

**Oracle® Communications Session  
Border Controller**

ACLI Reference Guide

Release S-C6.1.0

*Formerly Net-Net Session Director*

October 2013

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# About this Guide

## Overview

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The Oracle Communications Session Border Controller ACLI Reference Guide provides a comprehensive explanation of all commands and configuration parameters available to you in the Acme Command Line Interface (ACLI). This programming interface is used for configuring your Net-Net family of products. This document does not explain configurations and the logic involved in their creation.

## Document Organization

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- About this Guide—This chapter.
- How to Use the ACLI—Explains how to use the ACLI, the CLI-based environment for configuring the Net-Net family of products.
- Commands A-M—Lists commands starting with A-M, their syntax, and their usage.
- Commands N-Z—Lists commands starting with N-Z, their syntax, and their usage.
- Configuration Elements A-M—Lists configuration elements starting with A-M, their syntax, and their usage. Subelements are listed directly after the element where they are located.
- Configuration Elements N-Z—Lists configuration elements starting with N-Z, their syntax, and their usage. Subelements are listed directly after the element where they are located.
- ACLI Command Summary—Lists all ACLI commands.
- ACLI Configuration Element Tree—Shows a graphical representation of all configuration elements and subelements in a tree-type format that reflects their hierarchical position in the ACLI.

## Audience

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This document is written for all users of the Net-Net 4000 Session Director. Since the ACLI is one of the primary ways of configuring, monitoring, and maintaining your Net-Net 4000, this document lists the ACLI commands and their syntax.

## Conventions

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This section explains the documentation conventions used in this guide. Each of the following fields is used in the *Net-Net ACLI Reference Guide*.

The following are the fields associated with every command or configuration element in this guide. When no information is applicable, the field is simply omitted (this occurs mostly with the Notes field).

- **Description**—Describes each command, its purpose, and use.
- **Syntax**—Describes the proper syntax needed to execute the command. Syntax also includes syntax-specific explanation of the command.
- **Arguments**—Describes the argument place holders that are typed after a command. For commands only.
- **Parameters**—Describes the parameters available in a configuration element. For configuration elements only.
  - **Default**—Default value that populates this parameter when the configuration element is created.
  - **Values**—Valid values to enter for this parameter.
- **Notes**—Lists additional information not included in the above fields.
- **Mode**—Indicates whether the command is executed from User or Superuser mode.
- **Path**—Describes the ACLI path used to access the command.
- **Release**—Gives the original release version and the release last modified version for the command.
- **Example**—Gives an example of how the command should be entered using one of the command's valid arguments.

This guide uses the following callout conventions to simplify or explain the text.




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**Caution:** This format is used to advise administrators and users that failure to take or avoid a specified action can result in loss of data or damage to the system.

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## Style

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This guide uses the stylistic conventions identified within the following table to clarify and to distinguish specialized text from the main text.

Style	Definition
<Keypress or Keypress Combination>	Angle brackets distinguish a keypress or a keypress combination that is required (e.g., <Tab>, <Ctrl-Alt-Delete>) from the text surrounding it.
[Keypress or Keypress Combination]	Square brackets distinguish a keypress or a keypress combination that is optional (e.g., <Tab>, <Ctrl-Alt-Delete>) from the text surrounding it.
Code or Location	Text in Lucida Console font identifies code or the location of an item (e.g., in a file or directory). You can identify it as the Lucida Console fixed-width font common in many terminal programs.

Style	Definition
<b>user-entered-text</b>	Text in <b>Lucida Console BOLD</b> style depicts data that the user enters. You can identify it as the Lucida Console fixed-width font.
<b>command</b>	This style depicts a command or pre-determined text to be typed into the ACLI. You can identify it as text set in bold style.

## Supported Platforms

Release Version S-C6.1.0 is supported on the Net-Net 4500 and Net-Net 4250 platforms.

## Related Documentation

The following table lists the members that comprise the documentation set for this release:

Document Name	Document Description
Acme Packet 4500 System Hardware Installation Guide	Contains information about the components and installation of the Acme Packet 4500 system.
ACLI Configuration Guide	Contains information about the administration and software configuration SBC.
ACLI Reference Guide	Contains explanations of how to use the ACLI, as an alphabetical listings and descriptions of all ACLI commands and configuration parameters.
Maintenance and Troubleshooting Guide	Contains information about Net-Net SBC logs, performance announcements, system management, inventory management, upgrades, working with configurations, and managing backups and archives.
MIB Reference Guide	Contains information about Management Information Base (MIBs), Enterprise MIBs, general trap information, including specific details about standard traps and enterprise traps, Simple Network Management Protocol (SNMP) GET query information (including standard and enterprise SNMP GET query names, object identifier names and numbers, and descriptions), examples of scalar and table objects.
Accounting Guide	Contains information about the SBC's accounting support, including details about RADIUS accounting.

## Document Revision History

This section provides a chronological overview of the changes made to this document starting with the first revision after the GA posting (rev. 1.00)

<b>Date</b>	<b>Revision Number</b>	<b>Description</b>
December 18, 2009	1.01	<ul style="list-style-type: none"><li>Changes the default value of the sip-manipulation&gt;header-rules&gt;element-rule type parameter</li></ul>
October 30 2013	1.02	<ul style="list-style-type: none"><li>Corrects description for: realm-config&gt; add-additional-prefixes remove-additional-prefixes</li></ul>

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## The ACLI

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The ACLI is an administrative interface that communicates with other components of the Net-Net SBC. The ACLI is a single DOS-like, line-by-line entry interface.

The ACLI is modeled after industry standard CLIs. Users familiar with this type of interface should quickly become accustomed to the ACLI.

## Using the ACLI

---

You can access the ACLI either through a direct console connection, a Telnet connection, or an SSH connection.

### Privilege Levels

There are two privilege levels in the ACLI, User and Superuser. Both are password-protected.

- User—At User level, you can access a limited set of Net-Net SBC monitoring capabilities. You can:
  - View configuration versions and a large amount of statistical data for the system's performance.
  - Handle certificate information for IPsec and TLS functions.
  - Test pattern rules, local policies, and session translations.
  - Display system alarms.
  - Set the system's watchdog timer.
  - Set the display dimensions for your terminal.

You know you are in User mode when your system prompt ends in the angle bracket (>).

- Superuser—At Superuser level, you are allowed access to all system commands and configuration privileges. You can use all of the commands set out in this guide, and you can perform all configuration tasks.

You know you are in Superuser mode when your system prompt ends in the pound sign (#).

### Enabling Superuser Mode

#### To enable Superuser mode:

1. At the ACLI User prompt, type the enable command. You will be asked for your Superuser password.

```
ACMEPACKET> enable
```

```
Password:
```

2. Enter your password and press <Enter>.

Password: *[Your password does not echo on the display.]*  
ACMEPACKET#

If your entry is incorrect, the system issues an error message and you can try again. You are allowed three failed attempts before the system issues an error message telling you that there are excess failures. If this occurs, you will be returned to User mode where you can start again.

## System Access

You can access the ACLI using the different means described in this section.

### Local Console Access

Console access takes place via a serial connection to the console port directly on the Net-Net SBC chassis. When you are working with the Net-Net SBC at the console, the ACLI comes up automatically.

Accessing the ACLI through a console connection is the most secure method of connection, given that the physical location is itself secure.

### Remote Telnet Access

Accessing the ACLI via Telnet gives you the flexibility to connect to your Net-Net SBC from a remote location. In addition, you can administer multiple Net-Net SBCs from a single location.

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**Caution: Security is a main issue of concern with a Telnet connection. If you elect to use a Telnet connection to configure your Net-Net SBC, be aware that Telnet connections are not secure. You should connect your Net-Net SBC's management interface to a secure administrative LAN.**

---

### Remote SSH Access

SSH provides strong authentication and secure communications over unsecure channels. Accessing the ACLI via an SSH connection gives you the flexibility to connect to your Net-Net SBC from a remote location over an insecure connection.

## ACLI Help and Display

The Net-Net 4000's ACLI offers several features that aid with navigation and allow you to customize the ACLI so that you can work more efficiently.

