

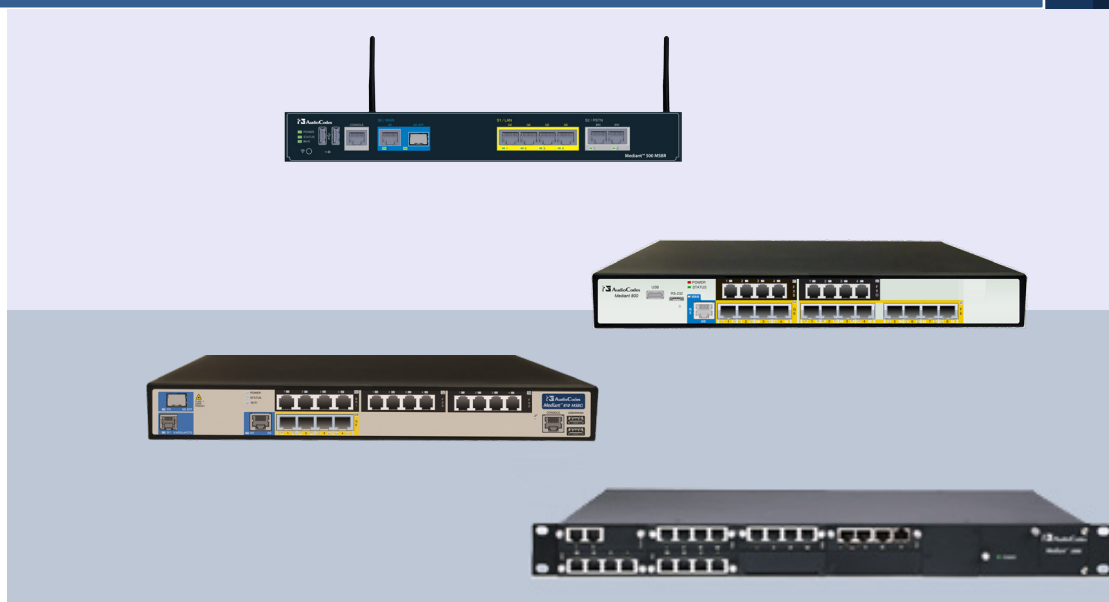
Mediant™ Series

Multi-Service Business Router (MSBR)

Analog & Digital Lines

CLI Reference Guide

For System and VoIP Functionalities



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Notice

This document describes the System and VoIP Command Line Interface (CLI) commands of AudioCodes Mediant 500 MSBR, Mediant 800 MSBR, Mediant 850 MSBR and Mediant 1000B MSBR Voice-over-IP (VoIP) SIP media gateways.

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Manual Name
SIP CPE Release Notes
Mediant 800 MSBR Installation Manual
Mediant 800 MSBR SIP User's Manual
Mediant 850 MSBR Installation Manual
Mediant 850 MSBR SIP User's Manual
Mediant 1000B MSBR SIP Installation Manual
Mediant 1000B MSBR SIP User's Manual



Note: Throughout this manual, unless otherwise specified, the term *device* refers to the Mediant 500 MSBR, Mediant 800 MSBR, Mediant 850 MSBR and Mediant 1000B MSBR.

1 Introduction

This document provides a reference for the device's System and VoIP Command Line Interface (CLI) commands. It describes the syntax and use of all the CLI commands.

Reader's Notes

2 Getting Started

2.1 Connecting to the CLI

MSBR's CLI can be accessed via RS232 interface, Telnet or SSH protocols via the Ethernet interface.

2.1.1 RS-232

The MSBR can be accessed via RS-232 by connecting a VT100 terminal to the device or using a terminal emulation program with a PC. Most Windows® computers come with a program called HyperTerminal®, which is located under **Programs > Accessories > Communications**.

Once you have connected via a VT100 terminal and started the HyperTerminal program, set the program settings as follows:

- 115200 baud rate
- 8 data bits
- No parity
- 1 stop bit
- No flow control

If you are using HyperTerminal, name your new connection and then set up the new connection via the resulting dialog box. The box allows you to determine the type of connection you are using. Verify COM1 and select **OK**.

Another dialogue box appears for entering the COM1 properties. Enter the program settings in this box; select **APPLY** and then **OK**. You should then be presented with a terminal window in which you can interface with your device.

2.1.2 SSH

The MSBR can be accessed by SSH protocol using SSH client software.

One of the most popular and freeware SSH client software is Putty, which can be downloaded from the following URL:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

By default the SSH access is disabled. Enable SSH access via CLI (**configure system > cli-terminal > set ssh on > activate**), or set the '*SSHServerEnable*' ini parameter to '1'.

2.1.3 Telnet

The MSBR 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.

2.2 CLI Structure

2.2.1 Authentication

When the device is accessed, the user is prompted to enter the device administrator's Username and Password.

The device administrator's credentials are common to all AudioCodes management interfaces (e.g. Web).

The default username and password are 'Admin', 'Admin' respectively.

2.2.2 Understanding Configuration Modes

As you begin communication, you should understand the command modes. Each command mode enables the user to access more commands and to make more changes in the device's configuration.

The CLI has two command modes:

- Basic
- Enable

The two command modes are organized in a two-tiered hierarchy with Basic at the bottom and Enable at the top.

2.2.2.1 Basic Command Mode

Interaction with your device begins at the Basic Command Mode. The commands supported by this command tier are limited, as is interaction with the device itself. The Basic Mode is for users without access to the higher-tiered commands, to keep them from changing the preferred configurations of the device.

The Basic Mode is accessed by beginning a CLI session (after successful authentication) and it enables the user to display system information and activate several debugging facilities.

The Basic Mode prompt is '>'.

2.2.2.2 Enable Command Mode

Enable Command Mode is the high-level tier in the command hierarchy, basically one step up from the Basic Mode. A password ('Admin' by default) is required to access the Enable Mode.

From the Enable Mode, you can access the configurations of your product as well as handle how your device boots and runs, among other things.

The Enable Mode is accessed by entering 'enable' while in the Basic Command Mode.

The Enable Mode prompt is '#'.

2.2.2.3 Understanding Configurations

Configurations are the means by which you set up your device and system according to your personal requirements and preferences.

All configurations are accessed through the Enable Command Mode. The configuration is divided into the following main configuration-sets:

- `configure system`
- `configure voip`

By typing "`configure`" at the Enable Mode prompt, you are ready to specify the configuration you want to access. Each configuration-set contains a different set of the command.

The "`configure system`" set contains the general and system oriented configuration command of the device - for example, Syslog configuration.

The "`configure voip`" set contains VoIP-oriented configuration commands - for example SIP, VoIP network interfaces and VoIP Media configurations.

The configuration command sets are broken down into categories of similar functions. For example, all commands dealing with configuring the Ethernet interface are grouped together, as are configuration commands dealing with hardware, virtual network, and so on.

2.2.3 Using CLI Shortcuts

The MSBR CLI provides several shortcuts to help you configure your MSBR product more easily. See the following table for descriptions.

Table 2-1: CLI Shortcuts

Shortcut	Description
Up arrow key	To re-display a previously entered command, use the Up arrow key. Continuing to press the Up arrow key cycles through all commands entered, starting with the most recent command.
<Tab> key	Pressing the <Tab> key after entering a partial (but unique) command completes the command, displays it on the command prompt line, and waits for further input. Pressing the <Tab> key after entering a partial and not unique command displays all completing options.
?	The MSBR CLI contains help to guide you through the configuration process. Using the question mark, do one of the following: Displays a list of all subcommands in the current mode. For example: <pre>(config)# interface ? BVI bridge interface GigabitEthernet GigabitEthernet vlan Vlan interface</pre> Displays a list of available commands beginning with certain letter(s). For example: <pre>(config)# interface G? GigabitEthernet GigabitEthernet</pre> Obtains syntax help for a specific command by entering the command, a space, and then a question mark (?). The MSBR CLI displays the range of values and a brief description of the next parameter expected for that particular command. For example: <pre>(config)# interface vlan ? [1-3999] Vlan ID</pre> In case there is a command that can be invoked (all its arguments are inserted), using the question mark at its end displays <cr>. For example: <pre>(config)# logging host 10.1.1.1 ? <cr></pre>
<Ctrl + A>	Jump to the beginning of the displayed command line. This shortcut is helpful when using the no form of commands (when available).
<Ctrl + E>	Jump to the end of the displayed command line.
<Ctrl + U>	Clears the current displayed command line.

auto finish	You need only enter enough letters to identify a command as unique. For example, entering <code>int G 0/0</code> at the configuration prompt provides you access to the configuration parameters for the specified Gigabit-Ethernet interface. Entering <code>interface GigabitEthernet 0/0</code> would work as well, but is not necessary.
-------------	--

2.2.4 Common CLI Functions

The following table contains descriptions of common CLI commands.

Table 2-2: Common CLI Commands

Command	Description
do	Provides a way to execute commands in other command sets without taking the time to exit the current command set. The following example shows the do command, used to view the GigabitEthernet interface configuration while in the virtual-LAN interface command set: <pre>(config)# interface vlan 1 (conf-if-VLAN 1)# do show interfaces GigabitEthernet 0/0</pre>
no	Undoes an issued command or disables a feature. Enter no before the command: <pre>no debug log</pre>
activate	Activates a command. When you enter a configuration command in the CLI, the command is not applied until you enter the activate and 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.
exit	Leaves the current command-set and returns one level up. If issued on the top level, the session ends. For online parameters, if the configuration was changed and no activate command was entered, the exit command applies the activate command automatically. If issued on the top level, the session will end: <pre>(config)# exit # exit (session closed)</pre>
display	Shows the configuration of current configuration set.
help	Shows a short help how-to string.
history	Shows a list of previously run commands.
list	Shows the available command list of the current command-set.
 <filter>	Applied to a command output. The filter should be typed after the command with a pipe mark () Supported filters: include <word> – filter (print) lines which contain <word> exclude <word> – filter lines which does not contain <word> grep <options> - filter lines according to <i>grep</i> common Unix utility options egrep <options> - filter lines according to <i>egrep</i> common Unix utility options begin <word> – filter (print) lines which begins with <word> between <word1> <word2> – filter (print) lines which are placed between <word1> and <word2> count – show the output's line count Example: <pre># show version grep Number ;Serial Number: 2239835;Slot Number: 1</pre>

2.2.5 Understanding CLI Error Messages

The following table lists and defines some of the more common error messages given in the CLI.

Table 2-3: CLI Error Messages

Message	Helpful Hints
Invalid command	The command may not be valid 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.



Notes:

- 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. This command can be disabled by running the **no debug log** command.

Reader's Notes

3 General Commands

The following describes the General commands.

3.1 clear alarms-history

This command clears the alarms history table

Syntax:

```
clear alarms-history
```

Defaults:

NA

Command Modes:

Enable

Example:

The following clears the alarms history table.

```
# clear alarms-history
```

3.2 clear counters

This command has two options:

- to clear a specific interface counters
- to clear all the interfaces counters

Syntax:

The syntax of this command includes the following variations:

```
clear counters
```

```
clear counters <interface type> <interface ID>
```

The command syntax format is described below:

Arguments	Description
<interface type> <interface ID>	Defines the Type and ID of the network interface. Interface Types: • BVI Bridge interface • GigabitEthernet Gigabit Ethernet interface • cellular Cellular 3G interface • gre Tunnel GRE interface • ipip Tunnel IPIP interface • l2tp L2TP Tunnel interface • loopback PPPoE interface • pppoe PPPoE interface • pptp PPTP Tunnel interface • vlan Vlan interface • loopback Loopback interface

Defaults:

NA

Command Modes:

Enable

Related Commands:

Examples:

The following example clears the network interface vlan 5 counters.

```
# clear counters vlan 5
```

3.3 clear data log-history

This command clears the data logs.

Syntax:

```
clear data log-history
```

Defaults:

NA

Command Modes:

Enable

Note:

This command is only applicable to MSBR devices.

Example:

The following clears the data logs.

```
# clear data log-history
```

3.4 clear data mac-address-table

This command clears the MAC table.

Syntax:

```
clear data mac-address-table
```

Defaults:

NA

Command Modes:

Enable

Note:

This command is only applicable to MSBR devices.

Example:

The following clears the MAC table.

```
# clear data mac-address-table
```

3.5 clear ip arp

This command enables the deletion of a specific arp entry or flushing the arp cache.

Syntax:

The syntax of this command includes the following variations:

```
clear ip arp all
clear ip arp <ip address>
clear ip arp interface <interface type> <interface id>
```

The command syntax format is described below:

Arguments	Description
all	Clears the entire ARP cache
<ip address>	Clears a specific ARP entry
interface	Clears the entire ARP cache on a specific interface
<interface type> <interface id>	Defines the Type and ID of the network interface.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example clears the entire ARP cache:

```
# clear ip arp all
```

The following example clears the 10.1.2.3 ARP entry:

```
# clear ip arp 10.1.2.3
```

The following example clears the entire ARP cache on the network interface vlan 2:

```
# clear ip arp interface vlan 2
```

3.6 clear ip dhcp binding

This command enables the deletion of a specific bind or clears the entire pool.

Syntax:

The syntax of this command can include the following variations:

```
clear ip dhcp binding all
clear ip dhcp binding <ip address>
```

The command's syntax format is described below:

Arguments	Description
< ip address >	Defines the IP address to clear.
all	Clear all automatic bindings

Defaults:

NA

Command Modes:

Enable

Example:

The following example clears the 10.1.2.3 binding.

```
# clear ip dhcp binding 10.1.2.3
```

3.7 clear l2tp-server

This command clears incoming L2TP connections.

Syntax:

```
clear l2tp-server all
clear l2tp-server conn <connection number>
```

The command's syntax format is described below:

Arguments	Description
<connection number>	Defines the incoming connection number, as reported by the <i>show data l2tp-server</i> command.

Defaults:

NA

Command Modes:

Enable

Note:

This command is only applicable to MSBR devices.

Example:

The following clears all incoming L2TP connections.

```
# clear l2tp-server all
```

3.8 clear ptp-server

This command clears incoming PTP connections.

Syntax:

```
clear l2tp-server all
clear l2tp-server conn <connection number>
```

The command's syntax format is described below:

Arguments	Description
<connection number>	Defines the incoming connection number, as reported by the <i>show data ptp-server</i> command.

Defaults:

NA

Command Modes:

Enable

Note:

This command is only applicable to MSBR devices.

Example:

The following clears all incoming PTP connections.

```
# clear ptp-server all
```

3.9 clear system-log

This command clears the system logs.

Syntax:

```
clear system-log
```

Defaults:

NA

Command Modes:

Enable

Example:

The following clears the alarms history table.

```
# clear system-log
```

3.10 clear voip gw

This command clears VoIP.

Syntax:

```
clear voip gw calls-count  
clear voip gw statistics
```

The command's syntax format is described below:

Arguments	Description
calls-count	Clears the calls count.
statistics	Clears the call statistics.

Defaults:

NA

Command Modes:

Enable

Example:

The following clears VoIP calls count.

```
# clear voip gw calls-count
```

3.11 configure system

The following describes the System configuration commands. To access these commands, enter `configure system` at the Enabled mode prompt.

Syntax:

```
configure system
```

Defaults:

NA

Command Modes:

Enable

Examples:

The following switches to the system configuration command-set.

```
# configure system
```

3.11.1 automatic-update

This command enables Automatic Update configuration.

Syntax:

```
# automatic-update
```

The command's syntax format is described below:

Parameter	Description	Values
call-progress-tones	Defines a URL of a Call Progress Tone file.	[URL]
cas-table	Defines a URL of a Channel Associated Signaling (CAS) file.	[URL]
cli-script	Defines a URL to a CLI show-run script.	[URL]
coder-table	Defines a URL to Coder table file.	[URL]
crc-check	Enables a CRC for Configuration files.	• off • regular • voice-conf-ordered
data-configuration	Defines a Data configuration file	[URL]
dial-plan	Defines a URL of Dial Plan file	[URL]
firmware	Defines URL of CMP file	[URL]
prerecorded-tones	Defines URL of Prerecorded Tone file	[URL]
startup-script	Defines URL of Startup script file	[URL]
tls-cert	Defines URL of TLS certificate file	[URL]
tls-private-key	Defines URL of TLS private key file	[URL]
tls-root-cert	Defines URL of TLS root CA file	[URL]
voice-configuration	Defines URL of Voice configuration file	[URL]
voice-prompts	Defines URL of Voice Prompts file	[URL]
voice-xml	Defines URL of Voice XML file	[URL]
zero-conf	Enables the Zero Configuration feature	• on • off
zero-conf-server	Defines a link to a Zero-Configuration redirect server.	

Defaults:

NA

Command Modes:

Enable

Note:

This command is only applicable to MSBR devices.

Examples:

The following example enables Zero Configuration.

```
(config-system) # automatic-update  
(automatic-update) # set zero-conf on
```

The following example provides a link to a Zero-Configuration redirect server.

```
(config-system) # automatic-update  
(automatic-update) # set zero-conf-server https://syssw-  
wiki.corp.audiocodes.com/redirect
```

3.11.1.1 set zero-conf

This command enables Zero Configuration.

Syntax:

```
# set zero-conf on|off
```

The command's syntax format is described below:

Arguments	Description
on	Enables the Zero Configuration feature.
off	Disables the Zero Configuration feature.

Defaults:

On

Command Modes:

Enable

Examples:

The following example enables Zero Configuration.

```
(config-system) # automatic-update
(automatic-update) # set zero-conf on
```

3.11.1.2 set zero-conf-server

This command provides a link to a Zero-Configuration redirect server.

Syntax:

```
# set zero-conf-server <URL>
```

The command's syntax format is described below:

Arguments	Description
URL	Defines the URL of AudioCodes HTTPS Redirect server. The valid value is a string of up to 256 characters.

Defaults:

The default URL value is *https://redirect.audiocodes.com/<MAC address>*.

Command Modes:

Enable

Examples:

3.11.2 cwmp

This command sets the TR-69 protocol parameters.

