

# KEENETIC EXTRA DSL

AC1200 Dual Band Whole Home Wi-Fi  
VDSL2/ADSL2+ Modem Router with Wireless  
Power Amplifiers, 4-port Managed Switch, and  
Multifunction USB 2.0 Port

## Command Reference Guide

|            |                     |
|------------|---------------------|
| Model      | Extra DSL (KN-2111) |
| OS Version | 3.7                 |
| Edition    | 1.120 11.02.2022    |



# Preface

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

## 2 Organization

This manual covers the following topics:

|                         |  |
|-------------------------|--|
| Introduction to the CLI | Describes how to use the Extra DSL 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 Extra DSL device.                          |

## 3 Document Conventions

Command descriptions use the following conventions:

|                        |   |
|------------------------|---|
| <b>boldface</b> font   | 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</i> font     | 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.<br><br>Interfaces used in the system and the relationships between them are shown in the diagrams below. |
| Arguments        | List of arguments if they exists, and explanations to them.  |
| Example          | An illustration of how the command looks when invoked. Because the interface is straightforward, some of the examples are obvious, but they are included for clarity.  |

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

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

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

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# Product Overview

## 1.1 Hardware Configuration

**CPU** EcoNet EN7513T MIPS® 34Kc 900MHz

**RAM** Nanya NT5CC64M16GP-DI 128MB DDR3

**DSL AFE** EcoNet EN7556N (ADSL2+/VDSL2)

**Flash** ESMT F50L1G41A 128MB SPI-NAND

| Ethernet | Ports | Chipset    | Notes |
|----------|-------|------------|-------|
|          | 4     | Integrated |       |

| Label | Speed    | Notes    |
|-------|----------|----------|
| 0     | 100 Mbps | WAN port |
| 1     | 100 Mbps |          |
| 2     | 100 Mbps |          |
| 3     | 100 Mbps |          |

| DSL | Label | Speed | Notes |
|-----|-------|-------|-------|
|     | 1     |       |       |

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

| Wi-Fi | Band    | Chipset           | Notes           |
|-------|---------|-------------------|-----------------|
|       | 2.4 GHz | MediaTek MT7592N  | 802.11bgn 2x2   |
|       | 5 GHz   | MediaTek MT7612EN | 802.11an+ac 2x2 |



# Introduction to the CLI

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

The primary tool for managing the Extra DSL 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.

Extra DSL 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 Extra DSL. 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 Extra DSL 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 Dsl0 network interface is set using the **address** command, which is located in the **interface → ip** group:

```
(config)>interface Dsl0 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 Dsl0
(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 Fa[Tab]

Usage template:
interface {name}

Variants:
FastEthernet0
FastEthernet0/Vlan1
Dsl0

(config)> interface FastEthernet0[Tab]

Usage template:
interface {name}

Variants:
FastEthernet0/Vlan1
Dsl0

(config)> interface FastEthernet0[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 Dsl0 [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 Dsl0

```

## 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 Extra DSL 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)> | <b>copy</b> <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 Extra DSL device.

**Prefix no** No

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

| 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.**History**

| 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)>**History**

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

**Example**

```
(config)> ls FILES:
               rel: FILES:
               entry, type = D:
                  name: com

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

               entry, type = D:
                  name: speedfan

               entry, type = D:
                  name: portable

               entry, type = D:
                  name: video

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

**History**

| Version | Description                                |
|---------|--|
| 2.00    | The <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 | String | Path to the directory. |

**Example**

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

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

**History**

| Version | Description                                   |
|---------|---|
| 2.12    | The <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.

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

**Synopsis**

```
(config)> access-list <name>
(config)> no access-list <name>
```

**Arguments**

| Argument | Value         | Description   |
|----------|---------------|---|
| name     | <i>String</i> | Filtering rules list name ( <a href="#">Access Control List</a> , 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.00           | The <b>access-list</b> command has been introduced. |

### 3.3.1 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>                 |
|-----------------|----------------|------------------------------------|
| tcp             | <i>Keyword</i> | <a href="#">TCP</a> protocol.      |
| udp             | <i>Keyword</i> | <a href="#">UDP</a> protocol.      |
| icmp            | <i>Keyword</i> | <a href="#">ICMP</a> protocol.     |
| esp             | <i>Keyword</i> | <a href="#">ESP</a> protocol.      |
| gre             | <i>Keyword</i> | <a href="#">GRE</a> protocol.      |
| ipip            | <i>Keyword</i> | <a href="#">IP in IP</a> protocol. |

| Argument             | Value             | Description   |
|----------------------|-------------------|---|
| ip                   | Keyword           | <i>IP</i> protocol (include <i>TCP</i> , <i>UDP</i> , <i>ICMP</i> and other).   |
| source               | <i>IP-address</i> | The source address in the header of IP-packet.  |
| source-mask          | <i>IP-mask</i>    | 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          | <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)> 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**

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

### 3.3.2 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**

| <b>Argument</b>      | <b>Value</b>      | <b>Description</b>  |
|----------------------|-------------------|---|
| tcp                  | <i>Keyword</i>    | <i>TCP</i> protocol.  |
| udp                  | <i>Keyword</i>    | <i>UDP</i> protocol.  |
| icmp                 | <i>Keyword</i>    | <i>ICMP</i> protocol.   |
| esp                  | <i>Keyword</i>    | <i>ESP</i> protocol.  |
| gre                  | <i>Keyword</i>    | <i>GRE</i> protocol.  |
| ipip                 | <i>Keyword</i>    | <i>IP in IP</i> protocol.   |
| ip                   | <i>Keyword</i>    | <i>IP</i> protocol (include <i>TCP</i> , <i>UDP</i> , <i>ICMP</i> and other).   |
| source               | <i>IP-address</i> | The source address in the header of IP-packet.  |
| source-mask          | <i>IP-mask</i>    | 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          | <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**

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

### 3.3.3 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**

| <b>Argument</b> | <b>Value</b>         | <b>Description</b>  |
|-----------------|----------------------|---|
| <b>index</b>    | <i>Integer</i>       | The ACL rule number.  |
| <b>disable</b>  | <i>Keyword</i>       | Disable the ACL rule.   |
| <b>schedule</b> | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> group of commands. |
| <b>order</b>    | <i>Integer</i>       | New position of the ACL rule in the list.   |

| Argument    | Value         | Description               |
|-------------|---------------|---------------------------|
| description | <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 adguard-dns

**Description** Access to a group of commands to configure *AdGuard DNS* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (adguard-dns)

**Synopsis**

|           |                    |
|-----------|--------------------|
| (config)> | <b>adguard-dns</b> |
|-----------|--------------------|

**Example**

|                           |                    |
|---------------------------|--------------------|
| (config)>                 | <b>adguard-dns</b> |
| Core::Configurator: Done. |                    |
| (adguard-dns)>            |                    |

**History**

| Version | Description   |
|---------|---|
| 2.12    | The <b>adguard-dns</b> command has been introduced. |

### 3.4.1 adguard-dns assign

**Description** Assign profile of protection to the host. By default standard profile is used for all hosts.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

```
(adguard-dns)> assign [<host>] <type>
```

```
(adguard-dns)> no assign [<host>]
```

**Arguments**

| Argument | Value       | Description  |
|----------|-------------|--|
| host     | MAC-address | Host to which type of protection is applied. If not specified, the protection is applied to all hosts. |
| type     | default     | No protection used.  |
|          | base        | Blocking advertising, tracking and phishing.   |
|          | standard    | Secure DNS resolving, no blocking.   |
|          | family      | Blocking advertising, tracking, phishing, adult sites, providing secure search.                        |

**Example**

```
(adguard-dns)> assign base
AdguardDns::Client: Default type set.
```

```
(adguard-dns)> assign 4C:0F:6E:4B:3C:BA default
AdguardDns::Client: "4C:0F:6E:4B:3C:BA" has been associated with ▶
"default" profile.
```

```
(adguard-dns)> assign 4C:0F:6E:4B:3C:BA standard
AdguardDns::Client: "4C:0F:6E:4B:3C:BA" has been reassociated ▶
with "standard" profile.
```

```
(adguard-dns)> assign 4C:0F:6E:4B:3C:BA family
AdguardDns::Client: "4C:0F:6E:4B:3C:BA" has been reassociated ▶
with "family" profile.
```

```
(adguard-dns)> no assign a8:1e:84:85:f2:72
AdguardDns::Client: Host "a8:1e:84:85:f2:72" has been removed.
```

```
(adguard-dns)> no assign
AdguardDns::Client: Default type set.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.12           | The <b>adguard-dns assign</b> command has been introduced. |

### 3.4.2 adguard-dns check-availability

**Description** Check availability of *AdGuard DNS* service.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (adguard-dns)> **check-availability****Example** (adguard-dns)> **check-availability**  
AdguardDns::Client: AdGuard DNS is available.**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.12           | The <b>adguard-dns check-availability</b> command has been introduced. |

### 3.4.3 adguard-dns enable

**Description** Enable *AdGuard DNS* service.Command with **no** prefix disables the service.**Prefix no** Yes**Change settings** Yes**Multiple input** No**Synopsis** (adguard-dns)> **enable**(adguard-dns)> **no enable****Example** (adguard-dns)> **enable**  
AdguardDns::Client: AdGuard DNS enabled.(adguard-dns)> **no enable**  
AdguardDns::Client: AdGuard DNS disabled.**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.12           | The <b>adguard-dns enable</b> command has been introduced. |

## 3.5 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**

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

### 3.5.1 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**

|  | <b>Version</b> | <b>Description</b>                                    |
|--|----------------|---|
|  | 2.06           | The <b>afp automount</b> command has been introduced. |

## 3.5.2 afp permissive

| <b>Description</b>     | Enable permissive mode, when all users can access the files on USB storage. By default, the setting is disabled.   |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
|                        | Command with <b>no</b> prefix disables permissive mode, so access to the files have only users with "afp" tag.   |         |             |      |  |
| <b>Prefix no</b>       | Yes  |         |             |      |  |
| <b>Change settings</b> | Yes  |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-afp)&gt; permissive (config-afp)&gt; no permissive</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config-afp)&gt; permissive Afp::Server: Permissive mode enabled.</pre><br><pre>(config-afp)&gt; no permissive Afp::Server: Permissive mode disabled.</pre>   |         |             |      |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.06</td> <td style="padding: 2px;">The <b>afp permissive</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.06 | The <b>afp permissive</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.06                   | The <b>afp permissive</b> command has been introduced.   |         |             |      |  |

## 3.5.3 afp share

| <b>Description</b>     | Share directory on USB storage.   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
|------------------------|---|--------------------------------------|-------|-------------|-------|---------------|-----------------------|-------|---------------|-----------------------------|-------------|----------------|--------------------------------------|
|                        | Command with <b>no</b> prefix removes share. If you use no argument, the entire list of shares will be removed.   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
| <b>Prefix no</b>       | Yes   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
| <b>Change settings</b> | Yes   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
| <b>Multiple input</b>  | Yes   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
| <b>Synopsis</b>        | <pre>(config-afp)&gt; share &lt;label&gt; &lt;mount&gt; [timemachine] [ description ] (config-afp)&gt; no share [ label ]</pre>   |                                      |       |             |       |               |                       |       |               |                             |             |                |                                      |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">label</td> <td style="padding: 2px;"><i>String</i></td> <td style="padding: 2px;">Share name for users.</td> </tr> <tr> <td style="padding: 2px;">mount</td> <td style="padding: 2px;"><i>String</i></td> <td style="padding: 2px;">Name of directory to share.</td> </tr> <tr> <td style="padding: 2px;">timemachine</td> <td style="padding: 2px;"><i>Keyword</i></td> <td style="padding: 2px;">Access for Time Machine application.</td> </tr> </tbody> </table> | 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. |
| 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. |       |             |       |               |                       |       |               |                             |             |                |                                      |

| Argument    | Value  | Description           |
|-------------|--------|-----------------------|
| description | String | 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. |

## 3.6 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. |

### 3.6.1 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

| <b>Synopsis</b> | <pre>(config-cifs)&gt; <b>automount</b> </pre> <pre>(config-cifs)&gt; <b>no automount</b></pre>   |         |             |      |  |
|-----------------|---|---------|-------------|------|--|
| <b>Example</b>  | <pre>(config-cifs)&gt; <b>automount</b> Cifs::ServerTsmb: Automount enabled.</pre> <pre>(config-cifs)&gt; <b>no automount</b> Cifs::ServerTsmb: Automount disabled.</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>cifs automount</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.00 | The <b>cifs automount</b> command has been introduced. |
| Version         | Description   |         |             |      |  |
| 2.00            | The <b>cifs automount</b> command has been introduced.  |         |             |      |  |

### 3.6.2 cifs map-hidden

| <b>Description</b>     | Enable <i>ACL</i> and hidden files support for <i>CIFS</i> . By default, the feature is disabled.<br>Command with <b>no</b> prefix disables the feature.   |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes  |         |             |      |   |
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-cifs)&gt; <b>map-hidden</b> </pre> <pre>(config-cifs)&gt; <b>no map-hidden</b></pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-cifs)&gt; <b>map-hidden</b> Cifs::ServerTsmb: Map hidden enabled.</pre> <pre>(config-cifs)&gt; <b>no map-hidden</b> Cifs::ServerTsmb: Map hidden enabled.</pre>                         |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.14</td><td>The <b>cifs map-hidden</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.14 | The <b>cifs map-hidden</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.14                   | The <b>cifs map-hidden</b> command has been introduced.  |         |             |      |   |

### 3.6.3 cifs master

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable <i>Master Browser</i> function for TSMB server. By default, the setting is enabled.<br>Command with <b>no</b> prefix disables <i>Master Browser</i> function. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |

**Multiple input**

No

**Synopsis**(config-cifs)> **master**(config-cifs)> **no master****Example**(config-cifs)> **master**  
Cifs::ServerT smb: Master browser enabled.(config-cifs)> **no master**  
Cifs::ServerT smb: 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.       |

### 3.6.4 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::ServerT smb: Permissive mode enabled.(config-cifs)> **no permissive**  
Cifs::ServerT smb: Permissive mode disabled.**History**

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

### 3.6.5 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)> <b>share</b> <label> <mount> [ <i>description</i> ] |
|--|

|   |
|---|
| (config-cifs)> <b>no share</b> [ <i>label</i> ] |
|---|

**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)> <b>share</b> MYHOME1 10A0CDE9A0CDD4FE:/<br>Cifs::ServerTsmb: Added share "MYHOME1". |
|--|

|  |
|--|
| (config-cifs)> <b>share</b> MYHOME 10A0CDE9A0CDD4FE:/Video/<br>Cifs::ServerTsmb: Added share "MYHOME". |
|--|

|  |
|--|
| (config-cifs)> <b>no share</b> MYHOME1<br>Cifs::ServerTsmb: Removed share "MYHOME1". |
|--|

**History**

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

## 3.7 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)> <b>cloud control2 security-level</b> ( <b>public</b>   <b>private</b> ) |
|---|

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| public   | <i>Keyword</i> | Access to the Cloud Control2 is allowed for public, private and protected interfaces. |

| Argument | Value   | Description  |
|----------|---------|--|
| private  | Keyword | Access to the Cloud Control2 is allowed for private interfaces only. |

**Example**

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

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

**History**

| Version | Description   |
|---------|---|
| 3.05    | The <b>cloud control2 security-level</b> command has been introduced. |

## 3.8 cloudflare-dns

**Description** Access to a group of commands to configure *Cloudflare DNS* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (cloudflare-dns)

**Synopsis**

|           |                       |
|-----------|-----------------------|
| (config)> | <b>cloudflare-dns</b> |
|-----------|-----------------------|

**Example**

|                           |                       |
|---------------------------|-----------------------|
| (config)>                 | <b>cloudflare-dns</b> |
| Core::Configurator: Done. |                       |
| (cloudflare-dns)>         |                       |

**History**

| Version | Description  |
|---------|--|
| 3.05    | The <b>cloudflare-dns</b> command has been introduced. |

### 3.8.1 cloudflare-dns assign

**Description** Assign profile of protection to the host. By default standard profile is used for all hosts.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input**

Yes

**Synopsis**

```
(cloudflare-dns)> assign [<host>] <type>
(cloudflare-dns)> no assign [<host>]
```

**Arguments**

| Argument | Value       | Description  |
|----------|-------------|--|
| host     | MAC-address | Host to which type of protection is applied. If not specified, the protection is applied to all hosts. |
| type     | default     | No protection used.  |
|          | standard    | Secure DNS resolving, no blocking.   |
|          | malware     | Blocking malware.  |
|          | family      | Blocking malware and adult sites.  |

**Example**

```
(cloudflare-dns)> assign default
CloudflareDns::Client: Default type set.

(cloudflare-dns)> assign c0:b8:83:c2:cb:11 default
CloudflareDns::Client: "c0:b8:83:c2:cb:11" has been reassociated ▶
with "default" profile.

(cloudflare-dns)> assign c0:b8:83:c2:cb:11 standard
CloudflareDns::Client: "c0:b8:83:c2:cb:11" has been reassociated ▶
with "standard" profile.

(cloudflare-dns)> assign c0:b8:83:c2:cb:11 malware
CloudflareDns::Client: "c0:b8:83:c2:cb:11" has been reassociated ▶
with "malware" profile.

(cloudflare-dns)> assign c0:b8:83:c2:cb:11 family
CloudflareDns::Client: "c0:b8:83:c2:cb:11" has been reassociated ▶
with "family" profile.

(cloudflare-dns)> no assign c0:b8:83:c2:cb:11
CloudflareDns::Client: Host "c0:b8:83:c2:cb:11" has been removed.

(cloudflare-dns)> no assign
CloudflareDns::Client: Default type set.
```

**History**

| Version | Description   |
|---------|---|
| 3.05    | The <b>cloudflare-dns assign</b> command has been introduced. |

### 3.8.2 cloudflare-dns check-availability

**Description**Check availability of *Cloudflare DNS* service.

| <b>Prefix no</b>       | No  |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Change settings</b> | No  |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | (cloudflare-dns)> <b>check-availability</b>   |         |             |      |   |
| <b>Example</b>         | (cloudflare-dns)> <b>check-availability</b><br>CloudflareDns::Client: Cloudflare DNS is available.  |         |             |      |   |
| <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>cloudflare-dns check-availability</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 3.05 | The <b>cloudflare-dns check-availability</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 3.05                   | The <b>cloudflare-dns check-availability</b> command has been introduced.   |         |             |      |   |

### 3.8.3 cloudflare-dns enable

| <b>Description</b>     | Enable <i>Cloudflare DNS</i> service.<br><br>Command with <b>no</b> prefix disables the service.   |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes  |         |             |      |  |
| <b>Change settings</b> | Yes  |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Synopsis</b>        | (cloudflare-dns)> <b>enable</b><br><br>(cloudflare-dns)> <b>no enable</b>  |         |             |      |  |
| <b>Example</b>         | (cloudflare-dns)> <b>enable</b><br>CloudflareDns::Client: Cloudflare DNS enabled.<br><br>(cloudflare-dns)> <b>no enable</b><br>CloudflareDns::Client: Cloudflare DNS disabled.             |         |             |      |  |
| <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>cloudflare-dns</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 3.05 | The <b>cloudflare-dns</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 3.05                   | The <b>cloudflare-dns</b> command has been introduced.   |         |             |      |  |

## 3.9 components

|                        |  |
|------------------------|--|
| <b>Description</b>     | Access to a group of commands to manage firmware components. |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Group entry</b>    | (config-comp)   |         |             |      |  |
| <b>Synopsis</b>       | (config)> <b>components</b>   |         |             |      |  |
| <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>components</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>components</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>components</b> command has been introduced.  |         |             |      |  |

### 3.9.1 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)> <b>auto-update channel</b> <channel> |
| (config-comp)> <b>no auto-update channel</b>        |

| 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.                             |             |

|                |   |
|----------------|---|
| <b>Example</b> | (config-comp)> <b>auto-update channel preview</b><br>Components::Manager: Auto-update channel is "preview".   |
|                | (config-comp)> <b>no auto-update channel</b><br>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. |

## 3.9.2 components auto-update disable

| <b>Description</b>     | Components auto-update function. By default, automatic update is enabled.<br>Command with <b>no</b> prefix enables auto-update.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | Yes   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-comp)&gt; auto-update disable<br/>(config-comp)&gt; no auto-update disable</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-comp)&gt; auto-update disable<br/>Components::Manager: Components auto-update disabled.<br/><br/>(config-comp)&gt; no auto-update disable<br/>Components::Manager: Components auto-update enabled.</pre> |         |             |      |  |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.09</td><td>The <b>components auto-update disable</b> command has been introduced.</td></tr></tbody></table>                       | Version | Description | 2.09 | The <b>components auto-update disable</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.09                   | The <b>components auto-update disable</b> command has been introduced.  |         |             |      |  |

## 3.9.3 components auto-update schedule

| <b>Description</b>     | Assign a schedule for the auto-update operation. Schedule must be created and customized with <b>schedule action</b> command before execution.<br>Command with <b>no</b> prefix unbinds the schedule.  |   |       |             |          |                      |   |
|------------------------|--|---|-------|-------------|----------|----------------------|---|
| <b>Prefix no</b>       | Yes  |   |       |             |          |                      |   |
| <b>Change settings</b> | Yes  |   |       |             |          |                      |   |
| <b>Multiple input</b>  | No   |   |       |             |          |                      |   |
| <b>Synopsis</b>        | <pre>(config-comp)&gt; auto-update schedule &lt;schedule&gt;<br/>(config-comp)&gt; no auto-update schedule</pre>   |   |       |             |          |                      |   |
| <b>Arguments</b>       | <table><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>schedule</td><td><i>Schedule name</i></td><td>The name of the schedule that was created with <b>schedule</b> group of commands.</td></tr></tbody></table> | Argument  | Value | Description | schedule | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> group of commands. |
| Argument               | Value  | Description   |       |             |          |                      |   |
| schedule               | <i>Schedule name</i>   | The name of the schedule that was created with <b>schedule</b> group of commands. |       |             |          |                      |   |
| <b>Example</b>         | <pre>(config-comp)&gt; auto-update schedule Update<br/>Components::Manager: Set auto-update schedule "Update".</pre>   |   |       |             |          |                      |   |

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

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.03           | The <b>components auto-update schedule</b> command has been introduced. |

### 3.9.4 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)> | <b>check-update</b> [ <i>force</i> ] |
|----------------|--------------------------------------|

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>            |
|-----------------|----------------|-------------------------------|
| 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**

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

### 3.9.5 components commit

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

| <b>Prefix no</b>       | No   |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | (config-comp)> <b>commit</b>   |         |             |      |   |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>components commit</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>components commit</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>components commit</b> command has been introduced.  |         |             |      |   |

### 3.9.6 components install

| <b>Description</b>     | Mark component to install. Final installation carried out with <b>components commit</b> command.   |   |       |             |           |               |   |
|------------------------|--|---|-------|-------------|-----------|---------------|---|
| <b>Prefix no</b>       | No   |   |       |             |           |               |   |
| <b>Change settings</b> | Yes  |   |       |             |           |               |   |
| <b>Multiple input</b>  | Yes  |   |       |             |           |               |   |
| <b>Synopsis</b>        | (config-comp)> <b>install &lt;component&gt;</b>  |   |       |             |           |               |   |
| <b>Arguments</b>       | <table><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>component</td><td><i>String</i></td><td>Component name. List of available components for installation can be displayed with the <b>components list</b> command.</td></tr></tbody></table> | 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. |
| 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.

| <b>History</b> | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>components install</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>components install</b> command has been introduced. |
|----------------|---|---------|-------------|------|--|
| Version        | Description   |         |             |      |  |
| 2.00           | The <b>components install</b> command has been introduced.  |         |             |      |  |

### 3.9.7 components list

|                    |   |
|--------------------|---|
| <b>Description</b> | 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. |
| <b>Prefix no</b>   | No  |

| <b>Change settings</b> | No  |   |       |             |         |        |   |
|------------------------|---|---|-------|-------------|---------|--------|---|
| <b>Multiple input</b>  | No  |   |       |             |         |        |   |
| <b>Synopsis</b>        | <code>(config-comp)&gt; list [ sandbox ]</code>   |   |       |             |         |        |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>sandbox</td> <td>String</td> <td>Remote sandbox, such as stable or beta.</td> </tr> </tbody> </table> | Argument                                | Value | Description | sandbox | String | Remote sandbox, such as stable or beta. |
| Argument               | Value   | Description                             |       |             |         |        |   |
| sandbox                | String  | Remote sandbox, such as stable or beta. |       |             |         |        |   |

|                |  |
|----------------|--|
| <b>Example</b> | <code>(config-comp)&gt; list</code>  |
|                | <pre>         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         ...     </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>components list</b> command has been introduced.</td></tr> <tr> <td>2.06.A.6</td><td>The <i>sandbox</i> parameter has been introduced. The command <b>components list</b> should be used in favour of <b>components sync</b>.</td></tr> </tbody> </table> | 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> . |
|----------------|---|---------|-------------|------|---|----------|---|
| 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> .   |         |             |      |   |          |   |

### 3.9.8 components preset

|                    |  |
|--------------------|--|
| <b>Description</b> | Select a predefined set of components. Installation of preset is carried out with <b>components commit</b> command.<br><br>Before preset installation check the latest versions of components on the update server with <b>components list</b> command. Internet connection is required. |
|--------------------|--|

| <b>Prefix no</b>       | No   |  |             |             |   |         |   |             |  |
|------------------------|--|--|-------------|-------------|---|---------|---|-------------|--|
| <b>Change settings</b> | Yes  |  |             |             |   |         |   |             |  |
| <b>Multiple input</b>  | No   |  |             |             |   |         |   |             |  |
| <b>Synopsis</b>        | (config-comp)> <b>preset</b> <preset>  |  |             |             |   |         |   |             |  |
| <b>Arguments</b>       | Number and names of presets can be changed, so check the list of available presets with help of <b>preset</b> [Tab] command.<br><br><table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td rowspan="2">preset</td><td>minimal</td><td>Minimal set of components will be marked.</td></tr><tr><td>recommended</td><td>Recommended set of components will be marked for installation.</td></tr></tbody></table> | Argument   | Value       | Description | preset  | minimal | Minimal set of components will be marked. | recommended | Recommended set of components will be marked for installation. |
| Argument               | Value  | Description  |             |             |   |         |   |             |  |
| preset                 | minimal  | Minimal set of components will be marked.                      |             |             |   |         |   |             |  |
|                        | recommended  | Recommended set of components will be marked for installation. |             |             |   |         |   |             |  |
| <b>Example</b>         | (config-comp)> <b>preset</b> [Tab]<br><br>Usage template:<br>preset {preset}<br><br>Choose:<br>minimal<br>recommended<br><br>(config-comp)> <b>preset recommended</b><br>lib::libndmComponents error[268369922]: updates are available ►<br>for this system.<br>(config-comp)> <b>commit</b><br>Components::Manager: Update task started.  |  |             |             |   |         |   |             |  |
| <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>components preset</b> command has been introduced.</td></tr></tbody></table>  | Version  | Description | 2.00        | The <b>components preset</b> command has been introduced. |         |   |             |  |
| Version                | Description  |  |             |             |   |         |   |             |  |
| 2.00                   | The <b>components preset</b> command has been introduced.  |  |             |             |   |         |   |             |  |

### 3.9.9 components preview

|                        |   |
|------------------------|---|
| <b>Description</b>     | Show size of firmware as current set of components selected with <b>components install</b> command. |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | (config-comp)> <b>preview</b>   |
| <b>Example</b>         | (config-comp)> <b>preview</b>   |

```
preview:  
size: 7733308
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>components preview</b> command has been introduced. |

### 3.9.10 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)> <b>remove</b> <component> |
|--|

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|-----------------|---------------|--|
| component       | <i>String</i> | Component name. List of available components for removal can be displayed with the <b>components list</b> command. |

**Example**

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

**History**

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

### 3.9.11 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.

Command with **no** prefix resets period to default. By default, value 1800 is used.

**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. |

## 3.10 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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.06           | The <b>crypto engine</b> command has been introduced. |

## 3.11 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)> | <b>crypto ike key &lt;name&gt; &lt;psk&gt; (&lt;type&gt; &lt;id&gt;   any)</b> |
| (config)> | <b>no crypto ike key &lt;name&gt;</b>  |

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.06           | The <b>crypto ike key</b> command has been introduced. |

## 3.12 crypto ike nat-keepalive

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
| (config)> crypto ike nat-keepalive <nat-keepalive>
| (config)> no crypto ike nat-keepalive
```

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>  |
|-----------------|----------------|---|
| nat-keepalive   | <i>Integer</i> | Timeout between keepalive packets in seconds. Can take values 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ike nat-keepalive</b> command has been introduced. |

## 3.13 crypto ike policy

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

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

**Prefix no** Yes

**Change settings** Yes

| <b>Multiple input</b> | Yes   |   |             |             |   |               |   |
|-----------------------|---|---|-------------|-------------|---|---------------|---|
| <b>Group entry</b>    | (config-ike-policy)   |   |             |             |   |               |   |
| <b>Synopsis</b>       | <pre>  (config)&gt; crypto ike policy &lt;name&gt;   (config)&gt; no crypto ike policy &lt;name&gt;</pre>   |   |             |             |   |               |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td><i>String</i></td><td><i>IKE</i> policy name. Latin letters, numbers, dots, hyphens and underscores are acceptable.</td></tr> </tbody> </table> | Argument  | Value       | Description | name  | <i>String</i> | <i>IKE</i> policy name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |
| Argument              | Value   | Description   |             |             |   |               |   |
| name                  | <i>String</i>   | <i>IKE</i> policy name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |             |             |   |               |   |
| <b>Example</b>        | <pre>(config)&gt; crypto ike policy test IpSec::Manager: "test": crypto ike policy successfully created.  (config)&gt; no crypto ike policy test IpSec::Manager: Crypto ike policy "test" removed.</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 ike policy</b> command has been introduced.</td></tr> </tbody> </table>  | Version   | Description | 2.06        | The <b>crypto ike policy</b> command has been introduced. |               |   |
| Version               | Description   |   |             |             |   |               |   |
| 2.06                  | The <b>crypto ike policy</b> command has been introduced.   |   |             |             |   |               |   |

### 3.13.1 crypto ike policy lifetime

| <b>Description</b>     | Set lifetime of <i>IPsec IKE</i> association. By default, the value 86400 is used.<br><br>Command with <b>no</b> prefix resets setting to default.   |   |       |             |          |                |   |
|------------------------|--|---|-------|-------------|----------|----------------|---|
| <b>Prefix no</b>       | Yes  |   |       |             |          |                |   |
| <b>Change settings</b> | Yes  |   |       |             |          |                |   |
| <b>Multiple input</b>  | No   |   |       |             |          |                |   |
| <b>Synopsis</b>        | <pre>  (config-ike-policy)&gt; lifetime &lt;lifetime&gt;   (config-ike-policy)&gt; no lifetime</pre>   |   |       |             |          |                |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>lifetime</td><td><i>Integer</i></td><td>Lifetime of <i>IPsec IKE</i> association in seconds. Can take values from 60 to 2147483647.</td></tr> </tbody> </table> | Argument  | Value | Description | lifetime | <i>Integer</i> | Lifetime of <i>IPsec IKE</i> association in seconds. Can take values from 60 to 2147483647. |
| Argument               | Value  | Description   |       |             |          |                |   |
| lifetime               | <i>Integer</i>   | Lifetime of <i>IPsec IKE</i> association in seconds. Can take values from 60 to 2147483647. |       |             |          |                |   |
| <b>Example</b>         | <pre>(config-ike-policy)&gt; lifetime 3600 IpSec::Manager: "test": crypto ike policy lifetime set to 3600 s.  (config-ike-policy)&gt; no lifetime IpSec::Manager: "test": crypto ike policy lifetime reset.</pre>  |   |       |             |          |                |   |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ike policy lifetime</b> command has been introduced. |

### 3.13.2 crypto ike policy mode

**Description**

Set [IKE](#) protocol version. By default, the value ikev1 is used.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config-ike-policy)> mode <mode>
```

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

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>      |
|-----------------|--------------|-------------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ike policy mode</b> command has been introduced. |

### 3.13.3 crypto ike policy negotiation-mode

**Description**

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

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config-ike-policy)> negotiation-mode <negotiation-mode>
(config-ike-policy)> no negotiation-mode
```

**Arguments**

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

**Example**

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

**History**

| Version | Description  |
|---------|--|
| 2.06    | The <b>crypto ike policy negotiation-mode</b> command has been introduced. |

### 3.13.4 crypto ike policy proposal

**Description**

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

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

```
(config-ike-policy)> proposal <proposal>
(config-ike-policy)> no proposal <proposal>
```

**Arguments**

| Argument | Value         | Description   |
|----------|---------------|---|
| proposal | <i>String</i> | <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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ike policy proposal</b> command has been introduced. |

## 3.14 crypto ike proposal

**Description**

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

A full list of encryption algorithms implemented in the system is provided in the [Appendix](#).

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

|                        |   |
|------------------------|---|
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | Yes   |
| <b>Group entry</b>     | (config-ike-proposal)   |
| <b>Synopsis</b>        | <pre>(config)&gt; <b>crypto ike proposal</b> &lt;name&gt; (config)&gt; <b>no crypto ike proposal</b> &lt;name&gt;</pre> |

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>  |
|-----------------|---------------|---|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.06           | The <b>crypto ike proposal</b> command has been introduced. |

### 3.14.1 crypto ike proposal aead

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

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

|                        |             |
|------------------------|-------------|
| (config-ike-proposal)> | <b>aead</b> |
|------------------------|-------------|

**Example**

|   |             |
|---|-------------|
| (config-ike-proposal)>  | <b>aead</b> |
| 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. |

### 3.14.2 crypto ike proposal dh-group

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|                        |                                     |
|------------------------|-------------------------------------|
| (config-ike-proposal)> | <b>dh-group &lt;dh-group&gt;</b>    |
| (config-ike-proposal)> | <b>no dh-group &lt;dh-group&gt;</b> |

| 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    |   |

| Argument | Value | Description |
|----------|-------|-------------|
|          | 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. |

### 3.14.3 crypto ike proposal encryption

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|  |
|--|
| <pre>(config-ike-proposal)&gt; <b>encryption &lt;encryption&gt;</b></pre>    |
| <pre>(config-ike-proposal)&gt; <b>no encryption &lt;encryption&gt;</b></pre> |

**Arguments**

| Argument   | Value       | Description                    |
|------------|-------------|--------------------------------|
| encryption | des         | Type of <i>IKE</i> encryption. |
|            | 3des        |                                |
|            | aes-cbc-128 |                                |
|            | aes-cbc-192 |                                |
|            | aes-cbc-256 |                                |

| Argument | Value       | Description |
|----------|-------------|-------------|
|          | 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. |

### 3.14.4 crypto ike proposal integrity

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|  |
|--|
| <pre>(config-ike-proposal)&gt; <b>integrity &lt;integrity&gt;</b></pre>    |
| <pre>(config-ike-proposal)&gt; <b>no integrity &lt;integrity&gt;</b></pre> |

**Arguments**

| Argument  | Value  | Description   |
|-----------|--------|---|
| integrity | md5    | <b>HMAC</b> signature algorithm of <b>IKE</b> 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.06           | The <b>crypto ike proposal integrity</b> command has been introduced. |

### 3.14.5 crypto ike proposal prf

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|   |
|---|
| <pre>(config-ike-proposal)&gt; prf &lt;prf&gt;</pre>    |
| <pre>(config-ike-proposal)&gt; no prf &lt;prf&gt;</pre> |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                      |
|-----------------|--------------|---|
| prf             | md5          | <i>HMAC</i> signature algorithm of <i>IKE</i> messages. |
|                 | sha1         |   |
|                 | aes-xcbc     |   |
|                 | sha256       |   |
|                 | 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.05           | The <b>crypto ike proposal prf</b> command has been introduced. |

## 3.15 crypto ipsec incompatible

| <b>Description</b>     | Disable <i>IPsec</i> tunnels compatibility checking. By default, the setting is disabled. Command with <b>no</b> prefix enables the checking back.  |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes   |         |             |      |   |
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | <pre>  (config)&gt; crypto ipsec incompatible   (config)&gt; no crypto ipsec incompatible</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config)&gt; crypto ipsec incompatible IpSec::Manager: Compatibility checks is disabled.</pre><br><pre>(config)&gt; no crypto ipsec incompatible IpSec::Manager: Compatibility checks is enabled.</pre>  |         |             |      |   |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.10</td> <td style="padding: 2px;">The <b>crypto ipsec incompatible</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.10 | The <b>crypto ipsec incompatible</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.10                   | The <b>crypto ipsec incompatible</b> command has been introduced.   |         |             |      |   |

## 3.16 crypto ipsec mtu

| <b>Description</b>     | Set <i>MTU</i> value to be transmitted to <i>IPsec</i> . By default, <i>auto</i> value is used.   |   |  |          |       |             |      |                |  |       |                |   |
|------------------------|---|---|--|----------|-------|-------------|------|----------------|--|-------|----------------|---|
| <b>Prefix no</b>       | No  |   |  |          |       |             |      |                |  |       |                |   |
| <b>Change settings</b> | No  |   |  |          |       |             |      |                |  |       |                |   |
| <b>Multiple input</b>  | No  |   |  |          |       |             |      |                |  |       |                |   |
| <b>Synopsis</b>        | <pre>  (config)&gt; crypto ipsec mtu (auto   &lt;value&gt;)</pre>   |   |  |          |       |             |      |                |  |       |                |   |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">auto</td> <td style="padding: 2px;"><i>Keyword</i></td> <td style="padding: 2px;"><i>MTU</i> will be assigned automatically.</td> </tr> <tr> <td style="padding: 2px;">value</td> <td style="padding: 2px;"><i>Integer</i></td> <td style="padding: 2px;"><i>MTU</i> value. Can take values from 128 to 1500 inclusively.</td> </tr> </tbody> </table> |   |  | Argument | Value | Description | auto | <i>Keyword</i> | <i>MTU</i> will be assigned automatically. | value | <i>Integer</i> | <i>MTU</i> value. Can take values from 128 to 1500 inclusively. |
| Argument               | Value   | Description   |  |          |       |             |      |                |  |       |                |   |
| auto                   | <i>Keyword</i>  | <i>MTU</i> will be assigned automatically.                      |  |          |       |             |      |                |  |       |                |   |
| value                  | <i>Integer</i>  | <i>MTU</i> value. Can take values from 128 to 1500 inclusively. |  |          |       |             |      |                |  |       |                |   |

|                |   |
|----------------|---|
| <b>Example</b> | <pre>(config)&gt; crypto ipsec mtu auto IpSec::Manager: MTU is set to auto.</pre><br><pre>(config)&gt; crypto ipsec mtu 1400 IpSec::Manager: Static MTU value is set to 1400.</pre> |
|----------------|---|

**History**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 2.08           | The <b>crypto ipsec mtu</b> command has been introduced. |

## 3.17 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>   |
|-----------------|--------------|--|
| name            | String       | <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**

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

### 3.17.1 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

| <b>Multiple input</b> | No   |   |             |             |   |           |   |
|-----------------------|--|---|-------------|-------------|---|-----------|---|
| <b>Synopsis</b>       | <pre>(config-ipsec-profile)&gt; <b>authentication-local &lt;auth&gt;</b> (config-ipsec-profile)&gt; <b>no authentication-local</b></pre>   |   |             |             |   |           |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>auth</td><td>pre-share</td><td>A single available type of authorization for now.</td></tr> </tbody> </table>  | Argument  | Value       | Description | auth  | pre-share | A single available type of authorization for now. |
| Argument              | Value  | Description                                       |             |             |   |           |   |
| auth                  | pre-share  | A single available type of authorization for now. |             |             |   |           |   |
| <b>Example</b>        | <pre>(config-ipsec-profile)&gt; <b>authentication-local pre-share</b> IpSec::Manager: "test": crypto ipsec profile authentication-local ▶ type "pre-share" is set.  (config-ipsec-profile)&gt; <b>no authentication-local</b> IpSec::Manager: "test": crypto ipsec profile authentication-local ▶ reset.</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 ipsec profile authentication-local</b> command has been introduced.</td></tr> </tbody> </table>   | Version   | Description | 2.06        | The <b>crypto ipsec profile authentication-local</b> command has been introduced. |           |   |
| Version               | Description  |   |             |             |   |           |   |
| 2.06                  | The <b>crypto ipsec profile authentication-local</b> command has been introduced.  |   |             |             |   |           |   |

## 3.17.2 crypto ipsec profile authentication-remote

| <b>Description</b>     | Set authentication type for remote host. By default, value pre-share is used.<br><br>Command with <b>no</b> prefix resets setting to default.   |   |       |             |      |           |   |
|------------------------|---|---|-------|-------------|------|-----------|---|
| <b>Prefix no</b>       | Yes   |   |       |             |      |           |   |
| <b>Change settings</b> | Yes   |   |       |             |      |           |   |
| <b>Multiple input</b>  | No  |   |       |             |      |           |   |
| <b>Synopsis</b>        | <pre>(config-ipsec-profile)&gt; <b>authentication-remote &lt;auth&gt;</b> (config-ipsec-profile)&gt; <b>no authentication-remote</b></pre>  |   |       |             |      |           |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>auth</td><td>pre-share</td><td>A single available type of authorization for now.</td></tr> </tbody> </table> | Argument  | Value | Description | auth | pre-share | A single available type of authorization for now. |
| Argument               | Value   | Description                                       |       |             |      |           |   |
| auth                   | pre-share   | A single available type of authorization for now. |       |             |      |           |   |
| <b>Example</b>         | <pre>(config-ipsec-profile)&gt; <b>authentication-remote pre-share</b> IpSec::Manager: "test": crypto ipsec profile ▶ authentication-remote type "pre-share" is set.</pre>  |   |       |             |      |           |   |

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

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ipsec profile authentication-remote</b> command has been introduced. |

### 3.17.3 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)> | <b>dpd-clear</b>    |
| (config-ipsec-profile)> | <b>no dpd-clear</b> |

**Example**

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

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

**History**

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

### 3.17.4 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

| <b>Multiple input</b> | No   |  |             |             |   |                |  |             |                |  |
|-----------------------|--|--|-------------|-------------|---|----------------|--|-------------|----------------|--|
| <b>Synopsis</b>       | <pre>(config-ipsec-profile)&gt; <b>dpd-interval</b> &lt;interval&gt; [retry-count] (config-ipsec-profile)&gt; <b>no dpd-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</td><td><i>Integer</i></td><td>The interval of sending <i>DPD</i> packets in seconds. Can take values from 2 to 3600.</td></tr> <tr> <td>retry-count</td><td><i>Integer</i></td><td>Number of attempts to send <i>DPD</i> packets. Can take values from 3 to 60.</td></tr> </tbody> </table> | Argument   | Value       | Description | interval  | <i>Integer</i> | The interval of sending <i>DPD</i> packets in seconds. Can take values from 2 to 3600. | retry-count | <i>Integer</i> | Number of attempts to send <i>DPD</i> packets. Can take values from 3 to 60. |
| Argument              | Value  | Description  |             |             |   |                |  |             |                |  |
| interval              | <i>Integer</i>   | The interval of sending <i>DPD</i> packets in seconds. Can take values from 2 to 3600. |             |             |   |                |  |             |                |  |
| retry-count           | <i>Integer</i>   | Number of attempts to send <i>DPD</i> packets. Can take values from 3 to 60.           |             |             |   |                |  |             |                |  |
| <b>Example</b>        | <pre>(config-ipsec-profile)&gt; <b>dpd-interval</b> 5 30 IpSec::Manager: "test": crypto ipsec profile dpd retry count is ▶ set to 30.  (config-ipsec-profile)&gt; <b>no dpd-interval</b> IpSec::Manager: "test": crypto ipsec profile dpd retry count ▶ reset.</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 ipsec profile dpd-interval</b> command has been introduced.</td></tr> </tbody> </table>   | Version  | Description | 2.06        | The <b>crypto ipsec profile dpd-interval</b> command has been introduced. |                |  |             |                |  |
| Version               | Description  |  |             |             |   |                |  |             |                |  |
| 2.06                  | The <b>crypto ipsec profile dpd-interval</b> command has been introduced.  |  |             |             |   |                |  |             |                |  |

## 3.17.5 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)> <b>identity-local</b> <type> <id> |
| (config-ipsec-profile)> <b>no identity-local</b>          |

| 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.   |

| Argument | Value         | Description     |
|----------|---------------|-----------------|
| 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. |

### 3.17.6 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**

|  |
|--|
| <pre>(config-ipsec-profile)&gt; <b>match-identity-remote (&lt;type&gt; &lt;id&gt;   any)</b></pre> |
| <pre>(config-ipsec-profile)&gt; <b>no match-identity-remote</b></pre>                              |

**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. |

## 3.17.7 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. |

## 3.17.8 crypto ipsec profile policy

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input**

No

**Synopsis**

```
(config-ipsec-profile)> policy <policy>
(config-ipsec-profile)> no policy
```

**Arguments**

| Argument | Value  | Description  |
|----------|--------|--|
| policy   | String | <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. |

### 3.17.9 crypto ipsec profile preshared-key

**Description**Set pre-shared key for *IPsec* profile.Command with **no** prefix removes pre-shared key.**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config-ipsec-profile)> preshared-key <preshare-key>
(config-ipsec-profile)> no preshared-key
```

**Arguments**

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

**Example**

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

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

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>crypto ipsec profile preshared-key</b> command has been introduced. |

### 3.17.10 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**

|   |
|---|
| <pre>(config-ipsec-profile)&gt; <b>xauth &lt;type&gt;</b></pre> |
| <pre>(config-ipsec-profile)&gt; <b>no xauth</b></pre>           |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b> |
|-----------------|--------------|--------------------|
| 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**

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

### 3.17.11 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. |

### 3.17.12 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.06           | The <b>crypto ipsec profile xauth-password</b> command has been introduced. |

## 3.18 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>  |
|-----------------|----------------|---|
| delay           | <i>Integer</i> | Delay value in seconds. Can take value in the range from 1 till 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>crypto ipsec rekey delete-delay</b> command has been introduced. |

## 3.19 crypto ipsec rekey make-before

| <b>Description</b>     | Set the mode when new IKE SA creates before the breaking the old one. By default, the feature is disabled.  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
|                        | 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)&gt; crypto ipsec rekey make-before   (config)&gt; no crypto ipsec rekey make-before</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; crypto ipsec rekey make-before IpSec::Manager: Enable make-before-brake scheme for IKEv2 rekey.  (config)&gt; no crypto ipsec rekey make-before IpSec::Manager: Disable make-before-brake scheme for IKEv2 rekey.</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>crypto ipsec rekey make-before</b> command has been introduced.</td></tr></tbody></table>                                | Version | Description | 2.11 | The <b>crypto ipsec rekey make-before</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.11                   | The <b>crypto ipsec rekey make-before</b> command has been introduced.  |         |             |      |  |

## 3.20 crypto ipsec transform-set

|                        |   |
|------------------------|---|
| <b>Description</b>     | Access to a group of commands to configure selected <i>IPsec ESP</i> transformation during Phase 2. If transformation is not found, the command tries to create it.   |
|                        | Command with <b>no</b> prefix removes transformation. At the same time references to this transformation are automatically deleted from all <i>IPsec</i> crypto maps. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | Yes   |
| <b>Group entry</b>     | (config-ipsec-transform)  |
| <b>Synopsis</b>        | <pre>  (config)&gt; crypto ipsec transform-set &lt;name&gt;   (config)&gt; no crypto ipsec transform-set &lt;name&gt;</pre>   |

**Arguments**

| 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.
```

**History**

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

### 3.20.1 crypto ipsec transform-set aead

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

**Prefix no** No

**Change settings** No

**Multiple input** No

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

**Example** (config-ipsec-transform)> **dh-group 14**

```
IpSec::Manager: "TEST": crypto ipsec transform-set "TEST" enabled ►
AEAD mode.
```

**History**

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

### 3.20.2 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. |

### 3.20.3 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. |

### 3.20.4 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    | <b>HMAC</b> signature algorithm of <b>IPsec ESP</b> 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**

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

### 3.20.5 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| lifetime        | <i>Integer</i> | Lifetime of <i>IPsec</i> transformation in seconds. Can take values 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**

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

## 3.21 crypto map

|                        |  |
|------------------------|--|
| <b>Description</b>     | Access to a group of commands to configure selected <i>IPsec</i> crypto map. If crypto map is not found, the command tries to create it. |
|                        | Command with <b>no</b> prefix removes crypto map.  |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | Yes  |
| <b>Group entry</b>     | (config-crypto-map)  |
| <b>Synopsis</b>        | <pre>(config)&gt; crypto map &lt;name&gt; (config)&gt; no crypto map &lt;name&gt;</pre>  |

| Arguments | Argument | Value         | Description   |
|-----------|----------|---------------|---|
|           | name     | <i>String</i> | <i>IPsec</i> crypto map name. Latin letters, numbers, dots, hyphens and underscores are acceptable. |

|                |  |
|----------------|--|
| <b>Example</b> | <pre>(config)&gt; crypto map test IpSec::Manager: "test": crypto map successfully created.  (config)&gt; no crypto map test IpSec::Manager: Crypto map profile "test" removed.</pre> |
|----------------|--|

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

### 3.21.1 crypto map connect

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable automatic unconditional <i>IPsec</i> connection to the remote host. Setting has no meaning if basic remote host was set to any (see <b>crypto map set-peer</b> command). By default, setting is disabled and connection is established when attempting to transmit traffic through the <i>IPsec ESP</i> transformation. |
|                        | Command with <b>no</b> prefix disables automatic unconditional connection.   |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |

| <b>Synopsis</b> | <pre>(config-crypto-map)&gt; connect<br/>(config-crypto-map)&gt; no connect</pre>   |         |             |      |  |
|-----------------|---|---------|-------------|------|--|
| <b>Example</b>  | <pre>(config-crypto-map)&gt; connect<br/>IpSec::Manager: "test": crypto map autoconnect enabled.<br/><br/>(config-crypto-map)&gt; no connect<br/>IpSec::Manager: "test": crypto map autoconnect disabled.</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 connect</b> command has been introduced.</td></tr></tbody></table>                  | Version | Description | 2.06 | The <b>crypto map connect</b> command has been introduced. |
| Version         | Description   |         |             |      |  |
| 2.06            | The <b>crypto map connect</b> command has been introduced.  |         |             |      |  |

## 3.21.2 crypto map enable

| <b>Description</b>     | Enable selected <i>IPsec</i> crypto map. By default, setting is enabled.<br><br>Command with <b>no</b> prefix disables crypto map.  |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes   |         |             |      |   |
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; enable<br/>(config-crypto-map)&gt; no enable</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; enable<br/>IpSec::Manager: "test": crypto map enabled.<br/><br/>(config-crypto-map)&gt; no enable<br/>IpSec::Manager: "test": crypto map disabled.</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 enable</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.06 | The <b>crypto map enable</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.06                   | The <b>crypto map enable</b> command has been introduced.   |         |             |      |   |

## 3.21.3 crypto map fallback-check-interval

|                        |   |
|------------------------|---|
| <b>Description</b>     | 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.<br><br>Command with <b>no</b> prefix disables checking. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |

| <b>Multiple input</b> | No  |  |             |             |  |         |  |
|-----------------------|---|--|-------------|-------------|--|---------|--|
| <b>Synopsis</b>       | <pre>(config-crypto-map)&gt; <b>fallback-check-interval</b> &lt;interval-value&gt; (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>Integer</td><td>Period of checking in seconds. Can take values from 60 to 86400.</td></tr> </tbody> </table>                                | Argument   | Value       | Description | interval-value   | Integer | Period of checking in seconds. Can take values from 60 to 86400. |
| Argument              | Value   | Description  |             |             |  |         |  |
| interval-value        | Integer   | Period of checking in seconds. Can take values from 60 to 86400. |             |             |  |         |  |
| <b>Example</b>        | <pre>(config-crypto-map)&gt; <b>fallback-check-interval</b> 120 IpSec::Manager: "test": crypto map fallback check interval is ▶ set to 120.  (config-crypto-map)&gt; <b>no fallback-check-interval</b> IpSec::Manager: "test": crypto map fallback check interval is ▶ 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.  |  |             |             |  |         |  |

### 3.21.4 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.<br><br>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> (config-crypto-map)&gt; <b>no force-encaps</b></pre>   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; <b>force-encaps</b> IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ▶ enabled.  (config-crypto-map)&gt; <b>no force-encaps</b> IpSec::Manager: "test": crypto map force ESP in UDP encapsulation ▶ disabled.</pre> |

**History**

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

## 3.21.5 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>   |
|-----------------|-------------------|--|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.12           | The <b>crypto map l2tp-server dhcp route</b> command has been introduced. |

## 3.21.6 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

| <b>Change settings</b> | Yes   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; l2tp-server enable (config-crypto-map)&gt; no l2tp-server enable</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; l2tp-server enable IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ► enabled.  (config-crypto-map)&gt; no l2tp-server enable IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ► 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>crypto map l2tp-server enable</b> command has been introduced.</td> </tr> </tbody> </table>                                  | Version | Description | 2.11 | The <b>crypto map l2tp-server enable</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.11                   | The <b>crypto map l2tp-server enable</b> command has been introduced.   |         |             |      |   |

### 3.21.7 crypto map l2tp-server interface

| <b>Description</b>     | Bind <b>L2TP</b> -server to the specified interface.<br><br>Command with <b>no</b> prefix unbinds the server.  |   |       |             |           |                       |   |
|------------------------|--|---|-------|-------------|-----------|-----------------------|---|
| <b>Prefix no</b>       | Yes  |   |       |             |           |                       |   |
| <b>Change settings</b> | Yes  |   |       |             |           |                       |   |
| <b>Multiple input</b>  | No   |   |       |             |           |                       |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; l2tp-server interface &lt;interface&gt; (config-crypto-map)&gt; no l2tp-server interface</pre>  |   |       |             |           |                       |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>interface</td> <td><i>Interface name</i></td> <td>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.</td> </tr> </tbody> </table> | Argument  | Value | Description | interface | <i>Interface name</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. |
| Argument               | Value  | Description   |       |             |           |                       |   |
| interface              | <i>Interface name</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. |       |             |           |                       |   |

|                |  |
|----------------|--|
| <b>Example</b> | <pre>(config-crypto-map)&gt; l2tp-server interface [Tab] Usage template:     interface {interface}  Choose:     GigabitEthernet1</pre> |
|----------------|--|

```

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**

|  | <b>Version</b> | <b>Description</b>   |
|--|----------------|--|
|  | 2.11           | The <b>crypto map l2tp-server interface</b> command has been introduced. |

### 3.21.8 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**

|  | <b>Version</b> | <b>Description</b>  |
|--|----------------|---|
|  | 3.00           | The <b>crypto map l2tp-server ipv6cp</b> command has been introduced. |

### 3.21.9 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)> | <b>l2tp-server lcp echo &lt;interval&gt; &lt;count&gt;</b> |
| (config-crypto-map)> | <b>no l2tp-server lcp echo</b>                             |

| 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)>  | <b>l2tp-server lcp echo 5 3</b> |
| IpSec::Manager: "VPNL2TPServer": crypto map L2TP/IPsec server ▶ | set LCP echo to "5" : "3".      |
| (config-crypto-map)>  | <b>no l2tp-server lcp echo</b>  |
| 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. |

### 3.21.10 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 <mru>**(config-crypto-map)> **no l2tp-server mru****Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| mru      | <i>Integer</i> | <i>MRU</i> value. Can take values 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. |

### 3.21.11 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 <mtu>**(config-crypto-map)> **no l2tp-server mtu****Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| mtu      | <i>Integer</i> | <i>MTU</i> value. Can take values 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. |

### 3.21.12 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. |

### 3.21.13 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. |

### 3.21.14 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. |

### 3.21.15 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. |

### 3.21.16 crypto map match-address

**Description** Set the reference to existing list of packet filtering rules (see [access-list](#) command). The first rule in the list will be used for [IPsec](#) Phase 2.

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

| <b>Prefix no</b>       | Yes   |   |             |             |  |               |   |
|------------------------|---|---|-------------|-------------|--|---------------|---|
| <b>Change settings</b> | Yes   |   |             |             |  |               |   |
| <b>Multiple input</b>  | No  |   |             |             |  |               |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; <b>match-address</b> &lt;access-list&gt; (config-crypto-map)&gt; <b>no match-address</b></pre>   |   |             |             |  |               |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>access-list</td><td><i>String</i></td><td>Packet filtering rules name. You can see available lists with help of <b>match-address</b> [Tab] command.</td></tr> </tbody> </table>  | Argument  | Value       | Description | access-list  | <i>String</i> | Packet filtering rules name. You can see available lists with help of <b>match-address</b> [Tab] command. |
| Argument               | Value   | Description   |             |             |  |               |   |
| access-list            | <i>String</i>   | Packet filtering rules name. You can see available lists with help of <b>match-address</b> [Tab] command. |             |             |  |               |   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; <b>match-address</b> [Tab] Usage template:   match-address {access-list}  Choose:   _WEBADMIN_GigabitEthernet0/Vlan4     _WEBADMIN_ISP     _WEBADMIN_Home     _WEBADMIN_Bridge2     _WEBADMIN_Wireguard2</pre><br><pre>(config-crypto-map)&gt; <b>match-address</b> test IpSec::Manager: "test": crypto map match-address set to "test".</pre><br><pre>(config-crypto-map)&gt; <b>no match-address</b> IpSec::Manager: "test": crypto map match-address reset.</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 match-address</b> command has been introduced.</td></tr> </tbody> </table>   | Version   | Description | 2.06        | The <b>crypto map match-address</b> command has been introduced. |               |   |
| Version                | Description   |   |             |             |  |               |   |
| 2.06                   | The <b>crypto map match-address</b> command has been introduced.  |   |             |             |  |               |   |

### 3.21.17 crypto map nail-up

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable automatic renegotiation of <i>IPsec ESP</i> transformations at their obsolescence. By default, setting is disabled.<br><br>Command with <b>no</b> prefix disables automatic renegotiation. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |

| <b>Synopsis</b> | <pre>(config-crypto-map)&gt; nail-up (config-crypto-map)&gt; no nail-up</pre>  |         |             |      |  |
|-----------------|--|---------|-------------|------|--|
| <b>Example</b>  | <pre>(config-crypto-map)&gt; nail-up IpSec::Manager: "test": crypto map SA renegotiation enabled.</pre><br><pre>(config-crypto-map)&gt; no nail-up IpSec::Manager: "test": crypto map SA renegotiation disabled.</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 nail-up</b> command has been introduced.</td></tr> </tbody> </table>                | Version | Description | 2.06 | The <b>crypto map nail-up</b> command has been introduced. |
| Version         | Description  |         |             |      |  |
| 2.06            | The <b>crypto map nail-up</b> command has been introduced.   |         |             |      |  |

### 3.21.18 crypto map priority

| <b>Description</b>     | Set priority for <i>IPsec</i> crypto map. By default, value 0 is used.<br><br>Command with <b>no</b> prefix resets value to default.   |   |             |             |   |                |   |
|------------------------|--|---|-------------|-------------|---|----------------|---|
| <b>Prefix no</b>       | Yes  |   |             |             |   |                |   |
| <b>Change settings</b> | Yes  |   |             |             |   |                |   |
| <b>Multiple input</b>  | No   |   |             |             |   |                |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; priority &lt;priority&gt; (config-crypto-map)&gt; no priority</pre>   |   |             |             |   |                |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>priority</td><td><i>Integer</i></td><td>Priority value. Can take values in the range from 0 till 255 inclusively.</td></tr> </tbody> </table> | Argument  | Value       | Description | priority  | <i>Integer</i> | Priority value. Can take values in the range from 0 till 255 inclusively. |
| Argument               | Value  | Description   |             |             |   |                |   |
| priority               | <i>Integer</i>   | Priority value. Can take values in the range from 0 till 255 inclusively. |             |             |   |                |   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; priority 255 IpSec::Manager: "VPNL2TPServer": crypto map priority set to 255.</pre><br><pre>(config-crypto-map)&gt; no priority IpSec::Manager: "VPNL2TPServer": crypto map priority reset.</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 priority</b> command has been introduced.</td></tr> </tbody> </table>   | Version   | Description | 2.06        | The <b>crypto map priority</b> command has been introduced. |                |   |
| Version                | Description  |   |             |             |   |                |   |
| 2.06                   | The <b>crypto map priority</b> command has been introduced.  |   |             |             |   |                |   |

### 3.21.19 crypto map reauth-passive

|                    |  |
|--------------------|--|
| <b>Description</b> | Enable passive reauthentication of <i>IPsec</i> 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)> | <b>reauth-passive</b>    |
| (config-crypto-map)> | <b>no reauth-passive</b> |

**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. |

### 3.21.20 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)> | <b>set-peer &lt;remote-ip&gt;</b> |
| (config-crypto-map)> | <b>no set-peer</b>                |

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

**Example**

```
(config-crypto-map)> set-peer ipsec.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. |

### 3.21.21 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. |

### 3.21.22 crypto map set-profile

**Description** Set the reference to existing *IPsec* profile (see **crypto ipsec profile** command). Command with **no** prefix removes the reference.

