set to 56:ff:20:00:1e:11.
```

```
(config-if)> no mac bssid
Network::Interface::WifiStation: BSSID cleared.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface mac bssid** command has been introduced. |

## 3.30.151 interface mac clone

**Description** Clone the MAC address from the operator's PC to the interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** MAC, IP

**Synopsis**

(config-if)> **mac clone**

**Example**

```
(config-if)> mac clone
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface mac clone** command has been introduced. |

## 3.30.152 interface media-type

**Description** Set combo port (RJ-45/SFP) media type. By default, `auto` value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **media-type** ‹*type*›

(config-if)> **no media-type**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | auto | Prefer SFP with auto-failover to MDI (Medium Dependent Interface). |
| | mdi | Enforce media type to MDI (Medium Dependent Interface) – RJ-45 Ethernet port operating mode. |
| | sfp | Enforce media type to SFP (Small Form-Factor Pluggable) – SFP port operating mode. |

**Example**

```
(config-if)> media-type mdi
Network::Interface::Ethernet: "GigabitEthernet0/3": switched ►
media type to MDI.

(config-if)> no media-type
Network::Interface::Ethernet: "GigabitEthernet0/3": reset media ►
type to auto.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface media-type** command has been introduced. |

## 3.30.153 interface mobile acq

**Description**

Lock 3G/LTE/5G mode for NDIS (UsbLte) modems.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **mobile acq** *‹acq›*

(config-if)> **no mobile acq**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| acq | gsm | 2G network. |
| | umts | 3G network. |
| | lte | 4G network. |
| | nr5g | 5G network. |

**Example**

```
(config-if)> mobile acq nr5g
Mobile::Interface: "UsbLte0": ACQ saved.
```

```
(config-if)> no mobile acq
Mobile::Interface: "UsbLte0": ACQ cleared.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface mobile acq** command has been introduced. |

## 3.30.154 interface mobile apn

**Description**

Set access point name (APN) for USB-modems in NDIS mode. Modem reboots after applying the command.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **mobile apn** *‹apn›*

(config-if)> **no mobile apn**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| apn | *String* | Access point name. |

**Example**

```
(config-if)> mobile apn my.example.com
Mobile::Interface: "UsbLte0": APN saved.
```

```
(config-if)> no mobile apn
Mobile::Interface: "UsbLte0": APN cleared.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface mobile apn** command has been introduced. |

## 3.30.155 interface mobile force-connected

**Description**

Disable link polling via HTTP. By default, the feature is disabled.

Command with **no** prefix disables the function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **mobile force-connected**

(config-if)> **no mobile force-connected**

**Example**

```
(config-if)> mobile force-connected
Mobile::Interface: "UsbLte0": force WWAN link status.
```

```
(config-if)> no mobile force-connected
Mobile::Interface: "UsbLte0": unforce WWAN link status.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface mobile force-connected** command has been introduced. |

## 3.30.156 interface mobile lte disable-band

**Description** Disable specified LTE band.

Command with **no** prefix enables LTE band. If you use no argument, the entire list of LTE bands will be enabled.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Usb

**Synopsis**

(config-if)> **mobile lte disable-band** *‹band›*

(config-if)> **no mobile lte disable-band** [ *‹band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | *Integer* | LTE band in the range from 1 to 43 inclusively. |

**Example**

```
(config-if)> mobile lte disable-band 22
UsbQmi::Interface: "UsbQmi0": LTE band 22 disabled.
```

```
(config-if)> no mobile lte disable-band 22
UsbQmi::Interface: "UsbQmi0": LTE band 22 enabled.
```

```
(config-if)>  no mobile lte disable-band
UsbQmi::Interface: "UsbQmi0": all LTE bands are enabled.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **interface mobile lte disable-band** command has been introduced. |

## 3.30.157 interface mobile name-servers

**Description**

Use *DNS* server addresses which are received via mobile operator. By default, the function is enabled.

Command with **no** prefix denies using of *DNS* server addresses which are received via mobile operator.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **mobile name-servers**

(config-if)> **no mobile name-servers**

**Example**

```
(config-if)> mobile name-servers
UsbQmi::Interface: "UsbQmi0": automatic name servers via QMI are ►
enabled.
```

```
(config-if)> no mobile name-servers
UsbQmi::Interface: "UsbQmi0": automatic name servers via QMI are ►
disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface mobile name-servers** command has been introduced. |

## 3.30.158 interface mobile operator

**Description**

Set network identifier for *PLMN*.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **mobile operator** *‹PLMN›*

(config-if)> **no mobile operator**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| PLMN | *String* | Operator identifier. |

**Example**

```
(config-if)>  mobile operator 25011
UsbQmi::Interface: Operator PLMN is set to "25011".
```

```
(config-if)> no mobile operator
UsbQmi::Interface: Operator PLMN cleared.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **interface mobile operator** command has been introduced. |

## 3.30.159 interface mobile pdp

**Description** Choose IP protocol version for USB modem. IPv6 can be selected only if the corresponding system component is installed. By default, ipv4 value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **mobile pdp** (**ipv4** | **ipv6** | **ipv4v6**)

(config-if)> **no mobile pdp**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| ipv4 | *String* | IPv4 only. |
| ipv6 | *String* | IPv6 only. |
| ipv4v6 | *String* | IPv4 and IPv6 dual stack. |

**Example**

```
(config-if)> mobile pdp ipv4
UsbQmi::Interface: Packet data protocol is set to "ipv4".

(config-if)> mobile pdp ipv4v6
UsbQmi::Interface: Packet data protocol is set to "ipv4v6".

(config-if)> no mobile pdp
Mobile::Interface: "UsbLte0": packet data protocol is reset to ►
default.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **interface mobile pdp** command has been introduced. |
| 3.08 | The `ipv6` argument and NO prefix were added. |

## 3.30.160 interface mobile roaming

**Description** Enable mobile roaming.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **mobile roaming**

(config-if)> **no mobile roaming**

**Example**

```
(config-if)> mobile roaming
UsbQmi::Interface: "UsbQmi0": roaming is enabled.
```

```
(config-if)>  no mobile roaming
UsbQmi::Interface: "UsbQmi0": roaming is disabled.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface mobile roaming** command has been introduced. |

## 3.30.161 interface mobile scan

**Description** Run a mobile network scan. The scanning process takes 20-50 seconds.

Command with **no** prefix stops scanning.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **mobile scan**

(config-if)> **no mobile scan**

**Example**

```
(config-if)> mobile scan
UsbQmi::Interface: Network scanning started.
```

```
(config-if)>  no mobile scan
UsbQmi::Interface: Network scanning stopped.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **interface mobile scan** command has been introduced. |

## 3.30.162 interface mobile umts disable-band

**Description** Disable specified UMTS band.

Command with **no** prefix enables UMTS band. If you use no argument, the entire list of UMTS bands will be enabled.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Usb

**Synopsis**

(config-if)> **mobile umts disable-band** *‹band›*

(config-if)> **no mobile umts disable-band** [ *‹band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | *Integer* | UMTS band. Can take values 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 26. |

**Example**

```
(config-if)> mobile umts disable-band 6
UsbQmi::Interface: "UsbQmi0": WCDMA band 6 disabled.
```

```
(config-if)> no mobile lte disable-band 6
UsbQmi::Interface: "UsbQmi0": WCDMA band 6 enabled.
```

```
(config-if)>  no mobile lte disable-band
UsbQmi::Interface: "UsbQmi0": all WCDMA bands are enabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **interface mobile umts disable-band** command has been introduced. |

## 3.30.163 interface modem connect

**Description**

Command to connect for USB-modem. Modem must be initialized with **tty init** command before execution.

Command with **no** prefix terminates the connection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

UsbModem

**Synopsis**

(config-if)> **modem connect** ( **dial** *‹phone›* | *‹string›* )

(config-if)> **no modem connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| phone | *String* | The phone number for dialing. |
| string | *String* | An arbitrary command. |

**Example**

```
(config-if)> modem connect dial *99#
Network::Interface::UsbModem: "UsbModem0": connect sequence saved.
```

```
(config-if)> modem connect dial *99#
Network::Interface::UsbModem: "UsbModem0": connect sequence ►
cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface modem connect** command has been introduced. |

## 3.30.164 interface modem timeout

**Description**

Set modem connection timeout. Setting is used for slow modems/connections. By default, 30 value is used.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** UsbModem

**Synopsis**

(config-if)> **modem timeout** *‹timeout›*

(config-if)> **no modem timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Value of timeout in seconds. Can take values in the range from 1 to 600 inclusively. |

**Example**

```
(config-if)> modem timeout 300
Network::Interface::UsbModem: "UsbModem0": connect timeout is ►
300 seconds.
```

```
(config-if)> no modem timeout
Network::Interface::UsbModem: "UsbModem0": connect timeout is ►
unchanged, defaults to 30 seconds.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **interface modem timeout** command has been introduced. |

## 3.30.165 interface openconnect accept-addresses

**Description** Enable address accepting from the *OpenConnect* server.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect accept-addresses**

(config-if)> **no openconnect accept-addresses**

**Example**

```
(config-if)> openconnect accept-addresses
OpenConnect::Interface: "OpenConnect0": enabled addresses accept.
```

```
(config-if)> no openconnect accept-addresses
OpenConnect::Interface: "OpenConnect0": disabled addresses accept.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface openconnect accept-addresses** command has been introduced. |

## 3.30.166 interface openconnect accept-routes

**Description** Enable receiving routes from a remote side via *OpenConnect*.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect accept-routes**

(config-if)> **no openconnect accept-routes**

**Example**

```
(config-if)> openconnect accept-routes
OpenConnect::Interface: "OpenConnect0": enabled routes accept.
```

```
(config-if)> no openconnect accept-routes
OpenConnect::Interface: "OpenConnect0": disabled routes accept.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface openconnect accept-routes** command has been introduced. |

## 3.30.167 interface openconnect allow-basic-auth

**Description** Configure HTTP Basic authentication[13] for the *OpenConnect* connection.

Command with **no** prefix disables HTTP Basic authentication.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

[13] https://www.infradead.org/openconnect/manual.html

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect allow-basic-auth**

(config-if)> **no openconnect allow-basic-auth**

**Example**

```
(config-if)> openconnect allow-basic-auth
OpenConnect::Interface: "OpenConnect0": enabled HTTP Basic auth.
```

```
(config-if)> no openconnect allow-basic-auth
OpenConnect::Interface: "OpenConnect0": disabled HTTP Basic auth.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface openconnect allow-basic-auth** command has been introduced. |

## 3.30.168 interface openconnect authgroup

**Description** Configure authgroup setting for the *OpenConnect*.

Note: The command implements a connection to the Cisco ASA.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect authgroup** *‹authgroup›*

(config-if)> **no openconnect authgroup**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| authgroup | *String* | The group name. |

**Example**

```
(config-if)> openconnect authgroup MYEXAMPLE
OpenConnect::Interface: "OpenConnect0": set auth group ►
"MYEXAMPLE".
```

```
(config-if)> no openconnect authgroup
OpenConnect::Interface: "OpenConnect0": removed auth group.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface openconnect authgroup** command has been introduced. |

## 3.30.169 interface openconnect dtls

**Description**

Configure the DTLS mode for the *OpenConnect*. By default, the mode is enabled.

Note: OpenConnect prefers PPP-over-DTLS. It will fall over to PPP-over-TLS if PPP-over-DTLS fails, or if it is disabled.

Command with **no** prefix disables the DTLS mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect dtls**

(config-if)> **no openconnect dtls**

**Example**

```
(config-if)> openconnect dtls
OpenConnect::Interface: "OpenConnect0": enabled DTLS mode.
```

```
(config-if)> no openconnect dtls
OpenConnect::Interface: "OpenConnect0": disabled DTLS mode.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface openconnect dtls** command has been introduced. |

## 3.30.170 interface openconnect protocol

**Description**

Set the *OpenConnect* connection protocol.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenConnect

**Synopsis**

(config-if)> **openconnect protocol** *‹protocol›*

(config-if)> **no openconnect protocol**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | anyconnect | Use AnyConnect[14] protocol for connection. |
| | fortinet | Use Fortinet[15] protocol for connection. |
| | nc | Use Juniper[16] protocol for connection. |

**Example**

```
(config-if)> openconnect protocol anyconnect
OpenConnect::Interface: "OpenConnect0": set protocol "anyconnect".
```

```
(config-if)> no openconnect protocol
OpenConnect::Interface: "OpenConnect0": removed protocol.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface openconnect protocol** command has been introduced. |
| 4.03 | Added support for the **fortinet** and **anyconnect** protocols. |
| 5.00 | Added support for the **nc** protocol. |

## 3.30.171 interface openvpn accept-routes

**Description** Enable receiving routes from a remote side via OpenVPN.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenVPN

**Synopsis**

(config-if)> **openvpn accept-routes**

(config-if)> **no openvpn accept-routes**

**Example**

```
(config-if)> openvpn accept-routes
Network::Interface::OpenVpn: "OpenVPN0": enable automatic routes ►
accept via tunnel.
```

[14] https://www.infradead.org/openconnect/anyconnect.html
[15] https://www.infradead.org/openconnect/fortinet.html
[16] https://www.infradead.org/openconnect/juniper.html

```
(config-if)> no openvpn accept-routes
Network::Interface::OpenVpn: "OpenVPN0": disable automatic routes ►
accept via tunnel.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface openvpn accept-routes** command has been introduced. |

## 3.30.172 interface openvpn connect

**Description** Set interface for OpenVPN connection. If you use no argument, connection is set via any interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** OpenVPN

**Synopsis**

(config-if)> **openvpn connect** [ **via** *‹via›* ]

(config-if)> **openvpn connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| via | *Interface* | Full interface name or an alias. |

**Example**

```
(config-if)> openvpn connect via ISP
Network::Interface::OpenVpn: "OpenVPN0": set connection via ISP.
```

```
(config-if)> openvpn connect
Network::Interface::OpenVpn: "OpenVPN0": set connection via any ►
interface.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface openvpn connect** command has been introduced. |

## 3.30.173 interface openvpn name-servers

**Description** Use *DNS* server addresses which are received via OpenVPN server. By default, the function is enabled.

Command with **no** prefix denies using of *DNS* server addresses which are received via OpenVPN server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** OpenVPN

**Synopsis**

(config-if)> **openvpn name-servers**

(config-if)> **no openvpn name-servers**

**Example**

```
(config-if)> openvpn name-servers
Network::Interface::OpenVpn: "OpenVPN0": automatic name servers ►
via tunnel are enabled.
```

```
(config-if)> no openvpn name-servers
Network::Interface::OpenVpn: "OpenVPN0": automatic name servers ►
via tunnel are disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface openvpn name-servers** command has been introduced. |

## 3.30.174 interface peer

**Description** Specify ID of the remote peer to which the *PPP* connection will be used. A more precise meaning of configurition depends on interface type. For example, for PPPoE the **interface peer** command specifies the name of access hub, for PPTP — remote host name or IP address, and for SSTP — specifies a remote server with port 443 or another.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **peer** *‹peer›*

(config-if)> **no peer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| peer | *String* | Remote connection point ID or remote server address `host.example.net:port`. By default, port number is 443. |

**Example**

```
(config-if)> peer 111
```

```
(config-if)> peer host.example.net:5555
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface peer** command has been introduced. |
| 2.12 | Added the ability to change the port of a remote server. |

## 3.30.175 interface peer-isolation

**Description**

Enable the isolation of wireless clients in the Home segment. The setting applies on the Bridge interface and has an effect for all access points included in it. Also, it blocks traffic from wireless clients inside the L2 network.

Command with **no** prefix cancels the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Bridge

**Synopsis**

(config-if)> **peer-isolation**

(config-if)> **no peer-isolation**

**Example**

```
(config-if)> peer-isolation
Network::Interface::Ethernet: "Bridge0": peer isolation enabled.
```

```
(config-if)> no peer-isolation
Network::Interface::Ethernet: "Bridge0": peer isolation disabled.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface peer-isolation** command has been introduced. |

## 3.30.176 interface ping-check profile

**Description**

Assign *Ping Check* profile to the interface.

Command with **no** prefix cancels the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config-if)> **ping-check profile** ‹*profile*›

(config-if)> **no ping-check profile**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `profile` | *`String`* | Profile name to assign. |

**Example**

```
(config-if)> ping-check profile test
PingCheck::Client: Set ping-check profile for interface "ISP".
```

```
(config-if)> no ping-check profile
PingCheck::Client: Reset ping-check profile for interface "ISP".
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **interface ping-check profile** command has been introduced. |

## 3.30.177 interface ping-check restart

**Description** Enable interface restart if *Ping Check* is triggered (Internet is not available on `interface`). By default the function is disabled.

Command with **no** prefix disables the function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-if)> **ping-check restart** [ ‹*interface*› ]

(config-if)> **no ping-check restart**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *`Interface`* | Full name or alias of the interface to be restarted when the *Ping Check* on the binded interface is triggered. If this argument is not specified, the interface binded with *Ping Check* profile will be restarted. |

**Example**

```
(config-if)> ping-check restart
PingCheck::Client: Enabled "PPPoE0" interface restart.
```

```
(config-if)>  ping-check restart ISP
PingCheck::Client: Enabled "ISP" interface restart for "PPPoE0".
```

```
(config-if)> no ping-check restart
PingCheck::Client: Remove restart settings for "PPPoE0".
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **interface ping-check restart** command has been introduced. |

## 3.30.178 interface pmf

**Description**

Enable *PMF* functionality.

Note: With *WPA2* or *WPA2*+*WPA3* encryption selected, the pmf command enables PMF Capable (MFPC) for the clients connecting to the AP.

If the client supports *PMF* functionality, then it will be able to connect with *PMF*, if not, then it will connect without *PMF* to the AP.

If WPA3 encryption is selected, the *PMF* function becomes mandatory for clients connecting to the AP.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFi

**Synopsis**

(config-if)> **pmf** [**force**]

(config-if)> **no pmf**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `force` | *Keyword* | Enable the mandatory *PMF* function for *WPA2* encryption. |

**Example**

```
(config-if)> pmf
Network::Interface::Rtx::WifiStation: "WifiMaster0/WifiStation0": ►
PMF enabled.
```

```
(config-if)> pmf force
Network::Interface::Mtk::WifiStation: "WifiMaster0/WifiStation0": ►
PMF forced.
```

```
(config-if)> no pmf
Network::Interface::Rtx::WifiStation: "WifiMaster0/WifiStation0": ►
PMF disabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **interface pmf** command has been introduced. |
| 4.01 | The `force` keyword was added. |

## 3.30.179 interface pmksa-lifetime

**Description** Change the *PMK* cache lifetime. By default, the value `1440` is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

(config-if)> **pmksa-lifetime** ‹*pmksa-lifetime*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `pmksa-lifetime` | *Integer* | Lifetime value, in minutes. |

**Example**

```
(config-if)> interface WifiMaster1 pmksa-lifetime 43200
Network::Interface::Mtk::WifiMaster: "WifiMaster1": PMKSA cache ►
lifetime updated.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface pmksa-lifetime** command has been introduced. |

## 3.30.180 interface power

**Description** Set the transmitter power for the radio interface. Transmitter power is limited by the hardware capabilities and state laws applicable to radio broadcast. This command allows one to only reduce the power of the transmitter relative to its maximum power, such as to decrease potential interference with other devices in this range/band. By default, the setting value of the power is set to `100`.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if)> **power** *‹power›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| power | *Integer* | The transmitter power as the percentage of the maximum power (from 1 to 100). |

**Example**

```
(config-if)>  power 1
Network::Interface::Rtx::WifiMaster: "WifiMaster0": TX power ►
level set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface power** command has been introduced. |

## 3.30.181 interface pppoe service

**Description** Specify PPPoE service. If service is not defined, then PPPoE client will be connected to an arbitrary service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPPoE

**Synopsis**

(config-if)> **pppoe service** *‹service›*

(config-if)> **no pppoe service**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| service | *String* | Name of PPPoE service. |

**Example**

```
(config-if)> pppoe service TEST
Network::Interface::Pppoe: "PPPoE0": service set.
```

```
(config-if)> no pppoe service
Network::Interface::Pppoe: "PPPoE0": service removed.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **interface pppoe service** command has been introduced. |

## 3.30.182 interface pppoe session auto-cleanup

**Description** Enable sending a PADT packet for the unfinished PPPoE session. By default the option is enabled.

Command with **no** prefix disables sending a PADT packet.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPPoE

**Synopsis**

(config-if)> **pppoe session auto-cleanup**

(config-if)> **no pppoe session auto-cleanup**

**Example**

```
(config-if)> pppoe session auto-cleanup
Network::Interface::Ppp: "PPPoE0": enabled session auto cleanup.
```

```
(config-if)> no pppoe session auto-cleanup
Network::Interface::Ppp: "PPPoE0": disabled session auto cleanup.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface pppoe session auto-cleanup** command has been introduced. |

## 3.30.183 interface preamble-short

**Description** Use short *preamble*. By default, the setting is disabled.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if)> **preamble-short**

(config-if)> **no preamble-short**

**Example**

```
(config-if)> preamble-short
Network::Interface::Rtx::WifiMaster: "WifiMaster0": short ►
preamble enabled.
```

```
(config-if)> no preamble-short
Network::Interface::Rtx::WifiMaster: "WifiMaster0": short ►
preamble disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface preamble-short** command has been introduced. |

## 3.30.184 interface proxy connect

**Description**

Start the process of connecting to the proxy server. By default, connection is set via any interface.

Command with **no** prefix resets value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Proxy

**Synopsis**

(config-if)> **proxy connect** [ **via** *‹via›* ]

(config-if)> **no proxy connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| via | *Interface* | Interface through which remote node is accessed. |

**Example**

```
(config-if)> proxy connect via WifiMaster1/WifiStation0
Proxy::Interface: "Proxy0": set connection via ►
WifiMaster1/WifiStation0.
```

```
(config-if)> no proxy connect
Proxy::Interface: "Proxy0": set connection via any interface.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface proxy connect** command has been introduced. |

## 3.30.185 interface proxy protocol

**Description**

Set the connection protocol. By default, the http protocol and *TCP* connection is used for proxy server.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Proxy

**Synopsis**

(config-if)> **proxy protocol** *‹protocol›*

(config-if)> **no proxy protocol**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | socks5 | Use *SOCKS5* protocol for connection. |
| | http | Use *HTTP or HTTPS* protocol for connection. |

**Example**

```
(config-if)> proxy protocol socks5
Proxy::Interface: "Proxy0": set proxy protocol to socks5.
```

```
(config-if)> no proxy protocol
Proxy::Interface: "Proxy0": reset proxy protocol.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface proxy protocol** command has been introduced. |

## 3.30.186 interface proxy socks5-udp

**Description** Enable *UDP* mode for the *SOCKS5* protocol. By default, the *UDP* mode is disabled.

Command with **no** prefix disables the mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Proxy

**Synopsis**

(config-if)> **proxy socks5-udp**

(config-if)> **no proxy socks5-udp**

**Example**

```
(config-if)> proxy socks5-udp
Proxy::Interface: "Proxy0": enable SOCKS5 UDP mode.
```

```
(config-if)> no proxy socks5-udp
Proxy::Interface: "Proxy0": disable SOCKS5 UDP mode.
```

**History**

| Version | Description |
|---|---|
| 4.1 | The **interface proxy socks5-udp** command has been introduced. |

## 3.30.187 interface proxy upstream

**Description**

Set proxy server for connection.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Proxy

**Synopsis**

(config-if)> **proxy upstream** ‹*host*› [‹*port*›]

(config-if)> **no proxy upstream**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| host | *String* | IP-address or domain name of proxy server. |
| port | *Integer* | The server port. |

**Example**

```
(config-if)> proxy upstream 203.0.113.48 1080
Proxy::Interface: "Proxy0": set proxy upstream to ►
203.0.113.48:1080.
```

```
(config-if)> no proxy upstream
Proxy::Interface: "Proxy0": cleared proxy upstream.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface proxy upstream** command has been introduced. |

## 3.30.188 interface reconnect-delay

**Description**

Set the period of time between reconnection attempts. By default, value 3 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP

**Synopsis**

(config-if)> **reconnect-delay** *‹sec›*

(config-if)> **no reconnect-delay**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| sec | *Integer* | Value of time in seconds. Can take values in the range from 3 to 600. |

**Example**

```
(config-if)> reconnect-delay 3
Network::Interface::Ppp: "PPTP1": reconnect delay set to 3 ►
seconds.
```

```
(config-if)> no reconnect-delay
Network::Interface::Ppp: "PPTP0": reconnect delay reset to ►
default.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **interface reconnect-delay** command has been introduced. |

## 3.30.189 interface rekey-interval

**Description** Set the period of time between automatic changes of the secret keys, which all devices on the network share. By default, 86400 value is used.

Command with **no** prefix disables keys changing.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **rekey-interval** *‹interval›*

(config-if)> **no rekey-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interval | *Integer* | Value of rekey interval in seconds. |

**Example**

```
(config-if)> rekey-interval 3000
Network::Interface::Rtx::WifiMaster: "WifiMaster0": rekey ►
interval is 3000 sec.
```

```
(config-if)> no rekey-interval
Network::Interface::Rtx::WifiMaster: "WifiMaster0": rekey ►
interval disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface rekey-interval** command has been introduced. |
| 2.15 | Added default value of rekey interval 3600 sec. |
| 3.04 | Default value of rekey interval is changed to 86400 sec. |

## 3.30.190 interface rename

**Description**

Assign arbitrary name to the specified network interface. The interface can be referred to by the new name just like by ID.

Command with **no** prefix removes the setting.

Warning: Do not rename Home interface. This can cause unpredictable system errors.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **rename** ‹*rename*›

(config-if)> **no rename**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| rename | *String* | New interface name. |

**Example**

```
(config-if)> rename PPPoE1
Network::Interface::Base: "PPPoE0": renamed to "PPPoE1".
```

```
(config-if)> no rename
Network::Interface::Base: "PPPoE0": name cleared.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface rename** command has been introduced. |

## 3.30.191 interface rf e2p set

**Description** Change the memory cell value of calibration data at *offset* by *value* for the specified interface.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Radio

**Synopsis**

(config-if) **rf e2p set** ‹*offset*› ‹*value*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| offset | *Hex* | Memory cell location. Can take values in the range from 1E0 to 1FE. |
| value | *Hex* | Value to be set. Can take values in the range from 0 to FFFF. |

**Example**

```
(config-if)> rf e2p set 1f6 0
Network::Interface::Rtx::WifiMaster: EEPROM [0x01F6]:0000 set.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **interface rf e2p set** command has been introduced. |

## 3.30.192 interface role

**Description** Set a role for the interface. Multiple roles can be assigned to one interface. Command is used for correct view of VLAN connections in the web interface.

Command with **no** prefix removes the role. If you use no arguments, the entire list of roles will be removed.

**Prefix no** Yes

**Change settings** No

**Multiple input** Yes

**Synopsis**

(config-if)> **role** ‹*role*› [ **for** ‹*ifor*› ]

(config-if)> **no role** [ *role* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| role | inet | Interface is used for Internet connection. |
| | iptv | Interface is used for IPTV service. |
| | voip | Interface is used for VoIP service. |
| | misc | Interface is used for IP Policy. |
| ifor | *Interface* | Full interface name or an alias. |

**Example**

```
(config-if)> role iptv for GigabitEthernet1
Network::Interface::Base: "GigabitEthernet1": assigned role ►
"iptv" for GigabitEthernet1.

(config-if)> no role iptv for GigabitEthernet1
Network::Interface::Base: "GigabitEthernet1": deleted role "iptv".

(config-if)> no role
Network::Interface::Base: "GigabitEthernet1": deleted all roles.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface role** command has been introduced. |
| 2.10 | Argument misc was added. |

## 3.30.193 interface rrm

**Description**

Enable *RRM* for search of nearby APs according to IEEE 802.11k standard in order to provide this AP list to the subscriber device by request. By default, the option is disabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

AccessPoint

**Synopsis**

(config-if)> **rrm**

(config-if)> **no rrm**

**Example**

```
(config-if)> rrm
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
RRM enabled.
```

```
(config-if)> no rrm
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
RRM disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **interface rrm** command has been introduced. |

## 3.30.194 interface rssi-threshold

**Description**

Set the RSSI signal strength threshold for the Access Point at which Wi-Fi clients will be disconnected and cannot connect to the Access Point. By default, the RSSI value `0` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

AccessPoint

**Synopsis**

(config-if)> **rssi-threshold** ‹*rssi-threshold*›

(config-if)> **no rssi-threshold**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `rssi-threshold` | *Integer* | RSSI values in the range from `-100` to `0`. If value is set to `0`, the setting is disabled. |

**Example**

```
(config-if)> rssi-threshold -30
Network::Interface::Mtk::AccessPoint: "WifiMaster0/AccessPoint0": ►
rssi threshold is set to -30.
```

```
(config-if)> no rssi-threshold
Network::Interface::Mtk::AccessPoint: "WifiMaster0/AccessPoint0": ►
rssi threshold reset to 0.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface rssi-threshold** command has been introduced. |

## 3.30.195 interface schedule

**Description**

Assign a schedule to the interface. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **schedule** *‹schedule›*

(config-if)> **no schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-if)> schedule WIFI
Network::Interface::Base: "WifiMaster0": schedule is "WiFi".
```

```
(config-if)> no schedule
Network::Interface::Base: "WifiMaster0": schedule cleared.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface schedule** command has been introduced. |

## 3.30.196 interface security-level

**Description**

Specify the interface security level. The security levels define the firewall logic:

- Allow establishing `private` → `public` connections.
- Prohibit establishing connections coming to the `public` interface, i. e. in the direction `public` → `private` and `public` → `public`.
- The device itself accepts network connections (allows control) only from `private` interfaces.
- Data transfer between `private` interfaces can be allowed or disallowed depending on the **isolate-private** global parameter.
- `protected` interfaces have no access to device and to other `private`/`protected` subnetworks, but they have access to `public` interfaces and to the internet. The device provides only DHCP and DNS services to the protected segments.

- Data transfer from `private` to `protected` interfaces is forbidden by default. To allow such connection use the **no isolate-private** command.

Note: By default, to all newly created interfaces `public` security level assigned.

Access lists **access-list** have higher priority than the security levels, so they can be used to set additional rules of packet filtering.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-if)> **security-level** (**public** | **private** | **protected**)

**Example**

Despite the fact that there is no functionality to disable the firewall completely, it is possible to disable it for particular directions. Suppose that it is necessary to allow data transfer between the "home" network `Home` and global network `PPPoE0`. To accomplish that, to both interfaces must be assigned `private` security level and function **isolate-private** must be disabled.

```
(config)> interface Home security-level private
Network::Interface::IP: "Bridge0": security level set to ►
"private".

(config)> interface PPPoE0 security-level private
Network::Interface::IP: "PPPoE0": security level set to "private".

(config)> no isolate-private
Netfilter::Manager: Private networks not isolated.
```

Note: The firewall and the address translation — are the functions designed to solve fundamentally different problems. Enabling NAT between `Home` and `PPPoE0` interfaces in the configuration shown above, does not prohibit access to the network `Home` from the global network. Even as the address translation is enabled by command **ip nat Home**, the packets from `PPPoE0` will get to `Home` network.

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface security-level** command has been introduced. |
| 2.06 | The `protected` parameter was added. |

# 3.30.197 interface sfp init-timeout

**Description**

Set SFP (Small Form-Factor Pluggable) module initialization timeout. By default, `auto` value is used.

Note: The timeout is selected and depends on the module firmware. This is the time until the module loads the built-in OS and configures the SerDes interface on its side. The SFP+ support driver uses a **quirk table**. If the module is found in the **quirk table**, it is automatically configured and does not require additional settings. The SFP **quirk table** list is updated by developers.

If the module is present in the **quirk table**, then when the module is installed, **use quirk** will be displayed in the system log:

```
[I] Feb  1 09:11:01 kernel: mt7986_eth: port 4 ►
SFP module: ODI DFP-34X-2IY3, rev 000
[I] Feb  1 09:11:01 kernel: mt7986_eth: port 4 ►
SFP module: 1250M fibre, 1000mW, DMI diag, use ►
quirk
```

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **sfp init-timeout** (**auto** | *‹timeout›* )

(config-if)> **no sfp init-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `auto` | *Keyword* | Automatic calculation of the SFP module initialization timeout. If the module is not identified as PON, the time is calculated from 1 to 4 seconds, depending on the interface speed. If the module is determined by the **quirk table**, the time will be substituted from the **quirk**. |
| `timeout` | *Integer* | The timeout value in seconds. Can take values in the range from `0` to `100` inclusively. |

**Example**

```
(config-if)> sfp init-timeout 45
Network::Interface::Ethernet: "GigabitEthernet0/3": set SFP ►
module initialization timeout to 45 seconds.
```

```
(config-if)> no sfp init-timeout
Network::Interface::Ethernet: "GigabitEthernet0/3": reset SFP ►
module initialization timeout to the auto value.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface sfp init-timeout** command has been introduced. |

## 3.30.198 interface sfp pcs

**Description**

Set PCS (Physical Coding Sublayer) mode. By default, `auto` value is used.

Note: For GPON modules, quirk sets the `fallback` mode, which cycles through 2500base-x/an -> 2500base-x -> 1000base-x/an -> 1000base-x until the PCS is synchronized. This takes time, and the mode without /an does not always guarantee that the interface will work when synchronization is established. You can always override the desired mode. By default, the 1000base-x/an mode is suitable for most GPON modules.

The SFP port on the Keenetic Hero (KN-1013) router mode does not support PCS mode 100Base-FX (125 MHz clock), so 100 Mbps modules will not work. If an optical module is used and the other side of the link is set to 100Base-FX mode, there will be no link.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **sfp pcs** *‹mode›*

(config-if)> **no sfp pcs**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mode` | `auto` | Autodetect from DDMI (Digital Diagnostics Monitoring Interface). |
| | `fallback` | Sequentially try fixed baseband modes until one of them works. |
| | `sgmii/an` | SGMII-supported (Serial Gigabit Media Independent Interface) speeds of 10/100/1000 Mbps with auto-negotiation enabled. |

| Argument | Value | Description |
|---|---|---|
| | 1000base-x/an | Fixed 1 Gbps baseband with Clause 37 auto-negotiation enabled. |
| | 1000base-x | Fixed 1 Gbps baseband. |
| | 2500base-x/an | Fixed 2.5 Gbps baseband with Clause 37 auto-negotiation enabled. |
| | 2500base-x | Fixed 2.5 Gbps baseband. |

**Example**

```
(config-if)> sfp pcs fallback
Network::Interface::Ethernet: "GigabitEthernet0/3": set a SFP ►
PCS mode to fallback.
```

```
(config-if)> no sfp pcs
Network::Interface::Ethernet: "GigabitEthernet0/3": reset a SFP ►
PCS mode to auto.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface sfp pcs** command has been introduced. |

## 3.30.199 interface sfp rx-los

**Description**

Set SFP RX_LOS (Receive Loss of Signal) reception mode. By default, `auto` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **sfp rx-los** *‹mode›*

(config-if)> **no sfp rx-los**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | auto | Autodetect from DDMI (Digital Diagnostics Monitoring Interface). |
| | accept | Accept RX_LOS (Receive Loss of Signal) signal. Allow you to respond to an optical signal loss signal. |
| | ignore | Ignore RX_LOS (Receive Loss of Signal) signal. Allow you to establish communication with the module without connecting an optical cable. |

**Example**

```
(config-if)> sfp rx-los accept
Network::Interface::Ethernet: "GigabitEthernet0/3": set a SFP ►
RX LOS mode to accept.
```

```
(config-if)> no sfp rx-los
Network::Interface::Ethernet: "GigabitEthernet0/3": reset a SFP ►
RX LOS mode to auto.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface sfp rx-los** command has been introduced. |

## 3.30.200 interface sim pin

**Description** Set PIN-code for SIM card.

Command with **no** prefix removes PIN-code.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **sim pin** *‹pin›*

(config-if)> **no sim pin**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| pin | *String* | 4 to 8 digits PIN. |

**Example**

```
(config-if)> sim pin 0000
Mobile::Interface: "UsbLte0": PIN code has been set.
```

```
(config-if)> no sim pin
Mobile::Interface: "UsbLte0": PIN code has been reset.
```

**History**

| Version | Description |
|---|---|
| 3.02 | The **interface sim pin** command has been introduced. |
| 4.00 | Prefix no was added. |

## 3.30.201 interface sim slot

**Description** Switch SIM-slot for QMI modem. By default, the 1 slot is set.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **sim slot** *‹slot›*

(config-if)> **no sim slot**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| slot | 1 | Set 1 or 2 slot. |
| | 2 | |

**Example**

```
(config-if)> sim slot 2
Mobile::Interface: "UsbQmi0": SIM slot is set to "2".
```

```
(config-if)> no sim slot
Mobile::Interface: "UsbQmi0": SIM slot is reset to default.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface sim slot** command has been introduced. |

## 3.30.202 interface speed

**Description** Configure the speed of the Ethernet interface. By default, auto value is set.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **speed** (**10** | **100** | **1000** | **auto**)

(config-if)> **no speed**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| 10 | *Keyword* | Connection speed in Mbit/s. |
| 100 | | |

| Argument | Value | Description |
|---|---|---|
| 1000 | | |
| auto | *Keyword* | Automatical speed configuration. |

**Example**

```
(config-if)> speed 1000
Network::Interface::Ethernet: "GigabitEthernet1/0": speed set ►
to 1000.
```

```
(config-if)> no speed
Network::Interface::Ethernet: "GigabitEthernet1/0": speed reset ►
to default (auto-negotiation).
```

**History**

| Version | Description |
|---|---|
| 2.06.B.1 | The **interface speed** command has been introduced. |

## 3.30.203 interface speed nonegotiate

**Description**

Disable autonegotiation. By default, autonegotiation is enabled.

Command with **no** prefix enables autonegotiation.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-if)> **speed nonegotiate**

(config-if)> **no speed nonegotiate**

**Example**

```
(config-if)> speed nonegotiate
Network::Interface::Ethernet: "GigabitEthernet1/0": ►
autonegotiation will be disabled for fixed speed.
```

```
(config-if)> no speed nonegotiate
Network::Interface::Ethernet: "GigabitEthernet1/0": ►
autonegotiation enabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface speed nonegotiate** command has been introduced. |

## 3.30.204 interface ssdp disable

**Description**

Disable network host discovery via *SSDP* on the specified interface. By default, the feature is enabled.

Command with **no** prefix enables *SSDP* on the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Bridge

**Synopsis**

(config-if)> **ssdp disable**

(config-if)> **no ssdp disable**

**Example**

```
(config-if)> ssdp disable
Discovery::Ssdp::Manager: Disabled on interface "Bridge0".
```

```
(config-if)> no ssdp disable
Discovery::Ssdp::Manager: Enabled on interface "Bridge0".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface ssdp disable** command has been introduced. |

## 3.30.205 interface ssid

**Description**

Specify the wireless network name (SSID) for `WiFiStation` and `AccessPoint` interfaces. Depending on the interface type, the SSID value is processed differently.

- For `AccessPoint`, the SSID is a necessary setting, without which the connection will not be accepted.
- For the `WiFiStation` SSID determines which access point `WiFiStation` will connect to. Without a specified SSID, `WiFiStation` can connect to any available wireless network at its discretion.

Command with **no** prefix resets network name to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFi

**Synopsis**

(config-if)> **ssid** *‹ssid›*

(config-if)> **no ssid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| ssid | *String* | Wireless Network Name (SSID). |

**Example**

```
(config-if)> ssid MYNETWORK
Network::Interface::Wireless: "WifiMaster0/AccessPoint0": SSID ►
saved.
```

```
(config-if)> no ssid
Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►
SSID reset.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface ssid** command has been introduced. |

## 3.30.206 interface standby enable

**Description**

Enable the standby mode. When the standby mode is enabled for an interface, it is automatically turned off when another WAN connection with a higher global priority is up and running.

The standby option is ignored in following cases:

- the global priority is not configured;
- the standby interface is included in a group, such as Bridge;
- the current WAN connection operates over the standby interface.

Command with **no** prefix disables the standby mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **standby enable**

(config-if)> **no standby enable**

**Example**

```
(config-if)> standby enable
Network::Interface::Standby: "CdcEthernet0": enabled.
```

```
(config-if)> no standby enable
Network::Interface::Standby: "CdcEthernet0": disabled.
```

```
(config-if)> standby enable
Network::Interface::Standby: "GigabitEthernet1": enabled.
```

```
(config-if)> no standby enable
Network::Interface::Standby: "GigabitEthernet1": disabled.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **interface standby enable** command has been introduced. |

## 3.30.207 interface standby timeout

**Description**

Set the on-demand connection timeout for a `standby` WAN interface. Specifies the time during which connection attempts are performed. When the timeout expires, the interface is disabled. By default, `600` value is used.

Command with **no** prefix resets settings to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **standby timeout** *‹seconds›*

(config-if)> **no standby timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `seconds` | *`Integer`* | Standby timeout in seconds. Can take values in the range from `10` to `3600` inclusively. |

**Example**

```
(config-if)> standby timeout 600
Network::Interface::Standby: "GigabitEthernet1": set timeout to ►
"600" sec.
```

```
(config-if)> no standby timeout
Network::Interface::Standby: "GigabitEthernet1": reset timeout.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **interface standby timeout** command has been introduced. |

## 3.30.208 interface storm-control disable

**Description** Enable the broadcast storm control on the Bridge interface. By default, the setting is enabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(config-if)> **storm-control disable**

(config-if)> **no storm-control disable**

**Example**

```
(config-if)> storm-control disable
Network::Interface::Bridge: "Bridge0": disabled storm control ►
and loop detector.
```

```
(config-if)> no storm-control disable
Network::Interface::Bridge: "Bridge0": enabled storm control and ►
loop detector.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **interface storm-control disable** command has been introduced. |

## 3.30.209 interface suspend enable

**Description** Enable the timeout mechanism for switching back to the primary SIM card on a dual-SIM modem.

Command with **no** prefix disables the SIM switching timeout mechanism.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **suspend enable**

(config-if)> **no suspend enable**

**Example**

```
(config-if)> suspend enable
Network::Interface::Suspend: "UsbLte0": enabled.
```

```
(config-if)> no suspend enable
Network::Interface::Suspend: "UsbLte0": disabled.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface suspend enable** command has been introduced. |

## 3.30.210 interface suspend schedule

**Description**

Assign a schedule to the SIM switching timeout mechanism.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **suspend schedule** *‹schedule›*

(config-if)> **no suspend schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-if)> suspend schedule schedule0
Network::Interface::Suspend: "UsbLte0": set schedule "schedule0".
```

```
(config-if)> no suspend schedule
Network::Interface::Suspend: Schedule disabled.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface suspend schedule** command has been introduced. |

## 3.30.211 interface suspend timeout

**Description**

Set the SIM switching timeout. By default, 60 value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **suspend timeout** *‹timeout›*

(config-if)> **no suspend timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Value of timeout in minutes. Can take values in the range from 1 to 2820 inclusively. |

**Example**

```
(config-if)> suspend timeout 1
Network::Interface::Suspend: "UsbLte0": set timeout to "1" ►
minutes.

(config-if)> no suspend timeout
Network::Interface::Suspend: "UsbLte0": reset timeout.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface suspend timeout** command has been introduced. |

## 3.30.212 interface switchport access

**Description** Set the port *VLAN* ID for access mode. Allows to transfer frames of the specified *VLAN* to the port and remove *VLAN* marker from the transferred frames.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Port

**Synopsis**

(config-if)> **switchport access vlan** *‹vid›*

(config-if)> **no switchport access vlan**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `vid` | *Integer* | Access *VLAN* ID. Can take values in the range from 1 to 4094 inclusively. |

**Example**

```
(config-if)> switchport access vlan 1
Network::Interface::Switch: "GigabitEthernet0/0": set access ►
VLAN ID: 1.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface switchport access** command has been introduced. |

## 3.30.213 interface switchport friend

**Description**

Configure undirectional *VLAN* for multicast traffic in addition to access *VLAN*. Port can be a member of one access *VLAN*. This command enables forwarding of downstream traffic from a different *VLAN* (called "friend"). Friend packets are transmitted without a tag.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Port

**Synopsis**

(config-if)> **switchport friend vlan** ‹*vid*›

(config-if)> **no switchport friend vlan**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| vid | *Integer* | Friend *VLAN* ID. Can take values in the range from 1 to 4094 inclusively. |

**Example**

```
(config-if)> switchport friend vlan 2
Network::Interface::Switch: "GigabitEthernet0/0": set friend ►
VLAN ID: 2.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface switchport friend** command has been introduced. |

## 3.30.214 interface switchport link-group

**Description**

Enable *Link Aggregation* for 1+2 or 3+4 Ethernet ports. Traffic allocation is based on XOR (balance-xor) mode.

Command with **no** prefix removes port group.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **switchport link-group**

(config-if)> **no switchport link-group**

**Example**

```
(config-if)> switchport link-group
Network::Interface::Switch: "GigabitEthernet0/1": link ►
aggregation is enabled.
```

```
(config-if)> no switchport link-group
Network::Interface::Switch: "GigabitEthernet0/1": link ►
aggregation is disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface switchport link-group** command has been introduced. |

## 3.30.215 interface switchport mode

**Description** Set `access` or `trunk` mode for *VLAN*. By default, `access` mode is set.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Port

**Synopsis**

(config-if)> **switchport mode** [ (**access** [**q-in-q**] ) | **trunk**]

(config-if)> **no switchport mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mode` | `access` | Enable the access mode to a *VLAN*, that is the mode when only the untagged frames pass through the port. The incoming frames get tagged with the PVID marker, which is set with **switchport access** command. The port is an |

| Argument | Value | Description |
|---|---|---|
| | | output one only for *VLAN* with PVID ID. Once a frame is transferred to the port, the *VLAN* marker gets removed. |
| | `trunk` | Enable the *VLAN* trunk mode, that is the mode when frames belonging to several VLANs get transmitted through the port. In this case each frame gets tagged. The list of IDs of *VLAN* networks that include the port is set with **switchport trunk** command. |
| `q-in-q` | *Keyword* | Enable double tagging. |

**Example**

```
(config-if)> switchport mode access
Network::Interface::Switch: "GigabitEthernet0/1": access mode ►
enabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface switchport mode** command has been introduced. |

## 3.30.216 interface switchport trunk

**Description**

Add a port to the *VLAN*. Allows receiving and transmitting of the given *VLAN* frames to the port, such that VLAN marker from the transmitted frames is not removed. In the `trunk` mode it is allowed to add a port to several VLANs.

Command with **no** prefix removes the port from the specified *VLAN*. If you use no argument, the port will be removed from all the VLANs.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Port

**Synopsis**

(config-if)> **switchport trunk vlan** *‹vid›*

(config-if)> **no switchport trunk vlan** [ *vid* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `vid` | *Integer* | *VLAN* ID. Can take values in the range from `1` to `4094` inclusively. |

**Example**

```
(config-if)> switchport trunk vlan 100
Network::Interface::Switch: "GigabitEthernet0/1": set trunk VLAN ►
ID: 100.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **interface switchport trunk** command has been introduced. |

## 3.30.217 interface traffic-counter action disconnect

**Description** Disconnect from the provider when the traffic limit is reached.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter action** ‹*trigger*› **disconnect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| trigger | limit | Disconnection trigger on a limit traffic. |

**Example**

```
(config-if)> traffic-counter action limit disconnect
UsbQmi::TrafficCounter: "UsbQmi0": set disconnect action for ►
trigger "limit".
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter action disconnect** command has been introduced. |

## 3.30.218 interface traffic-counter action sms-alert message

**Description** Set *SMS* alert message.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter action** ‹*trigger*› **sms-alert message** ‹*message*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| trigger | threshold | SMS alerting trigger is a threshold. |
| | limit | SMS alerting trigger is a traffic limit. |
| message | *String* | SMS alerting message. |

**Example**

```
(config-if)> traffic-counter action threshold sms-alert message ►
TEXT
UsbQmi::TrafficCounter: "UsbQmi0": set message for trigger ►
"threshold".
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter action sms-alert message** command has been introduced. |

## 3.30.219 interface traffic-counter action sms-alert phone

**Description** Set phone numbers for *SMS* alerting.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter action** ‹*trigger*› **sms-alert phone** ‹*phone*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| trigger | threshold | SMS alerting trigger is a threshold. |
| | limit | SMS alerting trigger is a traffic limit. |
| phone | *String* | Phone number for SMS alerting. Up to three phone numbers can be set. |

**Example**

```
(config-if)> traffic-counter action threshold sms-alert phone ►
+71112223344
UsbQmi::TrafficCounter: "UsbQmi0": add phone number ►
"+71112223344" for action "threshold".
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter action sms-alert phone** command has been introduced. |

## 3.30.220 interface traffic-counter enable

**Description** Enable the mobile traffic counter. By default, setting is disabled.

Command with **no** prefix disables the mobile traffic counter.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter enable**

(config-if)> **no traffic-counter enable**

**Example**

```
(config-if)> traffic-counter enable
UsbQmi::TrafficCounter: "UsbQmi0": enabled.
```

```
(config-if)> no traffic-counter enable
UsbQmi::TrafficCounter: "UsbQmi0": disabled.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter enable** command has been introduced. |

## 3.30.221 interface traffic-counter limit

**Description** Set the traffic counter limit in megabytes, gigabytes or terabytes.

Command with **no** prefix resets configuration.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter limit** *‹value› ‹unit›*

(config-if)> **no traffic-counter limit**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| value | *Integer* | Limit traffic value. |
| unit | *String* | Limit value units: MB, GB, TB, MiB, GiB, TiB. |

**Example**

```
(config-if)> traffic-counter limit 4 TB
UsbQmi::TrafficCounter: "UsbQmi0": set limit to 4 TB.
```

```
(config-if)> no traffic-counter limit
UsbQmi::TrafficCounter: "UsbQmi0": reset limit.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter limit** command has been introduced. |

## 3.30.222 interface traffic-counter monthly

**Description**

Set the day of the month to restart the traffic counter.

Command with **no** prefix resets configuration.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **traffic-counter monthly** *‹day-of-month›*

(config-if)> **no traffic-counter monthly**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| day-of-month | *Integer* | The day of the month from 1 to 31 to restart the traffic counter. |

**Example**

```
(config-if)> traffic-counter monthly 31
UsbQmi::TrafficCounter: "UsbQmi0": set day of month to "31".
```

```
(config-if)> no traffic-counter monthly
UsbQmi::TrafficCounter: "UsbQmi0": reset day of month.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter monthly** command has been introduced. |

## 3.30.223 interface traffic-counter set

**Description** Set the current value of the traffic counter.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter set** *‹value› ‹unit›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| value | *Integer* | Numeric counter value (either integer or floating point). |
| unit | *String* | Limit value units: MB, GB, TB, MiB, GiB, TiB. |

**Example**

```
(config-if)> traffic-counter set 1.54 GB
UsbQmi::TrafficCounter: "UsbQmi0": set value to 1.54 GB.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter set** command has been introduced. |

## 3.30.224 interface traffic-counter threshold

**Description** Set the traffic counter warning threshold.

Command with **no** prefix resets configuration.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **traffic-counter threshold** *‹threshold›*

(config-if)> **no traffic-counter threshold**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| threshold | *Integer* | Threshold value as a percentage of the limit. Can take values from 1 to 99 percent. |

**Example**

```
(config-if)> traffic-counter threshold 99
UsbQmi::TrafficCounter: "UsbQmi0": set treshold to 99 percent ►
of the limit.
```

```
(config-if)> no traffic-counter threshold
UsbQmi::TrafficCounter: "UsbQmi0": reset threshold.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface traffic-counter threshold** command has been introduced. |

## 3.30.225 interface traffic-shape

**Description**

Set the limit of data rate on a specified interface in both directions. By default speed is not limited.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **traffic-shape rate** *‹rate›* [ **asymmetric** *‹upstream-rate›* ] [ **schedule** *‹schedule›* ]

(config-if)> **no traffic-shape**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| rate | *Integer* | Value of data download rate in Kbps. Limit sould be in the range from 64 Kbps to 1 Gbps. |
| upstream-rate | *Integer* | Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-if)> traffic-shape rate 5000
TrafficControl::Manager: "Bridge0" interface rate limited to ►
5000 kbit/s.
```

```
(config-if)> traffic-shape rate 5000 asymmetric 500
TrafficControl::Manager: "Bridge0" interface rate limited to ►
5000/500 kbit/s.
```

```
(config-if)> no traffic-shape
TrafficControl::Manager: Rate limit removed for "Bridge0" ►
interface.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **interface traffic-shape** command has been introduced. |
| 3.04 | The **upstream-rate** argument was added. |

## 3.30.226 interface tty init

**Description**

Add initialization string at specified position `index` for RAS (UsbModem), NDIS (UsbLte), QMI (UsbQmi) modems.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **tty init** [ *‹index›* ] *‹string›* [ **sleep** *‹delay›* ]

(config-if)> **no tty init** [ *‹index›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `index` | *Integer* | Position, the line number where you want to insert a string. |
| `string` | *String* | Modem initialization string. |
| `delay` | *Integer* | Modem delay value in seconds. |

**Example**

```
(config-if)> tty init AT^SYSCFG=14,2,3fffffff,0,1
Mobile::Interface: "UsbQmi0": initialization string inserted.
```

```
(config-if)> tty init AT^SYSCFG=14,2,3fffffff,0,1 sleep 1
Mobile::Interface: "UsbQmi0": initialization string inserted.
```

```
(config-if)> no tty init
Mobile::Interface: "UsbQmi0": initialization strings erased.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **interface tty init** command has been introduced. |

## 3.30.227 interface tty send

**Description**

Send AT command to UsbLte, UsbQmi modems.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **tty send** *‹command›* [ *‹expect›* ] [ *‹timeout›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| command | *String* | AT command. |
| expect | *String* | Expected response. Default response is OK\|ERROR. |
| timeout | *Integer* | Time to wait in seconds. Default value is 3. |

**Example**

```
(config-if)> tty send ATI
".Built@Aug 23 2019:16:28:33"
OK

Mobile::Interface: "UsbLte0": got expected response.
```

```
(config-if)> tty send ATI OK|ERROR 2
".Built@Aug 23 2019:16:28:33"
OK

Mobile::Interface: "UsbLte0": got expected response.
```

```
(config-if)> tty send ATI OKEY 2
".Built@Aug 23 2019:16:28:33"
OK

Mobile::Interface error[73140786]: "UsbLte0": timeout waiting ►
for expected response.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface tty send** command has been introduced. |

## 3.30.228 interface tunnel destination

**Description** Set the remote end of tunnel. If it is used in conjunction with an automatic *IPSec* connection associated with the tunnel, remote host becomes the initiator of an *IPSec* connection.

Command with **no** prefix resets the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Tunnel

**Synopsis**

(config-if)> **tunnel destination** ‹*destination*›

(config-if)> **no tunnel destination**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| destination | *String* | IP address or domain name of the remote host. |

**Example**

```
(config-if)> tunnel destination example.net
Network::Interface::Tunnel: "Gre0": destination set to ►
example.net.
```

```
(config-if)> no tunnel destination
Network::Interface::Tunnel: "Gre0": destination was reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface tunnel destination** command has been introduced. |

## 3.30.229 interface tunnel eoip id

**Description** Set identifier of EoIP tunnel.

Command with **no** prefix resets the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Eoip

**Synopsis**

(config-if)> **tunnel eoip id** ‹*id*›

(config-if)> **no tunnel eoip id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *Integer* | Tunnel ID. |

**Example**

```
(config-if)> tunnel eoip id 50
Network::Interface::Tunnel: "Gre0": eoip id interface set to auto.
```

```
(config-if)> no tunnel eoip id
Network::Interface::Tunnel: "Gre0": eoip id was reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface tunnel eoip id** command has been introduced. |

## 3.30.230 interface tunnel gre keepalive

**Description**

Enable support of Cisco-like keepalive for GRE tunnel. By default, `interval` is set to 5, `count` is set to 3.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Tunnel

**Synopsis**

(config-if)> **tunnel gre keepalive** ‹*interval*› [*count*]

(config-if)> **no tunnel gre keepalive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | The interval of sending keepalive packets in seconds. Can take values in the range from `0` to `60`. If `0` is set, then GRE keepalive replies is enabled only and the router will not react on the tunnel state change. |
| `count` | *Integer* | Number of attempts to send keepalive packets. Can take values in the range from `1` to `20`. |

**Example**

```
(config-if)> tunnel gre keepalive 10 7
Network::Interface::Gre: "Gre0": set GRE keepalive to 10 s (7 ►
retries).
```

```
(config-if)> no tunnel gre keepalive
Network::Interface::Gre: "Gre0": disable GRE keepalive.
```

```
(config-if)> tunnel gre keepalive 0
Network::Interface::Gre: "Gre0": enable only GRE keepalive ►
replies.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface tunnel gre keepalive** command has been introduced. |

## 3.30.231 interface tunnel source

**Description**

Set the local end of tunnel. If it is used in conjunction with an automatic *IPSec* connection associated with the tunnel, then the reception mode of IPsec IKE connections is activated to establish a secure tunnel.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Tunnel

**Synopsis**

(config-if)> **tunnel source** (**auto** | *‹interface›* | *‹address›*)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `auto` | *Keyword* | Set the current working WAN interface. |
| `interface` | *Interface* | Full interface name or an alias. |
| `address` | *IP address* | Local IP-adress of the tunnel. |

**Example**

```
(config-if)> tunnel source auto
Network::Interface::Tunnel: "Gre0": set source interface to auto.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **interface tunnel source** command has been introduced. |
| 2.09 | The **auto** argument has been added. |
| 3.08 | The **no** prefix was removed as obsolete. |

## 3.30.232 interface tx-burst

**Description**

Enable Wi-Fi packet aggregation (Tx Burst). By default, the setting is disabled.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **tx-burst**

(config-if)> **no tx-burst**

**Example**

```
(config-if)> tx-burst
Network::Interface::Rtx::WifiMaster: Tx Burst enabled.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **interface tx-burst** command has been introduced. |

## 3.30.233 interface tx-queue length

**Description**

Set the size of the queue of outgoing packets on the interface. By default, `1000` value is set.

Command with **no** prefix resets to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **tx-queue length** *‹length›*

(config-if)> **no tx-queue length**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `length` | *Integer* | Queue length can take values in the range from `0` to 65536. |

**Example**

```
(config-if)> tx-queue length 255
Network::Interface::Base: "L2TP0": TX queue length is 255.
```

```
(config-if)> no tx-queue length
Network::Interface::Base: "L2TP0": TX queue length reset to ►
default.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface tx-queue length** command has been introduced. |

## 3.30.234 interface tx-queue scheduler cake

**Description**

Set the *CAKE* package scheduler for the interface. By default, the value cake is used for DSL and USB-modem interfaces, `fq_codel` — for all others.

Command with **no** prefix resets the scheduler to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **tx-queue scheduler cake**

(config-if)> **no tx-queue scheduler cake**

**Example**

```
(config-if)> tx-queue scheduler cake
Network::Interface::Base: "L2TP0": set TX queue scheduler to ►
"cake".
```

```
(config-if)> no tx-queue scheduler cake
Network::Interface::Base: "L2TP0": set default TX queue scheduler.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface tx-queue scheduler cake** command has been introduced. |

## 3.30.235 interface tx-queue scheduler fq_codel

**Description**

Set the *FQ_CODEL* package scheduler for the interface. By default, the value cake is used for DSL and USB-modem interfaces, `fq_codel` — for all others.

Command with **no** prefix resets the scheduler to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **tx-queue scheduler fq_codel**

(config-if)> **no tx-queue scheduler fq_codel**

**Example**

```
(config-if)> tx-queue scheduler fq_codel
Network::Interface::Base: "L2TP0": set TX queue scheduler to ►
"fq_codel".
```

```
(config-if)> no tx-queue scheduler fq_codel
Network::Interface::Base: "L2TP0": set default TX queue scheduler.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **interface tx-queue scheduler fq_codel** command has been introduced. |

## 3.30.236 interface up

**Description**

Enable the network interface and persist the state “up” to the settings.

Command with **no** prefix disables the network interface and deletes “up” from settings. Also **interface down** command can be used.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-if)> **up**

(config-if)> **no up**

**Example**

```
(config-if)> up
Interface enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface up** command has been introduced. |

## 3.30.237 interface usb device-id

**Description**

Assign vendor and model ID to the UsbModem interface. It is necessary for modem and interface binding.

If there is an interface UsbModem[N] with the appropriate DeviceID, then automatic binding is occur. If there is no such interface, it will be created automatically with the appropriate DeviceID.

Command with **no** prefix deletes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **usb device-id** *‹vendor› ‹model›*

(config-if)> **no usb device-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| vendor | *String* | Vendor info. |
| model | *String* | Model info. |

**Example**

```
(config-if)> usb device-id 12d1 1001
Device ID saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface usb device-id** command has been introduced. |

## 3.30.238 interface usb port-id

**Description**

Bind of RAS (UsbModem), CdcEthernet, NDIS (UsbLte), QMI (UsbQmi) modems interface to USB port identifier.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **usb port-id** ( *‹port›* | **auto**)

(config-if)> **no usb port-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *String* | USB port identifier. |
| auto | *Keyword* | Auto USB port selection. |

**Example**

```
(config-if)> usb port-id 1
Network::Interface::Usb: "CdcEthernet0": port ID is set to "1".
```

```
(config-if)> usb port-id auto
Network::Interface::Usb: "CdcEthernet0": port ID is automatically ►
set to "2/4".
```

```
(config-if)> no usb port-id
Network::Interface::Usb: "CdcEthernet0": port ID removed.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface usb port-id** command has been introduced. |

## 3.30.239 interface usb power-cycle

**Description** Turn off power on the usb-modem for a specified period of time. This function is used to hardware reset usb-modem in case of freezing.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **usb power-cycle** ‹*pause*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| pause | *Integer* | Period of time in which usb-modem will be disabled, in milliseconds. |

**Example**

```
(config-if)> usb power-cycle 3000
Network::Interface::Usb: "UsbLte0": started 3000 ms. power cycle.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **interface usb power-cycle** command has been introduced. |

## 3.30.240 interface usb power-fail

**Description** Specify further actions in case the usb-modem power-off did not help.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **usb power-fail** ‹*interval*› ( **retry** ‹*pause*› | **reboot**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | Time to wait for modem detection after its power reset, in seconds. Can take values in the range from `0` to `60` inclusively. |
| `pause` | *Integer* | Period of time in which usb-modem will be disabled, in seconds. Can take values in the range from `0` to `60` inclusively. |
| `reboot` | *Keyword* | Reboot of the entire system. |

**Example**

```
(config-if)> usb power-fail 60 reboot
Network::Interface::Usb: "YotaOne1": enabled power fail action: ►
reboot.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **interface usb power-fail** command has been introduced. |

## 3.30.241 interface vlan qos egress map

**Description**

Configure *NTCE* priority mapping to IEEE P802.1p[17] PCP for outgoing packets. By default, value `0` is used.

Command with **no** prefix resets the IEEE P802.1p[18] PCP value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Ethernet

**Synopsis**

(config-if)> **vlan qos egress map** ‹*priority*› ‹*pcp*›

(config-if)> **no vlan qos egress map** [ ‹*priority*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `priority` | *Integer* | *NTCE* priority number. Can take values in the range from `0` to `7` inclusively. If the value is `0`, all outgoing packets will receive this PCP. |
| `pcp` | *Integer* | The new value of the IEEE P802.1p[19] priority code point. |

[17] https://en.wikipedia.org/wiki/IEEE_P802.1p
[18] https://en.wikipedia.org/wiki/IEEE_P802.1p
[19] https://en.wikipedia.org/wiki/IEEE_P802.1p

**Example**

```
(config-if)> vlan qos egress map 0 2
Network::Interface::Vlan: "GigabitEthernet0/Vlan1": enabled ►
mapping priority 0 to PCP 2.
```

```
(config-if)> no vlan qos egress map 0
Network::Interface::Vlan: "GigabitEthernet0/Vlan1": reset PCP ►
mapping for priority 0.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface vlan qos egress map** command has been introduced. |

## 3.30.242 interface vrrp group

**Description**

Create *VRRP* group for the interface.

Command with **no** prefix removes the group. If you use no argument, the entire list of *VRRP* groups will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Ethernet, Bridge

**Synopsis**

(config-if)> **vrrp group** *‹group›*

(config-if)> **no vrrp group** [ *‹group›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| group | *Integer* | The Virtual Router Identifier (VRID) for the interface. Can take values in the range from 1 to 255. |

**Example**

```
(config-if)> vrrp group 1
Vrrp::Manager: "Bridge0": created group 1.
```

```
(config-if)> no vrrp group 1
Vrrp::Manager: "Bridge0": removed group 1.
```

```
(config-if)> no vrrp group
Vrrp::Manager: "Bridge0": removed all groups.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface vrrp group** command has been introduced. |

## 3.30.243 interface vrrp group advertise

**Description** Set the advertisement interval for a *VRRP* group.

Command with **no** prefix deletes the advertisement interval.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **vrrp group** *‹group›* **advertise** *‹advertise›*

(config-if)> **no vrrp group** *‹group›* **advertise**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| group | *Integer* | The Virtual Router Identifier (VRID) for the interface. Can take values in the range from 1 to 255. |
| advertise | *Integer* | Advertisement interval in seconds. Can take values in the range from 1 to 255. |

**Example**

```
(config-if)> vrrp group 1 advertise 2
Vrrp::Manager: "GigabitEthernet1": set advertise interval to "2" ►
s to group "1".
```

```
(config-if)> no vrrp group 1 advertise
Vrrp::Manager: "GigabitEthernet1": cleared advertise interval ►
for group "1".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface vrrp group advertise** command has been introduced. |

## 3.30.244 interface vrrp group ip

**Description** Set the virtual IP address for the specified *VRRP* group.

Command with **no** prefix deletes the IP address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet, Bridge

**Synopsis**

(config-if)> **vrrp group** ‹*group*› **ip** ‹*ip*›

(config-if)> **no vrrp group** ‹*group*› **ip**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| group | *Integer* | The Virtual Router Identifier (VRID) for the interface. Can take values in the range from 1 to 255. |
| ip | *IP-address* | The virtual IP address for the specified VRRP group. The specified IP address must belong to the same subnet as the physical IP address of the interface on which VRRP is being configured. |

**Example**

```
(config-if)> vrrp group 1 ip 192.168.2.10
Vrrp::Manager: "Bridge0": set virtual IP address "192.168.2.100" ►
to group "1".
```

```
(config-if)> no vrrp group 1 ip
Vrrp::Manager: "Bridge0": cleared virtual IP address for group ►
"1".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface vrrp group ip** command has been introduced. |

## 3.30.245 interface vrrp group priority

**Description** Set the priority for a *VRRP* group. Highest priority determines the Master router.

Command with **no** prefix deletes the priority.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet, Bridge

**Synopsis**

(config-if)> **vrrp group** ‹*group*› **priority** ‹*priority*›

(config-if)> **no vrrp group** ‹*group*› **priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `group` | *Integer* | The Virtual Router Identifier (VRID) for the interface. Can take values in the range from 1 to 255. |
| `priority` | *Integer* | Group priority. Can take values in the range from `0` to 255. |

**Example**

```
(config-if)> vrrp group 1 priority 110
Vrrp::Manager: "Bridge0": set priority "110" to group "1".
```

```
(config-if)> no vrrp group 1 priority
Vrrp::Manager: "Bridge0": cleared priority for group "1".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface vrrp group priority** command has been introduced. |

## 3.30.246 interface vrrp version

**Description**

Set *VRRP* protocol version. By default, `default` value is set.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet, Bridge

**Synopsis**

(config-if)> **vrrp version** (**default** | **v2** | **v3** | **v3-compat**)

(config-if)> **no vrrp version**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `default` | *Keyword* | Version 2 for IPv4 and version 3 for IPv6. |
| v2 | *Keyword* | Strict compliance to VRRP version 2:<br>• zero Virtual IPs are not allowed;<br>• IPv6 addresses are not allowed;<br>• the Master state can only be set if the priority is 255. |
| v3 | *Keyword* | VRRP version 3 for IPv4 and IPv6 both. |

| Argument | Value | Description |
|---|---|---|
| `v3-compat` | *Keyword* | VRRP version 3: IPv6 compatibility mode with Cisco routers. |

**Example**

```
(config-if)> vrrp version v3
Vrrp::Manager: "Bridge0": set version to "v3".
```

```
(config-if)> no vrrp version
Vrrp::Manager: "Bridge0": set version to "default".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface vrrp version** command has been introduced. |

## 3.30.247 interface web-api address

**Description**

Set the IP address to access the modem's web interface connected to the router.

Command with **no** prefix deletes the address.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(config-if)> **web-api address** ‹*address*›

(config-if)> **no web-api address**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *IP-address* | The web interface address. |

**Example**

```
(config-if)> web-api address 192.168.8.1
Mobile::Interface: "CdcEthernet0": WEB address is set.
```

```
(config-if)> no web-api address
Mobile::Interface: "CdcEthernet0": WEB address cleared.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface web-api address** command has been introduced. |

## 3.30.248 interface web-api login

**Description** Specify the user name to access the modem's web interface connected to the router.

Command with **no** prefix deletes the user name.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **web-api login** *‹login›*

(config-if)> **no web-api login**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| login | *String* | User name for authentication. Maximum user name length is 64 characters. |

**Example**

```
(config-if)> web-api login myadmin
Mobile::Interface: "CdcEthernet0": WEB login is set.
```

```
(config-if)> no web-api login
Mobile::Interface: "CdcEthernet0": WEB login cleared.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface web-api login** command has been introduced. |

## 3.30.249 interface web-api password

**Description** Set a password to access the modem's web interface connected to the router.

Command with **no** prefix deletes the password.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config-if)> **web-api password** *‹password›*

(config-if)> **no web-api password**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | The password for authentication. Maximum password length is 64 characters. |

**Example**

```
(config-if)> web-api password 12345678910
Mobile::Interface: "CdcEthernet0": WEB password is set.
```

```
(config-if)> no web-api password
Mobile::Interface: "CdcEthernet0": WEB password cleared.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **interface web-api password** command has been introduced. |

## 3.30.250 interface whnat

**Description**

Enable WHNAT (wireless hardware accelerator) for AP 5 GHz. The accelerator is used when transmitting traffic between LAN and WLAN clients of the same network segment. When HWNAT (hardware accelerator) is off, WHNAT (wireless hardware accelerator) works through SWNAT (software accelerator), which reduces the speed in the LAN-WLAN direction. By default, the setting is enabled.

Command with **no** prefix disables the accelerator.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFiMaster

**Synopsis**

(config-if)> **whnat**

(config-if)> **no whnat**

**Example**

```
(config-if)> whnat
Network::Interface::Rtx::WifiMaster: "WifiMaster1": wireless ►
hardware NAT offload is enabled.
```

```
(config-if)> no whnat
Network::Interface::Rtx::WifiMaster: "WifiMaster1": wireless ►
hardware NAT offload is disabled.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **interface whnat** command has been introduced. |

## 3.30.251 interface wireguard asc

**Description**

Configure the Advanced Security Configuration setting for *WireGuard*.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Wireguard

**Synopsis**

(config-if)> **wireguard asc** *‹jc› ‹jmin› ‹jmax› ‹s1› ‹s2› ‹h1› ‹h2› ‹h3› ‹h4›* [ *‹s3› ‹s4› ‹i1› ‹i2› ‹i3› ‹i4› ‹i5›* ]

(config-if)> **no wireguard asc**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| jc | *String* | The number of packets with random data that are sent before the start of the session. |
| jmin | *String* | The minimum packet size for Junk packet. That is, all randomly generated packets will have a size no smaller than Jmin. |
| jmax | *String* | The maximum size for Junk packets. |
| s1 | *String* | The size of random data that will be added to the init packet. |
| s2 | *String* | The size of random data that will be added to the response packet. |
| h1 | *String* | The header of the first byte of the handshake. |
| h2 | *String* | The header of the first byte of the handshake response. |
| h3 | *String* | UnderLoad packet header. |
| h4 | *String* | The header of the packet of the data packet. The interval of keepalive packet sending in seconds. |
| h4 | *String* | The header of the packet of the data packet. The interval of keepalive packet sending in seconds. |
| s3 | *String* | The size of random data added to the Cookie packet. |

| Argument | Value | Description |
|---|---|---|
| s4 | *String* | The size of random data added to the transport packet. |
| i1 | *String* | The parameters of the first custom signature packet. |
| i2 | *String* | The parameters of the second custom signature packet. |
| i3 | *String* | The parameters of the third custom signature packet. |
| i4 | *String* | The parameters of the fourth custom signature packet. |
| i5 | *String* | The parameters of the fifth custom signature packet. |

**Example**

```
(config-if)> wireguard asc 120 22 320 0 0 1 2 3 4
Wireguard::Interface: "Wireguard0": set ASC parameters.
```

```
(config-if)> wireguard asc 12 93 631 55 443 3815022723 2676095188 ►
1013151964 2222066632
Wireguard::Interface: "Wireguard0": set ASC parameters.
```

```
(config-if)> wireguard asc 4 11 40 61 121
 408497356-1600544948 2108567814-2122165249 2174439465-2126166684 ►
2135261384-2139127173 21 21
"<r 2><b ►
0x858000010001000000000669636c6f756403636f6d000001000100c00c000100010000105a00044d583737>
" "" "" "" ""
Wireguard::Interface: "Wireguard0": set ASC parameters.
```

```
(config-if)> no wireguard asc
Wireguard::Interface: "Wireguard0": reset ASC parameters.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface wireguard asc** command has been introduced. |
| 5.01 | Added support for additional ASC parameters: **s3**, **s4**, **i1**, **i2**, **i3**, **i4**, and **i5**. |

# 3.30.252 interface wireguard listen-port

**Description**

Specify *UDP* port number to which incoming connections are accepted. By default, port number is not defined.

Command with **no** prefix resets the port.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Interface type** Wireguard

**Synopsis**

(config-if)> **wireguard listen-port** *‹port›*

(config-if)> **no wireguard listen-port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | Port number. Can take values in the range from 1 to 65535 inclusively. |

**Example**

```
(config-if)> wireguard listen-port 11633
Wireguard::Interface: "Wireguard4": set listen port to "11633".
```

```
(config-if)> no wireguard listen-port
Wireguard::Interface: "Wireguard4": reset listen port.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard listen-port** command has been introduced. |

## 3.30.253 interface wireguard obfs-key

**Description** Configure the obfuscation key, compatible with DD-WRT firmware.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Wireguard

**Synopsis**

(config-if)> **wireguard obfs-key** *‹obfs-key›*

(config-if)> **no wireguard obfs-key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `obfs-key` | *String* | Value of the key. Latin letters, numbers, dots, hyphens and underscores are acceptable. The key length should be between 1 and 32 characters long. |

**Example**

```
(config-if)> wireguard obfs-key 5(-3*3RA{2&kay)_BbQs5a-J8Dq)%b*G
Wireguard::Interface: "Wireguard1": set obfs key for peer ►
"bmXOC+23451xEMF9dyiK2H5/1SUtzH0JuVo51h2wPfgyo=".
```

```
(config-if)> no wireguard obfs-key
Wireguard::Interface: "Wireguard3": reset obfs key.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface wireguard obfs-key** command has been introduced. |

## 3.30.254 interface wireguard peer

**Description**

Add the remote peer public key to configure the secure connection using the *WireGuard* protocol.

Command with **no** prefix removes specified key.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Wireguard

**Group entry**

`(config-wg-peer)`

**Synopsis**

(config-if)> **wireguard peer** *‹key›*

(config-if)> **no wireguard peer** *‹key›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | *String* | Value of the key. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters (Base64-encoded 32-byte string representation). |

**Example**

```
(config-if)> wireguard peer ►
gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=
(config-wg-peer)>
```

```
(config-if)> no wireguard peer ►
gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=
Wireguard::Interface: "Wireguard4": removed peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmmg0=".
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard peer** command has been introduced. |

## 3.30.254.1 interface wireguard peer allow-ips

**Description**

Add the subnet of IP addresses to which the transmission of packets inside the tunnel is allowed.

Note: You can add `0.0.0.0/0` subnet to allow transmission to any addresses.

Command with **no** prefix removes the subnet. If you use no argument, the entire list of subnets will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Wireguard

**Synopsis**

(config-wg-peer)> **allow-ips** *‹address› ‹mask›*

(config-wg-peer)> **no allow-ips** [ *‹address› ‹mask›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Together with mask *mask* sets the subnet of IP addresses to be translated. |
| mask | *IP-mask* | Mask of subnet. There are two ways to enter the mask: the canonical form (for example, `255.255.255.0`) and the form of prefix bit length (for example, `/24`). |

**Example**

```
(config-wg-peer)> allow-ips 0.0.0.0/0
Wireguard::Interface: "Wireguard4": add allowed IPs ►
"0.0.0.0/0.0.0.0" from peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> allow-ips 192.168.11.0 255.255.255.0
Wireguard::Interface: "Wireguard4": add allowed IPs ►
"192.168.11.0/255.255.255.0" from peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> no allow-ips
Wireguard::Interface: "Wireguard4": clear allowed IPs of peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard peer allow-ips** command has been introduced. |

## 3.30.254.2 interface wireguard peer client-id send

**Description**

Configure the client ID for sending in message headers for *WireGuard*.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Wireguard

**Synopsis**

(config-wg-peer)> **client-id send** ‹*client-id*›

(config-wg-peer)> **no client-id send**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `client-id` | *String* | Decimal number obtained by simple hexadecimal translation, for example: from `0x1620a6` you get simply `1450150`. Client ID must be in the range from 1 to 16777215. |

**Example**

```
(config-wg-peer)> client-id send 1450150
Wireguard::Interface: "Wireguard3": set peer ►
"4G0SzB1231234413PevDG4dy0Y/TCXG8fnKf2OLdjs=" send client ID to ►
"1450150".
```

```
(config-wg-peer)> no client-id send
Wireguard::Interface: "Wireguard3": reset send client ID for ►
peer "4G0SzB1231234413PevDG4dy0Y/TCXG8fnKf2OLdjs=".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **interface wireguard peer client-id send** command has been introduced. |

## 3.30.254.3 interface wireguard peer connect

**Description**

Set interface for WireGuard peer connection. By default, connection is set via any interface.

If you use no argument, the setting resets to default.

Command with **no** prefix disables WireGuard peer connection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WireGuard

**Synopsis**

(config-wg-peer)> **connect** [ **via** *‹via›* ]

(config-wg-peer)> **no connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| via | *Interface* | Full interface name or an alias. |

**Example**

```
(config-wg-peer)> connect
Wireguard::Interface: "Wireguard0": set peer ►
"IrtvFcVtI5wcqxn4cCmuWc+p8s8byPOzK/MAI67VmXs=" connection via ►
any interface.
```

```
(config-wg-peer)> connect via ISP
Wireguard::Interface: "Wireguard0": set peer ►
"IrtvFcVtI5wcqxn4cCmuWc+p8s8byPOzK/MAI67VmXs=" connect via "ISP"
```

```
(config-wg-peer)> no connect
Wireguard::Interface: "Wireguard0": disabled peer ►
"IrtvFcVtI5wcqxn4cCmuWc+p8s8byPOzK/MAI67VmXs=".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface wireguard peer connect** command has been introduced. |

## 3.30.254.4 interface wireguard peer endpoint

**Description** Set the remote peer address to which the *WireGuard* connection will be established.

Command with **no** prefix removes the endpoint.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Wireguard

**Synopsis**

(config-wg-peer)> **endpoint** *‹address›* [:*‹port›*]

(config-wg-peer)> **no endpoint**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | IP address or domain name of the server. |
| port | *Integer* | The *UDP* server port. |

**Example**

```
(config-wg-peer)> endpoint 10.0.1.10:11635
Wireguard::Interface: "Wireguard4": set peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=" endpoint to ►
"10.0.1.10:11635".
```

```
(config-wg-peer)> no endpoint
Wireguard::Interface: "Wireguard4": reset endpoint for peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard peer endpoint** command has been introduced. |

## 3.30.254.5 interface wireguard peer keepalive-interval

**Description**

Set the interval of keepalive packet sending for *WireGuard* connection monitoring. By default, the interval is not set.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Wireguard

**Synopsis**

(config-wg-peer)> **keepalive-interval** ‹*interval*›

(config-wg-peer)> **no keepalive-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interval | *Integer* | The interval of keepalive packet sending in seconds. Can take values in the range from 3 to 3600 inclusively. |

**Example**

```
(config-wg-peer)> keepalive-interval 3
Wireguard::Interface: "Wireguard4": set peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=" keepalive interval ►
to "3".
```

```
(config-wg-peer)> no keepalive-interval
Wireguard::Interface: "Wireguard4": reset persistent keepalive ►
interval for peer "gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard peer keepalive-interval** command has been introduced. |

## 3.30.254.6 interface wireguard peer obfs-key

**Description**

Configure the obfuscation key for the selected *WireGuard* peer.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Wireguard

**Synopsis**

(config-wg-peer)> **obfs-key** *‹obfs-key›*

(config-wg-peer)> **no obfs-key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| obfs-key | *String* | Value of the key. Latin letters, numbers, dots, hyphens and underscores are acceptable. The key length should be between 1 and 32 characters long. |

**Example**

```
(config-wg-peer)> obfs-key 5(-33RA{2&kay)_BbQs5a-J8Dq)%bG
Wireguard::Interface: "Wireguard3": set obfs key for peer ►
"bmXOC+F1FxEMF9dyiK2H5/1SUtzH0JuVo51h2wPfgyo=".
```

```
(config-wg-peer)> no obfs-key
Wireguard::Interface: "Wireguard3": reset obfs key for peer ►
"bmXOC+F1FxEMF9dyiK2H5/1SUtzH0JuVo51h2wPfgyo=".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface wireguard peer obfs-key** command has been introduced. |

### 3.30.254.7 interface wireguard peer preshared-key

**Description**

Set preshared key for *WireGuard* connection to remote peer. The preshared key (PSK) is an optional security improvement as per the *WireGuard* protocol and should be a unique PSK per client for highest security. By default, PSK is not used.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Wireguard

**Synopsis**

```
(config-wg-peer)>     preshared-key ‹preshared-key›
```

```
(config-wg-peer)> no preshared-key
```

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `preshared-key` | *String* | Secret PSK key value. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters. |

**Example**

```
(config-wg-peer)> preshared-key ►
WY2fkhJZuDCbYew7L8whBMzkReVf8KKzWJrmaR79F8z=
Wireguard::Interface: "Wireguard4": set preshared key for peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> no preshared-key
Wireguard::Interface: "Wireguard4": reset preshared key for peer ►
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard peer preshared-key** command has been introduced. |

## 3.30.255 interface wireguard private-key

**Description**

Set or generate the private key to connect to the remote peers via *WireGuard* protocol. By default, private key is not configured.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Interface type** Wireguard

**Synopsis**

(config-if)> **wireguard private-key** [ ‹*private-key*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `private-key` | *String* | A new private key value. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters. |

**Example**

```
(config-if)> wireguard private-key
Wireguard::Interface: "Wireguard4": generated new private key.
```

```
(config-if)> wireguard private-key ►
UshaeghezaiJ7reo8iK6ear0eomujohkeen8jahX5uo=
Wireguard::Interface: "Wireguard4": set private key.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **interface wireguard private-key** command has been introduced. |

## 3.30.256 interface wmm

**Description** Enable *WMM* on the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Access Point

**Synopsis**

(config-if)> **wmm**

(config-if)> **no wmm**

**Example**

```
(config-if)> wmm
WMM extensions enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface wmm** command has been introduced. |

## 3.30.257 interface wpa-eap radius secret

**Description** Specify the shared secret for secure communication between a *RADIUS* server and a *RADIUS* client.

Command with **no** prefix deletes the shared secret.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(config-if)> **wpa-eap radius secret** *‹secret›*

(config-if)> **no wpa-eap radius secret**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| secret | *String* | The value of *RADIUS* shared secret. Maximum key length is 64 characters. |

**Example**

```
(config-if)> wpa-eap radius secret ►
(+>R#G`}-JNxru'i8i|lK}wBN9E^XOXa{xFOG-N^%FaTnr|S(e(q$/lP2/tbX/#Q
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS secret applied.
```

```
(config-if)> no wpa-eap radius secret
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS secret cleared.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **interface wpa-eap radius secret** command has been introduced. |

## 3.30.258 interface wpa-eap radius server

**Description** Specify *RADIUS* server address.

Command with **no** prefix deletes the address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(config-if)> **wpa-eap radius server** *‹address›* [: *‹port›* ]

(config-if)> **no wpa-eap radius server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | *RADIUS* server IP address. |

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | *RADIUS* server port. |

**Example**

```
(config-if)> wpa-eap radius server 192.168.10.10
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server set to ►
192.168.10.10.
```

```
(config-if)> wpa-eap radius server 192.168.10.10:1111
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server set to ►
192.168.10.10:1111.
```

```
(config-if)> no wpa-eap radius server
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server cleared.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **interface wpa-eap radius server** command has been introduced. |

## 3.30.259 interface wps

**Description** Enable *WPS* functionality.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **wps**

(config-if)> **no wps**

**Example**

```
(config-if)> wps
WPS functionality enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface wps** command has been introduced. |

## 3.30.260 interface wps auto-self-pin

**Description** Enable *WPS* auto-self-pin mode. By default auto-self-pin mode is enabled.

Command with **no** prefix disables this mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **wps auto-self-pin**

(config-if)> **no wps auto-self-pin**

**Example**

```
(config-if)> wps auto-self-pin
Network::Interface::Rtx::Wps: an auto self PIN mode enabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **interface wps auto-self-pin** command has been introduced. |

## 3.30.261 interface wps button

**Description** Start WPS process using a software button. Process takes 2 minutes or until the first connection occured.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **wps button** *‹direction›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| direction | send | Send WiFi configuration. |
| | receive | Receive WiFi configuration from Hero. |

**Example**

```
(config-if)> wps button send
Sending WiFi configuration process started (software button mode).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface wps button** command has been introduced. |

## 3.30.262 interface wps peer

**Description** Start WPS process using remote peer's PIN. Process takes 2 minutes or until the first connection occured. By default, WPS PIN is disabled.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **wps peer** *‹direction› ‹pin›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| direction | send | Send WiFi configuration. |
| | receive | Receive WiFi configuration from the remote peer. |
| pin | *String* | PIN code of the remote peer. |

**Example**

```
(config-if)> wps peer send 53794141
Network::Interface::Rtx::Wps: "WifiMaster0/AccessPoint0": peer ►
PIN WPS session started.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **interface wps peer** command has been introduced. |

## 3.30.263 interface wps self-pin

**Description** Start WPS process using self PIN. Process takes 2 minutes or until the first connection occur.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(config-if)> **wps self-pin** *‹direction›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| direction | send | Send WiFi configuration. |
| | receive | Receive WiFi configuration from Hero. |

**Example**

```
(config-if)> wps self-pin receive
Receiving WiFi configuration process started (self PIN mode).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **interface wps self-pin** command has been introduced. |

## 3.30.264 interface wsd disable

**Description**

Disable network host discovery via *WS-Discovery* on the specified interface. By default, the feature is enabled.

Command with **no** prefix enables *WS-Discovery* on the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Bridge

**Synopsis**

(config-if)> **wsd disable**

(config-if)> **no wsd disable**

**Example**

```
(config-if)> wsd disable
Discovery::Wsd::Manager: Disabled on interface "Bridge0".
```

```
(config-if)> no wsd disable
Discovery::Wsd::Manager: Enabled on interface "Bridge0".
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **interface wsd disable** command has been introduced. |

## 3.30.265 interface zerotier accept-addresses

**Description**

Enable address accepting from the *ZeroTier* server.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

ZeroTier

**Synopsis**

(config-if)> **zerotier accept-addresses**

(config-if)> **no zerotier accept-addresses**

**Example**

```
(config-if)> zerotier accept-addresses
ZeroTier::Interface: "ZeroTier0": enabled addresses accept.
```

```
(config-if)> no zerotier accept-addresses
ZeroTier::Interface: "ZeroTier0": disabled addresses accept.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface zerotier accept-addresses** command has been introduced. |

## 3.30.266 interface zerotier accept-routes

**Description**

Enable receiving routes from a remote side via *ZeroTier*.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

ZeroTier

**Synopsis**

(config-if)> **zerotier accept-routes**

(config-if)> **no zerotier accept-routes**

**Example**

```
(config-if)> zerotier accept-routes
ZeroTier::Interface: "ZeroTier0": enabled routes accept.
```

```
(config-if)> no zerotier accept-routes
ZeroTier::Interface: "ZeroTier0": disabled routes accept.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface zerotier accept-routes** command has been introduced. |

## 3.30.267 interface zerotier connect

**Description**

Set interface for *ZeroTier* connection. If you use no argument, connection is set via any interface.

Command with **no** prefix resets value to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** ZeroTier

**Synopsis**

(config-if)> **zerotier connect** [ **via** ‹*via*› ]

(config-if)> **no zerotier connect**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| via | *Interface* | Full interface name or an alias. |

**Example**

```
(config-if)> zerotier connect via ISP
ZeroTier::Interface: "ZeroTier0": set connection via ISP.
```

```
(config-if)> no zerotier connect
ZeroTier::Interface: "ZeroTier0": set connection via any ►
interface.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface zerotier connect** command has been introduced. |

## 3.30.268 interface zerotier network-id

**Description** Set identifier of *ZeroTier* tunnel.

Command with **no** prefix resets the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** ZeroTier

**Synopsis**

(config-if)> **zerotier network-id** ‹*network-id*›

(config-if)> **no zerotier network-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| network-id | *String* | Tunnel ID. |

**Example**

```
(config-if)> zerotier network-id 816227940c13c37e
ZeroTier::Interface: "ZeroTier0": set network ID to ►
"816227940c13c37e".
```

```
(config-if)> no zerotier network-id
ZeroTier::Interface: "ZeroTier0": reset network ID.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **interface zerotier network-id** command has been introduced. |

# 3.31 ip arp

**Description**

Set static mapping between an IP address and a MAC address for hosts that do not support dynamic *ARP*.