Syntax:

```
# cwmp
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ acl-url ▪ acs-password ▪ acs-user-name ▪ connection-request-password ▪ connection-request-url ▪ connection-request-user-name ▪ debug-mode ▪ defaults ▪ inform-interval ▪ interface-name ▪ service For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the TR069 connection to 'wan'.

```
(config-system)# cwmp
(cwmp-tr069)# set interface-name int_name
```

3.11.3 high-availability

This command sets the high availability protocol parameters.

Syntax:

```
# high-availability
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ revertive-mode ▪ priority ▪ remote-address ▪ unit-id-name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the unit-id-name to 'uid_1'.

```
(config-system)# high-availability
(ha)# set unit-id-name uid_1
```

3.11.4 interface poe-table

This command sets the Power over Ethernet table.

Syntax:

```
# interface poe-table <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - port-enable - port-max-power - port-at-enable For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables Power over Ethernet AT Class 4.

```
(config-system)# interface poe-table 0
(poe-table-0)# set port-at-enable 1
```

3.11.5 logging

This command filters definitions for debug recording and syslog.

Syntax:

```
# logging
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ dbg-rec-dest-ip ▪ dbg-rec-dest-port ▪ dbg-rec-status ▪ debug-level ▪ defaults ▪ syslog ▪ syslog-ip ▪ syslog-port ▪ system-log-size For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example starts Debug Recording.

```
(config-system)# logging
(logging)# set dbg-rec-status start
```

3.11.6 mgmt-access-list

This command enables an IP address to connect to the management interface.

Syntax:

```
# mgmt-access-list <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - ip-address For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables '10.11.12.120' to connect to the management interface.

```
(config-system)# mgmt-access-list 9
(mgmt-access-list 9)# set ip-address 10.11.12.120
```

3.11.7 nfs

This command defines remote NFS file system parameters. It includes one row per remote file system. One NFS server may share multiple file systems.

Syntax:

```
# nfs  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ base-port ▪ client-max-retransmission ▪ defaults ▪ servers ▪ server-resp-timeout For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the maximum time the board should wait for a response when working with a remote server.

```
(config-system)# nfs  
(nfs)# set server-resp-timeout 1000
```

3.11.8 nqm probing-table

This command defines the Probing table configuration.

Syntax:

```
# nqm probing-table tablenum
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - probe-name - duration - frequency - life-span - start-time - history-entries For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the duration to 1000.

```
(config-system)# nqm probing-table 0
(probing-table-0)# set duration 1000
```

3.11.9 nqm responder-table

This command defines the responder table configuration.

Syntax:

```
# nqm responder-table  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ responder-name ▪ active ▪ local-ip-address ▪ local-port For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the responder table configuration

```
(config-system)# nqm responder-table 1  
(responder-table-1)# set responder-name respname1
```

3.11.10 nqm sender-table

This command defines the sender table configuration.

Syntax:

```
# nqm sender-table
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ sender-name ▪ active ▪ target-ip-address ▪ target-port ▪ packet-interval ▪ payload-size ▪ packet-tos ▪ packet-timeout ▪ rtt-threshold ▪ jitter-threshold ▪ pl-threshold ▪ probe-name ▪ source-interface-name For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the sender-table name.

```
(config-system) # nqm sender-table 2
(sender-table-2) # set sender-name send_tab_2
```

3.11.11 snmp

This command enables configuring SNMP Support.

Syntax:

```
# snmp  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ disable ▪ engine-id ▪ port ▪ ro-community-string ▪ rw-community-string ▪ snmp-acl ▪ sys-contact ▪ sys-location ▪ sys-name ▪ sys-oid ▪ trusted-managers ▪ wan-snmp-allow For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the contact person for this managed node.

```
(config-system) # snmp  
(snmp) # set sys-contact JJOnes
```

3.11.12 snmp trap destination

This command enables SNMPv3 USM user or SNMPv2 user to associate with this trap destination. By default it is associated with the SNMPv2 user.

Syntax:

```
# snmp trap destination <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ ip-address ▪ port ▪ send-trap ▪ trap-user For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the trap ports to be used by the different managers.

```
(config-system)# snmp trap destination 4
(trap-destination 4)# set port 18
```

3.11.13 test-call

This command defines Test Call settings.

Syntax:

```
# test-call
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ sbc-test-id ▪ testcall-id ▪ test-endpoint For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the incoming Test Call prefix to '180'.

```
(config-system)# test-call
(test-call)# set testcall-id 180
```

3.12 copy (auxiliary file)

This command copies an auxiliary file from a URL source to the device.

Syntax:

The syntax of this command can include the following variations:

```
copy <aux-file> from <URL>
```

The command's syntax format is described below:

Arguments	Description
<aux-file>	The auxiliary file type can be one of the following: call_progress_tones - Call progress call file cas_table – CAS table file coder_table – Coder table file dial_plan – Dial plan file tls_cert – TLS certificate file tls_private_key – TLS private key file tls_root_cert – TLS trusted root certificate file voice_prompts – Voice prompt file user_info – User info file web_logo – Web logo file voice_xml – Voice xml file prerecorded_tones - Prerecorded tones file
from	Copy the auxiliary file from URL.
<URL>	File source URL. Can be one of the following: http, https, tftp or nfs.

Defaults:

NA

Notes:

1. CAS table auxiliary file copy is supported only on MSBR products.
2. A copied file must be burned (via the 'write' command) in order to stay persistent.
3. Please refer to the user manual in order to learn about AudioCodes Auxiliary Files format and roles.

Command Modes:

Enable

Related Commands:

erase, dir, write

Examples:

The following example copies a voice prompt auxiliary file (*voice_prompt.dat*) to the device from www.exmaple.com.

```
# copy voice_prompts from http://www.exmaple.com/voice\_prompt.dat
```

3.13 copy configuration file

This command copies a configuration file from a URL source to the device and from the device to a destination URL or CLI console.

Syntax:

The syntax of this command can include the following variations:

```
copy <configuration-file> from <URL> apply-after-reset
copy <configuration-file> to <URL>
copy <configuration-file> to console
```

The command syntax format is described below:

Arguments	Description
< configuration-file >	The configuration file type can be one of the following: data_configuration – data (router's) configuration file voice_configuration – voice configuration file (i.e. <i>ini</i> file)
<URL>	When copying from a URL, the file source URL can be one of the following: <i>http, https, tftp, nfs</i> . When copying to a URL, the file destination URL can be one of the following: <i>http, https</i> .
apply-after-reset	This option command is intended for sending a future-version INI file, as part of a firmware upgrade process. This file will be applied only when the system is loaded with the new firmware, preventing unnecessary errors regarding the new INI file. After using this option, a new firmware MUST be loaded (which will result in a system reset). Once this option is used, no other configuration can be applied.
from	Copy the configuration file from URL file source.
to	Copy the current running configuration (file) to a destination.
console	Copy the configuration file to the CLI console.

Defaults:

NA

Notes:

1. When copying the configuration file to a URL destination, the device uses the PUT HTTP command in order to transfer the file.
2. Please refer to the User Manual in order to learn about AudioCodes data and voice configuration files format and roles

Command Modes:

Enable

Related Commands:

copy firmware

Examples:

The following example copies the date configuration file to the CLI console.

```
# copy data_configuration to console
```

3.14 copy cli-script

This command copies a cli-script file from a URL source to the device.

Syntax:

The syntax of this command can include the following variations:

```
copy cli-script from <URL>
```

The command syntax format is described below:

Arguments	Description
<URL>	When copying from a URL, the file source URL is tftp only.
from	Copy the cli-script file from URL file source.

Defaults:

NA

Notes:

1. This command loads a show-run output file into the board (via HTTP, HTTPS, TFTP or NFS) and applies it.
2. The script is activated immediately. The user does not need to do any additional action besides loading it.

Command Modes:

Enable

Related Commands:

copy cli-script

Examples:

The following example copies the date configuration from tftp server.

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

3.15 copy firmware

This command upgrades the device's firmware.

Syntax:

The syntax of this command can include the following variations:

```
copy firmware from <URL>
```

The command's syntax format is described below:

Arguments	Description
from	Copy the firmware file from URL file source
<URL>	File source URL. Can be one of: http, https, tftp or nfs.

Defaults:

NA

Notes:

When invoking this command:

1. The new firmware is copied and burned to the non-volatile (NV) memory of the device.
2. The current running configuration (voice and data) is saved on the NV memory as well.
3. The device automatically reloads with the new firmware.

Command Modes:

Enable

Related Commands:

copy (configuration)

Examples:

The following example upgrades the device's firmware from a source URL file.

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

3.16 copy voice-configuration

This command copies a configuration file from a URL source to the device and from the device to a destination URL or CLI console.

Syntax:

The syntax of this command can include the following variations:

```
copy voice-configuration from <URL>
copy voice-configuration to <URL>
copy voice-configuration to console
```

The command syntax format is described below:

Arguments	Description
< configuration-file >	The configuration file type can be one of the following: data_configuration – data (router's) configuration file voice_configuration – voice configuration file (i.e. <i>ini</i> file)
<URL>	When copying from a URL, the file source URL can be one of the following: <i>http, https, tftp, nfs</i> . When copying to a URL, the file destination URL can be one of the following: <i>http, https</i> .
from	Copy the configuration file from URL file source.
to	Copy the current running configuration (file) to a destination.
console	Copy the configuration file to the CLI console.

Defaults:

NA

Notes:

1. When copying the configuration file to a URL destination, the device uses the PUT HTTP command in order to transfer the file.
2. Please refer to the User Manual in order to learn about AudioCodes data and voice configuration files format and roles

This command copies the voice configuration file (*ini*). The 'apply-after-reset' option of this command is intended for sending a future-version *ini* file, as part of a firmware upgrade process.

This file will be applied only when the system is loaded with the new firmware, preventing unnecessary errors regarding the new *ini* file. After using this option, a new firmware **MUST** be loaded, resulting in a system reset.

Once this option is used, no other configuration can be applied.

Command Modes:

Enable

Related Commands:

copy firmware

Examples:

The following example copies the data configuration file to the CLI console.

```
# copy data_configuration to console
```

3.17 debug

The following describes the debug commands.

3.17.1 debug log

This command displays debugging messages to the CLI session.

Syntax:

The syntax of this command can include the following variations:

```
debug log
no debug log
no debug log all
```

Defaults:

NA

Notes:

1. Activating the debug log facility will redirect the device error messages (e.g. Syslog messages) to the CLI console as well as their original destination.
2. A 'no' command is supported for this command (*no debug log*), which disables the logging facility.
3. When working via telnet/SSH, "debug log" affects only the current CLI session.
4. To cancel log display to **all** CLI sessions, use "*no debug log all*".

Command Modes:

Enable

Related Commands:

NA

Examples:

The following example upgrades and activates the logging facility redirection.

```
# debug log
```

3.17.2 debug speedtest

This command performs a network speed test against a provisioned file server.

Syntax:

The syntax of this command can include the following variations:

```
debug speedtest set download <down-url>
debug speedtest set upload <up-url>
debug speedtest set upsize <up-filesize>
debug speedtest run
debug speedtest show
```

The command's syntax format is described below:

Arguments	Description
<down-url>	Defines the URL of the test file on remote server. Supported protocols are HTTP and FTP.
<up-url>	Defines the URL of the test location on the remote server where data can be uploaded. Supported protocols are HTTP and FTP.
<up-filesize>	Defines the length of upload test file, in bytes.

Defaults:

By default, testing URLs are not defined and the upload test size is set to 500000 bytes.

Notes:

1. Set the download URL to point to a large file (e.g. more than 2MB) on a testing server.
2. To perform just the download speed test, do not configure an upload URL.
3. Once the download and/or upload URLs are configured, run the test using the "*debug speedtest run*" command.
4. The test runs in the background, its status may be checked using the "*debug speedtest show*" command. Enter the *show* command repeatedly until the test is complete.
5. DNS must be configured correctly for speed test URLs.

Command Modes:

Enable

Related Commands:

NA

Examples:

The following example performs a network speed test.

```
# debug speedtest set download
http://speedtest.bezeq.co.il/speedtest/random1000x1000.jpg
# debug speedtest set upload
http://speedtest.bezeq.co.il/speedtest/speedtest/upload.aspx
```

```
# debug speedtest run  
# debug speedtest show
```

3.17.3 debug capture data physical

This command records all traffic on the device's interfaces, saving the result in a PCAP-format file (suitable for Wireshark) on a TFTP server.

Syntax:

The syntax of this command can include the following variations:

```
debug capture data physical <interface>
debug capture data physical start
debug capture data physical insert-pad
debug capture data physical show
debug capture data physical stop <server-ip>
```

The command's syntax format is described below:

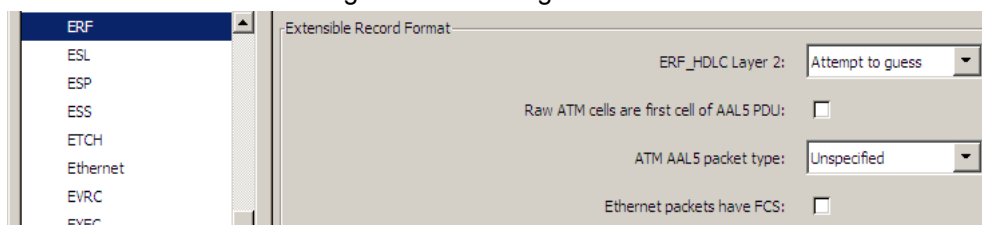
Arguments	Description
<interface>	Use one of the following: eth-lan , eth-wan , cellular-wan , shdsl-wan , t1-wan , xdsl-wan – depending on the hardware capabilities of the device. This command may be issued multiple times to capture data from several interfaces at once.
<server-ip>	Defines the IP address of a TFTP server on the network, where the resulting PCAP file will be saved.

Defaults:

By default, capture is inactive.

Notes:

1. Once the *start* command is issued, recording is performed to an in-memory buffer. If the buffer becomes full, recording stops.
2. Use the *insert-pad* command to make a manual mark in the captured file.
3. The *stop* command creates a file named debug-capture-data-<timestamp>.pcap and sends it to the TFTP server. The TFTP server must be configured to allow file uploads.
4. The generated PCAP file is in the Extensible Record Format (ERF); recent versions of Wireshark (1.5.0 or newer) are recommended for proper dissection.
5. Wireshark's ERF settings must be configured as follows:



Command Modes:

Enable

Related Commands:

NA

Examples

The following example performs a network capture of both LAN and ADSL.

```
# debug capture data physical eth-lan
# debug capture data physical xdsl-wan
# debug capture data physical start
# debug capture data physical stop 192.168.1.75
```

3.18 **dir**

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

Syntax:

The syntax of this command can include the following:

```
dir
```

Defaults:

NA

Notes:

NA

Command Modes:

Enable

Related Commands:

erase, copy (auxiliary file), write

Examples:

The following example displays the device's current auxiliary files directory information.

```
# dir
```

3.19 disable

This command switches the device back to Basic mode from Enable mode.

Syntax:

The syntax of this command includes the following:

```
disable
```

Defaults:

NA

Notes:

NA

Command Modes:

Enable

Related Commands:

enable, enable password

Examples:

The following example command switches the device back to Basic mode.

```
# disable
```

3.20 enable

This command switches the device to Enable Mode from Basic mode.

Syntax:

The syntax of this command includes the following:

```
enable
```

Defaults:

The default password for switching to Enable Mode is 'Admin'.

Notes:

1. When switching to Enable Mode, the user will be prompted to enter the Enable Mode password.
2. This password can be changed via the *enable password* command.

Command Modes:

Basic

Related Commands:

disable, enable password

Examples:

The following example command switches the device to Enable mode.

```
# enable
```

3.21 enable password

This command sets the Enable Mode password for switching to Enable Mode from Basic mode.

Syntax:

The syntax of this command can include the following variations:

```
enable password <password>
```

The command's syntax format is described below:

Arguments	Description
<password>	Enter the new password.

Defaults:

NA

Notes:

NA

Command Modes:

Enable

Related Commands:

disable, enable

Examples:

The following example command sets the Enable Mode password. To 'Admin'

```
# enable password Admin
```

3.22 erase

This command erases a device's auxiliary file.

Syntax:

The syntax of this command can include the following variations:

```
erase <file>
```

The command's syntax format is described below:

Arguments	Description
<file>	Defines the file name to be erased.

Defaults:

NA

Notes:

1. The file name should be copied from the 'dir' command output.
2. The file is being erased from RAM (and from the current device's run usage). In order to erase the file completely from the NV memory, a 'write' command should also be issued.

Command Modes:

Enable

Related Commands:

dir, copy (auxiliary file), write

Examples:

The following example prints the directory listing of the device and then erases one of the files.

```
# erase voice_prompts
```

3.23 ping

This command sends ping packets with an optional interface name, number of echo requests and payload size.

Syntax:

The syntax of this command can include the following variations:

```
ping <ip address> source voip interface [interface name] repeat #
size #
```

The command syntax format is described below:

Arguments	Description
IP address	Defines the host IP address.
Interface	(Optional) Defines the Interface name.
Repeat	(Optional) Defines the number of echo requests as above.
Size	(Optional) Defines the payload size as above.

Defaults:

NA

Command Modes:

Disable

Related commands:

Examples:

The following example sends 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
```

3.24 reload

This command reloads the device, with or without data configuration burn.

Syntax:

The syntax of this command can include the following variations:

```
reload now
reload without-saving
reload without-saving in <minutes>
no reload without-saving in <minutes>
```

The command's syntax format is described below:

Arguments	Description
now	Saves configuration and restarts.
if-needed	Reloads the system only if an offline configuration has been changed.
without-saving	Performs a restart without writing the configuration.
<minutes>	Specifies a number of minutes after which the device will restart. Use this command before making changes to sensitive settings; if your changes cause the device to lose connectivity, just wait for the device to restart with the previous working configuration. To cancel the timed restart, use the "no" form of this command.

Defaults:

Burns the configuration upon reload.

Notes:

1. By default, when the device is reloaded, the configuration and the auxiliary files are burned to NV memory.
2. Activating the 'reload' command is equivalent to activating the 'write' command followed by the 'reload without-saving' command.

Command Modes:

Enable

Related Commands:

Write

Examples:

The following example performs a restart without writing the configuration.