- Alphabetized help output—When you enter either a command followed by a question mark, the output is now sorted alphabetically and aligned in columns. The exception is the **exit** command, which always appears at the end of a column.
- Partial command entry help—When you enter a partial command followed by a question mark, the new Help output displays only commands that match the letter you type rather than the entire list.
- The **more** prompt—You can set a **more** option in the ACLI that controls whether or not you can use more with any of the following commands: **show**, **display**, **acl-show**, and **view-log-file**. Turning this option on gives you the ability to view output from the command one page at a time. By default, this option is enabled. Your setting is persistent across ACLI sessions.

With the **more** feature enabled, the ACLI displays information one page at a time and does so universally across the ACLI. A line at the bottom of the screen



prompts you for the action you want to take: view the displays’s next line or next page, show the entire display at once, or quit the display. You cannot change setting persistently, and need to change them every time you log in.

- Configurable page size—The page size defaults to 24 X 80. You can change the terminal screen size by using the new **cli terminal height** and **cli terminal width** commands. The settings for terminal size are not preserved across ACLI sessions.

## Exiting the ACLI

Typing **exit** at any ACLI prompt moves you to the next “higher” level in the ACLI. After exiting out of the User mode, you are logged out of the system.

## Navigation Tips

This section provides information about hotkeys used to navigate the ACLI. This information applies to both User mode and Superuser mode, although the specific commands available to those modes differ.

## Hotkeys

Hotkeys can assist you in navigating and editing the ACLI, and they also allow you to scroll through a list of commands that you have recently executed. These hotkeys are similar to those found in many other CLIs. The following table lists ACLI hotkeys and a description of each.

Category	Hotkey	Description
General	<Ctrl-D>	Equivalent of the <b>done</b> command when used at the end of a command line. When used within a command line, this hotkey deletes the character at the cursor.
	<UParrow>	Scrolls forward through former commands.
	<DOWNarrow>	Scrolls backward through former commands.
	<Tab>	Completes a partial command or lists all options available if the characters entered match multiple commands. Executed at the beginning of the command line, this hotkey lists the available commands or configurable elements/parameters .
Context-Sensitive Help	?	Provides context-sensitive help. It functions both for ACLI commands and configuration elements and is displayed in alphabetical order.

Category	Hotkey	Description
Moving the Cursor	<Ctrl-B>	Moves the cursor back one character.
	<Esc-B>	Moves the cursor back one word.
	<Ctrl-F>	Moves the cursor forward one character.
	<Esc-F>	Moves the cursor forward one word.
	<Ctrl-A>	Moves the cursor to the beginning of the command line.
	<Ctrl-E>	Moves the cursor to the end of the command line.
	<Ctrl-L>	Redraws the screen.
Deleting Characters	<Delete>	Deletes the character at the cursor.
	<Backspace>	Deletes the characters behind the cursor.
	<Ctrl-D>	Deletes the character at the cursor when used from within the command line.
	<Ctrl-K>	Deletes all characters from the cursor to the end of the command line.
	<Ctrl-W>	Deletes the word before the cursor.
	<Esc-D>	Deletes the word after the cursor.
Displaying Previous Command Lines	<Ctrl-P>	Scrolls backward through the list of recently executed commands.

## Command Abbreviation and Completion

This section describes how you can use abridged commands in the ACLI. Command completion can save you extra keystrokes and increase efficiency.

### Command Abbreviation

Commands can be abbreviated to the minimum number of characters that identify a unique selection. For example, you may abbreviate the configure terminal command to “config t.” You cannot abbreviate the command to “c t” because more than one command fits this criteria.

### Tab Completion

When you do not supply enough characters to identify a single selection, you can press <Tab> to view a list of commands that begin with the character(s) you entered. After you press <Tab>, the ACLI returns you to the system prompt and reprints the character(s) you originally typed. This enables you to complete the command with the characters that uniquely identify the command that you need. You can continue this process until enough characters to identify a single command are entered.

**ACMEPACKET# gen**

**generate-certificate-request generate-key**  
**ACMEPACKET# generate-key**

## ACLI Menus

---

The ACLI provides menus for system commands and for configuration elements in the Net-Net SBC. To access these menus, enter a question mark (?) at the system prompt. This action displays the entire menu for the system command or configuration element.

### Configuration Element and System Command Menus

Command menus and configuration element menus display similarly in the ACLI. The menus for each are divided into two columns. The first column lists all of the command and configuration elements available to a user working in this mode; the second column offers short explanations of each command or configuration element's purpose.

**ACMEPACKET(local-policy)# ?**

<b>from-address</b>	<b>from address list</b>
<b>to-address</b>	<b>to address list</b>
<b>source-realm</b>	<b>source realm list</b>
<b>activate-time</b>	<b>policy activation date &amp; time</b>
<b>deactivate-time</b>	<b>policy deactivation date &amp; time</b>
<b>state</b>	<b>enable/disable local policy</b>
<b>policy-priority</b>	<b>priority for this local policy</b>
<b>policy-attributes</b>	<b>list of policy attributes</b>
<b>select</b>	<b>select a local policy to edit</b>
<b>no</b>	<b>delete selected local policy</b>
<b>show</b>	<b>show selected local policy</b>
<b>done</b>	<b>write local policy information</b>
<b>exit</b>	<b>return to previous menu</b>

## Context-Sensitive Help

---

In addition to the information that ACLI menus offer, context-sensitive help can assist you with navigation and configuration. Within this one-line entry, you have access to context-sensitive help that tells you what values are valid for a given field and when you have completed an entry. When the <ENTER> no further known parameters line appears, the ACLI is informing you that there is no subsequent information to enter.

To use the context-sensitive help, enter the name of the command or field with which you require assistance, followed by a <Space> and then a question mark (?). The context-sensitive help information appears.

In general, context-sensitive help provides more detailed information than within ACLI menus. For system commands, it prompts you about the information you need to enter to execute a system command successfully. For configuration elements, it prompts you with a brief description of the field, as well as available values, ranges of values, and data types.

### Context-Sensitive Help for System Commands

The ACLI's context-sensitive help feature displays information you need to complete system commands and the body of subcommands available for each system command. In the following example, the **show** command menu appears. Typing a **?** after a system command asks if the system requires further information to complete a specific command. The system responds with a list of available subcommands.

**ACMEPACKET# show ?**

<b>about</b>	<b>credit information for acl</b>
<b>acl</b>	<b>show host access table</b>
<b>algd</b>	<b>ALG MGCP status</b>
<b>arp</b>	<b>ARP table</b>
<b>buffers</b>	<b>show memory buffer statistics</b>
<b>clock</b>	<b>system clock</b>
<b>configuration</b>	<b>show current configuration</b>
<b>dns</b>	<b>DNS information</b>
<b>enum</b>	<b>ENUM information</b>
<b>ext-band-mgr</b>	<b>External Bandwidth Manager status</b>
<b>ext-clf-svr</b>	<b>External CLF Server status</b>
<b>features</b>	<b>currently enabled features</b>
<b>h248d</b>	<b>H248D status</b>
<b>h323d</b>	<b>H323D status</b>
<b>health</b>	<b>system health information</b>
<b>hosts</b>	<b>show host table</b>
<b>interfaces</b>	<b>show network interfaces</b>
<b>ip</b>	<b>IP system information</b>
<b>logfile</b>	<b>Display a log file, 'enter' to display list</b>
<b>loglevel</b>	<b>loglevels of current processes</b>
<b>lrt</b>	<b>LRT (local-routing) information</b>