**Prefix no** Yes

**Change settings** Yes

**Multiple input**

No

**Synopsis**

```
(config-crypto-map)> set-profile <profile>
(config-crypto-map)> no set-profile
```

**Arguments**

| Argument | Value  | Description  |
|----------|--------|--|
| profile  | String | <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. |

### 3.21.23 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 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. |

## 3.21.24 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 | <i>String</i> | <i>IPsec</i> transformation name. You can see the list of available transformations with help of <b>set-transform [Tab]</b> 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**

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

### 3.21.25 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**

|   |
|---|
| <pre>(config-crypto-map)&gt; <b>virtual-ip dhcp route &lt;address&gt; &lt;mask&gt;</b></pre>      |
| <pre>(config-crypto-map)&gt; <b>no virtual-ip dhcp route [&lt;address&gt; &lt;mask&gt;]</b></pre> |

**Arguments**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>   |
|-----------------|-------------------|--|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.06           | The <b>crypto map virtual-ip dhcp route</b> command has been introduced. |

### 3.21.26 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>                |
|-----------------|-------------------|-----------------------------------|
| 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**

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

### 3.21.27 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.
```

**History**

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

### 3.21.28 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.
```

**History**

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

### 3.21.29 crypto map virtual-ip nat

**Description** Enable translation for remote network of Virtual IP extension server.

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

| <b>Prefix no</b>       | Yes  |                |                    |      |   |
|------------------------|--|----------------|--------------------|------|---|
| <b>Change settings</b> | Yes  |                |                    |      |   |
| <b>Multiple input</b>  | No   |                |                    |      |   |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; <b>virtual-ip nat</b>   (config-crypto-map)&gt; <b>no virtual-ip nat</b></pre>  |                |                    |      |   |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; <b>virtual-ip nat</b> IpSec::Manager: "test": crypto map Virtual IP remote pool SNAT ► is enabled.</pre><br><pre>(config-crypto-map)&gt; <b>no virtual-ip nat</b> IpSec::Manager: "test": crypto map Virtual IP remote pool SNAT ► is disabled.</pre> |                |                    |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th><b>Version</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>2.08</td> <td>The <b>crypto map virtual-ip nat</b> command has been introduced.</td> </tr> </tbody> </table>   | <b>Version</b> | <b>Description</b> | 2.08 | The <b>crypto map virtual-ip nat</b> command has been introduced. |
| <b>Version</b>         | <b>Description</b>   |                |                    |      |   |
| 2.08                   | The <b>crypto map virtual-ip nat</b> command has been introduced.  |                |                    |      |   |

### 3.21.30 crypto map virtual-ip range

| <b>Description</b>     | Configure the range of addresses issued to clients in Virtual IP server mode.<br><br>Command with <b>no</b> prefix removes the range.   |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
|------------------------|---|-------------------------------------|--------------|--------------------|-------|-------------------|-------------------------------------|-----|-------------------|-------------------------------|------|----------------|---------------------|
| <b>Prefix no</b>       | Yes   |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| <b>Change settings</b> | Yes   |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| <b>Multiple input</b>  | No  |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| <b>Synopsis</b>        | <pre>(config-crypto-map)&gt; <b>virtual-ip range &lt;begin&gt;(&lt;end&gt;   &lt;size&gt;)</b>   (config-crypto-map)&gt; <b>no virtual-ip range</b></pre>   |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th><b>Argument</b></th> <th><b>Value</b></th> <th><b>Description</b></th> </tr> </thead> <tbody> <tr> <td>begin</td> <td><i>IP-address</i></td> <td>The beginning of the address range.</td> </tr> <tr> <td>end</td> <td><i>IP-address</i></td> <td>The end of the address range.</td> </tr> <tr> <td>size</td> <td><i>Integer</i></td> <td>Address range size.</td> </tr> </tbody> </table> | <b>Argument</b>                     | <b>Value</b> | <b>Description</b> | 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. |
| <b>Argument</b>        | <b>Value</b>  | <b>Description</b>                  |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| 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.                 |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |
| <b>Example</b>         | <pre>(config-crypto-map)&gt; <b>virtual-ip range 10.5.0.0 20</b> 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).</pre>  |                                     |              |                    |       |                   |                                     |     |                   |                               |      |                |                     |

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

**History**

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

### 3.21.31 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**

|  |
|--|
| <pre>(config-crypto-map)&gt; virtual-ip static-ip &lt;user&gt; &lt;address&gt;</pre> |
| <pre>(config-crypto-map)&gt; no virtual-ip static-ip &lt;user&gt;</pre>              |

**Arguments**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>  |
|-----------------|-------------------|---------------------|
| 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**

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

### 3.22 dlna

**Description** Access to a group of commands to manage [DLNA](#) service.

**Prefix no** No

**Change settings** No

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Group entry</b>    | (config-dlna)   |         |             |      |  |
| <b>Synopsis</b>       | (config)> <b>dlna</b>   |         |             |      |  |
| <b>Example</b>        | (config)> <b>dlna</b><br>Core::Configurator: Done.<br>(config-dlna)>  |         |             |      |  |
| <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>dlna</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>dlna</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>dlna</b> command has been introduced.  |         |             |      |  |

### 3.22.1 dlna container

|                        |   |
|------------------------|---|
| <b>Description</b>     | Set default container for <i>DLNA</i> service.                                    |
|                        | Command with <b>no</b> prefix resets the setting.                                 |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | (config-dlna)> <b>container</b> <container><br>(config-dlna)> <b>no container</b> |

| Arguments | Argument  | Value  | Description                                      |
|-----------|-----------|--------|--|
|           | container | browse | Show the content of browse container by default. |
|           |           | music  | Show the content of music container by default.  |
|           |           | video  | Show the content of video container by default.  |
|           |           | images | Show the content of images container by default. |

|                |  |
|----------------|--|
| <b>Example</b> | (config-dlna)> <b>container browse</b><br>Dlna::Server: Set default container to "browse". |
|                | (config-dlna)> <b>no container</b><br>Dlna::Server: Reset default container.               |

| History | Version | Description  |
|---------|---------|--|
|         | 2.11    | The <b>dlna container</b> command has been introduced. |

## 3.22.2 dlna db-directory

**Description** Specify the directory with database of multimedia content.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
| (config-dlna)> db-directory <directory>
```

```
| (config-dlna)> no db-directory
```

**Arguments**

| Argument  | Value  | Description                          |
|-----------|--------|--------------------------------------|
| directory | String | Name of the directory with database. |

**Example**

```
(config-dlna)> db-directory 46E243F4E243E6B1:/components/dlna/  
Dlna::Server: DB directory set.
```

```
(config-dlna)> no db-directory  
Dlna::Server: DB directory removed.
```

**History**

| Version | Description   |
|---------|---|
| 2.06    | The <b>dlna db-directory</b> command has been introduced. |

## 3.22.3 dlna directory

**Description** Specify the directory with media content.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

```
| (config-dlna)> directory <directory> [ media-type ]
```

```
| (config-dlna)> no directory <directory>
```

**Arguments**

| Argument   | Value  | Description                               |
|------------|--------|---|
| directory  | String | Name of the directory with media content. |
| media-type | audio  | Content type is audio.                    |

| Argument | Value  | Description             |
|----------|--------|-------------------------|
|          | 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 <b>media-type</b> was added.                 |

### 3.22.4 dlna display-name

**Description** Assign custom name to **DLNA** server.Command with **no** prefix removes the setting.**Prefix no** Yes**Change settings** Yes**Multiple input** No

**Synopsis**

```
(config-dlna)> display-name <display-name>
(config-dlna)> no display-name
```

**Arguments**

| Argument     | Value         | Description            |
|--------------|---------------|------------------------|
| display-name | <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. |

## 3.22.5 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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 FastEthernet0/Vlan1
```

```
(config-dlna)> no interface FastEthernet0/Vlan1
```

**History**

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

## 3.22.6 dlna port

**Description** Set DLNA-server port for HTTP (descriptions, SOAP, media transfer) traffic.  
Command with **no** prefix resets port to default. By default, value 8200 is used.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

|                                   |
|-----------------------------------|
| (config-dlna)> <b>port</b> <port> |
| (config-dlna)> <b>no port</b>     |

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

**Example**

|                                     |
|-------------------------------------|
| (config-dlna)> <b>port</b> 8999     |
| Dlna::Server: Port changed to 8999. |

|                                   |
|-----------------------------------|
| (config-dlna)> <b>no port</b>     |
| Dlna::Server: Port reset to 8200. |

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

## 3.22.7 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)> <b>rescan</b> [ <b>full</b> ] |
|--|

**Arguments**

| 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. |

## 3.22.8 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.11           | The <b>dlna sort</b> command has been introduced. |

## 3.23 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.04           | The <b>dns-proxy</b> command has been introduced. |

### 3.23.1 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> ]
```

```
(config-dnspx)> no https upstream [<url>]
```

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>                |
|-----------------|---------------|-----------------------------------|
| url             | <i>String</i> | Custom URL of DNS service.        |
| format          | dnsm          | The format to represent DNS data. |
|                 | json          |                                   |

| Argument  | Value                 | Description                  |
|-----------|-----------------------|------------------------------|
| hash      | <i>String</i>         | Hash TLS certificate.        |
| interface | <i>Interface name</i> | Interface name to configure. |

**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)>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. |

## 3.23.2 dns-proxy intercept enable

**Description** Enable transit DNS requests interception. This feature is also enabled when the Internet filter is running. By default, the interception is disabled.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

|  |
|--|
| <pre>(config-dnspx)&gt; <b>intercept enable</b></pre>    |
| <pre>(config-dnspx)&gt; <b>no intercept enable</b></pre> |

**Example**

```
(config-dnspx)> intercept enable
Dns::Filter::Interceptor: Enabled.
(config-dnspx)> no intercept enable
Dns::Filter::Interceptor: Disabled.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.06           | The <b>dns-proxy intercept enable</b> command has been introduced. |

### 3.23.3 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| max-ttl         | <i>Integer</i> | The maximum value of TTL. Can take values 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.05           | The <b>dns-proxy max-ttl</b> command has been introduced. |

### 3.23.4 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 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. |

### 3.23.5 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**

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

### 3.23.6 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**

|  |
|--|
| <pre>(config-dnspx)&gt; <b>srr-reset &lt;srr-reset&gt;</b></pre> |
| <pre>(config-dnspx)&gt; <b>no srr-reset</b></pre>                |

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| srr-reset       | <i>Integer</i> | The value of time reset in milliseconds. Can take values 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.12           | The <b>dns-proxy srr-reset</b> command has been introduced. |

### 3.23.7 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

| <b>Multiple input</b> | Yes   |                              |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
|-----------------------|---|------------------------------|-------------|-------------|--|-------------------|---------------------------|------|----------------|------------------|------|---------------|-------------------|------|---------------|-----------------------|-----------|-----------------------|------------------------------|
| <b>Synopsis</b>       | <pre>(config-dnspx)&gt; <b>tls upstream</b> &lt;address&gt; [&lt;port&gt;] [ <b>sni</b> &lt;fqdn&gt; ] [ <b>spki</b> &lt;hash&gt; ] [ <b>on</b> &lt;interface&gt; ]</pre><br><pre>(config-dnspx)&gt; <b>no tls upstream</b> [&lt;address&gt;] [&lt;port&gt;]</pre>  |                              |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
| <b>Arguments</b>      | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>address</td><td><i>IP-address</i></td><td>IP-address of the server.</td></tr><tr><td>port</td><td><i>Integer</i></td><td>The server port.</td></tr><tr><td>fqdn</td><td><i>String</i></td><td>Full domain name.</td></tr><tr><td>hash</td><td><i>String</i></td><td>Hash TLS certificate.</td></tr><tr><td>interface</td><td><i>Interface name</i></td><td>Interface name to configure.</td></tr></tbody></table>   | 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 name</i> | Interface name to configure. |
| 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 name</i>   | Interface name to configure. |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
| <b>Example</b>        | <pre>(config-dnspx)&gt;<b>tls upstream</b> 1.1.1.1 853 <b>sni</b> cloudflare-dns.com<br/>Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►<br/>added.</pre><br><pre>(config-dnspx)&gt;<b>tls upstream</b> 1.1.1.1 853 <b>sni</b> cloudflare-dns.com ►<br/><b>on ISP</b><br/>Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►<br/>added.</pre><br><pre>(config-dnspx)&gt;<b>no tls upstream</b> 1.1.1.1 853<br/>Dns::Secure::ManagerDot: DNS-over-TLS name server 1.1.1.1:853 ►<br/>deleted.</pre><br><pre>(config-dnspx)&gt;<b>no tls upstream</b><br/>Dns::Secure::ManagerDot: DNS-over-TLS name servers cleared.</pre> |                              |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
| <b>History</b>        | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>3.01</td><td>The <b>dns-proxy tls upstream</b> command has been introduced.</td></tr></tbody></table>  | Version                      | Description | 3.01        | The <b>dns-proxy tls upstream</b> command has been introduced. |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
| Version               | Description   |                              |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |
| 3.01                  | The <b>dns-proxy tls upstream</b> command has been introduced.  |                              |             |             |  |                   |                           |      |                |                  |      |               |                   |      |               |                       |           |                       |                              |

## 3.24 dpn accept

|                        |   |
|------------------------|---|
| <b>Description</b>     | Accept user agreement <a href="#">DPN</a> . Until the license is accepted, the configurator does not accept any command except READ_ONLY. |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | No  |
| <b>Multiple input</b>  | No  |

**Synopsis**

```
(config)> dpn accept
```

**Example**

```
(config)> dpn accept
Core::Legal: Accepted dpn version 20200330.
```

**History**

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

## 3.25 dyndns profile

**Description**

Access to a group of commands to configure DynDns profile. If the profile is not found, the command tries to create it. You can enter up to 32 profiles.

Command with **no** prefix removes DynDns profile.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Group entry** (config-dyndns)

**Synopsis**

```
(config)> dyndns profile <name>
```

```
(config)> no dyndns profile <name>
```

**Arguments**

| Argument | Value  | Description   |
|----------|--------|---|
| name     | String | The profile name. Maximum name length is 64 characters. |

**Example**

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

**History**

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

### 3.25.1 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.

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

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

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

|                  |                                 |
|------------------|---------------------------------|
| (config-dyndns)> | <b>domain</b> < <i>domain</i> > |
| (config-dyndns)> | <b>no domain</b>                |

| <b>Arguments</b> | <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|------------------|-----------------|---------------|--|
|                  | 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.
```

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

## 3.25.2 dyndns profile password

**Description** Set password for access via DynDns.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

|                  |                                     |
|------------------|-------------------------------------|
| (config-dyndns)> | <b>password</b> < <i>password</i> > |
| (config-dyndns)> | <b>no password</b>                  |

| <b>Arguments</b> | <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|------------------|-----------------|---------------|--|
|                  | 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**

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

### 3.25.3 dyndns profile send-address

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable the necessity of connection IP-address indication in DynDns request.<br>Command with <b>no</b> prefix removes the setting.  |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config-dyndns)&gt; <b>send-address</b> (config-dyndns)&gt; <b>no send-address</b></pre>  |
| <b>Example</b>         | <pre>(config-dyndns)&gt; <b>send-address</b> DynDns::Profile: Send address is enabled.</pre><br><pre>(config-dyndns)&gt; <b>no send-address</b> DynDns::Profile: Send address is disabled.</pre> |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.03           | The <b>dyndns profile send-address</b> command has been introduced. |

### 3.25.4 dyndns profile type

|                        |  |
|------------------------|--|
| <b>Description</b>     | Set DynDns type depending on the site where the domain name was registered.                |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config-dyndns)&gt; <b>type &lt;type&gt;</b> (config-dyndns)&gt; <b>no type</b></pre> |

**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. |

## 3.25.5 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.    |
| hours    | <i>Integer</i> | Interval time in hours.   |
| minutes  | <i>Integer</i> | Interval time in minutes. |
| seconds  | <i>Integer</i> | Interval time in seconds. |

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

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

**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. |

## 3.25.6 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. |

## 3.25.7 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. |

## 3.26 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. |

### 3.26.1 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)> <b>exclude-gateway</b> |
|--|

|   |
|---|
| (ezconfig-check)> <b>no exclude-gateway</b> |
|---|

**Example**

|   |
|---|
| (ezconfig-check)> <b>exclude-gateway</b><br>Network:::InternetChecker: Gateway checking disabled. |
|---|

|   |
|---|
| (ezconfig-check)> <b>no exclude-gateway</b><br>Network:::InternetChecker: Gateway checking enabled. |
|---|

| History | Version | Description  |
|---------|---------|--|
|         | 2.05    | The <b>easyconfig check exclude-gateway</b> command has been introduced. |

### 3.26.2 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)> <b>host &lt;host&gt;</b> |
|--|

|   |
|---|
| (ezconfig-check)> <b>no host [ &lt;host&gt; ]</b> |
|---|

| Arguments | Argument | Value  | Description       |
|-----------|----------|--------|-------------------|
|           | host     | String | Remote host name. |

**Example**

|   |
|---|
| (ezconfig-check)> <b>host google.com</b><br>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**

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

### 3.26.3 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**

|  |
|--|
| <pre>(ezconfig-check)&gt; <b>max-fails &lt;count&gt;</b></pre> |
| <pre>(ezconfig-check)&gt; <b>no max-fails</b></pre>            |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>  |
|-----------------|--------------|---|
| count           | Integer      | Amount of failed requests. Can take values 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>easyconfig check max-fails</b> command has been introduced. |

### 3.26.4 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)> | <b>period &lt;period&gt;</b> |
| (ezconfig-check)> | <b>no period</b>             |

| 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)>   | <b>period 20</b> |
| Network::InternetChecker: A new check period set to 20 seconds.         |                  |
| (ezconfig-check)>   | <b>no period</b> |
| Network::InternetChecker: Check period reset to default (15 ► seconds). |                  |

| History | Version | Description   |
|---------|---------|---|
|         | 2.00    | The <b>easyconfig check period</b> command has been introduced. |

## 3.27 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)> | <b>easyconfig disable</b>    |
| (config)> | <b>no easyconfig disable</b> |

**Example**

|                                |                              |
|--------------------------------|------------------------------|
| (config)>                      | <b>easyconfig disable</b>    |
| EasyConfig::Manager: Disabled. |                              |
| (config)>                      | <b>no easyconfig disable</b> |
| EasyConfig::Manager: Enabled.  |                              |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.01           | The <b>easyconfig disable</b> command has been introduced. |

## 3.28 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.15           | The <b>eula accept</b> command has been introduced. |

## 3.29 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**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 2.06           | The <b>igmp-proxy</b> command has been introduced. |

### 3.29.1 igmp-proxy force

| <b>Description</b>     | Force old version of <b>IGMP</b> . By default, the setting is disabled and the protocol version is selected in automatic mode.   |                                      |                    |                    |  |         |                                      |  |         |                                      |
|------------------------|--|--------------------------------------|--------------------|--------------------|--|---------|--------------------------------------|--|---------|--------------------------------------|
|                        | Command with <b>no</b> prefix resets setting to default.   |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>Prefix no</b>       | Yes  |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>Change settings</b> | Yes  |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>Multiple input</b>  | No   |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>Synopsis</b>        | <pre>(igmp-proxy)&gt; <b>force &lt;protocol&gt;</b> (igmp-proxy)&gt; <b>no force</b></pre>   |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 2px;"><b>Argument</b></th><th style="text-align: left; padding: 2px;"><b>Value</b></th><th style="text-align: left; padding: 2px;"><b>Description</b></th></tr> </thead> <tbody> <tr> <td style="padding: 2px;">protocol</td><td style="padding: 2px;">igmp-v1</td><td style="padding: 2px;">Apply filtering to incoming packets.</td></tr> <tr> <td style="padding: 2px;"></td><td style="padding: 2px;">igmp-v2</td><td style="padding: 2px;">Apply filtering to outgoing packets.</td></tr> </tbody> </table> | <b>Argument</b>                      | <b>Value</b>       | <b>Description</b> | protocol   | igmp-v1 | Apply filtering to incoming packets. |  | igmp-v2 | Apply filtering to outgoing packets. |
| <b>Argument</b>        | <b>Value</b>   | <b>Description</b>                   |                    |                    |  |         |                                      |  |         |                                      |
| protocol               | igmp-v1  | Apply filtering to incoming packets. |                    |                    |  |         |                                      |  |         |                                      |
|                        | igmp-v2  | Apply filtering to outgoing packets. |                    |                    |  |         |                                      |  |         |                                      |
| <b>Example</b>         | <pre>(igmp-proxy)&gt; <b>force igmp-v1</b> Igmp::Proxy: Forced protocol: igmp-v1.</pre><br><pre>(igmp-proxy)&gt; <b>no force</b> Igmp::Proxy: Enabled IGMP auto-detect.</pre>  |                                      |                    |                    |  |         |                                      |  |         |                                      |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 2px;"><b>Version</b></th><th style="text-align: left; padding: 2px;"><b>Description</b></th></tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.08</td><td style="padding: 2px;">The <b>igmp-proxy force</b> command has been introduced.</td></tr> </tbody> </table>  | <b>Version</b>                       | <b>Description</b> | 2.08               | The <b>igmp-proxy force</b> command has been introduced. |         |                                      |  |         |                                      |
| <b>Version</b>         | <b>Description</b>   |                                      |                    |                    |  |         |                                      |  |         |                                      |
| 2.08                   | The <b>igmp-proxy force</b> command has been introduced.   |                                      |                    |                    |  |         |                                      |  |         |                                      |

### 3.30 igmp-snooping disable

|                        |   |
|------------------------|---|
| <b>Description</b>     | Disable IGMP snooping. Command is available in Client, Repeater or AP modes only. |
|                        | Command with <b>no</b> prefix enables IGMP snooping.                              |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config)&gt; <b>igmp-snooping disable</b></pre>                              |
| <b>Example</b>         | <pre>(config)&gt; <b>igmp-snooping disable</b> Igmp::Snooping: Disabled.</pre>    |

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

**History**

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

## 3.31 interface

**Description**

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

The interface name specifies its class that inherits certain properties, see the diagrams in the [Appendix](#). The commands work in relation to classes. The corresponding interface class is specified in the command description.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

(config-if)

**Synopsis**

```
(config)> interface <name>
```

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

**Arguments**

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

**Example**

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

Usage template:  
    interface {name}

Choose:

- Pvc
- Vlan
- CdcEthernet
- UsbModem
- RealtekEthernet
- AsixEthernet
- Davicom
- UsbLte

```

Yota
Bridge
PPPoE
SSTP
PPTP
L2TP
Wireguard
OpenVPN
IPIP
TunnelSixInFour
Gre
EoIP
TunnelSixToFour
Chilli

```

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

### 3.31.1 interface adsl snr-margin-offset

**Description** Configure the signal-to-noise ratio for ADSL line. By default, 0 value is used.

Command with **no** prefix resets the signal-to-noise ratio.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Dsl

**Synopsis**

```

(config-if)> adsl snr-margin-offset <offset>
(config-if)> no adsl snr-margin-offset

```

**Arguments**

| Argument | Value  | Description   |
|----------|--------|---|
| offset   | String | Integer value measured in dB and indicating the signal-to-noise ratio. Can take values in the range from -10 to +10 dB. |

**Example**

```

(config-if)> adsl snr-margin-offset -10
Network::Interface::Tc3262::Dsl: ADSL SNR margin offset is set ▶
to -10 dB.

```

```

(config-if)> adsl snr-margin-offset 10
Network::Interface::Tc3262::Dsl: ADSL SNR margin offset is set ▶
to 10 dB.

```

```
(config-if)> no adsl snr-margin-offset
Network::Interface::Tc3262::Dsl: ADSL SNR margin reset to default.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.03           | The <b>interface adsl snr-margin-offset</b> command has been introduced. |

### 3.31.2 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::Suplicant: "PPTP0": added authentication: >
CHAP .
```

```
(config-if)> no authentication chap
Network::Interface::Suplicant: "PPTP0": removed authentication: >
CHAP .
```

**History**

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

### 3.31.3 interface authentication eap-md5

**Description** Enable EAP-MD5 authentication support.  
Command with **no** prefix disables EAP-MD5.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

| <b>Interface type</b> | Secure  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>authentication eap-md5</b> (config-if)&gt; <b>no authentication eap-md5</b></pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config-if)&gt; <b>authentication eap-md5</b> Network::Interface::Ethernet: "GigabitEthernet1": configured ► authentication: EAP-MD5.  (config-if)&gt; <b>no authentication eap-md5</b> Network::Interface::Supplicant: "GigabitEthernet1": removed ► authentication: EAP-MD5.</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>interface authentication eap-md5</b> command has been introduced.</td> </tr> </tbody> </table>   | Version | Description | 2.00 | The <b>interface authentication eap-md5</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>interface authentication eap-md5</b> command has been introduced.  |         |             |      |  |

### 3.31.4 interface authentication eap-mschapv2

| <b>Description</b>     | Enable EAP-MSCHAPv2 authentication support.<br>Command with <b>no</b> 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   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>authentication eap-mschapv2</b> (config-if)&gt; <b>no authentication eap-mschapv2</b></pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>authentication eap-mschapv2</b> Network::Interface::Supplicant: "IKE0": authentication is ► unchanged.  (config-if)&gt; <b>no authentication eap-mschapv2</b> Network::Interface::Supplicant: "IKE0": removed authentication: ► EAP-MSCHAPv2, MS-CHAPv2.</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 authentication eap-mschapv2</b> command has been introduced.</td> </tr> </tbody> </table>   | Version | Description | 3.05 | The <b>interface authentication eap-mschapv2</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 3.05                   | The <b>interface authentication eap-mschapv2</b> command has been introduced.  |         |             |      |   |

### 3.31.5 interface authentication eap-ttls

| <b>Description</b>     | Enable EAP-TTLS authentication support.<br>Command with <b>no</b> prefix disables EAP-TTLS.  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes  |         |             |      |   |
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Interface type</b>  | Secure   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>authentication eap-ttls</b> (config-if)&gt; <b>no authentication eap-ttls</b></pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>authentication eap-ttls</b> Network::Interface::Ethernet: "GigabitEthernet1": configured ▶ authentication: EAP-TTLS.  (config-if)&gt; <b>no authentication eap-ttls</b> Network::Interface::Suplicant: "GigabitEthernet1": removed ▶ authentication: EAP-TTLS.</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>interface authentication eap-ttls</b> command has been introduced.</td> </tr> </tbody> </table>   | Version | Description | 2.00 | The <b>interface authentication eap-ttls</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>interface authentication eap-ttls</b> command has been introduced.  |         |             |      |   |

### 3.31.6 interface authentication identity

|                        |  |
|------------------------|--|
| <b>Description</b>     | Specify user name for device authentication on the remote system. Equally often used on PPTP, PPPoE and L2TP connections, as well as for UsbQmi interfaces.<br><br>Command with <b>no</b> prefix deletes the previously specified user name. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Interface type</b>  | Secure   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>authentication identity &lt;identity&gt;</b> (config-if)&gt; <b>no authentication identity</b></pre>   |

**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. |

### 3.31.7 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. |

### 3.31.8 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)> | <b>authentication mschap-v2</b>    |
| (config-if)> | <b>no authentication mschap-v2</b> |

**Example**

|   |                                    |
|---|------------------------------------|
| (config-if)>  | <b>authentication mschap-v2</b>    |
| Network::Interface::Supplicant: "PPTP0": authnentication is ▶ unchanged.      |                                    |
| (config-if)>  | <b>no authentication mschap-v2</b> |
| Network::Interface::Supplicant: "PPTP0": removed authentication: ▶ MS-CHAPv2. |                                    |

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

### 3.31.9 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)> | <b>authentication pap</b>    |
| (config-if)> | <b>no authentication pap</b> |

**Example**

|   |                              |
|---|------------------------------|
| (config-if)>  | <b>authentication pap</b>    |
| Network::Interface::Supplicant: "PPTP0": added authentication: ▶ PAP.   |                              |
| (config-if)>  | <b>no authentication pap</b> |
| Network::Interface::Supplicant: "PPTP0": removed authentication: ▶ PAP. |                              |

**History**

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

### 3.31.10 interface authentication password

**Description** Specify password for device authentication on the remote system. Equally often used on PPTP, PPPoE and L2TP 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>           |
|-----------------|---------------|------------------------------|
| password        | <i>String</i> | Password for authentication. |

**Example**

```
(config-if)> authentication password Aihoi2chal
Network::Interface::Supplicant: "PPTP0": password saved.
```

```
(config-if)> no authentication password
Network::Interface::Supplicant: "PPTP0": password cleared.
```

**History**

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

### 3.31.11 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

| <b>Interface type</b> | Secure  |         |             |      |   |
|-----------------------|---|---------|-------------|------|---|
| <b>Synopsis</b>       | <pre>(config-if)&gt; authentication peap (config-if)&gt; no authentication peap</pre>   |         |             |      |   |
| <b>Example</b>        | <pre>(config-if)&gt; authentication peap Network::Interface::Ethernet: "WifiMaster1/AccessPoint0": ▶ configured authentication: PEAP.  (config-if)&gt; no authentication peap Network::Interface::Supplicant: "WifiMaster1/AccessPoint0": ▶ removed authentication: PEAP.</pre> |         |             |      |   |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.03</td> <td>The <b>interface authentication peap</b> command has been introduced.</td> </tr> </tbody> </table>  | Version | Description | 2.03 | The <b>interface authentication peap</b> command has been introduced. |
| Version               | Description   |         |             |      |   |
| 2.03                  | The <b>interface authentication peap</b> command has been introduced.   |         |             |      |   |

### 3.31.12 interface authentication shared

| <b>Description</b>     | Enable authentication with a <i>shared key</i> . This mode is used only in conjunction with <i>WEP</i> encryption. <i>Shared keys</i> are specified by <b>interface encryption key</b> command.   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Prefix no</b>       | Command with <b>no</b> prefix turns authentication to open mode.  |         |             |      |   |
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Interface type</b>  | WiFi  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; authentication shared (config-if)&gt; no authentication shared</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; authentication shared Network::Interface::Rtx::AccessPoint: "WifiMaster1/AccessPoint0": ▶ shared authentication mode enabled.  (config-if)&gt; no authentication shared Network::Interface::Rtx::AccessPoint: "WifiMaster1/AccessPoint0": ▶ shared authentication mode disabled.</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>interface authentication shared</b> command has been introduced.</td> </tr> </tbody> </table>  | Version | Description | 2.00 | The <b>interface authentication shared</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.00                   | The <b>interface authentication shared</b> command has been introduced.   |         |             |      |   |

### 3.31.13 interface authentication wpa-psk

| <b>Description</b>     | 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 <b>no</b> prefix removes setting.   |   |       |             |     |               |   |
| <b>Prefix no</b>       | Yes  |   |       |             |     |               |   |
| <b>Change settings</b> | Yes  |   |       |             |     |               |   |
| <b>Multiple input</b>  | No   |   |       |             |     |               |   |
| <b>Interface type</b>  | WiFi   |   |       |             |     |               |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>authentication wpa-psk &lt;psk&gt;</b> (config-if)&gt; <b>no authentication wpa-psk</b></pre>  |   |       |             |     |               |   |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">psk</td> <td style="padding: 2px;"><i>String</i></td> <td style="padding: 2px;">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.</td> </tr> </tbody> </table> | 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. |
| 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. |       |             |     |               |   |

|                |   |
|----------------|---|
| <b>Example</b> | <pre>(config-if)&gt; <b>authentication wpa-psk Eethaich9z</b> Network::Interface::Wifi: "WifiMaster1/AccessPoint0": WPA PSK set.  (config-if)&gt; <b>no authentication wpa-psk</b> Network::Interface::Wifi: "WifiMaster1/AccessPoint0": WPA PSK ▶ removed.</pre> |
|----------------|---|

| <b>History</b> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 2px;">Version</th><th style="text-align: left; padding: 2px;">Description</th></tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.00</td><td style="padding: 2px;">The <b>interface authentication wpa-psk</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface authentication wpa-psk</b> command has been introduced. |
|----------------|---|---------|-------------|------|--|
| Version        | Description   |         |             |      |  |
| 2.00           | The <b>interface authentication wpa-psk</b> command has been introduced.  |         |             |      |  |

### 3.31.14 interface backhaul

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable support of <b>VLAN</b> for wireless connection between routers Keenetic in the trunk mode. By default, setting is disabled. |
|                        | Command with <b>no</b> prefix disables the setting.  |
| <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>backhaul</b><br/>(config-if)&gt; <b>no backhaul</b></pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config-if)&gt; <b>backhaul</b><br/>Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint1": ►<br/>backhaul mode enabled.<br/><br/>(config-if)&gt; <b>no backhaul</b><br/>Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint1": ►<br/>backhaul mode disabled.</pre> |         |             |      |  |
| <b>History</b>        | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>3.02</td><td>The <b>interface backhaul</b> command has been introduced.</td></tr></tbody></table>  | Version | Description | 3.02 | The <b>interface backhaul</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 3.02                  | The <b>interface backhaul</b> command has been introduced.  |         |             |      |  |

### 3.31.15 interface band-steering

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable <i>Band Steering</i> for AP 5 GHz. By default, the setting is enabled.<br><br>For correct <i>Band Steering</i> operation it is necessary to fulfill the following conditions: <ul style="list-style-type: none"><li>access points 2,4 GHz and 5 GHz are enabled both</li><li>they have the same SSID's</li><li>they have the same security settings (encryption type, key value, etc.)</li></ul> Command with <b>no</b> prefix disables the <i>Band Steering</i> . |
| <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>band-steering</b><br/>(config-if)&gt; <b>no band-steering</b></pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>band-steering</b><br/>Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►<br/>enabled.<br/><br/>(config-if)&gt; <b>no band-steering</b><br/>Network::Interface::Rtx::WifiMaster: "WifiMaster1": band steering ►<br/>disabled.</pre>   |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.09           | The <b>interface band-steering</b> command has been introduced. |

### 3.31.16 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)> | <b>band-steering preference &lt;band&gt;</b> |
| (config-if)> | <b>no band-steering preference</b>           |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b> |
|-----------------|--------------|--------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.09           | The <b>interface band-steering preference</b> command has been introduced. |

### 3.31.17 interface ccp

**Description** Enable *CCP* support during establishing connection.

Command with **no** prefix disables *CCP*.

**Prefix no** Yes

| <b>Change settings</b> | Yes  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Interface type</b>  | PPP  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt;    ccp (config-if)&gt; no ccp</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; ccp CCP enabled.  (config-if)&gt; no ccp CCP disabled.</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>interface ccp</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface ccp</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>interface ccp</b> command has been introduced.  |         |             |      |   |

### 3.31.18 interface channel

| <b>Description</b>     | 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 <b>no</b> prefix resets to default.   |   |       |             |         |        |                          |      |   |
| <b>Prefix no</b>       | Yes  |   |       |             |         |        |                          |      |   |
| <b>Change settings</b> | Yes  |   |       |             |         |        |                          |      |   |
| <b>Multiple input</b>  | No   |   |       |             |         |        |                          |      |   |
| <b>Interface type</b>  | Radio  |   |       |             |         |        |                          |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt;    channel &lt;channel&gt; (config-if)&gt; no channel</pre>   |   |       |             |         |        |                          |      |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">channel</td> <td>number</td> <td>Number of radio channel.</td> </tr> <tr> <td>auto</td> <td>Radio channel number is detected automatically.</td> </tr> </tbody> </table> | Argument  | Value | Description | channel | number | Number of radio channel. | auto | Radio channel number is detected automatically. |
| Argument               | Value  | Description                                     |       |             |         |        |                          |      |   |
| channel                | number   | Number of radio channel.                        |       |             |         |        |                          |      |   |
|                        | auto   | Radio channel number is detected automatically. |       |             |         |        |                          |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; channel 8 Network::Interface::Rtx::WifiMaster: "WifiMaster0": channel set ▶ to 8.</pre>   |   |       |             |         |        |                          |      |   |

```
(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. |

### 3.31.19 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**

|   |
|---|
| <pre>(config-if)&gt; channel auto-rescan [&lt;hh&gt;:&lt;mm&gt;]interval &lt;interval&gt;</pre> |
| <pre>(config-if)&gt; no channel auto-rescan</pre>   |

| Arguments | Argument | Value | Description               |
|-----------|----------|-------|---------------------------|
|           | interval | 1     | Rescan interval in hours. |
|           |          | 6     |                           |
|           |          | 12    |                           |
|           |          | 24    |                           |

**Example**

```
(config-if)> channel auto-rescan interval 1
Network::Interface::Rtx::WifiMaster: "WifiMaster0": scheduled ▶
auto rescan, interval 1 hour.
```

```
(config-if)> no channel auto-rescan
Network::Interface::Rtx::WifiMaster: "WifiMaster0": auto rescan ▶
disabled.
```

| History | Version | Description   |
|---------|---------|---|
|         | 2.07    | The <b>interface channel auto-rescan</b> command has been introduced. |

### 3.31.20 interface channel width

**Description** Set the bandwidth for a specified channel. By default, 40-above 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. |

### 3.31.21 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

| <b>Interface type</b> | Chilli  |                             |             |             |  |                |                             |
|-----------------------|---|-----------------------------|-------------|-------------|--|----------------|-----------------------------|
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>chilli coaport &lt;coaport&gt;</b> (config-if)&gt; <b>no chilli coaport</b></pre>   |                             |             |             |  |                |                             |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>coaport</td><td><i>Integer</i></td><td>The <i>CoA</i> port number.</td></tr> </tbody> </table> | Argument                    | Value       | Description | coaport  | <i>Integer</i> | The <i>CoA</i> port number. |
| Argument              | Value   | Description                 |             |             |  |                |                             |
| coaport               | <i>Integer</i>  | The <i>CoA</i> port number. |             |             |  |                |                             |
| <b>Example</b>        | <pre>(config-if)&gt; <b>chilli coaport 3940</b> Chilli::Interface: "Chilli0": coaport set to 3940.  (config-if)&gt; <b>no chilli coaport</b> Chilli::Interface: "Chilli0": coaport reset to default.</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 chilli coaport</b> command has been introduced.</td></tr> </tbody> </table>     | Version                     | Description | 2.10        | The <b>interface chilli coaport</b> command has been introduced. |                |                             |
| Version               | Description   |                             |             |             |  |                |                             |
| 2.10                  | The <b>interface chilli coaport</b> command has been introduced.  |                             |             |             |  |                |                             |

### 3.31.22 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)> <b>chilli dhcpif &lt;dhcpif&gt;</b> |
| (config-if)> <b>no chilli dhcpif</b>             |

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

**Example**

|   |
|---|
| (config-if)> <b>chilli dhcpif Bridge1</b>       |
| Chilli::Interface: "Chilli0": bound to Bridge1. |

|  |
|--|
| (config-if)> <b>no chilli dhcpif</b>   |
| Chilli::Interface: "Chilli0": unbound. |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.10           | The <b>interface chilli dhcpif</b> command has been introduced. |

### 3.31.23 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>               |
|-----------------|-------------------|----------------------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.10           | The <b>interface chilli dns</b> command has been introduced. |

### 3.31.24 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

| <b>Interface type</b> | Chilli   |   |             |             |  |                |   |
|-----------------------|--|---|-------------|-------------|--|----------------|---|
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>chilli lease &lt;lease&gt;</b> (config-if)&gt; <b>no chilli lease</b></pre>  |   |             |             |  |                |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>lease</td><td><i>Integer</i></td><td>Lease time in seconds. The maximum value is 259200.</td></tr> </tbody> </table>    | Argument  | Value       | Description | lease  | <i>Integer</i> | Lease time in seconds. The maximum value is 259200. |
| Argument              | Value  | Description   |             |             |  |                |   |
| lease                 | <i>Integer</i>   | Lease time in seconds. The maximum value is 259200. |             |             |  |                |   |
| <b>Example</b>        | <pre>(config-if)&gt; <b>chilli lease 1000</b> Chilli::Interface: "Chilli0": lease has been set 1000 seconds.  (config-if)&gt; <b>no chilli lease</b> Chilli::Interface: "Chilli0": lease has been reset to default ▶ (3600 seconds).</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 interface <b>chilli lease</b> command has been introduced.</td></tr> </tbody> </table>                                | Version   | Description | 2.11        | The interface <b>chilli lease</b> command has been introduced. |                |   |
| Version               | Description  |   |             |             |  |                |   |
| 2.11                  | The interface <b>chilli lease</b> command has been introduced.   |   |             |             |  |                |   |

### 3.31.25 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 (&lt;mac&gt;   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> (config-if)&gt; <b>chilli logout all</b> Chilli::Interface: "Chilli0": service restarted.</pre> |
|----------------|---|

**History**

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

### 3.31.26 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.10           | The <b>interface chilli macauth</b> command has been introduced. |

### 3.31.27 interface chilli macpasswd

**Description**

Set the password for MAC-address authentication.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Chilli

**Synopsis**

```
(config-if)>  chilli macpasswd <macpasswd>
```

```
(config-if)> no chilli macpasswd
```

**Arguments**

| Argument  | Value         | Description        |
|-----------|---------------|--------------------|
| macpasswd | <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. |

### 3.31.28 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 name</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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.10           | The <b>interface chilli nasip</b> command has been introduced. |

### 3.31.29 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)> <b>chilli nasmac &lt;mac&gt;</b> |
| (config-if)> <b>no chilli nasmac</b>          |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                            |
|-----------------|--------------|---|
| mac             | MAC-address  | New MAC-address for RADIUS Called-Station-ID. |

**Example**

```
(config-if)> chilli nasmac 50:ff:20:00:1e:86
Chilli::Interface: "Chilli0": NAS MAC address set to ▶
"50:ff:20:00:1e:86".
```

```
(config-if)> no chilli nasmac
Chilli::Interface: "Chilli0": NAS MAC address cleared.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>interface chilli nasmac</b> command has been introduced. |

### 3.31.30 interface chilli profile

**Description** Assign Chilli profile to the Chilli interface.

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

**Prefix no** Yes

| <b>Change settings</b> | Yes  |                                    |             |             |  |        |                                    |
|------------------------|--|------------------------------------|-------------|-------------|--|--------|------------------------------------|
| <b>Multiple input</b>  | No   |                                    |             |             |  |        |                                    |
| <b>Interface type</b>  | Chilli   |                                    |             |             |  |        |                                    |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>chilli profile &lt;profile&gt;</b>   (config-if)&gt; <b>no chilli profile</b></pre>  |                                    |             |             |  |        |                                    |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>profile</td> <td>String</td> <td><i>RADIUS</i> server profile name.</td> </tr> </tbody> </table> | Argument                           | Value       | Description | profile  | String | <i>RADIUS</i> server profile name. |
| Argument               | Value  | Description                        |             |             |  |        |                                    |
| profile                | String   | <i>RADIUS</i> server profile name. |             |             |  |        |                                    |
| <b>Example</b>         | <pre>(config-if)&gt; <b>chilli profile Wi-Fi_SYSTEM</b> Chilli::Interface: "Chilli0": assigned profile: Wi-Fi.  (config-if)&gt; <b>no chilli profile</b> Chilli::Interface: "Chilli0": profile cleared.</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 chilli profile</b> command has been introduced.</td> </tr> </tbody> </table>      | Version                            | Description | 2.10        | The <b>interface chilli profile</b> command has been introduced. |        |                                    |
| Version                | Description  |                                    |             |             |  |        |                                    |
| 2.10                   | The <b>interface chilli profile</b> command has been introduced.   |                                    |             |             |  |        |                                    |

### 3.31.31 interface chilli radius

| <b>Description</b>     | Add the <i>RADIUS</i> server addresses.<br><br>Command with <b>no</b> prefix removes the servers.   |   |       |             |         |        |  |         |        |   |
|------------------------|---|---|-------|-------------|---------|--------|--|---------|--------|---|
| <b>Prefix no</b>       | Yes   |   |       |             |         |        |  |         |        |   |
| <b>Change settings</b> | Yes   |   |       |             |         |        |  |         |        |   |
| <b>Multiple input</b>  | No  |   |       |             |         |        |  |         |        |   |
| <b>Interface type</b>  | Chilli  |   |       |             |         |        |  |         |        |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>chilli radius &lt;server1&gt; [&lt;server2&gt;]</b>   (config-if)&gt; <b>no chilli radius</b></pre>   |   |       |             |         |        |  |         |        |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>server1</td> <td>String</td> <td>Address of first <i>RADIUS</i> server.</td> </tr> <tr> <td>server2</td> <td>String</td> <td>Address of second <i>RADIUS</i> server.</td> </tr> </tbody> </table> | Argument                                | Value | Description | server1 | String | Address of first <i>RADIUS</i> server. | server2 | String | Address of second <i>RADIUS</i> server. |
| Argument               | Value   | Description                             |       |             |         |        |  |         |        |   |
| server1                | String  | Address of first <i>RADIUS</i> server.  |       |             |         |        |  |         |        |   |
| server2                | String  | 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. |

### 3.31.32 interface chilli radiusacctport

**Description** Set accounting UDP-port of [RADIUS](#) server. By default, value 1813 is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Chilli

**Synopsis**

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

**Arguments**

| Argument       | Value  | Description      |
|----------------|--------|------------------|
| radiusacctport | String | The port number. |

**Example**

```
(config-if)> chilli radiusacctport 1819
Chilli::Interface: "Chilli0": radiusacctport set to 1819.
```

```
(config-if)> no chilli radiusacctport
Chilli::Interface: "Chilli0": radiusacctport reset to default.
```

**History**

| Version | Description   |
|---------|---|
| 3.06    | The <b>interface chilli radiusacctport</b> command has been introduced. |

### 3.31.33 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   |                  |             |             |   |               |                  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>chilli radiusauthport &lt;radiusauthport&gt;</b> (config-if)&gt; <b>no chilli radiusauthport</b></pre>   |                  |             |             |   |               |                  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>radiusauthport</td><td><i>String</i></td><td>The port number.</td></tr> </tbody> </table>                           | Argument         | Value       | Description | radiusauthport  | <i>String</i> | The port number. |
| Argument               | Value  | Description      |             |             |   |               |                  |
| radiusauthport         | <i>String</i>  | The port number. |             |             |   |               |                  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>chilli radiusauthport 1820</b> Chilli::Interface: "Chilli0": radiusauthport set to 1820.  (config-if)&gt; <b>no chilli radiusauthport</b> Chilli::Interface: "Chilli0": radiusauthport reset to default.</pre> |                  |             |             |   |               |                  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.06</td><td>The interface <b>chilli radiusauthport</b> command has been introduced.</td></tr> </tbody> </table>                   | Version          | Description | 3.06        | The interface <b>chilli radiusauthport</b> command has been introduced. |               |                  |
| Version                | Description  |                  |             |             |   |               |                  |
| 3.06                   | The interface <b>chilli radiusauthport</b> command has been introduced.  |                  |             |             |   |               |                  |

### 3.31.34 interface chilli radiuslocationid

| <b>Description</b>     | Set location identifier of <b>RADIUS</b> server. It should be in the format <code>isocc=</code> , <code>cc=</code> , <code>ac=</code> , <code>network=</code> .<br><br>Command with <b>no</b> prefix removes the setting. |                            |       |             |                  |               |                            |
|------------------------|---|----------------------------|-------|-------------|------------------|---------------|----------------------------|
| <b>Prefix no</b>       | Yes   |                            |       |             |                  |               |                            |
| <b>Change settings</b> | Yes   |                            |       |             |                  |               |                            |
| <b>Multiple input</b>  | No  |                            |       |             |                  |               |                            |
| <b>Interface type</b>  | Chilli  |                            |       |             |                  |               |                            |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>chilli radiuslocationid &lt;radiuslocationid&gt;</b> (config-if)&gt; <b>no chilli radiuslocationid</b></pre>  |                            |       |             |                  |               |                            |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>radiuslocationid</td><td><i>String</i></td><td>Location identifier value.</td></tr> </tbody> </table>  | Argument                   | Value | Description | radiuslocationid | <i>String</i> | Location identifier value. |
| 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 interface <b>chilli radiuslocationid</b> command has been introduced. |

### 3.31.35 interface chilli radiuslocationname

**Description** Set location name of **RADIUS** server.Command with **no** prefix removes the setting.**Prefix no** Yes**Change settings** Yes**Multiple input** No**Interface type** Chilli

**Synopsis**

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

**Arguments**

| Argument           | Value  | Description    |
|--------------------|--------|----------------|
| radiuslocationname | String | Location name. |

**Example**

```
(config-if)> chilli radiuslocationname MyHotSpot
Chilli::Interface: "Chilli0": radiuslocationname set to ▶
  "MyHotSpot".
```

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

**History**

| Version | Description   |
|---------|---|
| 2.10    | The interface <b>chilli radiuslocationname</b> command has been introduced. |

### 3.31.36 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)> | <b>chilli radiusnasid &lt;radiusnasid&gt;</b> |
| (config-if)> | <b>no chilli radiusnasid</b>                  |

**Arguments**

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

**Example**

|   |   |
|---|---|
| (config-if)>  | <b>chilli radiusnasid keeneticru_12</b> |
| Chilli::Interface: "Chilli0": radiusnasid set to "keeneticru_12". |   |
| (config-if)>  | <b>no chilli radiusnasid</b>            |
| Chilli::Interface: "Chilli0": radiusnasid cleared.                |   |

**History**

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

### 3.31.37 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)> | <b>chilli radiussecret &lt;radiussecret&gt;</b> |
| (config-if)> | <b>no chilli radiussecret</b>                   |

**Arguments**

| 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. |

### 3.31.38 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.10           | The <b>interface chilli uamallowed</b> command has been introduced. |

### 3.31.39 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>          |
|-----------------|--------------|-----------------------------|
| uamdomain       | String       | Domain name of remote host. |

**Example**

```
(config-if)> chilli uamdomain example.net
Chilli::Interface: "Chilli0": "example.net" added to walled ▶
garden.
```

```
(config-if)> no chilli uamdomain example.net
Chilli::Interface: "Chilli0": "example.net" removed from walled ▶
garden.
```

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

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.10           | The <b>interface chilli uamdomain</b> command has been introduced. |

### 3.31.40 interface chilli uamhomepage

**Description**

Set URL of homepage to redirect unauthenticated users to.

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   |             |             |             |  |               |             |
| <b>Synopsis</b>        | <pre>  (config-if)&gt; <b>chilli uamhomepage &lt;uamhomepage&gt;</b>   (config-if)&gt; <b>no chilli uamhomepage</b></pre>  |             |             |             |  |               |             |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>uamhomepage</td><td><i>String</i></td><td>Custom URL.</td></tr></tbody></table>  | Argument    | Value       | Description | uamhomepage  | <i>String</i> | Custom URL. |
| Argument               | Value  | Description |             |             |  |               |             |
| uamhomepage            | <i>String</i>  | Custom URL. |             |             |  |               |             |
| <b>Example</b>         | <pre>(config-if)&gt; <b>chilli uamhomepage http://192.168.2.1/welcome.html</b> Chilli::Interface: "Chilli0": uamhomepage set to ▶ "http://192.168.2.1/welcome.html".</pre><br><pre>(config-if)&gt; <b>no chilli uamhomepage</b> Chilli::Interface: "Chilli0": uamhomepage cleared.</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 chilli uamhomepage</b> command has been introduced.</td></tr></tbody></table>   | Version     | Description | 2.10        | The <b>interface chilli uamhomepage</b> command has been introduced. |               |             |
| Version                | Description  |             |             |             |  |               |             |
| 2.10                   | The <b>interface chilli uamhomepage</b> command has been introduced.   |             |             |             |  |               |             |

### 3.31.41 interface chilli uamport

| <b>Description</b>     | Set <b>TCP</b> port to bind to for authenticating clients. By default, value 3990 is used.<br><br>Command with <b>no</b> 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  |                  |       |             |         |                |                  |
| <b>Synopsis</b>        | <pre>  (config-if)&gt; <b>chilli uamport &lt;uamport&gt;</b>   (config-if)&gt; <b>no chilli uamport</b></pre>   |                  |       |             |         |                |                  |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>uamport</td><td><i>Integer</i></td><td>The port number.</td></tr></tbody></table> | Argument         | Value | Description | uamport | <i>Integer</i> | The port number. |
| Argument               | Value   | Description      |       |             |         |                |                  |
| uamport                | <i>Integer</i>  | The port number. |       |             |         |                |                  |

**Example**

```
(config-if)> chilli uampport 3922
Chilli::Interface: "Chilli0": uampport set to 3922.
```

```
(config-if)> no chilli uampport
Chilli::Interface: "Chilli0": uampport reset to default.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.10           | The <b>interface chilli uampport</b> command has been introduced. |

### 3.31.42 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**

|  |
|--|
| <pre>(config-if)&gt; <b>chilli uamsecret &lt;uamsecret&gt;</b></pre> |
| <pre>(config-if)&gt; <b>no chilli uamsecret</b></pre>                |

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b> |
|-----------------|---------------|--------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.10           | The <b>interface chilli uamsecret</b> command has been introduced. |

### 3.31.43 interface chilli uamserver

**Description** Set URL of web server to use for authenticating clients.

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  |                           |             |             |  |        |                           |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>chilli uamserver &lt;uamserver&gt;</b> (config-if)&gt; <b>no chilli uamserver</b></pre>   |                           |             |             |  |        |                           |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>uamserver</td><td>String</td><td>Custom URL of web server.</td></tr></tbody></table>  | Argument                  | Value       | Description | uamserver  | String | Custom URL of web server. |
| Argument               | Value   | Description               |             |             |  |        |                           |
| uamserver              | String  | Custom URL of web server. |             |             |  |        |                           |
| <b>Example</b>         | <pre>(config-if)&gt; <b>chilli uamserver ▶</b> <b>https://auth.example.net/hotspotlogin</b> Chilli::Interface: "Chilli0": uamserver set to ▶ "https://auth.example.net/hotspotlogin".</pre><br><pre>(config-if)&gt; <b>no chilli uamserver</b> Chilli::Interface: "Chilli0": uamserver cleared.</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 chilli uamserver</b> command has been introduced.</td></tr></tbody></table>  | Version                   | Description | 2.10        | The <b>interface chilli uamserver</b> command has been introduced. |        |                           |
| Version                | Description   |                           |             |             |  |        |                           |
| 2.10                   | The <b>interface chilli uamserver</b> command has been introduced.  |                           |             |             |  |        |                           |

### 3.31.44 interface compatibility

|                        |   |
|------------------------|---|
| <b>Description</b>     | 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.<br><br>By default, "BGN" value is used for 2.4 GHz, "AN" — for 5 GHz. |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | Radio   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>compatibility &lt;annex&gt;</b></pre>   |

**Arguments**

| 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.
```

**History**

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

### 3.31.45 interface connect

**Description** Start the process of connecting to a remote node.

Command with **no** prefix terminates the connection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** PPP, IP

**Synopsis**

```
(config-if)> connect [ via <via> ]
(config-if)> no connect
```

**Arguments**

| Argument | Value          | Description  |
|----------|----------------|--|
| via      | Interface name | Interface through which remote node is accessed. For PPPoE this option is mandatory. |

**Example**

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

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

**History**

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

### 3.31.46 interface country-code

| <b>Description</b>     | Assign to the interface a literal country code, which influences the set of radio channels. By default, RU value is used.  |                   |             |             |  |               |                   |
|------------------------|--|-------------------|-------------|-------------|--|---------------|-------------------|
| <b>Prefix no</b>       | No   |                   |             |             |  |               |                   |
| <b>Change settings</b> | Yes  |                   |             |             |  |               |                   |
| <b>Multiple input</b>  | No   |                   |             |             |  |               |                   |
| <b>Interface type</b>  | Radio  |                   |             |             |  |               |                   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>country-code</b> &lt;code&gt;</pre>  |                   |             |             |  |               |                   |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>code</td><td><i>String</i></td><td>The country code.</td></tr></tbody></table>         | Argument          | Value       | Description | code   | <i>String</i> | The country code. |
| Argument               | Value  | Description       |             |             |  |               |                   |
| code                   | <i>String</i>  | The country code. |             |             |  |               |                   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>country-code</b> RU Network::Interface::Rtx::WifiMaster: "WifiMaster0": country code ▶ set.</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>interface country-code</b> command has been introduced.</td></tr></tbody></table> | Version           | Description | 2.00        | The <b>interface country-code</b> command has been introduced. |               |                   |
| Version                | Description  |                   |             |             |  |               |                   |
| 2.00                   | The <b>interface country-code</b> command has been introduced.   |                   |             |             |  |               |                   |

### 3.31.47 interface debug

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable debug mode of <a href="#">PPP</a> connection. Detailed info about connection progress is saved to the system log. By default, setting is disabled.<br><br>Command with <b>no</b> prefix disables the debug mode. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | PPP   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>debug</b> (config-if)&gt; <b>no debug</b></pre>   |

|                |  |
|----------------|--|
| <b>Example</b> | <pre>(config-if)&gt; <b>debug</b> Network::Interface::Base: Debug enabled.</pre> |
|----------------|--|

```
(config-if)> no debug
Network::Interface::Base: Debug disabled.
```

**History**

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

### 3.31.48 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>                      |
|-----------------|---------------|---|
| 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**

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

### 3.31.49 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**

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

### 3.31.50 interface dsl disconnect-report

**Description** Enable DSL disconnect reporting.

Command with **no** prefix disables reporting.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Dsl

**Synopsis**

```
(config-if)> dsl disconnect-report
```

```
(config-if)> no dsl disconnect-report
```

**Example**

```
(config-if)> dsl disconnect-report
```

Network::Interface::Tc3262::DisconnectReport: Enabled a line ▶ disconnect report.

