

# KEENETIC

# HOPPER

AX1800 Mesh Wi-Fi 6 Gigabit Router with a  
4-Port Gigabit Smart Switch and USB 3.0 Port

## Command Reference Guide

Model	Hopper (KN-3810)
OS Version	4.1
Edition	1.148 18.04.2024



# Preface

This guide contains Command-Line Interface (CLI) commands to maintain the Hopper 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 Hopper on-site. It is also intended for the operator who manages the Hopper. This manual cover high-level technical support procedures available to Root administrators and Hopper technical support personnel.

## 2 Organization

This manual covers the following topics:

Introduction to the CLI	Describes how to use the Hopper 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 Hopper device.

## 3 Document Conventions

Command descriptions use the following conventions:

<b>boldface font</b>	Commands and keywords are in <b>boldface</b> . Must be typed exactly as shown. Bold font is used as a user input in examples.
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[ <i>optional</i> ]	Elements in square brackets are optional.
⟨ <i>replaceable</i> ⟩	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 <b>no</b>	The possibility of using <b>no</b> 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.  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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# Product Overview

## 1.1 Hardware Configuration

**CPU** EcoNet EN7528DU/DA MIPS® 1004Kc 900MHz, 2 cores / 4 threads

**RAM** 256MB DDR3 (on-die)

**Flash** 128MB: Kioxia TC58CVG0S3HRAIJ, Winbond 5N01GVZEIG, Nuvoton XT26G01CWSIGA

### Ethernet

Ports	Chipset	Notes
4	Integrated	

Label	Speed	Notes
0	1000 Mbps	WAN port
1	1000 Mbps	
2	1000 Mbps	
3	1000 Mbps	

### USB

Label	Speed	Notes
1	USB 3.0	

### Wi-Fi

Band	Chipset	Notes
2.4 GHz	MediaTek MT7905DA	802.11ax 2x2
5 GHz		



# Introduction to the CLI

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

The primary tool for managing the Hopper 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.

Hopper has three types of settings:

Current settings	<i>running config</i> 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	<i>startup config</i> 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	<i>default config</i> contains factory default settings of Hopper. 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 Hopper 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 1.1.1.0/24 PPTP0
Network::RoutingTable: Added static route: 1.1.1.0/24 via PPTP0.
(config)> ip route 1.1.2.0/24 PPTP0
Network::RoutingTable: Added static route: 1.1.2.0/24 via PPTP0.
(config)> ip route 1.1.3.0/24 PPTP1
Network::RoutingTable: Added static route: 1.1.3.0/24 via PPTP1.
(config)> show running-config
...
ip route 1.1.1.0 255.255.255.0 PPTP0
ip route 1.1.2.0 255.255.255.0 PPTP0
ip route 1.1.3.0 255.255.255.0 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 1.1.2.0/24
Network::RoutingTable: Deleted static route: 1.1.2.0/24 via PPTP0.
(config)> show running-config
...
ip route 1.1.1.0 255.255.255.0 PPTP0
ip route 1.1.3.0 255.255.255.0 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 Hopper 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.





# 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	<i>Filename</i>	Full path to the file to be copied in <file system>:<path> format
destination	<i>Filename</i>	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 <b>copy</b> command has been introduced.

### 3.1.2 erase

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

**Prefix no** No

**Change settings** Yes**Multiple input** Yes**Synopsis** | (config)> **erase** <filename>

Argument	Value	Description
filename	<i>Filename</i>	Specifies the file to be removed.

**Example** (config)> **erase ext-opkg:/dlna\_files.db**  
 FileSystem::Repository: "ext-opkg:/dlna\_files.db" erased.

Version	Description
2.00	The <b>erase</b> 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)>

Version	Description
2.00	The <b>exit</b> command has been introduced.

### 3.1.4 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	<i>String</i>	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 <b>ls</b> command has been introduced.

## 3.1.5 mkdir

**Description**

Create a new directory.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

```
(config)> mkdir <directory>
```

**Arguments**

Argument	Value	Description
directory	<i>String</i>	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 <b>mkdir</b> command has been introduced.

## 3.1.6 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	<i>Filename</i>	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 <b>more</b> 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	<i>String</i>	Name of directory on USB storage.
user	<i>String</i>	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	<i>Keyword</i>	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 <b>access</b> 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	<i>String</i>	Filtering rules list name ( <i>Access Control List</i> , 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 <b>access-list</b> 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 <b>access-list auto-delete</b> 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 <i>source</i> . 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 <i>source-port</i> .

Argument	Value	Description
	eq	Operator “equal” to compare the port with the specified <i>source-port</i> .
	gt	Operator “greater” to compare the port with the specified <i>source-port</i> .
destination	<i>IP address</i>	The destination address in the header of IP-packet.
destination-mask	<i>IP-mask</i>	Mask to be applied to the destination address in the header of IP-packet before comparison with <i>destination</i> . 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	<i>Integer</i>	Destination port in the <i>TCP</i> or <i>UDP</i> header.
destination-end-port	<i>Integer</i>	The end of the destination range of ports.
dst-port-operator	lt	Operator “less” to compare the port with the specified <i>destination-port</i> .
	eq	Operator “equal” to compare the port with the specified <i>destination-port</i> .
	gt	Operator “greater” to compare the port with the specified <i>destination-port</i> .

**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 <b>access-list deny</b> 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 <i>source</i> . There are two ways to enter the mask: the

Argument	Value	Description
		canonical form (for example, 255.255.255.0) and the form of prefix bit length (for example, /24).
source-port	<i>Integer</i>	Source port in the <i>TCP</i> or <i>UDP</i> header.
source-end-port	<i>Integer</i>	The end of the source range of ports.
src-port-operator	lt	Operator “less” to compare the port with the specified <i>source-port</i> .
	eq	Operator “equal” to compare the port with the specified <i>source-port</i> .
	gt	Operator “greater” to compare the port with the specified <i>source-port</i> .
destination	<i>IP address</i>	The destination address in the header of IP-packet.
destination-mask	<i>IP-mask</i>	Mask to be applied to the destination address in the header of IP-packet before comparison with <i>destination</i> . 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	<i>Integer</i>	Destination port in the <i>TCP</i> or <i>UDP</i> header.
destination-end-port	<i>Integer</i>	The end of the destination range of ports.
dst-port-operator	lt	Operator “less” to compare the port with the specified <i>destination-port</i> .
	eq	Operator “equal” to compare the port with the specified <i>destination-port</i> .
	gt	Operator “greater” to compare the port with the specified <i>destination-port</i> .

**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 <b>access-list permit</b> command has been introduced.
2.06	New value <code>ip</code> was added to the <code>protocol</code> argument.
2.08	New protocols <code>esp</code> , <code>gre</code> and <code>ipip</code> 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
<code>index</code>	<i>Integer</i>	The ACL rule number.
<code>disable</code>	<i>Keyword</i>	Disable the ACL rule.
<code>schedule</code>	<i>Schedule</i>	The name of the schedule that was created with <a href="#">schedule</a> group of commands.
<code>order</code>	<i>Integer</i>	New position of the ACL rule in the list.
<code>description</code>	<i>String</i>	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 <b>access-list rule</b> 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 <b>afp</b> 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 <b>afp automount</b> 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 <b>afp permissive</b> command has been introduced.

## 3.4.3 afp share

**Description** Share directory on USB storage.

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> [timemachine] [description]
```

```
(config-afp)> no share [label]
```

**Arguments**

Argument	Value	Description
label	<i>String</i>	Share name for users.
mount	<i>String</i>	Name of directory to share.
timemachine	<i>Keyword</i>	Access for Time Machine application.
description	<i>String</i>	Description of share.

**Example**

```
(config-afp)> share AFP C253-062D:/FOR_AFP timemachine  
Afp::Server: Added share "AFP".
```

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

**History**

Version	Description
2.06	The <b>afp share</b> command has been introduced.

## 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 <b>cifs</b> 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::ServerT smb: Automount enabled.
```

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

**History**

Version	Description
2.00	The <b>cifs automount</b> 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::ServerT smb: Map hidden enabled.
```

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

**History**

Version	Description
2.14	The <b>cifs map-hidden</b> command has been introduced.

### 3.5.3 cifs master

**Description** Enable *Master Browser* function for TSMB server. By default, the setting is enabled.

Command with **no** prefix disables *Master Browser* function.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config-cifs)> master
(config-cifs)> no master
```

**Example**

```
(config-cifs)> master
Cifs::ServerTsmc: Master browser enabled.
```

```
(config-cifs)> no master
Cifs::ServerTsmc: Master browser disabled.
```

#### History

Version	Description
2.00	The <b>cifs master</b> command has been introduced.
2.04	The <b>cifs master</b> command was removed as obsolete.
3.03	The <b>cifs master</b> command has been returned.

### 3.5.4 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::ServerTsmc: Permissive mode enabled.
```



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

**History**

Version	Description
2.00	The <b>cifs permissive</b> command has been introduced.

## 3.5.5 cifs share

**Description**

Share directory on USB storage.

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	<i>String</i>	Share name, that users will see.
mount	<i>String</i>	Name of directory to share.
description	<i>String</i>	Description of share.

**Example**

```
(config-cifs)> share MYHOME1 10A0CDE9A0CDD4FE:/
Cifs::ServerTsmB: Added share "MYHOME1".
```

```
(config-cifs)> share MYHOME 10A0CDE9A0CDD4FE:/Video/
Cifs::ServerTsmB: Added share "MYHOME".
```

```
(config-cifs)> no share MYHOME1
Cifs::ServerTsmB: Removed share "MYHOME1".
```

**History**

Version	Description
2.00	The <b>cifs share</b> command has been introduced.

## 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	<i>Keyword</i>	Access to the Cloud Control2 is allowed for public, private and protected interfaces.
private	<i>Keyword</i>	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 <b>cloud control2 security-level</b> command has been introduced.

## 3.7 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 <b>components</b> command has been introduced.

### 3.7.1 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 <b>components auto-update channel</b> command has been introduced.

## 3.7.2 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 <b>components auto-update disable</b> command has been introduced.

### 3.7.3 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	<i>Schedule</i>	The name of the schedule that was created with <a href="#">schedule</a> 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 <b>components auto-update schedule</b> command has been introduced.

## 3.7.4 components check-update

**Description** Check the firmware updates for the candidate or member of Modular Wi-Fi System.

**Prefix no** No

**Change settings** No

**Multiple input** No

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

**Arguments**

Argument	Value	Description
force	<i>Keyword</i>	Check for updates constantly.

**Example**

```
(config-comp)> check-update
release: 2.15.A.3.0-2
  sandbox: draft
  timestamp: Dec 17 18:58:55
  valid: no
```

```
(config-comp)> check-update force
release: 2.15.A.3.0-2
  sandbox: draft
  timestamp: Dec 17 18:58:55
  valid: no
```

**History**

Version	Description
2.14	The <b>components check-update</b> command has been introduced.

## 3.7.5 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 <b>components commit</b> command has been introduced.

## 3.7.6 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	<i>String</i>	Component name. List of available components for installation can be displayed with the <b>components list</b> command.

**Example**

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

**History**

Version	Description
2.00	The <b>components install</b> command has been introduced.

## 3.7.7 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	<i>String</i>	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 <b>components list</b> command has been introduced.
2.06.A.6	The <i>sandbox</i> parameter has been introduced. The command <b>components list</b> should be used in favour of <b>components sync</b> .

## 3.7.8 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 <b>components preset</b> command has been introduced.

## 3.7.9 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 <b>components preview</b> command has been introduced.



## 3.7.10 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	<i>String</i>	Component name. List of available components for removal can be displayed with the <a href="#">components list</a> command.

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

**History**

Version	Description
2.00	The <b>components remove</b> command has been introduced.

## 3.7.11 components validity-period

**Description** Set a validity period of a local component list. After this time the command [components list](#) will be automatically 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	<i>Integer</i>	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 <b>components validity-period</b> command has been introduced.

## 3.8 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 <b>crypto engine</b> command has been introduced.

## 3.9 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	<i>String</i>	Name of the key. Latin letters, numbers, dots, hyphens and underscores are acceptable.
psk	<i>String</i>	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	<i>String</i>	Value of the remote side ID.
any	<i>Keyword</i>	Allow the key usage for any remote side.

### Example

```
(config)> crypto ike key VirtualIPServer ▶
aDjs0C1gvWCs0iE4Ijhs+HRnNPiheGA478 any
IpSec::Manager: "VirtualIPServer": crypto ike key successfully ▶
added.
```

```
(config)> crypto ike key VirtualIPServer ▶
aDjs0C1gvWCs0iE4Ijhs+HRnNPiheGA478R4M6d4+054LLihe 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 <b>crypto ike key</b> command has been introduced.

## 3.10 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	<i>Integer</i>	<i>MTU</i> 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 <b>crypto ike mtu</b> command has been introduced.

## 3.11 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	<i>Integer</i>	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 <b>crypto ike nat-keepalive</b> command has been introduced.

## 3.12 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	<i>String</i>	<i>IKE</i> 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 <b>crypto ike policy</b> command has been introduced.

### 3.12.1 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 <i>IPsec IKE</i> 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 <b>crypto ike policy lifetime</b> command has been introduced.

## 3.12.2 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 <b>crypto ike policy mode</b> command has been introduced.

### 3.12.3 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 <b>crypto ike policy negotiation-mode</b> command has been introduced.

### 3.12.4 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	<i>IKE</i> 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 <b>crypto ike policy proposal</b> command has been introduced.

## 3.13 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	<i>String</i>	<i>IKE</i> 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 <b>crypto ike proposal</b> command has been introduced.

### 3.13.1 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 <b>crypto ike proposal aead</b> command has been introduced.

### 3.13.2 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	<i>DH</i> group to work in the <i>PFS</i> 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 <b>crypto ike proposal dh-group</b> command has been introduced.

### 3.13.3 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 <i>IKE</i> 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 <b>crypto ike proposal encryption</b> command has been introduced.

### 3.13.4 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	<i>HMAC</i> signature algorithm of <i>IKE</i> 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 <b>crypto ike proposal integrity</b> command has been introduced.

## 3.13.5 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	<i>HMAC</i> signature algorithm of <i>IKE</i> messages.
	sha1	
	aes-xcbc	
	sha256	

Argument	Value	Description
	sha384	
	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 <b>crypto ike proposal prf</b> command has been introduced.

## 3.14 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 <b>crypto ipsec incompatible</b> command has been introduced.

## 3.15 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	<i>String</i>	<i>IPsec</i> 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 <b>crypto ipsec profile</b> command has been introduced.

### 3.15.1 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 <b>crypto ipsec profile authentication-local</b> command has been introduced.

## 3.15.2 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 <b>crypto ipsec profile authentication-remote</b> command has been introduced.

### 3.15.3 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: "VPNLT2PServer": crypto ipsec profile DPD action ►  
set to "clear".
```

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

```
IpSec::Manager: "VPNLT2PServer": crypto ipsec profile DPD action ►  
set to "restart".
```

**History**

Version	Description
2.11	The <b>crypto ipsec profile dpd-clear</b> command has been introduced.

### 3.15.4 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	<i>Integer</i>	The interval of sending <i>DPD</i> packets in seconds. Can take values in the range from 2 to 3600.
retry-count	<i>Integer</i>	Number of attempts to send <i>DPD</i> 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 <b>crypto ipsec profile dpd-interval</b> command has been introduced.

## 3.15.5 crypto ipsec profile identity-local

**Description**

Set a local identifier of *IPsec* profile.

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

**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	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	<i>String</i>	Local ID value.

**Example**

```
(config-ipsec-profile)> identity-local address 10.10.10.5
IpSec::Manager: "test": crypto ipsec profile identity-local is ►
set to "10.10.10.5" with type "address".
```

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

**History**

Version	Description
2.06	The <b>crypto ipsec profile identity-local</b> command has been introduced.

## 3.15.6 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	<i>String</i>	Remote host ID value.
any	<i>Keyword</i>	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 <b>crypto ipsec profile match-identity-remote</b> command has been introduced.

## 3.15.7 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.
	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 <b>crypto ipsec profile mode</b> command has been introduced.

## 3.15.8 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	<i>String</i>	<i>IKE</i> policy name. You can see the list of available policies with help of <b>policy</b> [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 <b>crypto ipsec profile policy</b> command has been introduced.

### 3.15.9 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	<i>String</i>	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 <b>crypto ipsec profile preshared-key</b> command has been introduced.

### 3.15.10 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 <b>crypto ipsec profile xauth</b> command has been introduced.

### 3.15.11 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 <i>XAuth</i> 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 <b>crypto ipsec profile xauth-identity</b> command has been introduced.

### 3.15.12 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 <i>XAuth</i> 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 <b>crypto ipsec profile xauth-password</b> command has been introduced.

## 3.16 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	<i>Integer</i>	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 <b>crypto ipsec rekey delete-delay</b> command has been introduced.

## 3.17 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 <b>crypto ipsec rekey make-before</b> command has been introduced.

## 3.18 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>



Argument	Value	Description
name	<i>String</i>	<i>IPsec</i> 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.
```

Version	Description
2.06	The <b>crypto ipsec transform-set</b> command has been introduced.

### 3.18.1 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.
```

Version	Description
3.05	The <b>crypto ipsec transform-set aead</b> command has been introduced.

### 3.18.2 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 <i>IPsec ESP</i> 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 <b>crypto ipsec transform-set cypher</b> command has been introduced.

### 3.18.3 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	<i>DH</i> group to work in the <i>PFS</i> mode.
	2	

Argument	Value	Description
	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 <b>crypto ipsec transform-set dh-group</b> command has been introduced.

## 3.18.4 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	<i>HMAC</i> signature algorithm of <i>IPsec ESP</i> transformation.
	esp-sha1-hmac	
	esp-sha256-hmac	

**Example**

```
(config-ipsec-transform)> hmac esp-sha1-hmac
IpSec::Manager: "test": crypto ipsec transform-set hmac ►
"esp-sha1-hmac" successfully added.
```

```
(config-ipsec-transform)> no hmac esp-sha1-hmac
IpSec::Manager: "test": crypto ipsec transform-set "test" hmac ►
successfully removed.
```

**History**

Version	Description
2.06	The <b>crypto ipsec transform-set hmac</b> command has been introduced.

## 3.18.5 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	<i>Integer</i>	Lifetime of <i>IPsec</i> 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 <b>crypto ipsec transform-set lifetime</b> command has been introduced.

## 3.19 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	<i>String</i>	<i>IPsec</i> 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 <b>crypto map</b> command has been introduced.

### 3.19.1 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 <b>crypto map connect</b> command has been introduced.

## 3.19.2 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 <b>crypto map enable</b> command has been introduced.

## 3.19.3 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

<b>Multiple input</b>	No						
<b>Synopsis</b>	<pre>(config-crypto-map)&gt; <b>fallback-check-interval</b> &lt;interval-value&gt;</pre> <pre>(config-crypto-map)&gt; <b>no fallback-check-interval</b></pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>interval-value</td> <td><i>Integer</i></td> <td>Period of checking in seconds. Can take values in the range from 60 to 86400.</td> </tr> </tbody> </table>	Argument	Value	Description	interval-value	<i>Integer</i>	Period of checking in seconds. Can take values in the range from 60 to 86400.
Argument	Value	Description					
interval-value	<i>Integer</i>	Period of checking in seconds. Can take values in the range from 60 to 86400.					
<b>Example</b>	<pre>(config-crypto-map)&gt; <b>fallback-check-interval 120</b></pre> <pre>IpSec::Manager: "test": crypto map fallback check interval is ►</pre> <pre>set to 120.</pre> <pre>(config-crypto-map)&gt; <b>no fallback-check-interval</b></pre> <pre>IpSec::Manager: "test": crypto map fallback check interval is ►</pre> <pre>cleared.</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.06</td> <td>The <b>crypto map fallback-check-interval</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	2.06	The <b>crypto map fallback-check-interval</b> command has been introduced.		
Version	Description						
2.06	The <b>crypto map fallback-check-interval</b> command has been introduced.						

### 3.19.4 crypto map force-encaps

<b>Description</b>	Enforce the <i>ESP</i> packet wrapping mode in <i>UDP</i> to bypass the firewall and NAT. Command with <b>no</b> prefix disables the mode.
<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Synopsis</b>	<pre>(config-crypto-map)&gt; <b>force-encaps</b></pre> <pre>(config-crypto-map)&gt; <b>no force-encaps</b></pre>
<b>Example</b>	<pre>(config-crypto-map)&gt; <b>force-encaps</b></pre> <pre>IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ►</pre> <pre>enabled.</pre> <pre>(config-crypto-map)&gt; <b>no force-encaps</b></pre> <pre>IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ►</pre> <pre>disabled.</pre>

**History**

Version	Description
2.08	The <b>crypto map force-encaps</b> command has been introduced.

## 3.19.5 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	<i>IP address</i>	Network client address.
mask	<i>IP-mask</i>	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 <b>crypto map l2tp-server dhcp route</b> command has been introduced.

## 3.19.6 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 <b>crypto map l2tp-server enable</b> command has been introduced.

## 3.19.7 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	<i>Interface</i>	Full name or an alias of the interface. You can see the list of available interfaces with help of <b>l2tp-server interface [Tab]</b> 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 <b>crypto map l2tp-server interface</b> command has been introduced.

## 3.19.8 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 <b>crypto map l2tp-server ipv6cp</b> command has been introduced.

### 3.19.9 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	<i>Integer</i>	Interval between sending <i>LCP</i> echo, in seconds. If within the specified time interval there is no <i>LCP</i> echo request from the remote location, the same request will be sent there asking for response <i>LCP</i> reply.
count	<i>Integer</i>	The number of consecutive requests <i>LCP</i> echo sent, for which no response <i>LCP</i> reply was received. If count of <i>LCP</i> 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 <b>crypto map l2tp-server lcp echo</b> command has been introduced.

### 3.19.10 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 <mr>
```

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

**Arguments**

Argument	Value	Description
mru	<i>Integer</i>	<i>MRU</i> 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 <b>crypto map l2tp-server mru</b> command has been introduced.

### 3.19.11 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 <mt>
```

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

**Arguments**

Argument	Value	Description
mtu	<i>Integer</i>	<i>MTU</i> 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 <b>crypto map l2tp-server mtu</b> command has been introduced.

## 3.19.12 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 <b>crypto map l2tp-server multi-login</b> command has been introduced.

## 3.19.13 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 <b>crypto map l2tp-server nat</b> command has been introduced.

## 3.19.14 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	<i>IP address</i>	Start address of pool.
end	<i>IP address</i>	End address of pool.
size	<i>Integer</i>	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 <b>crypto map l2tp-server range</b> command has been introduced.

## 3.19.15 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	<i>String</i>	Username.
address	<i>IP address</i>	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 <b>crypto map l2tp-server static-ip</b> command has been introduced.

## 3.19.16 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 <b>crypto map nail-up</b> command has been introduced.

### 3.19.17 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 <b>crypto map reauth-passive</b> command has been introduced.



### 3.19.18 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	<i>String</i>	IP address or domain name of remote host.
	any	Accept any incoming connections.

**Example**

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

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

**History**

Version	Description
2.06	The <b>crypto map set-peer</b> command has been introduced.

### 3.19.19 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	<i>String</i>	IP address or domain name of remote host.

**Example**

```
(config-crypto-map)> set-peer-fallback test.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 <b>crypto map set-peer-fallback</b> command has been introduced.

## 3.19.20 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	<i>String</i>	<i>IPsec</i> profile name. You can see the list of available profiles with help of <b>set-profile [Tab]</b> 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 <b>crypto map set-profile</b> command has been introduced.

## 3.19.21 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 identify *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	<i>Integer</i>	<i>MSS</i> upper limit. Can take values in the range from 576 to 1500.
	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 <b>crypto map set-tcpmss</b> command has been introduced.

## 3.19.22 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 <b>set-transform</b> [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 <b>crypto map set-transform</b> command has been introduced.

### 3.19.23 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	<i>String</i>	Name of local object group.
remote	<i>String</i>	Name of remote object group.

**Example**

```
(config-crypto-map)> traffic-selectors ►
 WEBADMIN_IPSEC_VPNL2TPServer-local ►
 WEBADMIN_IPSEC_VPNL2TPServer-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 <b>crypto map traffic-selectors</b> command has been introduced.

## 3.19.24 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	<i>Interface</i>	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 <b>crypto map tunnel-interface</b> command has been introduced.

### 3.19.25 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	<i>IP address</i>	Network client address.
mask	<i>IP-mask</i>	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 <b>crypto map virtual-ip dhcp route</b> command has been introduced.

## 3.19.26 crypto map virtual-ip dns-server

**Description** Set *DNS* server issued to clients in Virtual IP server mode.

Command with **no** prefix deletes the address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config-crypto-map)> virtual-ip dns-server <address>
(config-crypto-map)> no virtual-ip dns-server
```

**Arguments**

Argument	Value	Description
address	<i>IP address</i>	IP address of <i>DNS</i> server.

**Example**

```
(config-crypto-map)> virtual-ip dns-server 10.5.5.5
IpSec::Manager: "test": crypto map Virtual IP DNS server set to ►
"10.5.5.5".
```

```
(config-crypto-map)> no virtual-ip dns-server
IpSec::Manager: "test": crypto map Virtual IP DNS server deleted.
```

**History**

Version	Description
2.08	The <b>crypto map virtual-ip dns-server</b> command has been introduced.

## 3.19.27 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.
```

Version	Description
2.08	The <b>crypto map virtual-ip enable</b> command has been introduced.

### 3.19.28 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.
```

Version	Description
3.05	The <b>crypto map virtual-ip multi-login</b> command has been introduced.

### 3.19.29 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 <b>crypto map virtual-ip nat</b> command has been introduced.

## 3.19.30 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	<i>IP address</i>	The beginning of the address range.
end	<i>IP address</i>	The end of the address range.
size	<i>Integer</i>	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 <b>crypto map virtual-ip range</b> command has been introduced.

### 3.19.31 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	<i>String</i>	Username.
address	<i>IP address</i>	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 <b>crypto map virtual-ip static-ip</b> command has been introduced.

## 3.20 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)>

Version	Description
2.00	The <b>dlna</b> command has been introduced.

## 3.20.1 dlina 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**

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.

Version	Description
2.11	The <b>dlina container</b> command has been introduced.

## 3.20.2 dlina 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	<i>String</i>	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 <b>dlna db-directory</b> command has been introduced.

### 3.20.3 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	<i>String</i>	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 <b>dlna directory</b> command has been introduced.
2.06	Parameter <code>media-type</code> was added.

## 3.20.4 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
<code>display-name</code>	<i>String</i>	Server name to assign.

**Example**

```
(config-dlna)> display-name MYDLNA
Dlna::Server: Set a display name.
```

**History**

Version	Description
2.12	The <b>dlna display-name</b> command has been introduced.

## 3.20.5 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>dlna interface</b> command has been introduced.

## 3.20.6 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
```

Argument	Value	Description
port	<i>Integer</i>	The port number.

**Example**

```
(config-dlna)> port 8999
Dlna::Server: Port changed to 8999.
```

```
(config-dlna)> no port
Dlna::Server: Port reset to 8200.
```

Version	Description
2.00	The <b>dlna port</b> command has been introduced.

## 3.20.7 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 ]
```

Argument	Value	Description
full	<i>Keyword</i>	Specifies if rebuilding of database content is needed.

**Example**

```
(config-dlna)> rescan
```

```
(config-dlna)> rescan full
```

**History**

Version	Description
2.00	The <b>dlna rescan</b> command has been introduced.

## 3.20.8 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 <b>dlna sort</b> command has been introduced.



## 3.21 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 <b>dns-proxy</b> command has been introduced.

### 3.21.1 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-dnsp) > 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-dnsp) > no filter assign host preset
Dns::Filter::Public: Removed presets for hosts.
```

## History

Version	Description
3.08	The <b>dns-proxy filter assign host preset</b> command has been introduced.

## 3.21.2 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-dnsp) > filter assign host profile <host> <profile>
```

```
(config-dnsp) > no filter assign host profile [<host>]
```

### Arguments

Argument	Value	Description
host	<i>MAC address</i>	Network device MAC address.
profile	<i>String</i>	Profile name.

### Example

```
(config-dnsp) > 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-dnsp) > 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-dnsp) > no filter assign host profile
Dns::Filter::Public: Removed profiles for hosts.
```

History	Version	Description
	3.08	The <b>dns-proxy filter assign host profile</b> command has been introduced.

### 3.21.3 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	<i>Interface</i>	Network interface name. Must have a private or protected security level.
	preset	<i>String</i>	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 <b>dns-proxy filter assign interface preset</b> command has been introduced.

## 3.21.4 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	<i>Interface</i>	Network interface name. Must have a private or protected security level.
profile	<i>String</i>	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 <b>dns-proxy filter assign interface profile</b> command has been introduced.

## 3.21.5 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.
	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 <b>dns-proxy filter engine</b> command has been introduced.

## 3.21.6 dns-proxy filter profile

**Description** Create a user-defined 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	<i>String</i>	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 <b>dns-proxy filter profile</b> command has been introduced.

## 3.21.7 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	<i>String</i>	Profile name.
description	<i>String</i>	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 <b>dns-proxy filter profile description</b> command has been introduced.

## 3.21.8 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	<i>String</i>	Profile name.
address	<i>IP address</i>	IP address of the server.
port	<i>Integer</i>	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 <b>dns-proxy filter profile dns53 upstream</b> command has been introduced.

## 3.21.9 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	<i>String</i>	Profile name.
url	<i>String</i>	URL of DNS service.
hash	<i>String</i>	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 <b>dns-proxy filter profile https upstream</b> command has been introduced.

## 3.21.10 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
```



Argument	Value	Description
name	<i>String</i>	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".
```

Version	Description
3.09	The <b>dns-proxy filter profile intercept enable</b> command has been introduced.

### 3.21.11 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> ]
```

Argument	Value	Description
name	<i>String</i>	Profile name.
address	<i>IP address</i> <i>FQDN</i>	Address of the server.
port	<i>Integer</i>	The server port.
fqdn	<i>String</i>	Full domain name.
hash	<i>String</i>	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 <b>dns-proxy filter profile tls upstream</b> command has been introduced.

## 3.21.12 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	<i>String</i>	Custom URL of DNS service.
format	dnsm	The format to represent DNS data.
	json	
hash	<i>String</i>	Hash TLS certificate.
interface	<i>Interface</i>	Interface name to configure.
domain	<i>String</i>	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.domain.com/dns-query ▶
dnsm domain my.lib
```

```
Dns::Secure::ManagerDoh: DNS-over-HTTPS name server ▶
"https://my.domain.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 <b>dns-proxy https upstream</b> command has been introduced.
3.08	The domain argument was added.

## 3.21.13 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 <b>dns-proxy intercept enable</b> command has been introduced.
3.08	The <b>dns-proxy intercept enable</b> command was removed as obsolete.
3.09	The <b>dns-proxy intercept enable</b> command has been added again.

## 3.21.14 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	<i>Integer</i>	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 <b>dns-proxy max-ttl</b> command has been introduced.

## 3.21.15 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	<i>Integer</i>	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 <b>dns-proxy proceed</b> command has been introduced.

## 3.21.16 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	<i>Keyword</i>	Protect subnets for private interfaces.
strict	<i>Keyword</i>	Protect subnets from list <a href="https://www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml">IANA IPv4 Special-Purpose Address Registry</a> <sup>1</sup> .

**Example**

```
(config-dnspx)> rebind-protect auto
Dns::Manager: Enabled rebind protection.
```

<sup>1</sup> <https://www.iana.org/assignments/iana-ipv4-special-registry/iana-ipv4-special-registry.xhtml>

```
(config-dnspx)> no rebind-protect
Dns::Manager: Disabled rebind protection.
```

**History**

Version	Description
3.04	The <b>dns-proxy rebind-protect</b> command has been introduced.

## 3.21.17 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	<i>Integer</i>	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 <b>dns-proxy srr-reset</b> command has been introduced.

## 3.21.18 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	<i>IP address</i>	IP address of the server.
port	<i>Integer</i>	The server port.
fqdn	<i>String</i>	Full domain name.
hash	<i>String</i>	Hash TLS certificate.
interface	<i>Interface</i>	Interface name to configure.
domain	<i>String</i>	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 144.144.144.143 853 sni ►
my.domain.com domain my.lib
Dns::Secure::ManagerDot: DNS-over-TLS name server ►
144.144.144.143:853 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 <b>dns-proxy tls upstream</b> command has been introduced.
3.08	The domain argument was added.

## 3.22 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.
```

Version	Description
3.05	The <b>dpn accept</b> command has been introduced.

## 3.23 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>`

Argument	Value	Description
name	<i>String</i>	The profile name. Maximum name length is 64 characters.

**Example**

```
(config)> dyndns profile _WEBADMIN
Core::Configurator: Done.
(config-dyndns)>
```

Version	Description
2.00	The <b>dyndns profile</b> command has been introduced.



### 3.23.1 dyndns profile domain

**Description** Assign permanent domain name to the computer. You need to register this domain name on the site [dyndns.com](http://www.dyndns.com)<sup>2</sup> or [no-ip.com](http://www.no-ip.com)<sup>3</sup> 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	<i>String</i>	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.
```

**History**

Version	Description
2.00	The <b>dyndns profile domain</b> command has been introduced.

### 3.23.2 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
```

<sup>2</sup> <http://www.dyndns.com>

<sup>3</sup> <http://www.no-ip.com>

**Arguments**

Argument	Value	Description
password	<i>String</i>	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 <b>dyndns profile password</b> command has been introduced.

### 3.23.3 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 <b>dyndns profile send-address</b> command has been introduced.

### 3.23.4 dyndns profile type

**Description**

Set DynDns type depending on the site where the domain name was registered.

**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config-dyndns)> type <type>
(config-dyndns)> no type
```

**Arguments**

Argument	Value	Description
type	dyndns	Used if the domain name was registered on the <a href="http://www.dyndns.com">dyndns.com</a> <sup>4</sup> site.
	noip	Used if the domain name was registered on the <a href="http://www.no-ip.com">no-ip.com</a> <sup>5</sup> site.
	custom	Used if the domain name was registered on the other site (defined with <a href="#">dyndns profile url</a> 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 <b>dyndns profile type</b> command has been introduced.

### 3.23.5 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	<i>Integer</i>	Interval time in days.

<sup>4</sup> <http://www.dyndns.com>

<sup>5</sup> <http://www.no-ip.com>

Argument	Value	Description
hours	<i>Integer</i>	Interval time in hours.
minutes	<i>Integer</i>	Interval time in minutes.
seconds	<i>Integer</i>	Interval time in seconds.

**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 <b>dyndns profile update-interval</b> command has been introduced.

## 3.23.6 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	<i>String</i>	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 <b>dyndns profile url</b> command has been introduced.

### 3.23.7 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	<i>String</i>	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 <b>dyndns profile username</b> command has been introduced.

## 3.24 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 <b>easyconfig check</b> command has been introduced.

## 3.24.1 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 <b>easyconfig check exclude-gateway</b> command has been introduced.

## 3.24.2 easyconfig check host

**Description**

Specify the hostnames used to send requests for Internet access detection. By default, host address is google.com.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

```
(ezconfig-check)> host <host>
```

```
(ezconfig-check)> no host [ <host> ]
```

**Arguments**

Argument	Value	Description
host	<i>String</i>	Remote host name.

```

Example      (ezconfig-check)> host google.com
Network::InternetChecker: "google.com" name added.

(ezconfig-check)> no host google.com
Network::InternetChecker: "google.com" name removed.

(ezconfig-check)> no host
Network::InternetChecker: Domain name set reset to default.

```

**History**

Version	Description
2.00	The <b>easyconfig check host</b> command has been introduced.

### 3.24.3 easyconfig check max-fails

**Description** Specify the number of consecutive failed requests to the hostnames determined with **easyconfig check host** command. 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	<i>Integer</i>	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 <b>easyconfig check max-fails</b> command has been introduced.

## 3.24.4 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	<i>Integer</i>	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 <b>easyconfig check period</b> command has been introduced.

## 3.25 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 <b>easyconfig disable</b> command has been introduced.

## 3.26 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 <b>eula accept</b> command has been introduced.

## 3.27 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 <b>igmp-proxy</b> command has been introduced.

### 3.27.1 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
Igm::Proxy: Enabled Fast Leave.
```

```
(igmp-proxy)> no fast-leave
Igm::Proxy: Disabled Fast Leave.
```

History	Version	Description
	3.09	The <b>igmp-proxy fast-leave</b> command has been introduced.

