Reference Guide

AudioCodes Family of Media Gateways and Session Border Controllers

Command Line Interface

Root-Level Commands
System-Level Commands
Troubleshoot-Level Commands

Version 7.2

HD VoIP Sounds Better

AudioCodes

Table of Contents

1 Introduction 11

Getting Started 13

2 Accessing the CLI 15

3 CLI Structure 17

3.1 CLI Command Modes 17
3.1.1 Basic Mode 17
3.1.2 Enable Mode 17
3.1.3 Switching between Command Modes 18
3.2 CLI Configuration Wizard 18
3.3 CLI Shortcut Keys 19
3.4 Common CLI Commands 20
3.5 Working with Tables 22
3.5.1 Adding New Rows 22
3.5.2 Adding New Rows to Specific Indices 23
3.5.3 Changing Index Position of Rows 24
3.6 CLI Error Messages 25
3.7 Typographical Conventions 26

Root-Level Commands 27

4 Introduction 29

5 Debug Commands 31

5.1 debug auxilary-files 31
5.1.1 debug auxilary-files dial-plan 32
5.1.2 debug auxilary-files user-info 33
5.2 debug capture 33
5.2.1 debug capture trim 34
5.2.2 debug capture voip 34
5.2.2.1 debug capture voip interface 35
5.2.2.2 debug capture voip physical 37
5.3 debug debug-recording 39
5.4 debug dial plan 40
5.5 debug fax 41
5.6 debug log 42
5.7 debug pstn 43
5.8 debug sip 44
5.9 debug speedtest 45
5.10 debug syslog 46
5.11 debug syslog-server 47
5.12 debug test-call 48
5.13 debug usb 49
5.14 debug voip 50

6 Show Commands 51

6.1 show active-alarms 51
6.2 show alarms-history 52
6.3 show clock 52
6.4 show high-availability 53
6.5 show network 54
6.6 show ntp 55
6.7 show radius servers 56
6.8 show running-config 57
6.9 show storage-history 58
6.10 show system 59
6.11 show tls 60
6.12 show users 61
6.13 show version 61
6.14 show voip 62
6.14.1 show voip calls 62
6.14.1.1 show voip calls active 63
6.14.1.2 show voip calls history 64
6.14.1.3 show voip calls statistics 65
6.14.2 show voip channel-stats 66
6.14.3 show voip coders-stats 67
6.14.4 show voip cpu-stats 67
6.14.5 show voip dsp 68
6.14.5.1 show voip dsp perf 68
6.14.5.2 show voip dsp status 68
6.14.6 show voip e911 69
6.14.7 show voip ids 70
6.14.8 show voip interface 71
6.14.9 show voip ip-group 73
6.14.10 show voip ldap 74
6.14.11 show voip other-dialog statistics 75
6.14.12 show voip proxy sets status 75
6.14.13 show voip realm 76
6.14.14 show voip register 76
6.14.15 show voip subscribe 78
6.14.16 show voip tdm 79

7 Clear Commands 81

7.1 clear alarms-history 81
7.2 clear debug-file 81
7.3 clear qos counters 81
7.4 clear storage-history 82
7.5 clear system-log 82
7.6 clear user 83
7.7 clear voip 84
7.7.1 clear voip calls 84
7.7.2 clear voip register db sbc 85
7.7.3 clear voip statistics 86

8 Maintenance Commands 87

8.1 admin register 88
8.2 copy 89

8.3 dir 92
8.4 erase 93
8.5 nslookup 94
8.6 ping 95
8.7 pstn nfas-group-switch-activity 96
8.8 reload 97
8.9 srd-view 98
8.10 telnet 99
8.11 traceroute 100
8.12 usb 101
8.13 write 101
8.14 write factory 102
8.15 write-and-backup 103

System-Level Commands 105

9 Introduction 107

10 automatic-update 109

10.1 Files 110
10.2 http-user-agent 112
10.3 template-files-list 113
10.4 template-url 114

11 cli-settings 117

12 clock 119

13 configuration-version 121

14 feature-key 123

15 http-services 125

15.1 http-remote-hosts 125
15.2 http-remote-services 126

16 ldap 129

16.1 ldap ldap-configuration 129
16.2 ldap ldap-server-groups 130
16.3 ldap ldap-servers-search-dns 131
16.4 ldap mgmt-ldap-groups 131
16.5 ldap settings 132

17 mgmt-access-list 133
18 mgmt-auth 135
19 ntp 137
20 packetsmart 139
21 performance-profile 141
22 radius 143
22.1 radius servers 143
22.2 radius settings 143
23 snmp 145
23.1 snmp settings 145
23.2 snmp trap 146
23.3 snmp trap-destination 147
23.4 snmp v3-users 148
24 user 149
25 web 151
26 welcome-msg 153

Troubleshoot-Level Commands 155
27 Introduction 157
28 activity-log 159
29 activity-trap 161
30 cdr 163
30.1 cdr-format 164
30.1.1 gw-cdr-format 164
30.1.2 sb-cdr-format 165
30.1.3 show-title 166
31 fax-debug 167
32 logging 169
32.1 logging-filters 169
32.2 settings 170
33 pstn-debug 171
34 syslog 173
35 test-call 175
35.1 settings 175
35.2 test-call-table 176

List of Tables

Table 3-1: CLI Shortcut Keys 19
Table 3-2: Common CLI Commands 20
Table 3-3: CLI Error Messages 25
Table 3-4: Typographical Conventions 26

This page is intentionally left blank.

Notice

Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document and other documents can be viewed by registered customers at http://www.audiocodes.com/downloads.

Date Published: Jan-12-2017

Trademarks

WEEE EU Directive

Pursuant to the WEEE EU Directive, electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our Web site at www.audiocodes.com/support.

Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Document Revision Record

LTRT	Description
17922	Initial document release for Version 7.2.
17924	System-level commands; Troubleshoot-level commands; formatting and typos.

Related Documentation

Manual Name
Mediant 500 E-SBC User's Manual
Mediant 500L E-SBC User's Manual
Mediant 800B Gateway & E-SBC User's Manual
Mediant 1000B Gateway & E-SBC User's Manual
Mediant 2600 E-SBC User's Manual
Mediant 4000 SBC User's Manual
Mediant 9000 SBC User's Manual
Mediant Software SBC User's Manual

Documentation Feedback

AudioCodes continually strives to produce high quality documentation. If you have any comments (suggestions or errors) regarding this document, please fill out the Documentation Feedback form on our Web site at http://www.audiocodes.com/downloads.

1 Introduction

This document describes the Command-Line Interface (CLI) commands for AudioCodes devices. Currently, it describes the root-level, system-level and troubleshoot-level commands.

Note:

- For commands related to configuration, refer to the *User's Manual*.
- Some AudioCodes products referred to in this document may not have been released in Version 7.2 so commands that apply only to them should be ignored. For a list of the AudioCodes products released in Version 7.2, refer to the Media Gateway & SBC *Release Notes Ver. 7.2*.

This page is intentionally left blank.

Part I

Getting Started

2 Accessing the CLI

You can access the device's CLI through the following:

- **RS-232:** The device can be accessed through RS-232 by connecting a VT100 terminal to the device or using a terminal emulation program (e.g., HyperTerminal®) with a PC. Once you have connected via a VT100 terminal and started the emulation program, set the program settings as follows:
  - 115200 baud rate
  - 8 data bits
  - No parity
  - 1 stop bit
  - No flow control

  For information on cabling your device's RS-232 interface, refer to the *User's Manual* or *Hardware Installation Manual*.
- **SSH:** The device can be accessed by SSH protocol using SSH client software. A popular freeware SSH client software is PuTTy, which can be downloaded from http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html. By default, SSH access is disabled. To enable SSH, enter the following command set:

```
# configure system
 (config-system)# cli-settings
 (cli-settings)# ssh on
```

- **Telnet:** The device can be accessed by Telnet protocol using Telnet client software. Most Windows® computers come with a program called Telnet, which can be activated via the Windows command-line:

```
> telnet < Device's OAMP IP Address >
Welcome to ...
Username: < Username >
Password: < Password >
```

Note:

- The CLI can only be accessed by management users with the following user levels:
  - √ Security Administrator
  - √ Master
- When access the device's CLI, you are prompted to enter your management username and password. The credentials are common to all the device's management interfaces (e.g. Web). The default Administrator's username and password is "Admin" and "Admin", respectively.

This page is intentionally left blank.

3 CLI Structure

This section describes the CLI structure.

3.1 CLI Command Modes

Before you begin your CLI session, you should familiarize yourself with the CLI command modes. Each mode provides different levels of access to commands, as described below.

3.1.1 Basic Mode

The Basic command mode is accessed upon a successful CLI login authentication. Any user level can access the mode. The commands available under this mode are limited and only allow you to view information (using the `show` commands) and activate various debugging capabilities.

```
Welcome to ...
Username: Admin
Password: < Password >
>
```

The Basic mode prompt is ">".

3.1.2 Enable Mode

The Enable command mode is the high-level tier in the command hierarchy, one step up from the Basic mode. A password is required to access the mode **after** you have accessed the Basic mode. The mode allows you to configure all the device's settings. Once you have logged in to the device, the Enable mode is accessed by entering the following commands:

```
> enable
Password: < Enable mode password >
#
```

The Enable mode prompt is "#".

Note: The default password for accessing the Enable mode is "Admin" (case-sensitive). To change this password, use the **privilege-password** command.

The Enable mode groups the configuration commands under the following command sets:

- **Network:** Contains IP network-related commands (e.g., interface and dhcp-server):

  ```
  # configure network
  (config-network)#
  ```

- **System:** Contains system-related commands (e.g., clock, snmp settings, and web):

  ```
  # configure system
  (config-system)#
  ```

- **Troubleshoot:** Contains logging-related commands (e.g., syslog, logging and test-call):

  ```
  # configure troubleshoot
  (config-troubleshoot)#
  ```

- **Voip:** Contains voice-over-IP related commands (e.g., ip-group, sbc, gateway, and media):

```
# configure voip
(config-voip)#
```

3.1.3 Switching between Command Modes

To switch between command modes, use the following commands on the root-level prompt:

- Switching from Disable to Enable mode:

```
> enable
Password: < Password >
#
```

- Switching from Enable to Disable mode:

```
# disable
>
```

3.2 CLI Configuration Wizard

AudioCodes CLI Wizard provides a quick-and-easy tool for configuring your device with basic, initial management settings:

- Login passwords of the Security Administrator ("Admin") and User Monitor user accounts for accessing the device's embedded Web and CLI servers.
- IP network of the operations, administration, maintenance, and provisioning (OAMP) interface
- SNMP community strings (read-only and read-write)

The utility is typically used for first-time configuration of the device and is performed through a direct RS-232 serial cable connection with a computer. Configuration is done using the device's CLI. Once configured through the utility, you can access the device's management interface through the IP network.

To access the CLI Wizard, enter the following command at the root-prompt level:

```
# configure-wizard
```

For more information on how to use this utility, refer to the *CLI Wizard User's Guide.*

3.3 CLI Shortcut Keys

The device's CLI supports the following shortcut keys to facilitate configuration.

Table 3-1: CLI Shortcut Keys

Shortcut Key	Description
↑	(Up arrow key) Retypes the previously entered command. Continuing to press the key cycles through all commands entered, starting with the most recent command.
Tab	Pressing the key after entering a partial, but unique command automatically completes the command name.

?	(Question mark) Can be used for the following:
	▪ To display commands pertaining to the command set, for example:
	`(config-network)#?`
	`access-list Network access list`
	`dhcp-server DHCP server configuration`
	`dns DNS configuration`
	`...`
	▪ To display commands beginning with certain letters. Enter the letter followed by the "?" mark, for example:
	`(config-network)#d?`
	`dhcp-server DHCP server configuration`
	`dns DNS configuration`
	▪ To display a description of a command. Enter the command followed by the "?" mark (no spaces), for example:
	`(config-network)#dns srv2ip?`
	`srv2ip SRV to IP internal table`
	▪ To display all subcommands for the current command. Enter the command, a space, and then the "?" mark, for example:
	`(config-network)# dns srv2ip ?`
	`[0-9] index`
	…
	If one of the listed items after running the "?" mark is "<cr>", a carriage return (Enter) can be entered to run the command, for example:
	`# show active-alarms ?`
	`<cr>`

Ctrl + A	Moves the cursor to the beginning of the command line.
Ctrl + E	Moves the cursor to the end of the command line.
Ctrl + U	Deletes all characters on the command line.
Space Bar	When pressed after "--MORE--" that appears at the end of a displayed list, the next items are displayed.

3.4 Common CLI Commands

The table below describes common CLI commands.

Table 3-2: Common CLI Commands

Command	Description

`| < filter >`	Filters a command's output by matching the filter string or expression, and thereby displaying only what you need. The syntax includes the command, the vertical bar (|) and the filter expression:
	`< command >|< filter string or expression >`
	The filter expression can be:
	▪ **include < string >:** Filters the output to display only lines with the string, for example:
	`# show running-config|include  sbc routing ip2ip-routing 1`
	`  sbc routing ip2ip-routing 1`
	▪ **exclude < string >:** Filters the output to display all lines except the string.
	▪ **grep < options > < expression >:** Filters the output according to common options ("-v" and "-w") of the global regular expression print ("grep") UNIX utility.
	✓ "-v": Excludes all output lines that match the regular expression. If the "-v" option is not specified, all output lines matching the regular expression are displayed.
	✓ "-w": Filters the output lines to display only lines matching whole words form of the regular expression.
	For example:
	`# show system version|grep Number`
	`;Serial Number: 2239835;Slot Number: 1`
	▪ **egrep < expression >:** Filters the output according to common options of the "egrep" Unix utility.
	▪ **begin < string >:** Filters the output to display all lines starting with the matched string, for example:
	`# show running-config|begin troubleshoot`
	`configure troubleshoot`
	`syslog`
	`syslog on`
	`syslog-ip 10.8.94.236`
	`activate`
	`exit`
	`activate`
	`exit`
	▪ **between < string 1 > < string 2 >:** Filters the output to display only lines located between the matched *string 1* (top line) and *string 2* (last line). If a string contains a space(s), enclose the string in double quotes. For example, the string, *sbc malicious-signature-database 0* contains spaces and is therefore enclosed in double quotes:
	`# show running-config|between "sbc malicious-signature-database 0" exit`
	`sbc malicious-signature-database 0`
	`name "SIPVicious"`

Command	Description
	pattern "Header.User-Agent.content prefix 'friendly-scanner'" activate exit ▪ **count:** Displays the number of output lines.
activate	Activates a command. Commands are not applied until you enter the **activate** or **exit** commands. **Note:** Offline configuration changes require a reset of the device. A reset can be performed at the end of the configuration changes. A required reset is indicated by an asterisk (*) before the command prompt.
defaults	Restores the configuration of the currently accessed command set to factory default settings. For example, the below restores the Automatic Update configuration to factory defaults: (auto-update)# defaults
display	Displays the configuration of current configuration set.
do	Runs a command from another unrelated command without exiting the current command set. For example, the command to display all active alarms is run from the current command set for clock settings: (clock)# do show active-alarms
exit	Leaves the current command-set and returns one level up. For online parameters, if the configuration was changed and no **activate** command was entered, the **exit** command applies the **activate** command automatically. If entered on the top level, the session ends. (config-system)# exit # exit Connection to host lost.
help	Displays a short help how-to string.
history	Displays a list of previously run commands.
list	Displays a list of the available commands list of the current command-set.
no	Undoes an issued command or disables a feature. Enter the **no** before the command: # no debug log
pwd	Displays the full path to the current CLI command, for example: (auto-update)# pwd /config-system/auto-update
quit	Terminates the CLI session.

3.5 Working with Tables

This section describes general commands for configuring tables in the CLI.

3.5.1 Adding New Rows

When you add a new row to a table, it is automatically assigned to the next consecutive, available index.

Syntax

```
# < table name > new
```

Command Mode

Enable

Example

If the Accounts table is configured with three existing rows (account-0, account-1, and account-2) and a new row is added, account-3 is automatically created and its configuration mode is accessed:

```
(config-voip)# sip-definition account new
(account-3)#
```

3.5.2 Adding New Rows to Specific Indices

You can add a new row to any specific index number in the table, even if a row has already been configured for that index. The row that was assigned that index is incremented to the next consecutive index number, as well as all the index rows listed below it in the table.

Syntax

```
# < table name > < row index > insert
```

Note

The command is applicable only to the following tables:

- **SBC:**
  - IP-to-IP Routing
  - Classification
  - Message Condition
  - IP-to-IP Inbound Manipulation
  - IP-to-IP Outbound Manipulation
- **SBC and Gateway:**
  - Message Manipulations
- **Gateway:**
  - Destination Phone Number Manipulation Tables for IP-to-Tel / Tel-to-IP Calls
  - Calling Name Manipulation Tables for IP-to-Tel / Tel-to-IP Calls
  - Source Phone Number Manipulation Tables IP-to-Tel / Tel-to-IP Calls
  - Redirect Number Tel-to-IP

Command Mode

Enable

Example

If the IP-to-IP Routing table is configured with three existing rows (ip2ip-routing-0, ip2ip-routing-1, and ip2ip-routing-2) and a new row is added at Index 1, the previous ip2ip-routing-1 becomes ip2ip-routing-2, the previous ip2ip-routing-2 becomes ip2ip-routing-3, and so on:

```
(config-voip)# sbc routing ip2ip routing 1 insert
(ip2ip-routing-1)#
```

3.5.3 Changing Index Position of Rows

You can change the position (index) of a table row, by moving it one row up or one row down in the table.

Syntax

```
# < table name > < row index > move-up|move-down
```

Note

The command is applicable only to certain tables.

Command Mode

Enable

Example

Moving row at Index 1 down to Index 2 in the IP-to-IP Routing table:

```
<config-voip># sbc routing ip2ip-routing 1 move-down
```

3.6 CLI Error Messages

The table below lists and defines common error messages given in the CLI.