```
# reload without-saving
```

3.25 telnet

This command invokes a Telnet session towards a remote host.

Syntax:

The syntax of this command can include the following variations:

```
telnet <remote-host> <remote-port>
```

The command's syntax format is described below:

Arguments	Description
< remote-host >	Defines the remote host IP address.
< remote-port >	Defines the remote host port number. This argument is not mandatory.

Defaults:

Default remote port is 23 (if not entered otherwise by the user).

Notes:

1. The **telnet** command is used mainly for remote management proposes.
2. A remote administrator can access the MSBR device' CLI from the WAN leg while performing the full authentication process.
3. The user can then invoke Telnet sessions towards other devices in the LAN in order to manage them. That way, no special pin-holes or forwarding rules should be declared in order to manage the LAN devices.

Command Modes:

Enable

Related Commands:

NA

Examples:

The following example invokes a Telnet session.

```
# telnet 10.4.4.25
```

3.26 username administrator

This command configures the device's administrator credentials.

Syntax:

The syntax of this command can include the following variations:

```
username administrator name <name>
username administrator password <password>
```

The command's syntax format is described below:

Arguments	Description
name	Sets the administrator's name.
<name>	Sets the new value for the administrator's name.
password	Sets the administrator's password.
<password>	Sets the new value for the administrator's password.

Defaults:

NA

Notes:

The administrator's credentials are device wide. i.e., setting the administrator's credentials will take effect in the Web as well as the CLI authentication and vice-versa.

Command Modes:

Enable

Related Commands:

NA

Examples:

The following example sets the administrator's name to 'James'.

```
# username administrator name James
```

3.27 write

This command writes the current configuration set and auxiliary files to the NV memory.

Syntax:

The syntax of this command can include the following variations:

```
write
```

Defaults:

NA

Notes:

This command should be invoked in the following scenarios in order to save the configuration set and auxiliary files to the NV memory:

1. After completing a configuration set (i.e. after invoking one or more of the commands in the 'config' mode command-set)
2. After copying a new auxiliary file ('copy' command)
3. After copying a new configuration file ('copy' command)
4. After erasing an auxiliary file ('erase' command)

Command Modes:

Enable

Related Commands:

reload, copy, erase, write factory

Examples:

The following example writes configuration and auxiliary files to NV memory.

```
# write
```

3.28 write factory

This command restores the factory settings of the device.

Syntax:

The syntax of this command can include the following variations:

```
write factory
```

Defaults:

NA

Notes:

1. When this command is invoked, current configuration will be lost. Auxiliary files will also be erased. The device will then reload with its factory setting configuration.
2. Please refer to the user manual in order to learn about AudioCodes Factory Settings.

Command Modes:

Enable

Related Commands:

write

Examples:

The following example restores the factory settings of the device.

```
# write factory
```

Reader's Notes

4 System Commands

The following describes the System configuration commands. To access these commands, enter "configure system" at the Enabled mode prompt.

4.1 NTP

This command configures the Network Time Protocol (NTP) of the system.

Syntax:

The syntax of this command includes the following variations:

```
set primary-server <IP address>
set secondary-server <IP address>
set update-interval <seconds>
set utc-offset <utc-offset>
```

The command syntax format is described below:

Arguments	Description
utc-offset	Defines utc-offset (-43200 – 43200 seconds)

4.2 cli-terminal

This command configures the CLI management interface.

Syntax:

This configuration set includes the following sub-commands:

```
set ssh <on | off>
set ssh-acl <acl-name>
set ssh-port <port-num>
set ssh-admin-key <rsa-key>
set wan-ssh-allow <on | off>
set telnet <enable | disable | ssl>
set telnet-acl <acl-name>
set telnet-port <port-num>
set wan-telnet-allow <on | off>
set idle-timeout <timeout-minutes>
set password-obscurity <on | off>
```

Arguments	Description
ssh	Enables or disables SSH access.
ssh-acl	Selects an access-list permitting clients to connect to the SSH interface. The access-list is defined under "configure data".
ssh-port	Selects the TCP port number on which SSH is active.
ssh-admin-key	Sets the RSA key (entered as hexadecimal digits) of the SSH client. See the User's Manual for further information on SSH access using an RSA key.
wan-ssh-allow	Allows access to SSH from the WAN interface.
telnet	Enables or disables Telnet access.
telnet-acl	Selects an access-list permitting clients to connect to the Telnet interface. The access-list is defined under "configure data".
telnet-port	Selects the TCP port number on which Telnet is active.
wan-telnet-allow	Allows access to Telnet from the WAN interface.
idle-timeout	Configures how long a CLI session may remain idle, before being disconnected by the device.
password-obscurity	Hides PPP passwords in the output of "show running-config".

Command Modes:

Enable

Examples:

This example configures SSH.

```
(config-system) # cli-terminal  
(cli-terminal) # set ssh on
```

4.3 clock

This command configures the date and time of the system.

Syntax:

The syntax of this command includes the following variations:

```
set date <date>
```

```
set time <time>
```

The command syntax format is described below:

Arguments	Description
date	Defines the date format: d:m:yyyy.
time	Defines the time format: h:m:s.

4.4 summer-time

This command configures the daylight saving time (summer time) settings.

Syntax:

The syntax of this command includes the following variations:

```
set start <start date and time>
set end <end date and time>
set offset <offset time>
set summer-time <on/off>
```

The command syntax format is described below:

Arguments	Description
start date and time	Defines the start date and time in <i>mo:dd:hh:mm</i> format.
end date and time	Defines the end date and time in <i>mo:dd:hh:mm</i> format.
offset time	Defines the offset time (0 – 120 minutes).

4.5 logging

This command configures logging settings.

Syntax:

The syntax of this command includes the following variations:

```
set syslog <on/off>
set syslog-ip <IP address>
set syslog-port <port>
```

The command syntax format is described below:

Arguments	Description
port	Defines the port (0 – 65535).

4.6 mgmt-access-list

This command adds a new IP address authorized to connect to the device's Web and Telnet interfaces or delete all rows to allow access from any IP address.

Syntax:

The syntax of this command includes the following variations:

```
mgmt-access-list <index>
```

```
set <parameter> <value>
```

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following parameters: ▪ defaults ▪ ip-address For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

This example displays all mgmt-access-list configurations.

```
(config-system)# mgmt-access-list display

---- mgmt-access-list-0 ----
  ip-address (10.4.2.2)

---- mgmt-access-list-1 ----
  ip-address (10.4.2.3)

---- mgmt-access-list-2 ----
  ip-address (0.0.0.0)

---- mgmt-access-list-3 ----
  ip-address (0.0.0.0)

---- mgmt-access-list-4 ----
  ip-address (0.0.0.0)
```

```
---- mgmt-access-list-5 ----
    ip-address (0.0.0.0)

---- mgmt-access-list-6 ----
    ip-address (0.0.0.0)

---- mgmt-access-list-7 ----
    ip-address (0.0.0.0)

---- mgmt-access-list-8 ----
    ip-address (0.0.0.0)

---- mgmt-access-list-9 ----
    ip-address (0.0.0.0)
```

The following example configures mgmt-access-list index 0 with an IP address 10.4.2.2

```
(config-system)# mgmt-access-list 0
(mgmt-access-list 0)# set ip-address 10.4.2.2
```

4.7 oamp-default-network-src

This command selects the default network of OAMP services (Data or VoIP).

Syntax:

The syntax of this command includes the following variations:

```
oamp-default-network-src data | voip
```

Arguments	Description
data	Defines the Syslog messages that are sent from the WAN interface.
voip	Defines the Syslog messages are sent from the VoIP LAN interface for OAMP.

Defaults:

Data

Command Modes:

Enable

Examples:

This example selects the default Network of OAMP services.

```
(config-system) # oamp-default-network-src data
```

4.8 radius

This command enables and defines the RADIUS server.

Syntax:

The syntax of this command includes the following variations:

```
radius
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following parameters: - auth-server-ip - auth-server-port - default-access-level - double-decode-url - enable - enable-mgmt-login - local-cache-mode - local-cache-timeout - shared-secret - timeout-behavior - vsa-access-level - vsa-vendor-id For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

This example defines the default access level for the device.

```
(config-system)# radius
(radius)# set default-access-level 1
```

4.9 web

This command enables and defines the Web server.

Syntax:

The syntax of this command includes the following variations:

```
web
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following parameters: ▪ set control-pass-via-snmp ▪ set http-auth-mode ▪ set http-port ▪ set https-cipher-string ▪ set https-port ▪ set req-client-cert ▪ set secured-connection ▪ set wan-http-allow ▪ set wan-https-allow ▪ set web-acl For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

This example enables the use of client certificates for HTTPS connection.

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

4.10 snmp

This command enables and defines the SNMP server.

Syntax:

The syntax of this command includes the following variations:

```
snmp
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following parameters: ▪ defaults ▪ disable ▪ engine-id ▪ port ▪ ro-community-string ▪ rw-community-string ▪ snmp-acl ▪ sys-contact ▪ sys-location ▪ sys-name ▪ sys-oid ▪ trusted-managers ▪ wan-snmp-allow For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

This example defines the sys-name as described in MIB-2.

```
(config-system) # snmp
(snmp) # set sys-name ABCD_X1
```

4.11 snmp trap

This command configures SNMP trap managers.

Syntax:

```
snmp trap
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following parameters: ▪ auto-send-keep-alive ▪ community-string ▪ defaults ▪ manager-host-name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

This example defines the community string used in traps.

```
(config-system)# snmp trap
(snmp-trap)# set community-string comm_string_A
```

4.12 snmp trap destination

This command configures SNMP trap destinations.

Syntax:

The syntax of this command includes the following variations:

```
snmp trap destination <index>
set <parameter> <value>
```

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ set ip-address ▪ set port ▪ set send-trap For a description of these parameters, refer to the <i>User's Manual</i> .

Command Modes:

Enable

Examples:

This example defines the community string used in traps.

```
(config-system) # snmp traps destination 1
(trap-destination 1) # set ip address
```

4.13 snmp v3-users

This command configures SNMP v3 users.

Syntax:

The syntax of this command includes the following variations:

```
snmp v3-users <index>  
set <parameter> <value>
```

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ auth-key ▪ auth-protocol ▪ defaults ▪ group ▪ priv-key ▪ priv-protocol ▪ username For a description of these parameters, refer to the <i>User's Manual</i> .

Command Modes:

Enable

Examples:

This example configures read only snmp v3 user with no authentication or privacy.

```
(config-system)# snmp v3-users 1  
(v3-users-1)# set username j_brown  
(v3-users-1)# set group read-only  
(v3-users-1)# set auth-protocol none  
(v3-users-1)# set auth-protocol none
```

4.14 tls

This command configures Transport Layer Security (TLS).

Syntax:

This configuration set includes the following sub-commands:

```
analyze
set pkey-size <512 | 768 | 1024 | 2048>
generate <subject-name>
signing-request subject <subject-name>
signing-request interactive
set pkey-passphrase <passphrase>
set require-strict-cert <on | off>
set version <SSL2.0-3.0_and_TLS1.0 | TLS1.0_only>
set client-cipher-string <cipher-string>
set aupd-verify-cert <on | off>
```

Command	Description
analyze	Displays information about the currently-loaded certificate and private key. These files may be replaced using the "copy" command at the Enabled mode prompt.
pkey-size	Controls the size (in bits) of the RSA key created by the "generate" subcommand.
generate	Erases the old private key and certificate; generates a new random private key and creates a new self-signed certificate.
signing-request	Creates a Certificate Signing Request (CSR) for use by an organizational PKI. The "interactive" variant of this command enters a question-and-answer dialogue for the various fields of the CSR. In contrast, the "subject" variant of this command allows specifying just the Common Name (CN) of the certificate subject.
pkey-passphrase	Configures a short pass-phrase used for decoding loaded private keys (via the "copy" command).
require-strict-cert	Enables strict validation of peer certificates received in the TLS handshake. Strict validation includes the keyUsage attribute and the authority's allowed depth.
version	Selects which TLS versions are allowed.
client-cipher-string	Selects cipher-suites used by the Automatic Update facility. See the User's Manual for further information.
aupd-verify-cert	Enables certificate validation when connecting to remote HTTPS sites using the Automatic Update facility.

Command Modes:

Enable

Examples:

This example displays the current certificate status.

```
(config-system) # tls  
(tls) # analyze
```

4.15 feature-key

This command updates the feature-key.

Syntax:

This configuration set includes the following sub-commands:

```
feature-key <"string">
```

Command	Description
"string"	Sets the feature key string. Note that the feature key string must be within quotes.

Command Modes:

Enable

Examples:

This example sets a feature-key.

```
(config-system) # feature-key
"r6wmr5to25smaB12d21aiS194yMCf3lsfjBjagcch1kq9AZ9MJqqCOw44ywFcMlIb
iBaeNcsjh878ld1f2wKbY3IXJj1SOlcbiBfc6FBj1fROlJ9XvAw8k1IXdoFcOpeQJp
2e0stils0blNecypomhgU5yTlPREPQt12elwpiNgx7lRfeyXV?2s9@coFcOhdayWjW
hQuJeIgb5VbfyENC2w46O6OG3lf7NjnbkF5mxkka5xccyoVedYqlgMc"
```

5 VoIP Commands

The following describes the VoIP commands.

5.1 Configuration Voice Commands

The following describes Configuration Voice commands.

5.1.1 interface

This command enters a specific PSTN interface (e1-t1 or bri) configuration.

Syntax:

The syntax of this command includes the following variations:

```
interface e1-t1 <slot/port>
interface bri <slot/port>
set <parameter> <value>
```

Arguments	Description
slot	Defines the module slot index as shown on the front panel.
port	Defines the port index within the selected module.

Parameter Name	Configuration Parameter Name	Enum Names in CLI
protocol	PSTNTrunkProtocolType	
framing	PSTNFramingMethod	EXTENDED_SUPER_FRAME/0 SUPER_FRAME/1 E1_FRAMING_DDF/a E1_FRAMING_MFF_CRC4/b E1_FRAMING_MFF_CRC4_EXT/c T1_FRAMING_F4/A T1_FRAMING_F12/B T1_FRAMING_ESF/C T1_FRAMING_ESF_CRC6/D T1_FRAMING_F72/E T1_FRAMING_ESF_CRC6_JT/F
line-code	PSTNLineCode	B8ZS/0 AMI/1 HDB3/2
clock-master	PSTNClockMaster	CLOCK_MASTER_OFF/0 CLOCK_MASTER_ON/1
clock-priority	AutoClockTrunkPriority	

Parameter Name	Configuration Parameter Name	Enum Names in CLI
cas-channel-index	CasChannelIndex	
cas-delimiters-types	CASDelimitersPaddingUsage	
cas-dial-plan-name	CasTrunkDialPlanName	
cas-table-index	PSTNCASTableIndex	
isdn-termination-side	ISDNTerminationSide	USER_TERMINATION_SIDE/0 NETWORK_TERMINATION_SIDE/1
isdn-bits-cc-behavior	PSTNISDNGeneralCCBehavior	
isdn-bits-incoming-calls-behavior	PSTNISDNInCallsBehaviour	
isdn-bits-outgoing-calls-behavior	PSTNISDNOutCallsBehaviour	
isdn-bits-ns-behavior	PSTNISDNI_behaviour	
isdn-bits-ns-extension-behavior	ISDNNSBehaviour2	
isdn-nfas-dchannel-type	PSTNDChConfig	DCH_CONFIG_PRIMARY/0 DCH_CONFIG_BACKUP/1 DCH_CONFIG_NFAS/2
isdn-nfas-group-number	PSTNTrunkConfigNfasGroupNumber	
isdn-nfas-interface-id	PSTNISDNNfasInterfaceId	
isdn-layer2-mode	BriLayer2Mode	BRI_L2_MODE_P2P/0 BRI_L2_MODE_P2MP/1
line-build-out-loss	PSTNLineBuildOutLOSS	0DB/0 -7.5DB/1 -15DB/2 -22.5DB/3
line-build-out-overwrite	PSTNLineBuildOutOVERWRITE	NO_OVER_WRITE/0 OVER_WRITE/1
line-build-out-xpm0	PSTNLineBuildOutXPM0	
line-build-out-xpm1	PSTNLineBuildOutXPM1	
line-build-out-xpm2	PSTNLineBuildOutXPM2	

Command Modes:

Enable

Functional Notes:

In order to change a PSTN interface configuration, do the following:

- Enter the interface configuration (e.g. interface e1-t1 0/0)
- Set the configuration parameters (e.g. set protocol 1)
- Activate the configuration. This can be done in two ways:
 - Using the activate command
 - Exit the interface configuration

Examples:

The following example enters a specific PSTN interface e1-t1 and bri.

```
interface e1-t1 0/0  
interface bri 1/2
```

5.1.2 fxs-fxo

This command enters a specific analog interface (FXS or FXO) configuration.

Syntax:

The syntax of this command includes the following variations:

```
interface fxs-fxo <slot/port>
set <parameter> <value>
```

The command syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - bellcore-callerid-type-one-sub-standard - bellcore-vmwi-type-one-standard - caller-ID-type - caller-id-timing-mode - current-disconnect-duration - default-linepolarity-state - defaults - disable-analog-auto-calibration - enable-analog-dc-remover - enable-fxo-current-limit - etsi-callerid-type-one-sub-standard - etsi-vmwi-type-one-standard - far-end-disconnect-type - flash-hook-period - fxo-country-coefficients - fxo-dc-termination - fxs-country-coefficients - fxs-rx-gain-control - fxs-tx-gain-control - metering-on-time - metering-type - min-flash-hook-time - mwi-indication-type - polarity-reversal-type - rx-gain-control - time-to-sample-analog-line-voltage - trk-xfer-mode-type For a description of these parameters, refer to the <i>User's Manual</i>.

Command Modes:

Enable

Related Commands:

```
show voip interface fxs-fxo
```

The above commands give the user the interface status, main PM parameters and main configuration parameters.

Examples:

This example sets the metering method for charging pulses.