### 3.27.2 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
```

Argument	Value	Description
protocol	igmp-v1	Apply filtering to incoming packets.
	igmp-v2	Apply filtering to outgoing packets.

**Example**

```
(igmp-proxy)> force igmp-v1
Igmpp::Proxy: Forced protocol: igmp-v1.
```

```
(igmp-proxy)> no force
Igmpp::Proxy: Enabled IGMP auto-detect.
```

Version	Description
2.08	The <b>igmp-proxy force</b> command has been introduced.

## 3.28 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
Igmpp::Snooping: Disabled.
```

```
(config)> no igmp-snooping disable
Igmpp::Snooping: Enabled.
```

Version	Description
2.12	The <b>igmp-snooping disable</b> command has been introduced.

## 3.29 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes
<b>Group entry</b>	(config-if)

**Synopsis**

```
(config)> interface <name>
(config)> no interface <name>
```

Argument	Value	Description
name	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [Tab] command.

### Example

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

Usage template:

```
interface {name}
```

Choose:

```

Pvc
Vlan
CdcEthernet
UsbModem
RealtekEthernet
AsixEthernet
Davicom
UsbQmi
UsbLte
Yota
Bridge
PPPoE
SSTPEthernet
SSTP
PPTP
L2TP
ZeroTier
Wireguard
Proxy
OpenVPN
IPIP
XFRM
TunnelSixInFour
```

```

IKE
Gre
EoIP
Clat
MapT
DsLite
TunnelFourInSix
Chilli

```

**History**

Version	Description
2.00	The <b>interface</b> command has been introduced.

## 3.29.1 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 <b>interface authentication chap</b> command has been introduced.

## 3.29.2 interface authentication eap-md5

**Description**

Enable EAP-MD5 authentication support.

Command with **no** prefix disables EAP-MD5.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 <b>interface authentication eap-md5</b> command has been introduced.

### 3.29.3 interface authentication eap-mschapv2

**Description** Enable EAP-MSCHAPv2 authentication support.  
Command with **no** prefix disables EAP-MSCHAPv2, MS-CHAPv2.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 <b>interface authentication eap-mschapv2</b> command has been introduced.

### 3.29.4 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 <b>interface authentication eap-ttls</b> command has been introduced.

### 3.29.5 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	<i>String</i>	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 <b>interface authentication identity</b> command has been introduced.

## 3.29.6 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 <b>interface authentication mschap</b> command has been introduced.



## 3.29.7 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": authentication is ►
unchanged.

(config-if)> no authentication mschap-v2
Network::Interface::Supplicant: "PPTP0": removed authentication: ►
MS-CHAPv2.
```

### History

Version	Description
2.00	The <b>interface authentication mschap-v2</b> command has been introduced.

## 3.29.8 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 <b>interface authentication pap</b> command has been introduced.

## 3.29.9 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	<i>String</i>	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 <b>interface authentication password</b> command has been introduced.

## 3.29.10 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 <b>interface authentication peap</b> command has been introduced.

### 3.29.11 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 <b>interface authentication shared</b> command has been introduced.

## 3.29.12 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	<i>String</i>	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 <b>interface authentication wpa-psk</b> command has been introduced.

## 3.29.13 interface auto-ssid

**Description**

Generate a custom wireless network name (SSID) based on the router's MAC address.

<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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	<i>String</i>	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 <b>interface auto-ssid</b> command has been introduced.

## 3.29.14 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 <b>interface backhaul</b> command has been introduced.

## 3.29.15 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 <b>interface band-steering</b> command has been introduced.

## 3.29.16 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 <b>interface band-steering preference</b> command has been introduced.

## 3.29.17 interface beamforming explicit

**Description** Enable explicit *Beamforming* (eBF) for AP 5 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

<b>Interface type</b>	WiFiMaster							
<b>Synopsis</b>	<pre>(config-if)&gt; <b>beamforming explicit</b> [<i>mu-mimo</i>]</pre> <pre>(config-if)&gt; <b>no beamforming explicit</b></pre>							
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>mu-mimo</td> <td><i>Keyword</i></td> <td>Control MU-MIMO flags for explicit Beamforming. Enable control of data flow for multiple users.</td> </tr> </tbody> </table>		Argument	Value	Description	mu-mimo	<i>Keyword</i>	Control MU-MIMO flags for explicit Beamforming. Enable control of data flow for multiple users.
Argument	Value	Description						
mu-mimo	<i>Keyword</i>	Control MU-MIMO flags for explicit Beamforming. Enable control of data flow for multiple users.						
<b>Example</b>	<pre>(config-if)&gt; <b>beamforming explicit</b></pre> <pre>Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ► beamforming and SU-MIMO enabled.</pre> <pre>(config-if)&gt; <b>beamforming explicit mu-mimo</b></pre> <pre>Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ► beamforming and MU-MIMO enabled.</pre> <pre>(config-if)&gt; <b>no beamforming explicit</b></pre> <pre>Network::Interface::Rtx::WifiMaster: "WifiMaster1": explicit ► beamforming and MIMO disabled.</pre>							
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.10</td> <td>The <b>interface beamforming explicit</b> command has been introduced.</td> </tr> </tbody> </table>		Version	Description	2.10	The <b>interface beamforming explicit</b> command has been introduced.		
Version	Description							
2.10	The <b>interface beamforming explicit</b> command has been introduced.							

### 3.29.18 interface beamforming implicit

<b>Description</b>	<p>Enable implicit <i>Beamforming</i> (iBF) for AP 5 GHz. By default, the setting is disabled.</p> <p>Command with <b>no</b> prefix disables the implicit <i>Beamforming</i>.</p>
<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	WiFiMaster
<b>Synopsis</b>	<pre>(config-if)&gt; <b>beamforming implicit</b></pre> <pre>(config-if)&gt; <b>no beamforming implicit</b></pre>
<b>Example</b>	<pre>(config-if)&gt; <b>beamforming implicit</b></pre> <pre>Network::Interface::Rtx::WifiMaster: "WifiMaster1": implicit ► beamforming enabled.</pre>



```
(config-if)> no beamforming implicit
Network::Interface::Rtx::WifiMaster: "WifiMaster1": implicit ►
beamforming disabled.
```

**History**

Version	Description
2.10	The <b>interface beamforming implicit</b> command has been introduced.

## 3.29.19 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 <b>interface ccp</b> command has been introduced.

## 3.29.20 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.
	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 <b>interface channel</b> command has been introduced.

### 3.29.21 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.

Argument	Value	Description
	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 <b>interface channel auto-rescan</b> command has been introduced.

## 3.29.22 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.

**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 <b>interface channel width</b> command has been introduced.

## 3.29.23 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	<i>Integer</i>	The <i>CoA</i> 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 <b>interface chilli coaport</b> command has been introduced.

## 3.29.24 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	<i>Interface</i>	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 <b>interface chilli dhcpif</b> command has been introduced.

## 3.29.25 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	<i>IP address</i>	Address of primary DNS server.
dns2	<i>IP address</i>	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 <b>interface chilli dns</b> command has been introduced.

## 3.29.26 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	<i>Integer</i>	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 <b>interface chilli lease</b> command has been introduced.

## 3.29.27 interface chilli login

**Description** Configure authorization to connect to the [RADIUS](#) server.

**Prefix no** No

**Change settings** No

<b>Multiple input</b>	No												
<b>Interface type</b>	Chilli												
<b>Synopsis</b>	<pre>(config-if)&gt; <b>chilli login</b> &lt;mac&gt; [<b>username</b> &lt;username&gt; <b>password</b> &lt;password&gt; ]</pre>												
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>mac</td> <td><i>MAC address</i></td> <td>MAC address for authentication.</td> </tr> <tr> <td>username</td> <td><i>String</i></td> <td>Username for authentication.</td> </tr> <tr> <td>password</td> <td><i>String</i></td> <td>The password for authentication.</td> </tr> </tbody> </table>	Argument	Value	Description	mac	<i>MAC address</i>	MAC address for authentication.	username	<i>String</i>	Username for authentication.	password	<i>String</i>	The password for authentication.
Argument	Value	Description											
mac	<i>MAC address</i>	MAC address for authentication.											
username	<i>String</i>	Username for authentication.											
password	<i>String</i>	The password for authentication.											
<b>Example</b>	<pre>(config-if)&gt; <b>interface Chilli0 chilli login 00:01:02:03:04:05</b> Chilli::Interface: "Chilli0": sent login request for ► 00:01:02:03:04:05</pre> <pre>(config-if)&gt; <b>interface Chilli0 chilli login 00:01:02:03:04:05 ►</b> <b>username test password test</b> Chilli::Interface: "Chilli0": sent login request for ► 00:01:02:03:04:05</pre>												
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4.00</td> <td>The <b>interface chilli login</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	4.00	The <b>interface chilli login</b> command has been introduced.								
Version	Description												
4.00	The <b>interface chilli login</b> command has been introduced.												

### 3.29.28 interface chilli logout

<b>Description</b>	Force the MAC address of the specified client to be disabled.									
<b>Prefix no</b>	No									
<b>Change settings</b>	No									
<b>Multiple input</b>	No									
<b>Interface type</b>	Chilli									
<b>Synopsis</b>	<pre>(config-if)&gt; <b>chilli logout</b> (&lt;mac&gt;   <b>all</b>)</pre>									
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>mac</td> <td><i>MAC address</i></td> <td>MAC address of the registered client.</td> </tr> <tr> <td>all</td> <td>Keyword</td> <td>Disable all MAC addresses.</td> </tr> </tbody> </table>	Argument	Value	Description	mac	<i>MAC address</i>	MAC address of the registered client.	all	Keyword	Disable all MAC addresses.
Argument	Value	Description								
mac	<i>MAC address</i>	MAC address of the registered client.								
all	Keyword	Disable all MAC addresses.								
<b>Example</b>	<pre>(config-if)&gt; <b>chilli logout 64:a2:22:51:b4:11</b></pre> <pre>(config-if)&gt; <b>chilli logout all</b> Chilli::Interface: "Chilli0": service restarted.</pre>									

**History**

Version	Description
2.10	The <b>interface chilli logout</b> command has been introduced.

**3.29.29 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 <b>interface chilli macauth</b> command has been introduced.

**3.29.30 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
```



Argument	Value	Description
macpasswd	<i>String</i>	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 <b>interface chilli macpasswd</b> command has been introduced.

## 3.29.31 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	<i>IP address</i>	Specific IP address of the server.
wan	<i>Interface</i>	IP address from the specified WAN interface.
auto	<i>Keyword</i>	IP address from the current WAN interface.

**Example**

```
(config-if)> chilli nasip 95.213.215.187
Chilli::Interface: "Chilli0": NAS IP address set to ►
"95.213.215.187".
```

```
(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 <b>interface chilli nasip</b> command has been introduced.

## 3.29.32 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	<i>MAC address</i>	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 <b>interface chilli nasmac</b> command has been introduced.

## 3.29.33 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
```

Argument	Value	Description
profile	<i>String</i>	<i>RADIUS</i> 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.
```

Version	Description
2.10	The <b>interface chilli profile</b> command has been introduced.

### 3.29.34 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
```

Argument	Value	Description
server1	<i>String</i>	Address of first <i>RADIUS</i> server.
server2	<i>String</i>	Address of second <i>RADIUS</i> 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 <b>interface chilli radius</b> command has been introduced.

### 3.29.35 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	<i>String</i>	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 <b>interface chilli radiusacctport</b> command has been introduced.

### 3.29.36 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Chilli

**Synopsis**

```
(config-if)> chilli radiusauthport <radiusauthport>
(config-if)> no chilli radiusauthport
```

<b>Arguments</b>	Argument	Value	Description
	radiusauthport	<i>String</i>	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.
```

<b>History</b>	Version	Description
	3.06	The <b>interface chilli radiusauthport</b> command has been introduced.

### 3.29.37 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Chilli

**Synopsis**

```
(config-if)> chilli radiuslocationid <radiuslocationid>
(config-if)> no chilli radiuslocationid
```

<b>Arguments</b>	Argument	Value	Description
	radiuslocationid	<i>String</i>	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 <b>interface chilli radiuslocationid</b> command has been introduced.

## 3.29.38 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	<i>String</i>	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 <b>interface chilli radiuslocationname</b> command has been introduced.

## 3.29.39 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
```

Argument	Value	Description
radiusnasid	<i>String</i>	NAS identifier.

**Example**

```
(config-if)> chilli radiusnasid keeneticru_12
Chilli::Interface: "Chilli0": radiusnasid set to "keeneticru_12".

(config-if)> no chilli radiusnasid
Chilli::Interface: "Chilli0": radiusnasid cleared.
```

Version	Description
2.10	The <b>interface chilli radiusnasid</b> command has been introduced.

### 3.29.40 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
```

Argument	Value	Description
radiussecret	<i>String</i>	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 <b>interface chilli radiussecret</b> command has been introduced.

## 3.29.41 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	<i>String</i>	IP-address, URL or subnetwork.

**Example** (config-if)> **chilli uamallowed 188.166.114.0/24**  
Chilli::Interface: "Chilli0": "188.166.114.0/24" 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 188.166.114.0/24**  
Chilli::Interface: "Chilli0": "188.166.114.0/24" 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 <b>interface chilli uamallowed</b> command has been introduced.

### 3.29.42 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	<i>String</i>	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 <b>interface chilli uamdomain</b> command has been introduced.

### 3.29.43 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	<i>String</i>	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 <b>interface chilli uamhomepage</b> command has been introduced.

## 3.29.44 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	<i>Integer</i>	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 <b>interface chilli uamport</b> command has been introduced.

### 3.29.45 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	<i>String</i>	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 <b>interface chilli uamsecret</b> command has been introduced.

### 3.29.46 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 <b>interface chilli uamserver</b> command has been introduced.

## 3.29.47 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>
```

Argument	Value	Description
annex	B, G, N	For 2,4 GHz.
	A, N	For 5 GHz.
	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.
```

Version	Description
2.00	The <b>interface compatibility</b> command has been introduced.
2.06	New standard AC was added.

## 3.29.48 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
```

Argument	Value	Description
via	<i>Interface</i>	Interface through which remote node is accessed. For PPPoE this option is mandatory.

**Example**

```
(config-if)> connect via ISP
```

```
(config-if)> no connect
```

Version	Description
2.00	The <b>interface connect</b> command has been introduced.

### 3.29.49 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	<i>String</i>	The country code.

**Example**

```
(config-if)> country-code RU
Network::Interface::Rtx::WifiMaster: "WifiMaster0": country code ►
set.
```

**History**

Version	Description
2.00	The <b>interface country-code</b> command has been introduced.

### 3.29.50 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 <b>interface debug</b> command has been introduced.

## 3.29.51 interface description

**Description** Assign arbitrary description 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	<i>String</i>	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 <b>interface description</b> command has been introduced.

## 3.29.52 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 <b>interface down</b> command has been introduced.

## 3.29.53 interface downlink-mumimo

**Description**

Enable the downlink (explicit) *Beamforming* (eBF) MU-MIMO for AP 5 GHz. 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 <b>interface downlink-mumimo</b> command has been introduced.



## 3.29.54 interface downlink-ofdma

**Description** Enable 802.11ax downlink *OFDMA*. By default, the feature is disabled.  
Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

```
(config-if)> downlink-ofdma
(config-if)> no downlink-ofdma
```

**Example**

```
(config-if)> downlink-ofdma
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
downlink-ofdma enabled.

(config-if)> no downlink-ofdma
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
downlink-ofdma disabled.
```

### History

Version	Description
3.07	The <b>interface downlink-ofdma</b> command has been introduced.

## 3.29.55 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.

Argument	Value	Description
	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 <b>interface duplex</b> command has been introduced.

## 3.29.56 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	<i>String</i>	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 <b>interface dyndns profile</b> command has been introduced.

## 3.29.57 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	<i>Keyword</i>	Not take into account the update rate recommended by service provider.

**Example** `(config-if)> dyndns update`

**History**

Version	Description
2.00	The <b>interface dyndns update</b> command has been introduced.

## 3.29.58 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 <b>interface encryption anonymous-dh</b> command has been introduced.

## 3.29.59 interface encryption disable

**Description** Disable encryption on the wireless interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis** `(config-if)> encryption disable`

**Example** `(config-if)> encryption disable`  
 Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ►  
 wireless encryption disabled.

**History**

Version	Description
2.00	The <b>interface encryption disable</b> command has been introduced.

## 3.29.60 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 <b>interface encryption enable</b> command has been introduced.

## 3.29.61 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	<i>Integer</i>	The key number. Overall, up to 4 keys could be specified.
value	<i>String</i>	The key value as a hexadecimal number, consisting of 10 or 26 digits.
default	<i>Keyword</i>	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 <b>interface encryption key</b> command has been introduced.

### 3.29.62 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 <b>interface encryption mppe</b> command has been introduced.

### 3.29.63 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 <b>interface encryption owe</b> command has been introduced.

## 3.29.64 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	<i>Integer</i>	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 <b>interface encryption tkip hold-down</b> command has been introduced.

### 3.29.65 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 <b>interface encryption wpa</b> command has been introduced.

### 3.29.66 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 <b>interface encryption wpa2</b> command has been introduced.

### 3.29.67 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 <b>interface encryption wpa3</b> command has been introduced.

### 3.29.68 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 <b>interface encryption wpa3 suite-b</b> command has been introduced.

## 3.29.69 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	<i>Keyword</i>	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 <b>interface flowcontrol</b> command has been introduced.

## 3.29.70 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.

<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 <b>follow</b> [Tab] command.

#### Example

```
(config-if)> follow WifiMaster0/AccessPoint0
Network::Interface::AccessPoint: "WifiMaster1/AccessPoint0": set ►
to follow WifiMaster0/AccessPoint0.
```

#### History

Version	Description
3.07	The <b>interface follow</b> command has been introduced.

## 3.29.71 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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.
```

<b>History</b>	Version	Description
	2.13	The <b>interface ft enable</b> command has been introduced.

### 3.29.72 interface ft mdid

**Description** Set Mobility Domain ID for *FT*. By default, KN value is used.  
Command with **no** prefix resets setting to default.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	AccessPoint

**Synopsis**

```
(config-if)> ft mdid <mdid>
(config-if)> no ft mdid
```

<b>Arguments</b>	Argument	Value	Description
	mdid	<i>String</i>	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 <b>interface ft mdid</b> command has been introduced.

## 3.29.73 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 <b>interface ft otd</b> command has been introduced.

## 3.29.74 interface green-ethernet

**Description**

Enable *Green Ethernet* mode on the interface. By default, this mode is disabled.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type** Ethernet

**Synopsis**

```
(config-if)> green-ethernet
(config-if)> no green-ethernet
```

**Example**

```
(config-if)> green-ethernet
Network::Interface::Ethernet: Green ethernet enabled.

(config-if)> no green-ethernet
Network::Interface::Ethernet: Green ethernet disabled.
```

**History**

Version	Description
3.05	The <b>interface green-ethernet</b> command has been introduced.

## 3.29.75 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 <b>interface hide-ssid</b> command has been introduced.

## 3.29.76 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 <b>interface iapp auto</b> command has been introduced.

## 3.29.77 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	<i>String</i>	The value of <i>IAPP</i> 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 <b>interface iapp key</b> command has been introduced.

## 3.29.78 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	<i>Integer</i>	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 <b>interface idle-timeout</b> command has been introduced.

## 3.29.79 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	IP

**Synopsis**

```
(config-if)> igmp downstream
(config-if)> no igmp downstream
```

**Example**

```
(config-if)> igmp downstream
(config-if)> no igmp downstream
```

<b>History</b>	Version	Description
	2.00	The <b>interface igmp downstream</b> command has been introduced.

### 3.29.80 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	IP

**Synopsis**

```
(config-if)> igmp fork
(config-if)> no igmp fork
```

**Example**

```
(config-if)> igmp fork
(config-if)> no igmp fork
```

<b>History</b>	Version	Description
	2.00	The <b>interface igmp fork</b> command has been introduced.

## 3.29.81 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 <b>interface igmp upstream</b> command has been introduced.

## 3.29.82 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	<i>Interface</i>	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 <b>interface include</b> command has been introduced.

### 3.29.83 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	<i>Interface</i>	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 <b>interface inherit</b> command has been introduced.

## 3.29.84 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 *ACL*s 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	<i>String</i>	List of filtering rules as previously created using <a href="#">access-list</a> command.
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 <b>interface ip access-group</b> command has been introduced.

## 3.29.85 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	<i>IP address</i>	The network interface address.
mask	<i>IP-mask</i>	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 be 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 <b>interface ip address</b> command has been introduced.

## 3.29.86 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 [ hostname <hostname> ]
```

```
(config-if)> no ip address dhcp
```

**Arguments**

Argument	Value	Description
hostname	<i>String</i>	Name of the host to be placed in the DHCP option 12 field. This name need not be the same as the host name entered in global configuration mode.

**Example**

```
(config-if)> ip address dhcp hostname QWERTY2
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 <b>interface ip address dhcp</b> command has been introduced.

## 3.29.87 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	<i>Integer</i>	The value of TTL changing. Can take values in the range from 1 to 255 inclusively.

**Example**

```
(config-if)> ip adjust-ttl rcv 1
Network::Interface::Ip: "CdcEthernet0": incoming TTL set to 1.

(config-if)> no ip adjust-ttl rcv
Network::Interface::Ip: "CdcEthernet0": incoming TTL settings ►
removed.
```

**History**

Version	Description
3.07	The <b>interface ip adjust-ttl rcv</b> command has been introduced. Previous command name is <b>interface ip adjust-ttl</b> .

### 3.29.88 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	<i>Integer</i>	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 <b>interface ip adjust-ttl send</b> command has been introduced.

## 3.29.89 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 <b>interface ip alias</b> command has been introduced.

## 3.29.90 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 <b>interface ip dhcp client broadcast</b> command has been introduced.

### 3.29.91 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	<i>String</i>	Vendor class name, enclosed in double quotes.

**Example**

```
(config-if)> ip dhcp client class-id "Hopper"
Dhcp::Client: ISP DHCP client vendor class is set to "Hopper".
```

```
(config-if)> no ip dhcp client class-id
Dhcp::Client: ISP DHCP client vendor class is cleared.
```

**History**

Version	Description
2.02	The <b>interface ip dhcp client class-id</b> command has been introduced.

## 3.29.92 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 <b>interface ip dhcp client debug</b> command has been introduced.

## 3.29.93 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	<i>Interface</i>	Name or alias of the interface whose static address will be displaced.
check-session	<i>Keyword</i>	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 <b>ip dhcp client displace</b> command has been introduced.
2.15	Argument check-session was added.

## 3.29.94 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 <b>interface ip dhcp client dns-routes</b> command has been introduced.

## 3.29.95 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	<i>String</i>	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 <b>interface ip dhcp client fallback</b> command has been introduced.

## 3.29.96 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 <b>interface ip dhcp client hostname</b> command has been introduced.

## 3.29.97 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 <b>interface ip dhcp client name-servers</b> command has been introduced.

### 3.29.98 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 <b>interface ip dhcp client release</b> command has been introduced.

### 3.29.99 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 <b>interface ip dhcp client renew</b> command has been introduced.

### 3.29.100 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 <b>interface ip dhcp client routes</b> command has been introduced.

### 3.29.101 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
	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 <b>interface ip flow</b> command has been introduced.

## 3.29.102 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	<i>Integer</i>	Interface priority to configure the default route. Can take values in the range from 1 to 65534.
order	<i>Integer</i>	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	<i>Keyword</i>	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 <b>interface ip global</b> command has been introduced.
2.09	The order and auto arguments were added.

## 3.29.103 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	<i>Integer</i>	<i>MRU</i> 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 <b>interface ip mru</b> command has been introduced.

## 3.29.104 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	<i>Integer</i>	<i>MTU</i> 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 <b>interface ip mtu</b> command has been introduced.

### 3.29.105 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 <b>ip nat loopback</b> command has been introduced.

### 3.29.106 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	<i>IP address</i>	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 <b>interface ip remote</b> command has been introduced.

## 3.29.107 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	<i>Keyword</i>	Set the upper limit of <i>MSS</i> , equal to the minimum <i>MTU</i> along the path to the remote peer.
mss	<i>Integer</i>	<i>MSS</i> 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 <b>interface ip tcp adjust-mss</b> command has been introduced.

### 3.29.108 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 <b>interface ipcp address</b> command has been introduced.

### 3.29.109 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 <b>interface ipcp default-route</b> command has been introduced.

### 3.29.110 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 <b>interface ipcp dns-routes</b> command has been introduced.

### 3.29.111 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 <b>interface ipcp name-servers</b> command has been introduced.

## 3.29.112 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	<i>Keyword</i>	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 <b>interface ipcp vj</b> command has been introduced.

### 3.29.113 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, <i>PFS</i> is mandatory, priority is given to AES256 and SHA1.
	weak-pfs	The same as weak, but for the second phase <i>PFS</i> group 1 and 2 is enabled.
	normal-pfs	The same as normal, but for the second phase <i>PFS</i> group 2 and 5 is enabled.
	normal-3des-pfs	The same as normal-3des, but for the second phase <i>PFS</i> 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 <i>AEAD</i> algorithms.
	strong-aead-pfs	The strongest level, <i>PFS</i> is mandatory, priority is given to AES256 and SHA1 with addition of <i>AEAD</i> 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 <b>interface ipsec encryption-level</b> command has been introduced.
3.07	New levels of encryption has been added — high, strong-aead and strong-aead-pfs.

### 3.29.114 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 <b>interface ipsec force-encaps</b> command has been introduced.

### 3.29.115 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 <b>interface ipsec ignore</b> command has been introduced.

## 3.29.116 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 <b>interface ipsec ikev2</b> command has been introduced.

### 3.29.117 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 <b>interface ipsec nail-up</b> command has been introduced.

### 3.29.118 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 <b>interface ipsec name-servers</b> command has been introduced.

## 3.29.119 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	<i>String</i>	Secret PSK key value.

**Example**

```
(config-if)> ipsec preshared-key 12345678
Network::Interface::Secure: "Gre0": preshared key was set.
```

```
(config-if)> no ipsec preshared-key
Network::Interface::Secure: "Gre0": preshared key was reset.
```

**History**

Version	Description
2.08	The <b>interface ipsec preshared-key</b> command has been introduced.

## 3.29.120 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	<i>Integer</i>	Lifetime of <i>IPSec</i> 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 <b>interface ipsec proposal lifetime</b> command has been introduced.

## 3.29.121 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	<i>String</i>	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 <b>interface ipsec proposal local-id</b> command has been introduced.

## 3.29.122 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	<i>String</i>	IP address or domain name of remote host.

**Example**

```
(config-if)> ipsec proposal remote-id my.domain.com
Network::Interface::Secure: Set IKE remote ID to "my.domain.com".
```

```
(config-if)> no ipsec proposal remote-id
Network::Interface::Secure: Reset IKE remote ID.
```

History	Version	Description
	3.08	The <b>interface ipsec proposal remote-id</b> command has been introduced.

### 3.29.123 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	<i>Integer</i>	Lifetime of <i>IPSec</i> transformation in seconds. Can take values in the range from 60 to 2147483647.

**Example**

```
(config-if)> ipsec transform-set lifetime 222222
Network::Interface::Secure: IPsec ESP transform-set lifetime set ►
to 222222 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 <b>interface ipsec transform-set lifetime</b> command has been introduced.

### 3.29.124 interface ipv6 address

**Description** Configure 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	<i>IPv6 address</i>	The network interface address.
block	<i>IPv6 address</i>	The network interface address with mask.
auto	<i>Keyword</i>	Enable stateless autoconfiguration.

**Example**

```
(config-if)> ipv6 address 2a01:291:2:612:52ff:20ff:fe00:1e87
Network::Interface::Ip6: "GigabitEthernet1": added static address ►
2a01:291:2:612:52ff: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 2a01:291:2:612:52ff:20ff:fe00:1e87
Network::Interface::Ip6: "GigabitEthernet1": removed static ►
address 2a01:291:2:612:52ff:20ff:fe00:1e87.
```

```
(config-if)> no ipv6 address
Network::Interface::Ip6: "GigabitEthernet1": cleared addresses.
```

**History**

Version	Description
2.00	The <b>interface ipv6 address</b> command has been introduced.

## 3.29.125 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	<i>Prefix</i>	Requested IPv6 prefix or only its length if specified as <code>::/length</code> .

**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 <b>interface ipv6 dhcp client pd hint</b> command has been introduced.

## 3.29.126 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	<i>Suffix</i>	The static suffix.
eui64	<i>Keyword</i>	The identifier is based on the interface MAC address.
random	<i>Keyword</i>	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 <b>interface ipv6 id</b> command has been introduced.

## 3.29.127 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	<i>Keyword</i>	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 <b>interface ipv6 name-servers</b> command has been introduced.

## 3.29.128 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	<i>Keyword</i>	Enable prefix delegation.
prefix	<i>Prefix</i>	Manual input of prefix.

**Example**

```
(config-if)> ipv6 prefix 2001:db8:43:ab12::/64
Static IPv6 prefix added.
```

**History**

Version	Description
2.00	The <b>interface ipv6 prefix</b> command has been introduced.

## 3.29.129 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 <b>interface ipv6cp</b> command has been introduced.

### 3.29.130 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	<i>Keyword</i>	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 <b>interface lcp acfc</b> command has been introduced.

### 3.29.131 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	<i>Integer</i>	Interval between sending <i>LCP</i> echo, in seconds. If within the specified time interval there is no <i>LCP</i> echo request from the remote location, the same request will be sent there asking for response <i>LCP</i> reply.
count	<i>Integer</i>	The number of consecutive requests <i>LCP</i> echo sent, for which no response <i>LCP</i> reply was received. If count of <i>LCP</i> echo requests goes unanswered, the connection is terminated.
adaptive	<i>Keyword</i>	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 <b>interface lcp echo</b> command has been introduced.
2.06	The adaptive keyword has been added.

## 3.29.132 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	<i>Keyword</i>	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 <b>interface lcp pfc</b> command has been introduced.

## 3.29.133 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 <b>interface ldpc</b> command has been introduced.

### 3.29.134 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 <b>interface led wan</b> command has been introduced.

### 3.29.135 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 <b>interface lldp disable</b> command has been introduced.

**3.29.136 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 <a href="#">ACL</a> .

**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 <b>interface mac access-list address</b> command has been introduced.

**3.29.137 interface mac access-list type****Description**

Set the type for filtering list of the interface. Type is not defined by default (none value assigned).



<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 <b>interface mac access-list type</b> command has been introduced.

## 3.29.138 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.

Warning: Change MAC address on Wi-Fi interface is prohibited.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	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 3C:1F:6E:2A:1C:BA
```

```
(config-if)> no mac address
```

**History**

Version	Description
2.00	The <b>interface mac address</b> command has been introduced.

## 3.29.139 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 <b>interface mac address factory</b> command has been introduced.

## 3.29.140 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 <b>interface mac band</b> command has been introduced.

## 3.29.141 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 <b>interface mac bssid</b> command has been introduced.

## 3.29.142 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 <b>interface mac clone</b> command has been introduced.

## 3.29.143 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	<i>Integer</i>	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 <b>interface mobile lte disable-band</b> command has been introduced.

## 3.29.144 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 <b>interface mobile name-servers</b> command has been introduced.

## 3.29.145 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	<i>String</i>	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 <b>interface mobile operator</b> command has been introduced.

## 3.29.146 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	<i>String</i>	IPv4 only.
ipv6	<i>String</i>	IPv6 only.
ipv4v6	<i>String</i>	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 <b>interface mobile pdp</b> command has been introduced.
3.08	The <b>ipv6</b> argument and <b>NO</b> prefix were added.

## 3.29.147 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 <b>interface mobile roaming</b> command has been introduced.

## 3.29.148 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 <b>interface mobile scan</b> command has been introduced.

## 3.29.149 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



<b>Multiple input</b>	Yes						
<b>Interface type</b>	Usb						
<b>Synopsis</b>	<pre>(config-if)&gt; <b>mobile umts disable-band</b> &lt;band&gt;</pre> <pre>(config-if)&gt; <b>no mobile umts disable-band</b> [ &lt;band&gt; ]</pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>band</td> <td><i>Integer</i></td> <td>UMTS band. Can take values 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 26.</td> </tr> </tbody> </table>	Argument	Value	Description	band	<i>Integer</i>	UMTS band. Can take values 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 26.
Argument	Value	Description					
band	<i>Integer</i>	UMTS band. Can take values 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 26.					
<b>Example</b>	<pre>(config-if)&gt; <b>mobile umts disable-band 6</b></pre> <pre>UsbQmi::Interface: "UsbQmi0": WCDMA band 6 disabled.</pre> <pre>(config-if)&gt; <b>no mobile lte disable-band 6</b></pre> <pre>UsbQmi::Interface: "UsbQmi0": WCDMA band 6 enabled.</pre> <pre>(config-if)&gt; <b>no mobile lte disable-band</b></pre> <pre>UsbQmi::Interface: "UsbQmi0": all WCDMA bands are enabled.</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.05</td> <td>The <b>interface mobile umts disable-band</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	3.05	The <b>interface mobile umts disable-band</b> command has been introduced.		
Version	Description						
3.05	The <b>interface mobile umts disable-band</b> command has been introduced.						

## 3.29.150 interface modem connect

<b>Description</b>	<p>Command to connect for USB-modem. Modem must be initialized with <b>tty init</b> command before execution.</p> <p>Command with <b>no</b> prefix terminates the connection.</p>									
<b>Prefix no</b>	Yes									
<b>Change settings</b>	Yes									
<b>Multiple input</b>	No									
<b>Interface type</b>	UsbModem									
<b>Synopsis</b>	<pre>(config-if)&gt; <b>modem connect</b> ( <b>dial</b> &lt;phone&gt;   &lt;string&gt; )</pre> <pre>(config-if)&gt; <b>no modem connect</b></pre>									
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>phone</td> <td><i>String</i></td> <td>The phone number for dialing.</td> </tr> <tr> <td>string</td> <td><i>String</i></td> <td>An arbitrary command.</td> </tr> </tbody> </table>	Argument	Value	Description	phone	<i>String</i>	The phone number for dialing.	string	<i>String</i>	An arbitrary command.
Argument	Value	Description								
phone	<i>String</i>	The phone number for dialing.								
string	<i>String</i>	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 <b>interface modem connect</b> command has been introduced.

## 3.29.151 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	<i>Integer</i>	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 <b>interface modem timeout</b> command has been introduced.

### 3.29.152 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.

(config-if)> no openvpn accept-routes
Network::Interface::OpenVpn: "OpenVPN0": disable automatic routes ▶
accept via tunnel.
```

#### History

Version	Description
2.10	The <b>interface openvpn accept-routes</b> command has been introduced.

### 3.29.153 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	<i>Interface</i>	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 <b>interface openvpn connect</b> command has been introduced.

## 3.29.154 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 <b>interface openvpn name-servers</b> command has been introduced.

## 3.29.155 interface peer

**Description**

Specify ID of the remote peer to which the [PPP](#) connection will be used. A more precise meaning of configuration 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	<i>String</i>	Remote connection point ID or remote server address <code>host.example.net:port</code> . By default, port number is 443.

**Example**

```
(config-if)> peer 111
```

```
(config-if)> peer host.example.net:5555
```

**History**

Version	Description
2.00	The <b>interface peer</b> command has been introduced.
2.12	Added the ability to change the port of a remote server.