Command with **no** prefix removes entry from ARP table. If you use no arguments, the whole list of ARP entrys will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **ip arp** *‹ip› ‹mac›*

(config)> **no ip arp** [ *‹ip›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| ip | *IP address* | IP address in four-part dotted decimal format corresponding to the local data-link address. |
| mac | *MAC address* | MAC address as six groups of two hexadecimal digits separated by colons. |

**Example**

```
(config)> ip arp 192.168.2.50 a1:2e:84:85:f4:21
Network::ArpTable: Static ARP entry saved.
```

```
(config)> no ip arp 192.168.2.50
Network::ArpTable: Static ARP entry deleted for 192.168.2.50.
```

```
(config)> no ip arp
Network::ArpTable: Static ARP table cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip arp** command has been introduced. |

# 3.32 ip conntrack lockout disable

**Description** Disable conntrack table protection. By default, the protection is enabled.

Command with **no** prefix enables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip conntrack lockout disable**

(config)> **no ip conntrack lockout disable**

**Example**

```
(config)> ip conntrack lockout disable
Conntrack::Lockout: Disabled.
```

```
(config)> no ip conntrack lockout disable
Conntrack::Lockout: Enabled.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip conntrack lockout disable** command has been introduced. |

# 3.33 ip conntrack lockout duration

**Description** Set conntrack lockout duration. By default, the value `600` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip conntrack lockout duration** *‹duration›*

(config)> **no ip conntrack lockout duration**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `duration` | *Integer* | Lockout duration value in seconds. Can take values in the range from `60` to `3600`. |

**Example**

```
(config)> ip conntrack lockout duration 3600
Conntrack::Lockout: Set duration to 3600 s.
```

```
(config)> no ip conntrack lockout duration
Conntrack::Lockout: Reset duration.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip conntrack lockout duration** command has been introduced. |

# 3.34 ip conntrack lockout threshold public

**Description**

Set maximum number of connections from public interfaces. By default, the value 80 percent is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip conntrack lockout threshold public** *‹public›*

(config)> **no ip conntrack lockout threshold public**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| public | *Integer* | Number of connections as a percentage of the conntrack table size. Can take values in the range from 50 to 99 percent inclusively. |

**Example**

```
(config)> ip conntrack lockout threshold public 99
Conntrack::Lockout: Set threshold to "99".
```

```
(config)> no ip conntrack lockout threshold public
Conntrack::Lockout: Reset threshold.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip conntrack lockout threshold public** command has been introduced. |

# 3.35 ip conntrack max-entries

**Description** Set NAT table size for `conntrack` (used for connection tracking).

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip conntrack max-entries** *‹max-entries›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `max-entries` | *Integer* | The maximum number of entries in the table. |

**Example**

```
(config)> ip conntrack max-entries 32768
Core::FileSystem::Proc: System setting saved.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip conntrack max-entries** command has been introduced. |

# 3.36 ip conntrack sweep threshold

**Description** Set threshold to start cleaning up waiting sessions. By default, the value `70` percent is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip conntrack sweep threshold** *‹threshold›*

(config)> **no ip conntrack sweep threshold duration**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | Threshold for cleaning pending sessions as a percentage of the `conntrack` table size. Can |

| Argument | Value | Description |
|---|---|---|
| | | take values in the range from 50 to 99 percent inclusively. |

**Example**

```
(config)> ip conntrack sweep threshold 99
Conntrack::Lockout: Set sweep threshold to "99".
```

```
(config)> no ip conntrack sweep threshold
Conntrack::Lockout: Reset sweep threshold.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip conntrack sweep threshold** command has been introduced. |

# 3.37 ip dhcp class

**Description**

Access to a group of commands to configure *DHCP* vendor class (option 60). If specified class name is not found, the command tries to create it.

Command with **no** prefix removes selected class.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

Yes

**Group entry**

`(config-dhcp-class)`

**Synopsis**

(config)> **ip dhcp class** *‹class›*

(config)> **no ip dhcp class** *‹class›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `class` | *String* | The vendor-class name. |

**Example**

```
(config)> ip dhcp class STB-One
Dhcp::Server: Vendor class "STB-One" has been created.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp class** command has been introduced. |

## 3.37.1 ip dhcp class option

**Description** Set an option 60 to match the vendor-class.

Command with **no** prefix removes selected option.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-dhcp-class)> **option** *‹number›* **hex** *‹data›*

(config-dhcp-class)> **no option** *‹number›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *Integer* | Option number. Now the only 60 value is used. |
| data | *String* | Value of an option. |

**Example**

```
(config-dhcp-class)> option 60 hex FF
Dhcp::Server: Option 60 is set to FF.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp class option** command has been introduced. |

# 3.38 ip dhcp host

**Description** Configure static linking of IP address to MAC address of the host. If the host with the specified name is not found, the command tries to create it. If the specified IP address is not in range of any pool, the command will remain in the settings, but will not affect the *DHCP server* functioning.

The command allows one to change the MAC address, leaving the old value IP address and vice versa — to change the IP address, leaving the old MAC address value intact.

Command with **no** prefix removes the host.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **ip dhcp host** *‹host›* [ *mac* ] [ *ip* ]

(config)> **no ip dhcp host** *‹host›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *`String`* | Arbitrary host name, used to identify a MAC-IP pair in the settings. |
| `mac` | *`MAC address`* | MAC address of the host for static linking of IP address. If not specified, the value is taken from the previous configuration. |
| `ip` | *`IP address`* | IP address of the host. If not specified, the value is taken from the previous configuration. |

**Example**

```
(config)> ip dhcp host HOST 192.168.1.44
new host "HOST" has been created.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp host** command has been introduced. |

# 3.39 ip dhcp pool

**Description**

Access to a group of commands to configure DHCP-pool. If the pool is not found, the command tries to create it. For a pool one sets a list of DNS servers (**dns-server** command), default gateway (**default-router** command) and the lease time (**lease** command), as well as a range of dynamic IP addresses (**range** command).

Having configured the pool, it is necessary to enable the *DHCP* service using the **service dhcp** command.

You can enter up to 32 pools. Maximum pool name length is 32 characters.

Note: In the current version of the system no more than one pool per interface is supported. For *DHCP server* to function correctly it is required that the range of IP addresses set by **range** command belong to the network that is configured on one of the device's Ethernet-interfaces.

Command with **no** prefix removes the pool.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-dhcp-pool)`

**Synopsis**

(config)> **ip dhcp pool** *‹name›*

(config)> **no ip dhcp pool** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | DHCP pool name. |

**Example**

```
(config)> ip dhcp pool test_pool
pool "test_pool" has been created.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool** command has been introduced. |

## 3.39.1 ip dhcp pool bind

**Description** Bind the pool to specified interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-dhcp-pool)> **bind** *‹interface›*

(config-dhcp-pool)> **no bind** *‹interface›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. |

**Example**

```
(config-dhcp-pool)> bind GigabitEthernet1
pool "test_pool" bound to interface GigabitEthernet1.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool bind** command has been introduced. |

## 3.39.2 ip dhcp pool bootfile

**Description** Set boot file path on TFTP server for DHCP client (option 67).

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-dhcp-pool)> **bootfile** *‹bootfile›*

(config-dhcp-pool)> **no bootfile**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `bootfile` | *`Filename`* | The boot file path. |

**Example**

```
(config-dhcp-pool)> bootfile test.cnf
Dhcp::Pool: "_WEBADMIN": set bootfile option to "test.cnf".
```

```
(config-dhcp-pool)> no bootfile
Dhcp::Pool: "_WEBADMIN": cleared bootfile option.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip dhcp pool bootfile** command has been introduced. |

## 3.39.3 ip dhcp pool class

**Description** Access to a group of commands to configure *DHCP* vendor class for selected pool. If specified class name is not found, the command tries to create it.

To work correctly class name should be the same as for **ip dhcp class** command.

Command with **no** prefix removes selected class.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-dhcp-pool-class)`

**Synopsis**

(config-dhcp-pool)> **class** *‹class›*

(config-dhcp-pool)> **no class** *‹class›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `class` | *`String`* | The vendor-class name. |

**Example**

```
(config-dhcp-pool)> class STB-One
Dhcp::Server: Vendor class "STB-One" has been created.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool class** command has been introduced. |

### 3.39.3.1 ip dhcp pool class option

**Description**

Set additional options for *DHCP* client in case of vendor-class matching.

Command with **no** prefix removes selected option.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-dhcp-pool-class)> **option** *‹number› ‹type› ‹data›*

(config-dhcp-pool-class)> **no option** *‹number›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | 6 | 6 option, DNS server. |
| | 42 | 42 option, NTP server. |
| | 43 | 43 option, vendor specific information. |
| type | ip | Type of data is IP address. This type is not used for 43 option. |
| | hex | Type of data is hexadecimal number. |
| data | *String* | Value of an option. |

**Example**

```
(config-dhcp-pool-class)> option 6 ip 192.168.1.1
Dhcp::Server: Option 6 is set to 192.168.1.1.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool class option** command has been introduced. |

## 3.39.4 ip dhcp pool debug

**Description**

Add debug messages to the system log. By default, the setting is disabled.

Command with **no** prefix disables debugging.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **debug**

(config-dhcp-pool)> **no debug**

**History**

| Version | Description |
|---|---|
| 2.01 | The **ip dhcp pool debug** command has been introduced. |

## 3.39.5 ip dhcp pool default-router

**Description** Configure default gateway IP address. If not specified, the address of the Ethernet-interface determined automatically for a given range **range** will be used.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **default-router** ‹*address*›

(config-dhcp-pool)> **no default-router**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Default gateway address. |

**Example**

```
(config-dhcp-pool)> default-router 192.168.1.88
pool "test_pool" router address has been saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool default-router** command has been introduced. |

## 3.39.6 ip dhcp pool dns-server

**Description** Configure IP addresses of the DNS servers (DHCP option 6). If not specified, the address of the Ethernet-interface determined automatically for a given range **range** will be used.

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **dns-server** ( *‹address1›* [ *address2* ] | **disable**)

(config-dhcp-pool)> **no dns-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address1 | *IP address* | Address of primary DNS server. |
| address2 | *IP address* | Address of secondary DNS server. |
| disable | *Keyword* | Disable DHCP option 6. |

**Example**

```
(config-dhcp-pool)> dns-server 192.168.1.88
pool "test_pool" name server list has been saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool dns-server** command has been introduced. |
| 2.11 | Disable argument has been added. |

## 3.39.7 ip dhcp pool domain

**Description** Specify the domain name that client should use when resolving hostnames via DNS (option 15).

Command with **no** prefix cancels the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **domain** *‹domain›*

(config-dhcp-pool)> **no domain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | Local domain name. |

**Example**

```
(config-dhcp-pool)> domain example.net
Dhcp::Pool: Domain option has been saved.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **ip dhcp pool domain** command has been introduced. |

## 3.39.8 ip dhcp pool enable

**Description** Start to use the pool in the system.

Command with **no** prefix disables pool using.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **enable**

(config-dhcp-pool)> **no enable**

**Example**

```
(config-dhcp-pool)> enable
Dhcp::Server: pool "111" is enabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **ip dhcp pool enable** command has been introduced. |

## 3.39.9 ip dhcp pool lease

**Description** Set the lease time of DHCP pool IP address. By default, `25200` value is used (7 hours).

Command with **no** prefix resets lease time to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **lease** *‹lease›*

(config-dhcp-pool)> **no lease**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| lease | *Integer* | Lease time in seconds. Can take values in the range from 1 to 259200 seconds (3 days). |

**Example**

```
(config-dhcp-pool)> lease 259200
Dhcp::Pool: "_WEBADMIN": set lease time: 259200 seconds.
```

```
(config-dhcp-pool)> no lease
Dhcp::Pool: "_WEBADMIN": lease time reset to default (25200 ►
seconds).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool lease** command has been introduced. |

## 3.39.10 ip dhcp pool next-server

**Description**

Set TFTP server address for DHCP client (option 66).

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config-dhcp-pool)> **next-server** ‹*address*›

(config-dhcp-pool)> **no next-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | TFTP server address. |

**Example**

```
(config-dhcp-pool)> next-server 10.1.1.11
Dhcp::Pool: "_WEBADMIN": set next server address: 10.1.1.11.
```

```
(config-dhcp-pool)> no next-server
Dhcp::Pool: "_WEBADMIN": cleared next server address.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip dhcp pool next-server** command has been introduced. |

# 3.39.11 ip dhcp pool option

**Description** Set additional options for DHCP server.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Ethernet

**Synopsis**

(config-dhcp-pool)> **option** *‹number›* [ *type* ] *‹data›*

(config-dhcp-pool)> **no option** *‹number›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | 4 | 4 option, Time server. Type is IP address. |
| | 6 | 6 option, DNS server. Type is IP address. |
| | 42 | 42 option, NTP server. Type is IP address. |
| | 44 | 44 option, NetBIOS server. Type is IP address. |
| | 26 | 26 option, MTU. Can take values in the range from 0 to 65535 inclusively. |
| | 121 | 121 option, Classless Static Routes. Type is IP address of the destination network and mask of the destination network the form of prefix bit length (for example, /24). |
| | 249 | 249 option, Microsoft Classless Static Routes. Type is IP address of the destination network and mask of the destination network the form of prefix bit length (for example, /24). |
| type | hex | Hexadecimal number. |
| | ascii | ASCII number. |
| | ip | IP address. It is not applicable to 26 option. It is not specified as a keyword in the command. |
| data | *String* | Value of an option. |

**Example**

```
(config-dhcp-pool)> option 4 192.168.2.1
Dhcp::Pool: "_WEBADMIN_BRIDGE2": set option 4.
```

```
(config-dhcp-pool)> option 60 ascii "MSFT 5.0"
Dhcp::Pool: "_WEBADMIN_BRIDGE2": set option 60.
```

```
(config-dhcp-pool)> option 150 ip 198.51.100.46,203.0.113.46
Dhcp::Pool: "_WEBADMIN_BRIDGE2": set option 150.
```

```
(config-dhcp-pool)> no option 4
Dhcp::Pool: "_WEBADMIN_BRIDGE2": cleared option 4.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **ip dhcp pool option** command has been introduced. |

## 3.39.12 ip dhcp pool range

**Description**

Configure the range of dynamic addresses issued to DHCP clients of a subnet. The range is set by start and end IP addresses or the start address and size. The network interface to which the settings are applied is chosen automatically. Address of the chosen interface is used as the default gateway and DNS server, if other addresses are not specified using commands **ip dhcp pool default-router** and **ip dhcp pool dns-server**.

Command with **no** prefix removes the range.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-dhcp-pool)> **range** ‹*begin*› ( ‹*end*› | ‹*size*› )

(config-dhcp-pool)> **no range**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| begin | *IP address* | Pool's start address. |
| end | *IP address* | Pool's end address. |
| size | *Integer* | Pool size. |

**Example**

```
(config-dhcp-pool)> range 192.168.15.43 3
pool "_WEBADMIN" range has been saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp pool range** command has been introduced. |

## 3.39.13 ip dhcp pool update-dns

**Description**

Add static records into DNS-proxy when DHCP-address is assigned. The name of record is the hostname of the DHCP-request. By default, the feature is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **update-dns**

(config-dhcp-pool)> **no update-dns**

**Example**

```
(config-dhcp-pool)> update-dns
Dhcp::Pool: DNS update has been enabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **ip dhcp pool update-dns** command has been introduced. |

## 3.39.14 ip dhcp pool wpad

**Description** Configure DHCP option 252 — *WPAD* protocol. By default, the option is disabled.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-dhcp-pool)> **wpad** *‹wpad›*

(config-dhcp-pool)> **no wpad**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| wpad | *String* | URL of proxy. |

**Example**

```
(config-dhcp-pool)> wpad http://wpad/wpad.dat
Dhcp::Pool: WPAD option has been saved.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **ip dhcp pool wpad** command has been introduced. |

# 3.40 ip dhcp relay enable

**Description** Enable DHCP relay on an interface. DHCP relay takes priority over the router's DHCP server.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp relay enable**

(config-if)> **no ip dhcp relay enable**

**Example**

```
(config-if)> ip dhcp relay enable
Dhcp::Relay: Service enabled on ISP.
```

```
(config-if)> no ip dhcp relay enable
Dhcp::Relay: Service disabled on ISP.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip dhcp relay enable** command has been introduced. |

# 3.41 ip dhcp relay lan

**Description** Specify which network interface the DHCP relay will use to handle client's requests. Several “lan” interfaces can be specified, to which end the command should be entered several times, enumerating all desired interfaces one by one.

Command with **no** prefix disables the DHCP relay on the specified interface. If you use no argument, the DHCP relay will be removed from all interfaces.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **ip dhcp relay lan** ‹*interface*›

(config)> **no ip dhcp relay lan** [ *interface* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full name or an alias of `Ethernet` interface, through which DHCP relay will accept requests from clients. |

**Example**

```
(config)> ip dhcp relay lan Home
added LAN interface Home.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp relay lan** command has been introduced. |

# 3.42 ip dhcp relay server

**Description**

Specify the IP address of the *DHCP server*, to which the relay will forward client requests from the LAN.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip dhcp relay server** ‹*address*›

(config)> **no ip dhcp relay server** [ *address* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *IP address* | IP address of the *DHCP server*. |

**Example**

```
(config)> ip dhcp relay server 192.168.1.11
using DHCP server 192.168.1.11.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp relay server** command has been introduced. |

# 3.43 ip dhcp relay upstream interface

**Description**

Bind DHCP upstream to a specific interface.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp relay upstream interface** ‹*interface*›

(config-if)> **no ip dhcp relay upstream interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config-if)> ip dhcp relay upstream interface Home
Dhcp::Relay: Using WAN interface Home.
```

```
(config-if)> no ip dhcp relay upstream interface
Dhcp::Relay: WAN interface setting cleared.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip dhcp relay upstream interface** command has been introduced. |

# 3.44 ip dhcp relay upstream server

**Description** Specify an upstream IP address of the *DHCP server*, to which the relay will forward client requests.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(config-if)> **ip dhcp relay upstream server** ‹*server*›

(config-if)> **no ip dhcp relay upstream server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `server` | *IP address* | IP address of the *DHCP server*. |

**Example**

```
(config-if)> ip dhcp relay upstream server 192.168.17.1
Dhcp::Relay: Using DHCP server 192.168.17.1.
```

```
(config-if)> no ip dhcp relay upstream server
Dhcp::Relay: Server address setting cleared.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip dhcp relay upstream server** command has been introduced. |

# 3.45 ip dhcp relay wan

**Description**

Specify the network interface through which DHCP relay will interact with higher level *DHCP server*. There can be only one interface of such type in the system. If exact address of the server is not specified (see **ip dhcp relay server**), the requests will be broadcasted. It is recommended to specify server address.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip dhcp relay wan** *‹interface›*

(config)> **no ip dhcp relay wan** [ *interface* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full name or an alias of Ethernet interface, on which requests from the DHCP clients will be sent. |

**Example**

```
(config)> ip dhcp relay wan GigabitEthernet1
using WAN interface GigabitEthernet1.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip dhcp relay wan** command has been introduced. |

# 3.46 ip esp alg enable

**Description**

Enable *IPSec Passthrough* mode for *IPsec ESP* tunnel. By default, the setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **ip esp alg enable**

(config)> **no ip esp alg enable**

**Example**

```
(config)> ip esp alg enable
Esp::Alg: Enabled.
```

```
(config)> no ip esp alg enable
Esp::Alg: Disabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip esp alg enable** command has been introduced. |

# 3.47 ip flow-cache timeout active

**Description** Set timeout of active sessions in cache. By default, the value `10` is used.

Command with **no** prefix resets the setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **ip flow-cache timeout active** *‹timeout›*

(config)> **no ip flow-cache timeout active**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | The timeout value, in minutes. Can take values in the range from `1` to `30`. |

**Example**

```
(config)> ip flow-cache timeout active 1
Netflow::Manager: Active timeout set to "1" min.
```

```
(config)> no ip flow-cache timeout active
Netflow::Manager: Active timeout reset to "10" min.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip flow-cache timeout active** command has been introduced. |

# 3.48 ip flow-cache timeout inactive

**Description**

Set timeout of inactive sessions in cache. By default, the value `20` is used.

Command with **no** prefix resets the setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip flow-cache timeout inactive** *‹timeout›*

(config)> **no ip flow-cache timeout inactive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | The timeout value, in seconds. Can take values in the range from `1` to `600`. |

**Example**

```
(config)> ip flow-cache timeout inactive 1
Netflow::Manager: Inactive timeout set to "1" s.
```

```
(config)> no ip flow-cache timeout inactive
Netflow::Manager: Inactive timeout reset to "20" s.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip flow-cache timeout inactive** command has been introduced. |

# 3.49 ip flow-export destination

**Description**

Set parameters of *NetFlow* collector.

Command with **no** prefix removes collector's parameters.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip flow-export destination** ‹*address*› ‹*port*›

(config)> **no ip flow-export destination**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | IP address of the data collector. |
| port | *Integer* | Collector's UDP port number. Can take values 2055, 2056, 4432, 4739, 9025, 9026, 9995, 9996, 6343. |

**Example**

```
(config)> ip flow-export destination 192.168.101.31 4739
Netflow::Manager: Export destination is set to ►
192.168.101.31:4739.
```

```
(config)> no ip flow-export destination
Netflow::Manager: Export destination is unset.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip flow-export destination** command has been introduced. |

# 3.50 ip flow-export version

**Description**

Set version of *NetFlow* collector. By default, 5 value is used.

Command with **no** prefix resets version to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip flow-export version** ‹*version*›

(config)> **no ip flow-export version**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| version | *String* | Version of protocol. |

**Example**

```
(config)> ip flow-export version 9
Netflow::Manager: Set export protocol version to 9.
```

```
(config)> no ip flow-export version
Netflow::Manager: Reset export version to 5.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip flow-export version** command has been introduced. |

# 3.51 ip ftp

**Description** Access to a group of commands to configure access to **ftp**.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** `(config-ftp)`

**Synopsis**

(config)> **ip ftp**

**Example**

```
(config)> ip ftp
(config-ftp)>
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip ftp** command has been introduced. |

## 3.51.1 ip ftp client-charset

**Description** Set default encoding on FTP server. By default, the `UTF-8` is used.

Command with **no** prefix resets encoding to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ftp)> **client-charset** *‹charset›*

(config-ftp)> **no client-charset**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `charset` | `utf-8` | Encoding type. |
| | `utf-16` | |

| Argument | Value | Description |
|---|---|---|
| | utf-16le | |
| | utf-16be | |
| | utf-32 | |
| | utf-32le | |
| | utf-32be | |
| | iso-8859-1 | |
| | iso-8859-2 | |
| | iso-8859-3 | |
| | iso-8859-4 | |
| | iso-8859-5 | |
| | iso-8859-6 | |
| | iso-8859-7 | |
| | iso-8859-8 | |
| | iso-8859-9 | |
| | iso-8859-10 | |
| | iso-8859-11 | |
| | iso-8859-12 | |
| | iso-8859-13 | |
| | iso-8859-14 | |
| | iso-8859-15 | |
| | iso-8859-16 | |
| | cp-037 | |
| | cp-424 | |
| | cp-437 | |
| | cp-500 | |
| | cp-737 | |
| | cp-775 | |
| | cp-850 | |
| | cp-852 | |
| | cp-852 | |
| | cp-855 | |
| | cp-856 | |
| | cp-857 | |
| | cp-860 | |
| | cp-861 | |

| Argument | Value | Description |
|---|---|---|
| | cp-862 | |
| | cp-863 | |
| | cp-864 | |
| | cp-865 | |
| | cp-866 | |
| | cp-869 | |
| | cp-874 | |
| | cp-1026 | |
| | cp-1250 | |
| | cp-1251 | |
| | cp-1252 | |
| | cp-1253 | |
| | cp-1254 | |
| | cp-1255 | |
| | cp-1256 | |
| | cp-1257 | |
| | cp-1258 | |
| | koi8-r | |
| | koi8-u | |
| | kz-1048 | |
| | nextstep | |
| | mac-celtic | |
| | mac-centeuro | |
| | mac-croatian | |
| | mac-cyrillic | |
| | mac-gaelic | |
| | mac-greek | |
| | mac-icelandic | |
| | mac-inuit | |
| | mac-roman | |
| | mac-romanian | |
| | mac-turkish | |
| | mac-ukrainian | |

**Example**

```
(config-ftp)> client-charset utf-16
Ftp::Server: Set client charset to "utf-16".
```

```
(config-ftp)> no client-charset
Ftp::Server: Reset client charset to default.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip ftp client-charset** command has been introduced. |

## 3.51.2 ip ftp lockout-policy

**Description**

Set FTP server bruteforce detection parameters for public interfaces. By default, feature is enabled. If you use `0` as an argument, all bruteforce detection parameters will be reset to default.

Command with **no** prefix disables bruteforce detection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-ftp)> **lockout-policy** *‹threshold›* [ *‹duration›* [ *‹observation-window›* ]]

(config-ftp)> **no lockout-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | The number of failed attempts to log in. By default, `5` value is used. Can take values in the range from `3` to `20`. |
| `duration` | *Integer* | An authorization ban duration for the specified IP in minutes. By default, `15` value is used. Can take values in the range from `1` to `60`. |
| `observation-window` | *Integer* | Duration of suspicious activity observation in minutes. By default, `3` value is used. Can take values in the range from `1` to `10`. |

**Example**

```
(config-ftp)> lockout-policy 10 30 2
Ftp::Server: Bruteforce detection is enabled.
```

```
(config-ftp)> no lockout-policy
Ftp::Server: Bruteforce detection is disabled.
```

```
(config-ftp)> lockout-policy 0
Ftp::Server: Bruteforce detection reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ftp lockout-policy** command has been introduced. |

## 3.51.3 ip ftp permissive

**Description** Access to the FTP server for all users without authentication.

Command with **no** prefix denies access.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ftp)> **permissive**

(config-ftp)> **no permissive**

**Example**

```
(config-ftp)> permissive
```

```
(config-ftp)> no permissive
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip ftp permissive** command has been introduced. |

## 3.51.4 ip ftp security-level

**Description** Set FTP security level. By default, `private` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ftp)> **security-level** (**public** | **private** | **protected**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the FTP server is allowed for public, private and protected interfaces. |
| `private` | *Keyword* | Access to the FTP server is allowed for private interfaces. |

| Argument | Value | Description |
|---|---|---|
| `protected` | *Keyword* | Access to the FTP server is allowed for private and protected interfaces. |

**Example**

```
(config-ftp)> security-level protected
Ftp::Manager: Security level changed to protected.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip ftp security-level** command has been introduced. |

# 3.52 ip host

**Description** Add a domain name and address as a DNS-record.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **ip host** *‹domain› ‹address›*

(config)> **no ip host** [ *‹domain› ‹address›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `domain` | *String* | A domain name of a host. |
| `address` | *IP address* | An IP address of a host. |

**Example**

```
(config)> ip host example.local 192.168.1.22
Dns::Manager: Added static record for "example.local", address ►
192.168.1.22.
```

```
(config)> no ip host example.local 192.168.1.22
Dns::Manager: Record "example.local", address 192.168.1.22 ►
deleted.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip host** command has been introduced. |

# 3.53 ip hotspot

**Description** Access to a group of commands for Hotspot configuration.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** `(config-hotspot)`

**Synopsis**

(config)> **ip hotspot**

**Example**

```
(config)> ip hotspot
(config-hotspot)>
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **ip hotspot** command has been introduced. |

## 3.53.1 ip hotspot auto-register disable

**Description** Forcibly disable automatic host registration in the Home segment. By default, the auto-registration is enabled.

Command with **no** prefix enables the auto-registration.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-hotspot)> **auto-register disable**

(config-hotspot)> **no auto-register disable**

**Example**

```
(config-hotspot)> auto-register disable
Hotspot::AutoRegister: Disabled host auto-registration.
```

```
(config-hotspot)> no auto-register disable
Hotspot::AutoRegister: Enabled host auto-registration.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip hotspot auto-register disable** command has been introduced. |

## 3.53.2 ip hotspot default-policy

**Description**

Define the Hotspot policy for all interfaces or assign IP Policy. Policy applies to all hosts that have no explicitly configured access rule, **ip hotspot policy**.

Default policy: `permit`.

Command with **no** prefix resets policy to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config-hotspot)> **default-policy** (‹*access*› | ‹*policy*›)

(config-hotspot)> **no default-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `access` | `permit` | Permit access to the internet. |
| | `deny` | Deny access to the internet. |
| `policy` | *`Policy`* | Name of IP Policy profile. |

**Example**

```
(config-hotspot)> default-policy permit
FHotspot::Manager: Default policy "permit" applied.
```

```
(config-hotspot)> default-policy deny
Hotspot::Manager: Default policy "deny" applied.
```

```
(config-hotspot)> default-policy Policy0
Hotspot::Manager: Default policy "Policy0" applied.
```

```
(config-hotspot)> no default-policy
Hotspot::Manager: Default policy cleared.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **ip hotspot default-policy** command has been introduced. |
| 2.12 | Argument `policy` was added. |

## 3.53.3 ip hotspot host

**Description**

Setup bypass or block rules for specific Hotspot clients. Host rules override interface based policy (see **ip hotspot policy** command).

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-hotspot)> **host** *‹mac›* (*‹access›* | **schedule** *‹schedule›* | **policy** *‹policy›*)

(config-hotspot)> **no host** *‹mac›* (*‹access›* | **schedule** | **policy**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | Host MAC address. Host must be registered via **known host** in advance. |
| access | permit | Permit access to the internet. |
| | deny | Deny access to the internet. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |
| policy | *Policy* | Name of IP Policy profile. |

**Example**

```
(config)> known host MYTEST 54:e4:3a:8a:f3:a7
Hotspot::Manager: Policy "permit" applied to interface "Home".

(config-hotspot)> host 54:e4:3a:8a:f3:a7 permit
Hotspot::Manager: Rule "permit" applied to host ►
"54:e4:3a:8a:f3:a7".

(config-hotspot)> host 54:e4:3a:8a:f3:a7 deny
Hotspot::Manager: Rule "deny" applied to host "54:e4:3a:8a:f3:a7".

(config-hotspot)> host 54:e4:3a:8a:f3:a7 schedule MYSCHEDULE
Hotspot::Manager: Schedule "MYSCHEDULE" applied to host ►
"54:e4:3a:8a:f3:a7".

(config-hotspot)> no host 54:e4:3a:8a:f3:a7 schedule
Hotspot::Manager: Host "54:e4:3a:8a:f3:a7" schedule disabled.

(config-hotspot)> host 54:e4:3a:8a:f3:a7 policy Policy0
Hotspot::Manager: Policy "Policy0" applied to host ►
"54:e4:3a:8a:f3:a7".

(config-hotspot)> no host 54:e4:3a:8a:f3:a7 policy
Hotspot::Manager: Policy removed from host "54:e4:3a:8a:f3:a7".
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **ip hotspot host** command has been introduced. |

| | |
|---|---|
| 2.12 | Arguments `permit`, `deny`, `schedule`, `policy` were added. |

## 3.53.4 ip hotspot host conform

**Description**

Assign a segment-default policy for the registered hosts. Registration of a host is performed in advance by the **known host** command. By default, the setting is enabled.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-hotspot)> **host** *‹mac›* **conform**

(config-hotspot)> **no host** *‹mac›* **conform**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of host. |

**Example**

```
(config-hotspot)> host 04:14:24:54:bc:52 conform
Hotspot::Manager: Conform applied to host "04:14:24:54:bc:52".
```

```
(config-hotspot)> no host 04:14:24:54:bc:52 conform
Hotspot::Manager: Conform removed from host "04:14:24:54:bc:52".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip hotspot host conform** command has been introduced. |

## 3.53.5 ip hotspot host priority

**Description**

Assign a specific priority to all traffic bound to a registered host. Registration of a host is performed in advance by the **known host** command.

Command with **no** prefix removes the priority.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** IP

**Synopsis**

(config-hotspot)> **host** *‹mac›* **priority** *‹priority›*

(config-hotspot)> **no host** *‹mac›* **priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | Host MAC address. |
| priority | 1 | Top. |
| | 2 | Critical. |
| | 3 | High. |
| | 4 | Medium-high. |
| | 5 | Medium. |
| | 6 | Normal (Default). |
| | 7 | Low. |

**Example**

```
(config-hotspot)> host 04:d2:c1:14:bc:59 priority 7
Hotspot::Manager: Applied priority "7" to host ►
"04:d2:c1:14:bc:59".
```

```
(config-hotspot)> no host 04:d2:c1:14:bc:59 priority
Hotspot::Manager: Removed priority from host "04:d2:c1:14:bc:59".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **ip hotspot host priority** command has been introduced. |

## 3.53.6 ip hotspot policy

**Description** Define the Hotspot policy for a specific interface. Policy applies to all hosts that have no explicitly configured access rule, **ip hotspot host**.

Default policy: `permit`.

Command with **no** prefix resets policy to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-hotspot)> **policy** *‹interface›* (*‹access›* | *‹policy›*)

(config-hotspot)> **no policy** *‹interface›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Ethernet interface full name or an alias. |
| `access` | `permit` | Permit access to the internet. |
| | `deny` | Deny access to the internet. |
| `policy` | *Policy* | Name of IP Policy profile. |

**Example**

```
(config-hotspot)> policy Home permit
Hotspot::Manager: Policy "permit" applied to interface "Home".

(config-hotspot)> policy Home deny
Hotspot::Manager: Policy "deny" applied to interface "Home".

(config-hotspot)> policy Home Policy0
Hotspot::Manager: Policy "Policy0" applied to interface "Home".

(config-hotspot)> no policy Home
Hotspot::Manager: Interface "Home" policy cleared.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **ip hotspot policy** command has been introduced. |
| 2.12 | Argument `policy` was added. |

## 3.53.7 ip hotspot priority

**Description**

Assign a specific priority to all traffic bound to the interface.

Command with **no** prefix removes the priority.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config-hotspot)> **priority** *‹interface› ‹priority›*

(config-hotspot)> **no priority** *‹interface›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. |
| `priority` | 1 | Top. |

| Argument | Value | Description |
|---|---|---|
| | 2 | Critical. |
| | 3 | High. |
| | 4 | Medium-high. |
| | 5 | Medium. |
| | 6 | Normal (Default). |
| | 7 | Low. |

**Example**

```
(config-hotspot)> priority Home 7
Hotspot::Manager: Applied priority "7" to interface "Home".
```

```
(config-hotspot)> no priority Home
Hotspot::Manager: Removed priority from interface "Home".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **ip hotspot priority** command has been introduced. |

## 3.53.8 ip hotspot wake

**Description** Send Wake-on-LAN packet to private and protected interfaces of the host.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-hotspot)> **wake** *‹mac›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | Host MAC address. |

**Example**

```
(config-hotspot)> wake a8:1e:84:11:f1:22
Hotspot::Manager: WoL sent to host: a8:1e:84:11:f1:22.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip hotspot wake** command has been introduced. |

# 3.54 ip http lockout-policy

**Description**

Set HTTP bruteforce detection parameters for public interfaces. By default, feature is enabled. If you use `0` as an argument, all bruteforce detection parameters will be reset to default.

Command with **no** prefix disables bruteforce detection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip http lockout-policy** *‹threshold›* [ *‹duration›* [ *‹observation-window›* ]]

(config)> **no ip http lockout-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | The number of failed attempts to log in. By default, `5` value is used. Can take values in the range from `4` to `20`. |
| `duration` | *Integer* | An authorization ban duration for the specified IP in minutes. By default, `15` value is used. Can take values in the range from `1` to `60`. |
| `observation-window` | *Integer* | Duration of suspicious activity observation in minutes. By default, `3` value is used. Can take values in the range from `1` to `10`. |

**Example**

```
(config)> ip http lockout-policy 10 30 2
Http::Manager: Bruteforce detection is enabled.
```

```
(config)> no ip http lockout-policy
Http::Manager: Bruteforce detection is disabled.
```

```
(config)> ip http lockout-policy 0
Http::Manager: Bruteforce detection reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http lockout-policy** command has been introduced. |

# 3.55 ip http log access

**Description** Enable debug mode for web server (nginx). By default, feature is disabled.

Command with **no** prefix disables the debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http log access**

(config)> **no ip http log access**

**Example**

```
(config)> ip http log access
Http::Manager: Enabled access logging.
```

```
(config)> no ip http log access
Http::Manager: Disabled access logging.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **ip http log access** command has been introduced. |

# 3.56 ip http log auth

**Description** Enable logging of failed authorization attempts to the system. By default, feature is disabled.

Command with **no** prefix disables logging.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http log auth**

(config)> **no ip http log auth**

**Example**

```
(config)> ip http log auth
Http::Manager: Auth logging enabled.
```

```
(config)> no ip http log auth
Http::Manager: Auth logging disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http log auth** command has been introduced. |

# 3.57 ip http log webdav

**Description** Enable logging of failed connection attempts to the *WebDAV* server. By default, feature is disabled.

Command with **no** prefix disables logging.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http log webdav**

(config)> **no ip http log webdav**

**Example**

```
(config)> ip http log webdav
WebDav::Server: Enabled request tracing.
```

```
(config)> no ip http log webdav
WebDav::Server: Disabled request tracing.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip http log webdav** command has been introduced. |

# 3.58 ip http port

**Description** Assign HTTP port for Web interface of Hero. By default, `80` value is used.

Command with **no** prefix resets HTTP port to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http port** *‹port›*

(config)> **no ip http port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | New HTTP port. |

**Example**

```
(config)> ip http port 8080
Http::Manager: Port changed to 8080.
```

```
(config)> no ip http port
Http::Manager: Port reset to 80.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http port** command has been introduced. |

# 3.59 ip http proxy

**Description**

Access to a group of commands to configure HTTP proxy. If the proxy is not found, the command tries to create it.

Command with **no** prefix removes the proxy.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Group entry**

(config-http-proxy)

**Synopsis**

(config)> **ip http proxy** *‹name›*

(config)> **no ip http proxy** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | HTTP proxy name. |

**Example**

```
(config)> ip http proxy TEST
Http::Manager: Proxy "TEST" successfully created.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http proxy** command has been introduced. |

## 3.59.1 ip http proxy auth

**Description** Enable authorization for HTTP proxy. By default, the setting is disabled.

Command with **no** prefix disables HTTP proxy authorization.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config-http-proxy)> auth
```

```
(config-http-proxy)> no auth
```

**Example**

```
(config-http-proxy)> auth
Http::Manager: Proxy password auth is enabled.
```

```
(config-http-proxy)> no auth
Http::Manager: Proxy password auth is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **ip http proxy auth** command has been introduced. |

## 3.59.2 ip http proxy dns-override

**Description** Enable local DNS overrides for fourth level domains KeenDNS. By default, the setting is enabled.

Note: For the fourth level domain KeenDNS, a static DNS A-record with the address 198.51.100.11 (this is the IP we purchased for the name my.keenetic.net) is added for access in the router's local network.

After disabling this feature, the static DNS A-record with the address 198.51.100.11 is removed from the router's system for the fourth level domain KeenDNS.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **dns-override**

(config-http-proxy)> **no dns-override**

**Example**

```
(config-http-proxy)> dns-override
Http::Proxy: "test": enabled DNS override.
```

```
(config-http-proxy)> no dns-override
Http::Proxy: "test": disabled DNS override.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip http proxy dns-override** command has been introduced. |

## 3.59.3 ip http proxy domain

**Description**

Set domain name that specifies the *FQDN* of the virtual host.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-http-proxy)> **domain static** *‹domain›*

(config-http-proxy)> **no domain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | A domain name. |

**Example**

```
(config-http-proxy)> domain static example.net
Http::Manager: Configured base domain for proxy: test.
```

```
(config-http-proxy)> no domain
Http::Manager: Removed ndns domain for proxy: test.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http proxy domain** command has been introduced. |

## 3.59.4 ip http proxy domain ndns

**Description** Set HTTP proxy domain through NDNS. If enabled, setting ip http proxy domain is deleted.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **domain ndns**

(config-http-proxy)> **no domain ndns**

**Example**

```
(config-http-proxy)> domain ndns
Http::Manager: Configured ndns domain for proxy: test.
```

```
(config-http-proxy)> no domain
Http::Manager: Removed ndns domain for proxy: test.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http proxy domain ndns** command has been introduced. |

## 3.59.5 ip http proxy force-host

**Description** Enable the Host header rewriting for the upstream.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **force-host** ‹*force-host*›

(config-http-proxy)> **no force-host**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `force-host` | *String* | IP address or domain name. |

**Example**

```
(config-http-proxy)> force-host 192.168.8.1
Http::Proxy: "modem": enabled Host header enforcing to ►
"192.168.8.1".
```

```
(config-http-proxy)> force-host modem.keenetic.pro
Http::Proxy: "modem": enabled Host header enforcing to ►
"modem.keenetic.pro".
```

```
(config-http-proxy)> no force-host
Http::Proxy: "modem": disabled Host header enforcing.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **ip http proxy force-host** command has been introduced. |

## 3.59.6 ip http proxy force-origin

**Description**

Enable enforcement of the Origin header for proxies.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-http-proxy)> **force-origin** ‹*force-origin*›

(config-http-proxy)> **no force-origin**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| force-origin | *String* | Hostname or IP address of an HTTP or HTTPS endpoint. |

**Example**

```
(config-http-proxy)> force-origin https://my.example.com
Http::Proxy: "TEST": enabled Origin header enforcing to ►
"https://my.example.com".
```

```
(config-http-proxy)> force-origin http://192.168.1.2
Http::Proxy: "TEST": enabled Origin header enforcing to ►
"http://192.168.1.2".
```

```
(config-http-proxy)> no force-origin
Http::Proxy: "TEST": disabled Origin header enforcing.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **ip http proxy force-origin** command has been introduced. |

## 3.59.7 ip http proxy preserve-host

**Description**

Set option to save the original header for the host when passing through a proxy.

Command with **no** prefix disable option.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-http-proxy)> **preserve-host**

(config-http-proxy)> **no preserve-host**

**Example**

```
(config-http-proxy)> preserve-host
Http::Manager: Proxy HTTP Host header preservation is enabled.
```

```
(config-http-proxy)> no preserve-host
Http::Manager: Proxy HTTP Host header preservation is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **ip http proxy preserve-host** command has been introduced. |

## 3.59.8 ip http proxy preserve-origin

**Description**

Enable the option to save the Origin header for the host when passing through a proxy.

Command with **no** prefix disable option.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-http-proxy)> **preserve-origin**

(config-http-proxy)> **no preserve-origin**

**Example**

```
(config-http-proxy)> preserve-origin
Http::Proxy: "test": enabled Origin header preservation.
```

```
(config-http-proxy)> no preserve-origin
Http::Proxy: "test": disabled Origin header preservation.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip http proxy preserve-origin** command has been introduced. |

## 3.59.9 ip http proxy preserve-referer

**Description** Enable the option to save the Referer header for the host when passing through a proxy.

Command with **no** prefix disable option.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **preserve-referer**

(config-http-proxy)> **no preserve-referer**

**Example**

```
(config-http-proxy)> preserve-referer
Http::Proxy: "test": enabled Referer header preservation.
```

```
(config-http-proxy)> no preserve-referer
Http::Proxy: "test": disabled Referer header preservation.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip http proxy preserve-referer** command has been introduced. |

## 3.59.10 ip http proxy security-level

**Description** Set the security level for HTTP proxy service. By default, `private` value is set.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **security-level** (**public** | **private**)

(config-http-proxy)> **no security-level**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| public | *Keyword* | Access to the HTTP proxy is allowed for public, private and protected interfaces. |
| private | *Keyword* | Access to the HTTP proxy is allowed for private interfaces only. |

**Example**

```
(config-http-proxy)> security-level public
Http::Proxy: "test1": set public security level.
```

```
(config-http-proxy)> no security-level
Http::Proxy: "test1": unset public security level.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip http proxy security-level** command has been introduced. |

## 3.59.11 ip http proxy ssl redirect

**Description** Enable automatic redirection on domains with SSL certificate for HTTP proxy service. By default, the redirection is enabled.

Command with **no** prefix disables redirection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **ssl redirect**

(config-http-proxy)> **no ssl redirect**

**Example**

```
(config)> ip http ssl redirect
Http::Proxy: "mytest": enabled SSL redirect.
```

```
(config)> no ip http ssl redirect
Http::Proxy: "mytest": disabled SSL redirect.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **ip http proxy ssl redirect** command has been introduced. |

## 3.59.12 ip http proxy timeout

**Description**

Configure connection timeout for HTTP proxies. By default, the value `60` is used.

Command with **no** prefix resets timeout to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-http-proxy)> **timeout** ‹*timeout*›

(config-http-proxy)> **no timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Timeout value in the range from `5` to `86400` seconds. |

**Example**

```
(config-http-proxy)> timeout 5
Http::Proxy: "test": set upstream timeout to "5" s.
```

```
(config-http-proxy)> no timeout
Http::Proxy: "test": reset upstream timeout.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip http proxy timeout** command has been introduced. |

## 3.59.13 ip http proxy upstream

**Description**

Set HTTP or HTTPS server address for request redirecting.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **upstream** (**http** | **https** | **connect**) ( *‹mac›* | *‹ip›* | *‹fqdn›* ) [ *‹port›* ]

(config-http-proxy)> **no upstream**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `http` | *Keyword* | HTTP server. |
| `https` | *Keyword* | HTTPS server. |
| `connect` | *Keyword* | IP address and the port number of OpenVPN server. |
| `mac` | *MAC address* | MAC address of server. |
| `ip` | *IP address* | IP address of server. |
| `fqdn` | *FQDN* | Full domain name of server. |
| `port` | *Integer* | The port number. |

**Example**

```
(config-http-proxy)> upstream http 192.168.1.1 8080
Http::Proxy: "test": set http upstream 192.168.1.1, port 8080.

(config-http-proxy)> upstream https example.com 443
Http::Proxy: "test": set https upstream example.com, port 443.

(config-http-proxy)> upstream connect 127.0.0.1 8000
Http::Proxy: "test": set connect upstream 127.0.0.1, port 8000.

(config-http-proxy)> no upstream
Http::Proxy: "test": reset upstream.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http proxy upstream** command has been introduced. |
| 3.05 | `https` keyword was added. |
| 4.03 | `connect` keyword was added. |

## 3.59.14 ip http proxy x-real-ip

**Description** Enable X-Real-IP and X-Forwarded-For header support for HTTP proxy.

Command with **no** prefix disables headers.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-http-proxy)> **x-real-ip**

(config-http-proxy)> **no x-real-ip**

**Example**

```
(config-http-proxy)> x-real-ip
Http::Proxy: "test1": enabled X-Real-IP and X-Forwarded-For ►
headers.
```

```
(config-http-proxy)> no x-real-ip
Http::Proxy: "test1": disabled X-Real-IP and X-Forwarded-For ►
headers.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip http proxy x-real-ip** command has been introduced. |

# 3.60 ip http security-level

**Description** Set the security level for remote access to the Keenetic web interface. By default, `private` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http security-level** (**public** [**ssl**] | **private** | **protected**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the web interface is allowed for public, private and protected interfaces via HTTP and HTTPS. |
| `private` | *Keyword* | Access to the web interface is allowed for private interfaces. |
| `protected` | *Keyword* | Access to the web interface is allowed for private and protected interfaces. |
| `ssl` | *Keyword* | Access to the web interface is allowed for public interfaces via HTTPS only. |

**Example**

```
(config)> ip http security-level protected
Http::Manager: Security level changed to protected.
```

```
(config)> ip http security-level public ssl
Http::Manager: Security level set to public SSL.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip http security-level** command has been introduced. |
| 3.00 | Parameter **ssl** was added. |

# 3.61 ip http ssl acme debug

**Description**

Enable debug for the *ACME* service. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip http ssl acme debug**

(config)> **no ip http ssl acme debug**

**Example**

```
(config)> ip http ssl acme debug
Acme::Client: Enabled debug.
```

```
(config)> no ip http ssl acme debug
Acme::Client: Disabled debug.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip http ssl acme debug** command has been introduced. |

# 3.62 ip http ssl acme ecdsa

**Description**

Enable support for certificates based on ECDSA cryptography.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config)> **ip http ssl acme ecdsa**

(config)> **no ip http ssl acme ecdsa**

**Example**

```
(config)> ip http ssl acme ecdsa
Acme::Client: Enabled ECDSA chain.
```

```
(config)> no ip http ssl acme ecdsa
Acme::Client: Disabled ECDSA chain.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **ip http ssl acme ecdsa** command has been introduced. |

# 3.63 ip http ssl acme get

**Description** Generate and sign SSL certificate for the specified domain name (by default, KeenDNS). Access from the Internet should be granted.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **ip http ssl acme get** [ *‹domain›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | KeenDNS domain name. |

**Example**

```
(config)> ip http ssl acme get mytest.keenetic.pro
Acme::Client: Obtaining certificate for domain ►
"mytest.keenetic.pro" is started.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip http ssl acme get** command has been introduced. |

# 3.64 ip http ssl acme revoke

**Description** Revoke and remove SSL certificate for the specified domain name (KeenDNS, by default).

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **ip http ssl acme revoke** *‹revoke›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| revoke | *String* | KeenDNS domain name. |

**Example**

```
(config)> ip http ssl acme revoke mytest.keenetic.pro
Acme::Client: Revoking certificate for domain ►
"mytest.keenetic.pro" is started.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip http ssl acme revoke** command has been introduced. |

# 3.65 ip http ssl acme list

**Description** Show a list of free Let`s Encrypt certificates in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **ip http ssl acme list**

**Example**

```
(config)> ip http ssl acme list
      certificate:
                 domain: cc6b5a71a7644903b51a5454.keenetic.io
     should-be-renewed: no
            is-expired: no
            issue-time: 2018-06-20T09:16:30.000Z
       expiration-time: 2018-09-17T09:16:30.000Z

      certificate:
                 domain: mytest.keenetic.pro
     should-be-renewed: no
            is-expired: no
            issue-time: 2018-06-28T16:36:56.000Z
       expiration-time: 2018-09-25T16:36:56.000Z
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip http ssl acme list** command has been introduced. |

# 3.66 ip http ssl enable

**Description** Enable HTTP SSL server. By default, the server is disabled.

Command with **no** prefix disables SSL server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http ssl enable**

(config)> **no ip http ssl enable**

**Example**

```
(config)> ip http ssl enable
Http::Manager: Enabled SSL service.
```

```
(config)> no ip http ssl enable
Http::Manager: Disabled SSL service.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ip http ssl enable** command has been introduced. |

# 3.67 ip http ssl port

**Description** Assign HTTPS port for Web interface of Hero. By default, 443 value is used.

Command with **no** prefix resets HTTPS port to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip http ssl port** *‹port›*

(config)> **no ip http ssl port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | New HTTPS port. |

**Example**

```
(config)> ip http ssl port 4343
Http::Manager: SSL port changed to 4343.
```

```
(config)> no ip http ssl port
Http::Manager: SSL port reset to 443.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **ip http ssl port** command has been introduced. |

# 3.68 ip http ssl redirect

**Description**

Enable automatic redirection on domains with SSL certificate. By default, the redirection is enabled.

Command with **no** prefix disables redirection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip http ssl redirect**

(config)> **no ip http ssl redirect**

**Example**

```
(config)> ip http ssl redirect
Http::Manager: Redirect to SSL is enabled.
```

```
(config)> no ip http ssl redirect
Http::Manager: Redirect to SSL is disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip http ssl redirect** command has been introduced. |

# 3.69 ip http webdav

**Description**

Access to a group of commands to configure *WebDAV* server.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Interface type**

IP

**Group entry** `(config-webdav)`

**Synopsis**

(config)> **ip http webdav**

**Example**

```
(config)> ip http webdav
Core::Configurator: Done.
(config-webdav)>
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip http webdav** command has been introduced. |

## 3.69.1 ip http webdav enable

**Description** Enable *WebDAV* server. By default, the server is disabled.

Command with **no** prefix disables *WebDAV* server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-webdav)> **enable**

(config-webdav)> **no enable**

**Example**

```
(config-webdav)> enable
WebDav::Server: Enabled.
```

```
(config-webdav)> no enable
WebDav::Server: Disabled.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip http webdav enable** command has been introduced. |

## 3.69.2 ip http webdav permissive

**Description** Access to the *WebDAV* server for all users without authentication.

Command with **no** prefix denies anonymous access.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-webdav)> **permissive**

(config-webdav)> **no permissive**

**Example**

```
(config-webdav)> permissive
WebDav::Server: Enabled permissive mode.
```

```
(config-webdav)> no permissive
WebDav::Server: Disabled permissive mode.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip http webdav permissive** command has been introduced. |

## 3.69.3 ip http webdav security-level

**Description** Set the security level for remote access to the *WebDAV* server. By default, `private` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-webdav)> **security-level** (**public** | **private**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the WebDAV server is allowed for public, private and protected interfaces. |
| `private` | *Keyword* | Access to the WebDAV server is allowed for private interfaces. |

**Example**

```
(config-webdav)> security-level public
Http::Manager: WebDAV security level set to public.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip http webdav security-level** command has been introduced. |

# 3.70 ip http x-frame-options

**Description**

Set X-Frame-Options header value for web server (nginx) in Home network segment.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip http x-frame-options** *‹x-frame-options›*

(config)> **no ip http x-frame-options** *‹x-frame-options›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `x-frame-options` | *String* | The X-Frame-Option value. |

**Example**

```
(config)> ip http x-frame-options DENY
Http::Manager: Set X-Frame-Options to "DENY".
```

```
(config)> no ip http x-frame-options DENY
Http::Manager: Disabled X-Frame-Options header.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip http x-frame-options** command has been introduced. |

# 3.71 ip name-server

**Description**

Configure DNS server IP addresses. Addresses saved in this fashion are called static as opposite to dynamic — as registered by *PPP* or *DHCP* services.

Active, that addressed being used are the ones that have been registered most recently as compared to the others. Usually, the system uses the addresses which were obtained by several recent successfully connected *PPP* or *DHCP* services. If none of the services registers *DNS* addresses, static settings will be active. However, if after registering dynamic addresses the static settings are changed by the user, they become active until the new dynamic addresses are registered.

**ip name-server** command can be entered multiple times if several DNS-server addresses need to be setup. Moreover, each entered address can be associated with one or more domain names for working with specific areas, such as local names in the corporate network.

Command with **no** prefix removes the specified DNS server address from the static and the active lists if the command is furnished with arguments. If you use no arguments, the entire list of static addresses will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config)> **ip name-server** *‹address›* [ **:** *‹port›* ] [ *‹domain›* [ **on** *‹interface›* ] ]

(config)> **no ip name-server** [ *‹address›* [ **:** *‹port›* ] ] [ *‹domain›* [ **on** *‹interface›* ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Name server address. |
| port | *Integer* | Name server port. |
| domain | *String* | Domain for which the server will be used. In resolving names the DNS-proxy first selects the address of the server with name best matching the requested domain. If the domain is not specified, the server will be used for all requests. Use "" as default domain. The maximum number of domains per one DNS entry is 16. |
| interface | *Interface* | Interface name to configure. |

**Example**

```
(config)> ip name-server 8.8.8.8 "" on ISP
Dns::InterfaceSpecific: Name server 8.8.8.8 added, domain ►
(default), interface ISP.
```

```
(config)>  no ip name-server
Dns::Manager: Static name server list cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip name-server** command has been introduced. |
| 2.14 | Argument port was added. |

# 3.72 ip nat

**Description** Enable translation of “local” addresses of network *network* or network behind the interface *interface*. For example, command ip nat Home means that

all packets from the network `Home`, passing through the router will undergo IP spoofing.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config)> **ip nat** ( *‹interface›* | *‹address›* *‹mask›* )

(config)> **no ip nat** ( *‹interface›* | *‹address›* *‹mask›* )

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Source interface name (full name or an alias). |
| `address` | *IP address* | Together with mask *mask* sets the range of source IP addresses to be translated. |
| `mask` | *IP-mask* | Mask of a translation range. There are two ways to enter the mask: the canonical form (for example, `255.255.255.0`) and the form of prefix bit length (for example, `/24`). |

**Example**

```
(config)> ip nat Home
Network::Nat: A NAT rule added.
```

```
(config)> no ip nat Home
Network::Nat: A NAT rule removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip nat** command has been introduced. |

# 3.73 ip nat full-cone

**Description** Enable mode *Full Cone NAT*. By default, the mode is disabled.

Command with **no** prefix disables the mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip nat full-cone**

(config)> **no ip nat full-cone**

**Example**

```
(config)> ip nat full-cone
Network::Nat: Full cone mode enabled.
```

```
(config)> no ip nat full-cone
Network::Nat: Full cone mode disabled.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **ip nat full-cone** command has been introduced. |

# 3.74 ip nat oc

**Description**

Enable translation for *OpenConnect* clients.

Note: Command is available if the *OpenConnect* VPN server component is installed.

Command with **no** prefix removes the rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip nat oc**

(config)> **no ip nat oc**

**Example**

```
(config)> ip nat oc
OcServer::Nat: OpenConnect VPN NAT enabled.
```

```
(config)> no ip nat oc
OcServer::Nat: OpenConnect VPN NAT disabled.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip nat oc** command has been introduced. |

# 3.75 ip nat restricted-cone

**Description**

Enable mode *Restricted NAT*. By default, the mode is disabled.

Command with **no** prefix disables the mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip nat restricted-cone**

(config)> **no ip nat restricted-cone**

**Example**

```
(config)> ip nat restricted-cone
Network::Nat: Restricted cone mode enabled.
```

```
(config)> no ip nat restricted-cone
Network::Nat: Restricted cone mode disabled.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **ip nat restricted-cone** command has been introduced. |

# 3.76 ip nat sstp

**Description** Enable translation for *SSTP* clients.

Note: Command is available if the *SSTP* VPN server component is installed.

Command with **no** prefix removes the rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config)> **ip nat sstp**

(config)> **no ip nat sstp**

**Example**

```
(config)> ip nat sstp
SstpServer::Nat: SSTP VPN NAT enabled.
```

```
(config)> no ip nat sstp
SstpServer::Nat: SSTP VPN NAT disabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip nat sstp** command has been introduced. |

# 3.77 ip nat vpn

**Description**

Enable translation for PPTP clients.

Note: Command is available if the PPTP VPN server component is installed.

Command with **no** prefix removes the rule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip nat vpn**

(config)> **no ip nat vpn**

**Example**

```
(config)> ip nat vpn
VpnServer::Nat: PPTP VPN NAT enabled.
```

```
(config)> no ip nat vpn
VpnServer::Nat: PPTP VPN NAT disabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ip nat vpn** command has been introduced. |

# 3.78 ip policy

**Description**

Access to a group of commands to configure IP Policy — a default route selection rules for hosts and home network segments. If the IP Policy profile is not found, the command tries to create it. You can enter up to 64 profiles.

Command with **no** prefix removes the defined IP Policy profile from the list.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

(config-policy)

**Synopsis**

(config)> **ip policy** *‹name›*

(config)> **no ip policy** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Policy* | IP Policy name. Latin letters, numbers, hyphens and underscores are acceptable. Not more than 32 characters. |

**Example**

```
(config)> ip policy Policy0
Network::PolicyTable: Created policy "Policy0".
```

```
(config)> no ip policy Policy0
Network::PolicyTable: Removed policy "Policy0".
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip policy** command has been introduced. |

## 3.78.1 ip policy description

**Description**

Assign an arbitrary description to the specified IP Policy profile.

Command with **no** prefix removes description.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-policy)> **description** *‹description›*

(config-policy)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| description | *String* | An arbitrary description of the IP Policy. Latin letters, numbers, hyphens and underscores are acceptable. Not more than 256 characters. |

**Example**

```
(config-policy)> description PolicyOne
Network::PolicyTable: "Policy0": updated description.
```

```
(config-policy)> no description
Network::PolicyTable: "Policy0": updated description.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip policy description** command has been introduced. |

## 3.78.2 ip policy ipv6 route

**Description**

Add a static route to the routing table to describe a rule of IPv6-packets transmission through a particular gateway or network interface for IP Policy specific.

Command with **no** prefix removes the IPv6 route with the specified parameters or all IPv6 routes.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config-policy)> **ipv6 route** *‹prefix›* ( *‹interface›* [ *‹gateway›* ] | *‹gateway›* ) [**auto**] [ *‹metric›* ] [**reject**]

(config-policy)> **no ipv6 route** [ *prefix* ] [ *‹interface›* [ *‹gateway›* ] | *‹gateway›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `prefix` | *Prefix* | IPv6 prefix. |
| `interface` | *Interface* | Full interface name or an alias. |
| `gateway` | *IP address* | IP address of the router in a directly connected network. |
| `auto` | *Keyword* | Allows you to apply the route when specified gateway becomes available. |
| `metric` | *Integer* | Route metrics. Ignored in the current implementation. |
| `reject` | *Keyword* | Enable route to use only the selected interface for routing the traffic to the specified destination. If the specified interface is not active, the traffic is not sent via other possible routes. This option works only when using the `auto` option and cannot be applied to the default route. |

**Example**

```
(config-policy)> ipv6 route 2002:c100:aeb5::/48 ISP auto reject
Network::Ip6::RoutingTable: Added static route: ►
2002:c100:aeb5::/48 via ISP.
```

```
(config-policy)> ipv6 route 2002:c100:aeb5::/48 ISP
Network::Ip6::RoutingTable: Added static route: ►
2002:c100:aeb5::/48 via ISP.
```

```
(config-policy)> no ipv6 route 2002:c100:aeb5::/48 ISP
Network::Ip6::RoutingTable: Deleted static route: ►
2002:c100:aeb5::/48 via ISP.
```

```
(config-policy)> no ipv6 route
Network::Ip6::RoutingTable: Cleared all routes.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip policy ipv6 route** command has been introduced. |
| 5.00 | Multiple route removal support was added. |

## 3.78.3 ip policy multipath

**Description**

Enable the function of simultaneous use of WAN connections in the balancing mode.

Command with **no** prefix disables the function.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-policy)> **multipath**

(config-policy)> **no multipath**

**Example**

```
(config-policy)> multipath
Network::PolicyTable: "Policy0": enable multipath.
```

```
(config-policy)> no multipath
Network::PolicyTable: "Policy0": disable multipath.
```

**History**

| Version | Description |
|---|---|
| 2.14 | The **ip policy multipath** command has been introduced. |

## 3.78.4 ip policy permit

**Description**

Permit IP Policy for the global interface. If single IP Policy is permitted for multiple interfaces, you can specify a priority for each of them.

Command with **no** prefix denies the IP Policy for specified interface. If you use no arguments, IP Policy will be denied for the entire list of interfaces.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-policy)> **permit global** ‹*interface*› [ **order** ‹*order*› ]

(config-policy)> **no permit** [ **global** ‹*interface*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. |
| `order` | *Integer* | The priority of global interface to which the IP Policy is permitted. Can take values in the range from 1 to 65534, but not more than the number of global interfaces. |

**Example**

```
(config-policy)> permit global L2TP0 order 0
Network::PolicyTable: "Policy0": set permission to use L2TP0.
```

```
(config-policy)> no permit global L2TP0
Network::PolicyTable: "Policy0": set no permission to use L2TP0.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip policy permit** command has been introduced. |

## 3.78.5 ip policy permit auto

**Description** Permit new connections for the IP Policy automatically. By default, the feature is disabled.

Command with **no** prefix removes auto permission.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-policy)> **permit auto**

(config-policy)> **no permit auto**

**Example**

```
(config-policy)> permit auto
Network::PolicyTable: "Policy0": set auto permission.
```

```
(config-policy)> no permit auto
Network::PolicyTable: "Policy0": set auto permission.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip policy permit auto** command has been introduced. |

## 3.78.6 ip policy rate-limit input

**Description**

Add the input rate-limiting parameters to global interfaces of the IP Policy.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-policy)> **rate-limit** ‹*interface*› **input** (‹*rate*› | **auto**)

(config-policy)> **no rate-limit** ‹*interface*› **input**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | The name of a global IP interface to rate-limit its traffic for a group of policy assignees. |
| `rate` | *Integer* | The ingress rate limit in kbps. Can take values in the range from `64` to `1000000`. |
| `auto` | *Keyword* | Auto-ingress mode. |

**Example**

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 input auto
Network::PolicyTable: "Policy0": set input rate limit to "auto".
```

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 input 100000
Network::PolicyTable: "Policy0": set input rate limit to "100000" ►
kbps.
```

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 no input
Network::PolicyTable: "Policy0": reset input rate limit.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip policy rate-limit input** command has been introduced. |

## 3.78.7 ip policy rate-limit output

**Description**

Add output rate-limiting parameters to global interfaces of the IP Policy.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-policy)> **rate-limit** ‹*interface*› **output** ( ‹*rate*› | **auto**)

(config-policy)> **no rate-limit** ‹*interface*› **output**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | The name of a global IP interface to rate-limit its traffic for a group of policy assignees. |
| `rate` | *Integer* | The ingress rate limit in kbps. Can take values in the range from `64` to `1000000`. |
| `auto` | *Keyword* | Auto-ingress mode. |

**Example**

```
(config-policy)> rate-limit ISP output auto
Network::PolicyTable: "Policy0": set output rate limit to "auto".

(config-policy)> rate-limit ISP output 1000
Network::PolicyTable: "Policy0": set output rate limit to "1000" ►
kbps.

(config-policy)> rate-limit ISP no output
Network::PolicyTable: "Policy0": reset ouput rate limit.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ip policy rate-limit output** command has been introduced. |
| 3.08 | The **auto** argument has been added. |

# 3.78.8 ip policy route

**Description**

Add a static route to the routing table to describe a rule of IP-packets transmission through a particular gateway or network interface for IP Policy specific.

Command with **no** prefix removes the route with the specified parameters or all routes.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config-policy)> **route** ( ‹*network*› ‹*mask*› | ‹*host*› ) ( ‹*gateway*› [ ‹*network*› ] | ‹*interface*› ) [**auto**] [ ‹*metric*› ] [**reject**]

(config-policy)> **no route** [ ‹*network*› ‹*mask*› | ‹*host*› ] [ ‹*interface*› | ‹*gateway*› ] [ ‹*metric*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `network` | *IP address* | IP address of the destination network. |
| `mask` | *IP-mask* | Mask of the destination network. There are two ways to enter the mask: in the canonical form (for example, `255.255.255.0`) and in the form of prefix bit length (for example, `/24`). |
| `host` | *IP address* | IP address of the destination node. |
| `interface` | *Interface* | Interface full name or an alias. Specified as the direction of the packet transferring, if the interface has a point-to-point channel connected that requires no additional addressing within the channel.<br><br>If priority **interface ip global** is set on the interface, the route is added to the system table only if there is no other higher priority route with the same address. |
| `gateway` | *IP address* | IP address of the router in a directly connected network. Can be specified along with the interface name, if it is required to specify **interface ip global** priority. If no interface is specified, the systemd determines it automatically based on the current IP settings. |
| `auto` | *Keyword* | Allows you to apply the route when specified gateway becomes available. |

| Argument | Value | Description |
|---|---|---|
| `metric` | *Integer* | Route metrics. Ignored in the current implementation. |
| `reject` | *Keyword* | Enable route to use only the selected interface for routing the traffic to the specified destination. If the specified interface is not active, the traffic is not sent via other possible routes. This option works only when using the `auto` option and cannot be applied to the default route. |

**Example**

```
(config-policy)> route 203.0.113.123 Wireguard1 auto reject
Network::RoutingTable: Added static route: 203.0.113.123/32 via ►
Wireguard1.
```

```
(config-policy)> route 203.0.113.123 Wireguard1
Network::RoutingTable: Added static route: 203.0.113.123/32 via ►
Wireguard1.
```

```
(config-policy)> no route 203.0.113.123 Wireguard1
Network::RoutingTable: Deleted static route: 203.0.113.123/32 ►
via Wireguard1.
```

```
(config-policy)> no route 203.0.113.123
Network::RoutingTable: Deleted static route: 203.0.113.123/32 ►
via Wireguard1.
```

```
(config-policy)> no route
Network::RoutingTable: Cleared all routes.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ip policy route** command has been introduced. |
| 5.00 | Multiple route removal support was added. |

## 3.78.9 ip policy standalone

**Description**

Enable “standalone” mode, which static routes through interfaces with the **global** property are not automatically copied from the main settings to the selected IP policy profile.

Command with **no** prefix disables the function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-policy)> **standalone**

(config-policy)> **no standalone**

**Example**

```
(config-policy)> standalone
Network::PolicyTable: "Policy0": enable standalone mode.
```

```
(config-policy)> no standalone
Network::PolicyTable: "Policy0": disable standalone mode.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ip policy standalone** command has been introduced. |

# 3.79 ip route

**Description**

Add a static route to the routing table to describe a rule of IP-packets transmission through a particular gateway or network interface.

As the destination network, one can specify `default` keyword. In this case, a default route will be created.

Command with **no** prefix removes the route with the specified parameters or all routes.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config)> **ip route** ( *‹network› ‹mask›* | *‹host›* | **default**) ( *‹gateway›* [ *interface* ] | *‹interface›* ) [**auto**] [ *metric* ] [**reject**]

(config)> **no ip route** [ *‹network› ‹mask›* | *‹host›* | **default**] [ *‹gateway›* | *‹interface›* ] [ *‹metric›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `network` | *IP address* | IP address of the destination network. |
| `mask` | *IP-mask* | Mask of the destination network. There are two ways to enter the mask: in the canonical form (for example, `255.255.255.0`) and in the form of prefix bit length (for example, `/24`). |
| `host` | *IP address* | IP address of the destination node. |
| `default` | *Keyword* | Helps specify default routes. |

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Interface full name or an alias. Specified as the direction of the packet transferring, if the interface has a point-to-point channel connected that requires no additional addressing within the channel.<br><br>If priority **interface ip global** is set on the interface, the route is added to the system table only if there is no other higher priority route with the same address. |
| `gateway` | *IP address* | IP address of the router in a directly connected network. Can be specified along with the interface name, if it is required to specify **interface ip global** priority. If no interface is specified, the systemd determines it automatically based on the current IP settings. |
| `auto` | *Keyword* | Allows you to apply the route when specified gateway becomes available. |
| `metric` | *Integer* | Route metrics. Ignored in the current implementation. |
| `reject` | *Keyword* | Enable route to use only the selected interface for routing the traffic to the specified destination. If the specified interface is not active, the traffic is not sent via other possible routes. This option works only when using the `auto` option and cannot be applied to the default route. |

**Example**

```
(config)> ip route default Home
Network::RoutingTable: Added static route: 0.0.0.0/0 via Home.

(config)> no ip route default Home
Network::RoutingTable: No such route: 0.0.0.0/0 via Home.

(config)> ip route 203.0.113.123 Wireguard1 auto reject
Network::RoutingTable: Added static route: 203.0.113.123/32 via ►
Wireguard1.

(config)> no ip route 203.0.113.123 Wireguard1
Network::RoutingTable: Deleted static route: 203.0.113.123/32 ►
via Wireguard1.

(config)> ip route 203.0.113.123 Wireguard1
Network::RoutingTable: Added static route: 203.0.113.123/32 via ►
Wireguard1.

(config)> no ip route Wireguard1
Network::RoutingTable: Cleared routes on "Wireguard1".
```

```
(config)> no ip route default
Network::RoutingTable: Deleted route: 0.0.0.0/0 via 192.168.2.1 ►
(ISP).
```

```
(config)> no ip route
Network::RoutingTable: Cleared all routes.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip route** command has been introduced. |
| 3.08 | The `reject` option was added. |
| 5.00 | Multiple route removal support was added. |

# 3.80 ip search-domain

**Description**

Assign search domain to resolve hostnames that are not fully qualified.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ip search-domain** ‹*domain*›

(config)> **no ip search-domain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `domain` | *String* | The domain name to assign. |

**Example**

```
(config)> ip search-domain my.example
```

```
(config)> no ip search-domain my.example
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip search-domain** command has been introduced. |

# 3.81 ip sip alg direct-media

**Description**

Replace IP address in `0wner` field of SDP. This feature is used to not configure port forwarding separately for VoIP traffic. By default, the setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **ip sip alg direct-media**

(config)> **no ip sip alg direct-media**

**Example**

```
(config)> ip sip alg direct-media
Sip::Alg: Direct media enabled.
```

```
(config)> no ip sip alg direct-media
Sip::Alg: Direct media disabled.
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **ip sip alg direct-media** command has been introduced. |

# 3.82 ip sip alg port

**Description** Specify a port number for SIP messages other than the default port. By default, port number is `5060`.

Command with **no** prefix resets port to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **ip sip alg port** *‹port›*

(config)> **no ip sip alg port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | The port number. |

**Example**

```
(config)> ip sip alg port 7090
Sip::Alg: Port set to 7090.
```

```
(config)> no ip sip alg port
Sip::Alg: Port reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip sip alg port** command has been introduced. |

# 3.83 ip ssh

**Description** Access to a group of commands to manage SSH-server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** `(config-ssh)`

**Synopsis**

(config)> **ip ssh**

**Example**

```
(config)> ip ssh
(config-ssh)>
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ssh** command has been introduced. |

## 3.83.1 ip ssh cipher

**Description** Set a symmetric key cipher for SSH session.

Command with **no** prefix removes the specified cipher.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-ssh)> **cipher** *‹cipher›*

(config-ssh)> **no cipher** *‹cipher›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `cipher` | `chacha20-poly1305@openssh.com` | An encryption algorithm ChaCha20-Poly1305. |

| Argument | Value | Description |
|---|---|---|
| | `aes128-ctr` | An encryption algorithm AES128-CTR. |
| | `aes256-ctr` | An encryption algorithm AES256-CTR. |
| | `aes128-gcm@openssh.com` | An encryption algorithm AES128-GCM. |
| | `aes256-gcm@openssh.com` | An encryption algorithm AES256-GCM. |

**Example**

```
(config-ssh)> cipher chacha20-poly1305@openssh.com
Ssh::Manager: Added cipher "chacha20-poly1305@openssh.com".
```

```
(config-ssh)> no cipher chacha20-poly1305@openssh.com
Ssh::Manager: Use default ciphers.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip ssh cipher** command has been introduced. |
| 3.05 | New encryption algorithms `aes128-gcm@openssh.com`, `aes256-gcm@openssh.com` were added. |

## 3.83.2 ip ssh keygen

**Description** Regeneration of a given type key.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ssh)> **keygen** *‹keygen›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| keygen | `default` | Automatic generation of a new open key RSA2048 + ECDSA-NISTP521. |
| | `rsa-1024` | Automatic generation of a new open RSA-key with a length of 1024 bits. |
| | `rsa-2048` | Automatic generation of a new open RSA-key with a length of 2048 bits. |
| | `rsa-4096` | Automatic generation of a new open RSA-key with a length of 4096 bits. |

| Argument | Value | Description |
|---|---|---|
| | `ecdsa-nistp256` | Automatic generation of a new open ECDSA-key with a length of 256 bits. |
| | `ecdsa-nistp384` | Automatic generation of a new open ECDSA-key with a length of 384 bits. |
| | `ecdsa-nistp521` | Automatic generation of a new open ECDSA-key with a length of 521 bits. |
| | `ed25519` | Automatic generation of a new open ED25519 key with a length of 256 bits. |

**Example**

```
(config-ssh)> keygen default
Ssh::Manager: Key generation is in progress...
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ssh keygen** command has been introduced. |

## 3.83.3 ip ssh lockout-policy

**Description**

Set SSH bruteforce detection parameters for public interfaces. By default, feature is enabled. If you use `0` as an argument, all bruteforce detection parameters will be reset to default.

Command with **no** prefix disables bruteforce detection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-ssh)> **lockout-policy** *‹threshold›* [ *‹duration›* [ *‹observation-window›* ]]

(config-ssh)> **no lockout-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | The number of failed attempts to log in. By default, `5` value is used. Can take values in the range from `4` to `20`. |
| `duration` | *Integer* | An authorization ban duration for the specified IP in minutes. By default, `15` value is used. Can take values in the range from `1` to `60`. |

| Argument | Value | Description |
|---|---|---|
| observation-window | *Integer* | Duration of suspicious activity observation in minutes. By default, 3 value is used. Can take values in the range from 1 to 10. |

**Example**

```
(config-ssh)> lockout-policy 10 30 2
Ssh::Manager: Bruteforce detection is reconfigured.
```

```
(config-ssh)> no lockout-policy
Ssh::Manager: Bruteforce detection is disabled.
```

```
(config-ssh)> lockout-policy 0
Ssh::Manager: Bruteforce detection reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ssh lockout-policy** command has been introduced. |

## 3.83.4 ip ssh port

**Description**

Specify port number for SSH connection. By default, 22 port number is used.

Command with **no** prefix resets port number to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-ssh)> **port** *‹number›*

(config-ssh)> **no port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *Integer* | Port number. Can take values in the range from 1 to 65535 inclusively. |

**Example**

```
(config-ssh)> port 2626
Ssh::Manager: Port changed to 2626.
```

```
(config-ssh)> no port
Ssh::Manager: Port reset to 22.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ssh port** command has been introduced. |

## 3.83.5 ip ssh security-level

**Description** Set SSH security level. By default, `private` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ssh)> **`security-level`** (**`public`** | **`private`** | **`protected`**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the SSH server is allowed for public, private and protected interfaces. |
| `private` | *Keyword* | Access to the SSH server is allowed for private interfaces. |
| `protected` | *Keyword* | Access to the SSH server is allowed for private and protected interfaces. |

**Example**

```
(config-ssh)> security-level protected
Ssh::Manager: Security level changed to protected.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ip ssh security-level** command has been introduced. |

## 3.83.6 ip ssh session timeout

**Description** Set the lifetime of inactive session for SSH connection. By default, `300` value is used, i.e. the function of activity tracking within a session is disabled.

Command with **no** prefix resets timeout to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-ssh)> **session timeout** ‹*timeout*›

(config-ssh)> **no session timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| timeout | *Integer* | The lifetime of inactive session. Can take values in the range from 5 to $2^{32}$-1 seconds inclusively. |

**Example**

```
(config-ssh)> session timeout 123456
Ssh::Manager: A session timeout value set to 123456 seconds.
```

```
(config-ssh)> no session timeout
Ssh::Manager: A session timeout reset.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **ip ssh session timeout** command has been introduced. |

## 3.83.7 ip ssh sftp

**Description** Access to a group of commands to manage *SFTP* server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** (config-sftp)

**Synopsis**

(config)> **ip ssh sftp**

**Example**

```
(config)> ip ssh sftp
(config-sftp)>
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip ssh sftp** command has been introduced. |

### 3.83.7.1 ip ssh sftp enable

**Description** Enable *SFTP* server.

Command with **no** prefix disables the server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-sftp)> **enable**

(config-sftp)> **no enable**

**Example**

```
(config-sftp)> enable
Ssh::Manager: Enabled SFTP server.
```

```
(config-sftp)> no enable
Ssh::Manager: Disabled SFTP server.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip ssh sftp enable** command has been introduced. |

### 3.83.7.2 ip ssh sftp permissive

**Description** Access to the *SFTP* server for all users without authentication.

Command with **no** prefix denies access.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-sftp)> **permissive**

(config-sftp)> **no permissive**

**Example**

```
(config-sftp)> permissive
```

```
(config-sftp)> no permissive
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip ssh sftp permissive** command has been introduced. |

### 3.83.7.3 ip ssh sftp root

**Description**

Set root directory on *SFTP* server by default.

Command with **no** prefix resets root directory.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

```
(config-sftp)>  root ( ‹directory› | ‹directory› )
```

```
(config-sftp)> no root
```

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `directory` | *String* | Path to default root directory. |

**Example**

```
(config-sftp)> root files_ssd:/
Sftp::Server: A default root directory set to "files_ssd:/".
```

```
(config-sftp)> no root files_ssd:/
Sftp::Server: A default root directory reset.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **ip ssh sftp root** command has been introduced. |

# 3.84 ip static

**Description**

Create a static binding of local IP addresses to global ones. If *interface* or *network* corresponds to an interface with a public security level (the secutity level `public` parameter is set in the interface settings in the CLI), destination address translation (DNAT) will be performed. If *to-address* corresponds to an interface with a public security level, source address translation (SNAT) will be performed.

The TCP/UDP port number is always considered the destination port.

If *network* equals a single address and that address is equal to *to-address*, this rule will prohibit translation of the specified address, which could be performed based on the specified **ip nat** rules.

**ip static** rules have higher priority than the **ip nat** rules.

The rule can work either for one of two protocols (TCP or UDP) or for all protocols (including ICMP). If the TCP or UDP protocol type is not specified, then it is not possible to select a port number in the syntax.

When using the translation rule, the router opens access to the specified port, so there is no need to make additional configuration of the firewall.

Command with **no** prefix removes the specified rule. If you use no argument, the entire list of all rules will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config)> **ip static** [ *‹protocol›* ] ( *‹interface›* | (*‹address›* *‹mask›*) ) ( *‹port›* **through** *‹end-port›* ( *‹to-address›* | *‹to-host›* | *‹to-interface›* ) | *‹port›* ( *‹to-address›* | *‹to-host›* | *‹to-interface›* ) [ *‹to-port›* ] | *‹to-address›* | *‹to-host›* | *‹to-interface›* )

(config)> **no ip static** [ *‹protocol›* ( *‹interface›* | (*‹address›* *‹mask›*) ) ( *‹port›* **through** *‹end-port›* ( *‹to-address›* | *‹to-host›* | *‹to-interface›* ) | *‹port›* ( *‹to-address›* | *‹to-host›* | *‹to-interface›* ) [ *‹to-port›* ] | *‹to-address›* | *‹to-host›* | *‹to-interface›* ) ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | tcp | *TCP* protocol. |
| | udp | *UDP* protocol. |
| | icmp | *ICMP* protocol. |
| | tcpudp | *TCP* and *UDP* protocols. |
| | gre | *GRE* protocol. |
| | ipip | *IP in IP* protocol. |
| interface | *Interface* | Input interface name (full name or an alias). |
| address | *IP address* | Along with mask *mask* sets the range of destination IP addresses that are to be translated. |
| mask | *IP-mask* | Translation range mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |
| port | *Integer* | TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated. |
| end-port | *Integer* | The end of the range of ports. |

| Argument | Value | Description |
|---|---|---|
| to-address | *IP address* | The destination address after translation. |
| to-host | *MAC address* | The destination MAC address after translation. Only MAC address from known hosts are accepted. If the known host is deleted, then the associated rules will be deleted too. |
| to-port | *Integer* | TCP/UDP port number after translation. If not specified, the destination port remains the same. |
| to-interface | *Interface* | Interface name after translation. |

**Example**

```
(config)> ip static tcp ISP 8080 192.168.1.84 8080
Network::StaticNat: Static NAT rule has been added.

(config)> ip static tcp ISP 10000 through 20000 192.168.1.84
Network::StaticNat: Static NAT rule has been added.

(config)> ip static icmp 192.168.1.84 255.255.255.255 ► 
c1:2d:33:21:02:61
Network::StaticNat: Static NAT rule has been added.

(config)> ip static ISP 192.168.1.84
Network::StaticNat: Static NAT rule has been added.

(config)> ip static Home 203.0.113.10
Network::StaticNat: Static NAT rule has been added.

(config)> ip static 192.168.1.84 255.255.255.255 203.0.113.10
Network::StaticNat: Static NAT rule has been added.

(config)> ip static Home ISP
Network::StaticNat: Static NAT rule has been added.

(config)> ip static disable
Network::StaticNat: Static NAT disable unchanged.

(config)> no ip static
Network::StaticNat: Static NAT rules have been removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ip static** command has been introduced. |
| 2.06 | The to-host argument has been added. |

# 3.85 ip static rule

**Description**

Disable or enable IP address translation rule, set rule operation time by schedule or assign new position in the list of rules.

Command with **no** prefix enables or disables the rule or removes the rule schedule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config)> **ip static rule** ‹*index*› (**disable** | **schedule** ‹*schedule*› | **order** ‹*new-index*› )

(config)> **no ip static rule** ‹*index*› (**disable** | **schedule**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| index | *Integer* | The translation rule number. |
| disable | *Keyword* | Disable the translation rule. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |
| new-index | *Integer* | New position of the rule in the list. |

**Example**

```
(config)> ip static rule 0 disable
Network::StaticNat: Static NAT rule disabled.
```

```
(config)> no ip static rule 0 disable
Network::StaticNat: Static NAT rule enabled.
```

```
(config)> ip static rule 0 schedule test
Network::StaticNat: Static NAT rule schedule applied.
```

```
(config)> no ip static rule 0 schedule
Network::StaticNat: Static NAT rule schedule removed.
```

```
(config)> ip static rule 0 order 1
Network::StaticNat: Rule 0 moved to position 1.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip static rule** command has been introduced. |

# 3.86 ip telnet

**Description** Access to a group of commands to manage Telnet server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** `(config-telnet)`

**Synopsis**

(config)> **ip telnet**

**Example**

```
(config)> ip telnet
(config-telnet)>
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet** command has been introduced. |

## 3.86.1 ip telnet lockout-policy

**Description** Set Telnet bruteforce detection parameters for public interfaces. By default, feature is enabled. If you use `0` as an argument, all bruteforce detection parameters will be reset to default.

Command with **no** prefix disables bruteforce detection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-telnet)> **lockout-policy** *‹threshold›* [ *‹duration›* [ *‹observation-window›* ]]

(cconfig-telnet)> **no lockout-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | The number of failed attempts to log in. By default, `5` value is used. Can take values in the range from `4` to `20`. |
| `duration` | *Integer* | An authorization ban duration for the specified IP in minutes. By default, `15` value is used. Can take values in the range from `1` to `60`. |
| `observation-window` | *Integer* | Duration of suspicious activity observation in minutes. By default, `3` value is used. Can take values in the range from `1` to `10`. |

**Example**

```
(config-telnet)> lockout-policy 10 30 2
Telnet::Server: Bruteforce detection is reconfigured.
```

```
(config-telnet)> no lockout-policy
Telnet::Server: Bruteforce detection is disabled.
```

```
(config-telnet)> lockout-policy 0
Telnet::Server: Bruteforce detection is enabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet lockout-policy** command has been introduced. |

## 3.86.2 ip telnet port

**Description**

Specify port number for telnet connection. By default, 23 port number is used.

Command with **no** prefix resets port number to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-telnet)> **port** *‹number›*

(config-telnet)> **no port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *Integer* | Port number. Can take values in the range from 1 to 65535 inclusively. |

**Example**

```
(config-telnet)> port 2525
Telnet::Server: Port unchanged.
```

```
(config-telnet)> no port
Telnet::Server: Port unchanged.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet port** command has been introduced. |

## 3.86.3 ip telnet security-level

**Description**

Set Telnet security level. By default, `private` value is set.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-telnet)> **security-level** (**public** | **private** | **protected**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `public` | *Keyword* | Access to the Telnet server is allowed for public, private and protected interfaces. |
| `private` | *Keyword* | Access to the Telnet server is allowed for private interfaces. |
| `protected` | *Keyword* | Access to the Telnet server is allowed for private and protected interfaces. |

**Example**

```
(config-telnet)> security-level protected
Telnet::Manager: Security level changed to protected.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet security-level** command has been introduced. |

## 3.86.4 ip telnet session max-count

**Description** Set the maximal number of simultaneous sessions for telnet connection. By default, 4 value is used.

Command with **no** prefix resets count to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

(config-telnet)> **session max-count** ‹*count*›

(config-telnet)> **no session max-count**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `count` | *Integer* | The maximal number of simultaneous sessions. Can take values in the range from 1 to 4 inclusively. |

**Example**

```
(config-telnet)> session max-count 4
Telnet::Server: The maximum session count set to 4.
```

```
(config-telnet)> no session max-count
Telnet::Server: The maximum session count reset to 4.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet session max-count** command has been introduced. |

## 3.86.5 ip telnet session timeout

**Description**

Set the lifetime of inactive session for telnet connection. By default, `300` value is used which means that the function of activity tracking within a session is disabled.

Command with **no** prefix resets timeout to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config-telnet)> **session timeout** ‹*timeout*›

(config-telnet)> **no session timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | The lifetime of inactive session. Can take values in the range from 5 to $2^{32}$-1 seconds inclusively. |

**Example**

```
(config-telnet)> session timeout 600
Telnet::Server: A session timeout value set to 600 seconds.
```

```
(config-telnet)> no session timeout
Telnet::Server: A session timeout reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ip telnet session timeout** command has been introduced. |

# 3.87 ip traffic-shape host

**Description**

Set the limit of data rate on a specified known host in both directions. By default speed is not limited.

Command with **no** prefix removes the setting for specified host. If you use no arguments, the entire list of rate limits for all hosts will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

(config)> **ip traffic-shape host** ‹*mac*› **rate** ‹*rate*› [ **asymmetric** ‹*upstream-rate*› ] [ **schedule** ‹*schedule*› ]

(config)> **no ip traffic-shape host** [ ‹*mac*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of the known host. |
| rate | *Integer* | Value of data download rate in Kbps. Limit sould be in the range from 64 Kbps to 1 Gbps. |
| upstream-rate | *Integer* | Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config)> ip traffic-shape host a8:1e:82:81:f1:21 rate 80
TrafficControl::Manager: "a8:1e:82:81:f1:21" host rate limited ►
to DL 80 / UL 80 Kbits/sec.

(config)> ip traffic-shape host a8:1e:82:81:f1:21 rate 80 ►
asymmetric 64
TrafficControl::Manager: "a8:1e:82:81:f1:21" host rate limited ►
to DL 80 / UL 64 Kbits/sec..

(config)> ip traffic-shape host a8:1e:82:81:f1:21 rate 80 ►
asymmetric 64 schedule Update
TrafficControl::Manager: "a8:1e:82:81:f1:21" host rate limited ►
to DL 80 / UL 64 Kbits/sec (controlled by schedule Update).