<b>mbcd</b>	<b>MBCD status</b>
<b>media</b>	<b>show media interface information</b>
<b>memory</b>	<b>memory statistics</b>
<b>mgcp</b>	<b>ALG MGCP status</b>
<b>nat</b>	<b>show NAT table</b>
<b>net-management-control</b>	<b>Network Management Controls Statistics</b>
<b>packet-trace</b>	<b>displays the current packet trace addresses</b>
<b>privilege</b>	<b>show current privilege level</b>
<b>processes</b>	<b>active process statistics</b>
<b>prom-info</b>	<b>show prom information</b>
<b>radius</b>	<b>radius accounting</b>
<b>redundancy</b>	<b>redundancy status</b>
<b>registration</b>	<b>SIP Registration Cache status</b>
<b>route-stats</b>	<b>show routing statistics</b>
<b>routes</b>	<b>show routing table entries</b>
<b>running-config</b>	<b>current operating configuration</b>
<b>security</b>	<b>security information</b>
<b>sessions</b>	<b>Session Statistics</b>
<b>sipd</b>	<b>SIPD status</b>
<b>snmp-community-table</b>	<b>show snmp community table</b>
<b>support-info</b>	<b>show all required support information</b>
<b>system-state</b>	<b>current system-state</b>
<b>temperature</b>	<b>current SD temperature readings</b>
<b>trap-receiver</b>	<b>show snmp trap receivers</b>
<b>uptime</b>	<b>system uptime</b>
<b>users</b>	<b>currently logged in users</b>
<b>version</b>	<b>system version information</b>
<b>virtual-interfaces</b>	<b>show virtual interfaces</b>
<b>voltage</b>	<b>current SD voltages (SD-II only)</b>

The system responds with a no further known parameters if there are no subcommands.

```
ACMEPACKET# show about ?
```

```
<ENTER!> no further known parameters
```

```
ACMEPACKET# show about
```

## Viewing Output With the More Prompt

When the output of a command is too large to fit your screen, the system displays the output in smaller sections. At the end of a section a message is displayed with your options:

- <Space>—Display the next section of output
- <q>—Quits and returns to the system prompt

- <c>—Displays the rest of the output in its entirety

ACMEPACKET# show ?

about	credit information for acli
acl	show host access table
algd	ALG MGCP status
arp	ARP table
buffers	show memory buffer statistics
clock	system clock
configuration	show current configuration
dns	DNS information
enum	ENUM information
ext-band-mgr	External Bandwidth Manager status
ext-clf-svr	External CLF Server status
features	currently enabled features
h248d	H248D status
h323d	H323D status
health	system health information
hosts	show host table
interfaces	show network interfaces
ip	IP system information
logfile	Display a log file, 'enter' to display list
loglevel	loglevels of current processes

('space' for next page; 'q' to quit; 'enter' for next line; 'c' to continue)

### Disabling the More Prompt

If you don't want the Net-Net SBC to display the More prompt, you can disable it using the `cli more disabled` command.

```
ACMEPACKET# cli more disabled
The ACLI 'more' option has been disabled
ACMEPACKET#
```

## Configuring Using the ACLI

---

This section describes the two ACLI methods available for configuring the Net-Net SBC using line-by-line ACLI commands.

### Line-by-Line Commands

Using line-by-line commands, you can target a specific field for editing. Line-by-line commands appear in the ACLI as their name suggests: each argument consists of a parameter followed by a valid value, both on one line.

At any time, you can access either the element menu or the context-sensitive help to guide you. In the following example, you enter values for three parameters, and then issue the `show` command to check your work. Finally, type **done** to save your configuration.

```
ACMEPACKET(trap-receiver)# ip-address 10.0.0.1
ACMEPACKET(trap-receiver)# filter-level major
```

```

ACMEPACKET(trap-receiver)# community-name acme
ACMEPACKET(trap-receiver)# show
trap-receiver
  ip-address          10.0.0.1
  filter-level        Major
  community-name      acme
ACMEPACKET(trap-receiver)# done

```

## Working with Configuration Elements

---

Configuring elements involves entering the ACLI path to the configuration element you want to configure, and then entering the parameter name followed by a space and proper data in accordance with the required format.

### Creating

Creating elements involves using the ACLI path to enter configurations. Once you are in the element you want to configure, enter the appropriate information.

```

ACMEPACKET(trap-receiver)# ip-address 10.0.0.1
ACMEPACKET(trap-receiver)# filter-level major
ACMEPACKET(trap-receiver)# community-name acme
ACMEPACKET(trap-receiver)# done

```

### Saving

At all levels of the ACLI hierarchy, there are several methods of saving your settings and data.

- The **done** command, which is entered within a configuration element.
- The hotkey <Ctrl-D>, which is entered within a configuration element. This enters the **done** command in the command line and saves your information.

The Save Changes *y/n ? #* prompt appears when you exit a configuration element without saving your changes. This prompt only appears if you have changed old information and/or entered new information.

### Using Show and Saving Elements

We recommend that you view all of the information you have entered before carrying out the **done** command or another method of saving. Use the **show** command to review your configurations. Reviewing your settings will give you the opportunity to make any necessary changes before writing the information to the system database.

To view configuration information, type **show** when you are finished with a line-by-line entry.

The following example illustrates the use of the **show** command before executing the **done** command.

```

ACMEPACKET(media-profile)# show
media-profile
  name          profile1
  media-type    audio

```

```

payload-type
transport          rtp
req-bandwidth     100
frames-per-packet 500
parameters
average-rate-limit 50
peak-rate-limit   55
max-burst-size    100
sdp-rate-limit-headroom 10
sdp-bandwidth     disabled

```

### Using Done to Save Elements

We strongly recommend that you save your configuration information as you work. This ensures that your configurations have been written to the system database.

Every menu contains the **done** command.

```

ACMEPACKET(snmp-community)# show
snmp-community
  community-name      Acme_Community
  access-mode         READ-ONLY
  ip-addresses
                    10.0.0.2
                    10.0.0.3
                    10.0.0.4
ACMEPACKET(snmp-community)# done
snmp-community
  community-name      Acme_Community
  access-mode         READ-ONLY
  ip-addresses
                    10.0.0.2
                    10.0.0.3
                    10.0.0.4
ACMEPACKET(snmp-community)#

```

### Exiting and Saving Elements

When you use the **exit** command and have not already saved your changes, the ACLI produces the following message:

```
Save Changes y/n ? #
```

When this line appears, the ACLI is prompting you to save your configurations. This prompt only appears if you have changed old information or entered new information.

If you type anything other than a **y** in response to the **Save Changes y/n ? #** prompt, the system will interpret that character as a no response and will not save your work. You must type a **y** to save your work.



## Editing

Editing individual configurations in the ACLI involves finding the element or field you need to update, entering the new information, and then saving the element. Besides configuring parameters with no value in them, you can also overwrite existing values.

### To edit an element:

1. Enter the configuration path of the element for which you want to edit.
2. Use the **select** command to choose an element to update. A list of options appears when you press <Enter> at the key field prompt (e.g., <name:>).
3. Enter the number corresponding to the element you would like to update and press <Enter>. If there are no elements configured, you will still be presented with the prompt, but no list will appear. When you press <Enter> at the key field prompt, you will be returned to the system prompt.

```
ACMEPACKET(phy-interface)# sel
<name>: <Enter>
1: phyTEST
2: phyTEST-RI GHT
3: wancom0
```

```
selecti on: 3
ACMEPACKET(phy-interface)#
```

4. Edit the configuration element by re-entering any new changes.
5. Use the **show** command to be sure that your changes have been registered.

```
ACMEPACKET(phy-interface)# show
phy-interface
      name           lefty
operation-type      Media
port                0
slot                0
virtual-mac
admin-state         enabled
auto-negotiation    enabled
duplex-mode         FULL
speed               100
```

6. Use the **done** command to save your updates.

You can also overwrite parameters by entering a new value after a previous value has been created.

## Deleting

There are two methods of deleting configurations.

- You can delete the information for elements while you are still working with them.
- You can delete all configuration information for a previously configured element.

For either method, use the **no** command to clear configurations.

Only Multiple Instance Elements can be deleted from the system. Single Instance Elements can not be deleted; they can only be edited.

### Deleting while Working with an Element

While you are configuring an element for the Net-Net SBC, you may accidentally enter incorrect information or make some other error. To correct these errors, use the **no** command to clear the system of the information you have entered.

### Deleting an Existing Element

You can only delete configurations from within their ACLI path. Use the **select** command to choose the configuration element you want to delete.