Table 3-3: CLI Error Messages

Message	Helpful Hints
"Invalid command"	The command may be invalid in the current command mode, or you may not have entered enough correct characters for the command to be recognized. Try using "?" to determine your error.
"Incomplete command"	You may not have entered all of the pertinent information required to make the command valid. Try using "?" to determine your error.

Note:

- Optional arguments in commands are marked in square brackets **[ ]**.
- To ensure that all failed CLI commands' error/information messages are displayed in the CLI console, you can redirect these messages, received from the Syslog console, to the CLI console by running the **`debug log`** command.

3.7 Typographical Conventions

This document uses the following typographical conventions:

Table 3-4: Typographical Conventions

Convention	Description
Bold font	Indicates commands and subcommands. `# ping 10.4.0.1 timeout 10`
< >	Text enclosed by angled brackets indicates a value (digits or characters) that you need to enter, for example: `# ping < IP Address > timeout < Duration >`
|	The pipeline (or vertical bar) indicates a choice between commands or values, for example: `# reload {if-needed|now|without-saving}`
[ ]	Items enclosed by square brackets indicate optional commands (i.e., not mandatory). The following example shows two optional commands, **size** and **repeat**: `# ping < IP Address > timeout < Duration > [size < Max Packet Size >] [repeat < 1-300 >]`
{ }	Items enclosed by curly brackets indicate a choice between commands or values, where it is mandatory to select one of them, for example: `# reload {if-needed|now|without-saving}`

Part II

Root-Level Commands

4 Introduction

This part describes commands located at the root level, which includes the following main commands:

- **debug** (see Section 5)
- **show** (see Section 6)
- **clear** (see Section 7)
- Maintenance commands (see Section 8)

This page is intentionally left blank.

5 Debug Commands

This section describes the following **debug** commands:

- **debug auxilary-files** (see Section 5.1)
- **debug capture** (see Section 5.2)
- **debug debug-recording** (see Section 5.3)
- **debug dial-plan** (see Section 5.4)
- **debug fax** (see Section 5.5)
- **debug log** (see Section 5.6)
- **debug pstn** (see Section 5.7)
- **debug sip** (see Section 5.8)
- **debug speedtest** (see Section 5.9)
- **debug syslog** (see Section 5.10)
- **debug syslog-server** (see Section 5.11)
- **debug test-call** (see Section 5.12)
- **debug usb** (see Section5.13)
- **debug voip** (see Section 5.14)

5.1 debug auxilary-files

This command debugs loaded Auxiliary files.

Syntax

```
# debug auxilary-files {dial-plan|user-info}
```

Argument	Description
dial-plan	Debugs the dial plan (see Section 5.1.1)
user-info	Debugs the User Info file (see Section 5.1.2).

Command Mode

Enable

5.1.1 debug auxilary-files dial-plan

This command debugs the Dial Plan file.

Syntax

```
# debug auxilary-files dial-plan {info|match-number < Dial Plan
Number > < Prefix Number >}
```

Argument	Description	
info	Displays the loaded Dial Plan file and lists the names of its defined Dial Plans.	
match-number	Checks whether a specific prefix number is defined in a specific Dial Plan number. If the Dial Plan is used for tags, the command also shows the tag name.	
	Dial Plan Number	Defines the Dial Plan in which to search for the specified prefix number.
	Prefix Number	Configures the prefix number to search for in the Dial Plan.

Note

The index number of the first Dial Plan is 0.

Command Mode

Enable

Example

Checking if the called prefix number 2000 is defined in Dial Plan 1, which is used for obtaining the destination IP address (tag):

```
# debug auxilary-files dial-plan match-number PLAN1 2000
Match found for 4 digits
Matched prefix: 2000
Tag: 10.33.45.92
```

Displaying the loaded Dial Plan file and listing its defined Dial Plans:

```
# debug auxilary-files dial-plan info
  File Name: dialPlan.txt
  Plans:
  Plan #0 = PLAN1
  Plan #1 = PLAN2
```

5.1.2 debug auxilary-files user-info

This command displays the name of the User-Info file installed on the device.

Syntax

```
# debug auxilary-files user-info info
```

Command Mode

Enable

Example

Displaying the name of the User-Info file installed on the device:

```
Mediant 1000# debug auxilary-files user-info info
User Info File Name UIF_SBC.txt
```

5.2 debug capture

This command captures network traffic.

Syntax

```
# debug capture {trim|voip}
```

Argument	Description
trim	See Section 5.2.1
voip	See Section 5.2.2

Command Mode

Enable

5.2.1 debug capture trim

This command trims captured network traffic for USB captures.

Syntax

```
# debug capture trim {in-file < File >|offset < Time >}
```

Argument	Description
in-file	Trims captured traffic. Uses the existing file on USB storage.
offset	After a capture has been saved on an attached USB stick, you can trim the capture to include only a relevant time-slice. The command is useful when fetching a large capture file via SSH over a slow network connection. Offset is from the start of the capture, in hours:minutes:seconds.

Example

Offsetting 1 hour 20 minutes from start of capture in order to trim captured USB traffic:

```
debug capture trim offset 00:01:20
```

5.2.2 debug capture voip

This command captures network traffic on VoIP network interfaces.

Syntax

```
# debug capture voip {interface|physical}
```

Argument	Description
interface	Captures network traffic on one of the VoIP sub-system network interfaces. See Section 5.2.2.1
physical	Captures traffic on the wire. See Section 5.2.2.2

5.2.2.1 debug capture voip interface

This command captures network traffic on a VoIP network interface (VLAN).

Syntax

```
# debug capture voip interface vlan < VLAN ID > proto < Protocol Filter > host < Host Filter > {port < Port Filter > [tftp-server < TFTP Server IP Address >|ftp-server < FTP Server IP Address >]}
```

➢ **To start and stop the capture:**

1. After typing the above command, press **Enter**.
2. To stop the capture, press **Ctrl+C**.

Argument	Description
`vlan`	Configures the VLAN ID of the network interface on which to start the debug capture.
`proto`	Configures a protocol filter: • `all` (all protocols) • `arp` (ARP packets) • `icmp` (ICMP packets) • `ip` (IP packets) • `ipv6` (IPv6 packets) • `tcp` (TCP packets) • `udp` (UDP packets)
`host`	Configures a host (IP address) from/to which the packets are captured. To specify all hosts, enter `any`.
`port`	(Optional) Configures a port filter: 1-65535 or `any` (all ports). When using `arp` or `icmp` as the protocol filter, port filter cannot be used and the only valid value is `any`.
`ftp-server`	(Optional) Configures the IP address of the FTP server to which the captured traffic file (in .pcap file format) is sent. If not specified, captured traffic is displayed in the CLI console. After running the command, press Ctrl+C when you want the capture to end and the captured traffic file to be sent to the server. **Note:** The FTP server's IP address must be accessible from one of the VoIP network interfaces for the capture file to be successfully uploaded to the server. Ping the server to make sure it's accessible.
`tftp-server`	(Optional) Configures the IP address of the TFTP server to which the captured traffic file (in .pcap file format) is sent. If not specified, captured traffic is displayed in the CLI console. After running the command, press Ctrl+C when you want the capture to end and the captured traffic file to be sent to the server. **Note:** The TFTP server's IP address must be accessible

Argument	Description
	from one of the VoIP network interfaces for the capture file to be successfully uploaded to the server. Ping the server to make sure it's accessible.

Command Mode

Enable

Examples

Starting a debug capture on network interface VLAN 12, no host filter, and no port filter; the captured traffic is displayed in the CLI console:

```
# debug capture voip interface vlan 12 proto all host any
```

Starting a debug capture on network interface VLAN 1 with a protocol filter (IP), no host filter, and a port filter (514); the captured traffic is saved to a temporary file and is sent (when you press Ctrl+C) to the TFTP server at address 171.18.1.21:

```
# debug capture voip interface vlan 1 proto ip host any port 514
tftp-server 171.18.1.21
```

5.2.2.2 debug capture voip physical

This command captures network traffic on a physical VoIP network interface.

Syntax

```
# debug capture voip physical {clear|cyclic-buffer|eth-lan|get_last_capture|insert-pad|show|start|stop|target}
# debug capture voip physical target {ftp|tftp|usb}
# debug capture voip physical get_last_capture < TFTP/FTP Server IP Address >
```

- To start a capture:

```
# debug capture voip physical start
```

- To stop a capture:

```
# debug capture voip physical stop {< TFTP/FTP server IP Address >|usb}
```

Argument	Description	
clear	Deletes captured files from the device's RAM.	
cyclic-buffer	Continuously captures packets in a cyclical buffer. Packets are continuously captured until the Stop command is entered.	
eth-lan	Captures LAN frames.	
get_last_capture	Retrieves the last captured PCAP file sent to a specified TFTP/FTP server IP address. **Note**: The file is saved to the device's memory (not flash) and is erased after a device reset.	
insert-pad	Before running this command, the debug capture must be started. Inserts a PAD packet. A marked packet is shown with black background regardless of the configured coloring rules. Benefit: A marked packet can easily be located later when analyzing in a large capture file.	
show	Displays debug status and configured rules.	
start	Starts the capture.	
stop	Stops the capture and sends the capture file to the specified target. The capture file is named: "debug-capture-voip-<timestamp>.pcap"	
target	Configures the capture storage target: • ftp • tftp • usb	
	user	(Only applicable if ftp is specified as the capture storage target) Defines the name of the FTP user.
	password	(Only applicable if ftp is specified as the capture storage target) Defines the password

Argument	Description
	of the FTP user.

Command Mode

Enable

Note

- To free up memory on your device, it is recommended to delete the captured files when you no longer need them, using the following command: **debug capture voip physical clear**
- Capturing to USB is applicable only to devices providing USB port interfaces.

Examples

- Starting a physical VoIP debug capture:

```
# debug capture voip physical eth-lan
# debug capture voip physical start
```

- Retrieving the latest capture (PCAP file) saved on a specified server.

```
# debug capture voip physical get_last_capture 10.15.7.99
```

- Specifying USB as the destination to which to send the PCAP file:

```
# debug capture voip physical target usb
```

5.3 debug debug-recording

This command enables debug recording. To collect debug recording packets, use Wireshark open-source packet capturing program. AudioCodes' proprietary plug-in files are required. They can be downloaded from www.audiocodes.com/downloads. Once downloaded, copy the plug-in files to the directory in which you installed Wireshark, as follows:

- **...\dtds\cdr.dtd:** Wireshark\dtds\
- **...\plugins\<Wireshark ver.>*.dll:** Wireshark\plugins\<Wireshark ver.>
- **...\tpncp\tpncp.dat:** Wireshark\tpncp

After starting Wireshark, type **acdr** in the 'Filter' field in order to view the debug recording messages. Note that the source IP address of the messages is always the device's OAMP IP address.

Syntax

```
# debug debug-recording < Destination IP Address > {ip-
trace|port|pstn-trace|signaling|signaling-media|signaling-media-
pcm}
# debug debug-recording status
```

Argument	Description
Destination IP Address	Defines the destination IP address (IPv4) to which to send the debug recording (i.e., debug recording server).
`ip-trace`	Defines the debug recording filter type. Filters debug recording for IP network traces, using Wireshark-like expression (e.g., udp && ip.addr==10.8.6.55). IP traces are used to record any IP stream according to destination and/or source IP address, or port and Layer-4 protocol (UDP, TCP or any other IP type as defined by http://www.iana.com). Network traces are typically used to record HTTP.
`port`	Defines the port of the debug recording server to which to send the debug recording.
`pstn-trace`	Defines the debug recording capture type as PSTN trace. The debug recording includes ISDN and CAS traces.
`signaling`	Defines the debug recording capture type as signaling. The debug recording includes signaling information such as SIP signaling messages, Syslog messages, CDRs, and the <device>'s internal processing messages
`signaling-media`	Defines the debug recording capture type as signaling and media. The debug recording includes signaling, Syslog messages, and media (RTP/RTCP/T.38).
`signaling-media-pcm`	Defines the debug recording capture type as signaling, media and PCM. The debug recording includes SIP signalling messages, Syslog messages, media, and PCM (voice signals from and to TDM).
`status`	Displays the debug recording status.

Command Mode

Enable

Example

Displaying the debug recording status:

```
# debug debug-recording status
Debug Recording Configuration:
==============================
Debug Recording Destination IP: 10.33.5.231
Debug Recording Destination Port: 925
Debug Recording Status: Stop

Logging Filter Configuration (line 0):
======================================
Filter Type: Any
Value:
Capture Type: Signaling
Log Destination: Syslog Server
Mode: Enable
```

5.4 debug dial plan

This command checks whether a specified Dial Plan contains specific digits.

Syntax

```
# debug dial-plan < Dial Plan Name > match-digits < Digits to
Match >
```

Command Mode

Enable

Example

Searching for digits "2000" in Dial Plan 1:

```
# debug dial-plan 1 match-digits 2000
Match succeeded for dial plan 1 and dialed number 2000. Returned
tag RmoteUser
```

5.5 debug fax

This command debugs fax modem with a debug level.

Syntax

```
# debug fax {basic|detail} [num of next sessions for debug]
```

Argument	Description
basic	Sets debug fax level to Basic. • num of next sessions for debug (Configures the number of next sessions for debug)
detail	Sets debug fax level to Detail. ▪ num of next sessions for debug (Configures the number of next sessions for debug).

Note

- The command is applicable only to devices supporting FXS interfaces.
- To disable debug fax, type:

```
# no debug fax
```

Command Mode

Enable

Example

Enabling the next 10 sessions to be traced:

```
# debug fax detail 10
FaxModem debug has been activated in DETAIL mode. The 10 next
FaxModem sessions will be traced.
```

5.6 debug log

This command displays debugging messages (e.g., Syslog messages). Also displays activities performed by management users in the devices' management interfaces (CLI and Web interface).

Syntax

```
# debug log [full]
```

Argument	Description
`full`	(Optional) Displays more information than the regular debug messages, for example, 'SID' (Session ID) and 'S' (Syslog message sequence). Useful (for example) in determining if there's a network problem resulting from a Loss of Packets.

Note

- When connected to the CLI through Telnet/SSH, the `debug log` command affects only the current CLI session.
- To disable logging, type `no debug log`.
  - When connected to the CLI through Telnet/SSH, the `no debug log` command affects only the current CLI session.
  - To cancel log display for *all* sessions, use the command `no debug log all`.

Command Mode

Enable

Example

Displaying debug messages:

```
# debug log
Logging started
Jun 16 13:58:54  Resource SIPMessage deleted - (#144)
Jun 16 13:58:54  (#70) SBCRoutesIterator Deallocated.
Jun 16 13:58:54  (#283) FEATURE Deallocated.
```

Displaying debug messages (full):

```
# debug log full
Logging started
Jun 16 13:59:55 local0.notice [S=707517] [SID:1192090812]
(sip_stack)(706869) Resource SIP Message deleted - (#79)
Jun 16 13:59:55 local0.notice [S=707518] [SID:1192090812]
(lgr_sbc)(706870)(#69) SBCRoutesIterator Deallocated.
Jun 16 13:59:55 local0.notice [S=707519] [SID:1192090812]
(lgr_sbc)(706871) (#282) FEATURE Deallocated.
```

5.7 debug pstn

This command activates PSTN debugging.

Syntax

```
# debug pstn
```

Note

To deactivate PSTN debugging, type **no debug pstn**.

Command Mode

Enable

Related Commands

debug voip interface

Example

Activating PSTN debugging:

```
# debug pstn
```

5.8 debug sip

This command configures SIP debug level.

Syntax

```
# debug sip {[< Debug Level >]|status}
```

Argument	Description
Debug Level	Configures the SIP debug level: ▪ **0** = (No debug) Debug is disabled and Syslog messages are not sent. ▪ **1** = (Basic) Sends debug logs of incoming and outgoing SIP messages. ▪ **5** = (Detailed) Sends debug logs of incoming and outgoing SIP messages as well as many other logged processes.
`status`	Displays the current debug level.

Note

- If no level is specified, level 5 is used.
- Typing **no debug sip** configures the level to **0**.

Command Mode

Enable

Example

Setting the SIP debug level to 5:

```
# debug sip 5
```

5.9 debug speedtest

This command tests the upload and download speed (in bps) to and from a specified URL, respectively.

Syntax

```
# debug speedtest set {upload|download} < URL >
# debug speedtest set upsize < Upload Transfer Bytes >
# debug speedtest {run|show|stop}
```

Argument	Description
upload	Tests the upload speed to a URL (IP address or FQDN).
upsize	(Optional) Defines the number of bytes (1-10000000) to upload to the specified URL for testing the upload speed
download	Tests the download speed from a URL (IP address or FQDN).
show	Displays the test results.
stop	Stops the test.
run	Starts the test.

Example

Testing upload speed to speedy.com:

```
# debug speedtest set upload http://www.speedy.com/speedtest
  Upload URL  : http://www.speedy.com/speedtest
```

```
# debug speedtest run
Starting speed test. Check results using the command "debug
speedtest show".
```

```
# debug speedtest show
Speed test results:
Upload  : Complete
URL: http://www.speedy.com/speedtest
                      Bytes transferred: 1000000
                      Speed: 9.8 Mbps
```

5.10 debug syslog

This command verifies that Syslog messages sent by the device are received by the Syslog server. After you run the command, you need to check the Syslog server to verify whether it has received your Syslog message.

Syntax

```
# debug syslog < String >
```

Argument	Description
String	Defines any characters that you want to send in the Syslog message to the Syslog server.

Command Mode

Enable

Related Commands

debug syslog-server

Example

Verifying that a Syslog message containing "hello alan" is sent to the Syslog server:

```
# debug syslog hello alan
```

5.11 debug syslog-server

This command defines the IP address and port of the Syslog server.