(config)> no ip traffic-shape host a8:1e:82:81:f1:21
TrafficControl::Manager: Rate limit removed for host ►
"a8:1e:82:81:f1:21".
```

```
(config)> no ip traffic-shape host a8:1e:82:81:f1:21
TrafficControl::Manager: Rate limit removed for host ►
"a8:1e:82:81:f1:21".
```

```
(config)> no ip traffic-shape host
TrafficControl::Manager: Rate limits for all hosts removed.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **ip traffic-shape host** command has been introduced. |
| 2.08 | The **schedule** argument was added. |
| 3.04 | The **upstream-rate** argument was added. |

# 3.88 ip traffic-shape unknown-host

**Description**

Set the data rate limitation for unregistered devices in both directions. By default, speed is unlimited.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **ip traffic-shape unknown-host rate** *‹rate›* [ **asymmetric** *‹upstream-rate›* ]

(config)> **no ip traffic-shape unknown-host rate**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `rate` | *Integer* | The data download rate in Kbps. Value sould be in the range from 64 Kbps to 1 Gbps. |
| `upstream-rate` | *Integer* | Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps. |

**Example**

```
(config)> ip traffic-shape unknown-host rate 80
TrafficControl::Manager: Rate limit for unknown hosts set to 80 ►
Kbits/sec.
```

```
(config)> ip traffic-shape unknown-host rate 80 asymmetric 64
TrafficControl::Manager: Rate limit for unknown hosts set to ►
80/64 Kbits/sec.
```

```
(config)> no ip traffic-shape unknown-host rate
TrafficControl::Manager: Rate limit for unknown hosts removed.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **ip traffic-shape unknown-host** command has been introduced. |
| 3.04 | The **upstream-rate** argument was added. |

# 3.89 iperf3 interface

**Description**

Bind *iPerf3* server to a specific interface. By default, bind to all interfaces according to the security level.

Command with **no** prefix resets configuration.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **iperf3 interface** ‹*interface*›

(config)> **no iperf3 interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config)> iperf3 interface ISP
Iperf3::Server: Interface changed to ISP.
```

```
(config)> no iperf3 interface
Iperf3::Server: Interface reset.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **iperf3 interface** command has been introduced. |

# 3.90 iperf3 port

**Description**

Assign TCP/UDP port for *iPerf3* server. By default, `5201` value is used.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config)> **iperf3 port** *‹port›*

(config)> **no iperf3 port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | New TCP/UDP port. |

**Example**

```
(config)> iperf3 port 5002
Iperf3::Server: Port changed to 5002.
```

```
(config)> no iperf3 port
Iperf3::Server: Port reset to 5201.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **iperf3 port** command has been introduced. |

# 3.91 iperf3 security-level

**Description** Set security level for *iPerf3* server. By default, `private` value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **iperf3 security-level** (**public** | **private** | **protected**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| public | *Keyword* | Access to the iPerf3 server is allowed for public, private and protected interfaces. |
| private | *Keyword* | Access to the iPerf3 server is allowed for private interfaces. |
| protected | *Keyword* | Access to the iPerf3 server is allowed for private and protected interfaces. |

**Example**

```
(config)> iperf3 security-level  public
Iperf3::Server: Security level changed to public.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **iperf3 security-level** command has been introduced. |

# 3.92 ipv6 local-prefix

**Description**

Configure a local (ULA) prefix. Argument can be a literal prefix or **default**, which generates a persistent unique prefix automatically.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ipv6 local-prefix** (**default** | *‹prefix›* )

(config)> **no ipv6 local-prefix** [**default** | *‹prefix›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `default` | *Keyword* | Generate persistent unique prefix. |
| `prefix` | *Prefix* | Local ULA prefix. Must be a valid prefix in the block `fd00::/8` with a prefix length no longer than 48. |

**Example**

```
(config)> ipv6 local-prefix default
Ip6::Prefixes: Default ULA prefix enabled.
```

```
(config)> ipv6 local-prefix fd01:db8:43::/48
Ip6::Prefixes: Added static prefix: fd01:db8:43::/48.
```

```
(config)> no ipv6 local-prefix default
Ip6::Prefixes: Default ULA prefix disabled.
```

```
(config)> no ipv6 local-prefix fd01:db8:43::/48
Ip6::Prefixes: Deleted static prefix: fd01:db8:43::/48.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 local-prefix** command has been introduced. |

# 3.93 ipv6 name-server

**Description**

Configure DNS server IPv6-addresses. Addresses saved in this fashion are called static as opposite to dynamic — as registered by *PPP* or *DHCP* services.

**ipv6 name-server** command can be entered multiple times if several DNS server addresses need to be setup.

Command with **no** prefix removes the specified DNS server address from the static and the active lists if the command is furnished with arguments, or clears the list of static addresses if the command has no arguments.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **ipv6 name-server** *‹address›* [ *‹domain›* [ **on** *‹interface›* ] ]

(config)> **no ipv6 name-server** [ *‹address›* [ *‹domain›* [ **on** *‹interface›* ] ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IPv6-address* | Name server address. |
| domain | *String* | Domain for which the server will be used. In resolving names the DNS-proxy first selects the address of the server with name best matching the requested domain. If the domain is not specified, the server will be used for all requests. Use "" as default domain. |
| interface | *Interface* | Interface name to configure. |

**Example**

```
(config)> ipv6 name-server 2001:4860:4860::8888
Dns::Manager: Name server 2001:4860:4860::8888 added, domain ►
(default).
```

```
(config)> ipv6 name-server 123::456 "" on ISP
Dns::InterfaceSpecific: "GigabitEthernet1": name server 123::456 ►
added, domain (default).
```

```
(config)> ipv6 name-server 2001:4860:4860::8888 example.com
Dns::Manager: Name server 2001:4860:4860::8888 added, domain ►
example.com.
```

```
(config)> no ipv6 name-server 2001:4860:4860::8888
Dns::Manager: Name server 2001:4860:4860::8888, domain (default) ►
deleted.
```

```
(config)> no ipv6 name-server 123::456 "" on ISP
Dns::InterfaceSpecific: Name server 123::456 deleted, domain ►
(default).
```

```
(config)> no ipv6 name-server 2001:4860:4860::8888 example.com
Dns::Manager: Name server 2001:4860:4860::8888, domain ►
example.com deleted.
```

```
(config)> no ipv6 name-server
Dns::Manager: Static name server list cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 name-server** command has been introduced. |
| 4.00 | The `interface` argument was added. |

# 3.94 ipv6 pass

**Description**

Enable Pass Through mode on the router for IPv6-packets. By default, the feature is disabled.

Command with **no** prefix disables the function.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ipv6 pass through** *‹wan-iface› ‹lan-iface›*

(config)> **no ipv6 pass**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `wan-iface` | *Interface* | Full WAN-interface name or an alias. |
| `lan-iface` | *Interface* | Full LAN-interface name or an alias. |

**Example**

```
(config)> ipv6 pass through ISP Home
Ip6::Pass: Configured pass from "GigabitEthernet1" to "Bridge0".
```

```
(config)> no ipv6 pass
Ip6::Pass: Disabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **ipv6 pass** command has been introduced. |

# 3.95 ipv6 route

**Description**

Add a static route to the routing table to describe a rule of IPv6-packets transmission through a particular gateway or network interface.

As the destination network keyword `default` can be specified. In this case, a default route will be created.

Command with **no** prefix removes the route with the specified parameters or all routes.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **ipv6 route** ( *‹prefix›* | **default**) ( *‹interface›* [ *‹gateway›* ] | *‹gateway›* )

(config)> **no ipv6 route** [ *‹prefix›* | **default**] [ *‹interface›* [ *‹gateway›* ] | *‹gateway›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| prefix | *Prefix* | IPv6 prefix. |
| default | *Keyword* | Default prefix. |
| interface | *Interface* | Full interface name or an alias. |
| gateway | *IP address* | IP address of the router in a directly connected network. |

**Example**

```
(config)> ipv6 route 2002:c100:aeb5::/48 ISP auto reject
Network::Ip6::RoutingTable: Renewed static route: ►
2002:c100:aeb5::/48 via ISP.

(config)> ipv6 route 2002:c100:aeb5::/48 ISP
Network::Ip6::RoutingTable: Added static route: ►
2002:c100:aeb5::/48 via ISP.

(config)> no ipv6 route 2002:c100:aeb5::/48
Network::Ip6::RoutingTable: Deleted static route: ►
2002:c100:aeb5::/48 via ISP.

(config)> no ipv6 route 2002:c100:aeb5::/48 ISP
Network::Ip6::RoutingTable: Deleted static route: ►
2002:c100:aeb5::/48 via ISP.

(config)> ipv6 route 2002:c100:aeb5::/48 fe80::d69c:53ff:fe00:3df5
Network::Ip6::RoutingTable: Added static route: ►
2002:c100:aeb5::/48 via fe80::d69c:53ff:fe00:3df5.

(config)> no ipv6 route 2002:c100:aeb5::/48 ►
fe80::d69c:53ff:fe00:3df5
Network::Ip6::RoutingTable: Deleted static route: ►
2002:c100:aeb5::/48 via fe80::d69c:53ff:fe00:3df5.

(config)> no ipv6 route
Network::Ip6::RoutingTable: Deleted route: ::/0.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 route** command has been introduced. |
| 2.11 | gateway argument has been added. |
| 5.00 | Multiple route removal support was added. |

# 3.96 ipv6 static

**Description**

Define the rule to allow incoming connection to a specified port of a registered home network device.

Command with **no** prefix removes the rule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **ipv6 static** [ ‹*protocol*› ] ( ‹*interface*› ‹*mac*› | ‹*mac*› ) [ ‹*port*› [ **through** ‹*end-port*› ] ]

(config)> **no ipv6 static** [ [ ‹*protocol*› ] ( ‹*interface*› ‹*mac*› | ‹*mac*› ) [ ‹*port*› [ **through** ‹*end-port*› ] ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | tcp | *TCP* protocol. |
| | udp | *UDP* protocol. |
| | tcpudp | *TCP* and *UDP* protocol. |
| | icmp6 | *ICMPv6* protocol. |
| interface | *Interface* | Input interface name (full name or an alias). |
| mac | *MAC address* | MAC address of host. |
| port | *Integer* | TCP/UDP port number for which incoming request comes. |
| end-port | *Integer* | The end of the range of ports. |

**Example**

```
(config)> ipv6 static tcp ISP 04:d1:c3:24:bc:19 81
Ip6::Firewall: Static rule added.

(config)> ipv6 static tcp 04:d1:c3:24:bc:19 8080
Ip6::Firewall: Static rule added.

(config)> ipv6 static tcp ISP 04:d1:c3:24:bc:19 8080 through 8081
Ip6::Firewall: Static rule added.

(config)> ipv6 static icmpv6 ISP 04:d1:c3:24:bc:19
Ip6::Firewall: Static rule added.

(config)> no ipv6 static icmpv6 ISP 04:d1:c3:24:bc:19
Ip6::Firewall: Static rule removed.

(config)> no ipv6 static
Ip6::Firewall: Static rules cleared.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **ipv6 static** command has been introduced. |
| 4.00 | The `icmpv6` argument was added. |

# 3.97 ipv6 static rule

**Description**

Disable IPv6 address translation rule or set rule operation time by schedule.

Command with **no** prefix enables the rule or removes the rule schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **ipv6 static rule** ‹*index*› (**disable** | **schedule** ‹*schedule*› )

(config)> **no ipv6 static rule** ‹*index*› (**disable** | **schedule**)

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `index` | *Integer* | The translation rule number. |
| `disable` | *Keyword* | Disable the translation rule. |
| `schedule` | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config)> ipv6 static rule 0 schedule test
Ip6::Firewall: Static rule schedule applied.
```

```
(config)> ipv6 static rule 0 disable
Ip6::Firewall: Static rule disabled.
```

```
(config)> no ipv6 static rule 0 disable
Ip6::Firewall: Static rule enabled.
```

```
(config)> no ipv6 static rule 0 schedule
Ip6::Firewall: Static rule schedule removed.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **ipv6 static rule** command has been introduced. |

# 3.98 ipv6 subnet

**Description**

Access to a group of commands to configure a LAN IPv6 segment. If the segment is not found, the command tries to create it.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-subnet)`

**Synopsis**

(config)> **ipv6 subnet** *‹name›*

(config)> **no ipv6 subnet** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Subnet name or an alias. |

**Example**

```
(config)> ipv6 subnet Default
(config-subnet)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 subnet** command has been introduced. |

## 3.98.1 ipv6 subnet bind

**Description** Bind the subnet to an interface.

Command with **no** prefix cancels binding.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-subnet)> **bind** *‹bind›*

(config-subnet)> **no bind**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| bind | *Interface* | Full interface name or an alias. |

**Example**

```
(config-subnet)> bind WifiMaster0/AccessPoint1
Ip6::Subnets: Interface "WifiMaster0/AccessPoint1" bound to ►
subnet "Default".
```

```
(config-subnet)> no bind
Ip6::Subnets: Interface unbound from subnet "Default".
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 subnet bind** command has been introduced. |

## 3.98.2 ipv6 subnet dns-server

**Description**

Configure DNS server for subnets.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-subnet)> **dns-server** ( *‹address1›* [ *‹address2›* ] | **disable**)

(config-subnet)> **no dns-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address1 | *IPv6-address* | Address of primary name DNS server. |
| address2 | *IPv6-address* | Address of secondary name DNS server. |
| disable | *Keyword* | Disable DNS server. |

**Example**

```
(config-subnet)> dns-server 2606:4700:4700::1111
Network::Ip6::Subnets: Set name server 2606:4700:4700::1111 for ►
subnet "Default".
```

```
(config-subnet)> dns-server 2606:4700:4700::1111 ►
2606:4700:4700::1001
Network::Ip6::Subnets: Set name servers 2606:4700:4700::1111 ►
2606:4700:4700::1001 for subnet "Default".
```

```
(config-subnet)> dns-server disable
Network::Ip6::Subnets: Disable name servers  for subnet "Default".
```

```
(config-subnet)> no dns-server
Network::Ip6::Subnets: Cleared name servers for subnet "Default".
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **ipv6 subnet dns-server** command has been introduced. |

## 3.98.3 ipv6 subnet mode

**Description** Select the address configuration mode for hosts in the subnet. Exclusive options are **dhcp** and **slaac**. The former will enable a local DHCPv6 server for the purposes of address assignment, and the latter will enable SLAAC (Stateless Address Autoconfiguration).

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-subnet)> **mode** *‹mode›*

(config-subnet)> **no mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | slaac | Enable SLAAC (stateless autoconfiguration). |
| | dhcp | Enable DHCPv6 server (stateful autoconfiguration). |

**Example**

```
(config-subnet)> mode dhcp
Ip6::Subnets: Subnet "Default" enabled as DHCP.
```

```
(config-subnet)> no mode
Ip6::Subnets: Subnet "Default" disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 subnet mode** command has been introduced. |

## 3.98.4 ipv6 subnet number

**Description** Assign the subnet ID, which will determine the advertised prefix for the segment. Must be unique across subnets.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-subnet)> **number** *‹number›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *Integer* | Unique subnet ID. |

**Example**

```
(config-subnet)> number 2
Ip6::Subnets: Number 2 assigned to subnet "Default".
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ipv6 subnet number** command has been introduced. |

## 3.98.5 ipv6 subnet prefix delegate

**Description**

Set delegated prefix length.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-subnet)> **prefix delegate** *‹delegate›*

(config-subnet)> **no prefix delegate**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| delegate | *Integer* | The value must be less than prefix length. |

**Example**

```
(config-subnet)> prefix delegate 63
Network::Ip6::Subnets: Delegate length is /63 assigned to subnet ►
"Default".
```

```
(config-subnet)> no prefix delegate
Network::Ip6::Subnets: Prefix delegation disabled for subnet ►
"Default".
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **ipv6 subnet prefix delegate** command has been introduced. |

## 3.98.6 ipv6 subnet prefix length

**Description**

Set subnet prefix length. By default, /64 prefix length is set.

Command with **no** prefix resets to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config-subnet)> **prefix length** *‹length›*

(config-subnet)> **no prefix length**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `length` | *Integer* | Prefix length can take values in the range from /32 to /64. |

**Example**

```
(config-subnet)> prefix length 62
Network::Ip6::Subnets: Length is /62 assigned to subnet "Default".
```

```
(config-subnet)> no prefix length
Network::Ip6::Subnets: Length reset to defalut for subnet ►
"Default".
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **ipv6 subnet prefix length** command has been introduced. |

# 3.99 isolate-private

**Description** Prohibit data transfer between any interfaces with security level `private`. Enabled by default.

Command with **no** prefix cancels the command, allowing data transfer between `private` interfaces.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **isolate-private**

(config)> **no isolate-private**

**Example**

```
(config)> isolate-private
Netfilter::Manager: Private networks isolated.
```

```
(config)> no isolate-private
Netfilter::Manager: Private networks not isolated.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **isolate-private** command has been introduced. |

# 3.100 known host

**Description** Set known host.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **known host** *‹name› ‹mac›*

(config)> **no known host** [ *mac* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Arbitrary host name. |
| mac | *MAC address* | MAC address. |

**Example**

```
(config)> known host MY 00:0e:c6:a2:22:a1
Core::KnownHosts: New host "MY" has been created.
```

```
(config)> no known host 00:0e:c6:a2:22:a1
Core::KnownHosts: Host 00:0e:c6:a1:26:a8 has been removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **known host** command has been introduced. |

# 3.101 mdns

**Description** Access to a group of commands to manage *mDNS* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (config-mdns)

**Synopsis**

(config)> **mdns**

**Example**

```
(config)> mdns
Core::Configurator: Done.
(config-mdns)>
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **mdns** command has been introduced. |

## 3.101.1 mdns reflector disable

**Description**

Forcibly disable transparency mode between home network segments, irrespective of segment isolation (see the interface security-level command).

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mdns)> **reflector disable**

(config-mdns)> **no reflector disable**

**Example**

```
(config-mdns)>reflector disable
Mdns::Manager: Reflector disabled.
```

```
(config-mdns)>no reflector disable
Mdns::Manager: Reflector enabled.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **mdns reflector disable** command has been introduced. |

## 3.101.2 mdns reflector enforce

**Description**

Forcibly enable transparency mode between home network segments, irrespective of segment isolation (see the interface security-level command).

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mdns)> **reflector enforce**

(config-mdns)> **no reflector enforce**

**Example**

```
(config-mdns)>reflector enforce
Mdns::Manager: Reflector enforced.
```

```
(config-mdns)>no reflector enforce
Mdns::Manager: Reflector unenforced.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **mdns reflector enforce** command has been introduced. |

# 3.102 media initialize

**Description**

Reinitialize the media. Unmount related filesystems, sync the hardware cache, wipe the old partition table, create a new partition table with two partitions: swap and `ext4`/`ntfs`, and format the partition. The process starts in the background. Use **show media** command to monitor the current device status.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **media** ‹*name*› **initialize** ‹*preset*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *`String`* | Name of the media device. |
| `preset` | `default` | Specifies the file system to use for formatting.<br><br>The default preset for NVMe media is `ext4`, while for USB media it is `ntfs`. Supported presets can be checked in the `initialize-supported` array displayed by **show media** command.<br><br>An optional argument. `default` is used when the argument is not specified. |
| | `ntfs` | |
| | `ext4` | |

**Example**

```
(config)> media Media0 initialize default
Storage::External::Manager: Started "Media0" initialization.
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **media initialize** command has been introduced. |

# 3.103 media partition check

**Description**

Perform a full check of the filesystem. Unmount related filesystems, sync hardware cache, and check a partiton. The process starts in the background. Use **show media** command to monitor the current device status.

Whether a filesystem check for the partition is supported can be obtained from a `check-supported` key of the partition in **show media** output.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **media** ‹*name*› **partition** ‹*partition*› **check**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *String* | Name of the media device. |
| `partition` | *String* | Name of the partiton. |

**Example**

```
(config)> media Media0 partition Partition1 check
Storage::External::Manager: Started "Partition1" check on media ►
"Media0".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **media partition check** command has been introduced. |

# 3.104 media partition format

**Description**

Perform a partition formatting. Unmount related filesystems, sync hardware cache, and check a partiton. The process starts in the background. Use **show media** command to monitor the current device status.

Whether a filesystem format for the partition is supported can be obtained from a `format-supported` key of the partition in **show media** output.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **media** ‹*name*› **partition** ‹*partition*› **format** ‹*type*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the media device. |
| partition | *String* | Name of the partiton. |
| type | ext4 | A filesystem to use for formatting. |
| | ntfs | |
| | vfat | |
| | exfat | |
| | swap | |

**Example**

```
(config)> media Media0 partition Partition1 format swap
Storage::External::Manager: Started "Partition1" format on media ►
"Media0".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **media partition format** command has been introduced. |

# 3.105 media partition mount

**Description**

Mount the partition. Only a partition in the UNMOUNTED state can be mounted. Use **show media** command to monitor the current device status.

Command with **no** prefix unmounts the partition.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **media** ‹*name*› **partition** ‹*partition*› **mount**

(config)> **media** ‹*name*› **partition** ‹*partition*› **no mount**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the media device. |
| partition | *String* | Name of the partiton. |

**Example**

```
(config)> media Media0 partition Partition1 no mount
Core::FileSystem::Repository: ►
"11dcca2c-a8ce-43ff-e103-503d455d2062:" unmounted.
```

```
(config)> media Media0 partition Partition1 mount
Core::FileSystem::Repository: ►
"11dcca2c-a8ce-43ff-e103-503d455d2062:" mounted.
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **media partition mount** command has been introduced. |

# 3.106 mws acquire

**Description**

Attach new device to *MWS*.

Command with **no** prefix stops the acquisition.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **mws acquire** ‹*candidate*› [**eula-accept**] [**dpn-accept**] [**no-update**]

(config)> **no mws acquire** ‹*candidate*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| candidate | *String* | Device ID — MAC address or CID. |
| eula-accept | *Keyword* | Send **eula accept** command. |
| dpn-accept | *Keyword* | Send Device Privacy Notice accept. |
| no-update | *Keyword* | Acquisition without firmware update confirmation. |

**Example**

```
(config)> mws acquire ab1409a2-0f87-11e8-8f23-3d5f5921b253 ►
eula-accept
Mws::Controller: Candidate "ab1409a2-0f87-11e8-8f23-3d5f5921b253" ►
acquire started.
```

```
(config)> mws acquire 7207838e-af7d-11e6-8029-25463bd03811 ►
eula-accept dpn-accept no-update
Mws::Controller: Candidate "7207838e-af7d-11e6-8029-25463bd03811" ►
acquire started.
```

```
(config)> no mws acquire 60:31:97:3f:36:00
Mws::Controller: Candidate "60:31:97:3f:36:00" acquire stopped.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **mws acquire** command has been introduced. |

# 3.107 mws auto-ap-shutdown

**Description**

Enable automatic shutdown of the Wi-Fi System Extenders when communication with the Controller is inaccessible. By default, the setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **mws auto-ap-shutdown**

(config)> **no mws auto-ap-shutdown**

**Example**

```
(config)> mws auto-ap-shutdown
Mws::Controller: Automatic access points shutdown enabled.
```

```
(config)> no mws auto-ap-shutdown
Mws::Controller: Automatic access points shutdown disabled.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **mws auto-ap-shutdown** command has been introduced. |

# 3.108 mws backhaul shutdown

**Description**

Disable hidden wireless backhaul access points for *MWS* service. By default, the setting is enabled.

Command with **no** prefix enables hidden wireless backhaul access points.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **mws backhaul shutdown**

(config)> **no mws backhaul shutdown**

**Example**

```
(config)> mws backhaul shutdown
Mws::Controller: Backhaul disabled.
```

```
(config)> no mws backhaul shutdown
Mws::Controller: Backhaul enabled.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **mws backhaul shutdown** command has been introduced. |

# 3.109 mws log stp

**Description**

Enable STP logging for the interface. Allows you to track sent and received BPDU packets.

Command with **no** prefix disables logging for specified interface. If you use no argument, the entire list of STP logging will be removed.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

Yes

**Synopsis**

(config)> **mws log stp** *‹interface›*

(config)> **no mws log stp** [ *‹interface›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config)> mws log stp Bridge0
Network::Interface::Rtx::WifiController: Enabled STP logging for ►
"Bridge0".
```

```
(config)> no mws log stp Bridge0
Network::Interface::Rtx::WifiController: Disabled STP logging ►
for "Bridge0".
```

```
(config)> no mws log stp
Network::Interface::Rtx::WifiController: Disabled all STP logging.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **mws log stp** command has been introduced. |

# 3.110 mws member

**Description** Command with **no** prefix removes *MWS* member. If you use no argument, the entire list of members will be cleared.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **no mws member** [ *member* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws no member 2937a388-0d00-11e7-8029-7119319f930e
Mws::MemberList: Member 2937a388-0d00-11e7-8029-7119319f930e ►
pending factory reset.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **mws member** command has been introduced. |

# 3.111 mws member debug

**Description** Enable *MWS* member debug. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **mws member** ‹*member*› **debug**

(config)> **no mws member** ‹*member*› **debug**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws member 60:31:97:3c:11:12 debug
Mws::MemberList: Member "60:31:97:3c:11:12" ►
(7207838e-af7d-11e6-8011-25463bd03812) RCI debug enabled.
```

```
(config)> no mws member 60:31:97:3c:11:12 debug
Mws::MemberList: Member "60:31:97:3c:11:12" ►
(7207838e-af7d-11e6-8011-25463bd03812) RCI debug disabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **mws member debug** command has been introduced. |

# 3.112 mws member dpn-accept

**Description** Accept *DPN* for *MWS* member.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws member** ‹*member*› **dpn-accept**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws member 7207838e-af7d-11e6-8029-25463bd03828 ►
dpn-accept
Mws::Controller: Candidate "ab1409a2-0f87-11e8-8f23-3d5f5921b253" ►
acquire started.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **mws member dpn-accept** command has been introduced. |

# 3.113 mws member port access

**Description** Assign the LAN port of the Extender to the specified network segment.

By default, the LAN port is assigned to Home segment (Bridge0).

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **mws member** *‹member›* **port** *‹port›* **access** *‹interface›*

(config)> **mws member** *‹member›* **port** *‹port›* **no access** [ *‹interface›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |
| port | *Integer* | The LAN port number. |
| interface | *Interface* | Full name of the network segment (Bridge interface). |

**Example**

```
(config)> mws member cb7038f8-c49b-11ea-8f23-e123fd1a0e3e port ►
3 access Bridge2
Mws::Controller::Manager: "cb7038f8-c49b-11ea-8f23-e123fd1a0e3e": ►
port "3" has been attached to "Bridge2".
```

```
(config)> mws member 11:ff:22:43:5c:bf port 1 access Bridge2
Mws::Controller::Manager: "11:ff:22:43:5c:bf": port "1" has been ►
attached to "Bridge2".
```

```
(config)> mws member 11:ff:22:43:5c:bf port 1 no access Bridge2
Mws::Controller::Manager: "11:ff:22:43:5c:bf": port "1" has been ►
attached to "Bridge0".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **mws member port access** command has been introduced. |

# 3.114 mws member port disable

**Description**

Disable the LAN port of the Extender.

Command with **no** prefix enables the LAN port.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **mws member** *‹member›* **port** *‹port›* **disable**

(config)> **mws member** *‹member›* **port** *‹port›* **no disable**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |
| port | *Integer* | The LAN port number. |

**Example**

```
(config)> mws member 21:f3:20:43:5c:bf port 3 disable
Mws::Controller::Manager: "21:f3:20:43:5c:bf": port "3" has been ►
set to "down".
```

```
(config)> mws member 21:f3:20:43:5c:bf port 3 no disable
Mws::Controller::Manager: "21:f3:20:43:5c:bf": port "3" has been ►
set to "up".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **mws member port disable** command has been introduced. |

# 3.115 mws member reboot

**Description**

Reboot the *MWS* member. The process of rebooting extenders should be displayed in the **show mws member** command output.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **mws member** ‹*member*› **reboot** [ ‹*interval*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `member` | *String* | Device ID — MAC-address or CID. |
| `interval` | *Integer* | Timeout for reboot in seconds. Can take values in the range from `0` to `60` inclusively). If not specified, the reboot will be executed immediately. |

**Example**

```
(config)> mws member 7207838e-af7d-11e6-8029-25463bd03828 reboot ►
10
Mws::MemberList: Member "50:ff:21:1a:b1:f2" ►
(7207838e-af7d-11e6-8029-25463bd03828) pending reboot.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **mws member reboot** command has been introduced. |

# 3.116 mws member update channel

**Description**

Configure the update channel for the Extenders. By default, value `stable` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **mws member** *‹member›* **update channel** *‹channel›*

(config)> **no mws member** *‹member›* **update channel**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |
| channel | *String* | Update channel name. The list of channels is available in the command **components auto-update channel**. |

**Example**

```
(config)> mws member 8a33ff16-2c3c-11ef-9111-7bd989541127 update ►
channel preview
Mws::Controller::MemberList: "50:11:20:22:33:1b" update channel ►
is "preview".
```

```
(config)> no mws member 8a33ff16-2c3c-11ef-9396-7bd989541127 ►
update channel
Mws::Controller::MemberList: "50:ff:20:c5:97:1b" reset an update ►
channel to default.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **mws member update channel** command has been introduced. |

# 3.117 mws member update check

**Description** Check for an update for the *MWS* member.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws member** *‹member›* **update check**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws member 21:ff:22:32:18:af update check
Mws::Controller::Updater: "21:ff:22:32:18:af": checking for an ►
update.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **mws member update check** command has been introduced. |

# 3.118 mws member update start

**Description** Start the *MWS* member update.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws member** *‹member›* **update start**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws member 21:ff:22:32:18:af update start
Mws::Controller::Updater: "21:ff:22:32:18:af": pending update, ►
"(auto)" sandbox.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **mws member update start** command has been introduced. |

# 3.119 mws member update stop

**Description** Stop the *MWS* member update.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws member** *‹member›* **update stop**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `member` | *`String`* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws member 21:ff:22:32:18:af update stop
Mws::Controller::Updater: "21:ff:22:32:18:af": update stopped.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **mws member update stop** command has been introduced. |

# 3.120 mws reboot

**Description** Reboot the whole *MWS*.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws reboot**

**Example**

```
(config)> mws reboot
Mws::Controller: Pending reboot Modular Wi-Fi System in 10 ►
seconds.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **mws reboot** command has been introduced. |

# 3.121 mws revisit

**Description** Re-read status of potential *MWS* member.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **mws revisit** *‹candidate›*

(config)> **no mws revisit** *‹candidate›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| candidate | *String* | Device ID — MAC address or CID. |

**Example**

```
(config)> mws revisit 50:ff:20:08:71:62
Mws::Controller: Candidate "50:ff:20:08:71:62" revisit started.
```

```
(config)> mws no revisit 50:ff:20:08:71:62
Mws::Controller: Candidate "50:ff:20:08:71:62" revisit stopped.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **mws revisit** command has been introduced. |

# 3.122 mws stp encapsulation

**Description**

Enable STP (Spanning Tree Protocol) encapsulation support for *MWS*. By default, setting is disabled.

Note: This option allows you to hide STP traffic between the MWS Controller and Extenders from intermediate switches by adding an additional encapsulation header.

The command must be executed on the MWS Controller before associating any Extenders. It is recommended to connect the Extender directly to one of the MWS Controller's ports.

Before using the command, you must remove all previously associated Extenders.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **mws stp encapsulation**

(config)> **no mws stp encapsulation**

**Example**

```
(config)> mws stp encapsulation
Mws::Controller::Manager: Enabled STP encapsulation.
```

```
(config)> no mws stp encapsulation
Mws::Controller::Manager: Disabled STP encapsulation.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **mws stp encapsulation** command has been introduced. |

# 3.123 mws stp priority

**Description** Set the STP Bridge Priority. By default, the value 32768 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** No

**Multiple input** Yes

**Synopsis**

(config)> **mws stp priority** *‹priority›*

(config)> **no mws stp priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| priority | 0 | The STP Bridge Priority value. |
| | 4096 | |
| | 8192 | |
| | 12288 | |
| | 16384 | |
| | 20480 | |
| | 24576 | |
| | 28672 | |
| | 32768 | |
| | 36864 | |
| | 40960 | |
| | 45056 | |
| | 49152 | |
| | 53248 | |

**Example**

```
(config)> mws stp priority 4096
Mws::Controller::Manager: Applied STP priority 4096.
```

```
(config)> no mws stp priority
Mws::Controller::Manager: STP priority reset to default (32768).
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **mws stp priority** command has been introduced. |

# 3.124 mws update start

**Description**

Start the *MWS* update.

If there are updates for members, then the members are updated sequentially. Then, if there is an update for the controller, then the controller update is started. If there are no updates, then nothing happens.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **mws update start** [**controller** | **members**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| controller | *Keyword* | Update the controller, don't try to update members. If members update is running, the controller will be updated after them. |
| members | *Keyword* | Update a members, don't try to update the controller. |

**Example**

```
(config)> mws update start
Mws::Controller::Manager: Updating MWS.
```

```
(config)> mws update start controller
Mws::Controller::Manager: Updating controller.
```

```
(config)> mws update stop
Mws::Controller::Manager: Updating members.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **mws update start** command has been introduced. |

# 3.125 mws update stop

**Description**

Stop the *MWS* update.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(config)> **mws update stop**

**Example**

```
(config)> mws update stop
Mws::Controller::Manager: Update stopped.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **mws update stop** command has been introduced. |

# 3.126 mws wlan

**Description**

Access to a group of commands to configure wireless network.

Command with **no** prefix removes the specified wireless network. If you use no argument, the entire list of wireless networks will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

(config-mws-wlan)

**Synopsis**

(config)> **mws wlan** *‹id›*

(config)> **no mws wlan** [ *‹id›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | Wireless network identifier. |

**Example**

```
(config)> mws wlan wlan0
Mws::Wlan::Manager: Added the WLAN "wlan0".
(config-mws-wlan)>
```

```
(config)> no mws wlan wlan0
Mws::Wlan::Manager: Removed the WLAN "wlan0".
```

```
(config)> no mws wlan
Mws::Wlan::Manager: Removed all WLAN configurations.
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan** command has been introduced. |

# 3.126.1 mws wlan band

**Description**

Configure a set of bands for wireless network.

For each added band, WLAN will try to add one Wi-Fi access point that supports this band (if any). If a band is removed after being added, the corresponding Wi-Fi access points will be disabled but not completely deconfigured - they will retain their settings, including SSID, security settings and bridge group.

Command with **no** prefix removes the specified radio band. If you use no argument, the entire list of radio bands will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-mws-wlan)> **band** ( *‹band›* | **all**)

(config-mws-wlan)> **no band** [ *‹band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |
| | all | Use all available radio bands. |

**Example**

```
(config-mws-wlan)> band 0
Mws::Wlan::Manager: Band 0 is already set for WLAN "Home".
```

```
(config-mws-wlan)> band all
Mws::Wlan::Manager: Added all available bands supported by device ►
to WLAN "Home".
```

```
(config-mws-wlan)> no band 0
Mws::Wlan::Manager: Removed the band 0 from WLAN "Home".
```

```
(config-mws-wlan)> no band
Mws::Wlan::Manager: Removed all bands from WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan band** command has been introduced. |

## 3.126.2 mws wlan band-steering enable

**Description**

Enable *Band Steering* for wireless network. This setting is automatically synchronized between all instances of the wireless networks attached to the same bridge interface. By default, the setting is enabled.

Command with **no** prefix disables the *Band Steering*.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **band-steering enable**

(config-mws-wlan)> **no band-steering enable**

**Example**

```
(config-mws-wlan)> band-steering enable
Mws::Wlan::Manager: Enabled band-steering for WLAN "Home".
```

```
(config-mws-wlan)> no band-steering enable
Mws::Wlan::Manager: Disabled band-steering for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan band-steering enable** command has been introduced. |

## 3.126.3 mws wlan bind

**Description**

Bind the wireless network to the specified bridge interface. If it is removed, the previously configured wireless network will be completely disassembled. If it is changed, the previously configured wireless network will be completely disassembled and then re-assembled using the new bridge interface.

Command with **no** prefix removes the wireless network binding.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **bind** ‹*interface*›

(config-mws-wlan)> **no bind**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Bridge interface with `private` or `protected` security level. Multiple wireless network |

| Argument | Value | Description |
|---|---|---|
| | | instances can be bound to the same bridge interface, provided that these instances use disjoint sets of bands. |

**Example**

```
(config-mws-wlan)> bind Home
Mws::Wlan::Manager: Set the binding for WLAN "Home" to interface ►
"Home".
```

```
(config-mws-wlan)> no bind
Mws::Wlan::Manager: Removed the binding for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan bind** command has been introduced. |

## 3.126.4 mws wlan description

**Description**

Set the description for wireless network.

Command with **no** prefix deletes the description.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **description** *‹description›*

(config-mws-wlan)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| description | *String* | Arbitrary description. |

**Example**

```
(config-mws-wlan)> description Test
Mws::Wlan::Manager: Set the description for WLAN "Home" to "Test".
```

```
(config-mws-wlan)> no description
Mws::Wlan::Manager: Removed the description for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan description** command has been introduced. |

## 3.126.5 mws wlan enable

**Description** Enable the wireless network. When turned on or off, the administrative states of the Wi-Fi access points included in the WLAN are changed. The bridge interface state does not change.

Command with **no** prefix disables the wireless network.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **enable**

(config-mws-wlan)> **no enable**

**Example**

```
(config-mws-wlan)> enable
Mws::Wlan::Manager: Enabled WLAN "Home".
```

```
(config-mws-wlan)> no enable
Mws::Wlan::Manager: Disabled WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan enable** command has been introduced. |

## 3.126.6 mws wlan encryption

**Description** Set the encryption for wireless network.

Command with **no** prefix removes the encryption.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **encryption** *‹encryption›*

(config-mws-wlan)> **no encryption**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| encryption | none | Encryption method. |
| | wep | |
| | wpa | |
| | wpa+wpa2 | |

| Argument | Value | Description |
|---|---|---|
| | wpa2 | |
| | wpa2+3 | |
| | wpa3 | |
| | wpa3-suite-b | |
| | owe | |

**Example**

```
(config-mws-wlan)> encryption wpa2+3
Mws::Wlan::Manager: Set the encryption for WLAN "Home" to ►
"wpa2+3".
```

```
(config-mws-wlan)> no encryption
Mws::Wlan::Manager: Removed the encryption for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan encryption** command has been introduced. |

## 3.126.7 mws wlan ft auto-setup

**Description** Automatically configure *FT* for the specified wireless network.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ft auto-setup**

**Example**

```
(config-mws-wlan)> ft auto-setup
Mws::Wlan::Manager: Completed the auto setup of FT parameters ►
for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ft auto-setup** command has been introduced. |

## 3.126.8 mws wlan ft enable

**Description** Enable support of *FT* for wireless network.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ft enable**

(config-mws-wlan)> **no ft enable**

**Example**

```
(config-mws-wlan)> ft enable
Mws::Wlan::Manager: Enabled FT for WLAN "Home".
```

```
(config-mws-wlan)> no ft enable
Mws::Wlan::Manager: Disabled FT for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ft enable** command has been introduced. |

## 3.126.9 mws wlan ft iapp key

**Description** Set the *IAPP* key. This setting is automatically synchronized between all instances of the wireless networks attached to the same bridge interface.

Command with **no** prefix removes the key.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **iapp key** *‹key›*

(config-mws-wlan)> **no iapp key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | *String* | The value of *IAPP* key. Maximum key length is 64 characters. |

**Example**

```
(config-mws-wlan)> ft iapp key 11223344556677
Mws::Wlan::Manager: Set the FT IAPP key for WLAN "Home".
```

```
(config-mws-wlan)> no ft iapp key
Mws::Wlan::Manager: Removed the FT IAPP key for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ft iapp key** command has been introduced. |

## 3.126.10 mws wlan ft mdid

**Description** Set Mobility Domain ID for *FT*.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ft mdid** *‹mdid›*

(config-mws-wlan)> **no ft mdid**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mdid | *String* | The value of Mobility Domain ID. Consists of 2 ASCII symbols. |

**Example**

```
(config-mws-wlan)> ft mdid 1D
Mws::Wlan::Manager: Set the FT MDID for WLAN "Home" to "1D".
```

```
(config-mws-wlan)> no ft mdid
Mws::Wlan::Manager: Removed the FT MDID for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ft mdid** command has been introduced. |

## 3.126.11 mws wlan ft skip-band

**Description** Configure a set of bands that should be ignored by *FT*.

Command with **no** prefix removes the specified band from the setting. If you use no argument, the entire list of bands will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-mws-wlan)> **ft skip-band** *‹skip-band›*

(config-mws-wlan)> **no ft skip-band** [ *‹skip-band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| skip-band | 0 | 2,4 GHz band. |

| Argument | Value | Description |
|---|---|---|
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |

**Example**

```
(config-mws-wlan)> ft skip-band 0
Mws::Wlan::Manager: Added the band 0 to FT skip list for WLAN ►
"Home".
```

```
(config-mws-wlan)> no ft skip-band 0
Mws::Wlan::Manager: Removed the band 0 from FT skip list for ►
WLAN "Home".
```

```
(config-mws-wlan)> no ft skip-band
Mws::Wlan::Manager: Removed all bands from FT skip list for WLAN ►
"Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ft skip-band** command has been introduced. |

## 3.126.12 mws wlan mlo enable

**Description**

Enable Multi-Link Operation.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **mlo enable**

(config-mws-wlan)> **no mlo enable**

**Example**

```
(config-mws-wlan)> mlo enable
Mws::Wlan::Manager: Enabled MLO for WLAN "Home".
```

```
(config-mws-wlan)> no mlo enable
Mws::Wlan::Manager: Disabled MLO for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan mlo enable** command has been introduced. |

## 3.126.13 mws wlan mlo skip-band

**Description** Configure the bands that should be ignored by Multi-Link Operation.

Command with **no** prefix removes the specified band from the setting. If you use no argument, the entire list of bands will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **mlo skip-band** *‹skip-band›*

(config-mws-wlan)> **no mlo skip-band** [ *‹skip-band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| skip-band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |

**Example**

```
(config-mws-wlan)> mlo skip-band 0
Mws::Wlan::Manager: Added the band 0 to MLO skip list for WLAN ►
"Home".
```

```
(config-mws-wlan)> no mlo skip-band 0
Mws::Wlan::Manager: Removed the band 0 from MLO skip list for ►
WLAN "Home".
```

```
(config-mws-wlan)> no mlo skip-band
Mws::Wlan::Manager: Removed all bands from MLO skip list for ►
WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan mlo skip-band** command has been introduced. |

## 3.126.14 mws wlan peer-isolation

**Description** Enable peer isolation for the wireless network. This setting is automatically synchronized between all instances of the wireless networks bound to the same bridge interface.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **peer-isolation**

(config-mws-wlan)> **no peer-isolation**

**Example**

```
(config-mws-wlan)> peer-isolation
Mws::Wlan::Manager: Enabled peer isolation for WLAN "Home".
```

```
(config-mws-wlan)> no peer-isolation
Mws::Wlan::Manager: Disabled peer isolation for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan peer-isolation** command has been introduced. |

## 3.126.15 mws wlan rrm enable

**Description** Enable *RRM* and BSS Transition Management.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **rrm enable**

(config-mws-wlan)> **no rrm enable**

**Example**

```
(config-mws-wlan)> rrm enable
Mws::Wlan::Manager: Enabled RRM for WLAN "Home".
```

```
(config-mws-wlan)> no rrm enable
Mws::Wlan::Manager: Disabled RRM for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan rrm enable** command has been introduced. |

## 3.126.16 mws wlan rrm skip-band

**Description** Configure a set of bands that should be ignored by *RRM* and BSS Transition Management.

Command with **no** prefix removes the specified band from the setting. If you use no argument, the entire list of bands will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **rrm skip-band** *‹skip-band›*

(config-mws-wlan)> **no rrm skip-band** [ *‹skip-band›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| skip-band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |

**Example**

```
(config-mws-wlan)> rrm skip-band 0
Mws::Wlan::Manager: Added the band 0 to RRM skip list for WLAN ►
"Home".
```

```
(config-mws-wlan)> no rrm skip-band 0
Mws::Wlan::Manager: Removed the band 0 from RRM skip list for ►
WLAN "Home".
```

```
(config-mws-wlan)> no rrm skip-band
Mws::Wlan::Manager: Removed all bands from RRM skip list for ►
WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan rrm skip-band** command has been introduced. |

## 3.126.17 mws wlan schedule

**Description** Assign a schedule to the wireless network.

Command with **no** prefix removes the schedule assigned.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **schedule** *‹schedule›*

(config-mws-wlan)> **no schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-mws-wlan)> schedule test
Mws::Wlan::Manager: Set the schedule for WLAN "Home" to "test".
```

```
(config-mws-wlan)> no schedule
Mws::Wlan::Manager: Removed the schedule for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan schedule** command has been introduced. |

## 3.126.18 mws wlan ssid auto

**Description** Automatically generate the *SSID* for the wireless network.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ssid auto** *‹template› ‹prefix›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| template | mac4 | Template name — the last 4 or 6 digits of the MAC address to be added to the prefix. |
| | mac6 | |
| prefix | *String* | Custom string at the user's choice. |

**Example**

```
(config-mws-wlan)> ssid auto mac4 test123
Mws::Wlan::Manager: Set the SSID name for WLAN "wlan2" to ►
"test1233DF5".
```

```
(config-mws-wlan)> ssid auto mac6 test12345
Mws::Wlan::Manager: Set the SSID name for WLAN "wlan2" to ►
"test12345003DF5".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ssid auto** command has been introduced. |

## 3.126.19 mws wlan ssid hide

**Description** Hide the *SSID* of the wireless network.

Command with **no** prefix enables the *SSID* visibility.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ssid hide**

(config-mws-wlan)> **no ssid hide**

**Example**

```
(config-mws-wlan)> ssid hide
Mws::Wlan::Manager: Hides the SSID for WLAN "Home".
```

```
(config-mws-wlan)> no ssid hide
Mws::Wlan::Manager: Shows the SSID for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ssid hide** command has been introduced. |

## 3.126.20 mws wlan ssid name

**Description** Configure the *SSID* for the wireless network. This setting is required for WLAN operation. If the *SSID* is removed, the previously configured WLAN is completely disassembled.

Command with **no** prefix removes the *SSID* name.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **ssid name** *‹name›*

(config-mws-wlan)> **no ssid name**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Wireless Network Name (SSID). Must be unique among all WLANs. |

**Example**

```
(config-mws-wlan)> ssid name TEST
Mws::Wlan::Manager: Set the SSID name for WLAN "Home" to "TEST".
```

```
(config-mws-wlan)> no ssid name
Mws::Wlan::Manager: Removed the SSID name for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan ssid name** command has been introduced. |

## 3.126.21 mws wlan wep key

**Description**

Configure a set of *WEP* encryption keys.

Command with **no** prefix removes the specified key. If you use no argument, the entire list of keys will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-mws-wlan)> **wep key** ‹*key-id*› ( ‹*key*› **default** | **default** | ‹*key*› )

(config-mws-wlan)> **no wep key** [ ‹*key-id*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key-id | *Integer* | The key number. Overall, up to 4 keys could be specified. |
| key | *String* | The key value. |
| default | *Keyword* | Indicates that this key will be used by default. |

**Example**

```
(config-mws-wlan)> wep key 4 12345
Mws::Wlan::Manager: Set the WEP key "4" for WLAN "Home".
```

```
(config-mws-wlan)> wep key 4 default
Mws::Wlan::Manager: Set WEP key "4" as the default for WLAN ►
"Home".
```

```
(config-mws-wlan)> no wep key 1
Mws::Wlan::Manager: Removed the WEP key "1" for WLAN "Home".
```

```
(config-mws-wlan)> no wep key
Mws::Wlan::Manager: Removed the WEP keys for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wep key** command has been introduced. |

## 3.126.22 mws wlan wpa eap authentication

**Description**

Configure the EAP authentication method for *WPA Enterprise*.

Command with **no** prefix removes authentication.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-mws-wlan)> **wpa eap authentication** ‹*authentication*›

(config-mws-wlan)> **no wpa eap authentication**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| authentication | md5 | Authentication method. |
| | ttls | |
| | peap | |

**Example**

```
(config-mws-wlan)> wpa eap authentication md5
Mws::Wlan::Manager: Set the WPA-EAP authentication for WLAN ►
"Home" to "md5".
```

```
(config-mws-wlan)> no wpa eap authentication
Mws::Wlan::Manager: Removed the WPA-EAP authentication for WLAN ►
"Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa eap authentication** command has been introduced. |

## 3.126.23 mws wlan wpa eap radius secret

**Description**

Configure the *RADIUS* secret for *WPA Enterprise* authentication. This setting is automatically synchronized between all instances of the wireless networks bound to the same bridge interface.

Command with **no** prefix deletes the shared secret.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **wpa eap radius secret** ‹*secret*›

(config-mws-wlan)> **no wpa eap radius secret**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| secret | *String* | The value of *RADIUS* shared secret. Maximum key length is 64 characters. |

**Example**

```
(config-mws-wlan)> wpa eap radius secret 249759296abcdf-=\
Mws::Wlan::Manager: Set the WPA-EAP RADIUS secret for WLAN "Home".
```

```
(config-mws-wlan)> no wpa eap radius secret
Mws::Wlan::Manager: Removed the WPA-EAP RADIUS secret for WLAN ►
"Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa eap radius secret** command has been introduced. |

## 3.126.24 mws wlan wpa eap radius server

**Description**

Configure the *RADIUS* server for *WPA Enterprise* authentication. This setting is automatically synchronized between all instances of the wireless networks bound to the same bridge interface.

Command with **no** prefix deletes the address.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **wpa eap radius server** ‹*address*› [**:port**]

(config-mws-wlan)> **no wpa eap radius server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | *RADIUS* server IP address. |
| port | *Integer* | *RADIUS* server port. |

**Example**

```
(config-mws-wlan)> wpa eap radius server 192.168.1.10
Mws::Wlan::Manager: Set the WPA-EAP RADIUS server for WLAN "Home" ►
to "192.168.1.10".
```

```
(config-mws-wlan)> wpa eap radius server 192.168.1.10:1111
Mws::Wlan::Manager: Set the WPA-EAP RADIUS server for WLAN "Home" ►
to "192.168.1.10:1111".
```

```
(config-mws-wlan)> no wpa eap radius server
Mws::Wlan::Manager: Removed the WPA-EAP RADIUS server for WLAN ►
"Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa eap radius server** command has been introduced. |

## 3.126.25 mws wlan wpa gcmp256

**Description** Enable GCMP256 encryption.

Command with **no** prefix disables encryption.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **wpa gcmp256**

(config-mws-wlan)> **no wpa gcmp256**

**Example**

```
(config-mws-wlan)> wpa gcmp256
Mws::Wlan::Manager: Enabled GCMP256 encryption for WLAN "Home".
```

```
(config-mws-wlan)> no wpa gcmp256
Mws::Wlan::Manager: Disabled GCMP256 encryption for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa gcmp256** command has been introduced. |

## 3.126.26 mws wlan wpa psk

**Description** Configure the pre-shared key for *WPA* encryption.

Command with **no** prefix removes the pre-shared key.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **wpa psk** *‹psk›*

(config-mws-wlan)> **no wpa psk**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| psk | *String* | Pre-shared key in the form of a 256-bit hexadecimal number, which consists of 64 hexadecimal digits, or in the form of ASCII string of 8 to 63 characters length. |

**Example**

```
(config-mws-wlan)> wpa psk Ebnhaich91
Mws::Wlan::Manager: Set the WPA PSK for WLAN "Home".
```

```
(config-mws-wlan)> no wpa psk
Mws::Wlan::Manager: Removed the WPA PSK for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa psk** command has been introduced. |

## 3.126.27 mws wlan wpa sae ext-key enable

**Description**

Enable the WPA3-SAE extended key encryption.

Command with **no** prefix disables encryption.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-mws-wlan)> **wpa sae ext-key enable**

(config-mws-wlan)> **no wpa sae ext-key enable**

**Example**

```
(config-mws-wlan)> wpa sae ext-key enable
Mws::Wlan::Manager: Enabled WPA3-SAE extended key encryption for ►
WLAN "Home".
```

```
(config-mws-wlan)> no wpa sae ext-key enable
Mws::Wlan::Manager: Disabled WPA3-SAE extended key encryption ►
for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wpa sae ext-key enable** command has been introduced. |

## 3.126.28 mws wlan wps button

**Description** Start *WPS* on the specified band in sending mode to connect a new Wi-Fi client using the software *WPS* button.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **wps button** ‹*band*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |

**Example**

```
(config-mws-wlan)> wps button 0
Network::Interface::Mtk::Wps: "WifiMaster0/AccessPoint2": WPS ►
PBC session started.
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wps button** command has been introduced. |

## 3.126.29 mws wlan wps enable

**Description** Enable *WPS* for the specified wireless network.

Command with **no** prefix disables *WPS*.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **wps enable**

(config-mws-wlan)> **no wps enable**

**Example**

```
(config-mws-wlan)> wps enable
Mws::Wlan::Manager: Enabled WPS for WLAN "Home".
```

```
(config-mws-wlan)> no wps enable
Mws::Wlan::Manager: Disabled WPS for WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wps enable** command has been introduced. |

## 3.126.30 mws wlan wps reset

**Description** Reset all active *WPS* sessions on the specified band.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-mws-wlan)> **wps reset** *‹band›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| band | 0 | 2,4 GHz band. |
| | 1 | 5 GHz band. |
| | 2 | 6 GHz band. |

**Example**

```
(config-mws-wlan)> wps reset 0
Mws::Wlan::Manager: Reset the WPS for band 0 of WLAN "Home".
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **mws wlan wps reset** command has been introduced. |

# 3.127 mws zone

**Description** Limit the connection area of the client device within the specified *MWS* members.

Command with **no** prefix removes the specified setting. If you use no arguments, the entire list of restrictions will be removed.

**Prefix no** Yes

**Change settings** No

**Multiple input** Yes

**Synopsis**

(config)> **mws zone** *‹mac› ‹cid›*

(config)> **no mws zone** [ *‹mac› ‹cid›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of client device. It must be listed as a known host. |
| cid | *CID* | Identifier of *MWS* member. |

**Example**

```
(config)> mws zone 11:22:33:ec:58:e2 ►
12298f60-d886-11e7-9396-176971eeb8d6
Mws::Controller: Added zone 11:22:33:ec:58:e2 ►
12298f60-d886-11e7-9396-176971eeb8d6.
```

```
(config)> no mws zone 11:22:33:ec:58:e2 ►
12298f60-d886-11e7-9396-176971eeb8d6
Mws::Controller: Deleted zone 11:22:33:ec:58:e2 ►
12298f60-d886-11e7-9396-176971eeb8d6.
```

```
(config)> no mws zone
Mws::Controller: Cleared all zones.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **mws zone** command has been introduced. |

# 3.128 nextdns

**Description** Access to a group of commands to configure *NextDNS* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (nextdns)

**Synopsis**

(config)> **nextdns**

**Example**

```
(config)> nextdns
Core::Configurator: Done.
(nextdns)>
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **netxdns** command has been introduced. |

## 3.128.1 nextdns assign

**Description** Assign profile of protection to the host. By default `System` profile is used for all hosts and local network segments.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(nextdns)> **assign** *‹host› ‹token›* | **interface** *‹iface› ‹token›*

(nextdns)> **no assign** [*‹host›* | **interface** *‹iface›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *`MAC address`* | MAC address to assign. |
| `token` | *`Integer`* | Authentication token (ID). |
| `iface` | *`Interface`* | Full interface name or an alias. |

**Example**

```
(nextdns)> assign 11:24:c4:54:bc:59 1f2a36
NextDns::Client: Reassociated host "11:24:c4:54:bc:59" with ►
profile "1f2a36".
```

```
(nextdns)> assign interface Home 1f2a36
NextDns::Client: Associated interface "Home" with profile ►
"1f2a36".
```

```
(nextdns)> no assign 11:24:c4:54:bc:59
NextDns::Client: Removed profile for host "11:24:c4:54:bc:59".
```

```
(nextdns)> no assign Bridge0
NextDns::Client: Removed profile for interface "Bridge0".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **nextdns assign** command has been introduced. |

## 3.128.2 nextdns authenticate

**Description** Specify login for *NextDNS* account.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nextdns)> **authenticate** ‹*login*› ‹*password*› [ ‹*pin*› ]

(nextdns)> **no authenticate**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| login | *String* | Login to *NextDNS* account. |
| password | *String* | Password to *NextDNS* account. |
| pin | *String* | Pin to *NextDNS* account. |

**Example**

```
(nextdns)> authenticate account@gmail.com 123456789 1234
NextDns::Client: Authenticated successfully.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **nextdns authenticate** command has been introduced. |

## 3.128.3 nextdns authtoken

**Description**

Specify authentication token for *NextDNS* account.

Command with **no** prefix removes the token.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nextdns)> **authtoken** ‹*authtoken*›

(nextdns)> **no authtoken**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| authtoken | *String* | Authentication token (ID) for *NextDNS* account. |

**Example**

```
(nextdns)> authtoken 1f2a36
NextDns::Client: Set authentication token.
```

```
(nextdns)> no authtoken
NextDns::Client: Cleared authentication token.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **nextdns authtoken** command has been introduced. |

## 3.128.4 nextdns check-availability

**Description** Check availability of *NextDNS* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nextdns)> **check-availability**

**Example**

```
(nextdns)> check-availability
NextDns::Client: NextDNS DNS-over-HTTPS is available.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **nextdns check-availability** command has been introduced. |

# 3.129 ndns

**Description** Access to a group of commands to manage keenetic service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(ndns)`

**Synopsis**

(config)> **ndns**

**Example**

```
(config)> ndns
Core::Configurator: Done.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ndns** command has been introduced. |

## 3.129.1 ndns book-name

**Description** Reserve Public DNS device hostname allocation.

For hostname transmission to another Keenetic device `transfer-code` parameter is used.

To transfer hostname it is necessary:

1. Execute command with `transfer-code` on the transmitting side.

2. Execute the same command with the same parameters on the receiving side.

Lifetime of `transfer-code` is 1 week.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(ndns)> **book-name** *‹name›* *‹domain›* [ *‹access›* [ **ipv6** *‹access6›* ] | *‹transfer-code›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *`String`* | The hostname for allocation. |
| `domain` | *`String`* | Second-level domain. |
| `access` | `auto` | Automatic access type. |
| | `cloud` | Hostname is registered on the cloud server IP address, HTTP traffic is tunneled to the Hero. |
| | `direct` | Hostname is registered on the Hero WAN-address. |
| `access6` | `cloud` | Enable cloud mode for IPv6 address. |
| `transfer-code` | *`Hex`* | Code for domain transmission to another Keenetic device. The length is 32 symbols. |

**Example**

```
(ndns)> book-name test keenetic.pro

             done, layout = view, title = NDSS::ndns/bookName ►
(Public DNS Hostname Booking):
               client, geo = *, ip = 203.0.113.200, format = ►
clean, date = 2025-06-04T09:59:12.072Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
IP4, default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
IPv6, default = unknown:
                    field, name = transfer, title = Transfer:
```

```
                name: test
              domain: keenetic.pro
                acme: LE
             updated: 2025-06-04T09:59:12.059Z
             address: 0.0.0.0
              access: cloud
            address6: ::
             access6: cloud
            transfer: false

Ndns::Client: Booked "test.keenetic.pro".
```

```
(ndns)> book-name test keenetic.pro ►
121d567f901a345b289c121b567c903c

            done, layout = view, title = NDSS::ndns/bookName ►
(Public DNS Hostname Booking), sub-title =
The name booking was successful.: client, geo = *, ip = ►
203.0.113.137, format =
clean, date = 2018-12-13T09:04:41.939Z, standalone = false:

              fields:
                   field, name = name, title = Public Name:
                   field, name = domain, title = Domain Name:
                 field, name = updated, title = Updated, type ►
= date, variant = date:
                   field, name = address, title = IP Address:
                   field, name = access, title = Access Mode ►
IP4, default = unknown:
                 field, name = address6, title = IPv6 Address:
                  field, name = access6, title = Access Mode ►
IPv6, default = unknown:
                   field, name = transfer, title = Transfer:

                name: test
              domain: keenetic.pro
                acme: LE
             updated: 2018-12-13T08:47:11.014Z
             address: 0.0.0.0
              access: cloud
             access6: none
            transfer: true

Ndns::Client: Booked "test.keenetic.pro".
```

```
(ndns)> book-name test keenetic.pro cloud ipv6 cloud

            done, layout = view, title = NDSS::ndns/bookName ►
(Public DNS Hostname Booking), sub-title = The name booking was ►
successful.:
              client, geo = *, ip = 203.0.113.200, format = ►
clean, date = 2019-05-23T09:12:29.145Z, standalone = false:

              fields:
```

```
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
IP4, default = unknown:
                  field, name = address6, title = IPv6 Address:
                   field, name = access6, title = Access Mode ►
IPv6, default = unknown:
                    field, name = transfer, title = Transfer:

                 name: test
               domain: keenetic.pro
                 acme: LE
              updated: 2019-05-23T09:12:16.197Z
              address: 0.0.0.0
               access: cloud
             address6: ::
              access6: cloud
             transfer: false

Ndns::Client: Booked "test.keenetic.pro".
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ndns book-name** command has been introduced. |
| 2.14 | Parameter `ipv6` was added. |

## 3.129.2 ndns check-name

**Description** Check the availability of hostname for allocation.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(ndns)> **check-name** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The hostname for allocation. |

**Example**

```
(ndns)> check-name testname

            list:
                item:
                  domain: keenetic.link
```

```
                    name: testname
                available: yes
                     acme: yes

                 item:
                   domain: keenetic.pro
                     name: testname
                available: no
                     acme: yes

Ndns::Client: Check completed.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ndns check-name** command has been introduced. |

## 3.129.3 ndns drop-name

**Description** Drop Public DNS device hostname allocation.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(ndns)> **drop-name** *‹name› ‹domain›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The hostname for dropping. |
| domain | *String* | Second-level domain. |

**Example**

```
(ndns)> drop-name test keenetic.pro

            done, title = The name is un-booked., x-xml-debug ►
= message-basic, hl = true, code = 200, icon = tick, layout = ►
message, delay = false, x-ui-debug = UiBasic-object, rootName = ►
done:
               client, geo = *, ip = 203.0.113.200, format = ►
clean, date = 2025-06-04T10:04:36.236Z, standalone = false:
               reason: Success
              message, debug = x-string, class = code ►
style--block: The name is un-booked.

               detail, layout = list:
                  columns:
                       column, id = type, title = Type:
                       column, id = peer, title = Peer:
                       column, id = detail, title = Detail:
```

```
                        column, id = elapsed, title = Time, ►
variant = period, scale = 1:

Ndns::Client: Dropped "test keenetic.pro".
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ndns drop-name** command has been introduced. |

## 3.129.4 ndns get-booked

**Description** Get actual info from the server about current booked Public DNS hostname.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(ndns)> **get-booked**

**Example**

```
(ndns)> get-booked

             done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
               client, geo = *, ip = 203.0.113.200, format = ►
clean, date = 2025-06-10T11:35:27.933Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(ip4), default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
(ipv6), default = unknown:
                    field, name = transfer, title = Transfer:

                 name: test
               domain: keenetic.pro
                 acme: LE
              address: 0.0.0.0
               access: cloud
             address6: ::
              access6: cloud
              updated: 2025-06-10T07:19:49.113Z
             transfer: false
```

```
Ndns::Client: Got a booked name description.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **ndns get-booked** command has been introduced. |

## 3.129.5 ndns get-update

**Description** Update Public DNS device hostname allocation on the server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(ndns)> **get-update** [ ‹*access*› [ **ipv6** ‹*access6*› ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| access | auto | Automatic selection of the IPv4 access mode. The router decides whether to use cloud access or direct access for IPv4, based on the presence of a public IPv4 address and NAT type. |
| | cloud | Enable cloud mode for IPv4. The KeenDNS domain name works via the KeenDNS cloud server, HTTP traffic is tunneled through the cloud proxy even if the router has a public IPv4 address. |
| | direct | Enable direct access for IPv4. The KeenDNS domain name is bound to your public IPv4 address, and traffic goes directly, without the cloud proxy. This command allows to enable support for the *Static NAT (NAT 1-1)* on the server side in the keenetic account parameters. |
| access6 | auto | Automatic selection of the IPv6 access mode. The router decides whether to use cloud access for IPv6, based on the presence of a public IPv6 address and the provider. |
| | cloud | Enable cloud mode for IPv6. The KeenDNS domain name will also work via the KeenDNS cloud server for IPv6 addresses. The cloud provides an IPv6 web proxy and forwards requests to the router. |
| | direct | Enable direct access for IPv6. The KeenDNS domain name is bound to your public IPv6 |

| Argument | Value | Description |
|---|---|---|
| | | address, and traffic goes directly, without the cloud proxy. |

**Example**

```
(ndns)> get-update auto

             done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
               client, geo = *, ip = 198.51.100.200, format = ►
clean, date = 2025-06-04T10:13:22.594Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(ip4), default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
(ipv6), default = unknown:
                    field, name = transfer, title = Transfer:

                 name: test
               domain: keenetic.pro
                 acme: LE
              address: 0.0.0.0
               access: cloud
              access6: none
              updated: 2025-06-04T10:08:29.866Z
             transfer: false

Ndns::Client: Updated a booked name.
```

```
(ndns)> get-update direct

             done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
               client, geo = *, ip = 198.51.100.200, format = ►
clean, date = 2025-06-04T10:16:04.151Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(ip4), default = unknown:
```

```
                  field, name = address6, title = IPv6 Address:
                   field, name = access6, title = Access Mode ►
(ipv6), default = unknown:
                    field, name = transfer, title = Transfer:

                name: test
              domain: keenetic.pro
                acme: LE
             address: 198.51.100.200
              access: direct
             access6: none
             updated: 2025-06-04T10:16:04.149Z
            transfer: false

Ndns::Client: Updated a booked name.
```

```
(ndns)> get-update auto ipv6 auto

            done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
              client, geo = RU, ip = 203.0.113.187, format = ►
clean, date = 2026-09-15T12:31:11.643Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(IP4), default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
(IPv6), default = unknown:
                    field, name = transfer, title = Transfer:

                name: test
              domain: keenetic.pro
                acme: LE
             address: 0.0.0.0
              access: cloud
             access6: none
             updated: 2026-09-15T12:26:37.811Z
            transfer: false

Ndns::Client: Updated a booked name.
```

```
(ndns)> get-update direct ipv6 direct

            done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
             client, geo = CH, ip = 198.51.100.200, format = ►
```

```
clean, date = 2026-09-15T13:35:25.747Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(IP4), default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
(IPv6), default = unknown:
                    field, name = transfer, title = Transfer:

                 name: test
               domain: keenetic.pro
                 acme: LE
              address: 198.51.100.200
               access: direct
             address6: fd30:911f:788:0:52ff:20ff:fe00:1e82
              access6: direct
              updated: 2026-09-15T13:34:15.975Z
             transfer: false

Ndns::Client: Updated a booked name.
```

```
(ndns)> get-update cloud ipv6 cloud

             done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
               client, geo = *, ip = 198.51.100.200, format = ►
clean, date = 2025-06-04T10:15:08.638Z, standalone = false:

               fields:
                    field, name = name, title = Public Name:
                    field, name = domain, title = Domain Name:
                  field, name = updated, title = Updated, type ►
= date, variant = date:
                    field, name = address, title = IP Address:
                    field, name = access, title = Access Mode ►
(ip4), default = unknown:
                   field, name = address6, title = IPv6 Address:
                    field, name = access6, title = Access Mode ►
(ipv6), default = unknown:
                    field, name = transfer, title = Transfer:

                 name: test
               domain: keenetic.pro
                 acme: LE
              address: 0.0.0.0
               access: cloud
             address6: ::
```

```
              access6: cloud
              updated: 2025-06-04T10:15:08.633Z
             transfer: false

Ndns::Client: Updated a booked name.
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **ndns get-update** command has been introduced. |
| 2.14 | Parameter `ipv6` was added. |
| 5.00 | The **auto** and **direct** arguments were added for `ipv6`. |

# 3.130 ntce

**Description** Access to a group of commands to configure the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-ntce)`

**Synopsis**

(config)> **ntce**

**Example**

```
(config)> ntce
(config-ntce)>
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **ntce** command has been introduced. |

## 3.130.1 ntce debug

**Description** Enable debug for the *NTCE* service. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **debug**

(config-ntce)> **no debug**

**Example**

```
(config-ntce)> debug
Ntce::Manager: Enabled debug.
```

```
(config-ntce)> no debug
Ntce::Manager: Disabled debug.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **ntce debug** command has been introduced. |

## 3.130.2 ntce filter assign host

**Description**

Assign *NTCE* filter profile to a registered host.

The new profile can be added with **ntce filter profile** command.

The list of profiles in the system can be displayed with **show ntce filter profile** command.

Command with **no** prefix removes the defined profile for host. If you use no argument, the entire list of profiles will be cleared for hosts.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ntce)> **filter assign host** ‹*host*› ‹*profile*›

(config-ntce)> **no filter assign host** [ ‹*host*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| host | *MAC address* | MAC address of registered host. |
| profile | *String* | NTCE filter profile name. |

**Example**

```
(config-ntce)> filter assign host 04:12:c4:54:bc:59 test
Ntce::Profiles: Associated host "04:d4:12:54:bc:59" with profile ►
"test".
```

```
(config-ntce)> no filter assign host 04:d4:12:54:bc:59
Ntce::Profiles: Removed profile for host "04:d4:12:54:bc:59".
```

```
(config-ntce)> no filter assign host
Ntce::Profiles: Removed profiles for hosts.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter assign host** command has been introduced. |

## 3.130.3 ntce filter assign interface

**Description**

Assign *NTCE* filter profile to an interface.

The new profile can be added with **ntce filter profile** command.

The list of profiles in the system can be displayed with **show ntce filter profile** command.

Command with **no** prefix removes the defined profile for interface. If you use no argument, the entire list of profiles for interfaces will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ntce)> **filter assign interface** *‹interface› ‹profile›*

(config-ntce)> **no filter assign interface** [ *‹interface›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Network interface name. |
| `profile` | *String* | NTCE filter profile name. |

**Example**

```
(config-ntce)> filter assign interface Bridge0 test
Ntce::Profiles: "test": associated interface "Bridge0" with ►
profile "test".
```

```
(config-ntce)> no filter assign interface Bridge0
Ntce::Profiles: Removed profile for interface "Bridge0".
```

```
(config-ntce)> no filter assign interface
Ntce::Profiles: Removed profiles for interfaces.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter assign interface** command has been introduced. |

## 3.130.4 ntce filter profile

**Description**

Create a custom *NTCE* filtering profile.

Command with **no** prefix removes the profile.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

(config-ntce)> **filter profile** *‹name›*

(config-ntce)> **no filter profile** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | NTCE filter profile name. |

**Example**

```
(config-ntce)> filter profile test
Ntce::Profiles: Created profile "test".
```

```
(config-ntce)> no filter profile test
Ntce::Profiles: "test": removed profile.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile** command has been introduced. |

## 3.130.5 ntce filter profile application

**Description** Add application to the *NTCE* filter profile.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **filter profile** *‹name›* **application** *‹application›*

(config-ntce)> **no filter profile** *‹name›* **application** *‹application›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | NTCE filter profile name. |
| application | *String* | Application name. |

**Example**

```
(config-ntce)> filter profile test application youtube-kids
Ntce::Profiles: "test": added application "youtube-kids".
```

```
(config-ntce)> no filter profile test application youtube-kids
Ntce::Profiles: "test": removed application "youtube-kids".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile application** command has been introduced. |

## 3.130.6 ntce filter profile description

**Description** Assign description for the *NTCE* filter profile.

Command with **no** prefix deletes the profile description.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **filter profile** ‹*name*› **description** ‹*description*›

(config-ntce)> **no filter profile** ‹*name*› **description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *`String`* | NTCE filter profile name. |
| `description` | *`String`* | Arbitrary description of the profile. |

**Example**

```
(config-ntce)> filter profile test description myprofile
Ntce::Profiles: "test": set description "myprofile".
```

```
(config-ntce)> no filter profile test description
Ntce::Profiles: "test": set description "".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile description** command has been introduced. |

## 3.130.7 ntce filter profile group

**Description** Add application group to the *NTCE* filter profile.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **filter profile** ‹*name*› **group** ‹*group*›

(config-ntce)> **no filter profile** ‹*name*› **group** ‹*group*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | NTCE filter profile name. |
| group | *String* | Application group name. |

**Example**

```
(config-ntce)> filter profile test group gaming
Ntce::Profiles: "test": added group "gaming".
```

```
(config-ntce)> no filter profile test group gaming
Ntce::Profiles: "test": removed group "gaming".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile group** command has been introduced. |

## 3.130.8 ntce filter profile schedule

**Description**

Assign a schedule work to the *NTCE* filter profile.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ntce)> **filter profile** ‹*name*› **schedule** ‹*schedule*›

(config-ntce)> **no filter profile** ‹*name*› **schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | NTCE filter profile name. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(config-ntce)> filter profile test schedule schedule1
Ntce::Profiles: "test": set schedule "schedule1".
```

```
(config-ntce)> no filter profile test schedule
Ntce::Profiles: "test": removed schedule.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile schedule** command has been introduced. |

## 3.130.9 ntce filter profile type

**Description** Set the permission type of the *NTCE* filter profile.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **filter profile** ‹*name*› **type** ‹*type*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | NTCE filter profile name. |
| type | permit | Permit type profile. |
| | deny | Deny type profile. |

**Example**

```
(config-ntce)> filter profile test type permit
Ntce::Profiles: "test": set type "permit".
```

```
(config-ntce)> filter profile test type deny
Ntce::Profiles: "test": set type "deny".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **ntce filter profile type** command has been introduced. |

## 3.130.10 ntce memory-watcher

**Description** Enable the memory pressure watcher mechanism for the *NTCE* service. By default, setting is enabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ntce)> **memory-watcher**

(config-ntce)> **no memory-watcher**

**Example**

```
(config-ntce)> memory-watcher
Ntce::Manager: Enabled automatic memory pressure handler.
```

```
(config-ntce)> no memory-watcher
Ntce::Manager: Disabled automatic memory pressure handler.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **ntce memory-watcher** command has been introduced. |

## 3.130.11 ntce qos category priority

**Description**

Set priorities for traffic categories.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ntce)> **qos category** ‹*category*› **priority** ‹*priority*›

(config-ntce)> **qos category** ‹*category*› **no priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `category` | `calling` | ① Top. |
| | `gaming` | ② Critical. |
| | `streaming` | ③ High. |
| | `work` | ④ Medium-high. |
| | `surfing` | ⑤ Medium. |
| | `other` | ⑥ Normal (Default). |
| | `filetransfering` | ⑦ Low. |
| `priority` | *Integer* | Priority value. Can take values in the range from 1 to 7. |

**Example**

```
(config-ntce)> qos category work priority 7
Ntce::Manager: Set category "work" priority to "7".
```

```
(config-ntce)> qos category other no priority
Ntce::Manager: Reset QoS priority for category "work".
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **ntce qos category priority** command has been introduced. |

## 3.130.12 ntce qos enable

**Description**

Enable IntelliQoS, which ensures inbound, and outbound bandwidth for prioritized applications and tasks via pre-defined category groups presets. By default the service is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ntce)> **qos enable**

(config-ntce)> **no qos enable**

**Example**

```
(config-ntce)> qos enable
Ntce::Manager: Enabled QoS.
```

```
(config-ntce)> no qos enable
Ntce::Manager: Disabled QoS.
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **ntce qos enable** command has been introduced. |

## 3.130.13 ntce upstream rate-limit input

**Description**

Add limitation on the inbound traffic for specified interface.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ntce)> **upstream rate-limit** *‹interface›* **input** ( *‹rate›* | **auto**)

(config-ntce)> **no upstream rate-limit** *‹interface›* **input**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *`Interface`* | The name of a global interface to rate-limit. |
| `rate` | *`Integer`* | The ingress rate limit in kbps. Can take values in the range from 64 to 1000000. |
| `auto` | *`Keyword`* | Auto-ingress mode. |

**Example**

```
(config-ntce)> upstream rate-limit ISP input auto
Ntce::Upstreams: Set ISP input rate limit to "auto".
```

```
(config-ntce)> upstream rate-limit ISP input 1000000
Ntce::Upstreams: Set ISP input rate limit to "1000000" kbps.
```

```
(config-ntce)> no upstream rate-limit ISP input
Ntce::Upstreams: Reset ISP input rate limit.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **ntce upstream rate-limit input** command has been introduced. |

## 3.130.14 ntce upstream rate-limit output

**Description**

Add limitation on the outbound traffic for specified interface.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-ntce)> **upstream rate-limit** *‹interface›* **output** ( *‹rate›* | **auto**)

(config-ntce)> **no upstream rate-limit** *‹interface›* **output**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *`Interface`* | The name of a global interface to rate-limit. |
| `rate` | *`Integer`* | The ingress rate limit in kbps. Can take values in the range from 64 to 1000000. |
| `auto` | *`Keyword`* | Auto-ingress mode. |

**Example**

```
(config-ntce)> upstream rate-limit ISP output auto
Ntce::Upstreams: Set ISP output rate limit to "auto".
```

```
(config-ntce)> upstream rate-limit ISP output 1000000
Ntce::Upstreams: Set ISP output rate limit to "1000000" kbps.
```

```
(config-ntce)> no upstream rate-limit ISP output
Ntce::Upstreams: Reset ISP output rate limit.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **ntce upstream rate-limit output** command has been introduced. |

# 3.131 ntp

**Description** Access to configure *NTP* client.

Command with **no** prefix resets *NTP* client configuration to default.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(config)> **no ntp**

**Example**

```
(config)> no ntp
Ntp::Client: Configuration reset.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ntp** command has been introduced. |

# 3.132 ntp master

**Description** Enable *SNTP* server in `private` and `protected` network segments.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **ntp master**

(config)> **no ntp master**

**Example**

```
(config)> ntp mater
Ntp::Server: Enabled master mode.
```

```
(config)> no ntp master
Ntp::Server: Disabled master mode.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **ntp master** command has been introduced. |

# 3.133 ntp server

**Description**

Add a new *NTP* server to the list. You can enter up to 8 *NTP* servers.

Command with **no** prefix deletes *NTP* server from the list. If you use no argument, the entire list of *NTP* servers will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **ntp server** *‹server›*

(config)> **no ntp server** [ *‹server›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| server | *String* | Host of *NTP* server. |

**Example**

```
(config)> ntp server pool.ntp.org
Ntp::Client: Server "pool.ntp.org" has been added.
```

```
(config)> no ntp server
Ntp::Client: All NTP servers removed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ntp server** command has been introduced. |

# 3.134 ntp source

**Description**

Set a specific source IP address for *NTP* service.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config)> **ntp source** *‹address›*

(config)> **no ntp source**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | The source IP address for all NTP packets. |

**Example**

```
(config)> ntp source 192.168.2.2
Ntp::Client: Source has been set.
```

```
(config)> no ntp source
Ntp::Client: Source has been reset.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **ntp source** command has been introduced. |

# 3.135 ntp sync-period

**Description**

Set a period for time synchronization. By default, 1 week is used.

Command with **no** prefix resets time synchronization to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ntp sync-period** *‹period›*

(config)> **no ntp sync-period**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| period | *Integer* | Time synchronization, in minutes. Can take values in the range from 60 minutes to 1 month. |

**Example**

```
(config)> ntp sync-period 60
Ntp::Client: A synchronization period set to 60 minutes.
```

```
(config)> no ntp sync-period
Ntp::Client: Synchronization period value reset.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ntp sync-period** command has been introduced. |

# 3.136 object-group fqdn

**Description** Create an object group with automatic FQDN name resolution.

Command with **no** prefix removes the group.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Group entry** `(config-ogrp-fqdn)`

**Synopsis**

(config)> **object-group fqdn** *‹name›*

(config)> **no object-group fqdn** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the FQDN object group. |

**Example**

```
(config)> object-group fqdn TEST
Network::ObjectGroup: "TEST": group created.
```

```
(config)> no object-group fqdn TEST
Network::ObjectGroup: "TEST": group removed.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **object-group fqdn** command has been introduced. |

## 3.136.1 object-group fqdn description

**Description** Assign a description to the object group.

Command with **no** prefix deletes the object group description.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ogrp-fqdn)> **description** *‹description›*

(config-ogrp-fqdn)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `description` | *`String`* | Arbitrary description of the object group. |

**Example**

```
(config-ogrp-fqdn)> description test
Network::ObjectGroup: "domain-lis0": set group description.
```

```
(config-ogrp-fqdn)> no description
Network::ObjectGroup: "domain-lis0": reset group description.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **object-group fqdn description** command has been introduced. |

## 3.136.2 object-group fqdn exclude

**Description**

Add or remove non-matching element of the object group.

Command with **no** prefix removes the setting. If you use no argument, the entire object group element list is cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ogrp-fqdn)> **exclude** *‹address›*

(config-ogrp-fqdn)> **no exclude** [ *‹address›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *`String`* | IPv4 or IPv6 address, subnet mask (in prefix length notation, for example, /24), or domain name. |

**Example**

```
(config-ogrp-fqdn)> exclude example.com
Network::ObjectGroup: "domain-list0": added excluded FQDN ►
"example.com".
```

```
(config-ogrp-fqdn)> exclude 8.8.8.8
Network::ObjectGroup: "domain-list0": added excluded FQDN ►
"8.8.8.8".
```

```
(config-ogrp-fqdn)> exclude 0.0.0.0/0
Network::ObjectGroup: "domain-list0": added excluded FQDN ►
"0.0.0.0/0".
```

```
(config-ogrp-fqdn)> exclude 2001:4860:4860::8888
Network::ObjectGroup: "domain-list0": added excluded FQDN ►
"2001:4860:4860::8888".

(config-ogrp-fqdn)> exclude ::/0
Network::ObjectGroup: "domain-list0": added excluded FQDN "::/0".

(config-ogrp-fqdn)> no exclude example.com
Network::ObjectGroup: "domain-list0": removed excluded FQDN ►
"example.com".

(config-ogrp-fqdn)> no exclude 8.8.8.8
Network::ObjectGroup: "domain-list0": removed excluded FQDN ►
"8.8.8.8".

(config-ogrp-fqdn)> no exclude 0.0.0.0/0
Network::ObjectGroup: "domain-list0": removed excluded FQDN ►
"0.0.0.0/0".

(config-ogrp-fqdn)> no exclude 2001:4860:4860::8888
Network::ObjectGroup: "domain-list0": removed excluded FQDN ►
"2001:4860:4860::8888".

(config-ogrp-fqdn)> no exclude ::/0
Network::ObjectGroup: "domain-list0": removed excluded FQDN ►
"::/0".

(config-ogrp-fqdn)> no exclude
Network::ObjectGroup: "domain-list0": cleared excluded.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **object-group fqdn exclude** command has been introduced. |
| 5.00 | Added support for IP subnets. |

## 3.136.3 object-group fqdn include

**Description** Add or remove matching element of the object group.

Command with **no** prefix removes the setting. If you use no argument, the entire object group element list is cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-ogrp-fqdn)> **include** ‹*address*›

(config-ogrp-fqdn)> **no include** [ ‹*address*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *String* | IPv4 or IPv6 address, subnet mask (in prefix length notation, for example, /24), or domain name. |

**Example**

```
(config-ogrp-fqdn)> include example.com
Network::ObjectGroup: "domain-list0": added included FQDN ► 
"example.com".

(config-ogrp-fqdn)> include 8.8.8.8
Network::ObjectGroup: "domain-list0": added included FQDN ► 
"8.8.8.8".

(config-ogrp-fqdn)> include 0.0.0.0/0
Network::ObjectGroup: "domain-list0": added included FQDN ► 
"0.0.0.0/0".

(config-ogrp-fqdn)> include 2001:4860:4860::8888
Network::ObjectGroup: "domain-list0": added included FQDN ► 
"2001:4860:4860::8888".

(config-ogrp-fqdn)> include ::/0
Network::ObjectGroup: "domain-list0": added included FQDN "::/0".

(config-ogrp-fqdn)> no include example.com
Network::ObjectGroup: "domain-list0": removed included FQDN ► 
"example.com".

(config-ogrp-fqdn)> no include 8.8.8.8
Network::ObjectGroup: "domain-list0": removed included FQDN ► 
"8.8.8.8".

(config-ogrp-fqdn)> no include 0.0.0.0/0
Network::ObjectGroup: "domain-list0": removed included FQDN ► 
"0.0.0.0/0".

(config-ogrp-fqdn)> no include 2001:4860:4860::8888
Network::ObjectGroup: "domain-list0": removed included FQDN ► 
"2001:4860:4860::8888".

(config-ogrp-fqdn)> no include ::/0
Network::ObjectGroup: "domain-list0": removed included FQDN ► 
"::/0".

(config-ogrp-fqdn)> no include
Network::ObjectGroup: "domain-list0": cleared included.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **object-group fqdn include** command has been introduced. |
| 5.00 | Added support for IP subnets. |

# 3.137 object-group ip

**Description** Create an object group of IP type, which can store IPv4 subnets with optional L4 protocol and port range info.

Command with **no** prefix removes the group.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Group entry** `(config-ogrp-ip)`

**Synopsis**

(config)> **object-group ip** *‹name›*

(config)> **no object-group ip** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the IPv4 object group. |

**Example**

```
(config)> object-group ip test
Network::ObjectGroup: "test": group created.
```

```
(config)> no object-group ip test
Network::ObjectGroup: "test": group removed.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **object-group ip** command has been introduced. |

## 3.137.1 object-group ip description

**Description** Assign a description to the object group of IP type.

Command with **no** prefix deletes the object group description.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-ogrp-ip)> **description** *‹description›*

(config-ogrp-ip)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `description` | *`String`* | Arbitrary description of the object group of IP type. |

**Example**

```
(config-ogrp-ip)> description test
Network::ObjectGroup: "domain-lis0": set group description.
```

```
(config-ogrp-ip)> no description
Network::ObjectGroup: "domain-lis0": reset group description.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **object-group ip description** command has been introduced. |

## 3.137.2 object-group ip exclude

**Description**

Add or remove non-matching element of the object group.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ogrp-ip)> **exclude** *‹proto› ‹address›* [ *‹port›* [ *‹end-port›* ] ]

(config-ogrp-ip)> **no exclude** *‹proto› ‹address›* [ *‹port›* [ *‹end-port›* ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `proto` | `ip` | *IP* protocol (include *TCP*, *UDP*, *ICMP* and other). |
| | `tcp` | *TCP* protocol. |
| | `udp` | *UDP* protocol. |
| | `tcpudp` | *TCP* and *UDP* protocols. |
| | `icmp` | *ICMP* protocol. |
| | `esp` | *ESP* protocol. |
| | `gre` | *GRE* protocol. |
| | `ipip` | *IP in IP* protocol. |
| `address` | *`String`* | IP address or subnet (in the form of prefix bit length (e.g. 203.0.113.0/24)). |
| `port` | *`Integer`* | TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated. |

| Argument | Value | Description |
|---|---|---|
| `end-port` | *Integer* | The end of the range of ports. |

**Example**

```
(config-ogrp-ip)> exclude tcpudp 203.0.113.0/24 70 80
Network::ObjectGroup: "test": added exclude tcpudp 203.0.113.0/24 ►
70-80.
```

```
(config-ogrp-ip)> no exclude tcpudp 203.0.113.0/24 70 80
Network::ObjectGroup: "test": removed exclude tcpudp ►
203.0.113.0/24 70-80.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **object-group ip exclude** command has been introduced. |

## 3.137.3 object-group ip include

**Description**

Add or remove matching element of the object group.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(config-ogrp-ip)> **include** ‹*proto*› ‹*address*› [ ‹*port*› [ ‹*end-port*› ] ]

(config-ogrp-ip)> **no include** ‹*proto*› ‹*address*› [ ‹*port*› [ ‹*end-port*› ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `proto` | `ip` | *IP* protocol (include *TCP*, *UDP*, *ICMP* and other). |
| | `tcp` | *TCP* protocol. |
| | `udp` | *UDP* protocol. |
| | `tcpudp` | *TCP* and *UDP* protocols. |
| | `icmp` | *ICMP* protocol. |
| | `esp` | *ESP* protocol. |
| | `gre` | *GRE* protocol. |
| | `ipip` | *IP in IP* protocol. |
| `address` | *String* | IP address or subnet (in the form of prefix bit length (e.g. 203.0.113.0/24)). |

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated. |
| `end-port` | *Integer* | The end of the range of ports. |

**Example**

```
(config-ogrp-ip)> include tcpudp 203.0.113.0/24 75 80
Network::ObjectGroup: "test": added include tcpudp 203.0.113.0/24 ►
75-80.
```

```
(config-ogrp-ip)> no include tcpudp 203.0.113.0/24 75 80
Network::ObjectGroup: "test": removed include tcpudp ►
203.0.113.0/24 75-80.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **object-group ip include** command has been introduced. |

# 3.138 oc-server

**Description** Access to a group of commands to configure *OpenConnect* server parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(oc-server)`

**Synopsis**

(config)> **`oc-server`**

**Example**

```
(config)> oc-server
(oc-server)>
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server** command has been introduced. |

## 3.138.1 oc-server camouflage

**Description** Enable the camouflage mode for the *OpenConnect* server, which provides greater security from remote service scanning. By default, the mode is disabled.

Command with **no** prefix disables the camouflage mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **camouflage**

(oc-server)> **no camouflage**

**Example**

```
(oc-server)> camouflage
OcServer::Manager: Enabled camouflage mode.
```

```
(oc-server)> no camouflage
OcServer::Manager: Disabled camouflage mode.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server camouflage** command has been introduced. |

## 3.138.2 oc-server debug

**Description** Enable debug mode for *OpenConnect* server. Detailed information about the progress of the *OpenConnect* client connection to the *OpenConnect* server is saved to the system log. By default, setting is disabled.