## 3.29.156 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.
```

Version	Description
2.10	The <b>interface peer-isolation</b> command has been introduced.

## 3.29.157 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
```

Argument	Value	Description
profile	<i>String</i>	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".
```

Version	Description
2.04	The <b>interface ping-check profile</b> command has been introduced.

## 3.29.158 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 <i>Ping Check</i> on the binded interface is triggered. If this argument is not specified, the interface binded with <i>Ping Check</i> 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 <b>interface ping-check restart</b> command has been introduced.

## 3.29.159 interface pmf

**Description** Enable *PMF* functionality.  
Command with **no** prefix disables the feature.

**Prefix no** Yes**Change settings** Yes**Multiple input** No**Interface type** WiFi**Synopsis**

```
(config-if)> pmf
```

```
(config-if)> no pmf
```

**Example**

```
(config-if)> pmf
Network::Interface::Rtx::WifiStation: "WifiMaster0/WifiStation0": ►
PMF enabled.
```

```
(config-if)> no pmf
Network::Interface::Rtx::WifiStation: "WifiMaster0/WifiStation0": ►
PMF disabled.
```

**History**

Version	Description
2.09	The <b>interface pmf</b> command has been introduced.

## 3.29.160 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	<i>Integer</i>	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 <b>interface pmksa-lifetime</b> command has been introduced.

## 3.29.161 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	<i>Integer</i>	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 <b>interface power</b> command has been introduced.

## 3.29.162 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	<i>String</i>	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 <b>interface pppoe service</b> command has been introduced.

### 3.29.163 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 <b>interface pppoe session auto-cleanup</b> command has been introduced.

### 3.29.164 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 <b>interface preamble-short</b> command has been introduced.

## 3.29.165 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	<i>Interface</i>	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 <b>interface proxy connect</b> command has been introduced.

## 3.29.166 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
```

Argument	Value	Description
protocol	socks5	Use <a href="#">SOCKS5</a> protocol for connection.
	http	Use <a href="#">HTTP</a> or <a href="#">HTTPS</a> 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.
```

Version	Description
3.09	The <b>interface proxy protocol</b> command has been introduced.

### 3.29.167 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 <b>interface proxy socks5-udp</b> command has been introduced.

## 3.29.168 interface proxy udpgw-upstream

**Description**

Set proxy server for *UDP* connection.

Note: Command is available if the *SOCKS5* is the connection protocol.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Proxy

**Synopsis**

```
(config-if)> proxy udpgw-upstream <host> [ <port> ]
```

```
(config-if)> no proxy udpgw-upstream
```

**Arguments**

Argument	Value	Description
host	<i>String</i>	IP-address or domain name of proxy server.
port	<i>Integer</i>	The <i>UDP</i> port of server.

**Example**

```
(config-if)> proxy udpgw-upstream 202.150.93.130 8080
Proxy::Interface: "Proxy0": set proxy UDPGW upstream to ►
202.150.93.130:8080.
```

```
(config-if)> no proxy udpgw-upstream
Proxy::Interface: "Proxy0": cleared proxy UDPGW upstream.
```

**History**

Version	Description
4.1	The <b>interface proxy udpgw-upstream</b> command has been introduced.

## 3.29.169 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	<i>String</i>	IP-address or domain name of proxy server.
port	<i>Integer</i>	The server port.

**Example**

```
(config-if)> proxy upstream 161.8.174.48 1080
Proxy::Interface: "Proxy0": set proxy upstream to ►
161.8.174.48:1080.
```

```
(config-if)> no proxy upstream
Proxy::Interface: "Proxy0": cleared proxy upstream.
```

**History**

Version	Description
3.09	The <b>interface proxy upstream</b> command has been introduced.

## 3.29.170 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	<i>Integer</i>	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 <b>interface reconnect-delay</b> command has been introduced.

## 3.29.171 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	<i>Integer</i>	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 <b>interface rekey-interval</b> 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.

**3.29.172 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	<i>String</i>	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 <b>interface rename</b> command has been introduced.

**3.29.173 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 <b>interface rf e2p set</b> command has been introduced.

## 3.29.174 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 <a href="#">IP Policy</a> .
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 <b>interface role</b> command has been introduced.
2.10	Argument misc was added.

## 3.29.175 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 <b>interface rrm</b> command has been introduced.

## 3.29.176 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	<i>Integer</i>	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 <b>interface rssi-threshold</b> command has been introduced.

## 3.29.177 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	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>interface schedule</b> command has been introduced.

## 3.29.178 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 <code>interface security-level</code> command has been introduced.
2.06	The protected parameter was added.

## 3.29.179 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 <b>interface sim pin</b> command has been introduced.
4.00	Prefix no was added.

## 3.29.180 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 <b>interface sim slot</b> command has been introduced.

### 3.29.181 interface spatial-reuse

**Description** Enable support of *Spatial Reuse* for AP 2,4 GHz and 5 GHz. By default, setting is enabled.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis** | (config-if)> **spatial-reuse**

| (config-if)> **no spatial-reuse**

**Example** (config-if)> **spatial-reuse**  
Network::Interface::Rtx::WifiMaster: "WifiMaster0": llax spatial ►  
reuse enabled.

(config-if)> **no spatial-reuse**  
Network::Interface::Rtx::WifiMaster: "WifiMaster0": llax spatial ►  
reuse disabled.

History	Version	Description
	3.08	The <b>interface spatial-reuse</b> command has been introduced.

### 3.29.182 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	<i>Keyword</i>	Connection speed in Mbit/s.
100		
1000		
auto	<i>Keyword</i>	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 <b>interface speed</b> command has been introduced.

## 3.29.183 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 <b>interface speed nonegotiate</b> command has been introduced.

## 3.29.184 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	<i>String</i>	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 <b>interface ssid</b> command has been introduced.

## 3.29.185 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.

**History**

Version	Description
4.00	The <b>interface standby enable</b> command has been introduced.

## 3.29.186 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 <b>interface storm-control disable</b> command has been introduced.

## 3.29.187 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	<i>Integer</i>	Access <a href="#">VLAN</a> 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 <b>interface switchport access</b> command has been introduced.

## 3.29.188 interface switchport friend

**Description** Configure unidirectional [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	<i>Integer</i>	Friend <a href="#">VLAN</a> 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 <b>interface switchport friend</b> command has been introduced.

## 3.29.189 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 <i>VLAN</i> , 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 <b>switchport access</b> command. The port is an output one only for <i>VLAN</i> with PVID ID. Once a frame is transferred to the port, the <i>VLAN</i> marker gets removed.
	trunk	Enable the <i>VLAN</i> 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 <i>VLAN</i> networks that include the port is set with <b>switchport trunk</b> command.
q-in-q	<i>Keyword</i>	Enable double tagging.

**Example**

```
(config-if)> switchport mode access
Network::Interface::Switch: "GigabitEthernet0/1": access mode ►
enabled.
```

**History**

Version	Description
2.06	The <b>interface switchport mode</b> command has been introduced.

## 3.29.190 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	<i>Integer</i>	<i>VLAN</i> 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 <b>interface switchport trunk</b> command has been introduced.

## 3.29.191 interface target-waketime

**Description**

Enable *TWT (Target Wake Time)* function for AP 2,4 GHz and 5 GHz. By default, the setting for AP 2,4 GHz is disabled, for AP 5 GHz is enabled.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

WiFiMaster

**Synopsis**

```
(config-if)> target-waketime
```

```
(config-if)> no target-waketime
```

**Example**

```
(config-if)> target-waketime
Network::Interface::Rtx::WifiMaster: "WifiMaster0": 11ax TWT ►
enabled.
```

```
(config-if)> no target-waketime
Network::Interface::Rtx::WifiMaster: "WifiMaster0": 11ax TWT ►
disabled.
```

**History**

Version	Description
3.07	The <b>interface target-waketime</b> command has been introduced.

## 3.29.192 interface traffic-counter action disconnect

**Description**

Disconnect from the provider when the traffic limit is reached.

<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Usb

**Synopsis** `(config-if)> traffic-counter action <trigger> disconnect`

<b>Arguments</b>	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".

<b>History</b>	Version	Description
	3.06	The <b>interface traffic-counter action disconnect</b> command has been introduced.

### 3.29.193 interface traffic-counter action sms-alert message

**Description** Set [SMS](#) alert message.

<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Usb

**Synopsis** `(config-if)> traffic-counter action <trigger> sms-alert message`  
`<message>`

<b>Arguments</b>	Argument	Value	Description
	trigger	threshold	SMS alerting trigger is a threshold.
		limit	SMS alerting trigger is a traffic limit.
message	<i>String</i>	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 <b>interface traffic-counter action sms-alert message</b> command has been introduced.

**3.29.194 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	<i>String</i>	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 <b>interface traffic-counter action sms-alert phone</b> command has been introduced.

**3.29.195 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.
```

Version	Description
3.06	The <b>interface traffic-counter enable</b> command has been introduced.

## 3.29.196 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
```

Argument	Value	Description
value	<i>Integer</i>	Limit traffic value.
unit	<i>String</i>	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.
```

Version	Description
3.06	The <b>interface traffic-counter limit</b> command has been introduced.

## 3.29.197 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	<i>Integer</i>	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 <b>interface traffic-counter monthly</b> command has been introduced.

## 3.29.198 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>
```

Argument	Value	Description
value	<i>Integer</i>	Numeric counter value (either integer or floating point).
unit	<i>String</i>	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.
```

Version	Description
3.06	The <b>interface traffic-counter set</b> command has been introduced.

## 3.29.199 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
```

Argument	Value	Description
threshold	<i>Integer</i>	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.
```

Version	Description
3.06	The <b>interface traffic-counter threshold</b> command has been introduced.

## 3.29.200 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	<i>Integer</i>	Value of data download rate in Kbps. Limit could be in the range from 64 Kbps to 1 Gbps.
upstream-rate	<i>Integer</i>	Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps.
schedule	<i>Schedule</i>	The name of the schedule that was created with <a href="#">schedule</a> 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 <b>interface traffic-shape</b> command has been introduced.
3.04	The <b>upstream-rate</b> argument was added.

## 3.29.201 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Usb

**Synopsis**

```
(config-if)> tty init [ <index> ] <string> [ sleep <delay> ]
```

```
(config-if)> no tty init [ <index> ]
```

<b>Arguments</b>	Argument	Value	Description
	index	<i>Integer</i>	Position, the line number where you want to insert a string.
	string	<i>String</i>	Modem initialization string.
	delay	<i>Integer</i>	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.
```

<b>History</b>	Version	Description
	4.00	The <b>interface tty init</b> command has been introduced.

## 3.29.202 interface tty send

**Description** Send AT command to UsbLte, UsbQmi modems.

<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Usb

**Synopsis**

```
(config-if)> tty send <command> [ <expect> ] [ <timeout> ]
```

<b>Arguments</b>	Argument	Value	Description
	command	<i>String</i>	AT command.

Argument	Value	Description
expect	<i>String</i>	Expected response. Default response is OK ERROR.
timeout	<i>Integer</i>	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 <b>interface tty send</b> command has been introduced.

## 3.29.203 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
```

Argument	Value	Description
destination	<i>String</i>	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.
```

Version	Description
2.08	The <b>interface tunnel destination</b> command has been introduced.

### 3.29.204 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
```

Argument	Value	Description
id	<i>Integer</i>	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.
```

Version	Description
2.08	The <b>interface tunnel eoip id</b> command has been introduced.

## 3.29.205 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	<i>Integer</i>	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	<i>Integer</i>	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 <b>interface tunnel gre keepalive</b> command has been introduced.



### 3.29.206 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	<i>Keyword</i>	Set the current working WAN interface.
interface	<i>Interface</i>	Full interface name or an alias.
address	<i>IP address</i>	Local IP-address of the tunnel.

#### Example

```
(config-if)> tunnel source auto
Network::Interface::Tunnel: "Gre0": set source interface to auto.
```

#### History

Version	Description
2.08	The <b>interface tunnel source</b> command has been introduced.
2.09	The <b>auto</b> argument has been added.
3.08	The <b>no</b> prefix was removed as obsolete.

### 3.29.207 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 <b>interface tx-burst</b> command has been introduced.

## 3.29.208 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	<i>Integer</i>	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 <b>interface tx-queue length</b> command has been introduced.

## 3.29.209 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_code1` — 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 <b>interface tx-queue scheduler cake</b> command has been introduced.

### 3.29.210 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 <b>interface tx-queue scheduler fq_codel</b> command has been introduced.

### 3.29.211 interface up

**Description** Enable the network interface and persist the state “up” to the settings.  
Command with **no** prefix disables the 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 <b>interface up</b> command has been introduced.

### 3.29.212 interface uplink-mumimo

**Description** Enable 802.11ax uplink MU-MIMO. By default, the feature is enabled.  
Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

```
(config-if)> uplink-mumimo
(config-if)> no uplink-mumimo
```

**Example**

```
(config-if)> uplink-mumimo
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
uplink-mumimo enabled.
```

```
(config-if)> no uplink-mumimo
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
uplink-mumimo disabled.
```

History	Version	Description
	3.07	The <b>interface uplink-mumimo</b> command has been introduced.

### 3.29.213 interface uplink-ofdma

**Description** Enable 802.11ax uplink *OFDMA*. By default, the feature is disabled.  
Command with **no** prefix disables the feature.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

```
(config-if)> uplink-ofdma
(config-if)> no uplink-ofdma
```

**Example**

```
(config-if)> uplink-ofdma
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
downlink-ofdma enabled.

(config-if)> no uplink-ofdma
Network::Interface::Rtx::WifiMaster: "WifiMaster1": 11ax ►
downlink-ofdma disabled.
```

History	Version	Description
	3.07	The <b>interface uplink-ofdma</b> command has been introduced.

### 3.29.214 interface usb acq

**Description** Lock 3G/LTE mode for Huawei USB-modems.  
Command with **no** prefix removes the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

```
(config-if)> usb acq <acq>
```

```
(config-if)> no usb acq
```

**Arguments**

Argument	Value	Description
acq	gsm	2G network.
	umts	3G network.
	lte	4G network.

**Example**

```
(config-if)> usb acq lte
Network::Interface::Usb: "UsbLte0": ACQ saved.
```

```
(config-if)> no usb acq
Network::Interface::Usb: "UsbLte0": ACQ cleared.
```

**History**

Version	Description
2.09	The <b>interface usb acq</b> command has been introduced.

## 3.29.215 interface usb 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)> usb apn <apn>
```

```
(config-if)> no usb apn
```

**Arguments**

Argument	Value	Description
apn	<i>String</i>	Access point name.

**Example**

```
(config-if)> usb apn example.net
Network::Interface::Usb: "UsbModem0": APN saved.
```

```
(config-if)> no usb apn
Network::Interface::Usb: "UsbModem0": APN cleared.
```

History	Version	Description
	2.05	The <b>interface usb apn</b> command has been introduced.

### 3.29.216 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	<i>String</i>	Vendor info.
	model	<i>String</i>	Model info.

**Example**

```
(config-if)> usb device-id 12d1 1001  
Device ID saved.
```

History	Version	Description
	2.00	The <b>interface usb device-id</b> command has been introduced.

### 3.29.217 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	<i>String</i>	USB port identifier.
auto	<i>Keyword</i>	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 <b>interface usb port-id</b> command has been introduced.

## 3.29.218 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	<i>Integer</i>	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 <b>interface usb power-cycle</b> command has been introduced.

### 3.29.219 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	<i>Integer</i>	Time to wait for modem detection after its power reset, in seconds. Can take values in the range from 0 to 60 inclusively.
	pause	<i>Integer</i>	Period of time in which usb-modem will be disabled, in seconds. Can take values in the range from 0 to 60 inclusively.
	reboot	<i>Keyword</i>	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 <b>interface usb power-fail</b> command has been introduced.

### 3.29.220 interface usb wwan-force-connected

**Description** Disable CDC-modem 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)> usb wwan-force-connected
```

```
(config-if)> no usb wwan-force-connected
```

**Example**

```
(config-if)> usb wwan-force-connected  
Network::Interface::Usb: "UsbLte0": force WWAN link status.
```

```
(config-if)> no usb wwan-force-connected  
Network::Interface::Usb: "UsbLte0": unforce WWAN link status.
```

**History**

Version	Description
2.12	The <b>interface wwan-force-connected</b> command has been introduced.

## 3.29.221 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	<i>IP-address</i>	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 <b>interface web-api address</b> command has been introduced.

### 3.29.222 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	<i>String</i>	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 <b>interface web-api login</b> command has been introduced.

### 3.29.223 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	<i>String</i>	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 <b>interface web-api password</b> command has been introduced.

## 3.29.224 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 <b>interface whnat</b> command has been introduced.

### 3.29.225 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	<i>Integer</i>	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 <b>interface wireguard listen-port</b> command has been introduced.

### 3.29.226 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

<b>Interface type</b>	Wireguard							
<b>Group entry</b>	(config-wg-peer)							
<b>Synopsis</b>	<pre>(config-if)&gt; <b>wireguard peer</b> &lt;key&gt;</pre> <pre>(config-if)&gt; <b>no wireguard peer</b> &lt;key&gt;</pre>							
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>key</td> <td><i>String</i></td> <td>Value of the key. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters (Base64-encoded 32-byte string representation).</td> </tr> </tbody> </table>		Argument	Value	Description	key	<i>String</i>	Value of the key. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters (Base64-encoded 32-byte string representation).
Argument	Value	Description						
key	<i>String</i>	Value of the key. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters (Base64-encoded 32-byte string representation).						
<b>Example</b>	<pre>(config-if)&gt; <b>wireguard peer</b> ► <b>gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=</b> (config-wg-peer)&gt;</pre> <pre>(config-if)&gt; <b>no wireguard peer</b> ► <b>gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=</b> Wireguard::Interface: "Wireguard4": removed peer ► "gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmmg0=".</pre>							
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.03</td> <td>The <b>interface wireguard peer</b> command has been introduced.</td> </tr> </tbody> </table>		Version	Description	3.03	The <b>interface wireguard peer</b> command has been introduced.		
Version	Description							
3.03	The <b>interface wireguard peer</b> command has been introduced.							

### 3.29.226.1 interface wireguard peer allow-ips

<b>Description</b>	Add the subnet of IP addresses to which the transmission of packets inside the tunnel is allowed.
<b>Note:</b>	You can add 0.0.0.0/0 subnet to allow transmission to any addresses.
	Command with <b>no</b> prefix removes the subnet. If you use no argument, the entire list of subnets will be removed.
<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes
<b>Interface type</b>	Wireguard
<b>Synopsis</b>	<pre>(config-wg-peer)&gt; <b>allow-ips</b> &lt;address&gt; &lt;mask&gt;</pre> <pre>(config-wg-peer)&gt; <b>no allow-ips</b> [ &lt;address&gt; &lt;mask&gt; ]</pre>

**Arguments**

Argument	Value	Description
address	<i>IP address</i>	Together with mask <i>mask</i> sets the subnet of IP addresses to be translated.
mask	<i>IP-mask</i>	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 ▶
"gbplgW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(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 ▶
"gbplgW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> no allow-ips
Wireguard::Interface: "Wireguard4": clear allowed IPs of peer ▶
"gbplgW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

Version	Description
3.03	The <b>interface wireguard peer allow-ips</b> command has been introduced.

**3.29.226.2 interface wireguard peer connect****Description**

Set interface for WireGuard peer connection. 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**

WireGuard

**Synopsis**

```
(config-wg-peer)> connect via <via>
```

```
(config-wg-peer)> no connect
```

**Arguments**

Argument	Value	Description
via	<i>Interface</i>	Full interface name or an alias.

**Example**

```
(config-wg-peer)> connect via ISP
Wireguard::Interface: "Wireguard0": set peer ►
"IrtvFcVtI5wcqxn4cCmuWc+p8s8byP0zK/MAI67VmXs=" connect via "ISP"
```

```
(config-wg-peer)> no connect
Wireguard::Interface: "Wireguard0": disabled peer ►
"IrtvFcVtI5wcqxn4cCmuWc+p8s8byP0zK/MAI67VmXs=" .
```

**History**

Version	Description
4.01	The <b>interface wireguard peer connect</b> command has been introduced.

**3.29.226.3 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	<i>IP address</i>	IP address or domain name of the server.
port	<i>Integer</i>	The <i>UDP</i> server port.

**Example**

```
(config-wg-peer)> endpoint 10.0.1.10:11635
Wireguard::Interface: "Wireguard4": set peer ►
"gbplgW3pBQKssrAdah1hib13Jl123ZM8dBIjjPmm2g=" endpoint to ►
"10.0.1.10:11635".
```

```
(config-wg-peer)> no endpoint
Wireguard::Interface: "Wireguard4": reset endpoint for peer ►
"gbplgW3pBQKssrAdah1hib13Jl123ZM8dBIjjPmm2g=".
```

**History**

Version	Description
3.03	The <b>interface wireguard peer endpoint</b> command has been introduced.



### 3.29.226.4 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	<i>Integer</i>	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 <b>interface wireguard peer keepalive-interval</b> command has been introduced.

### 3.29.226.5 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 <pre-shared-key>
(config-wg-peer)> no preshared-key
```

**Arguments**

Argument	Value	Description
preshared-key	<i>String</i>	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 <b>interface wireguard peer preshared-key</b> command has been introduced.

## 3.29.227 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	<i>String</i>	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 <b>interface wireguard private-key</b> command has been introduced.

## 3.29.228 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 <b>interface wmm</b> command has been introduced.

## 3.29.229 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	<i>String</i>	The value of <i>RADIUS</i> shared secret. Maximum key length is 64 characters.

**Example**

```
(config-if)> wpa-eap radius secret ►
(+>R#G`}-JNxru'i8i|LK}wBN9E^X0Xa{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 <b>interface wpa-eap radius secret</b> command has been introduced.

## 3.29.230 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	<i>IP address</i>	<i>RADIUS</i> server IP address.
port	<i>Integer</i>	<i>RADIUS</i> 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 <b>interface wpa-eap radius server</b> command has been introduced.

### 3.29.231 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 <b>interface wps</b> command has been introduced.

### 3.29.232 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 <b>interface wps auto-self-pin</b> command has been introduced.

**3.29.233 interface wps button**

**Description** Start WPS process using a software button. Process takes 2 minutes or until the first connection occurred.

**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 Hopper.

**Example**

```
(config-if)> wps button send
Sending WiFi configuration process started (software button mode).
```

**History**

Version	Description
2.00	The <b>interface wps button</b> command has been introduced.

**3.29.234 interface wps peer**

**Description** Start WPS process using remote peer's PIN. Process takes 2 minutes or until the first connection occurred. 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>`

Argument	Value	Description
direction	send	Send WiFi configuration.
	receive	Receive WiFi configuration from the remote peer.
pin	<i>String</i>	PIN code of the remote peer.

**Example**

```
(config-if)> wps peer send 53794141
Network::Interface::Rtx::Wps: "WifiMaster0/AccessPoint0": peer ►
PIN WPS session started.
```

Version	Description
2.04	The <b>interface wps peer</b> command has been introduced.

### 3.29.235 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>
```

Argument	Value	Description
direction	send	Send WiFi configuration.
	receive	Receive WiFi configuration from Hopper.

**Example**

```
(config-if)> wps self-pin receive
Receiving WiFi configuration process started (self PIN mode).
```

Version	Description
2.00	The <b>interface wps self-pin</b> command has been introduced.

### 3.29.236 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 <b>interface zerotier accept-addresses</b> command has been introduced.

### 3.29.237 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 <b>interface zerotier accept-routes</b> command has been introduced.

### 3.29.238 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	<i>Interface</i>	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 <b>interface zerotier connect</b> command has been introduced.

### 3.29.239 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	<i>String</i>	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 <b>interface zerotier network-id</b> command has been introduced.

## 3.30 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 entries 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	<i>IP address</i>	IP address in four-part dotted decimal format corresponding to the local data-link address.
mac	<i>MAC address</i>	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 <b>ip arp</b> command has been introduced.

## 3.31 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	<i>String</i>	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 <b>ip dhcp class</b> command has been introduced.

### 3.31.1 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	<i>Integer</i>	Option number. Now the only 60 value is used.
data	<i>String</i>	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 <b>ip dhcp class option</b> command has been introduced.

## 3.32 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	<i>String</i>	Arbitrary host name, used to identify a MAC-IP pair in the settings.
mac	<i>MAC address</i>	MAC address of the host for static linking of IP address. If not specified, the value is taken from the previous configuration.

Argument	Value	Description
ip	<i>IP address</i>	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 <b>ip dhcp host</b> command has been introduced.

## 3.33 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	<i>String</i>	DHCP pool name.

**Example** (config)> **ip dhcp pool test\_pool**  
pool "test\_pool" has been created.

**History**

Version	Description
2.00	The <b>ip dhcp pool</b> command has been introduced.

### 3.33.1 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	<i>Interface</i>	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 <b>ip dhcp pool bind</b> command has been introduced.

### 3.33.2 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	<i>Filename</i>	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 <b>ip dhcp pool bootfile</b> command has been introduced.

### 3.33.3 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	<i>String</i>	The vendor-class name.

**Example**

```
(config-dhcp-pool)> class STB-0ne
Dhcp::Server: Vendor class "STB-0ne" has been created.
```

**History**

Version	Description
2.00	The <b>ip dhcp pool class</b> command has been introduced.

### 3.33.3.1 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	<i>String</i>	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 <b>ip dhcp pool class option</b> command has been introduced.

### 3.33.4 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 <b>ip dhcp pool debug</b> command has been introduced.

### 3.33.5 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	<i>IP address</i>	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 <b>ip dhcp pool default-router</b> command has been introduced.

### 3.33.6 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	<i>IP address</i>	Address of primary DNS server.
address2	<i>IP address</i>	Address of secondary DNS server.
disable	<i>Keyword</i>	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 <b>ip dhcp pool dns-server</b> command has been introduced.
2.11	Disable argument has been added.

### 3.33.7 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	<i>String</i>	Local domain name.

**Example**

```
(config-dhcp-pool)> domain example.net
Dhcp::Pool: Domain option has been saved.
```

**History**

Version	Description
2.05	The <b>ip dhcp pool domain</b> command has been introduced.

### 3.33.8 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.
```

Version	Description
2.03	The <b>ip dhcp pool enable</b> command has been introduced.

### 3.33.9 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
```

Argument	Value	Description
lease	<i>Integer</i>	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 <b>ip dhcp pool lease</b> command has been introduced.

## 3.33.10 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	<i>IP address</i>	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 <b>ip dhcp pool next-server</b> command has been introduced.

## 3.33.11 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	<i>String</i>	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 41.57.50.46,42.54.50.46  
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 <b>ip dhcp pool option</b> command has been introduced.

## 3.33.12 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	<i>IP address</i>	Pool's start address.
end	<i>IP address</i>	Pool's end address.
size	<i>Integer</i>	Pool size.

**Example**

```
(config-dhcp-pool)> range 192.168.15.43 3
pool "_WEBADMIN" range has been saved.
```

**History**

Version	Description
2.00	The <code>ip dhcp pool range</code> command has been introduced.

## 3.33.13 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 <b>ip dhcp pool update-dns</b> command has been introduced.

### 3.33.14 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	<i>String</i>	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 <b>ip dhcp pool wpad</b> command has been introduced.

### 3.34 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	<i>Interface</i>	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 <b>ip dhcp relay lan</b> command has been introduced.

## 3.35 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	<i>IP address</i>	IP address of the <i>DHCP server</i> .

**Example**

```
(config)> ip dhcp relay server 192.168.1.11
using DHCP server 192.168.1.11.
```



History	Version	Description
	2.00	The <b>ip dhcp relay server</b> command has been introduced.

## 3.36 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 <b>ip dhcp relay wan</b> command has been introduced.

## 3.37 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 <b>ip esp alg enable</b> command has been introduced.

## 3.38 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	<i>Integer</i>	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 <b>ip flow-cache timeout active</b> command has been introduced.

## 3.39 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	<i>Integer</i>	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 <b>ip flow-cache timeout inactive</b> command has been introduced.

## 3.40 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	<i>IP address</i>	IP address of the data collector.
port	<i>Integer</i>	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 <b>ip flow-export destination</b> command has been introduced.

## 3.41 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	<i>String</i>	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 <b>ip flow-export version</b> command has been introduced.

## 3.42 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 <b>ip ftp</b> command has been introduced.

### 3.42.1 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	
	utf-16le	
	utf-16be	
	utf-32	
	utf-32le	

Argument	Value	Description
	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	
	cp-862	
	cp-863	
	cp-864	
	cp-865	

Argument	Value	Description
	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 <b>ip ftp client-charset</b> command has been introduced.

## 3.42.2 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	<i>Integer</i>	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	<i>Integer</i>	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	<i>Integer</i>	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 <b>ip ftp lockout-policy</b> command has been introduced.

### 3.42.3 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 <b>ip ftp permissive</b> command has been introduced.

### 3.42.4 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	<i>Keyword</i>	Access to the FTP server is allowed for public, private and protected interfaces.
	private	<i>Keyword</i>	Access to the FTP server is allowed for private interfaces.

Argument	Value	Description
protected	<i>Keyword</i>	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 <b>ip ftp security-level</b> command has been introduced.

## 3.43 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	<i>String</i>	A domain name of a host.
address	<i>IP address</i>	An IP address of a host.

**Example**

```
(config)> ip host keenetic.local 192.168.1.22
Dns::Manager: Added static record for "keenetic.local", address ►
192.168.1.22.
```

```
(config)> no ip host keenetic.local 192.168.1.22
Dns::Manager: Record "keenetic.local", address 192.168.1.22 ►
deleted.
```

**History**

Version	Description
2.00	The <b>ip host</b> command has been introduced.

## 3.44 ip hotspot

**Description** Access to a group of commands for Hotspot configuration.

**Prefix no** No

<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Interface type</b>	IP
<b>Group entry</b>	(config-hotspot)

**Synopsis** | (config)> **ip hotspot**

**Example** (config)> **ip hotspot**  
(config-hotspot)>

<b>History</b>	Version	Description
	2.06	The <b>ip hotspot</b> command has been introduced.

### 3.44.1 ip hotspot auto-scan interface

**Description** Enable subnetwork passive scanning on interface. By default is enabled.  
Command with **no** prefix disables the setting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis** | (config-hotspot)> **auto-scan interface** *<interface>*  
| (config-hotspot)> **no auto-scan interface** *<interface>*

<b>Arguments</b>	Argument	Value	Description
	interface	<i>Interface</i>	Full interface name or an alias.

**Example** (config-hotspot)> **auto-scan interface WifiMaster0/AccessPoint1**  
Hotspot::Discovery::Manager: Subnetwork scanning on interface ►  
"WifiMaster0/AccessPoint1" is unchanged.

(config-hotspot)> **auto-scan interface WifiMaster0/AccessPoint1**  
Hotspot::Discovery::Manager: Subnetwork scanning on interface ►  
"WifiMaster0/AccessPoint1" is disabled.

<b>History</b>	Version	Description
	2.08	The <b>ip hotspot auto-scan interface</b> command has been introduced.

## 3.44.2 ip hotspot auto-scan interval

**Description** Set interval for probes of online hosts. By default, the value 30 is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config-hotspot)> auto-scan interval <interval>
(config-hotspot)> no auto-scan interval
```

**Arguments**

Argument	Value	Description
interval	<i>Integer</i>	Auto-scan probe interval in seconds.

**Example**

```
(config-hotspot)> auto-scan interval 10
Hotspot::Discovery::Manager: Auto-scan probe interval is set to ►
10 s.
```

```
(config-hotspot)> no auto-scan interval
Hotspot::Discovery::Manager: Auto-scan probe interval reset to ►
default.
```

**History**

Version	Description
2.08	The <b>ip hotspot auto-scan interval</b> command has been introduced.

## 3.44.3 ip hotspot auto-scan passive

**Description** Set passive autoscan rate in hosts per seconds. By default, the value 3 is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config-hotspot)> auto-scan passive <rate> hps
```

```
(config-hotspot)> no auto-scan passive
```

**Arguments**

Argument	Value	Description
rate	<i>Integer</i>	Passive autoscan rate.

**Example**

```
(config-hotspot)> auto-scan passive 5 hps
Hotspot::Discovery::Manager: Auto-scan rate is set to 5 hps.
```

```
(config-hotspot)> no auto-scan passive
Hotspot::Discovery::Manager: Auto-scan rate reset to default.
```

**History**

Version	Description
2.08	The <b>ip hotspot auto-scan passive</b> command has been introduced.

## 3.44.4 ip hotspot auto-scan timeout

**Description**

Set offline timeout for hosts. After the specified time, the missing host is removed from the online host list. By default, the value 35 is used.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

IP

**Synopsis**

```
(config-hotspot)> auto-scan timeout <timeout>
```

```
(config-hotspot)> no auto-scan timeout
```

**Arguments**

Argument	Value	Description
timeout	<i>Integer</i>	Offline timeout in seconds.

**Example**

```
(config-hotspot)> auto-scan timeout 31
Hotspot::Discovery::Manager: Auto-scan host offline timeout is ►
set to 31 s.
```

```
(config-hotspot)> no auto-scan timeout
Hotspot::Discovery::Manager: Auto-scan host offline timeout reset ►
to default.
```

**History**

Version	Description
2.08	The <b>ip hotspot auto-scan timeout</b> command has been introduced.

### 3.44.5 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	<i>Policy</i>	Name of IP Policy profile.

**Example**

```
(config-hotspot)> default-policy permit  
Hotspot::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 <b>ip hotspot default-policy</b> command has been introduced.
2.12	Argument policy was added.

## 3.44.6 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 <a href="#">known host</a> 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 <a href="#">schedule</a> 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 <b>ip hotspot host</b> command has been introduced.
2.12	Arguments permit, deny, schedule, policy were added.

## 3.44.7 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 <b>ip hotspot host priority</b> command has been introduced.

### 3.44.8 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	<i>Interface</i>	Ethernet interface full name or an alias.
	access	permit	Permit access to the internet.
		deny	Deny access to the internet.
	policy	<i>Policy</i>	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 <b>ip hotspot policy</b> command has been introduced.
	2.12	Argument policy was added.

### 3.44.9 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	<i>Interface</i>	Full interface name or an alias.
priority	1	Top.
	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 <b>ip hotspot priority</b> command has been introduced.

### 3.44.10 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 <b>ip hotspot wake</b> command has been introduced.

## 3.45 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 <b>ip http lockout-policy</b> command has been introduced.

## 3.46 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 <b>ip http log access</b> command has been introduced.

## 3.47 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 <b>ip http log auth</b> command has been introduced.

## 3.48 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 <b>ip http log webdav</b> command has been introduced.

## 3.49 ip http port

**Description** Assign HTTP port for Web interface of Hopper. 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	<i>Integer</i>	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 <b>ip http port</b> command has been introduced.

## 3.50 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	<i>String</i>	HTTP proxy name.

**Example**

```
(config)> ip http proxy TEST
Http::Manager: Proxy "TEST" successfully created.
```

**History**

Version	Description
2.08	The <b>ip http proxy</b> command has been introduced.

### 3.50.1 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 <b>ip http proxy auth</b> command has been introduced.

### 3.50.2 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	<i>String</i>	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 <b>ip http proxy domain</b> command has been introduced.

### 3.50.3 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 <b>ip http proxy domain ndns</b> command has been introduced.

### 3.50.4 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	<i>String</i>	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 <b>ip http proxy force-host</b> command has been introduced.

### 3.50.5 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 <b>ip http proxy preserve-host</b> command has been introduced.

### 3.50.6 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	<i>Keyword</i>	Access to the HTTP proxy is allowed for public, private and protected interfaces.
private	<i>Keyword</i>	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 <b>ip http proxy security-level</b> command has been introduced.

### 3.50.7 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 <b>ip http proxy ssl redirect</b> command has been introduced.

### 3.50.8 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) (<mac> | <ip> | <fqdn>)[<port>]
```

```
(config-http-proxy)> no upstream
```

**Arguments**

Argument	Value	Description
http	<i>Keyword</i>	HTTP server.
https	<i>Keyword</i>	HTTPS server.
mac	<i>MAC address</i>	MAC address of server.
ip	<i>IP address</i>	IP address of server.
fqdn	<i>FQDN</i>	Full domain name of server.
port	<i>Integer</i>	The port number.