Syntax

```
# debug syslog-server < IP Address > port < Port Number >
```

Argument	Description
IP Address	Defines the IP address of the Syslog server.
port	Defines the port number of the Syslog server.

Note

To disable Syslog server debugging, use the following command:

```
# no debug syslog-server
```

Command Mode

Enable

Example

Enabling Syslog by configuring the Syslog server:

```
# debug syslog-server 10.15.1.0 port 514
Syslog enabled to dest IP Address: 10.15.1.0 Port 514
```

5.12 debug test-call

This command initiates and terminates a call from the device to a remote destination to test whether connectivity, media, etc., are correct. Sends a SIP INVITE message and then manages the call with the call recipient.

Syntax

```
# debug test-call ip
```

- Configures a test call:

```
# debug test-call ip dial from {< Calling Number > to < Called Number > [dest-address < IP Address >] [sip-interface < SIP Interface ID >]|id < Test Call Table Index >}
```

- Configures a test call:

```
# debug test-call ip set called-number < Called number > caller-id < Caller ID > calling-number < Calling number > dest-address
< IP Address > play < Playback > sip-interfaces < SIP Interface ID > timeout < Disconnection timeout > transport-type
```

- Terminates a test call:

```
# debug test-call ip drop {< Calling Number >|id < Test Call Table Index >}
```

- Displays test call configuration:

```
# debug test-call ip show
```

Argument	Description
`ip`	Configures and initiates a test call to an IP address. ▪ `dial` (Dials using specified parameters) ✓ `from` (Configures the calling number): [NUMBER] (Calling number) `id` (uses the Test Call Rules table entry) ▪ `drop` (Terminates the latest outgoing test call): ✓ [Calling Number] (Terminates outgoing test call by number) ✓ id (Terminates outgoing test calls by table index) ▪ `set` (Sets test options): ✓ `called-number` (Called number) ✓ `caller-id` (Caller ID) ✓ `calling-number` (Calling number) ✓ `dest-address` (Target host) ✓ `play` (Sets playback) ✓ `sip-interfaces` (Sets SIP interfaces to listen on) ✓ `timeout` (Disconnection timeout (seconds)) ✓ `transport-type` (Transport type) ▪ `show` (Displays test call configuration)

Command Mode

Enable

Note

- The command is applicable only to the SBC application.
- Test calls can be made with the following two recommended commands:
  - (Basic) Making a call from one phone number to another, without performing any configuration:
    ```
    debug test-call ip dial from * to * dest-address * [sip-interface *]
    ```
  - (Advanced) Configuring a row in the Test Call table, and then placing a call by the row index:
    ```
    debug test-call ip dial from id *
    ```

5.13 debug usb

This command debugs the USB stick connected to the device.

Syntax

```
# debug usb devices
```

Argument	Description
devices	Displays information about the USB stick (e.g., manufacturer) connected to the device.

Command Mode

Enable

5.14 debug voip

This command debugs voice over IP channels.

```
# debug voip < Argument >
```

Argument	Description
activate-channel	Defines type of channel: ▪ analog (Activates an analog channel) ▪ digital (Activates a digital channel) ▪ virtual (Activates a virtual channel)
close-channels	Closes channels ▪ analog (FXS/FXO channel – run the show system assembly command to orient on the current hardware) ▪ digital (BRI/PRI channel (run the show system assembly command for orientation on the current hardware) ▪ virtual (Virtual channel)
dial-string	Sends a string of DTMF tones ▪ analog (FXS/FXO channel (run the show system assembly command for orientation on the current hardware) ▪ digital (BRI/PRI channel (run the show system assembly command for orientation on the current hardware) ▪ virtual (Virtual channel)
interface	Debugs tools related to PSTN interface ▪ bri (BRI debug parameters) ▪ e1-t1 (E1-T1 debug parameters)
open-and-activate	Opens and activates a channel ▪ analog (FXS/FXO channel (run the show system assembly command for orientation on the current hardware) ▪ digital (BRI/PRI channel (run the show system assembly command for orientation on the current hardware) ▪ virtual (Virtual channel)
open-channel	Opens channel analog/digital/virtual < CID >
wait-for-detection	Waits for a digit detection event

6 Show Commands

This section describes the following **show** commands:

- **show active-alarms** (see Section 6.1)
- **show alarms-history** (see Section 6.2)
- **show clock** (see Section 6.3)
- **show high-availability** (see Section 6.4)
- **show network** (see Section 6.5)
- **show ntp** (see Section 6.6)
- **show radius** (see Section 6.7)
- **show running-config** (see Section 6.8)
- **show storage-history** (see Section 6.9)
- **show system** (see Section 6.10)
- **show tls** (see Section 6.11)
- **show users** (see Section 6.12)
- **show version** (see Section 6.13)
- **show voip** (see Section 6.14)

6.1 show active-alarms

This command displays active alarms.

Syntax

```
# show active-alarms
```

Command Mode

Enable

Examples

```
# show active-alarms
Seq. Source                          Severity   Date                    Description
------------------------------------------------------------------------------------
1. Board#1/EthernetLink#2           minor      11.6.2010 , 14:19:42   Ethernet link
alarm. LAN port number 2 is down.
2. Board#1/EthernetGroup#2          major      11.6.2010 , 14:19:46   Ethernet Group
alarm. Ethernet Group 2 is Down.
```

6.2 show alarms-history

This command displays the system alarms history.

Syntax

```
# show alarms-history
```

Command Mode

Enable

Example

```
# show alarms-history
Seq. Source                          Severity   Date
Description
----------------------------------------------------------------------
--------------
1. Interface#0/trunk#0               critical   24.2.2011 , 20:20:32
Trunk LOS Alarm.
2. Board#1                           major      24.2.2011 , 20:20:32
Network element admin
   state change alarm. Gateway is locked.
3. Board#1/EthernetLink#2            minor      24.2.2011 , 20:20:34
Ethernet link alarm. LAN
   port number 2 is down.
4. Board#1/EthernetLink#3            minor      24.2.2011 , 20:20:34
Ethernet link alarm. LAN
   port number 3 is down.
5. Board#1/EthernetGroup#2           major      24.2.2011 , 20:20:38
Ethernet Group alarm.
   Ethernet Group 2 is Down.
6. Board#1/EthernetGroup#3           major      24.2.2011 , 20:20:38
Ethernet Group alarm.
   Ethernet Group 3 is Down.
```

6.3 show clock

This command displays the device's time and date.

Syntax

```
# show clock
```

Command Mode

Enable

Example

```
# show clock
14:12:48  01/02/2017  (dd/mm/yyyy)
```

6.4 show high-availability

This command displays network monitor status and HA status.

Syntax

```
# show high-availability {network-monitor-status|status}
```

Argument	Description
network-monitor-status	Displays network monitor status.
status	Displays HA status.

Command Mode

Enable

Example

```
# show high-availability status
HA Status:
Unit HA state is: StandAlone
HA Connection with other unit State is: Init
Last HA sync. action/state with other unit was: Sync. not started
```

6.5 show network

This command displays networking information.

Syntax

```
# show network {access-list|arp|dhcp clients|ether-group|interface
[description]|network-dev|physical-port|route|status}
```

Argument	Description
access-list	Displays the network access list (firewall) rules.
arp	Displays the ARP table entries.
dhcp	Displays the DHCP server leases.
ether-group	Displays the Ethernet Groups configured in the Ethernet Groups table.
interface	Displays the network IP interfaces (configured in the IP Interfaces table) with packet statistics, for example, number of transmitted packets. ▪ **description** (Displays IP network interfaces in the same format as the IP Interfaces table).
network-dev	Displays the Ethernet Devices configured in the Ethernet Devices table.
physical-port	Displays the Ethernet ports configured in the Physical Ports table.
route	Displays the static routes configured in the Static Routes table.

Related Commands

Enable

Command Mode

Enable

Example

```
# show network route
Codes: C - connected, S - static
C  10.3.0.0/16  is directly connected, vlan 1, Active
C  10.99.0.0/16  is directly connected, vlan 2, Active
C  10.99.0.0/16  is directly connected, vlan 7, Active
C  10.99.0.0/16  is directly connected, vlan 8, Active
C  10.99.0.0/16  is directly connected, vlan 9, Active
C  10.99.0.0/16  is directly connected, vlan 11, Active
C  10.99.0.0/16  is directly connected, vlan 10, Active
C  10.99.0.0/16  is directly connected, vlan 12, Active
C  10.10.0.0/16  is directly connected, vlan 5, Active
C  10.10.0.0/16  is directly connected, vlan 3, Active
```

```
C  192.168.0.0/16  is directly connected, vlan 6, Active
C  192.168.0.0/16  is directly connected, vlan 4, Active
S  0.0.0.0/0  [1] via 192.168.0.111, vlan 4, Active
S  0.0.0.0/0  [1] via 10.10.0.111, vlan 3, Active
S  0.0.0.0/0  [1] via 10.3.0.1, vlan 1, Active
S  0.0.0.0/0  [1] via 10.99.0.1, vlan 2, Active
```

6.6 show ntp

This command displays NTP information.

Syntax

```
# show ntp
```

Command Mode

Enable

Example

Displaying NTP information:

```
# show ntp
Configured NTP server #1 is 10.3.1.77
NTP is synchronized, stratum 0, reference is
☺☺

** Precision        0.00000 seconds
** Root delay       0.17199 seconds
** Root dispersion  0.12752 seconds
** Reference time   dafa64cf.2c476b5f (2016-06-02 07:54:55 UTC)
** UTC offset       10800 seconds
Current local time: 2016-06-02 11:29:19
```

6.7 show radius servers

This command displays the status of the RADIUS severs.

Syntax

```
# show radius servers
```

Command Mode

Enable

Example

```
# show radius servers
servers 0
ip-address 10.4.4.203
auth-port 1812
auth-ha-state "ACTIVE"
acc-port 1813
acc-ha-state "ACTIVE"
servers 1
ip-address 10.4.4.202
auth-port 1812
auth-ha-state "STANDBY"
acc-port 1813
acc-ha-state "STANDBY"
```

This example shows the following fields per server:

- If the authentication port is 0, the server is not part of the redundancy server selection for authentication.
- If the accounting port is 0, the server is not part of the redundancy server selection for accounting.
- Server authentication redundancy (HA) status. ACTIVE = the server was used for the last sent authentication request.
- Server accounting redundancy (HA) status. ACTIVE = the server was used for the last sent accounting request.

6.8 show running-config

This command displays the device's configuration.

Syntax

```
# show running-config
# show running-config > < URL >
# show running-config full [> < URL >]
```

Argument	Description
-	Displays the device's configuration in the format of a CLI command script. You can copy and paste the displayed output in a text-based file (e.g., using Notepad), and then upload the file to another device, or the same device if you want to make configuration changes, as a CLI script file.
> URL	(Optional) Sends the device's configuration in CLI script format, as a file to a remote destination defined by a URL (TFTP, HTTP or HTTPS).
`full`	(Optional) Displays the device's configuration as well as the default configuration settings that were not actively set by the user. In regular mode, only configuration that is not equal to the default is displayed.

Command Mode

Basic

Example

Sending configuration to an HTTP server:

```
# show running-config > http://10.9.9.9
```

6.9 show storage-history

This command displays the CDRs stored on the device.

Syntax

```
# show storage-history {services|unused}
```

Argument	Description
services	Displays registered storage services, e.g., for CDRs.
unused	Displays stored files that are not used.

Command Mode

Enabled

Related Command

clear storage-history

6.10 show system

This command displays system information.

Syntax

```
# show system < Argument >
```

Argument	Description
assembly	Displays information about the device's hardware assembly (slots, ports, module type, fan tray and power supply).
cpu-util [refreshing]	Displays voice CPU utilization, as a percentage ▪ refreshing (Refreshes the voice CPU information displayed; press CTRL+C to stop the refresh)
cwmp status	Displays TR-069 status (e.g., URL of ACS).
fax-debug-status	Displays fax debug status.
feature-key	Displays the stored License Key.
interface osn	Displays information about the OSN module.
log {-h|tail}	Displays the log history. ▪ -h (Displays the log history in a readable format) ▪ tail (Displays the recent history of the log messages)
uptime	Displays the device's uptime.

Command Mode

Enable

Example

```
# show system assembly

Board Assembly Info:

|Slot No.             | Ports      |Module Type               |
| 1                   | 1          | E1/T1                    |
| 2                   | 1-4        | FXS                      |
| 3                   | 0          | Empty                    |
| 4                   | 1-4        | LAN-GE                   |
| 5                   | 0          | Empty                    |

USB Port 1: Empty
USB Port 2: Empty
```

6.11 show tls

This command displays TLS security information (TLS Context).

Syntax

```
# show tls < Argument >
```

Argument	Description
certificate	Displays certificate information.
contexts	Displays TLS security context information.
trusted-root {detail < Index >|summary}	Displays trusted certificates. ▪ detail (Displays a specific trusted certificate) ▪ summary (Displays all trusted certificates)

Command Mode

Enable

Example

Displaying active TLS Contexts:

```
# show tls contexts
Context #  Name
---------  --------------------------
0          default
2          ymca

Total 2 active contexts.
Total certificate file size: 4208 bytes.
```

6.12 show users

This command displays and terminates users that are currently logged into the device's CLI and applies to users logged into the CLI through RS-232 (console), Telnet, or SSH.

For each logged-in user, the command displays the type of interface (console, Telnet, or SSH), user's username, remote IP address from where the user logged in, and the duration (days and time) of the session. Each user is displayed with a unique index (session ID).

Syntax

```
# show users
```

Command Mode

Basic

Note

The device can display management sessions of up to 24 hours. After this time, the duration counter is reset.

Example

Displaying all active calls:

```
# show users
[0]  console      Admin       local             0d00h03m15s
[1]  telnet       John        10.4.2.1          0d01h03m47s
[2]* ssh          Alex        192.168.121.234   12d00h02m34s
```

The current session from which the show command was run is displayed with an asterisk (*).

6.13 show version

This command displays the current running software and hardware version.

Syntax

```
# show version
```

Command Mode

Basic

Command Mode

Enable

6.14 show voip

This command displays VoIP-related information.

Syntax

```
# show voip < Argument >
```

Argument	Description
calls	See Section 6.14.1.
channel-stats	See Section 6.14.2.
coders-stats	See Section 6.14.3.
cpu-stats	See Section 6.14.4.
dsp	See Section 6.14.5
e911	See Section 6.14.6.
ids	See Section 6.14.7.
interface	See Section 6.14.8.
ip-group	See Section 6.14.9.
ldap	See Section 6.14.10.
other-dialog	See Section 6.14.11.
proxy	See Section 6.14.12.
realm	See Section 6.14.13.
register	See Section 6.14.14.
subscribe	See Section 6.14.15.
tdm	See Section 6.14.16.

6.14.1 show voip calls

This command displays active VoIP call information.

Syntax

```
# show voip calls {active|history|statistics}
```

Argument	Description
active	See Section 6.14.1.1.
history	See Section 6.14.1.2.
statistics	See Section 6.14.1.3.

6.14.1.1 show voip calls active

This command displays active calls.

Syntax

```
# show voip calls active [< Session ID >
|descending|gw|sbc|summary]
```

Argument	Description
-	Displays the total number of active calls and detailed call information.
Session ID	Displays detailed call information for a specific SIP session ID.
descending	Displays currently active calls, listed in descending order by call duration.
gw	Displays call information of currently active Gateway calls, listed in ascending order by call duration.
sbc	Displays call information of currently active SBC calls, listed in ascending order by call duration.
summary	Displays the total number of currently active calls (Gateway and SBC)

Example

Displaying all active calls:

```
# show voip calls active sbc
Total Active Calls: 1000
| Session ID    |     Caller         |     Callee         | Origin
|      Remote IP     |End Point Type |Duration|Call State
================================================================
============================================================
|314380675      |1129@10.3.3.194     |100@10.3.91.2
|Incoming|10.3.3.194(IPG-1)   |SBC           |00:05:12|Connected
|314380675      |1129@10.3.3.194     |100@10.3.91.2
|Outgoing|10.3.3.194(IPG-2)   |SBC           |00:05:12|Connected
|314380674      |1128@10.3.3.194     |100@10.3.91.2
|Incoming|10.3.3.194(IPG-1)   |SBC           |00:05:12|Connected
…
```

6.14.1.2 show voip calls history

This command displays CDR history information.

Syntax

```
# show voip calls history {gw|sbc} [< Session ID >]
```

Argument	Description
gw	Displays historical Gateway CDRs.
sbc	Displays historical SBC CDRs.
Session ID	(Optional) Displays historical SBC or Gateway CDRs of a specified SIP session ID.

Example

Displaying CDR history information:

```
# show voip calls history sbc
```

6.14.1.3 show voip calls statistics

This command displays call statistics.

Syntax

```
# show voip calls statistics {gw|sbc}
# show voip calls statistics gw [ip2tel|tel2ip]
```

Argument	Description	
gw	Displays Gateway call statistics. Optional arguments:	
	ip2tel	Displays statistics of IP-to-Tel calls
	tel2ip	Displays statistics of Tel-toIP calls
sbc	Displays SBC call statistics (see the example below).	