```
(config-if)> no dsl disconnect-report
```

Network::Interface::Tc3262::DisconnectReport: Disabled a line ▶ disconnect report.

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.07           | The <b>interface dsl disconnect-report</b> command has been introduced. |

### 3.31.51 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)> | <b>duplex</b> ( <b>full</b>   <b>half</b>   <b>auto</b> ) |
| (config-if)> | <b>no duplex</b>  |

**Arguments**

| Argument | Value | Description           |
|----------|-------|-----------------------|
| mode     | full  | Full duplex protocol. |
|          | half  | Half duplex protocol. |
|          | auto  | Auto duplex protocol. |

**Example**

|  |                    |
|--|--------------------|
| (config-if)>   | <b>duplex full</b> |
| Network::Interface::Ethernet: "GigabitEthernet0/1": duplex set ▶ to "full".    |                    |
| (config-if)>   | <b>no duplex</b>   |
| 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. |

### 3.31.52 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)> | <b>dyndns profile</b> < <i>profile</i> > |
| (config-if)> | <b>no dyndns profile</b>                 |

**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. |

### 3.31.53 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. |

### 3.31.54 interface encryption anonymous-dh

**Description**

Enable Anonymous DH for SSTP-servers without a certificate.

Command with **no** prefix disables Anonymous DH.

**Prefix no**

Yes

|                        |   |
|------------------------|---|
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | SSTP  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>encryption anonymous-dh</b>           (config-if)&gt; <b>no encryption anonymous-dh</b></pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>encryption anonymous-dh</b> Network::Interface::Sstp: "SSTP0": anonymous DH TLS is enabled.  (config-if)&gt; <b>no encryption anonymous-dh</b> Network::Interface::Sstp: "SSTP0": anonymous DH TLS is disabled.</pre> |

| History | Version | Description   |
|---------|---------|---|
|         | 2.13    | The <b>interface encryption anonymous-dh</b> command has been introduced. |

### 3.31.55 interface encryption disable

|                        |  |
|------------------------|--|
| <b>Description</b>     | Disable encryption on the wireless interface.  |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Interface type</b>  | WiFi   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>encryption disable</b></pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>encryption disable</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ wireless encryption disabled.</pre> |

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

### 3.31.56 interface encryption enable

|                    |  |
|--------------------|--|
| <b>Description</b> | Enable encryption on the wireless interface. By default, <b>WEP</b> encryption is used.<br><br>Command with <b>no</b> prefix disables wireless interface encryption. |
|--------------------|--|

| <b>Prefix no</b>       | Yes   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Interface type</b>  | WiFi  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>encryption enable</b> (config-if)&gt; <b>no encryption enable</b></pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>encryption enable</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ► wireless encryption enabled.  (config-if)&gt; <b>no encryption enable</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ► wireless encryption disabled.</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>interface encryption enable</b> command has been introduced.</td> </tr> </tbody> </table>  | Version | Description | 2.00 | The <b>interface encryption enable</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.00                   | The <b>interface encryption enable</b> command has been introduced.   |         |             |      |   |

### 3.31.57 interface encryption key

| <b>Description</b>     | Specify the <a href="#">WEP</a> encryption keys. Depending on the bit, the key can be standard 64-bit <a href="#">WEP</a> uses a 40 bit key (also known as WEP-40), or 128-bit <a href="#">WEP</a> 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.<br><br>Command with <b>no</b> prefix removes key. |   |       |             |           |                |   |              |               |   |
|------------------------|---|---|-------|-------------|-----------|----------------|---|--------------|---------------|---|
| <b>Prefix no</b>       | Yes   |   |       |             |           |                |   |              |               |   |
| <b>Change settings</b> | Yes   |   |       |             |           |                |   |              |               |   |
| <b>Multiple input</b>  | Yes   |   |       |             |           |                |   |              |               |   |
| <b>Interface type</b>  | WiFi  |   |       |             |           |                |   |              |               |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>encryption key &lt;id&gt; (&lt;value&gt; [default]   default)</b> (config-if)&gt; <b>no encryption key &lt;id&gt;</b></pre>   |   |       |             |           |                |   |              |               |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><i>id</i></td> <td><i>Integer</i></td> <td>The key number. Overall, up to 4 keys could be specified.</td> </tr> <tr> <td><i>value</i></td> <td><i>String</i></td> <td>The key value as a hexadecimal number, consisting of 10 or 26 digits.</td> </tr> </tbody> </table>            | Argument  | Value | Description | <i>id</i> | <i>Integer</i> | The key number. Overall, up to 4 keys could be specified. | <i>value</i> | <i>String</i> | The key value as a hexadecimal number, consisting of 10 or 26 digits. |
| Argument               | Value   | Description   |       |             |           |                |   |              |               |   |
| <i>id</i>              | <i>Integer</i>  | The key number. Overall, up to 4 keys could be specified.             |       |             |           |                |   |              |               |   |
| <i>value</i>           | <i>String</i>   | The key value as a hexadecimal number, consisting of 10 or 26 digits. |       |             |           |                |   |              |               |   |

| Argument | Value   | Description                                      |
|----------|---------|--|
| default  | Keyword | Indicates that this key will be used by default. |

**Example**

```
(config-if)> encryption key 1 1231231234
Network::Interface::Wifi: "WifiMaster0/AccessPoint0": WEP key 1 ►
set.
```

```
(config-if)> no encryption key 1
Network::Interface::Wifi: "WifiMaster0/AccessPoint0": WEP key 1 ►
removed.
```

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>interface encryption key</b> command has been introduced. |

### 3.31.58 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. |

### 3.31.59 interface encryption owe

| <b>Description</b>     | Enable <a href="#">OWE</a> security algorithms on the wireless interface. By default, the setting is disabled.<br><br>Command with <b>no</b> prefix disables <a href="#">OWE</a> support.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <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; encryption owe   (config-if)&gt; no encryption owe</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; encryption owe Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ OWE algorithms enabled.  (config-if)&gt; no encryption owe Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ OWE algorithms disabled.</pre> |         |             |      |  |
| <b>History</b>         | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>3.00</td><td>The <b>interface encryption owe</b> command has been introduced.</td></tr></tbody></table>  | Version | Description | 3.00 | The <b>interface encryption owe</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.00                   | The <b>interface encryption owe</b> command has been introduced.  |         |             |      |  |

### 3.31.60 interface encryption wpa

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable <a href="#">WPA</a> security algorithms on the wireless interface. Wireless interface can support the joint use of <a href="#">WPA</a> and <a href="#">WPA2</a> , but supporting <a href="#">WEP</a> automatically disables when any of the <a href="#">WPA</a> is enabled.<br><br>Command with <b>no</b> prefix disables <a href="#">WPA</a> support. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | WiFi  |
| <b>Synopsis</b>        | <pre>  (config-if)&gt; encryption wpa   (config-if)&gt; no encryption wpa</pre>   |

**Example**

```
(config-if)> encryption wpa
WPA algorithms enabled.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>interface encryption wpa</b> command has been introduced. |

### 3.31.61 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**

|   |
|---|
| <pre>(config-if)&gt; encryption wpa2</pre>    |
| <pre>(config-if)&gt; no encryption wpa2</pre> |

**Example**

```
(config-if)> encryption wpa2
WPA2 algorithms enabled.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>interface encryption wpa2</b> command has been introduced. |

### 3.31.62 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**

|  | <b>Version</b> | <b>Description</b>  |
|--|----------------|---|
|  | 3.00           | The <b>interface encryption wpa3</b> command has been introduced. |

### 3.31.63 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**

|  | <b>Version</b> | <b>Description</b>  |
|--|----------------|---|
|  | 3.01           | The <b>interface encryption wpa3 suite-b</b> command has been introduced. |

### 3.31.64 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

| <b>Multiple input</b> | No   |                                    |             |             |   |                |                                    |
|-----------------------|--|------------------------------------|-------------|-------------|---|----------------|------------------------------------|
| <b>Interface type</b> | Ethernet   |                                    |             |             |   |                |                                    |
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>flowcontrol on</b> (config-if)&gt; <b>no flowcontrol [send]</b></pre>  |                                    |             |             |   |                |                                    |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>send</td><td><i>Keyword</i></td><td>Flow control works asynchronously.</td></tr> </tbody> </table>                                      | Argument                           | Value       | Description | send  | <i>Keyword</i> | Flow control works asynchronously. |
| Argument              | Value  | Description                        |             |             |   |                |                                    |
| send                  | <i>Keyword</i>   | Flow control works asynchronously. |             |             |   |                |                                    |
| <b>Example</b>        | <pre>(config-if)&gt; <b>flowcontrol on</b> Network::Interface::Ethernet: "GigabitEthernet0/0": flow control ▶ enabled.  (config-if)&gt; <b>no flowcontrol send</b> Network::Interface::Ethernet: "GigabitEthernet0/0": flow control ▶ send disabled.</pre> |                                    |             |             |   |                |                                    |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>interface flowcontrol</b> command has been introduced.</td></tr> </tbody> </table>   | Version                            | Description | 2.08        | The <b>interface flowcontrol</b> command has been introduced. |                |                                    |
| Version               | Description  |                                    |             |             |   |                |                                    |
| 2.08                  | The <b>interface flowcontrol</b> command has been introduced.  |                                    |             |             |   |                |                                    |

### 3.31.65 interface follow

|                        |  |
|------------------------|--|
| <b>Description</b>     | 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  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>follow &lt;access-point&gt;</b></pre>  |

| Arguments | Argument     | Value                 | Description   |
|-----------|--------------|-----------------------|---|
|           | access-point | <i>Interface name</i> | 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 [Tab]</b> command. |

|         |   |
|---------|---|
| Example | (config-if)> <b>follow WifiMaster0/AccessPoint0</b><br>Network::Interface::AccessPoint: "WifiMaster1/AccessPoint0": set ▶ to follow WifiMaster0/AccessPoint0. |
|---------|---|

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

### 3.31.66 interface ft enable

|             |   |
|-------------|---|
| Description | Enable support of <b>FT</b> for Access Point (FT Over the Air, OTA) within the IEEE 802.11r standard. By default, the option is disabled.<br><br>For correct <b>FT</b> operation between 2,4 and 5 GHz APs it is necessary to fulfill the following conditions: <ul style="list-style-type: none"><li>• access points 2,4 GHz and 5 GHz are enabled both</li><li>• they have the same SSID's</li><li>• they have the same security settings (encryption type — WPA2 or without password, password value, etc.)</li></ul> Command with <b>no</b> prefix removes the setting. |
|-------------|---|

|                 |   |
|-----------------|---|
| Prefix no       | Yes   |
| Change settings | Yes   |
| Multiple input  | No  |
| Interface type  | AccessPoint   |
| Synopsis        | <pre>(config-if)&gt; <b>ft enable</b> (config-if)&gt; <b>no ft enable</b></pre> |

|         |  |
|---------|--|
| Example | (config-if)> <b>ft enable</b><br>Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ fast transition enabled.<br><br>(config-if)> <b>no ft enable</b><br>Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ fast transition disabled. |
|---------|--|

**History**

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

### 3.31.67 interface ft mdid

**Description**

Set Mobility Domain ID for **FT**. By default, KN value is used.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

AccessPoint

**Synopsis**

```
(config-if)> ft mdid <mdid>
```

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

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>  |
|-----------------|--------------|---|
| mdid            | String       | The value of Mobility Domain ID. Consists of 2 ASCII symbols. |

**Example**

```
(config-if)> ft mdid 1F
```

Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ► fast transition MDID set to "1F".

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

Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ► fast transition MDID reset to default.

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.13           | The <b>interface ft mdid</b> command has been introduced. |

### 3.31.68 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

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Interface type</b> | AccessPoint   |         |             |      |  |
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>ft otd</b> (config-if)&gt; <b>no ft otd</b></pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config-if)&gt; <b>ft otd</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ fast transition OTD enabled.  (config-if)&gt; <b>no ft otd</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ fast transition OTD disabled.</pre> |         |             |      |  |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.13</td> <td>The <b>interface ft otd</b> command has been introduced.</td> </tr> </tbody> </table>   | Version | Description | 2.13 | The <b>interface ft otd</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.13                  | The <b>interface ft otd</b> command has been introduced.  |         |             |      |  |

### 3.31.69 interface hide-ssid

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable hidden <b>SSID</b> 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 <b>SSID</b> , than he can connect to it. The mode is disabled by default.<br><br>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>Interface type</b>  | Access Point   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>hide-ssid</b> (config-if)&gt; <b>no hide-ssid</b></pre>  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>hide-ssid</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ SSID broadcasting disabled.  (config-if)&gt; <b>no hide-ssid</b> Network::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ SSID broadcasting enabled.</pre>  |

| History | Version | Description   |
|---------|---------|---|
|         | 2.00    | The <b>interface hide-ssid</b> command has been introduced. |

### 3.31.70 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. |

### 3.31.71 interface iapp key

**Description** Assign the **IAPP** Mobile Domain key for successful synchronization between Access Points where **FT** works (**interface ft enable** command). Access Points must belong to the same IP-subnet. By default, the key is not assigned.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Bridge

**Synopsis**

```
(config-if)> iapp key <key>
```

```
(config-if)> no iapp key
```

| Arguments | Argument | Value  | Description  |
|-----------|----------|--------|--|
|           | key      | String | The value of <b>IAPP</b> 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. |

### 3.31.72 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**

|  |
|--|
| <pre>(config-if)&gt; idle-timeout &lt;idle-timeout&gt;</pre> |
| <pre>(config-if)&gt; no idle-timeout</pre>                   |

**Arguments**

| Argument     | Value          | Description   |
|--------------|----------------|---|
| idle-timeout | <i>Integer</i> | Idle-timeout value in seconds. Can take values 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. |

### 3.31.73 interface igmp downstream

| <b>Description</b>     | Enable <i>IGMP</i> mode on the interface in the direction of the multicast recipients. <b>service igmp-proxy</b> must be enabled on the device. There can be several downstream interfaces.   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
|                        | 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>Interface type</b>  | IP  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>igmp downstream</b> (config-if)&gt; <b>no igmp downstream</b></pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>igmp downstream</b> (config-if)&gt; <b>no igmp downstream</b></pre>   |         |             |      |   |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px; vertical-align: top;">2.00</td> <td style="padding: 2px; vertical-align: top;">The <b>interface igmp downstream</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface igmp downstream</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.00                   | The <b>interface igmp downstream</b> command has been introduced.   |         |             |      |   |

### 3.31.74 interface igmp fork

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable the duplication of outgoing packets <i>IGMP</i> upstream to the specified interface. There can be only one fork interface. |
|                        | 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>Interface type</b>  | IP  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>igmp fork</b> (config-if)&gt; <b>no igmp fork</b></pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; <b>igmp fork</b> (config-if)&gt; <b>no igmp fork</b></pre>   |

**History**

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

### 3.31.75 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>interface igmp upstream</b> command has been introduced. |

### 3.31.76 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 name</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. |

### 3.31.77 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 name</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**

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

### 3.31.78 interface ip access-group

**Description**

Assign a named list of filtering rules (*ACL*, see [access-list](#)) to the interface. Parameter *in* or *out* indicates the traffic direction for which the *ACL* will be applied. Several ACLs can be assigned to a single interface.

Command with **no** prefix disables the *ACL* for the specified interface and traffic direction.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Synopsis**

```
(config-if)> ip access-group <acl> <direction>
(config-if)> no ip access-group [<acl> [<direction>]]
```

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|-----------------|---------------|--|
| 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. |

## 3.31.79 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)> | <b>ip address &lt;address&gt; &lt;mask&gt;</b> |
| (config-if)> | <b>no ip address</b>                           |

| 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 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. |

## 3.31.80 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. |

## 3.31.81 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 from 1 to 255 inclusively. |

**Example**

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

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

**History**

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

### 3.31.82 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 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.09           | The <b>interface ip adjust-ttl send</b> command has been introduced. |

### 3.31.83 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>   |
|-----------------|-------------------|--|
| address         | <i>IP-address</i> | Additional address of the network interface.   |
| mask            | <i>IP-mask</i>    | 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>interface ip alias</b> command has been introduced. |

### 3.31.84 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)> | <b>ip dhcp client broadcast</b>    |
| (config-if)> | <b>no ip dhcp client broadcast</b> |

**Example**

|  |                                 |
|--|---------------------------------|
| (config-if)>   | <b>ip dhcp client broadcast</b> |
| Dhcp::Client: ISP DHCP client request broadcast enabled. |                                 |

|   |                                    |
|---|------------------------------------|
| (config-if)>  | <b>no ip dhcp client broadcast</b> |
| Dhcp::Client: ISP DHCP client request broadcast disabled. |                                    |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.15           | The <b>interface ip dhcp client broadcast</b> command has been introduced. |

### 3.31.85 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)> | <b>ip dhcp client class-id &lt;class&gt;</b> |
|--------------|--|

```
(config-if)> no ip dhcp client class-id
```

**Arguments**

| Argument | Value  | Description                                   |
|----------|--------|---|
| class    | String | Vendor class name, enclosed in double quotes. |

**Example**

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

```
(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. |

### 3.31.86 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. |

### 3.31.87 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 name</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. |

|                |  |
|----------------|--|
| <b>Example</b> | (config-if)> ip dhcp client displace Home<br>Dhcp::Client: ISP added "Home" displacement.                    |
|                | (config-if)> ip dhcp client displace Home check-session<br>Dhcp::Client: ISP added "Home" displacement.      |
|                | (config-if)> no ip dhcp client displace Home<br>Dhcp::Client: ISP deleted "Home" displacement.               |
|                | (config-if)> no ip dhcp client displace Home check-session<br>Dhcp::Client: ISP deleted "Home" displacement. |

| History | Version | Description   |
|---------|---------|---|
|         | 2.03    | The <b>interface ip dhcp client displace</b> command has been introduced. |
|         | 2.15    | Argument <b>check-session</b> was added.                                  |

### 3.31.88 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. |

### 3.31.89 interface ip dhcp client fallback

**Description** Set static IP-address in case of DHCP errors.

Command with **no** prefix cancels setting and sets 0.0.0.0. address.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Ethernet

**Synopsis**

```
(config-if)> ip dhcp client fallback <type>
```

```
(config-if)> no ip dhcp client fallback
```

**Arguments**

| Argument | Value  | Description   |
|----------|--------|---|
| type     | String | The type of IP-address. Currently implemented only one type — static. |

**Example**

```
(config-if)> ip dhcp client fallback static
Dhcp::Client: A DHCP address fallback is static.
```

```
(config-if)> no ip dhcp client fallback
Dhcp::Client: A DHCP address fallback set to zero for "ISP".
```

**History**

| Version | Description   |
|---------|---|
| 2.05    | The <b>interface ip dhcp client fallback</b> command has been introduced. |

### 3.31.90 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**

|   |
|---|
| <pre>(config-if)&gt; ip dhcp client hostname &lt;hostname&gt;</pre> |
| <pre>(config-if)&gt; no ip dhcp client hostname</pre>               |

**Arguments**

| Argument | Value         | Description              |
|----------|---------------|--------------------------|
| hostname | <i>String</i> | 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. |

### 3.31.91 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](#).

| <b>Prefix no</b>       | Yes  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Interface type</b>  | Ethernet   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ip dhcp client name-servers (config-if)&gt; no ip dhcp client name-servers</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; ip dhcp client name-servers Dhcp::Client: ISP DHCP name servers are enabled.</pre><br><pre>(config-if)&gt; no ip dhcp client name-servers Dhcp::Client: ISP DHCP name servers are disabled.</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>interface ip dhcp client name-servers</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface ip dhcp client name-servers</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>interface ip dhcp client name-servers</b> command has been introduced.  |         |             |      |   |

### 3.31.92 interface ip dhcp client release

| <b>Description</b>     | 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.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | No  |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Interface type</b>  | Ethernet  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ip dhcp client release</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; ip dhcp client release Dhcp::Client: IP address released.</pre>  |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.03</td><td>The <b>interface ip dhcp client release</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.03 | The <b>interface ip dhcp client release</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.03                   | The <b>interface ip dhcp client release</b> command has been introduced.  |         |             |      |  |

### 3.31.93 interface ip dhcp client renew

| <b>Description</b>     | DHCP-client releases lease IP-address and passes in a mode of obtaining a new one.   |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
| <b>Prefix no</b>       | No   |         |             |      |  |
| <b>Change settings</b> | Yes  |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Interface type</b>  | Ethernet   |         |             |      |  |
| <b>Synopsis</b>        | (config-if)> <b>ip dhcp client renew</b>   |         |             |      |  |
| <b>Example</b>         | (config-if)> <b>ip dhcp client renew</b><br>Dhcp::Client: IP address renewed.  |         |             |      |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.03</td> <td style="padding: 2px;">The <b>interface ip dhcp client renew</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.03 | The <b>interface ip dhcp client renew</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.03                   | The <b>interface ip dhcp client renew</b> command has been introduced.   |         |             |      |  |

### 3.31.94 interface ip dhcp client routes

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable receiving routes from the provider (dhcp options 33, 121, 242). By default it is enabled. In the configuration it is displayed only with <b>no</b> prefix.<br><br>Command with <b>no</b> prefix disables the setting. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Interface type</b>  | Ethernet   |
| <b>Synopsis</b>        | (config-if)> <b>ip dhcp client routes</b><br><br>(config-if)> <b>no ip dhcp client routes</b>  |
| <b>Example</b>         | (config-if)> <b>ip dhcp client routes</b><br>Dhcp::Client: ISP DHCP client static routes are enabled.<br><br>(config-if)> <b>no ip dhcp client routes</b><br>Dhcp::Client: ISP DHCP client static routes are disabled.       |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.05           | The <b>interface ip dhcp client routes</b> command has been introduced. |

### 3.31.95 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                |
|-----------------|--------------|---|
| direction       | ingress      | Collection of incoming traffic.                   |
|                 | egress       | Collection of outgoing traffic.                   |
|                 | both         | Collection of incoming and outgoing traffic both. |

**Example**

```
(config-if)> ip flow ingress
Netflow::Manager: NetFlow collector is enabled on interface ▶
"Home" in "ingress" direction.
```

```
(config-if)> ip flow egress
Netflow::Manager: NetFlow collector is enabled on interface ▶
"Home" in "egress" direction.
```

```
(config-if)> ip flow both
Netflow::Manager: NetFlow collector is enabled on interface ▶
"Home" in "both" direction.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>interface ip flow</b> command has been introduced. |

## 3.31.96 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 from 1 to 65534.  |
|           | order    | <i>Integer</i> | Relative priority between interfaces. It can take values 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.

### 3.31.97 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 that which was before the first use of the command.

**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. |

### 3.31.98 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

| <b>Interface type</b> | IP  |   |             |             |  |                |   |
|-----------------------|---|---|-------------|-------------|--|----------------|---|
| <b>Synopsis</b>       | <pre>(config-if)&gt; ip mtu &lt;mtu&gt; (config-if)&gt; no ip mtu</pre>   |   |             |             |  |                |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>mtu</td><td><i>Integer</i></td><td><i>MTU</i> value. Can take values from 64 to 65535 inclusively.</td></tr> </tbody> </table> | Argument  | Value       | Description | mtu  | <i>Integer</i> | <i>MTU</i> value. Can take values from 64 to 65535 inclusively. |
| Argument              | Value   | Description   |             |             |  |                |   |
| mtu                   | <i>Integer</i>  | <i>MTU</i> value. Can take values from 64 to 65535 inclusively. |             |             |  |                |   |
| <b>Example</b>        | <pre>(config-if)&gt; ip mtu 1500 Network::Interface::Base: "GigabitEthernet1": static MTU is 1500.  (config-if)&gt; no ip mtu Network::Interface::Base: "GigabitEthernet1": static MTU reset ▶ to default.</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>interface ip mtu</b> command has been introduced.</td></tr> </tbody> </table>   | Version   | Description | 2.00        | The <b>interface ip mtu</b> command has been introduced. |                |   |
| Version               | Description   |   |             |             |  |                |   |
| 2.00                  | The <b>interface ip mtu</b> command has been introduced.  |   |             |             |  |                |   |

### 3.31.99 interface ip nat loopback

| <b>Description</b>     | 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).<br><br>Command with <b>no</b> prefix disables NAT loopback. |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <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-if)&gt; ip nat loopback (config-if)&gt; no ip nat loopback</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; ip nat loopback Network::StaticNat: NAT loopback is explicitly enabled on "Home".  (config-if)&gt; no ip nat loopback Network::StaticNat: NAT loopback is explicitly disabled on "Home".</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 nat loopback</b> command has been introduced.</td></tr> </tbody> </table>   | Version | Description | 2.11 | The <b>ip nat loopback</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.11                   | The <b>ip nat loopback</b> command has been introduced.  |         |             |      |   |

### 3.31.100 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. |

### 3.31.101 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. |

### 3.31.102 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. |

### 3.31.103 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**

|  | <b>Version</b> | <b>Description</b>  |
|--|----------------|---|
|  | 2.02           | The <b>interface ipcp dns-routes</b> command has been introduced. |

### 3.31.104 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>interface ipcp name-servers</b> command has been introduced. |

### 3.31.105 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                |
|-----------------|--------------|---|
| cid             | Keyword      | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> ipcp vj cid
VJ compression enabled.
```

```
(config-if)> no ipcp vj
VJ compression disabled.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.03           | The <b>interface ipcp vj</b> command has been introduced. |

### 3.31.106 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.

| <b>Prefix no</b>       | Yes   |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
|------------------------|---|--|-------------|-------------|--|------|--|--------|--|-------------|--|--------|---|----------|---|------------|---|-----------------|---|------|--|-------------|--|-----------------|---|
| <b>Change settings</b> | Yes   |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>Multiple input</b>  | No  |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>Interface type</b>  | Secure  |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ipsec encryption-level &lt;level&gt; (config-if)&gt; no ipsec encryption-level</pre>   |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td rowspan="9">level</td><td>weak</td><td>Weak level, DES and MD5 algorithms enabled.</td></tr> <tr> <td>normal</td><td>Level is compatible with most systems, priority is given to AES128 and SHA1.</td></tr> <tr> <td>normal-3des</td><td>Level is compatible with most systems, priority is given to 3DES and SHA1.</td></tr> <tr> <td>strong</td><td>The strongest level, <i>PFS</i> is mandatory, priority is given to AES256 and SHA1.</td></tr> <tr> <td>weak-pfs</td><td>The same as weak, but for the second phase <i>PFS</i> group 1 and 2 is enabled.</td></tr> <tr> <td>normal-pfs</td><td>The same as normal, but for the second phase <i>PFS</i> group 2 and 5 is enabled.</td></tr> <tr> <td>normal-3des-pfs</td><td>The same as normal-3des, but for the second phase <i>PFS</i> group 5 and 14 is enabled.</td></tr> <tr> <td>high</td><td>A set of modern algorithms for external providers of VPN services.</td></tr> <tr> <td>strong-aead</td><td>The strongest level, priority is given to AES256 and SHA1 with addition of <i>AEAD</i> algorithms.</td></tr> <tr> <td>strong-aead-pfs</td><td>The strongest level, <i>PFS</i> is mandatory, priority is given to AES256 and SHA1 with addition of <i>AEAD</i> algorithms.</td></tr> </tbody> </table> | 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. |
| 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.   |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>Example</b>         | <pre>(config-if)&gt; ipsec encryption-level high Network:::Interface::Secure: "IKE0": security level is set to ▶ "high".</pre>  |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
|                        | <pre>(config-if)&gt; no ipsec encryption-level Network:::Interface::Secure: "IKE0": security level was reset.</pre>   |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>interface ipsec encryption-level</b> command has been introduced.</td></tr> <tr> <td>3.07</td><td>New levels of encryption has been added — high, strong-aead and strong-aead-pfs.</td></tr> </tbody> </table>  | 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. |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |
| 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.  |  |             |             |  |      |  |        |  |             |  |        |   |          |   |            |   |                 |   |      |  |             |  |                 |   |

### 3.31.107 interface ipsec force-encaps

| <b>Description</b>     | Enable support of <i>ESP</i> forced encapsulation in <i>UDP</i> for client tunnels. By default, the feature is disabled.<br><br>Command with <b>no</b> prefix cancels the setting.   |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes  |         |             |      |  |
| <b>Change settings</b> | Yes  |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Interface type</b>  | Secure   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ipsec force-encaps (config-if)&gt; no ipsec force-encaps</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; ipsec force-encaps Network::Interface::Secure: Force ESP in UDP encapsulation ▶ enabled.  (config-if)&gt; no ipsec force-encaps Network::Interface::Secure: Force ESP in UDP encapsulation ▶ disabled.</pre>  |         |             |      |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">2.12</td> <td style="padding: 2px;">The <b>interface ipsec force-encaps</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.12 | The <b>interface ipsec force-encaps</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.12                   | The <b>interface ipsec force-encaps</b> command has been introduced.   |         |             |      |  |

### 3.31.108 interface ipsec ignore

|                        |   |
|------------------------|---|
| <b>Description</b>     | Disable processing incoming <i>IKE</i> packets for <i>IPSec</i> service on the interface. By default the command is disabled.<br><br>Command with <b>no</b> prefix cancels the setting. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | Secure  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ipsec ignore (config-if)&gt; no ipsec ignore</pre>   |

**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. |

### 3.31.109 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. |

### 3.31.110 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

| <b>Multiple input</b> | No   |         |             |      |   |
|-----------------------|--|---------|-------------|------|---|
| <b>Interface type</b> | Secure   |         |             |      |   |
| <b>Synopsis</b>       | <pre>(config-if)&gt; ipsec nail-up (config-if)&gt; no ipsec nail-up</pre>  |         |             |      |   |
| <b>Example</b>        | <pre>(config-if)&gt; ipsec nail-up Network::Interface::Secure: SA renegotiation enabled.  (config-if)&gt; no ipsec nail-up Network::Interface::Secure: SA renegotiation disabled.</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>interface ipsec nail-up</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.12 | The <b>interface ipsec nail-up</b> command has been introduced. |
| Version               | Description  |         |             |      |   |
| 2.12                  | The <b>interface ipsec nail-up</b> command has been introduced.  |         |             |      |   |

### 3.31.111 interface ipsec name-servers

| <b>Description</b>     | Use <a href="#">DNS</a> -server addresses which are received via IKEv1 or IKEv2 <a href="#">IPSec</a> -server. By default, the function is enabled.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
|                        | Command with <b>no</b> prefix denies using of <a href="#">DNS</a> -server addresses which are received via IKEv1 and IKEv2 <a href="#">IPSec</a> -server.   |         |             |      |  |
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Interface type</b>  | Secure  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; ipsec name-servers (config-if)&gt; no ipsec name-servers</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; ipsec name-servers IpSec::Interface::Ike: "IKE0": automatic name servers via IKE ► Configuration Payload are enabled.  (config-if)&gt; no ipsec name-servers IpSec::Interface::Ike: "IKE0": automatic name servers via IKE ► Configuration Payload are disabled.</pre> |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.06</td> <td>The <b>interface ipsec name-servers</b> command has been introduced.</td> </tr> </tbody> </table>   | Version | Description | 3.06 | The <b>interface ipsec name-servers</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.06                   | The <b>interface ipsec name-servers</b> command has been introduced.  |         |             |      |  |

### 3.31.112 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. |

### 3.31.113 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.<br>Can take values 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. |

### 3.31.114 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.<br>Can take values 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.11           | The <b>interface ipsec transform-set lifetime</b> command has been introduced. |

### 3.31.115 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**

|   |
|---|
| <pre>(config-if)&gt; ipv6 address (&lt;address&gt;   auto)</pre>    |
| <pre>(config-if)&gt; no ipv6 address [&lt;address&gt;   auto]</pre> |

**Arguments**

| <b>Argument</b> | <b>Value</b>        | <b>Description</b>                  |
|-----------------|---------------------|-------------------------------------|
| address         | <i>IPv6-address</i> | Name server address.                |
| auto            | <i>Keyword</i>      | Enable stateless autoconfiguration. |

**Example**

```
(config-if)> ipv6 address 2001:db8::1
Static IPv6 address saved.
```

**History**

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

### 3.31.116 interface ipv6 force-default

**Description** Force the interface to be used as default IPv6 gateway. By default, the setting is disabled.

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

**Prefix no** Yes

| <b>Change settings</b> | Yes   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>ipv6 force-default</b> (config-if)&gt; <b>no ipv6 force-default</b></pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>ipv6 force-default</b> interface is forced to be the default IPv6 gateway</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>interface ipv6 force-default</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface ipv6 force-default</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.00                   | The <b>interface ipv6 force-default</b> command has been introduced.  |         |             |      |  |

### 3.31.117 interface ipv6 name-servers

| <b>Description</b>     | Configure retrieval of <a href="#">DNS</a> information. When <b>auto</b> is set, enables DHCPv6 name-server requests.<br><br>Command with <b>no</b> prefix removes the setting.   |                                       |             |             |   |         |                                       |
|------------------------|---|---------------------------------------|-------------|-------------|---|---------|---------------------------------------|
| <b>Prefix no</b>       | Yes   |                                       |             |             |   |         |                                       |
| <b>Change settings</b> | Yes   |                                       |             |             |   |         |                                       |
| <b>Multiple input</b>  | No  |                                       |             |             |   |         |                                       |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>ipv6 name-servers (auto)</b> (config-if)&gt; <b>no ipv6 name-servers [auto]</b></pre>   |                                       |             |             |   |         |                                       |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>auto</td> <td>Keyword</td> <td>Enable name-server autoconfiguration.</td> </tr> </tbody> </table> | Argument                              | Value       | Description | auto  | Keyword | Enable name-server autoconfiguration. |
| Argument               | Value   | Description                           |             |             |   |         |                                       |
| auto                   | Keyword   | Enable name-server autoconfiguration. |             |             |   |         |                                       |
| <b>Example</b>         | <pre>(config-if)&gt; <b>ipv6 name-servers auto</b> Name servers provided by the interface network are accepted.</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>interface ipv6 name-servers</b> command has been introduced.</td> </tr> </tbody> </table>    | Version                               | Description | 2.00        | The <b>interface ipv6 name-servers</b> command has been introduced. |         |                                       |
| Version                | Description   |                                       |             |             |   |         |                                       |
| 2.00                   | The <b>interface ipv6 name-servers</b> command has been introduced.   |                                       |             |             |   |         |                                       |

### 3.31.118 interface ipv6 prefix

**Description** Configure prefix delegation. When **auto** is set, prefix is requested via DHCPv6-PD.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
| (config-if)> ipv6 prefix (<prefix> | auto)
| (config-if)> no ipv6 prefix [<prefix> | auto]
```

**Arguments**

| Argument | Value   | Description               |
|----------|---------|---------------------------|
| auto     | Keyword | Enable prefix delegation. |
| prefix   | Prefix  | Manual input of prefix.   |

**Example**

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

**History**

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

### 3.31.119 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**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 2.00           | The <b>interface ipv6cp</b> command has been introduced. |

### 3.31.120 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.

|                        |     |
|------------------------|-----|
| <b>Prefix no</b>       | Yes |
| <b>Change settings</b> | Yes |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | PPP |

**Synopsis**

```
(config-if)> lcp acfc [cid]
```

```
(config-if)> no lcp acfc
```

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                |
|-----------------|--------------|---|
| cid             | Keyword      | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> lcp acfc cid
ACFC compression enabled
```

```
(config-if)> no lcp acfc cid
ACFC compression disabled
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.03           | The <b>interface lcp acfc</b> command has been introduced. |

### 3.31.121 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.

|                        |     |
|------------------------|-----|
| <b>Prefix no</b>       | Yes |
| <b>Change settings</b> | 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.                       |

### 3.31.122 interface lcp pfc

**Description**

Enable compression negotiation of the *PPP Protocol field*. By default, the feature is disabled.

Command with **no** prefix disables this option and all the remote peer requests for the *PFC* negotiation will be rejected.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

PPP

**Synopsis**

```
(config-if)> lcp pfc [cid]
```

```
(config-if)> no lcp pfc
```

**Arguments**

| Argument | Value   | Description                                       |
|----------|---------|---|
| cid      | Keyword | Enable compression of Connection ID into headers. |

**Example**

```
(config-if)> lcp pfc cid
PFC compression enabled
```

```
(config-if)> no lcp pfc cid
PFC compression disabled
```

**History**

| Version | Description   |
|---------|---|
| 2.03    | The <b>interface lcp pfc</b> command has been introduced. |

### 3.31.123 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. |

### 3.31.124 interface led wan

|                        |   |
|------------------------|---|
| <b>Description</b>     | Display the interface status by means of LED. SelectedWan control should be chosen with <b>system led</b> command. By default, function is disabled.<br><br>Command with <b>no</b> prefix disables the feature. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; led wan (config-if)&gt; no led wan</pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; led wan Network::Interface::Led: Selected WAN GigabitEthernet1.  (config-if)&gt; no led wan Network::Interface::Led: Selected no WAN.</pre>  |

| History | Version | Description   |
|---------|---------|---|
|         | 2.08    | The <b>interface led wan</b> command has been introduced. |

### 3.31.125 interface lldp disable

|                        |   |
|------------------------|---|
| <b>Description</b>     | Disable <b>LLDP</b> agent on interface. By default, the feature is enabled.<br><br>Command with <b>no</b> prefix enables <b>LLDP</b> agent.   |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; lldp disable (config-if)&gt; no lldp disable</pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; lldp disable Network::DiscoveryManager: LLDP agent is disabled on interface ▶ "ISP".  (config-if)&gt; no lldp disable Network::DiscoveryManager: LLDP agent is enabled on interface ▶ "ISP".</pre> |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.11           | The <b>interface lldp disable</b> command has been introduced. |

### 3.31.126 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                     |
|-----------------|--------------|--|
| 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**

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

### 3.31.127 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   |  |             |             |  |      |  |        |  |      |  |
| <b>Synopsis</b>                       | <pre>(config-if)&gt; mac access-list type &lt;type&gt;</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">type</td><td>none</td><td>Type of filtering list is not defined.</td></tr> <tr> <td>permit</td><td>Only approved MAC-addresses will be added to the list.</td></tr> <tr> <td>deny</td><td>Only restricted MAC-addresses will be added to the list.</td></tr> </tbody> </table>  | 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. |
| 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. |             |             |  |      |  |        |  |      |  |
| <b>Example</b>                        | <pre>(config-if)&gt; mac access-list type permit Network::Interface::Ethernet: "WifiMaster0/AccessPoint1": ACL &gt; type changed to permit.</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>interface mac access-list type</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.00        | The <b>interface mac access-list type</b> command has been introduced. |      |  |        |  |      |  |
| Version                               | Description  |  |             |             |  |      |  |        |  |      |  |
| 2.00                                  | The <b>interface mac access-list type</b> command has been introduced.   |  |             |             |  |      |  |        |  |      |  |
| <b>3.31.128 interface mac address</b> |  |  |             |             |  |      |  |        |  |      |  |
| <b>Description</b>                    | <p>Set the MAC-address to the specified network interface. Address is specified in hexadecimal format <code>00:00:00:00:00:00</code>. 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.</p> <p>Command with <b>no</b> prefix resets the original MAC-addresses on the interface.</p> <p>Warning: Change MAC-address on Wi-Fi interface is prohibited.</p> |  |             |             |  |      |  |        |  |      |  |
| <b>Prefix no</b>                      | Yes  |  |             |             |  |      |  |        |  |      |  |
| <b>Change settings</b>                | Yes  |  |             |             |  |      |  |        |  |      |  |
| <b>Multiple input</b>                 | No   |  |             |             |  |      |  |        |  |      |  |
| <b>Interface type</b>                 | MAC  |  |             |             |  |      |  |        |  |      |  |
| <b>Synopsis</b>                       | <pre>(config-if)&gt; mac address &lt;mac&gt; (config-if)&gt; no mac address</pre>  |  |             |             |  |      |  |        |  |      |  |

**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. |

### 3.31.129 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**

|   |
|---|
| <pre>(config-if)&gt; mac address factory &lt;name&gt;</pre> |
|---|

**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. |

### 3.31.130 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. |

### 3.31.131 interface mac bssid

**Description** Set the new MAC-address of access point 2,4 GHz or 5 GHz in WISP mode.  
Command with **no** prefix returns the original MAC-address to the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

| <b>Interface type</b> | WifiStation   |  |       |             |       |             |  |
|-----------------------|---|--|-------|-------------|-------|-------------|--|
| <b>Synopsis</b>       | <pre>(config-if)&gt; mac bssid &lt;bssid&gt; (config-if)&gt; no mac bssid</pre>   |  |       |             |       |             |  |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>bssid</td> <td>MAC-address</td> <td>New MAC-address of the access point interface.</td> </tr> </tbody> </table> | Argument                                       | Value | Description | bssid | MAC-address | New MAC-address of the access point interface. |
| Argument              | Value   | Description                                    |       |             |       |             |  |
| bssid                 | MAC-address   | New MAC-address of the access point interface. |       |             |       |             |  |

|                |   |
|----------------|---|
| <b>Example</b> | <pre>(config-if)&gt; mac bssid 56:ff:20:00:1e:11 Network::Interface::WifiStation: BSSID set to 56:ff:20:00:1e:11.  (config-if)&gt; no mac bssid Network::Interface::WifiStation: BSSID cleared.</pre> |
|----------------|---|

| <b>History</b> | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.13</td><td>The <b>interface mac bssid</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.13 | The <b>interface mac bssid</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 2.13           | The <b>interface mac bssid</b> command has been introduced.  |         |             |      |   |

### 3.31.132 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 |
|------------------------|

| <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>interface mac clone</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface mac clone</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 2.00           | The <b>interface mac clone</b> command has been introduced.  |         |             |      |   |

### 3.31.133 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. |

### 3.31.134 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. |

### 3.31.135 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. |

### 3.31.136 interface mobile pdp

**Description** Choose IP protocol version for USB modem. IPv6 can be selected only if the corresponding system component is installed.

**Prefix no** No

**Change settings** Yes

**Multiple input**

No

**Interface type**

Usb

**Synopsis**(config-if)> **mobile pdp (ipv4 | ipv4v6)****Arguments**

| Argument | Value         | Description               |
|----------|---------------|---------------------------|
| ipv4     | <i>String</i> | IPv4 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".**History**

| Version | Description  |
|---------|--|
| 3.04    | The <b>interface mobile pdp</b> command has been introduced. |

### 3.31.137 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. |

### 3.31.138 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. |

### 3.31.139 interface mobile umts disable-band

**Description** Disable specified UMTS band.

Command with **no** prefix enables UMTS band. If you use no argument, the entire list of UMTS bands will be enabled.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Usb

**Synopsis**

```
(config-if)> mobile umts disable-band <band>
```

```
(config-if)> no mobile umts disable-band [ <band> ]
```

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| band     | <i>Integer</i> | UMTS band. Can take values 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 26. |

**Example**

```
(config-if)> mobile umts disable-band 6
UsbQmi::Interface: "UsbQmi0": WCDMA band 6 disabled.
```

```
(config-if)> no mobile lte disable-band 6
UsbQmi::Interface: "UsbQmi0": WCDMA band 6 enabled.
```

```
(config-if)> no mobile lte disable-band
UsbQmi::Interface: "UsbQmi0": all WCDMA bands are enabled.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.05           | The <b>interface mobile umts disable-band</b> command has been introduced. |

### 3.31.140 interface modem connect

**Description**

Command to connect for USB-modem. Modem must be initialized with **modem init** command before execution.

Command with **no** prefix terminates the connection.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

UsbModem

**Synopsis**

```
(config-if)> modem connect ( dial <phone> | <string> )
(config-if)> no modem connect
```

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>            |
|-----------------|--------------|-------------------------------|
| phone           | String       | The phone number for dialing. |
| string          | String       | An arbitrary command.         |

**Example**

```
(config-if)> modem connect dial *99#
Network::Interface::UsbModem: "UsbModem0": connect sequence saved.
```

```
(config-if)> modem connect dial *99#
Network::Interface::UsbModem: "UsbModem0": connect sequence ▶ cleared.
```

**History**

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

### 3.31.141 interface modem init

**Description** Add modem initialization string at specified position *index*.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** UsbModem

**Synopsis**

|              |  |
|--------------|--|
| (config-if)> | <b>modem init</b> [ < <i>index</i> > ] < <i>string</i> > [ <b>sleep</b> < <i>delay</i> > ] |
| (config-if)> | <b>no modem init</b> [ < <i>index</i> > ]  |

**Arguments**

| Argument      | Value          | Description  |
|---------------|----------------|--|
| <i>index</i>  | <i>Integer</i> | Position, the line number where you want to insert a string. |
| <i>string</i> | <i>String</i>  | Modem initialization string.                                 |
| <i>delay</i>  | <i>Integer</i> | Modem delay value in seconds.                                |

**Example**

```
(config-if)> modem init AT^SYSCFG=14,2,3fffffff,0,1
Network:::Interface::UsbModem: "UsbModem0": initialization string ►
inserted.
```

```
(config-if)> modem init AT^SYSCFG=14,2,3fffffff,0,1 sleep 1
Network:::Interface::UsbModem: "UsbModem0": initialization string ►
inserted.
```

```
(config-if)> no modem init
Network:::Interface::UsbModem: "UsbModem0": initialization strings ►
erased.
```

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>interface modem init</b> command has been introduced. |

### 3.31.142 interface modem timeout

**Description** Set modem connection timeout. Setting is used for slow modems/connections. By default, 30 value is used.

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

**Prefix no** Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

UsbModem

**Synopsis**

```
| (config-if)> modem timeout <timeout>
```

```
| (config-if)> no modem timeout
```

**Arguments**

| Argument | Value   | Description   |
|----------|---------|---|
| timeout  | Integer | Value of timeout in seconds. Can take values 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. |

### 3.31.143 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. |

### 3.31.144 interface openvpn connect

**Description** Set interface for OpenVPN connection. If you use no argument, connection is set via any interface.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** OpenVPN

**Synopsis**

```
(config-if)> openvpn connect [via <via>]
(config-if)> openvpn connect
```

| Arguments | Argument | Value          | Description                      |
|-----------|----------|----------------|----------------------------------|
|           | via      | Interface name | 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. |

### 3.31.145 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.

|                        |   |
|------------------------|---|
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | OpenVPN   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; openvpn name-servers (config-if)&gt; no openvpn name-servers</pre>   |
| <b>Example</b>         | <pre>(config-if)&gt; openvpn name-servers Network::Interface::OpenVpn: "OpenVPN0": automatic name servers ▶ via tunnel are enabled.  (config-if)&gt; no openvpn name-servers Network::Interface::OpenVpn: "OpenVPN0": automatic name servers ▶ via tunnel are disabled.</pre> |

| History | Version | Description  |
|---------|---------|--|
|         | 3.06    | The <b>interface openvpn name-servers</b> command has been introduced. |

### 3.31.146 interface operating-mode

|                        |   |
|------------------------|---|
| <b>Description</b>     | Configure the ADSL operating mode. By default, auto value is used.  |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | Switch  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; operating-mode ((adsl2   adsl2+) [annex (a   i   l   al   m)]   ansi-dmt   itu-dmt   glite   auto)</pre> |

| Arguments | Argument | Value | Description   |
|-----------|----------|-------|---|
|           | mode     | adsl2 | Configures operation in ADSL2 operating mode — ITU G.992.3 Annex A, Annex L, and Annex M. If an Annex operating mode is not chosen, Annex A, Annex L, and Annex M will all be enabled. The final mode will be decided by negotiation with the DSL access multiplexer (DSLAM). |

| Argument | Value    | Description  |
|----------|----------|--|
|          | 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. |
|          | ansi-dmt | Configures a router to operate in ANSI full-rate mode — ANSI T1.413.   |
|          | itu-dmt  | Configures operation in ITU G.992.1 Annex A fullrate mode.   |
|          | glite    | Configures operation in ITU G.992.2 Standard for ADSL using discrete multitone modulation.   |
|          | auto     | Configures the device so that the DSLAM automatically picks the ADSL operating mode. All supported modes are enabled.  |
| annex    | annex a  | xDSL service functioning over plain old telephone service.   |
|          | annex i  | Extending ADSL band to use the voice frequency range, 32 upstream tones for an additional 256 kbit/s upstream data rate over POTS lines.   |
|          | annex l  | Increases the range of the DSL service enabling the link to work at a distance of 7 kilometres (23,000 ft).  |
|          | annex al | Annex A and Annex L both.  |
|          | annex m  | Upstream/downstream frequency split has been shifted from 138 kHz up to 276 kHz, allowing maximum upstream bandwidth to be increased from 1.4 Mbit/s to 3.3 Mbit/s.  |

**History**

| Version | Description  |
|---------|--|
| 2.01    | The <b>interface operating-mode</b> command has been introduced. |

### 3.31.147 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.

| <b>Prefix no</b>                           | Yes   |  |             |             |  |               |  |
|--|---|--|-------------|-------------|--|---------------|--|
| <b>Change settings</b>                     | Yes   |  |             |             |  |               |  |
| <b>Multiple input</b>                      | No  |  |             |             |  |               |  |
| <b>Interface type</b>                      | PPP   |  |             |             |  |               |  |
| <b>Synopsis</b>                            | <pre>  (config-if)&gt; peer &lt;peer&gt;   (config-if)&gt; no peer</pre>  |  |             |             |  |               |  |
| <b>Arguments</b>                           | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>peer</td><td><i>String</i></td><td>Remote connection point ID or remote server address host.example.net:port. By default, port number is 443.</td></tr></tbody></table> | Argument   | Value       | Description | peer   | <i>String</i> | Remote connection point ID or remote server address host.example.net:port. By default, port number is 443. |
| Argument                                   | Value   | Description  |             |             |  |               |  |
| peer                                       | <i>String</i>   | Remote connection point ID or remote server address host.example.net:port. By default, port number is 443. |             |             |  |               |  |
| <b>Example</b>                             | <pre>(config-if)&gt; peer 111 (config-if)&gt; peer host.example.net:5555</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>interface peer</b> command has been introduced.</td></tr><tr><td>2.12</td><td>Added the ability to change the port of a remote server.</td></tr></tbody></table>   | 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.   |
| 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.  |  |             |             |  |               |  |
| <h3>3.31.148 interface peer-isolation</h3> |   |  |             |             |  |               |  |
| <b>Description</b>                         | 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 <b>no</b> prefix cancels the setting.  |  |             |             |  |               |  |
| <b>Prefix no</b>                           | Yes   |  |             |             |  |               |  |
| <b>Change settings</b>                     | Yes   |  |             |             |  |               |  |
| <b>Multiple input</b>                      | No  |  |             |             |  |               |  |
| <b>Interface type</b>                      | Bridge  |  |             |             |  |               |  |
| <b>Synopsis</b>                            | <pre>  (config-if)&gt; peer-isolation   (config-if)&gt; no peer-isolation</pre>   |  |             |             |  |               |  |
| <b>Example</b>                             | <pre>(config-if)&gt; peer-isolation Network::Interface::Ethernet: "Bridge0": peer isolation enabled.</pre>  |  |             |             |  |               |  |

```
(config-if)> no peer-isolation
Network::Interface::Ethernet: "Bridge0": peer isolation disabled.
```

**History**

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

### 3.31.149 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**

|   |
|---|
| <pre>(config-if)&gt; ping-check profile &lt;profile&gt;</pre> |
| <pre>(config-if)&gt; no ping-check profile</pre>              |

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>      |
|-----------------|---------------|-------------------------|
| profile         | <i>String</i> | Profile name to assign. |

**Example**

|   |
|---|
| <pre>(config-if)&gt; ping-check profile test PingCheck::Client: Set ping-check profile for interface "ISP".</pre> |
| <pre>(config-if)&gt; no ping-check profile PingCheck::Client: Reset ping-check profile for interface "ISP".</pre> |

**History**

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

### 3.31.150 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 | <i>Interface name</i> | 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. |

### 3.31.151 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. |

### 3.31.152 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. |

### 3.31.153 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

| <b>Interface type</b>                                  | PPPoE   |                        |             |             |  |        |                        |
|--|---|------------------------|-------------|-------------|--|--------|------------------------|
| <b>Synopsis</b>  | <pre>(config-if)&gt; pppoe service &lt;service&gt; (config-if)&gt; no pppoe service</pre>   |                        |             |             |  |        |                        |
| <b>Arguments</b>                                       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>service</td><td>String</td><td>Name of PPPoE service.</td></tr></tbody></table>   | Argument               | Value       | Description | service  | String | Name of PPPoE service. |
| Argument   | Value   | Description            |             |             |  |        |                        |
| service  | String  | Name of PPPoE service. |             |             |  |        |                        |
| <b>Example</b>   | <pre>(config-if)&gt; pppoe service TEST Network::Interface::Pppoe: "PPPoE0": service set.  (config-if)&gt; no pppoe service Network::Interface::Pppoe: "PPPoE0": service removed.</pre>   |                        |             |             |  |        |                        |
| <b>History</b>   | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.05</td><td>The <b>interface pppoe service</b> command has been introduced.</td></tr></tbody></table>                                     | Version                | Description | 2.05        | The <b>interface pppoe service</b> command has been introduced.              |        |                        |
| Version  | Description   |                        |             |             |  |        |                        |
| 2.05   | The <b>interface pppoe service</b> command has been introduced.   |                        |             |             |  |        |                        |
| <h3>3.31.154 interface pppoe session auto-cleanup</h3> |   |                        |             |             |  |        |                        |
| <b>Description</b>                                     | Enable sending a PADT packet for the unfinished PPPoE session. By default the option is enabled.  |                        |             |             |  |        |                        |
|  | Command with <b>no</b> prefix disables sending a PADT packet.   |                        |             |             |  |        |                        |
| <b>Prefix no</b>                                       | Yes   |                        |             |             |  |        |                        |
| <b>Change settings</b>                                 | Yes   |                        |             |             |  |        |                        |
| <b>Multiple input</b>                                  | No  |                        |             |             |  |        |                        |
| <b>Interface type</b>                                  | PPPoE   |                        |             |             |  |        |                        |
| <b>Synopsis</b>  | <pre>(config-if)&gt; pppoe session auto-cleanup (config-if)&gt; no pppoe session auto-cleanup</pre>   |                        |             |             |  |        |                        |
| <b>Example</b>   | <pre>(config-if)&gt; pppoe session auto-cleanup Network::Interface::Ppp: "PPPoE0": enabled session auto cleanup.  (config-if)&gt; no pppoe session auto-cleanup Network::Interface::Ppp: "PPPoE0": disabled session auto cleanup.</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 pppoe session auto-cleanup</b> command has been introduced.</td></tr></tbody></table>                        | Version                | Description | 3.03        | The <b>interface pppoe session auto-cleanup</b> command has been introduced. |        |                        |
| Version  | Description   |                        |             |             |  |        |                        |
| 3.03   | The <b>interface pppoe session auto-cleanup</b> command has been introduced.  |                        |             |             |  |        |                        |

### 3.31.155 interface preamble-short

| <b>Description</b>     | Use short <i>preamble</i> . By default, the setting is disabled.  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Interface type</b>  | Radio   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; preamble-short (config-if)&gt; no preamble-short</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-if)&gt; preamble-short Network::Interface::Rtx::WifiMaster: "WifiMaster0": short ▶ preamble enabled.  (config-if)&gt; no preamble-short Network::Interface::Rtx::WifiMaster: "WifiMaster0": short ▶ preamble disabled.</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>interface preamble-short</b> command has been introduced.</td> </tr> </tbody> </table>                         | Version | Description | 2.00 | The <b>interface preamble-short</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.00                   | The <b>interface preamble-short</b> command has been introduced.  |         |             |      |  |

### 3.31.156 interface pvc

| <b>Description</b>     | Configure a <i>permanent virtual circuit</i> on an <i>ATM</i> interface.  |  |       |             |     |                |   |     |                |  |
|------------------------|---|--|-------|-------------|-----|----------------|---|-----|----------------|--|
| <b>Prefix no</b>       | No  |  |       |             |     |                |   |     |                |  |
| <b>Change settings</b> | Yes   |  |       |             |     |                |   |     |                |  |
| <b>Multiple input</b>  | Yes   |  |       |             |     |                |   |     |                |  |
| <b>Interface type</b>  | PVC   |  |       |             |     |                |   |     |                |  |
| <b>Group entry</b>     | (config-if-atm-vc)  |  |       |             |     |                |   |     |                |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; pvc &lt;vpi&gt; &lt;vci&gt;</pre>  |  |       |             |     |                |   |     |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>vpi</td> <td><i>Integer</i></td> <td><i>ATM</i> network <i>virtual path identifier</i> of this <i>PVC</i>. Can take values from 0 to 255.</td> </tr> <tr> <td>vci</td> <td><i>Integer</i></td> <td><i>ATM</i> network <i>virtual channel identifier</i> of this <i>PVC</i>. Can take values from 0 to 65535.</td> </tr> </tbody> </table> | Argument   | Value | Description | vpi | <i>Integer</i> | <i>ATM</i> network <i>virtual path identifier</i> of this <i>PVC</i> . Can take values from 0 to 255. | vci | <i>Integer</i> | <i>ATM</i> network <i>virtual channel identifier</i> of this <i>PVC</i> . Can take values from 0 to 65535. |
| Argument               | Value   | Description  |       |             |     |                |   |     |                |  |
| vpi                    | <i>Integer</i>  | <i>ATM</i> network <i>virtual path identifier</i> of this <i>PVC</i> . Can take values from 0 to 255.      |       |             |     |                |   |     |                |  |
| vci                    | <i>Integer</i>  | <i>ATM</i> network <i>virtual channel identifier</i> of this <i>PVC</i> . Can take values from 0 to 65535. |       |             |     |                |   |     |                |  |

**History**

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

**3.31.156.1 interface pvc encapsulation**

**Description** Configure the *ATM* adaptation layer (*AAL*) and encapsulation type for an *ATMPVC*.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** PVC

**Synopsis**

|                    |   |
|--------------------|---|
| (config-if-atm-vc) | <b>encapsulation (aal5mux   aal5snap)</b> |
|--------------------|---|

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>  |
|-----------------|--------------|---|
| 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 aal5mux
Network::Interface::Pvc: using Ethernet encapsulation, VC mux.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>interface pvc encapsulation</b> command has been introduced. |

**3.31.157 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)> | <b>reconnect-delay &lt;sec&gt;</b> |
|--------------|------------------------------------|

(config-if)> **no reconnect-delay**

**Arguments**

| Argument | Value          | Description  |
|----------|----------------|--|
| sec      | <i>Integer</i> | Value of time in seconds. Can take values 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. |

### 3.31.158 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.

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

### 3.31.159 interface rename

|                    |   |
|--------------------|---|
| <b>Description</b> | Assign arbitrary name to the specified network interface. The interface can be referred to by the new name just like by ID.<br><br>Command with <b>no</b> 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)> | <b>rename &lt;rename&gt;</b> |
| (config-if)> | <b>no rename</b>             |

**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. |

### 3.31.160 interface rf e2p set

|                        |  |
|------------------------|--|
| <b>Description</b>     | Change the memory cell value of calibration data at <i>offset</i> by <i>value</i> for the specified interface. |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |

**Multiple input**

No

**Interface type**

Radio

**Synopsis**

```
(config-if)  rf e2p set <offset> <value>
```

**Arguments**

| Argument | Value                     | Description  |
|----------|---------------------------|--|
| offset   | <i>Hexadecimal number</i> | Memory cell location. Can take values from 1E0 to 1FE. |
| value    | <i>Hexadecimal number</i> | Value to be set. Can take values 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. |

### 3.31.161 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     | <i>Interface name</i> | 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.06           | The <b>interface role</b> command has been introduced. |
| 2.10           | Argument <b>misc</b> was added.                        |

### 3.31.162 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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.13           | The <b>interface rrm</b> command has been introduced. |

### 3.31.163 interface schedule

| <b>Description</b>     | Assign a schedule to the interface. Schedule must be created and customized with <b>schedule action</b> command before execution.  |   |             |             |  |                      |   |
|------------------------|--|---|-------------|-------------|--|----------------------|---|
|                        | Command with <b>no</b> prefix unbinds the schedule.  |   |             |             |  |                      |   |
| <b>Prefix no</b>       | Yes  |   |             |             |  |                      |   |
| <b>Change settings</b> | Yes  |   |             |             |  |                      |   |
| <b>Multiple input</b>  | No   |   |             |             |  |                      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; schedule &lt;schedule&gt;   (config-if)&gt; no schedule</pre>   |   |             |             |  |                      |   |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Argument</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">schedule</td> <td style="text-align: left;"><i>Schedule name</i></td> <td>The name of the schedule that was created with <b>schedule</b> group of commands.</td> </tr> </tbody> </table> | Argument  | Value       | Description | schedule   | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> group of commands. |
| Argument               | Value  | Description   |             |             |  |                      |   |
| schedule               | <i>Schedule name</i>   | The name of the schedule that was created with <b>schedule</b> group of commands. |             |             |  |                      |   |
| <b>Example</b>         | <pre>(config-if)&gt; schedule WIFI Network::Interface::Base: "WifiMaster0": schedule is "WiFi". (config-if)&gt; no schedule Network::Interface::Base: "WifiMaster0": schedule cleared.</pre>   |   |             |             |  |                      |   |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Version</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">2.06</td> <td>The <b>interface schedule</b> command has been introduced.</td> </tr> </tbody> </table>  | Version   | Description | 2.06        | The <b>interface schedule</b> command has been introduced. |                      |   |
| Version                | Description  |   |             |             |  |                      |   |
| 2.06                   | The <b>interface schedule</b> command has been introduced.   |   |             |             |  |                      |   |

### 3.31.164 interface security-level

|                    |   |
|--------------------|---|
| <b>Description</b> | Specify the interface security level. The security levels define the firewall logic:  |
|                    | <ul style="list-style-type: none"> <li>• Allow establishing private → public connections.</li> <li>• Prohibit establishing connections coming to the public interface, i. e. in the direction public → private and public → public.</li> <li>• The device itself accepts network connections (allows control) only from private interfaces.</li> <li>• Data transfer between private interfaces can be allowed or disallowed depending on the <b>isolate-private</b> global parameter.</li> <li>• 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.</li> </ul> |

- 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 <b>interface security-level</b> command has been introduced. |
|         | 2.06    | The protected parameter was added.                               |

### 3.31.165 interface sim pin

**Description** Set PIN-code for SIM card.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Usb

**Synopsis**

|              |                            |
|--------------|----------------------------|
| (config-if)> | <b>sim pin &lt;pin&gt;</b> |
|--------------|----------------------------|

**Arguments**

| Argument | Value         | Description        |
|----------|---------------|--------------------|
| pin      | <i>String</i> | 4 to 8 digits PIN. |

**Example**

|   |
|---|
| (config-if)> <b>sim pin 1455</b>            |
| UsbQmi::Interface: "UsbQmif": PIN code set. |

**History**

| Version | Description   |
|---------|---|
| 3.02    | The <b>interface sim pin</b> command has been introduced. |

### 3.31.166 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)> <b>speed (10   100   1000   auto)</b> |
| (config-if)> <b>no speed</b>                       |

**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. |

### 3.31.167 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. |

### 3.31.168 interface ssid

**Description** Specify the wireless network name (SSID) for WiFiStation and AccessPoint interfaces. Depending on the interface type, the SSID value is processed differently.

- For AccessPoint, the SSID is a necessary setting, without which the connection will not be accepted.
- For the WiFiStation SSID determines which access point WiFiStation will connect to. Without a specified SSID, WiFiStation can connect to any available wireless network at its discretion.

Command with **no** prefix resets network name to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFi

**Synopsis**

```
(config-if)> ssid <ssid>
(config-if)> no ssid
```

| Arguments | Argument | Value  | Description                   |
|-----------|----------|--------|-------------------------------|
|           | ssid     | String | Wireless Network Name (SSID). |

|                |  |
|----------------|--|
| <b>Example</b> | <pre>(config-if)&gt; <b>ssid MYNEXTWORK</b> Network:::Interface::Wireless: "WifiMaster0/AccessPoint0": SSID ▶ saved.</pre><br><pre>(config-if)&gt; <b>no ssid</b> Network:::Interface::Rtx::AccessPoint: "WifiMaster0/AccessPoint0": ▶ SSID reset.</pre> |
|----------------|--|

| History | Version | Description  |
|---------|---------|--|
|         | 2.00    | The <b>interface ssid</b> command has been introduced. |

### 3.31.169 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

| <b>Synopsis</b>  | <pre>(config-if)&gt; <b>switchport access vlan &lt;vid&gt;</b> (config-if)&gt; <b>no switchport access vlan</b></pre>  |  |       |             |     |                |  |
|------------------|--|--|-------|-------------|-----|----------------|--|
| <b>Arguments</b> | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>vid</td><td><i>Integer</i></td><td>Access <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively.</td></tr> </tbody> </table> | Argument   | Value | Description | vid | <i>Integer</i> | Access <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively. |
| Argument         | Value  | Description  |       |             |     |                |  |
| vid              | <i>Integer</i>   | Access <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively. |       |             |     |                |  |
| <b>Example</b>   | <pre>(config-if)&gt; <b>switchport access vlan 1</b> Network::Interface::Switch: "FastEthernet0/0": set access VLAN ▶ ID: 1.</pre>   |  |       |             |     |                |  |

### 3.31.170 interface switchport friend

| <b>Description</b>     | Configure undirectional <b>VLAN</b> for multicast traffic in addition to access <b>VLAN</b> . Port can be a member of one access <b>VLAN</b> . This command enables forwarding of downstream traffic from a different <b>VLAN</b> (called "friend"). Friend packets are transmitted without a tag. |  |       |             |     |                |  |
|------------------------|--|--|-------|-------------|-----|----------------|--|
|                        | Command with <b>no</b> prefix removes the setting.   |  |       |             |     |                |  |
| <b>Prefix no</b>       | Yes  |  |       |             |     |                |  |
| <b>Change settings</b> | Yes  |  |       |             |     |                |  |
| <b>Multiple input</b>  | No   |  |       |             |     |                |  |
| <b>Interface type</b>  | Port   |  |       |             |     |                |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>switchport friend vlan &lt;vid&gt;</b> (config-if)&gt; <b>no switchport friend vlan</b></pre>  |  |       |             |     |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>vid</td><td><i>Integer</i></td><td>Friend <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively.</td></tr> </tbody> </table>   | Argument   | Value | Description | vid | <i>Integer</i> | Friend <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively. |
| Argument               | Value  | Description  |       |             |     |                |  |
| vid                    | <i>Integer</i>   | Friend <b>VLAN</b> ID. Can take values from 1 to 4094 inclusively. |       |             |     |                |  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>switchport friend vlan 2</b> Network::Interface::Switch: "FastEthernet0/0": set friend VLAN ▶ ID: 2.</pre>   |  |       |             |     |                |  |

| History | Version | Description   |
|---------|---------|---|
|         | 2.06    | The <b>interface switchport friend</b> command has been introduced. |

### 3.31.171 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 <b>VLAN</b> , 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 <b>VLAN</b> with PVID ID. Once a frame is transferred to the port, the <b>VLAN</b> marker gets removed. |
|           |          | trunk          | Enable the <b>VLAN</b> 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 <b>VLAN</b> 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: "FastEthernet0/1": access mode >
enabled.
```

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

### 3.31.172 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> | <a href="#">VLAN</a> ID. Can take values from 1 to 4094 inclusively. |

**Example**

```
(config-if)> switchport trunk vlan 100
Network::Interface::Switch: "FastEthernet0/1": set trunk VLAN ▶
ID: 100.
```

| History | Version | Description  |
|---------|---------|--|
|         | 2.06    | The <b>interface switchport trunk</b> command has been introduced. |

### 3.31.173 interface traffic-counter action disconnect

**Description** Disconnect from the provider when the traffic limit is reached.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

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

**Arguments**

| Argument | Value | Description                               |
|----------|-------|---|
| trigger  | limit | Disconnection trigger on a limit traffic. |

**Example**

```
(config-if)> traffic-counter action limit disconnect
UsbQmi::TrafficCounter: "UsbQmi0": set disconnect action for ▶
trigger "limit".
```

**History**

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

**3.31.174 interface traffic-counter action sms-alert message****Description** Set *SMS* alert message.**Prefix no** No**Change settings** Yes**Multiple input** No**Interface type** Usb**Synopsis**

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

**Arguments**

| Argument | Value         | Description                              |
|----------|---------------|--|
| trigger  | threshold     | SMS alerting trigger is a threshold.     |
|          | limit         | SMS alerting trigger is a traffic limit. |
| message  | <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. |

**3.31.175 interface traffic-counter action sms-alert phone****Description** Set phone numbers for *SMS* alerting.

| <b>Prefix no</b>       | No  |  |             |             |  |           |                                      |       |  |       |        |  |
|------------------------|---|--|-------------|-------------|--|-----------|--------------------------------------|-------|--|-------|--------|--|
| <b>Change settings</b> | Yes   |  |             |             |  |           |                                      |       |  |       |        |  |
| <b>Multiple input</b>  | Yes   |  |             |             |  |           |                                      |       |  |       |        |  |
| <b>Interface type</b>  | Usb   |  |             |             |  |           |                                      |       |  |       |        |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; traffic-counter action &lt;trigger&gt; sms-alert phone &lt;phone&gt;</pre>   |  |             |             |  |           |                                      |       |  |       |        |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">trigger</td> <td>threshold</td> <td>SMS alerting trigger is a threshold.</td> </tr> <tr> <td>limit</td> <td>SMS alerting trigger is a traffic limit.</td> </tr> <tr> <td>phone</td> <td>String</td> <td>Phone number for SMS alerting. Up to three phone numbers can be set.</td> </tr> </tbody> </table> | Argument   | Value       | Description | trigger  | threshold | SMS alerting trigger is a threshold. | limit | SMS alerting trigger is a traffic limit. | phone | String | Phone number for SMS alerting. Up to three phone numbers can be set. |
| Argument               | Value   | Description  |             |             |  |           |                                      |       |  |       |        |  |
| trigger                | threshold   | SMS alerting trigger is a threshold.                                 |             |             |  |           |                                      |       |  |       |        |  |
|                        | limit   | SMS alerting trigger is a traffic limit.                             |             |             |  |           |                                      |       |  |       |        |  |
| phone                  | String  | Phone number for SMS alerting. Up to three phone numbers can be set. |             |             |  |           |                                      |       |  |       |        |  |
| <b>Example</b>         | <pre>(config-if)&gt; traffic-counter action threshold sms-alert phone &gt;+71112223344 UsbQmi::TrafficCounter: "UsbQmi0": add phone number &gt;"+71112223344" for action "threshold".</pre>   |  |             |             |  |           |                                      |       |  |       |        |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.06</td> <td>The interface <b>traffic-counter action sms-alert phone</b> command has been introduced.</td> </tr> </tbody> </table>   | Version  | Description | 3.06        | The interface <b>traffic-counter action sms-alert phone</b> command has been introduced. |           |                                      |       |  |       |        |  |
| Version                | Description   |  |             |             |  |           |                                      |       |  |       |        |  |
| 3.06                   | The interface <b>traffic-counter action sms-alert phone</b> command has been introduced.  |  |             |             |  |           |                                      |       |  |       |        |  |

### 3.31.176 interface traffic-counter enable

**Description** Enable the mobile traffic counter. By default, setting is disabled.  
Command with **no** prefix disables the mobile traffic counter.