Command with **no** prefix disables the debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **debug**

(oc-server)> **no debug**

**Example**

```
(oc-server)> debug
OcServer::Manager: Enabled debug.
```

```
(oc-server)> no debug
OcServer::Manager: Disabled debug.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **oc-server debug** command has been introduced. |

## 3.138.3 oc-server dns-servers

**Description**

Set the *DNS* server that is assigned to clients connecting to the *OpenConnect* server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(oc-server)> **dns-servers** ‹*dns1*› [ ‹*dns2*› ]

(oc-server)> **no dns-servers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(oc-server)> dns-servers 1.1.1.1
OcServer::Manager: Set custom DNS server "1.1.1.1".
```

```
(oc-server)> dns-servers 1.1.1.1 8.8.8.8
OcServer::Manager: Set custom DNS servers "1.1.1.1" and "8.8.8.8".
```

```
(oc-server)> no dns-servers
OcServer::Manager: Disabled custom DNS servers.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **oc-server dns-servers** command has been introduced. |

## 3.138.4 oc-server interface

**Description**

Bind *OpenConnect* server to the specified interface.

Command with **no** prefix unbinds the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(oc-server)> **interface** ‹*interface*›

(oc-server)> **no interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(oc-server)> interface Bridge0
OcServer::Manager: Bound to Bridge0.
```

```
(oc-server)> no interface
OcServer::Manager: Reset interface binding.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server interface** command has been introduced. |

## 3.138.5 oc-server mtu

**Description**

Set *MTU* value to be transmitted to *OpenConnect* server. By default, 1350 value is used.

Command with **no** prefix resets value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(oc-server)> **mtu** ‹*value*›

(oc-server)> **no mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| value | *Integer* | *MTU* value. Can take values in the range from 128 to 1500 inclusively. |

**Example**

```
(oc-server)> mtu 1350
OcServer::Manager: MTU set to 1350.
```

```
(oc-server)> no mtu
OcServer::Manager: MTU reset.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server mtu** command has been introduced. |

## 3.138.6 oc-server multi-login

**Description** Allow connection to *OpenConnect* server for multiple users from one account.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **multi-login**

(oc-server)> **no multi-login**

**Example**

```
(oc-server)> multi-login
OcServer::Manager: Enabled multiple login.
```

```
(oc-server)> no multi-login
OcServer::Manager: Disabled multiple login.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server multi-login** command has been introduced. |

## 3.138.7 oc-server pool-range

**Description** Assign a pool of addresses for the clients that connect to the *OpenConnect* server.

Command with **no** prefix removes a pool.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **oc-server** ‹*begin*› [ ‹*size*› ]

(oc-server)> **no oc-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `begin` | *IP address* | Start address of pool. |
| `size` | *Integer* | Pool size. |

**Example**

```
(oc-server)> pool-range 192.168.1.30 7
OcServer::Manager: Configured pool range 192.168.1.30 to ►
192.168.1.36.
```

```
(oc-server)> no pool-range
OcServer::Manager: Reset pool range.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server pool-range** command has been introduced. |

## 3.138.8 oc-server route

**Description**

Assign a route which is transmitted in DHCP INFORM messages to the *OpenConnect* server clients.

Command with **no** prefix cancels the specified route. If you use no arguments, the entire list of routes will be cleared.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(oc-server)> **route** ‹*address*› ‹*mask*›

(oc-server)> **no route** [ ‹*address*› ‹*mask*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Network client address. |
| mask | *IP-mask* | Network client mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |

**Example**

```
(oc-server)> route 192.168.2.0/24
Vpn::DhcpInform: "OCSRVVPN": added DHCP INFORM route to ►
192.168.2.0/24.
```

```
(oc-server)> no route 192.168.2.0/24
Vpn::DhcpInform: "OCSRVVPN": removed DHCP INFORM route to ►
192.168.2.0/24.
```

```
(oc-server)> no route
Vpn::DhcpInform: "OCSRVVPN": cleared DHCP INFORM routes.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **oc-server route** command has been introduced. |

## 3.138.9 oc-server session-logout

**Description** Terminate an active or stalled session on the *OpenConnect* server.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **session-logout** ‹*session*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| session | *Integer* | Identifier of the OpenConnect session (can be viewed using the **show oc-server** command). |

**Example**

```
(oc-server)> session-logout 6
OcServer::Manager: Session "6" is terminated.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **oc-server session-logout** command has been introduced. |

## 3.138.10 oc-server session-preempt

**Description** Enable to preempt VPN sessions when **oc-server multi-login** option is disabled for the *OpenConnect* server.

Command with **no** prefix disables the preempt.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(oc-server)> **session-preempt**

(oc-server)> **no session-preempt**

**Example**

```
(oc-server)> session-preempt
OcServer::Manager: Enabled session preemption.
```

```
(oc-server)> no session-preempt
OcServer::Manager: Disabled session preemption.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **oc-server session-preempt** command has been introduced. |

## 3.138.11 oc-server static-ip

**Description**

Bind IP address to the user. User account must have `vpn-oc` tag.

Command with **no** prefix removes binding.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(oc-server)> **static-ip** *‹name› ‹address›*

(oc-server)> **no static-ip** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `name` | *`String`* | Username. |
| `address` | *`IP address`* | IP address to bind. |

**Example**

```
(oc-server)> static-ip admin 192.168.1.30
OcServer::Manager: Static IP 192.168.1.30 assigned to user ►
"admin".
```

```
(oc-server)> no static-ip admin
OcServer::Manager: Static IP address removed for user "admin".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **oc-server static-ip** command has been introduced. |

# 3.139 opkg chroot

**Description**

Enable chroot for *opkg*. If enabled, root directory is changed to `/opt` before executing any opkg script. By default, the setting is disabled.

Command with **no** prefix disables chroot mode.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **opkg chroot**

(config)> **no opkg chroot**

**Example**

```
(config)> opkg chroot
Opkg::Manager: Chroot enabled.
```

```
(config)> no opkg chroot
Opkg::Manager: Chroot disabled.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **opkg chroot** command has been introduced. |

# 3.140 opkg disk

**Description** Configure partition for *opkg* software. This setting is required to install and run *opkg*.

Once configured, the partition will be mounted to `/opt` using **mount --bind**, and the **initrc** script executed immediately, see also Section 3.142 on page 539.

If `/opt/install` directory is not empty, all contained `*.ipk` and `*.tgz` archives are unpacked to `/opt` before running `initrc`. Archives are deleted after installation.

Command with **no** prefix disables the opkg feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **opkg disk** *‹disk›* [ *‹url›* ]

(config)> **no opkg disk**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `disk` | *String* | Partition label or UUID. |
| `url` | *String* | URL of installer package. |

**Example**

```
(config)> opkg disk ext4_opkg:/
Opkg::Manager: Disk is set to: ext4_opkg:/.
```

```
(config)> opkg disk storage:/ ►
https://bin.entware.net/aarch64-k3.10/installer/aarch64-installer.tar.gz
Opkg::Manager: Disk is set to: storage:/.
```

```
(config)> no opkg disk
Opkg::Manager: Disk is unset.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **opkg disk** command has been introduced. |
| 4.02 | The `url` argument was added. |

# 3.141 opkg dns-override

**Description**

Disable *TCP* and *UDP* 53 port for DNS proxy.

Disables port allows to replace embedded DNS proxy with a custom service, such as BIND or Dnsmasq of *opkg*.

Command with **no** prefix returns port work for DNS proxy.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **opkg dns-override**

(config)> **no opkg dns-override**

**Example**

```
(config)> opkg dns-override
Opkg::Manager: DNS override enabled.
```

```
(config)> no opkg dns-override
Opkg::Manager: DNS override disabled.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **opkg dns-override** command has been introduced. |

# 3.142 opkg initrc

**Description**

Set initial script. Default value — `/opt/etc/initrc`.

When the opkg disk is mounted, and the packages are installed, the system will execute the initial script. If *path* is a directory, the system will execute all contained scripts in alphabetic order.

Command with **no** prefix resets `initrc` to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **opkg initrc** *‹path›*

(config)> **no opkg initrc**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| path | *Filename* | Initial script file or directory. |

**Example**

```
(config)> opkg initrc /opt/etc/init.d/rc.unslung
Opkg::Manager: Configured init script: ►
"/opt/etc/init.d/rc.unslung".
(config)> no opkg initrc
Opkg::Manager: Init script reset to default: /opt/etc/initrc.
```

**History**

| Version | Description |
|---|---|
| 2.05.C.3 | The **opkg initrc** command has been introduced. |

# 3.143 opkg object-group fqdn enable

**Description** Enable FQDN name resolution for the specified object group **object-group fqdn**.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **opkg object-group fqdn** *‹name›* **enable**

(config)> **no opkg object-group fqdn** *‹name›* **enable**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The FQDN object group name. |

**Example**

```
(config)> opkg object-group fqdn domain-list0 enable
Dns::Route::ResolveQueue: Enabled group "domain-list0".
```

```
(config)> no opkg object-group fqdn domain-list0 enable
Dns::Route::ResolveQueue: Disabled group "domain-list0".
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **opkg object-group fqdn enable** command has been introduced. |

# 3.144 opkg timezone

**Description**

Configure TZ environment variable and `/opt/var/TZ` file for *opkg* software. Default — timezone is undefined.

It depends on the *opkg* C library, how timezone is interpreted. The value of TZ can be either a POSIX timezone specification in the form `stdoffset[dst[offset][,start[/time],end[/time]]]`, or the name of a zoneinfo-binary-format timezone file (the form used by glibc and almost all GNU systems).

Command with **no** prefix resets timezone to undefined.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **opkg timezone** (**auto** | ‹*timezone*›)

(config)> **no opkg timezone**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timezone` | *String* | Timezone specification to be assigned to the TZ environment variable and written to `/opt/var/TZ`. |
| `auto` | Keyword | Automatic timezone assignment. Specification is generated from system wide settings, see Section 3.184.4 on page 760. |

**Example**

```
(config)> opkg timezone auto
Opkg::Manager: Enabled automatic timezone.
(config)> opkg timezone UTC
Opkg::Manager: Enabled timezone "UTC".
(config)> no opkg timezone
Opkg::Manager: Timezone reset to undefined.
```

**History**

| Version | Description |
|---|---|
| 2.05.C.3 | The **opkg timezone** command has been introduced. |

# 3.145 ping-check profile

**Description** Access to a group of commands to configure *Ping Check* profile. If the profile is not found, the command tries to create it.

Command with **no** prefix removes *Ping Check* profile.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-pchk)`

**Synopsis**

(config)> **ping-check profile** *‹name›*

(config)> **no ping-check profile** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | *Ping Check* profile name. You can see the list of available profiles with help of **ping-check profile** [Tab] command. |

**Example**

```
(config)> ping-check profile [Tab]

 Usage template:
          profile {name}

   Choose:
             TEST
             MYMY
```

```
(config)> ping-check profile new_prof
PingCheck::Client: Profile "new_prof" has been created.
(config-pchk)>
```

```
(config)> no ping-check profile new_prof
PingCheck::Client: Profile "new_prof" has been deleted.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile** command has been introduced. |

## 3.145.1 ping-check profile host

**Description** Assign hostname for testing. By default, hostname is assigned according to country code.

Command with **no** prefix removes the hostname.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **host** *‹host›*

(config-pchk)> **no host** [ *‹host›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| host | *Hostname* | Name or address of remote host. |

**Example**

```
(config-pchk)> host 8.8.8.8
PingCheck::Profile: "test": add host "8.8.8.8" for testing.
```

```
(config-pchk)> host example.com
PingCheck::Profile: "test": add host "example.com" for testing.
```

```
(config-pchk)> no host
PingCheck::Profile: "test": hosts cleared.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile host** command has been introduced. |

## 3.145.2 ping-check profile max-fails

**Description** Specify the number of consecutive failed requests to a remote host by obtaining of which the Internet at the interface considered absent. By default, value 5 is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **max-fails** *‹count›*

(config-pchk)> **no max-fails**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| count | *Integer* | Amount of failed requests. Can take values in the range from 1 to 10 inclusively. |

**Example**

```
(config-pchk)> max-fails 7
PingCheck::Profile: "test": uses 7 fail count for disabling ►
interface.
```

```
(config-pchk)> no max-fails
PingCheck::Profile: "test": fail count is reset to 5.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile max-fails** command has been introduced. |

## 3.145.3 ping-check profile min-success

**Description**

Specify the number of consecutive success requests to a remote host by obtaining of which the Internet at the interface considered present. By default, value 5 is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-pchk)> **min-success** *‹count›*

(config-pchk)> **no min-success**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| count | *Integer* | Amount of success requests. Can take values in the range from 1 to 10 inclusively. |

**Example**

```
(config-pchk)> min-success 3
PingCheck::Profile: "test": uses 3 success count for enabling ►
interface.
```

```
(config-pchk)> no min-success
PingCheck::Profile: "test": success count is reset to 5.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile min-success** command has been introduced. |

## 3.145.4 ping-check profile mode

**Description** Set *Ping Check* mode. By default, `icmp` value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **mode** *‹mode›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mode` | `icmp` | The availability testing of remote host will be done by ICMP-echo request (ping) sending. |
| | `connect` | The availability testing of remote host will be done by TCP-connection establishing to specified port. |
| | `tls` | The availability testing of remote host will be done by TLS-connection. |
| | `uri` | The availability testing of remote host will be done by URI checking. |

**Example**

```
(config-pchk)> mode tls
PingCheck::Profile: "test": uses tls mode.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile mode** command has been introduced. |
| 3.09 | The `tls` argument was added. |
| 4.00 | The `uri` argument was added. |

## 3.145.5 ping-check profile port

**Description** Specify port for connection to the remote host. Setting has a meaning for `connect` mode of *Ping Check* (see **ping-check profile mode** command).

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **port** *‹port›*

(config-pchk)> **no port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | Port number. Can take values in the range from 1 to 65534 inclusively. |

**Example**

```
(config-pchk)> port 80
PingCheck::Profile: "test": uses port 80 for testing.
```

```
(config-pchk)> no port
PingCheck::Profile: "test": port is cleared.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile port** command has been introduced. |

## 3.145.6 ping-check profile power-cycle

**Description**

Enable power-cycle for USB network interface. Enabled by default.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-pchk)> **power-cycle**

(config-pchk)> **no power-cycle**

**Example**

```
(config-pchk)> power-cycle
PingCheck::Profile: "test": enabled USB power cycle.
```

```
(config-pchk)> power-cycle
PingCheck::Profile: "test": disabled USB power cycle.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile power-cycle** command has been introduced. |

## 3.145.7 ping-check profile timeout

**Description**

Set the maximum response time of the remote host for a single request in seconds. By default, 2 value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **timeout** ‹*timeout*›

(config-pchk)> **no timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Response time in seconds. Can take values in the range from 1 to 10 inclusively. |

**Example**

```
(config-pchk)> timeout 4
PingCheck::Profile: "test": timeout is changed to 4 seconds.
```

```
(config-pchk)> no timeout
PingCheck::Profile: "test": timeout is reset to 2.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile timeout** command has been introduced. |

## 3.145.8 ping-check profile update-interval

**Description** Set periodicity of *Ping Check* performing.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-pchk)> **update-interval** ‹*seconds*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `seconds` | *Integer* | Refresh period in seconds. Can take values in the range from 3 to 3600 inclusively. |

**Example**

```
(config-pchk)> update-interval 60
PingCheck::Profile: "test": update interval is changed to 60 ►
seconds.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **ping-check profile update-interval** command has been introduced. |

## 3.145.9 ping-check profile uri

**Description**

Assign URI (Uniform Resource Identifier[20]) host for testing.

Command with **no** prefix removes the host.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-pchk)> **uri** *‹uri›*

(config-pchk)> **no uri** [ *‹uri›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uri | *Hostname* | Name or address of remote HTTP or HTTPS host. |

**Example**

```
(config-pchk)> uri http://localhost:8888/
PingCheck::Profile: "TEST": add URI "http://localhost:8888/" for ►
testing.
```

```
(config-pchk)> uri https://localhost:4343/
PingCheck::Profile: "TEST": add URI "https://localhost:4343/" ►
for testing.
```

```
(config-pchk)> no uri http://localhost:8888/
PingCheck::Profile: "TEST": URIs cleared.
```

```
(config-pchk)> no uri
PingCheck::Profile: "TEST": URIs cleared.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **ping-check profile uri** command has been introduced. |

[20] https://en.wikipedia.org/wiki/Uniform_Resource_Identifier

# 3.146 ppe

**Description**

Enable Packet Processing Engine. By default, the setting is turned on for SWNAT and HWNAT both.

Command with **no** prefix disables specified accelerator.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **ppe** *‹engine›*

(config)> **no ppe** [*‹engine›*]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| engine | software | Software accelerator. |
| | hardware | Hardware accelerator. |

**Example**

```
(config)> ppe software
Network::Interface::Rtx::Ppe: Software PPE enabled.
```

```
(config)> no ppe
Network::Interface::Rtx::Ppe: All PPE disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **ppe** command has been introduced. |
| 2.05 | Argument engine was implemented. |
| 2.07 | Argument hardware-ipv6 was implemented. |
| 4.00 | Argument hardware-ipv6 was removed as obsolete. |

# 3.147 pppoe pass

**Description**

Enable PPPoE Pass Through function. You can enter up to 10 network nodes.

Command with **no** prefix disables the function.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Ethernet

**Synopsis**

(config)> **pppoe pass through** *‹wan-iface›* *‹lan-iface›*

(config)> **no pppoe pass through**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| wan-iface | *Interface* | The starting interface — full WAN-interface name or an alias. |
| lan-iface | *Interface* | The finishing interface — full LAN-interface name or an alias. |

**Example**

```
(config)> pppoe pass through Home ISP
Pppoe::Pass: Configured pass from "Bridge0" to "GigabitEthernet1".
```

```
(config)> no pppoe pass
Pppoe::Pass: Disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **pppoe pass** command has been introduced. |

# 3.148 printer

**Description**

Access to a group of commands to configure the printer. If the printer is not found, the command tries to create it.

Command with **no** prefix deletes the printer.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

(config-printer)

**Synopsis**

(config)> **printer** *‹id›*

(config)> **no printer** *‹id›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | Printer ID. |

**Example**

```
(config)> printer 0924:3cf4
(config-printer)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **printer** command has been introduced. |

## 3.148.1 printer bidirectional

**Description** Enable bidirectional mode for printer.

Command with **no** prefix disables bidirectional mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **bidirectional**

(config-printer)> **no bidirectional**

**Example**

```
(config-printer)> bidirectional
Printer::Manager: A bidirectional mode enabled.
```

```
(config-printer)> no bidirectional
Printer::Manager: A bidirectional mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **printer bidirectional** command has been introduced. |

## 3.148.2 printer debug

**Description** Enable debug mode for printer. If you use no argument, debug level 1 will be set.

Command with **no** prefix disables debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **debug** [ **level** *‹level›* ]

(config-printer)> **no debug**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `level` | *Integer* | The debug level. Can take values in the range from 1 to 3 inclusively. |

**Example**

```
(config-printer)> debug level 3
Printer::Manager: a debug level set to 3.
```

```
(config-printer)> no debug
Printer::Manager: A debug mode disabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **printer debug** command has been introduced. |

## 3.148.3 printer firmware

**Description** Set printer firmware file.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **firmware** *‹firmware›*

(config-printer)> **no firmware**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| firmware | *String* | Path to firmware file. |

**Example**

```
(config-printer)> firmware storage:sihp1018.dl
Printer::Manager: A printer firmware set.
```

```
(config-printer)> no firmware
Printer::Manager: A printer firmware set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **printer firmware** command has been introduced. |

## 3.148.4 printer name

**Description** Assign an arbitrary name to the printer.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **name** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Arbitrary printer name. |

**Example**

```
(config-printer)> name Canon
Printer::Manager: A printer name set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **printer name** command has been introduced. |

## 3.148.5 printer port

**Description** Set printer port if printer type is `direct`. By default, TCP-port is `9100`.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **port** *‹port›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | Printer port. |

**Example**

```
(config-printer)> port 2012
Printer::Manager: A port set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **printer port** command has been introduced. |

## 3.148.6 printer status-polling

**Description** Enable printer status polling. By default, status polling is enabled.

Command with **no** prefix disables printer status polling.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **status-polling**

(config-printer)> **no status-polling**

**Example**

```
(config-printer)> status-polling
Printer::Manager: Status polling enabled.
```

```
(config-printer)> no status-polling
Printer::Manager: Status polling disabled.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **printer status-polling** command has been introduced. |

## 3.148.7 printer type

**Description** Set printer type.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-printer)> **type** *‹type›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| type | cifs | Printer connected via *CIFS*. |
| | direct | Printer connected directly to device. |

**Example**

```
(config-printer)> type direct
Printer::Manager: A printer type set.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **printer type** command has been introduced. |

# 3.149 schedule

**Description** Access to a group of commands to configure the schedule. If the schedule is not found, the command tries to create it.

Command with **no** prefix deletes the schedule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** `(config-sched)`

**Synopsis**

(config)> **schedule** *‹name›*

(config)> **no schedule** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | A schedule name. |

**History**

| Version | Description |
|---|---|
| 2.06 | The **schedule** command has been introduced. |

## 3.149.1 schedule action

**Description** Specify the actions to be performed according to the selected schedule.

Command with **no** prefix cancels the action.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-sched)> **action** *‹action› ‹min› ‹hour› ‹dow›*

(config-sched)> **no action** [ *‹action› ‹min› ‹hour› ‹dow›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| action | start | Action of the beginning. |
| | stop | Action of the end. |
| min | *Integer* | The minutes. |
| hour | *Integer* | The hours. |
| dow | *Integer* | Days of the week, separated by commas. 0 means Sunday. * means daily. |

**Example**

```
(config-sched)> action start 00 3 0,1,2,3,4,5,6
Core::Schedule::Manager: Updated schedule "rebootrouter".
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **schedule action** command has been introduced. |

## 3.149.2 schedule description

**Description** Set description for the selected schedule.

Command with **no** prefix deletes the description.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(config-sched)> **description** *‹description›*

(config-sched)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| description | *String* | Text of the description. |

**Example**

```
(config-sched)> description "Schedule for on/off Access Point"
Core::Schedule::Manager: Updated description of schedule "WIFI".
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **schedule description** command has been introduced. |

## 3.149.3 schedule led

**Description** Set LED indication for the scheduled events. SelectedSchedule control shold be chosen with **system led** command.

Command with **no** prefix removes LED indication.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-sched)> **led** *‹action›*

(config-sched)> **no led**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| action | start | LED shows the beginning of the scheduled event. |
| | stop | LED shows the end of the scheduled event. |

**Example**

```
(config-sched)> led start
Core::Schedule::Led: Selected schedule "111".
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **schedule led** command has been introduced. |

# 3.150 service afp

**Description** Enable *AFP* service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service afp**

(config)> **no service afp**

**Example**

```
(config)> service afp
Afp::Server: Enabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **service afp** command has been introduced. |

# 3.151 service cifs

**Description** Enable *CIFS* service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service cifs**

(config)> **no service cifs**

**Example**

```
(config)> service cifs
Cifs::ServerTsmb: Enabled.
```

```
(config)> no service cifs
Cifs::ServerTsmb: Disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service cifs** command has been introduced. |

# 3.152 service dhcp

**Description**

Enable *DHCP server*. If there is not enough settings to start the service (see **ip dhcp pool**), the service will not respond to the network. As soon as there are enough settings, the service will be enabled automatically.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service dhcp**

(config)> **no service dhcp**

**Example**

```
(config)> service dhcp
service enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service dhcp** command has been introduced. |

# 3.153 service dhcp-relay

**Description**

Enable DHCP-relay. If there are not enough settings to start the service (see **ip dhcp relay lan**, **ip dhcp relay server**, **ip dhcp relay wan**), it will not respond within the network. As soon as there are enough settings, the service will be enabled automatically.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service dhcp-relay**

(config)> **no service dhcp-relay**

**Example**

```
(config)> service dhcp-relay
service enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service dhcp-relay** command has been introduced. |

# 3.154 service dlna

**Description**

Enable *DLNA* service. If there are not enough settings to start the service (see **dlna**), it will not respond within the network. As soon as there are enough settings, the service will be enabled automatically.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service dlna**

(config)> **no service dlna**

**Example**

```
(config)> service dlna
DLNA server enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service dlna** command has been introduced. |

# 3.155 service dns-proxy

**Description**

Enable DNS-proxy. To configure the parameters of the service, use Section 3.22 on page 131 group of commands.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service dns-proxy**

**Example**

```
(config)> service dns-proxy
Dns::Manager: DNS proxy enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service dns-proxy** command has been introduced. |

# 3.156 service ftp

**Description** Enable FTP server that provides the user with access to connected USB-drives, configuration files and a file with firmware update.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service ftp**

(config)> **no service ftp**

**Example**

```
(config)> service ftp
FTP server enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service ftp** command has been introduced. |

# 3.157 service http

**Description** Enable HTTP server that provides the user with Web-interface to configure Hero.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service http**

(config)> **no service http**

**Example**

```
(config)> service http
HTTP server enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service http** command has been introduced. |

# 3.158 service igmp-proxy

**Description** Enable IGMP-proxy. For the service functioning it is necessary to have one `upstream` interface and at least one `downstream` interface. If there are not enough settings to run the service, the service will not function. As soon as there are enough settings, the service will start automatically.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service igmp-proxy**

(config)> **no service igmp-proxy**

**Example**

```
(config)> service igmp-proxy
IGMP proxy enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service igmp-proxy** command has been introduced. |

# 3.159 service internet-checker

**Description** Enable the Internet-checker to monitor the state of Internet connection on the device. By default, service is enabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service internet-checker**

(config)> **no service internet-checker**

**Example**

```
(config)> service internet-checker
Network::InternetChecker: Hosts check enabled.
```

```
(config)> no service internet-checker
Network::InternetChecker: Hosts check disabled.
```

**History**

| Version | Description |
|---|---|
| 2.13 | The **service internet-checker** command has been introduced. |

# 3.160 service iperf3

**Description** Enable the *iPerf3* server.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service iperf3**

(config)> **no service iperf3**

**Example**

```
(config)> service iperf3
Iperf3::Server: Already enabled.
```

```
(config)> no service iperf3
Iperf3::Server: Disabled.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **service iperf3** command has been introduced. |

# 3.161 service ipsec

**Description** Enable *IPsec* service. By default, service is disabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service ipsec**

(config)> **no service ipsec**

**Example**

```
(config)>service ipsec
IpSec::Manager: Service enabled.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **service ipsec** command has been introduced. |

# 3.162 service mdns

**Description** Enable *mDNS* service. By default, service is enabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service mdns**

(config)> **no service mdns**

**Example**

```
(config)>service mdns
```

```
(config)>no service mdns
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **service mdns** command has been introduced. |

# 3.163 service mws

**Description** Enable *MWS* service. By default, service is disabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service mws**

(config)> **no service mws**

**Example**

```
(config)> service mws
Mws::Controller: Enabled.
```

```
(config)> no service mws
Mws::Controller: Disabled.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **service mws** command has been introduced. |

# 3.164 service ntce

**Description** Enable *NTCE* service. By default it is disabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service ntce**

(config)> **no service ntce**

**Example**

```
(config)> service ntce
Ntce::Manager: Enabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **service ntce** command has been introduced. Previous command name is **service dpi**. |

# 3.165 service ntp

**Description** Enable *NTP* service. By default it is enabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service ntp**

(config)> **no service ntp**

**Example**

```
(config)> service ntp
Ntp::Client: NTP service enabled.
```

```
(config)> no service ntp
Ntp::Client: NTP service disabled.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **service ntp** command has been introduced. Previous command name is **service ntp-client**. |

# 3.166 service oc-server

**Description** Enable *OpenConnect* server.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service oc-server**

(config)> **no service oc-server**

**Example**

```
(config)> service oc-server
OcServer::Manager: Service enabled.
```

```
(config)> no service oc-server
OcServer::Manager: Service disabled.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **service oc-server** command has been introduced. |

# 3.167 service snmp

**Description** Enable *SNMP* service. By default, the service is disabled.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service snmp**

(config)> **no service snmp**

**Example**

```
(config)> service snmp
Snmp::Manager: SNMP service was enabled.
```

```
(config)> no service snmp
Snmp::Manager: SNMP service was disabled.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **service snmp** command has been introduced. |

# 3.168 service ssh

**Description**

Enable the SSH server that provides the user with command line interface to configure the device.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service ssh**

(config)> **no service ssh**

**Example**

```
(config)> service ssh
Ssh::Manager: SSH server enabled.
```

```
(config)> no service ssh
Ssh::Manager: SSH server disabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **service ssh** command has been introduced. |

# 3.169 service sstp-server

**Description**

Enable *SSTP* server.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service sstp-server**

(config)> **no service sstp-server**

**Example**

```
(config)> service sstp-server
SstpServer::Manager: Service enabled.
```

```
(config)> no service sstp-server
SstpServer::Manager: Service disabled.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **service sstp-server** command has been introduced. |

# 3.170 service telnet

**Description**

Enable the telnet server that provides the user with command line interface to configure the device.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service telnet**

(config)> **no service telnet**

**Example**

```
(config)> service tel
Telnet server enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service telnet** command has been introduced. |

# 3.171 service torrent

**Description**

Enable BitTorrent client that provides the user with peer-to-peer sharing of very large files, such as entire movies and TV shows.

Command with **no** prefix stops the service.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **service torrent**

(config)> **no service torrent**

**Example**

```
(config)> service torrent
server enabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **service torrent** command has been introduced. |

# 3.172 service udpxy

**Description** Enable *udpxy* service.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service udpxy**

(config)> **no service udpxy**

**Example**

```
(config)> service udpxy
Udpxy::Manager: a service enabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **service udpxy** command has been introduced. |

# 3.173 service upnp

**Description** Enable *UPnP* service.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service upnp**

(config)> **no service upnp**

**History**

| Version | Description |
|---|---|
| 2.00 | The **service upnp** command has been introduced. |

# 3.174 service vpn-server

**Description** Enable VPN server.

Command with **no** prefix stops the service.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **service vpn-server**

(config)> **no service vpn-server**

**Example**

```
(config)> service vpn-server
VpnServer::Manager: Service enabled.
```

```
(config)> no service vpn-server
VpnServer::Manager: Service disabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **service vpn-server** command has been introduced. |

# 3.175 show

**Description** Access to a group of commands to display various diagnostic information about system. All commands of this group do not change system settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (show)

**Synopsis**

(config)> **show**

**History**

| Version | Description |
|---|---|
| 2.00 | The **show** command has been introduced. |

## 3.175.1 show access

**Description** Show user access for directory on USB drive.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **access** ‹*directory*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *String* | Path to the folder on USB drive. |

**Example**

```
(show)> access PENDRIVE:doc

            user:
                name: admin
            assigned: write
           effective: write
              exists: yes
            user:
                name: test
            assigned: read
           effective: read
              exists: yes
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show access** command has been introduced. |

## 3.175.2 show acme

**Description** Show *ACME* client status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **acme**

**Example**

```
(show)> acme
    acme:
              real-time: yes
            ndns-domain: mytest.keenetic.pro
      ndns-domain-acme: yes
```

```
     ndns-domain-error: no
        default-domain: cc6b5a71a7644903b51a5454.keenetic.io
       account-pending: no
       account-running: no
           get-pending: no
           get-running: no
        revoke-pending: no
        revoke-running: no
    reissue-queue-size: 0
     revoke-queue-size: 0
               retries: 0
         checker-timer: 82499
           apply-timer: 0
          acme-account: 36902346
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **show acme** command has been introduced. |

## 3.175.3 show afp

**Description** Show *AFP* server status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **afp**

**Example**

```
(show)> afp
          enabled: yes
        automount: yes
       permissive: yes

            share:
                mount: C253-062D:
                label: FLASH
          timemachine: yes
          description:
               active: yes

            share:
                mount: C253-062D:/FOR_AFP
                label: AFP
          timemachine: yes
          description:
               active: yes
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show afp** command has been introduced. |

## 3.175.4 show associations

**Description** Show list of wireless stations associated with an access point. If you use no argument, the entire list of wireless stations will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Access Point

**Synopsis**

(show)> **associations** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | An access point name. You can see the list of available access points with help of **associations** [Tab] command. |

**Example**

```
(show)> associations [Tab]

 Usage template:
     associations [{name}]

   Choose:
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
 WifiMaster1/AccessPoint2
 WifiMaster0/AccessPoint1
                GuestWiFi
 WifiMaster1/AccessPoint3
 WifiMaster1/AccessPoint0
           AccessPoint_5G
```

```
(show)> associations WifiMaster0/AccessPoint0

          station:
                  mac: ec:1f:72:d3:6d:3f
                   ap: WifiMaster0/AccessPoint0
        authenticated: 1
                txrate: 130
                uptime: 3804
               txbytes: 2058837
```

```
              rxbytes: 25023483
                   ht: 20
                 mode: 11n
                   gi: 800
                 rssi: -26
                  mcs: 15

          station:
                  mac: 20:aa:4b:5c:09:0e
                   ap: WifiMaster0/AccessPoint0
        authenticated: 1
               txrate: 270
               uptime: 19662
              txbytes: 19450396
              rxbytes: 70800065
                   ht: 40
                 mode: 11n
                   gi: 800
                 rssi: -41
                  mcs: 15
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show associations** command has been introduced. |

## 3.175.5 show button

**Description**

Show information about specified system button. If you use no argument, the entire list of all buttons on the device will be displayed. Available buttons depend on hardware configuration.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **button** [‹*name*›]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The button name. |

**Example**

```
(show)> button FN1

          buttons:
               button, name = FN1:
                is_switch: no
                  position: 2
           position_count: 2
                   clicks: 0
```

```
                  elapsed: 0
                hold_delay: 3000
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show button** command has been introduced. |

## 3.175.6 show button bindings

**Description** Show a list of actions associated with device buttons.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **button bindings**

**Example**

```
(show)> button bindings

bindings:

          binding, index = 0:
               button: RESET
               action: click
       active_handler: Reboot
      default_handler: Reboot
            protected: yes

          binding, index = 1:
               button: RESET
               action: hold
       active_handler: FactoryReset
      default_handler: FactoryReset
            protected: yes

          binding, index = 2:
               button: WLAN
               action: click
       active_handler: WpsStartMainAp
      default_handler: WpsStartMainAp
            protected: no

          binding, index = 3:
               button: WLAN
               action: double-click
       active_handler: WpsStartMainAp5
      default_handler: WpsStartMainAp5
            protected: no
```

```
         binding, index = 4:
              button: WLAN
              action: hold
      active_handler: WifiToggle
     default_handler: WifiToggle
           protected: no

         binding, index = 5:
              button: FN1
              action: click
      active_handler: UnmountUsb1
     default_handler: UnmountUsb1
           protected: no

         binding, index = 6:
              button: FN1
              action: double-click
      active_handler:
     default_handler:
           protected: no

         binding, index = 7:
              button: FN1
              action: hold
      active_handler:
     default_handler:
           protected: no

         binding, index = 8:
              button: FN2
              action: click
      active_handler: UnmountUsb2
     default_handler: UnmountUsb2
           protected: no

         binding, index = 9:
              button: FN2
              action: double-click
      active_handler:
     default_handler:
           protected: no

         binding, index = 10:
              button: FN2
              action: hold
      active_handler:
     default_handler:
           protected: no
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show button bindings** command has been introduced. |

## 3.175.7 show button handlers

**Description** Show a list of available button handlers in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **button handlers**

**Example**

```
(show)> button handlers

         handlers:
              handler, name = LedToggle:
         short_description: toggle system LED states
                 protected: no
            switch_related: no

              handler, name = FactoryReset:
         short_description: reset a configuration to factory ►
defaults
                 protected: yes
            switch_related: no

              handler, name = UnmountUsb1:
         short_description: unmount USB 1 port storages
                 protected: no
            switch_related: no

              handler, name = UnmountUsb2:
         short_description: unmount USB 2 port storages
                 protected: no
            switch_related: no

              handler, name = Reboot:
         short_description: reboot the system
                 protected: yes
            switch_related: no

              handler, name = DlnaDirectoryRescan:
        short_description: rescan DLNA directory for newer media ►
files
                 protected: no
            switch_related: no

              handler, name = DlnaDirectoryFullRescan:
         short_description: remove a DLNA database and rescan a ►
DLNA directory
                 protected: no
            switch_related: no
```

```
             handler, name = DectHandsetRegistrationToggle:
         short_description: toggle a DECT handset registration
                 protected: no
            switch_related: no

             handler, name = DectHandsetPagingToggle:
         short_description: toggle a DECT handset paging
                 protected: no
            switch_related: no

             handler, name = OpkgRunScript:
         short_description: run Opkg script
                 protected: no
            switch_related: no

             handler, name = TorrentAltSpeedToggle:
        short_description: toggle a Torrent alternative speed ►
mode
                 protected: no
            switch_related: no

             handler, name = TorrentClientStateToggle:
         short_description: toggle a Torrent client state
                 protected: no
            switch_related: no

             handler, name = WifiToggle:
         short_description: on/off all Wi-Fi interfaces
                 protected: no
            switch_related: no

             handler, name = WpsStartMainAp:
        short_description: start WPS (2.4 GHz main access point)
                 protected: no
            switch_related: no

             handler, name = WpsStartMainAp5:
         short_description: start WPS (5 GHz main access point)
                 protected: no
            switch_related: no

             handler, name = WifiGuestApToggle:
          short_description: toggle a guest access point state ►
(2.4 GHz)
                 protected: no
            switch_related: no

             handler, name = WpsStartStation:
         short_description: start WPS (2.4 GHz Wi-Fi station)
                 protected: no
            switch_related: no

             handler, name = WpsStartStation5:
         short_description: start WPS (5 GHz Wi-Fi station)
```

```
                protected: no
           switch_related: no
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show button handlers** command has been introduced. |

## 3.175.8 show chilli profiles

**Description** Show the list of available *RADIUS* server profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **chilli profiles**

**Example**

```
(show)> chilli profiles

         profile:
                 name: Iron Wi-Fi
                  url: https://www.ironwifi.com/
          description: Hosted RADIUS and Captive Portal

               preset:
                uamserver: ►
https://europe-west3.ironwifi.com/api/pages/uam/

                   radius:
                      server1: 203.0.113.176

         radiuslocationid:

                      dns:
                         dns1: 8.8.8.8
                         dns2: 8.8.4.4

              custom: uamsecret

              custom: radiussecret

              custom: radiusnasid
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **show chilli profiles** command has been introduced. |

## 3.175.9 show cifs

**Description** Show *CIFS* server status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **cifs**

**Example**

```
(show)> cifs

          enabled: yes

           master: no

        automount: yes

       permissive: yes

            share:
                mount: 9430B54530B52EDC:
                label: 9430B54530B52EDC
          description:
               active: no
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show cifs** command has been introduced. |

## 3.175.10 show clock date

**Description** Show the current system date.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **clock date**

**Example**

```
(show)> clock date

          weekday: 4
              day: 18
            month: 1
             year: 2018
             hour: 8
```

```
             min: 46
             sec: 2
            msec: 660
             dst: inactive

              tz:
          locality: GMT
         stdoffset: 0
         dstoffset: 0
           usesdst: no
              rule: GMT0
            custom: no
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show clock date** command has been introduced. |

## 3.175.11 show clock timezone-list

**Description** Show the list of available timezones.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **clock timezone-list**

**Example**

```
(show)> clock timezone-list

       timezones:
                  tz:
                locality: Adak
               stdoffset: -36000
               dstoffset: -32400
                  tz:
                locality: Aden
               stdoffset: 10800
               dstoffset: -1
                  tz:
                locality: Almaty
               stdoffset: 21600
               dstoffset: -1
                  tz:
                locality: Amsterdam
               stdoffset: 3600
               dstoffset: 7200
                  tz:
                locality: Anadyr
               stdoffset: 43200
```

```
                dstoffset: -1
    ...
    ...
    ...
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show clock timezone-list** command has been introduced. |

## 3.175.12 show cloud

**Description** Show the status and statistics of the Cloud agent service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **cloud**

**Example**

```
(show)> cloud

            agent:
              service:
                          state: ACTIVE
                    token_alias: f1111ba19ac234234b35234234bff1cd
                          since: 1
                      loop_delay: 5
                   loop_interval: 17
                      loop_limit: 7
                      loop_sleep: 30
             tcp_connect_timeout: 10
                       serial_in: 920
                      serial_out: 963
                   direct_access: no
                       transport: udp
                     target_list: 192.0.2.238, 203.0.113.58, ►
198.51.100.68, 203.0.113.96, 198.51.100.67, 192.0.2.42
                     target_host: 192.0.2.238
                     target_port: 4044
                  suspend_timeout: 0
           session_check_timeout: 70283
                     status_code: 0

                     event_store:
                             tx: 48
                           retx: 2
                        dropped: 2
                       cack_hit: 46
```

```
                    cack_miss: 0
                      pending: 0

                domain: keenetic.io
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **show cloud** command has been introduced. |

## 3.175.13 show components status

**Description** Display components updates status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **component status**

**Example**

```
(show)> components status

           update:
                state: idle
```

```
(show)> components status

           update:
                state: running
              progress: 41
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **show components status** command has been introduced. |

## 3.175.14 show configurator status

**Description** Show information about system configurator.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **configurator status**

**Example**

```
(show)> configurator status

touch: Thu, 18 Oct 2018 14:37:25 GMT

           header, name = Model: Keenetic Giga

           header, name = Version: 2.06.1

           header, name = Agent: http/rci

          header, name = Last change: Thu, 18 Oct 2018 14:37:25 ►
GMT

          serving:
                 name: Session /var/run/ndm.core.socket
                 time: 0.000397

              request, host = 192.168.1.42, name = admin:
                   parse: show configurator status
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show configurator status** command has been introduced. |

## 3.175.15 show credits

**Description**

Show the license information about specified installed package in KeeneticOS. If you use no argument, the entire list of all installed packages on the device will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **credits** [ *‹package›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| package | *String* | Package name. |

**Example**

```
(show)> credits

          package:
                 name: accel-ppp
                title: High performance accel-ppp VPN server
             homepage: https://accel-ppp.org/

          package:
```

```
                name: accel-ppp-l2tp
               title: L2TP plugin for accel-ppp
            homepage: https://accel-ppp.org/

          package:
                name: accel-ppp-pptp
               title: PPTP plugin for accel-ppp
            homepage: https://accel-ppp.org/

          package:
                name: accel-ppp-sstp
               title: SSTP plugin for accel-ppp
            homepage: https://accel-ppp.org/

          package:
                name: avahi-daemon
               title: An mDNS/DNS-SD implementation (daemon)
            homepage: http://www.avahi.org/

          package:
                name: coova-chilli
               title: Wireless LAN HotSpot controller (Coova ►
Chilli Version)
            homepage: http://www.coova.org/CoovaChilli

          package:
                name: crconf
               title: Netlink-based CryptoAPI userspace ►
management utility
            homepage:

          package:
                name: dhcpv6
               title: DHCPv6 client + server
            homepage: http://wide-dhcpv6.sourceforge.net/

          package:
                name: dropbear
               title: Small SSH2 client/server
            homepage: http://matt.ucc.asn.au/dropbear/

          package:
                name: iperf3-ssl
               title: Internet Protocol bandwidth measuring ►
tool with iperf_auth support
            homepage: https://github.com/esnet/iperf

          package:
                name: kernel
               title: Linux kernel
            homepage: http://www.kernel.org/

          package:
                name: kmod-ipt-account
```

```
              title: ACCOUNT netfilter module
           homepage:

         package:
                name: kmod-ipt-chaos
               title: CHAOS netfilter module
           homepage:

         package:
                name: kmod-ipt-compat-xtables
               title: API compatibilty layer netfilter module
           homepage:

         package:
                name: kmod-ipt-condition
               title: Condition netfilter module
           homepage:

         package:
                name: kmod-ipt-delude
               title: DELUDE netfilter module
           homepage:

         package:
                name: kmod-ipt-dhcpmac
               title: DHCPMAC netfilter module
           homepage:

         package:
                name: kmod-ipt-dnetmap
               title: DNETMAP netfilter module
           homepage:

         package:
                name: kmod-ipt-fuzzy
               title: fuzzy netfilter module
           homepage:

         package:
                name: kmod-ipt-geoip
               title: geoip netfilter module
           homepage:

         package:
                name: kmod-ipt-iface
               title: iface netfilter module
           homepage:

         package:
                name: kmod-ipt-ipmark
               title: IPMARK netfilter module
           homepage:

         package:
```

```
                name: kmod-ipt-ipp2p
               title: IPP2P netfilter module
            homepage:

          package:
                name: kmod-ipt-ipv4options
               title: ipv4options netfilter module
            homepage:

          package:
                name: kmod-ipt-length2
               title: length2 netfilter module
            homepage:

          package:
                name: kmod-ipt-logmark
               title: LOGMARK netfilter module
            homepage:

          package:
                name: kmod-ipt-lscan
               title: lscan netfilter module
            homepage:

          package:
                name: kmod-ipt-netflow
              title: Netflow netfilter module for Linux kernel
            homepage: http://ipt-netflow.sourceforge.net/

          package:
                name: kmod-ipt-psd
               title: psd netfilter module
            homepage:

          package:
                name: kmod-ipt-quota2
               title: quota2 netfilter module
            homepage:

          package:
                name: kmod-ipt-sysrq
               title: SYSRQ netfilter module
            homepage:

          package:
                name: kmod-ipt-tarpit
               title: TARPIT netfilter module
            homepage:

          package:
                name: kmod-nf-nathelper-rtsp
               title: RTSP Conntrack and NAT helpers
            homepage: https://github.com/maru-sama/rtsp-linux
```

```
          package:
                 name: kmod-wireguard
                title: WireGuard kernel module
             homepage:

          package:
                 name: libattr
                title: Extended attributes (xattr) manipulation ►
library
             homepage: http://savannah.nongnu.org/projects/attr

          package:
                 name: libav
                title: This package contains Libav library
             homepage: https://libav.org/

          package:
                 name: libavahi
                title: An mDNS/DNS-SD implementation (No D-Bus)
             homepage: http://www.avahi.org/

          package:
                 name: libcurl
                title: A client-side URL transfer library
             homepage: http://curl.haxx.se/

          package:
                 name: libdaemon
                title: A lightweight C library that eases the ►
writing of UNIX daemons
             homepage: ►
http://0pointer.de/lennart/projects/libdaemon/

          package:
                 name: libdb47
                title: Berkeley DB library (4.7)
            homepage: http://www.sleepycat.com/products/db.shtml

          package:
                 name: libevent
                title: Event notification library
             homepage: http://www.monkey.org/~provos/libevent/

          package:
                 name: libexif
                title: Library for JPEG files with EXIF tags
             homepage: https://libexif.github.io

          package:
                 name: libexpat
                title: An XML parsing library
             homepage: https://libexpat.github.io/

          package:
```

```
                name: libgcrypt
               title: GNU crypto library
            homepage: ►
http://directory.fsf.org/security/libgcrypt.html

          package:
                name: libgpg-error
               title: GnuPG error handling helper library
            homepage: ►
http://www.gnupg.org/related_software/libgpg-error/

          package:
                name: libid3tag
               title: An ID3 tag manipulation library
            homepage: https://www.underbit.com/products/mad/

          package:
                name: libjpeg
              title: The Independent JPEG Group's JPEG runtime ►
library
            homepage: http://www.ijg.org/

          package:
                name: liblzo
               title: A real-time data compression library
            homepage: http://www.oberhumer.com/opensource/lzo/

          package:
                name: libnghttp2
               title: Library implementing the framing layer ►
of HTTP/2
            homepage: https://nghttp2.org/

          package:
                name: libopenssl
               title: Open source SSL toolkit (libraries ►
(libcrypto.so, libssl.so))
            homepage: http://www.openssl.org/

          package:
                name: libpcap
               title: Low-level packet capture library
            homepage: http://www.tcpdump.org/

          package:
                name: libtommath
              title: A free number theoretic multiple-precision ►
integer library
            homepage: https://www.libtom.net/

          package:
                name: libusb
              title: A library for accessing Linux USB devices
            homepage: http://libusb.info/
```

```
        package:
               name: mini_snmpd
              title: Lightweight SNMP daemon
         homepage: http://troglobit.github.io/mini-snmpd.html

        package:
               name: minidlna
              title: UPnP A/V & DLNA Media Server
           homepage: http://minidlna.sourceforge.net/

        package:
               name: miniupnpd
              title: Lightweight UPnP daemon
           homepage: http://miniupnp.tuxfamily.org/

        package:
               name: netatalk
              title: netatalk
           homepage: http://netatalk.sourceforge.net

        package:
               name: nginx
              title: Nginx web server
           homepage: http://nginx.org/

        package:
               name: nginx-stream-module
              title: Nginx stream module
           homepage:

        package:
               name: openvpn
              title: Open source VPN solution using OpenSSL
           homepage: http://openvpn.net

        package:
               name: pjproject
              title: PJSIP
           homepage: http://www.pjsip.org/

        package:
               name: pureftpd
              title: FTP server
           homepage: http://www.pureftpd.org

        package:
               name: radvd
              title: Router advertisement daemon
           homepage: http://www.litech.org/radvd/

        package:
               name: sstp-client
              title: SSTP client for Linux
```

```
            homepage: http://sstp-client.sourceforge.net/

          package:
                 name: strongswan
                title: Strongswan IKEv1/IKEv2 ISAKMP and IPSec ►
suite
            homepage: https://www.strongswan.org/

          package:
                 name: transmission-daemon
                title: A free, lightweight BitTorrent client
            homepage: http://www.transmissionbt.com

          package:
                 name: tspc
                title: TSP client
            homepage: http://www.broker.ipv6.ac.uk

          package:
                 name: tzdata
                title: Timezone data files
            homepage: https://www.iana.org/time-zones

          package:
                 name: udpxy
               title: Convert UDP IPTV streams into HTTP stream
            homepage: http://sourceforge.net/projects/udpxy

          package:
                 name: zlib
                title: Library implementing the deflate ►
compression method
            homepage: http://www.zlib.net/
```

```
(show)> credits nginx

          copying: /*
                   * Copyright (C) 2002-2019 Igor Sysoev
                   * Copyright (C) 2011-2019 Nginx, Inc.
                   * All rights reserved.
                   *
                  * Redistribution and use in source and binary ►
forms, with or without
                   * modification, are permitted provided that ►
the following conditions
                   * are met:
                   * 1. Redistributions of source code must ►
retain the above copyright
                  *    notice, this list of conditions and the ►
following disclaimer.
                   * 2. Redistributions in binary form must ►
reproduce the above copyright
                  *    notice, this list of conditions and the ►
following disclaimer in the
```

```
                    *    documentation and/or other materials ►
provided with the distribution.
                    *
                   * THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND ►
CONTRIBUTORS ``AS IS'' AND
                    * ANY EXPRESS OR IMPLIED WARRANTIES, ►
INCLUDING, BUT NOT LIMITED TO, THE
                   * IMPLIED WARRANTIES OF MERCHANTABILITY AND ►
FITNESS FOR A PARTICULAR PURPOSE
                    * ARE DISCLAIMED.  IN NO EVENT SHALL THE ►
AUTHOR OR CONTRIBUTORS BE LIABLE
                    * FOR ANY DIRECT, INDIRECT, INCIDENTAL, ►
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
                    * DAMAGES (INCLUDING, BUT NOT LIMITED TO, ►
PROCUREMENT OF SUBSTITUTE GOODS
                   * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; ►
OR BUSINESS INTERRUPTION)
                    * HOWEVER CAUSED AND ON ANY THEORY OF ►
LIABILITY, WHETHER IN CONTRACT, STRICT
                    * LIABILITY, OR TORT (INCLUDING NEGLIGENCE ►
OR OTHERWISE) ARISING IN ANY WAY
                    * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ►
ADVISED OF THE POSSIBILITY OF
                    * SUCH DAMAGE.
                    */
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **show credits** command has been introduced. |

## 3.175.16 show crypto ike key

**Description** Show info about selected *IKE* key. If you use no argument, the entire list of *IKE* keys will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **crypto ike key** [*name*]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of selected *IKE* key. |

**Example**

```
(show)> crypto ike key

            IpSec:
              ike_key, name = test:
```

```
                    type: address
                      id: 10.10.10.10

              ike_key, name = test2:
                    type: any
                      id: ►
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show crypto ike key** command has been introduced. |

## 3.175.17 show crypto map

**Description**

Show info about selected *IPsec* crypto map. If you use no argument, the entire list of *IPsec* crypto maps will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **crypto map** [*map-name*]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| map-name | *String* | Name of selected crypto map. |

**Example**

```
(show)> crypto map test

           IpSec:
          crypto_map, name = test:
                  config:
                           remote_peer: ipsec.example.com
            crypto_ipsec_profile_name: prof1
                                 mode: tunnel

                       local_network:
                            net: 172.16.200.0
                           mask: 24
                       protocol: IPv4

                      remote_network:
                            net: 172.16.201.0
                           mask: 24
                       protocol: IPv4

                 status:
              primary_peer: true

                      phase1:
```

```
                            name: test
                       unique_id: 572
                       ike_state: ESTABLISHED
                  establish_time: 1451301596
                      rekey_time: 0
                     reauth_time: 1451304277
                      local_addr: 10.10.10.15
                     remote_addr: 10.10.10.20
                     ike_version: 2
                       local_spi: 00a6ebfc9d90f1c2
                      remote_spi: 3cd201ef496df75c
                      local_init: yes
                      ike_cypher: aes-cbc-256
                        ike_hmac: sha1
                    ike_dh_group: 2

            phase2_sa_list:
                       phase2_sa, index = 0:
                           unique_id: 304
                          request_id: 185
                            sa_state: INSTALLED
                                mode: TUNNEL
                            protocol: ESP
                       encapsulation: yes
                           local_spi: ca59bfcf
                          remote_spi: cde23d83
                        ipsec_cypher: esp-aes-256
                          ipsec_hmac: esp-sha1-hmac
                       ipsec_dh_group:
                            in_bytes: 7152
                          in_packets: 115
                             in_time: 1451302507
                           out_bytes: 6008
                         out_packets: 98
                            out_time: 1451302507
                          rekey_time: 1451305159
                            local_ts: 172.16.200.0/24
                           remote_ts: 172.16.201.0/24

                          state: PHASE2_ESTABLISHED
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show crypto map** command has been introduced. |

## 3.175.18 show defaults

**Description** Show the general default wireless and system parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **defaults**

**Example**

```
(show)> defaults

       servicetag: *****92181
      servicehost: ndss.*.*
      servicepass: ***************
         wlanssid: Keenetic-0000
          wlankey: ********
          wlanwps: ********
          country: EA
          ndmhwid: KN-1013
          product: Giga
          ctrlsum: a******a4096b06a0f178abab3f2647d
           serial: S****WF******
        signature: valid
        integrity: ok
           locked: yes
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show defaults** command has been introduced. |

## 3.175.19 show device-list

**Description** Show the list of devices known to the system in the home network. If you use no arguments, the entire list of devices will be displayed. You can limit the output to a single device by its MAC address, or to the devices that are online right now.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **device-list** [ ( *‹mac›* | **online** ) ] [ **detail** *‹details›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of the host. Only this host will be displayed. |
| online | *Keyword* | Show only active hosts. |
| details | wireless | Additional information to include in the output. Several values can be specified separated by commas. |
| | switch | |
| | internet-access | |
| | shaper | |

| Argument | Value | Description |
|---|---|---|
| | account | |

**Example**

```
(show)> device-list

            host:
                 mac: 52:f2:20:d1:38:ee
                 via: 52:f2:20:d1:38:ee
                  ip: 192.168.1.39

                 ip6: fd26:5bbb:5f55:0:50f2:20ff:fed1:38ee

            hostname: MYHOST
                name: HOST
        mws-backhaul: no

           interface:
                     id: Bridge0
                   name: Home
             description: Home network

                dhcp:
                 expires: 14429

          registered: yes
              access: permit
            schedule:
              policy:
            priority: 6
              active: yes
             rxbytes: 8887939
             txbytes: 16946101
                link: up
    auto-negotiation: yes
               speed: 1000
              duplex: yes
                port: 1
              uptime: 287980
           first-seen: 287975
            last-seen: 2

       traffic-shape:
                     rx: 0
                     tx: 0
                   mode: mac
                schedule:

            host:
                 mac: c2:2d:44:26:03:63
                 via: c2:2d:44:26:03:63
                  ip: 192.168.1.82
                 ip6: fd26:5bbb:5f55:1:34de:b5aa:15ff:c4f0
```

```
                ip6: fd26:5bbb:5f55:1:5c36:cf5d:a297:6526

                ip6: fd26:5bbb:5f55:0:34de:b5aa:15ff:c4f0

                ip6: fd26:5bbb:5f55:0:5c36:cf5d:a297:6526

                ip6: fd26:5bbb:5f55:1:519d:6745:d25a:360b

                ip6: fd26:5bbb:5f55:0:e3c5:b6f6:9cf1:c76

            hostname: my-PC
                name: my
        mws-backhaul: no

           interface:
                     id: Bridge0
                   name: Home
             description: Home network

                dhcp:
                 expires: 14912

          registered: yes
              access: permit
            schedule:
              policy:
            priority: 6
              active: yes
             rxbytes: 36538924147
             txbytes: 5823883416
                link: up
    auto-negotiation: yes
               speed: 2500
              duplex: yes
                port: 5
              uptime: 123691
          first-seen: 287990
           last-seen: 2

       traffic-shape:
                     rx: 0
                     tx: 0
                   mode: mac
                schedule:
```

```
(show)> device-list online

            host:
                 mac: c2:3d:44:26:03:63
                 via: c2:3d:44:26:03:63
                  ip: 192.168.1.84

                 ip6: fd26:5bbb:5f55:1:34de:b5aa:15ff:c4f0
```

```
              ip6: fd26:5bbb:5f55:1:5c36:cf5d:a297:6526

              ip6: fd26:5bbb:5f55:0:34de:b5aa:15ff:c4f0

              ip6: fd26:5bbb:5f55:0:5c36:cf5d:a297:6526

              ip6: fd26:5bbb:5f55:1:519d:6745:d25a:360b

              ip6: fd26:5bbb:5f55:0:e3c5:b6f6:9cf1:c76

         hostname: bequiet-PC
             name: bequiet-PC
    mws-backhaul: no

        interface:
                  id: Bridge0
                name: Home
         description: Home network

             dhcp:
              expires: 17856

       registered: yes
           access: permit
         schedule:
           policy:
         priority: 6
           active: yes
          rxbytes: 95821449193
          txbytes: 6333548393
             link: up
auto-negotiation: yes
            speed: 2500
           duplex: yes
             port: 5
           uptime: 133347
      first-seen: 297646
       last-seen: 8

   traffic-shape:
                  rx: 0
                  tx: 0
               mode: mac
           schedule:

         host:
              mac: 61:2f:dd:f0:de:75
              via: 61:2f:dd:f0:de:75
               ip: 192.168.1.118

              ip6: fd26:5bbb:5f55:0:89f5:c7cc:c7fa:75ea

              ip6: fd26:5bbb:5f55:0:640f:ddff:fef0:de75
```

```
            hostname: MyHost
                name:
         mws-backhaul: no

            interface:
                      id: Bridge0
                    name: Home
              description: Home network

                dhcp:
                 expires: 25165

            registered: no
                access: permit
              schedule:
                policy:
              priority: 6
                active: yes
               rxbytes: 0
               txbytes: 0
                  link: down
                uptime: 36
             first-seen: 8714
              last-seen: 8

        traffic-shape:
                      rx: 0
                      tx: 0
                    mode: mac
                schedule:
```

```
(show)> device-list detail wireless

             host:
                  mac: 62:1f:ad:f0:de:75
                  via: 62:1f:ad:f0:de:75
                   ip: 192.168.1.119
                  ip6:
             hostname: MyHost
                 name:
          mws-backhaul: no

             interface:
                       id: Bridge0
                     name:
               description:

                 dhcp:
                  expires: 25154

             registered: no
                 access: permit
               schedule:
```

```
              policy:
            priority: 6
              active: yes
             rxbytes: 0
             txbytes: 0
                link: up
                ssid: MyTest

                 mld:
                      ap: WifiMaster0/AccessPoint1
                     psm: yes
                     mld: yes
          authenticated: yes
                txrate: 1
                uptime: 46
                    ht: 20
                  mode: 11b
                    gi: 800
                  rssi: -38
                   mcs: 0
                  txss: 1
                   ebf: yes

                    _11: k

                    pmf: yes
               security: wpa3-psk

                 mld:
                      ap: WifiMaster1/AccessPoint1
                     psm: yes
                     mld: yes
          authenticated: yes
                txrate: 1201
                uptime: 46
                    ht: 80
                  mode: 11be
                    gi: 800
                  rssi: -37
                   mcs: 11
                  txss: 2
                   ebf: yes
                 dl-mu: yes
                 ul-mu: yes
              dl-ofdma: yes

                    _11: k

                    _11: r

                    _11: v

                    pmf: yes
               security: wpa3-psk
```

```
              uptime: 47
           first-seen: 42
            last-seen: 1

         traffic-shape:
                       rx: 0
                       tx: 0
                     mode: mac
                 schedule:
```

```
(show)> device-list 62:0f:dd:f1:de:43

              host:
                   mac: 62:0f:dd:f1:de:43
                   via: 62:0f:dd:f1:de:43
                    ip: 192.168.1.114
                   ip6:
              hostname: MyHost2
                  name:
          mws-backhaul: no

             interface:
                       id: Bridge0
                     name: Home
              description: Home network

                  dhcp:
                   expires: 24143

            registered: no
                access: permit
              schedule:
                policy:
              priority: 6
                active: yes
               rxbytes: 0
               txbytes: 0
                  link: up
                  ssid: MyTest

                   mld:
                        ap: WifiMaster0/AccessPoint1
                       psm: yes
                       mld: yes
             authenticated: yes
                    txrate: 1
                    uptime: 1018
                        ht: 20
                      mode: 11b
                        gi: 800
                      rssi: -38
                       mcs: 0
                      txss: 1
```

```
                    ebf: yes

                   _11: k

                    pmf: yes
               security: wpa3-psk

                mld:
                     ap: WifiMaster1/AccessPoint1
                    psm: yes
                    mld: yes
          authenticated: yes
                 txrate: 1080
                 uptime: 1018
                     ht: 80
                   mode: 11be
                     gi: 800
                   rssi: -37
                    mcs: 10
                   txss: 2
                    ebf: yes
                  dl-mu: yes
                  ul-mu: yes
               dl-ofdma: yes

                   _11: k

                   _11: r

                   _11: v

                    pmf: yes
               security: wpa3-psk

             uptime: 1018
          first-seen: 1053
           last-seen: 13

       traffic-shape:
                    rx: 0
                    tx: 0
                  mode: mac
               schedule:
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **show device-list** command has been introduced. |

## 3.175.20 show dlna

**Description** Show DLNA server status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dlna**

**Example**

```
(show)> dlna

          running: yes
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show dlna** command has been introduced. |

## 3.175.21 show dns-proxy

**Description** Show a list of current *DNS over TLS* and *DNS over HTTPS* servers.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dns-proxy**

**Example**

```
(show)> dns-proxy

     proxy-status:
              proxy-name: System

            proxy-config:

rpc_port = 54321
rpc_ttl = 10000
rpc_wait = 10000
timeout = 7000
proceed = 500
stat_file = /var/ndnproxymain.stat
stat_time = 10000
rr_port = 40901
dns_server = 127.0.0.1:40500 . # 1.1.1.1@cloudflare-dns.com
dns_server = 127.0.0.1:40501 . # 1.0.0.1@cloudflare-dns.com
dns_server = 127.0.0.1:40502 . # 9.9.9.9@dns.quad9.net
dns_server = 127.0.0.1:40503 . # 8.8.8.8@dns.google
static_a = my.keenetic.net 198.51.100.11 1
static_aaaa = my.keenetic.net 2001:2::c633:640b 1
rpc_const = on
static_aaaa = mytest123.keenetic.pro 2001:2::c633:640b 1
```

```
static_a = cc6b5a71a7644903b51a5454.keenetic.io 198.51.100.11 1
static_aaaa = cc6b5a71a7644903b51a5454.keenetic.io ►
2001:2::c633:640b 1
static_a = mytest123.keenetic.pro 198.51.100.11 1
norebind_ctl = on
norebind_ip4net = 192.168.1.1:24
norebind_ip4net = 255.255.255.255:32
has_vpn_clients = off
set-profile-ip 127.0.0.1 0
set-profile-ip ::1 0
dns_tcp_port = 53
dns_udp_port = 53
fqdn_mirror_path = /var/run/fqdn-dns-mirror.sock


             proxy-stat:

# ndnproxy statistics file

Total incoming requests: 18
Proxy requests sent:     18
Cache hits ratio:        0.056 (1)
Memory usage:            19.03K

DNS Servers

                      Ip   Port  R.Sent  A.Rcvd  NX.Rcvd  ►
Med.Resp  Avg.Resp  Rank
               127.0.0.1  40500       0       0        0       ►
0ms       0ms     2
               127.0.0.1  40501       1       1        0       ►
80ms      80ms     6
               127.0.0.1  40502       1       1        0     ►
141ms     141ms     4
               127.0.0.1  40503      16      15        0       ►
23ms      34ms    10

              proxy-safe:


               proxy-tls:
               server-tls:
                      address: 1.1.1.1
                          sni: cloudflare-dns.com
                         spki:
                    interface:
                       domain:

               server-tls:
                      address: 1.0.0.1
                          sni: cloudflare-dns.com
                         spki:
                    interface:
                       domain:
```

```
              server-tls:
                     address: 9.9.9.9
                         sni: dns.quad9.net
                        spki:
                   interface:
                      domain:

              server-tls:
                     address: 8.8.8.8
                         sni: dns.google
                        spki:
                   interface:
                      domain:

      proxy-tls-filters:
            proxy-https:
    proxy-https-filters:
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **show dns-proxy** command has been introduced. |

## 3.175.22 show dns-proxy filter presets

**Description** Show the list of filtering presets. There is always at least 1 preset, but can be many more.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dns-proxy filter presets** [ *‹lang›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `lang` | *String* | Language to show in “description” and “short-description” fields. If requested lang is absent English version will be returned. |

**Output**

| Element | Description |
|---|---|
| `description` | Long readable profile description. Has translation map. |
| `id` | Short name to be used in **dns-proxy** commands. |
| `short-description` | Short description to be used in combo-boxes and titles. Has translation map. |
| `stale` | Set to true when preset is obsolete and no longer works. |

**Example**

```
(show)> dns-proxy filter presets en

          version: 4

          presets:
                    id: opendns-family
                   url: ►
https://www.opendns.com/home-internet-security/
                 stale: no
     short-description: OpenDNS - FamilyShield
           description: Blocks domains that are categorized as ►
Tasteless, Proxy/Anonymizer, Sexuality and Pornography.

          presets:
                    id: quad9-security
                   url: https://quad9.net/home/individuals/
                 stale: no
     short-description: Quad9 - Security Protection
           description: Blocks malicious hostnames to protect ►
against a wide range of threats such as malware, phishing, ►
spyware, and botnets. Improves performance in addition to ►
guaranteeing
                        privacy.

          presets:
                    id: cleanbrowsing-security
                   url: https://cleanbrowsing.org/filters
                 stale: no
     short-description: CleanBrowsing - Security Filter
          description: Blocks access to phishing, spam, malware ►
and malicious domains. Our database of malicious domains is ►
updated hourly and considered to be one of the best in the ►
industry.
                       Note that it does not block adult content.

          presets:
                    id: cleanbrowsing-adult
                   url: https://cleanbrowsing.org/filters
                 stale: no
     short-description: CleanBrowsing - Adult Filter
          description: Blocks access to all adult, pornographic ►
and explicit sites. It does not block proxy or VPNs, nor ►
mixed-content sites. Sites like Reddit are allowed. Google and ►
Bing are set
                       to the Safe Mode. Malicious and Phishing ►
domains are blocked.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **show dns-proxy filter presets** command has been introduced. |

## 3.175.23 show dns-proxy filter profiles

**Description** Show the list of filtering profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dns-proxy filter profiles**

**Example**

```
(show)> dns-proxy filter profiles

         profiles:
                   id: DnsProfile0
          description: test
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **show dns-proxy filter profiles** command has been introduced. |

## 3.175.24 show dpn document

**Description** Show *DPN* agreement text.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dpn document** [ *‹version›* ] [ *‹language›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `version` | *String* | Version of *DPN*. If not specified, the latest version is shown. |
| `language` | *String* | The language of *DPN*. If not specified, the English version is shown. |

**Example**

```
(show)> dpn document
20200330

DEVICE PRIVACY NOTICE

Last update 2020-30-03

This End User License Agreement (this “Agreement”) constitutes ►
```

```
a valid and
binding agreement between Keenetic Limited, including all ►
affiliates and
subsidiaries (“Keenetic”, “us”, “our” or “we”) and You (as ►
defined below)
of the Software (as defined below), including the Software ►
installed onto
any one of our Keenetic products (the “Product”) and/or the ►
Software
legally obtained from or provided by an App Platform (as defined ►
below)
authorised by Keenetic. Keenetic and You shall be collectively ►
referred to
as the “Parties”, and individually as a “Party”.
```

```
(show)> dpn document 20200330 es
20200330

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Última actualización 30/03/2020

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Plataforma de la aplicación (tal y como se define a continuación)
autorizado por Keenetic. Se referirá a Keenetic y Usted, en ►
conjunto, como
las ”Partes“ y, de forma individual, como una ”Parte“.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show dpn document** command has been introduced. |

## 3.175.25 show dpn list

**Description** Show the list of *DPN* available in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dpn list**

**Example**

```
(show)> dpn list
              dpn:
              version: 20200330

             document:
                     lang: de

                   format: txt

                   format: md

             document:
                     lang: en

                   format: txt

                   format: md

             document:
                     lang: es

                   format: txt

                   format: md

             document:
                     lang: fr

                   format: txt

                   format: md

             document:
                     lang: it

                   format: txt

                   format: md

             document:
                     lang: pl

                   format: txt

                   format: md

             document:
                     lang: pt

                   format: txt
```

```
                format: md

            document:
                lang: ru

                format: txt

                format: md

            document:
                lang: sv

                format: txt

                format: md

            document:
                lang: tr

                format: txt

                format: md

            document:
                lang: uk

                format: txt

                format: md
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show dpn list** command has been introduced. |

## 3.175.26 show dot1x

**Description** Show 802.1x client status on the interface. To manage 802.1x client status on the interface authentication must be configured with **interface authentication** group of commands.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

(show)> **dot1x** [ *interface* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | An Ethernet interface name. You can see the list of available Ethernet interfaces with help of **dot1x** [Tab] command. |

**Example**

```
(show)> dot1x [Tab]

 Usage template:
           dot1x [{name}]

   Choose:
         GigabitEthernet1
                       ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
```

```
(show)> dot1x ISP

           dot1x:
                  id: GigabitEthernet1
               state: CONNECTING
```

**History**

| Version | Description |
|---|---|
| 2.02 | The **show dot1x** command has been introduced. |

## 3.175.27 show drivers

**Description** Show the list of loaded kernel drivers.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **drivers**

**Example**

```
(show)> drivers

           module:
                 name: rt2860v2_sta
                 size: 546736
                 used: 0
                 subs: -
           module:
                 name: rt2860v2_ap
```

```
                size: 554192
                used: 2
                subs: -
          module:
                name: rndis_host
                size: 5024
                used: 0
                subs: -
          module:
                name: dwc_otg
                size: 68416
                used: 0
                subs: -
          module:
                name: lm
                size: 1344
                used: 1
                subs: dwc_otg,[permanent]
    ...
    ...
    ...
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show drivers** command has been introduced. |

## 3.175.28 show dyndns updaters

**Description** Show the list of available DynDNS providers.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **dyndns updaters**

**Example**

```
(show)> dyndns updaters

          updater:
                type: dyndns
                 url: https://account.dyn.com/dns/dyndns
                 api: http://members.dyndns.org/nic/update

          updater:
                type: noip
                 url: https://www.noip.com/
                 api: http://dynupdate.no-ip.com/nic/update
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **show dyndns updaters** command has been introduced. |

## 3.175.29 show easyconfig status

**Description** Show EasyConfig status and settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **easyconfig status**

**Example**

```
(show)> easyconfig status

easyconfig:
            checked: Thu Nov  5 10:33:26 2026
            enabled: yes
           reliable: yes
 gateway-accessible: yes
     dns-accessible: yes
 captive-accessible: yes
           internet: yes
            gateway:
            interface: GigabitEthernet1
              address: 192.168.2.1
             failures: 0
           accessible: yes
             excluded: no
            captive:
                host: captive.example.net
             response: 200 (OK)
             location:
             failures: 0
             resolved: yes
              address: *.119.198.*
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show easyconfig status** command has been introduced. |

## 3.175.30 show eula document

**Description** Show *EULA* agreement text.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **eula document** [ *‹version›* ] [ *‹language›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| version | *String* | Version of *EULA*. If not specified, the latest version is shown. |
| language | *String* | The language of *EULA*. If not specified, the English version is shown. |

**Example**

```
(show)> eula document 20181001
20181001

Keenetic LIMITED
End User License Agreement

This End User License Agreement (this “Agreement”) constitutes ►
a valid and binding agreement between Keenetic Limited, including ►
all affiliates and subsidiaries (“Keenetic”, “us”, “our” or “we”) ►
and You (as
defined below) of the Software (as defined below), including the ►
Software installed onto any one of our Keenetic products (the ►
“Product”) and/or the Software legally obtained from or provided ►
by an App Platform
(as defined below) authorised by Keenetic. Keenetic and You shall ►
be collectively referred to as the “Parties”, and individually ►
as a “Party”.
```

```
(show)> eula document 20181001 ru
20181001

Keenetic LIMITED
Лицензионное соглашение с конечным пользователем

Настоящее Лицензионное соглашение с конечным пользователем ►
(настоящее «Соглашение») представляет собой действительное и ►
обязательное соглашение между Keenetic Limited, включая все ►
связанные с ней компании и все
её подразделения («Keenetic», «нам», «наш» или «мы»), и Вами ►
(как определено ниже) о Программном обеспечении (как определено ►
ниже), включая Программное обеспечение, устанавливаемое на любом ►
из продуктов
производства Keenetic («Продукт») и/или Программное обеспечение, ►
полученное на законных основаниях или предоставленное Магазином ►
Приложений (как определено ниже), авторизованной Keenetic. ►
Keenetic и Вы вместе
упоминаетесь как «Стороны», а по отдельности – «Сторона».
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **show eula document** command has been introduced. |

## 3.175.31 show eula list

**Description** Show the list of *EULA* available in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(show)>  eula list
```

**Example**

```
(show)> eula list
              eula:
              version: 20181001

             document:
                     lang: en

                   format: md

                   format: txt

             document:
                     lang: ru

                   format: md

                   format: txt

             document:
                     lang: tr

                   format: md

                   format: txt

             document:
                     lang: uk

                   format: md

                   format: txt
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **show eula list** command has been introduced. |

# 3.175.32 show interface

**Description** Show information of specified interface. If you use no argument, the entire list of all network interfaces will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Synopsis**

(show)> **interface** ‹*name*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Example**

### Example 3.1. Review the status of switch ports

The command **show interface** displays different information depending on the interface type. In particular, for `GigabitEthernet0` switch it shows current state of physical ports, speed and duplex, on top of general information.

```
(config)> show interface GigabitEthernet0

              id: GigabitEthernet0
           index: 0
            type: GigabitEthernet
     description:
  interface-name: GigabitEthernet0
            link: up
       connected: yes
           state: up
             mtu: 1500
        tx-queue: 2000

            port, name = 1:
                  id: GigabitEthernet0/0
               index: 0
      interface-name: 1
                type: Port
                link: up
               speed: 1000
              duplex: full
    auto-negotiation: on
        flow-control: on
                 eee: off
         last-change: 4578.185413
       last-overflow: 0
              public: no
```

```
           port, name = 2:
                 id: GigabitEthernet0/1
              index: 1
    interface-name: 2
              type: Port
              link: down
       last-change: 4590.205656
     last-overflow: 0
            public: no

           port, name = 3:
                 id: GigabitEthernet0/2
              index: 2
    interface-name: 3
              type: Port
              link: up

              role, for = GigabitEthernet0/Vlan2: inet

             speed: 100
            duplex: full
  auto-negotiation: on
      flow-control: off
               eee: off
       last-change: 4570.078144
     last-overflow: 0
            public: yes

           port, name = 4:
                 id: GigabitEthernet0/3
              index: 3
    interface-name: 4
              type: Port
              link: down
       last-change: 4590.202571
     last-overflow: 0
            public: no
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show interface** command has been introduced. |

## 3.175.33 show interface antennas

**Description** Show antenna signal strength.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(show)> **interface** ‹*name*› **antennas**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Output**

| Element | Description |
|---|---|
| channel | Antenna number. |
| rssi | Received signal strength indicator. |
| rsrq | Reference signal received quality for 4G only. |
| rsrp | Reference signal received power for 4G only. |
| phase | Offset phase for 4G only. |
| ecio | Ratio of the received/good energy to the interference/bad energy for 3G only. |

**Example**

```
(show)> interface UsbQmi0 antennas

          antenna:
              channel: 0
                 rssi: -61
                 rsrp: -81
                 rsrq: -8
                phase: 0

          antenna:
              channel: 1
                 rssi: -94
                 rsrp: -120
                 rsrq: -10
                phase: 6
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show interface antennas** command has been introduced. |

## 3.175.34 show interface bands

**Description** Show available 3G/LTE bands.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(show)> **interface** *‹name›* **bands**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(show)> interface UsbQmi0 bands

            umts:
                band: 1
             enabled: yes

            umts:
                band: 5
             enabled: yes

             lte:
                band: 1
             enabled: yes

             lte:
                band: 3
             enabled: yes

             lte:
                band: 7
             enabled: yes

             lte:
                band: 20
             enabled: yes
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show interface bands** command has been introduced. |

## 3.175.35 show interface bridge

**Description** Display interface bridge status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Bridge

**Synopsis**

(show)> **interface** *‹name›* **bridge**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Output**

| Element | Value |
|---|---|
| members | Root node. |
| interface | Interface name. |
| link | Link state of interface. |
| inherited | Attribute of inheritance. |

**Example**

```
(show)> interface Bridge1 bridge

          members:
            interface, link = no, inherited = yes:
                       WifiMaster0/AccessPoint2
            interface, link = yes: UsbLte0
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show interface bridge** command has been introduced. |

## 3.175.36 show interface cells

**Description** Show base stations in mobile networks.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(show)> **interface** *‹name›* **cells**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Output**

| Element | Description |
|---|---|
| phy-id | Cell identity (Cell ID). |
| rssi | Received signal strength indicator. |

**Example**

```
(show)> interface UsbQmi0 cells

            cells:
                phy-id: fc
                 rssi: -71

            cells:
               phy-id: 15b
                 rssi: -71

            cells:
               phy-id: 187
                 rssi: -72
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show interface cells** command has been introduced. |

## 3.175.37 show interface channel-utilization rrd

**Description** Show specific data from the channel utilization monitor.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** *‹name›* **channel-utilization rrd** *‹attribute›* [ *‹detail›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the Wi-Fi interface. |
| attribute | load | Channel load percentage. |
| | valid | The data is valid. |
| detail | 0 | RRD detalization level 64 x 3-seconds. It is used by default if the parameter is not specified. |
| | 1 | RRD detalization level 64 x 1-minutes. |
| | 2 | RRD detalization level 64 x 3-minutes. |
| | 3 | RRD detalization level 64 x 30-minutes. |

**Example**

```
(show)> interface WifiMaster1 channel-utilization rrd load 1

            data:
                   t: 578928.500000
                   v: 0

            data:
                   t: 578868.500000
                   v: 1

            data:
                   t: 578808.500000
                   v: 1

            data:
                   t: 578748.500000
                   v: 2

            data:
                   t: 578688.500000
                   v: 1

            data:
                   t: 578628.500000
                   v: 0

            data:
                   t: 578568.500000
                   v: 1

            data:
                   t: 578508.500000
                   v: 1

            data:
                   t: 578448.500000
                   v: 1

            data:
                   t: 578388.500000
                   v: 0

            data:
                   t: 578328.500000
                   v: 1

            data:
                   t: 578268.500000
                   v: 1

            data:
                   t: 578208.500000
                   v: 1
```

```
            data:
                   t: 578148.500000
                   v: 6

            data:
                   t: 578088.500000
                   v: 1

            data:
                   t: 578028.500000
                   v: 11
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **show interface channel-utilization rrd** command has been introduced. |

## 3.175.38 show interface channels

**Description** Show information about the specified wireless interface channels.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Radio

**Synopsis**

(show)> **interface** ‹*name*› **channels**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Output**

| Element | Value |
|---|---|
| channels | Root node. |
| channel, index | Record number in the list. |
| number | Channel number. |
| ext-40-above | Ability to expand channel above. |
| ext-40-below | Ability to expand channel below. |
| vhc-80 | Ability to expand channel up to 80 MHz. |

**Example**

```
(show)> interface WifiMaster0 channels

         channels:
```

```
              channel, index = 0:
                   number: 1
             ext-40-above: yes
             ext-40-below: no
                   vht-80: yes

              channel, index = 1:
                   number: 2
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 2:
                   number: 3
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 3:
                   number: 4
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 4:
                   number: 5
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 5:
                   number: 6
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 6:
                   number: 7
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes

              channel, index = 7:
                   number: 8
             ext-40-above: yes
             ext-40-below: yes
                   vht-80: yes
...
...
...
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show interface channels** command has been introduced. |

## 3.175.39 show interface chilli

**Description** Show information about statistics of connected clients to the *RADIUS* hotspot.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **chilli**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface Chilli0 chilli

            host:
         session-id: 4bf7c55f00000006
               user: 44w3c1
                 ip: 10.1.30.3
                mac: 55:a3:f9:51:b4:11
         start-time: 3884
           end-time: 0
          idle-time: 9
     idle-time-limit: 0
           tx-bytes: 695682
      tx-bytes-limit: 0
           rx-bytes: 1627453
      rx-bytes-limit: 0
           tx-speed: 0
      tx-speed-limit: 0
           rx-speed: 0
      rx-speed-limit: 0
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **show interface chilli** command has been introduced. |

## 3.175.40 show interface country-codes

**Description** Show the list of available country codes on a radio interface.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Radio

**Synopsis**

(show)> **interface** ‹*name*› **country-codes**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Output**

| Element | Value |
|---|---|
| country-codes | Root node. |
| code | Country code. |
| country | Country name. |

**Example**

```
(show)> interface WifiMaster0 country-codes

    country-codes:
         country-code:
                     code: AL
                  country: Albania

         country-code:
                     code: DZ
                  country: Algeria

         country-code:
                     code: AR
                  country: Argentina

         country-code:
                     code: AM
                  country: Armenia

         country-code:
                     code: AU
                  country: Australia
...
...
...
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show interface country-codes** command has been introduced. |

## 3.175.41 show interface esim status

**Description** Show the *eSIM* status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **esim status**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface UsbLte0 esim status

eid: 89086030202200000025000000665360
       ds-address: testrootsmds.gsma.com
  profile-version: 2.3.1
 firmware-version: 4.2.0
   free-nv-memory: 296629
      free-memory: 13887
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **show interface esim status** command has been introduced. |

## 3.175.42 show interface mac

**Description** Show the table of MAC addresses of the switch.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Switch

**Synopsis**

(show)> **interface** ‹*name*› **mac**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Example**

```
(show)> interface GigabitEthernet0 mac
============================================================
Port  MAC                         Aging
============================================================
0     b0:b2:dc:70:c4:28           6
0     f0:1b:21:6d:9a:c5           4
0     00:0c:43:76:20:77           6
0     b4:18:d1:6e:b5:6a           3
0     40:4a:03:78:01:af           2
0     84:8e:0c:3f:79:05           5
0     ec:43:f6:73:0a:99           6
0     ec:43:f6:04:2b:05           6
0     b2:b2:dc:5f:09:b3           1
0     ec:43:f6:72:4e:51           6
0     00:30:48:93:91:a7           6
0     f0:c1:f1:95:c3:fb           5
0     b8:ca:3a:8a:c7:43           6
0     ec:43:f6:da:78:79           5
0     10:7b:ef:59:7b:61           2
0     ec:43:f6:ff:f8:8b           6
0     58:8b:f3:65:8c:91           5
0     ec:43:f6:cf:0e:ef           2
0     00:ee:bd:a1:18:51           6
0     ec:43:f6:72:4e:69           6
0     90:e2:ba:07:9a:81           6
0     00:00:5e:00:01:01           6
0     00:08:9b:dc:8d:17           4
0     50:e5:49:58:2b:5a           6
0     90:e2:ba:07:99:55           6
0     ec:43:f6:04:36:8d           6
0     ec:43:f6:05:44:49           6
0     de:06:21:02:b3:e2           6
0     40:4a:03:60:80:05           6
0     00:0c:29:d5:84:c0           6
0     00:08:9b:dc:92:55           6
0     00:08:9b:dc:92:56           6
0     00:1b:0c:7f:b6:41           6
0     10:2a:b3:a6:86:18           5
0     10:7b:ef:df:83:a7           1
0     01:00:5e:00:00:fb           0
........................
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show interface mac** command has been introduced. |

## 3.175.43 show interface name-server

**Description** Show a list of current addresses of DNS resolvers used on the interface.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **name-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface WifiMaster1/WifiStation0 name-server

          server:
             address: 1.1.1.1
                port: 0
              domain:
              global: 0
             service: Dns::Manager
           interface:

          server:
             address: 9.9.9.9
                port: 0
              domain:
              global: 0
             service: Dns::Manager
           interface:

          server:
             address: 8.8.8.8
                port: 0
              domain:
              global: 0
             service: Dns::Manager
           interface:

          server:
             address: 192.168.133.1
                port: 0
              domain:
              global: 65318
             service: WifiMaster1/WifiStation0 DHCP client
           interface: WifiMaster1/WifiStation0

      server-tls:
             address: 8.8.8.8
                port: 0
                 sni: dns.google
                spki:
           interface:
              domain:
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **show interface name-server** command has been introduced. |

## 3.175.44 show interface operators

**Description**

Show list of available mobile operators. Before running this command, you must first run the network scan command **interface mobile scan**. After the scan is complete, the list will be available until the modem is restarted.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Interface type**

Usb

**Synopsis**

(show)> **interface** ‹*name*› **operators**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(show)> interface UsbQmi0 operators

         scanning: complete
              age: 80

         operator:
                 plmn: 25011
                 name: YOTA
               mobile: 4G

               status: used

               status: preferred

         operator:
                 plmn: 25099
                 name: Beeline
               mobile: 4G

               status: available

               status: roaming

               status: forbidden
```

```
        operator:
                plmn: 25020
                name: Tele2
              mobile: 3G

              status: available

              status: roaming

              status: forbidden

        operator:
                plmn: 25001
                name: MTS
              mobile: 3G

              status: available

              status: roaming

              status: forbidden

        operator:
                plmn: 25099
                name: Beeline
              mobile: 3G

              status: available

              status: roaming

              status: forbidden

        operator:
                plmn: 25020
                name: Tele2
              mobile: 4G

              status: available

              status: roaming

              status: forbidden

        operator:
                plmn: 25001
                name: MTS
              mobile: 4G

              status: available

              status: roaming

              status: forbidden
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **show interface operators** command has been introduced. |

## 3.175.45 show interface rf e2p

**Description** Show the current contents of all calibration data cells.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Radio

**Synopsis**

(show)> **interface** ‹*name*› **rf e2p**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface to display. |

**Example**

```
(show)> interface WifiMaster0 rf e2p

[0x0000]:5392  [0x0002]:0103  [0x0004]:43EC  [0x0006]:04F6
[0x0008]:042B  [0x000A]:5392  [0x000C]:1814  [0x000E]:8001
[0x0010]:0000  [0x0012]:5392  [0x0014]:1814  [0x0016]:0000
[0x0018]:0001  [0x001A]:FF6A  [0x001C]:0213  [0x001E]:FFFF
[0x0020]:FFFF  [0x0022]:FFC1  [0x0024]:9201  [0x0026]:FFFF
[0x0028]:43EC  [0x002A]:04F6  [0x002C]:052B  [0x002E]:FFFF
[0x0030]:758E  [0x0032]:4301  [0x0034]:FF22  [0x0036]:0025
[0x0038]:FFFF  [0x003A]:012D  [0x003C]:FFFF  [0x003E]:FAD9
[0x0040]:88CC  [0x0042]:FFFF  [0x0044]:FF0A  [0x0046]:0000
[0x0048]:0000  [0x004A]:0000  [0x004C]:0000  [0x004E]:FFFF
[0x0050]:FFFF  [0x0052]:1111  [0x0054]:1111  [0x0056]:1111
[0x0058]:1011  [0x005A]:1010  [0x005C]:1010  [0x005E]:1010
[0x0060]:1111  [0x0062]:1211  [0x0064]:1212  [0x0066]:1312
[0x0068]:1313  [0x006A]:1413  [0x006C]:1414  [0x006E]:2264
[0x0070]:00F1  [0x0072]:1133  [0x0074]:0000  [0x0076]:FC62
[0x01E8]:FFFF  [0x01EA]:FFFF  [0x01EC]:FFFF  [0x01EE]:FFFF
[0x01F0]:FFFF  [0x01F2]:FFFF  [0x01F4]:FFFF  [0x01F6]:FFFF
[0x01F8]:FFFF  [0x01FA]:FFFF  [0x01FC]:FFFF  [0x01FE]:FFFF
................................
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **show interface rf e2p** command has been introduced. |

# 3.175.46 show interface rrd

**Description** Show network interface loading on the principle of Round Robin Database.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **rrd** ‹*attribute*› [ ‹*detail*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |
| attribute | rxspeed | Value of data rate type. |
| | txspeed | |
| detail | 0 | Level of detail is 1 second. |
| | 1 | Level of detail is 2 seconds. |
| | 2 | Level of detail is 3 seconds. |
| | 3 | Level of detail is 5 seconds. |
| | 4 | Level of detail is 15 seconds. |
| | 5 | Level of detail is 30 seconds. |
| | 6 | Level of detail is 1 minute. |
| | 7 | Level of detail is 2 minutes. |
| | 8 | Level of detail is 3 minutes. |
| | 9 | Level of detail is 5 minutes. |
| | 10 | Level of detail is 15 minutes. |
| | 11 | Level of detail is 30 minutes. |