Example

Displaying SBC call statistics:

```
# show voip calls statistics sbc
SBC Call Statistics:
Active INVITE dialogs: 0
Active incoming INVITE dialogs: 0
Active outgoing INVITE dialogs: 0
Average call duration [min:sec]:  0:00
Call attempts: 0
Incoming call attempts: 0
Outgoing call attempts: 0
Established calls: 0
Incoming established calls: 0
Outgoing established calls: 0
Calls terminated due to busy line: 0
Incoming calls terminated due to busy line: 0
Outgoing calls terminated due to busy line: 0
Calls terminated due to no answer: 0
Incoming calls terminated due to no answer: 0
Outgoing calls terminated due to no answer: 0
Calls terminated due to forward: 0
Incoming calls terminated due to forward: 0
Outgoing calls terminated due to forward: 0
Calls terminated due to resource allocation failure: 0
Incoming calls terminated due to resource allocation failure: 0
Outgoing calls terminated due to resource allocation failure: 0
Calls terminated due to media negotiation failure: 0
Incoming calls terminated due to media negotiation failure: 0
Outgoing calls terminated due to media negotiation failure: 0
Calls terminated due to general failure: 0
Incoming calls terminated due to general failure: 0
Outgoing calls terminated due to general failure: 0
Calls abnormally terminated: 0
Incoming calls abnormally terminated: 0
```

```
Outgoing calls abnormally terminated: 0
```

6.14.2 show voip channel-stats

This command displays statistics associated with a specific VoIP channel.

Syntax

```
# show voip channel-stats {analog|channel-count|digital|jitter-threshold|pl|pl-threshold|rtt-threshold|virtual}
```

Argument	Description
`analog`	Displays an analog channel's statistics (FXS or FXO). ▪ channel number (0-255; run the command `show system assembly` to facilitate defining this argument) ▪ number of channels (1-256)
`channel-count`	Displays the number of active voice channels.
`digital`	Displays a digital channel's statistics (E1/T1 or BRI). ▪ channel number (0-255; run the command `show system assembly` to facilitate defining this argument) ▪ number of channels (1-256)
`jitter-threshold`	Displays the number of analog channels, digital channels, and virtual channels on which jitter occurred that exceeded the threshold you defined (in the range 0-65535).
`pl`	Displays the number of analog channels, digital channels, and virtual channels on which PL (packet loss) occurred.
`pl-threshold`	Displays the number of analog channels, digital channels, and virtual channels on which PL (packet loss) occurred that exceeded the threshold you defined (in the range 0-65535).
`rtt-threshold`	Displays the number of analog channels, digital channels, and virtual channels on which the RTT (Round Trip Time) exceeded the threshold you defined (in the range 0-65535).
`virtual`	Displays a virtual channel's statistics of active calls. ▪ channel number (0-255; run the command `show system assembly` to facilitate defining this argument) ▪ number of channels (1-256)

6.14.3 show voip coders-stats

This command displays the number and percentage of active channels using each audio coder.

Syntax

```
# show voip coders-stats
```

Example

Showing that 67 channels (25.18%) of the 266 active channels are using the G.729e coder, 76 (28.57%) are using the G.726 coder, and 123 (46.24%) are using the G.722 coder:

```
# show voip coders-stats
There are 266 active channels.
Coder     Number of Channels      Percentage
-------------------------------------------
G729e           67                25.18
G726            76                28.57
G722            123               46.24
```

6.14.4 show voip cpu-stats

This command displays the device's CPU percentage use.

Syntax

```
# show voip cpu-stats
```

Example

Displaying CPU percentage use:

```
# show voip cpu-stats
CPU percentage: 47%
```

6.14.5 show voip dsp

This command displays DSP information.

6.14.5.1 show voip dsp perf

This command displays performance monitoring of DSP data.

Syntax

```
# show voip dsp perf
```

Example

Displaying performance monitoring of DSP data:

```
# show voip dsp perf

DSP Statistics (statistics for 144 seconds):
Active DSP resources: 0
Total DSP resources: 76
DSP usage : 0
```

6.14.5.2 show voip dsp status

This command displays the current DSP status.

Syntax

```
# show voip dsp status
```

Example

Displaying the current DSP status:

```
# show voip dsp status

Group:0 DSP firmware:624AE3 Version:0660.07 - Used=0 Free=72
Total=72
  DSP device   0:  Active    Used= 0   Free= 6   Total= 6
  DSP device   1:  Active    Used= 0   Free= 6   Total= 6
  DSP device   2:  Active    Used= 0   Free= 6   Total= 6
  DSP device   3:  Active    Used= 0   Free= 6   Total= 6
  DSP device   4:  Active    Used= 0   Free= 6   Total= 6
  DSP device   5:  Active    Used= 0   Free= 6   Total= 6
  DSP device   6:  Active    Used= 0   Free= 6   Total= 6
  DSP device   7:  Active    Used= 0   Free= 6   Total= 6
  DSP device   8:  Active    Used= 0   Free= 6   Total= 6
  DSP device   9:  Active    Used= 0   Free= 6   Total= 6
  DSP device  10:  Active    Used= 0   Free= 6   Total= 6
  DSP device  11:  Active    Used= 0   Free= 6   Total= 6
Group:1 DSP firmware:204IM Version:0660.07 - Used=0 Free=8 Total=8
  DSP device  12:  Active    Used= 0   Free= 4   Total= 4
  DSP device  13:  Active    Used= 0   Free= 4   Total= 4
```

```
Group:2 DSP firmware:204IM Version:0660.07 - Used=0 Free=4 Total=4
  DSP device  14:  Active    Used= 0   Free= 4   Total= 4
Group:4 DSP firmware:204IM Version:0660.07 - Used=4 Free=0 Total=4
  DSP device  15:  Active    Used= 4   Free= 0   Total= 4
```

6.14.6 show voip e911

This command displays the ELIN number per E911 caller and the time of call.

Syntax

```
# show voip e911
```

6.14.7 show voip ids

This command displays the Intrusion Detection System (IDS) blacklist of remote hosts (IP addresses / ports) considered malicious.

Syntax

```
# show voip ids {blacklist active|active-alarm}
# show voip ids active-alarm {all|match < ID > rule < ID >}
```

Argument	Description
`active-alarm`	Displays all active blacklist alarms: ▪ all (Displays all active alarms) ▪ match (Displays active alarms of an IDS matched ID and rule ID)
`blacklist active`	Displays blacklisted hosts.

Related Commands

- ids policy
- ids rule

Example

- Displaying the IDS blacklist:

```
# show voip ids blacklist active
Active blacklist entries:
10.33.5.110(NI:0) remaining 00h:00m:10s in blacklist
```

  Where *SI* is the SIP Interface, and *NI* is the Network interface.

- Displaying the blacklist of all active IDS alarms:

```
# show voip ids active-alarm all
IDSMatch#0/IDSRule#1: minor alarm active.
```

- Displaying details regarding an active IDS alarm of the specified match and rule IDs:

```
# show voip ids active-alarm match 0 rule 1
IDSMatch#0/IDSRule#1: minor alarm active.
- Scope values crossed while this alarm is active:
    10.33.5.110(SI0)
```

6.14.8 show voip interface

This command displays information (basic configuration, status and Performance Monitoring) of a specified telephony interface (E1/T1, BRI or FXS/FXO).

Syntax

```
# show voip interface {e1-t1|bri|fxs-fxo} < Module >/< Port >
```

Argument	Description
e1-t1	Displays information on a specified E1/T1 interface.
bri	Displays information on a specified BRI interface.
fxs-fxo	Displays the current status, main PM parameters and main configuration parameters to a specific analog interface (FXS or FXO
module	Configures the module slot index as shown on the front panel
port	Configures the module's analog port number (FXS/FXO) or trunk port number (E1/T1 or BRI) to display.

Command Mode

Enable

Note

- Parameters displayed depend on the PSTN protocol type.
- The command is applicable to devices supporting analog and/or digital PSTN interfaces.

Example

Displaying information of the E1/T1 interface of trunk port 1 of trunk module 3:

```
# show voip interface e1-t1 3/1
 show voip interface e1-t1 3/1
------------------------------
module/port:       3/1
trunk number:      0
protocol:          t1_transparent
state:             not active
alarm status:      LOS 1,  LOF 0,  RAI 0,  AIS 0,  RAI_CRC 0
loopback status:   no loop
send alarm status: no alarm
main performance monitoring counters collected in the last 470
seconds:
       BitError:           0          EBitErrorDetected:      0
       CRCErrorReceived:   0          LineCodeViolation:      0
       ControlledSlip:     0          ControlledSlipSeconds:  0
```

```
      ErroredSeconds:     0           BurstyErroredSeconds:   0
      UnAvailableSeconds: 470         PathCodingViolation:    0
      LineErroredSeconds: 0           SeverelyErroredSeconds: 0
      SeverelyErroredFramingSeconds: 0

   basic configuration:
      framing:        T1_FRAMING_ESF_CRC6
      line-code:      B8ZS
      clock-master:   CLOCK_MASTER_OFF
      clock-priority: 0
      trace-level:    no-trace
```

6.14.9 show voip ip-group

This command displays the following QoS metrics per IP Group:

- QoE profile metrics per IP Group and its associated Media Realm on currently established calls such as MOS, jitter, packet loss, and delay. Metrics are displayed as average amounts.
- Bandwidth Profile (BW) metrics for Tx and Rx traffic per IP Group and/or Media Realm. Metrics are displayed with a status color for each specific port.
- QoE profile metrics for the remote (far-end) such as MOS, jitter, packet loss, and delay. Each metric is displayed with a specific color.
- Group MSA metrics for the IP Group and the Media Realm. Metrics are displayed as an aggregated value.

Syntax

```
# show voip ip-group < IP Groups Table Index> media-statistics
```

Example

Displaying QoS metrics of IP Group configured in row index 0:

```
# show voip ip-group 0 media-statistics
IPGroup 0. BWProfile: -1, QoEProfile: -1
-------------------------------------
MSA: 0
Averages: MOS 0  Remote MOS 0 Delay 0 Remote Delay 0 Jitter 0
Remote Jitter 0
Fraction loss  tx 0 Fraction loss rx 0
Packet sent 0 Packet received 0
Audio Tx BW 0, Audio Tx Status Green
Audio Rx BW 0, Audio Rx Status Green
Total Tx BW 0, Total Tx Status Green
Total Rx BW 0, Total Rx Status Green
Video Tx BW 0, Video Tx Status Green
Video Rx BW 0, Video Rx Status Green
MSA color Gray MSA remote color Gray
MOS color Gray remote MOS color Gray
Delay color Gray  remote Delay color Gray
PL color Gray  remote PL color Gray
Jitter color Gray  remote Jitter color Gray
color is not relevant
Media Realm -1. BWProfile -1, QoEProfile: -1
```

6.14.10 show voip ldap

This command displays the number of 'internal AD search requests', i.e., routings requiring information from the AD, including requests answered via the cache and directly from the AD. Routing requests are stored every 15 minutes. The last 96 intervals (24h) are stored.

Syntax

```
# show voip ldap {cache-hits-pm|print-cache} {group < Group Matrix
Index >}|print-cache-entry {group < Group Index >}|print-cache-
nums|searches-pm|timeout-pm
```

Argument	Description
cache-hits-pm	Displays the number of responses answered by the cache in each interval.
print-cache	Displays the cache (by group).
print-cache-entry	Displays a cache entry (by key and group).
print-cache-nums	Displays the number of entries and aged entries in the cache.
searches-pm	Displays performance monitoring results for searches.
timeout-pm	Displays performance monitoring results for searches.

Command Mode

Enable

Example

- Displaying the the number of responses answered by the cache in each interval:

```
# show voip ldap cache-hits-pm
server 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 server 1
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

- Displaying the cache (by group):

```
# show voip ldap print-cache
print cache
servers' group number 0 Hash size 0 aged 0
servers' total Hash size 16384
servers' group number 1 Hash size 0 aged 0
```

- Displaying the cache (by key and group):

```
# show voip ldap print-cache-entry
servers' group number 0 Hash size 0 aged 0
servers' total Hash size 16384
servers' group number 1 Hash size 0 aged 0
```

6.14.11 show voip other-dialog statistics

This command displays the number of current incoming and outgoing SIP dialogs (e.g., REGISTER), except for INVITE and SUBSCRIBE messages.

Syntax

```
# show voip other-dialog statistics
```

Note

The command is applicable only to the SBC application.

Example

```
# show voip other-dialog statistics
SBC other Dialog Statistics:
Active other dialogs: 0
Active incoming other dialogs: 0
Active outgoing other dialogs: 0
```

6.14.12 show voip proxy sets status

This command displays the status of Proxy Sets. The status ("OK" or "FAIL") indicates IP connectivity with the proxy server.

Syntax

```
# show voip proxy sets status
```

Example

Displaying status of Proxy Sets:

```
# show voip proxy sets status

  Active Proxy Sets Status
  ID       IP ADDRESS                  STATUS
  0         Not Used(--)                 --
  1         10.8.6.31(10.8.6.31)        OK
  2         10.8.2.19(10.8.2.19)        OK
```

6.14.13 show voip realm

This command displays statistics relating to Media Realms and Remote Media Subnets.

Syntax

- Displaying Media Realms:

```
# show voip realm < Media Realm Table Index > statistics
```

- Displaying Remote Media Subnets:

```
# show voip realm < Media Realm Table Index > remote-media-
subnet < Remote Media Subnet Table Index > statistics
```

Note

The command is especially useful when Quality of Experience Profile or Bandwidth Profile is associated with the Media Realm or Remote Media Subnets.

6.14.14 show voip register

This command displays registration status of users.

Syntax

```
# show voip register {account|board|db sbc|ports|suppserv gw|user-
info}
```

Argument	Description
`account`	Displays registration status of user Accounts (Accounts table). ▪ gw (Gateway accounts) ▪ sbc (SBC accounts)
`board`	Displays registration status for the entire gateway.
`db sbc`	Displays SBC users registered with the device (SBC User Information table). • list (Displays the status of all registered SBC users showing their AOR and Contact) • user < AOR > (Displays detailed information about a specific registered SBC user, including the IP Group to which the user belongs): **Active:YES** = user was successfully registered. **Active:NO** = user was registered and is waiting for approval. **Note:** The command is applicable only to the SBC application.
`ports`	Displays registration status of the devices' ports. **Note:** The command is applicable only to the Gateway application.
`suppserv gw`	Displays the number of users in the Supplementary Services table. • list (Displays detailed information about users, including registration status (REGISTERED / NOT REGISTERED). **Note:** The command is applicable only to the Gateway application.
`user-info`	Displays registration status of users in the User Info table.

Argument	Description
	▪ gw (Displays total number of Gateway users) ✓ list (Displays detailed information about users, including registration status - REGISTERED / NOT REGISTERED). ▪ sbc (Displays total number of SBC users) ✓ list (Displays detailed information about users, including registration status - REGISTERED / NOT REGISTERED).

Example

- Displaying registration status of SBC users of AOR "2017":

```
# show voip register db sbc user 2017
*** SBC Registered Contacts for AOR '2017' ***
sip:2017@10.8.2.225:5080;expire=90; Active: YES; IPG#4;
ResourceID#(#983)
```

- Displaying port registration status:

```
# show voip register ports

*** Ports Registration Status ***

Gateway      Port                Status
================================================
Module 3     Port 1     FXO      REGISTERED
------------------------------------------------
Module 3     Port 2     FXO      REGISTERED
------------------------------------------------
Module 3     Port 3     FXO      REGISTERED
------------------------------------------------
Module 3     Port 4     FXO      NOT REGISTERED
------------------------------------------------
Module 5     Port 1     FXS      NOT REGISTERED
------------------------------------------------
Module 5     Port 2     FXS      NOT REGISTERED
------------------------------------------------
Module 5     Port 3     FXS      NOT REGISTERED
------------------------------------------------
Module 5     Port 4     FXS      REGISTERED
```

- Displaying detailed information about users in the Supplementary Services table:

```
# show voip register suppserv gw list
*** GW Supp Serv Users Registration Status ***
Index   Type            Status          Contact
================================================
1       EndPoint        NOT REGISTERED  sip:4000@10.15.7.96:5060
```

6.14.15 show voip subscribe

This command displays active SIP SUBSCRIBE dialog sessions.

Syntax

```
# show voip subscribe {list|statistics}
# show voip subscribe list [< Session ID >|descending|summary]
```

Argument	Description
list	Displays SUBSCRIBE dialog information. One of three options can be selected: ▪ < Session ID > (Displays detailed information for the specified Session ID). ▪ descending (Displays SUBSCRIBE dialogs sorted in descending order by call duration). ▪ summary (Displays a summary of SUBSCRIBE dialogs).
statistics	Displays SUBSCRIBE dialog statistics including incoming and outgoing SUBSCRIBEs.

Example

Displaying a summary of active SUBSCRIBE dialogs:

```
# show voip subscribe statistics
SBC SUBSCRIBE Dialog Statistics:
Active SUBSCRIBE dialogs: 4
Active incoming SUBSCRIBE dialogs: 6
Active outgoing SUBSCRIBE dialogs: 8
```

6.14.16 show voip tdm

This command displays TDM status.

Syntax

```
# show voip tdm
```

Example

The command is applicable only to devices supporting PSTN interfaces.

Example

```
# show voip tdm
Clock status:
       TDM Bus Active Clock Source Internal
Configuration:
       PCM Law Select 3
       TDM Bus Clock Source 1
       TDM Bus Local Reference 0
       TDM Bus Type 2
       Idle ABCD Pattern 15
       Idle PCM Pattern 255
       TDM Bus PSTN Auto Clock Enable 0
       TDM Bus PSTN Auto Clock Reverting Enable 0
```

This page is intentionally left blank.

7 Clear Commands

This section describes the following **clear** commands:

- **clear alarms-history** (see Section 7.1)
- **clear debug-file** (see Section 7.2)
- **clear qos** (see Section 7.3)
- **clear storage-history** (see Section 7.4)
- **clear system-log** (see Section 7.5)
- **clear user** (see Section 7.6)
- **clear voip** (see Section 7.7)

7.1 clear alarms-history

This command deletes the Alarms History table.

Syntax

```
# clear alarms-history
```

Command Mode

Enable

7.2 clear debug-file

This command deletes the debug file (core dump).

Syntax

```
# clear debug-file
```

Command Mode

Enable

7.3 clear qos counters

This command deletes counter data related to quality of service.

Syntax

```
# clear qos counters
```

Command Mode

Enable

7.4 clear storage-history

This command deletes the locally stored CDRs.

Syntax