#### To delete an existing element:

1. Enter the ACLI path to the element you wish to delete.
2. Enter the **no** command. After you do so the key field prompt (e.g., <name:>) appears with a list of the existing configured elements beneath it.

```
ACMEPACKET(media-profile)# no
<name>: <Enter>
1: PCMU
2: G723
3: G729
```

3. Enter the number corresponding to the element you wish to delete.

```
select on: 3
```

4. To confirm the deletion, use the **select** command to view the list of remaining elements.

```
ACMEPACKET(media-profile)# select
<name>: <Enter>
1: PCMU
2: G723
```

# ACLI Configuration Summaries

---

The ACLI offers several ways for you to view configuration summaries. While the most straightforward and commonly used method is the **show** command, the ACLI also provides summary information every time you execute the **done** command.

## Viewing Summaries

The **show** command that appears for each ACLI configuration element allows you to view the configured information for a given element. The following example shows how to view `media-profile` configuration summaries.

### To view the settings for the media-profile element:

1. Enter the media-profile configuration element through the ACLI path.

```
ACMEPACKET# co t
ACMEPACKET(configure)# session-router
ACMEPACKET(session-router)# media-profile
ACMEPACKET(media-profile)#
```

2. From `media-profile`, use the `select` command. The `<name>:` prompt and a list of configured media-profile elements appear.

```
ACMEPACKET(media-profile)# sel ect
<name>:
1: PCMU
2: G723
3: G729
```

3. Select the configured media profile you want to view by entering the corresponding number and press the `<Enter>` key.

```
sel ect i on: 1
```

4. Type **show** and press the `<Enter>` key.

```
ACMEPACKET(media-profile)# show
media-profile
name                PCMU
media-type          audio
payload-type
transport           rtp
req-bandwidth       100
frames-per-packet   500
parameters
average-rate-limit  50
peak-rate-limit     55
max-burst-size      100
sdp-rate-limit-headroom 10
sdp-bandwidth       disabled
```

## Data Entry

---

To enter data using the ACLI, your entries must conform to required field formats. This section describes these formats, gives information about preset values, default values, and error messages.

The final part of this section covers information about using quotation marks (""), and parentheses (()) to enhance your data entry options and capabilities.

### ACLI Field Formats

This section describes required data entry formats. You can learn the data type for a field by using the menu or the help function.

#### Boolean Format

Boolean entries take the form of either enabled or disabled. To choose one of these two values, type either **enabled** or **disabled**.

#### Carrier Format

Carrier entries can be from 1 to 24 characters in length and can consist of any alphabetical character (Aa-Zz), numerical character (0-9), punctuation mark (! "\$ % ^ & \* () + - = ' | { } [ ] @ / \ ' ~ , . \_ : ;), or any combination of alphabetical characters, numerical characters, or punctuation marks. For example, both 1-0288 and acme\_carrier are valid carrier field formats.

#### Date Format

Date entries must adhere to the ccYY-mM-dD format, where cc is the century, YY is the year, mM is the month, and dD is the day (e.g., 2005-06-10). The minimum entry requirement for date fields is YY-M-D.

The Net-Net SBC can assign the current century (cc) information, as well as leading zeroes for the month (m) and the day (d). Date fields must be entered in the valid format described above.

#### Date and Time Format

The date and time format displays both the date and time and adheres to the yyyy-mm-dd hh:mm:ss.zzz or yyyy-mm-dd-hh:mm:ss.zzz where y=year, m=month, d=day, h=hours, m=minutes, s=seconds, and z=milliseconds.

#### Day of Week Format

Day of week entries set any combination of day(s) of the week plus holidays that the local -policy-attributes can use for preference determination. The day of week field options are:

- U—Sunday
- M—Monday
- T—Tuesday
- W—Wednesday
- R—Thursday
- F—Friday
- S—Saturday
- H—Holiday

This field format cannot accept spaces. For example, U-S and M,W,F are valid day of week field entries.

**Enumerated Format**

Enumerated parameters allow you to choose from a preset list of values. To access the list of choices from within the ACLI, use the help function for the appropriate parameter.

**Hostname (or FQDN) Format**

Hostname (FQDN) entries consist of any number of Domain Labels, separated by periods, and one Top Label. The minimum field value is a single alphabetical character to indicate the top label value (e.g., c to indicate '.com').

All hostname fields support IPv4 addresses as well as hostnames.

For Example: In the hostname `acme-packet.domainlabel.example100.com`, `acme-packet` is a domain label, `domainlabel` is a domain label, `example100` is a domain label, and `com` is the top label.

- domain label—`acme-packet`, `domainlabel`, `example100`
- top label—`com`

Note that each label is separated by a period.

The following describes hostname (FQDN) format label types:

- Domain Label—A domain label consists of any number or combination of alphabetical or numerical characters, or any number or combination of alphabetical or numerical characters separated by a dash (-). A dash must be surrounded on both sides by alphabetical or numerical characters, any number or combination. A dash cannot immediately follow or precede a period . A domain label is not required in a hostname field value.
- Top Label—A top label is the last segment of the hostname. A top label must start with an alphabetical character; it cannot start with a numerical character or with a dash (-). After the first character, a top label can consist of any number, or combination of alphabetical or numerical characters or any number or combination of alphabetical or numerical characters separated by a dash. Similar to dashes in domain labels, a top label dash must be surrounded on both sides by alphabetical or numerical characters, any number or combination. A single alphabetical character is the minimum requirement for a hostname field value.

**IP Address Format**

IP address entries must follow the dotted decimal notation format and can only include numerical characters (0-9). Entries for an IP address field should be between 0.0.0.0 and 255.255.255.255.

**Name Format**

Name entries must start with either an underscore symbol (`_`) or an alphabetical character from A through Z (`A-Za-z`). After the first character, the field entry can contain any combination of alphabetical or numerical characters (`0-9A-Za-z`), as well as the period (`.`), the dash (`-`), and the underscore (`_`) (e.g., `acmepacket_configuration`). The total entry can be from 1 to 24 characters in length.

**Number Format**

Number entries (e.g., phone number digits without dashes, any address that is not a hostname, etc.) can be any numerical character (0-9) or alphabetical character from A through F (`A-Fa-f`) or any combination of numerical and alphabetical characters from A through F (`0-9A-Fa-f`) (e.g., `18005551212` or `18005552CAB`). The minimum number of characters for a number entry is 1, and the maximum number is 32.

**Text Format**

Text entries (e.g., description fields) do not need to follow a particular format. Text fields can accommodate any combination of printable numerical and alphabetical characters, spaces, and most symbols. Noted exceptions are the ampersand (&), the apostrophe ('), and the less than symbol (<). Entries with spaces must be entered fully within quotation marks. For example, "This is the official Acme Packet Net-Net SBC configuration" is a valid text entry.

**Time of Day Format**

Time of day entries must include only numerical characters (0-9) and must follow the 4-digit military time format (e.g., 1400). Time of day entries set the time of day that attributes can be considered for preference determination. The minimum field value is 0000, and the maximum field value is 2400.

**Preset Values**

All configurations share one field: `last-modified-date`. This field value is set by the system database and can not be altered. It displays the date and time of the last modified action. The system sets this value automatically.

**Default Values**

By default, the system populates some ACLI values with preset system values if you do not configure them.

**Error Messages**

The ACLI produces error messages when information cannot be saved or commands cannot be executed. These events may occur when there is a problem either with the command itself, the information entered, the format of the information entered, or with the system in general.

For example, if you enter several words for a description and you do not put the entry inside quotation marks, the ACLI will tell you that you have entered an invalid number of arguments. In the example below, a user entered a media-type field value of "audio visual," but did not enclose the value in quotation marks ("").

```
ACMEPACKET(media-profile)# media-type audio visual
invalid number of arguments
ACMEPACKET(media-profile)#
```

When the value does not conform to format requirements, the ACLI returns a message that you have made an invalid entry for a given field. In the example below, a user entered an invalid IP address.

```
ACMEPACKET(snmp-community)# ip-addresses (1877.5647.457.2 45.124
254.65.23)
invalid IP address
ACMEPACKET(snmp-community)#
```

Message	Description
error invalid data...	You have entered a value not permitted by the system. This error includes numeric values that exceed defined parameters and misspellings of specifically spelled values (such as "enabled" or "disabled").
% command not found	You entered a command that is not valid. The command may be misspelled, or it may not exist where you are working.
invalid selection...	You have selected an item that does not exist in the system.