**Example**

```
(config-http-proxy)> upstream http 192.168.1.1 8080
Http::Manager: Proxy "TEST" upstream was set.
```

```
(config-http-proxy)> upstream https google.com 443
Http::Proxy: "modem": set https upstream google.com, port 443.
```

```
(config-http-proxy)> no upstream
Http::Manager: Remove upstream info for proxy "test".
```

**History**

Version	Description
2.08	The <b>ip http proxy upstream</b> command has been introduced.
3.05	https keyword was added.

## 3.50.9 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 <b>ip http proxy x-real-ip</b> command has been introduced.

## 3.51 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	<i>Keyword</i>	Access to the web interface is allowed for public, private and protected interfaces via HTTP and HTTPS.
private	<i>Keyword</i>	Access to the web interface is allowed for private interfaces.
protected	<i>Keyword</i>	Access to the web interface is allowed for private and protected interfaces.
ssl	<i>Keyword</i>	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 <b>ip http security-level</b> command has been introduced.
3.00	Parameter <b>ssl</b> was added.

## 3.52 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 <b>ip http ssl acme ecdsa</b> command has been introduced.

## 3.53 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	<i>String</i>	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 <b>ip http ssl acme get</b> command has been introduced.

## 3.54 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 <domain>`

Arguments	Argument	Value	Description
	domain	<i>String</i>	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 <b>ip http ssl acme revoke</b> command has been introduced.

## 3.55 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 <b>ip http ssl acme list</b> command has been introduced.

## 3.56 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 <b>ip http ssl enable</b> command has been introduced.

## 3.57 ip http ssl port

**Description** Assign HTTPS port for Web interface of Hopper. By default, 443 value is used.

Command with **no** prefix resets HTTPS port to default.

**Prefix no** Yes

**Change settings** Yes



<b>Multiple input</b>	No						
<b>Interface type</b>	IP						
<b>Synopsis</b>	<pre>(config)&gt; ip http ssl port &lt;port&gt;</pre> <pre>(config)&gt; no ip http ssl port</pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>port</td> <td><i>Integer</i></td> <td>New HTTPS port.</td> </tr> </tbody> </table>	Argument	Value	Description	port	<i>Integer</i>	New HTTPS port.
Argument	Value	Description					
port	<i>Integer</i>	New HTTPS port.					
<b>Example</b>	<pre>(config)&gt; ip http ssl port 4343</pre> <pre>Http:Manager: SSL port changed to 4343.</pre> <pre>(config)&gt; no ip http ssl port</pre> <pre>Http:Manager: SSL port reset to 443.</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4.00</td> <td>The <b>ip http ssl port</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	4.00	The <b>ip http ssl port</b> command has been introduced.		
Version	Description						
4.00	The <b>ip http ssl port</b> command has been introduced.						

## 3.58 ip http ssl redirect

<b>Description</b>	<p>Enable automatic redirection on domains with SSL certificate. By default, the redirection is enabled.</p> <p>Command with <b>no</b> prefix disables redirection.</p>				
<b>Prefix no</b>	Yes				
<b>Change settings</b>	Yes				
<b>Multiple input</b>	No				
<b>Interface type</b>	IP				
<b>Synopsis</b>	<pre>(config)&gt; ip http ssl redirect</pre> <pre>(config)&gt; no ip http ssl redirect</pre>				
<b>Example</b>	<pre>(config)&gt; ip http ssl redirect</pre> <pre>Http:Manager: Redirect to SSL is enabled.</pre> <pre>(config)&gt; no ip http ssl redirect</pre> <pre>Http:Manager: Redirect to SSL is disabled.</pre>				
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.11</td> <td>The <b>ip http ssl redirect</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	2.11	The <b>ip http ssl redirect</b> command has been introduced.
Version	Description				
2.11	The <b>ip http ssl redirect</b> command has been introduced.				

## 3.59 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 <b>ip http webdav</b> command has been introduced.

### 3.59.1 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 <b>ip http webdav enable</b> command has been introduced.

## 3.59.2 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 <b>ip http webdav permissive</b> command has been introduced.

## 3.59.3 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	<i>Keyword</i>	Access to the WebDAV server is allowed for public, private and protected interfaces.
private	<i>Keyword</i>	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 <b>ip http webdav security-level</b> command has been introduced.

## 3.60 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	<i>String</i>	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 <b>ip http x-frame-options</b> command has been introduced.

## 3.61 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	<i>IP address</i>	Name server address.
port	<i>Integer</i>	Name server port.
domain	<i>String</i>	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	<i>Interface</i>	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 <b>ip name-server</b> command has been introduced.
2.14	Argument port was added.

## 3.62 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	<i>Interface</i>	Source interface name (full name or an alias).
address	<i>IP address</i>	Together with mask <i>mask</i> sets the range of source IP addresses to be translated.
mask	<i>IP-mask</i>	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 <b>ip nat</b> command has been introduced.

## 3.63 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 <b>ip nat full-cone</b> command has been introduced.

## 3.64 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 <b>ip nat restricted-cone</b> command has been introduced.

## 3.65 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 <b>ip nat sstp</b> command has been introduced.

## 3.66 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 <b>ip nat vpn</b> command has been introduced.

## 3.67 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 16 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	<i>Policy</i>	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 <b>ip policy</b> command has been introduced.

## 3.67.1 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	<i>String</i>	An arbitrary description of the IP Policy. Latin letters, numbers, hyphens and underscores are acceptable. Not more than 256 characters.

**Example**

```
(config-policy)> description Policy0ne
Network::PolicyTable: "Policy0": updated description.
```

```
(config-policy)> no description
Network::PolicyTable: "Policy0": updated description.
```

**History**

Version	Description
2.12	The <b>ip policy description</b> command has been introduced.

## 3.67.2 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 <b>ip policy multipath</b> command has been introduced.

### 3.67.3 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	<i>Interface</i>	Full interface name or an alias.
order	<i>Integer</i>	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 <b>ip policy permit</b> command has been introduced.

## 3.67.4 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 <b>ip policy permit auto</b> command has been introduced.

## 3.67.5 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
```

Argument	Value	Description
interface	<i>Interface</i>	The name of a global IP interface to rate-limit its traffic for a group of policy assignees.
rate	<i>Integer</i>	The ingress rate limit in kbps. Can take values in the range from 64 to 1000000.
auto	<i>Keyword</i>	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.
```

Version	Description
3.05	The <b>ip policy rate-limit input</b> command has been introduced.

### 3.67.6 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
```

Argument	Value	Description
interface	<i>Interface</i>	The name of a global IP interface to rate-limit its traffic for a group of policy assignees.

Argument	Value	Description
rate	<i>Integer</i>	The ingress rate limit in kbps. Can take values in the range from 64 to 1000000.
auto	<i>Keyword</i>	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 output rate limit.
```

**History**

Version	Description
3.05	The <b>ip policy rate-limit output</b> command has been introduced.
3.08	The <b>auto</b> argument has been added.

## 3.68 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.

**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	<i>IP address</i>	IP address of the destination network.

Argument	Value	Description
mask	<i>IP-mask</i>	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	<i>IP address</i>	IP address of the destination node.
default	<i>Keyword</i>	Helps specify default routes.
interface	<i>Interface</i>	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.  If priority <b>interface ip global</b> 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	<i>IP address</i>	IP address of the router in a directly connected network. Can be specified along with the interface name, if it is required to specify <b>interface ip global</b> priority. If no interface is specified, the systemd determines it automatically based on the current IP settings.
auto	<i>Keyword</i>	Allows you to apply the route when specified gateway becomes available.
metric	<i>Integer</i>	Route metrics. Ignored in the current implementation.
reject	<i>Keyword</i>	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)> ip route 123.123.123.123 Wireguard1 auto reject
Network::RoutingTable: Added static route: 123.123.123.123/32 ►
via Wireguard1.
```

```
(config)> no ip route 123.123.123.123 Wireguard1
Network::RoutingTable: Deleted static route: 123.123.123.123/32 ►
via Wireguard1.
```

```
(config)> no ip route default
Network::RoutingTable: No such route: 0.0.0.0/0.
```

**History**

Version	Description
2.00	The <b>ip route</b> command has been introduced.
3.08	The reject option was added.

## 3.69 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	<i>String</i>	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 <b>ip search-domain</b> command has been introduced.

## 3.70 ip sip alg direct-media

**Description** Replace IP address in Owner 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 <b>ip sip alg direct-media</b> command has been introduced.

## 3.71 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	<i>Integer</i>	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 <b>ip sip alg port</b> command has been introduced.

## 3.72 ip ssh

**Description**

Access to a group of commands to manage SSH-server.

<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Interface type</b>	IP
<b>Group entry</b>	(config-ssh)

**Synopsis** | (config)> **ip ssh**

**Example** (config)> **ip ssh**  
(config-ssh)>

**History**

Version	Description
2.12	The <b>ip ssh</b> command has been introduced.

### 3.72.1 ip ssh cipher

**Description** Set a symmetric key cipher for SSH session.  
Command with **no** prefix removes the specified cipher.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes
<b>Interface type</b>	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.
	aes128-ctr	An encryption algorithm AES128-CTR.
	aes256-ctr	An encryption algorithm AES1256-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 <b>ip ssh cipher</b> command has been introduced.

Version	Description
3.05	New encryption algorithms aes128-gcm@openssh.com, aes256-gcm@openssh.com were added.

## 3.72.2 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.
	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 <b>ip ssh keygen</b> command has been introduced.

### 3.72.3 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	<i>Integer</i>	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	<i>Integer</i>	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	<i>Integer</i>	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 <b>ip ssh lockout-policy</b> command has been introduced.

### 3.72.4 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	<i>Integer</i>	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 <b>ip ssh port</b> command has been introduced.

### 3.72.5 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	<i>Keyword</i>	Access to the SSH server is allowed for public, private and protected interfaces.
private	<i>Keyword</i>	Access to the SSH server is allowed for private interfaces.
protected	<i>Keyword</i>	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 <b>ip ssh security-level</b> command has been introduced.

## 3.72.6 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	<i>Integer</i>	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 <b>ip ssh session timeout</b> command has been introduced.

### 3.72.7 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 <b>ip ssh sftp</b> command has been introduced.

#### 3.72.7.1 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 <b>ip ssh sftp enable</b> command has been introduced.

**3.72.7.2 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 <b>ip ssh sftp permissive</b> command has been introduced.

**3.72.7.3 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	<i>String</i>	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 <b>ip ssh sftp root</b> command has been introduced.

## 3.73 ip static

**Description**

Define translation rule for global and local IP addresses. If *interface* or *network* corresponds to the interface with [security level public](#), then the destination address translation (DNAT) will occur. If *to-address* corresponds to the interface with [security level public](#), then source address translation (SNAT) will occur. TCP/UDP port number is always treated as the destination port.

If *network* corresponds to a single address and this address is equal to *to-address*, then this rule will prohibit the translation of the specified address, which could have been done based on the specified rules [ip nat](#).

**ip static** rules have higher priority than the [ip nat](#) rules.

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 enables the rule or removes the rule.

**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	<i>TCP</i> protocol.
	udp	<i>UDP</i> protocol.
	icmp	<i>ICMP</i> protocol.
	tcpudp	<i>TCP</i> and <i>UDP</i> protocols.
	gre	<i>GRE</i> protocol.
	ipip	<i>IP in IP</i> protocol.
interface	<i>Interface</i>	Input interface name (full name or alias).
comment	<i>String</i>	User's notes with symbol ! before them.
address	<i>IP address</i>	Along with mask <i>mask</i> sets the range of destination IP addresses that are to be translated.
mask	<i>IP-mask</i>	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	<i>Integer</i>	TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated.
end-port	<i>Integer</i>	The end of the range of ports.
to-address	<i>IP address</i>	The destination address after translation.
to-host	<i>MAC address</i>	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	<i>Integer</i>	TCP/UDP port number after translation. If not specified, the destination port remains the same.
to-interface	<i>Interface</i>	Interface name after translation.

**Example**

Let there be a router between the “local” network 172.16.1.0/24 ([security level private](#)) and “global” network 10.0.0.0/16 ([security level public](#)). It is required that all requests coming to the “global” interface of this router on port 80 to be broadcast to the “local” server with the address 172.16.1.33. The sequence of commands to implement the required schema might look like this:

```
(config)> interface Home ip address 192.168.1.1/24
Network::Interface::Ip: "Bridge0": IP address is 192.168.1.1/24.
```

```
(config)> ip static tcp ISP 80 172.16.1.33 80
Network::StaticNat: Static NAT rule has been added.
```

```
(config)> ip static tcp ISP 21 00:0e:c6:a1:22:11 !test
Network::StaticNat: Static NAT rule is already there.
```

```
(config)> ip static disable
Network::StaticNat: Static NAT disable unchanged.
```

```
(config)> no ip static disable
Network::StaticNat: Static NAT rule enabled.
```

```
(config)> no ip static
Network::StaticNat: Static NAT rules have been removed.
```

## History

Version	Description
2.00	The <b>ip static</b> command has been introduced.
2.06	The to-host argument has been added.

## 3.74 ip static rule

**Description** Disable IP 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

**Interface type** IP

**Synopsis**

```
(config)> ip static rule <index> (disable | schedule <schedule>)
(config)> no ip static rule <index> (disable | schedule)
```

## Arguments

Argument	Value	Description
index	<i>Integer</i>	The translation rule number.
disable	<i>Keyword</i>	Disable the translation rule.
schedule	<i>Schedule</i>	The name of the schedule that was created with <a href="#">schedule</a> group of commands.

## Example

```
(config)> ip static rule 0 schedule test_schedule
Network::StaticNat: Static NAT rule schedule applied.
```

```
(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)> no ip static rule 0 schedule
Network::StaticNat: Static NAT rule schedule removed.
```

## History

Version	Description
2.08	The <b>ip static rule</b> command has been introduced.

## 3.75 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 <b>ip telnet</b> command has been introduced.

### 3.75.1 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	<i>Integer</i>	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	<i>Integer</i>	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	<i>Integer</i>	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 <b>ip telnet lockout-policy</b> command has been introduced.

## 3.75.2 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	<i>Integer</i>	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 <b>ip telnet port</b> command has been introduced.

### 3.75.3 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	<i>Keyword</i>	Access to the Telnet server is allowed for public, private and protected interfaces.
private	<i>Keyword</i>	Access to the Telnet server is allowed for private interfaces.
protected	<i>Keyword</i>	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 <b>ip telnet security-level</b> command has been introduced.

### 3.75.4 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	<i>Integer</i>	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 <b>ip telnet session max-count</b> command has been introduced.

## 3.75.5 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	<i>Integer</i>	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 <b>ip telnet session timeout</b> command has been introduced.

## 3.76 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	<i>MAC address</i>	MAC address of the known host.
rate	<i>Integer</i>	Value of data download rate in Kbps. Limit could be in the range from 64 Kbps to 1 Gbps.
upstream-rate	<i>Integer</i>	Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps.
schedule	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>ip traffic-shape host</b> command has been introduced.
2.08	The <b>schedule</b> argument was added.
3.04	The <b>upstream-rate</b> argument was added.

## 3.77 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	<i>Integer</i>	The data download rate in Kbps. Value could be in the range from 64 Kbps to 1 Gbps.
upstream-rate	<i>Integer</i>	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 <b>ip traffic-shape unknown-host</b> command has been introduced.
3.04	The <b>upstream-rate</b> argument was added.

## 3.78 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	<i>Keyword</i>	Generate persistent unique prefix.
prefix	<i>Prefix</i>	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 <b>ipv6 local-prefix</b> command has been introduced.

## 3.79 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	<i>IPv6-address</i>	Name server address.
domain	<i>String</i>	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	<i>Interface</i>	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 google.com
Dns::Manager: Name server 2001:4860:4860::8888 added, domain ►
google.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 google.com
Dns::Manager: Name server 2001:4860:4860::8888, domain google.com ►
deleted.
```

```
(config)> no ipv6 name-server
Dns::Manager: Static name server list cleared.
```

**History**

Version	Description
2.00	The <b>ipv6 name-server</b> command has been introduced.
4.00	The interface argument was added.

## 3.80 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	<i>Interface</i>	Full WAN-interface name or an alias.

Argument	Value	Description
lan-iface	<i>Interface</i>	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 <b>ipv6 pass</b> command has been introduced.

## 3.81 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.

**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	<i>Prefix</i>	IPv6 prefix.
default	<i>Keyword</i>	Default prefix.
interface	<i>Interface</i>	Full interface name or an alias.
gateway	<i>IP address</i>	IP address of the router in a directly connected network.

**Example**

```
(config)> ipv6 route 2002:c100:aeb5::/48 ISP
route added
```

```
(config)> no ipv6 route 2002:c100:aeb5::/48 ISP
route erased
```

```
(config)> ipv6 route 2002:c100:aeb5:100::/56 2002:c100:aeb5::33
route added
```

```
(config)> no ipv6 route 2002:c100:aeb5:100::/56 2002:c100:aeb5::33
route erased
```

**History**

Version	Description
2.00	The <b>ipv6 route</b> command has been introduced.
2.11	gateway argument has been added.

## 3.82 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** No

**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	<i>TCP</i> protocol.
	udp	<i>UDP</i> protocol.
	tcpudp	<i>TCP</i> and <i>UDP</i> protocol.
	icmp6	<i>ICMPv6</i> protocol.
interface	<i>Interface</i>	Input interface name (full name or an alias).
mac	<i>MAC address</i>	MAC address of host.
port	<i>Integer</i>	TCP/UDP port number for which incoming request comes.
end-port	<i>Integer</i>	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 <b>ipv6 static</b> command has been introduced.
4.00	The icmpv6 argument was added.

## 3.83 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	<i>String</i>	Subnet name or an alias.

### Example

```
(config)> ipv6 subnet Default
(config-subnet)>
```

## History

Version	Description
2.00	The <b>ipv6 subnet</b> command has been introduced.

### 3.83.1 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 <b>ipv6 subnet bind</b> command has been introduced.

## 3.83.2 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 <b>ipv6 subnet mode</b> command has been introduced.

### 3.83.3 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	<i>Integer</i>	Unique subnet ID.

**Example** (config-subnet)> **number 2**  
Ip6::Subnets: Number 2 assigned to subnet "Default".

**History**

Version	Description
2.00	The <b>ipv6 subnet number</b> command has been introduced.

### 3.83.4 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	<i>Integer</i>	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 <b>ipv6 subnet prefix delegate</b> command has been introduced.

### 3.83.5 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	<i>Integer</i>	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 default for subnet ►
"Default".
```

**History**

Version	Description
4.00	The <b>ipv6 subnet prefix length</b> command has been introduced.

## 3.84 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 <b>isolate-private</b> command has been introduced.

## 3.85 kabinet

**Description** Access to a group of commands to configure KAbINET authenticator parameters.

Command with **no** prefix resets all parameters to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Group entry** (kabinet)

**Synopsis** `(config)> kabinet`

`(config)> no kabinet`

**Example** `(config)> kabinet`  
`(kabinet)>`

```
(config)> no kabinet
Kabinet::Authenticator: A configuration reset.
```

**History**

Version	Description
2.02	The <b>kabinet</b> command has been introduced.

## 3.85.1 kabinet access-level

**Description** Set an access level for KAbINET authenticator. By default, access level internet is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(kabinet)> access-level <level>
(kabinet)> no access-level
```

**Arguments**

Argument	Value	Description
level	lan	Access level value.
	internet	

**Example**

```
(kabinet)> access-level lan
Kabinet::Authenticator: An access level set to "lan".
```

```
(kabinet)> access-level internet
Kabinet::Authenticator: An access level set to "internet".
```

```
(kabinet)> no access-level
Kabinet::Authenticator: An access level reset to "internet".
```

**History**

Version	Description
2.02	The <b>kabinet access-level</b> command has been introduced.

## 3.85.2 kabinet interface

**Description** Bind KAbINET authenticator to the specified interface.

Command with **no** prefix unbinds interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(kabinet)> interface <interface>
(kabinet)> no interface
```

**Arguments**

Argument	Value	Description
interface	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [Tab] command.

**Example**

```
(kabinet)> interface [Tab]

Usage template:
  interface {interface}

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

```
(kabinet)> interface ISP
Kabinet::Authenticator: Bound to GigabitEthernet1.
```

```
(kabinet)> no interface
Kabinet::Authenticator: Interface binding cleared.
```

**History**

Version	Description
2.02	The <b>kabinet interface</b> command has been introduced.

### 3.85.3 kabinet password

**Description** Set a password for KAbiNET authenticator. By default, password is not set. Command with **no** prefix clears the password.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(kabinet)> password <password>
```

```
(kabinet)> no password
```

**Arguments**

Argument	Value	Description
password	<i>String</i>	The password for authentication.

**Example**

```
(kabinet)> password 123456789
Kabinet::Authenticator: A password set.
```

```
(kabinet)> no password
Kabinet::Authenticator: A password cleared.
```

**History**

Version	Description
2.02	The <b>kabinet password</b> command has been introduced.

## 3.85.4 kabinet port

**Description**

Set the server port for KAbINET authenticator. By default, values 8314 or 8899 are used.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(kabinet)> port <port>
```

```
(kabinet)> no port
```

**Arguments**

Argument	Value	Description
port	<i>Integer</i>	The port number.

**Example**

```
(kabinet)> port 12345
Kabinet::Authenticator: A server port set.
```

```
(kabinet)> no port
Kabinet::Authenticator: A server port reset.
```

**History**

Version	Description
2.14	The <b>kabinet port</b> command has been introduced.

## 3.85.5 kabinet protocol-version

**Description** Set version of KAbINET authenticator protocol. By default, protocol version 2 is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(kabinet)> protocol-version <version>
(kabinet)> no protocol-version
```

**Arguments**

Argument	Value	Description
version	<i>String</i>	Version of protocol.

**Example**

```
(kabinet)> protocol-version 1
Kabinet::Authenticator: A protocol version set to "1".
```

```
(kabinet)> no protocol-version
Kabinet::Authenticator: A protocol version reset to "2".
```

**History**

Version	Description
2.02	The <b>kabinet protocol-version</b> command has been introduced.

## 3.85.6 kabinet server

**Description** Set an IP address of KAbINET authentication server. By default, IP 10.0.0.1 is used.

Command with **no** prefix resets the address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(kabinet)> server <address>
(kabinet)> no server
```

**Arguments**

Argument	Value	Description
address	<i>IP address</i>	Authentication server address.

**Example**

```
(kabinet)> server 77.222.111.1
Kabinet::Authenticator: A server address set.
```

```
(kabinet)> no server
Kabinet::Authenticator: A server address reset.
```

**History**

Version	Description
2.02	The <b>kabinet server</b> command has been introduced.

## 3.86 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	<i>String</i>	Arbitrary host name.
mac	<i>MAC address</i>	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 <b>known host</b> command has been introduced.

## 3.87 mdns

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

**Prefix no** No



<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Group entry</b>	(config-mdns)

**Synopsis** | (config)> **mdns**

**Example** (config)> **mdns**  
Core::Configurator: Done.  
(config-mdns)>

<b>History</b>	Version	Description
	3.07	The <b>mdns</b> command has been introduced.

### 3.87.1 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.

<b>History</b>	Version	Description
	3.07	The <b>mdns reflector disable</b> command has been introduced.

### 3.87.2 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 <b>mdns reflector enforce</b> command has been introduced.

## 3.88 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	<i>String</i>	Device ID — MAC address or CID.
eula-accept	<i>Keyword</i>	Send <b>eula accept</b> command.
dpn-accept	<i>Keyword</i>	Send Device Privacy Notice accept.
no-update	<i>Keyword</i>	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 <b>mws acquire</b> command has been introduced.

## 3.89 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 <b>mws auto-ap-shutdown</b> command has been introduced.

## 3.90 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 <b>mws backhaul shutdown</b> command has been introduced.

## 3.91 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>mws log stp</b> command has been introduced.

## 3.92 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	<i>String</i>	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 <b>mws member</b> command has been introduced.

## 3.93 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	<i>String</i>	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 <b>mws member debug</b> command has been introduced.

## 3.94 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	<i>String</i>	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 <b>mws member dpn-accept</b> command has been introduced.

## 3.95 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	<i>String</i>	Device ID — MAC-address or CID.
interval	<i>Integer</i>	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 <code>mws member reboot</code> command has been introduced.

## 3.96 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	<i>String</i>	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 <b>mws member update check</b> command has been introduced.

## 3.97 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	<i>String</i>	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 <b>mws member update start</b> command has been introduced.

## 3.98 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`



Argument	Value	Description
member	<i>String</i>	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.
```

Version	Description
4.00	The <b>mws member update stop</b> command has been introduced.

## 3.99 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.
```

Version	Description
3.08	The <b>mws reboot</b> command has been introduced.

## 3.100 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	<i>String</i>	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 <b>mws revisit</b> command has been introduced.

## 3.101 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	

Argument	Value	Description
	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 <b>mws stp priority</b> command has been introduced.

## 3.102 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	<i>Keyword</i>	Update the controller, don't try to update members. If members update is running, the controller will be updated after them.
members	<i>Keyword</i>	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 <b>mws update start</b> command has been introduced.

## 3.103 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 <b>mws update stop</b> command has been introduced.

## 3.104 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	<i>MAC address</i>	MAC address of client device. It must be listed as a known host.
cid	<i>CID</i>	Identifier of <i>MWS</i> 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 <b>mws zone</b> command has been introduced.

## 3.105 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 <b>netxdns</b> command has been introduced.

### 3.105.1 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	<i>MAC address</i>	MAC address to assign.
token	<i>Integer</i>	Authentication token (ID).
iface	<i>Interface</i>	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 <b>nextdns assign</b> command has been introduced.

## 3.105.2 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	<i>String</i>	Login to <i>NextDNS</i> account.
password	<i>String</i>	Password to <i>NextDNS</i> account.
pin	<i>String</i>	Pin to <i>NextDNS</i> account.

**Example**

```
(nextdns)> authenticate account@gmail.com 123456789 1234
NextDns::Client: Authenticated successfully.
```

History	Version	Description
	3.08	The <b>nextdns authenticate</b> command has been introduced.

### 3.105.3 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	<i>String</i>	Authentication token (ID) for <i>NextDNS</i> account.

**Example**

```
(nextdns)> authtoken 1f2a36
NextDns::Client: Set authentication token.
```

```
(nextdns)> no authtoken
NextDns::Client: Cleared authentication token.
```

History	Version	Description
	3.08	The <b>nextdns authtoken</b> command has been introduced.

### 3.105.4 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 <b>nextdns check-availability</b> command has been introduced.

## 3.106 ndns

**Description** Access to a group of commands to manage KeenDNS 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 <b>ndns</b> command has been introduced.

### 3.106.1 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	<i>String</i>	The hostname for allocation.
domain	<i>String</i>	Second-level domain.
access	auto	Automatic access type.
	cloud	Hostname is registered on the cloud server IP address, HTTP traffic is tunneled to the Hopper.
	direct	Hostname is registered on the Hopper WAN-address.
access6	cloud	Enable cloud mode for IPv6 address.
transfer-code	<i>Hex</i>	Code for domain transmission to another Keenetic device. The length is 32 symbols.

**Example**

```
(ndns)> book-name myhome23 keenetic.pro

done, layout = view, title = NDSS::ndns/bookName ▶
(Public DNS Hostname Booking), sub-title = The name booking was ▶
successful.:
  client, geo = RU, ip = 193.0.174.200, format = ▶
clean, date = 2019-05-23T09:46:54.536Z, 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: myhome23
    domain: keenetic.pro
    acme: LE
    updated: 2019-05-23T09:46:51.013Z
    address: 193.0.174.200
    access: direct
    access6: none
    transfer: false

  suffix, layout = message, code = 200, message = ▶
The name booking was successful.:
  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:

        item, elapsed = 18, origin = ▶
[TaskUdpSingle "ndss11h2.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss11h2.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 19, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss11h2.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=3:

        item, elapsed = 27, origin = ▶
[TaskUdpSingle "ndss112o1.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112o1.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 27, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112o1.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=2:

        item, elapsed = 67, origin = ▶
[TaskUdpSingle "ndss111r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss111r3.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 68, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss111r3.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=1:

        item, elapsed = 70, origin = ▶
[TaskUdpSingle "ndss112r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112r3.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 79, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = done, peer = local, detail = finalize: the name allocation
committed.:

```

```

        item, elapsed = 91, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = complete, peer = finalizer, detail = address updated:
193.0.174.200:

        item, elapsed = 91, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = finalize, peer = local, detail = post-process triggers
executed.:

        item, elapsed = 91, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112r3.ndm9.xyz, detail = success
reply: [MsgCack]:

        item, elapsed = 97, origin = ▶
[TaskUdpSingle "ndss112o1.ndm9.xyz" [MsgNdssMessage ▶
["rchs/bookFinalize","014635737374513","myhome23","keenetic.pro","193.0.174.200",":2",undefined,"2019-05-
23T09:46:51.013Z"]] / started], type = reply-final, peer = ▶
ndss112o1.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 106, origin = ▶
[TaskUdpSingle "ndss111h2.ndm9.xyz" [MsgNdssMessage ▶
["rchs/bookFinalize","014635737374513","myhome23","keenetic.pro","193.0.174.200",":2",undefined,"2019-05-
23T09:46:51.013Z"]] / started], type = reply-final, peer = ▶
ndss111h2.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 153, origin = ▶
[TaskUdpSingle "ndss112r3.ndm9.xyz" [MsgNdssMessage ▶
["rchs/bookFinalize","014635737374513","myhome23","keenetic.pro","193.0.174.200",":2",undefined,"2019-05-
23T09:46:51.013Z"]] / started], type = reply-final, peer = ▶
ndss112r3.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 153, origin = ▶
[TaskUdpSingle "ndss111r3.ndm9.xyz" [MsgNdssMessage ▶
["rchs/bookFinalize","014635737374513","myhome23","keenetic.pro","193.0.174.200",":2",undefined,"2019-05-
23T09:46:51.013Z"]] / started], type = reply-final, peer = ▶
ndss111r3.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 3465, origin = ▶
[TaskUdpSingle "ndss112h2.ndm9.xyz" [MsgNdssMessage ▶
["rchs/bookFinalize","014635737374513","myhome23","keenetic.pro","193.0.174.200",":2",undefined,"2019-05-
23T09:46:51.013Z"]] / started], type = reply-final, peer = ▶
ndss112h2.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 3520, origin = ▶
[TaskUdpSingle "ndss112h2.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112h2.ndm9.xyz, detail = [MsgCack]:

```

```

        item, elapsed = 3521, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112h2.ndm9.xyz, detail = success
reply: [MsgCack]:

        item, elapsed = 3521, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = complete, peer = *, detail = All done.:

Ndns::Client: Booked "myhome23.keenetic.pro".

(ndns)> book-name nnttnn keenetic.pro ▶
121d567f901a345b289c121b567c903c

        done, layout = view, title = NDSS::ndns/bookName ▶
(Public DNS Hostname Booking), sub-title =
The name booking was successful.: client, geo = RU, ip = ▶
193.0.174.137, 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: nnttnn
            domain: keenetic.pro
            acme: LE
            updated: 2018-12-13T08:47:11.014Z
            address: 0.0.0.0
            access: cloud
            access6: none
            transfer: true

        suffix, layout = message, code = 200, message = ▶
The name booking was successful.:
        detail, layout = list:
            columns:
                column, id = o, title = Operation:

                column, id = d, title = Detail:

                column, id = t, title = Time, variant ▶

```

```

= period, scale = 1:

        item, hl = false, o = start, d = ▶
[TaskBookName, {"name":"nnttnn","domain":
        ▶
"keenetic.pro","license":"730102642155400"}], t = 0:

        item, hl = false, o = lock-local, d = ▶
the name is locked (for current transaction), t = 1:

        item, hl = false, o = cluster, d = ▶
quorumRemaining: 2, quorumPossible: 4, quorumTotal: 4, t = 1:

        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('PuR10V/kVezuoVCE'), alt=Binary('0gJ/Wh1606jAm1M'), ▶
dst="/192.168.21.14:17047")], [MsgCack], quorumLeft=2, t = 10:

        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('EbxdtB4ne4ef/+p/'), alt=Binary('1c+3/pP6zaUjuE5w'), ▶
dst="/88.198.177.100:17047")], [MsgCack], quorumLeft=1, t = 57:

        item, hl = false, o = lock-reply, d = ▶
Quorum reached, finalizing, t = 57:

        item, hl = false, o = finalize, d = ▶
local changes committed., t = 65:

        item, hl = false, o = refreshed, d = ▶
address updated: 0.0.0.0, t = 77:

        item, hl = false, o = finalize, d = ▶
post-process triggers executed., t = 77:

        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('+sSJ50ow6hn05f6n'), alt=Binary('7FsVtTpEppYeP7aj'), ▶
dst="/46.105.148.85:17047")], [MsgCack], quorumLeft=0, t = 78:

        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('KveTxYekUYk2BwXz'), alt=Binary('s10R6mJvMmfQSe0s'), ▶
dst="/88.198.177.100:16047")], [MsgCack], quorumLeft=0, t = 78:

        item, hl = false, o = lock-reply, d = ▶
Done, all replies collected., t = 79:

        item, hl = false, o = commit-reply, d ▶
= Success: finalize, [NDSS
(key=Binary('PuR10V/kVezuoVCE'), alt=Binary('0gJ/Wh1606jAm1M'), ▶
dst="/192.168.21.14:17047")], [MsgCack], t = 84:

        item, hl = false, o = commit-reply, d ▶

```

```

= Success: finalize, [NDSS
(key=Binary('EbxdTB4ne4ef/+p/'), alt=Binary('1c+3/pP6zaUjuE5w'), ▶
dst="/88.198.177.100:17047")], [MsgCack], t = 126:
        item, hl = false, o = commit-reply, d ▶
= Success: finalize, [NDSS
(key=Binary('+sSJ50ow6hn05f6n'), alt=Binary('7FsVtTpEppYeP7aj'), ▶
dst="/46.105.148.85:17047")], [MsgCack], t = 133:
        item, hl = false, o = commit-reply, d ▶
= Success: finalize, [NDSS
key=Binary('KveTxYekUYk2BwXz'), alt=Binary('s10R6mJvMmfQSe0s'), ▶
dst="/88.198.177.100:16047")], [MsgCack], t = 145:
        item, hl = false, o = commit-reply, d ▶
= Commit stage complete., t = 146:
        item, hl = false, o = complete, d = All ▶
done., t = 146:

Ndns::Client: Booked "nnttnn.keenetic.pro".