```
# clear storage-history < Service Name > {all|unused}
```

Argument	Description	
Service Name	The name of the service. To view services, run the `show storage-history services` command. Currently supported service: `cdr-storage-history` Includes the following arguments:	
	`all`	Deletes all stored CDR files
	`unused`	Deletes unused stored CDR files

Command Mode

Enable

Related Commands

show storage-history services

Example

- Deleting all stored CDR files:

```
# clear storage-history cdr-storage-history all
```

- Deleting all unused stored CDR files:

```
# clear storage-history cdr-storage-history unused
```

7.5 clear system-log

This command deletes the system log.

Syntax

```
# clear system-log
```

Command Mode

Enable

7.6 clear user

This command terminates CLI users who are currently logged in through RS-232 (console), Telnet, or SSH. When run, the command drops the Telnet/SSH session or logs out the RS-232 session, and displays the login prompt.

Syntax

```
# clear user < Session ID >
```

Argument	Description
Session ID	Unique identification of each currently logged in CLI user. Allows you to end the active CLI session of a specific CLI user. You can view session IDs by running the **show users** command.

Note

The CLI session from which the command is run cannot be terminated.

Command Mode

Enable

Related Commands

show users

Example

Ending the CLI session of a specific user:

```
# clear user 1
```

7.7 clear voip

This command deletes VoIP-related information.

Syntax

```
# clear voip {calls|register|statistics}
```

Argument	Description
calls	See Section 7.7.1.
register	See Section 7.7.2.
statistics	See Section 7.7.3.

Command Mode

Enable

7.7.1 clear voip calls

This command deletes all active calls.

Syntax

```
# clear voip calls [< Session ID >]
```

Argument	Description
-	If Session ID isn't specified, *all* active VoIP calls are cleared.
Session ID	(Optional) If Session ID *is* specified, the specified call is cleared.

Command Mode

Enable

Related Commands

show voip calls active

Example

Displaying and then clearing VoIP calls:

```
# show voip calls
Total Active Calls: 1
| Session ID    |     Caller          |     Callee          | Origin
|      Remote IP     |End Point Type |Duration|Call State
=================================================================
=========================================================
|326433737      |3005                 |2000                 |Outgoin
g|10.8.6.36           |FXS-3/3         |00:00:06|Connected
```

```
# clear voip calls 326433737
1 Active Calls were Manually disconnected
```

7.7.2 clear voip register db sbc

This command deletes SBC users registered from the device's registration database.

Syntax

```
# clear voip register db sbc user < AOR >
# clear voip register db sbc ip-group < ID or Name >
```

Argument	Description
AOR	Configures the Address of Record (AOR) of the user (user part or user@host).
ID or name	Configures an IP Group (i.e., deletes all registered users belonging to the IP Group).

Command Mode

Enable

Note

The command is applicable only to the SBC application.

Example

Clearing John@10.33.2.22 from the registration database:

```
# clear voip register db sbc user John@10.33.2.22
```

7.7.3 clear voip statistics

This command deletes calls statistics.

Syntax

```
# clear voip statistics
```

Command Mode

Enable

8 Maintenance Commands

This section describes the following maintenance-related commands:

- **admin register** (see Section 8.1)
- **copy** (see Section 8.2)
- **dir** (see Section 8.3)
- **erase** (see Section 8.4)
- **nslookup** (see Section 8.5)
- **ping** (see Section 8.6)
- **pstn nfas-group-switch-activity** (see Section 8.7)
- **reload** (see Section 8.8)
- **srd-view** (see Section 8.9)
- **telnet** (see Section 8.10)
- **traceroute** (see Section 8.11)
- **usb** (see Section 8.12)
- **write** (see Section 8.13)
- **write factory** (see Section 8.14)
- **write-and-backup** (see Section 8.15)

8.1 admin register

This command registers (or unregisters) users with a proxy server.

Syntax

```
# admin register {accounts|gw|ports|suppserv|userinfo}
```

- Registration by Accounts:
  ```
  # admin register accounts < Account Index >
  ```
- Registering Gateway:
  ```
  # admin register gw
  ```
- Registration per physical port:
  ```
  # admin register ports < Module Number > < Port Number >
  ```
- Registration by extension number:
  ```
  # admin register suppserv < Extension Number >
  ```
- Registration by User Info table:
  ```
  # admin register userinfo {gw|sbc} < Local User >
  ```

Argument	Description
accounts	Registers user Accounts, configured in the Accounts table.
gw	Registers the device as a single entity (Gateway).
ports	Registers the device's ports. You need to specify the module number and port number.
suppserv	Registers an FXS endpoint by phone number and BRI line extensions configured in the Supplementary Services table.
userinfo	Registers users configured in the User Info table.

Note

To unregister, use the below command:

```
# admin unregister {accounts|gw|ports|suppserv|userinfo}
```

Command Mode

Enable

Example

Registering port 1 located on module 3:

```
# admin register ports 3 1
Registering module 3 port 1 (200)
```

8.2 copy

This command downloads / uploads files to / from the device.

Syntax

```
# copy < File Type > {from|to} {< URL >|console|usb:///< Filename >}
```

Argument	Description
File Type	
aux-package	Defines the type of file as an auxiliary package file, allowing you to download or upload a batch of auxiliary files, using a TAR (Tape ARchive) file (.tar). The TAR file can contain any number and type of Auxiliary files, for example, a Dial Plan file and a CPT file. **Note:** The file can be uploaded or downloaded (see arguments 'from' and 'to' below).
call-progress-tones	Defines the type of file as a Call Progress Tones (CPT) file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
cas-table	Defines the type of file as a Channel Associated Signaling (CAS) table file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
cli-script	Defines the type of file as a CLI script file. **Note:** The file can be uploaded or downloaded (see arguments 'from' and 'to' below).
debug-file	Defines the type of file as a debug file and copies the file from the <device> to a destination. The debug file contains the following information: • Exception information, indicating the specific point in the code where the crash occurred and a list of up to 50 of the most recent SNMP alarms that were raised by the <device> before it crashed. • Latest log messages that were recorded prior to the crash. • Core dump. The core dump is included only if core dump generation is enabled, no IP address has been configured, and the <device> has sufficient memory on its flash memory. May include additional application-proprietary debug information. The debug file is saved as a zipped file with the following file name: "debug_<device name>_ver_<firmware version>_mac_<MAC address>_<date>_<time>". For example, debug_acMediant_ver_700-8-4_mac_00908F099096_1-03-2015_3-29-29.
dial-plan	Defines the type of file as a Dial Plan file. **Note:** The file can only be uploaded to the device (see the

Argument	Description
	argument 'from' below).
`firmware`	Defines the type of file as a firmware file (.cmp). **Note:** After the .cmp file is loaded to the device, it's automatically saved to the device's flash memory with a device reset.
`prerecorded-tones`	Defines the type of file as a Prerecorded Tones (PRT) file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`startup-script`	Defines the type of file as a Startup CLI script file. **Note:** The file can be uploaded or downloaded (see arguments 'from' and 'to' below).
`storage-history`	Defines the type of file as a locally stored Call Detail Record (CDR) file. Define the name of the service. To view services, run the command `show storage-history services`. Currently supported service: `cdr-storage-history`
`tls-cert`	Defines the type of file as a TLS certificate file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`tls-private-key`	Defines the type of file as a TLS private key file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`tls-root-cert`	Defines the type of file as a TLS trusted root certificate file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`user-info`	Defines the type of file as a User Info file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`voice-configuration`	Defines the type of file as a configuration file (.ini). **Note:** The file can be uploaded or downloaded (see arguments 'from' and 'to' below).
`voice-prompts`	Defines the type of file as a Voice Prompts (VP) file. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
`web-favicon`	Defines the type of file as an icon file associated with the device's URL saved as a favorite bookmark on your browser's toolbar. **Note:** The file can only be uploaded to the device (see the argument 'from' below).
Download/Upload	
`from`	Downloads a file to the device.
`to`	Uploads a file from the device to a specified destination.
File Location	
URL	Defines the URL from which / to which to upload / download the file. Can be:

Argument	Description
	▪ HTTP ▪ HTTPS ▪ TFTP
`console`	Displays the current .ini configuration file on the CLI console. **Note:** The command is applicable only to the .ini configuration file (voice-configuration).
`usb:///< file name>`	Uploads the file from a USB stick, connected to the device, to the device, or downloads the file from the device to a USB stick connected to the device. **Note:** The command is applicable only to devices that provide a USB port interface.

Command Mode

Enable

Related Commands

- **erase**
- **dir**
- **write**

Note

- When you load a file to the device, you must run the `write` command to save the file to flash memory, else the file is deleted when the device is reset or powered off.
- For more information on the different file types, refer to the *User's Manual*.

Example

- Copying firmware file from an HTTP server:

```
# copy firmware from
http://192.169.11.11:80/SIP_F7.20A.260.002.cmp
Copying file...
done.
Restarting...
```

- Copying the voice configuration file to the CLI console:

```
# copy voice-configuration to console
```

- Auxilliary file batch:

```
# copy myauxfiles.tar from http://www.exmaple.com/auxiliary
```

- Copying CLI-based configuration from TFTP server:

```
# copy cli-script from tftp://192.168.0.3/script1.txt
```

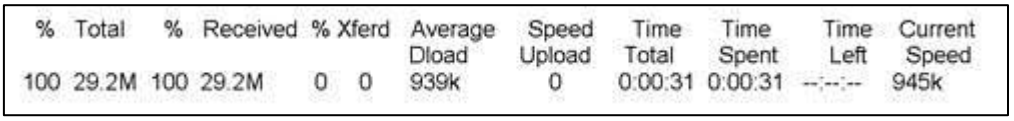
- Upgrading the device's firmware from a source URL file:

```
# copy firmware from http://www.exmaple.com/firmware.cmp
```

- Copying the dial plan file:

```
copy dial-plan from http://10.4.2.2/MyHistoryFiles/
```

After the `copy` command is run, progress information is displayed. Example:



%	Total	%	Received	%	Xferd	Average Dload	Speed Upload	Time Total	Time Spent	Time Left	Current Speed
100	29.2M	100	29.2M	0	0	939k	0	0:00:31	0:00:31	--:--:--	945k

where

- **%** is the percentage of total bytes downloaded and uploaded; downloaded is displayed only when downloading a file (i.e., `copy from` command)
- **Total** is the total bytes downloaded and uploaded.
- **%** is the percentage of downloaded bytes, for the `copy from` command.
- **Received** is the currently downloaded bytes, for the `copy from` command.
- **%** is the percentage of uploaded bytes, for the `copy to` command.
- **Xferd** is the currently uploaded bytes, for the `copy to` command.
- **Average Dload** is the average download speed, in bytes/sec, for the `copy from` command.
- **Speed Upload** is the average upload speed, in bytes/sec, for the `copy to` command.
- **Time Spent** is the elapsed time.
- **Time Left** is the time remaining for the file upload/download to complete.
- **Current Speed** is the current upload/download speed, in bytes/sec.

8.3 dir

This command displays the device's current auxiliary files directory.

Syntax

```
# dir
```

Command Mode

Enable

Example

Displaying the device's current auxiliary files directory:

```
# dir
directory listing:
call-progress-tones [usa_tones_13.dat]  9260 Bytes
cas-table [Earth_Calling.dat]   43852 Bytes
tls-private-key [pkey.pem]      940 Bytes
tls-cert [server.pem]   643 Bytes
```

8.4 erase

This command deletes an Auxiliary file.

Syntax

```
# erase < Auxiliary File >
```

Argument	Description
Auxiliary File	Configures the *type* of Auxilliary file to be erased.

Note

- View files using the **dir** command.
- To make sure the file type is correctly entered, copy it from the **dir** command output.
- The **erase** command only deletes the file from the device's RAM (and from the device's current usage). To delete the file permanently (from flash memory), enter the **write** command after issuing the **dir** command.

Command Mode

Enable

Related Commands

- **dir**
- **write**

Example

- Viewing Auxilliary files:

```
# dir
directory listing:
call-progress-tones [usa_tones_13.dat]  9260 Bytes
cas-table [Earth_Calling.dat]   43852 Bytes
tls-private-key [pkey.pem]      940 Bytes
tls-cert [server.pem]   643 Bytes
```

- Erasing the CPT file from flash memory:

```
# erase call-progress-tones
# write
```

8.5 nslookup

This command deletes queries the Domain Name System (DNS) to obtain domain name mapping or IP address mapping.

Syntax

```
# nslookup < Hostname > [source voip interface vlan < VLAN ID>]
[type {a|aaaa|naptr|srv}
```

Argument	Description
Hostname	Defines the host name.
`source voip interface vlan`	(Optional) Configures a VLAN ID (1 -3999).
`type`	(Optional) Configures the type of DNS: ▪ a (Use a Host address) ▪ aaaa (Use an IPv6 Address) ▪ naptr (Use NAPTR - Naming Authority PoinTeR) ▪ srv (Use Server selection)

Note

The DNS server must be configured for this command to function. The DNS server can be configured using:

- Internal DNS table: configure network > dns dns-to-ip
- Internal SRV table : configure network > dns srv2ip
- IP Interfaces table: configure network > interface network-if

Command Mode

Enable

Example

Looking up the IP address of Google:

```
# nslookup google.com
google.com resolved to 216.58.213.174
```

8.6 ping

This command deletes pings a remote destination to check connectivity.

Syntax

```
# ping {< IPv4 Address >|ipv6 < IPv6 Address >} [source voip
interface {vlan < VLAN ID >|name < Interface Name >}] [repeat <
Echo Requests >] [size < Payload Size >]
```

Argument	Description
IPv4 Address	Configures the IPv4 IP address in dotted-decimal notation.
IPv6 Address	Configures an IPv6 address as X:X::X:X.
`source voip interface`	(Optional) Configures the interface from where you want to ping. This can be one of the following: ▪ `vlan` (defines the VLAN ID) ▪ `name` (defines the IP network interface name)
`repeat`	(Optional) Configures the number (1-300) of echo requests.
`size`	(Optional) Configures the payload size (0-max packet size).

Command Mode

Enable

Example

- Sending 3 ICMP packets with 555 bytes payload size to 10.4.0.1 via interface VLAN 1:

```
# ping 10.4.0.1 source voip interface vlan 1 repeat 3 size 555
PING 10.4.0.1 (10.4.0.1): 555 data bytes
563 bytes from 10.4.0.1: icmp_seq=0 ttl=255 time=1.3 ms
563 bytes from 10.4.0.1: icmp_seq=1 ttl=255 time=1.1 ms
563 bytes from 10.4.0.1: icmp_seq=2 ttl=255 time=1.2 ms
--- 10.4.0.1 ping statistics ---
3 packets transmitted, 3 packets received, 0 packet loss
round-trip min/avg/max = 1.1/1.2/1.3 ms
```

- Pinging an IPv6 destination address:

```
# ping ipv6 2001:15::300
```

8.7 pstn nfas-group-switch-activity

This command deletes initiates a manual switchover between D-channels (primary and backup) pertaining to the same Non-Facility Associated Signaling (NFAS) group.

Syntax

```
# pstn nfas-group-switch-activity [ NFAS Group Number ]
```

Argument	Description
NFAS Group Number	Configures the NFAS group number (1-12).

Note

The command is applicable only devices supporting digital PSTN interfaces.

Command Mode

Enable

Example

```
# pstn nfas-group-switch-activity 2
```

8.8 reload

This command deletes resets the device with or without saving the configuration to flash memory.

Syntax

```
# reload {if-needed|now|without-saving [in < Minutes >]}
```

Argument	Description
`if-needed`	Resets the device only if you have configured a parameter that requires a device reset to take effect.
`now`	Resets the device and saves the configuration (including Auxiliary files) to flash memory.
`without-saving`	Resets the device without saving the configuration to flash memory. ▪ `in` (Configures the number of minutes that will lapse before the device is reset. Use before making changes to sensitive settings. If your changes cause the device to lose connectivity, wait for the device to restart with the previous working configuration. To cancel the timed restart, use the `no reload` command).

Default

When the command is run, the configuration is saved to flash memory.

Command Mode

Enable

Related Command

write

8.9 srd-view

This command access a specific SRD (tenant) view. To facilitate configuration of the Multi-Tenancy feature through the CLI, the administrator can access a specific tenant view. Once in a specific tenant view, all configuration commands apply only to that specific tenant and the tenant's name (SRD name) forms part of the CLI prompt. Only table rows (indexes) belonging to the viewed tenant can be modified. New table rows are automatically associated with the viewed tenant (i.e., SRD name).

Syntax

```
# srd-view < SRD Name >
```

Argument	Description
SRD Name	Defines the tenant view by SRD name.

Command Mode

Enable

Note

To exit the tenant view, enter the following command:

```
# no srd-view
```

Example

Accessing the 'itsp' tenant view:

```
# srd-view itsp
(srd-itsp)#
```

8.10 telnet

This command invokes a Telnet session from the device towards a remote host for remote management. A remote administrator can access the device's CLI from the WAN leg while performing the full authentication process. The administrator can then invoke Telnet sessions towards other devices in the LAN to manage them. No special pin-holes or forwarding rules need be declared to manage them.

Syntax

```
# telnet < Address > < Port > interface vlan < VLAN ID >
```

Argument	Description
Address	Remote host IP address.
Port	(Optional) Remote host port number.
`interface vlan`	(Optional) Device's VLAN ID from where you want to create the Telnet session. If not configured, the default port is 23.

Command Mode

Enable

Example

Invoking a Telnet session:

```
# telnet 10.4.4.25
```

8.11 traceroute

This command performs a traceroute and displays the route (path) and packet transit delays across an IP network, for diagnostic purposes.

Syntax