Message	Description
invalid number of arguments	You either have entered too many arguments (or commands) on one line or you may not have quotation marks ("" ) around your multi-word entry.
error 500 saving ...	The system could not save the data you entered to the system database.

## Special Entry Types: Quotation Marks and Parentheses

The ACLI uses certain syntax in order to increase ease of use.

- Quotation marks ("" )—The values inside quotation marks are read as being one argument; commonly used in text fields.
- Parentheses (())—The values inside parentheses are read as being multiple arguments for an element.

## Multiple Values for the Same Field

To enter multiple values for the same field, you can either use quotation marks ("" ) or parentheses (()) in order to express these values to the system. In a field that might contain multiple values, you must use either of these when you enter more than one value.

Your use of either of these methods signals to the system that it should read the data within the punctuation marks as multiple values. The following example shows how parentheses (()) are used in an instance of the local-policy element.

In the example that follows, there are three entries for the to-address in the parentheses (()).

*Note: If you enter multiple values within either quotation marks ("" ) or parentheses (()), be sure that the closing marks are made directly after the final value entered. Otherwise, the system will not read your data properly.*

```
ACMEPACKET(local-policy)# to-address (196.154.2.3 196.154.2.4 196.154.2.5)
ACMEPACKET(local-policy)# show
local-policy
  from-address
                        196.154.2.3
                        196.154.2.4
                        196.154.2.5
  to-address
  source-realm          *
  activate-time         N/A
  deactivate-time       N/A
  state                 enabled
  policy-priority       none
```

## Multi-Word Text Values

For many fields, you may want to enter a multi-word text value. This value may either be a series of descriptive words, a combination of words and numbers that identify a location, or a combination of words and numbers that identify a contact person.

To enter a multi-word text value, surround that value either with quotation marks (" ") or parentheses (()). Generally, quotation marks are most commonly used to configure text fields. The example below shows how quotation marks (" ") surround a multi-word value.

```
ACMEPACKET(session-router-config)# holidays
ACMEPACKET(session-router-holidays)# date 2008-01-01
ACMEPACKET(session-router-holidays)# description "new year's day"
ACMEPACKET(session-router-holidays)# done
    holiday
        date                2008-01-01
        description         new year's day
```

### An Additional Note on Using Parentheses

Parentheses can be used in the ACLI to enter multiple arguments on the same line. A command line can contain any number of entries inside parentheses. Single parentheses (()) connote one list, nested parentheses ((())) connote a list within a list, and so forth.

### Option Configuration

The options parameter shows up in many configuration elements. This parameter is used for configuring the Net-Net SBC to behave with either non-standard or customer-specific behavior.

Several options might be configured for a single configuration element. Every time you configure the option parameter, you overwrite the previously configured option list for the selected instance of the configuration element.

There is a shortcut to either add or delete a single option to the full option list. By typing a "+" to add or a "-" to subtract immediately before an option, you can edit the currently configured option list.

### Append Example

With the `forceH245` option preconfigured, you can append a new option without deleting the previously configured option:

```
ACMEPACKET(h323)# options +noAliasInRCF
ACMEPACKET(h323)# show
h323-config
    state                enabled
    log-level            INFO
    response-tmo         4
    connect-tmo          32
    options              forceH245
                        noAliasInRCF
ACMEPACKET(h323)#
```

### Delete Example

You can also delete a single existing option from the options list. Continuing from the previous example:

```
ACMEPACKET(h323)# options -forceH245
```



```
ACMEPACKET(h323)# show
h323-config
  state          enabled
  log-level      INFO
  response-tmo   4
  connect-tmo    32
  options        noAliasInRCF
ACMEPACKET(h323)#
```



## acl-show

---

The **acl-show** command shows a list of denied ACL entries.

<b>Syntax</b>	acl -show
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 2.0
<b>Notes</b>	<p>The <b>acl-show</b> command displays a list of the following denied ACL entries:</p> <ul style="list-style-type: none"> <li>• Incoming port, slot, and VLAN tag</li> <li>• Source IP, bit mask, port, and port mask</li> <li>• Destination IP address and port</li> <li>• Protocol</li> <li>• ACL entry as static or dynamic</li> <li>• ACL entry index</li> </ul>

**Example** ACMEPACKET# **acl -show**

## acquire-config

---

The **acquire-config** command retrieves the configuration from one Net-Net SBC for configuration checkpointing an HA node.

<b>Syntax</b>	acqui re-confi g <IPAddress>
<b>Arguments</b>	<IPAddress> Enter the IP address of Net-Net SBC to acquire configuration from
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 1.2.1 / Most recent update: 2.0
<b>Notes</b>	<p>This command forces one Net-Net SBC in an HA node to learn the configuration from the other system. If configuration checkpointing is already running, the <b>acquire-config</b> command has no effect.</p> <p>Only after the <b>acquire-config</b> command is executed and the Net-Net SBC is rebooted will process of acquiring the configuration be complete. In Net-Net SBC Software 2.0, only type <b>acqui re-confi g &lt;wancom0-IP address&gt;</b>.</p>

**Example** ACMEPACKET# **acqui re-confi g 1.1.0.1**

## activate-config

---

The **activate-config** command activates the current configuration on the Net-Net SBC to make it the running configuration.

**Syntax** `activate-config`

**Mode** Superuser

**Release** First appearance: 1.2.1

**Notes** Before executing this command, be aware of the real time configuration (RTC) consequences on the operation of the Net-Net SBC.

To use RTC, the **activate-config** command is executed to alert the Net-Net SBC that the current configuration has changed and that it needs reload configuration information.

**Example** `ACMEPACKET# activate-config`

## archives

---

The **archives** command is used for creating, moving, and manipulating archived log files. All archive files are created in .tar.gz format in SD Software versions 2.0 and above. All commands are executed from within the archives menu.

Log files contain a record of system events. Log files are stored in the `/code/logs` directory. The CFG archive type is no longer supported in C6.0.0. When an archive command is entered with the CFG type, the Net-Net SBC responds with an error message.

**Path** Type **archives** at the topmost prompt before executing any of the below commands to enter the archives shell.

**Release** First appearance: 1.1 / Most recent update: 2.0

### archives > create

**Syntax** `create LOGS <logfile-name>`

**Arguments** `<logfile-name>` Enter the name of archive file that contains all logs

To create an archive file of a log, type **create LOGS** and enter a logfile name. Archives are created in .tar.gz (tarred and gzipped) format.

**Example** `ACMEPACKET(archives)# create LOGS jun_30.gz`

## archives > delete

**Syntax** del ete LOGS <logfilename>

**Arguments** <filename> Enter the filename of the log archive to delete  
The **archives > delete** command deletes the specified archive file from the Net-Net SBC. You must append ".tar.gz" to the filename when using this command. Use the **archives > display** command to list the available log archives to delete.

**Example** ACMEPACKET(archives)# **del ete LOGS july\_16.gz**

## archives > display

**Syntax** di spl ay LOGS  
This command lists the log archives currently saved on the Net-Net SBC's file system.

**Example** ACMEPACKET(archives)# **di spl ay LOGS**

## archives > exit

**Syntax** exi t

**Notes** This command exits from the archives session and returns you to the ACLI Superuser system prompt.

**Example** ACMEPACKET(archives)# **exi t**

## archives > extract

This command is no longer supported in release C6.0.0.

## archives > get

**Syntax** get LOGS <archive-name> <remote-host> <user-name> <password>

**Arguments** <remote-name> Enter the full path and filename to retrieve  
<host> Enter the IP address of the remote host  
<user-name> Enter the user name on remote host

<password> Enter the password on remote host

**Notes**

This command retrieves an archived log. If you do not include all the necessary arguments, the **get** command will prompt you for the arguments you omitted.

The **get** command writes the retrieved file to the `/code/logs/<archive-name>` path.