```

```
(ndns)> book-name myhome23 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 = RU, ip = 193.0.174.200, 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: myhome23
        domain: keenetic.pro
        acme: LE
        updated: 2019-05-23T09:12:16.197Z
        address: 0.0.0.0
        access: cloud
        address6: ::
        access6: cloud
        transfer: false

        suffix, layout = message, code = 200, message = ▶

```

```

The name booking was successful.:
    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:

            item, elapsed = 11, origin = ▶
[TaskUdpSingle "ndss112h2.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112h2.ndm9.xyz, detail = [MsgCack]:

            item, elapsed = 11, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112h2.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=3:

            item, elapsed = 17, origin = ▶
[TaskUdpSingle "ndss112o1.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112o1.ndm9.xyz, detail = [MsgCack]:

            item, elapsed = 18, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112o1.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=2:

            item, elapsed = 18, origin = ▶
[TaskUdpSingle "ndss111o1.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss111o1.ndm9.xyz, detail = [MsgCack]:

            item, elapsed = 19, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss111o1.ndm9.xyz, detail = success
reply: [MsgCack], quorumLeft=1:

            item, elapsed = 25, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = done, peer = local, detail = finalize: the name allocation
committed.:

```

```

item, elapsed = 40, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = complete, peer = finalizer, detail = address updated: ▶
0.0.0.0:

item, elapsed = 40, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = finalize, peer = local, detail = post-process triggers
executed.:

item, elapsed = 49, origin = ▶
[TaskUdpSingle "ndss112o1.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookFinalize","014635737374513","myhome23","keenetic.pro","0.0.0.0",":",undefined,"2019-05-
23T09:12:28.977Z"]] / started], type = reply-final, peer = ▶
ndss112o1.ndm9.xyz, detail = [MsgCack]:

item, elapsed = 49, origin = ▶
[TaskUdpSingle "ndss111o1.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookFinalize","014635737374513","myhome23","keenetic.pro","0.0.0.0",":",undefined,"2019-05-
23T09:12:28.977Z"]] / started], type = reply-final, peer = ▶
ndss111o1.ndm9.xyz, detail = [MsgCack]:

item, elapsed = 50, origin = ▶
[TaskUdpSingle "ndss111r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss111r3.ndm9.xyz, detail = [MsgCack]:

item, elapsed = 50, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss111r3.ndm9.xyz, detail = success
reply: [MsgCack]:

item, elapsed = 50, origin = ▶
[TaskUdpSingle "ndss112r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss112r3.ndm9.xyz, detail = [MsgCack]:

item, elapsed = 51, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss112r3.ndm9.xyz, detail = success
reply: [MsgCack]:

item, elapsed = 80, origin = ▶
[TaskUdpSingle "ndss112r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookFinalize","014635737374513","myhome23","keenetic.pro","0.0.0.0",":",undefined,"2019-05-
23T09:12:28.977Z"]] / started], type = reply-final, peer = ▶
ndss112r3.ndm9.xyz, detail = [MsgCack]:

```



```

        item, elapsed = 122, origin = ▶
[TaskUdpSingle "ndss112h2.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookFinalize", "014635737374513", "myhome23", "keenetic.pro", "0.0.0.0", ":", undefined, "2019-05-
23T09:12:28.977Z"]] / started], type = reply-final, peer = ▶
ndss112h2.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 165, origin = ▶
[TaskUdpSingle "ndss111r3.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookFinalize", "014635737374513", "myhome23", "keenetic.pro", "0.0.0.0", ":", undefined, "2019-05-
23T09:12:28.977Z"]] / started], type = reply-final, peer = ▶
ndss111r3.ndm9.xyz, detail = [MsgCack]:

        item, elapsed = 166, origin = ▶
[TaskBookName, ▶
{"name": "myhome23", "domain": "keenetic.pro", "license": "014635737374513"}], ▶
type = complete, peer = *, detail = All done.:

Ndns::Client: Booked "myhome23.keenetic.pro".

```

## History

Version	Description
2.07	The <b>ndns book-name</b> command has been introduced.
2.14	Parameter <code>ipv6</code> was added.

## 3.106.2 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
<code>name</code>	<i>String</i>	The hostname for allocation.

### Example

```

(ndns)> check-name testname

list:
  item:
    domain: keenetic.link
    name: testname
  available: yes
  acme: yes

  item:

```

```

        domain: keenetic.name
        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 <b>ndns check-name</b> command has been introduced.

**3.106.3 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	<i>String</i>	The hostname for dropping.
domain	<i>String</i>	Second-level domain.

**Example**

```

(ndns)> drop-name testname mykeenetic.net

done, title = NDSS::ndns/dropName (Delete DNS ▶
Hostname Booking), code = 200,
icon = tick, hl = true, layout = message:
    client, geo = RU, ip = 81.200.27.56, format = ▶
clean, date = 2016-09-
22T10:52:35.685Z, standalone = false:
    reason: The name is un-booked.

    detail, layout = list:
        columns:
            column, id = o, title = Operation:
            column, id = d, title = Detail:
            column, id = t, title = Time, variant = ▶
period, scale = 1:

```

```

        item, hl = false, o = start, d = ▶
[TaskDropName, {"name":"testname",
"domain":"mykeenetic.net","license":"243992935221479"}], t = 0:
        item, hl = false, o = lock-local, d = the ▶
name is locked (for current
transaction), t = 1:
        item, hl = false, o = cluster, d = ▶
quorumRemaining: 2, quorumPossible: 4,
quorumTotal: 4, t = 1:
        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('vNEqUcIAWtrIaC50'), alt=Binary('L2hVqanJmGJrzvKh'),
dst="/148.251.63.154:17047")], [MsgCack], quorumLeft=2, t = 55:
        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('yp/ghaehxe5EtXyc'), alt=Binary('t+JluEWuGguJ+28h'),
dst="/46.105.148.81:17047")], [MsgCack], quorumLeft=1, t = 72:
        item, hl = false, o = lock-reply, d = Quorum ▶
reached, finalizing, t = 73:
        item, hl = false, o = finalize, d = local ▶
changes committed., t = 79:
        item, hl = false, o = refreshed, d = address ▶
cleared, t = 85:
        item, hl = false, o = finalize, d = ▶
post-process triggers executed., t = 85:
        item, hl = false, o = commit-reply, d = ▶
Success: finalize, [NDSS
(key=Binary('vNEqUcIAWtrIaC50'), alt=Binary('L2hVqanJmGJrzvKh'),
dst="/148.251.63.154:17047")], [MsgCack], t = 134:
        item, hl = false, o = commit-reply, d = ▶
Success: finalize, [NDSS
(key=Binary('yp/ghaehxe5EtXyc'), alt=Binary('t+JluEWuGguJ+28h'),
dst="/46.105.148.81:17047")], [MsgCack], t = 161:
        item, hl = false, o = lock-reply, d = ▶
Success: prepare, [NDSS
(key=Binary('SyptNue2bys/mxi0'), alt=Binary('yPrQwfa/4yn676wk'),
dst="/148.251.129.152:17047")], [MsgCack], quorumLeft=0, t = 231:
        item, hl = false, o = commit-reply, d = ▶
Success: finalize, [NDSS
(key=Binary('SyptNue2bys/mxi0'), alt=Binary('yPrQwfa/4yn676wk'),
dst="/148.251.129.152:17047")], [MsgCack], t = 235:
        item, hl = false, o = commit-reply, d = ▶
Success: finalize, [NDSS
(key=Binary('pLNIstXD+0P4D9Fc'), alt=Binary('kGIY2U/LublZ/Zr'),
dst="/91.218.112.118:17047")], [MsgCack], t = 3608:
        item, hl = false, o = commit-reply, d = ▶
Commit stage complete., t = 3608:
        item, hl = false, o = complete, d = All ▶
done., t = 3608:

Ndns::Client: Dropped "testname.mykeenetic.net".

```

## History

Version	Description
2.07	The <b>ndns drop-name</b> command has been introduced.

### 3.106.4 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 = RU, ip = 41.189.34.56, format = ►
xml, date = 2017-09-
14T08:30:19.266Z, standalone = false:
    menu, src = ►
/index?__auth=force&__role=context-
menu&ref=%2fndns%2fupdateBooking:

    fields:
        field, name = name, title = Public Name:

        field, name = domain, title = Domain Name:

        field, name = address, title = IP Address:

        field, name = updated, title = Updated, type ►
= date, variant = date:

        field, name = access, title = Access Mode, ►
default = unknown:

        field, name = transfer, title = Transfer:

        name: testname
        domain: mykeenetic.com
        address: 41.189.34.56
        updated: 2017-09-11T11:27:32.167Z
        access: direct
        transfer: false

Ndns::Client: Get-booked completed.
```

## History

Version	Description
2.08	The <b>ndns get-booked</b> command has been introduced.

### 3.106.5 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 access type.
	cloud	Hostname is registered on the cloud server IP address, HTTP traffic is tunneled to the Hopper.
	direct	Hostname is registered on the Hopper WAN-address. This command allows to enable support for the <i>Static NAT (NAT 1-1)</i> on the server side in the KeenDNS account parameters.
access6	cloud	Enable cloud mode for IPv6 address.

## Example

```
(ndns)> get-update auto

done, layout = view, title = ▶
NDSS::ndns/updateBooking (Update Name Booking
Address and Expiration):
  client, geo = RU, ip = 81.200.27.56, format = ▶
xml, date = 2016-09-
22T12:07:32.746Z, standalone = false:
  menu, src = ▶
/index?__auth=force&__role=context-
menu&ref=%2fndns%2fupdateBooking:

  fields:
    field, name = name, title = Public Name:
    field, name = domain, title = Domain Name:
    field, name = address, title = IP Address:
    field, name = updated, title = Updated, type ▶
= date, variant = date:
    field, name = access, title = Access Mode, ▶
default = unknown:
    field, name = transfer, title = Transfer:
```

```

        name: testname
        domain: mykeenetic.net
        address: 81.200.27.56
        updated: 2016-09-22T12:07:32.744Z
        access: direct
        transfer: false

```

Ndns::Client: Get-update completed.

(ndns)> **get-update cloud ipv6 cloud**

```

        done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
        client, geo = RU, ip = 193.0.174.168, format = ►
xml, date = 2019-05-21T15:26:45.552Z, standalone = false:
        menu, src = ►
/index?__auth=force&__role=context-menu&ref=%2fndns%2fupdateBooking:

        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: mytest
        domain: keenetic.pro
        acme: LE
        address: 0.0.0.0
        access: cloud
        address6: ::
        access6: cloud
        updated: 2019-05-21T15:26:45.547Z
        transfer: false

```

Ndns::Client: Get-update completed.

(ndns)> **get-update direct**

```

        done, layout = view, title = ►
NDSS::ndns/updateBooking (Update Name Booking Address and ►
Expiration):
        client, geo = RU, ip = 193.0.174.159, format = ►
xml, date = 2019-11-13T16:53:30.782Z, standalone = false:
        menu, src = ►
/index?__auth=force&__role=context-menu&ref=%2fndns%2fupdateBooking:

```

```

        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: myworknow
        domain: keenetic.link
        acme: LE
        address: 193.0.174.159
        access: direct
        access6: none
        updated: 2019-11-13T16:50:34.298Z
        transfer: false

```

**History**

Version	Description
2.07	The <b>ndns get-update</b> command has been introduced.
2.14	Parameter <b>ipv6</b> was added.

## 3.107 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 <b>ntce</b> command has been introduced.

### 3.107.1 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 <b>ntce debug</b> command has been introduced.

### 3.107.2 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 <b>ntce memory-watcher</b> command has been introduced.

### 3.107.3 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).
		filetransferring	⑦ Low.
priority		<i>Integer</i>	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 <b>ntce qos category priority</b> command has been introduced.

### 3.107.4 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 <b>ntce qos enable</b> command has been introduced.

### 3.107.5 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	<i>Interface</i>	The name of a global interface to rate-limit.
rate	<i>Integer</i>	The ingress rate limit in kbps. Can take values in the range from 64 to 1000000.
auto	<i>Keyword</i>	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 <b>ntce upstream rate-limit input</b> command has been introduced.

## 3.107.6 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	<i>Interface</i>	The name of a global interface to rate-limit.
rate	<i>Integer</i>	The ingress rate limit in kbps. Can take values in the range from 64 to 1000000.
auto	<i>Keyword</i>	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 <b>ntce upstream rate-limit output</b> command has been introduced.

## 3.108 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 <b>ntp</b> command has been introduced.

## 3.109 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 <b>ntp master</b> command has been introduced.

## 3.110 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	<i>String</i>	Host of <i>NTP</i> 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 <b>ntp server</b> command has been introduced.

## 3.111 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	<i>IP address</i>	The source IP address for all <i>NTP</i> 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 <b>ntp source</b> command has been introduced.

## 3.112 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	<i>Integer</i>	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 <b>ntp sync-period</b> command has been introduced.

## 3.113 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes
<b>Interface type</b>	IP
<b>Group entry</b>	(config-ogrp-ip)

**Synopsis**

```
(config)> object-group ip <name>
```

```
(config)> no object-group ip <name>
```

<b>Arguments</b>	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.
```

<b>History</b>	Version	Description
	4.00	The <b>object-group ip</b> command has been introduced.

### 3.113.1 object-group ip exclude

**Description** Add or remove non-matching element of the object group.  
Command with **no** prefix removes the setting.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes

**Synopsis**

```
(config-ogrp-ip)> exclude <proto> <address> [ <port> [<end-port>]]
```

```
(config-ogrp-ip)> no exclude <proto> <address> [ <port> [<end-port>]]
```

<b>Arguments</b>	Argument	Value	Description
	proto	ip	IP protocol (include <a href="#">TCP</a> , <a href="#">UDP</a> , <a href="#">ICMP</a> and other).
		tcp	<a href="#">TCP</a> protocol.

Argument	Value	Description
	udp	<i>UDP</i> protocol.
	tcpudp	<i>TCP</i> and <i>UDP</i> protocols.
	icmp	<i>ICMP</i> protocol.
	esp	<i>ESP</i> protocol.
	gre	<i>GRE</i> protocol.
	ipip	<i>IP in IP</i> protocol.
address	<i>String</i>	IP address or subnet (in the form of prefix bit length (e.g. 1.2.3.0/24)).
port	<i>Integer</i>	TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated.
end-port	<i>Integer</i>	The end of the range of ports.

**Example**

```
(config-ogrp-ip)> exclude tcpudp 1.2.3.0/24 70 80
Network::ObjectGroup: "test": added exclude tcpudp 1.2.3.0/24 ►
70-80.
```

```
(config-ogrp-ip)> no exclude tcpudp 1.2.3.0/24 70 80
Network::ObjectGroup: "test": removed exclude tcpudp 1.2.3.0/24 ►
70-80.
```

**History**

Version	Description
4.00	The <b>object-group ip exclude</b> command has been introduced.

## 3.113.2 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	<i>IP</i> protocol (include <i>TCP</i> , <i>UDP</i> , <i>ICMP</i> and other).
	tcp	<i>TCP</i> protocol.
	udp	<i>UDP</i> protocol.
	tcpudp	<i>TCP</i> and <i>UDP</i> protocols.
	icmp	<i>ICMP</i> protocol.
	esp	<i>ESP</i> protocol.
	gre	<i>GRE</i> protocol.
	ipip	<i>IP in IP</i> protocol.
address	<i>String</i>	IP address or subnet (in the form of prefix bit length (e.g. 1.2.3.0/24)).
port	<i>Integer</i>	TCP/UDP port number for which a translation request comes. If not specified, all incoming requests will be translated.
end-port	<i>Integer</i>	The end of the range of ports.

**Example**

```
(config-ogrp-ip)> include tcpudp 1.2.3.0/24 75 80
Network::ObjectGroup: "test": added include tcpudp 1.2.3.0/24 ►
75-80.
```

```
(config-ogrp-ip)> no include tcpudp 1.2.3.0/24 75 80
Network::ObjectGroup: "test": removed include tcpudp 1.2.3.0/24 ►
75-80.
```

**History**

Version	Description
4.00	The <b>object-group ip include</b> command has been introduced.

## 3.114 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 <b>opkg chroot</b> command has been introduced.

## 3.115 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 3.117 on page 451](#).

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> | <disk>)
(config)> no opkg disk
```

**Arguments**

Argument	Value	Description
disk	<i>String</i>	Partition label or UUID.

**Example**

```
(config)> opkg disk ext4_opkg:/
Opkg::Manager: Disk is set to: ext4_opkg:/.
```

```
(config)> no opkg disk
Opkg::Manager: Disk is unset.
```

**History**

Version	Description
2.05	The <b>opkg disk</b> command has been introduced.

## 3.116 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 <b>opkg dns-override</b> command has been introduced.

## 3.117 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	<i>Filename</i>	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 <b>opkg initrc</b> command has been introduced.

## 3.118 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	<i>String</i>	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 <a href="#">Section 3.158.4 on page 645</a> .

**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 <b>opkg timezone</b> command has been introduced.

## 3.119 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	<i>String</i>	<i>Ping Check</i> profile name. You can see the list of available profiles with help of <b>ping-check profile</b> [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 <b>ping-check profile</b> command has been introduced.

### 3.119.1 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	<i>Hostname</i>	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 google.com
PingCheck::Profile: "test": add host "google.com" for testing.
```

```
(config-pchk)> no host
PingCheck::Profile: "test": hosts cleared.
```

**History**

Version	Description
2.04	The <b>ping-check profile host</b> command has been introduced.

### 3.119.2 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	<i>Integer</i>	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 <b>ping-check profile max-fails</b> command has been introduced.

### 3.119.3 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	<i>Integer</i>	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 <b>ping-check profile min-success</b> command has been introduced.

## 3.119.4 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 <b>ping-check profile mode</b> command has been introduced.
3.09	The <b>tls</b> argument was added.
4.00	The <b>uri</b> argument was added.

## 3.119.5 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	<i>Integer</i>	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 <b>ping-check profile port</b> command has been introduced.

### 3.119.6 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 <b>ping-check profile power-cycle</b> command has been introduced.

### 3.119.7 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	<i>Integer</i>	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 <b>ping-check profile timeout</b> command has been introduced.

### 3.119.8 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	<i>Integer</i>	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.

Version	Description
2.04	The <b>ping-check profile update-interval</b> command has been introduced.

### 3.119.9 ping-check profile uri

**Description** Assign URI ([Uniform Resource Identifier](https://en.wikipedia.org/wiki/Uniform_Resource_Identifier)<sup>6</sup>) 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> ]
```

Argument	Value	Description
uri	<i>Hostname</i>	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.
```

Version	Description
4.00	The <b>ping-check profile uri</b> command has been introduced.

<sup>6</sup> [https://en.wikipedia.org/wiki/Uniform\\_Resource\\_Identifier](https://en.wikipedia.org/wiki/Uniform_Resource_Identifier)

## 3.120 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 <b>ppe</b> 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.

## 3.121 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	<i>Interface</i>	The starting interface — full WAN-interface name or an alias.
lan-iface	<i>Interface</i>	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 <b>pppoe pass</b> command has been introduced.

## 3.122 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	<i>String</i>	Printer ID.

**Example**

```
(config)> printer 0924:3cf4  
(config-printer)>
```

**History**

Version	Description
2.00	The <b>printer</b> command has been introduced.

## 3.122.1 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 <b>printer bidirectional</b> command has been introduced.

## 3.122.2 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	<i>Integer</i>	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 <b>printer debug</b> command has been introduced.

### 3.122.3 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	<i>String</i>	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 <b>printer firmware</b> command has been introduced.

### 3.122.4 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	<i>String</i>	Arbitrary printer name.

**Example**

```
(config-printer)> name Canon
Printer::Manager: A printer name set.
```

**History**

Version	Description
2.00	The <b>printer name</b> command has been introduced.

## 3.122.5 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	<i>Integer</i>	Printer port.

**Example**

```
(config-printer)> port 2012
Printer::Manager: A port set.
```

**History**

Version	Description
2.00	The <b>printer port</b> command has been introduced.

## 3.122.6 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 <b>printer status-polling</b> command has been introduced.

## 3.122.7 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 <a href="#">CIFS</a> .
	direct	Printer connected directly to device.

**Example**

```
(config-printer)> type direct
Printer::Manager: A printer type set.
```

**History**

Version	Description
2.00	The <b>printer type</b> command has been introduced.

## 3.123 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	<i>String</i>	A schedule name.

**History**

Version	Description
2.06	The <b>schedule</b> command has been introduced.

### 3.123.1 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	<i>Integer</i>	The minutes.
hour	<i>Integer</i>	The hours.
dow	<i>Integer</i>	Days of the week, separated by commas. 0 and 7 mean Sunday. * means daily.

**Example**

```
(config-sched)> action start 0 9 1,2,3,4,5  
Core::Schedule::Manager: Updated schedule "WIFI".
```

**History**

Version	Description
2.06	The <b>schedule action</b> command has been introduced.

## 3.123.2 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	<i>String</i>	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 <b>schedule description</b> command has been introduced.

## 3.123.3 schedule led

**Description** Set LED indication for the scheduled events. SelectedSchedule control should 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 <b>schedule led</b> command has been introduced.

## 3.124 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 <b>service afp</b> command has been introduced.

## 3.125 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::ServerT smb: Enabled.
```

```
(config)> no service cifs
Cifs::ServerT smb: Disabled.
```

History	Version	Description
	2.00	The <b>service cifs</b> command has been introduced.

## 3.126 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 <b>service dhcp</b> command has been introduced.

## 3.127 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 <b>service dhcp-relay</b> command has been introduced.

## 3.128 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 <b>service dlna</b> command has been introduced.

## 3.129 service dns-proxy

## Description

Enable DNS-proxy. To configure the parameters of the service, use [Section 3.21 on page 121](#) 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 <b>service dns-proxy</b> command has been introduced.

## 3.130 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 <b>service ftp</b> command has been introduced.

## 3.131 service http

**Description** Enable HTTP server that provides the user with Web-interface to configure Hopper.

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 <b>service http</b> command has been introduced.

## 3.132 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 <b>service igmp-proxy</b> command has been introduced.

## 3.133 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 <b>service internet-checker</b> command has been introduced.

## 3.134 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 <b>service ipsec</b> command has been introduced.

## 3.135 service kabinet

**Description** Enable KAbiNET authenticator 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 kabinet
(config)> no service kabinet
```

**Example**

```
(config)> service kabinet
Kabinet::Authenticator: Authenticator enabled.
```

```
(config)> service kabinet
Kabinet::Authenticator: Authenticator disabled.
```

## History

Version	Description
2.02	The <b>service kabinet</b> command has been introduced.

## 3.136 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 <b>service mdns</b> command has been introduced.

## 3.137 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 <b>service mws</b> command has been introduced.

## 3.138 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 <b>service ntce</b> command has been introduced. Previous command name is <b>service dpi</b> .

## 3.139 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 <b>service ntp</b> command has been introduced. Previous command name is <b>service ntp-client</b> .

## 3.140 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 <b>service snmp</b> command has been introduced.

## 3.141 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 <b>service ssh</b> command has been introduced.

## 3.142 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 <b>service sstp-server</b> command has been introduced.

## 3.143 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.

Version	Description
2.00	The <b>service telnet</b> command has been introduced.

## 3.144 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.

Version	Description
2.00	The <b>service torrent</b> command has been introduced.

## 3.145 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 <b>service udpxy</b> command has been introduced.

## 3.146 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 <b>service upnp</b> command has been introduced.

## 3.147 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 <b>service vpn-server</b> command has been introduced.

## 3.148 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**

Version	Description
2.00	The <b>show</b> command has been introduced.

### 3.148.1 show access

**Description** Show user access for directory on USB drive.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **access** <directory>

Argument	Value	Description
directory	<i>String</i>	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 <b>show access</b> command has been introduced.

## 3.148.2 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 <b>show acme</b> command has been introduced.

## 3.148.3 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 <b>show afp</b> command has been introduced.

## 3.148.4 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	<i>String</i>	An access point name. You can see the list of available access points with help of <b>associations</b> [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 <b>show associations</b> command has been introduced.

### 3.148.5 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]`

Argument	Value	Description
name	<i>String</i>	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
```

Version	Description
2.00	The <b>show button</b> command has been introduced.

### 3.148.6 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: UnmountUsbl
    default_handler: UnmountUsbl
    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 <b>show button bindings</b> command has been introduced.

**3.148.7 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 <b>show button handlers</b> command has been introduced.

**3.148.8 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: 35.198.88.176

  radiuslocationid:

    dns:
      dns1: 8.8.8.8
      dns2: 8.8.4.4

  custom: uamsecret

  custom: radiussecret

  custom: radiusnasid

```

**History**

Version	Description
2.10	The <b>show chilli profiles</b> command has been introduced.

**3.148.9 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 <b>show cifs</b> command has been introduced.

## 3.148.10 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
  usedst: no
  rule: GMT0
  custom: no

```

**History**

Version	Description
2.00	The <b>show clock date</b> command has been introduced.

## 3.148.11 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 <b>show clock timezone-list</b> command has been introduced.

### 3.148.12 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 <b>show components status</b> command has been introduced.

**3.148.13 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 <b>show configurator status</b> command has been introduced.

### 3.148.14 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	<i>String</i>	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: libpgp-error
  title: GnuPG error handling helper library
  homepage: ▶
http://www.gnupg.org/related_software/libpgp-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: minidlina
  title: UPnP A/V & DLNA Media Server
  homepage: http://minidlina.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
  homepage: https://www.strongswan.org/
suite

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 <b>show credits</b> command has been introduced.

## 3.148.15 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	<i>String</i>	Name of selected <i>IKE</i> 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 <b>show crypto ike key</b> command has been introduced.

## 3.148.16 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	<i>String</i>	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 <b>show crypto map</b> command has been introduced.

**3.148.17 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: 014635737374***
servicehost: ndss.keenetic.ndmsystems.com
servicepass: *****
wlanssid: Keenetic-0000
wlankey: xFxTH***
wlanwps: 75534***
country: RU
ndmhwid: KN-1010
ctrlsum: 4712e0849ccea477ccdd18e2fedb***
serial: S1749WF***
signature: valid
integrity: ok
locked: yes

```

## History

Version	Description
2.00	The <b>show defaults</b> command has been introduced.

### 3.148.18 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 <b>show dlna</b> command has been introduced.

### 3.148.19 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



```

dns_server = 127.0.0.1:40500 .
dns_server = 127.0.0.1:40501 .
dns_server = 127.0.0.1:40508 .
dns_server = 127.0.0.1:40509 .
static_a = my.keenetic.net 78.47.125.180
static_a = cc6b5a71a7644903b51a5454.keenetic.io 78.47.125.180
static_a = myhome23.keenetic.pro 78.47.125.180
set-profile-ip 127.0.0.1 0
set-profile-ip ::1 0
dns_tcp_port = 53
dns_udp_port = 53

```

```
proxy-stat:
```

```
# ndnproxy statistics file
```

```

Total incoming requests: 809
Proxy requests sent:      659
Cache hits ratio:        0.192 (155)
Memory usage:            44.41K

```

```
DNS Servers
```

Med.Resp	Avg.Resp	Ip	Port	R.Sent	A.Rcvd	NX.Rcvd	
		Rank					▶
		127.0.0.1	40500	2	2	0	▶
40ms	40ms	10					
		127.0.0.1	40501	652	651	0	▶
17ms	17ms	10					
		127.0.0.1	40508	2	0	0	▶
0ms	0ms	4					
		127.0.0.1	40509	3	1	0	▶
326ms	326ms	3					

```
proxy-safe:
```

```
proxy-tls:
```

```
server-tls:
```

```

address: 1.1.1.1
port: 853
sni: cloudflare-dns.com
spki:
interface:

```

```
server-tls:
```

```

address: 8.8.8.8
port: 853
sni: dns.google.com
spki:
interface:

```

```
proxy-tls-filters:
```

```

proxy-https:
server-https:
    uri: https://dns.adguard.com/dns-query
    format: dnsm
    spki:
    interface:

server-https:
    uri: ▶
https://cloudflare-dns.com/dns-query?ct=application/dns-json
    format: json
    spki:
    interface:

proxy-https-filters:

```

**History**

Version	Description
3.01	The <b>show dns-proxy</b> command has been introduced.

**3.148.20 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	<i>String</i>	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 <b>dns-proxy</b> 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 <b>show dns-proxy filter presets</b> command has been introduced.

### 3.148.21 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 <b>show dns-proxy filter profiles</b> command has been introduced.

### 3.148.22 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	<i>String</i>	Version of <i>DPN</i> . If not specified, the latest version is shown.
language	<i>String</i>	The language of <i>DPN</i> . 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
```

CONTRATO DE LICENCIA DEL USUARIO FINAL

Última actualización 30/03/2020

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## History

Version	Description
3.05	The <b>show dpn document</b> command has been introduced.

## 3.148.23 show dpn list

<b>Description</b>	Show the list of <i>DPN</i> available in the system.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	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 <b>show dpn list</b> command has been introduced.

**3.148.24 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

**Interface type**

Ethernet

**Multiple input**

No

**Synopsis**

```
(show)> dot1x [ interface ]
```

**Arguments**

Argument	Value	Description
interface	<i>Interface</i>	An Ethernet interface name. You can see the list of available Ethernet interfaces with help of <b>dot1x</b> [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 <b>show dot1x</b> command has been introduced.

## 3.148.25 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 <b>show drivers</b> command has been introduced.

**3.148.26 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 <b>show dyndns updaters</b> command has been introduced.

**3.148.27 show easyconfig status**

**Description** Show EasyConfig status and settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **easyconfigstatus**

**Example**

```
(show)> easyconfig status

easyconfig:
  checked: Tue Aug 6 11:50:21 2019
  enabled: yes
  reliable: yes
gateway-accessible: yes
  dns-accessible: yes
  host-accessible: yes
  internet: yes

gateway:
  interface: GigabitEthernet1
  address: 193.0.175.2
  failures: 0
accessible: yes
excluded: no

hosts:
  host:
    name: google.com
  failures: 0
  resolved: no
  accessible: no
```

**History**

Version	Description
2.00	The <b>show easyconfig status</b> command has been introduced.

**3.148.28 show eula document**

**Description** Show [EULA](#) agreement text.

<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No

**Synopsis** | (show)> **eula document** [ <version> ] [ <language> ]

**Arguments**

Argument	Value	Description
version	<i>String</i>	Version of <i>EULA</i> . If not specified, the latest version is shown.
language	<i>String</i>	The language of <i>EULA</i> . 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 <b>show eula document</b> command has been introduced.

**3.148.29 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 <b>show eula list</b> command has been introduced.

## 3.148.30 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	<i>Interface</i>	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 <b>show interface</b> command has been introduced.

**3.148.31 show interface antennas**

<b>Description</b>	Show antenna signal strength.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No

**Interface type** Usb

**Synopsis** (show)> **interface** *<name>* **antennas**

**Arguments**

Argument	Value	Description
name	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [Tab] command.

**Output**

Element	Description
channel	Antenna number.
rs si	Received signal strength indicator.
rs rq	Reference signal received quality for 4G only.
rs rp	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 <b>show interface antennas</b> command has been introduced.

## 3.148.32 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>show interface bands</b> command has been introduced.

### 3.148.33 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	<i>Interface</i>	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 <b>show interface bridge</b> command has been introduced.

## 3.148.34 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [Tab] command.

**Output**

Element	Description
phy-id	Cell identity (Cell ID).
rsssi	Received signal strength indicator.

**Example**

```
(show)> interface UsbQmi0 cells
```

```
    cells:
      phy-id: fc
      rsssi: -71
```

```
    cells:
      phy-id: 15b
      rsssi: -71
```

```
    cells:
      phy-id: 187
      rsssi: -72
```

**History**

Version	Description
3.05	The <b>show interface cells</b> command has been introduced.

## 3.148.35 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	<i>Interface</i>	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 <b>show interface channel-utilization rrd</b> command has been introduced.

**3.148.36 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	<i>Interface</i>	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 <b>show interface channels</b> command has been introduced.

**3.148.37 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	<i>Interface</i>	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 <b>show interface chilli</b> command has been introduced.

**3.148.38 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	<i>Interface</i>	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 <b>show interface country-codes</b> command has been introduced.

## 3.148.39 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	<i>Interface</i>	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 <b>show interface mac</b> command has been introduced.

**3.148.40 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	<i>Interface</i>	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 <b>show interface name-server</b> command has been introduced.

## 3.148.41 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>show interface operators</b> command has been introduced.

**3.148.42 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	<i>Interface</i>	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 <b>show interface rf e2p</b> command has been introduced.

**3.148.43 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	<i>Interface</i>	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.

Argument	Value	Description
	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 <b>show interface rrd</b> command has been introduced.

**3.148.44 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	<i>Interface</i>	Full name or an alias of the Wi-Fi interface.
channel	<i>Integer</i>	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.

Argument	Value	Description
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 <b>show interface spectrum rrd</b> command has been introduced.

**3.148.45 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	<i>Interface</i>	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 <b>show interface stat</b> command has been introduced.

**3.148.46 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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 <b>show interface traffic-counter</b> command has been introduced.

## 3.148.47 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`

Argument	Value	Description
name	<i>Interface</i>	Full name or an alias of the interface.

Element	Value
pin	Pin number.

**Example**

```
(show)> interface WifiMaster0/AccessPoint0 wps pin
pin: 60180360
```

Version	Description
2.00	The <b>show interface wps pin</b> command has been introduced.

## 3.148.48 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`

Argument	Value	Description
name	<i>Interface</i>	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 enabled active
direction	send receive
mode	pbc self-pin 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 <b>show interface wps status</b> command has been introduced.

**3.148.49 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	<i>Interface</i>	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: 50.7.252.138/9993

    path: 50.7.252.138/9993

    peer:
    address: 458cde7190
    latency: 201
    role: PLANET
    version: -1.-1.-1

    path: 103.195.103.66/9993

    peer:
    address: 126127940c
    latency: 153
    role: LEAF
    version: 1.12.2

    path: 35.209.81.208/53871

    path: 35.209.81.208/53871

    path: 35.209.81.208/53871

    peer:
    address: fdfe04eba9
    latency: 129
    role: PLANET
    version: -1.-1.-1

    path: 84.17.53.155/9993

    peer:
    address: dfde9efeb9
    latency: 246
    role: PLANET
    version: -1.-1.-1

    path: 104.194.8.134/9993
```

**History**

Version	Description
4.01	The <b>show interface zerotier peers</b> command has been introduced.

**3.148.50 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: google.com
            failures: 0
            resolved: no
            accessible: no
```

**History**

Version	Description
2.11	The <b>show internet status</b> command has been introduced.

## 3.148.51 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
82.135.72.150     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
82.138.72.163     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
82.138.72.129     00:30:48:89:b5:9f  ISP
```

**History**

Version	Description
2.00	The <b>show ip arp</b> command has been introduced.

## 3.148.52 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	<i>String</i>	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 <b>show ip dhcp bindings</b> command has been introduced.

## 3.148.53 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	<i>String</i>	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 <b>show ip dhcp pool</b> command has been introduced.

### 3.148.54 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 <b>show ip ftp</b> command has been introduced.

### 3.148.55 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 <b>show ip hotspot</b> command has been introduced.

## 3.148.56 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.

Argument	Value	Description
	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 <b>show ip hotspot rrd</b> command has been introduced.

**3.148.57 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	

Argument	Value	Description
	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	<i>Integer</i>	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 <b>show ip hotspot summary</b> command has been introduced.

**3.148.58 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 <b>show ip http proxy</b> command has been introduced.

**3.148.59 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 <b>show ip http webdav</b> command has been introduced.

## 3.148.60 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: 193.0.174.21
  port: 0
  domain:
  global: 64520
  service: Dhcp::Client-GigabitEthernet1
  interface: GigabitEthernet1

server:
  address: 2a02:290:0:1::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 <b>show ip name-server</b> command has been introduced.

**3.148.61 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	<i>Keyword</i>	Only the records with <i>TCP</i> type will be displayed.

**Example**

```
(show)> ip nat
```

Type	In   Out	Source	Port	Destination	Port	Packets
udp		10.1.30.34	6482	111.221.77.159	40005	1
		111.221.77.159	40005	82.138.7.164	6482	1
udp		220.27.130.179	6896	82.138.7.164	28197	1
		192.168.15.204	28197	220.27.130.179	6896	1
tcp		10.1.30.33	57474	78.141.179.15	12350	12
		78.141.179.15	12350	82.138.7.164	57474	11
udp		10.1.30.34	6482	84.201.228.162	44423	11
		84.201.228.162	44423	82.138.7.164	6482	16
tcp		10.1.30.34	46655	96.55.147.21	443	2
		96.55.147.21	443	82.138.7.164	46655	0
udp		10.1.30.34	6482	213.199.179.158	40006	1
		213.199.179.158	40006	82.138.7.164	6482	1

**History**

Version	Description
2.00	The <b>show ip nat</b> command has been introduced.

## 3.148.62 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 <b>show ip neighbour</b> command has been introduced.

## 3.148.63 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	<i>Policy</i>	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: 193.0.174.1
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: 185.230.127.84/32
  gateway: 193.0.174.1
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: 193.0.174.0/24
  gateway: 0.0.0.0
interface: ISP
```

```

metric: 0
proto: boot
floating: no

route:
destination: 193.0.175.0/25
gateway: 193.0.174.10
interface: ISP
metric: 0
proto: boot
floating: no

route:
destination: 193.0.175.22/32
gateway: 193.0.174.1
interface: ISP
metric: 0
proto: boot
floating: no

```

**History**

Version	Description
2.12	The <b>show ip policy</b> command has been introduced.