```
# traceroute {< Destination IP Address|Hostname >} [interface name
< Interface Name >|vlan < VLAN ID > < Source IP Address >]
```

Argument	Description
Destination IP Address or Hostname	The IP address or hostname to which the trace is sent.
`interface name`	Name of the interface.
`vlan`	Defines the VLAN ID.

Note

- Supports both IPv4 and IPv6 addresses.
- In IPv4, it supports hostname resolution as well.
- Sends three requests to each hop on the way to the destination.

Command Mode

Enable

Example

Examples of using this command:

- IPv6:

```
# traceroute ipv6 2014:6666::dddd
1  2014:7777::aa55 (2014:7777::aa55)  2.421 ms  2.022
ms  2.155 ms
2  2014:6666::dddd (2014:6666::dddd)  2.633 ms  2.481
ms  2.568 ms
Traceroute: Destination reached
```

- IPv4:

```
# traceroute 10.3.0.2
1  1 (10.4.0.1)  2.037 ms  3.665 ms  1.267 ms
2  1 (10.3.0.2)  1.068 ms  0.796 ms  1.070 ms
Traceroute: Destination reached
```

8.12 usb

This command allows maintenance on USB sticks plugged into the device.

Syntax

```
# usb < Argument >
```

Argument	Description
list	Displays files located on the USB.
remove	Safely removes a USB stick that is plugged into the device.

Command Mode

Enable

Note

The command is applicable only devices that provide USB port interfaces.

8.13 write

This command saves the device's current configuration to flash memory.

Syntax

```
# write
```

Command Mode

Enable

Note

The command does not reset the device. For parameters that require a reset for their settings to take effect, use the **reload now** command *instead of* the **write** command or use it *after* the **write** command.

Related Commands

- **reload now**
- **write factory**

Example

Saving the configuration to flash memory:

```
# write
Writing configuration…done
```

8.14 write factory

This command restores the device's configuration to factory defaults.

Syntax

```
# write factory
```

Note

When this command is run, Auxiliary files are also erased.

Command Mode

Enable

Related Commands

write

8.15 write-and-backup

This command saves the device's configuration file to flash memory and uploads it to a specified destination. The feature provides a method to back up your saved configuration.

Syntax

```
# write-and-backup to {< URL >|usb}
```

Argument	Description
URL	Configures the destination as a URL (TFTP or HTTP/S) to a remote server.
usb	Configures the destination to a folder on a USB storage stick plugged in to the device.

Command Mode

Enable

Note

- The USB option applies only to devices with USB interfaces.
- The configuration of the backed-up file is based only on CLI commands.
- The device first saves the configuration file to flash memory and then sends the file to the configured destination.

Related Commands

write

Example

- Saving a device's configuration to flash memory and sends it to a HTTP remote server:

```
# write-and-backup to http://www.example.com/configuration.txt
```

- Saving a device's configuration to flash memory and sends it to the plugged-in USB stick:

```
# write-and-backup to usb:///configuration.txt
```

This page is intentionally left blank.

Part III

System-Level Commands

9 Introduction

This part describes the commands located at the System level. The System-level commands are accessed by entering the following command at the root prompt:

```
# configure system
(config-system)#
```

The System-level commands include the following main commands:

- **automatic-update** (see Section 10)
- **cli-settings** (see Section 11)
- **clock** (see Section 12)
- **configuration-version** (see Section 13)
- **feature-key** (see Section 14)
- **http-services** (see Section 15)
- **ldap** (see Section 16)
- **mgmt-access-list** (see Section 17)
- **mgmt-auth** (see Section 18)
- **ntp** (see Section 19)
- **packetsmart** (see Section 20)
- **performance-profile** (see Section 21)
- **radius** (see Section 22)
- **snmp** (see Section 23)
- **user** (see Section 24)
- **web** (see Section 25)
- **welcome-msg** (see Section 26)

This page is intentionally left blank.

10 automatic-update

This command configures the Automatic Update feature.

Syntax

```
(config-system)# automatic-update
(auto-update)# < Argument >
```

Argument	Description
File	Automatically uploads specified files to the device from a remote server. For more information, see Section 10.1.
`crc-check {off|regular|voice-conf-ordered}`	Enables the device to run a Cyclic Redundancy Check (CRC) on the downloaded configuration file to determine whether the file content (regardless of file timestamp) has changed compared to the previously downloaded file. Depending on the CRC result, the device installs or discards the downloaded file. **regular**: CRC considers order of lines in the file (i.e., same text must be on the same lines). **voice-conf-ordered**: CRC ignores the order of lines in the file (i.e., same text can be on different lines).
`http-user-agent`	Configures the information sent in the HTTP User-Agent header. For more information, see Section 10.2.
`predefined-time`	Defines the time of day in the format *hh:mm* (i.e., hour:minutes).
`run`	Triggers the Automatic Update feature. **Note:** The command does not replace the **activate** command
`run-on-reboot {off|on}`	Enables the Automatic Update feature to run when the device resets (or powers up).
`template-files-list`	Configures the type of files in the file template to download from a provisioning server for the Automatic Update process. For more information, see Section 10.3.
`template-url`	Configures the URL address of the provisioning server on which the file types, specified in the file template using the **template-files-list** command are located for download for the Automatic Update process. For more information, see Section 10.4.
`tftp-block-size`	Configures the TFTP block size according to RFC 2348.
`update-firmware {off|on}`	Enables automatic update of the device's software file (.cmp).
`update-frequency`	Configures the interval (in minutes) between subsequent Automatic Update processes.
`verify-certificate {off|on}`	Enables verification of the server certificate over HTTPS. The device authenticates the certificate against the trusted root certificate store of the associated TLS Context. Only if authentication succeeds does the device allow communication.
`verify-ssl-subject-name {off|on}`	Enables verification of the SSL Subject Name in the server's certificate when using HTTPS.

Command Mode

Enable

10.1 Files

This command automatically uploads specified files to the device from a remote server.

Syntax

```
(config-system)# automatic-update
(auto-update)# < Argument >
```

Argument	Description
auto-firmware	Defines the URL path to a remote server from where the software file (.cmp) can be loaded. This is based on timestamp.
call-progress-tones	Defines the URL path to a remote server from where the Call Progress Tone (CPT) file can be loaded.
cas-table	Defines the URL path to a remote server from where the Channel Associated Signaling (CAS) file can be loaded.
cli-script	Defines the URL path to a remote server from where the CLI Script file can be loaded.
dial-plan	Defines the URL path to a remote server from where the Dial Plan file can be loaded.
feature-key	Defines the URL path to a remote server from where the License Key file can be loaded.
firmware	Defines the URL path to a remote server from where the software file (.cmp) file can be loaded. **Note:** This is a one-time file update; once loaded, the device does not load it again.
prerecorded-tones	Defines the URL path to a remote server from where the Prerecorded Tone file can be loaded.
startup-script	Defines the URL path to a remote server from where the Startup Script file can be loaded.
tls-cert	Defines the URL path to a remote server from where the TLS certificate file can be loaded.
tls-private-key	Defines the URL path to a remote server from where the TLS private key file can be loaded.
tls-root-cert	Defines the URL path to a remote server from where the TLS root CA file can be loaded.
user-info	Defines the URL path to a remote server from where the User Info file can be loaded.
voice-configuration	Defines the URL path to a remote server from where the voice configuration file can be loaded.

Argument	Description
`voice-prompts`	Defines the URL path to a remote server from where the Voice Prompts file can be loaded.
`web-favicon`	Defines the URL path to a remote server from where the favicon image file for the favorite bookmark on your Web browser's toolbar associated with the device's URL, can be loaded.
`web-logo`	Defines the URL path to a remote server from where the logo image file for the Web interface can be loaded.

Command Mode

Enable

Note

The URL can be IPv4 or IPv6. If IPv6, enclose the address in square brackets:

- URL with host name (FQDN) for DNS resolution into an IPv6 address:
  `http://[FQDN]:<port>/<filename>`
- URL with IPv6 address:
  `http://[IPv6 address]:<port>/<filename>`

Example

Automatic update of a CLI script file:

```
# configure system
(config-system)# automatic-update
(auto-update)# cli-script "http://192.168.0.199/cliconf.
txt"
Note: Changes to this parameter will take effect when applying the
'activate' or 'exit' command
(automatic-update)# activate
```

10.2 http-user-agent

This command configures the information sent in the HTTP User-Agent header in HTTP Get requests.

Syntax

```
(config-system)# automatic-update
(auto-update)# http-user-agent < String >
```

Command Mode

Enable

Note

Refer to the *User's Manual* for detailed information on configuring the string using placeholders (e.g., "<NAME>", "<MAC>", "<VER>", and "<CONF>").

Example

Configuring HTTP User-Agent header using placeholders:

```
(config-system)# automatic-update
(auto-update)# http-user-agent ITSPWorld-<NAME>;<VER>(<MAC>)
```

Above configuration may generate the following in the header:

```
User-Agent: ITSPWorld-Mediant;7.20.200.001(00908F1DD0D3)
```

10.3 template-files-list

This command configures which type of files in the file template to download from a provisioning server for the Automatic Update process. For more information on file templates, refer to the *User's Manual*.

Syntax

```
(config-system)# automatic-update
(auto-update)# template-files-list < File Types >
```

Argument	Description
< File Types >	Configures the file types: ▪ **ini**: ini file ▪ **init**: ini template file ▪ **cli**: CLI Script file ▪ **clis**: CLI Startup Script file ▪ **acmp**: CMP file based on timestamp ▪ **vp**: Voice Prompts (VP) file (applies only to Mediant 1000B) ▪ **usrinf**: User Info file ▪ **cmp**: CMP file ▪ **fk**: Feature Key file ▪ **cpt**: Call Progress Tone (CPT) file ▪ **prt**: Prerecorded Tones (PRT) file ▪ **cas**: CAS file (applies only to Digital PSTN supporting devices) ▪ **dpln**: Dial Plan file ▪ **amd**: Answering Machine Detection (AMD) file ▪ **sslp**: SSL/TLS Private Key file ▪ **sslr**: SSL/TLS Root Certificate file ▪ **sslc**: SSL/TLS Certificate file

Command Mode

Enable

Note

The file types must be separated by commas, but **without** spaces.

Related Commands

template-url

Example

Specifying the ini, License Key, and CPT file types to download:

```
(config-system)# automatic-update
```

```
(auto-update)# template-files-list ini,fk,cpt
```

10.4 template-url

This command configures the URL address of the provisioning server on which the file types, specified in the file template using the **template-files-list** command are located for download during the Automatic Update process. For more information on file templates, refer to the *User's Manual*.

Syntax

```
(config-system)# automatic-update
(auto-update)# template-url < URL >/< File Name <FILE> >
```

Argument	Description	
< URL >	Configures the URL address of the provisioning server (HTTP/S, FTP, or TFTP).	
File Name <FILE>	Configures the file name using the <FILE> placeholder. The placeholder is replaced by the following hard-coded strings, depending on file type as configured by the **template-files-list** command:	
	File Type (**template-files-list**)	Hard-coded String
	`ini`	device.ini
	`init`	deviceTemplate.ini
	`cli`	cliScript.txt
	`clis`	cliStartupScript.txt
	`acmp`	autoFirmware.cmp
	`vp`	vp.dat (applies only to Mediant 1000B)
	`usrinf`	userInfo.txt
	`cmp`	firmware.cmp
	`fk`	fk.ini
	`cpt`	cpt.dat
	`prt`	prt.dat
	`cas`	cas.dat (applies only to Digital PSTN devices)
	`dpln`	dialPlan.dat
	`amd`	amd.dat
	`sslp`	pkey.pem
	`sslr`	root.pem
	`sslc`	cert.pem

Command Mode

Enable

Related Commands

template-files-list

Example

Specifying the URL of an HTTP server at 10.8.8.20 from which the files specified in the file template can be downloaded:

```
#(config-system)# automatic-update
(auto-update)# template-url http://10.8.8.20/Site1_<FILE>
```

If the template file list is configured as follows:

```
(auto-update)# template-files-list ini,fk,cpt
```

the device sends HTTP requests to the following URLs:

- http://10.8.8.20/Site1_device.ini
- http://10.8.8.20/Site1_fk.ini
- http://10.8.8.20/Site1_cpt.data

This page is intentionally left blank.

11 cli-settings

This command configures various CLI settings.

Syntax

```
(config-system)# cli-settings
(cli-settings)# < Argument >
```

Argument	Description
`idle-timeout {off|on}`	Configures the maximum duration (in minutes) that a CLI session may remain idle, before being disconnected.
`password-obscurity {off|on}`	Hides all passwords in the output of the **show running-config** command.
`privilege-password`	Configures the password for the privilege (Enable) mode.
`ssh {off|on}`	Enables secure access using SSH.
`ssh-acl`	Assigns an Access List entry (client) permitted to access the SSH interface. The Access List is configured by the **access-list** command.
`ssh-admin-key`	Configures the RSA public key (hexadecimal) for SSH client login.
`ssh-last-login-message {off|on}`	Enables the display of the last address from which the user logged into the SSH server.
`ssh-max-binary-packet-size`	Configures the maximum SSH binary packet size.
`ssh-max-login-attempts`	Configures the maximum number of SSH login attempts.
`ssh-max-payload-size`	Configures the maximum size of the SSH payload (in bytes).
`ssh-max-sessions`	Configures the maximum number of SSH sessions.
`ssh-port`	Configures the local port for SSH.
`ssh-require-public-key {off|on}`	Enables SSH authentication via RSA public key.
`telnet {enable|disable|ssl-only}`	Enables Telnet access to the device.
`telnet-acl`	Assigns an Access List entry (client) permitted to access the Telnet interface. The Access List is configured by the **access-list** command.
`telnet-port`	Configures the local port number for Telnet.
`telnet-max-sessions`	Configures the maximum number of Telnet sessions.
`verify-telnet-cert {disable|require}`	Enables or disables verification of peer (client) certificate by Telnet server.

Argument	Description
`window-height {0-65535|automatic}`	Configures the height of the CLI terminal window: ▪ **0-65535**: Configures the number of lines in the terminal to display. ▪ **automatic**: Whenever you manually change the height of the window (i.e., by dragging with the mouse), the new size is automatically saved.

Command Mode

Enable

Example

The example configures the CLI terminal window height to 15 lines:

```
(config-system)# cli-settings
(cli-settings)# window-height 15
```

12 clock

This command configures the date and time of the device.

Syntax

```
(config-system)# clock
(clock)# < Argument >
```

Argument	Description
date	Configures the date in the format dd/mm/yyyy (i.e., day/month/year).
summer-time	Configures daylight saving time.
time	Configures the current time in the format hh:mm:ss (i.e., hour:minutes:seconds).
utc-offset	Configures the time zone (offset from UTC) in seconds.

Command Mode

Enable

Example

This example configures the date of the device.

```
(config-system)# clock
(clock)# date 23/11/2016
```

This page is intentionally left blank.

13 configuration-version

This command configures the ini file version number when saving the device's configuration to an ini file. The version number appears in the file as: "INIFileVersion = < number >"

Syntax

```
(config-system)# configuration-version < Number >
```

Command Mode

Enable

Example

The following example configures the ini file version to 72101:

```
(config-system)# configuration-version 72101
```

This page is intentionally left blank.

14 feature-key

This command updates the License Key.

Syntax

```
(config-system)# feature-key < "License Key" >
```

Command Mode

Enable

Note

You must enclose the License Key string in quotes ("…").

Example

The following example updates the License Key:

```
(config-system)# feature-key
"r6wmr5to25smaB12d21aiSl94yMCf3lsfjBjagcch1kq9AZ9MJqqCOw44ywFcMlIb
iBaeNcsjh878ld1f2wKbY3IXJj1SOlcbiBfc6FBj1fROlJ9XvAw8k1IXdoFcOpeQJp
2e0sti1s0blNecypomhgU5yTlPREPQtl2e1wpiNgx7lRfeyXV?2s9@coFcOhdayWjW
hQuJeIgb5VbfyENc2w46O6OG3lf7NJnbkF5mxkka5xccyoVedYq1gMc"
```

This page is intentionally left blank.

15 http-services

This command allows HTTP clients to access web applications.

Syntax

```
(config-system)# http-services
(http-client-services)# < Argument >
```

Argument	Description
http-remote-hosts	Configures the HTTP Remote Hosts table for REST. For more information, see Section 15.1.
http-remote-services	Configures the HTTP Remote Services table for REST. For more information, see Section 15.2.
rest-debug-mode {0-3}	Configures the level of debug messages of HTTP services, which are sent to Syslog. **0** blocks all messages; **3** is the most detailed level.
routing-server-group-status {disable|enable}	Enables the reporting of the device's topology status (using the REST TopologyStatus API command) to HTTP remote hosts.

Command Mode

Enable

15.1 http-remote-hosts

This command configures the HTTP Remote Hosts table, which lets you define remote HTTP hosts per Remote Web Service. The table is a "child" of the Remote Web Services table.

Syntax

```
(config-system)# http-services
(http-client-services)# http-remote-hosts < http-remote-services
Index >/< Index >
(http-remote-hosts-Index/Index>)# < Argument >
```

Argument	Description
rest-address	Configures the IP address or FQDN of the remote HTTP host.
rest-interface	Configures the IP network interface to use.
rest-port	Configures the port of the remote HTTP host.
rest-servers	Configures an arbitrary name to identify the host.
rest-transport-type {rest-http|rest-https}	Configures the HTTP protocol.

Command Mode

Enable

Example

The following example configures an HTTP remote host "ARM" at 10.15.7.8:

```
(config-system)# http-services
(http-client-services)# http-remote-hosts 0/0
(http-remote-hosts-0/0)# rest-address 10.15.7.8
(http-remote-hosts-0/0)# rest-interface 0
(http-remote-hosts-0/0)# rest-servers ARM
(http-remote-hosts-0/0)# rest-transport-type rest-http
```

15.2 http-remote-services

This command configures the Remote Web Services table, which lets you define Web-based (HTTP/S) services provided by third-party, remote HTTP/S hosts.

Syntax