**Example**

```
(show)> interface GigabitEthernet1 rrd rxspeed

              data:
                    t: 90083.990183
                    v: 200880

             data:
                    t: 90082.990128
                    v: 152392

             data:
                    t: 90081.990193
                    v: 110976

             data:
                    t: 90080.990142
```

```
                    v: 48000

             data:
                    t: 90079.990178
                    v: 38366
```

```
(show)> interface GigabitEthernet1 rrd txspeed

             data:
                    t: 87771.249486
                    v: 148202

             data:
                    t: 87768.248974
                    v: 10694

             data:
                    t: 87765.248977
                    v: 19070

             data:
                    t: 87762.249105
                    v: 48909

             data:
                    t: 87759.249105
                    v: 149277
```

```
(show)> interface GigabitEthernet1 rrd rxspeed 1

 data:
                    t: 90176.990054
                    v: 164766

             data:
                    t: 90174.990061
                    v: 121828

             data:
                    t: 90172.990052
                    v: 95430

             data:
                    t: 90170.990085
                    v: 57559

             data:
                    t: 90168.990119
                    v: 97759
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **show interface rrd** command has been introduced. |

# 3.175.47 show interface spectrum rrd

**Description** Show specific data from the spectrum analyzer.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **spectrum rrd** ‹*channel*› ‹*attribute*› [‹*detail*›]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the Wi-Fi interface. |
| channel | *Integer* | Wi-Fi channel number. |
| attribute | load | Channel load percentage. |
| | dfs | DFS enabled. |
| | radar | Radar detected. |
| | valid | The data is valid. |
| | active | The channel is used by the selected Wi-Fi radio interface. |
| detail | 0 | RRD detalization level 64 x 1-minute. This value is used by default if the parameter is not specified explicitly. |
| | 1 | RRD detalization level 64 x 3-minutes. |
| | 2 | RRD detalization level 64 x 30-minutes. |

**Example**

```
(show)> interface WifiMaster1 spectrum rrd 36 active
         data:
                t: 976.500000
                v: 1

         data:
                t: 916.500000
                v: 1

         data:
                t: 856.500000
                v: 0

         data:
                t: 796.500000
                v: 0

         data:
                t: 736.500000
```

```
                v: 0

        data:
                t: 676.500000
                v: 0

        data:
                t: 616.500000
                v: 0

        data:
                t: 556.500000
                v: 0

        data:
                t: 496.500000
                v: 0

        data:
                t: 436.500000
                v: 0

        data:
                t: 376.500000
                v: 0

        data:
                t: 316.500000
                v: 0

        data:
                t: 256.500000
                v: 0

        data:
                t: 196.500000
                v: 0

        data:
                t: 136.500000
                v: 0

        data:
                t: 76.500000
                v: 0
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **show interface spectrum rrd** command has been introduced. |

## 3.175.48 show interface stat

**Description** Show interface statistics.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** *‹name›* **stat**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface WifiMaster0/AccessPoint0 stat

        rxpackets: 137033
          rxbytes: 23915722
         rxerrors: 0
        rxdropped: 0
        txpackets: 847802
          txbytes: 1192583473
         txerrors: 0
        txdropped: 0
        timestamp: 11754.721178
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show interface stat** command has been introduced. |

## 3.175.49 show interface traffic-counter

**Description** Show detailed information about the traffic counter status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(show)> **interface** *‹name›***traffic-counter**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(show)> interface UsbQmi0 traffic-counter

          enabled: true
            value: 1.47
        threshold: 3.96
            limit: 4
        remaining: 2.46
             unit: GiB

          trigger:
                limit: false
            threshold: false

            saved: Fri Feb 19 18:56:29 2021
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **show interface traffic-counter** command has been introduced. |

## 3.175.50 show interface vrrp

**Description** Show *VRRP* status for the interface.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **vrrp**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface Bridge0 vrrp

         networks:
              network:
                    group: 1
                    ready: yes
                    state: master
                       ip: 192.168.2.10
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **show interface vrrp** command has been introduced. |

## 3.175.51 show interface wps pin

**Description** Show the access point WPS PIN.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(show)> **interface** *‹name›* **wps pin**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Output**

| Element | Value |
|---|---|
| pin | Pin number. |

**Example**

```
(show)> interface WifiMaster0/AccessPoint0 wps pin

              pin: 60180360
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show interface wps pin** command has been introduced. |

## 3.175.52 show interface wps status

**Description** Show the access point WPS status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

(show)> **interface** *‹name›* **wps status**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Output**

| Element | Value |
|---|---|
| wps | Root node. |
| configured | WPS is configured for Access Point. |
| auto-self-pin | Auto-self-pin mode state. |
| status | disabled<br>enabled<br>active |
| direction | send<br>receive |
| mode | pbc<br>self-pin<br>peer |
| left | Time to session closure in seconds. |

**Example**

```
(show)> interface WifiMaster0/AccessPoint0 wps status

              wps:
           configured: yes
         auto-self-pin: yes
                status: active
            direction: send
                 mode: self-pin
                 left: infinite
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show interface wps status** command has been introduced. |

## 3.175.53 show interface zerotier peers

**Description** Show a list of nodes.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **interface** ‹*name*› **zerotier peers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. |

**Example**

```
(show)> interface ZeroTier0 zerotier peers

             peer:
              address: 63f865ae71
              latency: 328
                 role: PLANET
              version: -1.-1.-1

                 path: 192.0.2.209/9993

                 path: 192.0.2.209/9993

             peer:
              address: 458cde7190
              latency: 201
                 role: PLANET
              version: -1.-1.-1

                 path: 198.51.100.156/9993

             peer:
              address: 126127940c
              latency: 153
                 role: LEAF
              version: 1.12.2

                 path: 192.0.2.208/53871

                 path: 192.0.2.208/53871

                 path: 192.0.2.208/53871

             peer:
              address: fdfe04eba9
              latency: 129
                 role: PLANET
              version: -1.-1.-1

                 path: 198.51.100.155/9993

             peer:
              address: dfde9efeb9
              latency: 246
                 role: PLANET
              version: -1.-1.-1

                 path: 203.0.113.134/9993
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **show interface zerotier peers** command has been introduced. |

## 3.175.54 show internet status

**Description** Check for an Internet connection on the device. The "Internet" LED (the globe) lights up as a result of connecting to popular internet sites.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **internet status**

**Example**

```
(show)> internet status

         checked: Tue Apr 24 17:14:37 2018
        reliable: yes
gateway-accessible: yes
   dns-accessible: yes
  host-accessible: yes
        internet: yes

  gateway:
           interface: GigabitEthernet1
             address: 192.168.1.1
            failures: 0
          accessible: yes
            excluded: no

     hosts:
                host:
                    name: example.net
                failures: 0
                resolved: yes
              accessible: yes

                host:
                    name: example.com
                failures: 0
                resolved: no
              accessible: no
```

**History**

| Version | Description |
|---|---|
| 2.11 | The **show internet status** command has been introduced. |

## 3.175.55 show ip arp

**Description** Display the contents of the *ARP* cache.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip arp**

**Example**

```
(show)> ip arp
================================================
IP                MAC                Interface
================================================
192.168.75.209    9c:b7:0d:91:e7:31  Home
198.51.100.150    00:0e:0c:09:db:60  ISP
192.168.75.106    88:53:2e:5e:07:1d  Home
192.168.75.201    7c:61:93:eb:6c:77  Home
192.168.75.203    00:19:d2:48:d6:dc  Home
10.10.30.34       a0:88:b4:40:9c:98  GuestWiFi
192.168.75.203    7c:61:93:ee:88:67  Home
192.168.75.211    00:26:c7:4a:e0:16  Home
203.0.113.163     34:51:c9:c6:53:cf  ISP
192.168.75.200    60:d8:19:cb:1b:36  Home
192.168.75.204    4c:0f:6e:4b:3c:ba  Home
203.0.113.129     00:30:48:89:b5:9f  ISP
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ip arp** command has been introduced. |

## 3.175.56 show ip conntrack lockout

**Description** Show conntrack lockout status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip hotspot lockout**

**Example**

```
(show)> ip conntrack lockout

          enabled: yes
           active: no
        time-left: 0
         max-size: 32768
```

```
            usage:
               public: 2
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **show ip conntrack lockout** command has been introduced. |

## 3.175.57 show ip dhcp bindings

**Description**

Show *DHCP server* status. If you use no argument, the entire list of issued IPs for all pools will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **ip dhcp bindings** [ ‹*pool*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| pool | *String* | The pool name. |

**Example**

```
(show)> ip dhcp bindings _WEBADMIN

            lease:
                   ip: 192.168.15.211
                  mac: 00:26:c7:4a:e0:16
              expires: 289
             hostname: lenovo
            lease:
                   ip: 192.168.15.208
                  mac: 00:19:d2:48:d6:dc
              expires: 258
             hostname: evo
    ...
    ...
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ip dhcp bindings** command has been introduced. |

## 3.175.58 show ip dhcp pool

**Description** Show information about specified pool. If you use no argument, the information about all system pools will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip dhcp pool** [ *‹pool›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| pool | *String* | The pool name. |

**Example**

```
(show)> ip dhcp pool 123

             pool, name = 123:
            interface, binding = auto:
              network: 0.0.0.0/0
                begin: 0.0.0.0
                  end: 0.0.0.0
               router, default = yes: 0.0.0.0
                lease, default = yes: 25200
                state: down
                debug: no
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show ip dhcp pool** command has been introduced. |

## 3.175.59 show ip ftp

**Description** Show home directories for users with **ftp** tag.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip ftp**

**Example**

```
(show)> ip ftp

          enabled: yes
       permissive: yes
             root: ADATA SD600:
```

```
            path: /tmp/mnt/ADATA SD600

            user, index = 0:
                name: admin
                root: ADATA SD600:
                path: /tmp/mnt/ADATA SD600
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **show ip ftp** command has been introduced. |

## 3.175.60 show ip hotspot

**Description** Show hotspot hosts.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip hotspot**

**Example**

```
(show)> ip hotspot

            host:
                 mac: 24:92:0e:92:e5:44
                 via: 24:92:0e:92:e5:44
                  ip: 192.168.1.41
            hostname: android-41d997d510af8ff9
                name:

           interface:
                      id: Bridge0
                    name: Home
          description: Home network (Wired and wireless hosts)

             expires: 207328
          registered: no
              access: permit
            schedule:
              active: yes
             rxbytes: 0
             txbytes: 0
              uptime: 4911
                link: up
                ssid: Bewilderbeast
                  ap: WifiMaster0/AccessPoint0
      authenticated: yes
             txrate: 65
                 ht: 20
```

```
                mode: 11n
                  gi: 800
                rssi: -24
                 mcs: 7

            host:
                 mac: 20:aa:4b:5c:09:0e
                 via: 20:aa:4b:5c:09:0e
                  ip: 192.168.1.51
            hostname: Julia-PC
                name:

           interface:
                          id: Bridge0
                        name: Home
           description: Home network (Wired and wireless hosts)

              expires: 212967
           registered: no
               access: permit
             schedule:
               active: yes
              rxbytes: 0
              txbytes: 0
               uptime: 884
                 link: up
                 ssid: Bewilderbeast
                   ap: WifiMaster0/AccessPoint0
       authenticated: yes
              txrate: 130
                  ht: 20
                mode: 11n
                  gi: 800
                rssi: -37
                 mcs: 15
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show ip hotspot** command has been introduced. |

## 3.175.61 show ip hotspot rrd

**Description** Show registered host traffic information of Round Robin Database.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip hotspot** *‹mac›* **rrd** *‹attribute›* [ *‹detail›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mac | *MAC address* | MAC address of registered host. |
| attribute | rxspeed | Data rate type. |
| | txspeed | |
| | rxbytes | |
| | txbytes | |
| detail | 0 | Level of detail is 1 second. |
| | 1 | Level of detail is 2 seconds. |
| | 2 | Level of detail is 3 seconds. |
| | 3 | Level of detail is 5 seconds. |
| | 4 | Level of detail is 15 seconds. |
| | 5 | Level of detail is 30 seconds. |
| | 6 | Level of detail is 1 minute. |
| | 7 | Level of detail is 2 minutes. |
| | 8 | Level of detail is 3 minutes. |
| | 9 | Level of detail is 5 minutes. |
| | 10 | Level of detail is 15 minutes. |
| | 11 | Level of detail is 30 minutes. |

**Example**

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd rxspeed

            data:
                   t: 2180.491855
                   v: 16298

            data:
                   t: 2177.492050
                   v: 9026

            data:
                   t: 2174.491916
                   v: 11450
```

```
            data:
                   t: 2171.491843
                   v: 626
```

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd txspeed

            data:
                   t: 2228.491841
                   v: 952

            data:
                   t: 2225.491920
                   v: 8813

            data:
                   t: 2222.492053
                   v: 28746

            data:
                   t: 2219.491845
                   v: 22474
```

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd rxbytes

            data:
                   t: 2279.491860
                   v: 4197

            data:
                   t: 2276.492050
                   v: 362

            data:
                   t: 2273.492040
                   v: 14337

            data:
                   t: 2270.491862
                   v: 3281
```

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd txbytes

            data:
                   t: 2360.491865
                   v: 3342

            data:
                   t: 2357.491853
                   v: 142

            data:
                   t: 2354.491949
                   v: 3333
```

```
            data:
                   t: 2351.491847
                   v: 3390
```

**History**

| Version | Description |
|---|---|
| 2.14 | The **show ip hotspot rrd** command has been introduced. |

## 3.175.62 show ip hotspot summary

**Description** Show the information about traffic usage for several registered hosts according to Round Robin Database. Sorting is in descending order.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip hotspot summary** ‹*attribute*› [ **detail** ‹*detail*› ] [ **count** ‹*count*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| attribute | rxspeed | Value of data rate type. |
| | txspeed | |
| | rxbytes | |
| | txbytes | |
| detail | 0 | Level of detail is 3 seconds. |
| | 1 | Level of detail is 60 seconds. |
| | 2 | Level of detail is 180 seconds. |
| | 3 | Level of detail is 1440 seconds. |
| count | *Integer* | The number of hosts. If not specified, the entire list of hosts is displayed. |

**Example**

```
(show)> ip hotspot summary rxspeed

               t: 255

            host:
              active: yes
                name: toshiba
             rxspeed: 143964

            host:
              active: yes
                name: lnx
```

```
              rxspeed: 24749

            host:
              active: yes
                name: oneplus6
             rxspeed: 2558
```

```
(show)> ip hotspot summary rxspeed detail 0

               t: 0

            host:
              active: yes
                name: toshiba
             rxspeed: 186519

            host:
              active: yes
                name: oneplus6
             rxspeed: 94298

            host:
              active: yes
                name: lnx
             rxspeed: 8237
```

```
(show)> ip hotspot summary rxspeed count 3

               t: 255

            host:
              active: yes
                name: toshiba
             rxspeed: 390322

            host:
              active: yes
                name: lnx
             rxspeed: 53518

            host:
              active: yes
                name: oneplus6
             rxspeed: 5284
```

**History**

| Version | Description |
|---|---|
| 2.14 | The **show ip hotspot summary** command has been introduced. |

## 3.175.63 show ip http proxy

**Description** Show HTTP proxy status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip http proxy**

**Example**

```
(show)> ip http proxy

            proxy:
                 name: modem
               domain: myhomemodem.keenetic.link
             upstream: http://192.168.8.1:80
                allow: public
                 ndns: yes
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show ip http proxy** command has been introduced. |

## 3.175.64 show ip http webdav

**Description** Show *WebDAV* server status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip http webdav**

**Example**

```
(show)> ip http webdav

          enabled: yes
      permissive: yes
            root: ext4-files:/
            path: /tmp/mnt/7a976f42-a16f-d501-3017-6b42a16fd501

            user, index = 0:
                name: admin
                root:
                path:

            user, index = 1:
                name: enpa
```

```
                root: ext4-files:/
                path: ►
/tmp/mnt/7a976f42-a16f-d501-3017-6b42a16fd501
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **show ip http webdav** command has been introduced. |

## 3.175.65 show ip name-server

**Description** Show a list of current IPv4 and IPv6 addresses of DNS servers in order of decreasing priority.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip name-server**

**Example**

```
(show)> ip name-server

    server:
         address: 1.1.1.1
            port: 0
          domain:
          global: 0
         service: Dns::Manager
       interface:

      server:
         address: 9.9.9.9
            port: 0
          domain:
          global: 0
         service: Dns::Manager
       interface:

      server:
         address: 2001:4860:4860::8888
            port: 0
          domain: ISP
          global: 0
         service: Dns::Manager
       interface:

      server:
         address: 203.0.113.21
            port: 0
```

```
           domain:
           global: 64520
          service: Dhcp::Client-GigabitEthernet1
        interface: GigabitEthernet1

       server:
          address: 2001:db8:0:1::4
             port: 0
           domain:
           global: 64520
          service: Ip6::Dhcp::Client-GigabitEthernet1
        interface: GigabitEthernet1

       server:
          address: 10.2.0.1
             port: 0
           domain:
           global: 43
          service: Dns::InterfaceSpecific-Wireguard5
        interface: Wireguard5
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ip name-server** command has been introduced. |

## 3.175.66 show ip nat

**Description** Show network address translation table.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip nat** [**tcp**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| tcp | *Keyword* | Only the records with *TCP* type will be displayed. |

**Example**

```
(show)> ip nat
================================================================================
Type | In  | Source         Port  Destination    Port    Packets
     | Out |
================================================================================
udp         10.1.30.34      6482  198.51.100.159  40005   1
            198.51.100.159  40005 192.0.2.164     6482    1
--------------------------------------------------------------------------------
```

```
udp         203.0.113.179   6896  192.0.2.164     28197   1
            192.168.15.204  28197 203.0.113.179   6896    1
------------------------------------------------------------------
tcp         10.1.30.33      57474 192.0.2.15      12350   12
            192.0.2.15      12350 192.0.2.164     57474   11
------------------------------------------------------------------
udp         10.1.30.34      6482  192.0.2.165     44423   11
            192.0.2.165     44423 192.0.2.164     6482    16
------------------------------------------------------------------
tcp         10.1.30.34      46655 198.51.100.21   443     2
            198.51.100.21   443   192.0.2.164     46655   0
------------------------------------------------------------------
udp         10.1.30.34      6482  198.51.100.160  40006   1
            198.51.100.160  40006 192.0.2.164     6482    1
------------------------------------------------------------------
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ip nat** command has been introduced. |

## 3.175.67 show ip neighbour

**Description** Show the list of discovered hosts on the network at the OSI model network level.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip neighbour** [**alive**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| alive | *Keyword* | Show active hosts. |

**Example**

```
(show)> ip neighbour

        neighbour:
                   id: 1
                  via: b8:88:e1:2b:30:af
                  mac: b8:88:e1:2b:30:af
       address-family: ipv4
              address: 192.168.22.16
            interface: Bridge0
           first-seen: 251387
            last-seen: 0
            leasetime: 7372
              expired: no
             wireless: no
```

```
       neighbour:
                  id: 4
                 via: b8:88:e2:4b:30:af
                 mac: b8:88:e2:4b:30:af
      address-family: ipv6

           addresses:
                 address:
                     address: fe80::a022:a505:fae6:c891
                      status: active
                   last-seen: 3

           interface: Bridge0
          first-seen: 251371
           last-seen: 251371
           leasetime: 0
             expired: no
            wireless: no
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **show ip neighbour** command has been introduced. |

## 3.175.68 show ip policy

**Description** Show the IP Policy profile status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip policy** [ ‹*policy*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| policy | *Policy* | Name of IP Policy profile. |

**Example**

```
(show)> ip policy
policy, name = Policy0, description = VPN-OpenVPN:
                mark: fffffd00
               table: 42

               route:
            destination: 10.1.30.0/24
                gateway: 0.0.0.0
              interface: Guest
                 metric: 0
                  proto: boot
```

```
                 floating: no

               route:
            destination: 172.16.3.33/32
                gateway: 0.0.0.0
              interface: L2TPVPN
                 metric: 0
                  proto: boot
               floating: no

               route:
            destination: 192.168.1.0/24
                gateway: 0.0.0.0
              interface: Home
                 metric: 0
                  proto: boot
               floating: no

         policy, name = Policy3, description = Home:
               mark: fffffd03
              table: 45

               route:
            destination: 10.1.30.0/24
                gateway: 0.0.0.0
              interface: Guest
                 metric: 0
                  proto: boot
               floating: no

               route:
            destination: 172.16.3.33/32
                gateway: 0.0.0.0
              interface: L2TPVPN
                 metric: 0
                  proto: boot
               floating: no

               route:
            destination: 192.168.1.0/24
                gateway: 0.0.0.0
              interface: Home
                 metric: 0
                  proto: boot
               floating: no
```

```
(show)> ip policy Policy0
policy, name = Policy0:
               mark: fffffd00
              table: 42

               route:
            destination: 0.0.0.0/0
                gateway: 198.51.100.1
```

```
  interface: ISP
     metric: 0
      proto: boot
   floating: no

  route:
destination: 10.1.30.0/24
    gateway: 0.0.0.0
  interface: Guest
     metric: 0
      proto: boot
   floating: no

  route:
destination: 192.0.2.84/32
    gateway: 198.51.100.1
  interface: ISP
     metric: 0
      proto: boot
   floating: no

  route:
destination: 192.168.1.0/24
    gateway: 0.0.0.0
  interface: Home
     metric: 0
      proto: boot
   floating: no

  route:
destination: 198.51.100.0/24
    gateway: 0.0.0.0
  interface: ISP
     metric: 0
      proto: boot
   floating: no

  route:
destination: 203.0.113.0/25
    gateway: 198.51.100.10
  interface: ISP
     metric: 0
      proto: boot
   floating: no

  route:
destination: 203.0.113.22/32
    gateway: 198.51.100.1
  interface: ISP
     metric: 0
      proto: boot
   floating: no
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **show ip policy** command has been introduced. |

## 3.175.69 show ip route

**Description** Show the current routing table.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip route** [table ‹*table*› ] [sort ‹*criteria*› ‹*direction*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| table | *Integer* | The route number. |
| criteria | interface | Sorting criteria is the interface name. |
| | gateway | Sorting criteria is the gateway address. |
| | destination | Sorting criteria is the destination address. |
| direction | ascending | Routing table records are sorted in ascending order. |
| | descending | Routing table records are sorted in descending order. |

**Example**

```
(show)> ip route table 254
═══════════════════════════════════════════════════════════════════════
Destination         Gateway          Interface                ►
       F  Metric
═══════════════════════════════════════════════════════════════════════
0.0.0.0/0          192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
1.1.1.1/32          0.0.0.0          Wireguard1               ►
       U  0
8.8.8.8/32          0.0.0.0          Wireguard7               ►
       U  0
10.1.30.0/24        0.0.0.0          Guest                    ►
       U  0
10.8.0.0/24         0.0.0.0          Wireguard3               ►
       U  0
172.16.85.0/24      0.0.0.0          Wireguard1               ►
       U  0
192.0.2.0/24        0.0.0.0          Wireguard7               ►
       U  0
192.168.1.0/24      192.168.15.88    Home                     ►
       U  0
192.168.15.0/24     0.0.0.0          Home                     ►
```

```
       U  0
192.168.17.0/24     0.0.0.0          Bridge2                 ►
       U  0
192.168.133.0/24    0.0.0.0          WifiMaster1/WifiStation0  ►
       U  0
192.168.220.0/24    0.0.0.0          Wireguard1              ►
       U  0
198.51.100.12/32    192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.0/27      0.0.0.0          Wireguard7              ►
       U  0
203.0.113.33/32     192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.86/32     192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.128/26    0.0.0.0          Wireguard7              ►
       U  0
203.0.113.215/32    192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
```

```
(show)> ip route sort interface ascending
═══════════════════════════════════════════════════════════════════════
Destination         Gateway          Interface               ►
       F  Metric
═══════════════════════════════════════════════════════════════════════
192.168.1.0/24      192.168.15.88    Home                    ►
       U  0
192.168.15.0/24     0.0.0.0          Home                    ►
       U  0
10.1.30.0/24        0.0.0.0          Guest                   ►
       U  0
192.168.17.0/24     0.0.0.0          Bridge2                 ►
       U  0
0.0.0.0/0           192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
192.168.133.0/24    0.0.0.0          WifiMaster1/WifiStation0  ►
       U  0
198.51.100.21/32    192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.33/32     192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.86/32     192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
203.0.113.215/32    192.168.133.1    WifiMaster1/WifiStation0  ►
       U  0
1.1.1.1/32          0.0.0.0          Wireguard1              ►
       U  0
172.16.85.0/24      0.0.0.0          Wireguard1              ►
       U  0
192.168.220.0/24    0.0.0.0          Wireguard1              ►
       U  0
10.8.0.0/24         0.0.0.0          Wireguard3              ►
       U  0
8.8.8.8/32          0.0.0.0          Wireguard7              ►
```

```
       U  0
192.0.2.0/24        0.0.0.0          Wireguard7               ►
       U  0
203.0.113.0/27      0.0.0.0          Wireguard7               ►
       U  0
203.0.113.128/26    0.0.0.0          Wireguard7               ►
       U  0
```

```
(show)> ip route sort interface descending
═══════════════════════════════════════════════════════════════
Destination         Gateway          Interface                ►
       F  Metric
═══════════════════════════════════════════════════════════════
203.0.113.128/26    0.0.0.0          Wireguard7               ►
       U  0
203.0.113.0/27      0.0.0.0          Wireguard7               ►
       U  0
192.0.2.0/24        0.0.0.0          Wireguard7               ►
       U  0
8.8.8.8/32          0.0.0.0          Wireguard7               ►
       U  0
10.8.0.0/24         0.0.0.0          Wireguard3               ►
       U  0
192.168.220.0/24    0.0.0.0          Wireguard1               ►
       U  0
172.16.85.0/24      0.0.0.0          Wireguard1               ►
       U  0
1.1.1.1/32          0.0.0.0          Wireguard1               ►
       U  0
203.0.113.215/32    192.168.133.1    WifiMaster1/WifiStation0 ►
       U  0
203.0.113.86/32     192.168.133.1    WifiMaster1/WifiStation0 ►
       U  0
203.0.113.33/32     192.168.133.1    WifiMaster1/WifiStation0 ►
       U  0
198.51.100.31/32    192.168.133.1    WifiMaster1/WifiStation0 ►
       U  0
192.168.133.0/24    0.0.0.0          WifiMaster1/WifiStation0 ►
       U  0
0.0.0.0/0           192.168.133.1    WifiMaster1/WifiStation0 ►
       U  0
192.168.17.0/24     0.0.0.0          Bridge2                  ►
       U  0
10.1.30.0/24        0.0.0.0          Guest                    ►
       U  0
192.168.15.0/24     0.0.0.0          Home                     ►
       U  0
192.168.1.0/24      192.168.15.88    Home                     ►
       U  0
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ip route** command has been introduced. |

## 3.175.70 show ip service

**Description** Show a list of open ports used by system services.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ip service**

**Example**

```
(show)> ip service

          service:
        service-name: Telnet
              family: ipv4
            protocol: tcp
                port: 23
      security-level: private

          service:
        service-name: DNS proxy
              family: ipv4
            protocol: udp
                port: 53
      security-level: protected

          service:
        service-name: DNS proxy
              family: ipv4
            protocol: tcp
                port: 53
      security-level: protected

          service:
        service-name: DNS proxy
              family: ipv4
            protocol: udp
                port: 54321
      security-level: private
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **show ip service** command has been introduced. |

## 3.175.71 show ipsec

**Description** Show info about *IPsec*/*IKE* strongSwan service status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipsec**

**Example**

```
(show)> ipsec

  ipsec_statusall:

Status of IKE charon daemon (strongSwan 5.3.4, Linux 2.6.36, ►
mips):
  uptime: 6 days, since Dec 22 10:23:36 2015
  worker threads: 11 of 16 idle, 5/0/0/0 working, job queue: ►
0/0/0/0, scheduled: 10
  loaded plugins: charon aes des sha1 sha2 md5 random nonce ►
openssl xcbc cmac hmac attr kernel-netlink socket-default stroke ►
updown eap-mschapv2 eap-dynamic xauth-generic xauth-eap ►
error-notify systime-fix
Listening IP addresses:
  192.168.1.1
  10.10.10.15
Connections:
     test:  %any...ipsec.example.org  IKEv2, dpddelay=10s
     test:   local:  [ipsec.example.org] uses pre-shared key ►
authentication
     test:   remote: [ipsec.example.com] uses pre-shared key ►
authentication
    test:   child:  172.16.200.0/24 === 172.16.201.0/24 TUNNEL, ►
dpdaction=restart
Security Associations (1 up, 0 connecting):
     test[572]: ESTABLISHED 24 minutes ago, ►
10.10.10.15[ipsec.example.org]...10.10.10.20[ipsec.example.com]
     test[572]: IKEv2 SPIs: 00a6ebfc9d90f1c2_i* ►
3cd201ef496df75c_r, pre-shared key reauthentication in 20 minutes
     test[572]: IKE proposal: ►
AES_CBC=256/HMAC_SHA1_96/PRF_HMAC_SHA1/MODP_1024/#
    test{304}:  INSTALLED, TUNNEL, reqid 185, ESP in UDP SPIs: ►
ca59bfcf_i cde23d83_o
     test{304}:  AES_CBC_256/HMAC_SHA1_96, 10055 bytes_i (164 ►
pkts, 0s ago), 10786 bytes_o (139 pkts, 0s ago), rekeying in 34 ►
minutes
     test{304}:   172.16.200.0/24 === 172.16.201.0/24
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show ipsec** command has been introduced. |

## 3.175.72 show ipv6 addresses

**Description** Show a list of current IPv6-addresses.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipv6 addresses**

**Example**

```
(show)> ipv6 addresses

          address:
              address: 2001:db8::1
            interface: ISP
      valid-lifetime: infinite
          address:
              address: 2001:db8::ce5d:4eff:fe4f:aab2
            interface: Home
      valid-lifetime: infinite
          address:
              address: fd3c:4268:1559:0:ce5d:4eff:fe4f:aab2
            interface: Home
      valid-lifetime: infinite
          address:
              address: fd01:db8:43:0:ce5d:4eff:fe4f:aab2
            interface: Home
      valid-lifetime: infinite
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ipv6 addresses** command has been introduced. |

## 3.175.73 show ipv6 dhcp bindings

**Description** Show *DHCPv6 server* status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipv6 dhcp bindings**

**Example**

```
(show)> ipv6 dhcp bindings
       subnet:
             name: Default

       subnet:
             name: guest
```

```
            lease:
                 type: IA-NA
                 duid: 00:03:00:01:a8:a1:59:61:57:69
              address: fc34:5678:0:4::cc
              expires: 299

            lease:
                 type: IA-PD
                 duid: 00:03:00:01:a8:a1:59:61:57:69
               prefix: fc34:5678:0:7::/64
               remote: fe80::2ecb:ff38:a778:66e8
              expires: 299
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **show ipv6 dhcp bindings** command has been introduced. |

## 3.175.74 show ipv6 prefixes

**Description** Show a list of current IPv6-prefixes.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipv6 prefixes**

**Example**

```
(show)> ipv6 prefixes

          prefix:
                prefix: 2001:db8::/64
             interface: ISP
         valid-lifetime: infinite
    preferred-lifetime: infinite
          prefix:
                prefix: fd3c:4268:1559::/48
             interface:
         valid-lifetime: infinite
    preferred-lifetime: infinite
          prefix:
                prefix: fd01:db8:43::/48
             interface:
         valid-lifetime: infinite
    preferred-lifetime: infinite
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ipv6 prefixes** command has been introduced. |

# 3.175.75 show ipv6 route

**Description** Show a list of current IPv6-routes.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipv6 route** [table ‹*table*› ] [sort ‹*criteria*› ‹*direction*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| table | *Integer* | The route number. |
| criteria | interface | Sorting criteria is the interface name. |
| | gateway | Sorting criteria is the gateway address. |
| | destination | Sorting criteria is the destination address. |
| direction | ascending | Routing table records are sorted in ascending order. |
| | descending | Routing table records are sorted in descending order. |

**Example**

```
(show)> ipv6 route table 42

           route6:
      destination: 2001:db8:2:65d:52ff:20ff:fe00:1e86/128
          gateway: ::
        interface: Home
           metric: 256
            flags: U
        rejecting: no
            proto: boot
         floating: no
           static: no
```

```
(show)> ipv6 route sort interface ascending

           route6:
      destination: 2001:db8:2:65d:52ff:20ff:fe00:1e86/128
          gateway: ::
        interface: Home
           metric: 256
            flags: U
        rejecting: no
            proto: kernel
         floating: no
           static: no
```

```
(show)> ipv6 route sort gateway descending
```

```
          route6:
        destination: ::/0
            gateway: fe80::66a0:e7ff:fef5:6392
          interface: ISP
             metric: 1024
              flags: U
          rejecting: no
              proto: boot
           floating: no
             static: no
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ipv6 routes** command has been introduced. |
| 4.00 | New command name is **show ipv6 route**. |

## 3.175.76 show ipv6 subnets

**Description** Show a list of current IPv6-subnets.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ipv6 subnets**

**Example**

```
(show)> ipv6 subnets

     subnet:
            name: Default
       interface: Home

        prefixes:
                prefix: 2001:db8:2ba1::/64
             interface: TunnelSixInFour0
          valid-lifetime: infinite
    preferred-lifetime: 0
                global: no
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **show ipv6 subnets** command has been introduced. |

## 3.175.77 show last-change

**Description** Show when and who made the latest changes in the settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **last-change**

**Example**

```
(show)> last-change

             date: Thu, 12 Jul 2012 10:01:47 GMT

            agent: cli
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show last-change** command has been introduced. |

## 3.175.78 show led

**Description** Show information about specified LED in the system. If you use no argument, the entire list of all LEDs on the device will be displayed. Available LEDs depend on hardware configuration.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **led** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | SYS | The LED name. The number of available indicators depends on the selected device. |
| | FN | |
| | FW_UPD | |
| | ACT_ACK | |
| | WAN | |
| | DSL | |
| | WLAN | |
| | WLAN5 | |
| | WPS_1 | |
| | WPS_2 | |
| | WPS_3 | |
| | WPS_4 | |

| Argument | Value | Description |
|---|---|---|
| | WPS5_1 | |
| | WPS5_2 | |
| | WPS5_3 | |
| | WPS5_4 | |
| | USB_1 | |
| | USB_2 | |
| | LTE | |

**Example**

```
(show)> led FN_1

              leds:
                  led, index = 0:
                      name: FN_1
        user_configurable: yes
                  virtual: no
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **show led** command has been introduced. |

## 3.175.79 show led bindings

**Description**

Show the control associated with the specified LED. If you use no argument, the entire list of all LEDs with theirs controls will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **led** [ *‹name›* ]**bindings**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | SYS | The LED name. Set of available indicators depends on the selected device. |
| | FN | |
| | FW_UPD | |
| | ACT_ACK | |
| | WAN | |
| | DSL | |
| | WLAN | |
| | WLAN5 | |

| Argument | Value | Description |
|---|---|---|
| | WPS_1 | |
| | WPS_2 | |
| | WPS_3 | |
| | WPS_4 | |
| | WPS5_1 | |
| | WPS5_2 | |
| | WPS5_3 | |
| | WPS5_4 | |
| | USB_1 | |
| | USB_2 | |
| | LTE | |

**Example**

```
(show)> led bindings

        bindings:

         binding, index = 0:
                  led: SYS
    user_configurable: no
       active_control: SystemState
      default_control: SystemState

         binding, index = 1:
                  led: FN_1
    user_configurable: yes
       active_control: Usb1PortDeviceAttached
      default_control: Usb1PortDeviceAttached

         binding, index = 2:
                  led: FN_2
    user_configurable: yes
       active_control: Usb2PortDeviceAttached
      default_control: Usb2PortDeviceAttached

         binding, index = 3:
                  led: ACT_ACK
    user_configurable: no
       active_control: ButtonActivityAcknowledgement
      default_control: ButtonActivityAcknowledgement

         binding, index = 4:
                  led: FW_UPD
    user_configurable: no
       active_control:
      default_control:
```

```
     binding, index = 5:
              led: WAN
user_configurable: no
   active_control: WanConnected
  default_control: WanConnected

     binding, index = 6:
              led: WLAN
user_configurable: no
   active_control: WlanActivity
  default_control: WlanActivity

     binding, index = 7:
              led: WPS_1
user_configurable: no
   active_control: WlanWps1Activity
  default_control: WlanWps1Activity

     binding, index = 8:
              led: WPS_2
user_configurable: no
   active_control: WlanWps2Activity
  default_control: WlanWps2Activity

     binding, index = 9:
              led: WPS_3
user_configurable: no
   active_control: WlanWps3Activity
  default_control: WlanWps3Activity

     binding, index = 10:
              led: WPS_4
user_configurable: no
   active_control: WlanWps4Activity
  default_control: WlanWps4Activity

     binding, index = 11:
              led: WPS_STA
user_configurable: no
   active_control: WstaWpsActivity
  default_control: WstaWpsActivity

     binding, index = 12:
              led: WLAN5
user_configurable: no
   active_control: Wlan5Activity
  default_control: Wlan5Activity

     binding, index = 13:
              led: WPS5_1
user_configurable: no
   active_control: Wlan5Wps1Activity
  default_control: Wlan5Wps1Activity
```

```
          binding, index = 14:
                   led: WPS5_2
    user_configurable: no
       active_control: Wlan5Wps2Activity
      default_control: Wlan5Wps2Activity

          binding, index = 15:
                   led: WPS5_3
    user_configurable: no
       active_control: Wlan5Wps3Activity
      default_control: Wlan5Wps3Activity

          binding, index = 16:
                   led: WPS5_4
    user_configurable: no
       active_control: Wlan5Wps4Activity
      default_control: Wlan5Wps4Activity

          binding, index = 17:
                   led: WPS5_STA
    user_configurable: no
       active_control: Wsta5WpsActivity
      default_control: Wsta5WpsActivity
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **show led bindings** command has been introduced. |

## 3.175.80 show led controls

**Description** Show a list of LED controls in the system. Available controls depend on hardware configuration.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **led controls**

**Example**

```
(show)> led controls

         controls:
              control, index = 0:
                       name: SystemState
         short_description: System state
                     owner: ndm
         user_configurable: no

              control, index = 1:
```

```
                        name: ButtonActivityAcknowledgement
         short_description: Button activity acknowledgement
                     owner: ndm
         user_configurable: no

              control, index = 2:
                        name: SelectedSchedule
         short_description: Selected schedule is active
                     owner: ndm
         user_configurable: yes

              control, index = 3:
                        name: SelectedWan
         short_description: Selected WAN interface has default ►
route
                     owner: ndm
         user_configurable: yes

              control, index = 4:
                        name: BackupWan
        short_description: Backup WAN interface has default route
                     owner: ndm
         user_configurable: yes

              control, index = 5:
                        name: WanConnected
         short_description: WAN interface connected
                     owner: ndm
         user_configurable: no

              control, index = 6:
                        name: Usb1PortDeviceAttached
         short_description: USB port 1 known device attached
                     owner: ndm
         user_configurable: yes

              control, index = 7:
                        name: Usb2PortDeviceAttached
         short_description: USB port 2 known device attached
                     owner: ndm
         user_configurable: yes

              control, index = 8:
                        name: UpdatesAvailable
         short_description: Firmware updates available
                     owner: ndm
         user_configurable: yes

              control, index = 9:
                        name: OpkgLedControl
         short_description: OPKG LED control
                     owner: ndm
         user_configurable: yes
```

```
     control, index = 10:
              name: Wlan5Activity
short_description: WLAN 5GHz interface activity
             owner: mt7615_ap
user_configurable: no

     control, index = 11:
              name: Wlan5Wps1Activity
short_description: WLAN 5GHz SSID 1 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 12:
              name: Wlan5Wps2Activity
short_description: WLAN 5GHz SSID 2 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 13:
              name: Wlan5Wps3Activity
short_description: WLAN 5GHz SSID 3 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 14:
              name: Wlan5Wps4Activity
short_description: WLAN 5GHz SSID 4 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 15:
              name: WlanActivity
short_description: WLAN 2.4GHz interface activity
             owner: mt7615_ap
user_configurable: no

     control, index = 16:
              name: WlanWps1Activity
short_description: WLAN 2.4GHz SSID 1 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 17:
              name: WlanWps2Activity
short_description: WLAN 2.4GHz SSID 2 WPS activity
             owner: mt7615_ap
user_configurable: no

     control, index = 18:
              name: WlanWps3Activity
short_description: WLAN 2.4GHz SSID 3 WPS activity
             owner: mt7615_ap
user_configurable: no
```

```
             control, index = 19:
                      name: WlanWps4Activity
        short_description: WLAN 2.4GHz SSID 4 WPS activity
                    owner: mt7615_ap
        user_configurable: no

             control, index = 20:
                      name: Wsta5WpsActivity
        short_description: Station 5GHz WPS activity
                    owner: mt7615_ap
        user_configurable: no

             control, index = 21:
                      name: WstaWpsActivity
        short_description: Station 2.4GHz WPS activity
                    owner: mt7615_ap
        user_configurable: no
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **show led controls** command has been introduced. |

## 3.175.81 show log

**Description**

Show system log contents (records that are present in a circular buffer). The command executes in the background, that is, until forced to stop by the user pressing [Ctrl]+[C].

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **log** [ *‹max-lines›* ] [**once**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| max-lines | *Integer* | Limit for returned log items. |
| once | *Keyword* | Show current log and exit to the CLI. |

**Example**

```
(show)> log
═══════════════════════════════════════════════════════════════════════
  Time                      Message
═══════════════════════════════════════════════════════════════════════
I [Jul 12 12:08:39] radvd[228]: attempting to reread config file
I [Jul 12 12:08:39] radvd[228]: resuming normal operation
I [Jul 12 12:08:40] wmond: WifiMaster0/AccessPoint0: ►
STA(d8:b3:77:36:05:c1)
                    occurred MIC different in key handshaking.
```

```
I [Jul 12 12:08:40] radvd[228]: attempting to reread config file
I [Jul 12 12:08:40] radvd[228]: resuming normal operation
I [Jul 12 12:08:41] wmond: WifiMaster0/AccessPoint0: ►
STA(d8:b3:77:36:05:c1)
                    occurred MIC different in key handshaking.
I [Jul 12 12:08:41] radvd[228]: attempting to reread config file
I [Jul 12 12:08:41] radvd[228]: resuming normal operation
I [Jul 12 12:08:44] wmond: WifiMaster0/AccessPoint0: ►
STA(d8:b3:77:36:05:c1)
                    pairwise key handshaking timeout.
I [Jul 12 12:08:44] wmond: WifiMaster0/AccessPoint0: ►
STA(d8:b3:77:36:05:c1) had
                    deauthenticated.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show log** command has been introduced. |

## 3.175.82 show media

**Description** Show detailed information about media devices and partitions.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **media** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of the media device. If not specified, information about all media devices and partitions is displayed. |

**Example**

```
(show)> media

           media:
                    name: FlashStorage
                     bus: mtd
               ejectable: no
               removable: no
                   state: ACTIVE
            manufacturer: Keenetic
                 product: (KN-1013)
                  serial: 0000
    initialize-supported:
                    size: 117964800

               partition:
```

```
                    id: Partition1
                  uuid: 7080000
                 label: Storage
                fstype: ubifs
         check-supported: no
        format-supported:
                 state: MOUNTED
                 total: 102989824
                  free: 96227328

               used-by: opkg

           media:
                  name: Media0
                   bus: usb
              ejectable: yes
              removable: yes

                   usb:
                  port: 1
                version: 3.10

                 state: ACTIVE
          manufacturer: SMI Corporation
               product: USB DISK
                serial: CCYYMMDDHHmmSSTTYA8Q

    initialize-supported: ntfs

    initialize-supported: ext4

                  size: 31981568000

              partition:
                    id: Partition2
                  uuid: 4C34E78B612990E2
                 label: NTFS-bNpCdTzK
                fstype: ntfs
         check-supported: yes

        format-supported: ext4

        format-supported: ntfs

        format-supported: vfat

        format-supported: exfat

        format-supported: swap

                 state: MOUNTED
                 total: 30972571648
                  free: 30904057856
```

```
                  used-by: cifs

                partition:
                       id: Partition1
                     uuid: 11dcca2c-a8ce-43ff-e103-503d455d2062
                    label: SWAP-8TK7YXBI
                   fstype: swap
          check-supported: yes

         format-supported: ext4

         format-supported: ntfs

         format-supported: vfat

         format-supported: exfat

         format-supported: swap

                    state: UNMOUNTED
                    total: 0
                     free: 0
                  used-by:
```

```
(show)> media FlashStorage


           media:
                     name: FlashStorage
                      bus: mtd
                ejectable: no
                removable: no
                    state: ACTIVE
             manufacturer: Keenetic
                  product: (KN-1013)
                   serial: 0000
    initialize-supported:
                     size: 117964800

                partition:
                       id: Partition1
                     uuid: 7080000
                    label: Storage
                   fstype: ubifs
          check-supported: no
         format-supported:
                    state: MOUNTED
                    total: 102989824
                     free: 96227328

                  used-by: opkg
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **show media** command has been introduced. |

## 3.175.83 show mws associations

**Description** Show the list of Access Points on the repeater(s) associated with *MWS* controller.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **mws associations**

**Example**

```
(show)> mws associations

          station:
                  mac: 51:ef:22:11:17:1a
                   ap: WifiMaster1/Backhaul0
       authenticated: yes
              txrate: 585
              rxrate: 270
              uptime: 31
             txbytes: 33569
             rxbytes: 74324
                  ht: 80
                mode: 11ac
                  gi: 800
                rssi: -27
                 mcs: 7
                txss: 2
                 ebf: yes
                  mu: yes
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **show mws associations** command has been introduced. |

## 3.175.84 show mws candidate

**Description** Show the list of candidates or the description of specified candidate by the given identifier.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **mws candidate** [ *‹candidate›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| candidate | *String* | Device ID — MAC address or CID. |

**Example**

```
(show)> mws candidate d11246e8-583d-11ef-911a-1f4569ab1720

        candidate:
                   mac: 51:ff:21:c4:a1:83
                   cid: d11246e8-583d-11ef-911a-1f4569ab1720
                  mode: extender
                 model: Hero (KN-1013)
                 state: COMPATIBLE_UPDATE
                    fw: 4.3.2
          fw-available: 5.0 Alpha 1
               license: 1111222233334444555
         eula-accepted: yes
          dpn-accepted: yes
    stp-encapsulation: yes

                  port:
                    label: 1

                  port:
                    label: 2

                  port:
                    label: 3

                  port:
                    label: 0

                   rci:
```

```
(show)> mws candidate 51:ff:21:c4:a1:83

        candidate:
                   mac: 51:ff:21:c4:a1:83
                   cid: d11246e8-583d-11ef-911a-1f4569ab1720
                  mode: extender
                 model: Hero (KN-1013)
                 state: COMPATIBLE_UPDATE
                    fw: 4.3.2
          fw-available: 5.0 Alpha 1
               license: 1111222233334444555
         eula-accepted: yes
          dpn-accepted: yes
    stp-encapsulation: yes

                  port:
```

```
                    label: 1

                  port:
                    label: 2

                  port:
                    label: 3

                  port:
                    label: 0

                   rci:
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **show mws candidate** command has been introduced. |

## 3.175.85 show mws log

**Description**

Show log of connections and transitions from one Access Point to another within *MWS*. The command executes in the background, that is, until forced to stop by the user pressing [Ctrl]+[C].

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **mws log** [ *‹max-lines›* ] [**once**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| max-lines | *Integer* | Limit of entries in the response. |
| once | *Keyword* | Show recent entries in the log. |

**Example**

```
(show)> mws log 1
═══════════════════════════════════════════════════════════════
 Time             Message
═══════════════════════════════════════════════════════════════
 [Jan 17 15:04:58] : 64:a2:f9:51:b1:82: associated -> ►
50:ff:20:00:11:82 (5 GHz)
```

```
(show)> mws log once

═══════════════════════════════════════════════════════════════
 Time             Message
═══════════════════════════════════════════════════════════════
 [Jan 17 14:46:37] : 64:a2:f9:51:b1:82: associated -> ►
50:ff:20:00:11:82 (5 GHz)
```

```
 [Jan 17 15:04:50] : 64:a2:f9:51:b1:82: 50:ff:20:00:11:82 (5 ►
GHz) -> disassociated
 [Jan 17 15:04:58] : 64:a2:f9:51:b1:82: associated -> ►
50:ff:20:00:11:82 (5 GHz)
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **show mws log** command has been introduced. |

## 3.175.86 show mws member

**Description** Show the list of members or the description of specified member by the given identifier.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **mws member** [ *‹member›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| member | *String* | Device ID — MAC address or CID. |

**Example**

```
(show)> mws member 1113b72-b339-11ee-911a-85c1127b77c0

          member:

                      cid: 1113b72-b339-11ee-911a-85c1127b77c0
                    model: Hero (KN-1013)
                      mac: 50:ff:22:b1:1c:b1
              known-host: Keenetic Hero
                      ip: 192.168.1.108
                    mode: extender
                 hw_type: extender
                   hw_id: KN-1013
                 license: 1114443339998889
                    fqdn: d11d2217db1f336a7a48e0a.keenetic.io

    fqdn-certificate-valid: yes
         cloud-agent-state: ACTIVE
        internet-available: yes
                      fw: 4.3.6.3
              fw-available: 5.0.3
                fw-release: 4.03.C.6.3-9
      fw-release-available: 5.00.C.3.0-2
       fw-update-available: yes
         fw-update-sandbox: preview
                    region: EA
```

```
              associations: 1

              capabilities:
                     acme: yes
                auth-token: yes
          auto-ap-shutdown: yes
              backhaul-bss: yes
                    cloud: yes
               controller: yes
              comp-status: yes
             country-code: yes
                dual-band: yes
                 mac-band: yes
                  mode-hw: no
                 mws-assoc: yes
                new-commit: yes
                    notify: yes
                       owe: yes
        seg-band-steering: yes
                 sta-mask: yes
                     wind: yes
                     wpa3: yes
                  wpa-eap: no
                    vht40: yes
        stp-encapsulation: no
         new-password-api: yes

           security-level:
              cloud-control2: yes
                   interface: yes

                     system:
                  cpuload: 1
                   memory: 167648/262144
                   uptime: 5742864

                   backhaul:
                   uplink: WifiMaster1/WifiStation0
                     root: 8000.50:ff:20:9c:21:86
                   bridge: 8000.50:ff:20:9c:21:86
                     cost: 50
                       ap: WifiMaster1/Backhaul0
                      psm: no
                      mld: no
           authenticated: yes
                  txrate: 720
                  uptime: 4775389
                      ht: 80
                    mode: 11ax
                      gi: 800
                    rssi: -61
                     mcs: 7
                    txss: 2
                     ebf: yes
```

```
                    dl-mu: yes
                    ul-mu: yes
                  dl-ofdma: yes
                       pmf: yes
                  security: wpa3-psk

                        port:
                       label: 0
                  appearance: gray-rj45
                        link: up
                       speed: 1000
                      duplex: full

                           rci:
                      errors: 0
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **show mws member** command has been introduced. |

## 3.175.87 show mws wlan

**Description** Show the status of the specified wireless network. If you use no argument, the entire list of WLANs will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **mws wlan** [ ‹*id*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | WLAN interface identifier. |

**Example**

```
(show)> mws wlan


            wlan, id = wlan0:
    disabled-by-schedule: no

                   band, id = 0:
                 enabled: yes

            access-point, name = GuestWiFi:
                        wps:
                     configured: yes
                   auto-self-pin: no
                          status: disabled
```

```
                   band, id = 1:
                enabled: yes

            access-point, name = GuestWiFi_5G:
                        wps:
                     configured: yes
                  auto-self-pin: no
                         status: disabled

            wlan, id = wlan1:
    disabled-by-schedule: no

                   band, id = 0:
                enabled: yes

            access-point, name = WifiMaster0/AccessPoint2:
                        wps:
                     configured: yes
                  auto-self-pin: no
                         status: disabled

                   band, id = 1:
                enabled: yes

            access-point, name = WifiMaster1/AccessPoint2:
                        wps:
                     configured: yes
                  auto-self-pin: no
                         status: disabled
```

```
(show)> mws wlan wlan1

            wlan, id = wlan1:
    disabled-by-schedule: no

                   band, id = 0:
                enabled: yes

            access-point, name = WifiMaster0/AccessPoint2:
                        wps:
                     configured: yes
                  auto-self-pin: no
                         status: disabled

                   band, id = 1:
                enabled: yes

            access-point, name = WifiMaster1/AccessPoint2:
                        wps:
                     configured: yes
                  auto-self-pin: no
                         status: disabled
```

**History**

| Version | Description |
|---|---|
| 5.01 | The **show mws wlan** command has been introduced. |

## 3.175.88 show ndns

**Description**

Show KeenDNS parameters from the latest request to the server (see **ndns get-booked** and **ndns get-update** commands).

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **ndns**

**Example**

```
(show)> ndns

            name: test
          booked: test
          domain: keenetic.pro
         address: 0.0.0.0
        address6: ::
         updated: yes
          access: cloud
         access6: cloud
             xns: ub5

             ttp:
              direct: no
           interface: GigabitEthernet1
             address: 203.0.113.200
            address6: ::

              tunnel:
                  client: *
                  target: *:80
           target-local: 192.168.133.40:49840
          target-remote: *:80
           default-fqdn: keenetic.io
            destination: 192.168.133.40:443
               dialback: ndns
                timeout: 30
                 uptime: 8
                   idle: 0
                 linger: 8073
```

**History**

| Version | Description |
|---|---|
| 2.07 | The **show ndns** command has been introduced. |

## 3.175.89 show netfilter

**Description** Show information about the firewall working. Need to provide remote technical support.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **netfilter**

**History**

| Version | Description |
|---|---|
| 2.00 | The **show netfilter** command has been introduced. |

## 3.175.90 show nextdns availability

**Description** Check and show *NextDNS* availability.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nextdns availability**

**Example**

```
(show)> nextdns availability

        available: yes
             port: 53
   doh-supported: yes
   doh-available: yes
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **show nextdns availability** command has been introduced. |

## 3.175.91 show nextdns profiles

**Description** Show *NextDNS* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nextdns profiles**

**Example**

```
(show)> nextdns profiles

        profiles:
             profile:
                    name: No filtering
                   token: 0

             profile:
                    name: My First Configuration
                   token: 1f3a36

NextDns::Client: Loaded profiles.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **show nextdns profiles** command has been introduced. |

## 3.175.92 show ntce applications

**Description** Show the list of applications supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce applications**

**Example**

```
(show)> ntce applications

     application:
               id-num: 1
                short: facebook
                 long: Facebook
            group-id: 2065
          group-long: Social
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

     application:
               id-num: 2
                short: magicjack
                 long: magicJack
            group-id: 2054
          group-long: Voice over IP
         groupset-id: 0
```

```
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

     application:
               id-num: 3
                short: itunes
                 long: iTunes
            group-id: 2056
          group-long: Streaming
         groupset-id: 2
    groupset-short-id: streaming
     groupset-long-id: Video & Audio streaming

     application:
               id-num: 4
                short: myspace
                 long: MySpace
            group-id: 2065
          group-long: Social
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

     application:
               id-num: 5
                short: facetime
                 long: FaceTime
            group-id: 2054
          group-long: Voice over IP
         groupset-id: 0
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

     application:
               id-num: 6
                short: truphone
                 long: Truphone
            group-id: 2054
          group-long: Voice over IP
         groupset-id: 0
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

     application:
               id-num: 7
                short: twitter
                 long: Twitter
            group-id: 2065
          group-long: Social
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

     application:
```

```
                id-num: 8
                 short: xbox
                  long: XBOX gaming console
             group-id: 2050
           group-long: Gaming
          groupset-id: 1
    groupset-short-id: gaming
     groupset-long-id: Gaming

     application:
                id-num: 9
                 short: realmedia
                  long: RealMedia
             group-id: 2088
           group-long: Removed
          groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

     application:
                id-num: 10
                 short: google-mail
                  long: Google Mail
             group-id: 2059
           group-long: Mail
          groupset-id: 3
    groupset-short-id: work
     groupset-long-id: Work & Learn from home
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce applications** command has been introduced. |

## 3.175.93 show ntce attributes

**Description** Show the list of attributes supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce attributes**

**Example**

```
(show)> ntce attributes

       attribute:
              id-num: 1
               short: encrypted
```

```
               long: Indicates that the current connection is ►
encrypted traffic.

        attribute:
               id-num: 2
                short: audio
                long: Indicates that the current connection is ►
an audio or voice signal.

        attribute:
               id-num: 3
                short: out
                long: Indicates that the current connection is ►
a landline call, e.g. a call to a home phone.

        attribute:
               id-num: 4
                short: video
                long: Indicates that the current connection is ►
a video signal.

        attribute:
               id-num: 5
                short: file-transfer
                long: Indicates that the current connection is ►
a file transfer.

        attribute:
               id-num: 6
                short: web
                long: Indicates that the current connection is ►
a surf the Internet session.

        attribute:
               id-num: 7
                short: chat
                long: Indicates that the current connection is ►
a chat session.

        attribute:
               id-num: 8
                short: mail
                long: Indicates that the current connection is ►
mail traffic.

        attribute:
               id-num: 9
                short: stream
                long: Indicates that the current connection is ►
a continues unidirectional stream of audio and / or video.

        attribute:
               id-num: 10
                short: android
```

```
                long: Indicates that the client side uses the ►
operating system Android.

        attribute:
               id-num: 11
                short: ios
                long: Indicates that the client side uses the ►
operating system iOS.

        attribute:
               id-num: 12
                short: windows-mobile
                long: Indicates that the client side uses the ►
operating system Windows Mobile.

        attribute:
               id-num: 13
                short: blackberry
                long: Indicates that the client side uses the ►
operating system Blackberry.

        attribute:
               id-num: 14
                short: picture
                 long: Indicates that the current connection ►
transfers pictures.

        attribute:
               id-num: 15
                short: ddl
               long: Indicates that the current connection is ►
a Direct Download Hoster.

        attribute:
               id-num: 16
                short: google
               long: Indicates that the current connection is ►
a Google service.

        attribute:
               id-num: 17
                short: outlook_web_access
                 long: Indicates that the current connection ►
uses the Microsoft Exchange Outlook Web Access as authentication ►
mechanism.

        attribute:
               id-num: 18
                short: amazon-cloud
               long: Indicates that the current connection is ►
a service of Amazon Cloud.

        attribute:
               id-num: 19
```

```
                short: apache
                 long: Indicates that the server side is an ►
Apache server.

        attribute:
               id-num: 20
                short: mysql-server
               long: Indicates that the server side is a MySQL ►
database server.

        attribute:
               id-num: 21
                short: mariadb-server
                 long: Indicates that the server side is a ►
MariaDB database server.

        attribute:
               id-num: 22
                short: ntlm
                 long: Current connection uses NTLM as ►
authentication mechanism.

        attribute:
               id-num: 23
                short: microsoft-windows
                 long: Indicates that the client side is the ►
operating system Microsoft Windows.

        attribute:
               id-num: 24
                short: chrome
                 long: Indicates that the client side is the ►
operating system Chrome.

        attribute:
               id-num: 25
                short: akamai-cloud
               long: Indicates that the current connection is ►
a service of Akamai Cloud.

        attribute:
               id-num: 26
                short: dox
               long: Indicates that the current connection is ►
DoT (DNS over TLS) or DoH (DNS over HTTPS).

        attribute:
               id-num: 27
                short: rcs
               long: Indicates that the current connection is ►
RCS (Rich Communication Services).
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce attributes** command has been introduced. |

## 3.175.94 show ntce filter profile

**Description** Show system list of *NTCE* filter profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce filter profile** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | The *NTCE* filter name. You can see the list of available filters with help of **ntce filter profile** [Tab] command. |

**Example**

```
(show)> ntce filter profile


          profile:
                 name: test
                 type: deny
              schedule:
      schedule-active: no

          profile:
                 name: test2
                 type: deny
              schedule:
      schedule-active: no
```

```
(show)> ntce filter profile test


          profile:
                 name: test
                 type: deny
              schedule:
      schedule-active: no
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **show ntce filter profile** command has been introduced. |

## 3.175.95 show ntce groups

**Description** Show the list of groups supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce groups**

**Example**

```
(show)> ntce groups

            group:
                id-num: 2048
                  long: Generic
           groupset-id: 5
     groupset-short-id: other
      groupset-long-id: Other

            group:
                id-num: 2049
                  long: Peer to Peer
           groupset-id: 6
     groupset-short-id: filetransfering
      groupset-long-id: File transfering

            group:
                id-num: 2050
                  long: Gaming
           groupset-id: 1
     groupset-short-id: gaming
      groupset-long-id: Gaming

            group:
                id-num: 2051
                  long: Tunnel
           groupset-id: 3
     groupset-short-id: work
      groupset-long-id: Work & Learn from home

            group:
                id-num: 2052
                  long: Business
           groupset-id: 3
     groupset-short-id: work
      groupset-long-id: Work & Learn from home

            group:
                id-num: 2053
                  long: E-Commerce
           groupset-id: 3
```

```
    groupset-short-id: work
     groupset-long-id: Work & Learn from home

           group:
               id-num: 2054
                 long: Voice over IP
          groupset-id: 0
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

           group:
               id-num: 2055
                 long: Messaging
          groupset-id: 0
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

           group:
               id-num: 2056
                 long: Streaming
          groupset-id: 2
    groupset-short-id: streaming
     groupset-long-id: Video & Audio streaming

           group:
               id-num: 2057
                 long: Mobile
          groupset-id: 0
    groupset-short-id: calling
     groupset-long-id: Calling and conferencing

           group:
               id-num: 2058
                 long: Remote Control
          groupset-id: 3
    groupset-short-id: work
     groupset-long-id: Work & Learn from home

           group:
               id-num: 2059
                 long: Mail
          groupset-id: 3
    groupset-short-id: work
     groupset-long-id: Work & Learn from home

           group:
               id-num: 2060
                 long: Network Management
          groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2061
```

```
                long: Database
           groupset-id: 3
      groupset-short-id: work
       groupset-long-id: Work & Learn from home

             group:
                 id-num: 2062
                   long: Filetransfer
           groupset-id: 6
      groupset-short-id: filetransfering
       groupset-long-id: File transfering

             group:
                 id-num: 2063
                   long: Web
           groupset-id: 4
      groupset-short-id: surfing
       groupset-long-id: Web surfing

             group:
                 id-num: 2064
                   long: Conference
           groupset-id: 0
      groupset-short-id: calling
       groupset-long-id: Calling and conferencing

             group:
                 id-num: 2065
                   long: Social
           groupset-id: 4
      groupset-short-id: surfing
       groupset-long-id: Web surfing

             group:
                 id-num: 2066
                   long: Sharehosting
           groupset-id: 6
      groupset-short-id: filetransfering
       groupset-long-id: File transfering

             group:
                 id-num: 2067
                   long: Deprecated
           groupset-id: 5
      groupset-short-id: other
       groupset-long-id: Other

             group:
                 id-num: 2068
                   long: Industrial
           groupset-id: 5
      groupset-short-id: other
       groupset-long-id: Other
```

```
           group:
               id-num: 2069
                 long: Encrypted
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2070
                 long: Advertisement and Analytic Services
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2071
                 long: News
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

           group:
               id-num: 2072
                 long: Health and Fitness
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2073
                 long: Cloud and CDN Services
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2074
                 long: Navigation
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

           group:
               id-num: 2075
                 long: Finance
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2076
                 long: Travel and Transportation
         groupset-id: 5
    groupset-short-id: other
```

```
     groupset-long-id: Other

           group:
               id-num: 2077
                 long: Pornography
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2078
                 long: Books and Magazines
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2079
                 long: Audio Entertainment
         groupset-id: 2
    groupset-short-id: streaming
     groupset-long-id: Video & Audio streaming

           group:
               id-num: 2080
                 long: Education
         groupset-id: 5
    groupset-short-id: other
     groupset-long-id: Other

           group:
               id-num: 2081
                 long: M2M and IoT
         groupset-id: 3
    groupset-short-id: work
     groupset-long-id: Work & Learn from home

           group:
               id-num: 2082
                 long: Device Security
         groupset-id: 4
    groupset-short-id: surfing
     groupset-long-id: Web surfing

           group:
               id-num: 2083
                 long: Multimedia Service Providers
         groupset-id: 2
    groupset-short-id: streaming
     groupset-long-id: Video & Audio streaming

           group:
               id-num: 2084
                 long: Organizers
```

```
          groupset-id: 3
      groupset-short-id: work
       groupset-long-id: Work & Learn from home

             group:
                 id-num: 2085
                   long: Enterprise Services
          groupset-id: 4
      groupset-short-id: surfing
       groupset-long-id: Web surfing

             group:
                 id-num: 2086
                   long: App-Stores and OS Updates
          groupset-id: 6
      groupset-short-id: filetransfering
       groupset-long-id: File transfering

             group:
                 id-num: 2087
                   long: Browsers
          groupset-id: 4
      groupset-short-id: surfing
       groupset-long-id: Web surfing

             group:
                 id-num: 2088
                   long: Removed
          groupset-id: 5
      groupset-short-id: other
       groupset-long-id: Other

             group:
                 id-num: 2089
                   long: Moved
          groupset-id: 5
      groupset-short-id: other
       groupset-long-id: Other
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce groups** command has been introduced. |

## 3.175.96 show ntce groupsets

**Description** Show the list of groupsets supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce groupsets**

**Example**

```
(show)> ntce groupsets

        groupset:
              id-num: 0
               short: calling
                long: Calling and conferencing

        groupset:
              id-num: 1
               short: gaming
                long: Gaming

        groupset:
              id-num: 2
               short: streaming
                long: Video & Audio streaming

        groupset:
              id-num: 3
               short: work
                long: Work & Learn from home

        groupset:
              id-num: 4
               short: surfing
                long: Web surfing

        groupset:
              id-num: 5
               short: other
                long: Other

        groupset:
              id-num: 6
               short: filetransfering
                long: File transfering
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce groupsets** command has been introduced. |

## 3.175.97 show ntce hosts

**Description** Show application statistics, which *NTCE* service has detected for hosts.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce hosts**

**Example**

```
(show)> ntce hosts

            host:
                 mac: 04:d4:c4:54:31:12

         application:
                        id-num: 7
                         short: twitter
                          long: Twitter
                      group-id: 2065
                    group-long: Social
                   groupset-id: 4
               groupset-short-id: surfing
                groupset-long-id: Web surfing
            groupset-service-class: 2
                       rxbytes: 62274
                       txbytes: 6020

         application:
                        id-num: 43
                         short: instagram
                          long: Instagram
                      group-id: 2065
                    group-long: Social
                   groupset-id: 4
               groupset-short-id: surfing
                groupset-long-id: Web surfing
            groupset-service-class: 2
                       rxbytes: 57606
                       txbytes: 11148

         application:
                        id-num: 428
                         short: spotify
                          long: Spotify
                      group-id: 2079
                    group-long: Audio Entertainment
                   groupset-id: 2
               groupset-short-id: streaming
                groupset-long-id: Video & Audio streaming
            groupset-service-class: 2
                       rxbytes: 155317
                       txbytes: 80526

         application:
                        id-num: 438
                         short: whatsapp
                          long: WhatsApp
                      group-id: 2055
```

```
                    group-long: Messaging
                  groupset-id: 0
              groupset-short-id: calling
               groupset-long-id: Calling and conferencing
        groupset-service-class: 2
                      rxbytes: 826
                      txbytes: 706

         application:
                       id-num: 461
                        short: google-cloud
                         long: Google Cloud
                     group-id: 2073
                    group-long: Cloud and CDN Services
                  groupset-id: 5
              groupset-short-id: other
               groupset-long-id: Other
        groupset-service-class: 2
                      rxbytes: 313
                      txbytes: 352

         application:
                       id-num: 498
                        short: telegram
                         long: Telegram
                     group-id: 2055
                    group-long: Messaging
                  groupset-id: 0
              groupset-short-id: calling
               groupset-long-id: Calling and conferencing
        groupset-service-class: 2
                      rxbytes: 109895
                      txbytes: 15561

         application:
                       id-num: 559
                        short: google-play
                         long: Google Play
                     group-id: 2086
                    group-long: App-Stores and OS Updates
                  groupset-id: 6
              groupset-short-id: filetransfering
               groupset-long-id: File transfering
        groupset-service-class: 2
                      rxbytes: 16736
                      txbytes: 28451

         application:
                       id-num: 611
                        short: zendesk
                         long: ZenDesk
                     group-id: 2052
                    group-long: Business
                  groupset-id: 3
```

```
            groupset-short-id: work
             groupset-long-id: Work & Learn from home
        groupset-service-class: 2
                      rxbytes: 101697
                      txbytes: 187527

         application:
                       id-num: 621
                        short: slack
                         long: Slack
                     group-id: 2064
                   group-long: Conference
                  groupset-id: 0
            groupset-short-id: calling
             groupset-long-id: Calling and conferencing
        groupset-service-class: 2
                      rxbytes: 30568
                      txbytes: 3650

         application:
                       id-num: 632
                        short: google-services
                         long: Google Shared Services
                     group-id: 2085
                   group-long: Enterprise Services
                  groupset-id: 4
            groupset-short-id: surfing
             groupset-long-id: Web surfing
        groupset-service-class: 2
                      rxbytes: 614512
                      txbytes: 202174

         application:
                       id-num: 664
                        short: microsoft-services
                         long: Microsoft Services
                     group-id: 2085
                   group-long: Enterprise Services
                  groupset-id: 4
            groupset-short-id: surfing
             groupset-long-id: Web surfing
        groupset-service-class: 2
                      rxbytes: 20243
                      txbytes: 10699

         application:
                       id-num: 700
                        short: fastly
                         long: Fastly
                     group-id: 2073
                   group-long: Cloud and CDN Services
                  groupset-id: 5
            groupset-short-id: other
             groupset-long-id: Other
```

```
        groupset-service-class: 2
                       rxbytes: 14859
                       txbytes: 3147

         application:
                        id-num: 703
                         short: cloudflare
                          long: Cloudflare
                      group-id: 2073
                    group-long: Cloud and CDN Services
                   groupset-id: 5
               groupset-short-id: other
                groupset-long-id: Other
        groupset-service-class: 2
                       rxbytes: 2172
                       txbytes: 3593

         application:
                        id-num: 719
                         short: google-apis
                          long: Google APIs
                      group-id: 2052
                    group-long: Business
                   groupset-id: 3
               groupset-short-id: work
                groupset-long-id: Work & Learn from home
        groupset-service-class: 2
                       rxbytes: 11837
                       txbytes: 7602

         application:
                        id-num: 933
                         short: bamtech-media
                          long: BAMTech Media
                      group-id: 2083
                    group-long: Multimedia Service Providers
                   groupset-id: 2
               groupset-short-id: streaming
                groupset-long-id: Video & Audio streaming
        groupset-service-class: 2
                       rxbytes: 4734
                       txbytes: 6006

              os-id: 3
            os-long: Windows

               host:
                    mac: 04:d4:c4:54:31:12
                    via: 04:d4:c4:54:31:12
                     ip: 192.168.11.19
               hostname: MyHost
                   name: MyHost

              interface:
```

```
                          id: Bridge0
                        name: Home
                 description: Home network

                        dhcp:
                          static: yes

               registered: yes
                   access: permit
                 schedule:
                   active: yes
                  rxbytes: 0
                  txbytes: 0
                   uptime: 9083
               first-seen: 9097
                last-seen: 1
                     link: up
       auto-negotiation: yes
                    speed: 1000
                   duplex: yes
                     port: 2

          traffic-shape:
                        rx: 0
                        tx: 0
                      mode: mac
                 schedule:
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce hosts** command has been introduced. |

## 3.175.98 show ntce oses

**Description** Show the list of OSes supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce oses**

**Example**

```
(show)> ntce oses

               os:
               id-num: 1
                 long: Not detected

               os:
```

```
                id-num: 2
                  long: Other

                os:
                id-num: 3
                  long: Windows

                os:
                id-num: 4
                  long: Linux

                os:
                id-num: 5
                  long: OS X

                os:
                id-num: 6
                  long: iOS

                os:
                id-num: 7
                  long: Symbian

                os:
                id-num: 8
                  long: Android

                os:
                id-num: 9
                  long: Blackberry

                os:
                id-num: 10
                  long: WindowsMobile

                os:
                id-num: 11
                  long: WindowsPhone

                os:
                id-num: 12
                  long: Chrome

                os:
                id-num: 13
                  long: Darwin
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce oses** command has been introduced. |

## 3.175.99 show ntce status

**Description** Show *NTCE* service info.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **ntce status**

**Example**

```
(show)> ntce status

       conntrack:
                 hosts: 2
            applications: 16
     applications-flows: 63
    applications-events: 0
                groups: 12
           groups-flows: 64
          groups-events: 0

                 memory:
         applications-flows: 1512
        applications-events: 0
               applications: 512
               groups-flows: 1536
              groups-events: 0
                     groups: 384
                      hosts: 72
                      total: 4016

          event:
              count: 0

             memory:
                  total: 0

        database:
               hosts: 1
        applications: 54
              groups: 30
          attributes: 6

             memory:
            applications: 2372976
                  groups: 1318320
              attributes: 263664
                   total: 3954960
```

**History**

| Version | Description |
|---|---|
| 3.07 | The **show ntce status** command has been introduced. |

## 3.175.100 show ntp status

**Description**

Show *NTP* system settings.

### NTP state general info

❶ The time elapsed since the last synchronization in seconds.
❷ The indicator of the last synchronization.
❸ The indicator of the initial synchronization.
❹ Time is taken from NDSS server.
❺ Time is set by the user manually.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **ntp status**

**Example**

```
(show)> ntp status

           status:
              elapsed: 435146 ❶
               server: 1.pool.ntp.org
             accurate: yes ❷
         synchronized: yes ❸
             ndsstime: no ❹
             usertime: no ❺
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show ntp status** command has been introduced. |

## 3.175.101 show object-group fqdn

**Description**

Show the specified *FQDN* object group. If you use no argument, the entire list of FQDN object groups will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **object-group fqdn** [ *‹group›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| group | *String* | The FQDN object group name. |

**Example**

```
(show)> object-group fqdn example


           group:
          group-name: example
             enabled: yes
      ipv4-addresses: 3
      ipv6-addresses: 4

              entry:
                   fqdn: ogads-pa.clients6.example.com
                   type: runtime
              deadline4: 143
              deadline6: 274
           fail-counter4: 0
           fail-counter6: 0
                 parent: example.com

                   ipv4:
                    address: 203.0.113.138
                        ttl: 168
               last-updated: 36

                   ipv6:
                    address: 2001:db8:4026:802::200a
                        ttl: 300
               last-updated: 36

              entry:
                   fqdn: ogs.example.com
                   type: runtime
              deadline4: 287
              deadline6: 297
           fail-counter4: 0
           fail-counter6: 0
                 parent: example.com

                   ipv4:
                    address: 203.0.113.142
                        ttl: 300
               last-updated: 27

                   ipv6:
                    address: 2001:db8:4026:804::200e
                        ttl: 300
               last-updated: 27
```

```
               entry:
                    fqdn: example.com
                    type: config
               deadline4: 2147483
               deadline6: 2147483
           fail-counter4: 0
           fail-counter6: 0
                    ipv4:
                    ipv6:

       excluded-ipv4:
       excluded-ipv6:
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **show object-group fqdn** command has been introduced. |

## 3.175.102 show oc-server

**Description** Show current connections to the *OpenConnect* server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **oc-server**

**Example**

```
(show)> oc-server

       ndns-name: mywrk.keenetic.link
            fqdn: 12af.mywrk.keenetic.link
          secret: 123e45ed
has-ndns-certificate: yes

          tunnel:
       clientaddress: 172.16.3.34
            username: mymy
              uptime: 30

           statistic:
                   rxpackets: 121
        rx-multicast-packets: 0
        rx-broadcast-packets: 0
                     rxbytes: 14715
                    rxerrors: 0
                   rxdropped: 0
                   txpackets: 78
```

```
         tx-multicast-packets: 0
         tx-broadcast-packets: 0
                      txbytes: 48265
                    txerrors: 0
                   txdropped: 0
                   timestamp: 104530.202229
                last-overflow: 0.000000
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **show oc-server** command has been introduced. |

## 3.175.103 show ping-check

**Description**

Show *Ping Check* profile status. If you use no arguments, the command displays information about all profiles.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **ping-check** [ ‹*profile_name*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| profile_name | *String* | Profile name. |

**Example**

```
(show)> ping-check

        pingcheck:
              profile: TEST
                 host: 8.8.8.8
                 port: 80
            max-fails: 7
              timeout: 1
                 mode: connect

            interface: ISP
               fail count: 0
                   status: pass

        pingcheck:
              profile: TEST1
                 mode: icmp

        pingcheck:
              profile: TEST2
                 mode: icmp
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **show ping-check** command has been introduced. |

## 3.175.104 show printers

**Description** Show attached printer list.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **printers**

**Example**

```
(show)> printers

         printers:
              printer: Canon MF8300C Series
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show printers** command has been introduced. |

## 3.175.105 show processes

**Description** Show statistics of CPU usage by services and processess.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **processes**

**Example**

```
(show)> processes

          process, id = NETBIOS browser:
                 name: nqnd

                  arg: -i

                  arg: 50ff20001e87

                state: S (sleeping)
                  pid: 629
                 ppid: 192
              vm-size: 3188 kB
```

```
             vm-data: 1548 kB
              vm-stk: 136 kB
              vm-exe: 4 kB
              vm-lib: 1448 kB
             vm-swap: 0 kB
             threads: 1
                 fds: 15

          statistics:
                interval: 30

                     cpu:
                         now: 17319.483753
                         min: 0
                         max: 0
                         avg: 0
                         cur: 0

             service:
              configured: yes
                   alive: yes
                 started: yes
                   state: STARTED

        process, id = Dns::Proxy::Policy0:
                name: ndnproxy

                 arg: -c

                 arg: /var/ndnproxy_Policy0.conf

                 arg: -p

                 arg: /var/ndnproxy_Policy0.pid

               state: S (sleeping)
                 pid: 630
                ppid: 192
             vm-size: 1676 kB
             vm-data: 504 kB
              vm-stk: 136 kB
              vm-exe: 108 kB
              vm-lib: 896 kB
             vm-swap: 0 kB
             threads: 1
                 fds: 10

          statistics:
                interval: 30

                     cpu:
                         now: 17319.483764
                         min: 0
                         max: 0
```

```
                          avg: 0
                          cur: 0

              service:
               configured: yes
                    alive: yes
                  started: yes
                    state: STARTED
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show processes** command has been introduced. |

## 3.175.106 show running-config

**Description** Show current settings, that is file `system:running-config` conteins, just like command **more** does.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **running-config**

**Example**

```
(show)> running-config
! $$$ Model: Keenetic Hopper
! $$$ Version: 2.06.1
! $$$ Agent: default
! $$$ Md5 checksum: 8c4b233db9ff35f1ea2fff277e36d9ea
! $$$ Username: admin
system
    set net.ipv4.ip_forward 1
    set net.ipv4.tcp_fin_timeout 30
    set net.ipv4.tcp_keepalive_time 120
    set net.ipv4.neigh.default.gc_thresh1 256
    set net.ipv4.neigh.default.gc_thresh2 1024
    set net.ipv4.neigh.default.gc_thresh3 2048
    set net.ipv6.neigh.default.gc_thresh1 256
    set net.ipv6.neigh.default.gc_thresh2 1024
    set net.ipv6.neigh.default.gc_thresh3 2048
    set net.netfilter.nf_conntrack_tcp_timeout_established 1200
    set net.netfilter.nf_conntrack_max 32768
    set vm.swappiness 60
    set vm.overcommit_memory 0
    set vm.vfs_cache_pressure 1000
    set dev.usb.force_usb2 0
    set net.ipv6.conf.all.forwarding 1
    domainname WORKGROUP
    hostname Keenetic-1111
```

```
    caption default
!
isolate-private
user admin
    tag cli
    tag http
    tag cifs
    tag printers
    tag webdav
!
interface GigabitEthernet0
    up
!
interface GigabitEthernet0/0
    rename 1
    switchport mode access
    switchport mode trunk
    switchport access vlan 1
    switchport trunk vlan 3
    up
!
interface GigabitEthernet0/1
    rename 2
    switchport mode access
    switchport mode trunk
    switchport access vlan 1
    switchport trunk vlan 3
    up
!
interface GigabitEthernet0/2
    rename 3
    switchport mode access
    switchport mode trunk
    switchport access vlan 1
    switchport trunk vlan 3
    up
!
interface GigabitEthernet0/Vlan1
    description "Home VLAN"
    ip dhcp client dns-routes
    up
!
interface GigabitEthernet0/Vlan3
    description "Guest VLAN"
    ip dhcp client dns-routes
    up
!
interface GigabitEthernet1
    rename ISP
    description "Broadband connection"
    mac address factory wan
    security-level public
    ip address dhcp
    ip dhcp client dns-routes
```

```
    ip global 700
    igmp upstream
    ipv6 address auto
    ipv6 prefix auto
    ipv6 name-servers auto
    up
!
interface GigabitEthernet1/0
    rename 0
    up
!
interface WifiMaster0
    compatibility BGN+AX
    tx-burst
    rekey-interval 86400
    beamforming explicit
    vht
    downlink-mumimo
    uplink-mumimo
    spatial-reuse
    up
!
interface WifiMaster0/AccessPoint0
    rename AccessPoint
    description "Wi-Fi access point"
    mac access-list type none
    wps
    authentication wpa-psk ns3 BMc1we4ZX9/fbJtDiM
    encryption enable
    encryption wpa2
    ip dhcp client dns-routes
    ssid Keenetic-1111
    wmm
    rrm
    ft mdid PX
    ft enable
    up
!
interface WifiMaster0/AccessPoint1
    rename GuestWiFi
    description "Guest access point"
    mac access-list type none
    ip dhcp client dns-routes
    ssid Guest
    wmm
    rrm
    ft mdid vX
    ft enable
    down
!
interface WifiMaster0/AccessPoint2
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
```

```
    down
!
interface WifiMaster0/AccessPoint3
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster0/AccessPoint4
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster0/AccessPoint5
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster0/AccessPoint6
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster0/WifiStation0
    security-level public
    encryption disable
    ip dhcp client dns-routes
    down
!
interface WifiMaster1
    compatibility AN+AC+AX
    tx-burst
    rekey-interval 86400
    beamforming explicit
    target-waketime
    downlink-mumimo
    uplink-mumimo
    spatial-reuse
    up
!
interface WifiMaster1/AccessPoint0
    rename AccessPoint_5G
    description "5GHz Wi-Fi access point"
    mac access-list type none
    wps
    authentication wpa-psk ns3 BMcOw7dA7GFO4ZX9/fbJtDiM
    encryption enable
    encryption wpa2
    ip dhcp client dns-routes
    ssid Keenetic-1111
    wmm
```

```
    rrm
    ft mdid PX
    ft enable
    follow AccessPoint
    up
!
interface WifiMaster1/AccessPoint1
    rename GuestWiFi_5G
    description "5GHz Guest access point"
    mac access-list type none
    encryption disable
    ip dhcp client dns-routes
    ssid Guest
    rrm
    ft mdid vX
    ft enable
    follow GuestWiFi
    down
!
interface WifiMaster1/AccessPoint2
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster1/AccessPoint3
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster1/AccessPoint4
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster1/AccessPoint5
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster1/AccessPoint6
    mac access-list type none
    security-level private
    ip dhcp client dns-routes
    down
!
interface WifiMaster1/WifiStation0
    security-level public
    encryption disable
    ip dhcp client dns-routes
    down
```

```
!
interface Bridge0
    rename Home
    description "Home network"
    inherit GigabitEthernet0/Vlan1
    include AccessPoint
    include AccessPoint_5G
    mac access-list type none
    security-level private
    ip address 192.168.1.1 255.255.255.0
    ip dhcp client dns-routes
    igmp downstream
    band-steering
    iapp key ns3 4k/XpM98jF123131NK9eur5Jk7Cgq4PpBm4M6U+hwh27
    up
!
interface Bridge1
    rename Guest
    description "Guest network"
    traffic-shape rate 5120
    inherit GigabitEthernet0/Vlan3
    include GuestWiFi
    include GuestWiFi_5G
    mac access-list type none
    peer-isolation
    security-level protected
    ip address 10.1.30.1 255.255.255.0
    ip dhcp client dns-routes
    iapp key ns3 +lIvt9ohKnXsiIt131312jPtqCJfqtVjrdm/MCVxzNYOH
    down
!
ip dhcp pool _WEBADMIN
    range 192.168.1.33 192.168.1.152
    bind Home
    enable
!
ip dhcp pool _WEBADMIN_GUEST_AP
    range 10.1.30.33 10.1.30.152
    bind Guest
    enable
!
ip http security-level private
ip http lockout-policy 5 15 3
ip http ssl enable
ip http webdav
    security-level public
!
ip nat Home
ip nat Guest
ip telnet
    security-level private
    lockout-policy 5 15 3
!
ipv6 subnet Default
```

```
    bind Home
    mode slaac
    prefix length 64
    number 0
!
ipv6 local-prefix default
ppe software
ppe hardware
upnp lan Home
service dhcp
service dns-proxy
service igmp-proxy
service http
service cifs
service telnet
service ntp
service upnp
cifs
    automount
    permissive
!
dns-proxy
    rebind-protect auto
!
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show running-config** command has been introduced. |

## 3.175.107 show schedule

**Description** Show parameters of defined schedule. If you use no argument, the entire list of system schedules will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **schedule** [ *‹name›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | A schedule name. |

**Example**

```
(show)> schedule 123

         schedule, name = 123:
               action, type = start, left = 561514, next = yes:
```

```
                        dow: Tue
                       time: 01:29

                 action, type = stop, left = 564274:
                        dow: Tue
                       time: 02:15
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show schedule** command has been introduced. |

## 3.175.108 show self-test

**Description** Show summary information about system activity. Need to provide remote technical support.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **self-test**

**History**

| Version | Description |
|---|---|
| 2.00 | The **show self-test** command has been introduced. |

## 3.175.109 show site-survey

**Description** Show available wireless networks.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Radio

**Synopsis**

(show)> **site-survey** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Full name or an alias of the interface. You can see the list of available interfaces with help of **site-survey** [Tab] command. |

**Example**

```
(show)> site-survey WifiMaster0
```

```
SSID                                MAC                Ch   Mode ►
       Q
═══════════════════════════════════════════════════════════════════
Hello_123                             11:22:d4:70:97:f1   1    ►
11b/g/n     31
BRT                                   78:69:87:b3:9d:68   1    ►
11b/g/n     13
SVH34-34                              23:bf:45:7b:0e:2e   1    ►
11b/g/n     5
Keenetic-1234                         56:f4:ab:56:9a:48   3    ►
11b/g/n     26
```

```
(show)> site-survey WifiMaster1
═══════════════════════════════════════════════════════════════════
SSID                                MAC                Ch   Mode ►
       Q
═══════════════════════════════════════════════════════════════════
Keenetic-1153 (5)                     34:ff:22:3d:69:fc   36   ►
11a/n/ac    2
RT-5WiFi-87F8                         15:a3:b8:e6:57:fa   44   ►
11a/n/ac    42
GPON5                                 23:9a:34:b1:b1:26   48   ►
11a/n/ac    0
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show site-survey** command has been introduced. |

## 3.175.110 show snmp view

**Description** Show *SNMP* view status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **snmp view**

**Example**

```
(show)> snmp view

              view:
                   id: client

              include: .1.3.6.1

              exclude: .1.3.6.1.2
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **show snmp view** command has been introduced. |

## 3.175.111 show ssh fingerprint

**Description** Show current SSH server keys.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(show)>  ssh fingerprint
```

**Example**

```
(show)> ssh fingerprint

         rsa: MD5:d0:b0:d4:f7:da:7b:c0:e0:d0:c8:8f:ea:85:3c:09:00

           rsa: SHA1:Nhxg8KNeE62E8zAZJngImcrJkmA

         rsa: SHA256:lM7MyrIaq4qFGT/dyF/t8TbJk5tCzreeGuhO3zaydu4

           ecdsa: ►
MD5:a6:db:b4:fb:3c:b9:ae:31:ca:6d:ca:ed:62:73:a5:7e

           ecdsa: SHA1:ndWg/dx/dP/P8rMkJcVC3XB8nFo

           ecdsa: ►
SHA256:Wp1K9d8MsquQBtlBeBlpVlyKdCN1Vay3BtBWbj0xs+o
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **show ssh fingerprint** command has been introduced. |

## 3.175.112 show ssh sftp

**Description** Show home directories for users with **sftp** tag.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(show)>  ssh sftp
```

**Example**

```
(show)> ssh sftp

          enabled: yes
      permissive: yes
            root: files_ssd:/
           path: /tmp/mnt/963b0583-4017-401b-9542-7ff1255add40

            user, index = 0:
                name: admin
                root:
                path: ►
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **show ssh sftp** command has been introduced. |

## 3.175.113 show sstp-server

**Description** Show current connections to the *SSTP* server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **sstp-server**

**Example**

```
(show)> sstp-server

          enabled: yes
       ndns-name: mymy.keenetic.link
has-ndns-certificate: yes

          tunnel:
       clientaddress: 172.16.3.33
            username: mymy
              uptime: 29

           statistic:
                    rxpackets: 121
        rx-multicast-packets: 0
        rx-broadcast-packets: 0
                     rxbytes: 14715
                    rxerrors: 0
                   rxdropped: 0
                   txpackets: 78
        tx-multicast-packets: 0
        tx-broadcast-packets: 0
                     txbytes: 48265
                    txerrors: 0
```

```
                    txdropped: 0
                    timestamp: 104530.202229
                last-overflow: 0.000000
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **show sstp-server** command has been introduced. |

## 3.175.114 show system

**Description** Show the general state of the system.

### System state general info

❶ CPU load, percentage.
❷ Occupied and available memory info, kilobytes.
❸ Swap file usage info, kilobytes.
❹ System uptime from the start, seconds.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **system**

**Example**