**3.148.64 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	<i>Integer</i>	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 F Metric	Gateway	Interface	▶
0.0.0.0/0 U 0	192.168.133.1	WifiMaster1/WifiStation0	▶
1.1.1.1/32 U 0	0.0.0.0	Wireguard1	▶
8.8.8.8/32 U 0	0.0.0.0	Wireguard7	▶
10.1.30.0/24 U 0	0.0.0.0	Guest	▶
10.8.0.0/24 U 0	0.0.0.0	Wireguard3	▶
13.32.99.0/24 U 0	0.0.0.0	Wireguard7	▶
82.3.116.12/32 U 0	192.168.133.1	WifiMaster1/WifiStation0	▶
108.157.4.0/24 U 0	0.0.0.0	Wireguard7	▶
162.159.192.1/32 U 0	192.168.133.1	WifiMaster1/WifiStation0	▶
172.16.85.0/24 U 0	0.0.0.0	Wireguard1	▶
176.124.212.86/32 U 0	192.168.133.1	WifiMaster1/WifiStation0	▶
188.114.96.0/22 U 0	0.0.0.0	Wireguard7	▶
192.168.1.0/24 U 0	192.168.15.88	Home	▶
192.168.15.0/24 U 0	0.0.0.0	Home	▶
192.168.17.0/24 U 0	0.0.0.0	Bridge2	▶
192.168.133.0/24 U 0	0.0.0.0	WifiMaster1/WifiStation0	▶
192.168.220.0/24 U 0	0.0.0.0	Wireguard1	▶
194.71.130.15/32 U 0	192.168.133.1	WifiMaster1/WifiStation0	▶

(show)> **ip route sort interface ascending**

Destination F Metric	Gateway	Interface	▶
192.168.1.0/24 U 0	192.168.15.88	Home	▶
192.168.15.0/24 U 0	0.0.0.0	Home	▶
10.1.30.0/24 U 0	0.0.0.0	Guest	▶
192.168.17.0/24 U 0	0.0.0.0	Bridge2	▶
0.0.0.0/0	192.168.133.1	WifiMaster1/WifiStation0	▶

```

      U 0
84.2.111.11/32    192.168.133.1    WifiMaster1/WifiStation0 ▶
      U 0
162.159.192.1/32  192.168.133.1    WifiMaster1/WifiStation0 ▶
      U 0
176.124.212.86/32 192.168.133.1    WifiMaster1/WifiStation0 ▶
      U 0
192.168.133.0/24  0.0.0.0          WifiMaster1/WifiStation0 ▶
      U 0
194.71.130.15/32  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
13.32.99.0/24    0.0.0.0          Wireguard7           ▶
      U 0
108.157.4.0/24   0.0.0.0          Wireguard7           ▶
      U 0
188.114.96.0/22  0.0.0.0          Wireguard7           ▶
      U 0

```

```
(show)> ip route sort interface descending
```

Destination	Gateway	Interface	
F Metric			▶
188.114.96.0/22	0.0.0.0	Wireguard7	▶
U 0			
108.157.4.0/24	0.0.0.0	Wireguard7	▶
U 0			
13.32.99.0/24	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			
194.71.130.15/32	192.168.133.1	WifiMaster1/WifiStation0	▶
U 0			
192.168.133.0/24	0.0.0.0	WifiMaster1/WifiStation0	▶
U 0			
176.124.212.86/32	192.168.133.1	WifiMaster1/WifiStation0	▶



```

    U 0
162.159.192.1/32    192.168.133.1    WifiMaster1/WifiStation0 ▶
    U 0
85.1.112.11/32    192.168.133.1    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 <b>show ip route</b> command has been introduced.

**3.148.65 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 <b>show ip service</b> command has been introduced.

**3.148.66 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 <b>show ipsec</b> command has been introduced.

**3.148.67 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 <b>show ipv6 addresses</b> command has been introduced.

**3.148.68 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 <b>show ipv6 dhcp bindings</b> command has been introduced.

**3.148.69 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 <b>show ipv6 prefixes</b> command has been introduced.

## 3.148.70 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	<i>Integer</i>	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: 2a02:290:2:65d: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: 2a02:290:2:65d: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 <b>show ipv6 routes</b> command has been introduced.
4.00	New command name is <b>show ipv6 route</b> .

## 3.148.71 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: 2a0d:8140:2ba1::/64
   interface: TunnelSixInFour0
   valid-lifetime: infinite
   preferred-lifetime: 0
   global: no
```

**History**

Version	Description
4.01	The <b>show ipv6 subnets</b> command has been introduced.

## 3.148.72 show kabinet status

**Description** Check for the status and configuration of KAbiNET authenticator.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **kabinet status**

**Example**

```
(show)> kabinet status

 kabinet:
   enabled: yes
   wan: yes
   state: STOPPED
   server: 10.0.0.1
   access-level: internet
   protocol-version: 2
```

**History**

Version	Description
2.02	The <b>show kabinet status</b> command has been introduced.

## 3.148.73 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 <b>show last-change</b> command has been introduced.

## 3.148.74 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	



Argument	Value	Description
	WPS_2	
	WPS_3	
	WPS_4	
	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 <b>show led</b> command has been introduced.

## 3.148.75 show led bindings

**Description** Show the control associated with the specified LED. If you use no argument, the entire list of all LEDs with their 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	

Argument	Value	Description
	DSL	
	WLAN	
	WLAN5	
	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 <b>show led bindings</b> command has been introduced.

**3.148.76 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 <b>show led controls</b> command has been introduced.

**3.148.77 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	<i>Integer</i>	Limit for returned log items.
once	<i>Keyword</i>	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 <b>show log</b> command has been introduced.

## 3.148.78 show media

**Description** Show info about system USB-drives and their partitions.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **media**

**Example** (show)> **media**

```

media:
  name: Media0
  port: 1
  state: ACTIVE
manufacturer: Western Digital
product: My Passport 074A
serial: 575832314139324D36383139
size: 1000202043392

partition:
  uuid: 01D55E919F06F5C0
  label: MyPassport
  fstype: ntfs
  state: MOUNTED
  total: 982291312640

```



```

        free: 285839884288

    partition:
        uuid: dd5e899f-915e-d501-101e-899f915ed501
        label: fls_wd_ext4
        fstype: ext4
        state: MOUNTED
        total: 15756732416
        free: 15741890560

    partition:
        uuid: 00000000-0000-0000-0000-000000000000
        label:
        fstype: swap
        state: MOUNTED
        total: 1081077760
        free: 1081077760

```

**History**

Version	Description
3.04	The <b>show media</b> command has been introduced.

## 3.148.79 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 <b>show mws associations</b> command has been introduced.

**3.148.80 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	<i>String</i>	Device ID — MAC address or CID.

**Example**

```
(show)> mws candidate 50:ff:20:08:71:61
```

```
candidate:
  mac: 50:ff:20:08:71:61
  cid:
  mode:
  model:
  state: DISCONNECTED
```

```
(show)> mws candidate 50:ff:20:08:71:61
```

```
candidate:
  mac: 50:ff:20:08:71:61
  cid: ab1409a2-0f87-11e8-8f23-3d5f5921b253
  mode: ap
  model: Extra (KN-1710)
  state: COMPATIBLE
  fw: 2.15.A.4.0-1
fw-available: 2.15.A.4.0-1
license: 273720056272398
```

**History**

Version	Description
2.15	The <b>show mws candidate</b> command has been introduced.

## 3.148.81 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	<i>Integer</i>	Limit of entries in the response.
once	<i>Keyword</i>	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 <b>show mws log</b> command has been introduced.

## 3.148.82 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	<i>String</i>	Device ID — MAC address or CID.

**Example**

```
(show)> mws member 40f829b8-71a8-11ec-9396-5fb681ed4743

      member:
        cid: 40f829b8-71a8-11ec-9396-5fb681ed4743
        model: Speedster (KN-3310)
        mac: 50:ff:21:69:21:7d
        known-host: Keenetic Hopper 116***591
        ip: 192.168.15.42
        mode: extender
        hw-type: router
        license: 116232491843591
        fqdn: 1fb1227d6b44e5863f46cb5a.keenetic.io
fqdn-certificate-valid: yes
        fw: 3.8 Beta 2
        fw-available: 3.8.2
        region: EU
        associations: 0
        rebooting: yes

      capabilities:
        mode-hw: no
        dual-band: yes
auto-ap-shutdown: yes
        wpa3: yes
        owe: yes
        wind: yes
        wpa-eap: no
        acme: yes
        auth-token: yes
        backhaul-bss: yes
        sta-mask: yes
        country-code: yes
        notify: yes

      system:
        cpuload: 2
        memory: 97592/262144
        uptime: 567

      backhaul:
        uplink: GigabitEthernet0/Vlan1
        bridge: 8000.50:ff:21:69:21:7d
        cost: 5
        speed: 1000
```

```
duplex: full
```

```
rci:
errors: 0
```

**History**

Version	Description
2.15	The <b>show mws member</b> command has been introduced.

## 3.148.83 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: testname
    booked: testname
    domain: mykeenetic.com
    address: 41.189.34.56
    updated: yes
    access: direct

    ttp:
    direct: yes
    interface: GigabitEthernet1
    address: 41.189.34.56
```

**History**

Version	Description
2.07	The <b>show ndns</b> command has been introduced.

## 3.148.84 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 <b>show netfilter</b> command has been introduced.

## 3.148.85 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 <b>show nextdns availability</b> command has been introduced.

## 3.148.86 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 <b>show nextdns profiles</b> command has been introduced.

**3.148.87 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 <b>show ntce applications</b> command has been introduced.

**3.148.88 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 Host.

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 <b>show ntce attributes</b> command has been introduced.

**3.148.89 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: filetransferring
  groupset-long-id: File transferring

    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: filetransferring
groupset-long-id: File transferring

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: filetransferring
groupset-long-id: File transferring

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: filetransferring
  groupset-long-id: File transferring

    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 <b>show ntce groups</b> command has been introduced.

**3.148.90 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: filetransferring
  long: File transferring
```

**History**

Version	Description
3.07	The <b>show ntce groupsets</b> command has been introduced.

**3.148.91 show ntce hosts**

<b>Description</b>	Show application statistics, which <i>NTCE</i> service has detected for hosts.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	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: filetransferring
    groupset-long-id: File transferring
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 <b>show ntce hosts</b> command has been introduced.

**3.148.92 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 <b>show ntce oses</b> command has been introduced.

**3.148.93 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`

```

contrack:
  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 <b>show ntce status</b> command has been introduced.

## 3.148.94 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 <b>show ntp status</b> command has been introduced.

## 3.148.95 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	<i>String</i>	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 <b>show ping-check</b> command has been introduced.

**3.148.96 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 <b>show printers</b> command has been introduced.

## 3.148.97 show processes

<b>Description</b>	Show statistics of CPU usage by services and processes.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Synopsis</b>	<code>(show)&gt; processes</code>

### 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 <b>show processes</b> command has been introduced.

**3.148.98 show running-config**

<b>Description</b>	Show current settings, that is file system: running-config contains, just like command <b>more</b> does.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Synopsis</b>	<code>(show)&gt; <b>running-config</b></code>

**Example**

```
(show)> running-config
! $$$ Model: Keenetic Start
! $$$ Version: 2.06.1
! $$$ Agent: http/rci
! $$$ Last change: Fri, 12 Jan 2017 07:23:56 GMT
system
  set net.ipv4.ip_forward 1
  set net.ipv4.netfilter.ip_conntrack_max 4096
  set net.ipv4.netfilter.ip_conntrack_tcp_timeout_established ▶
1200
  set net.ipv4.netfilter.ip_conntrack_udp_timeout 60
  set net.ipv4.tcp_fin_timeout 30
  set net.ipv4.tcp_keepalive_time 120
  set net.ipv6.conf.all.forwarding 1
  hostname Keenetic
  domainname WORKGROUP
!
ntp server 0.pool.ntp.org
ntp server 1.pool.ntp.org
ntp server 2.pool.ntp.org
ntp server 3.pool.ntp.org
access-list _WEBADMIN_GuestWiFi
  deny tcp 0.0.0.0 0.0.0.0 10.1.30.1 255.255.255.255
!
access-list _WEBADMIN_ISP
  permit tcp 0.0.0.0 0.0.0.0 192.168.15.200 255.255.255.255 ▶
port eq 3389
  permit icmp 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0
!
isolate-private
dyndns profile _ABCD
!
dyndns profile _WEBADMIN
  type dyndns
!
interface GigabitEthernet0
  up
!
interface GigabitEthernet0/0
  switchport mode access
  switchport access vlan 1
!
interface GigabitEthernet0/1
  switchport mode access
  switchport access vlan 1
!
interface Bridge0
  name Home
  description "Home network"
  inherit GigabitEthernet0/Vlan1
  include AccessPoint
  security-level private
  ip address 192.168.15.43 255.255.255.0
  up
```

```
!  
interface WiMax0  
    description Yota  
    security-level public  
    ip address auto  
    ip global 400  
    up  
!  
interface PPTP0  
    description "Office VPN"  
    peer crypton.example.net  
    lcp echo 30 3  
    ipcp default-route  
    ipcp name-servers  
    ccp  
    security-level public  
    authentication identity "00441"  
    authentication password 123456  
    authentication mschap  
    authentication mschap-v2  
    encryption mppe  
    ip tcp adjust-mss pmtu  
    connect via ISP  
    up  
!  
ip route 82.138.7.141 ISP auto  
ip route 82.138.7.132 ISP auto  
ip route 82.138.7.27 PPTP0 auto  
ip dhcp pool _WEBADMIN  
    range 192.168.15.200 192.168.15.219  
    bind Home  
!  
ip dhcp pool _WEBADMIN_GUEST_AP  
    range 10.1.30.33 10.1.30.52  
    bind GuestWiFi  
!  
ip dhcp host A 00:01:02:03:04:05 1.1.1.1  
ip dhcp host B 00:01:02:03:04:06 1.1.1.2  
ip nat Home  
ip nat GuestWiFi  
ipv6 subnet Default  
    bind Home  
    number 0  
    mode slaac  
!  
ipv6 local-prefix default  
no ppe  
upnp lan Home  
torrent  
    rpc-port 8090  
    peer-port 51413  
!  
user admin  
    password md5 2320924ba6e5c1fec3957e587a21535b
```



```

tag cli
tag cifs
tag http
tag ftp
!
user test
  password md5 baadfb946f5d516379cfd75e31e409d9
  tag readonly
!
service dhcp
service dns-proxy
service ftp
service cifs
service http
service telnet
service ntp
service upnp
cifs
  share 9430B54530B52EDC 9430B54530B52EDC:
  automount
  permissive
!
!
!
```

**History**

Version	Description
2.00	The <b>show running-config</b> command has been introduced.

**3.148.99 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	<i>String</i>	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 <b>show schedule</b> command has been introduced.

## 3.148.100 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 <b>show self-test</b> command has been introduced.

## 3.148.101 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	<i>Interface</i>	Full name or an alias of the interface. You can see the list of available interfaces with help of <b>site-survey</b> [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 <b>show site-survey</b> command has been introduced.

**3.148.102 show skydns profiles****Description** Show *SkyDNS* profiles.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (show)> **skydns profiles**

```
(show)> skydns profiles
```

```

profile:
  name: Main
  token: 821766297

profile:
  name: Kids
  token: 840106815
```

```
SkyDns::Client: Profile list is loaded.
```

**History**

Version	Description
2.01	The <b>show skydns profiles</b> command has been introduced.

**3.148.103 show skydns userinfo**

**Description** Show *SkyDNS* userinfo.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **skydns userinfo**

**Example**

```
(config)> skydns userinfo

      plan:
        name: Premium
        code: PREMIUM

SkyDns::Client: SkyDNS info is loaded.
```

**History**

Version	Description
2.01	The <b>show skydns userinfo</b> command has been introduced.

**3.148.104 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 <b>show snmp view</b> command has been introduced.

**3.148.105 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/t8TbJk5tCzreeGuh03zaydu4
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:Wp1K9d8MsquQBt1BeB1pVlyKdCN1Vay3BtBwbj0xs+o
```

**History**

Version	Description
2.12	The <b>show ssh fingerprint</b> command has been introduced.

**3.148.106 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 <b>show ssh sftp</b> command has been introduced.

### 3.148.107 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 <b>show sstp-server</b> command has been introduced.

## 3.148.108 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 <b>show system</b> command has been introduced.

## 3.148.109 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 <b>show system country</b> command has been introduced.



## 3.148.110 show system cpustat

<b>Description</b>	Show device CPU usage.
<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Synopsis</b>	<code>(show)&gt; system cpustat</code>

### 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 <b>show system cpustat</b> command has been introduced.

## 3.148.111 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 <b>show system zram</b> command has been introduced.

## 3.148.112 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 <b>show tags</b> command has been introduced.

## 3.148.113 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 <b>show threads</b> command has been introduced.

**3.148.114 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 <b>show torrent status</b> command has been introduced.

**3.148.115 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	Rules with <i>TCP</i> protocol will be displayed.
	udp	Rules with <i>UDP</i> protocol will be displayed.
interface	<i>Interface</i>	Rules with specified interface name will be displayed.
port	<i>Integer</i>	Rules with specified port will be displayed.
index	<i>Integer</i>	Rule with specified number in the list will be displayed.

**Example**

```
(show)> upnp redirect udp ISP 11175

entry:
  index: 1
  interface: ISP
  protocol: udp
  port: 11175
  to-address: 192.168.15.206
  to-port: 11175
  description: Skype UDP at 192.168.12.286:11175 (2024)
  packets: 0
  bytes: 0
```

**History**

Version	Description
2.00	The <b>show upnp redirect</b> command has been introduced.

## 3.148.116 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 <b>show usb</b> command has been introduced.

**3.148.117 show version**

**Description** Show firmware version.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **version**

**Example**

```

(show)> version

release: 2.10.C.1.0-0
arch: mips

ndm:
  exact: 0-d32118a
  cdate: 11 Dec 2017

bsp:
  exact: 0-cbe0525
  cdate: 11 Dec 2017

ndw:
  version: 4.2.3.92
  features: ▶
wifi_button,flexible_menu,emulate_firmware_progress
components: ▶
ddns,dot1x,interface-extras,miniupnpd,nathelper-ftp,
▶
nathelper-pptp,nathelper-sip,ppe,trafficcontrol,
▶

```

```
cloudcontrol,base,components,corewireless,dhcpd,l2tp,
    ▲
igmp,easyconfig,pingcheck,ppp,pptp,pppoe,ydns

manufacturer: Keenetic Ltd.
vendor: Keenetic
series: KN
model: Start (KN-1110)
hw_version: 10118000
hw_id: KN-1110
device: Start
class: Internet Center
```

**History**

Version	Description
2.00	The <b>show version</b> command has been introduced.

**3.148.118 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 <b>show vpn-server</b> command has been introduced.

## 3.149 skydns

**Description** Access to a group of commands to configure *SkyDNS* parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (skydns)

## Synopsis

```
(config)> skydns
```

## Example

```
(config)> skydns
Core::Configurator: Done.
(skydns)>
```

## History

Version	Description
2.01	The <b>skydns</b> command has been introduced.

### 3.149.1 skydns assign

**Description** Assign profile of protection to the host or local network segments. By default, System profile is used for all hosts and local network.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

## Synopsis

```
(skydns)> assign <host> <token> | interface <iface> <token>
```

```
(skydns)> no assign [<host> | interface <iface> ]
```

## Arguments

Argument	Value	Description
host	<i>MAC address</i>	MAC address to assign.
token	<i>Integer</i>	Authentication token (ID).
iface	<i>Interface</i>	Full interface name or an alias.



**Example**

```
(skydns)> assign interface Bridge0 7061161877
SkyDns::Client: Associated interface "Bridge0" with profile ▶
"7061161877".
```

```
(skydns)> assign 04:12:23:54:bc:59 7061161877
SkyDns::Client: Associated host "04:12:23:54:bc:59" with profile ▶
"7061161877".
```

```
(skydns)> no assign interface Bridge0
SkyDns::Client: Removed profile for interface "Bridge0".
```

```
(skydns)> no assign 04:12:23:54:bc:59
SkyDns::Client: Removed profile for host "04:12:23:54:bc:59".
```

**History**

Version	Description
2.01	The <b>skydns assign</b> command has been introduced.

## 3.149.2 skydns check-availability

**Description** Check availability of *SkyDNS* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** | (skydns)> **check-availability**

**Example** (skydns)> **check-availability**  
SkyDns::Client: SkyDNS is available.

**History**

Version	Description
2.04	The <b>skydns check-availability</b> command has been introduced.

## 3.149.3 skydns login

**Description** Specify login for *SkyDNS* account.  
Command with **no** prefix resets configuration.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(skydns)> login <login>
```

```
(skydns)> no login
```

**Arguments**

Argument	Value	Description
login	String	Login to <i>SkyDNS</i> account.

**Example**

```
(skydns)> login myaccount@keenetic.com
SkyDns::Client: Set login.
```

```
(skydns)> no login
SkyDns::Client: Set login.
```

**History**

Version	Description
2.01	The <b>skydns login</b> command has been introduced.

## 3.149.4 skydns password

**Description**

Specify password for *SkyDNS* account.

Command with **no** prefix resets configuration.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(skydns)> password <password>
```

```
(skydns)> no password
```

**Arguments**

Argument	Value	Description
password	String	Password for <i>SkyDNS</i> account.

**Example**

```
(skydns)> password g$sc1Uu(EGd*cGTv;`n
SkyDns::Client: Set password.
```

```
(skydns)> no password
SkyDns::Client: Set password.
```

**History**

Version	Description
2.01	The <b>skydns password</b> command has been introduced.

## 3.150 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	<i>Interface</i>	Interface with SMS service.

**Example**

```
(config)> sms UsbQmi0
(sms)>
```

**History**

Version	Description
3.03	The <b>sms</b> command has been introduced.

### 3.150.1 sms delete

**Description** Delete SMS message.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (sms)> **delete** <id>

**Arguments**

Argument	Value	Description
id	<i>String</i>	Message ID.

**Example**

```
(sms)> delete sim-5
UsbQmi::Sms: "UsbQmi0": message deleted.
```

**History**

Version	Description
3.03	The <b>sms delete</b> command has been introduced.

## 3.150.2 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	<i>Keyword</i>	Show a list of unread SMS messages only.
id	<i>Keyword</i>	Show message with the given identifier.
no-content	<i>Keyword</i>	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: 0k

    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 <b>sms list</b> command has been introduced.
3.07	The <b>id</b> and <b>no-content</b> arguments were added.

## 3.150.3 sms read

<b>Description</b>	Mark SMS as read. Command with <b>no</b> prefix return unread SMS mark.
<b>Prefix no</b>	Yes
<b>Change settings</b>	No
<b>Multiple input</b>	No
<b>Synopsis</b>	<pre>(sms)&gt; <b>read</b> &lt;id&gt;</pre>

Argument	Value	Description
id	<i>String</i>	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 <b>sms read</b> command has been introduced.

## 3.150.4 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	<i>String</i>	The receiver's phone number.
message	<i>String</i>	Text message to send.

**Example**

```
(sms)> send +79261122777 "hello world!"
UsbQmi::Sms: "UsbQmi0": message sent.
```

**History**

Version	Description
3.03	The <b>sms send</b> command has been introduced.

## 3.151 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	<i>String</i>	New community name.

**Example**

```
(config)> snmp community Co_test
Sntp::Manager: SNMP community set to "Co_test".
(config)> no snmp community
Sntp::Manager: SNMP community reset to "public".
```

**History**

Version	Description
2.08	The <b>snmp community</b> command has been introduced.

## 3.152 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	<i>String</i>	<i>SNMP</i> contact info.

**Example**

```
(config)> snmp contact Cont_test
Sntp::Manager: SNMP contact info set to "Cont_test".
(config)> no snmp contact
Sntp::Manager: SNMP community info reset.
```

**History**

Version	Description
2.08	The <b>snmp contact</b> command has been introduced.



## 3.153 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	<i>String</i>	<i>SNMP</i> 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 <b>snmp location</b> command has been introduced.

## 3.154 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	<i>String</i>	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 <b>snmp view</b> command has been introduced.

## 3.155 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	<i>String</i>	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 <b>snmp view exclude</b> command has been introduced.

## 3.156 snmp view include

**Description**

Add include subtree for *SNMP* view.

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

**Prefix no**

Yes

**Change settings**

Yes

<b>Multiple input</b>	No						
<b>Synopsis</b>	<pre>(config)&gt; snmp view include &lt;oid&gt;</pre> <pre>(config)&gt; no snmp view include [ &lt;oid&gt; ]</pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>oid</td> <td><i>String</i></td> <td>Object identifier.</td> </tr> </tbody> </table>	Argument	Value	Description	oid	<i>String</i>	Object identifier.
Argument	Value	Description					
oid	<i>String</i>	Object identifier.					
<b>Example</b>	<pre>(config)&gt; snmp view client include internet</pre> <pre>Snmp::Manager: "client": added included OID "internet".</pre> <pre>(config)&gt; no snmp view client include internet</pre> <pre>Snmp::Manager: "client": removed included OID "internet".</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4.01</td> <td>The <b>snmp view include</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	4.01	The <b>snmp view include</b> command has been introduced.		
Version	Description						
4.01	The <b>snmp view include</b> command has been introduced.						

## 3.157 sstp-server

<b>Description</b>	Access to a group of commands to configure <a href="#">SSTP</a> server parameters.				
<b>Prefix no</b>	No				
<b>Change settings</b>	No				
<b>Multiple input</b>	No				
<b>Group entry</b>	(sstp-server)				
<b>Synopsis</b>	<pre>(config)&gt; sstp-server</pre>				
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.12</td> <td>The <b>sstp-server</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	2.12	The <b>sstp-server</b> command has been introduced.
Version	Description				
2.12	The <b>sstp-server</b> command has been introduced.				

### 3.157.1 sstp-server allow-bridging

<b>Description</b>	<p>Enable Ethernet bridging mode for <a href="#">SSTP</a> server. By default, this mode is disabled.</p> <p>Command with <b>no</b> prefix disables the setting.</p>
<b>Prefix no</b>	Yes
<b>Change settings</b>	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 <b>sstp-server allow-bridging</b> command has been introduced.

## 3.157.2 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	<i>IP address</i>	Network client address.
mask	<i>IP-mask</i>	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 <b>sstp-server dhcp route</b> command has been introduced.

### 3.157.3 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>sstp-server interface</b> command has been introduced.

### 3.157.4 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 <b>sstp-server ipv6cp</b> command has been introduced.

### 3.157.5 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	<i>Integer</i>	Interval between sending <i>LCP</i> echo, in seconds. If within the specified time interval there is no <i>LCP</i> echo request from the remote location, the same request will be sent there asking for response <i>LCP</i> reply.

Argument	Value	Description
count	<i>Integer</i>	The number of consecutive requests <i>LCP</i> echo sent, for which no response <i>LCP</i> reply was received. If count of <i>LCP</i> echo requests goes unanswered, the connection is terminated.
adaptive	<i>Keyword</i>	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 <b>sstp-server lcp echo</b> command has been introduced.

## 3.157.6 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 <b>sstp-server lcp force-pap</b> command has been introduced.

## 3.157.7 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	<i>Integer</i>	<i>MRU</i> 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 <b>sstp-server mru</b> command has been introduced.

### 3.157.8 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	<i>Integer</i>	<i>MTU</i> 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 <b>sstp-server mtu</b> command has been introduced.

### 3.157.9 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 <b>sstp-server multi-login</b> command has been introduced.

### 3.157.10 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	<i>IP address</i>	Start address of pool.
	size	<i>Integer</i>	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 <b>sstp-server pool-range</b> command has been introduced.

## 3.157.11 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	<i>String</i>	Username.
address	<i>IP address</i>	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 <b>sstp-server static-ip</b> command has been introduced.

## 3.158 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 <b>system</b> command has been introduced.

## 3.158.1 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>
```

**Arguments**

Argument	Value	Description
button	RESET	RESET button.
	WLAN	Wireless LAN button.
	FN	FN 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.

Argument	Value	Description
	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
Peripheral::Manager: "WLAN/double-click" handler set.
```

**History**

Version	Description
2.03	The <b>system button</b> command has been introduced.
2.06	The OpkgRunScript handler was added.

## 3.158.2 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 (KN-3010)).
	hwid	The Model identifier (for example, KN-3010).
	hostname	The System name (for example, Keenetic-Speedster).
	ndns-domain	The KeenDNS 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.

Version	Description
3.08	The <b>system caption</b> command has been introduced.

### 3.158.3 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>*

Argument	Value	Description
date-and-time	<i>String</i>	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.

Version	Description
2.00	The <b>system clock date</b> command has been introduced.

### 3.158.4 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	<i>String</i>	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 <b>system clock timezone</b> command has been introduced.

### 3.158.5 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 <b>system configuration factory-reset</b> command has been introduced.

### 3.158.6 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: Committed fail-safe ►
configuration changes.
```

History	Version	Description
	3.08	The <b>system configuration fail-safe commit</b> command has been introduced.

### 3.158.7 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 <b>system configuration fail-safe keep-alive</b> command has been introduced.

### 3.158.8 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 <b>system configuration fail-safe rollback</b> command has been introduced.

**3.158.9 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	<i>Integer</i>	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 <b>system configuration fail-safe timer</b> command has been introduced.

**3.158.10 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.

Version	Description
2.05.B.1	The <b>system configuration save</b> command has been introduced.

## 3.158.11 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>*

Argument	Value	Description
country	<i>String</i>	The country code from <a href="https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2">ISO 3166-1 alpha-2</a> <sup>7</sup> .

**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.

Version	Description
4.00	The <b>system country</b> command has been introduced.

## 3.158.12 system debug

**Description** Enable system debug. By default, setting is disabled.

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

<sup>7</sup> [https://en.wikipedia.org/wiki/ISO\\_3166-1\\_alpha-2](https://en.wikipedia.org/wiki/ISO_3166-1_alpha-2)

**Prefix no** Yes**Change settings** Yes**Multiple input** No

**Synopsis**

```
(system)> debug
```

```
(system)> no debug
```

**Example**

```
(system)> debug
Core::Debug: System debug enabled.
```

Version	Description
2.03	The <b>system debug</b> command has been introduced.

### 3.158.13 system description

**Description** Set the system description as an arbitrary string. By default, description Hopper (KN-3810) 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
```

Argument	Value	Description
description	<i>String</i>	System description no longer than 256 bytes.

**Example**

```
(system)> description DEVICE
Core::System::Info: Description saved.
```

```
(config)> show version
...
  manufacturer: Keenetic Ltd.
  vendor: Keenetic
  series: KN
  model: Ultra (KN-1810)
  hw_version: 10188000
  hw_id: KN-1810
  device: Ultra
```

```

class: Internet Center
region: RU
description: DEVICE

```

```

(config)> show running-config
...
set vm.swappiness 60
set vm.overcommit_memory 0
set vm.vfs_cache_pressure 1000
set dev.usb.force_usb2 0
domainname WORKGROUP
hostname Keenetic_Ultra
description DEVICE
...

```

```

(system)> no description
Core::System::Info: Description reset to default.

```

```

(config)> show version
...
manufacturer: Keenetic Ltd.
vendor: Keenetic
series: KN
model: Ultra (KN-1810)
hw_version: 10188000
hw_id: KN-1810
device: Ultra
class: Internet Center
region: RU
description: Keenetic Ultra (KN-1810)

```

## History

Version	Description
2.15	The <b>system description</b> command has been introduced.

## 3.158.14 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	<i>String</i>	The domain name to assign.

**Example**

```
(system)> domainname keenetic
Domainname saved.
```

**History**

Version	Description
2.00	The <b>system domainname</b> command has been introduced.

## 3.158.15 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	<i>String</i>	Name of media drive to eject.

**Example**

```
(system)> eject Media0
Storage::Manager: Started "Media0" eject.
```

**History**

Version	Description
3.04	The <b>system eject</b> command has been introduced.

## 3.158.16 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
```

Argument	Value	Description
hostname	<i>String</i>	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.
```

Version	Description
2.00	The <b>system hostname</b> command has been introduced.

## 3.158.17 system led

**Description** Configure general purpose LEDs. By default, LED FN shows the status of device connected to USB.

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 ] ]
```

Argument	Value	Description
led	FN	LED name.
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 <b>interface led wan</b> command.
	SelectedSchedule	LED shows status of scheduled event assigned with <b>schedule led</b> command.

Argument	Value	Description
	OpkgLedControl	LED shows status of <i>opkg</i> .
	UsbPortDeviceAttached	LED shows status of device connected to USB.
indicate	<i>Keyword</i>	Turn off the indicator completely.

**Example**

```
(system)> led FN indicate SelectedWan
Peripheral::Manager: "SelectedWan" control bound to "FN" LED.
```

```
(system)> no led FN indicate
Peripheral::Manager: "FN" LED control binding removed.
```

**History**

Version	Description
2.08	The <b>system led</b> command has been introduced.

## 3.158.18 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	<i>Schedule</i>	The name of the schedule that was created with <a href="#">schedule</a> 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 <b>system led power schedule</b> command has been introduced.

## 3.158.19 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 <b>system led power shutdown</b> command has been introduced. Previous command name is <b>system led shutdown</b> .

## 3.158.20 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 <b>system log clear</b> command has been introduced.

**3.158.21 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 <b>system log reduction</b> command has been introduced.

**3.158.22 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	<i>IP address</i>	Remote log server address.
port	<i>Integer</i>	Remote log server port.



**Example** (system)> **log server 192.168.1.1:8080**  
Syslog: server 192.168.1.1:8080 added.

Version	Description
2.00	The <b>system log server</b> command has been introduced.

### 3.158.23 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> ]
```

Argument	Value	Description
ident	<i>String</i>	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".
```

Version	Description
2.04	The <b>system log suppress</b> command has been introduced.

### 3.158.24 system mode

**Description** Select system operating mode for Hopper.

**Prefix no** No

**Change settings** Yes

**Multiple input** No**Synopsis** `(system)> mode <mode>`**Arguments**

Argument	Value	Description
mode	router	Main mode.
	client	Network adapter mode to connect Ethernet devices to Wi-Fi network.
	repeater	Repeater mode to extend Wi-Fi network using a wireless connection.
	ap	Access point mode to extend Wi-Fi network using a wired Ethernet connection.

**Example**

```
(system)> mode repeater
Core::Mode: The system switched to "repeater" mode, reboot the ►
device to apply the settings.
```

**History**

Version	Description
2.05	The <b>system mode</b> command has been introduced.

## 3.158.25 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	<i>String</i>	Name of filesystem to mount/unmount.

**Example**

```
(system)> mount 9430B54530B52EDC:
Filesystem mounted
```

**History**

Version	Description
2.00	The <b>system mount</b> command has been introduced.

## 3.158.26 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 <b>system ndss dump-report disable</b> command has been introduced. Previous command name is <b>system dump-report disable</b> .

## 3.158.27 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	<i>Integer</i>	Timeout for reboot, in seconds. If not specified, the reboot will be executed immediately.
schedule	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>system reboot</b> command has been introduced.
2.12	The <b>schedule</b> argument has been added.

## 3.158.28 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	<i>String</i>	Identifier of the system parameter.
value	<i>String</i>	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 <b>system set</b> command has been introduced.

## 3.158.29 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	<i>Filename</i>	Full path to the swap-file in <file system>:<path> format.
size	<i>Integer</i>	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 <b>system swap</b> command has been introduced.

### 3.158.30 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	<i>String</i>	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 <b>system trace lock threshold</b> command has been introduced.

### 3.158.31 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	1	USB port 1.
schedule	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>system usb power schedule</b> command has been introduced.

## 3.158.32 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	1	USB port 1.

**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 <b>system usb power shutdown</b> command has been introduced.

**3.158.33 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	<i>Integer</i>	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 <b>system zram</b> command has been introduced.

**3.159 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 <b>tools</b> command has been introduced.

## 3.159.1 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	<i>IP address</i>	IP address of the respondent.
	source-interface	<i>Interface</i>	Name of source-interface.
	count	<i>Integer</i>	Quantity of requests. If not specified, the command will run until interrupted by the user.
	wait-time	<i>Integer</i>	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 <b>tools arping</b> command has been introduced.

## 3.159.2 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> ] [ size <packetsize> ] [ sequence-id
<sequence-id> ] [ source ( <source-interface> | <source-address> ) ] [ tos
<tos> ] [ ttl <ttl> ]
```

### Arguments

Argument	Value	Description
host	<i>String</i>	Domain name or host IP address.
count	<i>Integer</i>	Quantity of ICMP Echo Requests. If not specified, the command will run until interrupted by the user.
packetsize	<i>Integer</i>	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	<i>Integer</i>	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	<i>Integer</i>	Type Of Service. By default, 0 value is used. Can take values in the range from 0 to 63 inclusively.
ttl	<i>Integer</i>	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 <b>tools ping</b> command has been introduced.
4.01	New values address and interface were added to the source argument.