```
(config-system)# http-services
(http-client-services)# http-remote-services < Index >
(http-client-services-<Index>)# < Argument >
```

Argument	Description
`http-login-needed {disable|enable}`	Enables the use of proprietary REST API Login and Logout commands for connecting to the remote host.
`http-num-sockets`	Configures how many sockets (connection) are established per remote host.
`http-persistent-connection {disable|enable}`	Configures whether the HTTP connection with the host remains open or is only opened per request.
`http-policy {round-robin|sticky-next|sticky-primary}`	Configures the mode of operation when you have configured multiple remote hosts (in the HTTP Remote Hosts table) for a specific remote Web service.
`rest-ka-timeout`	Configures the duration (in seconds) in which HTTP-REST keep-alive messages are sent by the <device> if no other messages are sent.
`rest-message-type {call-status|capture|routing|topology-status}`	Configures the type of service provided by the HTTP remote host.
`rest-name`	Configures the name to easily identify the row.
`rest-password`	Configures the password for HTTP authentication.

Argument	Description
`rest-path`	Configures the path (prefix) to the REST APIs.
`rest-timeout`	Configures the TCP response timeout (in seconds) from the remote host.
`rest-tls-context`	Assigns a TLS context (if HTTPS).
`rest-user-name`	Configures the username for HTTP authentication.
`rest-verify-certificates {disable|enable}`	Enables certificate verification when connection with the host is based on HTTPS.

Command Mode

Enable

Example

The following example configures an HTTP service for routing:

```
(config-system)# http-services
(http-client-services)# http-remote-services 0
(http-client-services-0)# rest-message-type routing
(http-client-services-0)# rest-name ARM
```

This page is intentionally left blank.

16 ldap

This command configures LDAP and includes the following subcommands:

- **ldap-configuration** (see Section 16.1)
- **ldap-server-groups** (see Section 16.2)
- **ldap-servers-search-dns** (see Section 16.3)
- **mgmt-ldap-groups** (see Section 16.4)
- **settings** (see Section 16.5)

16.1 ldap ldap-configuration

This command configures the LDAP Servers table, which lets you configure LDAP servers.

Syntax

```
(config-system)# ldap ldap-configuration < Index >
(ldap-configuration-<Index>)# < Argument >
```

Argument	Description
`bind-dn`	Configures the LDAP server's bind Distinguished Name (DN) or username.
`domain-name`	Configures the domain name (FQDN) of the LDAP server.
`interface`	Configures the interface on which to send LDAP queries.
`max-respond-time`	Configures the duration (in msec) that the <device> waits for LDAP server responses.
`mgmt-attr`	Configures the LDAP attribute name to query, which contains a list of groups to which the user is a member of.
`password`	Configures the user password for accessing the LDAP server during connection and binding operations.
`server-group`	Assigns the LDAP server to an LDAP Server Group, configured in the LDAP Server Groups table.
`server-ip`	Configures the LDAP server's IP address.
`server-port`	Configures the LDAP server's port.
`tls-context`	Assigns a TLS Context if the connection with the LDAP server is TLS.
`use-tls {no|yes}`	Enables the <device> to encrypt the username and password (for Control and Management related queries) using TLS when sending them to the LDAP server.
`verify-certificate {no|yes}`	Enables certificate verification when the connection with the LDAP server uses TLS.

Command Mode

Enable

Example

The following example configures an LDAP server with IP address 10.15.7.8 and password "itsp1234":

```
(config-system)# ldap ldap-configuration 0
(ldap-configuration-0)# server-ip 10.15.7.8
(ldap-configuration-0)# password itsp1234
```

16.2 ldap ldap-server-groups

This command configures the LDAP Server Groups table, which lets you define LDAP Server Groups. An LDAP Server Group is a logical configuration entity that contains up to two LDAP servers.

Syntax

```
(config-system)# ldap ldap-server-groups < Index >
(ldap-server-groups-<Index>)# < Argument >
```

Argument	Description
`cache-entry-removal-timeout`	Configures the cache entry removal timeout.
`cache-entry-timeout`	Configures the cache entry timeout.
`search-dn-method {parallel|sequentialy}`	Configures the method for querying the DN objects within each LDAP server.
`server-search-method {parallel|sequentialy}`	Configures the method for querying between the two LDAP servers in the group.
`server-type {control|management}`	Configures whether the servers in the group are used for SIP-related LDAP queries (Control) or management login authentication-related LDAP queries (Management).

Command Mode

Enable

Example

The following example configures the LDAP Server Group for management-login authentication LDAP queries and where the search between the servers is done one after the other:

```
(config-system)# ldap ldap-server-groups 0
(ldap-server-groups-0)# server-type management
(ldap-server-groups-0)# server-search-method sequentialy
```

16.3 ldap ldap-servers-search-dns

This command configures the LDAP Search DN table, which lets you configure LDAP base paths, per LDAP Servers table.

Syntax

```
(config-system)# ldap ldap-servers-search-dns < ldap-configuration Index >/< Index >
(ldap-servers-search-dns-<Index>/<Index>)# set base-path
```

Command Mode

Enable

Example

The following example configures the LDAP base path "OU=NY,DC=OCSR2,DC=local":

```
config-system)# ldap ldap-servers-search-dns 0/0
(ldap-servers-search-dns-0-0)# set base-path
OU=NY,DC=OCSR2,DC=local
```

16.4 ldap mgmt-ldap-groups

This command configures the Management LDAP Groups table, which lets you define an access level per management groups, per LDAP Servers table.

Syntax

```
(config-system)# ldap mgmt-ldap-groups < ldap-configuration Index >/< Index >
(mgmt-ldap-groups-<Index>/<Index>)# < Argument >
```

Argument	Description
level	Configures the access level of the group(s).
groups	Configures the Attribute names of the groups in the LDAP server.

Command Mode

Enable

Example

The following example configures the LDAP server with monitor access level:

```
(config-system)# ldap mgmt-ldap-groups 0/0
(mgmt-ldap-groups-0-0)# level monitor
```

16.5 ldap settings

This command configures various LDAP settings.

Syntax

```
(config-system)# ldap settings
(ldap)# < Argument >
```

Argument	Description
auth-filter	Configures the filter (string) to search the user during the authentication process.
cache {clear-all|refresh-entry}	Configures LDAP cache actions.
enable-mgmt-login {off|on}	Enables the device to use LDAP for authenticating management interface access.
entry-removal-timeout	Configures the duration (in hours) after which an entry is removed from the LDAP cache.
entry-timeout	Configures the duration (minutes) an entry in the LDAP cache is valid.
ldap-cache-enable {off|on}	Enables the LDAP cache.
ldap-search-server-method {parallel|sequentialy}	Configures the search method in the LDAP servers if more than one LDAP server is configured.
ldap-service {off|on}	Enables the LDAP service.
search-dns-in-parallel {parallel|sequentialy}	Configures whether DNs should be checked in parallel or sequentially when there is more than one search DN.

Command Mode

Enable

Example

The following example enables the LDAP cache and sets the valid duration of a cached entry to 1200 minutes.

```
(config-system)# ldap settings
(ldap)# ldap-cache-enable on
(ldap)# entry-timeout 1200
```

17 mgmt-access-list

This command configures the Access List table, which lets you restrict access to the device's management interfaces (Web and CLI) by specifying IP addresses of management clients that are permitted to access the device.

Syntax

```
(config-system)# mgmt-access-list < Index >
(mgmt-access-list <Index>)# ip-address < IP address >
```

Command Mode

Enable

Example

The following example allows the host at IP address 10.11.12.120 to connect to the management interface:

```
(config-system)# mgmt-access-list 0
(mgmt-access-list 0)# ip-address 10.11.12.120
```

This page is intentionally left blank.

18 mgmt-auth

This command configures various management settings.

Syntax

```
(config-system)# mgmt-auth
(mgmt-auth)# < Argument >
```

Argument	Description
default-access-level	Configures the device's default access level when the LDAP/RADIUS response doesn't include an access level attribute for determining the user's management access level.
local-cache-mode {absolute-expiry-timer|reset-expiry-upon-access}	Configures the password's local cache timeout to reset after successful authorization.
local-cache-timeout	Configures the locally stored login password's expiry time, in seconds. When expired, the request to the Authentication server is repeated.
timeout-behavior {VerifyAccessLocally|deny-access}	Configures the device to search in the Local Users table if the Authentication server is inaccessible.
use-local-users-db {always|when-no-auth-server}	Configures when to use the Local Users table in addition to the Authentication server.

Command Mode

Enable

Example

The following example configures the device's default access level as 200:

```
(config-system)# mgmt-auth
(mgmt-auth)# default-access-level 200
```

This page is intentionally left blank.

19 ntp

This command configures Network Time Protocol (NTP) for updating the device's date and time.

Syntax

```
(config-system)# ntp
(ntp)# < Argument >
```

Argument	Description
auth-key-id	Configures the NTP authentication key identifier (string) for authenticating NTP messages.
auth-key-md5	Configures the authentication key (string) shared between the <device> (client) and the NTP server, for authenticating NTP messages.
ntp-as-oam {off|on}	Configures the location of the Network Time Protocol (NTP).
primary-server	Configures the NTP server FQDN or IP address.
secondary-server	Configures the NTP secondary server FQDN or IP address.
update-interval	Defines the NTP update time interval (in seconds).

Command Mode

Enable

Example

The following example configures an NTP server with IP address 10.15.7.8 and updated every hour:

```
(config-system)# ntp
(ntp)# primary-server 10.15.7.8
(ntp)# update-interval 216000
```

This page is intentionally left blank.

20 packetsmart

This command configures the device to send voice traffic data to BroadSoft's BroadCloud PacketSmart solution for monitoring and assessing the network in which the device is deployed.

Syntax

```
(config-system)# packetsmart < Argument >
```

Argument	Description
`enable`	Enables the PacketSmart feature. Takes effect only after reseting the device.
`monitor voip interface-if`	Configures the IP network interface ID for voice traffic.
`network voip interface-if`	Configures the IP network interface ID for communication with PacketSmart.
`server address [port]`	Configures the PacketSmart server address and port.

Command Mode

Enable

Example

The following example configures PacketSmart server IP address 10.15.7.8:

```
(config-system)# packetsmart enable
(config-system)# packetsmart monitor voip interface-if 0
(config-system)# packetsmart network voip interface-if 0
config-system)# packetsmart server address 10.15.7.8
```

This page is intentionally left blank.

21 performance-profile

This command configures the Performance Profile table, which defines thresholds of performance-monitoring call metrics for Major and Minor severity alarms.

Syntax

```
(config-system)# performance-profile < Index >
(performance-profile-<Index>)# < Argument >
```

Argument	Description
entity {global|ip-group|srd}	Configures the entity.
hysteresis	Configures the amount of fluctuation (hysteresis) from the configured threshold in order for the threshold to be considered as crossed.
ip-group-name	Configures the IP Group (string).
major-threshold	Configures the Major threshold.
minimum-samples	Calculates the performance monitoring (only if at least 'minimum samples' is configured in the argument 'window-size' (see below).
minor-threshold	Configures the Minor threshold.
pmtype {acd|asr|ner}	Configures the type of performance monitoring.
srd-name	Configures the SRD (string).
window-size	Configures how often performance monitoring is calculated (in minutes).

Command Mode

Enable

Example

This example configures a Performance Profile based on the ASR of a call, where the Major threshold is configured at 70%, the Minor threshold at 90% and the hysteresis for both thresholds at 2%:

```
(config-system)# performance-profile 0
(performance-profile-0)# entity ip-group
(performance-profile-0)# ip-group-name ITSP
(performance-profile-0)# pmtype asr
(performance-profile-0)# major-threshold 70
(performance-profile-0)# minor-threshold 90
(performance-profile-0)# hysteresis 2
```

This page is intentionally left blank.

22 radius

This command configures Remote Authentication Dial-In User Service (RADIUS) settings to enhance device security and includes the following subcommands:

- **radius servers** (see Section 22.1)
- **radius settings** (see Section 22.2)

22.1 radius servers

This command configures the RADIUS Servers table, which defines RADIUS servers.

Syntax

```
(config-system)# radius servers < Index >
(servers-<Index>)# < Argument >
```

Argument	Description
acc-port	Configures the RADIUS server's accounting port.
auth-port	Configures the RADIUS server's authentication port.
ip-address	Configures the RADIUS server's IP address.
shared-secret	Configures the shared secret between the RADIUS client and the RADIUS server.

Command Mode

Enable

Example

The following example configures a RADIUS server with IP address 10.15.7.8:

```
(config-system)# radius servers 0
(servers-0)# ip-address 10.15.7.8
```

22.2 radius settings

This command configures various RADIUS settings.

Syntax

```
(config-system)# radius settings
(radius)# < Argument >
```

Argument	Description
double-decode-url {off|on}	Enables an additional decoding of authentication credentials that are sent to the RADIUS server via URL.
enable {off|on}	Enables or disables the RADIUS application.

Argument	Description
`enable-mgmt-login {off|on}`	Uses RADIUS for authentication of management interface access.
`local-cache-mode {0|1}`	Configures the capability to reset the expiry time of the local RADIUS password cache.
`local-cache-timeout`	Configures the expiry time, in seconds of the locally stored RADIUS password cache.
`nas-id-attribute`	Configures the RADIUS NAS Identifier attribute.
`timeout-behavior`	Configures device behavior when RADIUS times out.
`vsa-access-level`	Configures the 'Security Access Level' attribute code in the VSA section of the RADIUS packet that the device should relate to.
`vsa-vendor-id`	Configures the vendor ID that the device should accept when parsing a RADIUS response packet.

Command Mode

Enable

Example

The following example demonstrates configuring VSA vendor ID:

```
(config-system)# radius settings
(radius)# vsa-vendor-id 5003
```

23 snmp

This command configures Simple Network Management Protocol (SNMP) and includes the following subcommands:

- **settings** (see Section 23.1)
- **trap** (see Section 23.2)
- **trap-destination** (see Section 23.3)
- **v3-users** (see Section 23.4)

23.1 snmp settings

This command configures various SNMP settings.

Syntax

```
(config-system)# snmp settings
(snmp)# < Argument >
```

Argument	Description
`activate-keep-alive-trap [interval]`	Enables a keep-alive trap for the agent behind NAT.
`delete-ro-community-string`	Deletes the read-only community string.
`delete-rw-community-string`	Deletes the read-write community string.
`disable {no|yes}`	Enables SNMP.
`engine-id`	Configures the SNMP Engine ID. 12 HEX Octets in the format: xx:xx:...:xx
`port`	Configures the port number for SNMP requests and responses.
`ro-community-string`	Configures a read-only community string.
`rw-community-string`	Configures a read-write community string.
`snmp-acl {community string}`	Sets the configuration.
`sys-contact`	Configures the contact person for this managed node (string) .
`sys-location`	Configures the physical location of the node (string).
`sys-name`	Configures the sysName as descibed in MIB-2 (string).
`sys-oid`	Configures the base product system OID - SNMP SysOid (string).
`trusted-managers {0-4} < IP Address >`	Configures the IP address of Trusted SNMP Managers.

Command Mode

Enable

Example

The following example configures the SysOID:

```
(config-system)# snmp settings
(snmp)# sys-oid 1.3.6.1.4.1.5003.10.10.2.21.1.3
```

23.2 snmp trap

This command configures SNMP traps.

Syntax

```
(config-system)# snmp trap
(snmp-trap)# < Argument >
```

Argument	Description
`auto-send-keep-alive {disable|enable}`	Invokes a keep-alive trap and sends it every 9/10 of the time defined by the parameter NatBindingDefaultTimeout.
`community-string`	Configures the community string used in traps.
`manager-host-name`	Configures the FQDN of the remote host that is used as an SNMP Trap Manager.
`reset-community-string`	Returns to the default trap community string.

Command Mode

Enable

Example

The following example configures the FQDN of the remote host used as the SNMP Trap Manager:

```
(config-system)# snmp trap
(snmp-trap)# manager-host-name John
```

23.3 snmp trap-destination

This command configures the SNMP Trap Destinations table, which defines SNMP trap destinations (Managers).

Syntax

```
(config-system)# snmp trap-destination < Index >
(trap-destination-<Index>)# < Argument >
```

Argument	Description
ip-address	Configures the SNMP manager's IP address.
port	Configures the SNMP manager's port.
reset-trap-user	Returns to the default trap user.
send-trap {disable|enable}	Enables the sending of traps to the SNMP manager.
trap-user	SNMPv3 USM user or SNMPv2 user to associate with this trap destination.

Command Mode

Enable

Example

The following example demonstrates configuring a trap destination:

```
(config-system)# snmp
(snmp)# trap-destination 0
(trap-destination 0)# ip-address 10.13.4.145
(trap-destination 0)# send-trap
```

23.4 snmp v3-users

This command configures the SNMPv3 Users table, which defines SNMPv3 users.

Syntax

```
(config-system)# snmp v3-users < Index >
v3-users-<Index># < Argument >
```

Argument	Description
auth-key	Configures the authentication key. The hex string should be in xx:xx:xx... format (string).
auth-protocol {md5|none|sha-1}	Configures the authentication protocol.
group {read-only|read-write|trap}	Configures the group that this user is associated with.
priv-key	Configures the privacy key. The hex string should be in xx:xx:xx... format.
priv-protocol {3des|aes-128|des|none}	Configures the privacy protocol (string).
username	Configures the name of the SNMP user. Must be unique in the scope of SNMPv3 users and community strings.

Command Mode

Enable

Example

The following example configures an SNMPv3 user:

```
(config-system)# snmp v3-users 0
(v3-users-0)# username JaneD
```

24 user

This command configures the Local Users table, which defines management user accounts.

Syntax