```
(config)> show system

         hostname: Undefined
       domainname: WORKGROUP
          cpuload: 0 ❶
           memory: 13984/28976 ❷
             swap: 0/0 ❸
           uptime: 153787 ❹
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show system** command has been introduced. |

## 3.175.115 show system country

**Description** Show country-specific configuration status depending on the factory region.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **system country**

**Example**

```
(show)> system country

        factory: EA
        selected: KZ
default-language: ru

         country:
                code: AM
          short-name: Armenia
    default-language: en

         country:
                code: AZ
          short-name: Azerbaijan
    default-language: en

         country:
                code: BY
          short-name: Belarus
    default-language: ru

         country:
                code: KG
          short-name: Kyrgyzstan
    default-language: en

         country:
                code: KZ
          short-name: Kazakhstan
    default-language: ru

         country:
                code: RU
          short-name: Russian Federation
    default-language: ru

         country:
                code: UZ
          short-name: Uzbekistan
    default-language: en
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **show system country** command has been introduced. |

## 3.175.116 show system cpustat

**Description** Show device CPU usage.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **system cpustat**

**Example**

```
(show)> system cpustat

        interval: 36

             busy:
                  cur: 1
                  min: 0
                  max: 11
                  avg: 2

             user:
                  cur: 0
                  min: 0
                  max: 10
                  avg: 1

             nice:
                  cur: 0
                  min: 0
                  max: 0
                  avg: 0

           system:
                  cur: 0
                  min: 0
                  max: 2
                  avg: 0

           iowait:
                  cur: 0
                  min: 0
                  max: 0
                  avg: 0

              irq:
                  cur: 0
                  min: 0
                  max: 0
                  avg: 0

             sirq:
                  cur: 0
                  min: 0
                  max: 0
                  avg: 0
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show system cpustat** command has been introduced. |

## 3.175.117 show system mode

**Description** Show system mode status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **system mode**

**Example**

```
(show)> system mode

            mode:
              active: router
            selected: router
           supported: router, extender
       hw_controlled: no
           hw_locked: no
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **show system mode** command has been introduced. |

## 3.175.118 show system zram

**Description** Show system zRam swap status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **system zram**

**Example**

```
(show)> system zram

            zram:
                 enabled: yes
        compression-algo: lzo
               disk-size: 268435456
         compressed-size: 87
           original-size: 4096
```

```
        total-memory-used: 12288
     compression-threads: 4
    compressed-ratio-pcs: 300
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show system zram** command has been introduced. |

## 3.175.119 show tags

**Description** Show available authentication tags.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **tags**

**Example**

```
(show)> tags

              tag: cli
              tag: readonly
              tag: http-proxy
              tag: http
              tag: printers
              tag: cifs
              tag: ftp
              tag: ipsec-xauth
              tag: ipsec-l2tp
              tag: opt
              tag: sstp
              tag: torrent
              tag: vpn
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show tags** command has been introduced. |

## 3.175.120 show threads

**Description** Show the list of active threads in NDM.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **threads**

**Example**

```
(show)> threads

               thread:
                       name: Cloud agent service
                        tid: 518
        lock_list_complete: yes
                     locks:

                statistics:
                    interval: 30

                         cpu:
                             now: 17771.481435
                             min: 0
                             max: 0
                             avg: 0
                             cur: 0

               thread:
                       name: FTP brute force detection
                        tid: 519
        lock_list_complete: yes
                     locks:

                statistics:
                    interval: 30

                         cpu:
                             now: 17771.481440
                             min: 0
                             max: 0
                             avg: 0
                             cur: 0
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **show threads** command has been introduced. |

## 3.175.121 show torrent status

**Description** Show BitTorrent client status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **torrent status**

**Example**

```
(show)> torrent status

           state: running
        rpc-port: 8090
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **show torrent status** command has been introduced. |

## 3.175.122 show upnp pinhole

**Description**

Show *UPnP* pinhole rules. If you use no arguments, the entire list of pinhole rules will be displayed.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(show)> **upnp pinhole** [( *‹protocol›* *‹interface›* *‹port›* ) | *‹index›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | tcp | *TCP* protocol. |
| | udp | *UDP* protocol. |
| address | *IPv6 address* | Destination IPv6 address for the pinhole rule. |
| port | *Integer* | Destination port number for the pinhole rule. |
| index | *Integer* | Index of the pinhole rule. |

**Example**

```
(show)> upnp pinhole

          entry:
              index: 0
          interface: GigabitEthernet1
           protocol: tcp
            address: 2001:db8::1234
               port: 8181
        description:
             policy: System
            packets: 0
              bytes: 0

          entry:
```

```
               index: 1
           interface: GigabitEthernet1
            protocol: tcp
             address: 2001:db8::1234
                port: 8080
         description:
              policy: System
             packets: 0
               bytes: 0
```

```
(show)> upnp pinhole 1

entry:
index: 1
interface: GigabitEthernet1
protocol: tcp
address: 2001:db8::1234
port: 8080
description:
policy: System
packets: 0
bytes: 0
```

```
(show)> upnp pinhole tcp 2001:db8::1234 8080

           entry:
               index: 1
           interface: GigabitEthernet1
            protocol: tcp
             address: 2001:db8::1234
                port: 8080
         description:
              policy: System
             packets: 0
               bytes: 0
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **show upnp pinhole** command has been introduced. |

## 3.175.123 show upnp redirect

**Description** Show *UPnP* port translation rules. If you use no arguments, the entire list of translation rules will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Synopsis**

(show)> **upnp redirect** [( *‹protocol›* *‹interface›* *‹port›* ) | *‹index›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | tcp | *TCP* protocol. |
| | udp | *UDP* protocol. |
| interface | *Interface* | Interface associated with the redirect rule. |
| port | *Integer* | Destination port number for the rule. |
| index | *Integer* | Index of the rule. |

**Example**

```
(show)> upnp redirect

           entry:
               index: 0
           interface: GigabitEthernet1
            protocol: tcp
                port: 63982
          to-address: 192.168.25.84
             to-port: 63982
         description: qBittorrent/5.2.0
              policy: System
             packets: 0
               bytes: 0

           entry:
               index: 1
           interface: GigabitEthernet1
            protocol: udp
                port: 63982
          to-address: 192.168.25.84
             to-port: 63982
         description: qBittorrent/5.2.0
              policy: System
             packets: 0
               bytes: 0
```

```
(show)> upnp redirect 1

           entry:
               index: 1
           interface: GigabitEthernet1
            protocol: udp
                port: 63982
          to-address: 192.168.25.84
             to-port: 63982
         description: qBittorrent/5.2.0
              policy: System
             packets: 0
               bytes: 0
```

```
(show)> upnp redirect tcp GigabitEthernet1 63982

           entry:
               index: 0
           interface: GigabitEthernet1
            protocol: tcp
                port: 63982
          to-address: 192.168.25.84
             to-port: 63982
         description: qBittorrent/5.2.0
              policy: System
             packets: 0
               bytes: 0
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show upnp redirect** command has been introduced. |

## 3.175.124 show usb

**Description** Show list of USB-devices.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **usb**

**Example**

```
(show)> usb

          device:
                name: 12F6-312F:
               label: PENDRIVE
           subsystem: storage
          device:
                name: 69f2894d-56a1-4632-9521-dbdc8ab5c53d:
               label: EXT3
           subsystem: storage
          device:
                name: 4FCC-A585:
               label: FAT32
           subsystem: storage
          device:
                name: 226F114C088FC43D:
               label: NTFS
           subsystem: storage
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show usb** command has been introduced. |

## 3.175.125 show version

**Description** Show firmware version.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **version**

**Example**

```
(show)> version

          release: 5.00.C.2.0-2
          sandbox: preview
            title: 5.0.2
             arch: aarch64

              ndm:
                exact: 0-a654284
                cdate: 3 Dec 2025

              bsp:
                exact: 0-e7c92fbd89
                cdate: 3 Dec 2025

              ndw:
             features: ►
dual_image,usb_3,usb_3_first,led_control,wifi_button,wifi5ghz,vht2ghz...
             components: ►
acl,afp,base,chilli,cloudcontrol,corewireless,ddns,dhcpd,dlna...

             ndw3:
              version: 5.0.43

             ndw4:
              version: 5.0.C.2.1

     manufacturer: Keenetic Ltd.
           vendor: Keenetic
           series: KN
            model: Hero (KN-1013)
       hw_version: 12108000
          hw_type: router
            hw_id: KN-1013
           device: Hero
          consent: EA
```

```
           region: EA
      description: Keenetic Hero (KN-1013)
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **show version** command has been introduced. |

## 3.175.126 show vpn-server

**Description** Show current connections to the VPN server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **vpn-server**

**Example**

```
(show)> vpn-server

           tunnel:
       clientaddress: 172.16.1.33
            username: test
              uptime: 3

           statistic:
                    rxpackets: 51
        rx-multicast-packets: 0
        rx-broadcast-packets: 0
                     rxbytes: 5440
                    rxerrors: 0
                   rxdropped: 0
                   txpackets: 46
        tx-multicast-packets: 0
        tx-broadcast-packets: 0
                     txbytes: 9229
                    txerrors: 0
                   txdropped: 0
                   timestamp: 146237.254244
               last-overflow: 0.000000
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **show vpn-server** command has been introduced. |

## 3.175.127 show wireguard-server

**Description** Show current connections to the *WireGuard* server.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **wireguard-server**

**Example**

```
(show)> wireguard-server

               id: Wireguard6
            index: 6
   interface-name: Wireguard6
             type: Wireguard
      description: Wireguard VPN Server

           traits: Ip

           traits: Ip6

           traits: Wireguard

             link: up
        connected: yes
            state: up
              mtu: 1324
  tx-queue-length: 50
       admin-only: no
          address: 172.16.6.1
             mask: 255.255.255.0
           uptime: 2436464
           global: no
   security-level: private
             ipv6:

        wireguard:
             public-key: ►
U123sdfJKJR9ePE1hkMLzvgG4tesKGkjNfHCdTf51T6PpZmo=
          listen-port: 41495
               status: up
         server-owned:

                  peer:
                       public-key: ►
6wfOaskdljaksld78667hHhspPsoe+9ELz5MOKb/X3Jl4ganM=
                     description: wg1
                      local-port: 41495
                         rxbytes: 0
                         txbytes: 0
                  last-handshake: 2147483647
                          online: no
                     remote-port: 0
                             via:
```

```
          local-endpoint-address: 0.0.0.0
         remote-endpoint-address: 0.0.0.0
                         enabled: yes
                          fwmark: 0

                    peer:
                         public-key: ►
IXsdfsdf18973981IsdfhWh6P2yIK+Z+HkSGx++Ak=
                        description: wg2
                         local-port: 41495
                            rxbytes: 0
                            txbytes: 0
                   last-handshake: 2147483647
                                online: no
                        remote-port: 0
                                  via:
          local-endpoint-address: 0.0.0.0
         remote-endpoint-address: 0.0.0.0
                         enabled: yes
                          fwmark: 0

                    peer:
                         public-key: ►
Tasldkal;sdkal;k129873toKl5Iq4J4fdscwR09JJO23dA2WA=
                        description: wg3
                         local-port: 41495
                            rxbytes: 0
                            txbytes: 0
                   last-handshake: 2147483647
                                online: no
                        remote-port: 0
                                  via:
          local-endpoint-address: 0.0.0.0
         remote-endpoint-address: 0.0.0.0
                         enabled: yes
                          fwmark: 0
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **show wireguard-server** command has been introduced. |

# 3.176 sms

**Description** Access to a group of commands to configure *SMS* on the interface.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Group entry** (sms)

**Synopsis**

(config)> **sms** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *Interface* | Interface with SMS service. |

**Example**

```
(config)> sms UsbQmi0
(sms)>
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **sms** command has been introduced. |

## 3.176.1 sms delete

**Description** Delete SMS message.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(sms)> **delete** *‹id›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | Message ID. |

**Example**

```
(sms)> delete sim-5
UsbQmi::Sms: "UsbQmi0": message deleted.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **sms delete** command has been introduced. |

## 3.176.2 sms list

**Description** Show a list of received SMS messages.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(sms)> **list** [ **unread** ] [ **id** ‹*id*› ] [ **no-content** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| unread | *Keyword* | Show a list of unread SMS messages only. |
| id | *Keyword* | Show message with the given identifier. |
| no-content | *Keyword* | Disable message text output. |

**Example**

```
(sms)> list

   nv-free-slots: 23
  nv-total-slots: 23
  sim-free-slots: 0
 sim-total-slots: 15

        messages, id = sim-0:
                read: yes
                from: +79658283425
           timestamp: Thu Aug 20 14:39:57 2020
               parts: 1
         total-parts: 1
                text: Accepted

        messages, id = sim-1:
                read: yes
                from: MegaFon
           timestamp: Wed Sep  9 13:57:21 2020
               parts: 2
         total-parts: 2
                text: 636-269 — your personal login code.
                       Do not share this code with anyone.

        messages, id = sim-3:
                read: yes
                from: +79658283425
           timestamp: Wed Sep  9 16:32:26 2020
               parts: 1
         total-parts: 1
                text: Our time to your time to yes to

        messages, id = sim-4:
                read: yes
                from: +79658283425
           timestamp: Mon Sep 14 17:14:11 2020
               parts: 1
         total-parts: 1
                text: Ok

        messages, id = sim-5:
```

```
                  read: yes
                  from: MegaFon
             timestamp: Wed Sep 16 10:24:46 2020
                 parts: 7
           total-parts: 7
                  text: Listen to audiobooks on management, ►
leadership,
                       personal efficiency and self-development ►
2 weeks free!

                       Just subscribe to the MegaFon AudioBooks ►
and
                      listen to them without advertising on any ►
convenient device.
                       The cost after the trial period - 1 euro ►
/ day.

                         Payment from the phone account without ►
card binding. Cancel
                        subscriptions at any time: pay only for ►
days
                         of usage. Learn more:
                         http://i.megafon.com/Q2XadzRp9xusLwS1

          messages, id = sim-12:
                  read: no
                  from: +79252384670
             timestamp: Fri Sep 18 19:02:27 2020
                 parts: 3
           total-parts: 4
                  text: This subscriber left you 18.09.2020 at ►
18:35
                        voice message. You can listen to it for ►
free by
                         number 0525. / Listen to podcasts and ►
book parodies in
                     convenient application without advertising ►
for 5 e/d. Detailed[...].
```

```
(sms)> list id xnv-64

    nv-free-slots: 68
   nv-total-slots: 128
   sim-free-slots: 15
  sim-total-slots: 15
   messages-count: 1

          messages, id = xnv-64:
                  read: yes
                  from: mTinkoff
             timestamp: Sat Jul  3 17:30:46 2021
                 parts: 2
           total-parts: 2
                text: Replenishment: 10.00 €. Available: 31.00 €.
```

```
(sms)> list no-content

   nv-free-slots: 12
  nv-total-slots: 23
  sim-free-slots: 10
 sim-total-slots: 10
  messages-count: 5

        messages, id = nv-3:
                read: yes

        messages, id = nv-7:
                read: yes

        messages, id = nv-2:
                read: yes

        messages, id = nv-0:
                read: yes

        messages, id = nv-1:
                read: yes
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **sms list** command has been introduced. |
| 3.07 | The **id** and **no-content** arguments were added. |

## 3.176.3 sms read

**Description** Mark SMS as read.

Command with **no** prefix return unread SMS mark.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(sms)> **read** ‹*id*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | Message ID. |

**Example**

```
(sms)> read sim-5
UsbQmi::Sms: "UsbQmi0": message marked as read.
```

```
(sms)> no read sim-5
UsbQmi::Sms: "UsbQmi0": message marked as unread.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **sms read** command has been introduced. |

## 3.176.4 sms send

**Description**

Send SMS to specified number. The maximum value of saved incoming SMS messages in the router's memory is 128. If the memory is full, the oldest SMS from the memory will be automatically deleted when a new SMS is received.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(sms)> **send** *‹to› ‹message›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `to` | *String* | The receiver's phone number. |
| `message` | *String* | Text message to send. |

**Example**

```
(sms)> send +79261122777 "hello world!"
UsbQmi::Sms: "UsbQmi0": message sent.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **sms send** command has been introduced. |

# 3.177 snmp community

**Description**

Set new name for *SNMP* community. By default, common name `public` is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **snmp community** *‹community›*

(config)> **no snmp community**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `community` | *String* | New community name. |

**Example**

```
(config)> snmp community Co_test
Snmp::Manager: SNMP community set to "Co_test".
(config)> no snmp community
Snmp::Manager: SNMP community reset to "public".
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **snmp community** command has been introduced. |

# 3.178 snmp contact

**Description**

Assign the contact name of *SNMP* agent. By default, the name is not defined.

Command with **no** prefix resets setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **snmp contact** *‹contact›*

(config)> **no snmp contact**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `contact` | *String* | *SNMP* contact info. |

**Example**

```
(config)> snmp contact Cont_test
Snmp::Manager: SNMP contact info set to "Cont_test".
(config)> no snmp contact
Snmp::Manager: SNMP community info reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **snmp contact** command has been introduced. |

# 3.179 snmp location

**Description**

Assign the location of *SNMP* agent. By default, the location is not defined.

Command with **no** prefix resets setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **snmp location** *‹location›*

(config)> **no snmp location**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| location | *String* | *SNMP* device location. |

**Example**

```
(config)> snmp location Odintsovo
Snmp::Manager: SNMP device location set to "Odintsovo".
(config)> no snmp location
Snmp::Manager: SNMP device location reset.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **snmp location** command has been introduced. |

# 3.180 snmp view

**Description** Create *SNMP* community with restricted access.

Command with **no** prefix removes community.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config)> **snmp view** *‹name›*

(config)> **no snmp view** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Community name in reduced form, not more than 32 characters. The maximum number of communities is 4. |

**Example**

```
(config)> snmp view client
Snmp::Manager: Created view "client".
```

```
(config)> no snmp view client
Snmp::Manager: Removed view "client".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **snmp view** command has been introduced. |

# 3.181 snmp view exclude

**Description**

Add subtree exclusion from *SNMP* view.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **snmp view exclude** ‹*oid*›

(config)> **no snmp view exclude** [ ‹*oid*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `oid` | *String* | Object identifier. |

**Example**

```
(config)> snmp view client exclude mgmt
Snmp::Manager: "client": added excluded OID "mgmt".
```

```
(config)> no snmp view client exclude mgmt
Snmp::Manager: "client": removed excluded OID "mgmt".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **snmp view exclude** command has been introduced. |

# 3.182 snmp view include

**Description**

Add include subtree for *SNMP* view.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config)> **snmp view include** ‹*oid*›

(config)> **no snmp view include** [ ‹*oid*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `oid` | *`String`* | Object identifier. |

**Example**

```
(config)> snmp view client include internet
Snmp::Manager: "client": added included OID "internet".

(config)> no snmp view client include internet
Snmp::Manager: "client": removed included OID "internet".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **snmp view include** command has been introduced. |

# 3.183 sstp-server

**Description** Access to a group of commands to configure *SSTP* server parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(sstp-server)`

**Synopsis**

(config)> **`sstp-server`**

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server** command has been introduced. |

## 3.183.1 sstp-server allow-bridging

**Description** Enable Ethernet bridging mode for *SSTP* server. By default, this mode is disabled.

Note: The bridging mode is supported between Keenetic routers.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **`allow-bridging`**

(sstp-server)> **no allow-bridging**

**Example**

```
(sstp-server)> allow-bridging
SstpServer::Manager: Enabled Ethernet mode.
```

```
(sstp-server)> no allow-bridging
SstpServer::Manager: Disabled Ethernet mode.
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **sstp-server allow-bridging** command has been introduced. |

## 3.183.2 sstp-server camouflage

**Description**

Enable the camouflage mode for the *SSTP* server, which provides greater security from remote service scanning. By default, the mode is disabled.

Command with **no** prefix disables the camouflage mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **camouflage**

(sstp-server)> **no camouflage**

**Example**

```
(sstp-server)> camouflage
SstpServer::Manager: Enabled camouflage mode.
```

```
(sstp-server)> no camouflage
SstpServer::Manager: Disabled camouflage mode.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **sstp-server camouflage** command has been introduced. |

## 3.183.3 sstp-server debug

**Description**

Enable debug mode for *SSTP* server. Detailed information about the progress of the *SSTP* client connection to the *SSTP* server is saved to the system log. By default, setting is disabled.

Command with **no** prefix disables the debug mode.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **debug**

(sstp-server)> **no debug**

**Example**

```
(sstp-server)> debug
SstpServer::Manager: Enabled debug.
```

```
(sstp-server)> no debug
SstpServer::Manager: Disabled debug.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **sstp-server debug** command has been introduced. |

## 3.183.4 sstp-server dhcp route

**Description** Assign a route which is transmitted in DHCP INFORM messages to the *SSTP* server clients.

Command with **no** prefix cancels the specified route. If you use no arguments, the entire list of routes will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(sstp-server)> **dhcp route** *‹address› ‹mask›*

(sstp-server)> **no dhcp route** [ *‹address› ‹mask›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Network client address. |
| mask | *IP-mask* | Network client mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |

**Example**

```
(sstp-server)> dhcp route 192.168.2.0/24
SstpServer::Manager: Added DHCP INFORM route to ►
192.168.2.0/255.255.255.0.
```

```
(sstp-server)> no dhcp route
SstpServer::Manager: Cleared DHCP INFORM routes.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server dhcp route** command has been introduced. |

## 3.183.5 sstp-server dns-servers

**Description**

Set the *DNS* server that is assigned to clients connecting to the *SSTP* server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **dns-servers** *‹dns1›* [ *‹dns2›* ]

(sstp-server)> **no dns-servers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(sstp-server)> dns-servers 1.1.1.1
SstpServer::Manager: Set custom DNS server "1.1.1.1".
```

```
(sstp-server)> dns-servers 1.1.1.1 8.8.8.8
SstpServer::Manager: Set custom DNS servers "1.1.1.1" and ►
"8.8.8.8".
```

```
(sstp-server)> no dns-servers
SstpServer::Manager: Disabled custom DNS servers.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **sstp-server dns-servers** command has been introduced. |

## 3.183.6 sstp-server interface

**Description**

Bind *SSTP* server to the specified interface.

Command with **no** prefix unbinds the interface.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **interface** ‹*interface*›

(sstp-server)> **no interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(sstp-server)> interface [Tab]

 Usage template:
        interface {interface}

   Choose:
         GigabitEthernet1
                      ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
 WifiMaster1/AccessPoint2
 WifiMaster0/AccessPoint1
                GuestWiFi
```

```
(sstp-server)> interface Bridge0
SstpServer::Manager: Bound to Bridge0.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server interface** command has been introduced. |

## 3.183.7 sstp-server ipv6cp

**Description** Enable IPv6 support. DHCP IPv6 pools are created for each *SSTP* server. By default, the setting is disabled.

Command with **no** prefix disables IPv6 support.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **ipv6cp**

(sstp-server)> **no ipv6cp**

**Example**

```
(sstp-server)> ipv6cp
SstpServer::Manager: IPv6 control protocol enabled.
```

```
(sstp-server)> no ipv6cp
SstpServer::Manager: IPv6 control protocol disabled.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **sstp-server ipv6cp** command has been introduced. |

## 3.183.8 sstp-server lcp echo

**Description**

Specify the testing rules of the SSTP-connections with *LCP* echo tools.

Command with **no** prefix disables *LCP* echo.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **lcp echo** ‹*interval*› ‹*count*› [**adaptive**]

(sstp-server)> **no lcp echo**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | Interval between sending *LCP* echo, in seconds. If within the specified time interval there is no *LCP* echo request from the remote location, the same request will be sent there asking for response *LCP* reply. |
| `count` | *Integer* | The number of consecutive requests *LCP* echo sent, for which no response *LCP* reply was received. If count of *LCP* echo requests goes unanswered, the connection is terminated. |
| `adaptive` | *Keyword* | Pppd will send LCP echo-request frames only if no traffic was received from the peer since the last echo-request was sent. |

**Example**

```
(sstp-server)> lcp echo 5 3
SstpServer::Manager: LCP echo parameters updated.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server lcp echo** command has been introduced. |

## 3.183.9 sstp-server lcp force-pap

**Description**

Enforce the *PAP* authentication only for *SSTP* server.

Command with **no** prefix disables *PAP* authentication.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **lcp force-pap**

(sstp-server)> **no lcp force-pap**

**Example**

```
(sstp-server)> lcp force-pap
SstpServer::Manager: Forced PAP-only authentication.
```

```
(sstp-server)> no lcp force-pap
SstpServer::Manager: Disabled forcing PAP-only authentication.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **sstp-server lcp force-pap** command has been introduced. |

## 3.183.10 sstp-server mru

**Description**

Set *MRU* value to be transmitted to *SSTP* server. By default, `1350` value is used.

Command with **no** prefix resets value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **mru** ‹*value*›

(sstp-server)> **no mru**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `value` | *Integer* | *MRU* value. Can take values in the range from `128` to `1500` inclusively. |

**Example**

```
(sstp-server)> mru 200
SstpServer::Manager: MRU set to 200.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server mru** command has been introduced. |

## 3.183.11 sstp-server mtu

**Description**

Set *MTU* value to be transmitted to *SSTP* server. By default, `1350` value is used.

Command with **no** prefix resets value to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **mtu** ‹*value*›

(sstp-server)> **no mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `value` | *Integer* | *MTU* value. Can take values in the range from `128` to `1500` inclusively. |

**Example**

```
(sstp-server)> mtu 200
SstpServer::Manager: MTU set to 200.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server mtu** command has been introduced. |

## 3.183.12 sstp-server multi-login

**Description**

Allow connection to *SSTP* server for multiple users from one account.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **multi-login**

(sstp-server)> **no multi-login**

**Example**

```
(sstp-server)> multi-login
SstpServer::Manager: Enabled multiple login.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server multi-login** command has been introduced. |

## 3.183.13 sstp-server pool-range

**Description**

Assign a pool of addresses for the clients that connect to the *SSTP* server. By default, pool size `10` is used.

Command with **no** prefix removes a pool.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sstp-server)> **pool-range** ‹*begin*› [ ‹*size*› ]

(sstp-server)> **no pool-range**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `begin` | *IP address* | Start address of pool. |
| `size` | *Integer* | Pool size. |

**Example**

```
(sstp-server)> pool-range 192.168.1.22 7
SstpServer::Manager: Configured pool range 192.168.1.22 to ►
192.168.1.28.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server pool-range** command has been introduced. |

## 3.183.14 sstp-server session-logout

**Description**

Terminate an active or stalled session on the *SSTP* server.

**Prefix no**

No

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **session-logout** ‹*session*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| session | *Integer* | Identifier of the SSTP session (can be viewed using the **show sstp-server** command). |

**Example**

```
(sstp-server)> session-logout 6
SstpServer::Manager: Session "6" is terminated.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **sstp-server session-logout** command has been introduced. |

## 3.183.15 sstp-server session-preempt

**Description** Enable to preempt VPN sessions when **sstp-server multi-login** option is disabled for the *SSTP* server.

Command with **no** prefix disables the preempt.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sstp-server)> **session-preempt**

(sstp-server)> **no session-preempt**

**Example**

```
(sstp-server)> session-preempt
SstpServer::Manager: Enabled session preemption.
```

```
(sstp-server)> no session-preempt
SstpServer::Manager: Disabled session preemption.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **sstp-server session-preempt** command has been introduced. |

## 3.183.16 sstp-server static-ip

**Description** Bind IP address to the user. User account must have `sstp` tag.

Command with **no** prefix removes binding.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(sstp-server)> **static-ip** *‹name› ‹address›*

(sstp-server)> **no static-ip** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Username. |
| address | *IP address* | IP address to bind. |

**Example**

```
(sstp-server)> static-ip admin 192.168.1.22
SstpServer::Manager: Static IP 192.168.1.22 assigned to user ►
"admin".
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **sstp-server static-ip** command has been introduced. |

# 3.184 system

**Description** Access to a group of commands to configure global parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (system)

**Synopsis**

(config)> **system**

**History**

| Version | Description |
|---|---|
| 2.00 | The **system** command has been introduced. |

## 3.184.1 system button

**Description** Configure device buttons to handle specific actions. Available handlers depend on hardware configuration and installed modules.

Command with **no** prefix remove setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **button** *‹button›* **on** *‹action›* **do** *‹handler›*

(system)> **no button** [ *‹button›* [ **on** *‹action›* ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| button | RESET | RESET button. |
| | WLAN | Wireless LAN button. |
| | FN1 | FN1 button. |
| | FN2 | FN2 button. |
| action | click | Single click. |
| | double-click | Double click. |
| | hold | Push and hold for 3 seconds. RESET button hold is 10 seconds. |
| handler | FactoryReset | Reset system to factory defaults. |
| | Reboot | System reboot. |
| | WifiToggle | Switch Wi-Fi on/off. |
| | WifiGuestApToggle | Switch Guest Wi-Fi on/off. |
| | WpsStartMainAp | Start WPS (2.4GHz only). |
| | WpsStartMainAp5 | Start WPS (5GHz only). |
| | WpsStartAllMainAp | Start WPS (all frequency bands). |
| | UnmountAll | Unmount all disks. |
| | DlnaDirectoryRescan | Search for new files. |
| | DlnaDirectoryFullRescan | Full rescan. |
| | TorrentAltSpeedToggle | Alternative speed on/off (component Transmission BitTorrent client required). |
| | TorrentClientStateToggle | Switch the BitTorrent client on/off (component Transmission BitTorrent client required). |
| | OpkgRunScript | Run the script on opkg-section, /etc/ndm/button.d/ folder (component OPKG required). |

**Example**

```
(system)> button WLAN on double-click do WifiGuestApToggle
Core::Peripheral::Manager: "WLAN/double-click" handler set.

(system)> no button
Core::Peripheral::Manager: All button bindings reset.

(system)> no button FN1
Core::Peripheral::Manager: "FN1" button bindings reset.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **system button** command has been introduced. |
| 2.06 | The `OpkgRunScript` handler was added. |

## 3.184.2 system caption

**Description** Set the Web interface title and header for ease of navigation.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **caption** *‹template›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `template` | `default` | Combination of Brand and Model (for example, Keenetic Speedster). |
| | `product` | The Model name (for example, Speedster). |
| | `description` | The System description (for example, Speedster (Hero (KN-1013)). |
| | `hwid` | The Model identifier (for example, Hero (KN-1013)). |
| | `hostname` | The System name (for example, Keenetic-Speedster). |
| | `ndns-domain` | The keenetic name (for example, mywork.keenetic.name). |
| | `default-ssid` | The Default Wi-Fi name (for example, Keenetic-8665). |

**Example**

```
(system)> caption product
Core::System::Caption: Template set to product.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **system caption** command has been introduced. |

## 3.184.3 system clock date

**Description** Adjust system date and time.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **clock date** *‹date-and-time›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `date-and-time` | *String* | Current date and time in `DD MM YYYY HH:MM:SS` format. |

**Example**

```
(system)> clock date 18 07 2012 09:52:33
System date and time has been changed.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system clock date** command has been introduced. |

## 3.184.4 system clock timezone

**Description** Set the system timezone.

Command with **no** prefix resets timezone to default (GMT).

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **clock timezone** *‹locality›*

(system)> **no clock timezone** *‹locality›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `locality` | *String* | Name of the city, indicating the time zone. |

**Example**

```
(system)> clock timezone Dublin
the system timezone is set to "Dublin".
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system clock timezone** command has been introduced. |

## 3.184.5 system configuration factory-reset

**Description** Reset configuration to the factory settings for all modes.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **configuration factory-reset**

**Example**

```
(system)> configuration factory-reset
Core::Configuration: the system configuration reset to factory ►
defaults.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system configuration factory-reset** command has been introduced. |

## 3.184.6 system configuration fail-safe commit

**Description** Commit all unsaved changes and stop the timer.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **configuration fail-safe commit**

**Example**

```
(system)> configuration fail-safe commit
Core::System::Mtd::ConfigStorage: Commited fail-safe ►
configuration changes.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **system configuration fail-safe commit** command has been introduced. |

## 3.184.7 system configuration fail-safe keep-alive

**Description** Silently restart the fail-safe timer.

If the fail-safe mode is inactive or there are no configuration changes the command does nothing.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **configuration fail-safe keep-alive**

**Example**

```
(system)> configuration fail-safe keep-alive
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **system configuration fail-safe keep-alive** command has been introduced. |

## 3.184.8 system configuration fail-safe rollback

**Description** Rollback all unsaved changes and reboot the system. The system brings to a special rollback state while rebooting. In this state commit and timer reconfiguration actions are blocked, except timer disable.

If there are no configuration changes the command does nothing.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **configuration fail-safe rollback**

**Example**

```
(system)> configuration fail-safe rollback
Core::System::Mtd::ConfigStorage: Ignored a fail-safe rollback: ►
no pending changes.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **system configuration fail-safe rollback** command has been introduced. |

## 3.184.9 system configuration fail-safe timer

**Description** Setup or cancel the fail-safe timer. The command configures (or reconfigures) a timer state that is permanent between reboots — it does not require explicit configuration saving. Implemented for the router mode only.

Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **configuration fail-safe timer** *‹action› ‹interval›*

(system)> **no configuration fail-safe timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| action | reboot | Action when the timer expires. |
| interval | *Integer* | Timer value in the range from 60 to 86400 seconds. |

**Example**

```
(system)> configuration fail-safe timer reboot 60
Core::System::Mtd::ConfigStorage: Enabled a 60-second fail-safe ►
"reboot" timer.
```

```
(system)> no configuration fail-safe timer
Core::System::Mtd::ConfigStorage: Turned off the fail-safe mode.
```

**History**

| Version | Description |
|---|---|
| 3.08 | The **system configuration fail-safe timer** command has been introduced. |

## 3.184.10 system configuration save

**Description** Save the system configuration asynchronously.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **configuration save**

**Example**

```
(system)> configuration save
Saving configuration.
```

**History**

| Version | Description |
|---|---|
| 2.05.B.1 | The **system configuration save** command has been introduced. |

## 3.184.11 system country

**Description**

Select a country from the list of countries available in the factory region. The selected country is permanently stored in the persistent storage and does not require configuration save commands.

The country setting affects all system modes.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **country** *‹country›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| country | *String* | The country code from ISO 3166-1 alpha-2[21]. |

**Example**

```
(system)> country EN
Core::System::Country: Set the system country code to "EN".
```

```
(system)> no country
Core::System::Country: Reset the system country code.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **system country** command has been introduced. |

## 3.184.12 system debug

**Description**

Enable system debug. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

[21] https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2

**Synopsis**

(system)> **debug**

(system)> **no debug**

**Example**

```
(system)> debug
Core::Debug: System debug enabled.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **system debug** command has been introduced. |

## 3.184.13 system description

**Description**

Set the system description as an arbitrary string. By default, description Hero (KN-1013) is used.

Command with **no** prefix resets description to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **description** *‹description›*

(system)> **no description**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| description | *String* | System description no longer than 256 bytes. |

**Example**

```
(system)> description DEVICE
Core::System::Info: Description saved.
```

```
(system)> no description
Core::System::Info: Description reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.15 | The **system description** command has been introduced. |

## 3.184.14 system domainname

**Description**

Assign domain name for the system.

Command with **no** prefix removes domain name.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **domainname** ‹*domain*›

(system)> **no domainname**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | The domain name to assign. |

**Example**

```
(system)> domainname example
Domainname saved.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system domainname** command has been introduced. |

## 3.184.15 system eject

**Description** Stop and eject SCSI/SATA USB-drive. To display all media drive names, use **show media** command.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **eject** ‹*name*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Name of media drive to eject. |

**Example**

```
(system)> eject Media0
Storage::Manager: Started "Media0" eject.
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **system eject** command has been introduced. |

## 3.184.16 system hostname

**Description** Set the host name. Host name used to identify a node in the network. It is required to enable some of the built-in services, such as CIFS.

Command with **no** prefix sets the default value, which depends on the model name.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **hostname** ‹*hostname*›

(system)> **no hostname**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| hostname | *String* | Name of the host. |

**Example**

```
(system)> hostname KN1010
Core::System::Hostname: The host name set.
```

```
(system)> no hostname
Core::System::Hostname: The host name reset.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system hostname** command has been introduced. |

## 3.184.17 system led

**Description** Configure general purpose LEDs. By default, LEDs FN_1 and FN_2 show the status of devices connected to USB_1 and USB_2.

Command with **no** prefix resets the setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(system)> **led** ‹*led*› **indicate** ‹*control*›

(system)> **no led** [ ‹*led*› [ **indicate**] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| led | FN_1 | LED name. |
| | FN_2 | |
| control | UpdatesAvailable | LED notifies you the updates for your device are available. |
| | BackupWan | LED shows that backup connection is active at the moment. |
| | SelectedWan | LED shows status of the interface defined with **interface led wan** command. |
| | SelectedSchedule | LED shows status of scheduled event assigned with **schedule led** command. |
| | OpkgLedControl | LED shows status of *opkg*. |
| | Usb1PortDeviceAttached | LED shows status of device connected to USB_1. |
| | Usb2PortDeviceAttached | LED shows status of device connected to USB_2. |
| indicate | *Keyword* | Turn off the indicator completely. |

**Example**

```
(system)> led FN_1 indicate BackupWan
Peripheral::Manager: "BackupWan" control bound to "FN_1" LED.
```

```
(system)> led FN_2 indicate SelectedWan
Peripheral::Manager: "SelectedWan" control bound to "FN_2" LED.
```

```
(system)> no led FN_1 indicate
Peripheral::Manager: "FN_1" LED control binding removed.
```

```
(system)> no led FN_1
Peripheral::Manager: "FN_1" LED control binding reset to default.
```

**History**

| Version | Description |
|---|---|
| 2.08 | The **system led** command has been introduced. |

## 3.184.18 system led power schedule

**Description**

Assign a schedule for the LEDs on the device. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(system)> **led power schedule** *‹schedule›*

(system)> **no led power schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(system)> led power schedule schedule1
Core::Peripheral::Manager: Set LED power schedule "schedule1".
```

```
(system)> no led power schedule
Core::Peripheral::Manager: Clear LED power schedule.
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **system led power schedule** command has been introduced. |

## 3.184.19 system led power shutdown

**Description** Shutdown the LEDs on the device.

Command with **no** prefix turns LEDs on.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **led power shutdown** *‹mode›*

(system)> **no led power shutdown**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | all | Shutdown all the LEDs. |
| | front | Shutdown the LEDs on the front panel. |
| | back | Shutdown the LEDs on the back panel. |

**Example**

```
(system)> led power shutdown all
Core::Peripheral::Manager: Set LED shutdown mode to "all".
```

```
(system)> no led power shutdown
Core::Peripheral::Manager: Set LED shutdown mode to "none".
```

**History**

| Version | Description |
|---|---|
| 3.06 | The **system led power shutdown** command has been introduced. Previous command name is **system led shutdown**. |

## 3.184.20 system log clear

**Description** Clear the system log.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **log clear**

**Example**

```
(system)> log clear
Syslog: the system log has been cleared.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system log clear** command has been introduced. |

## 3.184.21 system log reduction

**Description** Enable repeated message reduction. By default, the setting is enabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **log reduction**

(system)> **no log reduction**

**Example**

```
(system)> log reduction
```

```
(system)> no log reduction
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **system log reduction** command has been introduced. |

## 3.184.22 system log server

**Description** Add remote log server.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(system)> **log server** ‹*address*› [**:** ‹*port*›]

(system)> **no log server** [ ‹*address*› [**:** ‹*port*›] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Remote log server address. |
| port | *Integer* | Remote log server port. |

**Example**

```
(system)> log server 192.168.1.1:8080
Syslog: server 192.168.1.1:8080 added.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system log server** command has been introduced. |

## 3.184.23 system log suppress

**Description** Add message suppression rule.

Command with **no** prefix removes the rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(system)> **log suppress** ‹*ident*›

(system)> **no log suppress** [ ‹*ident*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| ident | *String* | Process ID which messages need to suppress. |

**Example**

```
(system)> log suppress kernel
Core::Syslog: Added suppression "kernel".
```

```
(system)> no log suppress kernel
Core::Syslog: Deleted suppression "kernel".
```

```
(system)> log suppress transmissiond
Core::Syslog: Added suppression "transmissiond".
```

```
(system)> no log suppress transmissiond
Core::Syslog: Deleted suppression "transmissiond".
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **system log suppress** command has been introduced. |

## 3.184.24 system mode

**Description** Select system operating mode for Hero.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **mode** *‹mode›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | router | Main mode (Router Mode). |
| | extender | Extender mode to extend an existing wireless network by connecting to a main router.<br><br>In Extender Mode, you can connect the device to the Main Router either via Wi-Fi (wireless connection) or Ethernet cable (wired connection). |

**Example**

```
(system)> mode router
Core::Mode: The system is already in "router" mode.
```

```
(system)> mode extender
Core::Mode: The system switched to "extender" mode, reboot the ►
device to apply the settings.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **system mode** command has been introduced. |

## 3.184.25 system mount

**Description** Mount USB-drive. To display all mounted drives use **show usb** command.

Command with **no** prefix unmount the drive.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis**

(system)> **mount** *‹filesystem›*

(system)> **no mount** *‹filesystem›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `filesystem` | *String* | Name of filesystem to mount/unmount. |

**Example**

```
(system)> mount 9430B54530B52EDC:
Filesystem mounted
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system mount** command has been introduced. |

## 3.184.26 system ndss debug

**Description** Enable debug for the NDSS subsystem. By default, setting is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **debug**

(system)> **no debug**

**Example**

```
(system)> ndss debug
Core::Ndss: Debug enabled.
```

```
(system)> no ndss debug
Core::Ndss: Debug disabled.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **system ndss debug** command has been introduced. |

## 3.184.27 system ndss dump-report disable

**Description**

Disable product improvement program. By default, setting is enabled.

Command with **no** prefix enables the program.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **ndss dump-report disable**

(system)> **no ndss dump-report disable**

**Example**

```
(system)> ndss dump-report disable
Core::Ndss: Dump-reporting disabled.
```

```
(system)> no ndss dump-report disable
Core::Ndss: Dump-reporting enabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **system ndss dump-report disable** command has been introduced. Previous command name is **system dump-report disable**. |

## 3.184.28 system reboot

**Description**

Reboot the system. If the parameter is set, reboot is executed after a timeout, in seconds. If the timer is already set, using of the command replaces the old value of the timer to the new one.

Using a scheduled reboot is convenient in the case when the device is under remote control, and the user doesn't understand the effect of the commands he/she is trying. The user can turn on a scheduled reboot for fear of losing control over the device. After reboot the system will return to its original state and become available.

Command with **no** prefix cancels reboot or removes the reboot on schedule.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

No

**Synopsis**

(system)> **reboot** [ *‹interval›* | **schedule** *‹schedule›* ]

(system)> **no reboot** [ **schedule** ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interval | *Integer* | Timeout for reboot, in seconds. If not specified, the reboot will be executed immediately. |
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(system)> reboot 20
Core::System::RebootManager: Rebooting in 20 seconds.
```

```
(system)> no reboot
Core::System::RebootManager: Reboot cancelled.
```

```
(system)> reboot schedule rebootroute
Core::System::RebootManager: Set reboot schedule "rebootroute".
```

```
(system)> no reboot schedule
Core::System::RebootManager: Schedule disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system reboot** command has been introduced. |
| 2.12 | The **schedule** argument has been added. |

## 3.184.29 system set

**Description**

Set the value of the specified system parameter and save it in the current settings.

Command with **no** prefix returns the default value to the specified parameter (before the first change).

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(system)> **set** *‹name› ‹value›*

(system)> **no set** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Identifier of the system parameter. |

| Argument | Value | Description |
|---|---|---|
| value | *String* | New value of the system parameter. |

**Example**

```
(config)> system
(system)> set net.ipv4.ip_forward 1
(system)> set net.ipv4.tcp_fin_timeout 30
(system)> set net.ipv4.tcp_keepalive_time 120
(system)> set ►
net.ipv4.netfilter.ip_conntrack_tcp_timeout_established 1200
(system)> set net.ipv4.netfilter.ip_conntrack_udp_timeout 60
(system)> set net.ipv4.netfilter.ip_conntrack_max 4096
(system)> exit
(config)> show running-config
system
set net.ipv4.ip_forward 1
    set net.ipv4.tcp_fin_timeout 30
    set net.ipv4.tcp_keepalive_time 120
   set net.ipv4.netfilter.ip_conntrack_tcp_timeout_established ►
1200
    set net.ipv4.netfilter.ip_conntrack_udp_timeout 60
    set net.ipv4.netfilter.ip_conntrack_max 4096
!
...
(config)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system set** command has been introduced. |

## 3.184.30 system swap

**Description** Configure swap area. If the file is not found, the command tries to create it.

Command with **no** prefix disables the swap.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **swap** (*‹area›* | *‹area›*) *‹size›*

(system)> **no swap**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| area | *Filename* | Full path to the swap-file in <file system>:<path> format. |
| size | *Integer* | Swap-file size, in Kbytes. |

**Example**

```
(system)> swap OPKG:/swap/swapfile 2097152
Storage::Swap::Manager: Swap is being initialized in background.
```

```
(system)> no swap
Storage::Swap::Manager: Swap area OPKG:/swap/swapfile disabled.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **system swap** command has been introduced. |

## 3.184.31 system trace lock threshold

**Description**

Set a trace lock threshold for the system threads. If the threshold value is exceeded, information about this thread (for example, SCGI session) is saved in the system log. By default, setting is disabled.

Command with **no** prefix disables the trace lock threshold feature.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

No

**Synopsis**

(system)> **system trace lock threshold** *‹threshold›*

(system)> **no system trace lock threshold**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *String* | Threshold value in milliseconds. Can take values in the range from `100` to `100000000` inclusively. The threshold value is not saved into `startup-config`. |

**Example**

```
(system)> system trace lock threshold 100
Lockable: Set threshold to 100 ms.
```

```
(system)> no trace lock threshold
Lockable: Reset threshold.
```

**History**

| Version | Description |
|---|---|
| 3.03 | The **system trace lock threshold** command has been introduced. |

## 3.184.32 system usb power schedule

**Description**

Assign a schedule for the USB port. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **usb** *‹port›* **power schedule** *‹schedule›*

(system)> **no usb** *‹port›* **power schedule** *‹schedule›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | 2 | USB port 2. |
| `schedule` | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(system)> usb 1 power schedule schedule0
Usb::Manager: Port "1" schedule "schedule0" assigned.
```

```
(system)> no usb 1 power schedule
Usb::Manager: Port "1" schedule unassigned.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **system usb power schedule** command has been introduced. |

## 3.184.33 system usb power shutdown

**Description**

Switch off the power on the USB port.

Command with **no** prefix turns the power on.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **port** *‹port›* **power shutdown**

(system)> **no port** *‹port›* **power shutdown**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | 2 | USB port 2. |

**Example**

```
(system)> usb 1 power shutdown
Usb::Manager: Port "1" power is shutting down.
```

```
(system)> no usb 1 power shutdown
Usb::Manager: Port "1" power is activated.
```

**History**

| Version | Description |
|---|---|
| 4.00 | The **system usb power shutdown** command has been introduced. |

## 3.184.34 system zram

**Description**

Configure zRam swap file. If you use no argument, size of zRam file will be set automatically.

Command with **no** prefix removes zRam file.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(system)> **zram** [ *‹size›* ]

(system)> **no zram**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `size` | *Integer* | Size of zRam file, in Kbytes. |

**Example**

```
(system)> zram
Zram::Manager: Enabled zram swap of size 262144Kb.
```

```
(system)> no zram
Zram::Manager: Zram swap disabled.
```

**History**

| Version | Description |
|---|---|
| 2.09 | The **system zram** command has been introduced. |

# 3.185 tools

**Description**

Access to a group of commands to test the environment.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(tools)`

**Synopsis**

(config)> **tools**

**History**

| Version | Description |
|---|---|
| 2.00 | The **tools** command has been introduced. |

## 3.185.1 tools arping

**Description** Command action is analogous to **tools ping** command, but operates at the link layer of the OSI model using the *ARP* protocol.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(tools)> **arping** ‹*address*› **source-interface** ‹*source-interface*› [ **count** ‹*count*› ] [ **wait-time** ‹*wait-time*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `address` | *IP address* | IP address of the respondent. |
| `source-interface` | *Interface* | Name of source-interface. |
| `count` | *Integer* | Quantity of requests. If not specified, the command will run until interrupted by the user. |
| `wait-time` | *Integer* | The maximum response time, in milliseconds. |

**Example**

```
(tools)> arping 192.168.15.51 source-interface Home count 4 ►
wait-time 3000
Starting the ARP ping to "192.168.15.51"...
ARPING 192.168.15.51 from 192.168.15.1 br0.
Unicast reply from 192.168.15.51 [9c:b7:0d:ce:51:6a] 1.884 ms.
Unicast reply from 192.168.15.51 [9c:b7:0d:ce:51:6a] 1.831 ms.
Sent 4 probes, received 2 responses.
Process terminated.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **tools arping** command has been introduced. |

## 3.185.2 tools iperf3

**Description** Runs *iPerf3* in client mode to test network bandwidth between a client and an *iPerf3* server, suitable for local networks or internet connections.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(tools)> **iperf3** ‹*host*› [ (**ipv4** | **ipv6**) ] [ (**tcp** | **udp**) ] [ **reverse** ] [ **port** ‹*port*› ] [ **bitrate** ‹*bitrate*› ] [ **streams** ‹*streams*› ] [ **time** ‹*time*› | **bytes** ‹*bytes*› ] [ **source-interface** ‹*source-interface*› | **source-address** ‹*source-address*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| host | *String* | The IP address or hostname of the iPerf3 server. |
| ipv4 | *String* | Use the IPv4 protocol version. |
| ipv6 | *String* | Use the IPv6 protocol version. |
| tcp | *Keyword* | Use the TCP transport protocol. |
| udp | *Keyword* | Use the UDP transport protocol. |
| reverse | *Keyword* | The mode, when the server sends data to the client. |
| port | *Integer* | The server port to connect (default: 5201). |
| bitrate | *Integer* | The bitrate in bits per second (bit/s). |
| streams | *Integer* | The number of simultaneous streams to use. |
| time | *Integer* | The duration in seconds. |
| bytes | *Integer* | The total number of bytes to transmit. |
| source-interface | *Interface* | The source interface for connections to the server. Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |
| source-address | *IP address* | The source IP address for connections to the server. |

**Example**

```
(tools)> iperf3 my.example.com ipv4 tcp reverse port 5203 streams ►
10 time 60 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5203
Reverse mode, remote host my.example.com is sending
[  5] local 192.168.2.4 port 54856 connected to 10.10.10.5 port ►
5203
[  7] local 192.168.2.4 port 54866 connected to 10.10.10.5 port ►
```

```
5203
[  9] local 192.168.2.4 port 54882 connected to 10.10.10.5 port ►
5203
[ 11] local 192.168.2.4 port 54896 connected to 10.10.10.5 port ►
5203
[ 13] local 192.168.2.4 port 54902 connected to 10.10.10.5 port ►
5203
[ 15] local 192.168.2.4 port 54910 connected to 10.10.10.5 port ►
5203
[ 17] local 192.168.2.4 port 54912 connected to 10.10.10.5 port ►
5203
[ 19] local 192.168.2.4 port 54914 connected to 10.10.10.5 port ►
5203
[ 21] local 192.168.2.4 port 54918 connected to 10.10.10.5 port ►
5203
[ 23] local 192.168.2.4 port 54926 connected to 10.10.10.5 port ►
5203
[ ID] Interval           Transfer     Bitrate
[  5]   0.00-1.00   sec  4.12 MBytes  34.6 Mbits/sec
[  7]   0.00-1.00   sec  4.12 MBytes  34.6 Mbits/sec
[  9]   0.00-1.00   sec  3.00 MBytes  25.1 Mbits/sec
[ 11]   0.00-1.00   sec  3.88 MBytes  32.5 Mbits/sec
[ 13]   0.00-1.00   sec  4.75 MBytes  39.8 Mbits/sec
[ 15]   0.00-1.00   sec  1.12 MBytes  9.43 Mbits/sec
[ 17]   0.00-1.00   sec  4.75 MBytes  39.8 Mbits/sec
[ 19]   0.00-1.00   sec  1.75 MBytes  14.7 Mbits/sec
[ 21]   0.00-1.00   sec  3.25 MBytes  27.2 Mbits/sec
[ 23]   0.00-1.00   sec   512 KBytes  4.19 Mbits/sec
[SUM]   0.00-1.00   sec  31.2 MBytes   262 Mbits/sec
- - - - - - - - - - - - - - - - - - - - - - - - -
[SUM]   0.00-60.00  sec  2.08 GBytes   297 Mbits/sec  8254     ►
        sender
[SUM]   0.00-60.00  sec  2.03 GBytes   291 Mbits/sec          ►
       receiver
iperf Done.
```

```
(tools)> iperf3 my.example.com ipv4 tcp port 5203 streams 10 ►
time 60 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5203
[  5] local 192.168.2.4 port 55062 connected to 10.10.10.5 port ►
5203
[  7] local 192.168.2.4 port 55074 connected to 10.10.10.5 port ►
5203
[  9] local 192.168.2.4 port 55076 connected to 10.10.10.5 port ►
5203
[ 11] local 192.168.2.4 port 55078 connected to 10.10.10.5 port ►
5203
[ 13] local 192.168.2.4 port 55094 connected to 10.10.10.5 port ►
5203
[ 15] local 192.168.2.4 port 55098 connected to 10.10.10.5 port ►
5203
[ 17] local 192.168.2.4 port 55102 connected to 10.10.10.5 port ►
5203
```

```
[ 19] local 192.168.2.4 port 55104 connected to 10.10.10.5 port ►
5203
[ 21] local 192.168.2.4 port 55106 connected to 10.10.10.5 port ►
5203
[ 23] local 192.168.2.4 port 55120 connected to 10.10.10.5 port ►
5203
[ ID] Interval           Transfer     Bitrate         Retr  Cwnd
[  5]   0.00-1.00   sec  18.6 MBytes   156 Mbits/sec    1    304 ►
KBytes
[  7]   0.00-1.00   sec  10.5 MBytes  88.0 Mbits/sec    4    129 ►
KBytes
[  9]   0.00-1.00   sec  2.50 MBytes  20.9 Mbits/sec    9   33.9 ►
KBytes
[ 11]   0.00-1.00   sec  5.75 MBytes  48.2 Mbits/sec    1    110 ►
KBytes
[ 13]   0.00-1.00   sec  6.62 MBytes  55.5 Mbits/sec    3   89.1 ►
KBytes
[ 15]   0.00-1.00   sec  6.88 MBytes  57.6 Mbits/sec   40   60.8 ►
KBytes
[ 17]   0.00-1.00   sec  4.00 MBytes  33.5 Mbits/sec   32   29.7 ►
KBytes
[ 19]   0.00-1.00   sec  4.12 MBytes  34.6 Mbits/sec   13   55.1 ►
KBytes
[ 21]   0.00-1.00   sec  9.75 MBytes  81.7 Mbits/sec    1    170 ►
KBytes
[ 23]   0.00-1.00   sec  9.88 MBytes  82.7 Mbits/sec    4    113 ►
KBytes
[SUM]   0.00-1.00   sec  78.6 MBytes   659 Mbits/sec  108
- - - - - - - - - - - - - - - - - - - - - - - - -
[SUM]   0.00-60.00  sec  3.78 GBytes   541 Mbits/sec  7312     ►
        sender
[SUM]   0.00-60.00  sec  3.77 GBytes   539 Mbits/sec           ►
       receiver
iperf Done.
```

```
(tools)> iperf3 my.example.com ipv6 tcp reverse port 5002 streams ►
10 time 60 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5002
Reverse mode, remote host my.example.com is sending
[  5] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51220 ►
connected to 2001:db8::21  port 5002
[  7] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51236 ►
connected to 2001:db8::21  port 5002
[  9] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51240 ►
connected to 2001:db8::21  port 5002
[ 11] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51244 ►
connected to 2001:db8::21 port 5002
[ 13] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51248 ►
connected to 2001:db8::21 port 5002
[ 15] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51252 ►
connected to 2001:db8::21 port 5002
[ 17] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51256 ►
connected to 2001:db8::21 port 5002
```

```
[ 19] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51272 ►
connected to 2001:db8::21 port 5002
[ 21] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51288 ►
connected to 2001:db8::21 port 5002
[ 23] local 2001:db8:2:612:52ff:20ff:fe00:1e87 port 51298 ►
connected to 2001:db8::21 port 5002
[ ID] Interval           Transfer     Bitrate
[  5]   0.00-1.00   sec  3.50 MBytes  29.3 Mbits/sec
[  7]   0.00-1.00   sec  2.25 MBytes  18.9 Mbits/sec
[  9]   0.00-1.00   sec  9.25 MBytes  77.5 Mbits/sec
[ 11]   0.00-1.00   sec  3.50 MBytes  29.3 Mbits/sec
[ 13]   0.00-1.00   sec  9.25 MBytes  77.5 Mbits/sec
[ 15]   0.00-1.00   sec  2.62 MBytes  22.0 Mbits/sec
[ 17]   0.00-1.00   sec  3.75 MBytes  31.4 Mbits/sec
[ 19]   0.00-1.00   sec  2.25 MBytes  18.9 Mbits/sec
[ 21]   0.00-1.00   sec  1.25 MBytes  10.5 Mbits/sec
[ 23]   0.00-1.00   sec  1.75 MBytes  14.7 Mbits/sec
[SUM]   0.00-1.00   sec  39.4 MBytes   330 Mbits/sec
- - - - - - - - - - - - - - - - - - - - - - - - -
[SUM]   0.00-60.05  sec  3.30 GBytes   472 Mbits/sec  2400     ►
        sender
[SUM]   0.00-60.00  sec  3.28 GBytes   470 Mbits/sec          ►
       receiver
iperf Done.
```

```
(tools)> iperf3 my.example.com ipv6 tcp port 5002 streams 10 ►
time 60 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5203
[  5] local 192.168.2.4 port 55062 connected to 10.10.10.5 port ►
5203
[  7] local 192.168.2.4 port 55074 connected to 10.10.10.5 port ►
5203
[  9] local 192.168.2.4 port 55076 connected to 10.10.10.5 port ►
5203
[ 11] local 192.168.2.4 port 55078 connected to 10.10.10.5 port ►
5203
[ 13] local 192.168.2.4 port 55094 connected to 10.10.10.5 port ►
5203
[ 15] local 192.168.2.4 port 55098 connected to 10.10.10.5 port ►
5203
[ 17] local 192.168.2.4 port 55102 connected to 10.10.10.5 port ►
5203
[ 19] local 192.168.2.4 port 55104 connected to 10.10.10.5 port ►
5203
[ 21] local 192.168.2.4 port 55106 connected to 10.10.10.5 port ►
5203
[ 23] local 192.168.2.4 port 55120 connected to 10.10.10.5 port ►
5203
[ ID] Interval           Transfer     Bitrate         Retr  Cwnd
[  5]   0.00-1.00   sec  18.6 MBytes   156 Mbits/sec    1    304 ►
KBytes
[  7]   0.00-1.00   sec  10.5 MBytes  88.0 Mbits/sec    4    129 ►
KBytes
```

```
[  9]   0.00-1.00   sec  2.50 MBytes  20.9 Mbits/sec    9   33.9 ►
KBytes
[ 11]   0.00-1.00   sec  5.75 MBytes  48.2 Mbits/sec    1    110 ►
KBytes
[ 13]   0.00-1.00   sec  6.62 MBytes  55.5 Mbits/sec    3   89.1 ►
KBytes
[ 15]   0.00-1.00   sec  6.88 MBytes  57.6 Mbits/sec   40   60.8 ►
KBytes
[ 17]   0.00-1.00   sec  4.00 MBytes  33.5 Mbits/sec   32   29.7 ►
KBytes
[ 19]   0.00-1.00   sec  4.12 MBytes  34.6 Mbits/sec   13   55.1 ►
KBytes
[ 21]   0.00-1.00   sec  9.75 MBytes  81.7 Mbits/sec    1    170 ►
KBytes
[ 23]   0.00-1.00   sec  9.88 MBytes  82.7 Mbits/sec    4    113 ►
KBytes
[SUM]   0.00-1.00   sec  78.6 MBytes   659 Mbits/sec  108
- - - - - - - - - - - - - - - - - - - - - - - - -
[SUM]   0.00-60.00  sec  1.71 GBytes   245 Mbits/sec  1002     ►
        sender
[SUM]   0.00-60.08  sec  1.68 GBytes   240 Mbits/sec          ►
       receiver
iperf Done.
```

```
(tools)> iperf3 my.example.com ipv4 tcp reverse port 5201 bitrate ►
10000000 streams 4 time 30 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5201
Reverse mode, remote host my.example.com is sending
[  5] local 192.168.2.4 port 57068 connected to 10.10.10.5 port ►
5201
[  7] local 192.168.2.4 port 57076 connected to 10.10.10.5 port ►
5201
[  9] local 192.168.2.4 port 57090 connected to 10.10.10.5 port ►
5201
[ 11] local 192.168.2.4 port 57092 connected to 10.10.10.5 port ►
5201
[ ID] Interval           Transfer     Bitrate
[  5]   0.00-1.00   sec  1.00 MBytes  8.38 Mbits/sec
[  7]   0.00-1.00   sec  1.00 MBytes  8.38 Mbits/sec
[  9]   0.00-1.00   sec  1.00 MBytes  8.38 Mbits/sec
[ 11]   0.00-1.00   sec  1.00 MBytes  8.38 Mbits/sec
[SUM]   0.00-1.00   sec  4.00 MBytes  33.5 Mbits/sec
- - - - - - - - - - - - - - - - - - - - - - - - -
[SUM]   0.00-30.00  sec   143 MBytes  40.1 Mbits/sec   74      ►
       sender
[SUM]   0.00-30.00  sec   142 MBytes  39.8 Mbits/sec          ►
       receiver
iperf Done.
```

```
(tools)> iperf3 my.example.com ipv4 tcp  port 5201 streams 4 ►
bytes 1000000 source-interface ISP
starting iperf3 client to server my.example.com...
Connecting to host my.example.com, port 5201
```

```
[  5] local 192.168.2.4 port 58344 connected to 10.10.10.5 port ►
5201
[  7] local 192.168.2.4 port 58354 connected to 10.10.10.5 port ►
5201
[  9] local 192.168.2.4 port 58370 connected to 10.10.10.5 port ►
5201
[ 11] local 192.168.2.4 port 58372 connected to 10.10.10.5 port ►
5201
[ ID] Interval           Transfer     Bitrate         Retr  Cwnd
[  5]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0    106 ►
KBytes
[  7]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0    106 ►
KBytes
[  9]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0    106 ►
KBytes
[ 11]   0.00-1.00   sec   256 KBytes  2.10 Mbits/sec    0    100 ►
KBytes
[SUM]   0.00-1.00   sec  1.38 MBytes  11.5 Mbits/sec    0
- - - - - - - - - - - - - - - - - - - - - - - - -
[ ID] Interval           Transfer     Bitrate         Retr
[  5]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0      ►
      sender
[  5]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec           ►
       receiver
[  7]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0      ►
      sender
[  7]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec           ►
       receiver
[  9]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec    0      ►
      sender
[  9]   0.00-1.00   sec   384 KBytes  3.14 Mbits/sec           ►
       receiver
[ 11]   0.00-1.00   sec   256 KBytes  2.09 Mbits/sec    0      ►
      sender
[ 11]   0.00-1.00   sec   256 KBytes  2.09 Mbits/sec           ►
       receiver
[SUM]   0.00-1.00   sec  1.38 MBytes  11.5 Mbits/sec    0      ►
       sender
[SUM]   0.00-1.00   sec  1.38 MBytes  11.5 Mbits/sec           ►
       receiver
iperf Done.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **tools iperf3** command has been introduced. |

## 3.185.3 tools ping

**Description**

Send Echo-Request requests of ICMP protocol to specified network node and register received Echo Reply responses. The time between sending request and receiving the response Round Trip Time (RTT) allows you to define double ended delays on the route and frequency of packet losses, that is, indirectly

determine loading on the channels of data transmission and intermediate devices.

Total absence of ICMP Replies can also mean that the remote node (or any of the intermediate routers) blocks ICMP Echo Reply or ignores ICMP Echo Request.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(tools)> **ping** ‹*host*› [ **count** ‹*count*› ] [ **packetsize** ‹*packetsize*› ] [ **sequence-id** ‹*sequence-id*› ] [ **source** ( ‹*source-interface*› | ‹*source-address*› ) ] [ **tos** ‹*tos*› ] [ **ttl** ‹*ttl*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| host | *String* | Domain name or host IP address. |
| count | *Integer* | Quantity of ICMP Echo Requests. If not specified, the command will run until interrupted by the user. |
| packetsize | *Integer* | Size of the ICMP Echo Request data field in bytes. By default, 56 value is used. Can take values in the range from 28 to 65535 inclusively. |
| sequence-id | *Integer* | Sequence number to aid in matching Echo Request and Echo Reply. By default, 0 value is used. Can take values in the range from 0 to 65535 inclusively. |
| source | source-address | Address of the outgoing interface. |
| | source-interface | Interface to be used as the source interface in outgoing probe packets. |
| tos | *Integer* | Type Of Service. By default, 0 value is used. Can take values in the range from 0 to 63 inclusively. |
| ttl | *Integer* | Maximum number of hops (max time-to-live value) traceroute will probe. By default, 30 value is used. Can take values in the range from 1 to 255 inclusively. |

**Example**

```
(tools)> ping 8.8.8.8 count 5 size 100
Sending ICMP ECHO request to 192.168.1.33
PING 192.168.1.33 (192.168.1.33) 72 (100) bytes of data.
100 bytes from 192.168.1.33: icmp_req=1, ttl=128, time=2.35 ms.
100 bytes from 192.168.1.33: icmp_req=2, ttl=128, time=1.07 ms.
100 bytes from 192.168.1.33: icmp_req=3, ttl=128, time=1.06 ms.
```

```
--- 192.168.1.33 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss,
0 duplicate(s), time 2002.65 ms.
Round-trip min/avg/max = 1.06/1.49/2.35 ms.
Process terminated.
```

```
(tools)> ping 8.8.8.8 source Wireguard1
sending ICMP ECHO request to 8.8.8.8...
PING 8.8.8.8 (8.8.8.8) 72 (100) bytes of data.
96 bytes from 8.8.8.8: icmp_req=1, ttl=108, time=17.58 ms. ►
(truncated).
96 bytes from 8.8.8.8: icmp_req=2, ttl=108, time=17.62 ms. ►
(truncated).
96 bytes from 8.8.8.8: icmp_req=3, ttl=108, time=17.29 ms. ►
(truncated).
96 bytes from 8.8.8.8: icmp_req=4, ttl=108, time=17.17 ms. ►
(truncated).
96 bytes from 8.8.8.8: icmp_req=5, ttl=108, time=17.41 ms. ►
(truncated).
--- 8.8.8.8 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss,
0 duplicate(s), time 4019.72 ms.
Round-trip min/avg/max = 17.17/17.41/17.62 ms.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **tools ping** command has been introduced. |
| 4.01 | New values `address` and `interface` were added to the `source` argument. |

## 3.185.4 tools ping6

**Description**

Send Echo-Request requests of ICMPv6 protocol to specified network node and register received Echo Reply responses. The time between sending request and receiving the response Round Trip Time (RTT) allows you to define double ended delays on the route and frequency of packet losses, that is, indirectly determine loading on the channels of data transmission and intermediate devices.

Total absence of ICMP Replies can also mean that the remote node (or any of the intermediate routers) blocks ICMP Echo Reply or ignores ICMP Echo Request.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(tools)> **ping6** ‹*host*› [ **count** ‹*count*› ] [ **packetsize** ‹*packetsize*› ] [ **sequence-id** ‹*sequence-id*› ] [ **source** ( ‹*source-interface*› | ‹*source-address*› ) ] [ **tos** ‹*tos*› ] [ **ttl** ‹*ttl*› ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *String* | Domain name or host IPv6-address. |
| `count` | *Integer* | Quantity of ICMPv6 Echo Requests. If not specified, the command will run until interrupted by the user. |
| `packetsize` | *Integer* | Size of the ICMPv6 Echo Request data field in bytes. By default, `56` value is used. Can take values in the range from `28` to `65535` inclusively. |
| `sequence-id` | *Integer* | Sequence number to aid in matching Echo Request and Echo Reply. By default, `0` value is used. Can take values in the range from `0` to `65535` inclusively. |
| `source` | `source-address` | Address of the outgoing interface. |
| | `source-interface` | Interface to be used as the source interface in outgoing probe packets. |
| `tos` | *Integer* | Type Of Service. By default, `0` value is used. Can take values in the range from `0` to `63` inclusively. |
| `ttl` | *Integer* | Maximum number of hops (max time-to-live value) traceroute will probe. By default, `30` value is used. Can take values in the range from `1` to `255` inclusively. |

**Example**

```
(tools)> ping6 2001:4860:4860::8888 count 5 size 111
sending ICMPv6 ECHO request to 2001:4860:4860::8888...
PING 2001:4860:4860::8888 (2001:4860:4860::8888) 63 (111) bytes ►
of data.
71 bytes from 2001:4860:4860::8888: icmp_req=1, ttl=108, ►
time=19.84 ms.
71 bytes from 2001:4860:4860::8888: icmp_req=2, ttl=108, ►
time=19.73 ms.
71 bytes from 2001:4860:4860::8888: icmp_req=3, ttl=108, ►
time=19.96 ms.
71 bytes from 2001:4860:4860::8888: icmp_req=4, ttl=108, ►
time=19.86 ms.
71 bytes from 2001:4860:4860::8888: icmp_req=5, ttl=108, ►
time=19.76 ms.
--- 2001:4860:4860::8888 ping statistics ---
5 packets transmitted, 5 packets received, 0% packet loss,
0 duplicate(s), time 4021.21 ms.
Round-trip min/avg/max = 19.73/19.83/19.96 ms.
```

```
(tools)> ping6 2001:4860:4860::8888 source ISP
sending ICMPv6 ECHO request to 2001:4860:4860::8888...
PING 2001:4860:4860::8888 (2001:4860:4860::8888) from eth3: 56 ►
(104) bytes of data.
64 bytes from 2001:4860:4860::8888: icmp_req=1, ttl=108, ►
time=19.90 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=2, ttl=108, ►
time=19.75 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=3, ttl=108, ►
time=19.64 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=4, ttl=108, ►
time=19.66 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=5, ttl=108, ►
time=19.88 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=6, ttl=108, ►
time=19.72 ms.
64 bytes from 2001:4860:4860::8888: icmp_req=7, ttl=108, ►
time=19.71 ms.
--- 2001:4860:4860::8888 ping statistics ---
7 packets transmitted, 7 packets received, 0% packet loss,
0 duplicate(s), time 6221.53 ms.
Round-trip min/avg/max = 19.64/19.75/19.90 ms.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **tools ping6** command has been introduced. |
| 4.01 | New values `address` and `interface` were added to the `source` argument. |

## 3.185.5 tools traceroute

**Description** Show the route to a network host.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(tools)>  traceroute ‹host› [ count ‹count› ] [ interval ‹interval› ]
      [ wait-time ‹wait-time› ] [ packetsize ‹packetsize› ]
      [ max-ttl ‹max-ttl› ] [ port ‹port› ] [ source-address
‹source-address› ]
      [ source-interface ‹source-interface› ] [ type ‹type› ] [ tos ‹tos›
]
```

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `host` | *`String`* | Name of the target host. |

| Argument | Value | Description |
|---|---|---|
| `count` | *Integer* | Number of probe packets per hop. Default value — 3. Value must be in the range [1;10]. |
| `interval` | *Integer* | Time in seconds between sending packets. Default value — 0. Value must be in the range [0;15]. |
| `wait-time` | *Integer* | Time to wait for a response to a probe (in seconds). Default value — 1. Value must be in the range [1;15]. |
| `packetsize` | *Integer* | Size of packet according to the protocol `type`.<br><br>For `tcp` type default packet size is 52. Range of values [52].<br><br>For `udp` and `icmp` types default packet size is 60. Range of values [28;65535]. |
| `max-ttl` | *Integer* | Maximum number of hops (max time-to-live value) traceroute will probe. Default value — 30. Value must be in the range [1;255]. |
| `port` | *Integer* | Destination port.<br><br>For `tcp` type default port is 80.<br><br>For `udp` type default port is 33434.<br><br>For `icmp` type default port is 1. |
| `source-address` | *String* | Address of the outgoing interface. |
| `source-interface` | *String* | Interface to be used as the source interface in outgoing probe packets. |
| `type` | `tcp` | *TCP* protocol. |
| | `udp` | *UDP* protocol. Used by default. |
| | `icmp` | *ICMP* protocol. |
| `tos` | *Integer* | Type Of Service. Default value — 0. Value must be in the range [0;255]. |

**Example**

```
(tools)> traceroute example.com count 5 interval 5
starting traceroute to example.com...
traceroute to example.com (203.0.113.113), 30 hops maximum, 60 ►
byte packets.
 1  192.168.233.1 (192.168.233.1)  2.742 ms  2.406 ms  2.460 ms ►
 2.191 ms  2.957 ms
 2  10.77.140.1 (10.77.140.1)  3.301 ms  3.847 ms  3.839 ms
process terminated
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **tools traceroute** command has been introduced. |

# 3.186 torrent

**Description** Access to a group of commands to configure BitTorrent parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(config-torrent)`

**Synopsis**

```
(config)>  torrent
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **torrent** command has been introduced. |

## 3.186.1 torrent directory

**Description** Specify a folder for downloads. If the folder is not found, the command tries to create it.

Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config-torrent)>  directory ‹directory›
```

```
(config-torrent)> no directory
```

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `directory` | *String* | Path to the folder with filesystem defining. Filesystems — `temp:`, `system:`, `flash:`, `sys:`, `proc:`, `usb:`. |

**Example**

```
(config-torrent)> directory ►
46E243F4E243E6B1:/components/transmission/
```

```
(config-torrent)> no directory
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **torrent directory** command has been introduced. |

## 3.186.2 torrent io-priority

**Description** Configure the background disk I/O priority for the BitTorrent client. By default, `normal` priority is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-torrent)> **io-priority** *‹io-priority›*

(config-torrent)> **no io-priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `io-priority` | `normal` | Disk I/O priority. |
| | `low` | |

**Example**

```
(config-torrent)> io-priority low
Torrent::Client: Set low I/O priority.
```

```
(config-torrent)> no io-priority
Torrent::Client: Reset I/O priority.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **torrent io-priority** command has been introduced. |

## 3.186.3 torrent peer-port

**Description** Set peer port. By default, 51413 value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-torrent)> **peer-port** *‹port›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | Incoming *TCP* listen port. Can take values in the range from 1024 to 65535. |

**Example**

```
(config-torrent)> peer-port 11122
Torrent::Client: Peer port changed to 11122.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **torrent peer-port** command has been introduced. |

## 3.186.4 torrent policy

**Description**

Define the IP Policy for BitTorrent client.

Command with **no** prefix removes the defined IP Policy profile for BitTorrent client.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-torrent)> **policy** ‹*policy*›

(config-torrent)> **no policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `policy` | *Policy* | Name of IP Policy profile. |

**Example**

```
(config-torrent)> policy PolicyNaN
Torrent::Client: Policy PolicyNaN applied.
```

```
(config-torrent)> no policy
Torrent::Client: Policy cleared.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **torrent policy** command has been introduced. |

## 3.186.5 torrent reset

**Description**

Reset settings of BitTorrent client.

**Prefix no**

No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-torrent)> **reset**

**Example**

```
(config-torrent)> reset
Torrent::Client: Reset performed.
```

**History**

| Version | Description |
|---|---|
| 2.10 | The **torrent reset** command has been introduced. |

## 3.186.6 torrent rpc-port

**Description** Set *RPC* port. By default, `8090` value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-torrent)> **rpc-port** ‹*port*› [**public**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | Webadmin listen port. Can take values in the range from `1024` to `65535`. |
| `public` | *Keyword* | Access to BitTorrent client managing by public interfaces. |

**Example**

```
(config-torrent)> rpc-port 9945
Torrent::Client: RPC port changed to 9945 (private).
```

```
(config-torrent)> rpc-port 9945 public
Torrent::Client: RPC port changed to 9945 (public).
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **torrent rpc-port** command has been introduced. |

# 3.187 udpxy

**Description** Access to a group of commands to configure *udpxy* parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(udpxy)`

**Synopsis**

(config)> **udpxy**

**History**

| Version | Description |
|---|---|
| 2.03 | The **udpxy** command has been introduced. |

## 3.187.1 udpxy buffer-size

**Description** Set *udpxy* buffer size. By default, 2048 value is used.

Command with **no** prefix resets buffer size to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(udpxy)> **buffer-size** ‹*size*›

(udpxy)> **no buffer-size**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `size` | *Integer* | Buffer size in bytes. Can take values in the range from 1 to 1048576. |

**Example**

```
(udpxy)> buffer-size 500
Udpxy::Manager: a buffer size set to 500 bytes.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **udpxy buffer-size** command has been introduced. |

## 3.187.2 udpxy buffer-timeout

**Description** Set *udpxy* timeout to hold data in the buffer. By default, 1 value is used.

Command with **no** prefix resets timeout to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(udpxy)> **buffer-timeout** *‹timeout›*

(udpxy)> **no buffer-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Timeout value in seconds. Can take values in the range from `-1` to `60`. `-1` — unlimited timeout. |

**Example**

```
(udpxy)> buffer-timeout 10
Udpxy::Manager: a hold data timeout set to 10 sec.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **udpxy buffer-timeout** command has been introduced. |

## 3.187.3 udpxy interface

**Description** Bind *udpxy* to the specified interface. By default, current default gateway is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(udpxy)> **interface** *‹interface›*

(udpxy)> **no interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(udpxy)> interface [Tab]

 Usage template:
        interface {interface}

   Choose:
         GigabitEthernet1
```

```
                      ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
```

```
(udpxy)> interface ISP
Udpxy::Manager: bound to GigabitEthernet1.
```

**History**

| Version | Description |
|---|---|
| 2.02 | The **udpxy interface** command has been introduced. |

## 3.187.4 udpxy port

**Description**

Specify port for HTTP requests. By default, `4022` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(udpxy)> **port** *‹port›*

(udpxy)> **no port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | Port number. Can take values in the range from `0` to `65535`. |

**Example**

```
(udpxy)> port 2323
Udpxy::Manager: a port set to 2323.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **udpxy port** command has been introduced. |

## 3.187.5 udpxy renew-interval

**Description**

Set renew interval of subscription to the multicast channel. By default, `0` value is used, i.e. the subscription is not renewed.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(udpxy)> **renew-interval** *‹renew-interval›*

(udpxy)> **no renew-interval**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| renew-interval | *Integer* | Renew interval of subscription in seconds. Can take values in the range from 0 to 3600. |

**Example**

```
(udpxy)> renew-interval 120
Udpxy::Manager: a renew subscription interval value set to 120 ►
sec.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **udpxy renew-interval** command has been introduced. |

## 3.187.6 udpxy timeout

**Description** Set connection timeout. By default, 5 value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(udpxy)> **timeout** *‹timeout›*

(udpxy)> **no timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| timeout | *Integer* | Timeout in seconds. Can take values in the range from 5 to 60. |

**Example**

```
(udpxy)> timeout 10
Udpxy::Manager: a stream timeout set to 10 sec.
```

**History**

| Version | Description |
|---|---|
| 2.03 | The **udpxy timeout** command has been introduced. |

# 3.188 upnp lan

**Description**

Set LAN interface where the *UPnP* service is running. The service works for one network segment only.

Command with **no** prefix removes setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

(config)> **upnp lan** ‹*interface*›

(config)> **no upnp lan**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config)> upnp lan [Tab]

 Usage template:
              lan {interface}

   Choose:
         GigabitEthernet1
                       ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
 WifiMaster1/AccessPoint2
 WifiMaster0/AccessPoint1
                GuestWiFi
```

```
(config)> upnp lan PPTP0
using LAN interface: PPTP0.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **upnp lan** command has been introduced. |

# 3.189 user

**Description**

Access to a group of commands to configure user account parameters. If specified user is not found, the command tries to create it.

Note: Account with reserved name `admin` can not be removed. In addition, the `admin` user can not lose the access right to command line.

Command with **no** prefix removes user account.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

`(config-user)`

**Synopsis**

(config)> **user** *‹name›*

(config)> **no user** *‹name›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Tne user name. |

**History**

| Version | Description |
|---|---|
| 2.00 | The **user** command has been introduced. |

## 3.189.1 user home

**Description**

Set home directory for user.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-user)> **home** *‹directory›*

(config-user)> **no home**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `directory` | *String* | Path to the home directory for FTP server, SFTP server and WeDAV server. |

**Example**

```
(config-user)> home files_ssd:/
Core::Authenticator: "test" user root directory set to ►
"files_ssd:/".
```

```
(config-user)> no home
(config-user)>
```

**History**

| Version | Description |
|---|---|
| 3.04 | The **user home** command has been introduced. |

## 3.189.2 user password generate

**Description**

Start generating a new random password (without saving) for the user account.

Returns a string — a random password consisting of uppercase and lowercase ASCII letters and numbers with a length of 15 characters.

**Prefix no**

No

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(config-user)> **password generate**

**Example**

```
(config-user)> password generate

         password: RvHQYN6iaQdhYDG
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **user password generate** command has been introduced. |

## 3.189.3 user password md5

**Description**

Set the MD5 hash (Message-Digest Algorithm 5) password.

Command with **no** prefix removes the MD5 hash password.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(config-user)> **password md5** *‹hash›*

(config-user)> **no password md5**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| hash | *String* | MD5 hash value. |

**Example**

```
(config-user)> password md5 5d505c920ed64c8ff3dc4bfefd4dc262
Core::Authenticator: Md5 password has been set for user "test2".
```

```
(config-user)> password md5 5d505c920ed64c8ff3dc4bfefd4dc262
Core::Authenticator: User "test2" md5 password deleted.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **user password md5** command has been introduced. |

## 3.189.4 user password nt

**Description** Set the NT hash (NT LAN Manager or NTLM hash) password.

Command with **no** prefix removes the NT hash password.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-user)> **password nt** *‹hash›*

(config-user)> **no password nt**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| hash | *String* | NT hash value. |

**Example**

```
(config-user)> password nt 5d505c920ed64c8ff3dc4bfefd4dc262
Core::Authenticator: Nt password has been set for user "test2".
```

```
(config-user)> no password nt
Core::Authenticator: User "test2" nt password deleted.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **user password nt** command has been introduced. |

## 3.189.5 user password plain

**Description** Set the plain text password.

Command with **no** prefix removes the password.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config-user)> **password plain** *‹password›*

(config-user)> **no password plain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | Password for authentication. Password length can be from 8 to 64 characters. It is recommended to use a combination of uppercase and lowercase letters, numbers, and special characters (**!, @, $, %, ^, &, *, +, #)**). |

**Example**

```
(config-user)> password plain 12bq23BN12-.89=-
Core::Authenticator: Password set has been changed for user ►
"test2".
```

```
(config-user)> no password plain
Core::Authenticator: Passwords have been reset for a user "test2".
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **user password plain** command has been introduced. |

## 3.189.6 user password validate

**Description** Verification of password compliance with requirements (e.g., length, acceptable characters, etc.).

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(config-user)> **password validate** *‹value›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `value` | *`String`* | Value of the password. A minimum password length of 8 characters is required. The recommended password length is 15 characters. |

**Example**

```
(config-user)> password validate Cg5ek6vKfuLNXZ8

         strength: good
```

```
(config-user)> password validate Cg5ek6vKfuLN

         strength: fair

           length:
             required: 8
          recommended: 15
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **user password validate** command has been introduced. |

## 3.189.7 user tag

**Description**

Assign a special tag to the user account, which presence is checked at the time of user authorization as well as performing any action in the system. Set of permitted tag values depends on the system functionality. The full list is shown in the table below.

Several different tags can be assigned to one account by entering the command several times. Each tag can be viewed as granting or revoking certain permissions.

Command with **no** prefix removes the specified tag. If you use no argument, the entire list of tags will be cleared for the user.

Note: The `admin` account can not be untagged `cli`.

The `admin` account can not be untagged `http` if device acts as MWS Extender.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(config-user)> **tag** *‹tag›*

(config-user)> **no tag** [ *‹tag›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| tag | cli | Access to the command line (TELNET and SSH). |
| | manager | Access for a user with limited administrator rights. |
| | readonly | Restrict commands that change the settings. |
| | http-proxy | Access to the HTTP proxy. |
| | http | Access to the Web-interface. |
| | afp | Access to USB drives via Apple File Protocol. |
| | printers | Access to USB printers via SMB/CIFS. |
| | cifs | Connection to the Windows files and printers service. |
| | vpn-dlna | Access to the *DLNA* for PPTP, L2TP/IPSec, SSTP tunnels. |
| | ftp | Connection to an integrated FTP server. |
| | ipsec-xauth | Connection to an integrated IPsec/XAuth server. |
| | ipsec-l2tp | Connection to an integrated L2TP/IPSec server. |
| | vpn-oc | Connection to an integrated OpenConnect server. |
| | opt | Access to services managed by OptWare. |
| | sftp | Access to SFTP file server. |
| | sstp | Connection to an integrated SSTP server. |
| | torrent | Access to the BitTorrent client GUI. |
| | vpn | Connection to an integrated PPTP server. |
| | webdav | Access to WebDAV file server. |

**Example**

```
(config-user)> tag cli
Core::Authenticator: User "test" tagged with "cli".

(config-user)> tag manager
Core::Authenticator: User "test" tagged with "manager".

(config-user)> tag readonly
Core::Authenticator: User "test" tagged with "readonly".

(config-user)> tag http-proxy
Core::Authenticator: User "test" tagged with "http-proxy".

(config-user)> tag http
Core::Authenticator: User "test" tagged with "http".
```

```
(config-user)> tag afp
Core::Authenticator: User "test" tagged with "afp".

(config-user)> tag printers
Core::Authenticator: User "test" tagged with "printers".

(config-user)> tag cifs
Core::Authenticator: User "test" tagged with "cifs".

(config-user)> tag vpn-dlna
Core::Authenticator: User "test" tagged with "vpn-dlna".

(config-user)> tag ftp
Core::Authenticator: User "test" tagged with "ftp".

(config-user)> tag ipsec-xauth
Core::Authenticator: User "test" tagged with "ipsec-xauth".

(config-user)> tag ipsec-l2tp
Core::Authenticator: User "test" tagged with "ipsec-l2tp".

(config-user)> tag vpn-oc
Core::Authenticator: User "test" tagged with "vpn-oc".

(config-user)> tag opt
Core::Authenticator: User "test" tagged with "opt".

(config-user)> tag sftp
Core::Authenticator: User "test" tagged with "sftp".

(config-user)> tag sstp
Core::Authenticator: User "test" tagged with "sstp".

(config-user)> tag torrent
Core::Authenticator: User "test" tagged with "torrent".

(config-user)> tag vpn
Core::Authenticator: User "test" tagged with "vpn".

(config-user)> tag webdav
Core::Authenticator: User "test" tagged with "webdav".

(config-user)> no tag readonly
Core::Authenticator: User "test": "readonly" tag deleted.

(config-user)> no tag
Core::Authenticator: User "test" tags deleted.
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **user tag** command has been introduced. |
| 2.04 | The **vpn** tag has been added. |
| 2.06 | The **opt**, **ipsec-xauth** tags have been added. |
| 2.10 | The **http-proxy** tag has been added. |

| | |
|---|---|
| 2.11 | The **ipsec-l2tp** tag has been added. |
| 2.12 | The **sstp** tag has been added. |
| 3.04 | The **vpn-dlna**, **sftp** and **webdav** tags have been added. |
| 4.02 | The **vpn-oc** tag has been added. |
| 5.00 | The **manager** tag has been added. |

# 3.190 ussd send

**Description** Send *USSD* request to the mobile operator.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

(config)> **ussd** ‹*interface*› **send** ‹*request*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interface` | *`Interface`* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |
| `request` | *`String`* | USSD command. |

**Example**

```
(config)> ussd UsbQmi0 send *100#

          request: *100#
         response: Your number: +79953332211
                   Available: 10 dol
                   4.01 / 5 GB
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **ussd send** command has been introduced. |

# 3.191 vpn-server

**Description** Access to a group of commands to configure VPN server parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(vpn-server)`

**Synopsis**

(config)> **`vpn-server`**

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server** command has been introduced. |

## 3.191.1 vpn-server debug

**Description** Enable debug mode for PPTP server. Detailed information about the progress of the PPTP client connection to the PPTP server is saved to the system log. By default, setting is disabled.

Command with **no** prefix disables the debug mode.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **`debug`**

(vpn-server)> **`no debug`**

**Example**

```
(vpn-server)> debug
VpnServer::Manager: Enabled debug.
```

```
(vpn-server)> no debug
VpnServer::Manager: Disabled debug.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **vpn-server debug** command has been introduced. |

## 3.191.2 vpn-server dhcp route

**Description** Assign a route which is transmitted in DHCP INFORM messages to the VPN server clients.

Command with **no** prefix cancels the specified route. If you use no arguments, the entire list of routes will be cleared.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(vpn-server)> **dhcp route** *‹address› ‹mask›*

(vpn-server)> **no dhcp route** [ *‹address› ‹mask›* ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| address | *IP address* | Network client address. |
| mask | *IP-mask* | Network client mask. There are two ways to enter the mask: the canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24). |

**Example**

```
(vpn-server)> dhcp route 192.168.2.0/24
VpnServer::Manager: Added DHCP INFORM route to ►
192.168.2.0/255.255.255.0.
```

```
(vpn-server)> no dhcp route
VpnServer::Manager: Cleared DHCP INFORM routes.
```

**History**

| Version | Description |
|---|---|
| 2.12 | The **vpn-server dhcp route** command has been introduced. |

## 3.191.3 vpn-server dns-servers

**Description**

Set the *DNS* server that is assigned to clients connecting to the PPTP server.