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

**Synopsis**

|  |
|--|
| <pre>(config-if)&gt; traffic-counter enable</pre>    |
| <pre>(config-if)&gt; no traffic-counter enable</pre> |

**Example**

|   |
|---|
| <pre>(config-if)&gt; traffic-counter enable UsbQmi::TrafficCounter: "UsbQmi0": enabled.</pre>     |
| <pre>(config-if)&gt; no traffic-counter enable UsbQmi::TrafficCounter: "UsbQmi0": disabled.</pre> |

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

### 3.31.177 interface traffic-counter limit

**Description** Set the traffic counter limit in megabytes, gigabytes or terabytes.

Command with **no** prefix resets configuration.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Usb

**Synopsis**

```
(config-if)> traffic-counter limit <value> <unit>
(config-if)> no traffic-counter limit
```

| Arguments | Argument | Value          | Description                                   |
|-----------|----------|----------------|---|
|           | value    | <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.
```

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

### 3.31.178 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

| <b>Interface type</b> | Usb  |   |             |             |   |                |   |
|-----------------------|--|---|-------------|-------------|---|----------------|---|
| <b>Synopsis</b>       | <pre>(config-if)&gt; traffic-counter monthly &lt;day-of-month&gt; (config-if)&gt; no traffic-counter monthly</pre>   |   |             |             |   |                |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>day-of-month</td><td><i>Integer</i></td><td>The day of the month from 1 to 31 to restart the traffic counter.</td></tr> </tbody> </table> | Argument  | Value       | Description | day-of-month  | <i>Integer</i> | The day of the month from 1 to 31 to restart the traffic counter. |
| Argument              | Value  | Description   |             |             |   |                |   |
| day-of-month          | <i>Integer</i>   | The day of the month from 1 to 31 to restart the traffic counter. |             |             |   |                |   |
| <b>Example</b>        | <pre>(config-if)&gt; traffic-counter monthly 31 UsbQmi::TrafficCounter: "UsbQmi0": set day of month to "31". (config-if)&gt; no traffic-counter monthly UsbQmi::TrafficCounter: "UsbQmi0": reset day of month.</pre>   |   |             |             |   |                |   |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.06</td><td>The <b>interface traffic-counter monthly</b> command has been introduced.</td></tr> </tbody> </table>                                       | Version   | Description | 3.06        | The <b>interface traffic-counter monthly</b> command has been introduced. |                |   |
| Version               | Description  |   |             |             |   |                |   |
| 3.06                  | The <b>interface traffic-counter monthly</b> command has been introduced.  |   |             |             |   |                |   |

### 3.31.179 interface traffic-counter set

| <b>Description</b>     | Set the current value of the traffic counter.   |   |             |             |   |                |   |      |               |   |
|------------------------|---|---|-------------|-------------|---|----------------|---|------|---------------|---|
| <b>Prefix no</b>       | No  |   |             |             |   |                |   |      |               |   |
| <b>Change settings</b> | Yes   |   |             |             |   |                |   |      |               |   |
| <b>Multiple input</b>  | No  |   |             |             |   |                |   |      |               |   |
| <b>Interface type</b>  | Usb   |   |             |             |   |                |   |      |               |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; traffic-counter set &lt;value&gt; &lt;unit&gt;</pre>   |   |             |             |   |                |   |      |               |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>value</td><td><i>Integer</i></td><td>Numeric counter value (either integer or floating point).</td></tr> <tr> <td>unit</td><td><i>String</i></td><td>Limit value units: MB, GB, TB, MiB, GiB, TiB.</td></tr> </tbody> </table> | 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. |
| 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.             |             |             |   |                |   |      |               |   |
| <b>Example</b>         | <pre>(config-if)&gt; traffic-counter set 1.54 GB UsbQmi::TrafficCounter: "UsbQmi0": set value to 1.54 GB.</pre>   |   |             |             |   |                |   |      |               |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.06</td><td>The <b>interface traffic-counter set</b> command has been introduced.</td></tr> </tbody> </table>  | Version   | Description | 3.06        | The <b>interface traffic-counter set</b> command has been introduced. |                |   |      |               |   |
| Version                | Description   |   |             |             |   |                |   |      |               |   |
| 3.06                   | The <b>interface traffic-counter set</b> command has been introduced.   |   |             |             |   |                |   |      |               |   |

### 3.31.180 interface traffic-counter threshold

| <b>Description</b>     | Set the traffic counter warning threshold.   |  |          |             |             |   |                |  |
|------------------------|--|--|----------|-------------|-------------|---|----------------|--|
|                        | Command with <b>no</b> prefix resets configuration.  |  |          |             |             |   |                |  |
| <b>Prefix no</b>       | Yes  |  |          |             |             |   |                |  |
| <b>Change settings</b> | Yes  |  |          |             |             |   |                |  |
| <b>Multiple input</b>  | No   |  |          |             |             |   |                |  |
| <b>Interface type</b>  | Usb  |  |          |             |             |   |                |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>traffic-counter threshold</b> &lt;threshold&gt; (config-if)&gt; <b>no traffic-counter threshold</b></pre>  |  |          |             |             |   |                |  |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">threshold</td> <td style="padding: 2px;"><i>Integer</i></td> <td style="padding: 2px;">Threshold value as a percentage of the limit.<br/>Can take values from 1 to 99 percent.</td> </tr> </tbody> </table> |  | Argument | Value       | Description | threshold   | <i>Integer</i> | Threshold value as a percentage of the limit.<br>Can take values from 1 to 99 percent. |
| Argument               | Value  | Description  |          |             |             |   |                |  |
| threshold              | <i>Integer</i>   | Threshold value as a percentage of the limit.<br>Can take values from 1 to 99 percent. |          |             |             |   |                |  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>traffic-counter threshold</b> 99 UsbQmi::TrafficCounter: "UsbQmi0": set threshold to 99 percent ▶ of the limit.  (config-if)&gt; <b>no traffic-counter threshold</b> UsbQmi::TrafficCounter: "UsbQmi0": reset threshold.</pre>   |  |          |             |             |   |                |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">3.06</td> <td style="padding: 2px;">The <b>interface traffic-counter threshold</b> command has been introduced.</td> </tr> </tbody> </table>  |  | Version  | Description | 3.06        | The <b>interface traffic-counter threshold</b> command has been introduced. |                |  |
| Version                | Description  |  |          |             |             |   |                |  |
| 3.06                   | The <b>interface traffic-counter threshold</b> command has been introduced.  |  |          |             |             |   |                |  |

### 3.31.181 interface traffic-shape

|                        |  |  |
|------------------------|--|--|
| <b>Description</b>     | Set the limit of data rate on a specified interface in both directions. By default speed is not limited.   |  |
|                        | Command with <b>no</b> prefix removes the setting.   |  |
| <b>Prefix no</b>       | Yes  |  |
| <b>Change settings</b> | Yes  |  |
| <b>Multiple input</b>  | No   |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>traffic-shape rate</b> &lt;rate&gt; [ <b>asymmetric</b> &lt;upstream-rate&gt; ] [ <b>schedule</b> &lt;schedule&gt; ]</pre> |  |

```
(config-if)> no traffic-shape
```

**Arguments**

| Argument      | Value                | Description   |
|---------------|----------------------|---|
| rate          | <i>Integer</i>       | Value of data download rate in Kbps. Limit should 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 name</i> | The name of the schedule that was created with <b>schedule</b> group of commands.         |

**Example**

```
(config-if)> traffic-shape rate 5000
TrafficControl::Manager: "Bridge0" interface rate limited to >
5000 kbit/s.

(config-if)> traffic-shape rate 5000 asymmetric 500
TrafficControl::Manager: "Bridge0" interface rate limited to >
5000/500 kbit/s.

(config-if)> no traffic-shape
TrafficControl::Manager: Rate limit removed for "Bridge0" >
interface.
```

**History**

| Version | Description   |
|---------|---|
| 2.05    | The interface <b>traffic-shape</b> command has been introduced. |
| 3.04    | The <b>upstream-rate</b> argument was added.                    |

### 3.31.182 interface tunnel destination

**Description**

Set the remote end of tunnel. If it is used in conjunction with an automatic **IPSec** connection associated with the tunnel, remote host becomes the initiator of an **IPSec** connection.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Interface type**

Tunnel

**Synopsis**

```
(config-if)> tunnel destination <destination>
(config-if)> no tunnel destination
```

| Arguments | Argument    | Value         | Description                                   |
|-----------|-------------|---------------|---|
|           | destination | <i>String</i> | IP address or domain name of the remote host. |

|         |  |
|---------|--|
| Example | (config-if)> <b>tunnel destination example.net</b><br>Network::Interface::Tunnel: "Gre0": destination set to ▶ example.net.<br><br>(config-if)> <b>no tunnel destination</b><br>Network::Interface::Tunnel: "Gre0": destination was reset. |
|---------|--|

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

### 3.31.183 interface tunnel eoip id

|                 |  |
|-----------------|--|
| Description     | Set identifier of EoIP tunnel.<br><br>Command with <b>no</b> prefix resets the setting.              |
| Prefix no       | Yes  |
| Change settings | Yes  |
| Multiple input  | No   |
| Interface type  | Eoip   |
| Synopsis        | <pre>(config-if)&gt; <b>tunnel eoip id &lt;id&gt;</b> (config-if)&gt; <b>no tunnel eoip id</b></pre> |

| Arguments | Argument | Value          | Description |
|-----------|----------|----------------|-------------|
|           | id       | <i>Integer</i> | Tunnel ID.  |

|         |  |
|---------|--|
| Example | (config-if)> <b>tunnel eoip id 50</b><br>Network::Interface::Tunnel: "Gre0": eoip id interface set to auto.<br><br>(config-if)> <b>no tunnel eoip id</b><br>Network::Interface::Tunnel: "Gre0": eoip id was reset. |
|---------|--|

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

### 3.31.184 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)> | <b>tunnel gre keepalive &lt;interval&gt; [count]</b> |
|--------------|--|

|              |                                |
|--------------|--------------------------------|
| (config-if)> | <b>no tunnel gre keepalive</b> |
|--------------|--------------------------------|

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| interval | <i>Integer</i> | The interval of sending keepalive packets in seconds. Can take values 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 from 1 to 20.   |

**Example**

|              |                                  |
|--------------|----------------------------------|
| (config-if)> | <b>tunnel gre keepalive 10 7</b> |
|--------------|----------------------------------|

|                            |  |
|----------------------------|--|
| Network:::Interface:::Gre: | "Gre0": set GRE keepalive to 10 s (7 ► retries). |
|----------------------------|--|

|              |                                |
|--------------|--------------------------------|
| (config-if)> | <b>no tunnel gre keepalive</b> |
|--------------|--------------------------------|

|                            |                                |
|----------------------------|--------------------------------|
| Network:::Interface:::Gre: | "Gre0": disable GRE keepalive. |
|----------------------------|--------------------------------|

|              |                               |
|--------------|-------------------------------|
| (config-if)> | <b>tunnel gre keepalive 0</b> |
|--------------|-------------------------------|

|                            |  |
|----------------------------|--|
| 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. |

### 3.31.185 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.

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

| <b>Prefix no</b>       | Yes  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
|------------------------|--|--|----------|-------------|-------------|---|----------------|--|-----------|-----------------------|----------------------------------|---------|-------------------|---------------------------------|
| <b>Change settings</b> | Yes  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>Multiple input</b>  | No   |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>Interface type</b>  | Tunnel   |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>tunnel source (auto   &lt;interface&gt;   &lt;address&gt; )</b>           (config-if)&gt; <b>no tunnel source</b></pre>  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>auto</td><td><i>Keyword</i></td><td>Set the current working WAN interface.</td></tr> <tr> <td>interface</td><td><i>Interface name</i></td><td>Full interface name or an alias.</td></tr> <tr> <td>address</td><td><i>IP-address</i></td><td>Local IP-address of the tunnel.</td></tr> </tbody> </table> |  | Argument | Value       | Description | auto  | <i>Keyword</i> | Set the current working WAN interface.   | interface | <i>Interface name</i> | Full interface name or an alias. | address | <i>IP-address</i> | Local IP-address of the tunnel. |
| Argument               | Value  | Description                            |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| auto                   | <i>Keyword</i>   | Set the current working WAN interface. |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| interface              | <i>Interface name</i>  | Full interface name or an alias.       |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| address                | <i>IP-address</i>  | Local IP-address of the tunnel.        |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>Example</b>         | <pre>(config-if)&gt; <b>tunnel source auto</b> Network::Interface::Tunnel: "Gre0": source interface set to auto.  (config-if)&gt; <b>no tunnel source</b> Network::Interface::Tunnel: "Gre0": source was reset.</pre>  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>interface tunnel source</b> command has been introduced.</td></tr> <tr> <td>2.09</td><td>The <b>auto</b> argument has been added.</td></tr> </tbody> </table>  |  | Version  | Description | 2.08        | The <b>interface tunnel source</b> command has been introduced. | 2.09           | The <b>auto</b> argument has been added. |           |                       |                                  |         |                   |                                 |
| Version                | Description  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| 2.08                   | The <b>interface tunnel source</b> command has been introduced.  |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |
| 2.09                   | The <b>auto</b> argument has been added.   |  |          |             |             |   |                |  |           |                       |                                  |         |                   |                                 |

### 3.31.186 interface tx-burst

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable Wi-Fi packet aggregation (Tx Burst). By default, the setting is disabled.<br>Command with <b>no</b> prefix disables the setting. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>tx-burst</b>           (config-if)&gt; <b>no tx-burst</b></pre>   |

**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. |

### 3.31.187 interface tx-queue length

**Description** Set the size of the queue of outgoing packets on the interface. By default 1000 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 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. |

### 3.31.188 interface tx-queue scheduler cake

**Description** Set the **CAKE** package scheduler for the interface. By default, the value **cake** is used for DSL and USB-modem interfaces, **fq\_codel** — for all others.

Command with **no** prefix resets the scheduler to default.

**Prefix no** Yes

**Change settings** Yes

| <b>Multiple input</b> | No  |         |             |      |   |
|-----------------------|---|---------|-------------|------|---|
| <b>Synopsis</b>       | <pre>(config-if)&gt; tx-queue scheduler cake (config-if)&gt; no tx-queue scheduler cake</pre>   |         |             |      |   |
| <b>Example</b>        | <pre>(config-if)&gt; tx-queue scheduler cake Network::Interface::Base: "L2TP0": set TX queue scheduler to ▶ "cake". (config-if)&gt; no tx-queue scheduler cake Network::Interface::Base: "L2TP0": set default TX queue scheduler.</pre> |         |             |      |   |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.06</td> <td>The <b>interface tx-queue scheduler cake</b> command has been introduced.</td> </tr> </tbody> </table>              | Version | Description | 3.06 | The <b>interface tx-queue scheduler cake</b> command has been introduced. |
| Version               | Description   |         |             |      |   |
| 3.06                  | The <b>interface tx-queue scheduler cake</b> command has been introduced.   |         |             |      |   |

### 3.31.189 interface tx-queue scheduler fq\_codel

| <b>Description</b>     | Set the <i>FQ_CODEL</i> package scheduler for the interface. By default, the value <i>cake</i> is used for DSL and USB-modem interfaces, <i>fq_codel</i> — for all others. Command with <b>no</b> prefix resets the scheduler to default.           |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes   |         |             |      |   |
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-if)&gt; tx-queue scheduler fq_codel (config-if)&gt; no tx-queue scheduler fq_codel</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; tx-queue scheduler fq_codel Network::Interface::Base: "L2TP0": set TX queue scheduler to ▶ "fq_codel". (config-if)&gt; no tx-queue scheduler fq_codel Network::Interface::Base: "L2TP0": set default TX queue scheduler.</pre> |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.06</td> <td>The <b>interface tx-queue scheduler fq_codel</b> command has been introduced.</td> </tr> </tbody> </table>                      | Version | Description | 3.06 | The <b>interface tx-queue scheduler fq_codel</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 3.06                   | The <b>interface tx-queue scheduler fq_codel</b> command has been introduced.   |         |             |      |   |

### 3.31.190 interface up

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable the network interface and persist the state “up” to the settings.   |
|                        | Command with <b>no</b> prefix disables the the network interface and deletes “up” from settings. Also <b>interface down</b> command can be used. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>  (config-if)&gt;   up   (config-if)&gt; no up</pre>  |
| <b>Example</b>         | <pre>(config-if)&gt; up Interface enabled.</pre>   |

| History | Version | Description  |
|---------|---------|--|
|         | 2.00    | The <b>interface up</b> command has been introduced. |

### 3.31.191 interface usb acq

|                        |   |
|------------------------|---|
| <b>Description</b>     | Lock 3G/LTE mode for Huawei USB-modems.   |
|                        | Command with <b>no</b> prefix removes the setting.                              |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | Usb   |
| <b>Synopsis</b>        | <pre>  (config-if)&gt;   usb acq &lt;acq&gt;   (config-if)&gt; no usb acq</pre> |

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

|                |   |
|----------------|---|
| <b>Example</b> | <pre>(config-if)&gt; usb acq lte Network::Interface::Usb: "UsbLte0": ACQ saved.</pre> |
|----------------|---|

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

**History**

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

### 3.31.192 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b> |
|-----------------|---------------|--------------------|
| 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**

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

### 3.31.193 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.

| <b>Prefix no</b>       | Yes  |              |             |             |   |               |              |       |               |             |
|------------------------|--|--------------|-------------|-------------|---|---------------|--------------|-------|---------------|-------------|
| <b>Change settings</b> | Yes  |              |             |             |   |               |              |       |               |             |
| <b>Multiple input</b>  | No   |              |             |             |   |               |              |       |               |             |
| <b>Interface type</b>  | Usb  |              |             |             |   |               |              |       |               |             |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>usb device-id &lt;vendor&gt; &lt;model&gt;</b><br/>(config-if)&gt; <b>no usb device-id</b></pre>   |              |             |             |   |               |              |       |               |             |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>vendor</td><td><i>String</i></td><td>Vendor info.</td></tr><tr><td>model</td><td><i>String</i></td><td>Model info.</td></tr></tbody></table> | Argument     | Value       | Description | vendor  | <i>String</i> | Vendor info. | model | <i>String</i> | Model info. |
| Argument               | Value  | Description  |             |             |   |               |              |       |               |             |
| vendor                 | <i>String</i>  | Vendor info. |             |             |   |               |              |       |               |             |
| model                  | <i>String</i>  | Model info.  |             |             |   |               |              |       |               |             |
| <b>Example</b>         | <pre>(config-if)&gt; <b>usb device-id 12d1 1001</b><br/>Device ID saved.</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>interface usb device-id</b> command has been introduced.</td></tr></tbody></table>  | Version      | Description | 2.00        | The <b>interface usb device-id</b> command has been introduced. |               |              |       |               |             |
| Version                | Description  |              |             |             |   |               |              |       |               |             |
| 2.00                   | The <b>interface usb device-id</b> command has been introduced.  |              |             |             |   |               |              |       |               |             |

### 3.31.194 interface usb power-cycle

| <b>Description</b>     | 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.  |  |       |             |       |                |  |
|------------------------|---|--|-------|-------------|-------|----------------|--|
| <b>Prefix no</b>       | No  |  |       |             |       |                |  |
| <b>Change settings</b> | No  |  |       |             |       |                |  |
| <b>Multiple input</b>  | No  |  |       |             |       |                |  |
| <b>Interface type</b>  | Usb   |  |       |             |       |                |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>usb power-cycle &lt;pause&gt;</b></pre>   |  |       |             |       |                |  |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>pause</td><td><i>Integer</i></td><td>Period of time in which usb-modem will be disabled, in milliseconds.</td></tr></tbody></table> | Argument   | Value | Description | pause | <i>Integer</i> | Period of time in which usb-modem will be disabled, in milliseconds. |
| Argument               | Value   | Description  |       |             |       |                |  |
| pause                  | <i>Integer</i>  | Period of time in which usb-modem will be disabled, in milliseconds. |       |             |       |                |  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>usb power-cycle 3000</b><br/>Network::Interface::Usb: "UsbLte0": started 3000 ms. power cycle.</pre>  |  |       |             |       |                |  |

| History | Version | Description   |
|---------|---------|---|
|         | 2.03    | The <b>interface usb power-cycle</b> command has been introduced. |

### 3.31.195 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)> | <b>usb power-fail &lt;interval&gt; ( retry &lt;pause&gt;   reboot)</b> |
|--------------|--|

| 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)> | <b>usb power-fail 60 reboot</b>   |
|              | 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. |

### 3.31.196 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

| <b>Interface type</b> | Usb  |         |             |      |  |
|-----------------------|--|---------|-------------|------|--|
| <b>Synopsis</b>       | <pre>(config-if)&gt; <b>usb wwan-force-connected</b> (config-if)&gt; <b>no usb wwan-force-connected</b></pre>  |         |             |      |  |
| <b>Example</b>        | <pre>(config-if)&gt; <b>usb wwan-force-connected</b> Network::Interface::Usb: "UsbLte0": force WWAN link status.  (config-if)&gt; <b>no usb wwan-force-connected</b> Network::Interface::Usb: "UsbLte0": unforce WWAN link status.</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>interface wwan-force-connected</b> command has been introduced.</td> </tr> </tbody> </table>                  | Version | Description | 2.12 | The <b>interface wwan-force-connected</b> command has been introduced. |
| Version               | Description  |         |             |      |  |
| 2.12                  | The <b>interface wwan-force-connected</b> command has been introduced.   |         |             |      |  |

### 3.31.197 interface vdsl snr-margin

| <b>Description</b>     | Configure the signal-to-noise ratio for VDSL line. By default, 8 value is used.<br>Command with <b>no</b> prefix resets the signal-to-noise ratio.  |  |       |             |        |                |  |
|------------------------|---|--|-------|-------------|--------|----------------|--|
| <b>Prefix no</b>       | Yes   |  |       |             |        |                |  |
| <b>Change settings</b> | Yes   |  |       |             |        |                |  |
| <b>Multiple input</b>  | No  |  |       |             |        |                |  |
| <b>Interface type</b>  | Dsl   |  |       |             |        |                |  |
| <b>Synopsis</b>        | <pre>(config-if)&gt; <b>vdsl snr-margin &lt;margin&gt;</b> (config-if)&gt; <b>no vdsl snr-margin</b></pre>  |  |       |             |        |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>margin</td> <td><i>Integer</i></td> <td>Value measured in dB and indicating the signal-to-noise ratio. Can take values in the range from 4 to 30 dB.</td> </tr> </tbody> </table> | Argument   | Value | Description | margin | <i>Integer</i> | Value measured in dB and indicating the signal-to-noise ratio. Can take values in the range from 4 to 30 dB. |
| Argument               | Value   | Description  |       |             |        |                |  |
| margin                 | <i>Integer</i>  | Value measured in dB and indicating the signal-to-noise ratio. Can take values in the range from 4 to 30 dB. |       |             |        |                |  |
| <b>Example</b>         | <pre>(config-if)&gt; <b>vdsl snr-margin 30</b> Network::Interface::Tc3262::Dsl: VDSL SNR margin is set to 30 dB.  (config-if)&gt; <b>no vdsl snr-margin</b> Network::Interface::Tc3262::Dsl: VDSL SNR margin reset to default.</pre>  |  |       |             |        |                |  |

| History | Version | Description  |
|---------|---------|--|
|         | 3.03    | The <b>interface vds snr-margin</b> command has been introduced. |

### 3.31.198 interface vga-clamp

**Description** Enable **VGA** technology adjustment. By default, adjustment is disabled.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** WiFiMaster

**Synopsis**

```
(config-if)> vga-clamp <vga-clamp>
(config-if)> no vga-clamp
```

| Arguments | Argument  | Value          | Description  |
|-----------|-----------|----------------|--|
|           | vga-clamp | <i>Integer</i> | The value of correction. Can take values in the range from 1 to 8 inclusively. |

**Example**

```
(config-if)> vga-clamp 1
Network::Interface::Rtx::WifiMaster: "WifiMaster0": VGA clamp ▶
set to 1.

(config-if)> no vga-clamp
Network::Interface::Rtx::WifiMaster: "WifiMaster0": VGA clamp ▶
disabled.

(config-if)> vga-clamp 2
Network::Interface::Rtx::WifiMaster: "WifiMaster1": VGA clamp ▶
set to 2.

(config-if)> no vga-clamp
Network::Interface::Rtx::WifiMaster: "WifiMaster1": VGA clamp ▶
disabled.
```

| History | Version | Description   |
|---------|---------|---|
|         | 2.09    | The <b>interface vga-clamp</b> command has been introduced. |

### 3.31.199 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 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. |

### 3.31.200 interface wireguard peer

**Description** Add the remote peer public key to configure the secure connection using the *WireGuard* protocol.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Interface type** Wireguard

**Group entry** (config-wg-peer)

**Synopsis**

```
(config-if)> wireguard peer <key>
```

```
(config-if)> no wireguard peer <key>
```

**Arguments**

| Argument | Value         | Description  |
|----------|---------------|--|
| key      | <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). |

**Example**

```
(config-if)> wireguard peer >
gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=
(config-wg-peer)>
```

```
(config-if)> no wireguard peer >
gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=
Wireguard::Interface: "Wireguard4": removed peer >
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm0g=". .
```

**History**

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

**3.31.200.1 interface wireguard peer allow-ips****Description**

Add the subnet of IP-addresses to which the transmission of packets inside the tunnel is allowed.

Note: You can add `0.0.0.0/0` subnet to allow transmission to any addresses.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

Wireguard

**Synopsis**

```
(config-wg-peer)> allow-ips <address> <mask>
```

```
(config-wg-peer)> no allow-ips [ <address> <mask> ]
```

**Arguments**

| Argument | Value             | Description   |
|----------|-------------------|---|
| address  | <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 >
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> allow-ips 192.168.11.0 255.255.255.0
Wireguard::Interface: "Wireguard4": add allowed IPs >
"192.168.11.0/255.255.255.0" from peer >
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

```
(config-wg-peer)> no allow-ips
Wireguard::Interface: "Wireguard4": clear allowed IPs of peer >
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

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

**3.31.200.2 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**

|  |
|--|
| <pre>(config-wg-peer)&gt; <b>endpoint</b> &lt;address&gt; [&lt;port&gt;]</pre> |
| <pre>(config-wg-peer)&gt; <b>no endpoint</b></pre>                             |

**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 ▶
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=" endpoint to ▶
"10.0.1.10:11635".
```

```
(config-wg-peer)> no endpoint
Wireguard::Interface: "Wireguard4": reset endpoint for peer ▶
"gbp1gW3pBQKssrAdah1hiib13Jl123ZM8dBIjjPmm2g=".
```

**History**

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

**3.31.200.3 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)> | <b>keepalive-interval &lt;interval&gt;</b> |
| (config-wg-peer)> | <b>no keepalive-interval</b>               |

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| interval        | <i>Integer</i> | The interval of keepalive packet sending in seconds. Can take values 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.03           | The <b>interface wireguard peer keepalive-interval</b> command has been introduced. |

### 3.31.200.4 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)> | <b>preshared-key</b> <preshared-key> |
| (config-wg-peer)> | <b>no preshared-key</b>              |

**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. |

### 3.31.201 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

| <b>Interface type</b> | Wireguard   |  |       |             |             |               |  |
|-----------------------|---|--|-------|-------------|-------------|---------------|--|
| <b>Synopsis</b>       | (config-if)> <b>wireguard private-key</b> [ <i>&lt;private-key&gt;</i> ]  |  |       |             |             |               |  |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>private-key</td> <td><i>String</i></td> <td>A new private key value. Latin letters, numbers and equal signs are acceptable. The key length is 44 characters.</td> </tr> </tbody> </table> | 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. |
| 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. |       |             |             |               |  |

|                |  |
|----------------|--|
| <b>Example</b> | (config-if)> <b>wireguard private-key</b><br>Wireguard::Interface: "Wireguard4": generated new private key.<br><br>(config-if)> <b>wireguard private-key</b> ▶<br>UshaeghezaiJ7reo8iK6ear0eomujohkeen8jahX5uo= |
|----------------|--|

| <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 private-key</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 3.03 | The <b>interface wireguard private-key</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 3.03           | The <b>interface wireguard private-key</b> command has been introduced.  |         |             |      |   |

### 3.31.202 interface wmm

**Description** Enable **WMM** on the interface.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** Access Point

|                 |                            |
|-----------------|----------------------------|
| <b>Synopsis</b> | (config-if)> <b>wmm</b>    |
|                 | (config-if)> <b>no wmm</b> |

|                |  |
|----------------|--|
| <b>Example</b> | (config-if)> <b>wmm</b><br>WMM extensions enabled. |
|----------------|--|

| <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>interface wmm</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.00 | The <b>interface wmm</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 2.00           | The <b>interface wmm</b> command has been introduced.  |         |             |      |   |

### 3.31.203 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)> | <b>wpa-eap radius secret &lt;secret&gt;</b> |
| (config-if)> | <b>no wpa-eap radius secret</b>             |

**Arguments**

| Argument | Value         | Description  |
|----------|---------------|--|
| secret   | <i>String</i> | The value of <b>RADIUS</b> shared secret. Maximum key length is 64 characters. |

**Example**

|   |   |
|---|---|
| (config-if)>  | <b>wpa-eap radius secret</b> ▶                                  |
| (→>R#G`}-JNxru'i8i lK}wBN9E^X0Xa{xF0G-N^%FaTnr S(e(q\$/lP2/tbX/#Q | Network::Interface::Rtx::WpaEap: Bridge0 RADIUS secret applied. |
| (config-if)>  | <b>no wpa-eap radius secret</b>                                 |
|   | 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. |

### 3.31.204 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)> | <b>wpa-eap radius server &lt;address&gt;[:&lt;port&gt;]</b> |
| (config-if)> | <b>no wpa-eap radius server</b>                             |

**Arguments**

| Argument | Value             | Description                      |
|----------|-------------------|----------------------------------|
| address  | <i>IP-address</i> | <b>RADIUS</b> server IP-address. |

| Argument | Value   | Description         |
|----------|---------|---------------------|
| port     | Integer | RADIUS server port. |

**Example**

```
(config-if)> wpa-eap radius server 192.168.10.10
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server set to ▶
192.168.10.10.

(config-if)> wpa-eap radius server 192.168.10.10:1111
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server set to ▶
192.168.10.10:1111.

(config-if)> no wpa-eap radius server
Network::Interface::Rtx::WpaEap: Bridge0 RADIUS server cleared.
```

**History**

| Version | Description   |
|---------|---|
| 3.01    | The interface <b>wpa-eap radius server</b> command has been introduced. |

### 3.31.205 interface wps

**Description** Enable **WPS** functionality.**Prefix no** Yes**Change settings** Yes**Multiple input** No**Interface type** WiFi**Synopsis**

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

**Example**

```
(config-if)> wps
WPS functionality enabled.
```

**History**

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

### 3.31.206 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

| <b>Change settings</b> | Yes  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Interface type</b>  | WiFi   |         |             |      |   |
| <b>Synopsis</b>        | <pre>  (config-if)&gt; wps auto-self-pin   (config-if)&gt; no wps auto-self-pin</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config-if)&gt; wps auto-self-pin Network::Interface::Rtx::Wps: an auto self PIN mode enabled.</pre>  |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.04</td><td>The <b>interface wps auto-self-pin</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.04 | The <b>interface wps auto-self-pin</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.04                   | The <b>interface wps auto-self-pin</b> command has been introduced.  |         |             |      |   |

### 3.31.207 interface wps button

| <b>Description</b>     | Start WPS process using a software button. Process takes 2 minutes or until the first connection occurred.  |  |             |             |  |      |                          |  |         |  |
|------------------------|---|--|-------------|-------------|--|------|--------------------------|--|---------|--|
| <b>Prefix no</b>       | No  |  |             |             |  |      |                          |  |         |  |
| <b>Change settings</b> | No  |  |             |             |  |      |                          |  |         |  |
| <b>Multiple input</b>  | No  |  |             |             |  |      |                          |  |         |  |
| <b>Interface type</b>  | WiFi  |  |             |             |  |      |                          |  |         |  |
| <b>Synopsis</b>        | <pre>  (config-if)&gt; wps button &lt;direction&gt;</pre>   |  |             |             |  |      |                          |  |         |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>direction</td><td>send</td><td>Send WiFi configuration.</td></tr> <tr> <td></td><td>receive</td><td>Receive WiFi configuration from Extra DSL.</td></tr> </tbody> </table> | Argument                                   | Value       | Description | direction  | send | Send WiFi configuration. |  | receive | Receive WiFi configuration from Extra DSL. |
| Argument               | Value   | Description                                |             |             |  |      |                          |  |         |  |
| direction              | send  | Send WiFi configuration.                   |             |             |  |      |                          |  |         |  |
|                        | receive   | Receive WiFi configuration from Extra DSL. |             |             |  |      |                          |  |         |  |
| <b>Example</b>         | <pre>(config-if)&gt; wps button send Sending WiFi configuration process started (software button mode).</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>interface wps button</b> command has been introduced.</td></tr> </tbody> </table>   | Version                                    | Description | 2.00        | The <b>interface wps button</b> command has been introduced. |      |                          |  |         |  |
| Version                | Description   |  |             |             |  |      |                          |  |         |  |
| 2.00                   | The <b>interface wps button</b> command has been introduced.  |  |             |             |  |      |                          |  |         |  |

## 3.31.208 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> |
|--------------|----------------------------|

| Arguments | Argument | Value  | Description |
|-----------|----------|--|-------------|
| direction | send     | Send WiFi configuration.                         |             |
|           | receive  | Receive WiFi configuration from the remote peer. |             |
| pin       | String   | PIN code of the remote peer.                     |             |

**Example**

|                                     |
|-------------------------------------|
| (config-if)> wps peer send 53794141 |
|-------------------------------------|

Network::Interface::Rtx::Wps: "WifiMaster0/AccessPoint0": peer ►  
PIN WPS session started.

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

## 3.31.209 interface wps self-pin

**Description** Start WPS process using self PIN. Process takes 2 minutes or until the first connection occurs.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** WiFi

**Synopsis**

|              |                          |
|--------------|--------------------------|
| (config-if)> | wps self-pin <direction> |
|--------------|--------------------------|

| Arguments | Argument | Value                                      | Description |
|-----------|----------|--|-------------|
| direction | send     | Send WiFi configuration.                   |             |
|           | receive  | Receive WiFi configuration from Extra DSL. |             |

**Example**

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

**History**

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

## 3.32 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**

| <b>Argument</b> | <b>Value</b>       | <b>Description</b>  |
|-----------------|--------------------|---|
| 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**

| <b>Version</b> | <b>Description</b>                             |
|----------------|--|
| 2.00           | The <b>ip arp</b> command has been introduced. |

## 3.33 ip dhcp class

| <b>Description</b>     | Access to a group of commands to configure <i>DHCP</i> vendor class (option 60). If specified class name is not found, the command tries to create it.   |                        |             |             |   |               |                        |
|------------------------|--|------------------------|-------------|-------------|---|---------------|------------------------|
|                        | Command with <b>no</b> prefix removes selected class.  |                        |             |             |   |               |                        |
| <b>Prefix no</b>       | Yes  |                        |             |             |   |               |                        |
| <b>Change settings</b> | No   |                        |             |             |   |               |                        |
| <b>Multiple input</b>  | Yes  |                        |             |             |   |               |                        |
| <b>Group entry</b>     | (config-dhcp-class)  |                        |             |             |   |               |                        |
| <b>Synopsis</b>        | <pre>(config)&gt; ip dhcp class &lt;class&gt; (config)&gt; no ip dhcp class &lt;class&gt;</pre>  |                        |             |             |   |               |                        |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Argument</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>class</td> <td><i>String</i></td> <td>The vendor-class name.</td> </tr> </tbody> </table> | Argument               | Value       | Description | class   | <i>String</i> | The vendor-class name. |
| Argument               | Value  | Description            |             |             |   |               |                        |
| class                  | <i>String</i>  | The vendor-class name. |             |             |   |               |                        |
| <b>Example</b>         | <pre>(config)&gt; ip dhcp class STB-0ne Dhcp::Server: Vendor class "STB-0ne" has been created.</pre>   |                        |             |             |   |               |                        |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Version</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>2.00</td> <td>The <b>ip dhcp class</b> command has been introduced.</td> </tr> </tbody> </table>                                    | Version                | Description | 2.00        | The <b>ip dhcp class</b> command has been introduced. |               |                        |
| Version                | Description  |                        |             |             |   |               |                        |
| 2.00                   | The <b>ip dhcp class</b> command has been introduced.  |                        |             |             |   |               |                        |

### 3.33.1 ip dhcp class option

| <b>Description</b>     | Set an option 60 to match the vendor-class.   |   |       |             |        |                |   |
|------------------------|---|---|-------|-------------|--------|----------------|---|
|                        | Command with <b>no</b> prefix removes selected option.  |   |       |             |        |                |   |
| <b>Prefix no</b>       | Yes   |   |       |             |        |                |   |
| <b>Change settings</b> | Yes   |   |       |             |        |                |   |
| <b>Multiple input</b>  | Yes   |   |       |             |        |                |   |
| <b>Synopsis</b>        | <pre>(config-dhcp-class)&gt; option &lt;number&gt; hex &lt;data&gt; (config-dhcp-class)&gt; no option &lt;number&gt;</pre>  |   |       |             |        |                |   |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Argument</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>number</td> <td><i>Integer</i></td> <td>Option number. Now the only 60 value is used.</td> </tr> </tbody> </table> | Argument                                      | Value | Description | number | <i>Integer</i> | Option number. Now the only 60 value is used. |
| Argument               | Value   | Description                                   |       |             |        |                |   |
| number                 | <i>Integer</i>  | Option number. Now the only 60 value is used. |       |             |        |                |   |

| Argument | Value         | Description         |
|----------|---------------|---------------------|
| 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. |

## 3.34 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. |
| 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**

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

## 3.35 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b> |
|-----------------|--------------|--------------------|
| name            | String       | DHCP pool name.    |

**Example**

```
(config)> ip dhcp pool test_pool
pool "test_pool" has been created.
```

**History**

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

### 3.35.1 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 name</i> | Full interface name or an alias. |

**Example**

```
(config-dhcp-pool)> bind Dsl0
pool "test_pool" bound to interface Dsl0.
```

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

### 3.35.2 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. |

### 3.35.3 ip dhcp pool class

**Description**

Access to a group of commands to configure *DHCP* vendor class for selected pool. If specified class name is not found, the command tries to create it.

To work correctly class name should be the same as for [ip dhcp class](#) command.

Command with **no** prefix removes selected class.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Group entry**

(config-dhcp-pool-class)

**Synopsis**

```
(config-dhcp-pool)> class <class>
```

```
(config-dhcp-pool)> no class <class>
```

**Arguments**

| Argument | Value  | Description            |
|----------|--------|------------------------|
| class    | String | The vendor-class name. |

**Example**

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

**History**

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

#### 3.35.3.1 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.

| <b>Prefix no</b>       | Yes   |  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
|------------------------|---|--|-------------|-------------|---|---|-----------------------|----|------------------------|----|---|------|----|--|-----|-------------------------------------|------|---------------|---------------------|
| <b>Change settings</b> | Yes   |  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
| <b>Multiple input</b>  | Yes   |  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
| <b>Synopsis</b>        | <pre>(config-dhcp-pool-class)&gt; <b>option &lt;number&gt; &lt;type&gt; &lt;data&gt;</b>   (config-dhcp-pool-class)&gt; <b>no option &lt;number&gt;</b></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">number</td><td>6</td><td>6 option, DNS server.</td></tr> <tr> <td>42</td><td>42 option, NTP server.</td></tr> <tr> <td>43</td><td>43 option, vendor specific information.</td></tr> <tr> <td rowspan="2">type</td><td>ip</td><td>Type of data is IP-address. This type is not used for 43 option.</td></tr> <tr> <td>hex</td><td>Type of data is hexadecimal number.</td></tr> <tr> <td>data</td><td><i>String</i></td><td>Value of an option.</td></tr> </tbody> </table> | 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. |
| 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.  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
| <b>Example</b>         | <pre>(config-dhcp-pool-class)&gt; <b>option 6 ip 192.168.1.1</b> Dhcp::Server: Option 6 is set to 192.168.1.1.</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>ip dhcp pool class option</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.00        | The <b>ip dhcp pool class option</b> command has been introduced. |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
| Version                | Description   |  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |
| 2.00                   | The <b>ip dhcp pool class option</b> command has been introduced.   |  |             |             |   |   |                       |    |                        |    |   |      |    |  |     |                                     |      |               |                     |

### 3.35.4 ip dhcp pool debug

| <b>Description</b>     | Add debug messages to the system log. By default, the setting is disabled.<br><br>Command with <b>no</b> prefix disables debugging.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config-dhcp-pool)&gt; <b>debug</b>   (config-dhcp-pool)&gt; <b>no debug</b></pre>   |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.01</td><td>The <b>ip dhcp pool debug</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.01 | The <b>ip dhcp pool debug</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.01                   | The <b>ip dhcp pool debug</b> command has been introduced.  |         |             |      |  |

## 3.35.5 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)> | <b>default-router &lt;address&gt;</b> |
| (config-dhcp-pool)> | <b>no default-router</b>              |

| <b>Arguments</b> | <b>Argument</b> | <b>Value</b>      | <b>Description</b>       |
|------------------|-----------------|-------------------|--------------------------|
|                  | address         | <i>IP-address</i> | Default gateway address. |

**Example**

|  |
|--|
| (config-dhcp-pool)> <b>default-router 192.168.1.88</b> |
| pool "test_pool" router address has been saved.        |

| <b>History</b> | <b>Version</b> | <b>Description</b>  |
|----------------|----------------|---|
|                | 2.00           | The <b>ip dhcp pool default-router</b> command has been introduced. |

## 3.35.6 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)> | <b>dns-server ( &lt;address1&gt; [ address2 ]   disable)</b> |
| (config-dhcp-pool)> | <b>no dns-server</b>   |

| <b>Arguments</b> | <b>Argument</b> | <b>Value</b>      | <b>Description</b>             |
|------------------|-----------------|-------------------|--------------------------------|
|                  | address1        | <i>IP-address</i> | Address of primary DNS-server. |

| Argument | Value             | Description                      |
|----------|-------------------|----------------------------------|
| 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.                                |

### 3.35.7 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)> | <b>domain &lt;domain&gt;</b> |
| (config-dhcp-pool)> | <b>no domain</b>             |

**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. |

### 3.35.8 ip dhcp pool enable

**Description** Start to use the pool in the system.

Command with **no** prefix disables pool using.

|                        |   |
|------------------------|---|
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config-dhcp-pool)&gt; enable (config-dhcp-pool)&gt; no enable</pre>     |
| <b>Example</b>         | <pre>(config-dhcp-pool)&gt; enable Dhcp::Server: pool "111" is enabled.</pre> |

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

## 3.35.9 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

|                 |   |
|-----------------|---|
| <b>Synopsis</b> | <pre>(config-dhcp-pool)&gt; lease &lt;lease&gt; (config-dhcp-pool)&gt; no lease</pre> |
|-----------------|---|

| Arguments | Argument | Value          | Description   |
|-----------|----------|----------------|---|
|           | lease    | <i>Integer</i> | Lease time in seconds. Can take values 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. |

### 3.35.10 ip dhcp pool next-server

| <b>Description</b>     | Set TFTP server address for DHCP client (option 66).<br>Command with <b>no</b> prefix removes the setting.  |                      |             |             |  |                   |                      |
|------------------------|---|----------------------|-------------|-------------|--|-------------------|----------------------|
| <b>Prefix no</b>       | Yes   |                      |             |             |  |                   |                      |
| <b>Change settings</b> | Yes   |                      |             |             |  |                   |                      |
| <b>Multiple input</b>  | No  |                      |             |             |  |                   |                      |
| <b>Interface type</b>  | Ethernet  |                      |             |             |  |                   |                      |
| <b>Synopsis</b>        | <pre>  (config-dhcp-pool)&gt; <b>next-server &lt;address&gt;</b>   (config-dhcp-pool)&gt; <b>no next-server</b></pre>   |                      |             |             |  |                   |                      |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>address</td><td><i>IP-address</i></td><td>TFTP server address.</td></tr></tbody></table>                            | Argument             | Value       | Description | address  | <i>IP-address</i> | TFTP server address. |
| Argument               | Value   | Description          |             |             |  |                   |                      |
| address                | <i>IP-address</i>   | TFTP server address. |             |             |  |                   |                      |
| <b>Example</b>         | <pre>(config-dhcp-pool)&gt; <b>next-server 10.1.1.11</b> Dhcp::Pool: "_WEBADMIN": set next server address: 10.1.1.11.  (config-dhcp-pool)&gt; <b>no next-server</b> Dhcp::Pool: "_WEBADMIN": cleared next server address.</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 dhcp pool next-server</b> command has been introduced.</td></tr></tbody></table>                            | Version              | Description | 2.11        | The <b>ip dhcp pool next-server</b> command has been introduced. |                   |                      |
| Version                | Description   |                      |             |             |  |                   |                      |
| 2.11                   | The <b>ip dhcp pool next-server</b> command has been introduced.  |                      |             |             |  |                   |                      |

### 3.35.11 ip dhcp pool option

|                        |   |
|------------------------|---|
| <b>Description</b>     | Set additional options for DHCP client.<br>Command with <b>no</b> prefix removes the setting.   |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | Yes   |
| <b>Interface type</b>  | Ethernet  |
| <b>Synopsis</b>        | <pre>  (config-dhcp-pool)&gt; <b>option &lt;number&gt; &lt;type&gt; &lt;data&gt;</b>   (config-dhcp-pool)&gt; <b>no option &lt;number&gt;</b></pre> |

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|-----------------|---------------|--|
| number          | 4             | 4 option, Time server.   |
|                 | 6             | 6 option, DNS server.  |
|                 | 42            | 42 option, NTP server.   |
|                 | 44            | 44 option, NetBIOS server.                                     |
|                 | 26            | 26 option, MTU.  |
|                 | 121           | 121 option, Classless Static Routes.                           |
|                 | 249           | 249 option, MS Routes.   |
| type            | ip            | Type of data is IP-address. It is not applicable to 26 option. |
|                 | hex           | Type of data is hexadecimal number.                            |
|                 | ascii         | Type of data is ASCII number.                                  |
|                 | mtu           | Type of data is Maximum Transmit Unit size.                    |
| data            | <i>String</i> | Value of an option.  |

**Example**

```
(config-dhcp-pool)> option 4 hex 00010203
(config-dhcp-pool)> option 4 ascii test
(config-dhcp-pool)> option 6 8.8.8.8,8.8.4.4,192.168.1.1
(config-dhcp-pool)> no option 6 8.8.8.8,8.8.4.4,192.168.1.1
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.09           | The <b>ip dhcp pool option</b> command has been introduced. |

## 3.35.12 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>    |
|-----------------|-------------------|-----------------------|
| 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**

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

### 3.35.13 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.06           | The <b>ip dhcp pool update-dns</b> command has been introduced. |

### 3.35.14 ip dhcp pool wpad

**Description**

Configure DHCP option 252 — [WPAD](#) protocol. By default, the option is disabled.

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

| <b>Prefix no</b>       | Yes  |               |             |             |   |               |               |
|------------------------|--|---------------|-------------|-------------|---|---------------|---------------|
| <b>Change settings</b> | Yes  |               |             |             |   |               |               |
| <b>Multiple input</b>  | No   |               |             |             |   |               |               |
| <b>Synopsis</b>        | <pre>(config-dhcp-pool)&gt; wpad &lt;wpad&gt; (config-dhcp-pool)&gt; no wpad</pre>   |               |             |             |   |               |               |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>wpad</td><td><i>String</i></td><td>URL of proxy.</td></tr> </tbody> </table>        | Argument      | Value       | Description | wpad  | <i>String</i> | URL of proxy. |
| Argument               | Value  | Description   |             |             |   |               |               |
| wpad                   | <i>String</i>  | URL of proxy. |             |             |   |               |               |
| <b>Example</b>         | <pre>(config-dhcp-pool)&gt; wpad http://wpad/wpad.dat Dhcp::Pool: WPAD option has been saved.</pre>  |               |             |             |   |               |               |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.05</td><td>The <b>ip dhcp pool wpad</b> command has been introduced.</td></tr> </tbody> </table> | Version       | Description | 2.05        | The <b>ip dhcp pool wpad</b> command has been introduced. |               |               |
| Version                | Description  |               |             |             |   |               |               |
| 2.05                   | The <b>ip dhcp pool wpad</b> command has been introduced.  |               |             |             |   |               |               |

## 3.36 ip dhcp relay lan

| <b>Description</b>     | 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 <b>no</b> prefix disables the DHCP relay on the specified interface. If you use no argument, the DHCP relay will be removed from all interfaces.   |  |       |             |           |                       |  |
| <b>Prefix no</b>       | Yes   |  |       |             |           |                       |  |
| <b>Change settings</b> | Yes   |  |       |             |           |                       |  |
| <b>Multiple input</b>  | Yes   |  |       |             |           |                       |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip dhcp relay lan &lt;interface&gt; (config)&gt; no ip dhcp relay lan [ interface ]</pre>   |  |       |             |           |                       |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>interface</td><td><i>Interface name</i></td><td>Full name or an alias of Ethernet interface, through which DHCP relay will accept requests from clients.</td></tr> </tbody> </table> | Argument   | Value | Description | interface | <i>Interface name</i> | Full name or an alias of Ethernet interface, through which DHCP relay will accept requests from clients. |
| Argument               | Value   | Description  |       |             |           |                       |  |
| interface              | <i>Interface name</i>   | Full name or an alias of Ethernet interface, through which DHCP relay will accept requests from clients. |       |             |           |                       |  |
| <b>Example</b>         | <pre>(config)&gt; ip dhcp relay lan Home added LAN interface Home.</pre>  |  |       |             |           |                       |  |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>ip dhcp relay lan</b> command has been introduced. |

## 3.37 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)> | <b>ip dhcp relay server &lt;address&gt;</b> |
| (config)> | <b>no ip dhcp relay server [ address ]</b>  |

**Arguments**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>                     |
|-----------------|-------------------|--|
| 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**

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

## 3.38 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)> | <b>ip dhcp relay wan &lt;interface&gt;</b> |
|-----------|--|

```
(config)> no ip dhcp relay wan [ interface ]
```

**Arguments**

| Argument  | Value                 | Description  |
|-----------|-----------------------|--|
| interface | <i>Interface name</i> | Full name or an alias of Ethernet interface, on which requests from the DHCP-clients will be sent. |

**Example**

```
(config)> ip dhcp relay wan Dsl0
using WAN interface Dsl0.
```

**History**

| Version | Description   |
|---------|---|
| 2.00    | The <b>ip dhcp relay wan</b> command has been introduced. |

## 3.39 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. |

## 3.40 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.

| <b>Prefix no</b>       | Yes  |  |             |             |  |                |  |
|------------------------|--|--|-------------|-------------|--|----------------|--|
| <b>Change settings</b> | Yes  |  |             |             |  |                |  |
| <b>Multiple input</b>  | No   |  |             |             |  |                |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip flow-cache timeout active &lt;timeout&gt; (config)&gt; no ip flow-cache timeout active</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>The timeout value, in minutes. Can take value in the range from 1 to 30.</td></tr> </tbody> </table> | Argument   | Value       | Description | timeout  | <i>Integer</i> | The timeout value, in minutes. Can take value in the range from 1 to 30. |
| Argument               | Value  | Description  |             |             |  |                |  |
| timeout                | <i>Integer</i>   | The timeout value, in minutes. Can take value in the range from 1 to 30. |             |             |  |                |  |
| <b>Example</b>         | <pre>(config)&gt; ip flow-cache timeout active 1 Netflow::Manager: Active timeout set to "1" min.  (config)&gt; no ip flow-cache timeout active Netflow::Manager: Active timeout reset to "10" min.</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 flow-cache timeout active</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.11        | The <b>ip flow-cache timeout active</b> command has been introduced. |                |  |
| Version                | Description  |  |             |             |  |                |  |
| 2.11                   | The <b>ip flow-cache timeout active</b> command has been introduced.   |  |             |             |  |                |  |

## 3.41 ip flow-cache timeout inactive

| <b>Description</b>     | Set timeout of inactive sessions in cache. By default, the value 20 is used.<br><br>Command with <b>no</b> prefix resets the setting to default.  |   |       |             |         |                |   |
|------------------------|---|---|-------|-------------|---------|----------------|---|
| <b>Prefix no</b>       | Yes   |   |       |             |         |                |   |
| <b>Change settings</b> | Yes   |   |       |             |         |                |   |
| <b>Multiple input</b>  | No  |   |       |             |         |                |   |
| <b>Synopsis</b>        | <pre>(config)&gt; ip flow-cache timeout inactive &lt;timeout&gt; (config)&gt; no ip flow-cache timeout inactive</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>The timeout value, in seconds. Can take value in the range from 1 to 600.</td></tr> </tbody> </table> | Argument  | Value | Description | timeout | <i>Integer</i> | The timeout value, in seconds. Can take value in the range from 1 to 600. |
| Argument               | Value   | Description   |       |             |         |                |   |
| timeout                | <i>Integer</i>  | The timeout value, in seconds. Can take value in the range from 1 to 600. |       |             |         |                |   |
| <b>Example</b>         | <pre>(config)&gt; ip flow-cache timeout inactive 1 Netflow::Manager: Inactive timeout set to "1" s.</pre>   |   |       |             |         |                |   |

```
(config)> no ip flow-cache timeout inactive
Netflow::Manager: Inactive timeout reset to "20" s.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.11           | The <b>ip flow-cache timeout inactive</b> command has been introduced. |

## 3.42 ip flow-export destination

| <b>Description</b>     | Set parameters of <i>NetFlow</i> collector.   |  |              |                    |         |                   |                                   |      |                |  |
|------------------------|---|--|--------------|--------------------|---------|-------------------|-----------------------------------|------|----------------|--|
|                        | Command with <b>no</b> prefix removes collector's parameters.   |  |              |                    |         |                   |                                   |      |                |  |
| <b>Prefix no</b>       | Yes   |  |              |                    |         |                   |                                   |      |                |  |
| <b>Change settings</b> | Yes   |  |              |                    |         |                   |                                   |      |                |  |
| <b>Multiple input</b>  | No  |  |              |                    |         |                   |                                   |      |                |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip flow-export destination &lt;address&gt; &lt;port&gt; (config)&gt; no ip flow-export destination</pre>  |  |              |                    |         |                   |                                   |      |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th><b>Argument</b></th><th><b>Value</b></th><th><b>Description</b></th></tr> </thead> <tbody> <tr> <td>address</td><td><i>IP-address</i></td><td>IP-address of the data collector.</td></tr> <tr> <td>port</td><td><i>Integer</i></td><td>Collector's UDP port number. Can take values 2055, 2056, 4432, 4739, 9025, 9026, 9995, 9996, 6343.</td></tr> </tbody> </table> | <b>Argument</b>  | <b>Value</b> | <b>Description</b> | 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. |
| <b>Argument</b>        | <b>Value</b>  | <b>Description</b>   |              |                    |         |                   |                                   |      |                |  |
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.11           | The <b>ip flow-export destination</b> command has been introduced. |

## 3.43 ip flow-export version

|                    |   |
|--------------------|---|
| <b>Description</b> | Set version of <i>NetFlow</i> collector. By default, 5 value is used. |
|                    | Command with <b>no</b> prefix resets version to default.              |

| <b>Prefix no</b>       | Yes  |                      |             |             |  |        |                      |
|------------------------|--|----------------------|-------------|-------------|--|--------|----------------------|
| <b>Change settings</b> | Yes  |                      |             |             |  |        |                      |
| <b>Multiple input</b>  | No   |                      |             |             |  |        |                      |
| <b>Synopsis</b>        | <pre>  (config)&gt; ip flow-export version &lt;version&gt;   (config)&gt; no ip flow-export version</pre>  |                      |             |             |  |        |                      |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>version</td><td>String</td><td>Version of protocol.</td></tr></tbody></table>          | Argument             | Value       | Description | version  | String | Version of protocol. |
| Argument               | Value  | Description          |             |             |  |        |                      |
| version                | String   | Version of protocol. |             |             |  |        |                      |
| <b>Example</b>         | <pre>(config)&gt; ip flow-export version 9 Netflow::Manager: Set export protocol version to 9.  (config)&gt; no ip flow-export version Netflow::Manager: Reset export version to 5.</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>ip flow-export version</b> command has been introduced.</td></tr></tbody></table> | Version              | Description | 3.05        | The <b>ip flow-export version</b> command has been introduced. |        |                      |
| Version                | Description  |                      |             |             |  |        |                      |
| 3.05                   | The <b>ip flow-export version</b> command has been introduced.   |                      |             |             |  |        |                      |

## 3.44 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. |

### 3.44.1 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)> | <b>client-charset &lt;charset&gt;</b> |
| (config-ftp)> | <b>no client-charset</b>              |

| Arguments | Argument | Value       | Description    |
|-----------|----------|-------------|----------------|
|           | charset  | utf-8       | Encoding type. |
|           |          | utf-16      |                |
|           |          | utf-16le    |                |
|           |          | utf-16be    |                |
|           |          | utf-32      |                |
|           |          | utf-32le    |                |
|           |          | utf-32be    |                |
|           |          | iso-8859-1  |                |
|           |          | iso-8859-2  |                |
|           |          | iso-8859-3  |                |
|           |          | iso-8859-4  |                |
|           |          | iso-8859-5  |                |
|           |          | iso-8859-6  |                |
|           |          | iso-8859-7  |                |
|           |          | iso-8859-8  |                |
|           |          | iso-8859-9  |                |
|           |          | iso-8859-10 |                |
|           |          | iso-8859-11 |                |
|           |          | iso-8859-12 |                |
|           |          | iso-8859-13 |                |
|           |          | iso-8859-14 |                |
|           |          | iso-8859-15 |                |
|           |          | iso-8859-16 |                |

| Argument | Value    | Description |
|----------|----------|-------------|
|          | 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   |             |
|          | 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 |             |

| Argument | Value         | Description |
|----------|---------------|-------------|
|          | 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. |

### 3.44.2 ip ftp lockout-policy

**Description** Set FTP-server bruteforce detection parameters for public interfaces. By default, feature is enabled.

Command with **no** prefix disables bruteforce detection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

|  |
|--|
| <pre>(config-ftp)&gt; <b>lockout-policy &lt;threshold&gt; [&lt;duration&gt;]</b> [&lt;observation-window&gt;]]</pre> |
| <pre>(config-ftp)&gt; <b>no lockout-policy</b></pre>   |

| Arguments | Argument           | Value          | Description  |
|-----------|--------------------|----------------|--|
|           | threshold          | <i>Integer</i> | The number of failed attempts to log in. By default, 5 value is used.                        |
|           | duration           | <i>Integer</i> | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. |
|           | observation-window | <i>Integer</i> | Duration of suspicious activity observation in minutes. By default, 3 value is used.         |

|         |  |
|---------|--|
| Example | (config-ftp)> <b>lockout-policy 10 30 2</b><br>Ftp::Server: Bruteforce detection is enabled. |
|         | (config-ftp)> <b>no lockout-policy</b><br>Ftp::Server: Bruteforce detection is disabled.     |

| History | Version | Description   |
|---------|---------|---|
|         | 2.12    | The <b>ip ftp lockout-policy</b> command has been introduced. |

### 3.44.3 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)> | <b>permissive</b>    |
| (config-ftp)> | <b>no permissive</b> |

**Example**

|                                    |
|------------------------------------|
| (config-ftp)> <b>permissive</b>    |
| (config-ftp)> <b>no permissive</b> |

| History | Version | Description   |
|---------|---------|---|
|         | 2.08    | The <b>ip ftp permissive</b> command has been introduced. |

## 3.44.4 ip ftp security-level

| <b>Description</b>     | Set FTP security level. By default, private value is set.   |   |          |             |             |   |         |   |         |         |   |           |         |   |
|------------------------|---|---|----------|-------------|-------------|---|---------|---|---------|---------|---|-----------|---------|---|
| <b>Prefix no</b>       | No  |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Change settings</b> | Yes   |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Multiple input</b>  | No  |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Interface type</b>  | IP  |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Synopsis</b>        | <pre>(config-ftp)&gt; security-level (public   private   protected)</pre>   |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>public</td> <td>Keyword</td> <td>Access to the FTP-server is allowed for public, private and protected interfaces.</td> </tr> <tr> <td>private</td> <td>Keyword</td> <td>Access to the FTP-server is allowed for private interfaces.</td> </tr> <tr> <td>protected</td> <td>Keyword</td> <td>Access to the FTP-server is allowed for private and protected interfaces.</td> </tr> </tbody> </table> |   | Argument | Value       | Description | public  | Keyword | Access to the FTP-server is allowed for public, private and protected interfaces. | private | Keyword | Access to the FTP-server is allowed for private interfaces. | protected | Keyword | Access to the FTP-server is allowed for private and protected interfaces. |
| Argument               | Value   | Description   |          |             |             |   |         |   |         |         |   |           |         |   |
| public                 | Keyword   | Access to the FTP-server is allowed for public, private and protected interfaces. |          |             |             |   |         |   |         |         |   |           |         |   |
| private                | Keyword   | Access to the FTP-server is allowed for private interfaces.                       |          |             |             |   |         |   |         |         |   |           |         |   |
| protected              | Keyword   | Access to the FTP-server is allowed for private and protected interfaces.         |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>Example</b>         | <pre>(config-ftp)&gt; security-level protected Ftp::Manager: Security level changed to protected.</pre>   |   |          |             |             |   |         |   |         |         |   |           |         |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.08</td> <td>The <b>ip ftp security-level</b> command has been introduced.</td> </tr> </tbody> </table>  |   | Version  | Description | 2.08        | The <b>ip ftp security-level</b> command has been introduced. |         |   |         |         |   |           |         |   |
| Version                | Description   |   |          |             |             |   |         |   |         |         |   |           |         |   |
| 2.08                   | The <b>ip ftp security-level</b> command has been introduced.   |   |          |             |             |   |         |   |         |         |   |           |         |   |

## 3.45 ip host

| <b>Description</b>     | Add a domain name and address as a DNS-record.  |                          |          |       |             |        |        |                          |
|------------------------|---|--------------------------|----------|-------|-------------|--------|--------|--------------------------|
| <b>Prefix no</b>       | Yes   |                          |          |       |             |        |        |                          |
| <b>Change settings</b> | Yes   |                          |          |       |             |        |        |                          |
| <b>Multiple input</b>  | Yes   |                          |          |       |             |        |        |                          |
| <b>Synopsis</b>        | <pre>(config)&gt; ip host &lt;domain&gt; &lt;address&gt; (config)&gt; no ip host [ &lt;domain&gt; &lt;address&gt; ]</pre>   |                          |          |       |             |        |        |                          |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>domain</td> <td>String</td> <td>A domain name of a host.</td> </tr> </tbody> </table> |                          | Argument | Value | Description | domain | String | A domain name of a host. |
| Argument               | Value   | Description              |          |       |             |        |        |                          |
| domain                 | String  | A domain name of a host. |          |       |             |        |        |                          |

| Argument | Value             | Description              |
|----------|-------------------|--------------------------|
| 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. |

## 3.46 ip hotspot

**Description** Enter the Hotspot configuration command group.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** IP

**Group entry** (config-hotspot)

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

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

**History**

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

### 3.46.1 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

| <b>Interface type</b> | IP   |                                  |             |             |  |                       |                                  |
|-----------------------|--|----------------------------------|-------------|-------------|--|-----------------------|----------------------------------|
| <b>Synopsis</b>       | <pre>(config-hotspot)&gt; auto-scan interface &lt;interface&gt; (config-hotspot)&gt; no auto-scan interface &lt;interface&gt;</pre>  |                                  |             |             |  |                       |                                  |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>interface</td><td><i>Interface name</i></td><td>Full interface name or an alias.</td></tr> </tbody> </table>  | Argument                         | Value       | Description | interface  | <i>Interface name</i> | Full interface name or an alias. |
| Argument              | Value  | Description                      |             |             |  |                       |                                  |
| interface             | <i>Interface name</i>  | Full interface name or an alias. |             |             |  |                       |                                  |
| <b>Example</b>        | <pre>(config-hotspot)&gt; auto-scan interface WifiMaster0/AccessPoint1 Hotspot::Discovery::Manager: Subnetwork scanning on interface &gt; "WifiMaster0/AccessPoint1" is unchanged.  (config-hotspot)&gt; auto-scan interface WifiMaster0/AccessPoint1 Hotspot::Discovery::Manager: Subnetwork scanning on interface &gt; "WifiMaster0/AccessPoint1" is disabled.</pre> |                                  |             |             |  |                       |                                  |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>ip hotspot auto-scan interface</b> command has been introduced.</td></tr> </tbody> </table>  | Version                          | Description | 2.08        | The <b>ip hotspot auto-scan interface</b> command has been introduced. |                       |                                  |
| Version               | Description  |                                  |             |             |  |                       |                                  |
| 2.08                  | The <b>ip hotspot auto-scan interface</b> command has been introduced.   |                                  |             |             |  |                       |                                  |

## 3.46.2 ip hotspot auto-scan interval

| <b>Description</b>     | Set interval for probes of online hosts.<br><br>Command with <b>no</b> prefix resets setting to default.  |  |       |             |          |                |  |
|------------------------|---|--|-------|-------------|----------|----------------|--|
| <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-hotspot)&gt; auto-scan interval &lt;interval&gt; (config-hotspot)&gt; no auto-scan interval</pre>  |  |       |             |          |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>interval</td><td><i>Integer</i></td><td>Auto-scan probe interval in seconds. By default, the value 30 is used.</td></tr> </tbody> </table> | Argument   | Value | Description | interval | <i>Integer</i> | Auto-scan probe interval in seconds. By default, the value 30 is used. |
| Argument               | Value   | Description  |       |             |          |                |  |
| interval               | <i>Integer</i>  | Auto-scan probe interval in seconds. By default, the value 30 is used. |       |             |          |                |  |
| <b>Example</b>         | <pre>(config-hotspot)&gt; auto-scan interval 10 Hotspot::Discovery::Manager: Auto-scan probe interval is set to &gt; 10 s.</pre>  |  |       |             |          |                |  |

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

**History**

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

### 3.46.3 ip hotspot auto-scan passive

**Description** Set passive autoscan rate in hosts per seconds.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

|   |
|---|
| (config-hotspot)> <b>auto-scan passive &lt;rate&gt; hps</b> |
| (config-hotspot)> <b>no auto-scan passive</b>               |

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>                                      |
|-----------------|----------------|---|
| rate            | <i>Integer</i> | Passive autoscan rate. By default, the value 3 is used. |

**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**

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

### 3.46.4 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.

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>  | IP  |   |             |             |  |                |   |
| <b>Synopsis</b>        | <pre>(config-hotspot)&gt; auto-scan timeout &lt;timeout&gt; (config-hotspot)&gt; no auto-scan timeout</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>Offline timeout in seconds. By default, the value 35 is used.</td></tr> </tbody> </table>       | Argument  | Value       | Description | timeout  | <i>Integer</i> | Offline timeout in seconds. By default, the value 35 is used. |
| Argument               | Value   | Description   |             |             |  |                |   |
| timeout                | <i>Integer</i>  | Offline timeout in seconds. By default, the value 35 is used. |             |             |  |                |   |
| <b>Example</b>         | <pre>(config-hotspot)&gt; auto-scan timeout 31 Hotspot::Discovery::Manager: Auto-scan host offline timeout is set to 31 s.  (config-hotspot)&gt; no auto-scan timeout Hotspot::Discovery::Manager: Auto-scan host offline timeout reset to default.</pre> |   |             |             |  |                |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>ip hotspot auto-scan timeout</b> command has been introduced.</td></tr> </tbody> </table>   | Version   | Description | 2.08        | The <b>ip hotspot auto-scan timeout</b> command has been introduced. |                |   |
| Version                | Description   |   |             |             |  |                |   |
| 2.08                   | The <b>ip hotspot auto-scan timeout</b> command has been introduced.  |   |             |             |  |                |   |

### 3.46.5 ip hotspot default-policy

|                        |  |
|------------------------|--|
| <b>Description</b>     | Define the Hotspot policy for all interfaces or assign IP Policy. Policy applies to all hosts that have no explicitly configured access rule, <b>ip hotspot policy</b> .<br><br>Default policy: permit.<br><br>Command with <b>no</b> prefix resets policy to default. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | Yes  |
| <b>Interface type</b>  | IP   |
| <b>Synopsis</b>        | <pre>(config-hotspot)&gt; default-policy (&lt;access&gt;   &lt;policy&gt;) (config-hotspot)&gt; no default-policy</pre>  |

| Arguments | Argument           | Value | Description                    |
|-----------|--------------------|-------|--------------------------------|
| access    | permit             |       | Permit access to the internet. |
|           | deny               |       | Deny access to the internet.   |
| policy    | <i>Policy name</i> |       | Name of IP Policy profile.     |

**Example**