**Example**

```
ACMEPACKET(archives)# get LOGS may_31.gz
```

**archives > rename****Syntax**

```
rename LOGS <old-archive> <new-archive>
```

**Arguments**

<current\_name> Enter the old archive name

<new\_name> Enter the new archive name

**Notes**

Renames an archived log. You do not need to append ".tar.gz" to the filename when using this command.

**Example**

```
ACMEPACKET(archives)# rename LOGS June sept
```

**archives > send****Syntax**

```
send LOGS <archive-name> <host-ip-address> <username>
```

**Arguments**

<archive-name> Enter the name of archive file to send

<host-ip-address> Enter the IP address of FTP server

<username> Enter the FTP username on server

**Notes**

This command sends an archived log file to a remote host using FTP. If you do not include all the necessary arguments, the **send** command will prompt you for the arguments you omitted.

**Example**

```
ACMEPACKET(archives)# send LOGS Oct_24.gz 1.0.100.7 user1
```

**arp-add**

---

The **arp-add** command manually adds ARP entries for media interfaces to the ARP table.

**Syntax**

```
arp-add <slot> <port> <vlan ID> <ip-address> <mac-address>
```

<b>Arguments</b>	<slot>	Select the media interface slot
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
	<port>	Select the media interface port
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• Enter the 3—Rightmost port (not applicable for GigE cards)</li> </ul>
	<vlan ID>	VLAN identifier
	<ip-address>	Enter the IP address
	<mac-address>	Enter the MAC address in hexadecimal notation
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.0 / Most recent update: 1.2.1	
<b>Example</b>	ACMEPACKET# <b>arp-add 1 0 0 172.16.1.102 ab:cd:ef:01:23:14</b>	

## arp-check

---

The **arp-check** command forces the SD to send an ARP request for the specified IP address.

**Syntax**                   arp-check <slot> <port> <vlan-ID> <ip-address>

<b>Arguments</b>	<slot>	Select the media interface slot
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
	<port>	Select the media interface port
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>
	<vlan ID>	Enter the VLAN identifier
	<ip-address>	Enter the IP address
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.0 / Most recent update: 1.2.1	
<b>Example</b>	ACMEPACKET# <b>arp-check 0 0 0 11.21.0.10</b>	

## arp-delete

---

The **arp-delete** command manually removes ARP entries from the ARP table.

### Syntax

**arp-del ete** <sl ot> <port> <vl an-ID> <i p-address>

### Arguments

<slot> Select the media interface slot

*Values*

- 0—Left slot
- 1—Right slot

<port> Select the media interface port

*Values*

- 0—Leftmost port
- 1—Second from left port
- 2—Third from left port (not applicable for GigE cards)
- 3—Rightmost port (not applicable for GigE cards)

<vlan ID> Enter the VLAN identifier

<ip-address> Enter the IP address

### Mode

Superuser

### Release

First appearance: 1.0 / Most recent update: 1.2.1

### Example

ACMEPACKET# **arp-del ete 1 0 1 12. 11. 0. 100**

## backup-config

---

The **backup-config** command backs up the current flash memory configuration to the specified filename in the /code/bkups directory.

### Syntax

**backup-confi g** <name-of-backup> [runni ng | edi ti ng]

### Arguments

<name-of-backup> Enter the name of the backup configuration file

<running> Backup the configuration from the running configuration cache. This is an optional argument.

<editing> Backup the configuration from the editing configuration cache. This is an optional argument.

### Mode

Superuser

### Release

First appearance: 1.0 / Most recent update: 1.2.1

### Notes

If insufficient disk space is available, the Net-Net SBC will not complete the task.

### Example

ACMEPACKET# **backup-confi g FEB\_BACKUP. gz runni ng**



## check-space-remaining

---

The **check-space-remaining** command displays the remaining amount of space in the boot directory, code (or flash memory), and ramdrv devices.

<b>Syntax</b>	check-space-remaini ng <devi ce>	
<b>Argument</b>	<device>	Select where to check the remaining space
	<i>Values</i>	<ul style="list-style-type: none"> <li>• boot</li> <li>• code</li> <li>• ramdrv</li> </ul>
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.1	
<b>Notes</b>	The output of this command is in bytes.	
<b>Example</b>	ACMEPACKET# <b>check-space-remaini ng boot</b>	

## check-stack

---

The **check-stack** command outputs the system's full stack to the ACLI.

<b>Syntax</b>	check-stack	
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.1	
<b>Notes</b>	<p>This command displays a summary of stack usage for a specified task, or for all tasks if no argument is entered. The command output includes:</p> <ul style="list-style-type: none"> <li>• Name—task name</li> <li>• Entry—entry id</li> <li>• TID—task identification</li> <li>• Size—total stack size</li> <li>• CUR—current number of stack bytes used</li> <li>• HIGH—maximum number of stack bytes used</li> <li>• Margin—number of bytes never used at the top of the stack</li> </ul>	
<b>Example</b>	ACMEPACKET# <b>check-stack</b>	

## clear-alarm

---

The **clear-alarm** command clears a specified alarm.

### Syntax

```
clear-alarm <alarm_id> <task_id>
```

### Arguments

<alarm\_id> Enter a unique 32-bit integer that contains a 16-bit category name or number and a unique 16-bit identifier for the error or failure within that category

<task\_id> Enter the task ID of the task that sent the alarm

### Release

First appearance: 1.0

### Notes

For alarm identification and task codes for specific alarms, use the **display-alarms** command.

### Example

```
ACMEPACKET# clear-alarm 65524 sip
```

## clear-cache

---

The **clear-cache** command allows you to clear a specified cache entry on the Net-Net SBC.

## clear-cache dns

### Syntax

```
clear-cache dns <realm id | "all" > <cache entry key | "all" >
```

This command allows you to clear a specified DNS cache entry or all entries.

### Arguments

<realm id | all> Specify the realm whose DNS cache you want to clear or enter **all** if you want to clear the cache of all realms

<cache entry key>Enter a specific cache entry key or enter **all** for all entries. A specified cache entry key should take one of the following forms.

–NAPTR entries—NAPTR:test.com

–SRV entries—SRV:\_sip\_udp.test.com

–A entries—A:test.com

### Example

```
ACMEPACKET# clear-cache dns public A: test.com
```

## clear-cache enum

This command allows you to clear a specified ENUM cache entry or all entries.

**Syntax** `clear-cache enum <EnumConfig Name | "all"> [cache entry key | "all"]`

**Arguments**

<EnumConfig Name> Enter the name of the specific EnumConfig for which you want to clear the cache

<cache entry key> Enter the cache key of the specific EnumConfig for which you want to clear the cache

<all> Enter `all` to clear all caches. In order for this command to work the DNS cache needs to be cleared.

**Example** `ACMEPACKET# clear-cache enum enum1`

## clear-cache registration

The **clear-cache registration** command allows you to clear the registration cache for a specified protocol.

**Syntax** `clear-cache registration <sip | mgcp | h323> <type>`

**Arguments**

<sip> Clear the SIP registration cache. The following are the types of information for which you can clear:

- all
- by-ip <IPaddress>
- by-user <phone number>

<mgcp> Clear the MGCP registration cache. The following are the types of information for which you can clear:

- all
- by-endpoint <endpoint name>

<h323> Clear the H.323 registration cache. The following are the types of information for which you can query:

- all
- by-alias <terminalAlias>

**Example** `ACMEPACKET# clear-cache registration sip all`

## clear-cache tls

This command allows you to clear the TLS cache.

**Syntax** `clear-cache tls`

**Example** ACMEPACKET# **clear-cache t l s**  
**Mode** Superuser  
**Release** First appearance: 5.0

## clear-deny

---

The **clear-deny** command deletes a denied ACL entry.

**Syntax** `clear-deny [<index> | "all"]`

**Arguments** `<index>` Enter the index number of the ACL entry to delete  
`<"all">` Delete all denied ACL entries

**Mode** Superuser  
**Release** First appearance: 4.0

**Notes** Use the **acl-show** command to identify the index of a specific ACL entry. Use the **clear-deny all** command to delete all of the deny entries. This command replaces the **acl-delete** command from previous versions.