```
(config-system) # interface fxs-fxo  
(fxs-fxo) # set metering-type 12-kHz-sinusoidal-bursts
```

The following example enters a specific analog interface configuration.

```
# show voip interface fxs-fxo  
Module in slot 1, Ports type is FXS  
Port 1 status:  
  Chip Revision: 2  
  Hook state(1- off hook, 0- onhook): 0  
  Message Waiting Indication: 0  
  Ring:0  
  Reversal Polarity:0  
  Tx Gain Control: 0db  
  Rx Gain Control: 0db  
Port configuration:  
Various timing parameters:  
  WinkTime 200 ms  
  CurrentDisconnectDuration 900 ms  
  FlashHookPeriod 700 ms  
  MinFlashHookTime 300 ms  
Caller ID and MWI parameters:  
  Primary Caller ID and MWI type is 0  
  AnalogCallerIDTimingMode is CallerID transferred between first  
and second rings  
  BellcoreCallerIDTypeOneSubStandard is 0  
  ETSICallerIDTypeOneSubStandard is 0  
  ETSIVMWITypeOneStandard is 0  
  BellcoreVMWITypeOneStandard is 0  
Various signal indications parameters:  
  PolarityReversalType is 0  
  MeteringType is 0  
  LifeLineType is acLifeLineType_Hardware_Only  
Country Coefficients is set to USA
```

5.1.3 enm

E and M (earth and magneto, or ear and mouth) is a type of supervisory line signaling that uses DC signals on separate leads, called the "E" lead and "M" lead, traditionally used in the telecommunications industry between telephone switches.

Conventions

E and M Interface Supervision Signal Description

E (Ear or Earth) - Signal wire from trunking (CO) side to signaling side.

M (Mouth or Magnet) - Signal wire from signaling side to trunking (CO) side.

SG (Signal Ground) - Used on E & M Types II, III, IV.

SB (Signal Battery) - Used on E & M Types II, III, IV.

T/R (Tip/Ring) - T / R leads carry audio between the signaling unit and the trunking circuit. On a two-wire audio operation circuit, this pair carries the full-duplex audio path.

T1/R1 (Tip-1/Ring-1) - Used on four-wire audio operation circuits only. The four-wire implementation provides separate paths to receive and send audio signals.

E & M signaling defines a trunk circuit side and a signaling unit side for each connection similar to the data circuit-terminating equipment (DCE) and data terminal equipment (DTE) reference type. Usually the PBX is the trunk circuit side and the Telco, CO, channel-bank. The AudioCodes analog E and M interface functions both as the signaling or trunking unit circuit.

Hook Events Detection and Generation - AudioCodes support only the LMR type for hook signaling.

Syntax:

The syntax of this command includes the following variations:

```
interface enm
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following table parameters: - country_coefficients - defaults - hook_debounce - hook-debounce-time - hook_glare_enable - port_rx_gain - port_tx_gain - signaling_type - system_interface - voice_type For a description of these parameters, refer to the <i>User's Manual</i>.

Command Modes:

Enable

Examples:

This example configures the E and M voice interface to two wires.

```
(config-system) # interface enm
(enm) # set voice_type 0
```

5.2 debug capture voip

This command captures network traffic on one of the voip sub-system network interfaces

Syntax:

The syntax of this command includes the following variations:

```
debug capture voip interface vlan <vlanID> proto <protocol filter>
host <host filter>
debug capture voip interface vlan <vlanID> proto <protocol> host
<host filter> port <port filter>
debug capture voip interface vlan <vlanID> proto <protocol> host
<host filter> port <port filter> tftp-server <tftp server ip
address>
```

The command syntax format is described below:

Arguments	Description
<vlanID>	Defines the VLAN ID of the network interface on which to start the debug capture process
<protocol filter>	Captures a specific protocol, or all protocols. Available options are: <i>all</i> , <i>ip</i> , <i>tcp</i> , <i>udp</i> , <i>arp</i> , <i>icmp</i>
<host filter>	Captures traffic from/to a specific host (IP address), or <i>any</i> .
<port filter>	Captures traffic from/to a specific port. Valid ports are 1-65535, or the keyword <i>any</i> . When using <i>arp</i> or <i>icmp</i> as protocol filter, port filter cannot be used, and the only valid value is <i>any</i> . This argument is optional.
<tftp server ip address>	When this argument is omitted, captured traffic is printed to the CLI console. When using this argument, the captured traffic is saved to a file in <i>pcap</i> format, and when the capture is stopped (using ctrl-c), the capture file is uploaded, via TFTP, to the TFTP server specified in this argument. Note: The TFTP server IP address specified in this argument must be accessible from one of the voip sub-system network interfaces, so that the capture file will be uploaded to the server successfully. Use <i>ping</i> test to make sure this TFTP server is accessible. This argument is optional.

Command Modes:

Enable

Related Commands:

debug capture data

Examples:

The following example starts a debug capture on the network interface vlan 12, with a protocol filter (ip), no host filter, and no port filter. The captured traffic will be printed to the CLI session:

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

The following example starts a debug capture on the network interface vlan 1, with a protocol filter (ip), no host filter, and a port filter (514). The captured traffic will be saved to a temporary file, and will be sent, when *ctrl-c* is used, to the TFTP server at address 171.18.1.21. This server is accessible via network interface vlan 2014:

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

5.3 Network Interface Configuration

The following describes the Network Interface Configuration commands.

5.3.1 access-list

This command displays and configures the Network access list table - Internal Firewall.

Syntax:

The syntax of this command includes the following variations:

```
access-list <index>
set <parameter> <value>
```

The command syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ allow-type ▪ byte-burst ▪ byte-rate ▪ defaults ▪ end-port ▪ network-interface-name ▪ packet-size ▪ prefixLen ▪ protocol ▪ source-ip ▪ src-port ▪ start-port ▪ use-specific-interface For a description of these parameters, refer to the <i>User's Manual</i> .

Command Modes:

Enable

Examples:

The following example sets the byte rate to 10 bytes per second..

```
(config-voip)# access-list 1
(access-list-1)# set byte-rate 10
```

5.3.2 interface network-if

This command displays and configures the network interface table.

Syntax:

The syntax of this command includes the following variations:

```
interface network-if display
interface network-if <index>
set application-type
set gateway
set ip-address
set mode
set name
set prefix-length
set primary-dns
set secondary-dns
set vlan-id
```

The command syntax format is described below:

Arguments	Description
display	Displays all network interfaces configuration.
<index>	Defines the Interface index between 1 and 15.

Configuration Parameters

Parameter Name	Configuration Parameter Name	Options
application-type	InterfaceTable_ApplicationTypes	control maintenance media media-control oamp oamp-control oamp-media oamp-media-control
gateway	InterfaceTable_Gateway	
ip-address	InterfaceTable_IPAddress	
Mode	InterfaceTable_InterfaceMode	ipv4-manual ipv6-manual ipv6-manual-prefix
Name	InterfaceTable_InterfaceName	
prefix-length	InterfaceTable_PrefixLength	

Parameter Name	Configuration Parameter Name	Options
primary-dns	InterfaceTable_PrimaryDNSServerIPAddress	
secondary-dns	InterfaceTable_SecondaryDNSServerIPAddress	
vlan-id	InterfaceTable_VlanID	

Command Modes:

Enable

Examples:

The following example displays all interfaces configuration

```
(config-voip)# interface network-if display
---- network-if-0 ----
  application-type (oamp-media-control)
  mode (ipv4-manual)
  ip-address (10.4.60.62)
  prefix-length (16)
  gateway (10.4.0.1)
  vlan-id (1)
  name (O+M+C)
  primary-dns (0.0.0.0)
  secondary-dns (0.0.0.0)
  underlying-if ()
```

The following example configures interface 3 with an IP address 10.5.0.1

```
(config-voip)# interface network-if 3
(network-if-3)# set ip-address 10.5.0.3
```

5.3.3 interface vlan

This command selects a data-like configuration syntax for VoIP interface configuration.

Syntax:

The syntax of this command includes the following variations:

```
interface vlan <vlan id>
```

The command syntax format is described below:

Arguments	Description
<vlan id>	Defines a valid VLAN interface ID in the range of 1 and 255.

Command Modes:

Enable

Examples:

The following example selects VLAN 1 as the interface to configure.

```
(config-voip) # interface vlan 1
```

5.3.4 application_type

This command defines the application type on the specified Layer 3 interface.

Syntax:

```
application_type <type>
```

The command's syntax format is described below:

Arguments	Description
<type>	Defines the application type - Control, Media or OAMP

Defaults:

NA

Command Modes:

Enable

Examples:

The following example configures the control application type for interface VLAN 3.

```
(config-voip)# interface vlan 3
(conf-if-vlan 3)# application_type control
```

5.3.5 ip address

This command defines the primary IP address on the specified Layer 3 interface.

Syntax:

```
ip address <ip address> <subnet mask>
```

The command's syntax format is described below:

Arguments	Description
<ip address>	Defines a valid IPv4 address. IP addresses should be expressed in dotted decimal notation (for example, 10.1.2.3).
<subnet mask>	Defines the subnet mask that corresponds to a range of IP addresses. Subnet masks should be expressed in dotted decimal notation (e.g., 255.255.255.0).

Defaults:

NA

Command Modes:

Enable

Examples:

The following example configures the IP address of 10.4.2.3 255.255.0.0 for interface VLAN 3.

```
(config-voip)# interface vlan 3
(conf-if-vlan 3)# ip address 10.5.0.1 255.255.0.0
```

5.3.6 ip gateway

This command defines the gateway IP address on the specified Layer 3 interface.

Syntax:

```
ip gateway <ip address>
```

The command's syntax format is described below:

Arguments	Description
<ip address>	Defines a valid IPv4 address. IP addresses should be expressed in dotted decimal notation (for example, 10.1.2.3).

Defaults:

NA

Command Modes:

Enable

Examples:

The following example configures the gateway IP address 10.4.0.1 for interface VLAN 3.

```
(config-voip)# interface vlan 3  
(conf-if-vlan 3)# ip gateway 10.4.0.1
```

5.3.7 ip name-server

This command defines the DNS relay (remote) server's address on the interface.

Syntax:

```
ip name-server <first ip address> [second ip address]
```

The command's syntax format is described below:

Arguments	Description
<first ip address>	Defines the primary DNS server address. Specifies a valid IPv4 address. IP addresses should be expressed in dotted decimal notation (e.g., 10.1.2.3).
<second ip address>	Defines the secondary DNS server address. This field is not required when specifying a single IP address. Defines a valid IPv4 address. IP addresses should be expressed in dotted decimal notation (e.g., 10.1.2.3).

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines DNS relay servers 10.4.1.1 and 10.4.1.2 on interface VLAN 1.

```
(config-voip)# interface vlan 3
(conf-if-vlan 3)# ip name-server 10.4.1.1 10.4.1.2
```

5.3.8 desc

This command sets the description on the specified interface.

Syntax:

```
desc <string>
```

The command's syntax format is described below:

Arguments	Description
<string>	Defines the interface description\name using an alphanumerical string (up to 16 characters).

Defaults:

NA

Functional Notes:

Use inverted commas when using the space character as part of the description.

The string is limited to 16 characters.

Command Modes:

Enable

Examples:

The following example sets the description on VLAN 3.

```
(config-voip)# interface vlan 3  
(conf-if-vlan 3)# desc Media3
```

5.4 routing static

This command displays and configures the static routing table.

Syntax:

The syntax of this command includes the following variations:

```
routing static display
routing static <index>
set description
set destination
set gateway
set interface-name
set prefix-length
```

The command syntax format is described below:

Arguments	Description
display	Displays all static routes configuration.
<index>	Defines the Static index between 1 and 15.

Parameter Name	Configuration Parameter Name	Enum Names in CLI
description	StaticRouteTable_Description	
Gateway	StaticRouteTable_Gateway	
Destination	StaticRouteTable_Destination	
interface-name	StaticRouteTable_InterfaceName	
prefix-length	StaticRouteTable_PrefixLength	

Command Modes:

Enable

Examples:

The following example displays all static routes configuration.

```
(config-voip)# routing static display
---- static-0 ----
  interface-name (O+M+C)
  destination (10.21.0.0)
  prefix-length (16)
  gateway (10.4.0.1)
  description (desc1)
```

The following example configures a static route for subnet 1.1.0.0/16 default gateway 10.4.0.1 for an interface named MEDIA

```
(config-voip)# routing static 3
(static-3)# set interface-name MEDIA
(static-3)# set destination 1.1.0.0
(static-3)# set prefix-length 16
(static-3)# set gateway 10.4.0.1
(static-3)# set interface-name MEDIA
```

5.5 qos vlan-mapping

This command displays and configures Quality of Service vlan mapping.

Syntax:

The syntax of this command includes the following variations:

```
qos vlan-mapping display
qos vlan-mapping <index>
set diff-serv
set vlan-priority

qos application-mapping
set bronze-qos
set control-qos
set gold-qos
set media-qos
```

The command syntax format is described below:

Arguments	Description
display	Displays all static routes configuration.
<index>	Defines the Static index between 1 and 15.

Parameter Name	Configuration Parameter Name	Enum names in CLI
diff-serv	DiffServToVlanPriority_DiffServ	
vlan-priority	DiffServToVlanPriority_VlanPriority	
bronze-qos	vlanBronzeServiceClassDiffServ	
control-qos	vlanPremiumServiceClassControlDiffServ	
gold-qos	vlanGoldServiceClassDiffServ	
media-qos	vlanPremiumServiceClassMediaDiffServ	

For a description of these parameters, refer to the *User's Manual*.

Examples:

The following example displays all qos vlan mapping configuration.

```
(config-voip) # qos vlan-mapping display
```

The following example sets the DiffServ value for the Bronze service class content (OAM&P).

```
(config-voip) # qos application-mapping
(app-map) # set bronze-qos 46
```

The following example maps DiffServ value of 46 to vlan priority 5

```
(config-voip)# qos vlan-mapping 3  
(vlan-mapping-3)# set diff-serv 46  
(vlan-mapping-3)# set vlan-priority 5
```

5.6 qos application mapping

This command sets the differentiated services application mapping.

Syntax:

The syntax of this command includes the following variations:

```
qos application-mapping
set <parameter> <value>
```

The command syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - bronze-qos - control-qos - defaults - gold-qos - media-qos For a description of these parameters, refer to the <i>User's Manual</i>.

Examples:

The following example sets the DiffServ value for the Bronze service class content (OAM&P).

```
(config-voip)# qos application-mapping
(app-map)# set bronze-qos 46
```

5.7 coders-and-profiles coders-group

This command defines the Coders Group table.

Syntax:

The syntax of this command includes the following variations:

```
coders-and-profiles coders-group-<0-10> <index>
```

```
set <parameter> <value>
```

The command syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ name ▪ p-time ▪ payload-type ▪ rate ▪ silence-suppression For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the Coders Group 0 table and sets the name.

```
(config-voip)# coders-and-profiles coders-group-0 1
```

```
(coders-group-0-1)# set name C_group_1
```

5.8 coders-and-profiles ip-profile

This command defines the IP Profile table.

Syntax:

The syntax of this command includes the following variations:

```
coders-and-profiles ip-profile <index>
```

```
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following table parameters: - amd-max-greeting-time - amd-max-post-silence-greeting-time - amd-sensitivity-level - amd-sensitivity-parameter-suit - add-ie-in-setup - cng-mode - call-limit - coders-group-id - copy-dst-to-redirect-number - disconnect-on-broken-connection - early-media - echo-canceller - enable-early-183 - enable-hold - enable-qsig-tunneling - enable-symmetric-mki - fax-sig-method - first-tx-dtmf-option - input-gain - ip-preference - is-dtmf-used - jitter-buffer-minimum-delay - jitter-buffer-optimization-factor - media-ip-version-preference - media-security-behaviour - mki-size - nse-mode - play-rbt-to-ip - profile-name - prog-ind-to-ip - remote-base-udp-port - rtp-redundancy-depth - rtp-ip-diffserv - rx-dtmf-option - sbc-allowed-coders-group-id - sbc-allowed-coders-mode - sbc-alternative-dtmf-method - sbc-assert-identity

Arguments	Description
	▪ sbc-diversion-mode ▪ sbc-enforce-mki-size ▪ sbc-ext-coders-group-id ▪ sbc-fax-coders-group-id ▪ sbc-fax-answer-mode ▪ sbc-fax-behavior ▪ sbc-fax-offer-mode ▪ sbc-history-info-mode ▪ sbc-media-security-behavior ▪ sbc-prack-mode ▪ sbc-rfc2833-behavior ▪ sbc-rmt-3xx-behavior ▪ sbc-rmt-can-play-ringback ▪ sbc-rmt-delayed-offer ▪ sbc-rmt-early-media-resp ▪ sbc-rmt-early-media-rtp ▪ sbc-rmt-early-media-suppl ▪ sbc-rmt-multiple-18x-suppl ▪ sbc-rmt-refer-behavior ▪ sbc-rmt-re-invite-suppl ▪ sbc-rmt-rfc3960-suppl ▪ sbc-rmt-ringback-src-rel ▪ sbc-rmt-update-suppl ▪ sbc-session-expires-mode ▪ sce ▪ second-tx-dtmf-option ▪ signaling-diffserv ▪ transcoding-mode ▪ voice-volume ▪ vxx-transport-type ▪ defaults ▪ echo-canceller For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines enables the echo canceller.