```
(config-hotspot)> default-policy permit
FHotspot::Manager: Default policy "permit" applied.
```

```
(config-hotspot)> default-policy deny
Hotspot::Manager: Default policy "deny" applied.
```

```
(config-hotspot)> default-policy Policy0
Hotspot::Manager: Default policy "Policy0" applied.
```

```
(config-hotspot)> no default-policy
Hotspot::Manager: Default policy cleared.
```

**History**

| Version | Description   |
|---------|---|
| 2.09    | The <b>ip hotspot default-policy</b> command has been introduced. |
| 2.12    | Argument <b>policy</b> was added.                                 |

## 3.46.6 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**

|   |
|---|
| <pre>(config-hotspot)&gt; <b>host &lt;mac&gt; (&lt;access&gt;   <b>schedule</b> &lt;schedule&gt;   <b>policy</b> &lt;policy&gt;)</b></pre><br><pre>(config-hotspot)&gt; <b>no host &lt;mac&gt; (&lt;access&gt;   <b>schedule</b>   <b>policy</b>)</b></pre> |
|---|

**Arguments**

| Argument | Value              | Description  |
|----------|--------------------|--|
| mac      | <i>MAC-address</i> | Host MAC address. Host must be registered via <a href="#">known host</a> in advance. |
| access   | permit             | Permit access to the internet.   |

| Argument | Value                | Description   |
|----------|----------------------|---|
|          | deny                 | Deny access to the internet.  |
| schedule | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> group of commands. |
| policy   | <i>Policy name</i>   | 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 <b>permit</b> , <b>deny</b> , <b>schedule</b> , <b>policy</b> were added. |

### 3.46.7 ip hotspot host service-class

**Description** Assign a specific class to all traffic bound to a registered host. The class is represented by an integer from 1 to 6. Registration of a host is performed in advance by the **known host** command.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config-hotspot)> host <mac> service-class <service-class>
(config-hotspot)> no host <mac> service-class
```

**Arguments**

| Argument      | Value       | Description  |
|---------------|-------------|--|
| mac           | MAC-address | Host MAC-address.                                  |
| service-class | 1           | Minimum latency (VoIP).                            |
|               | 2           | Real-time interactive (Games, Video conferencing). |
|               | 3           | Broadcast services (YouTube, NetFlix).             |
|               | 4           | Low latency data (Database, SSH).                  |
|               | 5           | High-throughput data (Web traffic).                |
|               | 6           | Low-priority data (File sharing, BitTorrent).      |

**Example**

```
(config-hotspot)> host 04:d4:c4:54:bc:11 service-class 3
Hotspot::Manager: Service class "3" applied to host ▶
"04:d4:c4:54:bc:11".
```

```
(config-hotspot)> no host 04:d4:c4:54:bc:59 service-class
Hotspot::Manager: Service class removed from host ▶
"04:d4:c4:54:bc:59".
```

**History**

| Version | Description   |
|---------|---|
| 3.05    | The <b>ip hotspot host service-class</b> command has been introduced. |

## 3.46.8 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**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                        |
|-----------------|-----------------------|---|
| interface       | <i>Interface name</i> | Ethernet interface full name or an alias. |
| access          | permit                | Permit access to the internet.            |
|                 | deny                  | Deny access to the internet.              |
| policy          | <i>Policy name</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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.06           | The <b>ip hotspot policy</b> command has been introduced. |
| 2.12           | Argument <b>policy</b> was added.                         |

### 3.46.9 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)> <b>wake &lt;mac&gt;</b> |
|---|

**Arguments**

| <b>Argument</b> | <b>Value</b>       | <b>Description</b> |
|-----------------|--------------------|--------------------|
| mac             | <i>MAC-address</i> | 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**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.08           | The <b>ip hotspot wake</b> command has been introduced. |

## 3.47 ip http lockout-policy

**Description** Set HTTP bruteforce detection parameters for public interfaces. By default, feature is enabled.

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          | <i>Integer</i> | The number of failed attempts to log in. By default, 5 value is used.                        |
| duration           | <i>Integer</i> | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. |
| observation-window | <i>Integer</i> | Duration of suspicious activity observation in minutes. By default, 3 value is used.         |

**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.
```

**History**

| Version | Description  |
|---------|--|
| 2.08    | The <b>ip http lockout-policy</b> command has been introduced. |

## 3.48 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

| <b>Change settings</b> | Yes   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Interface type</b>  | IP  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip http log access (config)&gt; no ip http log access</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; ip http log access Http::Manager: Enabled access logging.  (config)&gt; no ip http log access Http::Manager: Disabled access logging.</pre>   |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.00</td> <td>The <b>ip http log access</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.00 | The <b>ip http log access</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.00                   | The <b>ip http log access</b> command has been introduced.  |         |             |      |  |

## 3.49 ip http log auth

| <b>Description</b>     | Enable logging of failed authorization attempts to the system. By default, feature is disabled.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
|                        | Command with <b>no</b> prefix disables logging.   |         |             |      |  |
| <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 log auth (config)&gt; no ip http log auth</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; ip http log auth Http::Manager: Auth logging enabled.  (config)&gt; no ip http log auth Http::Manager: Auth logging disabled.</pre>   |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.08</td> <td>The <b>ip http log auth</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.08 | The <b>ip http log auth</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.08                   | The <b>ip http log auth</b> command has been introduced.  |         |             |      |  |

## 3.50 ip http log webdav

| <b>Description</b>     | Enable logging of failed connection attempts to the <a href="#">WebDAV</a> server. By default, feature is disabled.  |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
|                        | Command with <b>no</b> prefix disables logging.  |         |             |      |  |
| <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 log webdav (config)&gt; no ip http log webdav</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; ip http log webdav WebDav::Server: Enabled request tracing.  (config)&gt; no ip http log webdav WebDav::Server: Disabled request tracing.</pre>  |         |             |      |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">3.04</td> <td style="padding: 2px;">The <b>ip http log webdav</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.04 | The <b>ip http log webdav</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 3.04                   | The <b>ip http log webdav</b> command has been introduced.   |         |             |      |  |

## 3.51 ip http port

| <b>Description</b>     | Assign HTTP port for Web interface of Extra DSL. By default, 80 value is used.   |                |       |             |      |                |                |
|------------------------|--|----------------|-------|-------------|------|----------------|----------------|
|                        | Command with <b>no</b> prefix resets HTTP port to default.   |                |       |             |      |                |                |
| <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 port &lt;port&gt; (config)&gt; no ip http port</pre>   |                |       |             |      |                |                |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px;">port</td> <td style="padding: 2px;"><i>Integer</i></td> <td style="padding: 2px;">New HTTP port.</td> </tr> </tbody> </table> | Argument       | Value | Description | port | <i>Integer</i> | New HTTP port. |
| 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. |

## 3.52 ip http proxy

**Description**

Access to a group of commands to configure HTTP proxy. If the proxy is not found, the command tries to create it.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Interface type**

IP

**Group entry**

(config-http-proxy)

**Synopsis**

```
(config)> ip http proxy <name>
```

```
(config)> no ip http proxy <name>
```

**Arguments**

| Argument | Value  | Description      |
|----------|--------|------------------|
| name     | String | HTTP proxy name. |

**Example**

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

**History**

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

### 3.52.1 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

| <b>Change settings</b> | Yes   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Interface type</b>  | IP  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-http-proxy)&gt; auth<br/>(config-http-proxy)&gt; no auth</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-http-proxy)&gt; auth<br/>Http::Manager: Proxy password auth is enabled.<br/><br/>(config-http-proxy)&gt; no auth<br/>Http::Manager: Proxy password auth is disabled.</pre> |         |             |      |   |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.10</td><td>The ip http proxy auth command has been introduced.</td></tr></tbody></table>            | Version | Description | 2.10 | The ip http proxy auth command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.10                   | The ip http proxy auth command has been introduced.   |         |             |      |   |

## 3.52.2 ip http proxy domain

| <b>Description</b>     | Set domain name that specifies the <i>FQDN</i> of the virtual host.<br><br>Command with <b>no</b> prefix removes the setting.  |                |       |             |        |               |                |
|------------------------|--|----------------|-------|-------------|--------|---------------|----------------|
| <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-http-proxy)&gt; domain static &lt;domain&gt;<br/>(config-http-proxy)&gt; no domain</pre>  |                |       |             |        |               |                |
| <b>Arguments</b>       | <table><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>domain</td><td><i>String</i></td><td>A domain name.</td></tr></tbody></table>   | Argument       | Value | Description | domain | <i>String</i> | A domain name. |
| Argument               | Value  | Description    |       |             |        |               |                |
| domain                 | <i>String</i>  | A domain name. |       |             |        |               |                |
| <b>Example</b>         | <pre>(config-http-proxy)&gt; domain static example.net<br/>Http::Manager: Configured base domain for proxy: test.<br/><br/>(config-http-proxy)&gt; no domain<br/>Http::Manager: Removed ndns domain for proxy: test.</pre> |                |       |             |        |               |                |

**History**

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

### 3.52.3 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)> | <b>domain</b> <b>ndns</b>    |
| (config-http-proxy)> | <b>no domain</b> <b>ndns</b> |

**Example**

|  |                           |
|--|---------------------------|
| (config-http-proxy)>                                   | <b>domain</b> <b>ndns</b> |
| Http::Manager: Configured ndns domain for proxy: test. |                           |

|   |                  |
|---|------------------|
| (config-http-proxy)>                                | <b>no domain</b> |
| Http::Manager: Removed ndns domain for proxy: test. |                  |

**History**

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

### 3.52.4 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)> | <b>force-host</b> < <i>force-host</i> > |
|----------------------|---|

```
(config-http-proxy)> no force-host
```

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>         |
|-----------------|---------------|----------------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.06           | The <b>ip http proxy force-host</b> command has been introduced. |

### 3.52.5 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.13           | The <b>ip http proxy preserve-host</b> command has been introduced. |

## 3.52.6 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)> | <b>security-level (public   private)</b> |
| (config-http-proxy)> | <b>no security-level</b>                 |

| Arguments | Argument | Value   | Description   |
|-----------|----------|---------|---|
|           | public   | Keyword | Access to the HTTP proxy is allowed for public, private and protected interfaces. |
|           | private  | Keyword | Access to the HTTP proxy is allowed for private interfaces only.                  |

**Example**

|                       |                              |
|-----------------------|------------------------------|
| (config-http-proxy)>  | <b>security-level public</b> |
| Http::Proxy: "test1": | set public security level.   |
| (config-http-proxy)>  | <b>no security-level</b>     |
| Http::Proxy: "test1": | unset public security level. |

| History | Version | Description  |
|---------|---------|--|
|         | 3.05    | The <b>ip http proxy security-level</b> command has been introduced. |

## 3.52.7 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)> | <b>upstream (http   https) (&lt;mac&gt;   &lt;ip&gt;   &lt;fqdn&gt;) [&lt;port&gt;]</b> |
|----------------------|---|

```
(config-http-proxy)> no upstream
```

**Arguments**

| <b>Argument</b> | <b>Value</b>       | <b>Description</b>          |
|-----------------|--------------------|-----------------------------|
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.08           | The <b>ip http proxy upstream</b> command has been introduced. |
| 3.05           | <b>https</b> keyword was added.                                |

### 3.52.8 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. |

## 3.53 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)> | <b>ip http security-level (public [ssl]   private   protected)</b> |
|-----------|--|

| 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)> <b>ip http security-level protected</b>   |
| Http::Manager: Security level changed to protected. |

|  |
|--|
| (config)> <b>ip http security-level public ssl</b> |
| 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. |
|------|---------------------------------|

## 3.54 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)> | <b>ip http ssl acme get [ &lt;domain&gt; ]</b> |
|-----------|--|

| Arguments | Argument | Value  | Description          |
|-----------|----------|--------|----------------------|
|           | domain   | String | KeenDNS domain name. |

**Example**

|  |
|--|
| (config)> <b>ip http ssl acme get mytest.keenetic.pro</b><br>Acme::Client: Obtaining certificate for domain ▶<br>"mytest.keenetic.pro" is started. |
|--|

| History | Version | Description  |
|---------|---------|--|
|         | 2.11    | The <b>ip http ssl acme get</b> command has been introduced. |

## 3.55 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)> | <b>ip http ssl acme revoke &lt;domain&gt;</b> |
|-----------|---|

| Arguments | Argument | Value  | Description          |
|-----------|----------|--------|----------------------|
|           | domain   | String | KeenDNS domain name. |

**Example**

|  |
|--|
| (config)> <b>ip http ssl acme revoke mytest.keenetic.pro</b><br>Acme::Client: Revoking certificate for domain ▶<br>"mytest.keenetic.pro" is started. |
|--|

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>ip http ssl acme revoke</b> command has been introduced. |

## 3.56 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>ip http ssl acme list</b> command has been introduced. |

## 3.57 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. |

## 3.58 ip http ssl redirect

**Description** Enable automatic redirection on domains with SSL certificate. By default, the redirection is enabled.  
Command with **no** prefix disables redirection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config)> ip http ssl redirect
```

```
(config)> no ip http ssl redirect
```

**Example**

```
(config)> ip http ssl redirect
Http::Manager: Redirect to SSL is enabled.
```

```
(config)> no ip http ssl redirect
Http::Manager: Redirect to SSL is disabled.
```

**History**

| Version | Description  |
|---------|--|
| 2.11    | The <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

| <b>Change settings</b> | No  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Interface type</b>  | IP  |         |             |      |  |
| <b>Group entry</b>     | (config-webdav)   |         |             |      |  |
| <b>Synopsis</b>        | <pre>  (config)&gt; ip http webdav</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; ip http webdav Core::Configurator: Done. (config-webdav)&gt;</pre>  |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.04</td> <td>The <b>ip http webdav</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.04 | The <b>ip http webdav</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.04                   | The <b>ip http webdav</b> command has been introduced.  |         |             |      |  |

### 3.59.1 ip http webdav enable

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable <i>WebDAV</i> server. By default, the server is disabled.<br><br>Command with <b>no</b> prefix disables <i>WebDAV</i> server. |
| <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-webdav)&gt; enable   (config-webdav)&gt; no enable</pre>  |
| <b>Example</b>         | <pre>(config-webdav)&gt; enable WebDav::Server: Enabled.  (config-webdav)&gt; no enable WebDav::Server: Disabled.</pre>              |

| <b>History</b> | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.04</td><td>The <b>ip http webdav enable</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 3.04 | The <b>ip http webdav enable</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 3.04           | The <b>ip http webdav enable</b> command has been introduced.  |         |             |      |   |

### 3.59.2 ip http webdav permissive

|                    |  |
|--------------------|--|
| <b>Description</b> | Access to the <i>WebDAV</i> 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)> <b>permissive</b> |
|------------------------------------|

|                                       |
|---------------------------------------|
| (config-webdav)> <b>no permissive</b> |
|---------------------------------------|

**Example**

|  |
|--|
| (config-webdav)> <b>permissive</b><br>WebDav::Server: Enabled permissive mode. |
|--|

|  |
|--|
| (config-webdav)> <b>no permissive</b><br>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)> <b>security-level (public   private)</b> |
|---|

**Arguments**

| Argument | Value   | Description  |
|----------|---------|--|
| public   | Keyword | Access to the WebDAV server is allowed for public, private and protected interfaces. |
| private  | Keyword | Access to the WebDAV server is allowed for private interfaces.                       |

**Example**

|  |
|--|
| (config-webdav)> <b>security-level public</b><br>Http::Manager: WebDAV security level set to public. |
|--|

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>        |
|-----------------|---------------|---------------------------|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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)> | <b>ip name-server</b> <address>[:<port>][<domain>[on<interface>]]      |
| (config)> | <b>no ip name-server</b> [<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 name</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)> | <b>ip nat</b> ( <i>interface</i>   <i>address</i> <i>mask</i> )    |
| (config)> | <b>no ip nat</b> ( <i>interface</i>   <i>address</i> <i>mask</i> ) |

| Arguments | Argument  | Value                 | Description  |
|-----------|-----------|-----------------------|--|
|           | interface | <i>Interface name</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)> | <b>ip nat Home</b>               |
|           | Network:::Nat: A NAT rule added. |

|           |                                    |
|-----------|------------------------------------|
| (config)> | <b>no ip nat Home</b>              |
|           | 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

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Interface type</b> | IP  |         |             |      |  |
| <b>Synopsis</b>       | <pre>(config)&gt; ip nat full-cone (config)&gt; no ip nat full-cone</pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config)&gt; ip nat full-cone Network::Nat: Full cone mode enabled.</pre> <pre>(config)&gt; no ip nat full-cone Network::Nat: Full cone mode disabled.</pre>   |         |             |      |  |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.01</td> <td>The <b>ip nat full-cone</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.01 | The <b>ip nat full-cone</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 3.01                  | The <b>ip nat full-cone</b> command has been introduced.  |         |             |      |  |

## 3.64 ip nat restricted-cone

| <b>Description</b>     | Enable mode <i>Restricted NAT</i> . By default, the mode is disabled.<br><br>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>Interface type</b>  | IP  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip nat restricted-cone (config)&gt; no ip nat restricted-cone</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; ip nat restricted-cone Network::Nat: Restricted cone mode enabled.</pre> <pre>(config)&gt; no ip nat restricted-cone Network::Nat: Restricted cone mode disabled.</pre>                       |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.01</td> <td>The <b>ip nat restricted-cone</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.01 | The <b>ip nat restricted-cone</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.01                   | The <b>ip nat restricted-cone</b> command has been introduced.  |         |             |      |  |

## 3.65 ip nat sstp

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable translation for <i>SSTP</i> clients.<br>Command with <b>no</b> prefix removes the rule.  |
| <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 nat sstp (config)&gt; no ip nat sstp</pre>   |
| <b>Example</b>         | <pre>(config)&gt; ip nat sstp SstpServer::Nat: SSTP VPN NAT enabled.  (config)&gt; no ip nat sstp SstpServer::Nat: SSTP VPN NAT disabled.</pre> |

| History | Version | Description   |
|---------|---------|---|
|         | 2.12    | The <b>ip nat sstp</b> command has been introduced. |

## 3.66 ip nat vpn

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable translation for VPN clients.<br>Command with <b>no</b> prefix removes the rule.  |
| <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 nat vpn (config)&gt; no ip nat vpn</pre>   |
| <b>Example</b>         | <pre>(config)&gt; ip nat vpn VpnServer::Nat: PPTP VPN NAT enabled.  (config)&gt; no ip nat vpn VpnServer::Nat: PPTP VPN NAT disabled.</pre> |

**History**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 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**

| <b>Argument</b> | <b>Value</b>       | <b>Description</b>   |
|-----------------|--------------------|--|
| name            | <i>Policy name</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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 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

| <b>Multiple input</b> | No  |  |             |             |   |               |  |
|-----------------------|---|--|-------------|-------------|---|---------------|--|
| <b>Interface type</b> | IP  |  |             |             |   |               |  |
| <b>Synopsis</b>       | <pre>(config-policy)&gt; <b>description</b> &lt;description&gt; (config-policy)&gt; <b>no description</b></pre>   |  |             |             |   |               |  |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>description</td><td><i>String</i></td><td>An arbitrary description of the IP Policy. Latin letters, numbers, hyphens and underscores are acceptable. Not more than 256 characters.</td></tr> </tbody> </table> | 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. |
| 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. |             |             |   |               |  |
| <b>Example</b>        | <pre>(config-policy)&gt; <b>description</b> PolicyOne Network:::PolicyTable: "Policy0": updated description.  (config-policy)&gt; <b>no description</b> Network:::PolicyTable: "Policy0": updated description.</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>ip policy description</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.12        | The <b>ip policy description</b> command has been introduced. |               |  |
| Version               | Description   |  |             |             |   |               |  |
| 2.12                  | The <b>ip policy description</b> command has been introduced.   |  |             |             |   |               |  |

## 3.67.2 ip policy multipath

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable the function of simultaneous use of WAN connections in the balancing mode.<br><br>Command with <b>no</b> prefix disables the function.   |
| <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-policy)&gt; <b>multipath</b> (config-policy)&gt; <b>no multipath</b></pre>   |
| <b>Example</b>         | <pre>(config-policy)&gt; <b>multipath</b> Network:::PolicyTable: "Policy0": enable multipath.  (config-policy)&gt; <b>no multipath</b> Network:::PolicyTable: "Policy0": disable multipath.</pre> |

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>  |
|-----------------|-----------------------|---|
| interface       | <i>Interface name</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 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**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 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

| <b>Change settings</b> | Yes   |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Interface type</b>  | IP  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-policy)&gt; <b>permit auto</b> </pre> <pre>(config-policy)&gt; <b>no permit auto</b></pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-policy)&gt; <b>permit auto</b> Network:::PolicyTable: "Policy0": set auto permission.</pre><br><pre>(config-policy)&gt; <b>no permit auto</b> Network:::PolicyTable: "Policy0": set auto permission.</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>ip policy permit auto</b> command has been introduced.</td> </tr> </tbody> </table>          | Version | Description | 2.12 | The <b>ip policy permit auto</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 2.12                   | The <b>ip policy permit auto</b> command has been introduced.   |         |             |      |   |

### 3.67.5 ip policy rate-limit input

| <b>Description</b>     | Add the input rate-limiting parameters to global interfaces of the IP Policy.<br><br>Command with <b>no</b> prefix removes the setting.   |  |       |             |           |                       |  |      |                |  |      |                |                    |
|------------------------|---|--|-------|-------------|-----------|-----------------------|--|------|----------------|--|------|----------------|--------------------|
| <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-policy)&gt; <b>rate-limit &lt;interface&gt; input (&lt;rate&gt;   auto)</b> </pre> <pre>(config-policy)&gt; <b>rate-limit &lt;interface&gt; no input</b></pre>   |  |       |             |           |                       |  |      |                |  |      |                |                    |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>interface</td> <td><i>Interface name</i></td> <td>The name of a global IP interface to rate-limit its traffic for a group of policy assignees.</td> </tr> <tr> <td>rate</td> <td><i>Integer</i></td> <td>The ingress rate limit in kbps. Can take values in the range from 64 to 1000000.</td> </tr> <tr> <td>auto</td> <td><i>Keyword</i></td> <td>Auto-ingress mode.</td> </tr> </tbody> </table> | Argument   | Value | Description | interface | <i>Interface name</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. |
| Argument               | Value   | Description  |       |             |           |                       |  |      |                |  |      |                |                    |
| interface              | <i>Interface name</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.   |       |             |           |                       |  |      |                |  |      |                |                    |
| <b>Example</b>         | <pre>(config-policy)&gt; <b>rate-limit WifiMaster1/WifiStation0 input auto</b> Network:::PolicyTable: "Policy0": set input rate limit to "auto".</pre>  |  |       |             |           |                       |  |      |                |  |      |                |                    |

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 input 100000
Network::PolicyTable: "Policy0": set input rate limit to "100000" ▶
kbps.
```

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 no input
Network::PolicyTable: "Policy0": reset input rate limit.
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 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**

|   |
|---|
| <pre>(config-policy)&gt; rate-limit &lt;interface&gt; output &lt;rate&gt;</pre> |
| <pre>(config-policy)&gt; rate-limit &lt;interface&gt; no output</pre>           |

**Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>   |
|-----------------|-----------------------|--|
| interface       | <i>Interface name</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.             |

**Example**

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 output 1000
Network::PolicyTable: "Policy0": set output rate limit to "1000" ▶
kbps.
```

```
(config-policy)> rate-limit WifiMaster1/WifiStation0 no output
Network::PolicyTable: "Policy0": reset ouput rate limit.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.05           | The <b>ip policy rate-limit output</b> command has been introduced. |

## 3.68 ip route

|                        |  |
|------------------------|--|
| <b>Description</b>     | 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 <b>default</b> keyword. In this case, a default route will be created.   |
|                        | Command with <b>no</b> prefix removes the route with the specified parameters.   |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | Yes  |
| <b>Interface type</b>  | IP   |
| <b>Synopsis</b>        | <pre>(config)&gt; ip route (&lt;network&gt; &lt;mask&gt;   &lt;host&gt;   <b>default</b>)(&lt;gateway&gt; [&lt;interface&gt;]   &lt;interface&gt;) [<b>auto</b>] [<i>metric</i>]</pre> <pre>(config)&gt; <b>no</b> ip route (&lt;network&gt; &lt;mask&gt;   &lt;host&gt;   <b>default</b>) [&lt;gateway&gt;   &lt;interface&gt;] [<i>metric</i>]</pre> |

| Arguments | Argument  | Value                 | Description   |
|-----------|-----------|-----------------------|---|
|           | network   | <i>IP-address</i>     | IP-address of the destination network.  |
|           | 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 name</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.<br><br>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 system determines it automatically based on the current IP settings.  |

| Argument | Value          | Description   |
|----------|----------------|---|
| 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.                   |

**Example**

```
(config)> ip route default Home
Network::RoutingTable: Added static route: 0.0.0.0/0 via Home.
```

```
(config)> ip route default Home
```

**History**

| Version | Description                                      |
|---------|--|
| 2.00    | The <b>ip route</b> command has been introduced. |

## 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.

|                        |   |
|------------------------|---|
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config)&gt; ip sip alg direct-media (config)&gt; no ip sip alg direct-media</pre>   |
| <b>Example</b>         | <pre>(config)&gt; ip sip alg direct-media Sip::Alg: Direct media enabled.  (config)&gt; no ip sip alg direct-media Sip::Alg: Direct media disabled.</pre> |

| 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.

|                        |  |
|------------------------|--|
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config)&gt; ip sip alg port &lt;port&gt; (config)&gt; no ip sip alg port</pre> |

| Arguments | Argument | Value   | Description      |
|-----------|----------|---------|------------------|
|           | port     | Integer | The port number. |

**Example**

```
(config)> ip sip alg port 7090
Sip::Alg: Port set to 7090.
```

```
(config)> no ip sip alg port
Sip::Alg: Port reset to default.
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 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.**Prefix no** No**Change settings** No**Multiple input** No**Interface type** IP**Group entry** (config-ssh)**Synopsis** (config)> **ip ssh****Example** (config)> **ip ssh**  
(config-ssh)>**History**

| <b>Version</b> | <b>Description</b>                             |
|----------------|--|
| 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.**Prefix no** Yes**Change settings** Yes**Multiple input** Yes**Interface type** IP**Synopsis** (config-ssh)> **cipher <cipher>**(config-ssh)> **no cipher <cipher>****Arguments**

| <b>Argument</b> | <b>Value</b>                  | <b>Description</b>                         |
|-----------------|-------------------------------|--|
| cipher          | chacha20-poly1305@openssh.com | An encryption algorithm ChaCha20-Poly1305. |

| Argument | Value                  | Description                          |
|----------|------------------------|--------------------------------------|
|          | aes128-ctr             | An encryption algorithm AES128-CTR.  |
|          | aes256-ctr             | An encryption algorithm 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)&gt; keygen &lt;keygen&gt;

**Arguments**

| Argument | Value    | Description  |
|----------|----------|--|
| keygen   | default  | Automatic generation of a new open key RSA2048 + ECDSA-NISTP521.       |
|          | rsa-1024 | Automatic generation of a new open RSA-key with a length of 1024 bits. |
|          | rsa-2048 | Automatic generation of a new open RSA-key with a length of 2048 bits. |
|          | rsa-4096 | Automatic generation of a new open RSA-key with a length of 4096 bits. |

| Argument | Value          | Description   |
|----------|----------------|---|
|          | ecdsa-nistp256 | Automatic generation of a new open ECDSA-key with a length of 256 bits.   |
|          | ecdsa-nistp384 | Automatic generation of a new open ECDSA-key with a length of 384 bits.   |
|          | ecdsa-nistp521 | Automatic generation of a new open ECDSA-key with a length of 521 bits.   |
|          | ed25519        | Automatic generation of a new open ED25519 key with a length of 256 bits. |

**Example**

```
(config-ssh)> keygen default
Ssh::Manager: Key generation is in progress...
```

**History**

| Version | Description   |
|---------|---|
| 2.12    | The <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.

Command with **no** prefix disables bruteforce detection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config)> ip ssh lockout-policy <threshold> [<duration> [<observation-window>]]
```

```
(config)> no ip ssh lockout-policy
```

**Arguments**

| Argument           | Value          | Description  |
|--------------------|----------------|--|
| threshold          | <i>Integer</i> | The number of failed attempts to log in. By default, 5 value is used.                        |
| duration           | <i>Integer</i> | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. |
| observation-window | <i>Integer</i> | Duration of suspicious activity observation in minutes. By default, 3 value is used.         |

**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.
```

**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 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

| <b>Multiple input</b> | No   |   |       |             |        |                |   |         |                |   |           |                |   |
|-----------------------|--|---|-------|-------------|--------|----------------|---|---------|----------------|---|-----------|----------------|---|
| <b>Interface type</b> | IP   |   |       |             |        |                |   |         |                |   |           |                |   |
| <b>Synopsis</b>       | (config-ssh)> <b>security-level (public   private   protected)</b>   |   |       |             |        |                |   |         |                |   |           |                |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>public</td> <td><i>Keyword</i></td> <td>Access to the SSH-server is allowed for public, private and protected interfaces.</td> </tr> <tr> <td>private</td> <td><i>Keyword</i></td> <td>Access to the SSH-server is allowed for private interfaces.</td> </tr> <tr> <td>protected</td> <td><i>Keyword</i></td> <td>Access to the SSH-server is allowed for private and protected interfaces.</td> </tr> </tbody> </table> | 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. |
| 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.         |       |             |        |                |   |         |                |   |           |                |   |

|                |   |
|----------------|---|
| <b>Example</b> | (config-ssh)> <b>security-level protected</b><br>Ssh::Manager: Security level changed to protected. |
|----------------|---|

| <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>ip ssh security-level</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.12 | The <b>ip ssh security-level</b> command has been introduced. |
|----------------|--|---------|-------------|------|---|
| Version        | Description  |         |             |      |   |
| 2.12           | The <b>ip ssh security-level</b> command has been introduced.  |         |             |      |   |

## 3.72.6 ip ssh session timeout

| <b>Description</b>     | 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.<br><br>Command with <b>no</b> prefix resets timeout to default.   |   |       |             |         |                |   |
|------------------------|--|---|-------|-------------|---------|----------------|---|
| <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-ssh)&gt; <b>session timeout &lt;timeout&gt;</b> (config-ssh)&gt; <b>no session timeout</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>The lifetime of inactive session. Can take values from 5 to <math>2^{32} - 1</math> seconds inclusively.</td> </tr> </tbody> </table> | Argument  | Value | Description | timeout | <i>Integer</i> | The lifetime of inactive session. Can take values from 5 to $2^{32} - 1$ seconds inclusively. |
| Argument               | Value  | Description   |       |             |         |                |   |
| timeout                | <i>Integer</i>   | The lifetime of inactive session. Can take values from 5 to $2^{32} - 1$ seconds inclusively. |       |             |         |                |   |

|                |   |
|----------------|---|
| <b>Example</b> | (config-ssh)> <b>session timeout 123456</b><br>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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 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**

|  |
|--|
| <pre>(config-sftp)&gt; permissive</pre>    |
| <pre>(config-sftp)&gt; no permissive</pre> |

**Example**

```
(config-sftp)> permissive
```

```
(config-sftp)> no permissive
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>              |
|-----------------|--------------|---------------------------------|
| directory       | String       | Path to default root directory. |

**Example**

```
(config-sftp)> root files_ssdd:/
Sftp::Server: A default root directory set to "files_ssdd:/".
(config-sftp)> no root files_ssdd:/
Sftp::Server: A default root directory reset.
```

**History**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 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.

**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>) |
    [<port>](<to-address> | <to-host>) [<to-port>] |
    <to-address> | <to-host> | <to-interface>)

(config)> no ip static [<protocol>](<interface> | (<address> <mask>) |
    (<port> through <end-port>)(<to-address> | <to-host>) |
    [<port>](<to-address> | <to-host>) [<to-port>] |
```

| <to-address> | <to-host> | <to-interface>)

| Arguments  | Argument              | Value                | Description   |
|------------|-----------------------|----------------------|---|
| protocol   | tcp                   | <i>TCP</i> protocol. |   |
|            | udp                   | <i>UDP</i> protocol. |   |
| interface  | <i>Interface name</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.   |

**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
Network:::StaticNat: Static NAT rules have been removed.
```

**History**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.00           | The <b>ip static</b> command has been introduced. |
| 2.06           | The <b>to-host</b> 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**

|  |
|--|
| <pre>(config)&gt; ip static rule &lt;index&gt; (disable   schedule &lt;schedule&gt;)</pre> |
| <pre>(config)&gt; no ip static rule &lt;index&gt; (disable   schedule)</pre>               |

**Arguments**

| <b>Argument</b> | <b>Value</b>         | <b>Description</b>  |
|-----------------|----------------------|---|
| index           | <i>Integer</i>       | The translation rule number.  |
| disable         | <i>Keyword</i>       | Disable the translation rule.   |
| schedule        | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 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.

Command with **no** prefix disables bruteforce detection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Interface type** IP

**Synopsis**

```
(config)> ip telnet lockout-policy <threshold> [<duration>
[<observation-window>]]
(config)> no ip telnet lockout-policy
```

**Arguments**

| Argument  | Value   | Description  |
|-----------|---------|--|
| threshold | Integer | The number of failed attempts to log in. By default, 5 value is used.                        |
| duration  | Integer | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. |

| Argument           | Value          | Description  |
|--------------------|----------------|--|
| observation-window | <i>Integer</i> | Duration of suspicious activity observation in minutes. By default, 3 value is used. |

**Example**

```
(config)> ip telnet lockout-policy 10 30 2
Telnet::Manager: Bruteforce detection is reconfigured.
```

**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)> | <b>port &lt;number&gt;</b> |
| (config-telnet)> | <b>no port</b>             |

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| number   | <i>Integer</i> | Port number. Can take values 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

| <b>Description</b>     | Set Telnet security level. By default, private value is set.  |  |          |             |             |  |         |  |         |         |  |           |         |  |
|------------------------|---|--|----------|-------------|-------------|--|---------|--|---------|---------|--|-----------|---------|--|
| <b>Prefix no</b>       | No  |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Change settings</b> | Yes   |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Multiple input</b>  | No  |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Interface type</b>  | IP  |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Synopsis</b>        | <pre>(config-telnet)&gt; security-level (public   private   protected)</pre>  |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>public</td><td>Keyword</td><td>Access to the Telnet-server is allowed for public, private and protected interfaces.</td></tr><tr><td>private</td><td>Keyword</td><td>Access to the Telnet-server is allowed for private interfaces.</td></tr><tr><td>protected</td><td>Keyword</td><td>Access to the Telnet-server is allowed for private and protected interfaces.</td></tr></tbody></table> |  | Argument | Value       | Description | public   | Keyword | Access to the Telnet-server is allowed for public, private and protected interfaces. | private | Keyword | Access to the Telnet-server is allowed for private interfaces. | protected | Keyword | Access to the Telnet-server is allowed for private and protected interfaces. |
| Argument               | Value   | Description  |          |             |             |  |         |  |         |         |  |           |         |  |
| public                 | Keyword   | Access to the Telnet-server is allowed for public, private and protected interfaces. |          |             |             |  |         |  |         |         |  |           |         |  |
| private                | Keyword   | Access to the Telnet-server is allowed for private interfaces.                       |          |             |             |  |         |  |         |         |  |           |         |  |
| protected              | Keyword   | Access to the Telnet-server is allowed for private and protected interfaces.         |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>Example</b>         | <pre>(config-telnet)&gt; security-level protected Telnet::Manager: Security level changed to protected.</pre>   |  |          |             |             |  |         |  |         |         |  |           |         |  |
| <b>History</b>         | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.08</td><td>The <b>ip telnet security-level</b> command has been introduced.</td></tr></tbody></table>  |  | Version  | Description | 2.08        | The <b>ip telnet security-level</b> command has been introduced. |         |  |         |         |  |           |         |  |
| Version                | Description   |  |          |             |             |  |         |  |         |         |  |           |         |  |
| 2.08                   | The <b>ip telnet security-level</b> command has been introduced.  |  |          |             |             |  |         |  |         |         |  |           |         |  |

### 3.75.4 ip telnet session max-count

|                        |   |
|------------------------|---|
| <b>Description</b>     | Set the maximal number of simultaneous sessions for telnet connection. By default, 4 is used. |
|                        | Command with <b>no</b> prefix resets count to default.  |
| <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-telnet)&gt; session max-count &lt;count&gt;</pre>                                |

```
(config-telnet)> no session max-count
```

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---|
| count    | <i>Integer</i> | The maximal number of simultaneous sessions. Can take values 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 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>  |
|-----------------|---------------|---|
| mac             | MAC-address   | MAC-address of the known host.  |
| rate            | Integer       | Value of data download rate in Kbps. Limit should be in the range from 64 Kbps to 1 Gbps. |
| upstream-rate   | Integer       | Data upload rate in Kbps. Value can be in the range from 64 Kbps to 1 Gbps.               |
| schedule        | Schedule name | 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.05           | The <b>ip traffic-shape host</b> command has been introduced. |
| 2.08           | The <b>schedule</b> argument was added.                       |

| <b>Version</b> | <b>Description</b>                           |
|----------------|--|
| 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>   |
|-----------------|----------------|--|
| rate            | <i>Integer</i> | The data download rate in Kbps. Value should 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 firewall

**Description**

Enable IPv6 firewall. By default, the setting is enabled.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config)> ipv6 firewall
(config)> no ipv6 firewall
```

**Example**

```
(config)> ipv6 firewall
```

```
(config)> no ipv6 firewall
```

**History**

| Version | Description   |
|---------|---|
| 2.06    | The <b>ipv6 firewall</b> command has been introduced. |

## 3.79 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

| <b>Change settings</b> | Yes  |  |             |             |   |                |                                    |        |               |  |
|------------------------|--|--|-------------|-------------|---|----------------|------------------------------------|--------|---------------|--|
| <b>Multiple input</b>  | No   |  |             |             |   |                |                                    |        |               |  |
| <b>Synopsis</b>        | <pre>(config)&gt; ipv6 local-prefix (default   &lt;prefix&gt; ) (config)&gt; no ipv6 local-prefix [default   &lt;prefix&gt; ]</pre>  |  |             |             |   |                |                                    |        |               |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>default</td><td><i>Keyword</i></td><td>Generate persistent unique prefix.</td></tr> <tr> <td>prefix</td><td><i>Prefix</i></td><td>Local ULA prefix. Must be a valid prefix in the block fd00::/8 with a prefix length no longer than 48.</td></tr> </tbody> </table>                | 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. |
| 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. |             |             |   |                |                                    |        |               |  |
| <b>Example</b>         | <pre>(config)&gt; ipv6 local-prefix default Ip6::Prefixes: Default ULA prefix enabled.  (config)&gt; ipv6 local-prefix fd01:db8:43::/48 Ip6::Prefixes: Added static prefix: fd01:db8:43::/48.  (config)&gt; no ipv6 local-prefix default Ip6::Prefixes: Default ULA prefix disabled.  (config)&gt; no ipv6 local-prefix fd01:db8:43::/48 Ip6::Prefixes: Deleted static prefix: fd01:db8:43::/48.</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>ipv6 local-prefix</b> command has been introduced.</td></tr> </tbody> </table>   | Version  | Description | 2.00        | The <b>ipv6 local-prefix</b> command has been introduced. |                |                                    |        |               |  |
| Version                | Description  |  |             |             |   |                |                                    |        |               |  |
| 2.00                   | The <b>ipv6 local-prefix</b> command has been introduced.  |  |             |             |   |                |                                    |        |               |  |

## 3.80 ipv6 name-server

|                        |  |
|------------------------|--|
| <b>Description</b>     | Configure DNS server IPv6-addresses. Addresses saved in this fashion are called static as opposite to dynamic — as registered by <b>PPP</b> or <b>DHCP</b> services.<br><br><b>ipv6 name-server</b> command can be entered multiple times if several DNS-server addresses need to be setup.<br><br>Command with <b>no</b> 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. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | Yes  |
| <b>Synopsis</b>        | <pre>(config)&gt; ipv6 name-server &lt;address&gt; [&lt;domain&gt; ]</pre>   |

```
(config)> no ipv6 name-server [<address> [<domain>]]
```

**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. |

**Example**

```
(config)> ipv6 name-server 2001:4860:4860::8888
Dns::Manager: Name server 2001:4860:4860::8888 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
Dns::Manager: Static name server list cleared.
```

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>ipv6 name-server</b> command has been introduced. |

## 3.81 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 name</i> | Full WAN-interface name or an alias. |

| Argument  | Value                 | Description                          |
|-----------|-----------------------|--------------------------------------|
| lan-iface | <i>Interface name</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. |

## 3.82 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 name</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**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 2.00           | The <b>ipv6 route</b> command has been introduced. |
| 2.11           | gateway argument has been added.                   |

## 3.83 ipv6 static

**Description**

Define the rule to allow incoming connection to a specified port of a registered home network device.

**ipv6 firewall** should be enabled.

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

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

No

**Synopsis**

```
(config)> ipv6 static <protocol> [<interface>] <mac> <port> [through
<end-port>]

(config)> no ipv6 static [<protocol> [<interface>] <mac> <port> [through
<end-port>]]
```

**Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                                    |
|-----------------|-----------------------|---|
| protocol        | tcp                   | TCP protocol.   |
|                 | udp                   | UDP protocol.   |
| interface       | <i>Interface name</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 64:a2:f9:51:b4:8a 80 through 80
Ip6::Firewall: Rule updated.
```

```
(config)> no ipv6 static tcp ISP 64:a2:f9:51:b4:8a 80 through 80
Ip6::Firewall: Static rule removed.
```

**History**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.12           | The <b>ipv6 static</b> command has been introduced. |

## 3.84 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>       |
|-----------------|---------------|--------------------------|
| name            | <i>String</i> | Subnet name or an alias. |

**Example**

```
(config)> ipv6 subnet Default
(config-subnet)>
```

**History**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.00           | The <b>ipv6 subnet</b> command has been introduced. |

### 3.84.1 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     | <i>Interface name</i> | 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. |

## 3.84.2 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. |

### 3.84.3 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)> <b>number &lt;number&gt;</b> |
|---|

**Arguments**

| Argument | Value          | Description       |
|----------|----------------|-------------------|
| number   | <i>Integer</i> | Unique subnet ID. |

**Example**

|  |
|--|
| (config-subnet)> <b>number 2</b><br>Ip6::Subnets: Number 2 assigned to subnet "Default". |
|--|

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>ipv6 subnet number</b> command has been introduced. |

### 3.85 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)> <b>isolate-private</b>    |
| (config)> <b>no isolate-private</b> |

**Example**

|  |
|--|
| (config)> <b>isolate-private</b><br>Netfilter::Manager: Private networks isolated. |
|--|

|   |
|---|
| (config)> <b>no isolate-private</b><br>Netfilter::Manager: Private networks not isolated. |
|---|

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.00           | The <b>isolate-private</b> command has been introduced. |

## 3.86 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**

| <b>Version</b> | <b>Description</b>                              |
|----------------|---|
| 2.02           | The <b>kabinet</b> command has been introduced. |

### 3.86.1 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 kabinet access-level command has been introduced. |

## 3.86.2 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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. |

### 3.86.3 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 | String | 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. |

### 3.86.4 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.

| <b>Prefix no</b>       | Yes   |                  |             |             |  |                |                  |
|------------------------|---|------------------|-------------|-------------|--|----------------|------------------|
| <b>Change settings</b> | Yes   |                  |             |             |  |                |                  |
| <b>Multiple input</b>  | No  |                  |             |             |  |                |                  |
| <b>Synopsis</b>        | <pre>(kabinet)&gt; port &lt;port&gt; (kabinet)&gt; no 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>The port number.</td></tr> </tbody> </table> | Argument         | Value       | Description | port   | <i>Integer</i> | The port number. |
| Argument               | Value   | Description      |             |             |  |                |                  |
| port                   | <i>Integer</i>  | The port number. |             |             |  |                |                  |
| <b>Example</b>         | <pre>(kabinet)&gt; port 12345 Kabinet::Authenticator: A server port set.  (kabinet)&gt; no port Kabinet::Authenticator: A server port reset.</pre>  |                  |             |             |  |                |                  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.14</td><td>The <b>kabinet port</b> command has been introduced.</td></tr> </tbody> </table>   | Version          | Description | 2.14        | The <b>kabinet port</b> command has been introduced. |                |                  |
| Version                | Description   |                  |             |             |  |                |                  |
| 2.14                   | The <b>kabinet port</b> command has been introduced.  |                  |             |             |  |                |                  |

## 3.86.5 kabinet protocol-version

| <b>Description</b>     | Set version of KABiNET authenticator protocol. By default, protocol version 2 is used.  |                      |       |             |         |               |                      |
|------------------------|---|----------------------|-------|-------------|---------|---------------|----------------------|
|                        | Command with <b>no</b> prefix resets protocol to default.   |                      |       |             |         |               |                      |
| <b>Prefix no</b>       | Yes   |                      |       |             |         |               |                      |
| <b>Change settings</b> | Yes   |                      |       |             |         |               |                      |
| <b>Multiple input</b>  | No  |                      |       |             |         |               |                      |
| <b>Synopsis</b>        | <pre>(kabinet)&gt; protocol-version &lt;version&gt; (kabinet)&gt; no protocol-version</pre>   |                      |       |             |         |               |                      |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>version</td><td><i>String</i></td><td>Version of protocol.</td></tr> </tbody> </table> | Argument             | Value | Description | version | <i>String</i> | Version of protocol. |
| Argument               | Value   | Description          |       |             |         |               |                      |
| version                | <i>String</i>   | Version of protocol. |       |             |         |               |                      |
| <b>Example</b>         | <pre>(kabinet)&gt; protocol-version 1 Kabinet::Authenticator: A protocol version set to "1".  (kabinet)&gt; no protocol-version Kabinet::Authenticator: A protocol version reset to "2".</pre>            |                      |       |             |         |               |                      |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.02           | The <b>kabinet protocol-version</b> command has been introduced. |

## 3.86.6 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)> | <b>server</b> <address> |
| (kabinet)> | <b>no server</b>        |

**Arguments**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>             |
|-----------------|-------------------|--------------------------------|
| 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.02           | The <b>kabinet server</b> command has been introduced. |

## 3.87 known host

**Description** Set known host.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|           |                                     |
|-----------|-------------------------------------|
| (config)> | <b>known host</b> <name> <mac>      |
| (config)> | <b>no known host</b> [ <i>mac</i> ] |

**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. |

## 3.88 mdns

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

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (config-mdns)

**Synopsis** (config)> mdns

**Example** (config)> mdns
Core::Configurator: Done.
(config-mdns)>

**History**

| Version | Description                                  |
|---------|--|
| 3.07    | The <b>mdns</b> command has been introduced. |

### 3.88.1 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

| <b>Synopsis</b> | <pre>  (config-mdns)&gt; reflector disable<br/>  (config-mdns)&gt; no reflector disable</pre>   |         |             |      |  |
|-----------------|---|---------|-------------|------|--|
| <b>Example</b>  | <pre>(config-mdns)&gt;reflector disable<br/>Mdns::Manager: Reflector disabled.</pre><br><pre>(config-mdns)&gt;no reflector disable<br/>Mdns::Manager: Reflector enabled.</pre>          |         |             |      |  |
| <b>History</b>  | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>3.07</td><td>The <b>mdns reflector disable</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 3.07 | The <b>mdns reflector disable</b> command has been introduced. |
| Version         | Description   |         |             |      |  |
| 3.07            | The <b>mdns reflector disable</b> command has been introduced.  |         |             |      |  |

## 3.88.2 mdns reflector enforce

| <b>Description</b>     | Forcibly enable transparency mode between home network segments, irrespective of segment isolation (see the <a href="#">interface security-level</a> command).<br><br>Command with <b>no</b> prefix disables the setting. |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>  (config-mdns)&gt; reflector enforce<br/>  (config-mdns)&gt; no reflector enforce</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config-mdns)&gt;reflector enforce<br/>Mdns::Manager: Reflector enforced.</pre><br><pre>(config-mdns)&gt;no reflector enforce<br/>Mdns::Manager: Reflector unenforced.</pre>   |         |             |      |  |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>3.07</td><td>The <b>mdns reflector enforce</b> command has been introduced.</td></tr></tbody></table>                                   | Version | Description | 3.07 | The <b>mdns reflector enforce</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.07                   | The <b>mdns reflector enforce</b> command has been introduced.  |         |             |      |  |

## 3.89 mws acquire

|                    |  |
|--------------------|--|
| <b>Description</b> | Attach new device to <a href="#">MWS</a> .<br><br>Command with <b>no</b> prefix stops the acquisition. |
|--------------------|--|

| <b>Prefix no</b>       | Yes   |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
|------------------------|---|---|-------------|-------------|---|---------------|---------------------------------|-------------|----------------|----------------------------------|------------|----------------|------------------------------------|-----------|----------------|---|
| <b>Change settings</b> | No  |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| <b>Multiple input</b>  | No  |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| <b>Synopsis</b>        | <pre>(config)&gt; mws acquire &lt;candidate&gt; [eula-accept] [dpn-accept] [no-update]</pre> <pre>(config)&gt; no mws acquire &lt;candidate&gt;</pre>   |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>candidate</td><td><i>String</i></td><td>Device ID — MAC-address or CID.</td></tr> <tr> <td>eula-accept</td><td><i>Keyword</i></td><td>Send <b>eula accept</b> command.</td></tr> <tr> <td>dpn-accept</td><td><i>Keyword</i></td><td>Send Device Privacy Notice accept.</td></tr> <tr> <td>no-update</td><td><i>Keyword</i></td><td>Acquisition without firmware update confirmation.</td></tr> </tbody> </table> | 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. |
| 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. |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| <b>Example</b>         | <pre>(config)&gt; mws acquire ab1409a2-0f87-11e8-8f23-3d5f5921b253 ▶ eula-accept Mws::Controller: Candidate "ab1409a2-0f87-11e8-8f23-3d5f5921b253" ▶ acquire started.</pre><br><pre>(config)&gt; mws acquire 7207838e-af7d-11e6-8029-25463bd03811 ▶ eula-accept dpn-accept no-update Mws::Controller: Candidate "7207838e-af7d-11e6-8029-25463bd03811" ▶ acquire started.</pre><br><pre>(config)&gt; no mws acquire 60:31:97:3f:36:00 Mws::Controller: Candidate "60:31:97:3f:36:00" acquire stopped.</pre>                         |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.15</td><td>The <b>mws acquire</b> command has been introduced.</td></tr> </tbody> </table>  | Version   | Description | 2.15        | The <b>mws acquire</b> command has been introduced. |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| Version                | Description   |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |
| 2.15                   | The <b>mws acquire</b> command has been introduced.   |   |             |             |   |               |                                 |             |                |                                  |            |                |                                    |           |                |   |

## 3.90 mws backhaul shutdown

|                        |  |
|------------------------|--|
| <b>Description</b>     | Disable hidden wireless backhaul access points for <b>MWS</b> service. By default, the setting is enabled. |
|                        | Command with <b>no</b> prefix enables hidden wireless backhaul access points.                              |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>              |
|-----------------|---------------|---------------------------------|
| 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**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 2.15           | The <b>mws member</b> command has been introduced. |

## 3.93 mws member check-update

**Description** Initiate an update check for *MWS* member.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (config)> **mws member <member> check-update**

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>              |
|-----------------|---------------|---------------------------------|
| member          | <i>String</i> | Device ID — MAC-address or CID. |

**Example**

```
(config)> mws member ab1409a2-0f87-11e8-8f23-3d5f5921b253 ▶
check-update
```

```
Mws::MemberList: Member "50:ff:20:08:7a:6a" ▶
(ab1409a2-0f87-11e8-8f23-3d5f5921b253) checking for an update.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.15           | The <b>mws member check-update</b> command has been introduced. |

## 3.94 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>              |
|-----------------|---------------|---------------------------------|
| 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**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 3.05           | The <b>mws member debug</b> command has been introduced. |

## 3.95 mws member dpn-accept

**Description** Accept **DPN** for **MWS** member.

**Prefix no** No

**Change settings** No

| <b>Multiple input</b> | No   |                                 |             |             |   |        |                                 |
|-----------------------|--|---------------------------------|-------------|-------------|---|--------|---------------------------------|
| <b>Synopsis</b>       | (config)> <b>mws member &lt;member&gt; dpn-accept</b>  |                                 |             |             |   |        |                                 |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>member</td><td>String</td><td>Device ID — MAC-address or CID.</td></tr> </tbody> </table> | Argument                        | Value       | Description | member  | String | Device ID — MAC-address or CID. |
| Argument              | Value  | Description                     |             |             |   |        |                                 |
| member                | String   | Device ID — MAC-address or CID. |             |             |   |        |                                 |
| <b>Example</b>        | <pre>(config)&gt; mws member 7207838e-af7d-11e6-8029-25463bd03828 ▶ dpn-accept Mws::Controller: Candidate "ab1409a2-0f87-11e8-8f23-3d5f5921b253" ▶ acquire started.</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>mws member dpn-accept</b> command has been introduced.</td></tr> </tbody> </table>   | Version                         | Description | 3.05        | The <b>mws member dpn-accept</b> command has been introduced. |        |                                 |
| Version               | Description  |                                 |             |             |   |        |                                 |
| 3.05                  | The <b>mws member dpn-accept</b> command has been introduced.  |                                 |             |             |   |        |                                 |

## 3.96 mws revisit

| <b>Description</b>     | Re-read status of potential <i>MWS</i> member.   |                                 |             |             |   |        |                                 |
|------------------------|--|---------------------------------|-------------|-------------|---|--------|---------------------------------|
| <b>Prefix no</b>       | Yes  |                                 |             |             |   |        |                                 |
| <b>Change settings</b> | No   |                                 |             |             |   |        |                                 |
| <b>Multiple input</b>  | No   |                                 |             |             |   |        |                                 |
| <b>Synopsis</b>        | <pre>(config)&gt; mws revisit &lt;candidate&gt; (config)&gt; no mws revisit &lt;candidate&gt;</pre>  |                                 |             |             |   |        |                                 |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>candidate</td><td>String</td><td>Device ID — MAC-address or CID.</td></tr> </tbody> </table>                      | Argument                        | Value       | Description | candidate   | String | Device ID — MAC-address or CID. |
| Argument               | Value  | Description                     |             |             |   |        |                                 |
| candidate              | String   | Device ID — MAC-address or CID. |             |             |   |        |                                 |
| <b>Example</b>         | <pre>(config)&gt; mws revisit 50:ff:20:08:71:62 Mws::Controller: Candidate "50:ff:20:08:71:62" revisit started.  (config)&gt; mws no revisit 50:ff:20:08:71:62 Mws::Controller: Candidate "50:ff:20:08:71:62" revisit stopped.</pre> |                                 |             |             |   |        |                                 |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.15</td><td>The <b>mws revisit</b> command has been introduced.</td></tr> </tbody> </table>                                     | Version                         | Description | 2.15        | The <b>mws revisit</b> command has been introduced. |        |                                 |
| Version                | Description  |                                 |             |             |   |        |                                 |
| 2.15                   | The <b>mws revisit</b> command has been introduced.  |                                 |             |             |   |        |                                 |

## 3.97 mws zone

**Description** Limit the connection area of the client device within the specified [MWS](#) members.

Command with **no** prefix removes the specified setting. If you use no arguments, the entire list of restrictions will be removed.