**Example** ACMEPACKET# **clear-deny all**

## clear-sess

---

The **clear-sess** command deletes SIP, H.323, and IWF sessions from the system.

**Syntax** `clear-sess <sipd | h323d> <all | by-agent | by-callid | by-ip | by-user> <agent id | call id | ip address | user>`

**Arguments** `<all>` Delete all sessions for the specified protocol  
`<by-agent>` Delete sessions for a specified session agent  
`<by-callid>` Delete sessions for a specified call identifier  
`<by-ip>` Delete sessions for a specified endpoint IP address (entered in quotation marks)  
`<by-user>` Delete sessions for a specified calling or called number

**Mode** Superuser  
**Release** First appearance: 5.1

**Notes** Use the `show <sipd | h323d> sessions` with similar arguments to view information about sessions you might want to clear from the system.

**Example** ACMEPACKET# **clear-sess sipd sessions all**

## clear-trusted

---

The **clear-trusted** command deletes a trusted ACL entry.

**Syntax** `clear-trusted [<index> | "all"]`

**Arguments**

<index>	Enter the index number of ACL entry to delete
<"all">	Delete all trusted ACL entries

**Mode** Superuser

**Release** First appearance: 4.0

**Notes** Use the **acl-show** command to identify the index of a specific ACL entry. Use the **clear-trusted all** command to delete all of the trusted entries.

**Example** `ACMEPACKET# clear-trusted all`

## cli

---

The **cli** command allows you to modify ACLI session terminal settings and "more" options on your Net-Net SBC.

**Syntax** `cli <more> <terminal -height>`

<more> Enable or disable the **more** prompt you see when the output on the screen is larger than the size of the screen.

*Values* enabled | disabled

<terminal-height> Enter the number of rows in the terminal

*Default* 24

*Values* Min: 0 / Max: 1000

**Mode** User

**Release** First appearance: 5.0

**Example** `ACMEPACKET# cli more disabled terminal -height 500`

## configure terminal

---

The **configure terminal** command enters you into the system level where you can configure all operating and system elements on your Net-Net SBC.

**Syntax** `configure terminal`

**Mode** Superuser

**Release** First appearance: 1.0

**Example** ACMEPACKET# **configure terminal**

## delete realm-specifics

---

The **delete realm-specifics** command used with a realm identifier deletes the specified realm, and the configurations and parameters associated with it. This command should be used with the utmost care.

**Syntax** `delete realm-specifics <realm identifier>`

**Arguments** `<realm identifier>`—Enter the identifier for the realm you want to delete

**Mode** Superuser

**Release** First appearance: S-C6.1.0

**Notes** This command should be used with the utmost care.

**Example** ACMEPACKET# **delete realm-specifics peer\_1**

## delete-backup-config

---

The **delete-backup-config** command deletes a saved configuration file from the Net-Net SBC flash memory.

**Syntax** `delete-backup-config <backup-name>`

**Arguments** `<backup-name>` Enter the name of the backup configuration you want to delete

**Mode** Superuser

**Release** First appearance: 1.2.1

**Notes** Use **display-backups** to list backup configurations to delete.

**Example** ACMEPACKET# **delete-backup-config JAN\_BACKUP.gz**

## delete-config

---

The **delete-config** command deletes the current configuration located in the `/code/data` and `/code/config` directories from the system's flash memory.

**Syntax** `delete-config [cached]`

**Arguments** `[cached]` Delete the cached config. This is an optional argument.

<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 1.1 / Most recent update: 2.0
<b>Example</b>	ACMEPACKET# <b>del ete-confi g</b>
<b>Notes</b>	When the <b>delete-config</b> command is entered, the system gives the warning asking if you really want to erase either the current config or the current cached config. Enter a <b>y</b> to complete the deletion.

## delete-status-file

---

The **delete-status-file** deletes the reboot status file.

<b>Syntax</b>	del ete-status-fi le
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 1.1 / Most recent update: 1.3
<b>Notes</b>	This command deletes the <code>/code/statsDump.dat</code> file which retains all system data if the Net-Net SBC has to reboot. This command also removes the contents of the <code>/code/taskCheckDump.dat</code> file which contains system failure information.
<b>Example</b>	ACMEPACKET# <b>del ete-status-fi le</b>

## display-alarms

---

The **display-alarms** command displays details about the specific alarms on the Net-Net SBC.

<b>Syntax</b>	di spl ay-al arms
<b>Mode</b>	User
<b>Release</b>	First appearance: 1.0
<b>Notes</b>	This command shows the current alarms on the Net-Net SBC. Each alarm entry lists alarm ID, task ID, alarm severity code, number of occurrences, when the alarm first and last occurred, the number of times it has occurred, and a description of the alarm.
<b>Example</b>	ACMEPACKET# <b>di spl ay-al arms</b>

## display-backups

---

The **display-backups** command displays the configuration backup files located in the `/code/bkups` directory.

<b>Syntax</b>	di spl ay-backups [sort-by-name]
---------------	----------------------------------

<b>Arguments</b>	<sort-by-name> Sort the output of the <b>display-backups</b> command output. This is an optional command.
<b>Mode</b>	User
<b>Release</b>	First appearance: 2.0
<b>Example</b>	ACMEPACKET# <b>di spl ay-backups</b>

## display-current-cfg-version

---

The **display-current-cfg-version** command displays the current configuration version.

<b>Syntax</b>	di spl ay-current-cfg-versi on
<b>Mode</b>	User
<b>Release</b>	First appearance: 1.2.1
<b>Notes</b>	This command displays the saved version number of the current configuration. This integer value is incremented by one for each new configuration version.
<b>Example</b>	ACMEPACKET# <b>di spl ay-current-cfg-versi on</b>

## display-logfiles

---

The **display-logfiles** command lists the current logfiles located in the logfile directory.

<b>Syntax</b>	di spl ay-l ogfi l es
<b>Mode</b>	User
<b>Release</b>	First appearance: 1.0
<b>Notes</b>	Logfiles are located in the /code/l ogs directory.
<b>Example</b>	ACMEPACKET# <b>di spl ay-l ogfi l es</b>

## display-running-cfg-version

---

The **display-running-cfg-version** command displays the current configuration version.

<b>Syntax</b>	di spl ay-runni ng-cfg-versi on
<b>Mode</b>	User
<b>Release</b>	First appearance: 1.2.1



**Notes** This command displays the version number of the running configuration, and integer value that is incremented by one for each new configuration version.

**Example** ACMEPACKET# **display-running-cfg-version**

## enable

---

The **enable** command changes the current ACLI session from User mode to Superuser mode.

**Syntax** enable

**Mode** User

**Release** First appearance: 1.0

**Notes** Observing the command prompt can tell you if the Net-Net SBC is in user or superuser mode. A ">" (close-angle-bracket) indicates User mode and a "#" (pound) sign indicates Superuser mode.

**Example** ACMEPACKET# **enable**

## exit

---

The **exit** command exits from the current command shell or configuration subsystem to the next higher level.

**Syntax** exit

**Mode** User

**Release** First appearance: 1.0

**Example** ACMEPACKET# **exit**

## generate-certificate-request

---

For TLS Support, the **generate-certificate-request** command allows you to generate a private key and a certificate request in the PKCS10 PEM format. The generated private key is stored in the certificate record configuration. If the certificate record is designed to hold a CA certificate, there is no need to generate a certificate request.

**Syntax** generate-certificate-request <certificate-record-name>

**Arguments** <certificate-record-name> Enter the name of the certificate you want to view.

**Mode** Superuser

**Release** First appearance: 4.1

**Example** ACMEPACKET# **generate-certificate-request acmepacket**

## generate-key

---

The **generate-key** command allows you to generate a security key.

**Syntax** generate-key <type>

**Arguments** <type> Select the type of key you want to generate. The following is a list of valid security keys.

- Values*
- 3des—Generate a 3DES 192 bit, odd parity key
  - aes-128—Generate an AES 128 bit key
  - aes-256—Generate an AES 256 bit key
  - des—Generate a DES 64 bit, odd parity key
  - hmac-md5—Generate an HMAC MD5 secret
  - hmac-sha1—Generate an HMAC SHA1 secret

**Mode** User

**Release** First appearance: 5.0

**Example** ACMEPACKET# **generate-key aes-256**

## import-certificate

---

For TLS support, the **import-certificate** command allows you to import a certificate record.