```
(config-voip)# coders-and-profiles ip-profile 1
(ip-profile-1)# set echo-canceller enable
```

5.9 coders-and-profiles tel-profile

This command defines the Tel Profile table.

Syntax:

```
coders-and-profiles tel-profile <index>
set <parameter> <value>
```

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ call-priority-mode ▪ coders-group-id ▪ current-disconnect ▪ defaults ▪ dial-plan-index ▪ digit-delivery ▪ digital-cut-through ▪ disconnect-on-busy-tone ▪ dtmf-volume ▪ early-media ▪ echo-canceller ▪ echo-canceller ▪ echo-canceller-nlp-mode ▪ enable-911-psap ▪ enable-agc ▪ enable-did-wink ▪ enable-voice-mail-delay ▪ fax-sig-method ▪ flash-hook-period ▪ fxo-double-answer ▪ input-gain ▪ IsFaxUsed ▪ is-two-stage-dial ▪ jitter-buffer-minimum-delay ▪ jitter-buffer-optimization-factor ▪ mwi-analog-lamp ▪ mwi-display ▪ polarity-rvrsI ▪ profile-name ▪ prog-ind-to-ip ▪ rtp-ip-diffserv ▪ signaling-diffserv ▪ swap-teltoip-phone-numbers ▪ tel-preference ▪ time-for-reorder-tone ▪ voice-volume For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the DTMF volume.

```
(config-voip)# coders-and-profiles tel-profile 1  
(tel-profile-1)# set DtmfVolume 10
```

5.10 control-network

These commands define the SIP control-network.

5.10.1 NATTranslation

This command sets the NAT Translation table.

Syntax:

```
control-network NATTranslation <index>
set <parameter> <value>
```

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ SourceIPInterfaceName ▪ TargetIPAddress ▪ SourceStartPort ▪ SourceEndPort ▪ TargetStartPort ▪ TargetEndPort ▪ TargetIPAddress For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

This example configures a NAT rule to translate IP address 10.13.4.70 to the public IP 100.222.4.5:

```
(config-voip) # control-network NATTranslation 0
(NATTranslation-0) # set SourceIPInterfaceName VOIP
(NATTranslation-0) # set TargetIPAddress 10.13.4.70
```

5.10.2 dns-to-ip

This command defines the control-network dns-to-ip table.

Syntax:

```
control-network dns dns-to-ip <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ domain-name ▪ first-ip-address ▪ second-ip-address ▪ third-ip-address ▪ fourth-ip-address For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the first IP address.

```
(config-voip)# control-network dns dns-to-ip 1  
(dns-to-ip-1)# set first-ip-address 10.12.3.105
```

5.10.3 srv2ip

This command defines the control-network srv2ip table.

Syntax:

```
control-network dns srv2ip <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dns-name-1 - dns-name-2 - dns-name-3 - domain-name - port-1 - port-2 - port-3 - priority-1 - priority-2 - priority-3 - transport-type - weight-1 - weight-2 - weight-3 For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the First IP address.

```
(config-voip)# control-network dns srv2ip 5
(srv2ip-5)# set port-1 10
```

5.10.4 ip-group

This command defines the ip-group table.

Syntax:

```
control-network ip-group <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ always-use-route-table ▪ authentication-method-list ▪ authentication-mode ▪ classify-by-proxy-set ▪ contact-user ▪ defaults ▪ description ▪ dst-uri-input ▪ enable-sbc-client-forking ▪ enable-survivability ▪ inbound-mesg-manipulation-set ▪ ip-profile-id ▪ local-host-name ▪ max-num-of-reg-users ▪ media-realm-name ▪ outbound-mesg-manipulation-set ▪ proxy-set-id ▪ re-routing-mode ▪ registration-mode ▪ routing-mode ▪ serving-ip-group-id ▪ sip-group-name ▪ src-uri-input ▪ srd ▪ type For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the ip-group table.

```
(config-voip)# control-network ip-group 1  
(ip-group-1)# set contact-user john_brown
```

5.10.5 proxy-ip

This command defines the proxy-ip table.

Syntax:

```
control-network proxy-ip <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ proxy-address ▪ proxy-set-id ▪ transport-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the IP address in the proxy-ip table.

```
(config-voip)# control-network proxy-ip 5  
(proxy-ip-5)# set proxy-address 1.5.20.103
```

5.10.6 proxy-set

This command defines the proxy-set table.

Syntax:

```
control-network proxy-set <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ classification-input ▪ defaults ▪ is-proxy-hot-swap ▪ proxy-enable-keep-alive ▪ proxy-keep-alive-time ▪ proxy-load-balancing-method ▪ proxy-redundancy-mode ▪ srd-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Classification Input to "ip-only".

```
(config-voip) # control-network proxy-set 1
(proxy-set-1) # set classification-input ip-only
```

5.10.7 sip-interface

This command defines the SIP Interface table.

Syntax:

```
control-network sip-interface <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ application-type ▪ defaults ▪ message-policy ▪ network-interface ▪ srd ▪ tcp-port ▪ tls-mutual-auth ▪ tls-port ▪ udp-port For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Note:

The network interface should be taken from: *interface network-if (name)*

Command Modes:

Enable

Examples:

The following example sets the SRD to 1.

```
(config-voip)# control-network sip-interface 1  
(sip-interface-1)# set srd 1
```

5.10.8 srd

This command defines the SRD table.

Syntax:

```
control-network srd <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ block-un-reg-users ▪ defaults ▪ enable-un-auth-registrs ▪ intra-srd-media-anchoring ▪ max-reg-users ▪ media-realm ▪ name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Maximum Registered Users number to 500.

```
(config-voip)# control-network srd 1
(srd-1)# set max-reg-users 500
```

5.11 ip-media ip-media-settings

This command defines IP Media / IP-Media-Settings mode.

Syntax:

```
ip-media ip-media-settings <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ beep-on-conf ▪ com-noise-gen-nego ▪ conf-dtmf-clamping ▪ conf-dtmf-reporting ▪ conf-id ▪ defaults ▪ enable-vxml ▪ mscml-id ▪ netann-annc-id ▪ transcoding-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines IP Media / IP-Media-Settings mode.

```
(config-voip)# ip-media ip-media-settings  
(sip-ip-media-setting)# set beep-on-conf on
```

5.12 ldap

This command defines the LDAP server table.

Syntax:

```
ldap
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ LDAPSERVERIP ▪ bind-dn ▪ cache ▪ defaults ▪ enable ▪ password ▪ search-dns ▪ search-dns-in-parallel ▪ server-domain-name ▪ server-max-respond-time ▪ server-port For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets LDAP server IP address.

```
(config-voip)# ldap
(ldap)# set ldapserverip 10.5.5.12
```

5.13 SAS

The following commands define SAS.

5.13.1 sasregistrationmanipulation

This command enables the SAS Registration Manipulation feature.

Syntax:

```
sas sasregistrationmanipulation <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ leave-from-right ▪ remove-from-right For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables five digits from the right of the phone number, to be left for registration manipulation.

```
(config-voip) # sas sasregistrationmanipulation 0  
(SASRegistrationManipulation-0) # set leave-from-right 5
```

5.13.2 stand-alone-survivability

This command enables the Stand Alone Survivability feature.

Syntax:

```
sas stand-alone-survivability
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ set defaults ▪ enable-enum ▪ rdcy-sas-proxy-set ▪ record-route ▪ sas-binding-mode ▪ sas-block-unreg-usrs ▪ sas-connection-reuse ▪ sas-contact-replace ▪ sas-default-gw-ip ▪ sas-emerg-nb ▪ sas-emerg-prefix ▪ sas-inb-manipul-md ▪ sas-local-sip-tcp-port ▪ sas-local-sip-tls-port ▪ sas-local-sip-udp-port ▪ sas-proxy-set ▪ sas-registration-time ▪ sas-subscribe-resp ▪ sas-survivability For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the survivability mode.

```
(config-voip) # sas stand-alone-survivability
(sip-sas-setting) # set sas-survivability
```

5.14 sip-definition

The following commands define SIP Definition.

5.14.1 account

This command defines the Account table.

Syntax:

```
# sip-definition account <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ application-type ▪ contact-user ▪ defaults ▪ host-name ▪ password ▪ register ▪ served-ip-group ▪ served-trunk-group ▪ serving-ip-group ▪ user-name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the username in the Account table.

```
(config-voip)# sip-definition account 1
(account-1)# set user-name jsmith
```

5.14.2 account setting

This command defines the SIP Definitions account settings.

Syntax:

```
sip-definition account-setting  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ set aaa-indications ▪ accounting-port ▪ accounting-server-ip ▪ defaults ▪ enable ▪ radius-accounting For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the username in the Account table.

```
(config-voip) # sip-definition account-setting  
(sip-def-account-setting) # set enable on
```

5.14.3 advanced settings

This command defines advanced SIP settings.

Syntax:

```
sip-definition advanced-settings
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ set 1st-call-rbt-id ▪ FarEndDisconnectSilenceMethod ▪ FarEndDisconnectSilencePeriod ▪ amd-beep-detection ▪ broken-connection-event-timeout ▪ busy-out ▪ call-pickup-key ▪ call-transfer-using-reinvites ▪ calls-cut-through ▪ cdr-report-level ▪ cdr-srvr-ip-adrr ▪ current-disc ▪ debug-level ▪ defaults ▪ delay-after-reset ▪ delay-b4-did-wink ▪ delayed-offer ▪ dflt-release-cse ▪ did-wink-enbl ▪ digit-delivery-2ip ▪ digit-delivery-2tel ▪ digit-pttrn-on-conn ▪ disc-broken-conn ▪ disc-on-silence-det ▪ e911-callback-timeout ▪ e911-gateway ▪ emerg-calls-regrt-t-out ▪ enum-resolution ▪ fax-re-routing ▪ filter-calls-to-ip ▪ graceful-bsy-out-t-out ▪ ip-security ▪ ip-to-ip-transfer-mode ▪ ldap-primary-key ▪ ldap-private-nm-attr ▪ ldap-secondary-key ▪ max-nb-of-act-calls

Arguments	Description
	▪ media-cdr-rprt-level ▪ microsoft-ext ▪ mx-call-duration ▪ network-isdn-xfer ▪ oos-behavior ▪ polarity-rvrsl ▪ prog-ind-2ip ▪ pstn-alert-timeout ▪ qos-statistics-in-release-msg ▪ reanswer-time ▪ reliable-conn-persistent ▪ rep-calling-w-redir ▪ replace-nb-sign-w-esc ▪ sas-emerg-nb ▪ single-dsp-transcoding ▪ src-hdr-4-called-nb ▪ t38-fax-mx-buff ▪ tel-to-ip-call-forking-mode ▪ user-inf-usage ▪ x-channel-header For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the usage of the User Info file.

```
(config-voip)# sip-definition advanced-settings
(sip-def-adv-setting)# set user-inf-usage on
```

5.14.4 general settings

This command defines the SIP Definitions general settings.

Syntax:

```
sip-definition general-settings
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ 183-msg-behavior ▪ 3xx-behavior ▪ ShouldRegister ▪ anonymous-mode ▪ app-sip-transport-type ▪ asserted-identity-m ▪ ch-select-mode ▪ comfort-tone ▪ contact-restriction ▪ defaults ▪ det-fax-on-ans-tone ▪ disp-name-as-src-nb ▪ early-media ▪ enable-gruu ▪ enable-sips ▪ fax-sig-method ▪ forking-handling ▪ hist-info-hdr ▪ min-session-expires ▪ mult-ptime-format ▪ nat-ip-addr ▪ np-n-type-to-rpi-hdr ▪ p-associated-uri-hdr ▪ p-charging-vector ▪ phone-in-from-hdr ▪ play-busy-tone-2tel ▪ play-rbt-2ip ▪ play-rbt2tel ▪ prack-mode ▪ reason-header ▪ remote-party-id ▪ rtp-only-mode ▪ sdp-session-owner ▪ semi-att-transfer ▪ session-exp-method ▪ session-expires-time ▪ sip-dst-port

Arguments	Description
	▪ sip-max-rtx ▪ sip-tcp-local-port ▪ sip-tls-local-port ▪ sip-udp-local-port ▪ src-nb-as-disp-name ▪ src-nb-preference ▪ t1-re-tx-time ▪ t2-re-tx-time ▪ tcp-conn-reuse ▪ tcp-timeout ▪ tel2ip-no-ans-timeout ▪ uri-for-assert-id ▪ use-tgrp-inf ▪ user-agent-info ▪ user=phone-in-url ▪ usr-def-subject ▪ voicemail-uri For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example disables the 'user=phone-in-url' parameter..

```
(config-voip)# sip-definition general-setting
(sip-def-gnrl-setting)# set user=phone-in-url disable
```

5.14.5 proxy and registration

This command defines proxy and registration settings.

Syntax:

```
sip-definition proxy-and-registration
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ always-use-proxy ▪ authentication-mode ▪ challenge-caching ▪ cnonce-4-auth ▪ defaults ▪ dns-query ▪ enable-proxy ▪ enable-registration ▪ fallback-to-routing ▪ gw-name ▪ gw-registration-name ▪ ip-addr-rgstr ▪ mutual-authentication ▪ nb-of-rtx-b4-hot-swap ▪ password-4-auth ▪ prefer-routing-table ▪ proxy-dns-query ▪ proxy-ip-lst-rfrsh-time ▪ proxy-name ▪ re-registration-timing ▪ redundancy-mode ▪ redundant-routing-m ▪ reg-on-conn-failure ▪ reg-on-invite-fail ▪ registrar-name ▪ registrar-transport ▪ registration-retry-time ▪ registration-time ▪ registration-time-thres ▪ rte-tbl-4-host-names ▪ set-oos-on-reg-failure ▪ sip-rerouting-mode ▪ subscription-mode ▪ use-gw-name-for-opt ▪ user-name-4-auth For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example set the gateway name to 'gateway1'.

```
(config-voip)# sip-definition proxy-and-registration  
(sip-def-proxy-and-reg)# set gw-name gateway1
```

5.15 sbc

The following defines SBC commands.

5.15.1 allowed-coders-group

This command defines the allowed-coders-group.

Syntax:

```
sbc allowed-coders-group AllowedCodersGroup<0-4> <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ name ▪ defaults For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the name in the coder's group.

```
(config-voip)# sbc allowed-coders-group AllowedCodersGroup0 1  
(AllowedCodersGroup0-1)# set name j_brown
```

5.15.2 general-setting

This command defines the general settings.

Syntax:

```
sbc general-setting
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - auth-chlng-mthd - auth-qop - defaults - lifetime-of-nonce - media-channels - min-session-expires - sbc-gruu-mode - sbc-media-sync - sbc-no-arelt-timeout - sbc-preferences - sbc-rgstr-time - sbc-sess-exp-time - transcoding-mode - unclassified-calls For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the number of channels associated with media services (announcements, conferencing).

```
(config-voip)# sbc general-setting
(sbc-gnrl-setting)# set media-channels 10
```

5.15.3 manipulations ip-inbound-manipulation

This command defines the inbound manipulations table.

Syntax:

```
sbc manipulations ip-inbound-manipulation <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ dst-host ▪ dst-user-name-prefix ▪ is-additional-manipulation ▪ leave-from-right ▪ manipulated-uri ▪ prefix-to-add ▪ purpose ▪ remove-from-left ▪ remove-from-right ▪ request-type ▪ src-host ▪ src-ip-group-id ▪ src-user-name-prefix ▪ suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the number of channels associated with media services (announcements, conferencing).

```
(config-voip)# sbc manipulations ip-inbound-manipulation 1  
(ip-inbound-manipulation-1) # set media-channels 10
```

5.15.4 manipulations ip-outbound-manipulation

This command defines the outbound manipulations table.

Syntax:

```
sbc manipulations ip-outbound-manipulation <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dst-host - dst-ip-group-id - dst-user-name-prefix - is-additional-manipulation - leave-from-right - manipulated-uri - prefix-to-add - privacy-restriction-mode - re-route-ip-group-id - remove-from-left - remove-from-right - request-type - src-host - src-ip-group-id - src-user-name-prefix - suffix-to-add - trigger For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Request Type to 'all'.

```
(config-voip)# sbc manipulations ip-outbound-manipulation 1
(ip-outbound-manipulation-1)# set request-type all
```

5.15.5 manipulations message-manipulations

This command defines the message manipulations table.

Syntax:

```
sbc manipulations message-manipulations <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ action-subject ▪ action-type ▪ action-value ▪ condition ▪ defaults ▪ manipulation-set-id ▪ message-type ▪ row-role For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Action Type to 'remove-prefix'.

```
(config-voip)# sbc manipulations message-manipulations 2  
(message-manipulations-2)# set action-type remove-prefix
```

5.15.6 sbc-admission-control

This command defines the sbc-admission-control table.

Syntax:

```
sbc sbc-admission-control <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ ip-group-id ▪ limit ▪ limit-per-user ▪ limit-type ▪ max-burst ▪ rate ▪ request-direction ▪ request-type ▪ srd-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Limit Type to 'srd'.

```
(config-voip)# sbc sbc-admission-control 1
(sbc-admission-control-1)# set limit-type srd
```

5.15.7 sbc message-policy

This command defines the sbc message policy table.

Syntax:

```
sbc message-policy <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ body-list ▪ body-list-type ▪ defaults ▪ max-body-length ▪ max-header-length ▪ max-message-length ▪ max-num-bodies ▪ max-num-headers ▪ method-list ▪ method-list-type ▪ send-rejection For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the maximum header length to 100.

```
(config-voip)# sbc message-policy 1  
(message-policy-1)# set max-header-length 100
```

5.16 routing

The following commands describe Routing.

5.16.1 classification

This command defines the classification table.

Syntax:

```
# sbc routing classification <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ action-type ▪ defaults ▪ dst-host-prefix ▪ dst-user-name-prefix ▪ message-condition ▪ src-host-prefix ▪ src-ip-address ▪ src-ip-group-id ▪ src-port ▪ src-srd-id ▪ src-transport-type ▪ src-user-name-prefix For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Action Type to 'allow'.

```
(config-voip)# sbc routing classification 1
(classification-1)# set action-type allow
```

5.16.2 condition-table

This command defines the condition table.

Syntax:

```
# sbc routing condition-table <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ condition ▪ description ▪ defaults For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the description for the routing condition.

```
(config-voip)# sbc routing condition-table 1
(condition-table-1)# set description Maintable 1
```

5.16.3 ip2ip-routing

This command defines the ip2ip-routing table.