Command with **no** prefix removes the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(vpn-server)> **dns-servers** *‹dns1›* [ *‹dns2›* ]

(vpn-server)> **no dns-servers**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dns1 | *IP address* | Address of primary DNS server. |
| dns2 | *IP address* | Address of secondary DNS server. |

**Example**

```
(vpn-server)> dns-servers 1.1.1.1
VpnServer::Manager: Set custom DNS server "1.1.1.1".
```

```
(vpn-server)> dns-servers 1.1.1.1 8.8.8.8
VpnServer::Manager: Set custom DNS servers "1.1.1.1" and ►
"8.8.8.8".
```

```
(vpn-server)> no dns-servers
VpnServer::Manager: Disabled custom DNS servers.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **vpn-server dns-servers** command has been introduced. |

## 3.191.4 vpn-server interface

**Description** Bind VPN server to the specified interface.

Command with **no** prefix unbinds the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **interface** ‹*interface*›

(vpn-server)> **no interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(vpn-server)> interface [Tab]

 Usage template:
        interface {interface}

   Choose:
         GigabitEthernet1
                      ISP
 WifiMaster0/AccessPoint2
 WifiMaster1/AccessPoint1
 WifiMaster0/AccessPoint3
 WifiMaster0/AccessPoint0
              AccessPoint
```

```
(vpn-server)> interface GigabitEthernet0/Vlan1
VpnServer::Manager: Bound to GigabitEthernet0/Vlan1
```

```
(vpn-server)> no interface
VpnServer::Manager: Reset interface binding.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server interface** command has been introduced. |

## 3.191.5 vpn-server ipv6cp

**Description**

Enable IPv6 support. DHCP IPv6 pools are created for each VPN server. By default, the setting is disabled.

Command with **no** prefix disables IPv6 support.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(vpn-server)> **ipv6cp**

(vpn-server)> **no ipv6cp**

**Example**

```
(vpn-server)> ipv6cp
VpnServer::Manager: IPv6 control protocol enabled.
```

```
(vpn-server)> no ipv6cp
VpnServer::Manager: IPv6 control protocol disabled.
```

**History**

| Version | Description |
|---|---|
| 3.00 | The **vpn-server ipv6cp** command has been introduced. |

## 3.191.6 vpn-server lcp echo

**Description**

Specify the testing rules of the PPTP connections with *LCP* echo tools.

Command with **no** prefix disables *LCP* echo.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(vpn-server)> **lcp echo** ‹*interval*› ‹*count*› [**adaptive**]

(vpn-server)> **no lcp echo**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | Interval between sending *LCP* echo, in seconds. If within the specified time interval there is no *LCP* echo request from the remote location, the same request will be sent there asking for response *LCP* reply. |
| `count` | *Integer* | The number of consecutive requests *LCP* echo sent, for which no response *LCP* reply was received. If count of *LCP* echo requests goes unanswered, the connection is terminated. |
| `adaptive` | *Keyword* | Pppd will send LCP echo-request frames only if no traffic was received from the peer since the last echo-request was sent. |

**Example**

```
(vpn-server)> lcp echo 5 3
LCP echo parameters updated.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **vpn-server lcp echo** command has been introduced. |

## 3.191.7 vpn-server lockout-policy

**Description**

Set VPN server bruteforce detection parameters. By default, feature is enabled. If you use `0` as an argument, all bruteforce detection parameters will be reset to default.

Command with **no** prefix disables bruteforce detection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(vpn-server)> **lockout-policy** *‹threshold›* [ *‹duration›* [ *‹observation-window›* ]]

(vpn-server)> **no lockout-policy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `threshold` | *Integer* | The number of failed attempts to log in. By default, 5 value is used. Can take values in the range from 2 to 20. |
| `duration` | *Integer* | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. Can take values in the range from 1 to 120. |

| Argument | Value | Description |
|---|---|---|
| `observation-window` | *Integer* | Duration of suspicious activity observation in minutes. By default, 3 value is used. Can take values in the range from 1 to 20. |

**Example**

```
(vpn-server)> lockout-policy 10 30 2
VpnServer::Manager: Bruteforce detection is reconfigured.
```

```
(vpn-server)> no lockout-policy
VpnServer::Manager: Bruteforce detection is disabled.
```

```
(vpn-server)> lockout-policy 0
VpnServer::Manager: Bruteforce detection reset to default.
```

**History**

| Version | Description |
|---|---|
| 3.01 | The **vpn-server lockout-policy** command has been introduced. |

## 3.191.8 vpn-server mppe

**Description**

Set mode for *MPPE* encryption. 40-bit key is used by default.

Command with **no** prefix disables selected mode.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(vpn-server)> **mppe** *‹mode›*

(vpn-server)> **no mppe** *‹mode›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `mode` | `40` | Length of the encryption key is 40 bits. |
| | `128` | Length of the encryption key is 128 bits. |

**Example**

```
(vpn-server)> mppe 40
VpnServer::Manager: Set encryption 40.
```

**History**

| Version | Description |
|---|---|
| 2.05 | The **vpn-server mppe** command has been introduced. |

## 3.191.9 vpn-server mppe-optional

**Description** Allow connections without *MPPE* encryption. By default, the feature is enabled.

Command with **no** prefix deny unencrypted connections.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **mppe-optional**

(vpn-server)> **no mppe-optional**

**Example**

```
(vpn-server)> mppe-optional
VpnServer::Manager: Unencrypted connections enabled.
```

```
(vpn-server)> no mppe-optional
VpnServer::Manager: Unencrypted connections disabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server mppe-optional** command has been introduced. |

## 3.191.10 vpn-server mru

**Description** Set *MRU* value to be transmitted to PPTP server. By default, `1350` value is used.

Command with **no** prefix resets value to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **mru** *‹value›*

(vpn-server)> **no mru**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `value` | *Integer* | *MRU* value. Can take values in the range from `128` to `1500` inclusively. |

**Example**

```
(vpn-server)> mru 200
VpnServer::Manager: mru set to 200.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server mru** command has been introduced. |

## 3.191.11 vpn-server mtu

**Description** Set *MTU* value to be transmitted to PPTP server. By default, 1350 value is used.

Command with **no** prefix resets value to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **mtu** *‹value›*

(vpn-server)> **no mtu**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| value | *Integer* | *MTU* value. Can take values in the range from 128 to 1500 inclusively. |

**Example**

```
(vpn-server)> mtu 200
VpnServer::Manager: mtu set to 200.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server mtu** command has been introduced. |

## 3.191.12 vpn-server multi-login

**Description** Allow connection to VPN server for multiple users from one account.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **multi-login**

(vpn-server)> **no multi-login**

**Example**

```
(vpn-server)> multi-login
VpnServer::Manager: multi login enabled.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server multi-login** command has been introduced. |

## 3.191.13 vpn-server pool-range

**Description** Assign a pool of addresses for the clients that connect to the VPN server.

Command with **no** prefix removes a pool.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **pool-range** ‹*begin*› [ ‹*size*› ]

(vpn-server)> **no pool-range**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `begin` | *IP address* | Start address of pool. |
| `size` | *Integer* | Pool size. Can take values in the range from 1 to 64 inclusively. If the size is not specified, it is determined automatically depending on the device. |

**Example**

```
(vpn-server)> pool-range 172.16.1.22 20
VpnServer::Manager: Configured pool range 172.16.1.22 to ►
172.16.1.41.
```

```
(vpn-server)> no pool-range
VpnServer::Manager: Reset pool range.
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server pool-range** command has been introduced. |

## 3.191.14 vpn-server session-logout

**Description** Terminate an active or stalled session on the VPN server.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

(vpn-server)> **session-logout** *‹session›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| session | *Integer* | Identifier of the PPTP session (can be viewed using the **show vpn-server** command). |

**Example**

```
(vpn-server)> session-logout 1
VpnServer::Manager: Session "1" is terminated.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **vpn-server session-logout** command has been introduced. |

## 3.191.15 vpn-server session-preempt

**Description**

Enable to preempt VPN sessions when **vpn-server multi-login** option is disabled for the PPTP server.

Command with **no** prefix disables the preempt.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(vpn-server)> **session-preempt**

(vpn-server)> **no session-preempt**

**Example**

```
(vpn-server)> session-preempt
VpnServer::Manager: Enabled sessions preemption.
```

```
(vpn-server)> no session-preempt
VpnServer::Manager: Disabled session preemption.
```

**History**

| Version | Description |
|---|---|
| 4.03 | The **vpn-server session-preempt** command has been introduced. |

## 3.191.16 vpn-server static-ip

**Description**

Bind IP address to the user. User account must have vpn tag.

Command with **no** prefix removes binding.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(vpn-server)> **static-ip** ‹*name*› ‹*address*›

(vpn-server)> **no static-ip** ‹*name*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | Username. |
| address | *IP address* | IP address to bind. |

**Example**

```
(vpn-server)> static-ip test 172.16.1.35
VpnServer::Manager: Static IP 172.16.1.35 assigned to user "test".
```

```
(vpn-server)> static-ip test
VpnServer::Manager: Static IP address removed for user "test".
```

**History**

| Version | Description |
|---|---|
| 2.04 | The **vpn-server static-ip** command has been introduced. |

# 3.192 wireguard-server interface

**Description** Bind *WireGuard* server to the specified interface. By default, the Home interface is used.

Command with **no** prefix unbinds the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(config)> **wireguard-server interface** ‹*interface*›

(config)> **no wireguard-server interface**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| interface | *Interface* | Full interface name or an alias. You can see the list of available interfaces with help of **interface** [Tab] command. |

**Example**

```
(config)> wireguard-server interface Bridge1
Wireguard::Server: Bound to Bridge1.
```

```
(config)> no wireguard-server interface
Wireguard::Server: Reset interface binding.
```

**History**

| Version | Description |
|---|---|
| 5.00 | The **wireguard-server interface** command has been introduced. |

# Glossary

| | |
|---|---|
| Address and Control Field Compression | *LCP* configuration option that provides a method to negotiate the compression of the Data Link Layer Address and Control fields. |
| Address Resolution Protocol | is a protocol for mapping an Internet Protocol address (IP address) to a physical machine address that is recognized in the local network. For example, in IP Version 4, the most common level of IP in use today, an address is 32 bits long. In an Ethernet local area network, however, addresses for attached devices are 48 bits long. (The physical machine address is also known as a Media Access Control or MAC address.) A table, usually called the ARP cache, is used to maintain a correlation between each MAC address and its corresponding IP address. ARP provides the protocol rules for making this correlation and providing address conversion in both directions. |
| Apple Filing Protocol | is a proprietary network protocol, and part of the Apple File Service (AFS), that offers file services for macOS and the classic Mac OS. |
| Authenticated Encryption with Associated Data | this form of encryption which simultaneously assure the confidentiality and authenticity of data. AEAD is a variant of AE that allows a recipient to check the integrity of both the encrypted and unencrypted information in a message. |
| Automatic Certificate Management Environment | is a communications protocol for automating interactions between certificate authorities and their users' web servers, allowing the automated deployment of public key infrastructure at very low cost. It was designed by the Internet Security Research Group (ISRG) for their Let's Encrypt service. |
| Band Steering | is a feature that encourages dual-band capable wireless clients to connect to the less crowded 5GHz network, and leave the 2.4GHz network available for those clients who support 2.4GHz only; thus, Wi-Fi performance can be improved for all clients. |
| Beamforming | is a kind of radio frequency management in which an access point makes use of various antennas to transmit the exact same signal. By broadcasting various signals and examining client feedback, the wireless LAN infrastructure could very well modify the signals it transmits. This way, it can identify the ideal path the signal must follow to get to a client device. Beamforming efficiently enhances the uplink and downlink SNR performances as well as the overall network capacity. |
| Challenge-Handshake Authentication Protocol | widely used algorithm for authentication, which provides the transfer of indirect information about user password. CHAP provides better security than *Password Authentication Protocol*. |

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| Change of Authorization | is a provides a mechanism for changing RADIUS authentication and authorization session attributes. Allows you to set up an active client session. |
| Command Line Interface | is a user interface to a computer's operating system or an application in which the user responds to a visual prompt by typing in a command on a specified line, receives a response back from the system, and then enters another command, and so forth. |
| Common Applications Kept Enhanced | is a shaping-capable queue discipline which uses both AQM and FQ. It combines COBALT, which is an AQM algorithm combining Codel and BLUE, a shaper which operates in deficit mode, and a variant of DRR++ for flow isolation. 8-way set-associative hashing is used to virtually eliminate hash collisions. Priority queuing is available through a simplified diffserv implementation. CAKE uses a deficit-mode shaper, which does not exhibit the initial burst typical of token-bucket shapers. It will automatically burst precisely as much as required to maintain the configured throughput. |
| Common Internet File System | is a protocol that lets programs make requests for files and services on remote computers on the Internet. CIFS uses the client/server programming model. A client program makes a request of a server program (usually in another computer) for access to a file or to pass a message to a program that runs in the server computer. The server takes the requested action and returns a response. |
| Compression Control Protocol | is used for establishing and configuring data compression algorithms over *PPP*. |
| Dead Peer Detection | is a method that network devices use to verify the current existence and availability of other peer devices. |
| Device Privacy Notice | is a device privacy notice on data processing. |
| DHCP | is a network protocol that is used to configure network devices so that they can communicate on an IP network. A DHCP client uses the DHCP protocol to acquire configuration information, such as an IP address, a default route, and one or more DNS server addresses from a DHCP server. The DHCP client then uses this information to configure its host. Once the configuration process is complete, the host is able to communicate on the Internet. |
| DHCP server | manages a pool of IP addresses and information about client configuration parameters such as default gateway, domain name, the name servers, other servers such as time servers, and so forth. On receiving a valid request, the server assigns the computer an IP address, a lease (length of time the allocation is valid), and other IP configuration parameters, such as the subnet mask and the default gateway. Depending on implementation, the DHCP server may have three methods of allocating IP-addresses:<br>• *dynamic allocation*: A network administrator assigns a range of IP addresses to DHCP, and each client computer on the LAN is configured to request an IP address from the DHCP server during network initialization. The request-and-grant process uses a lease |

concept with a controllable time period, allowing the DHCP server to reclaim (and then reallocate) IP addresses that are not renewed.

- *automatic allocation*: The DHCP server permanently a free IP address to a requesting client from the range defined by the administrator. This is like dynamic allocation, but the DHCP server keeps a table of past IP address assignments, so that it can preferentially assign to a client the same IP address that the client previously had.
- *static allocation*: The DHCP server allocates an IP address based on a table with MAC address/IP address pairs, which are manually filled in (perhaps by a network administrator). Only requesting clients with a MAC address listed in this table will be allocated an IP address. This feature (which is not supported by all DHCP servers) is variously called Static DHCP Assignment (by DD-WRT),fixed-address (by the dhcpd documentation), Address Reservation (by Netgear), DHCP reservation or Static DHCP (by Cisco/Linksys), and IP reservation or MAC/IP binding (by various other router manufacturers).

DHCPv6 server

is a network protocol for configuring Internet Protocol version 6 (IPv6) hosts with IP addresses, IP prefixes, default route, local segment MTU, and other configuration data required to operate in an IPv6 network. IPv6 hosts may automatically generate IP addresses internally using stateless address autoconfiguration[1] (SLAAC), or they may be assigned configuration data with DHCPv6.

Diffie-Hellman

is that part of the *IKE* protocol used for exchanging the material from which the symmetrical keys are built. The Diffie-Hellman algorithm builds an encryption key known as a "shared secret" from the private key of one party and the public key of the other. Since the *IPsec* symmetrical keys are derived from this DH key shared between the peers, at no point are symmetric keys actually exchanged.

DLNA

standard that allows compatible devices to transfer media content (images, music, videos) over the home network and display it in real time. This technology is to connect home computers, mobile phones, notebooks and home electronics in a single digital network. DLNA-certified devices can be configured and combined in a home network automatically.

Domain Name System

is a hierarchical distributed naming system for computers, services, or any resource connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. A Domain Name Service resolves queries for these names into IP addresses for the purpose of locating computer services and devices worldwide. By providing a worldwide, distributed keyword-based redirection service, the Domain Name System is an essential component of the functionality of the Internet.

DNS over HTTPS

is a domain name system, computer distributed system for obtaining information about domains using secure data transfer between internet nodes resolution via the HTTPS protocol. The method is to increase

[1] https://en.wikipedia.org/wiki/IPv6#Stateless_address_autoconfiguration_(SLAAC)

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| | user privacy and security by preventing eavesdropping and manipulation of DNS data by man-in-the-middle attacks. The standard is described in RFC 8484[2]. |
| DNS over TLS | is a domain name system, computer distributed system for obtaining information about domains using secure data transfer between internet nodes. The standard is described in RFC 7858[3] and RFC 8310[4]. |
| DNS rebinding | is a method of manipulating resolution of domain names. In this attack, a malicious web page causes visitors to run a client-side script that attacks machines elsewhere on the network. This attack can be used to breach a private network by causing the victim's web browser to access computers at private IP addresses and return the results to the attacker. |
| Dynamic Frequency Selection | is a channel allocation scheme specified to identify and avoid interference in AP 5 GHz. The zero wait DFS feature provides seamless change of channels and avoids the one minute outage. |
| Encapsulating Security Payload | is a member of the *IPsec* protocol suite. In IPsec it provides origin authenticity, integrity, and confidentiality protection of packets. |
| End-user license agreement | is a legal contract between a software application author or publisher and the user of that application. |
| Embedded Subscriber Identity Module | is a digital SIM embedded in an eUICC chip that stores and manages mobile operator profiles without requiring a physical SIM card. |
| Fast Transition | is a new concept of roaming where the initial handshake with the new AP is done even before the client roams to the target AP. |
| Fair Queuing Controlled Delay | is queuing discipline that combines Fair Queuing with the CoDel AQM scheme. FQ_Codel uses a stochastic model to classify incoming packets into different flows and is used to provide a fair share of the bandwidth to all the flows using the queue. Each such flow is managed by the CoDel queuing discipline. |
| Fully Qualified Domain Name | is a domain name that specifies its exact location in the tree hierarchy of the *Domain Name System*. It specifies all domain levels, including the top-level domain and the root zone. A fully qualified domain name is distinguished by its lack of ambiguity: it can be interpreted only in one way. |
| Full Cone NAT | also Static NAT, one to one NAT, port forwarding<br><br>is the only type of NAT where the port is permanently open and allows inbound connections from any external host. A full cone NAT maps a public IP address and port to a LAN IP and port. Any external host can send data to the LAN IP through the mapped NAT IP and port. If it tries to send data through a different port it will fail. Static NAT is required when a network device on a private network must be accessible from the Internet. |

[2] https://tools.ietf.org/html/rfc8484
[3] https://tools.ietf.org/html/rfc7858
[4] https://tools.ietf.org/html/rfc8310

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|---|---|
| Generic Routing Encapsulation | is a tunneling protocol developed by Cisco Systems that can encapsulate a wide variety of network layer protocols inside virtual point-to-point links over an Internet Protocol network. |
| Hash Message Authentication Code | is a specific construction for calculating a message authentication code (MAC) involving a cryptographic hash function in combination with a secret cryptographic key. As with any MAC, it may be used to simultaneously verify both the data integrity and the authentication of a message. Any cryptographic hash function, such as MD5 or SHA-1, may be used in the calculation of an HMAC; the resulting MAC algorithm is termed HMAC-MD5 or HMAC-SHA1 accordingly. The cryptographic strength of the HMAC depends upon the cryptographic strength of the underlying hash function, the size of its hash output, and on the size and quality of the key. |
| HTTP Proxy | Hypertext Transfer Protocol (HTTP) and HTTPS (HyperText Transfer Protocol Secure) Proxy is a proxy server that uses the Hypertext Transfer Protocol (HTTP) to connect to a web server and a client (browser). HTTPS (HyperText Transfer Protocol Secure) proxies work with SSL (Secure Socket Layer), which is an additional layer of security imposed on HTTP to protect its data. It supports security certificates, which are used to end-to-end encrypt traffic and prevent data interception during transmission. A proxy server that supports SSL establishes a secure connection to the client and to the web server to avoid any outside interference. |
| Idempotence | is the property of certain operations in computer science, that they can be applied multiple times without changing the result beyond the initial application. |
| Inter-Access Point Protocol | is a standard IEEE 802.11F protocol exchange of service information for data transfer between access points. The protocol is responsible for combining the wireless network, secure data exchange between the current access point and the new access point in the specified period. |
| Internet Control Message Protocol | is a message control and error-reporting protocol between a host server and a gateway to the Internet. ICMP uses Internet Protocol (IP) datagrams, but the messages are processed by the IP software and are not directly apparent to the application user. |
| Internet Control Message Protocol version 6 | is the implementation of the Internet Control Message Protocol (ICMP) for Internet Protocol version 6 (IPv6). ICMPv6 is an integral part of IPv6 and performs error reporting and diagnostic functions. ICMPv6 is defined in RFC 4443[5]. |
| Internet Group Management Protocol | is an Internet protocol that provides a way for an Internet computer to report its multicast group membership to adjacent routers. Multicasting allows one computer on the Internet to send content to multiple other computers. Multicasting can be used for streaming media to an audience that has "tuned in" by setting up a multicast group membership. |

[5] https://datatracker.ietf.org/doc/html/rfc4443

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| Internet Key Exchange | is a standard protocol IPsec, used to ensure the safety of interaction in virtual private networks. IKE purpose is to establish a secure authenticated communication channel by using the *Diffie–Hellman* key exchange algorithm to generate a shared secret key to encrypt further *IPsec* communications. |
| Internet Protocol | is the principal communications protocol in the Internet. The first major version of IP, Internet Protocol Version 4 (IPv4), is the dominant protocol of the Internet. Its successor is Internet Protocol Version 6 (IPv6). |
| Internet Protocol Control Protocol | is a network control protocol for establishing and configuring Internet Protocol over a *Point-to-Point Protocol* (PPP) link. IPCP uses the same packet exchange mechanism as the Link Control Protocol. IPCP packets may not be exchanged until PPP has reached the Network-Layer Protocol phase, and any IPCP packets received before this phase is reached should be silently discarded. |
| Internet Protocol Security | commonly called IPsec, is a protocol suite for secure *Internet Protocol* (IP) communications by authenticating and encrypting each IP packet of a communication session. IPsec includes protocols for establishing mutual authentication between agents at the beginning of the session and negotiation of cryptographic keys to be used during the session. IPsec can be used in protecting data flows between a pair of hosts (host-to-host), between a pair of security gateways (network-to-network), or between a security gateway and a host (network-to-host). Internet Protocol security (IPsec) uses cryptographic security services to protect communications over Internet Protocol (IP) networks. IPsec supports network-level peer authentication, data origin authentication, data integrity, data confidentiality (encryption), and replay protection. |
| iPerf3 | is a network performance measurement tool used to evaluate throughput between two endpoints using a client–server model. It supports TCP and UDP testing, allowing measurement of data transfer rates, latency, packet loss, and other network characteristics. Commonly used for performance diagnostics in both local and wide area networks. |
| IPsec Passthrough | is technology that allows VPN-traffic to pass through NAT. |
| IPsec Security Association | is fundamental to IPsec. An SA is a relationship between two or more entities that describes how the entities will use security services to communicate securely. Each IPsec connection can provide encryption, integrity, authenticity, or all three. When the security service is determined, the two IPsec peers must determine exactly which algorithms to use (for example, DES or 3DES for encryption, MD5 or SHA for integrity). After deciding on the algorithms, the two devices must share session keys. The Security Association is the method that IPsec uses to track all the particulars concerning a given IPSec communication session. |
| IP in IP | is an IP tunneling protocol that encapsulates one IP packet in another IP packet. |
| IPv6CP | is responsible for configuring, enabling, and disabling the IPv6 protocol modules on both ends of the *Point-to-Point* (PPP) link. IPv6CP uses the |

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| | same packet exchange mechanism as the *Link Control Protocol*. IPv6CP packets may not be exchanged until PPP has reached the Network-Layer Protocol phase. IPv6CP packets received before this phase is reached should be silently discarded. |
| Layer 2 Tunneling Protocol | is a tunneling protocol used to support virtual private networks (VPNs) or as part of the delivery of services by ISPs. It does not provide any encryption or confidentiality by itself. Rather, it relies on an encryption protocol that it passes within the tunnel to provide privacy. |
| Link Aggregation | is a method of combining (aggregating) multiple network connections in parallel in order to increase throughput beyond what a single connection could sustain, and to provide redundancy in case one of the links should fail. |
| Link Control Protocol | establishes, configures, and tests data-link Internet connections in the *Point-to-Point Protocol* (PPP). Before establishing communications over a point-to-point link, each end of the PPP link must send out LCP packets. The LCP packet either accepts or rejects the identity of its linked peer, agrees up on packet size limits, and looks for common misconfiguration errors.<br><br>LCP packets are divided into three classes:<br><br>• Link configuration packets used to establish and configure a link<br><br>• Link termination packets used to terminate a link<br><br>• Link maintenance packets used to manage and debug a link |
| Link Layer Discovery Protocol | is a vendor-neutral link layer protocol in the Internet Protocol Suite used by network devices for advertising their identity, capabilities, and neighbors on an IEEE 802 local area network, principally wired Ethernet.<br><br>Information gathered with LLDP is stored in the device as a management information database (MIB) and can be queried with the Simple Network Management Protocol (SNMP). |
| Low-Density Parity-Check | is a linear error correcting code, a method of transmitting a message over a noisy transmission channel. An LDPC is constructed using a sparse bipartite graph. LDPC codes are capacity-approaching codes, which means that practical constructions exist that allow the noise threshold to be set very close (or even arbitrarily close on the BEC) to the theoretical maximum (the Shannon limit) for a symmetric memoryless channel. The noise threshold defines an upper bound for the channel noise, up to which the probability of lost information can be made as small as desired. Using iterative belief propagation techniques, LDPC codes can be decoded in time linear to their block length. |
| Maximum Receive Unit | is the maximum size (in bytes) of the frame, which can be received at the data link layer of communication protocol. |
| Maximum Segment Size | is a parameter of the options field of the *TCP* header that specifies the largest amount of data, specified in bytes, that a computer or |

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| | communications device can receive in a single TCP segment. It does not count the TCP header or the IP header. |
| Maximum Transmission Unit | is the largest size packet or frame, specified in octets (eight-bit bytes), that can be sent in a packet- or frame-based network such as the Internet. The Internet's Transmission Control Protocol (TCP) uses the MTU to determine the maximum size of each packet in any transmission. Most computer operating systems provide a default MTU value that is suitable for most users. In general, Internet users should follow the advice of their Internet service provider (ISP) about whether to change the default value and what to change it to. |
| Microsoft Point-to-Point Encryption | encrypts data in *Point-to-Point Protocol* based dial-up connections or Point-to-Point Tunneling Protocol (PPTP) connections. 128-bit key (strong), 56-bit key, and 40-bit key (standard) MPPE encryption schemes are supported. MPPE provides data security for the PPTP connection that is between the VPN client and the VPN server. |
| Modular Wi-Fi System | a system that allows several devices to be combined into a single Internet space distributed over an area. One of the devices is defined as the controller, the others as the members. |
| Multicast DNS | is a way of using familiar DNS programming interfaces, packet formats and operating semantics, in a small network where no conventional DNS server has been installed. The mDNS protocol uses IP multicast UDP packets, and is implemented by the Apple Bonjour and open source Avahi software packages. |
| Network Access Control List | rules that are applied to IP interfaces that are available on a router, each with a list of hosts or networks that are permitted or denied to use the service. Access control lists can be configured to control both inbound and outbound traffic. |
| Network Flow | network protocol for network traffic accounting, uses UDP or SCTP protocols to send traffic data to the collector. Collector is an application that runs on a server and collects statistics received from sensors. A sensor is a device that collects traffic statistics and sends it to a collector. The sensor can be a Cisco third-level router or switch. |
| NEXTDNS | service of NextDNS protects you from all kinds of security threats, blocks ads and trackers on websites and in apps and provides a safe and supervised Internet for kids — on all devices and on all networks. |
| Network Time Protocol | is a protocol that is used to synchronize computer clock times in a network of computers. Developed by David Mills at the University of Delaware, NTP is now an Internet standard. In common with similar protocols, NTP uses Coordinated Universal Time (UTC) to synchronize computer clock times to a millisecond, and sometimes to a fraction of a millisecond. |
| Network Traffic Classification Engine | also DPI, Deep Packet Inspection<br><br>is a technology for accumulating statistics and inspecting network packets based on their contents. Deep Packet Inspection analyzes not |

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| | only packet headers, but also the full content of traffic at OSI layers 2 and above.<br><br>Deep Packet Inspection can determine which network application has generated or received data, collecting detailed connection statistics for each device and application individually. With quality of service Deep Packet Inspection controls the transmission speed of individual packets by raising or lowering it.<br><br>The Traffic Classification Engine component operates completely independently and does not make any calls to external services. |
| OpenConnect | is a free and open-source cross-platform multi-protocol virtual private network (VPN) client software which implement secure point-to-point connections. |
| Open Package | lightweight package management system. It is intended for use on embedded Linux devices and is used in this capacity in the OpenWrt[6] and Entware[7] projects. Opkg packages use the `.ipk` extension. |
| Opportunistic Wireless Encryption | is an extension of the IEEE 802.11 standard, similar encryption method Simultaneous Authentication of Equals (SAE). This encryption method provides users with better protection when connected to an open Wi-Fi network. |
| Password Authentication Protocol | is an authentication protocol that uses a password. PAP is used by *Point-to-Point Protocol* to validate users before allowing them access to the remote network. PAP transmits unencrypted ASCII passwords over the network and is therefore considered insecure. |
| Protected Extensible Authentication Protocol | is a protocol that encapsulates the Extensible Authentication Protocol (EAP) within an encrypted and authenticated Transport Layer Security (TLS) tunnel. The purpose was to correct deficiencies in EAP; EAP assumed a protected communication channel, such as that provided by physical security, so facilities for protection of the EAP conversation were not provided. |
| Perfect Forward Secrecy | is a property of secure communication protocols: a secure communication protocol is said to have forward secrecy if compromise of long-term keys does not compromise past session keys. PFS protects past sessions against future compromises of secret keys or passwords. |
| Ping Check | performs ICMP and TCP based tests to verify if the internet connection is working fine. Test results may be used to switch between primary and backup connections. |
| Pairwise Master Key | is a cryptographic private key used in wireless networks to establish secure communication between devices. PMK is derived from a pre-shared key (PSK) or another authentication mechanism, and it serves as the foundation for generating encryption keys for pairwise communication. The PMK is primarily used in the IEEE 802.11i standard. |

[6] https://www.openwrt.org/
[7] https://github.com/Entware/Entware

| | |
|---|---|
| Point-to-Point Protocol | is a protocol used to establish a direct connection between two nodes. It can provide connection authentication, transmission encryption, and compression. PPP is used over many types of physical networks including serial cable, phone line, cellular telephone, specialized radio links, and fiber optic links. After the link has been established, additional network (layer 3) configuration may take place. Most commonly, the *Internet Protocol Control Protocol* (IPCP) is used. |
| Public Land Mobile Network | is a combination of wireless communication services offered by a specific operator in a specific country. PLMN typically consists of several cellular technologies like GSM/2G, UMTS/3G, LTE/4G, offered by a operator cellular network. |
| Preamble | it is the first part of the Physical Layer Convergence Protocol/Procedure (PLCP) Protocol Data Unit (PDU). A header is the remaining part of the data packets and has more information identifying the modulation scheme, transmission rate, and length of time to transmit the whole data frame.<br><br>The Preamble type in IEEE 802.11 based wireless communication defines the length of the CRC (Cyclic Redundancy Check) block for communication between the Access Point and roaming wireless adapters.<br><br>Long preamble:<br>• PLCP with long preamble is transmitted at 1 Mbps regardless of transmit rate of data frames<br>• Total long preamble transfer time is a constant at 192 usec<br>• Compatible with legacy IEEE 802.11 systems running at 1 and 2 Mbps<br><br>Short preamble:<br>• Preamble is transmitted at 1 Mbps and header at 2 Mbps<br>• Total short preamble transfer time is a constant at 96 usec<br>• Not compatible with legacy IEEE 802.11 systems operating at 1 and 2 Mbps |
| Protected Management Frames | IEEE 802.11w is the Protected Management Frames standard for the IEEE 802.11 family of standards. This functionality is necessary to improve security by ensuring data confidentiality in control frames. |
| Protocol Field Compression | is a method to negotiate the compression of the *PPP* Protocol field. By default, all implementations MUST transmit packets with two octet PPP Protocol fields. |
| Pseudo-Random Function | is similar to an integrity algorithm, but instead of being used to authenticate messages, it is only used to provide randomness for purposes such as keying material. PRFs are primarily used with an authenticated encryption algorithm type such as AES-GCM. |

| | |
|---|---|
| Radio Resource Management | is the system level management of co-channel interference, radio resources, and other radio transmission characteristics in wireless communication systems. RRM includes control parameters such as transmit power, user allocation, beamforming, data rates, handover criteria, modulation scheme, coding scheme errors. |
| Remote Authentication in Dial-In User Service | is a protocol to implement authentication, authorization, and resource collection. It is used for charging the used resources by a specific user. Used to authenticate users on open Wi-Fi wireless networks. |
| Remote Procedure Call | is a protocol that one program can use to request a service from a program located in another computer in a network without having to understand network details. (A procedure call is also sometimes known as a function call or a subroutine call.) RPC uses the client/server model. The requesting program is a client and the service-providing program is the server. Like a regular or local procedure call, an RPC is a synchronous operation requiring the requesting program to be suspended until the results of the remote procedure are returned. |
| Restricted NAT | also Dynamic NAT<br><br>works in the same way as a *Full Cone NAT* but applies additional restrictions based on an IP address. The internal client must first have sent packets to IP address (X) before it can receive packets from X. In terms of restrictions the only requirement is that packets come in on the mapped port and from an IP address that the internal client has sent packets to. |
| Secure Socket Tunneling Protocol | is a type of VPN tunnel that utilizes an SSL 3.0 channel to send PPP or L2TP traffic. SSL allows for transmission and data encryption, as well as traffic integrity checking. Due to this, SSTP can pass through most firewalls and proxy servers by using the SSL channel over TCP port 443. |
| Service Set Identifier | is a sequence of characters that uniquely names a wireless local area network (WLAN). An SSID is sometimes referred to as a "network name". This name allows stations to connect to the desired network when multiple independent networks operate in the same physical area. |
| Simple Network Management Protocol | is an Internet-standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior. Devices that typically support SNMP include routers, switches, servers, workstations, printers, modem racks and more. |
| Simple Network Time Protocol | is an Internet Protocol (IP) used to synchronize the clocks of networks of computers.<br><br>SNTP is based upon the TCP/IP protocol suite. It is an application layer time protocol, part of the Network Time Protocol base protocol. Along with NTP, SNTP communicates using the User Datagram Protocol (UDP). By default, UDP port 123 is used. |

| | |
|---|---|
| | SNTP can operate on IPv4 and IPv6 networks. The standard is described in RFC 4330[8]. |
| Simple Service Discovery Protocol | is a network protocol for advertising and discovering network services and devices in a local network without any prior configuration. SSDP is the discovery layer of Universal Plug and Play (UPnP). |
| SOCKS | is an Internet protocol that exchanges network packets between a client and server through a proxy server. SOCKS5 optionally provides authentication so only authorized users may access a server. SOCKS server proxies TCP connections to an arbitrary IP address, and provides a means for UDP packets to be forwarded. |
| Shared key | is a mode by which a computer can gain access to a wireless network that uses the Wired Equivalent Privacy protocol. With Shared Key, a computer equipped with a wireless modem can fully access any WEP network and exchange encrypted or unencrypted data. |
| Short Message Service | is a text messaging service component of most telephone, Internet, and mobile device systems. It uses standardized communication protocols to enable mobile devices to exchange short text messages. |
| SSH File Transfer Protocol | is a application layer protocol for transferring files over a reliable and secure connection over TCP port 22. |
| Transmission Control Protocol | is a core protocol of the *Internet Protocol* suite. TCP provides reliable, ordered, and error-checked delivery of a stream of octets between applications running on hosts communicating over an IP network. |
| Temporal Key Integrity Protocol | is a security protocol used in the IEEE 802.11 wireless networking standard. TKIP was designed by the IEEE 802.11i task group and the Wi-Fi Alliance as an interim solution to replace WEP without requiring the replacement of legacy hardware. |
| Universal Access Method | is a method that allows a subscriber to access a wireless Wi-Fi network. The Internet browser will open a login page where the user should fill in his credentials before he can access. UAM uses the RADIUS client and the RADIUS server for authorization. |
| User Datagram Protocol | is a core protocol of the *Internet Protocol* suite. UDP uses a simple connectionless transmission model with a minimum of protocol mechanism. It has no handshaking dialogues, and thus exposes the user's program to any unreliability of the underlying network protocol. There is no guarantee of delivery, ordering, or duplicate protection. Time-sensitive applications often use UDP because dropping packets is preferable to waiting for delayed packets, which may not be an option in a real-time system. |
| udpxy | is a UDP-to-HTTP multicast traffic relay daemon: it forwards UDP traffic from a given multicast subscription to the requesting HTTP client. |
| Universal Plug and Play | is a standard that uses Internet and Web protocols to enable devices such as PCs, peripherals, intelligent appliances, and wireless devices to be plugged into a network and automatically know about each other. |

[8] https://www.rfc-editor.org/rfc/rfc4330

| | |
|---|---|
| | With UPnP, when a user plugs a device into the network, the device will configure itself, acquire a TCP/IP address, and use a discovery protocol based on the HTTP to announce its presence on the network to other devices. |
| Unstructured Supplementary Service Data | is a communications protocol used by cellular telephones to communicate with the mobile network operator's computers. USSD is commonly used by prepaid cellular phones to query the available balance. |
| Virtual LAN | is a local area network with a definition that maps workstations on some other basis than geographic location (for example, by department, type of user, or primary application). The virtual LAN controller can change or add workstations and manage loadbalancing and bandwidth allocation more easily than with a physical picture of the LAN. |
| Virtual Router Redundancy Protocol | is a computer networking protocol that provides automatic assignment of available IP routers to participating hosts. This increases routing path availability via automatic default gateway selection on IP subnetworks. |
| Web Distributed Authoring and Versioning | is a extension of the Hypertext Transfer Protocol (HTTP) that allows clients to perform remote Web content authoring operations. Supports web server authentication and SSL encryption for HTTPS using the default TCP port 443. |
| Web Proxy Auto-Discovery Protocol | is a method used by clients to locate the URL of a configuration file using DHCP and/or DNS discovery methods. Once detection and download of the configuration file is complete, it can be executed to determine the proxy for a specified URL. |
| Web Services Dynamic Discovery | is a multicast discovery protocol for locating services and devices in a local network. WS-Discovery is an OASIS standard based on SOAP-over-UDP. |
| WireGuard | is a free and open-source software application and virtual private network (VPN) protocol to create secure point-to-point connections in routed configurations. WireGuard protocol uses modern cryptography options Curve25519 for key exchange, ChaCha20 for encryption, and Poly1305 for data authentication, SipHash for hashtable keys, and BLAKE2s for hashing. Supports layer 3 for both protocols IPv4 and IPv6. |
| Wi-Fi Multimedia | previously known as Wireless Multimedia Extensions (WME), is a subset of the 802.11e wireless LAN (WLAN) specification that enhances quality of service (QoS) on a network by prioritizing data packets according to four access categories (AC). Ranging from highest priority to lowest, these categories are: voice (AC_VO), video (AC_VI), best effort (AC_BE), and background (AC_BK).<br><br>WMM also features a Power Save certification that helps small devices on a network conserve battery life. Power Save allows small devices, such as phones and PDAs, to transmit data while in a low-power "dozing" status. The certification gives software developers and |

| | |
|---|---|
| | hardware manufacturers a way to fine-tune battery use in the ever-increasing number of small devices that have Wi-Fi capabilities. |
| Wi-Fi Protected Access | Wi-Fi Protected Access II (WPA2), and Wi-Fi Protected Access 3 (WPA3) are three security protocols and security certification programs developed by the Wi-Fi Alliance to secure wireless computer networks. The Alliance defined these in response to serious weaknesses researchers had found in the previous system, WEP. WPA advantages are enhanced data security and tightened access control for wireless networks. Important characteristic is the compatibility between multiple wireless devices at the hardware level as well as at software level.<br><br>WPA3 uses 128-bit encryption in WPA3-Personal mode (192-bit in WPA3-Enterprise). The WPA3 standard also replaces the Pre-Shared Key exchange with Simultaneous Authentication of Equals as defined in IEEE 802.11-2016 resulting in a more secure initial key exchange in personal mode.<br><br>WPA Enterprise is a protocol-based authentication mode IEEE 802.1X using an external authentication server RADIUS and local client Supplicant. |
| Wi-Fi Protected Setup | provides an industry-wide mechanism to set up and configure networks for home and small office (SOHO) environments. Wi-Fi Protected Setup enables typical users who possess little understanding of traditional Wi-Fi configuration and security settings to easily configure new wireless networks, to add new devices and to enable security. |
| Wired Equivalent Privacy | is a security algorithm for IEEE 802.11 wireless networks. WEP, recognizable by the key of 10 or 26 hexadecimal digits, is widely in use and is often the first security choice presented to users by router configuration tools. In 2004, with the ratification of the full 802.11i standard (i.e. *WPA2*), the IEEE declared that both WEP-40 and WEP-104 have been deprecated. |
| Wireless Internet Service Provider | is an Internet service provider (ISP) that allows subscribers to connect to a server at designated hotspots (access points) using a wireless connection such as Wi-Fi. This type of ISP offers Broadband service and allows subscriber computers, called stations, to access the Internet and the Web from anywhere within the zone of coverage provided by the server antenna. This is usually a region with a radius of several kilometers.<br><br>The simplest WISP is a basic service set (BSS) consisting of one server and numerous stations all linked to that server by wireless. More sophisticated WISP networks employ the extended service set (ESS) topology, consisting of two or more BSSs linked together at access points (APs). Both BSS and ESS are supported by the IEEE 802.11b specification. |
| Extended Authentication | or XAUTH, provides an additional level of authentication by allowing the *IPsec* gateway to request extended authentication from remote users, thus forcing remote users to respond with their credentials before being allowed access to the VPN. |

XFRM

is an IP framework for transforming packets (such as encrypting their payloads) and used to implement the IPsec protocol suite. It is also used for the IP Payload Compression Protocol and features of Mobile IPv6.

ZeroTier

is a distributed network hypervisor built atop a cryptographically secure global peer to peer network. It provides advanced network virtualization and management capabilities on par with an enterprise SDN switch, but across both local and wide area networks and connecting almost any kind of app or device.

All traffic is encrypted end to end on OSI layer 1 using 256-bit Salsa20 and authenticated using the Poly1305 message authentication (MAC) algorithm. MAC is computed after encryption (encrypt-then-MAC) and the cipher/MAC composition used is identical to the NaCl reference implementation.

The ZeroTier world is controlled by two types of identifier: 40-bit/10-digit ZeroTier addresses and 64-bit/16-digit *network IDs*. These identifiers are easily distinguished by their length. A *ZeroTier address* identifies a node or "device" (laptop, phone, server, VM, app, etc.) while a network ID identifies a virtual Ethernet network that can be joined by devices.

A ZeroTier address looks like `8056c2e21c` and a network ID looks like `8056c2e21c000001`. Network IDs are composed of the ZeroTier address of that network's primary controller and an arbitrary 24-bit ID that identifies the network on this controller.

# A

# Interface Hierarchy

**Figure A.1. Core interfaces**

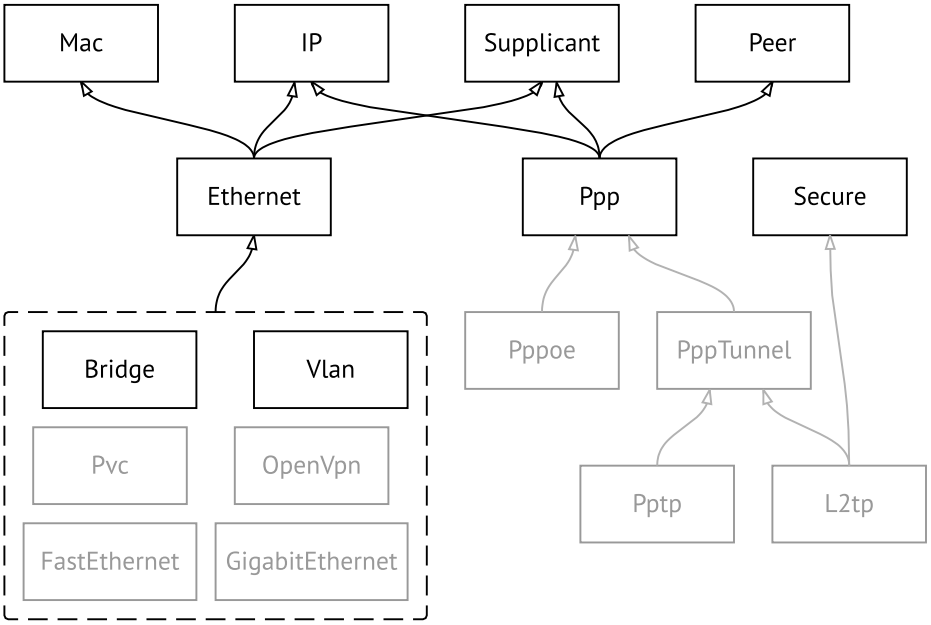



**Figure A.2. Tunnel interfaces**

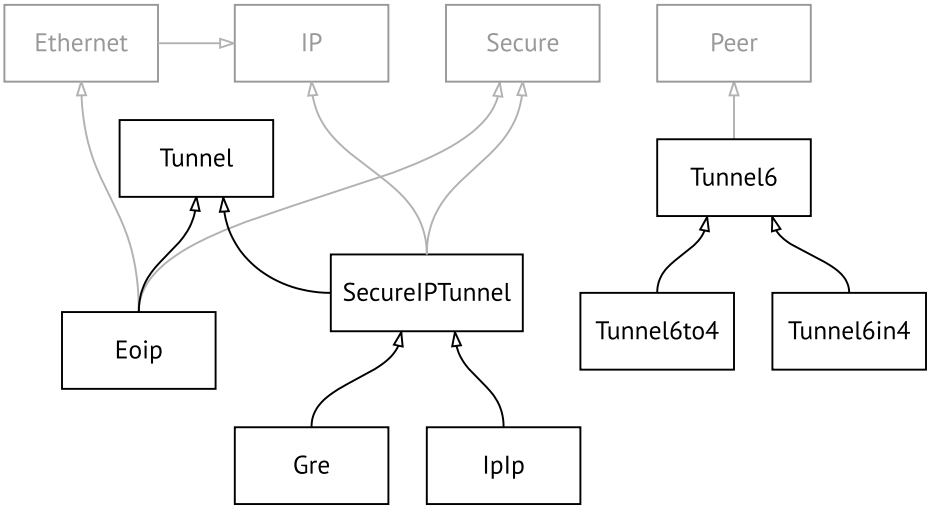


**Figure A.3. USB interfaces**

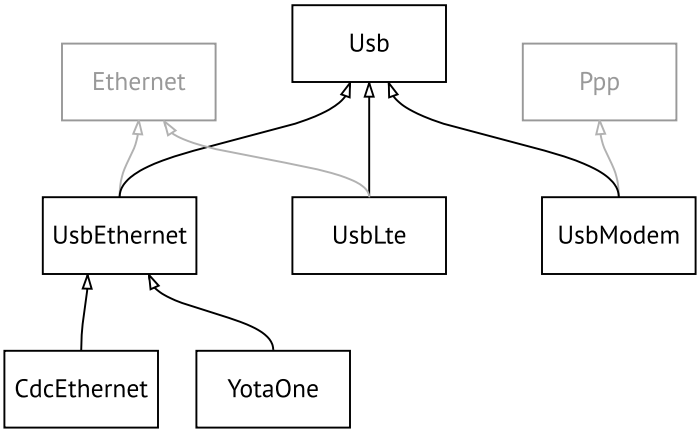
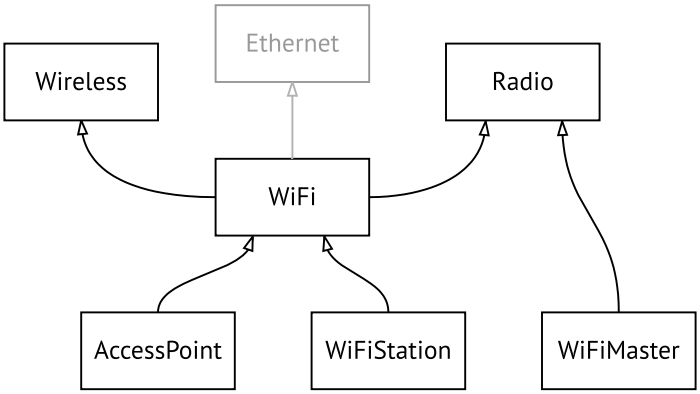



**Figure A.4. Wi-Fi interfaces**



# B

# HTTP API

## B.1 REST Core Interface

Hero HTTP API lets you develop a custom application, that will access Hero settings using simple HTTP methods, such as GET and POST.

The base URL for all operations is `/rci`, that simply stands for REST Core Interface. It replaces the XML Core Interface, which is now deprecated but continues to be functional.

### B.1.1 Resource Location

RCI is based on the Hero command tree. Device settings are mapped to RCI resources in such a way that every "`a b c`" command corresponds to the `/rci/a/b/c` URL.

As a result, hereby Command Reference gives you a complete picture of all RCI resources and their parameters. The words "command" and "resource" are used interchangeably in this manual.

Parameters are listed in the Arguments table of each command. They can be passed as part of the request using HTTP query: `/rci/a/b/c?`*`parameter`*`=`*`value`*. Unless otherwise specified for a certain command, query parameters are optional. Multiple parameters should be separated by ampersand (&) characters.

Parameters can also be passed in the POST request body, as described in Section B.1.3 on page 840.

### B.1.2 Methods

Method semantics depend on the type of resource. There are three types of resources in RCI:

- Settings
- Actions
- Background processes

#### B.1.2.1 Settings

Settings are device configuration elements. You can view, modify, or delete settings using standard HTTP methods.

GET Retrieve settings.

POST Create or modify settings.

DELETE Delete settings (reset to default).

### B.1.2.2 Actions

Actions are commands that do not modify settings. Actions run instantly as opposed to background processes, see also Section B.1.2.3 on page 840

GET Mapped to POST for `/rci/show`. Not applicable to other actions.

POST Execute a command and return its output.

DELETE Not applicable.

### B.1.2.3 Background processes

Background processes are instances that can be created and polled for updates. Such processes are bound to a particular session, and cannot be accessed from anywhere else.

GET Retrieve updates from existing process. Returns 404 if there is no such process.

POST Create a background process.

DELETE Terminate a background process.

## B.1.3 Data Format

HTTP POST requests must be submitted in a free-form JSON,[1] that is interpreted as a batch of parameters and nested settings, depending on the data type. Conversely, HTTP GET returns JSON data that was previously POSTed to the specified resource.

The primary data type is Object. This is unordered collection of key-value pairs, enclosed in curly brackets `{}`. Each key must be unique within an object.

Objects can be put one into another, or be combined in arrays as detailed in Section B.1.3.2 on page 841 and Section B.1.3.3 on page 841

### B.1.3.1 Parameters

String, boolean and number values of an object are interpreted as parameters of the resource being addressed.

```
{
  "parameter": value
}
```

**Example B.1. Set hotspot policy**

Set policy “permit” for the Home network. Refer to Section 3.53.6 on page 386 to see how “interface” and “access” parameters are mentioned in the Arguments table.

[1] In compliance with RFC 7159.

```
POST /rci/ip/hotspot/policy HTTP/1.1
Host: 192.168.1.1
Content-length: 48
Content-type: application/json

{
  "interface":"Home",
  "access":"permit"
}
```

### B.1.3.2 Nested resources

Object and array values of a parent object are interpreted as nested resources.

```
{
 "command": {
  "parameter": value
 }
}
```

In particular, empty object denotes a command with no parameters.

```
{
 "command": {}
}
```

Using this rule, you can address multiple resources at a time. RCI engine will process your request from top to bottom, recursing over the JSON structure. Parameters of a parent resource apply to all nested resources within the nearest surrounding scope.

#### Example B.2. Create and enable a PPP interface

Call “interface” to create a new PPPoE connection, as described in Section 3.30 on page 160, and enable it with “interface up”. The “name” parameter applies to both “interface” and “up”.

```
POST /rci HTTP/1.1
Host: 192.168.1.1
Content-length: 39
Content-type: application/json

{"interface":{"name":"PPPoE1","up":{}}}
```

### B.1.3.3 Arrays

Arrays can be used to operate on a specific resource multiple times. The important thing is that arrays preserve the order of their elements, in contrast to object members.

```
{
 "command": [
  {"parameter1": value1},
  {"parameter2": value2} ]
}
```

### B.1.3.4 Response structure

The structure of POST output strictly corresponds to input. RCI reproduces input arrays and nested objects, and replaces input parameters with output data. This approach lets you locate any part of the response using a resource name.

#### Example B.3. Show version and interface Home

Run two different “show” commands in a certain order.

```
POST /rci/show HTTP/1.1
Host: 192.168.1.1
Content-length: 46
Content-type: application/json

[{"version":{}},{"interface":{"name":"Home"}}]
```

Response is an array of two elements, in accordance with the request.

```
[
 {
  "version": {
   "release": "2.12.A.1.0-1",
   "arch": "mips",
   "ndm": {
    "exact": "0-cbf8590",
    "cdate": "15 Jan 2018"
   },
   "bsp": {
    "exact": "0-06ee10b",
    "cdate": "15 Jan 2018"
   },
   "ndw": {
    "version": "0.2.1",
    "features": "wifi_button,single_usb_port,dual_image",
    "components": "base,cloudcontrol,..."
   },
   "manufacturer": "Keenetic Ltd.",
   "vendor": "Keenetic",
   "series": "KN",
   "model": "Hero (KN-1013)",
   "hw_version": "10128000",
   "hw_id": "KN-1013",
   "device": "Hero",
   "class": "Internet Center"
  }
 },
 {
  "interface": {
   "id": "Bridge0",
   "index": 0,
   "type": "Bridge",
   "description": "Home network",
   "interface-name": "Home",
```

```
    "link": "up",
    "connected": "yes",
    "state": "up",
    "mtu": 1500,
    "tx-queue": 1000,
    "address": "192.168.1.1",
    "mask": "255.255.255.0",
    "uptime": 2621,
    "global": false,
    "security-level": "private",
    "mac": "50:ff:20:00:00:08",
    "auth-type": "none"
  }
 }
]
```

# B.2 XML Core Interface

Warning: XML Core Interface is deprecated and is maintained for backward compatibility.

Hero provides an HTTP XML API. The API is implemented as `/ci` resource that accepts POST XML requests and returns XML after the user agent has been authenticated.

If Hero is reset to factory defaults, authentication is not required.

### Example B.4. XML API call

Execute the "**show interface**" command for the WAN interface named `ISP`. This interface exists by default in Hero.

```
POST /ci HTTP/1.1
Host: 192.168.1.1
Connection: keep-alive
Content-Length: 177
Origin: http://192.168.1.1
User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64)
Content-Type: application/xml
Referer: http://192.168.1.1/

<packet ref="/">
    <request id="1" ref="former.ifaces[load]">
        <command name="show interface">
            <name>ISP</name>
        </command>
    </request>
</packet>
```

The device responds with the current status of `ISP`:

```
HTTP/1.0 200 OK
Server: Ag [47]
Set-Cookie: _authorized=*; path=/
```

```
Content-type: text/xml
Content-Length: 760

<packet>
    <response id="1">
        <interface name="ISP">
            <mac>ec:43:f6:d3:22:d9</mac>
            <id>GigabitEthernet1</id>
            <index>2</index>
            <type>VLAN</type>
            <description>Broadband connection</description>
            <link>down</link>
            <connected>no</connected>
            <state>up</state>
            <mtu>1500</mtu>
            <tx-queue>1000</tx-queue>
            <global>yes</global>
            <defaultgw>no</defaultgw>
            <priority>700</priority>
            <security-level>public</security-level>
            <auth-type>none</auth-type>
        </interface>
        <message code="268370345" ident="Network::Interface::Base"
source="">done</message>
    </response>
</packet>
```

The <request> element is always sent from the user agent to the device. The device always responds with a <response>. The id attribute can be used to establish one-to-one correspondence between them.

**Figure B.1. Request Element**

```
<request id="identifier">
    <!-- request content -->
</request>
```

**Figure B.2. Response Element**

```
<response id="identifier">
    <!-- response content -->
</response>
```

There are two basic types of XML requests:

| | |
|---|---|
| Command Request | Execute a specific command on the device. Available commands are described in Chapter 3 on page 43 |
| Configuration Request | Get parameters that have been configured by a specific command. |

## B.2.1 Command Request

Command request can be used to execute a specific command on the device.

**Figure B.3. Command Request**

```
<request id="identifier">
    <command name="command">
        <no/>
        <argument>value</argument>
        ...
    </command>
</request>
```

*command* Space separated name of the command. Available commands are listed in Chapter 3 on page 43.

*argument* Name of the argument. Available arguments for each command are listed in Chapter 3 on page 43. Some commands do not require any arguments.

*value* Value of the argument.

no Optional element that is used to negate the action of the command. It has the same effect as the prefix no, see Section 2.3 on page 39.

## B.2.2 Configuration Request

Configuration request can be used to get configured parameters. Web interface uses this kind of request to fill out the HTML forms.

**Figure B.4. Configuration Request**

```
<request id="identifier">
    <config name="command"/>
</request>
```

## B.2.3 Request Packet

Multiple requests can be arranged in packets to optimize the performance.

**Figure B.5. Request Packet**

```
<packet>
    <request id="1">
        <!-- request content -->
    </request>
    <request id="2">
        <!-- request content -->
    </request>
    ...
</packet>
```

Response elements are returned as a packet. Response identifiers are used to bind response elements to requests. If there is no response, an empty <response/> element is returned.

**Figure B.6. Response Packet**

```
<packet>
    <response id="1">
        <!-- response content -->
    </response>
    <response id="2"/>
        <!-- no response for id=2 -->
    ...
</packet>
```

C

# NVOX CLI commands

NVOX is an IP telephony application designed to work with Keenetic Linear USB module. Allows you to connect telephones to your Keenetic router to make and receive calls over the Internet using SIP.

**Why the prefix substitution rule is used**

In some cases, in incoming calls, the calling numbers are defined in a format that is not compatible with the dialing rules of the IP telephony operator. This makes it impossible to call back the number from the phone's call log.

For example: during an incoming call on the phone display, you can see +393921234567 and to call back the subscriber, you need to dial 3921234567. In this case, the prefix substitution rule **(+39>)x.** can remove **+39** from the caller's number. With this rule, when a call comes in, the handset display shows the number 3921234567, compatible with the operator's dialing rules.

**Syntax of prefix substitution rules**

**01234567890*#+ABCDx[]()|-.>** — allowed characters.

**T** — waiting for the next digit of the number.

**x** — any digit from 0 to 9.

**[146]** — any of the numbers in square brackets (1, 4, or 6).

**[1-6]** — any of the digits in the range specified in square brackets (1,2,3,4,5 or 6).

**(8>+7)** — replacement/substitution/deletion. To the left of the **>** symbol, there is a sequence of digits that should be replaced with the sequence to the right of the **>**. If only the sequence on the left is specified, it will be deleted from the dialed number. If only the sequence on the right is specified, it will be added. The expression must be enclosed in parentheses.

**2.** — the digit to the left of the dot is repeated any number of times.

The **|** character separates two or more prefix replacement rules in a string.

Note: A string of several rules written with the separator **|** must be enclosed in quotation marks.

**Examples of a prefix substitution rules**

**(+7>8)49(589)x.** — in numbers with the prefix **+7** and code **495**, **498** or **499** the prefix changes to 8, the rest of the number remains unchanged.

**8[49]xxxxxxxxx** — any number with 11 digits, the first digit of which is **8** and the second digit of which is **4** or **9**.

**10xx** — any four-digit number in which the first digits are **10**.

***xx#** — a four-digit sequence in which the first character is *****, followed by any two digits and the character **#**.

**[1-79]xxxxxx** — any number of seven digits in which the first digit is any digit except 8.

**x.** — any number consists of digits from 0 to 9.

**"0T|00T|000"** — the numbers 0, 00 or 000. The **T** symbol is used to wait for dialing to continue after dialling 0 and 00. It should be used if you need to dial in conversational mode (press the call button, then dial the number).

**(0>+4)x.** — in any number, the first digit of **0** will be replaced by **+4**.

**(*2>84951234567)** — dialing ***2** will send a call to 84951234567. You can configure a speed dialing.

**"8[49]xxxxxxxxx|10xx|*xx#"** — the three rules discussed above are written on one line, separated by **|**. The telephone exchange checks such rules one by one, from left to the right.

**"76543210|1234x.|+749[589]xxxxxxx"** — a list of one number and two templates.

# C.1 nvox

**Description** Access to a group of commands to manage the telephone station.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(nvox)`

**Synopsis**

(config)> **nvox**

**Example**

```
(config)> nvox
Core::Configurator: Done.
(nvox)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **nvox** command has been introduced. |

# C.2 nvox call-history clear

**Description** Delete all entries from the call log.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nvox)> **call-history clear**

**Example**

```
(nvox)> call-history clear
Nvox::CallHistory: Call history cleared.
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **dect call-history clear** command has been introduced. |
| 3.05 | The command renamed to **nvox call-history clear**. |

# C.3 nvox call-history delete-call

**Description** Delete a call log entry.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nvox)> **call-history delete-call** *‹call-index›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| call-index | *Hex* | Four-digit entry identifier. |

**Example**

```
(nvox)> call-history delete-call 000f
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox call-history delete-call** command has been introduced. |

# C.4 nvox call-history directory

**Description** Specify a directory on the external USB drive to store call log files. By default, the call log is stored in the Keenetic router's RAM and is cleared after a reboot.

Command with **no** prefix resets setting to default.

Note: The phone book is stored in the same directory as the call log.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **call-history directory** *‹directory›*

(nvox)> **no call-history directory**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| directory | *Filename* | Path to the folder on the external drive. |

**Example**

```
(nvox)> call-history directory DATA:/call-history
Nvox::Manager: Set call history directory to DATA:/call-history.
```

```
(nvox)> no call-history directory
Nvox::Manager: Call history directory reset to default.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox call-history directory** command has been introduced. |

# C.5 nvox call-history dump

**Description** Save the call log to a *.csv file.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nvox)> **call-history dump**

**Example**

```
(nvox)> call-history dump
Nvox::CallHistory: Dump call history to file: ►
/tmp/mnt/ff085e00-8850-4ac3-9f46-3c209fcf3a13/nvox/nvox.history_calls.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox call-history dump** command has been introduced. |

# C.6 nvox call-history filter

**Description**

Configure a filter to output the call history by the **show nvox call-history** command.

Command with **no** prefix disables the filter.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **call-history filter** ‹*time-from*› ‹*time-to*› ‹*type*› [*text*]

(nvox)> **no call-history filter**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `time-from` | *String* | Date and time of the period start in DD MM YYYY HH:MM:SS format. |
| | * | The beginning of the interval is not set. |
| `time-to` | *String* | Date and time of the period end in DD MM YYYY HH:MM:SS format. |
| | * | The end of the interval is not set. |
| `type` | `in` | Search in incoming calls. |
| | `out` | Search in outgoing calls. |
| | `missed` | Search in missed calls. |
| | * | Search in any calls. |
| `text` | *String* | Text to find. |

**Example**

```
(nvox)> call-history filter "12 Aug 2021 00:00:00" "15 Aug 2021 ►
23:59:59" in 1234567
Nvox::CallHistory: Filter enabled.
```

```
(nvox)> no call-history filter
Nvox::CallHistory: Filter disabled.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox call-history filter** command has been introduced. |

# C.7 nvox call-history length

**Description** Set the maximum number of records in the call log. By default, value `500` is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **call-history length** ‹*length*›

(nvox)> **no call-history length**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `length` | *Integer* | The number of entries in the call log in the range from 2 to `8000`. |

**Example**

```
(nvox)> call-history length 400
Nvox::CallHistory: Set history length to 400.
```

```
(nvox)> no call-history length
Nvox::CallHistory: Reset history length to default value (500).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox call-history length** command has been introduced. |

# C.8 nvox fxs

**Description** Access to a group of commands to configure the USB FXS adapter.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(nvox-fxs)`

**Synopsis**

(config)> **nvox fxs**

**Example**

```
(config)> nvox fxs
Core::Configurator: Done.
(nvox-fxs)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **nvox fxs** command has been introduced. |

## C.8.1 nvox fxs country

**Description**

Set the national FXS settings profile. Tones, ringtone, port impedance, etc. will be configured according to the standards in force in that country.

Command with **no** prefix resets the country code value to what is hardwired into the router.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-fxs)> **`country`** ‹*`country`*›

(nvox-fxs)> **`no country`**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `country` | `BG` | Two-letter country code (ISO 3166-1 alpha-2). |
| | `CA` | |
| | `CS` | |
| | `DE` | |
| | `DK` | |
| | `EE` | |
| | `ES` | |
| | `FI` | |
| | `FR` | |
| | `GR` | |
| | `HR` | |
| | `HU` | |
| | `IT` | |
| | `KZ` | |
| | `LT` | |
| | `LV` | |
| | `NO` | |
| | `PL` | |
| | `PT` | |

| Argument | Value | Description |
|---|---|---|
| | RO | |
| | RS | |
| | RU | |
| | SE | |
| | SI | |
| | SK | |
| | TR | |
| | UA | |

**Example**

```
(nvox-fxs)> country DE
Nvox::Manager: Set FXS Country for FXS configuration to "DE".
```

```
(nvox-fxs)> no country
Nvox::Manager: Reset FXS Country for FXS configuration to "TR".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs country** command has been introduced. |

## C.8.2 nvox fxs echo-canc-mode

**Description**

Set echo cancellation mode on FXS ports. By default, 2 value is used.

Command with **no** prefix resets the mode to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-fxs)> **echo-canc-mode** *‹mode›*

(nvox-fxs)> **no echo-canc-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | 0 | Echo cancellation is off. |
| | 1 | Weak echo cancellation. |
| | 2 | Medium echo cancellation. |
| | 3 | Maximum echo cancellation. |

**Example**

```
(nvox-fxs)> echo-canc-mode 3
Nvox::Manager: Set FXS Echo cancellation mode to "3".
```

```
(nvox-fxs)> no echo-canc-mode
Nvox::Manager: Reset FXS Echo cancellation mode.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs echo-canc-mode** command has been introduced. |

## C.8.3 nvox fxs echo-canc-thresholds

**Description**

Set the threshold levels of the audio signal to activate echo cancellation. By default, 20 and 15 values is used. The upper threshold must be higher than the lower threshold.

Command with **no** prefix resets settings to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

(nvox-fxs)> **echo-canc-thresholds** ‹*mute_threshold*› ‹*unmute_threshold*›

(nvox-fxs)> **no echo-canc-thresholds**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mute_threshold | *Integer* | Upper threshold signal level between 1 and 127. |
| unmute_threshold | *Integer* | Lower threshold signal level between 1 and 127. |

**Example**

```
(nvox-fxs)> echo-canc-thresholds 15 10
Nvox::Manager: Set FXS Echo cancellation mute threshold to "15" ►
and Echo cancellation unmute threshold to "10".
```

```
(nvox-fxs)> no echo-canc-thresholds
Nvox::Manager: Reset FXS Echo cancellation mute threshold and ►
Echo cancellation unmute threshold.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs echo-canc-thresholds** command has been introduced. |

## C.8.4 nvox fxs force-calibration

**Description**

Perform LB calibration for FXS ports each time FXS is initialized.

Command with **no** prefix disables LB calibration, using factory calibration data.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-fxs)> **force-calibration**

(nvox-fxs)> **no force-calibration**

**Example**

```
(nvox-fxs)> force-calibration
Nvox::Manager: Set FXS Force FXS longitudinal balance calibration ►
on start to "1".
```

```
(nvox-fxs)> no force-calibration
Nvox::Manager: Set FXS Force FXS longitudinal balance calibration ►
on start to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs force-calibration** command has been introduced. |

## C.8.5 nvox fxs init-timer

**Description** Set FXS initialisation waiting timer in milliseconds. By default, `15000` value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-fxs)> **init-timer** ‹*timer*›

(nvox-fxs)> **no init-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timer` | *Integer* | Timer value in milliseconds. Can take values in the range from `1000` to `300000`. |

**Example**

```
(nvox-fxs)> init-timer 1000
Nvox::Manager: Set FXS Timer to exit on DECT dongle ►
initialization failure to "1000".
```

```
(nvox-fxs)> no init-timer
Nvox::Manager: Reset FXS Timer to exit on DECT dongle ►
initialization failure.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs init-timer** command has been introduced. |

## C.8.6 nvox fxs led-blinking-timer

**Description**

Set the switching period (flashing frequency) of the FXS port status LEDs in talk mode. By default, `15000` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-fxs)> **led-blinking-timer** *‹timer›*

(nvox-fxs)> **no led-blinking-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timer` | *Integer* | Timer value in milliseconds. Can take values in the range from `0` to `60000`. |

**Example**

```
(nvox-fxs)> led-blinking-timer 1000
Nvox::Manager: Set FXS LED blinking period during calls to "1000".
```

```
(nvox-fxs)> no led-blinking-timer
Nvox::Manager: Reset FXS LED blinking period during calls.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs led-blinking-timer** command has been introduced. |

## C.8.7 nvox fxs port-paging

**Description**

Enable FXS port paging.

Command with **no** prefix disables the paging.

**Prefix no**

Yes

**Change settings**

No

**Multiple input** No

**Synopsis**

(nvox-fxs)> **port-paging** *‹id›*

(nvox-fxs)> **no port-paging**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | 1 | FXS port ID. |
| | 2 | |

**Example**

```
(nvox-fxs)> port-paging 1
Nvox::Fxs: Start paging FXS port 1.
```

```
(nvox-fxs)> no port-paging
Nvox::Fxs: Stop paging FXS ports.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs port-paging** command has been introduced. |

## C.8.8 nvox fxs pulse-dial-mode

**Description** Set the pulse detection mode on the FXS ports. By default, 1 value is used.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-fxs)> **pulse-dial-mode** *‹mode›*

(nvox-fxs)> **no pulse-dial-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | 0 | Pulse dialing is not detected. |
| | 1 | Pulse dialing is not detected during a call. |
| | 2 | Pulse dialing is detected all the time. |

**Example**

```
(nvox-fxs)> pulse-dial-mode 2
Nvox::Manager: Set FXS Pulse dialing mode to "2".
```

```
(nvox-fxs)> no pulse-dial-mode
Nvox::Manager: Reset FXS Pulse dialing mode to 1.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs pulse-dial-mode** command has been introduced. |

## C.8.9 nvox fxs unmute-timer

**Description**

Set the timer to delay the sound on the FXS ports in milliseconds after connecting the audio channel during a call. The turn-on delay helps to eliminate noises and other unwanted sounds when answering a call. By default, the `200` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-fxs)> **unmute-timer** *‹timer›*

(nvox-fxs)> **no unmute-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timer` | *Integer* | Timer value in milliseconds. Can take values in the range from `0` to `5000`. |

**Example**

```
(nvox-fxs)> unmute-timer 300
Nvox::Manager: Set FXS Delay before unmuting the voice channel ►
to "300".
```

```
(nvox-fxs)> no unmute-timer
Nvox::Manager: Reset FXS Delay before unmuting the voice channel.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox fxs unmute-timer** command has been introduced. |

# C.9 nvox parallel accept

**Description**

Set the code to answer a parallel incoming call. Dial this code to answer a call that comes in during a call. By default, the R value is used.

Command with **no** prefix disables the answer to a parallel incoming call function.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel accept** *‹accept›*

(nvox)> **no parallel accept**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| accept | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel accept **R
Nvox::Manager: Handset info "012345ABCD" created.
```

```
(nvox)> no parallel accept
Nvox::Manager: Disabled an action to accept a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel accept** command has been introduced. |

# C.10 nvox parallel disable

**Description** Disable support for parallel calls on the Keenetic telephone station. By default, the parallel calls are enabled.

Command with **no** prefix enables support for parallel calls.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel disable**

(nvox)> **no parallel disable**

**Example**

```
(nvox)> parallel disable
Nvox::Manager: Disabled parallel calls.
```

```
(nvox)> no parallel disable
Nvox::Manager: Enabled parallel calls.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel disable** command has been introduced. |

# C.11 nvox parallel call-external

**Description**

Set the code to create a parallel outgoing external call. To call another caller during a call, dial this code, then the caller's number. By default, the R value is used.

Command with **no** prefix disables the parallel outgoing external call function.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **parallel call-external** *‹call-external›*

(nvox)> **no parallel call-external**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| call-external | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel call-external **R
Nvox::Manager: "**R" sequence set to start an external call.
```

```
(nvox)> no parallel call-external
Nvox::Manager: Disabled an action to start an external call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel call-external** command has been introduced. |

# C.12 nvox parallel call-internal

**Description**

Set the code to create a parallel outgoing internal call. To call another phone port or DECT-handset during a call, dial this code, then the extension number of the port or handset. By default, the * value is used.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel call-internal** *‹call-internal›*

(nvox)> **no parallel call-internal**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `call-internal` | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel call-internal ***
Nvox::Manager: "***" sequence set to start an internal call.
```

```
(nvox)> no parallel call-internal
Nvox::Manager: Disabled an action to start an internal call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel call-internal** command has been introduced. |

# C.13 nvox parallel hold-resume

**Description** Configure code to put on hold and unholding a call on phone during a conversation. Dial this code during the call to put the caller on hold. To remove the hold and continue the call, dial this code again. By default, the R value is used.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel hold-resume** *‹hold-resume›*

(nvox)> **no parallel hold-resume**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `hold-resume` | *`String`* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel hold-resume **R
Nvox::Manager: "**R" sequence set to hold or resume a call.
```

```
(nvox)> no parallel hold-resume
Nvox::Manager: Disabled an action to hold or resume a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel hold-resume** command has been introduced. |

# C.14 nvox parallel intercept

**Description**

Configure code to intercept the call. Dial this code, which to transfer the caller from another handset to this handset. When incoming call to the other handset, dial this code to answer the call. By default, the R value is used.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **parallel intercept** ‹*intercept*›

(nvox)> **no parallel intercept**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `intercept` | *`String`* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel intercept **R
Nvox::Manager: "**R" sequence set to intercept a call.
```

```
(nvox)> no parallel intercept
Nvox::Manager: Disabled an action to intercept a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel intercept** command has been introduced. |

# C.15 nvox parallel reject

**Description**

Configure code to reject an incoming parallel call. Dial this code to reject a call that comes in during a call. By default, the # value is used.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **parallel intercept** ‹*reject*›

(nvox)> **no parallel intercept**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `reject` | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel reject **#
Nvox::Manager: "**#" sequence set to reject a call.
```

```
(nvox)> no parallel reject
Nvox::Manager: Disabled an action to reject a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel reject** command has been introduced. |

# C.16 nvox parallel release-active

**Description**

Configure code to end of an active parallel call. Dial this code to end an active call and continue the conversation with the caller on hold. By default, the # value is used.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel release-active** *‹release-active›*

(nvox)> **no parallel release-active**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| release-active | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel release-active **1
Nvox::Manager: "**1" sequence set to release an active call.
```

```
(nvox)> no parallel release-active
Nvox::Manager: Disabled an action to release an active call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel release-active** command has been introduced. |

# C.17 nvox parallel release-passive

**Description** Configure code to end of a parallel call on hold. Dial this code to end the connection with the caller on hold and continue the conversation with the current caller. By default, the # value is used.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel release-passive** *‹release-passive›*

(nvox)> **no parallel release-passive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| release-passive | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel release-passive **0
Nvox::Manager: "**0" sequence set to release a passive call.
```

```
(nvox)> no parallel release-passive
Nvox::Manager: Disabled an action to release a passive call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel release-passive** command has been introduced. |

# C.18 nvox parallel toggle

**Description**

Configure code to switch between two parallel calls. Dial this code to continue a call on hold and put the current call on hold. By default, the R value is used.

Command with **no** prefix disables this feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **parallel toggle** ‹*toggle*›

(nvox)> **no parallel toggle**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| toggle | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel toggle **5
Nvox::Manager: "**5" sequence set to toggle a call.
```

```
(nvox)> no parallel toggle
Nvox::Manager: Disabled an action to toggle a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel toggle** command has been introduced. |

# C.19 nvox parallel transfer

**Description** Configure code to transfer the caller on hold to another caller or phone port/DECT-handset. Dial this code to connect the caller on hold with the caller who is talking to you at the moment. By default, the * value is used.

Command with **no** prefix disables this feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **parallel transfer** ‹*transfer*›

(nvox)> **no parallel transfer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| transfer | *String* | A string from 1 to 3 characters in length. The first character is R,* or #. The second and third characters are numbers from 0 to 9 or characters R,* or #. |

**Example**

```
(nvox)> parallel transfer ***
Nvox::Manager: "***" sequence set to transfer a call.
```

```
(nvox)> no parallel transfer
Nvox::Manager: Disabled an action to transfer a call.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox parallel transfer** command has been introduced. |

# C.20 nvox phone

**Description** Access to a group of commands to configure the FXS ports and DECT handsets.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (nvox-phone)

**Synopsis**

(config)> **nvox phone**

**Example**

```
(config)> nvox phone
Core::Configurator: Done.
(nvox-phone)>
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone** command has been introduced. |

# C.20.1 nvox phone cadence

**Description**

Set the parameters for one of the six ringtones, each of which can be linked to a specific type of incoming call (external, internal, paging, call from a particular number). Such a setting will allow you to identify the type of call by the sound of the ringtone.

Default values:

| Ringtone N | active1 | passive1 | active2 | passive2 | active3 | passive3 |
|---|---|---|---|---|---|---|
| 0 | 400 | 500 | 400 | 2000 | 0 | 0 |
| 1 | 1000 | 4000 | 0 | 0 | 0 | 0 |
| 2 | 400 | 500 | 0 | 0 | 0 | 0 |
| 3 | 400 | 2000 | 1200 | 1200 | 0 | 0 |
| 4 | 400 | 500 | 400 | 2000 | 2000 | 2000 |
| 5 | 4000 | 2000 | 0 | 0 | 0 | 0 |

Command with **no** prefix resets settings to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(nvox-phone)> **cadence** ‹*cadence*› ‹*active1*› ‹*passive1*› ‹*active2*› ‹*passive2*› ‹*active3*› ‹*passive3*›

(nvox-phone)> **no cadence** [‹*cadence*›]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `cadence` | *Integer* | Ringtone number in the range from `0` to `5`. |
| `active1` | *Integer* | First signal duration in the range from `200` to `5000` ms or `0`. |
| `passive1` | *Integer* | Second pause duration in the range from `200` to `5000` ms or `0`. |
| `active2` | *Integer* | Second signal duration in the range from `200` to `5000` ms or `0`. |

| Argument | Value | Description |
|---|---|---|
| passive2 | *Integer* | First pause duration in the range from 200 to 5000 ms or 0. |
| active3 | *Integer* | Third signal duration in the range from 200 to 5000 ms or 0. |
| passive3 | *Integer* | Third pause duration in the range from 200 to 5000 ms or 0. |

**Example**

```
(nvox-phone)> cadence 1 800 320 0 0 0 0
Nvox::Phone: Set phone cadence 1 to 800/320, 0/0, 0/0 ►
(active/passive periods).
```

```
(nvox-phone)> no cadence 1
Nvox::Phone: Reset phone cadence 1 to 1000/4000, 0/0, 0/0 ►
(active/passive periods).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone cadence** command has been introduced. |

## C.20.2 nvox phone dial-digit-timer

**Description**

Set the timer in milliseconds to wait for the next digit to be dialed in the dialing mode during an outgoing call. When the timer countdown finishes, the outgoing call is made on the dialed number. By default, 5000 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-phone)> **dial-digit-timer** ‹*timer*›

(nvox-phone)> **no dial-digit-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| timer | *Integer* | The timer duration is in the range from 100 to 10000 ms. |

**Example**

```
(nvox-phone)> dial-digit-timer 7000
Nvox::Manager: Set dial digit timer.
```

```
(nvox-phone)> no dial-digit-timer
Nvox::Manager: Reset dial digit timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone dial-digit-timer** command has been introduced. |

## C.20.3 nvox phone intercom-cadence

**Description**

Set a ringtone for internal calls. By default, `0` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-phone)> **`intercom-cadence`** *‹cadence›*

(nvox-phone)> **`no intercom-cadence`**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cadence | *Integer* | Ringtone number in the range from `0` to `5`. |

**Example**

```
(nvox-phone)> intercom-cadence 4
Nvox::Phone: Set intercom cadence to 4.
```

```
(nvox-phone)> no intercom-cadence
Nvox::Phone: Reset intercom cadence to 0.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone intercom-cadence** command has been introduced. |

## C.20.4 nvox phone offhook-timer

**Description**

Set the timer in milliseconds to wait for the first digit to be dialed after activating the talk mode for an outgoing call. When the timer countdown is over, the waiting stops and a short beep sounds. By default, `10000` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-phone)> **offhook-timer** *‹timer›*

(nvox-phone)> **no offhook-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| timer | *Integer* | The timer duration is in the range from 100 to 10000 ms. |

**Example**

```
(nvox-phone)> offhook-timer 8000
Nvox::Manager: Set offhook timer.
```

```
(nvox-phone)> no offhook-timer
Nvox::Manager: Reset offhook timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone offhook-timer** command has been introduced. |

## C.20.5 nvox phone paging-cadence

**Description**

Set a ringtone for paging. By default, 0 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-phone)> **paging-cadence** *‹cadence›*

(nvox-phone)> **no paging-cadence**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cadence | *Integer* | Ringtone number in the range from 0 to 5. |

**Example**

```
(nvox-phone)> paging-cadence 3
Nvox::Phone: Set paging cadence to 3.
```

```
(nvox-phone)> no paging-cadence
Nvox::Phone: Reset paging cadence to 0.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phone paging-cadence** command has been introduced. |

# C.21 nvox phonebook delete

**Description** Delete all contacts from the phonebook.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(nvox)> **nvox phonebook delete**

**Example**

```
(nvox)> nvox phonebook delete
Nvox::Manager: All contacts have been deleted from the phonebook.
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **nvox phonebook delete** command has been introduced. |

# C.22 nvox phonebook handset-edit

**Description** Allow DECT handsets to edit the phonebook.

Command with **no** prefix denies editing the phonebook.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox)> **phonebook handset-edit**

(nvox)> **no phonebook handset-edit**

**Example**

```
(nvox)> phonebook handset-edit
Nvox::Manager: Enabled a DECT handset to edit a phonebook.
```

```
(nvox)> no phonebook handset-edit
Nvox::Manager: Disabled a DECT handset to edit a phonebook.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phonebook handset-edit** command has been introduced. |

# C.23 nvox phonebook import

**Description**

Import contacts in vCard format from a *.vcf file to the phonebook. Each contact must contain the subscriber's first name, last name and up to three phone numbers up to 20 digits long with standard labels - home, work, cell, etc.

You can create a contact group using Google Contacts and/or iCloud Contacts in an Internet browser and then export it in vCard format.

The contacts.vcf file obtained during export is suitable for importing into the phonebook. It should be downloaded to the built-in storage of the Internet Center, then run this command, specifying the path to the /storage/contacts.vcf file and the contacts reading mode.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(nvox)> **`phonebook import`** *‹filename› ‹mode›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `filename` | *`String`* | Path to the *vcf file with contacts to import.<br>If the contacts.vcf file is located on the router's built-in storage, you must specify the path /storage/contacts.vcf |
| `mode` | `replace` | All contacts in the phonebook will be deleted and replaced by contacts from the file. |
| | `overwrite` | New contacts will be added when the first and last name of a contact in the phonebook matches a contact in the file. The contact numbers in the phonebook are replaced by the contact numbers from the file. |
| | `expand` | New contacts will be added when the first and last name of a contact in the phonebook matches a contact in the file. The new numbers of the contact from the file are added to the contact from the phonebook. Note: this addition of numbers occurs if the phonebook contact has less than three numbers. |

| Argument | Value | Description |
|---|---|---|
| | `duplicate` | Contacts from the file are added to the phonebook even if they match contacts in the phonebook. |

**Example**

```
(nvox)> nvox phonebook import /storage/contacts_google.vcf replace
```

```
(nvox)> nvox phonebook import /storage/contacts_icloud.vcf ► overwrite
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **nvox phonebook import** command has been introduced. |

# C.24 nvox phonebook last-name-first

**Description**

Display the last name first (last name, first name) when viewing the phone book on DECT handsets. By default, the first name is displayed first (first name, last name).

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **phonebook last-name-first**

(nvox)> **no phonebook last-name-first**

**Example**

```
(nvox)> phonebook last-name-first
Nvox::Manager: Show last name first in a DECT phonebook.
```

```
(nvox)> no phonebook last-name-first
Nvox::Manager: Show name first in a DECT phonebook.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phonebook last-name-first** command has been introduced. |

# C.25 nvox phonebook length

**Description**

Set the maximum number of phonebook entries that are supported by DECT handsets connected to the Keenetic Plus DECT base. By default, `500` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **phonebook length** ‹*length*›

(nvox)> **no phonebook length**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `length` | *Integer* | Number of entries in the range from 2 to `500`. |

**Example**

```
(nvox)> phonebook length 100
Nvox::Manager: Set DECT phonebook length to 100.
```

```
(nvox)> no phonebook length
Nvox::Manager: Reset DECT phonebook length to default (500).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phonebook length** command has been introduced. |

# C.26 nvox phonebook match-length

**Description**

Set the length of the caller's number fragment that is used for comparison with the numbers in the phonebook. When a call comes in, the system compares the number fragment with the phonebook numbers and, if it matches, displays the caller's name from the corresponding phonebook entry on the phone display. By default, 7 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **phonebook match-length** ‹*length*›

(nvox)> **no phonebook match-length**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| length | *Integer* | Number of digits for comparison in the range from 0 to 20. |

**Example**

```
(nvox)> phonebook match-length 6
Nvox::Manager: Set a DECT phonebook match length to 6.
```

```
(nvox)> no phonebook match-length
Nvox::Manager: Reset a DECT phonebook match length to 7.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox phonebook match-length** command has been introduced. |

# C.27 nvox postdial key

**Description**

Set the postdial key. The part of the number to the right of the postdial key is transmitted to the line after connecting to the number to the left of this key. By default, *** value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **postdial key** *‹key›*

(nvox)> **no postdial key**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| key | *String* | A postdial key of 1 to 3 digits in the range from 0 to 9 or R, *, # characters in any combination. |

**Example**

```
(nvox)> postdial key **#
Nvox::Manager: Set postdial key.
```

```
(nvox)> no postdial key
Nvox::Manager: Reset postdial key.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox postdial key** command has been introduced. |

# C.28 nvox postdial mid-timer

**Description**

Set the duration of pauses between digits transmitted to the line during postdialing. By default, `250` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **postdial mid-timer** ‹*timeout*›

(nvox)> **no postdial mid-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Pause duration in the range from `250` to `10000` ms. |

**Example**

```
(nvox)> postdial mid-timer 300
Nvox::Manager: Set postdial mid timer.
```

```
(nvox)> no postdial mid-timer
Nvox::Manager: Reset postdial mid timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox postdial mid-timer** command has been introduced. |

# C.29 nvox postdial post-timer

**Description**

Set the sound delay timer after postdialing. By default, `250` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **postdial post-timer** *‹timeout›*

(nvox)> **no postdial post-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Delay duration in the range from `250` to `10000` ms. |

**Example**

```
(nvox)> postdial post-timer 500
Nvox::Manager: Set postdial post timer.
```

```
(nvox)> no postdial post-timer
Nvox::Manager: Reset postdial post timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox postdial post-timer** command has been introduced. |

# C.30 nvox postdial pre-timer

**Description**

Set the postdialing delay after a connection is established (SIP 200 OK). By default, `6000` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox)> **postdial pre-timer** *‹timeout›*

(nvox)> **no postdial pre-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | Delay duration in the range from `250` to `10000` ms. |

**Example**

```
(nvox)> postdial pre-timer 8000
Nvox::Manager: Set postdial pre timer.
```

```
(nvox)> no postdial pre-timer
Nvox::Manager: Reset postdial pre timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox postdial pre-timer** command has been introduced. |

# C.31 nvox sip

**Description**

Access to a group of commands to configure the selected SIP line. If the line is not found, the command tries to create it. The maximum number of telephone lines supported by the telephone station is 10.

Command with **no** prefix deletes the line.

**Prefix no**

Yes

**Change settings**

No

**Multiple input**

Yes

**Group entry**

`(nvox-sip)`

**Synopsis**

(nvox)> **sip** *‹id›*

(nvox)> **no sip** *‹id›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `id` | *`String`* | SIP line identifier of Latin letters and numbers from `0` to 9. The maximum string length is 64 characters. |

**Example**

```
(nvox)> sip sipline1
Nvox::Manager: Created SIP line "sipline1".
(nvox-sip)>
```

```
(nvox)> no sip sipline1
Nvox::Manager: Deleted SIP line "sipline1".
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **nvox sip** command has been introduced. |

## C.31.1 nvox sip audio-protocol

**Description**

Select the audio transport protocol for the SIP line. By default, RTP value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **audio-protocol** *‹protocol›*

(nvox-sip)> **no audio-protocol**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| protocol | rtp | RTP protocol. |
| | srtp | SRTP protocol. |
| | both | Where possible, SRTP is used, otherwise RTP. |

**Example**

```
(nvox-sip)> audio-protocol srtp
Nvox::Manager: Set SIP line sipline1 audio protocol to "srtp".
```

```
(nvox-sip)> no audio-protocol
Nvox::Manager: Reset SIP line sipline1 audio protocol.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip audio-protocol** command has been introduced. |

## C.31.2 nvox sip blacklist

**Description** Create a blacklist of numbers from which incoming calls are prohibited through this line. By default, blacklist is not configured.

When you receive an incoming call from a subscriber whose number is blacklisted and is not on the whitelist, the phones and handsets do not ring. The caller is notified that the user is busy, and the call information is recorded in the call log and system log.

When checking the number against the blacklist, the system sequentially compares the number with each of the numbers and patterns in the line from left to right until the first match.

When the command is executed, the previously configured blacklist is overwritten with the new list.

Command with **no** prefix removes the blacklist.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **blacklist** *‹map›*

(nvox-sip)> **no blacklist**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| map | *String* | A string of up to 600 characters in length. Phone numbers and number patterns are separated from each other by the \| character.<br><br>Valid characters: 01234567890*#+ABCDx[]\|-.> |

**Example**

```
(nvox-sip)> blacklist 1234x
Nvox::Manager: Set SIP line 1 blacklist to "1234x".
```

```
(nvox-sip)> blacklist +749[589]1234567
Nvox::Manager: Set SIP line 1 blacklist to "+749[589]1234567".
```

```
(nvox-sip)> blacklist "[1-69]x.|+792[67]x.|000x.|1234567"
Nvox::Manager: Set SIP line test blacklist to ►
"[1-69]x.|+792[67]x.|000x.|1234567".
```

```
(nvox-sip)> no blacklist
Nvox::Manager: Reset SIP line 1 blacklist.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **nvox sip blacklist** command has been introduced. |

## C.31.3 nvox sip cadence

**Description**

Select the ringtone that will sound for incoming calls on this line. By default, the 1 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **cadence** *‹cadence›*

(nvox-sip)> **no cadence**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cadence | *Integer* | Ringtone number in the range from 0 to 5. |

**Example**

```
(nvox-sip)> cadence 3
Nvox::Manager: Set SIP line 1 Cadence for incoming calls (0 is ►
for internal calls) to "3".
```

```
(nvox-sip)> no cadence
Nvox::Manager: Reset SIP line 1 Cadence for incoming calls (0 ►
is for internal calls).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip cadence** command has been introduced. |

## C.31.4 nvox sip cadence-rule

**Description**

Set a rule to select a melody that will sound for incoming calls from specific numbers on this line. You can recognize by the sound of the ringtone who is calling you.

Command with **no** prefix removes the rule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(nvox-sip)> **cadence-rule** ‹*rule*› ‹*cadence*› ‹*digitmap*›

(nvox-sip)> **no cadence-rule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `rule` | *Integer* | Rule number of 0 to 2. |
| `cadence` | *Integer* | Ringtone number of 0 to 5. |
| `digitmap` | *String* | The pattern to which the caller's number must correspond. For more information see Syntax of prefix substitution rules. |

**Example**

```
(nvox-sip)> cadence-rule 0 4 4951234567
Nvox::Sip: Add SIP sipline1 cadence rule 0: cadence 4 for digit ►
map "4951234567".
```

```
(nvox-sip)> no cadence-rule 0
Nvox::Sip: Reset SIP sipline1 cadence rule 0.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip cadence-rule** command has been introduced. |

## C.31.5 nvox sip codec

**Description**

Allow use of audio codec for calls on this line. When configuring codecs with this command, you should consider:

1) Keenetic Linear only supports codecs G.711a and G.711u;

2) Codec G.722 only supports DECT-handset with support CAT-iq 1/CAT-iq 2.x (handset Gigaset).