```
(config-system)# user < Username >
user-<Username># < Argument >
```

Argument	Description
block-duration < Time >	Configures the duration (in seconds) for which the user is blocked when the user exceeds a user-defined number of failed login attempts.
password < Password >	Configures the user's password.
password-age < Days >	Configures the validity duration (in days) of the password.
privilege {admin|master|sec-admin|user}	Configures the user's privilege level.
session-limit < Max. Sessions >	Configures the maximum number of concurrent sessions logged in with the same username-password.
session-timeout < Number >	Configures the duration (in minutes) of inactivity of a logged-in user, after which the user is automatically logged off the Web session.
status {failed-login|inactivity|new|valid}	Configures the status of the user.

Command Mode

Enable

Example

The following example configures a new user "John":

```
(config-system)# user John
Configure new user John
user-John# password qwer
user-John# status valid
```

This page is intentionally left blank.

25 web

This command configures various Web interface settings.

Syntax

```
(config-system)# web
(web)# < Argument >
```

Argument	Description
`control-pass-via-snmp {off|on}`	Enables changing the password of the Web interface and the username through SNMP.
`enforce-password-complexity {0|1}`	Enforces definition of a complex password.
`http-auth-mode {basic|digest-http-only| digest-when-possible}`	Selects HTTP basic (clear text) or digest (MD5) authentication for the Web interface.
`http-port`	Configures the device's LAN HTTP port for Web interface access.
`https-cipher-string`	Configures the cipher string for HTTPS.
`https-port`	Configures the device's LAN HTTPS port for secure Web interface access.
`req-client-cert {off|on}`	Enables requirement of client certificates for HTTPS Web interface connections.
`secured-connection {http-and-https|https-only}`	Configures the protocol (HTTP or HTTPS) for accessing the Web interface.

Command Mode

Enable

Note

For more information on the commands, refer to the *User's Manual*.

Example

The following example enables requirement of client certificates for HTTPS Web interface connections:

```
(config-system)# web
(web)# req-client-cert on
```

This page is intentionally left blank.

26 welcome-msg

This command configures a banner message, which is displayed when you connect to the device's management interfaces (Web and CLI).

Syntax

```
(config-system)# welcome-msg < Index >
(welcome-msg-<Index>)# text < Message >
```

Argument	Description
< Index >	The message can include up to 20 lines (0 to 19).
text < Message >	Configures the message (string) for the row.
display	Displays the banner message.

Command Mode

Enable

Note

The message string must not contain spaces between characters. Use hyphens to separate words.

Example

- The following example configures a banner message:

```
(config-system)# welcome-msg 0
(welcome-msg-0)# text Hello-World-of-SBC
(welcome-msg-0)# activate
(welcome-msg-0)# exit
(config-system)# welcome-msg 1
(welcome-msg-1)# text Configure-Me
(welcome-msg-1)# activate
```

- The following example displays the message:

```
(config-system)# welcome-msg display
welcome-msg 0
  text "Hello-World-of-SBC"
welcome-msg 1
  text "Configure-Me"
```

The message is displayed when you connect to the device's management interface:

```
Hello-World-of-SBC
Configure-Me
Username: Admin
```

This page is intentionally left blank.

Part IV

Troubleshoot-Level Commands

27 Introduction

This part describes the commands located at the Troubleshoot level.

To access the Troubleshoot level, enter the following command at the root prompt:

```
# configure troubleshoot
(config-troubleshoot)#
```

The Troubleshoot-level commands include the following main commands:

- **activity-log** (see Section 28)
- **activity-trap** (see Section 29)
- **cdr** (see Section 30)
- **fax-debug** (see Section 31)
- **logging** (see Section 32)
- **pstn-debug** (see Section 33)
- **syslog** (see Section 34)
- **test-call** (see Section 35)

This page is intentionally left blank.

28 activity-log

This command configures event types performed in the management interface (Web and CLI) to report in syslog messages or in an SNMP trap.

Syntax

```
(config-troubleshoot)# activity-log
(activity-log)# < Argument >
```

Argument	Description
`action-execute {on|off}`	Enables logging notifications on actions executed events.
`cli-commands-log {on|off}`	Enables logging of CLI commands.
`config-changes {on|off}`	Enables logging notifications on parameters-value-change events.
`device-reset {on|off}`	Enables logging notifications on device-reset events.
`files-loading {on|off}`	Enables logging notifications on auxiliary-files-loading events.
`flash-burning {on|off}`	Enables logging notifications on flash-memory-burning events.
`login-and-logout {on|off}`	Enables logging notifications on login-and-logout events.
`sensitive-config-changes {on|off}`	Enables logging notifications on sensitive-parameters-value-change events.
`software-update {on|off}`	Enables logging notifications on device-software-update events.
`unauthorized-access {on|off}`	Enables logging notifications on non-authorized-access events.

Command Mode

Enable

Related Command

activity-trap - enables an SNMP trap to report Web user activities.

Example

The following example enables reporting of login and logout attempts:

```
(config-troubleshoot)# activity-log
(activity-log)# login-and-logout on
```

This page is intentionally left blank.

29 activity-trap

This command enables the device to send an SNMP trap to notify of Web user activities in the Web interface.

Syntax

```
(config-troubleshoot)# activity-trap {on|off}
```

Command Mode

Enable

Related Command

activity-log - configures the activity types to report.

Example

The following example demonstrates configuring the activity trap:

```
(config-troubleshoot)# activity-trap on
```

This page is intentionally left blank.

30 cdr

This command configures CDRs.

Syntax

```
(config-troubleshoot)# cdr
(cdr)# < Argument >
```

Argument	Description
aaa-indications {accounting-only|none}	Configures which Authentication, Authorization and Accounting indications to use.
cdr-format	Customizes the CDR format (see Section 30.1).
cdr-report-level {connect-and-end-call|end-call|none|start-and-end-and-connect-call|start-and-end-call}	Configures the call stage at which media- and signaling-related CDRs are sent to a Syslog server.
cdr-seq-num {off|on}	Enables sequence numbering of SIP CDR syslog messages.
cdr-srvr-ip-adrr	Configures the syslog server IP address for sending CDRs.
enable {off|on}	Enables or disables the RADIUS application.
local-storage-interval	Configures the interval size for locally stored files, in minutes.
local-storage-max-file-size	Configures the maximum size per locally stored file, in KB.
local-storage-max-files	Configures the maximum number of locally stored files.
media-cdr-rprt-level {end|none|start-and-end|start-end-and-update|update-and-end}	Enables media-related CDRs of SBC calls to be sent to a Syslog server and configures the call stage at which they are sent.
non-call-cdr-rprt {off|on}	Enables creation of CDR messages for non-call SIP dialogs (such as SUBSCRIBE, OPTIONS, and REGISTER).
radius-accounting {end-call|connect-and-end-call|start-and-end-call}	Configures at what stage of the call RADIUS accounting messages are sent to the RADIUS accounting server.

Command Mode

Enable

Example

The following example configures the call stage at which CDRs are generated:

```
(config-troubleshoot)# cdr
(cdr)# cdr-report-level start-and-end-call
```

30.1 cdr-format

This command customizes the format of CDRs for gateway (Gateway CDR Format table) and SBC (SBC CDR Format table) calls.

Syntax

```
(config-troubleshoot)# cdr
(cdr)# cdr-format < Argument >
```

Argument	Value
gw-cdr-format	See Section 30.1.1.
sbc-cdr-format	See Section 30.1.2.
show-title	See Section 30.1.3.

30.1.1 gw-cdr-format

This command customizes the format of CDRs for gateway (Gateway CDR Format table) calls.

Syntax

```
(config-troubleshoot)# cdr
(cdr)# cdr-format gw-cdr-format < Index >
(gw-cdr-format-<Index>)# < Argument >
```

Argument	Value
cdr-type {local-storage-gw|radius-gw|syslog-gw}	Configures the type of CDRs that you want customized.
col-type	Configures the CDR field (column) that you want to customize.
radius-id	Configures the ID of the RADIUS Attribute.
radius-type {standard|vendor-specific}	Configures the RADIUS Attribute type.
title	Configures a new name for the CDR field name.

Example

The following example changes the CDR field name "call-duration" to "Phone-Duration" for Syslog messages:

```
(config-troubleshoot)# cdr
(cdr)# cdr-format gw-cdr-format 0
(gw-cdr-format-0)# cdr-type syslog-media
(gw-cdr-format-0)# col-type call-duration
```

```
(gw-cdr-format-0)# title Phone-Duration
```

30.1.2 sb-cdr-format

This command customizes the format of CDRs for SBC (SBC CDR Format table) calls.

Syntax

```
(config-troubleshoot)# cdr
(cdr)# cdr-format sbc-cdr-format < Index >
(sbc-cdr-format-<Index>)# < Argument >
```

Argument	Value
`cdr-type {local-storage-gw|radius-gw|syslog-gw}`	Configures the type of CDRs that you want customized.
`col-type`	Configures the CDR field (column) that you want to customize.
`radius-id`	Configures the ID of the RADIUS Attribute.
`radius-type {standard|vendor-specific}`	Configures the RADIUS Attribute type.
`title`	Configures a new name for the CDR field name.

Example

The following example changes the CDR field name "connect-time" to "Call-Connect-Time=" and the RADIUS Attribute to 281 for RADIUS messages:

```
(cdr)# cdr-format sbc-cdr-format 0
(sbc-cdr-format-0)# cdr-type radius-sbc
(sbc-cdr-format-0)# col-type connect-time
(sbc-cdr-format-0)# title Call-Connect-Time=
(sbc-cdr-format-0)# radius-type vendor-specific
(sbc-cdr-format-0)# radius-id 281
```

30.1.3 show-title

This command displays CDR column titles of a specific CDR type.

Syntax

```
(config-troubleshoot)# cdr
(cdr)# cdr-format show-title < Argument >
```

Argument	Value
local-storage-gw	Displays CDR column titles of locally stored Gateway CDRs.
local-storage-sbc	Displays CDR column titles of locally stored SBC CDRs.
syslog-gw	Displays CDR column titles of Syslog Gateway CDRs.
syslog-media	Displays CDR column titles of Syslog media CDRs.
syslog-sbc	Displays CDR column titles of Syslog SBC CDRs.

Example

The following example displays column titles of Syslog Gateway CDRs:

```
(config-troubleshoot)# cdr
(cdr)# cdr-format show-title syslog-gw
|GWReportType   |Cid  |SessionId |LegId|Trunk|BChan|ConId|TG
|EPTyp  |Orig |SourceIp |DestIp |TON  |NPI  |SrcPhoneNum
|SrcNumBeforeMap |TON  |NPI  |DstPhoneNum |DstNumBeforeMap
|Durat|Coder |Intrv|RtpIp |Port |TrmSd|TrmReason |Fax |InPackets
|OutPackets|PackLoss |RemotePackLoss|SIPCallId |SetupTime
|ConnectTime |ReleaseTime |RTPdelay |RTPjitter|RTPssrc
|RemoteRTPssrc |RedirectReason |TON  |NPI  |RedirectPhonNum
|MeteringPulses  |SrcHost |SrcHostBeforeMap |DstHost
|DstHostBeforeMap    |IPG (name) |LocalRtpIp |LocalRtpPort
|Amount |Mult |TrmReasonCategory|RedirectNumBeforeMap|SrdId (name)
|SIPInterfaceId (name) |ProxySetId (name) |IpProfileId (name)
|MediaRealmId (name)|SigTransportType|TxRTPIPDiffServ |
TxSigIPDiffServ|LocalRFactor|RemoteRFactor|LocalMosCQ|RemoteMosCQ|
SigSourcePort|SigDestPort|MediaType |AMD| %
|SIPTrmReason|SIPTermDesc |PstnTermReason|LatchedRtpIp
|LatchedRtpPort |LatchedT38Ip |LatchedT38Port |CoderTranscoding
```

31 fax-debug

This command configures fax / modem debugging.

Syntax

```
(config-troubleshoot)# fax-debug < Argument >
```

Argument	Description
`level {basic|detail}`	Configures the fax / modem debug level.
`max-sessions`	Configures debugging the maximum number of fax / modem sessions.
`off`	Disables fax / modem debugging.
`on`	Enables fax / modem debugging.

Command Mode

Enable

Example

The following example configures fax / modem debug basic level:

```
(config-troubleshoot)# fax-debug level basic
(config-troubleshoot)# on
```

This page is intentionally left blank.

32 logging

This command configures logging and includes the following subcommands:

- `logging-filters` (see Section 32.1)
- `settings` (see Section 32.2)

32.1 logging-filters

This command configures the Logging Filters table.

Syntax

```
(config-troubleshoot)# logging logging-filters < Index >
(logging-filters-<Index>)# < Argument >
```

Argument	Description
`filter-type {any|classification|fxs-fxo|ip-group|ip-to-ip-routing|ip-to-tel|ip-trace|sip-interface|srd|tel-to-ip|trunk-bch|trunk-group-id|trunk-id|user}`	Type of logging filter.
`log-dest {debug-rec|local-storage|syslog}`	Log destination.
`log-type {cdr-only|none|pstn-trace|signaling|signaling-media|signaling-media-pcm}`	Log type.
`mode {disable|enable}`	Enables or disables the log rule.
`value`	Value of log filter (string).

Command Mode

Enable

Example

The following example configures a Logging Filter rule (Index 0) that sends SIP signaling syslog messages of IP Group 1 to a Syslog server:

```
(config-troubleshoot)# logging logging-filters 0
(logging-filters-0)# filter-type ip-group
(logging-filters-0)# log-dest syslog
(logging-filters-0)# log-type signaling
(logging-filters-0)# mode enable
(logging-filters-0)# value 1
```

32.2 settings

This command configures debug recording settings.

Syntax

```
(config-troubleshoot)# logging settings
(logging-settings)# < Argument >
```

Argument	Description
dbg-rec-dest-ip	Configures the destination IP address for debug recording.
dbg-rec-dest-port	Configures the destination UDP port for debug recording.
dbg-rec-status {start|stop}	Starts and stops debug recording.

Command Mode

Enable

Example

The following example configures the debug recoding server at 10.13.28.10 and starts the recording:

```
(config-troubleshoot)# logging settings
(logging-settings)# dbg-rec-dest-ip 10.13.28.10
(logging-settings)# dbg-rec-status start
```

33 pstn-debug

This command enables or disables PSTN debugging.

Syntax

```
(config-troubleshoot)# pstn-debug {on|off}
```

Command Mode

Enable

Example

The following example enables PSTN debugging:

```
(config-troubleshoot)# pstn-debug on
```

This page is intentionally left blank.

34 syslog

This command configures syslog debugging.

Syntax

```
(config-troubleshoot)# syslog
(syslog)# < Argument >
```

Argument	Description
debug-level {basic|detailed|no-debug}	Configures the SIP media gateway's debug level.
specific-debug-names-list	Configures a specific debug names list (string).
Syslog {on|off}	Enables or disables syslog messages.
syslog-cpu-protection {on|off}	Enables or disables downgrading the debug level when CPU idle is dangerously low.
syslog-ip	Configures the syslog server's IP address.
syslog-optimization {disable|enable}	Enables or disables bundling debug syslog messages for performance.
syslog-port	Configures the syslog server's port number.
system-log-size	Configures the local system log file size (in Kbytes).

Command Mode

Enable

Example

The following example disables syslog:

```
(config-troubleshoot)# syslog
(syslog)# debug-level no-debug
```

This page is intentionally left blank.

35 test-call

This command configures test calls and includes the following subcommands:

- `settings` (see Section 35.1)
- `test-call-table` (see Section 35.2)

35.1 settings

This command configures various test call settings.

Syntax

```
(config-troubleshoot)# test-call settings
(test-call)# < Argument >
```

Argument	Description
`testcall-dtmf-string`	Configures a DTMF string (tone) that is played for answered test calls.
`testcall-id`	Configures the incoming test call prefix that identifies it as a test call.

Command Mode

Enable

Example

The following example configures a test call ID:

```
(config-troubleshoot)# test-call
(test-call)# testcall-id 03
```

35.2 test-call-table

This command configures the Test Call Rules table, which allows you to test SIP signaling (setup and registration) and media (DTMF signals) of calls between a simulated phone on the <device> and a remote IP endpoint.

Syntax

```
(config-troubleshoot)# test-call test-call-table < Index >
(test-call-table-<Index>)# < Argument >
```

Argument	Description
application-type {gw|sbc}	Application type.
auto-register {disable|enable}	Automatic register.
bandwidth-profile	Bandwidth Profile.
call-duration	Call duration in seconds (-1 for auto, 0 for infinite).
call-party {called|caller}	Test call party.
called-uri	Called URI.
calls-per-second	Calls per second.
dst-address	Destination address and optional port.
dst-transport	Destination transport type.
endpoint-uri	Endpoint URI ('user' or 'user@host').
ip-group-name	IP Group.
max-channels	Maximum concurrent channels for session.
password	Password for registration.
Play {disable|dtmf|prt}	Playback mode.
qoe-profile	Quality of Experience (QOE) Profile.
route-by {dst-address|ip-group|tel-to-ip}	Routing method.
schedule-interval	0 disables scheduling, any positive number defines the interval between scheduled calls (in minutes).
sip-interface-name	SIP Interface.
test-duration	Test duration (minutes).
test-mode {continuous|once}	Test mode.
user-name	User name for registration.

Command Mode

Enable

Example

The following example partially configures a test call rule that calls endpoint URI 101 at IP address 10.13.4.12:

```
(config-troubleshoot)# test-call test-call-table 0
(test-call-table-0)# called-uri 101
(test-call-table-0)# route-by dst-address
(test-call-table-0)# dst-address 10.13.4.12
```

International Headquarters
1 Hayarden Street,
Airport City
Lod 7019900, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.
27 World's Fair Drive,
Somerset, NJ 08873
Tel: +1-732-469-0880
Fax: +1-732-469-2298

Contact us: www.audiocodes.com/info
Website: www.audiocodes.com

Document #: LTRT-17924

AudioCodes