Syntax:

```
sbc routing ip2ip-routing <index>
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - alt-route-options - cost-group - defaults - dst-address - dst-host - dst-ip-group-id - dst-port - dst-srd-id - dst-transport-type - dst-type - dst-user-name-prefix - message-condition - re-route-ip-group-id - request-type - src-host - src-ip-group-id - src-user-name-prefix - trigger For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Request Type to 'invite'.

```
(config-voip)# sbc routing ip2ip-routing 1
(ip2ip-routing-1)# set request-type invite
```

5.16.4 sbc-alternative-routing-reasons

This command defines the sbc-alternative-routing-reasons table.

Syntax:

```
sbc routing sbc-alternative-routing-reasons <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ ReleaseCause ▪ defaults For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Release Cause to '1'.

```
(config-voip)# sbc routing sbc-alternative-routing-reasons 1  
(sbc-alternative-routing-reasons-1)# set ReleaseCause 1
```

5.17 gw

The following defines gw commands:

5.17.1 advance-application

This command defines the advance application settings.

Syntax:

```
# gw advance-application voice-mail-setting
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - defaults - dig-to-ignore-dig-pattern - disc-call-dig-ptn - enable-smdi - ext-call-dig-ptn - fwd-busy-dig-ptn-ext - fwd-busy-dig-ptn-int - fwd-dnd-dig-ptn-ext - fwd-dnd-dig-ptn-int - fwd-no-ans-dig-ptn-ext - fwd-no-ans-dig-ptn-int - fwd-no-rsn-dig-ptn-ext - fwd-no-rsn-dig-ptn-int - int-call-dig-ptn - line-transfer-mode - mwi-off-dig-ptn - mwi-on-dig-ptn - mwi-source-number - mwi-suffix-pattern - smdi-timeout-[msec] - vm-interface For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the Simplified Message Desk Interface (SMDI) to Belcore.

```
(config-voip)# gw advance-application voice-mail-setting  
(gw-adv-appli-vm)# set enable-smdi 1
```

5.17.2 analoggw

The following defines analoggw commands.

5.17.2.1 authentication

This command defines the analog gateway authentication settings.

Syntax:

```
# gw analoggw authentication <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - username - password - defaults - port - port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the userid to "user1".

```
(config-voip)# gw analoggw authentication 1
(authentication-1)# set username user1
```

5.17.2.2 automatic-dialing

This command defines the automatic-dialing settings.

Syntax:

```
# gw analoggw automatic-dialing <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ auto-dial-status ▪ defaults ▪ dst-number ▪ hotline-dialtone-duration ▪ port ▪ port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the hotline-dialtone-duration to 18.

```
(config-voip)# gw analoggw automatic-dialing 2
(automatic-dialing-2)# set hotline-dialtone-duration 18
```

5.17.2.3 caller-display-info

This command defines the caller-display-info settings.

Syntax:

```
# gw analoggw caller-display-info <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - defaults - display-string - presentation - port - port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the display string to "user1ab".

```
(config-voip)# gw analoggw caller-display-info 3
(caller-display-info-3)# set display-string user1ab
```

5.17.2.4 call-forward

This command defines the call-forward settings.

Syntax:

```
# gw analoggw call-forward <index>  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ destination ▪ no-reply-time ▪ type ▪ port ▪ port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the call forward type condition to “on busy”.

```
(config-voip)# gw analoggw call-forward 3  
(caller-display-info-3)# set type on-busy
```

5.17.2.5 call-waiting

This command defines the call-waiting settings.

Syntax:

```
# gw analoggw call-waiting <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - defaults - enable-call-waiting - port - port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the call-waiting feature.

```
(config-voip)# gw analoggw call-waiting 4
(call-waiting-4)# set enable-call-waiting enable
```

5.17.2.6 enable-caller-id

This command defines the enable-caller-id settings.

Syntax:

```
# gw analoggw enable-caller-id <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ caller-id ▪ defaults ▪ port ▪ port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the enable-caller-id feature.

```
(config-voip)# gw analoggw enable-caller-id 2
(enable-caller-id-2)# set caller-id enable
```

5.17.2.7 enable-did

This command enables the DID table.

Syntax:

```
# gw analoggw enable-did <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ did ▪ defaults ▪ port ▪ port-type For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the DID table.

```
(config-voip)# gw analoggw enable-did 2
(enable-caller-id-2)# set did enable
```

5.17.2.8 charge-code

This command defines the analog gateway chargecode settings.

Syntax:

```
# gw analoggw charge-code <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ end-time-1 ▪ end-time-2 ▪ end-time-3 ▪ end-time-4 ▪ pulse-interval-1 ▪ pulse-interval-2 ▪ pulse-interval-3 ▪ pulse-interval-4 ▪ pulses-on-answer-1 ▪ pulses-on-answer-2 ▪ pulses-on-answer-3 ▪ pulses-on-answer-4 ▪ defaults For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the pulse interval.

```
(config-voip)# gw analoggw ChargeCode 1
(ChargeCode-1)*# set EndTime1 pulsinterval1 20
```

5.17.2.9 fxo-setting

This command defines the fxo settings.

Syntax:

```
# gw analoggw fxo-setting
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - answer-supervision - defaults - dialing-mode - disc-on-busy-tone-c - disc-on-dial-tone - fxo-autodial-play-busy - fxo-dbl-ans - guard-time-btwn-calls - reorder-tone-duration - ring-detection-tout - rings-b4-det-callerid - snd-mtr-msg-2ip - time-wait-b4-dialing - waiting-4-dial-tone For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the wait for dial tone before initiating an outgoing call to the PBX/PSTN (FXO one-stage dialing mode).

```
(config-voip) # gw analoggw fxo-setting
(gw-analogGW-fxo) # set waiting-4-dial-tone enable
```

5.17.2.10 keypad-features

This command defines the keypad features settings.

Syntax:

```
# gw analoggw keypad-features
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ blind-transfer ▪ caller-id-restriction-act ▪ cw-act ▪ cw-deact ▪ defaults ▪ fwd-busy-or-no-ans ▪ fwd-deactivate ▪ fwd-dnd ▪ fwd-no-answer ▪ fwd-on-busy ▪ fwd-unconditional ▪ hotline-act ▪ hotline-deact ▪ id-restriction-deact ▪ port ▪ port-type ▪ reject-anony-call-activate ▪ reject-anony-call-deactivate For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Key pad pattern for rejecting anonymous calls.

```
(config-voip)# gw analoggw keypad-features
(gw-analgw-keypad) # set KeyRejectAnonymousCall 2345
```

5.17.2.11 metering-tones

This command defines the metering tones.

Syntax:

```
# gw analoggw metering-tones
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - defaults - gen-mtr-tones - metering-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the metering method for charging pulses.

```
(config-voip)# gw analoggw metering-tones
(gw-analgw-mtrtone)*# set metering-type 16-kHz-sinusoidal-bursts
```

5.17.2.12 reject-anonymous-calls

This command defines the reject-anonymous-calls.

Syntax:

```
# gw analoggw reject-anonymous-calls  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ reject-calls ▪ port ▪ port-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables reject-anonymous calls.

```
(config-voip)# gw analoggw reject-anonymous-calls 5  
(reject-anonymous-calls-5)# set reject-calls enable
```

5.17.2.13 tone-index

This command defines the Tone Index table.

Syntax:

```
# gw analoggw tone-index
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ default ▪ dst-prefix ▪ fxs-port-first ▪ fxs-port-last ▪ priority ▪ src-prefix For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Priority Index to "1".

```
(config-voip)# gw analoggw tone-index 1
(tone-index-1)# set priority 1
```

5.17.3 digitalgw

The following defines digitalgw commands.

5.17.3.1 digital-gw-parameters

This command defines the digital gateway parameters.

Syntax:

```
gw digitalgw digital-gw-parameters
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ add-ie-in-setup ▪ add-pref-to-redir-nb ▪ b-ch-negotiation ▪ blind-xfer-add-prefix ▪ blind-xfer-disc-tmo ▪ cp-dst-nb-2-redir-nb ▪ defaults ▪ dflt-call-prio ▪ dflt-cse-map-isdn2sip ▪ dig-oos-behavior ▪ disc-on-busy-tone-c ▪ disc-on-busy-tone-i ▪ dscp-4-mlpp-flsh ▪ dscp-4-mlpp-flsh-ov ▪ dscp-4-mlpp-flsh-ov-ov ▪ dscp-4-mlpp-immed ▪ dscp-for-mlpp-prio ▪ dscp-for-mlpp-rtn ▪ epn-as-cpn-ip2tel ▪ epn-as-cpn-tel2ip ▪ etsi-diversion ▪ fax-rerouting-delay ▪ fax-rerouting-mode ▪ format-dst-phone-number ▪ ignore-bri-los-alarm ▪ isdn-facility-trace ▪ isdn-tnl-ip2tel ▪ isdn-tnl-tel2ip ▪ isdn-trsfr-on-conn ▪ mfc2-category ▪ mlpp-dflt-namespace ▪ mlpp-dflt-srv-domain ▪ mlpp-norm-ser-dmn

Arguments	Description
	▪ ni2-cpc ▪ np-n-ton-2-redirnb ▪ play-l-rbt-isdn-trsfr ▪ preemp-tone-dur ▪ PSTNReserved3 ▪ qsig-path-replacement ▪ qsig-tunneling ▪ rmv-calling-name ▪ rmv-cli-when-restr ▪ send-local-datetime-connect ▪ send-screen-to-ip ▪ send-screen-to-isdn ▪ swap-rdr-n-called-nb ▪ tdm-tunneling ▪ tel-to-ip-dflt-redir-rsn ▪ trkgrps-to-snd-ie ▪ usr2usr-hdr-frmt ▪ uui-ie-for-ip2tel ▪ uui-ie-for-tel2ip ▪ xfer-cap-for-data-calls ▪ xfer-prefix-ip2tel For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the gateway to maintain a permanent RTP connection.

```
(config-voip)# gw digitalgw digital-gw-parameters
(gw-digitalGW-params)# set tdm-tunneling on
```

5.17.3.2 isdn-supp-serv

This command defines the ISDN Supplementary Services table.

Syntax:

```
gw digitalgw isdn-supp-serv <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ caller-id-enable ▪ caller-id-number ▪ defaults ▪ module ▪ phone-number ▪ port ▪ presentation-restricted ▪ user-id ▪ user-password For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the user password in the ISDN Supplementary Services to 'abc123'.

```
(config-voip)# gw digitalgw isdn-supp-serv 1  
(isdn-supp-serv-1)# set user-password abc123
```

5.17.3.3 rp-network-domains

This command defines the Resource Priority Network Domains table.

Syntax:

```
gw digitalgw rp-network-domains <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the name of the Resource Priority Network Domains table to 'RPN1'.

```
(config-voip)# gw digitalgw rp-network-domains 1
(rp-network-domains-1)# set name RPN1
```

5.17.4 dtmf-and-suppl dtmf-and-dialing

This command defines the dtmf and supplementary parameters.

Syntax:

```
gw dtmf-and-suppl dtmf-and-dialing
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ dflt-dest-nb ▪ dial-plan-index ▪ digitmapping ▪ dt-duration ▪ hook-flash-option ▪ hotline-dt-dur ▪ isdn-tx-overlap ▪ min-dg-b4-routing ▪ mxdig-b4-dialing ▪ rfc-2833-in-sdp ▪ special-digit-rep ▪ special-digits ▪ telephony-events-payload-type-tx ▪ time-btwn-dial-digs For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables ISDN Overlap IP to Tel Dialing.

```
(config-voip)# gw dtmf-and-suppl dtmf-and-dialing
(gw-dtmf-and-dial)# set isdn-tx-overlap on
```

5.17.5 dtmf-and-suppl supplementary-services

This command defines the dtmf and supplementary parameters.

Syntax:

```
gw dtmf-and-suppl supplementary-services
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: 3w-conf-mode 3w-conf-nonalloc-prts - as-subs-ipgroupid - blind-transfer - call-forward - call-hold-remnd-rng - call-prio-mode - call-waiting - caller-ID-type - cfe-ring-tone-id - conf-id - defaults - reminder-ring - enable-3w-conf - enable-caller-id - enable-mwi - enable-transfer - flash-key-seq-style - flash-key-seq-tmout - held-timeout - hold - hold-format - hold-to-isdn - hook-flash-code - mlpp-diffserv - music-on-hold - mwi-analog-lamp - mwi-display - mwi-srvr-ip-addr - mwi-srvr-transp-type - mwi-subs-expr-time - mwi-subs-ipgrpid - mwi-subs-rtry-time - mx-3w-conf-onboard - nb-of-cw-ind - nrt-sub-retry-time - nrt-subscription

Arguments	Description
	▪ precedence-ringing ▪ send-all-cdrs-on-rtrv ▪ should-subscribe ▪ sttr-tone-duration ▪ subscribe-to-mwi ▪ time-b4-cw-ind ▪ time-between-cw ▪ transfer-prefix ▪ waiting-beep-dur For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the Call Waiting tone beep length (msec).

```
(config-voip)# gw dtmf-and-suppl supplementary-services  
(gw-suppl-serv)# set waiting-beep-dur 180
```

5.17.6 hunt-or-trunk-group trunk-group

This command defines the hunt-or-trunk-group Trunk Group table.

Syntax:

```
gw hunt-or-trunk-group trunk-group <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ first-b-channel ▪ first-phone-number ▪ first-trunk-id ▪ last-b-channel ▪ last-trunk-id ▪ module ▪ tel-profile-id ▪ trunk-group-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the first-phone-number to '123-345-567'.

```
(config-voip)# gw hunt-or-trunk-group trunk-group 4
(trunk-group-4)# set first-phone-number 123-345-567
```

5.17.7 hunt-or-trunk-group trunk-group-setting

This command defines the Hunt or Trunk Group Settings table.

Syntax:

```
gw hunt trunk-group-setting <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ channel-select-mode ▪ contact-user ▪ defaults ▪ gateway-name ▪ mwi-interrogation-type ▪ registration-mode ▪ serving-ip-group ▪ trunk-group-id ▪ trunk-group-name For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Registration Mode to 'per-account'.

```
(config-voip)# gw hunt-or-trunk-group trunk-group-setting 4  
(trunk-group-setting-4)# set registration-mode per-account
```

5.17.8 manipulations

The following commands define manipulations.

5.17.8.1 cause-map-isdn2sip

This command defines the cause-map-isdn2sip settings.

Syntax:

```
gw manipulations cause-map-isdn2sip <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - q850-causes - sip-response For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the ISDN Release Cause to "2".

```
(config-voip)# gw manipulations cause-map-isdn2sip 1
(cause-map-isdn2sip-1)# set q850-causes 2
```

5.17.8.2 cause-map-sip2isdn

This command defines the cause-map-sip2isdn settings.

Syntax:

```
gw manipulations cause-map-sip2isdn <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ q850-causes ▪ sip-response For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the SIP response to "2".

```
(config-voip)# gw manipulations cause-map-sip2isdn 1  
(cause-map-sip2isdn-1)# set sip-response 2
```

5.17.8.3 dst-number-map-ip2tel

This command defines the dst-number-map-ip2tel settings.

Syntax:

```
gw manipulations dst-number-map-ip2tel <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dst-host-prefix - dst-prefix - npi - num-of-digits-to-leave - prefix-to-add - remove-from-left - remove-from-right - src-host-prefix - src-ip-address - src-prefix - suffix-to-add - ton For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the source IP address.

```
(config-voip)# gw manipulations dst-number-map-ip2tel 2
(dst-number-map-ip2tel-2)# set src-ip-address 12.10.4.120
```

5.17.8.4 dst-number-map-tel2ip

This command defines the dst-number-map-tel2ip settings.

Syntax:

```
gw manipulations dst-number-map-tel2ip <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ dst-ip-group-id ▪ dst-prefix ▪ num-of-digits-to-leave ▪ prefix-to-add ▪ remove-from-left ▪ remove-from-right ▪ src-ip-group-id ▪ src-prefix ▪ src-trunk-group-id ▪ suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the Destination Prefix.

```
(config-voip)# gw manipulations dst-number-map-tel2ip 10  
(NumberMapTel2Ip-10)# set dst-prefix 02
```

5.17.8.5 src-number-map-ip2tel

This command defines the src-number-map-ip2tel settings.

Syntax:

```
gw manipulations src-number-map-ip2tel <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dst-host-prefix - dst-prefix - is-presentation-restricted - npi - num-of-digits-to-leave - prefix-to-add - remove-from-left - remove-from-right - src-host-prefix - src-ip-address - src-prefix - suffix-to-add - ton For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets is-presentation-restricted to 'restricted'.

```
(config-voip)# gw manipulations src-number-map-ip2tel 20
(src-number-map-ip2tel-20)# set is-presentation-restricted
restricted
```

5.17.8.6 src-number-map-tel2ip

This command defines the src-number-map-Tel2Ip settings.

Syntax:

```
# gw manipulations src-number-map-tel2ip <index>  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ dst-prefix ▪ is-presentation-restricted ▪ num-of-digits-to-leave ▪ prefix-to-add ▪ remove-from-left ▪ remove-from-right ▪ src-ip-group-id ▪ src-prefix ▪ src-trunk-group-id ▪ suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the Stripped Digits From Left to be '5'.

```
(config-voip)# gw manipulations src-number-map-Tel2Ip 18  
(src-number-map-tel2ip-18)# set remove-from-left 5
```

5.17.8.7 calling-name-map-ip2tel

This command defines the calling-name-map-ip2tel settings.

Syntax:

```
# gw manipulations calling-name-map-ip2tel <index>
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - calling-name-prefix - defaults - dst-host-prefix - dst-prefix - num-of-digits-to-leave - prefix-to-add - remove-from-left - remove-from-right - src-host-prefix - src-ip-address - src-prefix - suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the suffix to add.

```
(config-voip)# gw manipulations calling-name-map-ip2tel 1
(calling-name-map-ip2tel-1)# set suffix-to-add xxyy
```

5.17.8.8 calling-name-map-tel2ip

This command defines the calling-name-map-tel2ip settings.