**Prefix no** Yes

**Change settings** No

**Multiple input** Yes

**Synopsis**

```
(config)> mws zone <mac> <cid>
(config)> no mws zone [ <mac> <cid> ]
```

| Arguments | Argument | Value       | Description  |
|-----------|----------|-------------|--|
|           | mac      | MAC-address | MAC-address of client device. It must be listed as a known host. |
|           | cid      | CID         | Identifier of <a href="#">MWS</a> 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. |

## 3.98 ndns

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

**Prefix no** No

**Change settings** No

**Multiple input** No

| <b>Group entry</b> | (ndns)  |         |             |      |  |
|--------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>    | (config)> ndns  |         |             |      |  |
| <b>Example</b>     | (config)> <b>ndns</b><br>Core::Configurator: Done.  |         |             |      |  |
| <b>History</b>     | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.07</td> <td>The <b>ndns</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.07 | The <b>ndns</b> command has been introduced. |
| Version            | Description   |         |             |      |  |
| 2.07               | The <b>ndns</b> command has been introduced.  |         |             |      |  |

## 3.98.1 ndns book-name

|                        |  |
|------------------------|--|
| <b>Description</b>     | Reserve Public DNS device hostname allocation.<br><br>For hostname transmission to another Keenetic device transfer-code parameter is used.<br><br>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.   |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | (ndns)> <b>book-name</b> <name> <domain> [<access> [ <b>ipv6</b> <access6>]   <transfer-code>]   |

| <b>Arguments</b> | <b>Argument</b> | <b>Value</b>  | <b>Description</b>                  |
|------------------|-----------------|---|-------------------------------------|
|                  | name            | <i>String</i>   | The hostname for allocation.        |
|                  | domain          | <i>String</i>   | Second-level domain.                |
| <b>access</b>    | auto            | Automatic access type.  |                                     |
|                  | cloud           | Hostname is registered on the cloud server IP-address, HTTP traffic is tunneled to the Extra DSL. |                                     |
|                  | direct          | Hostname is registered on the Extra DSL WAN-address.  |                                     |
|                  | access6         | cloud   | Enable cloud mode for IPv6 address. |

| Argument      | Value              | Description  |
|---------------|--------------------|--|
| transfer-code | Hexadecimal number | 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 "ndss111h2.ndm9.xyz" [MsgNdssMessage ▶
["ndns/bookPrepare","014635737374513","myhome23","keenetic.pro",undefined]] ▶
/ started], type = reply-final,
peer = ndss111h2.ndm9.xyz, detail = [MsgCack]:
```

```

item, elapsed = 19, origin = ▶
[TaskBookName, ▶
{"name":"myhome23","domain":"keenetic.pro","license":"014635737374513"}], ▶
type = prepare-reply, peer = ndss111h2.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 ▶
["ndns/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 ▶
["ndns/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 ▶
["ndns/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 ▶
["ndns/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 ▶
["ndns/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/Wh1606jlAm1M'), ►
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/Wh1606jlAm1M'), ►
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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.07           | The <b>ndns book-name</b> command has been introduced. |
| 2.14           | Parameter <b>ipv6</b> was added.                       |

## 3.98.2 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>           |
|-----------------|---------------|------------------------------|
| name            | <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**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.07           | The <b>ndns check-name</b> command has been introduced. |

### 3.98.3 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>         |
|-----------------|---------------|----------------------------|
| 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('L2hVqanJmGJrvKh'), 
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 commited., 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('L2hVqanJmGJrvKh'), 
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+OP4D9Fc'), alt=Binary('kGImY2U/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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.07           | The <b>ndns drop-name</b> command has been introduced. |

### 3.98.4 ndns get-booked

|                    |   |
|--------------------|---|
| <b>Description</b> | Get actual info from the server about current booked Public DNS hostname. |
| <b>Prefix no</b>   | No  |

|                        |   |
|------------------------|---|
| <b>Change settings</b> | No  |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <b>(ndns)&gt; get-booked</b>  |
| <b>Example</b>         | <pre>(ndns)&gt; <b>get-booked</b>  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&amp;__role=context- menu&amp;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.</pre> |

| History | Version | Description   |
|---------|---------|---|
|         | 2.08    | The <b>ndns get-booked</b> command has been introduced. |

### 3.98.5 ndns get-update

**Description** Update Public DNS device hostname allocation on the server.

| <b>Prefix no</b>       | No   |  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
|------------------------|--|--|-------|-------------|--------|------|------------------------|-------|---|--------|--|---------|-------|-------------------------------------|
| <b>Change settings</b> | No   |  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
| <b>Multiple input</b>  | No   |  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
| <b>Synopsis</b>        | (ndns)> <b>get-update</b> [<access> [<ipv6> <access6>]]  |  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td rowspan="3">access</td><td>auto</td><td>Automatic access type.</td></tr> <tr> <td>cloud</td><td>Hostname is registered on the cloud server IP-address, HTTP traffic is tunneled to the Extra DSL.</td></tr> <tr> <td>direct</td><td>Hostname is registered on the Extra DSL 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.</td></tr> <tr> <td>access6</td><td>cloud</td><td>Enable cloud mode for IPv6 address.</td></tr> </tbody> </table>   | Argument   | Value | Description | access | auto | Automatic access type. | cloud | Hostname is registered on the cloud server IP-address, HTTP traffic is tunneled to the Extra DSL. | direct | Hostname is registered on the Extra DSL 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. |
| Argument               | Value  | Description  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
| access                 | auto   | Automatic access type.   |       |             |        |      |                        |       |   |        |  |         |       |                                     |
|                        | cloud  | Hostname is registered on the cloud server IP-address, HTTP traffic is tunneled to the Extra DSL.  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
|                        | direct   | Hostname is registered on the Extra DSL 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.  |       |             |        |      |                        |       |   |        |  |         |       |                                     |
| <b>Example</b>         | <pre>(ndns)&gt; <b>get-update auto</b>  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&amp;__role=context- menu&amp;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.</pre> |  |       |             |        |      |                        |       |   |        |  |         |       |                                     |

```
(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.                        |

## 3.99 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. |

### 3.99.1 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

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>       | <pre>(config-ntce)&gt; debug</pre> <pre>(config-ntce)&gt; no debug</pre>  |         |             |      |  |
| <b>Example</b>        | <pre>(config-ntce)&gt; debug Ntce::Manager: Enabled debug.</pre> <pre>(config-ntce)&gt; no debug Ntce::Manager: Disabled debug.</pre>   |         |             |      |  |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.07</td> <td>The <b>ntce debug</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.07 | The <b>ntce debug</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 3.07                  | The <b>ntce debug</b> command has been introduced.  |         |             |      |  |

## 3.99.2 ntce qos enable

| <b>Description</b>     | 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 <b>no</b> prefix disables the feature.  |         |             |      |   |
| <b>Prefix no</b>       | Yes  |         |             |      |   |
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config-ntce)&gt; qos enable</pre> <pre>(config-ntce)&gt; no qos enable</pre>   |         |             |      |   |
| <b>Example</b>         | <pre>(config-ntce)&gt; qos enable Ntce::Manager: Enabled QoS.</pre> <pre>(config-ntce)&gt; no qos enable Ntce::Manager: Disabled QoS.</pre>  |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>3.07</td> <td>The <b>ntce qos enable</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 3.07 | The <b>ntce qos enable</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 3.07                   | The <b>ntce qos enable</b> command has been introduced.  |         |             |      |   |

## 3.99.3 ntce qos priority

|                    |  |
|--------------------|--|
| <b>Description</b> | Set priorities for traffic categories.             |
|                    | Command with <b>no</b> prefix removes the setting. |

| <b>Prefix no</b>       | Yes   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|------------------------|---|--|-------------|-------------|--|---------|--------------------|--------|--------------------------|-----------|-----------------------|------|----------------|---------|-------------------------|------------------|----------------------|----------|----------------|--|
| <b>Change settings</b> | Yes   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| <b>Multiple input</b>  | Yes   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| <b>Synopsis</b>        | <pre>(config-ntce)&gt; qos priority &lt;category&gt; &lt;priority&gt; (config-ntce)&gt; no qos priority</pre>   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td rowspan="6">category</td><td>calling</td><td>① Minimum latency.</td></tr> <tr> <td>gaming</td><td>② Real time interactive.</td></tr> <tr> <td>streaming</td><td>③ Broadcast services.</td></tr> <tr> <td>work</td><td>④ Low latency.</td></tr> <tr> <td>surfing</td><td>⑤ High-throughput data.</td></tr> <tr> <td>filetransferring</td><td>⑥ Low priority data.</td></tr> <tr> <td>priority</td><td><i>Integer</i></td><td>Priority value. Can take values from 1 to 6.</td></tr> </tbody> </table> | Argument                                     | Value       | Description | category   | calling | ① Minimum latency. | gaming | ② Real time interactive. | streaming | ③ Broadcast services. | work | ④ Low latency. | surfing | ⑤ High-throughput data. | filetransferring | ⑥ Low priority data. | priority | <i>Integer</i> | Priority value. Can take values from 1 to 6. |
| Argument               | Value   | Description                                  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| category               | calling   | ① Minimum latency.                           |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | gaming  | ② Real time interactive.                     |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | streaming   | ③ Broadcast services.                        |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | work  | ④ Low latency.                               |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | surfing   | ⑤ High-throughput data.                      |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | filetransferring  | ⑥ Low priority data.                         |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| priority               | <i>Integer</i>  | Priority value. Can take values from 1 to 6. |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| <b>Example</b>         | <pre>(config-ntce)&gt; qos priority calling 1 Ntce::Manager: Set priority "1" to "calling".</pre>   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
|                        | <pre>(config-ntce)&gt; no qos priority Ntce::Manager: Reset QoS priority list.</pre>  |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.07</td><td>The ntce qos priority command has been introduced.</td></tr> </tbody> </table>   | Version                                      | Description | 3.07        | The ntce qos priority command has been introduced. |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| Version                | Description   |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |
| 3.07                   | The ntce qos priority command has been introduced.  |  |             |             |  |         |                    |        |                          |           |                       |      |                |         |                         |                  |                      |          |                |  |

## 3.100 ntp

|                        |  |
|------------------------|--|
| <b>Description</b>     | Access to configure <i>NTP</i> -client.<br>Command with <b>no</b> prefix resets <i>NTP</i> -client configuration to default. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | No   |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config)&gt; no ntp</pre>   |
| <b>Example</b>         | <pre>(config)&gt; no ntp Ntp::Client: Configuration reset.</pre>   |

**History**

| <b>Version</b> | <b>Description</b>                          |
|----------------|---|
| 2.00           | The <b>ntp</b> command has been introduced. |

### 3.100.1 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>          |
|-----------------|---------------|-----------------------------|
| 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**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 2.00           | The <b>ntp server</b> command has been introduced. |

### 3.100.2 ntp sync-period

**Description** Set a period for time synchronization. By default, 1 week is used.

Command with **no** prefix resets time synchronization to default.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(config)> ntp sync-period <period>
```

```
(config)> no ntp sync-period
```

**Arguments**

| Argument | Value   | Description   |
|----------|---------|---|
| period   | Integer | Time synchronization, in minutes. Can take values 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. |

## 3.101 ntp server

**Description**

Add a new *NTP*-server to the list. You can enter up to 8 *NTP*-servers.

Command with **no** prefix deletes *NTP*-server from the list. If you use no argument, the entire list of *NTP*-servers will be removed.

**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

```
(config)> ntp server <server>
(config)> no ntp server [<server>]
```

**Arguments**

| Argument | Value  | Description                 |
|----------|--------|-----------------------------|
| server   | String | Host of <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. |

## 3.102 ntp sync-period

| <b>Description</b>     | Set a period for time synchronization. By default, 1 week is used.<br>Command with <b>no</b> prefix resets time synchronization to default.   |   |          |             |             |   |         |   |
|------------------------|---|---|----------|-------------|-------------|---|---------|---|
| <b>Prefix no</b>       | Yes   |   |          |             |             |   |         |   |
| <b>Change settings</b> | Yes   |   |          |             |             |   |         |   |
| <b>Multiple input</b>  | No  |   |          |             |             |   |         |   |
| <b>Synopsis</b>        | <pre>(config)&gt; ntp sync-period &lt;period&gt; (config)&gt; no ntp sync-period</pre>  |   |          |             |             |   |         |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>period</td> <td>Integer</td> <td>Time synchronization, in minutes. Can take values from 60 minutes to 1 month.</td> </tr> </tbody> </table> |   | Argument | Value       | Description | period  | Integer | Time synchronization, in minutes. Can take values from 60 minutes to 1 month. |
| Argument               | Value   | Description   |          |             |             |   |         |   |
| period                 | Integer   | Time synchronization, in minutes. Can take values from 60 minutes to 1 month. |          |             |             |   |         |   |
| <b>Example</b>         | <pre>(config)&gt; ntp sync-period 60 Ntp::Client: A synchronization period set to 60 minutes.  (config)&gt; no ntp sync-period Ntp::Client: Synchronization period value reset.</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>ntp sync-period</b> command has been introduced.</td> </tr> </tbody> </table>  |   | Version  | Description | 2.00        | The <b>ntp sync-period</b> command has been introduced. |         |   |
| Version                | Description   |   |          |             |             |   |         |   |
| 2.00                   | The <b>ntp sync-period</b> command has been introduced.   |   |          |             |             |   |         |   |

## 3.103 opkg chroot

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable chroot for <a href="#">opkg</a> . If enabled, root directory is changed to /opt before executing any opkg script. By default, the setting is disabled.<br>Command with <b>no</b> prefix disables chroot mode. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config)&gt; opkg chroot (config)&gt; no opkg chroot</pre>  |
| <b>Example</b>         | <pre>(config)&gt; opkg chroot Opkg::Manager: Chroot enabled.</pre>   |

```
(config)> no opkg chroot
Opkg::Manager: Chroot disabled.
```

**History**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.05           | The <b>opkg chroot</b> command has been introduced. |

## 3.104 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 3.106 on page 401](#).

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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>       |
|-----------------|---------------|--------------------------|
| 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.05           | The <b>opkg disk</b> command has been introduced. |

## 3.105 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 <code>opkg dns-override</code> command has been introduced. |

## 3.106 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.05.C.3       | The <b>opkg initrc</b> command has been introduced. |

## 3.107 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**

|   |
|---|
| <pre>(config)&gt; opkg timezone (auto   &lt;timezone&gt;)</pre> |
| <pre>(config)&gt; no opkg timezone</pre>                        |

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>   |
|-----------------|---------------|--|
| 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 3.143.3 on page 576</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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.05.C.3       | The <b>opkg timezone</b> command has been introduced. |

## 3.108 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>   |
|-----------------|--------------|--|
| name            | String       | <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**

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

### 3.108.1 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. |

### 3.108.2 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 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 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. |

### 3.108.3 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 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 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. |

### 3.108.4 ping-check profile mode

| <b>Description</b>     | Set <i>Ping Check</i> mode. By default, icmp value is used.  |  |          |       |             |      |      |   |  |         |  |
|------------------------|--|--|----------|-------|-------------|------|------|---|--|---------|--|
| <b>Prefix no</b>       | No   |  |          |       |             |      |      |   |  |         |  |
| <b>Change settings</b> | Yes  |  |          |       |             |      |      |   |  |         |  |
| <b>Multiple input</b>  | No   |  |          |       |             |      |      |   |  |         |  |
| <b>Synopsis</b>        | <pre>(config-pchk)&gt; mode &lt;mode&gt;</pre>   |  |          |       |             |      |      |   |  |         |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>mode</td> <td>icmp</td> <td>The availability testing of remote host will be done by ICMP-echo request (ping) sending.</td> </tr> <tr> <td></td> <td>connect</td> <td>The availability testing of remote host will be done by TCP-connection establishing to specified port.</td> </tr> </tbody> </table> |  | 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. |
| 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. |          |       |             |      |      |   |  |         |  |

|                |  |
|----------------|--|
| <b>Example</b> | <pre>(config-pchk)&gt; mode connect PingCheck::Profile: "TEST": uses connect mode.</pre> |
|----------------|--|

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

### 3.108.5 ping-check profile port

|                        |   |
|------------------------|---|
| <b>Description</b>     | Specify port for connection to the remote host. Setting has a meaning for connect mode of <i>Ping Check</i> (see <b>ping-check profile mode</b> command). |
|                        | Command with <b>no</b> prefix removes the setting.  |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>(config-pchk)&gt; port &lt;port&gt;</pre>  |

```
(config-pchk)> no port
```

**Arguments**

| Argument | Value   | Description   |
|----------|---------|---|
| port     | Integer | Port number. Can take values 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. |

### 3.108.6 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. |

### 3.108.7 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 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. |

### 3.108.8 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 from 3 to 3600 inclusively. |

**Example**

```
(config-pchk)> update-interval 60
PingCheck::Profile: "test": update interval is changed to 60 ►
seconds.
```

**History**

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

## 3.109 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>                                  |
|-----------------|---------------|---|
| engine          | software      | Software accelerator.                               |
|                 | hardware      | Hardware accelerator.                               |
|                 | hardware-ipv6 | Hardware accelerator for IPv6. Disabled by default. |

**Example**

```
(config)> ppe software
Network::Interface::Rtx::Ppe: Software PPE enabled.
```

```
(config)> no ppe
Network::Interface::Rtx::Ppe: All PPE disabled.
```

```
(config)> ppe hardware-ipv6
Network::Interface::Rtx::Ppe: Hardware-ipv6 PPE enabled.
```

```
(config)> no ppe hardware-ipv6
Network::Interface::Rtx::Ppe: Hardware-ipv6 PPE disabled.
```

**History**

| <b>Version</b> | <b>Description</b>                          |
|----------------|---|
| 2.00           | The <b>ppe</b> command has been introduced. |
| 2.05           | Argument engine was implemented.            |
| 2.07           | Parameter hardware-ipv6 was implemented.    |

## 3.110 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 name</i> | The starting interface — full WAN-interface name or an alias.  |
|           | lan-iface | <i>Interface name</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. |

## 3.111 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b> |
|-----------------|---------------|--------------------|
| <i>id</i>       | <i>String</i> | Printer ID.        |

**Example**

```
(config)> printer 0924:3cf4
(config-printer)>
```

**History**

| <b>Version</b> | <b>Description</b>                              |
|----------------|---|
| 2.00           | The <b>printer</b> command has been introduced. |

### 3.111.1 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.04           | The <b>printer bidirectional</b> command has been introduced. |

### 3.111.2 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 from 1 to 3 inclusively. |

**Example**(config-printer)> **debug level 3**  
Printer::Manager: a debug level set to 3.(config-printer)> **no debug**  
Printer::Manager: A debug mode disabled.**History**

| Version | Description   |
|---------|---|
| 2.04    | The printer <b>debug</b> command has been introduced. |

### 3.111.3 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 printer <b>firmware</b> command has been introduced. |

### 3.111.4 printer name

**Description** Assign an arbitrary name to the printer.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

|                   |                    |
|-------------------|--------------------|
| (config-printer)> | <b>name</b> <name> |
|-------------------|--------------------|

**Arguments**

| Argument | Value         | Description             |
|----------|---------------|-------------------------|
| name     | <i>String</i> | Arbitrary printer name. |

**Example**

|                   |                   |
|-------------------|-------------------|
| (config-printer)> | <b>name</b> Canon |
|-------------------|-------------------|

Printer::Manager: A printer name set.

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>printer name</b> command has been introduced. |

### 3.111.5 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)> | <b>port</b> <port> |
|-------------------|--------------------|

**Arguments**

| Argument | Value          | Description   |
|----------|----------------|---------------|
| port     | <i>Integer</i> | Printer port. |

**Example**

|                   |                  |
|-------------------|------------------|
| (config-printer)> | <b>port</b> 2012 |
|-------------------|------------------|

Printer::Manager: A port set.

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>printer port</b> command has been introduced. |

### 3.111.6 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)> | <b>status-polling</b> |
|-------------------|-----------------------|

|                   |                          |
|-------------------|--------------------------|
| (config-printer)> | <b>no status-polling</b> |
|-------------------|--------------------------|

**Example**

|   |                       |
|---|-----------------------|
| (config-printer)>                         | <b>status-polling</b> |
| Printer::Manager: Status polling enabled. |                       |

|  |                          |
|--|--------------------------|
| (config-printer)>                          | <b>no status-polling</b> |
| Printer::Manager: Status polling disabled. |                          |

**History**

| Version | Description  |
|---------|--|
| 3.04    | The <b>printer status-polling</b> command has been introduced. |

### 3.111.7 printer type

**Description** Set printer type.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

|                   |                          |
|-------------------|--------------------------|
| (config-printer)> | <b>type &lt;type&gt;</b> |
|-------------------|--------------------------|

**Arguments**

| Argument | Value  | Description                                  |
|----------|--------|--|
| type     | cifs   | Printer connected via <a href="#">CIFS</a> . |
|          | direct | Printer connected directly to device.        |

**Example**

|                                       |                    |
|---------------------------------------|--------------------|
| (config-printer)>                     | <b>type direct</b> |
| Printer::Manager: A printer type set. |                    |

**History**

| Version | Description  |
|---------|--|
| 2.00    | The <b>printer type</b> command has been introduced. |

## 3.112 schedule

| <b>Description</b>     | Access to a group of commands to configure the schedule. If the schedule is not found, the command tries to create it.  |                  |             |             |  |               |                  |
|------------------------|---|------------------|-------------|-------------|--|---------------|------------------|
|                        | Command with <b>no</b> prefix deletes the schedule.   |                  |             |             |  |               |                  |
| <b>Prefix no</b>       | Yes   |                  |             |             |  |               |                  |
| <b>Change settings</b> | Yes   |                  |             |             |  |               |                  |
| <b>Multiple input</b>  | Yes   |                  |             |             |  |               |                  |
| <b>Group entry</b>     | (config-sched)  |                  |             |             |  |               |                  |
| <b>Synopsis</b>        | <pre>(config)&gt; schedule &lt;name&gt; (config)&gt; no schedule &lt;name&gt;</pre>   |                  |             |             |  |               |                  |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Argument</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>name</td> <td><i>String</i></td> <td>A schedule name.</td> </tr> </tbody> </table> | Argument         | Value       | Description | name   | <i>String</i> | A schedule name. |
| Argument               | Value   | Description      |             |             |  |               |                  |
| name                   | <i>String</i>   | A schedule name. |             |             |  |               |                  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Version</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>2.06</td> <td>The <b>schedule</b> command has been introduced.</td> </tr> </tbody> </table>                                  | Version          | Description | 2.06        | The <b>schedule</b> command has been introduced. |               |                  |
| Version                | Description   |                  |             |             |  |               |                  |
| 2.06                   | The <b>schedule</b> command has been introduced.  |                  |             |             |  |               |                  |

### 3.112.1 schedule action

| <b>Description</b>     | Specify the actions to be performed according to the selected schedule.  |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
|------------------------|--|--------------------------|-------|-------------|--------|-------|--------------------------|------|--------------------|-----|----------------|--------------|------|----------------|------------|
|                        | Command with <b>no</b> prefix cancels the action.  |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
| <b>Prefix no</b>       | Yes  |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
| <b>Change settings</b> | Yes  |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
| <b>Multiple input</b>  | Yes  |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
| <b>Synopsis</b>        | <pre>(config-sched)&gt; action &lt;action&gt; &lt;min&gt; &lt;hour&gt; &lt;dow&gt; (config-sched)&gt; no action [&lt;action&gt; &lt;min&gt; &lt;hour&gt; &lt;dow&gt; ]</pre>   |                          |       |             |        |       |                          |      |                    |     |                |              |      |                |            |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">Argument</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">action</td><td>start</td><td>Action of the beginning.</td></tr> <tr> <td>stop</td><td>Action of the end.</td></tr> <tr> <td>min</td><td><i>Integer</i></td><td>The minutes.</td></tr> <tr> <td>hour</td><td><i>Integer</i></td><td>The hours.</td></tr> </tbody> </table> | 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. |
| 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.               |       |             |        |       |                          |      |                    |     |                |              |      |                |            |

| Argument | Value   | Description   |
|----------|---------|---|
| dow      | Integer | Days of the week, separated by commas.<br>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. |

### 3.112.2 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**

|  |
|--|
| <pre>(config-sched)&gt; <b>description &lt;description&gt;</b></pre> |
| <pre>(config-sched)&gt; <b>no description</b></pre>                  |

**Arguments**

| Argument    | Value  | Description              |
|-------------|--------|--------------------------|
| description | String | Text of the description. |

**Example**

```
(config-sched)> description "Schedule for on/off Access Point"
Core::Schedule::Manager: Updated description of schedule "WIFI".
```

**History**

| Version | Description  |
|---------|--|
| 2.06    | The <b>schedule description</b> command has been introduced. |

### 3.112.3 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

| <b>Change settings</b> | Yes  |   |             |             |  |       |   |  |      |   |
|------------------------|--|---|-------------|-------------|--|-------|---|--|------|---|
| <b>Multiple input</b>  | No   |   |             |             |  |       |   |  |      |   |
| <b>Synopsis</b>        | <pre>(config-sched)&gt; led &lt;action&gt; (config-sched)&gt; no led</pre>   |   |             |             |  |       |   |  |      |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>action</td><td>start</td><td>LED shows the beginning of the scheduled event.</td></tr> <tr> <td></td><td>stop</td><td>LED shows the end of the scheduled event.</td></tr> </tbody> </table> | Argument  | Value       | Description | action   | start | LED shows the beginning of the scheduled event. |  | stop | LED shows the end of the scheduled event. |
| Argument               | Value  | Description                                     |             |             |  |       |   |  |      |   |
| action                 | start  | LED shows the beginning of the scheduled event. |             |             |  |       |   |  |      |   |
|                        | stop   | LED shows the end of the scheduled event.       |             |             |  |       |   |  |      |   |
| <b>Example</b>         | <pre>(config-sched)&gt; led start Core::Schedule::Led: Selected schedule "111".</pre>  |   |             |             |  |       |   |  |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>schedule led</b> command has been introduced.</td></tr> </tbody> </table>  | Version   | Description | 2.08        | The <b>schedule led</b> command has been introduced. |       |   |  |      |   |
| Version                | Description  |   |             |             |  |       |   |  |      |   |
| 2.08                   | The <b>schedule led</b> command has been introduced.   |   |             |             |  |       |   |  |      |   |

## 3.113 service afp

| <b>Description</b>     | Enable <a href="#">AFP</a> service.  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes  |         |             |      |   |
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config)&gt; service afp (config)&gt; no service afp</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config)&gt; service afp Afp::Server: Enabled.</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>service afp</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.06 | The <b>service afp</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.06                   | The <b>service afp</b> command has been introduced.  |         |             |      |   |

## 3.114 service cifs

|                    |                                      |
|--------------------|--------------------------------------|
| <b>Description</b> | Enable <a href="#">CIFS</a> service. |
| <b>Prefix no</b>   | Yes                                  |

| <b>Change settings</b> | Yes  |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Synopsis</b>        | <pre>  (config)&gt; service cifs   (config)&gt; no service cifs</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; service cifs Cifs::ServerTsmb: Enabled.  (config)&gt; no service cifs Cifs::ServerTsmb: Disabled.</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>service cifs</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>service cifs</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.00                   | The <b>service cifs</b> command has been introduced.   |         |             |      |  |

## 3.115 service dhcp

| <b>Description</b>     | Enable <i>DHCP-server</i> . If there is not enough settings to start the service (see <a href="#">ip dhcp pool</a> ), the service will not respond to the network. As soon as there are enough settings, the service will be enabled automatically.<br><br>Command with <b>no</b> prefix stops the service. |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>  (config)&gt; service dhcp   (config)&gt; no service dhcp</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; service dhcp service enabled.</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>service dhcp</b> command has been introduced.</td></tr></tbody></table>  | Version | Description | 2.00 | The <b>service dhcp</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.00                   | The <b>service dhcp</b> command has been introduced.  |         |             |      |  |

## 3.116 service dhcp-relay

|                    |  |
|--------------------|--|
| <b>Description</b> | Enable DHCP-relay. If there are not enough settings to start the service (see <a href="#">ip dhcp relay lan</a> , <a href="#">ip dhcp relay server</a> , <a href="#">ip dhcp relay wan</a> ), 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. |

## 3.117 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. |

## 3.118 service dns-proxy

**Description** Enable DNS-proxy. To configure the parameters of the service, use [Section 3.23 on page 119](#) group of commands.

| <b>Prefix no</b>       | No   |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | (config)> <b>service dns-proxy</b>   |         |             |      |   |
| <b>Example</b>         | (config)> <b>service dns-proxy</b><br>Dns::Manager: DNS proxy enabled.   |         |             |      |   |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>service dns-proxy</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>service dns-proxy</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>service dns-proxy</b> command has been introduced.  |         |             |      |   |

## 3.119 service ftp

| <b>Description</b>     | Enable FTP-server that provides the user with access to connected USB-drives, configuration files and a file with firmware update.<br><br>Command with <b>no</b> prefix stops the service. |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes  |         |             |      |   |
| <b>Change settings</b> | Yes  |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | (config)> <b>service ftp</b><br><br>(config)> <b>no service ftp</b>  |         |             |      |   |
| <b>Example</b>         | (config)> <b>service ftp</b><br>FTP server enabled.  |         |             |      |   |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>service ftp</b> command has been introduced.</td></tr></tbody></table>               | Version | Description | 2.00 | The <b>service ftp</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>service ftp</b> command has been introduced.  |         |             |      |   |

## 3.120 service http

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable HTTP-server that provides the user with Web-interface to configure Extra DSL.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>       | <pre>(config)&gt; service http (config)&gt; no service http</pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config)&gt; service http HTTP server enabled.</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>service http</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>service http</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>service http</b> command has been introduced.  |         |             |      |  |

## 3.121 service igmp-proxy

| <b>Description</b>     | 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 <b>no</b> prefix stops the service.   |         |             |      |  |
| <b>Prefix no</b>       | Yes  |         |             |      |  |
| <b>Change settings</b> | Yes  |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config)&gt; service igmp-proxy (config)&gt; no service igmp-proxy</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt; service igmp-proxy IGMP proxy enabled.</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>service igmp-proxy</b> command has been introduced.</td> </tr> </tbody> </table>  | Version | Description | 2.00 | The <b>service igmp-proxy</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.00                   | The <b>service igmp-proxy</b> command has been introduced.   |         |             |      |  |

## 3.122 service internet-checker

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable the Internet-checker to monitor the state of Internet connection on the device. By default, service is enabled. |
|                        | Command with <b>no</b> prefix stops the service.   |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | 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**

|      | <b>Version</b> | <b>Description</b>   |
|------|----------------|--|
| 2.13 |                | The <b>service internet-checker</b> command has been introduced. |

## 3.123 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**

|      | <b>Version</b> | <b>Description</b>                                    |
|------|----------------|---|
| 2.06 |                | The <b>service ipsec</b> command has been introduced. |

## 3.124 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

| <b>Multiple input</b> | No   |         |             |      |   |
|-----------------------|--|---------|-------------|------|---|
| <b>Synopsis</b>       | <pre>(config)&gt; service kabinet (config)&gt; no service kabinet</pre>  |         |             |      |   |
| <b>Example</b>        | <pre>(config)&gt; service kabinet Kabinet::Authenticator: Authenticator enabled.</pre> <pre>(config)&gt; service kabinet Kabinet::Authenticator: Authenticator disabled.</pre>                           |         |             |      |   |
| <b>History</b>        | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.02</td> <td>The <b>service kabinet</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.02 | The <b>service kabinet</b> command has been introduced. |
| Version               | Description  |         |             |      |   |
| 2.02                  | The <b>service kabinet</b> command has been introduced.  |         |             |      |   |

## 3.125 service mdns

| <b>Description</b>     | Enable <i>mDNS</i> service. By default, service is enabled.<br><br>Command with <b>no</b> prefix stops the service.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config)&gt; service mdns (config)&gt; no service mdns</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(config)&gt;service mdns (config)&gt;no service mdns</pre>   |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.15</td> <td>The <b>service mdns</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.15 | The <b>service mdns</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.15                   | The <b>service mdns</b> command has been introduced.  |         |             |      |  |

## 3.126 service mws

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable <i>MWS</i> service. By default, service is disabled.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |

| <b>Multiple input</b> | No  |         |             |      |   |
|-----------------------|---|---------|-------------|------|---|
| <b>Synopsis</b>       | <pre>(config)&gt; service mws</pre> <pre>(config)&gt; no service mws</pre>  |         |             |      |   |
| <b>Example</b>        | <pre>(config)&gt; service mws Mws::Controller: Enabled.</pre> <pre>(config)&gt; no service mws Mws::Controller: Disabled.</pre>   |         |             |      |   |
| <b>History</b>        | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.15</td><td>The <b>service mws</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.15 | The <b>service mws</b> command has been introduced. |
| Version               | Description   |         |             |      |   |
| 2.15                  | The <b>service mws</b> command has been introduced.   |         |             |      |   |

## 3.127 service ntce

| <b>Description</b>     | Enable <i>NTCE</i> service. By default it is disabled.<br><br>Command with <b>no</b> prefix stops the service.  |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Prefix no</b>       | Yes   |         |             |      |   |
| <b>Change settings</b> | Yes   |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config)&gt; service ntce</pre> <pre>(config)&gt; no service ntce</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config)&gt; service ntce Ntce::Manager: Enabled.</pre>  |         |             |      |   |
| <b>History</b>         | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.09</td><td>The <b>service ntce</b> command has been introduced.<br/>Previous command name is <b>service dpi</b>.</td></tr></tbody></table> | Version | Description | 2.09 | The <b>service ntce</b> command has been introduced.<br>Previous command name is <b>service dpi</b> . |
| Version                | Description   |         |             |      |   |
| 2.09                   | The <b>service ntce</b> command has been introduced.<br>Previous command name is <b>service dpi</b> .   |         |             |      |   |

## 3.128 service ntp-client

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable <i>NTP</i> -client.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>       | <pre>(config)&gt; service ntp-client (config)&gt; no service ntp-client</pre>   |         |             |      |  |
| <b>Example</b>        | <pre>(config)&gt; service ntp-client NTP client enabled.</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>service ntp-client</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>service ntp-client</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>service ntp-client</b> command has been introduced.  |         |             |      |  |

## 3.129 service snmp

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable <b>SNMP</b> service. By default, the service is disabled.<br><br>Command with <b>no</b> prefix stops the service.                             |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config)&gt; service snmp (config)&gt; no service snmp</pre>  |
| <b>Example</b>         | <pre>(config)&gt; service snmp Snmp::Manager: SNMP service was enabled. (config)&gt; no service snmp Snmp::Manager: SNMP service was disabled.</pre> |

| <b>History</b> | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.08</td><td>The <b>service snmp</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.08 | The <b>service snmp</b> command has been introduced. |
|----------------|---|---------|-------------|------|--|
| Version        | Description   |         |             |      |  |
| 2.08           | The <b>service snmp</b> command has been introduced.  |         |             |      |  |

## 3.130 service ssh

|                        |   |
|------------------------|---|
| <b>Description</b>     | Enable the SSH server that provides the user with command line interface to configure the device.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | 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. |

## 3.131 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. |

## 3.132 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.

|                        |   |
|------------------------|---|
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | <pre>  (config)&gt; service telnet   (config)&gt; no service telnet</pre> |
| <b>Example</b>         | <pre>(config)&gt; service tel Telnet server enabled.</pre>                |

| <b>History</b> | <b>Version</b> | <b>Description</b>                                     |
|----------------|----------------|--|
|                | 2.00           | The <b>service telnet</b> command has been introduced. |

## 3.133 service torrent

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable BitTorrent-client that provides the user with peer-to-peer sharing of very large files, such as entire movies and TV shows.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>  (config)&gt; service torrent   (config)&gt; no service torrent</pre>  |
| <b>Example</b>         | <pre>(config)&gt; service torrent server enabled.</pre>  |

| <b>History</b> | <b>Version</b> | <b>Description</b>                                      |
|----------------|----------------|---|
|                | 2.00           | The <b>service torrent</b> command has been introduced. |

## 3.134 service udpxy

|                    |  |
|--------------------|--|
| <b>Description</b> | Enable <i>udpxy</i> service.<br><br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>   | Yes  |

| <b>Change settings</b> | Yes  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | <pre>(config)&gt; service udpxy (config)&gt; no service udpxy</pre>  |         |             |      |   |
| <b>Example</b>         | <pre>(config)&gt; service udpxy Udpxy::Manager: a service enabled.</pre>   |         |             |      |   |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.03</td><td>The <b>service udpxy</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.03 | The <b>service udpxy</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.03                   | The <b>service udpxy</b> command has been introduced.  |         |             |      |   |

## 3.135 service upnp

| <b>Description</b>     | Enable UPnP service.<br>Command with <b>no</b> prefix stops the service.  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(config)&gt; service upnp (config)&gt; no service upnp</pre>   |         |             |      |  |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>service upnp</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>service upnp</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.00                   | The <b>service upnp</b> command has been introduced.  |         |             |      |  |

## 3.136 service vpn-server

|                        |  |
|------------------------|--|
| <b>Description</b>     | Enable VPN-server.<br>Command with <b>no</b> prefix stops the service. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | <pre>(config)&gt; service vpn-server</pre>                             |

```
(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. |

## 3.137 show

**Description** Access to a group of commands to display various diagnostic information about system. All commands of this group do not change system settings.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (show)

**Synopsis**

```
(config)> show
```

**History**

| Version | Description                                  |
|---------|--|
| 2.00    | The <b>show</b> command has been introduced. |

### 3.137.1 show access

**Description** Show user access for directory on USB drive.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

```
(show)> access <directory>
```

**Arguments**

| Argument  | Value  | Description                      |
|-----------|--------|----------------------------------|
| directory | String | Path to the folder on USB drive. |

**Example**

```
(show)> access PENDRIVE:doc

    user:
        name: admin
        assigned: write
        effective: write
        exists: yes
    user:
        name: test
        assigned: read
        effective: read
        exists: yes
```

**History**

| Version | Description   |
|---------|---|
| 2.00    | The <b>show access</b> command has been introduced. |

### 3.137.2 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.11           | The <b>show acme</b> command has been introduced. |

### 3.137.3 show adguard-dns availability

**Description** Check and show *AdGuard DNS* availability.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **adguard-dns availability**

**Example** (show)> **adguard-dns availability**

```
available: yes
port: 53
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.12           | The <b>show adguard-dns availability</b> command has been introduced. |

### 3.137.4 show adguard-dns profiles

**Description** Show *AdGuard DNS* profiles.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **adguard-dns profiles**

**Example** (show)> **adguard-dns profiles**

```
profiles:
    profile: default

    profile: standard

    profile: family
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.11           | The <b>show adguard-dns profiles</b> command has been introduced. |

### 3.137.5 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**

| <b>Version</b> | <b>Description</b>                               |
|----------------|--|
| 2.06           | The <b>show afp</b> command has been introduced. |

### 3.137.6 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

| <b>Interface type</b> | Access Point   |   |       |             |      |        |   |
|-----------------------|--|---|-------|-------------|------|--------|---|
| <b>Synopsis</b>       | (show)> <b>associations</b> [ <name> ]   |   |       |             |      |        |   |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td>String</td><td>An access point name. You can see the list of available access points with help of <b>associations</b> [Tab] command.</td></tr> </tbody> </table> | Argument  | Value | Description | name | String | An access point name. You can see the list of available access points with help of <b>associations</b> [Tab] command. |
| Argument              | Value  | Description   |       |             |      |        |   |
| name                  | String   | 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>show associations</b> command has been introduced. |

### 3.137.7 show button

**Description** Show information about specified system button. If you use no argument, the entire list of all buttons on the device will be displayed. Available buttons depend on hardware configuration.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **button** [<name>]

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b> |
|-----------------|---------------|--------------------|
| 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
```

**History**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.00           | The <b>show button</b> command has been introduced. |

### 3.137.8 show button bindings

**Description** Show a list of actions associated with device buttons.

**Prefix no** No

|                        |                                |
|------------------------|--------------------------------|
| <b>Change settings</b> | No                             |
| <b>Multiple input</b>  | No                             |
| <b>Synopsis</b>        | (show)> <b>button bindings</b> |

|                |                                |
|----------------|--------------------------------|
| <b>Example</b> | (show)> <b>button bindings</b> |
|----------------|--------------------------------|

```

bindings:

    binding, index = 0:
        button: RESET
        action: click
        active_handler: Reboot
        default_handler: Reboot
        protected: yes

    binding, index = 1:
        button: RESET
        action: hold
        active_handler: FactoryReset
        default_handler: FactoryReset
        protected: yes

    binding, index = 2:
        button: WLAN
        action: click
        active_handler: WpsStartMainAp
        default_handler: WpsStartMainAp
        protected: no

    binding, index = 3:
        button: WLAN
        action: double-click
        active_handler: WpsStartMainAp5
        default_handler: WpsStartMainAp5
        protected: no

    binding, index = 4:
        button: WLAN
        action: hold
        active_handler: WifiToggle
        default_handler: WifiToggle
        protected: no

    binding, index = 5:
        button: FN1
        action: click
        active_handler: UnmountUsb1
        default_handler: UnmountUsb1
        protected: no

binding, index = 6:

```

```
        button: FN1
        action: double-click
active_handler:
default_handler:
protected: no

binding, index = 7:
        button: FN1
        action: hold
active_handler:
default_handler:
protected: no

binding, index = 8:
        button: FN2
        action: click
active_handler: UnmountUsb2
default_handler: UnmountUsb2
protected: no

binding, index = 9:
        button: FN2
        action: double-click
active_handler:
default_handler:
protected: no

binding, index = 10:
        button: FN2
        action: hold
active_handler:
default_handler:
protected: no
```

**History**

| Version | Description  |
|---------|--|
| 2.03    | The <b>show button bindings</b> command has been introduced. |

### 3.137.9 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.03           | The <b>show button handlers</b> command has been introduced. |

### 3.137.10 show chilli profiles

**Description**Show the list of available *RADIUS*-server profiles.

|                        |  |
|------------------------|--|
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | (show)> <b>chilli profiles</b>   |
| <b>Example</b>         | <pre>(show)&gt; <b>chilli profiles</b>          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</pre> |

| History | Version | Description  |
|---------|---------|--|
|         | 2.10    | The <b>show chilli profiles</b> command has been introduced. |

### 3.137.11 show cifs

|                        |                                 |
|------------------------|---------------------------------|
| <b>Description</b>     | Show <i>CIFS</i> server status. |
| <b>Prefix no</b>       | No                              |
| <b>Change settings</b> | No                              |
| <b>Multiple input</b>  | No                              |
| <b>Synopsis</b>        | (show)> <b>cifs</b>             |

**Example**

```
(show)> cifs

    enabled: yes

    master: no

    automount: yes

    permissive: yes

    share:
        mount: 9430B54530B52EDC:
        label: 9430B54530B52EDC
    description:
        active: no
```

**History**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.00           | The <b>show cifs</b> command has been introduced. |

**3.137.12 show clock date****Description** Show the current system date.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (show)> **clock date****Example**

```
(show)> clock date

    weekday: 4
        day: 18
        month: 1
        year: 2018
        hour: 8
        min: 46
        sec: 2
        msec: 660
        dst: inactive

        tz:
        locality: GMT
        stdoffset: 0
        dstoffset: 0
        usesdst: no
            rule: GMT0
        custom: no
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.00           | The <b>show clock date</b> command has been introduced. |

### 3.137.13 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>show clock timezone-list</b> command has been introduced. |

### 3.137.14 show cloudflare-dns availability

| <b>Description</b>     | Check and show <i>Cloudflare DNS</i> availability.  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | No  |         |             |      |  |
| <b>Change settings</b> | No  |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | (show)> <b>cloudflare-dns availability</b>  |         |             |      |  |
| <b>Example</b>         | (show)> <b>cloudflare-dns availability</b><br><br>available: yes<br>doh-supported: yes<br>doh-available: yes<br>dot-supported: yes<br>dot-available: yes<br>blocked-name: ►<br>31bd8460-89fd-e2de-8865-63ffb93d1c9e.is-cf.cloudflareresolve.com<br>ipv6-supported: no<br>ipv6-enabled: no |         |             |      |  |
| <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>show cloudflare-dns availability</b> command has been introduced.</td></tr></tbody></table>  | Version | Description | 3.05 | The <b>show cloudflare-dns availability</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.05                   | The <b>show cloudflare-dns availability</b> command has been introduced.  |         |             |      |  |

### 3.137.15 show cloudflare-dns profiles

|                        |   |
|------------------------|---|
| <b>Description</b>     | Show <i>Cloudflare DNS</i> profiles.  |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | No  |
| <b>Multiple input</b>  | No  |
| <b>Synopsis</b>        | (show)> <b>cloudflare-dns profiles</b>  |
| <b>Example</b>         | (show)> <b>cloudflare-dns profiles</b><br><br>profiles:<br>profile: default<br><br>profile: standard<br><br>profile: malware<br><br>profile: family |

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.05           | The <b>show cloudflare-dns profiles</b> command has been introduced. |

### 3.137.16 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/raci
    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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.06           | The <b>show configurator status</b> command has been introduced. |

### 3.137.17 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: dhcpcv6
        title: DHCPv6 client + server
        homepage: http://wide-dhcpcv6.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 compatibility layer netfilter module  
    homepage:  
  
package:  
    name: kmod-ipt-condition  
    title: Condition netfilter module  
    homepage:  
  
package:  
    name: kmod-ipt-delude  
    title: DELUDE netfilter module  
    homepage:  
  
package:  
    name: kmod-ipt-dhcpmac  
    title: DHCPMAC netfilter module  
    homepage:  
  
package:  
    name: kmod-ipt-dnetmap  
    title: DNETMAP netfilter module  
    homepage:  
  
package:  
    name: kmod-ipt-fuzzy
```

```
        title: fuzzy netfilter module
        homepage:

package:
    name: kmod-ipt-geoip
    title: geoip netfilter module
    homepage:

package:
    name: kmod-ipt-iface
    title: iface netfilter module
    homepage:

package:
    name: kmod-ipt-ipmark
    title: IPMARK netfilter module
    homepage:

package:
    name: kmod-ipt-ipp2p
    title: IPP2P netfilter module
    homepage:

package:
    name: kmod-ipt-ipv4options
    title: ipv4options netfilter module
    homepage:

package:
    name: kmod-ipt-length2
    title: length2 netfilter module
    homepage:

package:
    name: kmod-ipt-logmark
    title: LOGMARK netfilter module
    homepage:

package:
    name: kmod-ipt-lscan
    title: lscan netfilter module
    homepage:

package:
    name: kmod-ipt-netflow
    title: Netflow netfilter module for Linux kernel
    homepage: http://ipt-netflow.sourceforge.net/

package:
    name: kmod-ipt-psd
    title: psd netfilter module
    homepage:

package:
```

```

        name: kmod-ipt-quota2
        title: quota2 netfilter module
        homepage:

package:
        name: kmod-ipt-sysrq
        title: SYSRQ netfilter module
        homepage:

package:
        name: kmod-ipt-tarpit
        title: TARPIT netfilter module
        homepage:

package:
        name: kmod-nf-nathelper-rtsp
        title: RTSP Conntrack and NAT helpers
        homepage: https://github.com/maru-sama/rtsp-linux

package:
        name: kmod-wireguard
        title: WireGuard kernel module
        homepage:

package:
        name: libattr
        title: Extended attributes (xattr) manipulation ▶
library
        homepage: http://savannah.nongnu.org/projects/attr

package:
        name: libav
        title: This package contains Libav library
        homepage: https://libav.org/

package:
        name: libavahi
        title: An mDNS/DNS-SD implementation (No D-Bus)
        homepage: http://www.avahi.org/

package:
        name: libcurl
        title: A client-side URL transfer library
        homepage: http://curl.haxx.se/

package:
        name: libdaemon
        title: A lightweight C library that eases the ▶
writing of UNIX daemons
        homepage: ▶
http://0pointer.de/lennart/projects/libdaemon/

package:
        name: libdb47

```

```
        title: Berkeley DB library (4.7)
        homepage: http://www.sleepycat.com/products/db.shtml

    package:
        name: libevent
        title: Event notification library
        homepage: http://www.monkey.org/~provos/libevent/

    package:
        name: libexif
        title: Library for JPEG files with EXIF tags
        homepage: https://libexif.github.io

    package:
        name: libexpat
        title: An XML parsing library
        homepage: https://libexpat.github.io/

    package:
        name: libgcrypt
        title: GNU crypto library
        homepage: ▶
http://directory.fsf.org/security/libgcrypt.html

    package:
        name: libgpg-error
        title: GnuPG error handling helper library
        homepage: ▶
http://www.gnupg.org/related\_software/libgpg-error/

    package:
        name: libid3tag
        title: An ID3 tag manipulation library
        homepage: https://www.underbit.com/products/mad/

    package:
        name: libjpeg
        title: The Independent JPEG Group's JPEG runtime ▶
library
        homepage: http://www.ijg.org/

    package:
        name: liblzo
        title: A real-time data compression library
        homepage: http://www.oberhumer.com/opensource/lzo/

    package:
        name: libnhttp2
        title: Library implementing the framing layer ▶
of HTTP/2
        homepage: https://nghttp2.org/

    package:
        name: libopenssl
```

```
        title: Open source SSL toolkit (libraries ►
(libcrypto.so, libssl.so))
        homepage: http://www.openssl.org/

    package:
        name: libpcap
        title: Low-level packet capture library
        homepage: http://www.tcpdump.org/

    package:
        name: libtommath
        title: A free number theoretic multiple-precision ►
integer library
        homepage: https://www.libtom.net/

    package:
        name: libusb
        title: A library for accessing Linux USB devices
        homepage: http://libusb.info/

    package:
        name: mini_snmpd
        title: Lightweight SNMP daemon
        homepage: http://troglobit.github.io/mini-snmpd.html

    package:
        name: minidlna
        title: UPnP A/V & DLNA Media Server
        homepage: http://minidlna.sourceforge.net/

    package:
        name: miniupnpd
        title: Lightweight UPnP daemon
        homepage: http://miniupnp.tuxfamily.org/

    package:
        name: netatalk
        title: netatalk
        homepage: http://netatalk.sourceforge.net

    package:
        name: nginx
        title: Nginx web server
        homepage: http://nginx.org/

    package:
        name: nginx-stream-module
        title: Nginx stream module
        homepage:

    package:
        name: openvpn
        title: Open source VPN solution using OpenSSL
        homepage: http://openvpn.net
```

```
        package:  
            name: pjproject  
            title: PJSIP  
            homepage: http://www.pjsip.org/  
  
        package:  
            name: pureftpd  
            title: FTP server  
            homepage: http://www.pureftpd.org  
  
        package:  
            name: radvd  
            title: Router advertisement daemon  
            homepage: http://www.litech.org/radvd/  
  
        package:  
            name: sstp-client  
            title: SSTP client for Linux  
            homepage: http://sstp-client.sourceforge.net/  
  
        package:  
            name: strongswan  
            title: Strongswan IKEv1/IKEv2 ISAKMP and IPsec ▶  
suite  
            homepage: https://www.strongswan.org/  
  
        package:  
            name: transmission-daemon  
            title: A free, lightweight BitTorrent client  
            homepage: http://www.transmissionbt.com  
  
        package:  
            name: tspc  
            title: TSP client  
            homepage: http://www.broker.ipv6.ac.uk  
  
        package:  
            name: tzdata  
            title: Timezone data files  
            homepage: https://www.iana.org/time-zones  
  
        package:  
            name: udpxy  
            title: Convert UDP IPTV streams into HTTP stream  
            homepage: http://sourceforge.net/projects/udpxy  
  
        package:  
            name: zlib  
            title: Library implementing the deflate ▶  
compression method  
            homepage: http://www.zlib.net/
```

```
(show)> credits nginx

copying: /*
    * Copyright (C) 2002-2019 Igor Sysoev
    * Copyright (C) 2011-2019 Nginx, Inc.
    * All rights reserved.
    *
    * Redistribution and use in source and binary ►
forms, with or without
    * modification, are permitted provided that ►
the following conditions
    * are met:
    * 1. Redistributions of source code must ►
retain the above copyright
    * notice, this list of conditions and the ►
following disclaimer.
    * 2. Redistributions in binary form must ►
reproduce the above copyright
    * notice, this list of conditions and the ►
following disclaimer in the
    * documentation and/or other materials ►
provided with the distribution.
    *
    * THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND ►
CONTRIBUTORS ``AS IS'' AND
    * ANY EXPRESS OR IMPLIED WARRANTIES, ►
INCLUDING, BUT NOT LIMITED TO, THE
    * IMPLIED WARRANTIES OF MERCHANTABILITY AND ►
FITNESS FOR A PARTICULAR PURPOSE
    * ARE DISCLAIMED. IN NO EVENT SHALL THE ►
AUTHOR OR CONTRIBUTORS BE LIABLE
    * FOR ANY DIRECT, INDIRECT, INCIDENTAL, ►
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
    * DAMAGES (INCLUDING, BUT NOT LIMITED TO, ►
PROCUREMENT OF SUBSTITUTE GOODS
    * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; ►
OR BUSINESS INTERRUPTION)
    * HOWEVER CAUSED AND ON ANY THEORY OF ►
LIABILITY, WHETHER IN CONTRACT, STRICT
    * LIABILITY, OR TORT (INCLUDING NEGLIGENCE ►
OR OTHERWISE) ARISING IN ANY WAY
    * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ►
ADVISED OF THE POSSIBILITY OF
    * SUCH DAMAGE.
    */

```

**History**

| <b>Version</b> | <b>Description</b>                                   |
|----------------|--|
| 3.01           | The <b>show credits</b> command has been introduced. |

### 3.137.18 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. |

### 3.137.19 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: ca59bfcc
                    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**

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

### 3.137.20 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: 4712e0849cce477ccdd18e2fedb***
serial: S1749WF***
signature: valid
integrity: ok
locked: yes
```

**History**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.00           | The <b>show defaults</b> command has been introduced. |

### 3.137.21 show dlna

**Description** Show DLNA server status.

| <b>Prefix no</b>       | No   |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Change settings</b> | No   |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Synopsis</b>        | (show)> <b>dlna</b>  |         |             |      |   |
| <b>Example</b>         | (show)> <b>dlna</b><br>running: yes  |         |             |      |   |
| <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>show dlna</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.00 | The <b>show dlna</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.00                   | The <b>show dlna</b> command has been introduced.  |         |             |      |   |

### 3.137.22 show dns-proxy

|                        |  |
|------------------------|--|
| <b>Description</b>     | Show a list of current <i>DNS over TLS</i> and <i>DNS over HTTPS</i> servers.  |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |
| <b>Multiple input</b>  | No   |
| <b>Synopsis</b>        | (show)> <b>dns-proxy</b>   |
| <b>Example</b>         | <pre>(show)&gt; <b>dns-proxy</b>  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</pre> |

```
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

          Ip      Port   R.Sent A.Rcvd NX.Rcvd ▶
Med.Resp Avg.Resp 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: dnsms
          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. |

### 3.137.23 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

El presente contrato de licencia del usuario final (el presente ►
Contrato“)
constituye un acuerdo válido y vinculante celebrado entre Keenetic
Limited, incluidas todas las filiales y sucursales (“Keenetic“,
“nosotros“, “nuestro/a“ o “nos“) y Usted (tal y como se define a
continuación) del Software (tal y como se define a continuación), ►
incluido
el Software instalado en cualquiera de nuestros productos de ►
Keenetic (el
“Producto“) y/o el Software obtenido o proporcionado legalmente ►
por la
Plataforma de la aplicación (tal y como se define a continuación)
autorizado por Keenetic. Se referirá a Keenetic y Usted, en ►
conjunto, como
las “Partes“ y, de forma individual, como una “Parte“.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.05           | The <b>show dpn document</b> command has been introduced. |

### 3.137.24 show dpn list

**Description** Show the list of *DPN* available in the system.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **dpn list**

```
(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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 3.05           | The <b>show dpn list</b> command has been introduced. |

### 3.137.25 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**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>   |
|-----------------|-----------------------|--|
| interface       | <i>Interface name</i> | An Ethernet interface name. You can see the list of available Ethernet interfaces with help of <b>dot1x [Tab]</b> 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: Dsl0
            state: CONNECTING
```

**History**

| <b>Version</b> | <b>Description</b>                                 |
|----------------|--|
| 2.02           | The <b>show dot1x</b> command has been introduced. |

**3.137.26 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. |

### 3.137.27 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. |

### 3.137.28 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. |

### 3.137.29 show eula document

**Description** Show *EULA* agreement text.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **eula document** [*version*] [*language*]

**Arguments**

| Argument | Value         | Description   |
|----------|---------------|---|
| version  | <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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.15           | The <b>show eula document</b> command has been introduced. |

### 3.137.30 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.15           | The <b>show eula list</b> command has been introduced. |

### 3.137.31 show interface

|                        |   |
|------------------------|---|
| <b>Description</b>     | Show information of specified interface. If you use no argument, the entire list of all network interfaces will be displayed. |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | No  |
| <b>Multiple input</b>  | No  |
| <b>Interface type</b>  | IP  |

**Synopsis**(show)> **interface <name>****Arguments**

| Argument | Value                 | Description  |
|----------|-----------------------|--|
| name     | <i>Interface name</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 FastEthernet0/Vlan1 switch it shows current state of physical ports, speed and duplex, on top of general information.

```
(config)> show interface FastEthernet0/Vlan1

        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**

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

### 3.137.32 show interface antennas

**Description** Show antenna signal strength.**Prefix no** No**Change settings** No**Multiple input** No**Interface type** Usb**Synopsis** (show)> **interface <name> antennas****Arguments**

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

| Output | Element | Description   |
|--------|---------|---|
|        | channel | Antenna number.   |
|        | rssi    | Received signal strength indicator.   |
|        | rsrq    | Reference signal received quality for 4G only.                                |
|        | rsrp    | Reference signal received power for 4G only.                                  |
|        | phase   | Offset phase for 4G only.   |
|        | ecio    | Ratio of the received/good energy to the interference/bad energy for 3G only. |

**Example**

```
(show)> interface UsbQmi0 antennas

    antenna:
        channel: 0
        rssi: -61
        rsrp: -81
        rsrq: -8
        phase: 0

    antenna:
        channel: 1
        rssi: -94
        rsrp: -120
        rsrq: -10
        phase: 6
```

**History**

| Version | Description   |
|---------|---|
| 3.05    | The <b>show interface antennas</b> command has been introduced. |

### 3.137.33 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 name</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 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. |

### 3.137.34 show interface bridge

**Description** Display interface bridge status.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Interface type** Bridge

**Synopsis**

|         |                                      |
|---------|--------------------------------------|
| (show)> | <b>interface &lt;name&gt; bridge</b> |
|---------|--------------------------------------|

**Arguments**

| Argument | Value                 | Description  |
|----------|-----------------------|--|
| name     | <i>Interface name</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. |

### 3.137.35 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command. |

**Output**

| Element | Description                         |
|---------|-------------------------------------|
| phy-id  | Cell identity (Cell ID).            |
| rssi    | Received signal strength indicator. |

**Example**

```
(show)> interface UsbQmi0 cells
    cells:
        phy-id: fc
        rssi: -71

    cells:
        phy-id: 15b
        rssi: -71

    cells:
        phy-id: 187
        rssi: -72
```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.05           | The <b>show interface cells</b> command has been introduced. |

### 3.137.36 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)&gt; interface &lt;name&gt; channels

**Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                                 |
|-----------------|-----------------------|--|
| name            | <i>Interface name</i> | Full name or an alias of the interface to display. |

**Output**

| <b>Element</b> | <b>Value</b>                            |
|----------------|---|
| 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)&gt; 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.03           | The <b>show interface channels</b> command has been introduced. |

**3.137.37 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**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                      |
|-----------------|-----------------------|---|
| name            | <i>Interface name</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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.10           | The <b>show interface chilli</b> command has been introduced. |

**3.137.38 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)> | <b>interface &lt;name&gt; country-codes</b> |
|---------|---|

**Arguments**

| Argument | Value                 | Description  |
|----------|-----------------------|--|
| name     | <i>Interface name</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. |

### 3.137.39 show interface dsl disconnect-report

| <b>Description</b>     | Show current reporting state for DSL connection.   |  |          |             |             |  |                       |  |
|------------------------|--|--|----------|-------------|-------------|--|-----------------------|--|
| <b>Prefix no</b>       | No   |  |          |             |             |  |                       |  |
| <b>Change settings</b> | No   |  |          |             |             |  |                       |  |
| <b>Multiple input</b>  | No   |  |          |             |             |  |                       |  |
| <b>Interface type</b>  | Dsl  |  |          |             |             |  |                       |  |
| <b>Synopsis</b>        | <pre>(show)&gt; interface [&lt;name&gt;]dsl disconnect-report</pre>  |  |          |             |             |  |                       |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td><i>Interface name</i></td><td>Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command.</td></tr> </tbody> </table> |  | Argument | Value       | Description | name   | <i>Interface name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command. |
| Argument               | Value  | Description  |          |             |             |  |                       |  |
| name                   | <i>Interface name</i>  | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command. |          |             |             |  |                       |  |
| <b>Example</b>         | <pre>(show)&gt; interface Dsl0 dsl disconnect-report       device: READY       state: WAIT_FOR_DISCONNECT       finished:       file:        upload:       file:       time:       state: IDLE</pre>   |  |          |             |             |  |                       |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.07</td><td>The <b>show interface dsl disconnect-report</b> command has been introduced.</td></tr> </tbody> </table>  |  | Version  | Description | 3.07        | The <b>show interface dsl disconnect-report</b> command has been introduced. |                       |  |
| Version                | Description  |  |          |             |             |  |                       |  |
| 3.07                   | The <b>show interface dsl disconnect-report</b> command has been introduced.   |  |          |             |             |  |                       |  |

### 3.137.40 show interface mac

|                        |  |
|------------------------|--|
| <b>Description</b>     | Show the table of MAC-addresses of the switch.   |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |
| <b>Multiple input</b>  | No   |
| <b>Interface type</b>  | Switch   |
| <b>Synopsis</b>        | <pre>(show)&gt; interface &lt;name&gt; mac</pre> |

**Arguments**

| Argument | Value                 | Description  |
|----------|-----------------------|--|
| name     | <i>Interface name</i> | Full name or an alias of the interface to display. |

**Example**