## 3.159.3 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.

<b>Prefix no</b>	No
<b>Change settings</b>	No
<b>Multiple input</b>	No

**Synopsis**

```
(tools)> ping6 <host> [ count <count> ] [ size <packetsize> ] [ sequence-id
<sequence-id> ] [ source ( <source-interface> | <source-address> ) ] [ tos
<tos> ] [ ttl <ttl> ]
```

**Arguments**

Argument	Value	Description
host	<i>String</i>	Domain name or host IPv6-address.
count	<i>Integer</i>	Quantity of ICMPv6 Echo Requests. If not specified, the command will run until interrupted by the user.
packetsize	<i>Integer</i>	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	<i>Integer</i>	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	<i>Integer</i>	Type Of Service. By default, 0 value is used. Can take values in the range from 0 to 63 inclusively.
ttl	<i>Integer</i>	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 <b>tools ping6</b> command has been introduced.
4.01	New values address and interface were added to the source argument.

**3.159.4 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>] [packet-size <packet-size>]
[max-ttl <max-ttl>] [port <port>] [source-address <source-address>]
[source-interface <source-interface>] [type <type>] [tos <tos>]
```

**Arguments**

Argument	Value	Description
host	<i>String</i>	Name of the target host.
count	<i>Integer</i>	Number of probe packets per hop. Default value — 3. Value must be in the range [1;10].

Argument	Value	Description
interval	<i>Integer</i>	Time in seconds between sending packets. Default value — 0. Value must be in the range [0;15].
wait-time	<i>Integer</i>	Time to wait for a response to a probe (in seconds). Default value — 1. Value must be in the range [1;15].
packet-size	<i>Integer</i>	Size of packet according to the protocol type.  For tcp type default packet size is 52. Range of values [52].  For udp and icmp types default packet size is 60. Range of values [28;65535].
max-ttl	<i>Integer</i>	Maximum number of hops (max time-to-live value) traceroute will probe. Default value — 30. Value must be in the range [1;255].
port	<i>Integer</i>	Destination port.  For tcp type default port is 80.  For udp type default port is 33434.  For icmp type default port is 1.
source-address	<i>String</i>	Address of the outgoing interface.
source-interface	<i>String</i>	Interface to be used as the source interface in outgoing probe packets.
type	tcp	<i>TCP</i> protocol.
	udp	<i>UDP</i> protocol. Used by default.
	icmp	<i>ICMP</i> protocol.
tos	<i>Integer</i>	Type Of Service. Default value — 0. Value must be in the range [0;255].

**Example**

```
(tools)> traceroute google.com count 5 interval 5
starting traceroute to google.com...
traceroute to google.com (64.233.161.113), 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 <b>tools traceroute</b> command has been introduced.

## 3.160 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 <b>torrent</b> command has been introduced.

### 3.160.1 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	<i>String</i>	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 <b>torrent directory</b> command has been introduced.

## 3.160.2 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	<i>Integer</i>	Incoming <i>TCP</i> 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 <b>torrent peer-port</b> command has been introduced.

## 3.160.3 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	<i>Policy</i>	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 <b>torrent policy</b> command has been introduced.

### 3.160.4 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 <b>torrent reset</b> command has been introduced.

### 3.160.5 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	<i>Integer</i>	Webadmin listen port. Can take values in the range from 1024 to 65535.
	public	<i>Keyword</i>	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 <b>torrent rpc-port</b> command has been introduced.

## 3.161 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 <b>udpxy</b> command has been introduced.

### 3.161.1 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	<i>Integer</i>	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 <b>udpxy buffer-size</b> command has been introduced.

## 3.161.2 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	<i>Integer</i>	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 <b>udpxy buffer-timeout</b> command has been introduced.

## 3.161.3 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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 <b>udpxy interface</b> command has been introduced.

## 3.161.4 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	<i>Integer</i>	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 <b>udpxy port</b> command has been introduced.

### 3.161.5 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	<i>Integer</i>	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 <b>udpxy renew-interval</b> command has been introduced.

### 3.161.6 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	<i>Integer</i>	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 <b>udpxy timeout</b> command has been introduced.

## 3.162 upnp forward

**Description**

Add [UPnP](#) forwarding rule.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

```
(config)> upnp forward <protocol> [ interface ] <address> <port>
```

```
(config)> no upnp forward [ <index> | ( <protocol> <address> <port> ) ]
```

**Arguments**

Argument	Value	Description
protocol	tcp	Rule for <a href="#">TCP</a> protocol will be added/deleted.
	udp	Rule for <a href="#">UDP</a> protocol will be added/deleted.
interface	<i>Interface</i>	Rule for specified interface name will be added.
address	<i>IP address</i>	Rule for specified IP address will be added/deleted.
port	<i>Integer</i>	Rule for specified port will be added/deleted.
index	<i>Integer</i>	Rule with specified number in the list will be removed.

**History**

Version	Description
2.00	The <b>upnp forward</b> command has been introduced.

## 3.163 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [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 <b>upnp lan</b> command has been introduced.

## 3.164 upnp redirect

**Description** Add *UPnP* port translation rule.

Command with **no** prefix removes rule from the list. If you use no arguments, the entire list of rules will be removed.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** IP

**Synopsis**

```
(config)> upnp redirect <protocol> <interface> <port> <to-address> [
to-port ]

(config)> no upnp redirect [and forward | [ <index> | ( <protocol> <port> )
]]
```

### Arguments

Argument	Value	Description
protocol	tcp	Rule for <i>TCP</i> protocol will be added/deleted.
	udp	Rule for <i>UDP</i> protocol will be added/deleted.
interface	<i>Interface</i>	Rule for specified interface name will be added.
port	<i>Integer</i>	Rule for specified port will be added/deleted.
to-address	<i>IP address</i>	Rule for specified destination address will be added.
to-port	<i>Integer</i>	Rule for specified destination port will be added.
and forward	<i>Keyword</i>	Lists of forwarding and redirecting rules will be cleared.
index	<i>Integer</i>	Rule with specified number in the list will be removed.

### History

Version	Description
2.00	The <b>upnp redirect</b> command has been introduced.

## 3.165 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.

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	Yes
<b>Group entry</b>	(config-user)

**Synopsis**

```
(config)> user <name>
(config)> no user <name>
```

<b>Arguments</b>	Argument	Value	Description
	name	<i>String</i>	The user name.

<b>History</b>	Version	Description
	2.00	The <b>user</b> command has been introduced.

## 3.165.1 user home

**Description** Set home directory for user.

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

<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No

**Synopsis**

```
(config-user)> home <directory>
(config-user)> no home
```

<b>Arguments</b>	Argument	Value	Description
	directory	<i>String</i>	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 <b>user home</b> command has been introduced.

## 3.165.2 user password

**Description**

Set the user password. The password is stored as MD5-hash, computed from the "user:realm:password" string. *realm* is the device model name from startup-config.txt file.

The command takes open string or hash-function value as argument. Saved password is used for user authentication.

Command with **no** prefix removes the password so that the user can access to the device unauthenticated.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config-user)> password ( md5 <hash> | <password> )
```

```
(config-user)> no password
```

**Arguments**

Argument	Value	Description
hash	<i>String</i>	MD5-hash value.
password	<i>String</i>	Value of the password in open form, from which the hash value is calculated automatically.

**Example**

```
(config-user)> password 1111
Core::Authenticator: Password set has been changed for user ►
"test".
```

**History**

Version	Description
2.00	The <b>user password</b> command has been introduced.

## 3.165.3 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.

Note: The admin account can not be untagged `cli`.

The admin account can not be untagged `http` in Repeater mode.

**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).
	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 <a href="#">DLNA</a> 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.
	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.	

Argument	Value	Description
	webdav	Access to WebDAV file server.

**Example**

```
(config-user)> tag cli
Core::Authenticator: User "test" tagged with "cli".
```

```
(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 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.
```

**History**

Version	Description
2.00	The <b>user tag</b> command has been introduced.
2.04	The <b>vpn</b> tag has been added.
2.06	The <b>opt</b> , <b>ipsec-xauth</b> tags have been added.
2.10	The <b>http-proxy</b> tag has been added.
2.11	The <b>ipsec-l2tp</b> tag has been added.
2.12	The <b>sstp</b> tag has been added.
3.04	The <b>vpn-dlna sftp</b> and <b>webdav</b> tags have been added.

## 3.166 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	<i>Interface</i>	Full interface name or an alias. You can see the list of available interfaces with help of <b>interface</b> [Tab] command.
request	<i>String</i>	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 <b>ussd send</b> command has been introduced.

## 3.167 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**

Version	Description
2.04	The <b>vpn-server</b> command has been introduced.

### 3.167.1 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>* ]

Argument	Value	Description
address	<i>IP address</i>	Network client address.
mask	<i>IP-mask</i>	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 <b>vpn-server dhcp route</b> command has been introduced.

## 3.167.2 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 <b>interface</b> [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 <b>vpn-server interface</b> command has been introduced.

### 3.167.3 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 <b>vpn-server ipv6cp</b> command has been introduced.

### 3.167.4 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	<i>Integer</i>	Interval between sending <i>LCP</i> echo, in seconds. If within the specified time interval there is no <i>LCP</i> echo request from the remote location, the same request will be sent there asking for response <i>LCP</i> reply.



Argument	Value	Description
count	<i>Integer</i>	The number of consecutive requests <i>LCP</i> echo sent, for which no response <i>LCP</i> reply was received. If count of <i>LCP</i> echo requests goes unanswered, the connection is terminated.
adaptive	<i>Keyword</i>	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 <b>vpn-server lcp echo</b> command has been introduced.

## 3.167.5 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	<i>Integer</i>	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	<i>Integer</i>	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.
observation-window	<i>Integer</i>	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 <b>vpn-server lockout-policy</b> command has been introduced.

## 3.167.6 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 <b>vpn-server mppe</b> command has been introduced.

## 3.167.7 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 <b>vpn-server mppe-optional</b> command has been introduced.

## 3.167.8 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	<i>Integer</i>	<i>MRU</i> 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 <b>vpn-server mru</b> command has been introduced.

### 3.167.9 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	<i>Integer</i>	<i>MTU</i> 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 <b>vpn-server mtu</b> command has been introduced.

### 3.167.10 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 <b>vpn-server multi-login</b> command has been introduced.

### 3.167.11 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	<i>IP address</i>	Start address of pool.
	size	<i>Integer</i>	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 172.168.1.22 20
VpnServer::Manager: Configured pool range 172.168.1.22 to ►
172.168.1.41.
```

```
(vpn-server)> no pool-range
VpnServer::Manager: Reset pool range.
```

History	Version	Description
	2.04	The <b>vpn-server pool-range</b> command has been introduced.

### 3.167.12 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	<i>String</i>	Username.
address	<i>IP address</i>	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 <b>vpn-server static-ip</b> command has been introduced.

# Glossary

Address and Control Field Compression	<i>LCP</i> 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.
Asynchronous Transfer Mode	is a telecommunications concept defined by ANSI and ITU (formerly CCITT) standards for carriage of a complete range of user traffic, including voice, data, and video signals, and is designed to unify telecommunication and computer networks. It uses asynchronous time-division multiplexing, and it encodes data into small, fixed-sized cells. This differs from approaches such as the Internet Protocol or Ethernet that use variable sized packets or frames. ATM provides data link layer services that run over a wide range of OSI physical Layer links.
ATM adaptation layer	<p>isolates higher-layer protocols from the details of the ATM processes by converting higher-layer information into ATM cells and vice versa.</p> <p>The AAL is divided into two sublayers:</p> <ul style="list-style-type: none"><li>• Convergence sublayer (CS) — takes the common part convergence sublayer (CPCS) frame, divides it into 53-byte cells, and sends these cells to the destination for reassembly</li><li>• Segmentation and reassembly sublayer — segments data frames into ATM cells at the transmitter and reassembles them into their original format at the receiver</li></ul>
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 <a href="#">Password Authentication Protocol</a> .
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 <a href="#">PPP</a> .
Dead Peer Detection	is a method that network devices use to verify the current existence and availability of other peer devices.



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Device Privacy Notice	is a Keenetic 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	<p>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:</p> <ul style="list-style-type: none"><li>• <i>dynamic allocation</i>: 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.</li><li>• <i>automatic allocation</i>: 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.</li><li>• <i>static allocation</i>: 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).</li></ul>
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 <a href="https://en.wikipedia.org/wiki/IPv6#Stateless_address_autoconfiguration">stateless address autoconfiguration</a> <sup>1</sup> (SLAAC), or they may be assigned configuration data with DHCPv6.
Diffie-Hellman	is that part of the <i>IKE</i> 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

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<sup>1</sup> [https://en.wikipedia.org/wiki/IPv6#Stateless\\_address\\_autoconfiguration\\_\(SLAAC\)](https://en.wikipedia.org/wiki/IPv6#Stateless_address_autoconfiguration_(SLAAC))

	key of one party and the public key of the other. Since the <a href="#">IPsec</a> 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 user privacy and security by preventing eavesdropping and manipulation of DNS data by man-in-the-middle attacks. The standard is described in <a href="#">RFC 8484</a> <sup>2</sup> .
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 <a href="#">RFC 7858</a> <sup>3</sup> and <a href="#">RFC 8310</a> <sup>4</sup> .
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.
Energy-Efficient Ethernet	also Green Ethernet  is a set of enhancements to the twisted-pair and backplane Ethernet family of computer networking standards that reduce power consumption during periods of low data activity. The intention is to reduce power consumption by 50% or more, while retaining full compatibility with existing equipment.
Encapsulating Security Payload	is a member of the <a href="#">IPsec</a> 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.

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<sup>2</sup> <https://tools.ietf.org/html/rfc8484>

<sup>3</sup> <https://tools.ietf.org/html/rfc7858>

<sup>4</sup> <https://tools.ietf.org/html/rfc8310>

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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 <i>Domain Name System</i> . 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  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.
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 <a href="https://datatracker.ietf.org/doc/html/rfc4443">RFC 4443</a> <sup>5</sup> .
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.
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 <a href="#">Diffie-Hellman</a> key exchange algorithm to generate a shared secret key to encrypt further <a href="#">IPsec</a> 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 <a href="#">Point-to-Point Protocol</a> (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 <a href="#">Internet Protocol</a> (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.

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<sup>5</sup> <https://datatracker.ietf.org/doc/html/rfc4443>

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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 <a href="#">Point-to-Point</a> (PPP) link. IPv6CP uses the same packet exchange mechanism as the <a href="#">Link Control Protocol</a> . 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 Control Protocol	<p>establishes, configures, and tests data-link Internet connections in the <a href="#">Point-to-Point Protocol</a> (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.</p> <p>LCP packets are divided into three classes:</p> <ul style="list-style-type: none"><li>• Link configuration packets used to establish and configure a link</li><li>• Link termination packets used to terminate a link</li><li>• Link maintenance packets used to manage and debug a link</li></ul>
Link Layer Discovery Protocol	<p>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.</p> <p>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).</p>
Logical Link Control	in this method, multiple protocol types can be carried across a single connection with the type of encapsulated packet identified by a standard LLC/SNAP header. LLC encapsulation is provided to support routed and bridged protocols. In this encapsulation format, PDUs from

	multiple protocols can be carried over the same virtual connection. The type of protocol is indicated in the packet's SNAP header.
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.
Master Browser	is a tool that provides information about, and typically a way to access, SMB/CIFS files and printer shares. It is responsible for the browse host list within its respective subnet and portion of the domain on its subnet. Is used to host information of other Windows computers within the same Windows domain or TCP/IP network.
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 <a href="#">TCP</a> header that specifies the largest amount of data, specified in bytes, that a computer or 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 <a href="#">Point-to-Point Protocol</a> 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 Keenetic 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	<p>also DPI, Deep Deep Packet Inspection</p> <p>is a technology for accumulating statistics and inspecting network packets based on their contents. Deep Packet Inspection analyzes not only packet headers, but also the full content of traffic at OSI layers 2 and above.</p> <p>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.</p> <p>The Traffic Classification Engine component operates completely independently and does not make any calls to external services.</p>
Open Package	lightweight package management system. It is intended for use on embedded Linux devices and is used in this capacity in the <a href="https://www.openwrt.org/">OpenWrt</a> <sup>6</sup> and <a href="https://github.com/Entware/Entware">Entware</a> <sup>7</sup> 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.
Orthogonal Frequency-Division Multiple Access	is a new feature of 802.11ax that divides available channel bandwidth into several mutual orthogonal subcarriers or resource units. Access to multiple users is granted in OFDMA by assigning subsets of these subcarriers to individual users. The 802.11ax OFDMA is both uplink and downlink.

<sup>6</sup> <https://www.openwrt.org/>

<sup>7</sup> <https://github.com/Entware/Entware>

Password Authentication Protocol	is an authentication protocol that uses a password. PAP is used by <a href="#">Point-to-Point Protocol</a> 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.
Permanent Virtual Circuit	is a networking technology that allows sharing of physical paths among multiple virtual circuits by establishing long-term logical connections and bandwidth allocations within a frame relay or <a href="#">ATM</a> network, which handles management of network traffic.
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.
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 <a href="#">Internet Protocol Control Protocol</a> (IPCP) is used.
Power Spectral Density	is a measure of a signal's power intensity in the frequency domain. The PSD provides a useful way to characterize the amplitude versus frequency content of a random signal.
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.



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.

Long preamble:

- PLCP with long preamble is transmitted at 1 Mbps regardless of transmit rate of data frames
- Total long preamble transfer time is a constant at 192 usec
- Compatible with legacy IEEE 802.11 systems running at 1 and 2 Mbps

Short preamble:

- Preamble is transmitted at 1 Mbps and header at 2 Mbps
- Total short preamble transfer time is a constant at 96 usec
- 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 <i>PPP</i> 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	<p>also Dynamic NAT</p> <p>works in the same way as a <a href="#">Full Cone NAT</a> 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.</p>
Secure Socket Tunneling Protocol	<p>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.</p>
Service Set Identifier	<p>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.</p>
Simple Network Management Protocol	<p>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.</p>
Simple Network Time Protocol	<p>is an Internet Protocol (IP) used to synchronize the clocks of networks of computers.</p> <p>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.</p> <p>SNTP can operate on IPv4 and IPv6 networks. The standard is described in <a href="#">RFC 4330</a><sup>8</sup>.</p>
SOCKS	<p>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.</p>
Shared key	<p>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.</p>
Short Message Service	<p>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.</p>
SkyDNS	<p>service that provides the ability to filter and block dangerous or unwanted sites. SkyDNS extends the <a href="#">Domain Name System</a> by adding features such as phishing protection and content filtering.</p>

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<sup>8</sup> <https://www.rfc-editor.org/rfc/rfc4330>

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Spatial Reuse	is a The Spatial Reuse (SR) operation included in the IEEE 802.11ax-2020 (11ax) amendment aims at increasing the number of parallel transmissions in an Overlapping Basic Service Set (OBSS).
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 <i>Internet Protocol</i> suite. TCP provides reliable, ordered, and error-checked delivery of a stream of octets between applications running on hosts communicating over an IP network.
Target Wake Time	is a feature reduces power consumption and improves spectral efficiency by enabling devices to determine how often to wake in order to send/receive data. This technology enables 802.11ax deployments to consistently deliver higher quality of service to many different devices.
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 <i>Internet Protocol</i> 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. 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.
VCI&VPI	virtual path identifier (VPI) and virtual channel identifier (VCI). VPI identifies a virtual path leg on an ATM interface. VPI and VCI together identify a virtual channel leg on an ATM interface. Concatenating such

	<p>legs through switches forms a virtual connection across a network. VPIs and VCIs are not addresses, such as MAC addresses used in LAN switching. VPIs and VCIs are explicitly assigned at each segment of a connection and, as such, have only local significance across a particular link. They are remapped, as appropriate, at each switching point. Using the VCI/VPI identifier, the ATM layer can multiplex (interleave), demultiplex, and switch cells from multiple connections.</p>
Very-high-bit-rate Digital Subscriber Line	<p>is a digital subscriber line (DSL) technology providing faster data transmission over a single flat untwisted or twisted pair of copper wires. VDSL is deployed over existing wiring used for analog telephone service and lower-speed DSL connections.</p>
Virtual LAN	<p>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.</p>
Web Distributed Authoring and Versioning	<p>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.</p>
Web Proxy Auto-Discovery Protocol	<p>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.</p>
WireGuard	<p>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.</p>
Wi-Fi Multimedia	<p>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).</p> <p>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.</p>
Wi-Fi Protected Access	<p>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</p>

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	<p>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.</p> <p>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.</p> <p>WPA Enterprise is a protocol-based authentication mode IEEE 802.1X using an external authentication server RADIUS and local client Supplicant.</p>
Wi-Fi Protected Setup	<p>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.</p>
Wired Equivalent Privacy	<p>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. <a href="#">WPA2</a>), the IEEE declared that both WEP-40 and WEP-104 have been deprecated.</p>
Wireless Internet Service Provider	<p>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.</p> <p>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.</p>
Extended Authentication	<p>or XAUTH, provides an additional level of authentication by allowing the <a href="#">IPsec</a> gateway to request extended authentication from remote users, thus forcing remote users to respond with their credentials before being allowed access to the VPN.</p>
XFRM	<p>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.</p>
ZeroTier	<p>is a distributed network hypervisor built atop a cryptographically secure global peer to peer network. It provides advanced network virtualization</p>

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.

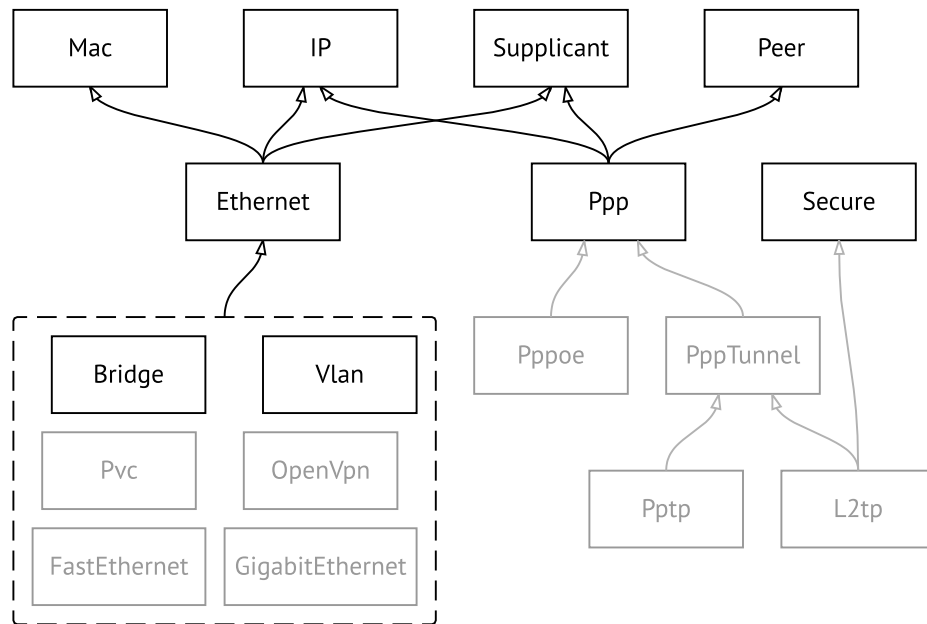
All traffic is encrypted end to end on OSI layer 1 using 256-bit Salsa20 and authenticated using the Poly1305 message authentication (MAC) algorithm. MAC is computed after encryption (encrypt-then-MAC) and the cipher/MAC composition used is identical to the NaCl reference implementation.

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.

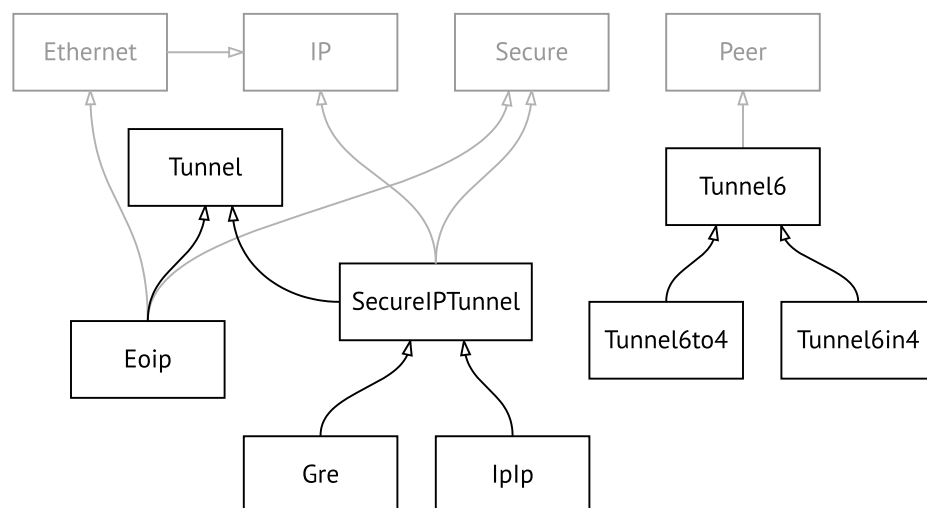
A ZeroTier address looks like 8056c2e21c and a network ID looks like 8056c2e21c000001. Network IDs are composed of the ZeroTier address of that network's primary controller and an arbitrary 24-bit ID that identifies the network on this controller.

# Interface Hierarchy

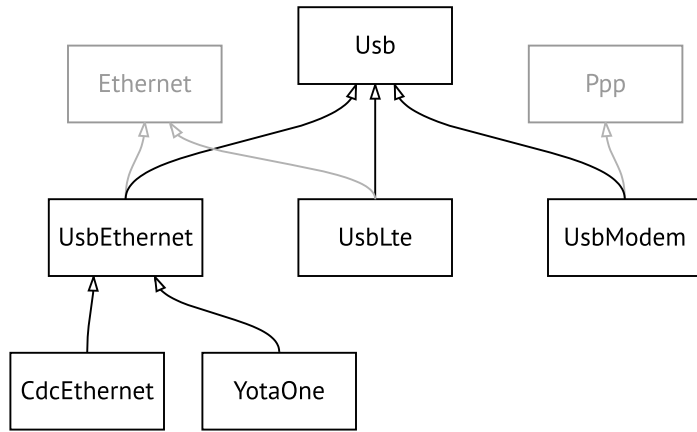
**Figure A.1. Core interfaces**



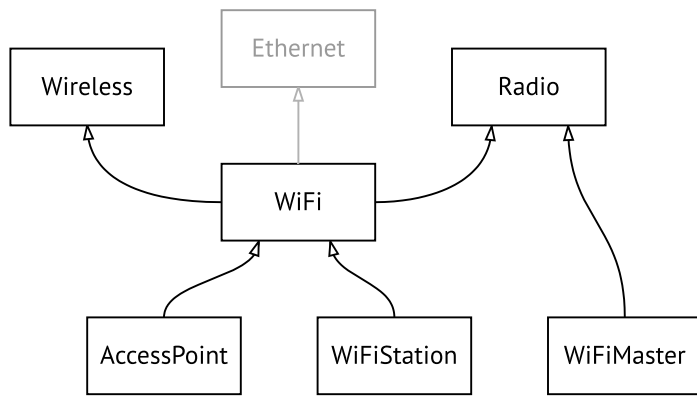
**Figure A.2. Tunnel interfaces**



**Figure A.3. USB interfaces**



**Figure A.4. Wi-Fi interfaces**





## B.1 REST Core Interface

Hopper HTTP API lets you develop a custom application, that will access Hopper 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 Hopper 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 714](#).

### 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 714](#)

- 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,<sup>1</sup> 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 715](#) and [Section B.1.3.3 on page 715](#)

### 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 3.44.8 on page 345](#) to see how "interface" and "access" parameters are mentioned in the Arguments table.

---

<sup>1</sup>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 3.29 on page 147](#), 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": "4G (KN-1210)",
      "hw_version": "10128000",
      "hw_id": "KN-1210",
      "device": "4G",
      "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.

Hopper 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 Hopper 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 Hopper.

```

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 <a href="#">Chapter 3 on page 41</a>
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 41](#).

*argument* Name of the argument. Available arguments for each command are listed in [Chapter 3 on page 41](#). 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 37](#).

**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>
```



# Keenetic Plus DSL Support

Keenetic Plus DSL gives function of ADSL2+/VDSL2 modem to any model of Keenetic with USB-port. It connects via USB directly to the internet center, managed by its operating system (via optional component) and does not require a separate power supply.

## C.1 interface operating-mode

<b>Description</b>	Configure the ADSL operating mode. By default, <code>adsl2+</code> and <code>a</code> values are used.
<b>Prefix no</b>	No
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Interface type</b>	Switch

**Synopsis** | `(config-if)> operating-mode mode [ annex ]`

### Arguments

Argument	Value	Description
mode	adsl2	Configures operation in ADSL2 operating mode — ITU G.992.3 Annex A and Annex M. If an Annex operating mode is not chosen, Annex A and Annex M will all be enabled. The final mode will be decided by negotiation with the DSL access multiplexer (DSLAM).
	adsl2+	Configures operation in ADSL2+ mode — ITU G.992.5 Annex A and Annex M. If an Annex A operating mode is not chosen, both Annex A and Annex M will be enabled. The final mode will be decided by negotiation with DSLAM.
	vdsl2-cpe	Configures operation in VDSL2 client mode.
	vdsl2-co	Configures operation in VDSL2 server mode. It can be set manually only.
	auto	Mode is selected automatically (except <code>vdsl2-co</code> ).
annex	a	xDSL service functioning over plain old telephone service.
	m	Upstream/downstream frequency split has been shifted from 138 kHz up to 276 kHz,

Argument	Value	Description
		allowing maximum upstream bandwidth to be increased from 1.4 Mbit/s to 3.3 Mbit/s.
	auto	Annex is selected in automatic mode.

**Example**

```
(config)> interface UsbDsl0 operating-mode vdsl2-cpe
Network::Interface::Mt2311::UsbDsl: Opmode is set to VDSL2-CPE.
```

**History**

Version	Description
2.06	The <b>interface operating-mode</b> command has been introduced.

## C.2 interface pvc

**Description** Configure a *permanent virtual circuit* on an *ATM* interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Interface type** PVC

**Group entry** (config-if-atm-vc)

**Synopsis** `(config-if)> pvc <vpi> <vci>`

**Arguments**

Argument	Value	Description
vpi	<i>Integer</i>	A <i>virtual path identifier</i> of this <i>PVC</i> . Can take values from 0 to 255.
vci	<i>Integer</i>	A <i>virtual channel identifier</i> of this <i>PVC</i> . Can take values from 32 to 65535.

**Example**

```
(config-if)> pvc 1 50
Network::Interface::Mt2311::Pvc: Assigned UsbDsl0/Pvc0 1/50.
```

**History**

Version	Description
2.00	The <b>interface pvc</b> command has been introduced.

## C.3 interface pvc encapsulation

**Description** Configure the *ATM* adaptation layer (*AAL*) and encapsulation type for an *ATM PVC*. By default, the `aal5snap` value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** PVC

**Synopsis** `(config-if-atm-vc) encapsulation (aal5mux | aal5snap)`

**Arguments**

Argument	Value	Description
encapsulation	aal5mux	Dedicate the specified <i>PVC</i> to a single protocol (called VC multiplexing).
	aal5snap	Multiplex two or more protocols over the same <i>PVC</i> (called <i>LLC multiplexing</i> ).

**Example**

```
(config-if-atm-vc)> encapsulation aal5snap
Network::Interface::Mt2311::Pvc: Using Ethernet encapsulation, ►
LLC mux.
```

**History**

Version	Description
2.00	The <b>interface pvc encapsulation</b> command has been introduced.

## C.4 interface vdsl carrier

**Description** Select *VDSL* carrier set. By default, `auto` parameter is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis** `(config-if)> vdsl carrier <carrier>`

**Arguments**

Argument	Value	Description
carrier	auto	Carrier is selected in automatic mode.
	a43	Select A43 carrier set.
	b43	Select B43 carrier set.

Argument	Value	Description
	v43	Select V43 carrier set.

**Example**

```
(config-if)> vdsl carrier a43
Network::Interface::Mt2311::UsbDsl: Set G.hs carrier: A43.
```

**History**

Version	Description
2.06	The <b>interface vdsl carrier</b> command has been introduced.

## C.5 interface vdsl profile

**Description**

Set *VDSL* profiles. By default, the all value is set.

Command with **no** prefix removes one of profiles. If you use no arguments, the default value will be set.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

```
(config-if)> vdsl profile (<profile> | all)
```

```
(config-if)> no vdsl profile [profile]
```

**Arguments**

Argument	Value	Description
all	<i>Keyword</i>	Set all <i>VDSL</i> profiles.
profile	8a	<i>VDSL</i> profile name.
	8b	
	8c	
	8d	
	12a	
	12b	
	17a	
	30a	

**Example**

```
(config-if)> vdsl profile 12a
Network::Interface::Mt2311::UsbDsl: Enabled profile(s): 12a.
```

**History**

Version	Description
2.06	The <b>interface vdsl profile</b> command has been introduced.

## C.6 interface vdsl psdmask

**Description** Set mask of *PSD*. By default, the A\_R\_POTS\_D-32\_EU-32 value is used.

**Prefix no** No

**Change settings** Yes

**Multiple input** Yes

**Synopsis** `(config-if)> vdsl psdmask <mask>`

**Arguments**

Argument	Value	Description
mask	A_R_POTS_D-32_EU-32	Name of <i>PSD</i> mask.
	A_R_POTS_D-64_EU-64	
	B7-1_997-M1c-A-7	
	B7-3_997-M1x-M	
	B7-7_HPE17-M1-NUS0	
	B7-8_HPE30-M1-NUS0	
	B7-9_997E17-M2x-A	
	B7-10_997E30-M2x-NUS0	
	B7-11_HPE1230-M1-NUS0	
	B7-12_HPE1730-M1-NUS0	
	B8-1_998-M1x-A	
	B8-2_998-M1x-B	
	B8-3_998-M1x-NUS0	
	B8-4_998-M2x-A	
	B8-5_998-M2x-M	
	B8-6_998-M2x-B	
	B8-7_998-M2x-NUS0	
	B8-8_998E17-M2x-NUS0	
	B8-9_998E17-M2x-NUS0-M	
	B8-10_998ADE17-M2x-NUS0-M	
B8-11_998ADE17-M2x-A		
B8-12_998ADE17-M2x-B		

Argument	Value	Description
	B8-13_998E30-M2x-NUS0	
	B8-14_998E30-M2x-NUS0-M	
	B8-15_998ADE30-M2x-NUS0-M	
	B8-16_998ADE30-M2x-NUS0-A	
	B8-17_998ADE30-M2x-NUS0-A	
	C_POTS_25-138_b	
	C_POTS_25-276_b	
	C_TCM-ISDN	

**Example**

```
(config-if)> vdsl psdmask B7-7_HPE17-M1-NUS0
Network::Interface::Mt2311::UsbDsl: Set PSD mask: ►
B7-7_HPE17-M1-NUS0.
```

**History**

Version	Description
2.06	The <b>interface vdsl psdmask</b> command has been introduced.