Command with **no** prefix denies the use of this codec or resets configuration.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(nvox-sip)> **codec** *‹codec›*

(nvox-sip)> **no codec**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| codec | g711u | Codec G.711u (ULAW, PCMU). |
| | g711a | Codec G.711a (ALAW, PCMA). |
| | g726 | Codec G.726-32. |
| | g722 | Codec G.722. |

**Example**

```
(nvox-sip)> codec g726
Nvox::Manager: Added g726 to SIP line "sipline1" codecs.
```

```
(nvox-sip)> no codec g726
Nvox::Manager: Removed g726 from SIP line "sipline1" codecs.
```

```
(nvox-sip)> no codec
Nvox::Manager: Reset SIP line "sipline1" codecs.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip codec** command has been introduced. |

## C.31.6 nvox sip deny-interception

**Description**

Prohibit interception of connections on this line (user 1 is on the phone, user 2 dials a special code, intercepts the call and talks with the interlocutor of the user 1). By default, the connection interception is allowed.

Command with **no** prefix allows the connection interception.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **deny-interception**

(nvox-sip)> **no deny-interception**

**Example**

```
(nvox-sip)> deny-interception
Nvox::Manager: Set SIP line sipline1 deny interception to "1".
```

```
(nvox-sip)> no deny-interceptiond
Nvox::Manager: Set SIP line sipline1 deny interception to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip deny-interception** command has been introduced. |

## C.31.7 nvox sip deny-pickup

**Description** Prohibit interception of incoming calls on this line (user 1 is on the phone, user 2 dials a special code on his phone/DECT-handset and answers the phone instead of user 1). By default, the incoming calls interception is allowed.

Command with **no** prefix allows the incoming calls interception.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **deny-pickup**

(nvox-sip)> **no deny-pickup**

**Example**

```
(nvox-sip)> deny-pickup
Nvox::Manager: Set SIP line sipline1 deny pickup to "1".
```

```
(nvox-sip)> no deny-pickup
Nvox::Manager: Set SIP line sipline1 deny pickup to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip deny-pickup** command has been introduced. |

## C.31.8 nvox sip digit-map

**Description**

Create dialing rules the number, outgoing calls to which are allowed through this line. If the dialed number doesn`t match any of the dialing rules, the outgoing call will be dismiss. If there are no dialing rules, calls to any number are allowed. By default, dialing rules is not configured.

For more information see Syntax of prefix substitution rules.

Command with **no** prefix removes the dialing rules.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **digit-map** *‹map›*

(nvox-sip)> **no digit-map**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| map | *String* | String to 250 characters long. Valid characters: 01234567890*#+ABCDxT[]()\|>.- |

**Example**

```
(nvox-sip)> digit-map "8[49]xxxxxxxxx|10xx|*xx#"
Nvox::Manager: Set SIP line test digit map to ►
"8[49]xxxxxxxxx|10xx|*xx#".
```

```
(nvox-sip)> no digit-map
Nvox::Manager: Reset SIP line sipline1 digit map.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip digit-map** command has been introduced. |

## C.31.9 nvox sip disable

**Description**

Shutdown the telephone line. If the line is off, outgoing and incoming calls cannot be made through this line.

Command with **no** prefix enables the telephone line.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **disable**

(nvox-sip)> **no disable**

**Example**

```
(nvox-sip)> deny-pickup
Nvox::Manager: Disabled SIP line "sipline1".
```

```
(nvox-sip)> no deny-pickup
Nvox::Manager: Enabled SIP line "sipline1".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip disable** command has been introduced. |

## C.31.10 nvox sip disable-extended-keepalive

**Description**

Disable Extended Keep Alive feature, which sends keepalive packets to all servers resolved from the DNS SRV record. By default, the feature is enabled.

Note: If Extended Keep Alive is disabled, keepalive packets should only be sent to the server where SIP registration is performed.

Command with **no** prefix enables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **disable-extended-keepalive**

(nvox-sip)> **no disable-extended-keepalive**

**Example**

```
(nvox-sip)> disable-extended-keepalive
Nvox::Manager: Set SIP line test disable extended keepalive to ►
"1".
```

```
(nvox-sip)> no disable-extended-keepalive
Nvox::Manager: Reset SIP line test disable extended keepalive ►
to 0.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **nvox sip disable-extended-keepalive** command has been introduced. |

## C.31.11 nvox sip disable-force-registration-retry

**Description**

Disable sending retry SIP registration requests in situations where registration was rejected or there is no response to the request. By default, the request sending is enabled.

Command with **no** prefix enables retry registration requests.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **disable-force-registration-retry**

(nvox-sip)> **no disable-force-registration-retry**

**Example**

```
(nvox-sip)> disable-force-registration-retry
Nvox::Manager: Set SIP line sipline1 disable force registration ►
retry to "1".
```

```
(nvox-sip)> no disable-force-registration-retry
Nvox::Manager: Reset SIP line sipline1 disable force registration ►
retry.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip disable-force-registration-retry** command has been introduced. |

## C.31.12 nvox sip disable-stun

**Description**

Shutdown the STUN client used to successfully pass SIP messages and RTP audio data through NAT. By default, STUN client is enabled.

Command with **no** prefix enables the STUN client.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **disable-stun**

(nvox-sip)> **no disable-stun**

**Example**

```
(nvox-sip)> disable-stun
Nvox::Manager: Set SIP line sipline1 disable STUN to "1".
```

```
(nvox-sip)> no disable-stun
Nvox::Manager: Reset SIP line sipline1 disable STUN.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip disable-stun** command has been introduced. |

## C.31.13 nvox sip display-name

**Description**

Specify the name that will be displayed on the phone of the called party during an outgoing call on this line. By default, the name is not specified.

Command with **no** prefix removes the name.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **display-name** *‹name›*

(nvox-sip)> **no display-name**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | String of printed symbols of the set ASCII. Maximum string length is 100 characters. |

**Example**

```
(nvox-sip)> display-name office_12
Nvox::Manager: Set SIP line sipline1 display name to "office_12".
```

```
(nvox-sip)> no display-name
Nvox::Manager: Reset SIP line sipline1 display name.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip display-name** command has been introduced. |

## C.31.14 nvox sip dnd

**Description**

Enable DND (Do Not Disturb) mode for this line. When DND is enabled, phones and handsets do not ring on incoming calls, callers are receive a notification that the user is busy and information about missed calls is entered into the call log and system log. By default, the setting is disabled.

Command with **no** prefix disables DND (Do Not Disturb) function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **dnd**

(nvox-sip)> **no dnd**

**Example**

```
(nvox-sip)> dnd
Nvox::Manager: Set SIP line sipline1 Do Not Disturb to "1".
```

```
(nvox-sip)> no dnd
Nvox::Manager: Reset SIP line sipline1 Do Not Disturb.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip dnd** command has been introduced. |

## C.31.15 nvox sip dnd-schedule

**Description** Assign a schedule work to the DND (Do Not Disturb). Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **dnd-schedule** ‹*schedule*›

(nvox-sip)> **no dnd-schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(nvox-sip)> dnd-schedule
Nvox::Sip: SIP line "sipline1" set schedule "schedule0" for dnd.
```

```
(nvox-sip)> no dnd-schedule
Nvox::Sip: SIP line "sipline1" delete schedule for dnd.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip dnd-schedule** command has been introduced. |

## C.31.16 nvox sip domain

**Description**

Specify the domain name of the IP Telephony operator to which this line is connected.

Command with **no** prefix removes the domain name.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **domain** *‹domain›*

(nvox-sip)> **no domain**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| domain | *String* | The domain name. Maximum domain name length is 100 characters. |

**Example**

```
(nvox-sip)> domain voipprovider
Nvox::Manager: Set SIP line sipline1 domain to "voipprovider".
```

```
(nvox-sip)> no domain
Nvox::Manager: Reset SIP line sipline1 domain.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip domain** command has been introduced. |

## C.31.17 nvox sip dtmf-flash-signal

**Description**

Enable FLASH signal transmission (calibrated loop plume) in SIP INFO messages. By default, the feature is disabled.

Command with **no** prefix disables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **dtmf-flash-signal**

(nvox-sip)> **no dtmf-flash-signal**

**Example**

```
(nvox-sip)> dtmf-flash-signal
Nvox::Manager: Set SIP line sipline1 DTMF flash signal to "1".
```

```
(nvox-sip)> no dtmf-flash-signal
Nvox::Manager: Reset SIP line sipline1 DTMF flash signal.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip dtmf-flash-signal** command has been introduced. |

## C.31.18 nvox sip dtmf-mode

**Description**

Set the DTMF transmission method for this line. By default, method `rfc2833` is used.

Command with **no** prefix resets transmission method to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **dtmf-mode** *‹mode›*

(nvox-sip)> **no dtmf-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | rfc2833 | Transmission of DTMF signals by RTP protocol messages. |
| | sip-info | Transmission of DTMF signals with SIP INFO requests. |
| | inband | Transmission of DTMF signals in the media stream along with voice. Can only be used with G.711a and G.711u codecs. |

**Example**

```
(nvox-sip)> dtmf-mode rfc2833
Nvox::Manager: Set SIP line sipline1 DTMF mode to "rfc2833".
```

```
(nvox-sip)> no dtmf-mode
Nvox::Manager: Reset SIP line sipline1 DTMF mode.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip dtmf-mode** command has been introduced. |

## C.31.19 nvox sip enable-blacklist

**Description**

Enable blacklist. By default, setting is disabled.

Command with **no** prefix disables the setting.

Note: The **nvox sip blacklist** command is used to create a blacklist.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **enable-blacklist**

(nvox-sip)> **no enable-blacklist**

**Example**

```
(nvox-sip)> enable-blacklist
Nvox::Manager: Set SIP line 1 Enable blacklist for a line to "1".
```

```
(nvox-sip)> no enable-blacklist
Nvox::Manager: Set SIP line 1 Enable blacklist for a line to "0".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **nvox sip enable-blacklist** command has been introduced. |

## C.31.20 nvox sip enable-whitelist

**Description**

Enable whitelist. By default, setting is disabled.

Command with **no** prefix disables the setting.

Note: The **nvox sip whitelist** command is used to create a whitelist.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **enable-whitelist**

(nvox-sip)> **no enable-whitelist**

**Example**

```
(nvox-sip)> enable-whitelist
Nvox::Manager: Set SIP line 1 Enable whitelist for a line to "1".
```

```
(nvox-sip)> no enable-whitelist
Nvox::Manager: Set SIP line 1 Enable whitelist for a line to "0".
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **nvox sip enable-whitelist** command has been introduced. |

## C.31.21 nvox sip enable-whitelist-phonebook

**Description**

Enable whitelist from phonebook numbers. By default, setting is disabled.

When you receive an incoming call from a subscriber whose number is listed in the phonebook, the phone rings even if the number is blacklisted. If the whitelist of phonebook numbers is enabled while the blacklist is absent or disabled, only calls from phonebook numbers are allowed.

Command with **no** prefix disables the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **enable-whitelist-phonebook**

(nvox-sip)> **no enable-whitelist-phonebook**

**Example**

```
(nvox-sip)> enable-whitelist-phonebook
Nvox::Manager: Set SIP line test Enable to use phonebook as a ►
whitelist to "1".
```

```
(nvox-sip)> no enable-whitelist-phonebook
Nvox::Manager: Set SIP line test Enable to use phonebook as a ►
whitelist to "0".
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **nvox sip enable-whitelist-phonebook** command has been introduced. |

## C.31.22 nvox sip forward

**Description**

Enable unconditional forwarding of incoming calls to a specified SIP ID through this line. By default, the feature is disabled.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward** ‹*number*›

(nvox-sip)> **no forward**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *String* | The caller ID consists of ASCII characters (not more than 100 characters). The call is forwarded to the SIP URL sip:sipid@domain. |

**Example**

```
(nvox-sip)> forward +49301234567
Nvox::Manager: Set SIP line 1 unconditional forward to ►
"+49301234567".
```

```
(nvox-sip)> no forward
Nvox::Manager: Reset SIP line 1 unconditional forward.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward** command has been introduced. |

## C.31.23 nvox sip forward-if-busy

**Description**

Enable forwarding of incoming calls to a specified SIP ID through this line, if the phones/DECT-handsets, which are allowed to make incoming calls from this line at the time of the call are busy.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward-if-busy** ‹*{number*›

(nvox-sip)> **no forward-if-busy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `number` | *`String`* | The caller ID consists of ASCII characters (not more than 100 characters). The call is forwarded to the SIP URL sip:sipid@domain. |

**Example**

```
(nvox-sip)> forward-if-busy +49301234567
Nvox::Manager: Set SIP line 1 forward if busy to "+49301234567".
```

```
(nvox-sip)> no forward-if-busy
Nvox::Manager: Reset SIP line 1 forward if busy.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward-if-busy** command has been introduced. |

## C.31.24 nvox sip forward-if-busy-schedule

**Description**

Assign a schedule for the forwarding of incoming calls on busy. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward-if-busy-schedule** ‹*schedule*›

(nvox-sip)> **no forward-if-busy-schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `schedule` | *`Schedule`* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(nvox-sip)> forward-if-busy-schedule telephony-fwd-busy
Nvox::Sip: SIP line "1" set schedule "telephony-fwd-busy" for ►
forward-if-busy.
```

```
(nvox-sip)> no forward-if-busy-schedule
Nvox::Sip: SIP line "1" delete schedule for forward-if-busy.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward-if-busy-schedule** command has been introduced. |

## C.31.25 nvox sip forward-if-timeout

**Description**

Enable forwarding of incoming calls to a specified SIP ID through this line, if the phones/DECT-handsets, which are allowed to make incoming calls from this line do not answer within a specified time.

Command with **no** prefix resets the setting.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward-if-timeout** ‹*number*› ‹*timeout*›

(nvox-sip)> **no forward-if-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *String* | The caller ID consists of ASCII characters (not more than 100 characters). The call is forwarded to the SIP URL sip:sipid@domain. |
| timeout | *Integer* | Response time in the range from 1 to 60 seconds. |

**Example**

```
(nvox-sip)> forward-if-timeout +49301234567 10
Nvox::Manager: Set SIP line 1 forward timeout to "10".
```

```
(nvox-sip)> no forward-if-timeout
Nvox::Manager: Reset SIP line 1 forward timeout.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward-if-timeout** command has been introduced. |

## C.31.26 nvox sip forward-if-timeout-schedule

**Description**

Assign a schedule for the forwarding of incoming calls on timeout. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward-if-timeout-schedule** ‹*schedule*›

(nvox-sip)> **no forward-if-timeout-schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(nvox-sip)> forward-if-timeout-schedule telephony-fwd-timeout
Nvox::Sip: SIP line "1" set schedule "telephony-fwd-timeout" for ►
forward-if-timeout.
```

```
(nvox-sip)> no forward-if-timeout-schedule
Nvox::Sip: SIP line "1" delete schedule for forward-if-timeout.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward-if-timeout-schedule** command has been introduced. |

## C.31.27 nvox sip forward-schedule

**Description**

Enable unconditional forwarding by schedule. Schedule must be created and customized with **schedule action** command before execution.

Command with **no** prefix unbinds the schedule.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **forward-schedule** ‹*schedule*›

(nvox-sip)> **no forward-schedule**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| schedule | *Schedule* | The name of the schedule that was created with **schedule** group of commands. |

**Example**

```
(nvox-sip)> forward-schedule telephony-fwd
Nvox::Sip: SIP line "1" set schedule "telephony-fwd" for forward.
```

```
(nvox-sip)> no forward-schedule
Nvox::Sip: SIP line "1" delete schedule for forward.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip forward-schedule** command has been introduced. |

## C.31.28 nvox sip identity

**Description**

Set the SIP user ID for this line received from your IP telephony provider.

Command with **no** prefix removes SIP ID.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **identity** ‹*identity*›

(nvox-sip)> **no identity**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| identity | *String* | The caller ID consists of ASCII characters (not more than 100 characters). |

**Example**

```
(nvox-sip)> identity sipuser1001
Nvox::Manager: Set SIP line 1 identity to "sipuser1001".
```

```
(nvox-sip)> no identity
Nvox::Manager: Reset SIP line 1 identity.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip identity** command has been introduced. |

## C.31.29 nvox sip incoming-mask

**Description**

Allow a telephone (Keenetic Linear) or DECT handset with a given ID to receive incoming calls on this line. By default, all phones and handsets are not allowed to receive incoming calls through this line.

Command with **no** prefix denies incoming calls for this handset.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(nvox-sip)> **incoming-mask** *‹ipui›*

(nvox-sip)> **no incoming-mask** *‹ipui›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| ipui | 1 | Keenetic Linear Adapter Port 1 ID. |
| | 2 | Keenetic Linear Adapter Port 2 ID. |
| | *String* | Ten-digit DECT handset identifier (IPUI). Consists of 10 characters A, B, C, D, E, F and digits from 0 to 9. |

**Example**

```
(nvox-sip)> incoming-mask 01234ABCDE
Nvox::Manager: Added phone 01234ABCDE to SIP "1" incoming-mask.
```

```
(nvox-sip)> no incoming-mask 01234ABCDE
Nvox::Manager: Removed phone 01234ABCDE from SIP "1" ►
incoming-mask.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip incoming-mask** command has been introduced. |

## C.31.30 nvox sip keepalive

**Description**

Set a timeout for sending keepalive messages to the SIP proxy server signal port to keep the server connection open through NAT. By default, 15 value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **keepalive** *‹keepalive›*

(nvox-sip)> **no keepalive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| keepalive | *Integer* | Keepalive timeout in the range from 10 to 3600 seconds. 0 value disables the sending of keepalive messages. |

**Example**

```
(nvox-sip)> keepalive 50
Nvox::Manager: Set SIP line 1 keepalive to "50".
```

```
(nvox-sip)> no keepalive
Nvox::Manager: Reset SIP line 1 keepalive.
```

```
(nvox-sip)> keepalive 0
Nvox::Manager: Set SIP line 1 keepalive to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip keepalive** command has been introduced. |

## C.31.31 nvox sip lock-codec

**Description**

Force a single codec for the connection by requesting re-INVITE when the remote party chooses multiple codecs.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **lock-codec**

(nvox-sip)> **no lock-codec**

**Example**

```
(nvox-sip)> lock-codec
Nvox::Manager: Set SIP line 3 lock SIP audio codec to "1".
```

```
(nvox-sip)> no lock-codec
Nvox::Manager: Set SIP line 3 lock SIP audio codec to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip lock-codec** command has been introduced. |

## C.31.32 nvox sip login

**Description**

Set SIP Auth ID — the name used for authentication on the IP-telephony provider's servers. By default, SIP Auth ID is not configured.

Command with **no** prefix removes the SIP Auth ID from the line parameters.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **login** ‹*login*›

(nvox-sip)> **no login**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| login | *String* | A string of ASCII characters. The maximum length of the string is 64 characters. |

**Example**

```
(nvox-sip)> login user1001
Nvox::Manager: Set SIP line 1 login to "user1001".
```

```
(nvox-sip)> no login
Nvox::Manager: Reset SIP line 1 login.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip login** command has been introduced. |

## C.31.33 nvox sip name

**Description** Set the line name, which is displayed in the call log and system log. By default, the line name is not configured.

Command with **no** prefix removes the line name from the line parameters.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **name** ‹*name*›

(nvox-sip)> **no name**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| name | *String* | A string of ASCII characters. The maximum length of the string is 100 characters. |

**Example**

```
(nvox-sip)> name line-1001
Nvox::Manager: Set SIP line 3 line name to "line-1001".
```

```
(nvox-sip)> no name
Nvox::Manager: Reset SIP line 3 line name.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip name** command has been introduced. |

## C.31.34 nvox sip outgoing-mask

**Description**

Allow a telephone (Keenetic Linear) or DECT handset with a given ID to perform outgoing calls via this line. By default, for all phones and handsets outgoing calls are denied via this line.

Command with **no** prefix denies outgoing calls for this handset.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

(nvox-sip)> **outgoing-mask** *‹ipui›*

(nvox-sip)> **no outgoing-mask** *‹ipui›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `ipui` | 1 | Keenetic Linear Adapter Port 1 ID. |
| | 2 | Keenetic Linear Adapter Port 2 ID. |
| | *`String`* | Ten-digit DECT handset identifier (IPUI). Consists of 10 characters `A`, `B`, `C`, `D`, `E`, `F` and digits from `0` to 9. |

**Example**

```
(nvox-sip)> outgoing-mask 1
Nvox::Manager: Added phone 1 to SIP "1" outgoing-mask.
```

```
(nvox-sip)> outgoing-mask 034725D054
Nvox::Manager: Added phone 034725D054 to SIP "1" outgoing-mask.
```

```
(nvox-sip)> no outgoing-mask 2
Nvox::Manager: Removed phone 2 from SIP "1" outgoing-mask.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip outgoing-mask** command has been introduced. |

## C.31.35 nvox sip password

**Description**

Set the password used for authentication on the IP-telephony provider's servers. By default, the password is not configured.

Command with **no** prefix removes the password from the line parameters.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **password** ‹*password*›

(nvox-sip)> **no password**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| password | *String* | A string of ASCII characters. The maximum length of the string is 64 characters. |

**Example**

```
(nvox-sip)> password 1234567
Nvox::Manager: Set SIP line 1 password.
```

```
(nvox-sip)> no password
Nvox::Manager: Reset SIP line 1 password.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip password** command has been introduced. |

## C.31.36 nvox sip priority

**Description** Set the priority for this line. Line priorities are taken into account when selecting a line for an outgoing call: the system selects the line with the highest priority of those that are allowed for the phone or handset and have dialing rules that correspond to the dialed number.

Command with **no** prefix sets priority to 1 for this line, rearranging the priorities of the other lines accordingly if necessary.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **priority** ‹*priority*›

(nvox-sip)> **no priority**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `priority` | *`Integer`* | The priority number in the range from `0` to `9`, where `0` is the lowest priority; `9` — highest priority. |

**Example**

```
(nvox-sip)> priority 7
Nvox::Manager: Set SIP line 1 priority to "7".
```

```
(nvox-sip)> no priority
Nvox::Manager: Reset SIP line 1 priority.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip priority** command has been introduced. |

## C.31.37 nvox sip proxy

**Description**

Set the domain name or IP address of the IP telephony operator's SIP proxy for this line. By default, the SIP proxy is not configured.

Command with **no** prefix removes the SIP proxy from the line parameters.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **proxy** *‹proxy›*

(nvox-sip)> **no proxy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `proxy` | *`String`* | Domain name or IP address. If the SIP proxy uses a non-standard port (other than 5060), it must be specified to the right of the domain name/IP address with a colon. |

**Example**

```
(nvox-sip)> proxy sip.proxy.local:5090
Nvox::Manager: Set SIP line 1 proxy URI to "sip.proxy.local:5090".
```

```
(nvox-sip)> no proxy
Nvox::Manager: Reset SIP line 1 proxy URI.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip proxy** command has been introduced. |

## C.31.38 nvox sip reg-timeout

**Description**

Set the SIP registration validity period on the IP-telephony operator's server, after which the registration should be resumed. This parameter can be changed during the registration process by the server. By default, `180` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **reg-timeout** *‹timeout›*

(nvox-sip)> **no reg-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | SIP registration validity period in the range from `10` to `3600` seconds. |

**Example**

```
(nvox-sip)> reg-timeout 1800
Nvox::Manager: Set SIP line 1 registration timeout to "1800".
```

```
(nvox-sip)> no reg-timeout
Nvox::Manager: Reset SIP line 1 registration timeout.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip reg-timeout** command has been introduced. |

## C.31.39 nvox sip registration-first-retry

**Description**

Set the first SIP registration retry timeout. Registration attempts are repeated if the IP telephony operator's SIP server does not respond to SIP registration requests. By default, `120` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **registration-first-retry** *‹timeout›*

(nvox-sip)> **no registration-first-retry**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | First SIP registration repeat timeout in the range from `0` to `1800` seconds. |

**Example**

```
(nvox-sip)> registration-first-retry 180
Nvox::Manager: Set SIP line 1 registration first retry to "180".
```

```
(nvox-sip)> no registration-first-retry
Nvox::Manager: Reset SIP line 1 registration first retry.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip registration-first-retry** command has been introduced. |

## C.31.40 nvox sip registration-retry

**Description**

Set the SIP registration retry timeout. Registration attempts are repeated if the IP telephony operator's server does not respond to SIP registration requests. By default, `120` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **registration-retry** *‹timeout›*

(nvox-sip)> **no registration-retry**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | SIP registration repeat timeout in the range from `0` to `1800` seconds. |

**Example**

```
(nvox-sip)> registration-retry 180
Nvox::Manager: Set SIP line 1 registration retry to "180".
```

```
(nvox-sip)> no registration-retry
Nvox::Manager: Reset SIP line 1 registration retry.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip registration-retry** command has been introduced. |

## C.31.41 nvox sip registration-uri

**Description**

Set the domain name or IP address of the SIP registration server of the IP telephony operator for this line. By default, the registration server is not set.

Command with **no** prefix removes the registration server from parameters.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **registration-uri** *‹uri›*

(nvox-sip)> **no registration-uri**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| uri | *String* | Domain name or IP address. If the SIP proxy uses a non-standard port (other than 5060), it must be specified to the right of the domain name/IP address with a colon. |

**Example**

```
(nvox-sip)> registration-uri sip.registrar.local:5090
Nvox::Manager: Set SIP line 1 registration URI to ►
"sip.registrar.local:5090".
```

```
(nvox-sip)> no registration-uri
Nvox::Manager: Reset SIP line 1 registration URI.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip registration-uri** command has been introduced. |

## C.31.42 nvox sip sdp-nat-rewrite

**Description**

Enable receiving your IP address (or NAT IP address) from the registration server and overwriting by it the appropriate fields in the Via, Contact headers, as well as in SIP/SDP in all further outgoing SIP messages. This ensures the successful exchange of SIP signaling messages and two-way audibility. Use this option when a secondary channel, such as a VPN tunnel, is used to communicate with the server, or when there is a symmetric NAT between

the Keenetic device and the operator's public server that STUN technology does not work with. By default, the feature is disabled.

Command with **no** prefix disables IP address rewriting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **sdp-nat-rewrite**

(nvox-sip)> **no sdp-nat-rewrite**

**Example**

```
(nvox-sip)> sdp-nat-rewrite
Nvox::Manager: Set SIP line 1 SDP NAT, Contact and Via rewrite ►
to "1".
```

```
(nvox-sip)> no sdp-nat-rewrite
Nvox::Manager: Reset SIP line 1 SDP NAT, Contact and Via rewrite.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip sdp-nat-rewrite** command has been introduced. |

## C.31.43 nvox sip selection-id

**Description**

Set the line selection code 0...9, which allows you to select this line for an outgoing call. To select a line, dial #, the line selection code and the subscriber number. When you select a line with a dialing code, the dialing rules are ignored and you can call a number that does not match the dialing rules of that line. With the code you can select only the lines, outgoing calls through which are allowed for this phone or DECT handset. The default selection code is not configured.

Command with **no** prefix removes the selection code from the line settings.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **selection-id** ‹*sel-id*›

(nvox-sip)> **no selection-id**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `sel-id` | *Integer* | Line selection code in the range from `0` to `9`. |

**Example**

```
(nvox-sip)> selection-id 9
Nvox::Manager: Set SIP line 1 selection id to "9".
```

```
(nvox-sip)> no selection-id
Nvox::Manager: Reset SIP line 1 selection id.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip selection-id** command has been introduced. |

## C.31.44 nvox sip session-timer

**Description**

Set the SIP session timer for this line. By default, the `120` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **session-timer** *‹timer›*

(nvox-sip)> **no session-timer**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timer` | *Integer* | Timer value in the range from `90` to `86400` seconds. |

**Example**

```
(nvox-sip)> session-timer 180
Nvox::Manager: Set SIP line 1 session timer to "180".
```

```
(nvox-sip)> no session-timer
Nvox::Manager: Reset SIP line 1 session timer.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip session-timer** command has been introduced. |

## C.31.45 nvox sip session-timer-mode

**Description**

Set the SIP-session timer mode for this line. By default, the `optional` value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **session-timer-mode** *‹mode›*

(nvox-sip)> **no session-timer-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | disable | The session timer is not used, except when required by the remote party. |
| | optional | The session timer is used if the remote party supports and uses it. |
| | required | Session timer support is a requirement for the remote party to establish a connection. |
| | always | Session timer is used in every connection, regardless of whether the remote party supports it or not. |

**Example**

```
(nvox-sip)> session-timer-mode always
Nvox::Manager: Set SIP line 1 session timer mode to "always".
```

```
(nvox-sip)> no session-timer-mode
Nvox::Manager: Reset SIP line 1 session timer mode.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip session-timer-mode** command has been introduced. |

## C.31.46 nvox sip substitute

**Description** Set up a prefix substitution rule to delete some digits or a group of digits in the caller's number that appears on the handset display when a call comes in. The symbol > is used for substitution. To the left of the > must be a sequence of numbers, which should be replaced by the sequence to the right of this symbol. The substitution expression must be enclosed in parentheses. In a substitution rule there can be several substitution expressions. By default, the prefix substitution rule is not configured. Numbers that do not comply with the prefix substitution rule are displayed on the phone screen unchanged.

For more information see Syntax of prefix substitution rules.

Command with **no** prefix removes the prefix substitution rule.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip)> **substitute** *‹substitute›*

(nvox-sip)> **no substitute**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| substitute | *String* | A string up to 100 characters long. Valid characters: 01234567890*#+ABCDx[]()\|>.-. |

**Example**

```
(nvox-sip)> substitute "(+39>)x.|(+>00)x."
Nvox::Manager: Set SIP line test substitute to ►
"(+39>)x.|(+>00)x.".
```

```
(nvox-sip)> no substitute
Nvox::Manager: Reset SIP line 1 substitute.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip substitute** command has been introduced. |

## C.31.47 nvox sip tls-security-mode

**Description**

Set the security mode when using the TLS transport protocol. By default, the sip-tls value is used.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **tls-security-mode** *‹mode›*

(nvox-sip)> **no tls-security-mode**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| mode | sip-tls | The SIP URI scheme is used. During a call, the TLS transport is only used to transmit SIP signaling between the Keenetic router and your IP telephony provider's proxy server. |
| | sips | The SIPS URI scheme is used. It is designed to ensure that during a phone call, secure transport protocols are used to send SIP signaling all the way between the Keenetic router and the remote caller. |

**Example**

```
(nvox-sip)> tls-security-mode sips
Nvox::Manager: Set SIP line 1 TLS security mode to "sips".
```

```
(nvox-sip)> no tls-security-mode
Nvox::Manager: Reset SIP line 1 TLS security mode to sip-tls.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip tls-security-mode** command has been introduced. |

## C.31.48 nvox sip transport

**Description**

Set the transport protocol used to transmit SIP signaling messages. By default, the udp value is used.

Note: If communication is only possible over IPv4, the UDP over IPv4 transport will be used, even if UDP over IPv6 was selected.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **transport** ‹*transport*›

(nvox-sip)> **no transport**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| transport | udp | The UDP transport protocol over IPv4 is the most commonly used transport. It is supported by most SIP servers and subscriber devices. |
| | udp6 | The UDP transport protocol over IPv6. |
| | tcp | Transport protocol TCP over IPv4. It guarantees the delivery of messages, including long messages that cannot be transmitted by the UDP transport without fragmentation. |
| | tcp6 | Transport protocol TCP over IPv6. |
| | tls | TLS transport protocol over IPv4. It ensures secure exchange of SIP signaling messages with the operator's proxy server. Helps prevent theft of credentials and other important information transmitted in SIP signaling messages. |
| | tls6 | TLS transport protocol over IPv6. |

**Example**

```
(nvox-sip)> transport tls
Nvox::Manager: Set SIP line 1 transport to "tls".
```

```
(nvox-sip)> transport udp6
Nvox::Manager: Set SIP line 1 transport to "udp6".
```

```
(nvox-sip)> no transport
Nvox::Manager: Reset SIP line 1 transport to udp.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip transport** command has been introduced. |
| 4.00 | The `udp6`, `tcp6`, `tls6` arguments were added. |

## C.31.49 nvox sip whitelist

**Description**

Create a whitelist list of numbers from which incoming calls are allowed through this line. By default, whitelist is not configured.

When you receive an incoming call from a subscriber whose number is in the whitelist, the phone rings even if this number corresponds to the blacklist. If the whitelist is created and enabled, while the blacklist is absent or disabled, only calls from numbers in the whitelist are allowed.

When checking the number against the whitelist, the system sequentially compares the number with each of the numbers and patterns in the line from left to right until the first match.

When the command is executed, the previously configured whitelist is overwritten with the new list.

Command with **no** prefix removes the whitelist.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip)> **whitelist** *‹map›*

(nvox-sip)> **no whitelist**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `map` | *`String`* | A string of up to 600 characters in length. Phone numbers and number patterns are separated from each other by the \| character.<br><br>Valid characters: 01234567890*#+ABCDx[]\|-.> |

**Example**

```
(nvox-sip)> whitelist 1234x
Nvox::Manager: Set SIP line 1 whitelist to "1234x".

(nvox-sip)> whitelist +749[589]1234567
Nvox::Manager: Set SIP line 1 whitelist to "+749[589]1234567".

(nvox-sip)> whitelist "1234567890|+79261234567|000123456|1234567"
Nvox::Manager: Set SIP line test whitelist to ►
"1234567890|+79261234567|000123456|1234567".

(nvox-sip)> no whitelist
Nvox::Manager: Reset SIP line 1 whitelist.
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **nvox sip whitelist** command has been introduced. |

# C.32 nvox sip-common

**Description** Access to a group of commands to configure the SIP common settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(nvox-sip-common)`

**Synopsis**

(nvox)> **sip-common**

**Example**

```
(nvox)> sip-common
Core::Configurator: Done.
(nvox-sip-common)>
```

**History**

| Version | Description |
|---|---|
| 2.00 | The **nvox sip-common** command has been introduced. |

## C.32.1 nvox sip-common 100rel

**Description** Enable support of 100rel for reliable SIP Class 100 messaging on incoming and outgoing calls. By default, 100rel is enabled.

Command with **no** prefix disables 100rel support.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **100rel**

(nvox-sip-common)> **no 100rel**

**Example**

```
(nvox-sip-common)> 100rel
Nvox::Manager: Set SIP enable 100rel/PRACK SIP extension to "1".
```

```
(nvox-sip-common)> no 100rel
Nvox::Manager: Set SIP enable 100rel/PRACK SIP extension to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common 100rel** command has been introduced. |

## C.32.2 nvox sip-common agent

**Description** Configure the User Agent name. By default, the name is used of the router's model, for example

“Keenetic Hero (KN-1013)”.

Command with **no** prefix removes the User Agent name configured by the user.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **agent** *‹agent›*

(nvox-sip-common)> **no agent**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| agent | *String* | String of printed symbols of the set ASCII.<br><br>Maximum string length is 100 characters. |

**Example**

```
(nvox-sip-common)> agent Keenetic
Nvox::Manager: Set SIP user agent to "Keenetic".
```

```
(nvox-sip-common)> no agent
Nvox::Manager: Reset SIP user agent.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common agent** command has been introduced. |

## C.32.3 nvox sip-common disable-dns-srv

**Description**

Disable the DNS SRV resolving feature. With this feature, the system gets the IP address and signal port of the SIP proxy server from the DNS SRV record. By default, the feature is enabled.

Note: If the DNS SRV resolving function is disabled, the system gets the IP address of the SIP proxy server from entry A, and gets its signal port from the SIP line settings.

Command with **no** prefix enables the feature.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **disable-dns-srv**

(nvox-sip-common)> **no disable-dns-srv**

**Example**

```
(nvox-sip-common)> disable-dns-srv
Nvox::Manager: Set SIP disable DNS SRV to "1".
```

```
(nvox-sip-common)> no disable-dns-srv
Nvox::Manager: Reset SIP disable DNS SRV.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common disable-dns-srv** command has been introduced. |

## C.32.4 nvox sip-common disable-tls-validation

**Description**

Disable the SIP proxy validation when using SIP TLS transport. By default, the SIP proxy validation is enabled.

Validation is performed when a TLS connection is established with a SIP proxy server. A proxy server is considered valid if the following conditions are met:

1) The x.509 certificate of the proxy server is signed by one of the trusted certificate authorities whose root certificates are in the certificate store of the Keenetic device.

2) The SIP proxy server domain name in the SIP telephone line settings must match the "commonName" field in the SIP proxy certificate.

Keenetic establishes a TLS connection if the validation is successful and starts exchanging SIP messages with the SIP proxy server. Keenetic terminates the TLS connection if a validation error occurs, and displays "503 SSL certificate validation error" in the system log.

Command with **no** prefix enables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **disable-tls-validation**

(nvox-sip-common)> **no disable-tls-validation**

**Example**

```
(nvox-sip-common)> disable-tls-validation
Nvox::Manager: Set SIP disable proxy verification to "1".
```

```
(nvox-sip-common)> no disable-tls-validation
Nvox::Manager: Set SIP disable proxy verification to "0"
```

**History**

| Version | Description |
|---|---|
| 3.09 | The **nvox sip-common disable-tls-validation** command has been introduced. |

## C.32.5 nvox sip-common g726-dynamic-payload

**Description** Configure the dynamic payload type for the G.726 codec. By default, `109` value is used.

Note: G.726 codec is not supported with Keenetic Linear.

Command with **no** prefix resets the dynamic payload to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **g726-dynamic-payload** *‹payload›*

(nvox-sip-common)> **no g726-dynamic-payload**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| payload | *Integer* | Dynamic payload type ranging from 96 to 127. |

**Example**

```
(nvox-sip-common)> g726-dynamic-payload 98
Nvox::Manager: Set SIP G726 dynamic payload to "98".
```

```
(nvox-sip-common)> no g726-dynamic-payload
Nvox::Manager: Reset SIP G726 dynamic payload.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common g726-dynamic-payload** command has been introduced. |

## C.32.6 nvox sip-common outbound-proxy

**Description**

Configure the domain name or IP address of the outgoing SIP proxy server for all SIP telephone lines configured in the system. By default, the proxy server is not configured.

Note: If the outgoing proxy uses a non-standard port (other than 5060), it must be specified to the right of the domain name/IP address with a colon.

Command with **no** prefix deletes the outgoing SIP proxy server.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **outbound-proxy** ‹*proxy*›

(nvox-sip-common)> **no outbound-proxy**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| proxy | *String* | Domain name or IP address. |

**Example**

```
(nvox-sip-common)> outbound-proxy sip.proxy.local:5090
Nvox::Manager: Set SIP outbound proxy to "sip.proxy.local:5090".
```

```
(nvox-sip-common)> no outbound-proxy
Nvox::Manager: Reset SIP outbound proxy.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common outbound-proxy** command has been introduced. |

# C.32.7 nvox sip-common qos

**Description** Access to a group of commands to configure the QoS. These settings apply to all SIP lines in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** `(sip-common-qos)`

**Synopsis**

(nvox-sip)> **qos**

**Example**

```
(nvox-sip)> qos
Core::Configurator: Done.
(sip-common-qos)>
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip qos** command has been introduced. |

## C.32.7.1 nvox sip-common qos rtp-dscp

**Description** Set the priority in the IP header DS field of outgoing packets with audio data transmitted over RTP. The upstream network equipment can read the DS field and prioritize packets according to the priority specified in this field. The default setting is lowest priority.

Command with **no** prefix sets lowest priority (0) to DS.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sip-common-qos)> **rtp-dscp** *‹dscp›*

(sip-common-qos)> **no rtp-dscp**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `dscp` | *Integer* | The priority number in the range from `0` to 63. |

**Example**

```
(sip-common-qos)> rtp-dscp 46
Nvox::Manager: Set SIP Default RTP ToS/DSCP (Type of Service) ►
to "46".
```

```
(sip-common-qos)> no rtp-dscp
Nvox::Manager: Reset SIP Default RTP ToS/DSCP (Type of Service).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common qos rtp-dscp** command has been introduced. |

### C.32.7.2 nvox sip-common qos rtp-so-prio

**Description**

Set the priority in the 3-bit PCP field of the IEEE 802.1Q header of outgoing packets with audio data transmitted via RTP over VLAN. The upstream network equipment can read the PCP field and prioritize packets according to the priority specified in this field. The default setting is lowest priority.

Command with **no** prefix sets 0 priority to PCP.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(sip-common-qos)> **rtp-so-prio** ‹*so_prio*›

(sip-common-qos)> **no rtp-so-prio**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| so_prio | *Integer* | The priority number in the range from 0 to 7, where 0 is the lowest priority; 7 — highest priority. |

**Example**

```
(sip-common-qos)> rtp-so-prio 7
Nvox::Manager: Set SIP Default RTP CoS (Class of Service) to "7".
```

```
(sip-common-qos)> no rtp-so-prio
Nvox::Manager: Reset SIP Default RTP CoS (Class of Service).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common qos rtp-so-prio** command has been introduced. |

### C.32.7.3 nvox sip-common qos sip-dscp

**Description**

Set the priority in the DS field of the IP header packets with outgoing messages transmitted via the SIP protocol. The upstream network equipment can read the DS field and prioritize packets according to the priority specified in this field. The default setting is lowest priority.

Command with **no** prefix sets lowest priority (0) to DS.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sip-common-qos)> **sip-dscp** *‹dscp›*

(sip-common-qos)> **no sip-dscp**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| dscp | *Integer* | The priority number in the range from 0 to 63. |

**Example**

```
(sip-common-qos)> sip-dscp 24
Nvox::Manager: Set SIP Default SIP ToS/DSCP (Type of Service) ►
to "24".
```

```
(sip-common-qos)> no sip-dscp
Nvox::Manager: Reset SIP Default SIP ToS/DSCP (Type of Service).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common qos sip-dscp** command has been introduced. |

### C.32.7.4 nvox sip-common qos sip-so-prio

**Description** Set the priority in the 3-bit PCP field of the IEEE 802.1Q header of outgoing packets with audio data transmitted via SIP over VLAN. The upstream network equipment can read the PCP field and prioritize packets according to the priority specified in this field. The default setting is lowest priority.

Command with **no** prefix sets 0 priority to PCP.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(sip-common-qos)> **sip-so-prio** *‹so_prio›*

(sip-common-qos)> **no sip-so-prio**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| so_prio | *Integer* | The priority number in the range from 0 to 7, where 0 is the lowest priority; 7 — highest priority. |

**Example**

```
(sip-common-qos)> sip-so-prio 7
Nvox::Manager: Set SIP Default SIP CoS (Class of Service) to "7".
```

```
(sip-common-qos)> no sip-so-prio
Nvox::Manager: Reset SIP Default SIP CoS (Class of Service).
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common qos sip-so-prio** command has been introduced. |

## C.32.8 nvox sip-common rtp-port

**Description**

Configure the range of UDP ports that the system uses to exchange RTP audio data during a telephone connection. By default, the range of UDP ports is from 4000 to 4015.

Command with **no** prefix resets the range of UDP ports by default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **rtp-port** *‹port›* **through** *‹end-port›*

(nvox-sip-common)> **no rtp-port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| port | *Integer* | The first port of the range. Valid values are from 1 to 65534. |
| end-port | *Integer* | The last port of the range. Valid values are from 1 to 65534. |

**Example**

```
(nvox-sip-common)> rtp-port 10000 through 10200
Nvox::Manager: Set RTP port range from 10000 to 10200.
```

```
(nvox-sip-common)> no rtp-port
Nvox::Manager: Reset SIP RTP port range to default, the transport ►
will be bound to any available port.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common rtp-port** command has been introduced. |

## C.32.9 nvox sip-common sdp rtcp

**Description** Enable RTCP parameter negotiation in SDP. By default, function is disabled.

Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **sdp rtcp**

(nvox-sip-common)> **no sdp rtcp**

**Example**

```
(nvox-sip-common)> sdp rtcp
Nvox::Manager: Set SIP RTCP in SDP to "1".
```

```
(nvox-sip-common)> no sdp rtcp
Nvox::Manager: Reset SIP RTCP in SDP.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common sdp rtcp** command has been introduced. |

## C.32.10 nvox sip-common sdp tias

**Description** Add TIAS bandwidth modifier to SDP (SDP bandwidth modifier TIAS, RFC3890). By default, the TIAS is absent in SDP.

Command with **no** prefix removes TIAS from SDP.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **sdp tias**

(nvox-sip-common)> **no sdp tias**

**Example**

```
(nvox-sip-common)> sdp tias
Nvox::Manager: Set SIP TIAS in SDP to "1".
```

```
(nvox-sip-common)> no sdp tias
Nvox::Manager: Reset SIP TIAS in SDP.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common sdp tias** command has been introduced. |

## C.32.11 nvox sip-common stun-server

**Description**

Configure the domain name or IP address of the STUN server common to all SIP telephone lines configured in the system.

By default, the STUN server is `stun.l.google.com:19302`.

Command with **no** prefix resets the STUN server to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **stun-server** ‹*stun*›

(nvox-sip-common)> **no stun-server**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `stun` | *String* | Domain name or IP address, optionally with a port. |

**Example**

```
(nvox-sip-common)> stun-server stun.example.net:3478
Nvox::Manager: Set SIP STUN server to "stun.example.net:3478".
```

```
(nvox-sip-common)> no stun-server
Nvox::Manager: Reset SIP STUN server.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common stun-server** command has been introduced. |

## C.32.12 nvox sip-common tcp-keepalive

**Description**

Set the interval of keepalive packet sending to the SIP proxy's TCP signaling port to keep an open connection to the server through NAT. By default, `90` value is set.

Command with **no** prefix resets setting to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **tcp-keepalive** ‹*interval*›

(nvox-sip-common)> **no tcp-keepalive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | The interval of keepalive packet sending in seconds. Can take values in the range from `5` to `600` inclusively. `0` value disables the sending of keepalive messages. |

**Example**

```
(nvox-sip-common)> tcp-keepalive 120
Nvox::Manager: Set SIP TCP keepalive to "120".
```

```
(nvox-sip-common)> no tcp-keepalive
Nvox::Manager: Reset SIP TCP keepalive.
```

```
(nvox-sip-common)> tcp-keepalive 0
Nvox::Manager: Set SIP TCP keepalive to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common tcp-keepalive** command has been introduced. |

## C.32.13 nvox sip-common tcp-port

**Description** Configure the number of the local TCP port used to exchange SIP signaling messages with IP-telephony providers servers over the TCP transport protocol. By default, `5060` value is set.

Command with **no** prefix resets port to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **tcp-port** ‹*port*›

(nvox-sip-common)> **no tcp-port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | TCP port number in the range from 1 to 65534. Use `0` value to force the system to select a random free TCP port automatically. |

**Example**

```
(nvox-sip-common)> tcp-port 8075
Nvox::Manager: Set SIP TCP port to "8075".
```

```
(nvox-sip-common)> no tcp-port
Nvox::Manager: Reset SIP TCP port.
```

```
(nvox-sip-common)> tcp-port 0
Nvox::Manager: Set SIP TCP port to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common tcp-port** command has been introduced. |

## C.32.14 nvox sip-common td-timeout

**Description**

Set the timeout for switching SIP proxies. Switching becomes possible if the DNS SRV record contains a list of several servers. The system selects from a list the server with the highest priority for SIP messaging. If this server does not respond, the system switches to the next highest priority server.

Note: This command is relevant if the DNS SRV resolving is enabled.

By default, `10000` value is set.

Command with **no** prefix resets timeout to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **td-timeout** ‹*timeout*›

(nvox-sip-common)> **no td-timeout**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `timeout` | *Integer* | The switchover timeout to another server in the range from `10000` to `100000` ms. |

**Example**

```
(nvox-sip-common)> td-timeout 12000
Nvox::Manager: Set SIP wait time for response retransmissions ►
to "12000".
```

```
(nvox-sip-common)> no td-timeout
Nvox::Manager: Reset SIP wait time for response retransmissions.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common td-timeout** command has been introduced. |

## C.32.15 nvox sip-common tls-keepalive

**Description**

Set the interval of keepalive packet sending to the SIP proxy's TLS signaling port to keep an open connection to the server through NAT. By default, `90` value is set.

Note: This command is relevant when using the TLS transport protocol.

Command with **no** prefix resets setting to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **tls-keepalive** ‹*interval*›

(nvox-sip-common)> **no tls-keepalive**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `interval` | *Integer* | The interval of keepalive packet sending in seconds. Can take values in the range from `5` to `600` inclusively. `0` value disables the sending of keepalive messages. |

**Example**

```
(nvox-sip-common)> tls-keepalive 120
Nvox::Manager: Set SIP TLS keepalive to "120".
```

```
(nvox-sip-common)> no tls-keepalive
Nvox::Manager: Reset SIP TLS keepalive.
```

```
(nvox-sip-common)> tls-keepalive 0
Nvox::Manager: Set SIP TLS keepalive to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common tls-keepalive** command has been introduced. |

## C.32.16 nvox sip-common tls-port

**Description**

Configure the number of the local TLS port used to exchange SIP signaling messages with IP-telephony providers servers over the TLS protocol. By default, `5061` value is set.

Note: Local TLS port number must not be the same as the local UDP and TCP port numbers that the system uses to exchange SIP messages.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **tcp-port** *‹port›*

(nvox-sip-common)> **no tcp-port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | TLS port number in the range from 1 to 65534. Use `0` value to force the system to select a random free TLS port automatically. |

**Example**

```
(nvox-sip-common)> tls-port 8076
Nvox::Manager: Set SIP TLS port to "8076".
```

```
(nvox-sip-common)> no tls-port
Nvox::Manager: Reset SIP TLS port.
```

```
(nvox-sip-common)> tls-port 0
Nvox::Manager: Set SIP TLS port to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common tls-port** command has been introduced. |

## C.32.17 nvox sip-common udp-port

**Description**

Configure the number of the local UDP port used to exchange SIP signaling messages with IP-telephony providers servers over the UDP protocol. By default, `5060` value is set.

Command with **no** prefix resets port to default.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

(nvox-sip-common)> **udp-port** *‹port›*

(nvox-sip-common)> **no udp-port**

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `port` | *Integer* | UDP port number in the range from 1 to 65534. Use `0` value to force the system to select a random free UDP port automatically. |

**Example**

```
(nvox-sip-common)> udp-port 34577
Nvox::Manager: Set SIP UDP port to "34577".
```

```
(nvox-sip-common)> no udp-port
Nvox::Manager: Reset SIP UDP port.
```

```
(nvox-sip-common)> udp-port 0
Nvox::Manager: Set SIP UDP port to "0".
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common udp-port** command has been introduced. |

## C.32.18 nvox sip-common unescape-hash-char

**Description**

Allow the # symbol in Request URI of INVITE requests in ASCII encoding, which is necessary for normal work with some IP-telephony operators. By default, the feature is disabled.

Command with **no** prefix disables the setting. The # symbol is encoded as %23, which corresponds to RFC2396.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input** No

**Synopsis**

(nvox-sip-common)> **unescape-hash-char**

(nvox-sip-common)> **no unescape-hash-char**

**Example**

```
(nvox-sip-common)> unescape-hash-char
Nvox::Manager: Set SIP unescape # char in outgoing SIP URI to "1".
```

```
(nvox-sip-common)> no unescape-hash-char
Nvox::Manager: Reset SIP unescape # char in outgoing SIP URI.
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **nvox sip-common unescape-hash-char** command has been introduced. |

# C.33 show nvox active-calls

**Description** Show the list of active calls that are being made at the moment.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox active-calls**

**Example**

```
(show)> nvox active-calls

    active_calls:
                call:
                    type: outgoing
                   index: 0
                  status: hold
                      hs: phone 1
                    line: 1001
                  number: 9999
              start_time: Fri Dec 17 12:04:06 2021
                duration: 30
            matched_name:

                call:
                    type: outgoing
                   index: 1
                  status: connected
                      hs: phone 1
                    line: 1001
                  number: 1002
              start_time: Fri Dec 17 12:04:17 2021
```

```
                duration: 12
            matched_name:

                call:
                    type: incoming
                   index: 2
                  status: connected
                      hs: phone 2
                    line: 1002
                  number: 1001
              start_time: Fri Dec 17 12:04:21 2021
                duration: 12
            matched_name:
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox active-calls** command has been introduced. |

# C.34 show nvox blacklist

**Description** Show the blacklist configured for the SIP line.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox blacklist** ‹*id*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `id` | *`String`* | SIP line identifier of Latin letters and numbers from `0` to 9. The maximum string length is 64 characters. |

**Example**

```
(show)> nvox blacklist 1

            line:
                  id: 1
                name: nonoh
           blacklist: [1-69]x.|+792[67]x.|000x.|1234567
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **show nvox blacklist** command has been introduced. |

# C.35 show nvox cadences

**Description** Show the settings of the selected ringtone. If you use no argument, the settings of all ringtones will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox cadences** [*cadence*]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| cadence | *Integer* | Ringtone number in the range from 0 to 5. |

**Example**

```
(show)> nvox cadences

         cadences:
              cadence:
                       id: 0
                   active1: 400
                  passive1: 500
                   active2: 400
                  passive2: 2000
                   active3: 0
                  passive3: 0

              cadence:
                       id: 1
                   active1: 1000
                  passive1: 4000
                   active2: 0
                  passive2: 0
                   active3: 0
                  passive3: 0

              cadence:
                       id: 2
                   active1: 400
                  passive1: 500
                   active2: 0
                  passive2: 0
                   active3: 0
                  passive3: 0

              cadence:
                       id: 3
                   active1: 400
                  passive1: 2000
                   active2: 1200
```

```
                passive2: 1200
                 active3: 0
                passive3: 0

            cadence:
                      id: 4
                 active1: 400
                passive1: 500
                 active2: 400
                passive2: 2000
                 active3: 2000
                passive3: 2000

            cadence:
                      id: 5
                 active1: 4000
                passive1: 2000
                 active2: 0
                passive2: 0
                 active3: 0
                passive3: 0
```

```
(show)> nvox cadences 1

          cadence:
                   id: 1
              active1: 1000
             passive1: 4000
              active2: 0
             passive2: 0
              active3: 0
             passive3: 0
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox cadences** command has been introduced. |

# C.36 show nvox call-history

**Description** Show list of calls registered since the router is switched on. If you use no arguments, the entire call log will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox call-history** [ ‹*offset*› [ ‹*count*› ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `offset` | *Integer* | The number of call log entries, starting from the last entry, that you want to skip when displaying on the screen. The offset must not exceed the maximum number of records specified by the **nvox call-history length** command. |
| `count` | *Integer* | The number of records to be shown. The records are displayed in descending order. If this parameter is absent, all records with the specified offset are displayed. |

**Example**

```
(show)> nvox call-history

    call_history:
                call:
                      type: outgoing
                     index: 3
                start_time: Wed Dec 29 13:15:17 2021
                      line: 1002
                        hs: phone 2
        other_party_number: 9996
          other_party_name:
                  duration: 47
              release_code:
            release_reason:

                call:
                      type: outgoing
                     index: 2
                start_time: Wed Dec 29 13:15:17 2021
                      line: 1001
                        hs: phone 1
        other_party_number: 9997
          other_party_name:
                  duration: 48
              release_code:
            release_reason:

                call:
                      type: outgoing
                     index: 1
                start_time: Wed Dec 29 13:13:39 2021
                      line: 1002
                        hs: phone 2
        other_party_number: 9998
          other_party_name:
                  duration: 13
              release_code:
            release_reason:

                call:
```

```
                      type: outgoing
                     index: 0
                start_time: Wed Dec 29 13:13:36 2021
                      line: 1001
                        hs: phone 1
        other_party_number: 9999
          other_party_name:
                  duration: 18
              release_code:
            release_reason:
```

```
(show)> nvox call-history 2 2

    call_history:
                call:
                      type: outgoing
                     index: 1
                start_time: Wed Dec 29 13:13:39 2021
                      line: 1002
                        hs: phone 2
        other_party_number: 9998
          other_party_name:
                  duration: 13
              release_code:
            release_reason:

                call:
                      type: outgoing
                     index: 0
                start_time: Wed Dec 29 13:13:36 2021
                      line: 1001
                        hs: phone 1
        other_party_number: 9999
          other_party_name:
                  duration: 18
              release_code:
            release_reason:
```

**History**

| Version | Description |
|---|---|
| 2.06 | The **show dect call-history** command has been introduced. |
| 3.05 | The command renamed to **show nvox call-history**. |

# C.37 show nvox fxs

**Description** Show Keenetic Linear USB module settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox fxs**

**Example**

```
(show)> nvox fxs

       fxs-status:
                country-codes: BG CA CS DE DK EE ES FI FR GR HR
                               HU IT KZ LT LV NO PL PT RO RS RU ►
SE SI SK TR UA
                selected-country: DE
               force-calibration: disabled
                pulse-dial-modes: 0 - disabled, 1 - disabled
                                  during voice calls, 2 - always ►
enabled
     selected-pulse-dial-mode: 1
           led-blinking-timer: 1000
                 unmute-timer: 200
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox fxs** command has been introduced. |

# C.38 show nvox fxs-ports

**Description** Show phone port settings of Keenetic Linear USB module.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox fxs-ports**

**Example**

```
(show)> nvox fxs-ports

            ports:
                 port:
                        id: 1
                      name: phone 1
                 int-number: 1
                     status: enabled
                  volume-rx: -4
                  volume-tx: -4
                  impedance: 220_820_115
               hash-ends-dial: enabled
             echo-cancellation: enabled

                 port:
```

```
                        id: 2
                      name: phone 2
                int-number: 2
                    status: enabled
                 volume-rx: -4
                 volume-tx: -4
                 impedance: 220_820_115
            hash-ends-dial: enabled
        echo-cancellation: enabled
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox fxs-ports** command has been introduced. |

# C.39 show nvox info

**Description** Show information about the IP telephony system application installed on KeeneticOS.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox info**

**Example**

```
(show)> nvox info

            info:
            app_name: nvox
         app_version: 0.8.2.53
          app_suffix: singledongle
        compile_date: Dec 15 2021
            sip_name: pjsip
         sip_version: 2.6
          sip_status: stopped
            tel_type: FXS
            tel_name: Si32287
     tel_api_version: 9.2.0
          tel_serial: S2135NS000404
         tel_fw_date: 17:28:49 Feb 24 2021
      tel_fw_version: 0044
             plugged: yes
    supported_codecs: g711u,g711a,g726,g722
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox info** command has been introduced. |

# C.40 show nvox license

**Description** Show information about the connected USB module service code.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox license**

**Example**

```
(show)> nvox license

          plugged: yes
          license: 123456789012345
        integrity: ok
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox license** command has been introduced. |

# C.41 show nvox phonebook

**Description** Show the phonebook. If you execute the command without parameters, the entire phonebook is displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox phonebook** [ ‹*sort_by_field*› [ ‹*offset*› ‹*count*› ] ]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `sort_by_field` | `fn` | Sort by first name. |
| | `ln` | Sort by last name. |
| `offset` | *Integer* | The number of contacts, starting from the first record, to be skipped when displaying on the screen. The offset mustn't exceed the maximum number of phone contacts specified by the **nvox phonebook length** command. |
| `count` | *Integer* | The number of contacts to be displayed. If this parameter is absent, all contacts with the offset specified by the **offset** parameter are displayed. |

**Example**

```
(show)> show nvox phonebook ln 5 3

        phonebook:
               record:
                    index: 5
               first_name: Dan
                last_name: Lazovski
                  number1: 11231234567
             number1_type: mobile
                  number2: 4912341234567
             number2_type: mobile
                  number3: 57945678900
             number3_type: mobile

               record:
                    index: 6
               first_name: Lana
                last_name: Rey
                  number1: 6545613854
             number1_type: mobile

               record:
                    index: 7
               first_name: Sam
                last_name: Sorin
                  number1: 4912312345678980
             number1_type: mobile
                  number2: 5754329764534
             number2_type: work
                  number3: 5334838376261234
             number3_type: fixed
```

**History**

| Version | Description |
|---|---|
| 4.02 | The **show nvox phonebook** command has been introduced. |

# C.42 show nvox sip-lines

**Description** Show SIP registration status of telephone lines and the status of blacklists and whitelists configured in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(show)>  nvox sip-lines
```

**Example**

```
(show)> nvox sip-lines

           lines:
                line:
                      id: 2
                    name: 1002
                    code: 401
                  status: failure
            description: Unauthorized
                blacklist: configured, enabled
                whitelist: configured, disabled

                line:
                      id: 1
                    name: 1001
                    code: 200
                  status: registered
            description: OK
                blacklist: empty, disabled
                whitelist: configured, disabled
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox sip-lines** command has been introduced. |

# C.43 show nvox sip-profiles

**Description**

Show settings profiles for connecting to IP telephony operators, which are used to configure phone lines in the web interface.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)> **nvox sip-profiles** [**default**]

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `default` | *Keyword* | Show the default settings profile that is used when no operator is selected. |

**Example**

```
(show)> nvox sip-profiles

          profile:
             provider: Actionvoip
     registration-uri: sip.actionvoip.com
                proxy: sip.actionvoip.com:5060
               domain: sip.actionvoip.com
          reg-timeout: 180
```

```
     profile:
        provider: Chief 070
registration-uri:
           proxy: 203.0.113.17
          domain: chiefcall.com.tw

     profile:
        provider: Deutsche Telekom (UDP)
          domain: tel.t-online.de
registration-uri: tel.t-online.de
           proxy: tel.t-online.de
      substitute: (+49>0)x.
     reg-timeout: 480

     profile:
        provider: Deutsche Telekom (TCP)
          domain: tel.t-online.de
registration-uri: tel.t-online.de
           proxy: tel.t-online.de
      substitute: (+49>0)x.
       transport: tcp
     reg-timeout: 480

     profile:
        provider: FreeCall
registration-uri: sip.voiparound.com
           proxy: sip.voiparound.com:5060
          domain: sip.voiparound.com
     reg-timeout: 180

     profile:
        provider: Nonoh
registration-uri: sip.nonoh.net
           proxy: sip.nonoh.net:5060
          domain: sip.nonoh.net
     reg-timeout: 180

     profile:
        provider: Telbo
registration-uri: telbo.com
           proxy: telbo.com
          domain: telbo.com

     profile:
        provider: TIM Telecom Italia
registration-uri: telecomitalia.it
          domain: telecomitalia.it
       transport: udp
       keepalive: 30
      substitute: (+39>)x.|(+>00)x.

           codec: g711a
```

```
                codec: g711u

          reg-timeout: 3600

          profile:
             provider: VoipDiscount
    registration-uri: sip.voipdiscount.com
               proxy: sip.voipdiscount.com:5060
              domain: sip.voipdiscount.com
          reg-timeout: 180

          profile:
             provider: WebCallDirect
    registration-uri: webcalldirect.com
               proxy: webcalldirect.com
              domain: webcalldirect.com
          reg-timeout: 180
```

```
(show)> nvox sip-profiles default

     profile:
         provider: CUSTOM
             name: CUSTOM
  registration-uri:
       reg-timeout: 180
             proxy:
            domain:
         transport: udp
tls-security-mode: SIP-TLS
        dtmf-mode: rfc2833
       lock-codec: yes
     disable-stun: yes
   sdp-nat-rewrite: no
        keepalive: 30

            codec: g711u

            codec: g711a

        digit-map:
       substitute:
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox sip-profiles** command has been introduced. |

# C.44 show nvox try-dial

**Description**

Show the telephone line through which an outgoing call will go to a specified telephone number from a specified DECT handset or telephone port.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox try-dial** ‹*ipui*› ‹*number*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| `ipui` | *Hex Integer* | Ten-digit DECT handset identifier or telephone port number (1 or 2). |
| `number` | *String* | Phone number, a string consisting of digits from `0` to `9` as well as the symbols `#` and `*`. The length of the string is up to 19 characters. |

**Example**

```
(show)> nvox try-dial 034725D054 1234567

            line: 1
         line_id: 1
       line_name: 1001
          status: registered
            code: 200
     description: OK
```

```
(show)> nvox try-dial 1 1234567

            line: 1
         line_id: 1
       line_name: 1001
          status: registered
            code: 200
     description: OK
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox try-dial** command has been introduced. |

# C.45 show nvox try-dial-ext

**Description** Show the routing of an outgoing call to a specified telephone number for all DECT handsets or telephone ports registered in the system. The command output for each handset displays a list of phone lines that are allowed to make an outgoing call from that handset. The lines in the list are displayed according to their priority — the higher the line in the list, the higher its priority. For the outgoing call the system selects the line with the highest priority and successful SIP registration (status "registered").

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox try-dial-ext** *‹number›*

**Arguments**

| Argument | Value | Description |
|---|---|---|
| number | *String* | Phone number, a string consisting of digits from 0 to 9 as well as the symbols # and *. The length of the string is up to 19 characters. |

**Example**

```
(show)> nvox try-dial-ext 1234567

           number: 1234567

         handset:
                name: phone 1

                line:
                      id: 1
                    name: 1001
                  status: registered

         handset:
                name: phone 2

                line:
                      id: 3
                    name: 1003
                  status: registered

                line:
                      id: 2
                    name: 1002
                  status: unregistered
```

**History**

| Version | Description |
|---|---|
| 3.05 | The **show nvox try-dial-ext** command has been introduced. |

# C.46 show nvox whitelist

**Description** Show the whitelist configured for the SIP line.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

(show)> **nvox whitelist** ‹*id*›

**Arguments**

| Argument | Value | Description |
|---|---|---|
| id | *String* | SIP line identifier of Latin letters and numbers from 0 to 9. The maximum string length is 64 characters. |

**Example**

```
(show)> nvox whitelist 1

            line:
                  id: 1
                name: nonoh
           whitelist: 1234567890|+79261234567|000123456|1234567
```

**History**

| Version | Description |
|---|---|
| 4.01 | The **show nvox whitelist** command has been introduced. |

# D

# SNMP MIB

Management Information Bases (MIBs) are read-only.

The following MIBs are supported:

## D.1 SNMPv2-MIB

OID: 1.3.6.1.2.1.1

The following data elements are supported:

- SNMPv2-MIB::sysDescr
- SNMPv2-MIB::sysUpTime
- SNMPv2-MIB::sysContact
- SNMPv2-MIB::sysName
- SNMPv2-MIB::sysLocation
- SNMPv2-MIB::sysServices

## D.2 IF-MIB

OID: 1.3.6.1.2.1.2 and 1.3.6.1.2.1.31

The following data elements are supported:

**Basical**

OID: 1.3.6.1.2.1.2

- IF-MIB::ifNumber
- IF-MIB::ifIndex
- IF-MIB::ifDescr
- IF-MIB::ifType
- IF-MIB::ifMtu
- IF-MIB::ifSpeed
- IF-MIB::ifPhysAddress
- IF-MIB::ifAdminStatus

- IF-MIB::ifOperStatus
- IF-MIB::ifLastChange
- IF-MIB::ifInOctets
- IF-MIB::ifInUcastPkts
- IF-MIB::ifInDiscards
- IF-MIB::ifInErrors
- IF-MIB::ifOutOctets
- IF-MIB::ifOutUcastPkts
- IF-MIB::ifOutDiscards
- IF-MIB::ifOutErrors

**Advanced**

OID 1.3.6.1.2.1.31

- IF-MIB::ifName
- IF-MIB::ifInMulticastPkts
- IF-MIB::ifInBroadcastPkts
- IF-MIB::ifOutMulticastPkts
- IF-MIB::ifOutBroadcastPkts
- IF-MIB::ifHCInOctets
- IF-MIB::ifHCInUcastPkts
- IF-MIB::ifHCInMulticastPkts
- IF-MIB::ifHCInBroadcastPkts
- IF-MIB::ifHCOutOctets
- IF-MIB::ifHCOutUcastPkts
- IF-MIB::ifHCOutMulticastPkts
- IF-MIB::ifHCOutBroadcastPkts
- IF-MIB::ifLinkUpDownTrapEnable
- IF-MIB::ifHighSpeed
- IF-MIB::ifPromiscuousMode
- IF-MIB::ifConnectorPresent
- IF-MIB::ifAlias

- IF-MIB::ifCounterDiscontinuityTime

# D.3 IP-MIB

OID: 1.3.6.1.2.1.6

The following data elements are supported:

- TCP-MIB::tcpRtoAlgorithm
- TCP-MIB::tcpRtoMin
- TCP-MIB::tcpRtoMax
- TCP-MIB::tcpMaxConn
- TCP-MIB::tcpActiveOpens
- TCP-MIB::tcpPassiveOpens
- TCP-MIB::tcpAttemptFails
- TCP-MIB::tcpEstabResets
- TCP-MIB::tcpCurrEstab
- TCP-MIB::tcpInSegs
- TCP-MIB::tcpOutSegs
- TCP-MIB::tcpRetransSegs
- TCP-MIB::tcpInErrs
- TCP-MIB::tcpOutRsts

# D.4 UDP-MIB

OID: 1.3.6.1.2.1.7

The following data elements are supported:

- UDP-MIB::udpInDatagrams
- UDP-MIB::udpNoPorts
- UDP-MIB::udpInErrors
- UDP-MIB::udpOutDatagrams
- UDP-MIB::udpHCInDatagrams
- UDP-MIB::udpHCOutDatagrams

# D.5 HOST-RESOURCES-MIB

OID: 1.3.6.1.2.1.25

The following data elements are supported:

- HOST-RESOURCES-MIB::hrSystemUptime

# D.6 UCD-SNMP-MIB

OID 1.3.6.1.4.1.2021

The following data elements are supported:

**RAM info**

- UCD-SNMP-MIB::memTotalReal
- UCD-SNMP-MIB::memAvailReal
- UCD-SNMP-MIB::memShared
- UCD-SNMP-MIB::memBuffer
- UCD-SNMP-MIB::memCached

**USB-storage info**

- UCD-SNMP-MIB::dskIndex
- UCD-SNMP-MIB::dskPath
- UCD-SNMP-MIB::dskTotal
- UCD-SNMP-MIB::dskAvail
- UCD-SNMP-MIB::dskUsed
- UCD-SNMP-MIB::dskPercent
- UCD-SNMP-MIB::dskPercentNode

**System load info**

- UCD-SNMP-MIB::laIndex
- UCD-SNMP-MIB::laNames
- UCD-SNMP-MIB::laLoad
- UCD-SNMP-MIB::laConfig
- UCD-SNMP-MIB::laLoadInt
- UCD-SNMP-MIB::ssCpuRawUser
- UCD-SNMP-MIB::ssCpuRawNice
- UCD-SNMP-MIB::ssCpuRawSystem

- UCD-SNMP-MIB::ssCpuRawIdle
- UCD-SNMP-MIB::ssRawInterrupts
- UCD-SNMP-MIB::ssRawContexts

# D.7 MOBILE-INTERFACE-METRICS-MIB

OID: 1.3.6.1.4.1.9.9.661.1.3.4.1.1.1.7006

The following data elements are supported:

- RSSI (Received Signal Strength Indicator)

OID: 1.3.6.1.4.1.9.9.817.1.1.1.1.1.1.7006

The following data elements are supported:

- RSRP (Reference Signal Received Power)

OID: 1.3.6.1.4.1.9.9.817.1.1.1.1.1.2.7006

The following data elements are supported:

- RSRQ (Reference Signal Received Quality)

OID: 1.3.6.1.4.1.9.9.817.1.1.1.1.1.3.7006

The following data elements are supported:

- SNR (Signal-to-Noise Ratio)

# E

# IPsec Encryption Levels

The encryption level defines a set of *IKE* and *IPsec SA* algorithms.

Below a complete list of algorithms is displayed for each level in order of decreasing priority, as well as a set of commands **crypto ike proposal** to setup this profile manually.

In the list of algorithms is indicated:

- encryption with key length
- hash function for *HMAC* forming
- *PFS* mode (NO if disabled)

## E.1 weak

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-128-CBC/SHA1/MODP1024 | encryption aes-128-cbc |
| | AES-128-CBC/SHA1/MODP768 | encryption 3des |
| | AES-128-CBC/MD5/MODP1024 | encryption des |
| | AES-128-CBC/MD5/MODP768 | integrity sha1 |
| | 3DES-CBC/SHA1/MODP1024 | integrity md5 |
| | 3DES-CBC/SHA1/MODP768 | dh-group 2 |
| | 3DES-CBC/MD5/MODP1024 | dh-group 1 |
| | 3DES-CBC/MD5/MODP768 | |
| | DES-CBC/SHA1/MODP1024 | |
| | DES-CBC/SHA1/MODP768 | |
| | DES-CBC/MD5/MODP1024 | |
| | DES-CBC/MD5/MODP768 | |
| IKEv2 | AES-128-CBC/SHA1/MODP1024 | encryption aes-128-cbc |
| | AES-128-CBC/SHA1/MODP768 | encryption 3des |
| | AES-128-CBC/MD5/MODP1024 | encryption des |
| | AES-128-CBC/MD5/MODP768 | integrity sha1 |

| Protocol | Encryption | Proposal |
|---|---|---|
| | 3DES-CBC/SHA1/MODP1024 | integrity md5 |
| | 3DES-CBC/SHA1/MODP768 | dh-group 2 |
| | 3DES-CBC/MD5/MODP1024 | dh-group 1 |
| | 3DES-CBC/MD5/MODP768 | |
| | DES-CBC/SHA1/MODP1024 | |
| | DES-CBC/SHA1/MODP768 | |
| | DES-CBC/MD5/MODP1024 | |
| | DES-CBC/MD5/MODP768 | |
| IPsec SA | DES/MD5 | cypher esp-des |
| | AES-128-CBC/SHA1 | cypher esp-3des |
| | 3DES-CBC/SHA1 | cypher esp-aes-128 |
| | DES/SHA1 | hmac esp-md5-hmac |
| | AES-128-CBC/MD5 | hmac esp-sha1-hmac |
| | 3DES-CBC/MD5 | |

# E.2 weak-pfs

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-128-CBC/SHA1/MODP1024 | encryption aes-128-cbc |
| | AES-128-CBC/SHA1/MODP768 | encryption 3des |
| | AES-128-CBC/MD5/MODP1024 | encryption des |
| | AES-128-CBC/MD5/MODP768 | integrity sha1 |
| | 3DES-CBC/SHA1/MODP1024 | integrity md5 |
| | 3DES-CBC/SHA1/MODP768 | dh-group 2 |
| | 3DES-CBC/MD5/MODP1024 | dh-group 1 |
| | 3DES-CBC/MD5/MODP768 | |
| | DES-CBC/SHA1/MODP1024 | |
| | DES-CBC/SHA1/MODP768 | |
| | DES-CBC/MD5/MODP1024 | |
| | DES-CBC/MD5/MODP768 | |

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv2 | AES-128-CBC/SHA1/MODP1024 | encryption aes-128-cbc |
| | AES-128-CBC/SHA1/MODP768 | encryption 3des |
| | AES-128-CBC/MD5/MODP1024 | encryption des |
| | AES-128-CBC/MD5/MODP768 | integrity sha1 |
| | 3DES-CBC/SHA1/MODP1024 | integrity md5 |
| | 3DES-CBC/SHA1/MODP768 | dh-group 2 |
| | 3DES-CBC/MD5/MODP1024 | dh-group 1 |
| | 3DES-CBC/MD5/MODP768 | |
| | DES-CBC/SHA1/MODP1024 | |
| | DES-CBC/SHA1/MODP768 | |
| | DES-CBC/MD5/MODP1024 | |
| | DES-CBC/MD5/MODP768 | |
| IPsec SA | DES/MD5/MODP1024 | cypher esp-des |
| | AES-128-CBC/SHA1 | cypher esp-3des |
| | 3DES-CBC/SHA1 | cypher esp-aes-128 |
| | DES/SHA1 | hmac esp-md5-hmac |
| | AES-128-CBC/MD5 | hmac esp-sha1-hmac |
| | 3DES-CBC/MD5 | dh-group 2 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 1 |
| | 3DES-CBC/SHA1/MODP1024 | |
| | DES-CBC/SHA1/MODP1024 | |
| | AES-128-CBC/SHA1/MODP768 | |
| | 3DES-CBC/SHA1/MODP768 | |
| | DES-CBC/SHA1/MODP768 | |
| | AES-128-CBC/MD5/MODP1024 | |
| | 3DES-CBC/MD5/MODP1024 | |
| | AES-128-CBC/MD5/MODP768 | |
| | 3DES-CBC/MD5/MODP768 | |
| | DES-CBC/MD5/MODP768 | |

# E.3 normal

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA1/MODP1536 | encryption aes-256-cbc |
| | AES-256-CBC/SHA1/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA1/MODP2048 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha1 |
| | AES-128-CBC/SHA1/MODP1536 | integrity sha256 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 5 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 14 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 2 |
| | 3DES-CBC/SHA1/MODP1024 | dh-group 26 |
| | AES-256-CBC/SHA256/MODP1024 | |
| | AES-128-CBC/SHA256/MODP1024 | |
| | 3DES-CBC/SHA256/MODP1024 | |
| IKEv2 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |
| | AES-128-CBC/SHA256/MODP1024 | encryption aes-128-cbc |
| | 3DES-CBC/SHA256/MODP1024 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha256 |
| | AES-256-CBC/SHA1/ECP384 | integrity sha1 |
| | AES-256-CBC/SHA1/MODP2048 | dh-group 2 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-256-CBC/SHA256/MODP2048 | dh-group 5 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 26 |
| | 3DES-CBC/SHA1/MODP1536 | |
| | 3DES-CBC/SHA1/MODP1024 | |
| IPsec SA | AES-128-CBC/SHA1 | cypher esp-aes-128 |
| | AES-256-CBC/SHA1 | cypher esp-aes-256 |

| Protocol | Encryption | Proposal |
|---|---|---|
| | 3DES-CBC/SHA1 | cypher esp-3des |
| | AES-128-CBC/SHA256 | hmac esp-sha1-hmac |
| | AES-256-CBC/SHA256 | hmac esp-sha256-hmac |
| | 3DES-CBC/SHA256 | |

# E.4 normal-pfs

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA1/MODP1536 | encryption aes-256-cbc |
| | AES-256-CBC/SHA1/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA1/MODP2048 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha1 |
| | AES-128-CBC/SHA1/MODP1536 | integrity sha256 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 5 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 14 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 2 |
| | 3DES-CBC/SHA1/MODP1024 | dh-group 26 |
| | AES-256-CBC/SHA256/MODP1024 | |
| | AES-128-CBC/SHA256/MODP1024 | |
| | 3DES-CBC/SHA256/MODP1024 | |
| IKEv2 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |
| | AES-128-CBC/SHA256/MODP1024 | encryption aes-128-cbc |
| | 3DES-CBC/SHA256/MODP1024 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha256 |
| | AES-256-CBC/SHA1/ECP384 | integrity sha1 |
| | AES-256-CBC/SHA1/MODP2048 | dh-group 2 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-256-CBC/SHA256/MODP2048 | dh-group 5 |

| Protocol | Encryption | Proposal |
|---|---|---|
| | 3DES-CBC/SHA1/MODP2048 | dh-group 26 |
| | 3DES-CBC/SHA1/MODP1536 | |
| | 3DES-CBC/SHA1/MODP1024 | |
| IPsec SA | AES-128-CBC/SHA1/MODP1024 | esp-aes-128 |
| | AES-128-CBC/SHA1 | cypher esp-aes-256 |
| | AES-256-CBC/SHA1 | cypher esp-3des |
| | 3DES-CBC/SHA1 | hmac esp-sha1-hmac |
| | AES-256-CBC/SHA1/MODP1536 | hmac esp-sha256-hmac |
| | AES-128-CBC/SHA1/MODP1536 | dh-group 2 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 14 |
| | AES-256-CBC/SHA1/MODP1024 | |
| | 3DES-CBC/SHA1/MODP1024 | |

# E.5 normal-3des

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA1/MODP1536 | encryption aes-256-cbc |
| | AES-256-CBC/SHA1/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA1/MODP2048 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha1 |
| | AES-128-CBC/SHA1/MODP1536 | integrity sha256 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 5 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 14 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 2 |
| | 3DES-CBC/SHA1/MODP1024 | dh-group 26 |
| | AES-256-CBC/SHA256/MODP1024 | |
| | AES-128-CBC/SHA256/MODP1024 | |
| | 3DES-CBC/SHA256/MODP1024 | |
| IKEv2 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |

| Protocol | Encryption | Proposal |
|---|---|---|
| | AES-128-CBC/SHA256/MODP1024 | encryption aes-128-cbc |
| | 3DES-CBC/SHA256/MODP1024 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha256 |
| | AES-256-CBC/SHA1/ECP384 | integrity sha1 |
| | AES-256-CBC/SHA1/MODP2048 | dh-group 2 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-256-CBC/SHA256/MODP2048 | dh-group 5 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 26 |
| | 3DES-CBC/SHA1/MODP1536 | |
| | 3DES-CBC/SHA1/MODP1024 | |
| IPsec SA | 3DES-CBC/SHA1 | cypher esp-3des |
| | AES-256-CBC/SHA1 | cypher esp-aes-256 |
| | AES-128-CBC/SHA1 | cypher esp-aes-128 |
| | 3DES-CBC/SHA256 | hmac esp-sha1-hmac |
| | AES-256-CBC/SHA256 | hmac esp-sha256-hmac |
| | AES-128-CBC/SHA256 | |

# E.6 normal-3des-pfs

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA1/MODP1536 | encryption aes-256-cbc |
| | AES-256-CBC/SHA1/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA1/MODP2048 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha1 |
| | AES-128-CBC/SHA1/MODP1536 | integrity sha256 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 5 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 14 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 2 |

| Protocol | Encryption | Proposal |
|---|---|---|
| | 3DES-CBC/SHA1/MODP1024 | dh-group 26 |
| | AES-256-CBC/SHA256/MODP1024 | |
| | AES-128-CBC/SHA256/MODP1024 | |
| | 3DES-CBC/SHA256/MODP1024 | |
| IKEv2 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |
| | AES-128-CBC/SHA256/MODP1024 | encryption aes-128-cbc |
| | 3DES-CBC/SHA256/MODP1024 | encryption 3des |
| | AES-256-CBC/SHA1/MODP1024 | integrity sha256 |
| | AES-256-CBC/SHA1/ECP384 | integrity sha1 |
| | AES-256-CBC/SHA1/MODP2048 | dh-group 2 |
| | AES-128-CBC/SHA1/MODP1024 | dh-group 20 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-256-CBC/SHA256/MODP2048 | dh-group 5 |
| | 3DES-CBC/SHA1/MODP2048 | dh-group 26 |
| | 3DES-CBC/SHA1/MODP1536 | |
| | 3DES-CBC/SHA1/MODP1024 | |
| IPsec SA | 3DES-CBC/SHA1/MODP1024 | cypher esp-3des |
| | 3DES-CBC/SHA1 | cypher esp-aes-256 |
| | AES-256-CBC/SHA1 | cypher esp-aes-128 |
| | AES-128-CBC/SHA1 | hmac esp-sha1-hmac |
| | AES-256-CBC/SHA1/MODP1536 | hmac esp-sha256-hmac |
| | AES-128-CBC/SHA1/MODP1536 | dh-group 2 |
| | 3DES-CBC/SHA1/MODP1536 | dh-group 14 |
| | AES-256-CBC/SHA1/MODP1024 | |
| | AES-128-CBC/SHA1/MODP1024 | |

# E.7 high

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |

| Protocol | Encryption | Proposal |
|---|---|---|
| | AES-256-CBC/SHA256/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA256/MODP1536 | integrity sha256 |
| | AES-256-CBC/SHA1/MODP2048 | integrity sha1 |
| | AES-256-CBC/SHA1/ECP384 | dh-group 2 |
| | AES-256-CBC/SHA1/MODP1536 | dh-group 20 |
| | AES-128-CBC/SHA1/MODP2048 | dh-group 5 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-128-CBC/SHA1/MODP1536 | dh-group 26 |
| IKEv2 | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |
| | AES-256-CBC/SHA256/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA256/MODP1536 | integrity sha256 |
| | AES-256-CBC/SHA1/MODP2048 | integrity sha1 |
| | AES-256-CBC/SHA1/ECP384 | dh-group 2 |
| | AES-256-CBC/SHA1/MODP1536 | dh-group 20 |
| | AES-128-CBC/SHA1/MODP2048 | dh-group 5 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 14 |
| | AES-128-CBC/SHA1/MODP1536 | dh-group 26 |
| IPsec SA | AES-256-CBC/SHA256 | cypher esp-aes-256 |
| | AES-128-CBC/SHA256 | cypher esp-aes-128 |
| | | hmac esp-hmac-sha256 |

# E.8 strong

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-CBC/SHA1/MODP2048 | encryption aes-256-cbc |
| | AES-256-CBC/SHA1/ECP384 | encryption aes-128-cbc |
| | AES-256-CBC/SHA1/MODP1536 | integrity sha1 |
| | AES-128-CBC/SHA1/MODP2048 | dh-group 14 |
| | AES-128-CBC/SHA1/ECP256 | dh-group 20 |
| | AES-128-CBC/SHA1/MODP1536 | dh-group 5 |

| Protocol | Encryption | Proposal |
|---|---|---|
| | | dh-group 26 |
| IKEv2 | AES-256-CBC/SHA1/MODP2048<br>AES-256-CBC/SHA1/ECP384<br>AES-256-CBC/SHA1/MODP1536<br>AES-128-CBC/SHA1/MODP2048<br>AES-128-CBC/SHA1/ECP256<br>AES-128-CBC/SHA1/MODP1536 | encryption aes-256-cbc<br>encryption aes-128-cbc<br>integrity sha1<br>dh-group 14<br>dh-group 20<br>dh-group 5<br>dh-group 26 |
| IPsec SA | AES-256-CBC/SHA1/MODP1536<br>AES-256-CBC/SHA1/MODP2048<br>AES-128-CBC/SHA1/MODP2048<br>AES-128-CBC/SHA1/MODP1536 | cypher esp-aes-256<br>cypher esp-aes-128<br>hmac esp-sha1-hmac<br>dh-group 5<br>dh-group 14 |

# E.9 strong-aead

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-GCM-16/PRF-SHA384/ECP384 | aead<br>encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20 |
| IKEv2 | AES-256-GCM-16/PRF-SHA384/ECP384 | aead<br>encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20 |
| IPsec SA | AES-256-GCM-16<br>CHACHA20POLY1305 | aead<br>cypher aes-256-gcm-16 |

# E.10 strong-aead-pfs

| Protocol | Encryption | Proposal |
|---|---|---|
| IKEv1 | AES-256-GCM-16/PRF-SHA384/ECP384 | aead |

| Protocol | Encryption | Proposal |
|---|---|---|
| | | encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20 |
| IKEv2 | AES-256-GCM-16/PRF-SHA384/ECP384 | aead<br>encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20 |
| IPsec SA | AES-256-GCM-16/ECP384<br>CHACHA20POLY1305-ECP384 | aead<br>cypher aes-256-gcm-16<br>dh-group 20 |