```
(show)> interface FastEthernet0 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. |

## 3.137.41 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)> | <b>interface &lt;name&gt; operators</b> |
|---------|---|

| Arguments | Argument | Value                 | Description  |
|-----------|----------|-----------------------|--|
|           | name     | <i>Interface name</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)> <b>interface UsbQmi0 operators</b> |
|--|

```

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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.12           | The <b>show interface operators</b> command has been introduced. |

### 3.137.42 show interface rf e2p

| <b>Description</b>     | Show the current contents of all calibration data cells.   |  |  |          |             |             |   |                       |  |
|------------------------|--|--|--|----------|-------------|-------------|---|-----------------------|--|
| <b>Prefix no</b>       | No   |  |  |          |             |             |   |                       |  |
| <b>Change settings</b> | No   |  |  |          |             |             |   |                       |  |
| <b>Multiple input</b>  | No   |  |  |          |             |             |   |                       |  |
| <b>Interface type</b>  | Radio  |  |  |          |             |             |   |                       |  |
| <b>Synopsis</b>        | (show)> <b>interface &lt;name&gt; rf e2p</b>   |  |  |          |             |             |   |                       |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td><i>Interface name</i></td><td>Full name or an alias of the interface to display.</td></tr> </tbody> </table>   |  |  | Argument | Value       | Description | name  | <i>Interface name</i> | Full name or an alias of the interface to display. |
| Argument               | Value  | Description  |  |          |             |             |   |                       |  |
| name                   | <i>Interface name</i>  | Full name or an alias of the interface to display. |  |          |             |             |   |                       |  |
| <b>Example</b>         | <pre>(show)&gt; <b>interface WifiMaster0 rf e2p</b>  [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 .....</pre> |  |  |          |             |             |   |                       |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.04</td><td>The <b>show interface rf e2p</b> command has been introduced.</td></tr> </tbody> </table>   |  |  | Version  | Description | 2.04        | The <b>show interface rf e2p</b> command has been introduced. |                       |  |
| Version                | Description  |  |  |          |             |             |   |                       |  |
| 2.04                   | The <b>show interface rf e2p</b> command has been introduced.  |  |  |          |             |             |   |                       |  |

### 3.137.43 show interface rrd

|                    |  |
|--------------------|--|
| <b>Description</b> | Show network interface loading on the principle of Round Robin Database. |
| <b>Prefix no</b>   | No   |

**Change settings** No**Multiple input** No**Synopsis** (show)> **interface <name>rrd <attribute> [<detail>]****Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                      |
|-----------------|-----------------------|---|
| name            | <i>Interface name</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.           |
|                 | 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. |

### 3.137.44 show interface stat

**Description** Show interface statistics.

| <b>Prefix no</b>       | No  |   |             |             |   |                       |   |
|------------------------|---|---|-------------|-------------|---|-----------------------|---|
| <b>Change settings</b> | No  |   |             |             |   |                       |   |
| <b>Multiple input</b>  | No  |   |             |             |   |                       |   |
| <b>Synopsis</b>        | (show)> <b>interface &lt;name&gt; stat</b>  |   |             |             |   |                       |   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td><i>Interface name</i></td><td>Full name or an alias of the interface.</td></tr> </tbody> </table>                                       | Argument                                | Value       | Description | name  | <i>Interface name</i> | Full name or an alias of the interface. |
| Argument               | Value   | Description                             |             |             |   |                       |   |
| name                   | <i>Interface name</i>   | Full name or an alias of the interface. |             |             |   |                       |   |
| <b>Example</b>         | <pre>(show)&gt; interface WifiMaster0/AccessPoint0 stat       rxpackets: 137033       rxbytes: 23915722       rxerrors: 0       rxdropped: 0       txpackets: 847802       txbytes: 1192583473       txerrors: 0       txdropped: 0       timestamp: 11754.721178</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>show interface stat</b> command has been introduced.</td></tr> </tbody> </table>  | Version                                 | Description | 2.00        | The <b>show interface stat</b> command has been introduced. |                       |   |
| Version                | Description   |   |             |             |   |                       |   |
| 2.00                   | The <b>show interface stat</b> command has been introduced.   |   |             |             |   |                       |   |

### 3.137.45 show interface traffic-counter

| <b>Description</b>     | Show detailed information about the traffic counter status.  |  |       |             |      |                       |  |
|------------------------|--|--|-------|-------------|------|-----------------------|--|
| <b>Prefix no</b>       | No   |  |       |             |      |                       |  |
| <b>Change settings</b> | No   |  |       |             |      |                       |  |
| <b>Multiple input</b>  | No   |  |       |             |      |                       |  |
| <b>Interface type</b>  | Usb  |  |       |             |      |                       |  |
| <b>Synopsis</b>        | (show)> <b>interface &lt;name&gt;traffic-counter</b>   |  |       |             |      |                       |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>name</td><td><i>Interface name</i></td><td>Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command.</td></tr> </tbody> </table> | Argument   | Value | Description | name | <i>Interface name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> command. |
| Argument               | Value  | Description  |       |             |      |                       |  |
| name                   | <i>Interface name</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**

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

### 3.137.46 show interface wps pin

**Description** Show the access point WPS PIN.**Prefix no** No**Change settings** No**Multiple input** No**Interface type** WiFi**Synopsis** (show)> **interface <name> wps pin****Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                      |
|-----------------|-----------------------|---|
| name            | <i>Interface name</i> | Full name or an alias of the interface. |

**Output**

| <b>Element</b> | <b>Value</b> |
|----------------|--------------|
| pin            | Pin number.  |

**Example**

```
(show)> interface WifiMaster0/AccessPoint0 wps pin
```

```
pin: 60180360
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>show interface wps status</b> command has been introduced. |

### 3.137.47 show interface wps status

**Description** Show the access point WPS status.**Prefix no** No**Change settings** No**Multiple input** No**Interface type** WiFi**Synopsis** (show)> **interface <name> wps status****Arguments**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>                      |
|-----------------|-----------------------|---|
| name            | <i>Interface name</i> | Full name or an alias of the interface. |

**Output**

| <b>Element</b> | <b>Value</b>                        |
|----------------|-------------------------------------|
| wps            | Root node.                          |
| configured     | WPS is configured for Access Point. |
| auto-self-pin  | Auto-self-pin mode state.           |
| status         | disabled<br>enabled<br>active       |
| direction      | send<br>receive                     |
| mode           | pbc<br>self-pin<br>peer             |
| left           | Time to session closure in seconds. |

**Example**(show)> **interface WifiMaster0/AccessPoint0 wps status**

```
wps:  
configured: yes
```

```

auto-self-pin: yes
status: active
direction: send
mode: self-pin
left: infinite

```

| History | Version | Description   |
|---------|---------|---|
|         | 2.00    | The <b>show interface wps status</b> command has been introduced. |

### 3.137.48 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.11           | The <b>show internet status</b> command has been introduced. |

### 3.137.49 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.00           | The <b>show ip arp</b> command has been introduced. |

### 3.137.50 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

| <b>Multiple input</b> | No   |                |             |             |   |               |                |
|-----------------------|--|----------------|-------------|-------------|---|---------------|----------------|
| <b>Synopsis</b>       | (show)> <b>ip dhcp bindings [ &lt;pool&gt; ]</b>   |                |             |             |   |               |                |
| <b>Arguments</b>      | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>pool</td><td><i>String</i></td><td>The pool name.</td></tr> </tbody> </table>   | Argument       | Value       | Description | pool  | <i>String</i> | The pool name. |
| Argument              | Value  | Description    |             |             |   |               |                |
| pool                  | <i>String</i>  | The pool name. |             |             |   |               |                |
| <b>Example</b>        | <pre>(show)&gt; 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     ...     ...</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>show ip dhcp bindings</b> command has been introduced.</td></tr> </tbody> </table>   | Version        | Description | 2.00        | The <b>show ip dhcp bindings</b> command has been introduced. |               |                |
| Version               | Description  |                |             |             |   |               |                |
| 2.00                  | The <b>show ip dhcp bindings</b> command has been introduced.  |                |             |             |   |               |                |

### 3.137.51 show ip dhcp pool

| <b>Description</b>     | Show information about specified pool. If you use no argument, the information about all system pools will be displayed.   |                |       |             |      |               |                |
|------------------------|--|----------------|-------|-------------|------|---------------|----------------|
| <b>Prefix no</b>       | No   |                |       |             |      |               |                |
| <b>Change settings</b> | No   |                |       |             |      |               |                |
| <b>Multiple input</b>  | No   |                |       |             |      |               |                |
| <b>Synopsis</b>        | (show)> <b>ip dhcp pool [ &lt;pool&gt; ]</b>   |                |       |             |      |               |                |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>pool</td><td><i>String</i></td><td>The pool name.</td></tr> </tbody> </table> | Argument       | Value | Description | pool | <i>String</i> | The pool name. |
| Argument               | Value  | Description    |       |             |      |               |                |
| pool                   | <i>String</i>  | The pool name. |       |             |      |               |                |

|                |   |
|----------------|---|
| <b>Example</b> | <pre>(show)&gt; ip dhcp pool 123  pool, name = 123: interface, binding = auto: network: 0.0.0.0/0</pre> |
|----------------|---|

```

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**

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

### 3.137.52 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**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.08           | The <b>show ip ftp</b> command has been introduced. |

### 3.137.53 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. |

### 3.137.54 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.  |

| Argument | Value | Description                    |
|----------|-------|--------------------------------|
|          | 5     | Level of detail is 30 seconds. |
|          | 6     | Level of detail is 1 minute.   |
|          | 7     | Level of detail is 2 minutes.  |
|          | 8     | Level of detail is 3 minutes.  |
|          | 9     | Level of detail is 5 minutes.  |
|          | 10    | Level of detail is 15 minutes. |
|          | 11    | Level of detail is 30 minutes. |

**Example**

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd rxspeed
```

```
    data:  
        t: 2180.491855  
        v: 16298
```

```
    data:  
        t: 2177.492050  
        v: 9026
```

```
    data:  
        t: 2174.491916  
        v: 11450
```

```
    data:  
        t: 2171.491843  
        v: 626
```

```
(show)> ip hotspot a8:1e:84:85:f2:11 rrd txspeed
```

```
    data:  
        t: 2228.491841  
        v: 952
```

```
    data:  
        t: 2225.491920  
        v: 8813
```

```
    data:  
        t: 2222.492053  
        v: 28746
```

```
    data:
```

```
t: 2219.491845
v: 22474

(show)> ip hotspot a8:1e:84:85:f2:11 rrd rxbytes

data:
t: 2279.491860
v: 4197

data:
t: 2276.492050
v: 362

data:
t: 2273.492040
v: 14337

data:
t: 2270.491862
v: 3281

(show)> ip hotspot a8:1e:84:85:f2:11 rrd txbytes

data:
t: 2360.491865
v: 3342

data:
t: 2357.491853
v: 142

data:
t: 2354.491949
v: 3333

data:
t: 2351.491847
v: 3390
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.14           | The <b>show ip hotspot rrd</b> command has been introduced. |

### 3.137.55 show ip hotspot summary

|                        |  |
|------------------------|--|
| <b>Description</b>     | Show the information about traffic usage for several registered hosts according to Round Robin Database. Sorting is in descending order. |
| <b>Prefix no</b>       | No   |
| <b>Change settings</b> | No   |

**Multiple input**

No

**Synopsis**

```
(show)> ip hotspot summary <attribute> [<detail>][<count>]
```

**Arguments**

| Argument  | Value          | Description   |
|-----------|----------------|---|
| attribute | rxspeed        | Value of data rate type.  |
|           | txspeed        |   |
|           | rxbytes        |   |
|           | txbytes        |   |
| detail    | 0              | Level of detail is 3 seconds.   |
|           | 1              | Level of detail is 60 seconds.  |
|           | 2              | Level of detail is 180 seconds.   |
|           | 3              | Level of detail is 1440 seconds.  |
| count     | <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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.14           | The <b>show ip hotspot summary</b> command has been introduced. |

**3.137.56 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.09           | The <b>show ip http proxy</b> command has been introduced. |

**3.137.57 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.04           | The <b>show ip http webdav</b> command has been introduced. |

**3.137.58 show ip name-server****Description** Show a list of current 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: 9.9.9.9
        port:
        domain:
        global: 0

    server:
        address: 1.0.0.1
        port:
        domain: keenetic.net
        global: 0

    server:
        address: 1.1.1.1
        port:
        domain:
        global: 64509
```

**History**

| Version | Description   |
|---------|---|
| 2.00    | The <b>show ip name-server</b> command has been introduced. |

### 3.137.59 show ip nat

**Description** Show network address translation table.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (show)> ip nat [tcp]**Arguments**

| Argument | Value   | Description  |
|----------|---------|--|
| tcp      | Keyword | Only the records with <b>TCP</b> type will be displayed. |

**Example**

```
(show)> ip nat
=====
Type | In   | Source          Port  Destination      Port  Packets
     | Out  |
=====
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  |
| <hr/> |                 |       |                 |       |    |
| tcp   | 10.1.30.33      | 57474 | 78.141.179.15   | 12350 | 12 |
|       | 78.141.179.15   | 12350 | 82.138.7.164    | 57474 | 11 |
| <hr/> |                 |       |                 |       |    |
| udp   | 10.1.30.34      | 6482  | 84.201.228.162  | 44423 | 11 |
|       | 84.201.228.162  | 44423 | 82.138.7.164    | 6482  | 16 |
| <hr/> |                 |       |                 |       |    |
| tcp   | 10.1.30.34      | 46655 | 96.55.147.21    | 443   | 2  |
|       | 96.55.147.21    | 443   | 82.138.7.164    | 46655 | 0  |
| <hr/> |                 |       |                 |       |    |
| udp   | 10.1.30.34      | 6482  | 213.199.179.158 | 40006 | 1  |
|       | 213.199.179.158 | 40006 | 82.138.7.164    | 6482  | 1  |
| <hr/> |                 |       |                 |       |    |

**History**

| Version | Description   |
|---------|---|
| 2.00    | The <b>show ip nat</b> command has been introduced. |

### 3.137.60 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    | <i>Keyword</i> | 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.10           | The <b>show ip neighbour</b> command has been introduced. |

### 3.137.61 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**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>         |
|-----------------|--------------|----------------------------|
| policy          | Policy name  | 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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.12           | The <b>show ip route</b> command has been introduced. |

### 3.137.62 show ip route

**Description** Show the current routing table.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** `(show)> ip route [ sort <criteria> <direction> ]`**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                                    |
|-----------------|--------------|---|
| direction       | ascending    | Routing table records are sorted in ascending order.  |
|                 | descending   | Routing table records are sorted in descending order. |
| criteria        | interface    | Sorting criteria is the interface name.               |
|                 | gateway      | Sorting criteria is the gateway address.              |
|                 | destination  | Sorting criteria is the destination address.          |

**Example**

```
(show)> ip route sort destination ascending
=====
Destination        Gateway          Interface     Metric
=====
0.0.0.0/0          82.138.7.129   ISP           0
10.1.30.0/24       0.0.0.0         GuestWiFi    0
82.138.7.27/32    0.0.0.0         PPTP0        0
82.138.7.32/32    0.0.0.0         PPTP0        0
82.138.7.128/26   0.0.0.0         ISP           0
82.138.7.132/32   82.138.7.129   ISP           0
82.138.7.141/32   82.138.7.129   ISP           0
89.179.183.128/26 82.138.7.138   ISP           0
192.168.15.0/24   0.0.0.0         Home          0
```

**History**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.00           | The <b>show ip route</b> command has been introduced. |

### 3.137.63 show ipsec

**Description** Show info about **IPsec/IKE** strongSwan service status.

| <b>Prefix no</b>       | No   |         |             |      |  |
|------------------------|--|---------|-------------|------|--|
| <b>Change settings</b> | No   |         |             |      |  |
| <b>Multiple input</b>  | No   |         |             |      |  |
| <b>Synopsis</b>        | <pre>(show)&gt; ipsec</pre>  |         |             |      |  |
| <b>Example</b>         | <pre>(show)&gt; 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: ▶ ca59bfcc_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</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>show ipsec</b> command has been introduced.</td> </tr> </tbody> </table>  | Version | Description | 2.06 | The <b>show ipsec</b> command has been introduced. |
| Version                | Description  |         |             |      |  |
| 2.06                   | The <b>show ipsec</b> command has been introduced.   |         |             |      |  |

### 3.137.64 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. |

### 3.137.65 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. |

### 3.137.66 show ipv6 routes

**Description** Show a list of current IPv6-routes.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **ipv6 routes**

**Example** (show)> **ipv6 routes**

```

        route_:
        destination: 2001:db8::/64
            gateway: ::
            interface: Home
        route_:
        destination: fd3c:4268:1559::/64
            gateway: ::
            interface: Home
        route_:
        destination: fd01:db8:43::/64
            gateway: ::
            interface: Home

```

| History | Version | Description  |
|---------|---------|--|
|         | 2.00    | The <b>show ipv6 routes</b> command has been introduced. |

### 3.137.67 show kabinet status

**Description** Check for the status and configuration of KABiNET authenticator.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

|         |                       |
|---------|-----------------------|
| (show)> | <b>kabinet status</b> |
|---------|-----------------------|

**Example**

|  |
|--|
| (show)> <b>kabinet status</b>  |
| <pre> kabinet:     enabled: yes         wan: yes         state: STOPPED         server: 10.0.0.1         access-level: internet         protocol-version: 2       </pre> |

| History | Version | Description   |
|---------|---------|---|
|         | 2.02    | The <b>show kabinet status</b> command has been introduced. |

### 3.137.68 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)> | <b>last-change</b> |
|---------|--------------------|

**Example**

|   |
|---|
| (show)> <b>last-change</b>  |
| <pre> date: Thu, 12 Jul 2012 10:01:47 GMT agent: cli       </pre> |

| History | Version | Description  |
|---------|---------|--|
|         | 2.00    | The <b>show last-change</b> command has been introduced. |

## 3.137.69 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)> | <b>led</b> [ <name> ] |
|---------|-----------------------|

### Arguments

| Argument | Value   | Description  |
|----------|---------|--|
| name     | SYS     | The LED name. The number of available indicators depends on the selected device. |
|          | FN      |  |
|          | FW_UPD  |  |
|          | ACT_ACK |  |
|          | WAN     |  |
|          | DSL     |  |
|          | WLAN    |  |
|          | WLAN5   |  |
|          | WPS_1   |  |
|          | WPS_2   |  |
|          | WPS_3   |  |
|          | WPS_4   |  |
|          | 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**

| <b>Version</b> | <b>Description</b>                               |
|----------------|--|
| 2.05           | The <b>show led</b> command has been introduced. |

### 3.137.70 show led bindings

**Description** Show the control associated with the specified LED. If you use no argument, the entire list of all LEDs with theirs controls will be displayed.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **led [ <name> ]bindings**

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>  |
|-----------------|--------------|---|
| name            | SYS          | The LED name. Set of available indicators depends on the selected device. |
|                 | FN           |   |
|                 | FW_UPD       |   |
|                 | ACT_ACK      |   |
|                 | WAN          |   |
|                 | DSL          |   |
|                 | WLAN         |   |
|                 | WLAN5        |   |
|                 | WPS_1        |   |
|                 | WPS_2        |   |
|                 | WPS_3        |   |
|                 | WPS_4        |   |
|                 | 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.08           | The <b>show led bindings</b> command has been introduced. |

### 3.137.71 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.08           | The <b>show led controls</b> command has been introduced. |

## 3.137.72 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)> | <b>log</b> [ <i>&lt;max-lines&gt;</i> ] [ <b>once</b> ] |
|---------|---|

**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)> <b>log</b>     |  |
|------------------------|--|
| 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. |

## 3.137.73 show media

**Description** Show info about system USB-drives and their partitions.

| <b>Prefix no</b>       | No  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Change settings</b> | No  |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | (show)> <b>media</b>  |         |             |      |  |
| <b>Example</b>         | <pre>(show)&gt; 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</pre> |         |             |      |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.04</td><td>The <b>show media</b> command has been introduced.</td></tr> </tbody> </table>   | Version | Description | 3.04 | The <b>show media</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 3.04                   | The <b>show media</b> command has been introduced.  |         |             |      |  |

### 3.137.74 show mws associations

|                    |   |
|--------------------|---|
| <b>Description</b> | Show the list of Access Points on the repeater(s) associated with <a href="#">MWS</a> controller. |
|--------------------|---|

| <b>Prefix no</b>       | No  |         |             |      |   |
|------------------------|---|---------|-------------|------|---|
| <b>Change settings</b> | No  |         |             |      |   |
| <b>Multiple input</b>  | No  |         |             |      |   |
| <b>Synopsis</b>        | (show)> <b>mws associations</b>   |         |             |      |   |
| <b>Example</b>         | <pre>(show)&gt; 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</pre> |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.01</td><td>The <b>show mws associations</b> command has been introduced.</td></tr> </tbody> </table>  | Version | Description | 3.01 | The <b>show mws associations</b> command has been introduced. |
| Version                | Description   |         |             |      |   |
| 3.01                   | The <b>show mws associations</b> command has been introduced.   |         |             |      |   |

### 3.137.75 show mws candidate

| <b>Description</b>     | Show the list of candidates or the description of specified candidate by the given identifier.   |                                 |       |             |           |               |                                 |
|------------------------|--|---------------------------------|-------|-------------|-----------|---------------|---------------------------------|
| <b>Prefix no</b>       | No   |                                 |       |             |           |               |                                 |
| <b>Change settings</b> | No   |                                 |       |             |           |               |                                 |
| <b>Multiple input</b>  | No   |                                 |       |             |           |               |                                 |
| <b>Synopsis</b>        | (show)> <b>mws candidate [ &lt;candidate&gt; ]</b>   |                                 |       |             |           |               |                                 |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>candidate</td><td><i>String</i></td><td>Device ID — MAC-address or CID.</td></tr> </tbody> </table> | Argument                        | Value | Description | candidate | <i>String</i> | Device ID — MAC-address or CID. |
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.15           | The <b>show mws candidate</b> command has been introduced. |

### 3.137.76 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)> | <b>mws log</b> [ <i>&lt;max-lines&gt;</i> ] [ <b>once</b> ] |
|---------|---|

**Arguments**

| <b>Argument</b>  | <b>Value</b>   | <b>Description</b>                |
|------------------|----------------|-----------------------------------|
| <i>max-lines</i> | <i>Integer</i> | Limit of entries in the response. |
| <b>once</b>      | <b>Keyword</b> | 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 -> ►<br>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 ►<br>GHz) -> disassociated |
| [Jan 17 15:04:58] | : 64:a2:f9:51:b1:82: associated -> ►<br>50:ff:20:00:11:82 (5 GHz)    |

| History | Version | Description  |
|---------|---------|--|
|         | 2.15    | The <b>show mws log</b> command has been introduced. |

### 3.137.77 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)> | <b>mws member [ &lt;member&gt; ]</b> |
|---------|--------------------------------------|

| Arguments | Argument | Value  | Description                     |
|-----------|----------|--------|---------------------------------|
|           | member   | String | Device ID — MAC-address or CID. |

**Example**

|   |
|---|
| (show)> mws member ab1409a2-0f87-11e8-8f23-3d5f5921b253 |
|---|

```
member:
    cid: ab1409a2-0f87-11e8-8f23-3d5f5921b253
    model: Extra (KN-1710)
    mac: 50:ff:20:08:7a:6a
    ip: 192.168.1.43
    mode: ap
    fw: 2.15.A.4.0-1
    fw-available: 2.15.A.4.0-1
    dual-band: yes

system:
    cpuload: 3
    memory: 32680/131072
    uptime: 2696
```

```
rcl:  
errors: 0
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.15           | The <b>show mws member</b> command has been introduced. |

## 3.137.78 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.07           | The <b>show ndns</b> command has been introduced. |

## 3.137.79 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.00           | The <b>show netfilter</b> command has been introduced. |

**3.137.80 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. |

### 3.137.81 show ntce attributes

**Description** Show the list of attributes supported by the *NTCE* service.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **ntce attributes**

**Example** (show)> **ntce attributes**

```

attribute:
    id-num: 1
        short: encrypted
        long: Indicates that the current connection is ▶
encrypted traffic.

attribute:
    id-num: 2
        short: audio
        long: Indicates that the current connection is ▶
an audio or voice signal.

attribute:
    id-num: 3
        short: out
        long: Indicates that the current connection is ▶
a landline call, e.g. a call to a home phone.

```

```
attribute:  
    id-num: 4  
    short: video  
    long: Indicates that the current connection is ►  
a video signal.  
  
attribute:  
    id-num: 5  
    short: file-transfer  
    long: Indicates that the current connection is ►  
a file transfer.  
  
attribute:  
    id-num: 6  
    short: web  
    long: Indicates that the current connection is ►  
a surf the Internet session.  
  
attribute:  
    id-num: 7  
    short: chat  
    long: Indicates that the current connection is ►  
a chat session.  
  
attribute:  
    id-num: 8  
    short: mail  
    long: Indicates that the current connection is ►  
mail traffic.  
  
attribute:  
    id-num: 9  
    short: stream  
    long: Indicates that the current connection is ►  
a continues unidirectional stream of audio and / or video.  
  
attribute:  
    id-num: 10  
    short: android  
    long: Indicates that the client side uses the ►  
operating system Android.  
  
attribute:  
    id-num: 11  
    short: ios  
    long: Indicates that the client side uses the ►  
operating system iOS.  
  
attribute:  
    id-num: 12  
    short: windows-mobile  
    long: Indicates that the client side uses the ►  
operating system Windows Mobile.
```

```
attribute:  
    id-num: 13  
    short: blackberry  
    long: Indicates that the client side uses the ►  
operating system Blackberry.  
  
attribute:  
    id-num: 14  
    short: picture  
    long: Indicates that the current connection ►  
transfers pictures.  
  
attribute:  
    id-num: 15  
    short: ddl  
    long: Indicates that the current connection is ►  
a Direct Download Hoster.  
  
attribute:  
    id-num: 16  
    short: google  
    long: Indicates that the current connection is ►  
a Google service.  
  
attribute:  
    id-num: 17  
    short: outlook_web_access  
    long: Indicates that the current connection ►  
uses the Microsoft Exchange Outlook Web Access as authentication ►  
mechanism.  
  
attribute:  
    id-num: 18  
    short: amazon-cloud  
    long: Indicates that the current connection is ►  
a service of Amazon Cloud.  
  
attribute:  
    id-num: 19  
    short: apache  
    long: Indicates that the server side is an ►  
Apache server.  
  
attribute:  
    id-num: 20  
    short: mysql-server  
    long: Indicates that the server side is a MySQL ►  
database server.  
  
attribute:  
    id-num: 21  
    short: mariadb-server  
    long: Indicates that the server side is a ►
```

```

MariaDB database server.

attribute:
    id-num: 22
    short: ntlm
    long: Current connection uses NTLM as ▶
authentication mechanism.

attribute:
    id-num: 23
    short: microsoft-windows
    long: Indicates that the client side is the ▶
operating system Microsoft Windows.

attribute:
    id-num: 24
    short: chrome
    long: Indicates that the client side is the ▶
operating system Chrome.

attribute:
    id-num: 25
    short: akamai-cloud
    long: Indicates that the current connection is ▶
a service of Akamai Cloud.

attribute:
    id-num: 26
    short: dox
    long: Indicates that the current connection is ▶
DoT (DNS over TLS) or DoH (DNS over HTTPS).

attribute:
    id-num: 27
    short: rcs
    long: Indicates that the current connection is ▶
RCS (Rich Communication Services).

```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 3.07           | The <b>show ntce attributes</b> command has been introduced. |

### 3.137.82 show ntce groups

|                        |   |
|------------------------|---|
| <b>Description</b>     | Show the list of groups supported by the <b>NTCE</b> service. |
| <b>Prefix no</b>       | No  |
| <b>Change settings</b> | No  |
| <b>Multiple input</b>  | 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 transfering

group:
    id-num: 2050
        long: Gaming
    groupset-id: 1
groupset-short-id: gaming
groupset-long-id: Gaming

group:
    id-num: 2051
        long: Tunnel
    groupset-id: 3
groupset-short-id: work
groupset-long-id: Work & Learn from home

group:
    id-num: 2052
        long: Business
    groupset-id: 3
groupset-short-id: work
groupset-long-id: Work & Learn from home

group:
    id-num: 2053
        long: E-Commerce
    groupset-id: 3
groupset-short-id: work
groupset-long-id: Work & Learn from home

group:
    id-num: 2054
        long: Voice over IP
    groupset-id: 0
groupset-short-id: calling
groupset-long-id: Calling and conferencing
```

```
group:  
    id-num: 2055  
    long: Messaging  
    groupset-id: 0  
groupset-short-id: calling  
groupset-long-id: Calling and conferencing  
  
group:  
    id-num: 2056  
    long: Streaming  
    groupset-id: 2  
groupset-short-id: streaming  
groupset-long-id: Video & Audio streaming  
  
group:  
    id-num: 2057  
    long: Mobile  
    groupset-id: 0  
groupset-short-id: calling  
groupset-long-id: Calling and conferencing  
  
group:  
    id-num: 2058  
    long: Remote Control  
    groupset-id: 3  
groupset-short-id: work  
groupset-long-id: Work & Learn from home  
  
group:  
    id-num: 2059  
    long: Mail  
    groupset-id: 3  
groupset-short-id: work  
groupset-long-id: Work & Learn from home  
  
group:  
    id-num: 2060  
    long: Network Management  
    groupset-id: 5  
groupset-short-id: other  
groupset-long-id: Other  
  
group:  
    id-num: 2061  
    long: Database  
    groupset-id: 3  
groupset-short-id: work  
groupset-long-id: Work & Learn from home  
  
group:  
    id-num: 2062  
    long: Filetransfer  
    groupset-id: 6  
groupset-short-id: filetransferring
```

```
groupset-long-id: File transfering

    group:
        id-num: 2063
        long: Web
        groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

    group:
        id-num: 2064
        long: Conference
        groupset-id: 0
groupset-short-id: calling
groupset-long-id: Calling and conferencing

    group:
        id-num: 2065
        long: Social
        groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

    group:
        id-num: 2066
        long: Sharehosting
        groupset-id: 6
groupset-short-id: filetransferring
groupset-long-id: File transfering

    group:
        id-num: 2067
        long: Deprecated
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

    group:
        id-num: 2068
        long: Industrial
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

    group:
        id-num: 2069
        long: Encrypted
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

    group:
        id-num: 2070
        long: Advertisement and Analytic Services
```

```
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2071
            long: News
        groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

        group:
            id-num: 2072
            long: Health and Fitness
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2073
            long: Cloud and CDN Services
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2074
            long: Navigation
        groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

        group:
            id-num: 2075
            long: Finance
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2076
            long: Travel and Transportation
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2077
            long: Pornography
        groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
```

```

        id-num: 2078
            long: Books and Magazines
            groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2079
                long: Audio Entertainment
                groupset-id: 2
groupset-short-id: streaming
groupset-long-id: Video & Audio streaming

        group:
            id-num: 2080
                long: Education
                groupset-id: 5
groupset-short-id: other
groupset-long-id: Other

        group:
            id-num: 2081
                long: M2M and IoT
                groupset-id: 3
groupset-short-id: work
groupset-long-id: Work & Learn from home

        group:
            id-num: 2082
                long: Device Security
                groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

        group:
            id-num: 2083
                long: Multimedia Service Providers
                groupset-id: 2
groupset-short-id: streaming
groupset-long-id: Video & Audio streaming

        group:
            id-num: 2084
                long: Organizers
                groupset-id: 3
groupset-short-id: work
groupset-long-id: Work & Learn from home

        group:
            id-num: 2085
                long: Enterprise Services
                groupset-id: 4
groupset-short-id: surfing
groupset-long-id: Web surfing

```

```

        group:
            id-num: 2086
            long: App-Stores and OS Updates
        groupset-id: 6
    groupset-short-id: filetransferring
    groupset-long-id: File transfering

        group:
            id-num: 2087
            long: Browsers
        groupset-id: 4
    groupset-short-id: surfing
    groupset-long-id: Web surfing

        group:
            id-num: 2088
            long: Removed
        groupset-id: 5
    groupset-short-id: other
    groupset-long-id: Other

        group:
            id-num: 2089
            long: Moved
        groupset-id: 5
    groupset-short-id: other
    groupset-long-id: Other

```

**History**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 3.07           | The <b>show ntce groups</b> command has been introduced. |

### 3.137.83 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 transfering

```

| History | Version | Description   |
|---------|---------|---|
|         | 3.07    | The <b>show ntce groupsets</b> command has been introduced. |

### 3.137.84 show ntce hosts

**Description** Show application statistics, which *NTCE* service has detected for hosts.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **ntce hosts**

**Example** (show)> **ntce hosts**

```

host:
```

```
mac: 04:d4:c4:54:31:12

application:
    id-num: 7
        short: twitter
        long: Twitter
        group-id: 2065
        group-long: Social
        groupset-id: 4
        groupset-short-id: surfing
        groupset-long-id: Web surfing
groupset-service-class: 2
    rxbytes: 62274
    txbytes: 6020

application:
    id-num: 43
        short: instagram
        long: Instagram
        group-id: 2065
        group-long: Social
        groupset-id: 4
        groupset-short-id: surfing
        groupset-long-id: Web surfing
groupset-service-class: 2
    rxbytes: 57606
    txbytes: 11148

application:
    id-num: 428
        short: spotify
        long: Spotify
        group-id: 2079
        group-long: Audio Entertainment
        groupset-id: 2
        groupset-short-id: streaming
        groupset-long-id: Video & Audio streaming
groupset-service-class: 2
    rxbytes: 155317
    txbytes: 80526

application:
    id-num: 438
        short: whatsapp
        long: WhatsApp
        group-id: 2055
        group-long: Messaging
        groupset-id: 0
        groupset-short-id: calling
        groupset-long-id: Calling and conferencing
groupset-service-class: 2
    rxbytes: 826
    txbytes: 706
```

```

application:
    id-num: 461
    short: google-cloud
    long: Google Cloud
    group-id: 2073
    group-long: Cloud and CDN Services
    groupset-id: 5
    groupset-short-id: other
    groupset-long-id: Other
groupset-service-class: 2
    rxbytes: 313
    txbytes: 352

application:
    id-num: 498
    short: telegram
    long: Telegram
    group-id: 2055
    group-long: Messaging
    groupset-id: 0
    groupset-short-id: calling
    groupset-long-id: Calling and conferencing
groupset-service-class: 2
    rxbytes: 109895
    txbytes: 15561

application:
    id-num: 559
    short: google-play
    long: Google Play
    group-id: 2086
    group-long: App-Stores and OS Updates
    groupset-id: 6
    groupset-short-id: filetransferring
    groupset-long-id: File transfering
groupset-service-class: 2
    rxbytes: 16736
    txbytes: 28451

application:
    id-num: 590
    short: yandex
    long: Yandex
    group-id: 2085
    group-long: Enterprise Services
    groupset-id: 4
    groupset-short-id: surfing
    groupset-long-id: Web surfing
groupset-service-class: 2
    rxbytes: 606
    txbytes: 200

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

application:
        id-num: 1136
        short: cloud-mail-ru
        long: Cloud-Mail-Ru
        group-id: 2062
        group-long: Filetransfer

```

```
        groupset-id: 6
        groupset-short-id: filetransferring
        groupset-long-id: File transfering
groupset-service-class: 2
            rxbytes: 61161
            txbytes: 86671

application:
        id-num: 1281
        short: kaspersky-services
        long: Kaspersky Services
        group-id: 2082
        group-long: Device Security
        groupset-id: 4
        groupset-short-id: surfing
        groupset-long-id: Web surfing
groupset-service-class: 2
            rxbytes: 40
            txbytes: 70

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. |

### 3.137.85 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 3.07           | The <b>show ntce oses</b> command has been introduced. |

**3.137.86 show ntce status****Description** Show *NTCE* service info.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (show)> **ntce status****Example** (show)> **ntce status**

```

conntrack:
    hosts: 2
    applications: 16
    applications-flows: 63
    applications-events: 0
    groups: 12
    groups-flows: 64
    groups-events: 0

```

```

        memory:
applications-flows: 1512
applications-events: 0
    applications: 512
    groups-flows: 1536
groups-events: 0
    groups: 384
    hosts: 72
    total: 4016

event:
count: 0

memory:
total: 0

database:
hosts: 1
applications: 54
    groups: 30
    attributes: 6

        memory:
applications: 2372976
    groups: 1318320
    attributes: 263664
    total: 3954960

```

**History**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 3.07           | The <b>show ntce status</b> command has been introduced. |

### 3.137.87 show ntp status

**Description** Show *NTP* system settings.**NTP state general info**

- ① The time elapsed since the last synchronization in seconds.
- ② The indicator of the last synchronization.
- ③ The indicator of the initial synchronization.
- ④ Time is taken from NDSS server.
- ⑤ 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 ①
        server: 1.pool.ntp.org
    accurate: yes ②
    synchronized: yes ③
        ndsstime: no ④
        usertime: no ⑤
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.00           | The <b>show ntp status</b> command has been introduced. |

**3.137.88 show nvox call-history**

**Description** Show list of calls registered since the router is switched on.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> nvox call-history

**Example**

```
(show)> nvox call-history

call_history:
    revision: 13

    call:
        type: missed
        index: 0
        start_time: Thu Sep 14 12:13:23 2017
            line: SIPLab1
                hs: KX-TPA60
        other_party_number: 3254
        other_party_name:
            duration:
            release_code:
            release_reason: rejected

    call:
        type: accepted
        index: 1
        start_time: Thu Sep 14 12:13:32 2017
            line: SIPLab1
                hs: Gigaset A540CAT
        other_party_number: 3254
        other_party_name:
```

```
        duration: 3
        release_code:
        release_reason:

        call:
            type: internal
            index: 2
            start_time: Thu Sep 14 12:13:51 2017
            line: intercom
            hs: Gigaset A540CAT
        other_party_number: hs1
        other_party_name: KX-TGA250
            duration: 3
            release_code:
            release_reason:

        call:
            type: internal
            index: 3
            start_time: Thu Sep 14 12:14:07 2017
            line: intercom
            hs: Gigaset A540CAT
        other_party_number: hs2
        other_party_name: KX-TPA60
            duration: 2
            release_code:
            release_reason:

        call:
            type: internal
            index: 4
            start_time: Thu Sep 14 12:14:24 2017
            line: intercom
            hs: Gigaset A540CAT
        other_party_number: hs*
        other_party_name:
            duration: 0
            release_code:
            release_reason:

        call:
            type: internal
            index: 5
            start_time: Thu Sep 14 12:14:42 2017
            line: intercom
            hs: Gigaset A540CAT
        other_party_number: hs2
        other_party_name: KX-TPA60
            duration: 0
            release_code:
            release_reason:

        call:
            type: outgoing
```

```

        index: 6
        start_time: Thu Sep 14 12:15:44 2017
        line: Data Group
        hs: Gigaset A540CAT
other_party_number: 0443647362
other_party_name:
duration: 0
release_code:
release_reason:

call:
type: missed
index: 7
start_time: Thu Sep 14 12:15:44 2017
line: Data Group
hs:
other_party_number: 3647362
other_party_name:
duration:
release_code:
release_reason:

call:
type: forwarded
index: 8
start_time: Thu Sep 14 12:17:30 2017
line: Data Group
hs:
other_party_number: 3647362
other_party_name:
duration:
release_code: 61773
release_reason: 0687852828

call:
type: outgoing
index: 9
start_time: Thu Sep 14 12:17:30 2017
line: Data Group
hs: Panasonic KX-TPA60
other_party_number: 0443647362
other_party_name:
duration: 0
release_code: 480
release_reason: Temporarily Not Available

```

**History**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 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> .         |

## 3.137.89 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)> | <b>ping-check</b> [ <i>&lt;profile_name&gt;</i> ] |
|---------|---|

**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. |

## 3.137.90 show ppe

**Description** Show Packet Processing Engine status.

**Prefix no** No

**Change settings** No

**Multiple input**

No

**Synopsis**

(show)&gt; ppe

**Example**

```
(show)> ppe

hw_nat:

Total Entry Count = 2
IPv4_NAPT=1122 : 13.33.96.244:443->10.77.140.59:56457 => ▶
13.33.96.244:443->192.168.232.44:56457
IPv4_NAPT=5454 : 173.194.220.97:443->10.77.140.59:56553 => ▶
173.194.220.97:443->192.168.232.44:56553
done
```

**History**

|  | <b>Version</b> | <b>Description</b>                               |
|--|----------------|--|
|  | 2.03           | The <b>show ppe</b> command has been introduced. |

### 3.137.91 show printers

**Description**

Show attached printer list.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

(show)&gt; printers

**Example**

```
(show)> printers

printers:
    printer: Canon MF8300C Series
```

**History**

|  | <b>Version</b> | <b>Description</b>                                    |
|--|----------------|---|
|  | 2.00           | The <b>show printers</b> command has been introduced. |

### 3.137.92 show processes

**Description**

Show statistics of CPU usage by services and processes.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**(show)> **processes****Example**

```
(show)> processes

    process, id = NETBIOS browser:
        name: nqnd

            arg: -i

            arg: 50ff20001e87

            state: S (sleeping)
                pid: 629
                ppid: 192
            vm-size: 3188 kB
            vm-data: 1548 kB
            vm-stk: 136 kB
            vm-exe: 4 kB
            vm-lib: 1448 kB
            vm-swap: 0 kB
            threads: 1
            fds: 15

            statistics:
                interval: 30

            cpu:
                now: 17319.483753
                min: 0
                max: 0
                avg: 0
                cur: 0

            service:
                configured: yes
                alive: yes
                started: yes
                state: STARTED

    process, id = Dns::Proxy::Policy0:
        name: ndnproxy

            arg: -c

            arg: /var/ndnproxy_Policy0.conf

            arg: -p

            arg: /var/ndnproxy_Policy0.pid

            state: S (sleeping)
                pid: 630
                ppid: 192
```

```

        vm-size: 1676 kB
        vm-data: 504 kB
        vm-stk: 136 kB
        vm-exe: 108 kB
        vm-lib: 896 kB
        vm-swap: 0 kB
        threads: 1
        fds: 10

    statistics:
        interval: 30

    cpu:
        now: 17319.483764
        min: 0
        max: 0
        avg: 0
        cur: 0

    service:
        configured: yes
        alive: yes
        started: yes
        state: STARTED

```

**History**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.09           | The <b>show processes</b> command has been introduced. |

### 3.137.93 show running-config

**Description** Show current settings, that is file system:running-config contains, just like command **more** does.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis** (show)> **running-config**

**Example**

```
(show)> running-config
! $$$ Model: Keenetic Start
! $$$ Version: 2.06.1
! $$$ Agent: http/raci
! $$$ 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 FastEthernet0
    up
!
interface FastEthernet0/0
    switchport mode access
    switchport access vlan 1
!
interface FastEthernet0/1
    switchport mode access
    switchport access vlan 1
!
interface Bridge0
    name Home
    description "Home network"
    inherit FastEthernet0/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 baadfb946f5d516379cf75e31e409d9
        tag readonly
    !
```

```

service dhcp
service dns-proxy
service ftp
service cifs
service http
service telnet
service ntp-client
service upnp
cifs
    share 9430B54530B52EDC 9430B54530B52EDC:
    automount
    permissive
!
!
!
```

| History | Version | Description   |
|---------|---------|---|
|         | 2.00    | The <b>show running-config</b> command has been introduced. |

## 3.137.94 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**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.06           | The <b>show schedule</b> command has been introduced. |

## 3.137.95 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**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.00           | The <b>show self-test</b> command has been introduced. |

## 3.137.96 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**

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

**Example**

```
(show)> site-survey [Tab]
```

```
Usage template:  
    site-survey {name}
```

```
Choose:  
    WifiMaster1  
    WifiMaster0
```

| (show)> <b>site-survey WifiStation0</b> |                   |    |           |     |  |
|---|-------------------|----|-----------|-----|--|
| ESSID                                   | MAC               | Ch | Rate      | Q   |  |
| Gena                                    | 00:23:f8:5b:d3:f5 | 11 | 300Mbit/s | 100 |  |
| Keenetic-2034                           | 00:23:f8:5b:d3:f4 | 11 | 300Mbit/s | 100 |  |
| Sonar                                   | 40:4a:03:b4:5d:18 | 4  | 54Mbit/s  | 34  |  |

| History | Version | Description  |
|---------|---------|--|
|         | 2.00    | The <b>show site-survey</b> command has been introduced. |

### 3.137.97 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:Wp1K9d8MsquQBtlBeBlpVlyKdCN1Vay3BtBWbj0xs+o
```

| History | Version | Description  |
|---------|---------|--|
|         | 2.12    | The <b>show ssh fingerprint</b> command has been introduced. |

### 3.137.98 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_ssdd:/
            path: /tmp/mnt/963b0583-4017-401b-9542-7ff1255add40

            user, index = 0:
                name: admin
                root:
                path: ▶
```

**History**

|  | <b>Version</b> | <b>Description</b>                                    |
|--|----------------|---|
|  | 3.04           | The <b>show ssh sftp</b> command has been introduced. |

### 3.137.99 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**

| <b>Version</b> | <b>Description</b>                                       |
|----------------|--|
| 2.12           | The <b>show sstp-server</b> command has been introduced. |

## 3.137.100 show system

**Description**

Show the general state of the system.

**System state general info**

- ① CPU load, percentage.
- ② Occupied and available memory info, kilobytes.
- ③ Swap file usage info, kilobytes.
- ④ 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 ①
memory: 13984/28976 ②
swap: 0/0 ③
uptime: 153787 ④
    
```

**History**

| <b>Version</b> | <b>Description</b>                                  |
|----------------|---|
| 2.00           | The <b>show system</b> command has been introduced. |

## 3.137.101 show system cpustat

**Description**

Show device CPU usage.

|                        |                               |
|------------------------|-------------------------------|
| <b>Prefix no</b>       | No                            |
| <b>Change settings</b> | No                            |
| <b>Multiple input</b>  | No                            |
| <b>Synopsis</b>        | (show)> <b>system cpustat</b> |

|                |   |
|----------------|---|
| <b>Example</b> | (show)> <b>system cpustat</b><br><br>interval: 36<br><br>busy:<br>cur: 1<br>min: 0<br>max: 11<br>avg: 2<br><br>user:<br>cur: 0<br>min: 0<br>max: 10<br>avg: 1<br><br>nice:<br>cur: 0<br>min: 0<br>max: 0<br>avg: 0<br><br>system:<br>cur: 0<br>min: 0<br>max: 2<br>avg: 0<br><br>iowait:<br>cur: 0<br>min: 0<br>max: 0<br>avg: 0<br><br>irq:<br>cur: 0<br>min: 0<br>max: 0<br>avg: 0<br><br>sirq:<br>cur: 0<br>min: 0<br>max: 0<br>avg: 0 |
|----------------|---|

| History | Version | Description   |
|---------|---------|---|
|         | 2.09    | The <b>show system cpustat</b> command has been introduced. |

### 3.137.102 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. |

### 3.137.103 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**

| <b>Version</b> | <b>Description</b>                                |
|----------------|---|
| 2.00           | The <b>show tags</b> command has been introduced. |

### 3.137.104 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**

| <b>Version</b> | <b>Description</b>                                   |
|----------------|--|
| 2.09           | The <b>show threads</b> command has been introduced. |

### 3.137.105 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.03           | The <b>show torrent status</b> command has been introduced. |

### 3.137.106 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**

| <b>Argument</b> | <b>Value</b>          | <b>Description</b>  |
|-----------------|-----------------------|---|
| protocol        | tcp                   | Rules with <i>TCP</i> protocol will be displayed.         |
|                 | udp                   | Rules with <i>UDP</i> protocol will be displayed.         |
| interface       | <i>Interface name</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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>show upnp redirect</b> command has been introduced. |

### 3.137.107 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. |

### 3.137.108 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. |

### 3.137.109 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. |

## 3.138 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)> | <b>sms &lt;name&gt;</b> |
|-----------|-------------------------|

**Arguments**

| Argument | Value                 | Description                 |
|----------|-----------------------|-----------------------------|
| name     | <i>Interface name</i> | Interface with SMS service. |

**Example**

|           |                    |
|-----------|--------------------|
| (config)> | <b>sms UsbQmi0</b> |
| (sms)>    |                    |

**History**

| Version | Description                                 |
|---------|---|
| 3.03    | The <b>sms</b> command has been introduced. |

### 3.138.1 sms delete

**Description** Delete SMS message.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Synopsis**

|        |                          |
|--------|--------------------------|
| (sms)> | <b>delete &lt;id&gt;</b> |
|--------|--------------------------|

**Arguments**

| Argument | Value         | Description |
|----------|---------------|-------------|
| id       | <i>String</i> | Message ID. |

**Example**

|        |  |
|--------|--|
| (sms)> | <b>delete sim-5</b>                      |
|        | UsbQmi::Sms: "UsbQmi0": message deleted. |

**History**

| Version | Description  |
|---------|--|
| 3.03    | The <b>sms delete</b> command has been introduced. |

## 3.138.2 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: Ok

messages, id = sim-5:
        read: yes
        from: MegaFon
        timestamp: Wed Sep 16 10:24:46 2020
        parts: 7
        total-parts: 7
        text: Listen to audiobooks on management, ►
leadership,           personal efficiency and self-development ►
2 weeks free!

Just subscribe to the MegaFon AudioBooks ►
and
listen to them without advertising on any ►
convenient device.           The cost after the trial period - 1 euro ►
/ day.

Payment from the phone account without ►
card binding. Cancel
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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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. |

**3.138.3 sms read**

**Description** Mark SMS as read.  
 Command with **no** prefix return unread SMS mark.

**Prefix no** Yes

**Change settings** No

**Multiple input** No

**Synopsis** (sms)> **read <id>**

**Arguments**

| Argument | Value         | Description |
|----------|---------------|-------------|
| id       | <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. |

## 3.138.4 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. |

## 3.139 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
Snmp::Manager: SNMP community set to "Co_test".
(config)> no snmp community
Snmp::Manager: SNMP community reset to "public".
```

**History**

| Version | Description  |
|---------|--|
| 2.08    | The <b>snmp community</b> command has been introduced. |

## 3.140 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> | <b>SNMP</b> contact info. |

**Example**

```
(config)> snmp contact Cont_test
Snmp::Manager: SNMP contact info set to "Cont_test".
(config)> no snmp contact
Snmp::Manager: SNMP community info reset.
```

**History**

| Version | Description  |
|---------|--|
| 2.08    | The <b>snmp contact</b> command has been introduced. |

## 3.141 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)> | <b>snmp location</b> < <i>location</i> > |
| (config)> | <b>no snmp location</b>                  |

**Arguments**

| Argument | Value         | Description                           |
|----------|---------------|---------------------------------------|
| location | <i>String</i> | <a href="#">SNMP</a> 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. |

## 3.142 sstp-server

**Description** Access to a group of commands to configure [SSTP](#)-server parameters.

**Prefix no** No

**Change settings** No

**Multiple input** No

**Group entry** (sstp-server)

**Synopsis**

|           |                    |
|-----------|--------------------|
| (config)> | <b>sstp-server</b> |
|-----------|--------------------|

**History**

| Version | Description   |
|---------|---|
| 2.12    | The <b>sstp-server</b> command has been introduced. |

### 3.142.1 sstp-server dhcp route

| <b>Description</b>     | Assign a route which is transmitted in DHCP INFORM messages to the <i>SSTP</i> -server clients.  |  |             |             |  |                   |                         |      |                |  |
|------------------------|--|--|-------------|-------------|--|-------------------|-------------------------|------|----------------|--|
|                        | Command with <b>no</b> prefix cancels the specified route. If you use no arguments, the entire list of routes will be cleared.   |  |             |             |  |                   |                         |      |                |  |
| <b>Prefix no</b>       | Yes  |  |             |             |  |                   |                         |      |                |  |
| <b>Change settings</b> | Yes  |  |             |             |  |                   |                         |      |                |  |
| <b>Multiple input</b>  | Yes  |  |             |             |  |                   |                         |      |                |  |
| <b>Synopsis</b>        | <pre>(sstp-server)&gt; <b>dhcp route</b> &lt;address&gt; &lt;mask&gt; (sstp-server)&gt; <b>no dhcp route</b> [&lt;address&gt; &lt;mask&gt;]</pre>  |  |             |             |  |                   |                         |      |                |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>address</td><td><i>IP-address</i></td><td>Network client address.</td></tr> <tr> <td>mask</td><td><i>IP-mask</i></td><td>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).</td></tr> </tbody> </table> | 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). |
| 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). |             |             |  |                   |                         |      |                |  |
| <b>Example</b>         | <pre>(sstp-server)&gt; <b>dhcp route</b> 192.168.2.0/24 SstpServer::Manager: Added DHCP INFORM route to ▶ 192.168.2.0/255.255.255.0.</pre><br><pre>(sstp-server)&gt; <b>no dhcp route</b> SstpServer::Manager: Cleared DHCP INFORM routes.</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 dhcp route</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.12        | The <b>sstp-server dhcp route</b> command has been introduced. |                   |                         |      |                |  |
| Version                | Description  |  |             |             |  |                   |                         |      |                |  |
| 2.12                   | The <b>sstp-server dhcp route</b> command has been introduced.   |  |             |             |  |                   |                         |      |                |  |

### 3.142.2 sstp-server interface

|                        |  |
|------------------------|--|
| <b>Description</b>     | Bind <i>SSTP</i> -server to the specified interface. |
|                        | Command with <b>no</b> prefix unbinds the interface. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |

**Synopsis**

```
(sstp-server)> interface <interface>
(sstp-server)> no interface
```

**Arguments**

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

### 3.142.3 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. |

### 3.142.4 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. |
| 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.12           | The <b>sstp-server lcp echo</b> command has been introduced. |

### 3.142.5 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.05           | The <b>sstp-server lcp force-pap</b> command has been introduced. |

### 3.142.6 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>  |
|-----------------|----------------|---|
| value           | <i>Integer</i> | <i>MRU</i> value. Can take values from 128 to 1500 inclusively. |

**Example**

```
(sstp-server)> mru 200
SstpServer::Manager: MRU set to 200.
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.12           | The <b>sstp-server mru</b> command has been introduced. |

### 3.142.7 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)> <b>mtu &lt;value&gt;</b> |
| (sstp-server)> <b>no mtu</b>            |

**Arguments**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>  |
|-----------------|----------------|---|
| value           | <i>Integer</i> | <i>MTU</i> value. Can take values from 128 to 1500 inclusively. |

**Example**

```
(sstp-server)> mtu 200
SstpServer::Manager: MTU set to 200.
```

**History**

| <b>Version</b> | <b>Description</b>                                      |
|----------------|---|
| 2.12           | The <b>sstp-server mtu</b> command has been introduced. |

### 3.142.8 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)> <b>multi-login</b> |
|-----------------------------------|

```
(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. |

### 3.142.9 sstp-server pool-range

**Description** Assign a pool of addresses for the clients that connect to the [SSTP](#)-server.

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. If not defined, size 10 is used. |

**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. |

### 3.142.10 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. |

## 3.143 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. |

### 3.143.1 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.<br>RESET button hold is 10 seconds.                         |
| handler  | FactoryReset             | Reset system to factory defaults.  |
|          | Reboot                   | System reboot.   |
|          | WifiToggle               | Switch Wi-Fi on/off.   |
|          | WifiGuestApToggle        | Switch Guest Wi-Fi on/off.   |
|          | WpsStartMainAp           | Start WPS (2.4GHz only).   |
|          | WpsStartMainAp5          | Start WPS (5GHz only).   |
|          | WpsStartAllMainAp        | Start WPS (all frequency bands).   |
|          | UnmountAll               | Unmount all disks.   |
|          | DlnaDirectoryRescan      | Search for new files.  |
|          | DlnaDirectoryFullRescan  | Full rescan.   |
|          | TorrentAltSpeedToggle    | Alternative speed on/off (component Transmission BitTorrent client required).            |
|          | TorrentClientStateToggle | Switch the BitTorrent client on/off (component Transmission BitTorrent client required). |
|          | OpkgRunScript            | Run the script on opkg-section, /etc/ndm/button.d/ folder (component OPKG required).     |

**Example**

```
(system)> button WLAN on double-click do WifiGuestApToggle
Peripheral::Manager: "WLAN/double-click" handler set.
```

**History**

| <b>Version</b> | <b>Description</b>                                    |
|----------------|---|
| 2.03           | The <b>system button</b> command has been introduced. |
| 2.06           | The OpkgRunScript handler was added.                  |

### 3.143.2 system clock date

**Description** Adjust system date and time.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis** (system)> **clock date <date-and-time>**

**Arguments**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>                                   |
|-----------------|---------------|--|
| 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.

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>system clock date</b> command has been introduced. |

### 3.143.3 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**

| <b>Argument</b> | <b>Value</b>  | <b>Description</b>                          |
|-----------------|---------------|---|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.00           | The <b>system clock timezone</b> command has been introduced. |

### 3.143.4 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.00           | The <b>system configuration factory-reset</b> command has been introduced. |

### 3.143.5 system configuration save

**Description** Save the system configuration asynchronously.**Prefix no** No**Change settings** Yes**Multiple input** No**Synopsis**

```
(system)> configuration save
```

**Example**

```
(system)> configuration save
Saving configuration.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.05.B.1       | The <b>system configuration save</b> command has been introduced. |

### 3.143.6 system debug

**Description** Enable system debug. By default, setting is disabled.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **debug**

(system)> **no debug**

**Example**

```
(system)> debug
Core::Debug: System debug enabled.
```

**History**

| Version | Description  |
|---------|--|
| 2.03    | The <b>system debug</b> command has been introduced. |

### 3.143.7 system description

**Description** Set the system description as an arbitrary string. By default, description Extra DSL (KN-2111) is used.

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

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

(system)> **description <description>**

(system)> **no description**

**Arguments**

| Argument    | Value         | Description                                  |
|-------------|---------------|--|
| description | <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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.15           | The <b>system description</b> command has been introduced. |

### 3.143.8 system domainname

|                        |  |
|------------------------|--|
| <b>Description</b>     | Assign domain name for the system.<br><br>Command with <b>no</b> prefix removes domain name. |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | No   |

**Synopsis**(system)> **domainname** <domain>(system)> **no domainname****Arguments**

| Argument | Value  | Description                |
|----------|--------|----------------------------|
| domain   | String | 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. |

## 3.143.9 system eject

**Description** Stop and eject SCSI/SATA USB-drive. To display all media drive names, use [show media](#) command.**Prefix no** No**Change settings** No**Multiple input** No**Synopsis** (system)> **eject** <name>**Arguments**

| Argument | Value  | Description                   |
|----------|--------|-------------------------------|
| name     | String | Name of media drive to eject. |

**Example**(system)> **eject Media0**

Storage::Manager: Started "Media0" eject.