Syntax:

```
# gw manipulations calling-name-map-tel2ip <index>  
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - calling-name-prefix - defaults - dst-prefix - num-of-digits-to-leave - prefix-to-add - remove-from-left - remove-from-right - src-ip-group-id - src-prefix - src-trunk-group-id - suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the source prefix to be 'abcd'.

```
(config-voip)# gw manipulations calling-name-map-tel2ip 5  
(calling-name-map-tel2ip-5)# set src-prefix abcd
```

5.17.8.9 general-setting

This command defines the general settings.

Syntax:

```
# gw manipulations general-setting
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - add-ph-cntxt-as-pref - defaults - ip2tel-redir-reason - prfm-ip-to-tel-dst-map - prfm-ip-to-tel-src-map - tel-to-ip-dflt-redir-rsn - tel2ip-redir-reason For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the parameter to add the phone context to src/dest phone number as a prefix.

```
(config-voip)# gw manipulations general-setting
(gw-manipul-gnrl-setting)# set add-ph-cntxt-as-pref on
```

5.17.8.10 phone-context-table

This command defines the phone context table.

Syntax:

```
gw manipulations phone-context-table <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ context ▪ defaults ▪ np ▪ ton For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the context table string to 'abcd'.

```
(config-voip)# gw manipulations phone-context-table 1  
(phone-context-table-1)# set context abcd
```

5.17.8.11 redirect-number-map-ip2tel

This command defines the redirect-number-map-ip2tel table.

Syntax:

```
gw manipulations redirect-number-map-ip2tel <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dst-host-prefix - dst-prefix - is-presentation-restricted - npi - num-of-digits-to-leave - prefix-to-add - redirect-prefix - remove-from-left - remove-from-right - src-host-prefix - src-ip-address - suffix-to-add - ton For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the number of digits to leave.

```
(config-voip)# gw manipulations redirect-number-map-ip2tel 1
(redirect-number-map-ip2tel-1)# set LeaveFromRight 5
```

5.17.8.12 **redirect-number-map-tel2ip**

This command defines the redirect-number-map-tel2ip table.

Syntax:

```
gw manipulations redirect-number-map-tel2ip <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ dst-prefix ▪ is-presentation-restricted ▪ num-of-digits-to-leave ▪ prefix-to-add ▪ redirect-prefix ▪ remove-from-left ▪ remove-from-right ▪ src-ip-group-id ▪ src-trunk-group-id ▪ suffix-to-add For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the destination prefix.

```
(config-voip) # gw manipulations redirect-number-map-tel2ip 8  
(redirect-number-map-tel2ip-8) # set DestinationPrefix abcd
```

5.17.9 routing

The following commands define gw routing commands.

5.17.9.1 alt-route-cause-tel2ip

This command defines the AltRouteCauseTel2IP table.

Syntax:

```
gw routing alt-route-cause-tel2ip <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - release-cause For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the release-cause to "1".

```
(config-voip)# gw routing alt-route-cause-tel2ip 5
(alternate-cause-tel2ip-5)# set release-cause 1
```

5.17.9.2 alt-route-cause-ip2tel

This command defines the AltRouteCauseIP2Tel table.

Syntax:

```
gw routing alt-route-cause-ip2tel <index>
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ release-cause For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the release-cause to "2".

```
(config-voip)# gw routing alt-route-cause-ip2tel 4
(alternate-route-cause-ip2tel-4)# set release-cause 2
```

5.17.9.3 fwd-on-busy-trk-dst

This command defines the ForwardOnBusyTrunkDest table.

Syntax:

```
gw routing fwd-on-busy-trk-dst <index>
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - forward-dst - trunk-group-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the forward destination to "LTP1".

```
(config-voip)# gw routing fwd-on-busy-trk-dst 1
```

```
(fwd-on-busy-trk-dst-1)# set forward-dst LTP1
```

5.17.9.4 general-setting

This command defines the ForwardOnBusyTrunkDest table.

Syntax:

```
gw routing general-setting <index>
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ alt-routing-tel2ip ▪ alt-rte-tel2ip-keep-alive ▪ alt-rte-tel2ip-method ▪ alt-rte-tel2ip-mode ▪ alt-rte-tone-duration ▪ defaults ▪ empty-dst-w-bch-nb ▪ ip2tel-rmv-rte-tbl ▪ ip2tel-rte-mode ▪ mx-pkt-loss-4-alt-rte ▪ npi-n-ton-to-cld-nb ▪ npi-n-ton-to-cng-nb ▪ src-ip-addr-input ▪ src-manipulation ▪ tel2ip-rte-mode ▪ trk-id-as-prefix ▪ trkgrpid-prefix For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the forward destination to "LTP1".

```
(config-voip)# gw routing general-setting 1
(gw-routing-gnrlsetting)# set alt-routing-tel2ip enable
```

5.17.9.5 ip2tel-routing

This command defines the ip2tel-routing table.

Syntax:

```
gw routing ip2tel-routing <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - defaults - dst-host-prefix - dst-phone-prefix - ip-profile-id - src-host-prefix - src-ip-address - src-ip-group-id - src-phone-prefix - src-srd-id - trunk-group-id - trunk-id For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets ip-profile-id to "10".

```
(config-voip)# gw routing ip2tel-routing 1
(ip2tel-routing-1)# set ip-profile-id 10
```

5.17.9.6 tel2ip-routing

This command defines the tel2ip-routing table.

Syntax:

```
gw routing tel2ip-routing <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ charge-code ▪ cost-group-id ▪ defaults ▪ dst-host-prefix ▪ dst-ip-address ▪ dst-ip-group-id ▪ dst-phone-prefix ▪ dst-port ▪ dst-srd ▪ forking-group ▪ ip-profile-id ▪ src-host-prefix ▪ src-ip-group-id ▪ src-phone-prefix ▪ src-trunk-group-id ▪ transport-type For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets ip-profile-id to "20".

```
(config-voip)# gw routing tel2ip-routing 8  
(tel2ip-routing-8)# set ip-profile-id 20
```

5.18 services

This command enables services mode.

5.18.1 services least-cost-routing cost-group

This command enables the cost-group table.

Syntax:

```
services least-cost-routing cost-group <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - cost-group-name - default-connection-cost - default-minute-cost - defaults For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the cost-group-name to "cgroup1".

```
(config-voip)# services least-cost-routing cost-group 1
(cost-group-1)# set cost-group-name cgroup1
```

5.18.2 services least-cost-routing cost-group-time-bands

This command enables the cost-group-time-bands table.

Syntax:

```
services least-cost-routing cost-group-time-bands <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ connection-cost ▪ cost-group ▪ defaults ▪ end-time ▪ minute-cost ▪ start-time ▪ timeband-index For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Start Time for this timeband in ddd:hh:mm format.

```
(config-voip)# services least-cost-routing cost-group-time-bands 9  
(cost-group-time-bands-9)# set start-time Mon:08:00
```

5.18.3 services least-cost-routing routing-rule-groups

This command enables the routing-rule-groups table.

Syntax:

```
services least-cost-routing routing-rule-groups <index>
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ lcr-call-length ▪ lcr-default-cost ▪ lcr-enable For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the average call length used for Least Cost Routing calculations to 10000.

```
(config-voip)# services least-cost-routing routing-rule-groups 9
(routing-rule-groups-0)# set lcr-call-length 10000
```

5.19 tdm

The following defines how to enter TDM commands.

Syntax:

```
tdm
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ IdleABCDPattern ▪ PCMLawSelect ▪ TDMBusLocalReference ▪ TDMBusPSTNAutoClockEnable ▪ TDMBusPSTNAutoClockRevertingEnable ▪ bus-type ▪ clock-source ▪ defaults ▪ idle-pcm-pattern For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example selects the TDM bus interface (framers) to be used.

```
(config-voip) # tdm
(tdm) # set bus-type framers
```

5.20 voice-streaming ivr

The following defines how to configure Voice Streaming settings.

Syntax:

```
voice-streaming ivr
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: - allow-url-as-alias - defaults - enable - enable-force-update - play-coder - profile - record-coder - use-aps-bundle For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example selects the profile for the Advanced Audio Syntax specification.

```
(config-voip)# voice-streaming ivr
(vs-ivr)# set profile h2489
```

5.21 Configuring Voice Settings

The following defines how to configure Voice settings.

5.21.1 media voice-processing

This command enables the media voice-processing parameters.

Syntax:

```
media voice-processing <index>
```

```
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ AGC-disable-fast-adaptation ▪ AGC-enable ▪ AGC-gain-slope ▪ AGC-max-gain ▪ AGC-min-gain ▪ AGC-redirection ▪ AGC-target-energy ▪ defaults ▪ echo-canceller-NLP-mode ▪ echo-canceller-aggressive-NLP ▪ echo-canceller-enable ▪ echo-canceller-freeze ▪ echo-canceller-hybrid-loss ▪ high-pass-filter-enable ▪ idle-pcm-pattern ▪ input-gain ▪ jitter-buffer-minimum-delay ▪ jitter-buffer-optimization-factor ▪ max-echo-canceller-length ▪ silence-compression-mode ▪ voice-volume For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example activates the AGC (Automatic Gain Control).

```
(config-voip)# media voice-processing 1  
(media-voice-processing)# set AGC-enable on
```

5.21.2 media voice-processing codecs

This command enables the media voice-processing codecs parameters.

Syntax:

```
media voice-processing codecs <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameter: ▪ G726-voice-payload-format For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the G.726 voice payload format to "regular".

```
(config-voip)# media voice-processing codecs  
(media-voice-processing-codecs)# set G726-voice-payload-format  
regular
```

5.22 Configuring Fax/Modem

The following defines how to configure Fax/Modem.

5.22.1 media fax-modem

This command configures media fax-modem parameters.

Syntax:

```
# media fax-modem
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - CNG-detector-mode - TTY-transport-type - V21-modem-transport-type - V22-modem-transport-type - V23-modem-transport-type - V32-modem-transport-type - V34-fax-transport-type - V34-modem-transport-type - bell-modem-transport-type - defaults - enable-fax-modem-inband-network-detection - fax-cng-mode - fax-modem-telephony-events-mode - fax-transport-mode - fax-vbd-behvr For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example determines the fax CNG tone detector mode.

```
(config-voip) # media fax-modem
(media-fax-modem-T38) # set CNG-detector-mode T38-relay
```

5.22.2 media fax-modem t38

This command configures media fax-modem t38 parameters.

Syntax:

```
# media fax-modem t38
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ ECM-mode ▪ defaults ▪ enhanced-redundancy-depth ▪ max-rate ▪ redundancy-depth ▪ version ▪ volume For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables ECM (Error Correction Mode) during T.38 Fax Relay

```
(config-voip)# media fax-modem t38
(media-fax-modem)# set ECM-mode on
```

5.22.3 media fax-modem V1501

This command configures the V1501 configuration.

Syntax:

```
# media fax-modem V1501
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - SPRT-transport-channel0-max-payload-size - SPRT-transport-channel2-max-payload-size - SPRT-transport-channel2-max-window-size - SPRT-transport-channel3-max-payload-size - SSE-redundancy-depth - defaults For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the V.150.1 SPRT transport Channel 0 maximum payload size to 140.

```
(config-voip)# media fax-modem V1501
(media-fax-modem-V1501)# set SPRT-transport-channel0-max-payload-size 140
```

5.22.4 media fax-modem bypass

This command configures the bypass configuration.

Syntax:

```
# media fax-modem bypass
# set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ NSE-mode ▪ basic-packet-interval ▪ coder ▪ defaults ▪ fax-bypass-output-gain ▪ jitter-buffer-minimum-delay ▪ modem-bypass-output-gain ▪ packing-factor For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the Fax/Modem bypass coder.

```
(config-voip)# media fax-modem bypass
(media-fax-modem-bypass)# set coder G711-alaw
```

5.23 Configuring RTP/RTCP Settings

The following defines how to configure RTP/RTCP settings.

5.23.1 media RTP-RTCP

This command configures the RTP RTCP configuration.

Syntax:

```
media RTP-RTCP
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - CAS-transport-type - RTP-redundancy-depth - broken-connection-event-activation-mode - broken-connection-event-timeout - connection-establishment-notification-mode - defaults - disable-NAT-traversal - disable-RTCP-randomization - no-operation-enable - no-operation-interval - number-of-SID-coefficients For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the ABCD signaling transport type over IP.

```
(config-voip) # media RTP-RTCP
(media-RTP-RTCP) # set CAS-transport-type events-only
```

5.24 Configuring IPM-Detectors Settings

The following defines how to configure IPM-Detectors settings.

5.24.1 media IPM-detectors

This command configures the IP Media detectors configuration.

Syntax:

```
media IPM-detectors
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ IPM-detectors-enable ▪ answer-detector-activity-delay ▪ answer-detector-enable ▪ answer-detector-redirection ▪ answer-detector-sensitivity ▪ answer-detector-silence-time ▪ defaults ▪ energy-detector-enable ▪ energy-detector-redirection ▪ energy-detector-sensitivity ▪ energy-detector-threshold For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the DSP IP Media Detectors.

```
(config-voip)# media IPM-detectors
(media-IPM-detectors)# set IPM-detectors-enable enable
```

5.25 Configuring General Media Settings

The following defines how to configure general Media settings.

5.25.1 media general

This command sets general media capabilities.

Syntax:

```
media general
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - DSP-version-template-number - defaults - media-channels For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example enables the DSP IP Media Detectors.

```
(config-voip)# media general
(media-IPM-detectors)# set IPM-detectors-enable enable
```

5.26 Configuring Media Realm Settings

The following defines how to configure Media Realm settings.

5.26.1 media realm

This command sets the Media Realm parameters.

Syntax:

```
media realm <index>  
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<index>	Defines the table row index.
<parameter> <value>	Sets the following table parameters: ▪ defaults ▪ ipv4if ▪ ipv6if ▪ is-default ▪ media-realm-transrate-ratio ▪ name ▪ port-range-end ▪ port-range-start ▪ session-leg For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example sets the number of media sessions associated with the range of ports.

```
(config-voip)# media realm 1  
(realm-1)# set session-leg 10
```

5.27 Configuring Media Security Settings

The following defines how to configure Media Security settings.

5.27.1 media security

This command sets the Media Security parameters.

Syntax:

```
media security
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ ARIA-protocol-support ▪ RTCP-encryption-disable-tx ▪ RTP-authentication-disable-tx ▪ RTP-encryption-disable-tx ▪ SRTP-tx-packet-MKI-size ▪ defaults ▪ inbound-media-latch-mode ▪ media-sec-bhvor ▪ media-security-enable ▪ offer-srtp-cipher ▪ symmetric-mki For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Command Modes:

Enable

Examples:

The following example determines the way of handling incoming media packets from a non-expected address/port.

```
(config-voip)# media security
(media-security)# set inbound-media-latch-mode dynamic
```

5.28 Configuring RTP Payload Types Settings

The following defines how to configure RTP Payload Types settings.

5.28.1 media RTP-payload-types

This command sets the RTP default payload types.

Syntax:

```
media RTP-payload-types
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ NSE-payload-type ▪ RTP-redundancy-payload-type ▪ defaults ▪ fax-bypass-payload-type ▪ modem-bypass-payload-type ▪ no-operation-payload-type ▪ telephony-events-payload-type-rx ▪ telephony-events-payload-type-tx For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the transmitted No Operation packets RTP Payload type.

```
(config-voip)# media RTP-payload-types
(media-RTP-payload-types)# set no-operation-payload-type 96
```

5.29 Configuring QoE Settings

The following defines how to configure Quality of Experience (QoE) settings.

5.29.1 media QoE

This command sets (QoE) media parameters.

Syntax:

```
media QoE
set <parameter> <value>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: - defaults - voice-quality-monitoring-enable For a description of these parameters, refer to the <i>User's Manual</i> .

Defaults:

NA

Command Modes:

Enable

Examples:

The following example defines the **voice-quality-monitoring-enable** parameter.

```
(config-voip)# media QoE
(media-QoE)# set voice-quality-monitoring-enable full
```

5.30 Configuring In-band Signaling Settings

The following defines how to configure In-band Signaling settings.

5.30.1 media in-band-signaling

This command configures the media in-band-signaling table.

Syntax:

The syntax of this command includes the following variations:

```
media in-band-signaling  
set <parameter> <value>
```

The command syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: ▪ COT-detector-enable ▪ CPT-detector-frequency-deviation ▪ DTMF-detector-enable ▪ DTMF-generation-twist ▪ DTMF-transport-type ▪ DTMF-volume ▪ IBS-detection-redirection ▪ MF-transport-type ▪ MFR1-detector-enable ▪ MFR2-backward-detector-enable ▪ MFR2-forward-detector-enable ▪ NTT-DID-signaling-form ▪ SIT-detector-enable ▪ UDT-detector-frequency-deviation ▪ call-progress-detector-enable ▪ caller-ID-transport-type ▪ caller-ID-type ▪ defaults ▪ digit-hangover-time-rx ▪ digit-hangover-time-tx ▪ telephony-events-max-duration ▪ user-defined-tones-detector-enable For a description of these parameters, refer to the <i>User's Manual</i>.

Command Modes:

Enable

Examples:

The following example enables COT (Continuity Tones) detection and generation.