## C.7 show interface dsl

**Description** Display DSL interface configuration.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** DSL

**Synopsis** `(show)> interface <name> dsl`

**Arguments**

Argument	Value	Description
name	<i>Interface name</i>	Full interface name or an alias.

**Output**

Element	Interface	Value
id	Base	...
index	Base	...
type	Base	...
description	Base	
connected	Base	

Element	Interface	Value
state	Base	
mtu	Base	
tx-queue	Base	
global		
security-level	IP	public private protected
mac		
auth-type		
plugged	Usb	
vendor	Usb	
model	Usb	
manufacturer	Usb	
product	Usb	
serial	Usb	
opmode	UsbDsl	
link	UsbDsl	
standard	UsbDsl	
annex	UsbDsl	
us_delay	UsbDsl	
ds_delay	UsbDsl	
profile	UsbDsl	
us_fast_rate	UsbDsl	
ds_fast_rate	UsbDsl	
us_noise	UsbDsl	
ds_noise	UsbDsl	
us_atten	UsbDsl	
ds_atten	UsbDsl	
us_attain	UsbDsl	
ds_attain	UsbDsl	
us_power	UsbDsl	
ds_power	UsbDsl	
us_capacity	UsbDsl	
ds_capacity	UsbDsl	
far_itu_id	UsbDsl	

Element	Interface	Value
near_itu_id	UsbDsl	

**Example**

```
(show)> interface UsbDsl0 dsl
      id: UsbDsl0
      index: 0
      type: UsbDsl
      description: Keenetic Plus DSL
      connected: yes
      state: up
      mtu: 1500
      tx-queue: 1000
      global: no
      security-level: public
      mac: 90:ef:68:d2:61:f0
      auth-type: none
      plugged: yes
      vendor: 0586
      model: 3427
      manufacturer: ZyXEL
      product: Keenetic Plus DSL
      serial: S155608000034
      opmode: VDSL2-CPE
      link: showtime
      standard: VDSL2
      us_delay: 0 ms
      ds_delay: 0 ms
      profile: 30a
      us_fast_rate: 122784 kbps
      ds_fast_rate: 200187 kbps
      us_noise: 6.5 dB
      ds_noise: 6.2 dB
      us_atten: 0.0 dB
      ds_atten: 0.0 dB
      us_attain: 122784 kbps
      ds_attain: 209445 kbps
      us_power: 9.0 dBm
      ds_power: 10.3 dBm
      us_capacity: 100 %
      ds_capacity: 95 %
      far_itu_id: b5004d455441003300
      near_itu_id: b5004d455441000000
```

**History**

Version	Description
2.06	The <b>show interface dsl</b> command has been introduced.



## C.8 show interface dsl snr

**Description** Display Signal-to-Noise Ratio for each xDSL tone.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** `(show)> interface <name> dsl snr`

### Arguments

Argument	Value	Description
name	<i>Interface name</i>	Full interface name or an alias.

### Example

```
(show)> interface UsbDsl0 dsl snr

DS, mult = 8, from = 25, to = 425, index = 0, timestamp = ►
15348.699707:
  45.5,45.5,47.0,49.5,50.0,50.5,50.0,50.0,50.0,50.0,50.0,50.0,
  50.0,50.5,50.0,50.0,51.5,51.5,52.5,52.0,51.5,52.5,51.0,52.0,
  52.0,53.0,53.0,53.0,52.5,52.5,52.0,53.0,52.0,52.0,52.5,52.0,
  52.0,51.5,51.5,51.0,51.5,50.0,50.0,50.0,50.0,50.0,50.0,50.0,
  50.5,50.0,50.0
US, mult = 8, from = 433, to = 593, index = 1, timestamp = ►
15348.707689:
  49.5,49.5,53.5,53.0,53.5,53.5,53.5,53.5,53.5,53.5,53.5,53.5,
  53.0,53.0,53.0,53.5,53.0,53.0,53.0,53.0,53.0
DS, mult = 8, from = 609, to = 977, index = 2, timestamp = ►
15348.723292:
  49.5,49.5,50.0,50.0,50.0,50.0,50.0,49.5,50.0,50.0,50.0,49.0,50.0,
  48.5,48.0,47.5,47.5,48.5,49.0,49.5,49.0,48.5,49.5,50.0,49.0,
  49.0,49.0,48.0,48.0,49.0,48.0,48.5,48.5,49.0,50.0,49.0,49.5,
  49.0,49.0,49.5,48.0,49.0,49.0,47.5,48.5,47.5,47.5,48.0
US, mult = 8, from = 985, to = 1017, index = 3, timestamp = ►
15348.725914:
  47.0,47.0,53.5,53.0,53.5
DS, mult = 8, from = 1401, to = 2657, index = 4, timestamp = ►
15348.781327:
  47.5,47.5,48.0,48.0,48.5,48.0,49.0,49.5,49.0,49.0,49.5,49.5,
  49.0,49.5,50.0,49.0,48.5,49.0,49.0,50.0,49.0,49.5,49.5,50.0,
  49.0,49.5,49.0,48.5,48.0,48.0,48.0,48.0,48.5,48.5,49.0,49.0,
  48.5,49.5,49.5,49.0,49.0,48.5,48.5,49.0,48.0,48.0,49.0,49.0,
  49.0,49.0,49.0,50.0,49.0,49.5,50.0,48.5,49.0,49.0,48.0,47.5,
  47.5,47.5,47.0,47.5,48.5,49.5,48.5,49.5,49.0,48.5,48.0,48.5,
  48.0,47.0,47.0,47.0,47.0,47.0,47.0,47.0,47.0,47.0,47.5,48.5,47.5,48.0,
  47.5,47.0,47.5,47.5,47.0,47.0,47.0,47.0,47.0,46.5,47.0,47.0,
  47.0,47.0,46.5,47.0,47.0,47.0,46.5,46.5,47.0,47.0,46.5,45.5,
  45.0,45.0,44.5,44.5,46.0,47.0,46.5,46.5,45.5,45.0,45.0,44.5,
  44.0,44.0,44.0,44.0,44.0,44.0,44.0,44.0,44.0,44.0,43.5,44.0,
```

```

44.0,44.0,44.0,44.0,44.0,44.0,44.0,44.0,43.5,42.0,43.0,41.0,
43.5,44.0,43.5,44.0,43.0,42.0,43.0,41.0,41.0,41.0,41.0,41.0,
41.0,41.0
US, mult = 8, from = 2665, to = 3473, index = 5, timestamp = ►
15348.799646:
40.5,0.0,0.0,38.0,38.0,38.0,38.0,38.0,38.0,37.5,37.0,36.5,
36.5,36.5,35.0,35.0,35.0,35.0,35.5,37.0,36.0,36.5,35.0,35.0,
35.0,35.0,35.0,35.0,35.0,35.0,35.0,35.0,35.0,35.0,35.0,35.0,
35.0,35.0,35.0,35.0,35.0,35.0,35.0,34.5,33.5,32.0,33.0,32.0,
32.0,32.0,32.0,34.5,33.0,33.0
    
```

**History**

Version	Description
2.06	The <b>show interface dsl snr</b> command has been introduced.

## C.9 show interface dsl bits

**Description** Display Bits Allocation for each xDSL tone.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** `(show)> interface <name> dsl bits`

**Arguments**

Argument	Value	Description
name	<i>Interface name</i>	Full interface name or an alias.

**Example**

```

(show)> interface UsbDsl0 dsl bits
DSL1, mult = 1, from = 20, to = 430, index = 0, timestamp = ►
15402.799703:
0,11,11,11,11,12,12,12,12,12,9,9,9,9,13,13,13,13,13,13,13,
13,13,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,
14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,
14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,14,
14,14,14,14,14,15,13,12,14,14,14,14,14,14,14,14,14,14,14,
14,14,14,14,14,14,14,15,15,15,15,14,14,15,14,14,14,15,15,
14,15,14,14,15,15,15,14,15,15,15,14,15,14,14,15,14,14,14,15,
14,14,14,15,15,15,15,14,15,14,15,14,14,14,15,15,14,14,14,15,
15,14,14,15,15,15,14,14,14,15,14,14,15,15,15,15,15,14,15,15,
15,15,15,15,15,15,15,15,15,15,15,15,15,15,15,14,15,15,
15,15,15,14,15,15,15,15,15,15,15,15,14,15,14,13,15,14,15,15,
15,15,14,15,15,15,15,15,15,15,14,14,14,15,15,15,14,15,15,
15,14,15,14,14,15,14,15,14,15,15,15,14,14,15,14,15,
    
```





# 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.

## 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]xxxxxxxxxx** — 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).

**(8>+7)x**. — in any number, the first digit of **8** will be replaced by **+7**.

**(\*2>84951234567)** — dialing **\*2** will send a call to 84951234567. You can configure a speed dialing.

**8[49]xxxxxxxxxx|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.

## D.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 <b>nvox</b> command has been introduced.

## D.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.

Version	Description
2.06	The <b>dect call-history clear</b> command has been introduced.
3.05	The command renamed to <b>nvox call-history clear</b> .

## D.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>

Argument	Value	Description
call-index	Hex	Four-digit entry identifier.

**Example** (nvox)> **call-history delete-call 000f**

Version	Description
3.05	The <b>nvox call-history delete-call</b> command has been introduced.

## D.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	<i>Filename</i>	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 <b>nvox call-history directory</b> command has been introduced.

## D.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 <b>nvox call-history dump</b> command has been introduced.

## D.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	<i>String</i>	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	<i>String</i>	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	<i>String</i>	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 <b>nvox call-history filter</b> command has been introduced.

## D.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	<i>Integer</i>	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 <b>nvox call-history length</b> command has been introduced.

## D.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 <b>nvox fxs</b> command has been introduced.

### D.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	
	RO	
RS		
RU		
SE		
SI		
SK		
TR		

Argument	Value	Description
	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 <b>nvox fxs country</b> command has been introduced.

## D.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 <b>nvox fxs echo-canc-mode</b> command has been introduced.

## D.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	<i>Integer</i>	Upper threshold signal level between 1 and 127.
unmute_threshold	<i>Integer</i>	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 <b>nvox fxs echo-canc-thresholds</b> command has been introduced.

## D.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 <b>nvox fxs force-calibration</b> command has been introduced.

## D.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	<i>Integer</i>	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 <b>nvox fxs init-timer</b> command has been introduced.

## D.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	<i>Integer</i>	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 <b>nvox fxs led-blinking-timer</b> command has been introduced.

## D.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 <b>nvox fxs port-paging</b> command has been introduced.

## D.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 <b>nvox fxs pulse-dial-mode</b> command has been introduced.



## D.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	<i>Integer</i>	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 <b>nvox fxs unmute-timer</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel accept</b> command has been introduced.

## D.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 <b>nvox parallel disable</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel call-external</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel call-internal</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel hold-resume</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel intercept</b> command has been introduced.

## D.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 <b>nvox parallel reject</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel release-active</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel release-passive</b> command has been introduced.

## D.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	<i>String</i>	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 <b>nvox parallel toggle</b> command has been introduced.

## D.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 <b>nvox parallel transfer</b> command has been introduced.

## D.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 <b>nvox phone</b> command has been introduced.

**D.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	<i>Integer</i>	Ringtone number in the range from 0 to 5.
active1	<i>Integer</i>	First signal duration in the range from 200 to 5000 ms or 0.
passive1	<i>Integer</i>	Second pause duration in the range from 200 to 5000 ms or 0.
active2	<i>Integer</i>	Second signal duration in the range from 200 to 5000 ms or 0.
passive2	<i>Integer</i>	First pause duration in the range from 200 to 5000 ms or 0.

Argument	Value	Description
active3	<i>Integer</i>	Third signal duration in the range from 200 to 5000 ms or 0.
passive3	<i>Integer</i>	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 <b>nvox phone cadence</b> command has been introduced.

## D.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	<i>Integer</i>	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 <b>nvox phone dial-digit-timer</b> command has been introduced.

## D.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	<i>Integer</i>	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 <b>nvox phone intercom-cadence</b> command has been introduced.

## D.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
```

Argument	Value	Description
timer	<i>Integer</i>	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.
```

Version	Description
3.05	The <b>nvox phone offhook-timer</b> command has been introduced.

## D.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
```

Argument	Value	Description
cadence	<i>Integer</i>	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 <b>nvox phone paging-cadence</b> command has been introduced.

## D.21 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	<i>String</i>	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 <b>nvox postdial key</b> command has been introduced.

## D.22 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

<b>Multiple input</b>	No						
<b>Synopsis</b>	<pre>(nvox)&gt; <b>postdial mid-timer</b> &lt;timeout&gt;</pre> <pre>(nvox)&gt; <b>no postdial mid-timer</b></pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>timeout</td> <td><i>Integer</i></td> <td>Pause duration in the range from 250 to 10000 ms.</td> </tr> </tbody> </table>	Argument	Value	Description	timeout	<i>Integer</i>	Pause duration in the range from 250 to 10000 ms.
Argument	Value	Description					
timeout	<i>Integer</i>	Pause duration in the range from 250 to 10000 ms.					
<b>Example</b>	<pre>(nvox)&gt; <b>postdial mid-timer 300</b></pre> <pre>Nvox::Manager: Set postdial mid timer.</pre> <pre>(nvox)&gt; <b>no postdial mid-timer</b></pre> <pre>Nvox::Manager: Reset postdial mid timer.</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.05</td> <td>The <b>nvox postdial mid-timer</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	3.05	The <b>nvox postdial mid-timer</b> command has been introduced.		
Version	Description						
3.05	The <b>nvox postdial mid-timer</b> command has been introduced.						

## D.23 nvox postdial post-timer

<b>Description</b>	<p>Set the sound delay timer after postdialing. By default, 250 value is used.</p> <p>Command with <b>no</b> prefix resets setting to default.</p>						
<b>Prefix no</b>	Yes						
<b>Change settings</b>	Yes						
<b>Multiple input</b>	No						
<b>Synopsis</b>	<pre>(nvox)&gt; <b>postdial post-timer</b> &lt;timeout&gt;</pre> <pre>(nvox)&gt; <b>no postdial post-timer</b></pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>timeout</td> <td><i>Integer</i></td> <td>Delay duration in the range from 250 to 10000 ms.</td> </tr> </tbody> </table>	Argument	Value	Description	timeout	<i>Integer</i>	Delay duration in the range from 250 to 10000 ms.
Argument	Value	Description					
timeout	<i>Integer</i>	Delay duration in the range from 250 to 10000 ms.					
<b>Example</b>	<pre>(nvox)&gt; <b>postdial post-timer 500</b></pre> <pre>Nvox::Manager: Set postdial post timer.</pre> <pre>(nvox)&gt; <b>no postdial post-timer</b></pre> <pre>Nvox::Manager: Reset postdial post timer.</pre>						

**History**

Version	Description
3.05	The <b>nvox postdial post-timer</b> command has been introduced.

## D.24 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	<i>Integer</i>	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 <b>nvox postdial pre-timer</b> command has been introduced.

## D.25 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



<b>Multiple input</b>	Yes						
<b>Group entry</b>	(nvox-sip)						
<b>Synopsis</b>	<pre>(nvox)&gt; sip &lt;id&gt;</pre> <pre>(nvox)&gt; no sip &lt;id&gt;</pre>						
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>id</td> <td>String</td> <td>SIP line identifier of Latin letters and numbers from 0 to 9. The maximum string length is 64 characters.</td> </tr> </tbody> </table>	Argument	Value	Description	id	String	SIP line identifier of Latin letters and numbers from 0 to 9. The maximum string length is 64 characters.
Argument	Value	Description					
id	String	SIP line identifier of Latin letters and numbers from 0 to 9. The maximum string length is 64 characters.					
<b>Example</b>	<pre>(nvox)&gt; sip sipline1</pre> <pre>Nvox::Manager: Created SIP line "sipline1".</pre> <pre>(nvox-sip)&gt;</pre> <pre>(nvox)&gt; no sip sipline1</pre> <pre>Nvox::Manager: Deleted SIP line "sipline1".</pre>						
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.00</td> <td>The <b>nvox sip</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	2.00	The <b>nvox sip</b> command has been introduced.		
Version	Description						
2.00	The <b>nvox sip</b> command has been introduced.						

## D.25.1 nvox sip audio-protocol

<b>Description</b>	<p>Select the audio transport protocol for the SIP line. By default, RTP value is used.</p> <p>Command with <b>no</b> prefix resets setting to default.</p>										
<b>Prefix no</b>	Yes										
<b>Change settings</b>	Yes										
<b>Multiple input</b>	No										
<b>Synopsis</b>	<pre>(nvox-sip)&gt; audio-protocol &lt;protocol&gt;</pre> <pre>(nvox-sip)&gt; no audio-protocol</pre>										
<b>Arguments</b>	<table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="3">protocol</td> <td>rtp</td> <td>RTP protocol.</td> </tr> <tr> <td>srtplib</td> <td>SRTP protocol.</td> </tr> <tr> <td>both</td> <td>Where possible, SRTP is used, otherwise RTP.</td> </tr> </tbody> </table>	Argument	Value	Description	protocol	rtp	RTP protocol.	srtplib	SRTP protocol.	both	Where possible, SRTP is used, otherwise RTP.
Argument	Value	Description									
protocol	rtp	RTP protocol.									
	srtplib	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 <b>nvox sip audio-protocol</b> command has been introduced.

## D.25.2 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	<i>String</i>	A string of up to 600 characters in length. Phone numbers and number patterns are separated from each other by the   character.  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 1 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 <b>nvox sip blacklist</b> command has been introduced.

## D.25.3 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	<i>Integer</i>	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 <b>nvox sip cadence</b> command has been introduced.

## D.25.4 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	<i>Integer</i>	Rule number of 0 to 2.
cadence	<i>Integer</i>	Ringtone number of 0 to 5.
digitmap	<i>String</i>	The pattern to which the caller's number must correspond. For more information see <a href="#">Syntax of prefix substitution rules</a> .

**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 <b>nvox sip cadence-rule</b> command has been introduced.

## D.25.5 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 <b>nvox sip codec</b> command has been introduced.

## D.25.6 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 <b>nvox sip deny-interception</b> command has been introduced.

## D.25.7 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 <b>nvox sip deny-pickup</b> command has been introduced.

## D.25.8 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	<i>String</i>	String to 250 characters long. Valid characters: 01234567890*#+ABCDxT[]() >.-

**Example**

```
(nvox-sip)> digit-map 8[49]xxxxxxxx|10xx|*xx#
Nvox::Manager: Set SIP line sipline1 digit map to ►
"8[49]xxxxxxxx|10xx|*xx#".
```

```
(nvox-sip)> no digit-map
Nvox::Manager: Reset SIP line sipline1 digit map.
```

**History**

Version	Description
3.05	The <b>nvox sip digit-map</b> command has been introduced.

## D.25.9 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 <b>nvox sip disable</b> command has been introduced.

## D.25.10 nvox sip disable-extended-keepalive

<b>Description</b>	<p>Disable Extended Keep Alive feature, which sends keepalive packets to all servers resolved from the DNS SRV record. By default, the feature is enabled.</p> <p>Note: If Extended Keep Alive is disabled, keepalive packets should only be sent to the server where SIP registration is performed.</p> <p>Command with <b>no</b> prefix enables the feature.</p>				
<b>Prefix no</b>	Yes				
<b>Change settings</b>	Yes				
<b>Multiple input</b>	No				
<b>Synopsis</b>	<pre>(nvox-sip)&gt; <b>disable-extended-keepalive</b></pre> <pre>(nvox-sip)&gt; <b>no disable-extended-keepalive</b></pre>				
<b>Example</b>	<pre>(nvox-sip)&gt; <b>disable-extended-keepalive</b></pre> <pre>Nvox::Manager: Set SIP line test disable extended keepalive to ► "1".</pre> <pre>(nvox-sip)&gt; <b>no disable-extended-keepalive</b></pre> <pre>Nvox::Manager: Reset SIP line test disable extended keepalive ► to 0.</pre>				
<b>History</b>	<table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>4.01</td> <td>The <b>nvox sip disable-extended-keepalive</b> command has been introduced.</td> </tr> </tbody> </table>	Version	Description	4.01	The <b>nvox sip disable-extended-keepalive</b> command has been introduced.
Version	Description				
4.01	The <b>nvox sip disable-extended-keepalive</b> command has been introduced.				

## D.25.11 nvox sip disable-force-registration-retry

<b>Description</b>	<p>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.</p> <p>Command with <b>no</b> prefix enables retry registration requests.</p>
<b>Prefix no</b>	Yes
<b>Change settings</b>	Yes
<b>Multiple input</b>	No
<b>Synopsis</b>	<pre>(nvox-sip)&gt; <b>disable-force-registration-retry</b></pre> <pre>(nvox-sip)&gt; <b>no disable-force-registration-retry</b></pre>



**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 <b>nvox sip disable-force-registration-retry</b> command has been introduced.

## D.25.12 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 <b>nvox sip disable-stun</b> command has been introduced.

## D.25.13 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	<i>String</i>	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 <b>nvox sip display-name</b> command has been introduced.

## D.25.14 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 <b>nvox sip dnd</b> command has been introduced.

## D.25.15 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	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>nvox sip dnd-schedule</b> command has been introduced.

## D.25.16 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 <b>nvox sip domain</b> command has been introduced.

## D.25.17 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 <b>nvox sip dtmf-flash-signal</b> command has been introduced.

## D.25.18 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 <b>nvox sip dtmf-mode</b> command has been introduced.

## D.25.19 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 <b>nvox sip enable-blacklist</b> command has been introduced.

## D.25.20 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 <b>nvox sip enable-whitelist</b> command has been introduced.

## D.25.21 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	<i>String</i>	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 <b>nvox sip forward</b> command has been introduced.

## D.25.22 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	<i>String</i>	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 <b>nvox sip forward-if-busy</b> command has been introduced.

## D.25.23 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	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>nvox sip forward-if-busy-schedule</b> command has been introduced.



## D.25.24 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	<i>String</i>	The caller ID consists of ASCII characters (not more than 100 characters). The call is forwarded to the SIP URL sip:sipid@domain.
timeout	<i>Integer</i>	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 <b>nvox sip forward-if-timeout</b> command has been introduced.

## D.25.25 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	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>nvox sip forward-if-timeout-schedule</b> command has been introduced.

## D.25.26 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	<i>Schedule</i>	The name of the schedule that was created with <b>schedule</b> 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 <b>nvox sip forward-schedule</b> command has been introduced.

## D.25.27 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	<i>String</i>	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 <b>nvox sip identity</b> command has been introduced.

## D.25.28 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.
	<i>String</i>	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 <b>nvox sip incoming-mask</b> command has been introduced.

## D.25.29 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	<i>Integer</i>	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 <b>nvox sip keepalive</b> command has been introduced.

## D.25.30 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 <b>nvox sip lock-codec</b> command has been introduced.

## D.25.31 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
```

Argument	Value	Description
login	<i>String</i>	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.
```

Version	Description
3.05	The <b>nvox sip login</b> command has been introduced.

## D.25.32 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
```

Argument	Value	Description
name	<i>String</i>	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 <b>nvox sip name</b> command has been introduced.

## D.25.33 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.
		<i>String</i>	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 <b>nvox sip outgoing-mask</b> command has been introduced.

## D.25.34 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	<i>String</i>	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 <b>nvox sip password</b> command has been introduced.

## D.25.35 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
```



Argument	Value	Description
priority	<i>Integer</i>	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.
```

Version	Description
3.05	The <b>nvox sip priority</b> command has been introduced.

## D.25.36 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
```

Argument	Value	Description
proxy	<i>String</i>	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.
```

Version	Description
3.05	The <b>nvox sip proxy</b> command has been introduced.

## D.25.37 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	<i>Integer</i>	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 <b>nvox sip reg-timeout</b> command has been introduced.

## D.25.38 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	<i>Integer</i>	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 <b>nvox sip registration-first-retry</b> command has been introduced.

## D.25.39 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	<i>Integer</i>	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 <b>nvox sip registration-retry</b> command has been introduced.

**D.25.40 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	<i>String</i>	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 <b>nvox sip registration-uri</b> command has been introduced.

**D.25.41 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 <b>nvox sip sdp-nat-rewrite</b> command has been introduced.

## D.25.42 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	<i>Integer</i>	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 <b>nvox sip selection-id</b> command has been introduced.

## D.25.43 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	<i>Integer</i>	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 <b>nvox sip session-timer</b> command has been introduced.

## D.25.44 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 <b>nvox sip session-timer-mode</b> command has been introduced.

## D.25.45 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	<i>String</i>	A string up to 100 characters long. Valid characters: 01234567890*#+ABCDx[]() >.-.

**Example**

```
(nvox-sip)> substitute (+39>)x.|(+00)x.  
Nvox::Manager: Set SIP line 1 substitute to "(+39>)x.|(+00)x."
```

```
(nvox-sip)> no substitute  
Nvox::Manager: Reset SIP line 1 substitute.
```

**History**

Version	Description
3.05	The <b>nvox sip substitute</b> command has been introduced.

## D.25.46 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 <b>nvox sip tls-security-mode</b> command has been introduced.

## D.25.47 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 <b>nvox sip transport</b> command has been introduced.
4.00	The <b>udp6</b> , <b>tcp6</b> , <b>tls6</b> arguments were added.

## D.25.48 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	<i>String</i>	A string of up to 600 characters in length. Phone numbers and number patterns are separated from each other by the   character.  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 1 whitelist to ►
"1234567890|+79261234567|000123456|1234567".
```

```
(nvox-sip)> no whitelist
Nvox::Manager: Reset SIP line 1 whitelist.
```

**History**

Version	Description
4.01	The <b>nvox sip whitelist</b> command has been introduced.

## D.26 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 <b>nvox sip-common</b> command has been introduced.

### D.26.1 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 <b>nvox sip-common 100rel</b> command has been introduced.

## D.26.2 nvox sip-common agent

**Description**

Configure the User Agent name. By default, the name is used of the router's model, for example "Keenetic Giga (KN-1011)".

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	<i>String</i>	String of printed symbols of the set ASCII. 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 <b>nvox sip-common agent</b> command has been introduced.

## D.26.3 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 <b>nvox sip-common disable-dns-srv</b> command has been introduced.

## D.26.4 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 <b>nvox sip-common disable-tls-validation</b> command has been introduced.

## D.26.5 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	<i>Integer</i>	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 <b>nvox sip-common g726-dynamic-payload</b> command has been introduced.

## D.26.6 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 <b>nvox sip-common outbound-proxy</b> command has been introduced.

## D.26.7 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)>
```

Version	Description
3.05	The <b>nvox sip qos</b> command has been introduced.

### D.26.7.1 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
```

Argument	Value	Description
dscp	<i>Integer</i>	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).
```

Version	Description
3.05	The <b>nvox sip-common qos rtp-dscp</b> command has been introduced.



### D.26.7.2 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	<i>Integer</i>	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 <b>nvox sip-common qos rtp-so-prio</b> command has been introduced.

### D.26.7.3 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	<i>Integer</i>	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 <b>nvox sip-common qos sip-dscp</b> command has been introduced.

**D.26.7.4 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	<i>Integer</i>	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 <b>nvox sip-common qos sip-so-prio</b> command has been introduced.

## D.26.8 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	<i>Integer</i>	The first port of the range. Valid values are from 1 to 65534.
end-port	<i>Integer</i>	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 <b>nvox sip-common rtp-port</b> command has been introduced.

## D.26.9 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 <b>nvox sip-common sdp rtcp</b> command has been introduced.

## D.26.10 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 <b>nvox sip-common sdp tias</b> command has been introduced.

## D.26.11 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 configuration by default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(nvox-sip-common)> stun-server <stun>
(nvox-sip-common)> no stun-server
```

Argument	Value	Description
stun	<i>String</i>	Domain name or IP address.

**Example**

```
(nvox-sip-common)> stun-server stun.sipnet.ru:3478
Nvox::Manager: Set SIP STUN server to "stun.sipnet.ru:3478".
```

```
(nvox-sip-common)> no stun-server
Nvox::Manager: Reset SIP STUN server.
```

Version	Description
3.05	The <b>nvox sip-common stun-server</b> command has been introduced.

## D.26.12 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	<i>Integer</i>	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 <b>nvox sip-common tcp-keepalive</b> command has been introduced.

## D.26.13 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	<i>Integer</i>	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 <b>nvox sip-common tcp-port</b> command has been introduced.

**D.26.14 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	<i>Integer</i>	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 <b>nvox sip-common td-timeout</b> command has been introduced.

## D.26.15 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	<i>Integer</i>	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 <b>nvox sip-common tls-keepalive</b> command has been introduced.

## D.26.16 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	<i>Integer</i>	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 <b>nvox sip-common tls-port</b> command has been introduced.

## D.26.17 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	<i>Integer</i>	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 <b>nvox sip-common udp-port</b> command has been introduced.

## D.26.18 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 <b>nvox sip-common unescape-hash-char</b> command has been introduced.

## D.27 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 <b>show nvox active-calls</b> command has been introduced.

## D.28 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>`

Argument	Value	Description
id	<i>String</i>	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
```

Version	Description
4.01	The <b>show nvox blacklist</b> command has been introduced.

## D.29 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]`

Argument	Value	Description
cadence	<i>Integer</i>	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 <b>show nvox cadences</b> command has been introduced.

## D.30 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	<i>Integer</i>	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 <b>nvox call-history length</b> command.
count	<i>Integer</i>	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 <b>show dect call-history</b> command has been introduced.
3.05	The command renamed to <b>show nvox call-history</b> .

## D.31 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 <b>show nvox fxs</b> command has been introduced.

## D.32 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 <b>show nvox fxs-ports</b> command has been introduced.

## D.33 show nvox info

**Description** Show information about the IP telephony system application installed on Keenetic OS.

**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 <b>show nvox info</b> command has been introduced.

## D.34 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 <b>show nvox license</b> command has been introduced.

## D.35 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 <b>show nvox sip-lines</b> command has been introduced.

## D.36 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	<i>Keyword</i>	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: 202.133.231.17
      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 <b>show nvox sip-profiles</b> command has been introduced.

## D.37 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	<i>Hex Integer</i>	Ten-digit DECT handset identifier or telephone port number (1 or 2).
number	<i>String</i>	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 <b>show nvox try-dial</b> command has been introduced.

## D.38 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	<i>String</i>	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 <b>show nvox try-dial-ext</b> command has been introduced.

## D.39 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	<i>String</i>	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 <b>show nvox whitelist</b> command has been introduced.



# SNMP MIB

Management Information Bases (MIBs) are read-only.

The following MIBs are supported:

## E.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

## E.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::ifHCOctets
- IF-MIB::ifHCOUcastPkts
- IF-MIB::ifHCOMulticastPkts
- IF-MIB::ifHCOBroadcastPkts
- IF-MIB::ifLinkUpDownTrapEnable
- IF-MIB::ifHighSpeed
- IF-MIB::ifPromiscuousMode
- IF-MIB::ifConnectorPresent
- IF-MIB::ifAlias

- IF-MIB::ifCounterDiscontinuityTime

Main chipset	Switch	Device	Description
MT7621/RT63368	MT7530	Keenetic Giga III	64-bit per port octet counters. 32-bit per port packet counters. Separate per port broadcast, multicast and unicast packet counters.
	RTL8370M	Keenetic Ultra II Keenetic LTE	
MT7620	RTL8367B	Keenetic Viva Keenetic Extra	32-bit per port octet counters & 16-bit per port packet counters. Last counter overflow event time set in IF-MIB::ifCounterDiscontinuityTime.
	Integrated	Keenetic 4G III Keenetic Lite II Keenetic Lite III Keenetic Omni Keenetic Omni II	
MT7628	Integrated	Keenetic Start II Keenetic Lite III rev.B Keenetic 4G III rev.B Keenetic Air Keenetic Extra II	16-bit per port packet counters only. Last counter overflow event time set in IF-MIB::ifCounterDiscontinuityTime.

## E.3 IP-MIB

OID: 1.3.6.1.2.1.49

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

## E.4 UDP-MIB

OID: 1.3.6.1.2.1.50

The following data elements are supported:

- UDP-MIB::udpInDatagrams
- UDP-MIB::udpNoPorts
- UDP-MIB::udpInErrors
- UDP-MIB::udpOutDatagrams
- UDP-MIB::udpHCInDatagrams
- UDP-MIB::udpHCOutDatagrams

## E.5 HOST-RESOURCES-MIB

OID: 1.3.6.1.2.1.25

The following data elements are supported:

- HOST-RESOURCES-MIB::hrSystemUptime

## E.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



# 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)

## F.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	

## F.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
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		

## F.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	

## F.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	

## F.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	

## F.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 AES-256-CBC/SHA256/MODP1024 AES-128-CBC/SHA256/MODP1024 3DES-CBC/SHA256/MODP1024	dh-group 26
IKEv2	AES-256-CBC/SHA256/MODP1024 AES-128-CBC/SHA256/MODP1024 3DES-CBC/SHA256/MODP1024 AES-256-CBC/SHA1/MODP1024 AES-256-CBC/SHA1/ECP384 AES-256-CBC/SHA1/MODP2048 AES-128-CBC/SHA1/MODP1024 AES-128-CBC/SHA1/ECP256 AES-256-CBC/SHA256/MODP2048 3DES-CBC/SHA1/MODP2048 3DES-CBC/SHA1/MODP1536 3DES-CBC/SHA1/MODP1024	encryption aes-256-cbc encryption aes-128-cbc encryption 3des integrity sha256 integrity sha1 dh-group 2 dh-group 20 dh-group 14 dh-group 5 dh-group 26
IPsec SA	3DES-CBC/SHA1/MODP1024 3DES-CBC/SHA1 AES-256-CBC/SHA1 AES-128-CBC/SHA1 AES-256-CBC/SHA1/MODP1536 AES-128-CBC/SHA1/MODP1536 3DES-CBC/SHA1/MODP1536 AES-256-CBC/SHA1/MODP1024 AES-128-CBC/SHA1/MODP1024	cypher esp-3des cypher esp-aes-256 cypher esp-aes-128 hmac esp-sha1-hmac hmac esp-sha256-hmac dh-group 2 dh-group 14

## F.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

## F.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 AES-256-CBC/SHA1/ECP384 AES-256-CBC/SHA1/MODP1536 AES-128-CBC/SHA1/MODP2048 AES-128-CBC/SHA1/ECP256 AES-128-CBC/SHA1/MODP1536	encryption aes-256-cbc encryption aes-128-cbc integrity sha1 dh-group 14 dh-group 20 dh-group 5 dh-group 26
IPsec SA	AES-256-CBC/SHA1/MODP1536 AES-256-CBC/SHA1/MODP2048 AES-128-CBC/SHA1/MODP2048 AES-128-CBC/SHA1/MODP1536	cypher esp-aes-256 cypher esp-aes-128 hmac esp-sha1-hmac dh-group 5 dh-group 14

## F.9 strong-aead

Protocol	Encryption	Proposal
IKEv1	AES-256-GCM-16/PRF-SHA384/ECP384	aead encryption aes-256-gcm-16 prf sha384 dh-group 20
IKEv2	AES-256-GCM-16/PRF-SHA384/ECP384	aead encryption aes-256-gcm-16 prf sha384 dh-group 20
IPsec SA	AES-256-GCM-16 CHACHA20POLY1305	aead cypher aes-256-gcm-16

## F.10 strong-aead-pfs

Protocol	Encryption	Proposal
IKEv1	AES-256-GCM-16/PRF-SHA384/ECP384	aead



Protocol	Encryption	Proposal
		encryption aes-256-gcm-16 prf sha384 dh-group 20
IKEv2	AES-256-GCM-16/PRF-SHA384/ECP384	aead encryption aes-256-gcm-16 prf sha384 dh-group 20
IPsec SA	AES-256-GCM-16/ECP384 CHACHA20POLY1305-ECP384	aead cypher aes-256-gcm-16 dh-group 20