**History**

| Version | Description  |
|---------|--|
| 3.04    | The <b>system eject</b> command has been introduced. |

## 3.143.10 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.

| <b>Prefix no</b>       | Yes   |                   |             |             |   |               |                   |
|------------------------|---|-------------------|-------------|-------------|---|---------------|-------------------|
| <b>Change settings</b> | Yes   |                   |             |             |   |               |                   |
| <b>Multiple input</b>  | No  |                   |             |             |   |               |                   |
| <b>Synopsis</b>        | <pre>(system)&gt; hostname &lt;hostname&gt;           (system)&gt; no hostname</pre>  |                   |             |             |   |               |                   |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>hostname</td><td><i>String</i></td><td>Name of the host.</td></tr> </tbody> </table> | Argument          | Value       | Description | hostname  | <i>String</i> | Name of the host. |
| Argument               | Value   | Description       |             |             |   |               |                   |
| hostname               | <i>String</i>   | Name of the host. |             |             |   |               |                   |
| <b>Example</b>         | <pre>(system)&gt; hostname KN1010 Core::System::Hostname: The host name set.  (system)&gt; no hostname Core::System::Hostname: The host name reset.</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>system hostname</b> command has been introduced.</td></tr> </tbody> </table>    | Version           | Description | 2.00        | The <b>system hostname</b> command has been introduced. |               |                   |
| Version                | Description   |                   |             |             |   |               |                   |
| 2.00                   | The <b>system hostname</b> command has been introduced.   |                   |             |             |   |               |                   |

### 3.143.11 system led

| <b>Description</b>     | Configure general purpose LEDs. By default, LED FN shows the status of device connected to USB.<br><br>Command with <b>no</b> prefix resets the setting to default.   |  |       |             |     |    |           |         |                               |  |
|------------------------|---|--|-------|-------------|-----|----|-----------|---------|-------------------------------|--|
| <b>Prefix no</b>       | Yes   |  |       |             |     |    |           |         |                               |  |
| <b>Change settings</b> | Yes   |  |       |             |     |    |           |         |                               |  |
| <b>Multiple input</b>  | Yes   |  |       |             |     |    |           |         |                               |  |
| <b>Synopsis</b>        | <pre>(system)&gt; led &lt;led&gt; indicate &lt;control&gt;           (system)&gt; no led [&lt;led&gt; [ indicate]]</pre>  |  |       |             |     |    |           |         |                               |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>led</td><td>FN</td><td>LED name.</td></tr> <tr> <td>control</td><td>UpdatesAvailable<br/>BackupWan</td><td>LED notifies you the updates for your device are available.<br/>LED shows that backup connection is active at the moment.</td></tr> </tbody> </table> | Argument   | Value | Description | led | FN | LED name. | control | UpdatesAvailable<br>BackupWan | LED notifies you the updates for your device are available.<br>LED shows that backup connection is active at the moment. |
| Argument               | Value   | Description  |       |             |     |    |           |         |                               |  |
| led                    | FN  | LED name.  |       |             |     |    |           |         |                               |  |
| control                | UpdatesAvailable<br>BackupWan   | LED notifies you the updates for your device are available.<br>LED shows that backup connection is active at the moment. |       |             |     |    |           |         |                               |  |

| Argument | Value                 | Description  |
|----------|-----------------------|--|
|          | 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.   |
|          | OpkgLedControl        | LED shows status of <b>opkg</b> .  |
|          | 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. |

### 3.143.12 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**

|   |
|---|
| <pre>(system)&gt; led power schedule &lt;schedule&gt;</pre> |
| <pre>(system)&gt; no led power schedule</pre>               |

**Arguments**

| Argument | Value                | Description   |
|----------|----------------------|---|
| schedule | <i>Schedule name</i> | The name of the schedule that was created with <b>schedule</b> 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.06           | The <b>system led power schedule</b> command has been introduced. |

### 3.143.13 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)> <b>led power shutdown &lt;mode&gt;</b> |
| (system)> <b>no led power shutdown</b>           |

**Arguments**

| <b>Argument</b> | <b>Value</b> | <b>Description</b>                    |
|-----------------|--------------|---------------------------------------|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 3.06           | The <b>system led power shutdown</b> command has been introduced. Previous command name is <b>system led shutdown</b> . |

### 3.143.14 system log clear

**Description** Clear the system log.

**Prefix no** No

**Change settings** No

| <b>Multiple input</b> | No  |         |             |      |  |
|-----------------------|---|---------|-------------|------|--|
| <b>Synopsis</b>       | (system)> <b>log clear</b>  |         |             |      |  |
| <b>Example</b>        | (system)> <b>log clear</b><br>Syslog: the system log has been cleared.  |         |             |      |  |
| <b>History</b>        | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.00</td><td>The <b>system log clear</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.00 | The <b>system log clear</b> command has been introduced. |
| Version               | Description   |         |             |      |  |
| 2.00                  | The <b>system log clear</b> command has been introduced.  |         |             |      |  |

### 3.143.15 system log reduction

| <b>Description</b>     | Enable repeated message reduction. By default, the setting is enabled.<br><br>Command with <b>no</b> prefix disables the feature.   |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | (system)> <b>log reduction</b><br><br>(system)> <b>no log reduction</b>   |         |             |      |  |
| <b>Example</b>         | (system)> <b>log reduction</b><br><br>(system)> <b>no log reduction</b>   |         |             |      |  |
| <b>History</b>         | <table><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.04</td><td>The <b>system log reduction</b> command has been introduced.</td></tr></tbody></table> | Version | Description | 2.04 | The <b>system log reduction</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.04                   | The <b>system log reduction</b> command has been introduced.  |         |             |      |  |

### 3.143.16 system log server

|                        |   |
|------------------------|---|
| <b>Description</b>     | Add remote log server.  |
| <b>Prefix no</b>       | Yes   |
| <b>Change settings</b> | Yes   |
| <b>Multiple input</b>  | Yes   |
| <b>Synopsis</b>        | (system)> <b>log server &lt;address&gt; [:&lt;port&gt;]</b><br><br>(system)> <b>no log server [&lt;address&gt; [:&lt;port&gt;]]</b> |

**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.
```

**History**

| Version | Description   |
|---------|---|
| 2.00    | The <b>system log server</b> command has been introduced. |

### 3.143.17 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)> | <b>log suppress</b> < <i>ident</i> >        |
| (system)> | <b>no log suppress</b> [ < <i>ident</i> > ] |

**Arguments**

| 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".
```

**History**

| Version | Description   |
|---------|---|
| 2.04    | The <b>system log suppress</b> command has been introduced. |

### 3.143.18 system mode

**Description** Select system operating mode for Extra DSL.

**Prefix no** No

**Change settings** Yes

**Multiple input** No

**Synopsis**

|           |                    |
|-----------|--------------------|
| (system)> | <b>mode</b> <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. |

### 3.143.19 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)> | <b>mount</b> <filesystem> |
|-----------|---------------------------|

|           |                              |
|-----------|------------------------------|
| (system)> | <b>no mount</b> <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. |

### 3.143.20 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> . |

### 3.143.21 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)> | <b>reboot</b> [ <i>&lt;interval&gt;</i>   <b>schedule</b> <i>&lt;schedule&gt;</i> ] |
| (system)> | <b>no reboot</b> [ <b>schedule</b> ]  |

**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 name</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 system <b>reboot</b> command has been introduced. |
| 2.12    | The <b>schedule</b> argument has been added.          |

### 3.143.22 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. |

### 3.143.23 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. |

### 3.143.24 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 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. |

### 3.143.25 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)> <b>zram</b> [ <i>size</i> ] |
| (system)> <b>no zram</b>              |

| Arguments | Argument    | Value          | Description                   |
|-----------|-------------|----------------|-------------------------------|
|           | <i>size</i> | <i>Integer</i> | Size of zRam file, in Kbytes. |

**Example**

|   |
|---|
| (system)> <b>zram</b><br>Zram::Manager: Enabled zram swap of size 262144Kb. |
|---|

|  |
|--|
| (system)> <b>no zram</b><br>Zram::Manager: Zram swap disabled. |
|--|

| History | Version | Description   |
|---------|---------|---|
|         | 2.09    | The <b>system zram</b> command has been introduced. |

### 3.144 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)> <b>tools</b> |
|------------------------|

**History**

| <b>Version</b> | <b>Description</b>                            |
|----------------|---|
| 2.00           | The <b>tools</b> command has been introduced. |

### 3.144.1 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**

| <b>Argument</b>  | <b>Value</b>          | <b>Description</b>  |
|------------------|-----------------------|---|
| address          | <i>IP-address</i>     | IP-address of the respondent.   |
| source-interface | <i>Interface name</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**

| <b>Version</b> | <b>Description</b>                                   |
|----------------|--|
| 2.00           | The <b>tools arping</b> command has been introduced. |

### 3.144.2 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> ]
```

**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, which together with the 8-byte header specifies the size of the ICMP-pack — 64 bytes. |

**Example**

```
(tools)> ping 192.168.1.33 count 3 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.
```

**History**

| Version | Description                                 |
|---------|---|
| 2.00    | The tools ping command has been introduced. |

### 3.144.3 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.

**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

```
(tools)> ping6 <host> [ count <count> ] [ size <packetsize> ]
```

**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, which together with the 8-byte header specifies the size of the ICMPv6-pack — 64 bytes. |

**Example**

```
(tools)> ping6 fd4b:f12b:5d59:0:1108:4407:b772:20cd count 3 size ▶
100
Sending ICMPv6 ECHO request to ▶
fd4b:f12b:5d59:0:1108:4407:b772:20cd
PING fd4b:f12b:5d59:0:1108:4407:b772:20cd ▶
(fd4b:f12b:5d59:0:1108:4407:b772:20cd) 52 (60) bytes of data.
60 bytes from fd4b:f12b:5d59:0:1108:4407:b772:20cd ▶
(fd4b:f12b:5d59:0:1108:4407:b772:20cd): icmp_req=1, ttl=64, ▶
time=7.18 ms.
60 bytes from fd4b:f12b:5d59:0:1108:4407:b772:20cd ▶
(fd4b:f12b:5d59:0:1108:4407:b772:20cd): icmp_req=2, ttl=64, ▶
time=8.42 ms.
60 bytes from fd4b:f12b:5d59:0:1108:4407:b772:20cd ▶
(fd4b:f12b:5d59:0:1108:4407:b772:20cd): icmp_req=3, ttl=64, ▶
time=1.51 ms.
--- fd4b:f12b:5d59:0:1108:4407:b772:20cd ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss,
0 duplicate(s), time 2002.61 ms.
Round-trip min/avg/max = 1.51/5.70/8.42 ms.
Process terminated.
```

**History**

| Version | Description   |
|---------|---|
| 2.00    | The tools <b>ping6</b> command has been introduced. |

### 3.144.4 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].   |
|           | 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.<br><br>For tcp type default packet size is 52. Range of values [52].<br><br>For udp and icmp types default packet size is 60. Range of values [28;65535]. |
|           | max-ttl          | <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.<br><br>For tcp type default port is 80.<br><br>For udp type default port is 33434.<br><br>For icmp type default port is 1.   |
|           | source-address   | <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.  |

| Argument | Value          | Description  |
|----------|----------------|--|
|          | 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. |

## 3.145 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. |

### 3.145.1 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.<br>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. |

### 3.145.2 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 <a href="#">TCP</a> listen port. Can take values 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. |

### 3.145.3 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 name</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. |

### 3.145.4 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. |

### 3.145.5 torrent rpc-port

**Description** Set **RPC** port. By default, 8090 value is used.

| <b>Prefix no</b>       | No   |  |             |             |  |                |   |        |                |  |
|------------------------|--|--|-------------|-------------|--|----------------|---|--------|----------------|--|
| <b>Change settings</b> | Yes  |  |             |             |  |                |   |        |                |  |
| <b>Multiple input</b>  | No   |  |             |             |  |                |   |        |                |  |
| <b>Synopsis</b>        | (config-torrent)> <b>rpc-port</b> <port> [ <b>public</b> ]   |  |             |             |  |                |   |        |                |  |
| <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>Webadmin listen port. Can take values from 1024 to 65535.</td></tr> <tr> <td>public</td><td><i>Keyword</i></td><td>Access to BitTorrent-client managing by public interfaces.</td></tr> </tbody> </table> | Argument   | Value       | Description | port   | <i>Integer</i> | Webadmin listen port. Can take values from 1024 to 65535. | public | <i>Keyword</i> | Access to BitTorrent-client managing by public interfaces. |
| Argument               | Value  | Description  |             |             |  |                |   |        |                |  |
| port                   | <i>Integer</i>   | Webadmin listen port. Can take values from 1024 to 65535.  |             |             |  |                |   |        |                |  |
| public                 | <i>Keyword</i>   | Access to BitTorrent-client managing by public interfaces. |             |             |  |                |   |        |                |  |
| <b>Example</b>         | <pre>(config-torrent)&gt; <b>rpc-port</b> 9945 Torrent::Client: RPC port changed to 9945 (private).</pre><br><pre>(config-torrent)&gt; <b>rpc-port</b> 9945 <b>public</b> Torrent::Client: RPC port changed to 9945 (public).</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>torrent rpc-port</b> command has been introduced.</td></tr> </tbody> </table>  | Version  | Description | 2.00        | The <b>torrent rpc-port</b> command has been introduced. |                |   |        |                |  |
| Version                | Description  |  |             |             |  |                |   |        |                |  |
| 2.00                   | The <b>torrent rpc-port</b> command has been introduced.   |  |             |             |  |                |   |        |                |  |

## 3.146 udpxy

| <b>Description</b>     | Access to a group of commands to configure <i>udpxy</i> parameters.  |         |             |      |   |
|------------------------|--|---------|-------------|------|---|
| <b>Prefix no</b>       | No   |         |             |      |   |
| <b>Change settings</b> | No   |         |             |      |   |
| <b>Multiple input</b>  | No   |         |             |      |   |
| <b>Group entry</b>     | ( <i>udpxy</i> )   |         |             |      |   |
| <b>Synopsis</b>        | (config)> <b>udpxy</b>   |         |             |      |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>2.03</td><td>The <b>udpxy</b> command has been introduced.</td></tr> </tbody> </table> | Version | Description | 2.03 | The <b>udpxy</b> command has been introduced. |
| Version                | Description  |         |             |      |   |
| 2.03                   | The <b>udpxy</b> command has been introduced.  |         |             |      |   |

### 3.146.1 udpxy buffer-size

|                    |   |
|--------------------|---|
| <b>Description</b> | Set <i>udpxy</i> buffer size. By default, 2048 value is used.<br>Command with <b>no</b> prefix resets buffer size to default. |
|--------------------|---|

| <b>Prefix no</b>       | Yes  |  |             |             |   |                |  |
|------------------------|--|--|-------------|-------------|---|----------------|--|
| <b>Change settings</b> | Yes  |  |             |             |   |                |  |
| <b>Multiple input</b>  | No   |  |             |             |   |                |  |
| <b>Synopsis</b>        | <pre>(udpxy)&gt; buffer-size &lt;size&gt; (udpxy)&gt; no buffer-size</pre>   |  |             |             |   |                |  |
| <b>Arguments</b>       | <table border="1"><thead><tr><th>Argument</th><th>Value</th><th>Description</th></tr></thead><tbody><tr><td>size</td><td><i>Integer</i></td><td>Buffer size in bytes. Can take values from 1 to 1048576.</td></tr></tbody></table> | Argument   | Value       | Description | size  | <i>Integer</i> | Buffer size in bytes. Can take values from 1 to 1048576. |
| Argument               | Value  | Description  |             |             |   |                |  |
| size                   | <i>Integer</i>   | Buffer size in bytes. Can take values from 1 to 1048576. |             |             |   |                |  |
| <b>Example</b>         | <pre>(udpxy)&gt; buffer-size 500 Udpxy::Manager: a buffer size set to 500 bytes.</pre>   |  |             |             |   |                |  |
| <b>History</b>         | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.04</td><td>The <b>udpxy buffer-size</b> command has been introduced.</td></tr></tbody></table>                                      | Version  | Description | 2.04        | The <b>udpxy buffer-size</b> command has been introduced. |                |  |
| Version                | Description  |  |             |             |   |                |  |
| 2.04                   | The <b>udpxy buffer-size</b> command has been introduced.  |  |             |             |   |                |  |

## 3.146.2 udpxy buffer-timeout

| <b>Description</b>     | Set <i>udpxy</i> timeout to hold data in the buffer. By default, 1 value is used.<br><br>Command with <b>no</b> prefix resets timeout to default.   |  |             |             |  |                |  |
|------------------------|---|--|-------------|-------------|--|----------------|--|
| <b>Prefix no</b>       | Yes   |  |             |             |  |                |  |
| <b>Change settings</b> | Yes   |  |             |             |  |                |  |
| <b>Multiple input</b>  | No  |  |             |             |  |                |  |
| <b>Synopsis</b>        | <pre>(udpxy)&gt; buffer-timeout &lt;timeout&gt; (udpxy)&gt; no buffer-timeout</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>Timeout value in seconds. Can take values from -1 to 60. -1 — unlimited timeout.</td></tr></tbody></table> | Argument   | Value       | Description | timeout  | <i>Integer</i> | Timeout value in seconds. Can take values from -1 to 60. -1 — unlimited timeout. |
| Argument               | Value   | Description  |             |             |  |                |  |
| timeout                | <i>Integer</i>  | Timeout value in seconds. Can take values from -1 to 60. -1 — unlimited timeout. |             |             |  |                |  |
| <b>Example</b>         | <pre>(udpxy)&gt; buffer-timeout 10 Udpxy::Manager: a hold data timeout set to 10 sec.</pre>   |  |             |             |  |                |  |
| <b>History</b>         | <table border="1"><thead><tr><th>Version</th><th>Description</th></tr></thead><tbody><tr><td>2.04</td><td>The <b>udpxy buffer-timeout</b> command has been introduced.</td></tr></tbody></table>  | Version  | Description | 2.04        | The <b>udpxy buffer-timeout</b> command has been introduced. |                |  |
| Version                | Description   |  |             |             |  |                |  |
| 2.04                   | The <b>udpxy buffer-timeout</b> command has been introduced.  |  |             |             |  |                |  |

### 3.146.3 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)> | <b>interface &lt;interface&gt;</b> |
| (udpxy)> | <b>no interface</b>                |

| Arguments | Argument  | Value                 | Description  |
|-----------|-----------|-----------------------|--|
|           | interface | <i>Interface name</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 Dsl0.
```

**History**

| Version | Description   |
|---------|---|
| 2.02    | The <b>udpxy interface</b> command has been introduced. |

### 3.146.4 udpuy 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 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. |

## 3.146.5 udpxy renew-interval

**Description**

Set renew interval of subscription to the multicast channel. By default, 0 value is used, ie 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 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. |

## 3.146.6 udpxy timeout

| <b>Description</b>     | Set connection timeout. By default, 5 value is used.<br>Command with <b>no</b> prefix resets setting to default.  |   |          |             |             |   |                |   |
|------------------------|---|---|----------|-------------|-------------|---|----------------|---|
| <b>Prefix no</b>       | Yes   |   |          |             |             |   |                |   |
| <b>Change settings</b> | Yes   |   |          |             |             |   |                |   |
| <b>Multiple input</b>  | No  |   |          |             |             |   |                |   |
| <b>Synopsis</b>        | <pre>(udpxy)&gt; timeout &lt;timeout&gt; (udpxy)&gt; no timeout</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>Timeout in seconds. Can take values from 5 to 60.</td> </tr> </tbody> </table> |   | Argument | Value       | Description | timeout   | <i>Integer</i> | Timeout in seconds. Can take values from 5 to 60. |
| Argument               | Value   | Description                                       |          |             |             |   |                |   |
| timeout                | <i>Integer</i>  | Timeout in seconds. Can take values from 5 to 60. |          |             |             |   |                |   |
| <b>Example</b>         | <pre>(udpxy)&gt; timeout 10 Udpxy::Manager: a stream timeout set to 10 sec.</pre>   |   |          |             |             |   |                |   |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>2.03</td> <td>The <b>udpxy timeout</b> command has been introduced.</td> </tr> </tbody> </table>  |   | Version  | Description | 2.03        | The <b>udpxy timeout</b> command has been introduced. |                |   |
| Version                | Description   |   |          |             |             |   |                |   |
| 2.03                   | The <b>udpxy timeout</b> command has been introduced.   |   |          |             |             |   |                |   |

## 3.147 upnp forward

| <b>Description</b>     | Add <a href="#">UPnP</a> forwarding rule.<br>Command with <b>no</b> prefix removes rule from the list.   |  |          |       |             |          |     |  |
|------------------------|--|--|----------|-------|-------------|----------|-----|--|
| <b>Prefix no</b>       | Yes  |  |          |       |             |          |     |  |
| <b>Change settings</b> | Yes  |  |          |       |             |          |     |  |
| <b>Multiple input</b>  | Yes  |  |          |       |             |          |     |  |
| <b>Interface type</b>  | IP   |  |          |       |             |          |     |  |
| <b>Synopsis</b>        | <pre>(config)&gt; upnp forward &lt;protocol&gt; [interface] &lt;address&gt; &lt;port&gt; (config)&gt; no upnp forward [&lt;index&gt;   (&lt;protocol&gt; &lt;address&gt; &lt;port&gt;)]</pre>  |  |          |       |             |          |     |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>protocol</td> <td>tcp</td> <td>Rule for <a href="#">TCP</a> protocol will be added/deleted.</td> </tr> </tbody> </table> |  | Argument | Value | Description | protocol | tcp | Rule for <a href="#">TCP</a> protocol will be added/deleted. |
| Argument               | Value  | Description  |          |       |             |          |     |  |
| protocol               | tcp  | Rule for <a href="#">TCP</a> protocol will be added/deleted. |          |       |             |          |     |  |

| Argument  | Value                 | Description   |
|-----------|-----------------------|---|
|           | udp                   | Rule for <i>UDP</i> protocol will be added/deleted.     |
| interface | <i>Interface name</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. |

## 3.148 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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. |

## 3.149 upnp redirect

|                        |  |
|------------------------|--|
| <b>Description</b>     | Add <a href="#">UPnP</a> port translation rule.<br><br>Command with <b>no</b> prefix removes rule from the list. If you use no arguments, the entire list of rules will be removed.  |
| <b>Prefix no</b>       | Yes  |
| <b>Change settings</b> | Yes  |
| <b>Multiple input</b>  | Yes  |
| <b>Interface type</b>  | IP   |
| <b>Synopsis</b>        | <pre>(config)&gt; upnp redirect &lt;protocol&gt; &lt;interface&gt; &lt;port&gt; &lt;to-address&gt; [     to-port ] </pre> <pre>(config)&gt; no upnp redirect [and forward   [ &lt;index&gt;   ( &lt;protocol&gt; &lt;port&gt; )     ]]</pre> |

**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 name</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.        |

| Argument    | Value          | Description  |
|-------------|----------------|--|
| 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. |

## 3.150 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)   |
| <b>Synopsis</b>        | <pre>  (config)&gt; user &lt;name&gt;   (config)&gt; no user &lt;name&gt;</pre> |

| Arguments | Argument | Value         | Description    |
|-----------|----------|---------------|----------------|
|           | name     | <i>String</i> | The user name. |

| History | Version | Description                                  |
|---------|---------|--|
|         | 2.00    | The <b>user</b> command has been introduced. |

### 3.150.1 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   |  |             |             |   |        |  |
| <b>Synopsis</b>        | <pre>(config-user)&gt; home &lt;directory&gt;           (config-user)&gt; no home</pre>  |  |             |             |   |        |  |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>directory</td><td>String</td><td>Path to the home directory for FTP-server, SFTP-server and WeDAV-server.</td></tr> </tbody> </table> | Argument   | Value       | Description | directory   | String | Path to the home directory for FTP-server, SFTP-server and WeDAV-server. |
| Argument               | Value  | Description  |             |             |   |        |  |
| directory              | String   | Path to the home directory for FTP-server, SFTP-server and WeDAV-server. |             |             |   |        |  |
| <b>Example</b>         | <pre>(config-user)&gt; home files(ssd:/) Core::Authenticator: "test" user root directory set to ▶ "files(ssd:/)".  (config-user)&gt; no home (config-user)&gt;</pre>   |  |             |             |   |        |  |
| <b>History</b>         | <table border="1"> <thead> <tr> <th>Version</th><th>Description</th></tr> </thead> <tbody> <tr> <td>3.04</td><td>The <b>user home</b> command has been introduced.</td></tr> </tbody> </table>   | Version  | Description | 3.04        | The <b>user home</b> command has been introduced. |        |  |
| Version                | Description  |  |             |             |   |        |  |
| 3.04                   | The <b>user home</b> command has been introduced.  |  |             |             |   |        |  |

## 3.150.2 user password

| <b>Description</b>     | Set the user password. The password is stored as MD5-hash, computed from the " <i>user:realm:password</i> " string. <i>realm</i> is the device model name from startup-config.txt file.<br><br>The command takes open string or hash-function value as argument. Saved password is used for user authentication.<br><br>Command with <b>no</b> prefix removes the password so that the user can access to the device unauthenticated. |                 |       |             |      |        |                 |
|------------------------|---|-----------------|-------|-------------|------|--------|-----------------|
| <b>Prefix no</b>       | Yes   |                 |       |             |      |        |                 |
| <b>Change settings</b> | Yes   |                 |       |             |      |        |                 |
| <b>Multiple input</b>  | No  |                 |       |             |      |        |                 |
| <b>Synopsis</b>        | <pre>(config-user)&gt; password ( md5 &lt;hash&gt;   &lt;password&gt; )           (config-user)&gt; no password</pre>   |                 |       |             |      |        |                 |
| <b>Arguments</b>       | <table border="1"> <thead> <tr> <th>Argument</th><th>Value</th><th>Description</th></tr> </thead> <tbody> <tr> <td>hash</td><td>String</td><td>MD5-hash value.</td></tr> </tbody> </table>  | Argument        | Value | Description | hash | String | MD5-hash value. |
| Argument               | Value   | Description     |       |             |      |        |                 |
| hash                   | String  | MD5-hash value. |       |             |      |        |                 |

| Argument | Value         | Description  |
|----------|---------------|--|
| 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. |

### 3.150.3 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: admin account cannot be tagged readonly or untagged cli or ssh.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** Yes

**Synopsis**

|  |
|--|
| <pre>(config-user)&gt; <b>tag &lt;tag&gt;</b></pre>        |
| <pre>(config-user)&gt; <b>no tag [ &lt;tag&gt; ]</b></pre> |

**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. |

| Argument | Value       | Description  |
|----------|-------------|--|
|          | 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.                               |
|          | webdav      | Access to WebDAV file server.  |

**Example**

```
(config-user)> tag cli
Core::Authenticator: User "admin" tagged with "cli".
```

```
(config-user)> tag readonly
Core::Authenticator: User "my" tagged with "readonly".
```

```
(config-user)> tag http-proxy
Core::Authenticator: User "admin" tagged with "http-proxy".
```

```
(config-user)> tag http
Core::Authenticator: User "admin" tagged with "http".
```

```
(config-user)> tag afp
Core::Authenticator: User "test" tagged with "afp".
```

```
(config-user)> tag printers
Core::Authenticator: User "admin" tagged with "printers".
```

```
(config-user)> tag cifs
Core::Authenticator: User "admin" tagged with "cifs".
```

```
(config-user)> tag vpn-dlna
Core::Authenticator: User "enpa" tagged with "vpn-dlna".
```

```
(config-user)> tag ftp
Core::Authenticator: User "admin" tagged with "ftp".
```

```
(config-user)> tag ipsec-xauth
Core::Authenticator: User "admin" tagged with "ipsec-xauth".
```

```
(config-user)> tag ipsec-l2tp
Core::Authenticator: User "admin" tagged with "ipsec-l2tp".
```

```
(config-user)> tag opt
Core::Authenticator: User "admin" tagged with "opt".
```

```
(config-user)> tag sftp
Core::Authenticator: User "test" tagged with "sftp".
```

```
(config-user)> tag sstp
Core::Authenticator: User "admin" tagged with "sstp".
```

```
(config-user)> tag torrent
Core::Authenticator: User "admin" tagged with "torrent".
```

```
(config-user)> tag vpn
Core::Authenticator: User "admin" tagged with "vpn".
```

```
(config-user)> tag webdav
Core::Authenticator: User "test" tagged with "webdav".
```

```
(config-user)> no tag readonly
Core::Authenticator: User "admin": "readonly" tag deleted.
```

**History**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 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</b> <b>sftp</b> and <b>webdav</b> tags have been added. |

## 3.151 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 name</i> | Full interface name or an alias. You can see the list of available interfaces with help of <b>interface [Tab]</b> 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. |

## 3.152 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)> | <b>vpn-server</b> |
|-----------|-------------------|

**History**

| Version | Description  |
|---------|--|
| 2.04    | The <b>vpn-server</b> command has been introduced. |

### 3.152.1 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> ]
```

**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**

```
(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. |

## 3.152.2 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 | <i>Interface name</i> | 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 FastEthernet0/Vlan1
VpnServer::Manager: Bound to FastEthernet0/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. |

### 3.152.3 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. |

### 3.152.4 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)> | <b>lcp echo &lt;interval&gt; &lt;count&gt; [adaptive]</b> |
| (vpn-server)> | <b>no lcp echo</b>  |

**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**

|               |                              |
|---------------|------------------------------|
| (vpn-server)> | <b>lcp echo 5 3</b>          |
|               | LCP echo parameters updated. |

**History**

| Version | Description   |
|---------|---|
| 2.06    | The <b>vpn-server lcp echo</b> command has been introduced. |

## 3.152.5 vpn-server lockout-policy

**Description** Set VPN-server bruteforce detection parameters. By default, feature is enabled.

Command with **no** prefix disables bruteforce detection.

**Prefix no** Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

|               |  |
|---------------|--|
| (vpn-server)> | <b>vpn-server lockout-policy &lt;threshold&gt; [&lt;duration&gt; [&lt;observation-window&gt;]]</b> |
| (vpn-server)> | <b>no vpn-server lockout-policy</b>  |

| Arguments | Argument           | Value          | Description  |
|-----------|--------------------|----------------|--|
|           | threshold          | <i>Integer</i> | The number of failed attempts to log in. By default, 5 value is used.                        |
|           | duration           | <i>Integer</i> | An authorization ban duration for the specified IP in minutes. By default, 15 value is used. |
|           | observation-window | <i>Integer</i> | Duration of suspicious activity observation in minutes. By default, 3 value is used.         |

|         |  |
|---------|--|
| Example | (vpn-server)> <b>lockout-policy 10 30 2</b><br>VpnServer::Manager: Bruteforce detection is reconfigured. |
|         | (vpn-server)> <b>no lockout-policy</b><br>VpnServer::Manager: Bruteforce detection is disabled.          |

| History | Version | Description   |
|---------|---------|---|
|         | 3.01    | The <b>vpn-server lockout-policy</b> command has been introduced. |

## 3.152.6 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)> <b>mppe &lt;mode&gt;</b>    |
| (vpn-server)> <b>no mppe &lt;mode&gt;</b> |

| 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)> <b>mppe 40</b><br>VpnServer::Manager: Set encryption 40. |
|---------|--|

| History | Version | Description   |
|---------|---------|---|
|         | 2.05    | The <b>vpn-server mppe</b> command has been introduced. |

## 3.152.7 vpn-server mppe-optional

| <b>Description</b>     | Enable <b>MPPE</b> encryption.  |         |             |      |  |
|------------------------|---|---------|-------------|------|--|
|                        | Command with <b>no</b> prefix disables encryption.  |         |             |      |  |
| <b>Prefix no</b>       | Yes   |         |             |      |  |
| <b>Change settings</b> | Yes   |         |             |      |  |
| <b>Multiple input</b>  | No  |         |             |      |  |
| <b>Synopsis</b>        | <pre>(vpn-server)&gt; mppe-optional (vpn-server)&gt; no mppe-optional</pre>   |         |             |      |  |
| <b>Example</b>         | <pre>(vpn-server)&gt; mppe-optional VpnServer::Manager: Unencrypted connections enabled.</pre>  |         |             |      |  |
| <b>History</b>         | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Version</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px; vertical-align: top;">2.04</td> <td style="padding: 2px;">The <b>vpn-server mppe-optional</b> command has been introduced.</td> </tr> </tbody> </table> | Version | Description | 2.04 | The <b>vpn-server mppe-optional</b> command has been introduced. |
| Version                | Description   |         |             |      |  |
| 2.04                   | The <b>vpn-server mppe-optional</b> command has been introduced.  |         |             |      |  |

## 3.152.8 vpn-server mru

| <b>Description</b>     | Set <b>MRU</b> value to be transmitted to PPTP-server. By default, 1350 value is used.  |  |  |          |       |             |       |                |  |
|------------------------|---|--|--|----------|-------|-------------|-------|----------------|--|
|                        | Command with <b>no</b> prefix resets value to default.  |  |  |          |       |             |       |                |  |
| <b>Prefix no</b>       | Yes   |  |  |          |       |             |       |                |  |
| <b>Change settings</b> | Yes   |  |  |          |       |             |       |                |  |
| <b>Multiple input</b>  | No  |  |  |          |       |             |       |                |  |
| <b>Synopsis</b>        | <pre>(vpn-server)&gt; mru &lt;value&gt; (vpn-server)&gt; no mru</pre>   |  |  |          |       |             |       |                |  |
| <b>Arguments</b>       | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left; padding: 2px;">Argument</th> <th style="text-align: left; padding: 2px;">Value</th> <th style="text-align: left; padding: 2px;">Description</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px; vertical-align: top;">value</td> <td style="padding: 2px; vertical-align: top;"><i>Integer</i></td> <td style="padding: 2px;">MRU value. Can take values from 128 to 1500 inclusively.</td> </tr> </tbody> </table> |  |  | Argument | Value | Description | value | <i>Integer</i> | MRU value. Can take values from 128 to 1500 inclusively. |
| Argument               | Value   | Description  |  |          |       |             |       |                |  |
| value                  | <i>Integer</i>  | MRU value. Can take values from 128 to 1500 inclusively. |  |          |       |             |       |                |  |
| <b>Example</b>         | <pre>(vpn-server)&gt; mru 200 VpnServer::Manager: mru set to 200.</pre>   |  |  |          |       |             |       |                |  |

**History**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.04           | The <b>vpn-server mru</b> command has been introduced. |

### 3.152.9 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**

| <b>Argument</b> | <b>Value</b>   | <b>Description</b>  |
|-----------------|----------------|---|
| value           | <i>Integer</i> | <b>MTU</b> value. Can take values from 128 to 1500 inclusively. |

**Example**

```
(vpn-server)> mtu 200
VpnServer::Manager: mtu set to 200.
```

**History**

| <b>Version</b> | <b>Description</b>                                     |
|----------------|--|
| 2.04           | The <b>vpn-server mtu</b> command has been introduced. |

### 3.152.10 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**

| <b>Version</b> | <b>Description</b>   |
|----------------|--|
| 2.04           | The <b>vpn-server multi-login</b> command has been introduced. |

### 3.152.11 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**

| <b>Argument</b> | <b>Value</b>      | <b>Description</b>  |
|-----------------|-------------------|---|
| 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**

| <b>Version</b> | <b>Description</b>  |
|----------------|---|
| 2.04           | The <b>vpn-server pool-range</b> command has been introduced. |

### 3.152.12 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. |

## 3.153 yandexdns

**Description**Access to a group of commands to configure *Yandex.DNS* profiles.**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Group entry**

(yandexdns)

**Synopsis**(config)> **yandexdns****History**

| Version | Description                                       |
|---------|---|
| 2.01    | The <b>yandexdns</b> command has been introduced. |

### 3.153.1 yandexdns assign

**Description**Assign types to the hosts. By default **safe** type is used for all hosts. **default** type can be assigned to a single host.Command with **no** prefix resets setting to default.**Prefix no**

Yes

**Change settings**

Yes

**Multiple input**

Yes

**Synopsis**

```
(yandexdns)> assign [<host>] <type>  
(yandexdns)> no assign [<host>]
```

**Arguments**

| Argument | Value       | Description   |
|----------|-------------|---|
| host     | MAC-address | Host to which type of filtering is applied. If not specified, the type is applied to all hosts. |
| type     | default     | No filtering used.  |
|          | safe        | Protection against malicious and phishing websites.   |
|          | family      | Access denied to malicious and phishing websites, as well as to resources for adults.           |

**History**

| Version | Description  |
|---------|--|
| 2.01    | The <b>yandexdns assign</b> command has been introduced. |

### 3.153.2 yandexdns check-availability

**Description**Check availability of *Yandex.DNS* service.**Prefix no**

No

**Change settings**

No

**Multiple input**

No

**Synopsis**

```
(yandexdns)> check-availability
```

**Example**

```
(yandexdns)> check-availability  
available
```

**History**

| Version | Description  |
|---------|--|
| 2.04    | The <b>yandexdns check-availability</b> command has been introduced. |

### 3.153.3 yandexdns enable

**Description**Enable *Yandex.DNS* service.Command with **no** prefix disables the service.**Prefix no**

Yes

**Change settings** Yes

**Multiple input** No

**Synopsis**

```
(yandexdns)> enable
(yandexdns)> no enable
```

**Example**

```
(yandexdns)> enable
YandexDns::Client: Yandex DNS is enabled.
```

| History | Version | Description  |
|---------|---------|--|
|         | 2.01    | The <b>yandexdns enable</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. |
| AdGuard DNS                           | service of AdGuard company to protect home network. Provides three protection modes: <ul style="list-style-type: none"> <li>• default mode: no blocked sites</li> <li>• standard mode: blocking advertising, tracking and phishing;</li> <li>• family mode: blocking advertising, tracking, phishing and adult sites, providing secure search in the browser.</li> </ul>  |
| 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                  | isolates higher-layer protocols from the details of the ATM processes by converting higher-layer information into ATM cells and vice versa.<br><br>The AAL is divided into two sublayers: <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> </ul>   |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"><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.   |
| Challenge-Handshake Authentication Protocol   | widely used algorithm for authentication, which provides the transfer of indirect information about user password. CHAP provides better security than <i>Password Authentication Protocol</i> .   |
| 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.   |
| Cloudflare DNS                                | is a service of Cloudflare company to protect home network. Provides three protection modes: <ul style="list-style-type: none"><li>• default mode: no blocked sites;</li><li>• standard mode: secure dns resolving, no blocking;</li><li>• malware mode: blocking malware;</li><li>• family mode: blocking malware and adult sites.</li></ul>   |
| 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.   |
| 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                  | 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: <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 dhcpcd 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> |

|                                |  |
|--------------------------------|--|
| Diffie-Hellman                 | is that part of the <a href="#">IKE</a> protocol used for exchanging the material from which the symmetrical keys are built. The Diffie-Hellman algorithm builds an encryption key known as a "shared secret" from the private key of one party and the public key of the other. Since the <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>1</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>2</sup> and <a href="#">RFC 8310</a> <sup>3</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.   |
| 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.   |
| 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  |

<sup>1</sup> <https://tools.ietf.org/html/rfc8484>

<sup>2</sup> <https://tools.ietf.org/html/rfc7858>

<sup>3</sup> <https://tools.ietf.org/html/rfc8310>

|                                    |  |
|------------------------------------|--|
|                                    | 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. |
| 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 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. |
| 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         | establishes, configures, and tests data-link Internet connections in the <i>Point-to-Point Protocol</i> (PPP). Before establishing communications over a point-to-point link, each end of the PPP link must send out LCP packets. The LCP packet either accepts or rejects the identity of its linked peer, agrees up on packet size limits, and looks for common misconfiguration errors.<br><br>LCP packets are divided into three classes: <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 | is a vendor-neutral link layer protocol in the Internet Protocol Suite used by network devices for advertising their identity, capabilities, and neighbors on an IEEE 802 local area network, principally wired Ethernet.<br><br>Information gathered with LLDP is stored in the device as a management information database (MIB) and can be queried with the Simple Network Management Protocol (SNMP).   |
| 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.   |
| Network Time Protocol                 | is a protocol that is used to synchronize computer clock times in a network of computers. Developed by David Mills at the University of Delaware, NTP is now an Internet standard. In common with similar protocols, NTP uses Coordinated Universal Time (UTC) to synchronize computer clock times to a millisecond, and sometimes to a fraction of a millisecond.   |
| Network Traffic Classification Engine | also DPI, Deep Deep Packet Inspection<br><br>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.   |
|  | 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.   |
|  | The Traffic Classification Engine component operates completely independently and does not make any calls to external services.  |
| 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="#">OpenWrt</a> <sup>4</sup> and <a href="#">Entware</a> <sup>5</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.  |
| 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.   |
| 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          |

<sup>4</sup> <https://www.openwrt.org/>

<sup>5</sup> <https://github.com/Entware/Entware>

|                             |   |
|-----------------------------|---|
|                             | <p>network (layer 3) configuration may take place. Most commonly, the <i>Internet Protocol Control Protocol</i> (IPCP) is used.</p>   |
| Public Land Mobile Network  | <p>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.</p>   |
| Preamble                    | <p>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.</p> <p>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.</p> <p>Long preamble:</p> <ul style="list-style-type: none"><li>• PLCP with long preamble is transmitted at 1 Mbps regardless of transmit rate of data frames</li><li>• Total long preamble transfer time is a constant at 192 usec</li><li>• Compatible with legacy IEEE 802.11 systems running at 1 and 2 Mbps</li></ul> <p>Short preamble:</p> <ul style="list-style-type: none"><li>• Preamble is transmitted at 1 Mbps and header at 2 Mbps</li><li>• Total short preamble transfer time is a constant at 96 usec</li><li>• Not compatible with legacy IEEE 802.11 systems operating at 1 and 2 Mbps</li></ul> |
| Protected Management Frames | <p>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.</p>  |
| Protocol Field Compression  | <p>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.</p>   |
| Pseudo-Random Function      | <p>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.</p>   |
| Radio Resource Management   | <p>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.</p>  |

|   |  |
|---|--|
| Remote Authentication in Dial-In User Service | is a protocol to implement authentication, authorization, and resource collection. It is used for charging the used resources by a specific user. Used to authenticate users on open Wi-Fi wireless networks.  |
| Remote Procedure Call                         | is a protocol that one program can use to request a service from a program located in another computer in a network without having to understand network details. (A procedure call is also sometimes known as a function call or a subroutine call.) RPC uses the client/server model. The requesting program is a client and the service-providing program is the server. Like a regular or local procedure call, an RPC is a synchronous operation requiring the requesting program to be suspended until the results of the remote procedure are returned. |
| Restricted NAT                                | also Dynamic NAT<br><br>works in the same way as a <i>Full Cone NAT</i> but applies additional restrictions based on an IP address. The internal client must first have sent packets to IP address (X) before it can receive packets from X. In terms of restrictions the only requirement is that packets come in on the mapped port and from an IP address that the internal client has sent packets to.   |
| Secure Socket Tunneling Protocol              | is a type of VPN tunnel that utilizes an SSL 3.0 channel to send PPP or L2TP traffic. SSL allows for transmission and data encryption, as well as traffic integrity checking. Due to this, SSTP can pass through most firewalls and proxy servers by using the SSL channel over TCP port 443.  |
| Service Set Identifier                        | is a sequence of characters that uniquely names a wireless local area network (WLAN). An SSID is sometimes referred to as a "network name". This name allows stations to connect to the desired network when multiple independent networks operate in the same physical area.  |
| Shared key                                    | is a mode by which a computer can gain access to a wireless network that uses the Wired Equivalent Privacy protocol. With Shared Key, a computer equipped with a wireless modem can fully access any WEP network and exchange encrypted or unencrypted data.   |
| Short Message Service                         | is a text messaging service component of most telephone, Internet, and mobile device systems. It uses standardized communication protocols to enable mobile devices to exchange short text messages.   |
| Simple Network Management Protocol            | is an Internet-standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior. Devices that typically support SNMP include routers, switches, servers, workstations, printers, modem racks and more.  |
| 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.   |

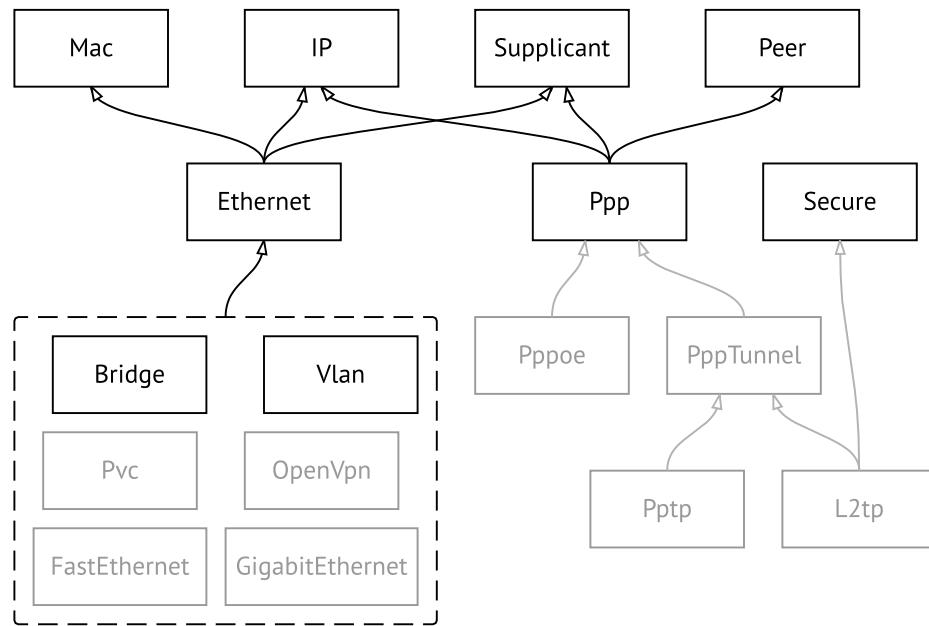
|  |   |
|--|---|
| Universal Access Method                  | is a method that allows a subscriber to access a wireless Wi-Fi network. The Internet browser will open a login page where the user should fill in his credentials before he can access. UAM uses the RADIUS client and the RADIUS server for 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.  |
| Variable Gain Amplifiers                 | VGA are signal-conditioning amplifiers with electronically settable voltage gain. Used to improve wireless communication.   |
| 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 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. |
| Virtual LAN                              | is a local area network with a definition that maps workstations on some other basis than geographic location (for example, by department, type of user, or primary application). The virtual LAN controller can change or add workstations and manage loadbalancing and bandwidth allocation more easily than with a physical picture of the LAN.  |
| Web Distributed Authoring and Versioning | is a extension of the Hypertext Transfer Protocol (HTTP) that allows clients to perform remote Web content authoring operations. Supports web server authentication and SSL encryption for HTTPS using the default TCP port 443.  |

|                                   |  |
|-----------------------------------|--|
| Web Proxy Auto-Discovery Protocol | is a method used by clients to locate the URL of a configuration file using DHCP and/or DNS discovery methods. Once detection and download of the configuration file is complete, it can be executed to determine the proxy for a specified URL.   |
| WireGuard                         | is a free and open-source software application and virtual private network (VPN) protocol to create secure point-to-point connections in routed configurations. WireGuard protocol uses modern cryptography options Curve25519 for key exchange, ChaCha20 for encryption, and Poly1305 for data authentication, SipHash for hashtable keys, and BLAKE2s for hashing. Supports layer 3 for both protocols IPv4 and IPv6.  |
| Wi-Fi Multimedia                  | previously known as Wireless Multimedia Extensions (WME), is a subset of the 802.11e wireless LAN (WLAN) specification that enhances quality of service (QoS) on a network by prioritizing data packets according to four access categories (AC). Ranging from highest priority to lowest, these categories are: voice (AC_VO), video (AC_VI), best effort (AC_BE), and background (AC_BK).  |
|                                   | WMM also features a Power Save certification that helps small devices on a network conserve battery life. Power Save allows small devices, such as phones and PDAs, to transmit data while in a low-power "dozing" status. The certification gives software developers and hardware manufacturers a way to fine-tune battery use in the ever-increasing number of small devices that have Wi-Fi capabilities.  |
| Wi-Fi Protected Access            | Wi-Fi Protected Access II (WPA2), and Wi-Fi Protected Access 3 (WPA3) are three security protocols and security certification programs developed by the Wi-Fi Alliance to secure wireless computer networks. The Alliance defined these in response to serious weaknesses researchers had found in the previous system, WEP. WPA advantages are enhanced data security and tightened access control for wireless networks. Important characteristic is the compatibility between multiple wireless devices at the hardware level as well as at software level. |
|                                   | 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.   |
|                                   | WPA Enterprise is a protocol-based authentication mode IEEE 802.1X using an external authentication server RADIUS and local client Suplicant.  |
| Wi-Fi Protected Setup             | provides an industry-wide mechanism to set up and configure networks for home and small office (SOHO) environments. Wi-Fi Protected Setup enables typical users who possess little understanding of traditional Wi-Fi configuration and security settings to easily configure new wireless networks, to add new devices and to enable security.  |
| Wired Equivalent Privacy          | is a security algorithm for IEEE 802.11 wireless networks. WEP, recognizable by the key of 10 or 26 hexadecimal digits, is widely in use and is often the first security choice presented to users by router configuration tools. In 2004, with the ratification of the full 802.11i   |

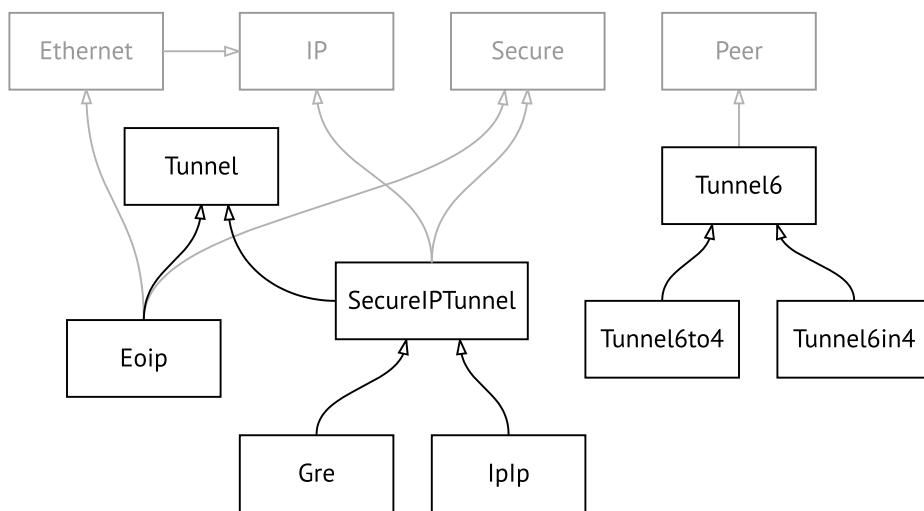
|                         |   |
|-------------------------|---|
|                         | standard (i.e. <a href="#">WPA2</a> ), the IEEE declared that both WEP-40 and WEP-104 have been deprecated.   |
| Extended Authentication | or XAUTH, provides an additional level of authentication by allowing 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.  |
| Yandex.DNS              | service of Yandex company to protect home network. Provides three filtering modes: <ul style="list-style-type: none"><li>• no filtering: resources are not blocked</li><li>• safe mode: stops malicious and phishing websites</li><li>• family mode: stops malicious and phishing websites, as well as resources for adults</li></ul> |

# Interface Hierarchy

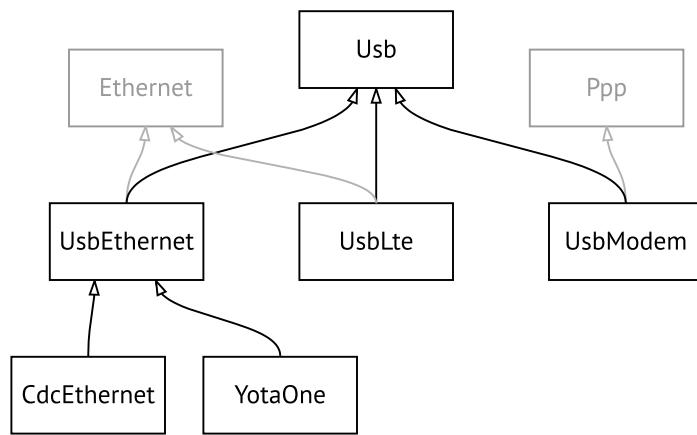
**Figure A.1. Core interfaces**



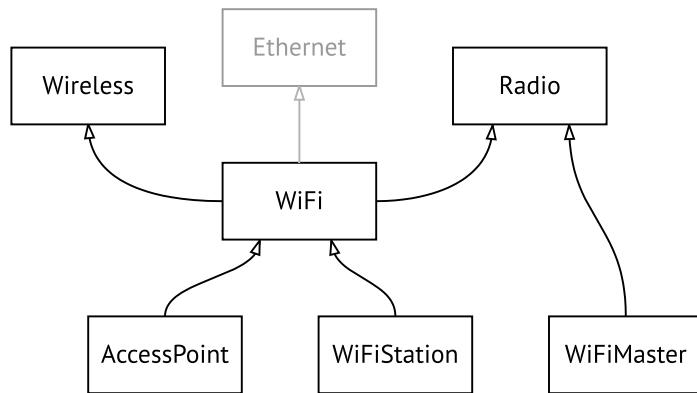
**Figure A.2. Tunnel interfaces**



**Figure A.3. USB interfaces**



**Figure A.4. Wi-Fi interfaces**



# HTTP API

## B.1 REST Core Interface

Extra DSL HTTP API lets you develop a custom application, that will access Extra DSL 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 Extra DSL 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 640](#).

### 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 640](#)

- 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 641](#) and [Section B.1.3.3 on page 641](#)

### 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 3.46.8 on page 312](#) to see how “interface” and “access” parameters are mentioned in the Arguments table.

---

<sup>1</sup>In compliance with RFC 7159.

```
POST /rcl/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 3.31 on page 136](#), and enable it with “interface up”. The “name” parameter applies to both “interface” and “up”.

```
POST /rcl 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.

Extra DSL 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 Extra DSL 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 Extra DSL.

```

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>Dsl0</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 35</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 35](#).

*argument* Name of the argument. Available arguments for each command are listed in [Chapter 3 on page 35](#). 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 31](#).

## 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>
```

# SNMP MIB

Management Information Bases (MIBs) are read-only.

The following MIBs are supported:

## C.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

## C.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  |
|---------|---|
|         | <ul style="list-style-type: none"><li>• IF-MIB::ifNumber</li><li>• IF-MIB::ifIndex</li><li>• IF-MIB::ifDescr</li><li>• IF-MIB::ifType</li><li>• IF-MIB::ifMtu</li><li>• IF-MIB::ifSpeed</li><li>• IF-MIB::ifPhysAddress</li><li>• IF-MIB::ifAdminStatus</li></ul> |

- IF-MIB::ifOperStatus
- IF-MIB::ifLastChange
- IF-MIB::ifInOctets
- IF-MIB::ifInUcastPkts
- IF-MIB::ifInDiscards
- IF-MIB::ifInErrors
- IF-MIB::ifOutOctets
- IF-MIB::ifOutUcastPkts
- IF-MIB::ifOutDiscards
- IF-MIB::ifOutErrors

**Advanced**

OID 1.3.6.1.2.1.31

- IF-MIB::ifName
- IF-MIB::ifInMulticastPkts
- IF-MIB::ifInBroadcastPkts
- IF-MIB::ifOutMulticastPkts
- IF-MIB::ifOutBroadcastPkts
- IF-MIB::ifHCInOctets
- IF-MIB::ifHCInUcastPkts
- IF-MIB::ifHCInMulticastPkts
- IF-MIB::ifHCInBroadcastPkts
- IF-MIB::ifHCOutOctets
- IF-MIB::ifHCOutUcastPkts
- IF-MIB::ifHCOutMulticastPkts
- IF-MIB::ifHCOutBroadcastPkts
- IF-MIB::ifLinkUpDownTrapEnable
- IF-MIB::ifHighSpeed
- IF-MIB::ifPromiscuousMode
- IF-MIB::ifConnectorPresent
- IF-MIB::ifAlias

- IF-MIB::ifCounterDiscontinuityTime

| 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<br>Keenetic LTE |   |
|                |            |                                   |   |
| MT7620         | RTL8367B   | Keenetic Viva                     |   |
|                |            | Keeentic Extra                    |   |
|                | Integrated | Keenetic 4G III                   | 32-bit per port octet counters & 16-bit per port packet counters. Last counter overflow event time set in IF-MIB::ifCounterDiscontinuityTime. |
|                |            | Keenetic Lite II                  |   |
|                |            | Keenetic Lite III                 |   |
|                |            | Keenetic Omni                     |   |
|                |            | Keenetic Omni II                  |   |
| MT7628         | Integrated | Keenetic Start II                 | 16-bit per port packet counters only. Last counter overflow event time set in IF-MIB::ifCounterDiscontinuityTime.                             |
|                |            | Keenetic Lite III rev.B           |   |
|                |            | Keenetic 4G III rev.B             |   |
|                |            | Keenetic Air                      |   |
|                |            | Keenetic Extra II                 |   |

## C.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

## C.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

## C.5 HOST-RESOURCES-MIB

OID: 1.3.6.1.2.1.25

The following data elements are supported:

- HOST-RESOURCES-MIB::hrSystemUptime

## C.6 UCD-SNMP-MIB

OID 1.3.6.1.4.1.2021

The following data elements are supported:

|                 |   |
|-----------------|---|
| <b>RAM info</b> | <ul style="list-style-type: none"><li>• UCD-SNMP-MIB::memTotalReal</li><li>• UCD-SNMP-MIB::memAvailReal</li><li>• UCD-SNMP-MIB::memShared</li><li>• UCD-SNMP-MIB::memBuffer</li></ul> |
|-----------------|---|

- 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)

## D.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      |                        |
| IKEv2    | DES-CBC/MD5/MODP1024      |                        |
|          | DES-CBC/MD5/MODP768       |                        |
|          | 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         |

| <b>Protocol</b> | <b>Encryption</b>      | <b>Proposal</b>    |
|-----------------|------------------------|--------------------|
|                 | 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           |                    |

## D.2 weak-pfs

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>        |
|-----------------|---------------------------|------------------------|
| 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       |                        |

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>        |
|-----------------|---------------------------|------------------------|
| IKEv2           | AES-128-CBC/SHA1/MODP1024 | encryption aes-128-cbc |
|                 | AES-128-CBC/SHA1/MODP768  | encryption 3des        |
|                 | AES-128-CBC/MD5/MODP1024  | encryption des         |
|                 | AES-128-CBC/MD5/MODP768   | integrity sha1         |
|                 | 3DES-CBC/SHA1/MODP1024    | integrity md5          |
|                 | 3DES-CBC/SHA1/MODP768     | dh-group 2             |
|                 | 3DES-CBC/MD5/MODP1024     | dh-group 1             |
|                 | 3DES-CBC/MD5/MODP768      |                        |
|                 | DES-CBC/SHA1/MODP1024     |                        |
|                 | DES-CBC/SHA1/MODP768      |                        |
|                 | DES-CBC/MD5/MODP1024      |                        |
|                 | DES-CBC/MD5/MODP768       |                        |
| IPsec SA        | DES/MD5/MODP1024          | cypher esp-des         |
|                 | AES-128-CBC/SHA1          | cypher esp-3des        |
|                 | 3DES-CBC/SHA1             | cypher esp-aes-128     |
|                 | DES/SHA1                  | hmac esp-md5-hmac      |
|                 | AES-128-CBC/MD5           | hmac esp-sha1-hmac     |
|                 | 3DES-CBC/MD5              | dh-group 2             |
|                 | AES-128-CBC/SHA1/MODP1024 | dh-group 1             |
|                 | 3DES-CBC/SHA1/MODP1024    |                        |
|                 | DES-CBC/SHA1/MODP1024     |                        |
|                 | AES-128-CBC/SHA1/MODP768  |                        |
|                 | 3DES-CBC/SHA1/MODP768     |                        |
|                 | DES-CBC/SHA1/MODP768      |                        |
|                 | AES-128-CBC/MD5/MODP1024  |                        |
|                 | 3DES-CBC/MD5/MODP1024     |                        |
|                 | AES-128-CBC/MD5/MODP768   |                        |
|                 | 3DES-CBC/MD5/MODP768      |                        |
|                 | DES-CBC/MD5/MODP768       |                        |

## D.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    |                      |

## D.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             |

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>      |
|-----------------|---------------------------|----------------------|
|                 | 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    |                      |

## D.5 normal-3des

| <b>Protocol</b> | <b>Encryption</b>           | <b>Proposal</b>        |
|-----------------|-----------------------------|------------------------|
| 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 |

| <b>Protocol</b> | <b>Encryption</b>           | <b>Proposal</b>        |
|-----------------|-----------------------------|------------------------|
|                 | 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          |                        |

## D.6 normal-3des-pfs

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>        |
|-----------------|---------------------------|------------------------|
| 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             |

| <b>Protocol</b> | <b>Encryption</b>           | <b>Proposal</b>        |
|-----------------|-----------------------------|------------------------|
|                 | 3DES-CBC/SHA1/MODP1024      | dh-group 26            |
|                 | AES-256-CBC/SHA256/MODP1024 |                        |
|                 | AES-128-CBC/SHA256/MODP1024 |                        |
|                 | 3DES-CBC/SHA256/MODP1024    |                        |
| IKEv2           | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |
|                 | AES-128-CBC/SHA256/MODP1024 | encryption aes-128-cbc |
|                 | 3DES-CBC/SHA256/MODP1024    | encryption 3des        |
|                 | AES-256-CBC/SHA1/MODP1024   | integrity sha256       |
|                 | AES-256-CBC/SHA1/ECP384     | integrity sha1         |
|                 | AES-256-CBC/SHA1/MODP2048   | dh-group 2             |
|                 | AES-128-CBC/SHA1/MODP1024   | dh-group 20            |
|                 | AES-128-CBC/SHA1/ECP256     | dh-group 14            |
|                 | AES-256-CBC/SHA256/MODP2048 | dh-group 5             |
|                 | 3DES-CBC/SHA1/MODP2048      | dh-group 26            |
|                 | 3DES-CBC/SHA1/MODP1536      |                        |
|                 | 3DES-CBC/SHA1/MODP1024      |                        |
| IPsec SA        | 3DES-CBC/SHA1/MODP1024      | cypher esp-3des        |
|                 | 3DES-CBC/SHA1               | cypher esp-aes-256     |
|                 | AES-256-CBC/SHA1            | cypher esp-aes-128     |
|                 | AES-128-CBC/SHA1            | hmac esp-sha1-hmac     |
|                 | AES-256-CBC/SHA1/MODP1536   | hmac esp-sha256-hmac   |
|                 | AES-128-CBC/SHA1/MODP1536   | dh-group 2             |
|                 | 3DES-CBC/SHA1/MODP1536      | dh-group 14            |
|                 | AES-256-CBC/SHA1/MODP1024   |                        |
|                 | AES-128-CBC/SHA1/MODP1024   |                        |

## D.7 high

| <b>Protocol</b> | <b>Encryption</b>           | <b>Proposal</b>        |
|-----------------|-----------------------------|------------------------|
| IKEv1           | AES-256-CBC/SHA256/MODP1024 | encryption aes-256-cbc |

| <b>Protocol</b> | <b>Encryption</b>           | <b>Proposal</b>                            |
|-----------------|-----------------------------|--|
| IKEv1           | 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                                |
| IPsec SA        | AES-256-CBC/SHA256          | cypher esp-aes-256                         |
|                 | AES-128-CBC/SHA256          | cypher esp-aes-128<br>hmac esp-hmac-sha256 |

## D.8 strong

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>        |
|-----------------|---------------------------|------------------------|
| 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             |

| <b>Protocol</b> | <b>Encryption</b>         | <b>Proposal</b>           |
|-----------------|---------------------------|---------------------------|
|                 |                           | dh-group 26               |
| IKEv2           | 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<br>dh-group 26 |
| IPsec SA        | AES-256-CBC/SHA1/MODP1536 | cypher esp-aes-256        |
|                 | AES-256-CBC/SHA1/MODP2048 | cypher esp-aes-128        |
|                 | AES-128-CBC/SHA1/MODP2048 | hmac esp-sha1-hmac        |
|                 | AES-128-CBC/SHA1/MODP1536 | dh-group 5<br>dh-group 14 |

## D.9 strong-aead

| <b>Protocol</b> | <b>Encryption</b>                      | <b>Proposal</b>  |
|-----------------|--|--|
| IKEv1           | AES-256-GCM-16/PRF-SHA384/ECP384       | aead<br><br>encryption aes-256-gcm-16<br><br>prf sha384<br><br>dh-group 20 |
| IKEv2           | AES-256-GCM-16/PRF-SHA384/ECP384       | aead<br><br>encryption aes-256-gcm-16<br><br>prf sha384<br><br>dh-group 20 |
| IPsec SA        | AES-256-GCM-16<br><br>CHACHA20POLY1305 | aead<br><br>cypher aes-256-gcm-16  |

## D.10 strong-aead-pfs

| <b>Protocol</b> | <b>Encryption</b>                | <b>Proposal</b> |
|-----------------|----------------------------------|-----------------|
| IKEv1           | AES-256-GCM-16/PRF-SHA384/ECP384 | aead            |

| Protocol | Encryption                                       | Proposal   |
|----------|--|--|
|          |  | encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20         |
| IKEv2    | AES-256-GCM-16/PRF-SHA384/ECP384                 | aead<br>encryption aes-256-gcm-16<br>prf sha384<br>dh-group 20 |
| IPsec SA | AES-256-GCM-16/ECP384<br>CHACHA20POLY1305-ECP384 | aead<br>cypher aes-256-gcm-16<br>dh-group 20                   |