```
(config-voip)# media in-band-signaling  
(media-in-band-signaling)# set COT-detector-enable on
```


5.31 Configuring User Information / Registration Database

This feature provides support for configuring the User Information / Registration database through CLI. Up until now, this database could be configured only in an external User Info file (text-based) which was then loaded to the device. Once loaded, it could only be modified by loading a new User Info file. This new feature now enables adding, editing, deleting, and searching users in this database, through CLI and is applicable to all products.

This database is used for the following applications:

- **Gateway Application:** Maps PBX extensions connected to the device to "global" IP numbers, and registers each PBX user to an external registrar server.
- **SBC Application:**
 - Registers to an external registrar server on behalf of a specific user
 - Authenticates (for any SIP request and as a client) on behalf of a specific user if challenged by an external server
 - Authenticates (as a server) incoming user requests

5.31.1 user-info

This command configures user information / registration database.

Syntax:

```
user-info <gw-user-info> <sbc-user-info>
```

The command's syntax format is described below:

Arguments	Parameter Name	Description
<gw-user-info>	Sets the following table parameters:	
	▪ pbx-ext	Defines the PBX extension (e.g., 405).
	▪ global-phone-num	Defines the Global phone number (e.g., 405).
	▪ display-name	Defines the Display name (e.g., Ext405).
	▪ username	Defines the Username (e.g., user405)
	▪ password	Defines the Password (hidden for security)
	▪ status	Defines the Registration status ("registered" or "not-registered")
	For a description of these parameters, refer to the <i>User's Manual</i> .	

Arguments	Parameter Name	Description
<sbcs-user-info>	Sets the following table parameters:	
	▪ local-user	Identifies the user and is used as the URI user part for the AOR in the database.
	▪ ip-group-id	IP Group ID to which the user belongs and is used as the URI source host part for the AOR in the database.
	▪ username	Defines the Authentication username (e.g., user405).
	▪ password	Defines the Authentication password (hidden for security).
	▪ status	Defines the Registration status ("registered" or "not-registered").
	For a description of these parameters, refer to the <i>User's Manual</i> .	

Defaults:

NA

Command Modes:

Enable

Examples:

The path to these tables is as follows:

```
# configure voip
(config-voip)# sip-definition proxy-and-registration
(sip-def-proxy-and-reg)# user-info <gw-user-info | sbcs-user-info>
```

The following commands can be used:

- To view all database entries, use the **display** command, as shown in the example below:

```
(sip-def-proxy-and-reg)# user-info gw-user-info display
---- gw-user-info-0 ----
pbx-ext (405)
global-phone-num (405)
display-name (Ext405)
username (user405)
password (0aGzoKfh5uI=)
status (not-resgistered)
---- gw-user-info-1 ----
pbx-ext (406)
global-phone-num (406)
display-name (Ext406)
username (user406)
```

```
password (0KCwoaDg5eA=)
status (not-resgistered)
```

- To view a specific entry, enter the database record entry number and **display** command:

```
(sip-def-proxy-and-reg)# user-info gw-user-info 1
(gw-user-info-1)# display
pbx-ext (406)
global-phone-num (406)
display-name (Ext406)
username (user406)
password (0KCwoaDg5eA=)
status (not-resgistered)
```

- To add and/or define a user, use the **set** command, as shown in the example below:

```
(sip-def-proxy-and-reg)# user-info gw-user-info 1
(gw-user-info-1)# set username user406b
```

- To apply your changes, you must enter the **exit** or **activate** command per user addition or modification (not per parameter)

```
(gw-user-info-1)# <activate | exit>
```

- To search a user (by pbx-ext for Gateway or by local-user for SBC), use the **find** command, as shown in the example below:

```
sip-def-proxy-and-reg)# user-info find <PBX-EXT e.g., 300 |
Local-User, e.g., JohnDoe>
300: Found at index 3 in GW user info table, not registered
```

The search locates the table index belonging to the searched user.

- To delete a user, use the **no** command, as shown in the example below:

```
(sip-def-proxy-and-reg)# no user-info gw-user-info <database
index entry, e.g., 1>
```



Note: If you load a User Info file to the device, all previous database entries are removed and replaced with the users in the loaded User Info file.

6 Show Commands

The following describes the Show commands.

6.1 show mode

This command displays VoIP interface table details.

Syntax:

The syntax of this command includes the following variations:

```
show voip interface network <vlan id>
show voip interface network description
```

The command syntax format is described below:

Arguments	Description
<vlan id>	Defines a valid VLAN interface ID in the range of 1 and 255.

Command Modes:

Enable

Examples:

The following example displays interface VLAN 2 details:

```
# sh voip interface network 2
Name: M_12
Application Type: CONTROL
IP address: 10.12.60.66
PrefixLength: 16
Gateway: 0.0.0.0
Vlan ID: 3
Primary DNS: 0.0.0.0
Secondary DNS: 0.0.0.0
Uptime: 69:54:48
rx_packets 0          tx_packets 6
rx_bytes 0           tx_bytes 462
```

The following example displays brief descriptions for all interfaces.

```
# sh voip interface network description
```

Index	Application Type	IP Address	Prefix	Gateway
VlanID	Interface Name			
0	O+M+C 10.4.60.62	16	10.4.0.1	1 O+M+C
2	CONTROL 10.12.60.66	16	0.0.0.0	3 M_12
3	MEDIA 10.13.60.66	16	10.13.0.1	2 M_13

6.2 show running-config

This command outputs the current system configuration in the form of a CLI command script. This script can be cut and pasted to the console for execution (limited by the client's capability of saving data to the clipboard).

The command 'show running-configuration > [URL]' will output the script to a file on a remote location. HTTP, HTTPS and NFS are supported.

Syntax:

The syntax of this command can include the following variations:

```
show running-config <parameter>
```

The command's syntax format is described below:

Arguments	Description
<parameter> <value>	Sets the following table parameters: > - data - full - no-switchports For a description of these parameters, refer to the <i>User's Manual</i>.

Defaults:

NA

Notes:

NA

Command Modes:

Basic

Related Commands:

NA

6.3 show system

The following commands define the **show system** commands.

6.3.1 show system assembly

This command displays system information.

Syntax:

The syntax of this command includes the following variations:

```
show system assembly
```

Command Modes:

Enable

Examples:

```
# show system assembly
```

```
Board Assembly Info:
```

Slot No.	Module Type	Num of Ports
0 CPU	0	
1 FXS	4	
2 FXO	4	
3 Empty	0	
4 GB-ETH	4	
5 FAST-ETH	8	

6.3.2 show system active-alarms

This command displays the system active alarms.

Syntax:

The syntax of this command includes the following variations:

```
show system active-alarms
```

Command Modes:

Enable

Examples:

```
# show system active-alarms
1. Board#1      14 major      Network element operational state
change alarm. Operational state is disabled.
2. Board#1/WanLink#1  78 major      WAN link alarm. FE interface
1 is down.
3. Board#1/EthernetLink#2    9 minor      Ethernet link alarm.
LAN port number 2 is down.
4. Board#1/EthernetLink#3    9 minor      Ethernet link alarm.
LAN port number 3 is down.
5. Board#1/EthernetLink#4    9 minor      Ethernet link alarm.
LAN port number 4 is down.
6. Board#1/EthernetLink#5    9 minor      Ethernet link alarm.
LAN port number 5 is down.
7. Board#1/EthernetLink#6    9 minor      Ethernet link alarm.
LAN port number 6 is down.
8. Board#1/EthernetLink#7    9 minor      Ethernet link alarm.
LAN port number 7 is down.
9. Board#1/EthernetLink#8    9 minor      Ethernet link alarm.
LAN port number 8 is down.
10. Board#1/EthernetLink#9    9 minor      Ethernet link alarm.
LAN port number 9 is down.
11. Board#1/EthernetLink#10   9 minor      Ethernet link alarm.
LAN port number 10 is down.
12. Board#1/EthernetLink#11   9 minor      Ethernet link alarm.
LAN port number 11 is down.
13. Board#1/EthernetLink#12   9 minor      Ethernet link alarm.
LAN port number 12 is down.
```

6.3.3 show system alarms-history

This command displays the system alarms history.

Syntax:

The syntax of this command includes the following variations:

```
show system alarms-history
```

Command Modes:

Enable

Examples:

```
# show system alarms-history
 1. Board#1      14 major      Network element operational state
change alarm. Operational state is disabled.
 2. Board#1/WanLink#1  78 major      WAN link alarm. FE interface
1 is down.
 3. Board#1/EthernetLink#2    9 minor      Ethernet link alarm.
LAN port number 2 is down.
 4. Board#1/EthernetLink#3    9 minor      Ethernet link alarm.
LAN port number 3 is down.
 5. Board#1/EthernetLink#4    9 minor      Ethernet link alarm.
LAN port number 4 is down.
 6. Board#1/EthernetLink#5    9 minor      Ethernet link alarm.
LAN port number 5 is down.
 7. Board#1/EthernetLink#6    9 minor      Ethernet link alarm.
LAN port number 6 is down.
 8. Board#1/EthernetLink#7    9 minor      Ethernet link alarm.
LAN port number 7 is down.
 9. Board#1/EthernetLink#8    9 minor      Ethernet link alarm.
LAN port number 8 is down.
10. Board#1/EthernetLink#9    9 minor      Ethernet link alarm.
LAN port number 9 is down.
11. Board#1/EthernetLink#10   9 minor      Ethernet link alarm.
LAN port number 10 is down.
12. Board#1/EthernetLink#11   9 minor      Ethernet link alarm.
LAN port number 11 is down.
13. Board#1/EthernetLink#12   9 minor      Ethernet link alarm.
LAN port number 12 is down. 2. Board#1/WanLink#1  78 major
WAN link alarm. FE interface 1 is down.
 3. Board#1/EthernetLink#2    9 minor      Ethernet link alarm.
LAN port number 2 is down.
 4. Board#1/EthernetLink#3    9 minor      Ethernet link alarm.
LAN port number 3 is down.
 5. Board#1/EthernetLink#4    9 minor      Ethernet link alarm.
LAN port number 4 is down.
 6. Board#1/EthernetLink#5    9 minor      Ethernet link alarm.
LAN port number 5 is down.
 7. Board#1/EthernetLink#6    9 minor      Ethernet link alarm.
LAN port number 6 is down.
 8. Board#1/EthernetLink#7    9 minor      Ethernet link alarm.
LAN port number 7 is down.
```

9. Board#1/EthernetLink#8 LAN port number 8 is down.	9 minor	Ethernet link alarm.
10. Board#1/EthernetLink#9 LAN port number 9 is down.	9 minor	Ethernet link alarm.
11. Board#1/EthernetLink#10 LAN port number 10 is down.	9 minor	Ethernet link alarm.
12. Board#1/EthernetLink#11 LAN port number 11 is down.	9 minor	Ethernet link alarm.
13. Board#1/EthernetLink#12 LAN port number 12 is down.	9 minor	Ethernet link alarm.

6.3.4 show system feature-key

This command displays system feature-key information.

Syntax:

The syntax of this command includes the following variations:

```
show system feature-key
```

Command Modes:

Enable

Examples:

```
# show system feature-key
Key features:
Board Type: Mediant 800 - MSBG
Security: IPSEC MediaEncryption StrongEncryption
EncryptControlProtocol
DATA features: Routing FireWall&VPN WAN Eth-Port=12 BGP Advanced-
Routing Wan-Rate=1020Mbps
Coders: G723 G729 G728 NETCODER GSM-FR GSM-EFR AMR EVRC-QCELP G727
ILBC EVRC-B AMR-WB G722 EG711 MS_RTA_NB MS_RTA_WB SPEEX_WB
PSTN FALLBACK Supported
E1Trunks=1
T1Trunks=1
FXSPorts=4
FXOPorts=4
DSP Voice features: RTCP-XR AMRPolicyManagement
Channel Type: RTP DspCh=32
PSTN Protocols: IUA=1
IP Media: Conf VXML VoicePromptAnnounc(H248.9) CALEA TrunkTesting
POC
SS7 Links: MTP2=1 MTP3=1 M2UA=1 M3UA=1
Control Protocols: MGCP SIP SASurvivability SBC=1
Default features:
Coders: G711 G726
```

6.3.5 **show system ntp-status**

This command displays NTP information.

Syntax

The syntax of this command can include the following variations:

```
show system ntp-status
```

Defaults:

NA

Command Modes:

Enable

Example

This example displays NTP information.

```
show system ntp-status
```

6.3.6 show system power

This command displays the system PoE information.

Syntax:

The syntax of this command can include the following variations:

```
show system power
```

Defaults:

NA

Command Modes:

Enable

Example

This example displays the system PoE information,

```
show system power
```

6.3.7 show system version

This command shows the current running software and hardware version.

Syntax:

The syntax of this command can include the following variations:

```
show system version
```

Command Modes:

Basic

Related Commands:

NA

6.4 show voip interface

The following commands define the **show voip** commands.

6.4.1 E1/T1, BRI

This command displays the current status, main PM parameters and main configuration parameters to a specific PSTN interface (E1/T1 or BRI).

Syntax:

The syntax of this command includes the following variations:

```
show voip interface e1-t1 <slot/port>
show voip interface bri <slot/port>
```

The command syntax format is described below:

Arguments	Description
slot	Defines the module slot index as shown on the front panel.
port	Defines the port index within the selected module.

Related Commands:

```
interface e1-t1 <slot/port>
interface bri <slot/port>
```

The above commands enter a specific PSTN interface (E1/T1 or BRI) configuration.

Notes

The displayed parameters depend on the protocol type.

Examples:

The following example displays the current status, main PM parameters and main configuration parameters.

```
show voip interface e1-t1 1/1
show voip interface bri 1/2
Mediant 800 - MSBG# show voip interface bri 1/2

show voip interface bri 1\2
-----
module/port: 1\2
trunk number:      1
protocol:    bri_euro_isdn
state:       active
alarm status:    LOS 0,  LOF 0
d-channel status: not established
loopback status: no loop

main performance monitoring counters collected in the last 330
seconds:
Slips:      25  Slip seconds:      1
Code violations: 0  Code violation seconds:  0
```

HDLC CRC errors: 2 LOF seconds: 1

basic configuration:

isdn-layer2-mode: BRI_L2_MODE_P2MP

isdn configuration:

isdn-termination-side: USER_TERMINATION_SIDE

isdn-bits-cc-behavior: 0

isdn-bits-incoming-calls-behavior: 0

isdn-bits-outgoing-calls-behavior: 0

isdn-bits-ns-behavior: 0

isdn-bits-ns-extension-behavior: 0

6.4.2 FXS/FXO

This command displays the current status, main PM parameters and main configuration parameters to a specific analog interface (FXS or FXO).

Syntax:

The syntax of this command includes the following variations:

```
show voip interface fxs-fxo <slot/port>
```

The command syntax format is described below:

Arguments	Description
slot	Defines the module slot index as shown on the front panel.
port	Defines the port index within the selected module.

Related Commands:

```
interface fxs-fxo <slot/port>
```

Examples:

The following example displays the current status, main PM parameters and main configuration parameters.

```
show voip interface fxs-fxo
```

6.4.3 enm

This command displays detailed information regarding the E and M port.

Syntax:

The syntax of this command includes the following variations:

```
show voip interface enm
```

Examples:

The following example displays detailed information regarding the E and M port.

```
show voip interface enm

Module in slot 2, Ports type is E_M

Port 1 Hook indication status:
  Detected off Hook State
  Generated off Hook State

Port 2 Hook indication status:
  Detected off Hook State
  Generated on Hook State

Module Configuration:
  Signaling Type 0
  System Type - signaling
  Voice Type - two wires
  Line Impedance USA 600 Ohm
  Country Coefficients - USA
  Hook Debounce Timer - 75
  Off Hook Glare Disable
```

6.5 show voip dsp

The following commands define the **show voip dsp** commands.

6.5.1 show voip dsp perf

This command displays performance monitoring of DSP data.

Syntax:

The syntax of this command includes the following variations:

```
show voip dsp perf
```

Examples:

The following example displays 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
```

6.5.2 show voip dsp status

This command displays the current DSP status.

Syntax:

The syntax of this command includes the following variations:

```
show voip dsp status
```

Examples:

The following example displays 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
```

6.6 show voip gw

This feature provides support for the following additional show CLI commands that display various statistics and call counters relating to the Gateway (analog and digital PSTN) application.

These commands are applicable to the following products:

- MP-1xx
- Mediant 600
- Mediant 1000B
- MSBR Series
- Mediant 2000
- Mediant 3000

6.6.1 show voip gw statistics basic-statistics

This command displays performance monitoring.

Syntax:

The syntax of this command includes the following variations:

```
show voip gw statistics basic-statistics
```

Note:

This command is applicable to the MSBR Series.

Examples:

The following example displays performance monitoring.

```
# show voip gw statistics basic-statistics
Active TDM channels          2
Active DSP resources         2
Active analog channels       0
Active G.711 channels        1
Average voice delay (ms)     0
Average voice jitter (ms)    0
Total RTP packets TX         125
Total RTP packets RX         140
Total call attempts          2
```

6.6.2 show voip gw calls-count tel2ip

This command displays various Tel-to-IP call counters.

Syntax:

The syntax of this command includes the following variations:

```
show voip gw calls-count tel2ip
```

Note:

This command is applicable to the MSBR Series.

Examples:

The following example displays various Tel-to-IP call counters.

```
# show voip gw calls-count tel2ip
```

```
Number of attempted calls: 5
Number of established calls: 5
Percentage of successful calls(ASR): 100.000000
Number of calls terminated due to a busy line: 0
Number of calls terminated due to no answer: 0
Number of calls terminated due to forward: 0
Number of calls terminated due to no route: 0
Number of calls terminated due to no matched capabilities: 0
Number of calls terminated due to no resources: 0
Number of calls terminated due to other failures: 0
Average call duration (ACD) [sec]: 103
Attempted fax calls counter: 0
Successful fax calls counter: 0
```

6.6.3 show voip gw calls-count ip2tel

This command displays various IP-to-Tel call counters.

Syntax:

The syntax of this command includes the following variations:

```
show voip gw calls-count ip2tel
```

Note:

This command is applicable to the MSBR Series.

Examples:

The following example displays various Tel-to-IP call counters.

```
# show voip gw calls-count ip2tel
```

```
Number of attempted calls: 5
Number of established calls: 5
Percentage of successful calls(ASR): 100.000000
Number of calls terminated due to a busy line: 0
Number of calls terminated due to no answer: 0
Number of calls terminated due to forward: 0
Number of calls terminated due to no route: 0
Number of calls terminated due to no matched capabilities: 0
Number of calls terminated due to no resources: 0
Number of calls terminated due to other failures: 0
Average call duration (ACD) [sec]: 18
Attempted fax calls counter: 0
Successful fax calls counter: 0
```

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