**Syntax** import-certificate <type>

**Arguments** <type> Enter the type of certificate you want to import. Each type of import certificate is described below:

- Values*
- pkcs7—Import using a password enhanced mail format
  - x509—Import using a password enhanced mail format
  - try-all—Try importing from both pkcs7 and x509

**Mode** User

**Release** First appearance: 4.1

**Example** ACMEPACKET# **import-certificate x509**

## kill

---

The **kill** command terminates a Telnet session on the Net-Net SBC.

<b>Syntax</b>	<code>kill &lt;id&gt;</code>
<b>Arguments</b>	<id> Enter the id of the Telnet session you want to terminate
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 2.0
<b>Notes</b>	You can use the <b>show users</b> command to view all active Telnet sessions and the index number associated with each session. You cannot use this command to terminate SSH or console sessions.
<b>Example</b>	ACMEPACKET# <b>kill 11</b>

## load image

---

The **load image** command guides users through the upgrade process, thereby keeping errors to a minimum.

<b>Syntax</b>	<code>load image &lt;IP address&gt; &lt;filename&gt; &lt;username&gt;</code>
<b>Arguments</b>	<p>&lt;IP address&gt; Enter the IP address of the remote host</p> <p>&lt;filename&gt; Enter the remote filename with path</p> <p>&lt;username&gt; Enter the username for the remote host</p>
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 5.1.1
<b>Example</b>	ACMEPACKET# <b>load image 192.30.8.50 /image/nnC511p4.gz user</b>
<b>Notes</b>	<p>You can either enter these arguments all in one line (with a &lt;Space&gt; between each), or you can press &lt;Enter&gt; after each entry to move to the next piece of information required to load the new information.</p> <p>Once you have entered all of the required information, you will be prompted for the password for the remote host and the image loading process starts.</p>

## log-level

---

The **log-level** command sets the system wide log-level or the log-level for a specific task or process. In addition, you can set the log type for a specific log level on a per-task basis.

<b>Syntax</b>	<code>log-level system &lt;log-level &gt;</code> <code>log-level &lt;task-name   "all"&gt; &lt;log-level &gt;</code>
<b>Arguments</b>	<log-level> Select the log level either by name or by number

- Values*
  - emergency (1)
  - critical (2)
  - major (3)
  - minor (4)
  - warning (5)
  - notice (6)
  - info (7)
  - trace (8)
  - debug (9)
  - detail
- <task-name> Enter the task name for the log level being set
- <all> Change the log level for all Net-Net SBC tasks

**Mode** Superuser

**Release** First appearance: 1.0 / Most recent update: 1.1

**Notes** The log setting changes made by the log-level command are not persistent after a reboot. Upon reboot, you need to change the log settings in the system configuration in order for them to be persistent.

When entering multiple log types in the log-type-list argument, use a space for separation.

**Example** ACMEPACKET# **log-level system warning**

## management

---

The **management** command sets the starting state of Telnet and FTP services at boot time.

**Syntax** management <state | show> <service>

- Arguments**
- <state> Select the operating state of service
  - Values*
    - enable—Enable the service set in the <service> argument from starting at boot time
    - disable—Disable the service set in the <service> argument from starting at boot time
  - <service> Select the service that you are setting boot time status
  - Values*
    - ftp—Enter the FTP service
    - telnet—Enter the Telnet service

**Mode** Superuser

**Release** First appearance: 2.0

**Example** ACMEPACKET# **management enable ftp**

## monitor

---

The **monitor** command displays real-time media or signaling statistics.

**Syntax** `moni tor <medi a | sessi on>`

**Arguments**

<code>&lt;media&gt;</code>	Enter the media you want to monitor
<code>&lt;session&gt;</code>	Enter the session you want to monitor

**Mode** User

**Release** First appearance: 1.0

**Notes** This command outputs real-time media and signaling statistics to the ACLI. Pressing a numerical digit (0-9) changes the refresh rate to that interval in seconds. By default, there is a 2 second refresh rate. Type "q" to exit the monitor display.

Note that **monitor session** will display the equivalent of **show sipd statistics**, and **monitor media** will display the equivalent of **show mbc d statistics**.

**Example** `ACMEPACKET# moni tor medi a`



## notify

---

The **notify** command notifies a specific task or process of a condition that it should act.

### Syntax

```
noti fy <all | <process-name>> trace <all |<socket-address><file-
name>> [<out-udp-port>]
```

```
noti fy <all | <process-name>> notrace all |<socket-address>
```

### Arguments

<process-name> Enter the name of the process you want to notify

<socket-address> Enter the IP address and the port on which the socket is connected

<file-name> Enter the name of the file you want to notify

<out-udp-port> Enter the IP address and port to which the log messages are sent; if the <out-udp-port> is not specified, logs are written to the <file-name>

Used for runtime protocol tracing for UDP/TCP sockets, this command provides for all protocol messages for ServiceSocket sockets to be written to a log file or sent out of the Net-Net SBC to a UDP port.

### Example

```
ACMEPACKET# noti fy all trace all aug.gz
```

## notify algd

### Syntax

```
noti fy algd <log>
```

### Arguments

<log> Each log argument is listed and described below.

*Values*

- nolog—Disable MBCD and MGCP message exchanges processed by the ALGD task
- log—Enable ALGD and MGCP messages in the alg.log

### Example

```
ACMEPACKET# noti fy algd log
```

**notify algd mgcp-endpoint**

**Syntax** notify algd mgcp-endpoint <endpoint>

**Arguments** <endpoint> Delete session and corresponding gateway entries for a specified gateway. The value is the endpoint name from the Audit Name field of the RSIP. If a gateway has multiple endpoints, then the last endpoint that sent the RSIP should be used as the endpoint ID.

**Example** ACMEPACKET# **notify algd mgcp-endpoint 1.2.0.1**

**notify berpd force**

**Syntax** notify berpd force

Force a manual switchover between Net-Net SBCs in an HA node, regardless of the Net-Net SBC on which the command is executed.

**Example** ACMEPACKET# **notify berpd force**

**notify mbcd**

**Syntax** notify mbcd <arguments>

**Arguments** <arguments> The following are arguments for this command:

*Values*

- nolog—Disable MBCD logging
- log—Enable MBCD logging
- debug—Set the log level for MBCD. Unless a specific log type is specified, this command will use its defaults: FLOW and Media
- nodebug—Disable setting the log level for MBCD

**Example** ACMEPACKET# **notify mbcd debug**

**notify radd reload**

**Syntax** notify radd reload

Changes the configurations for RADIUS dynamically by reloading the configuration data in the accounting configuration.



**Example** ACMEPACKET# **noti fy radd rel oad**

## notify sipd

**Syntax** noti fy si pd <arguments>

**Arguments** <arguments> The following are arguments for this command:

*Values*

- reload—Update configuration changes dynamically by reloading the configuration data that SIP functionality might need. This command cannot tear down any in-progress sessions, and it cannot tear down any listening sockets.
- nosiplog—Disable the logging of SIP messages, including SIP messages as seen from the perspective of the Net-Net SBC's SIP proxy
- siplog—Enable SIP logging messages in the si pmsg. l og
- report—Write all SIP process statistics to the log file
- dump limit—Write CPU limit information to the log file
- debug—Set log level for SIP protocol for some SIP activity
- nodebug —Disable setting the log level for the SIP protocol for some SIP activity

**Example** ACMEPACKET# **noti fy si pd nosi pl og**

## notify syslog

**Syntax** noti fy sysl og <arguments>

**Arguments** <arguments> Arguments for this command

*Values*

- ip-address—Add a syslog server with the given IP address to the configured syslog servers. When this command is executed without any arguments, the Net-Net SBC is prompted to re-read the current configuration, replace any pre-existing configuration information for syslog, and begin sending syslog messages to any configured syslog servers.
- udplog
- noudplog
- trace
- notrace

**Example** ACMEPACKET# **noti fy sysl og 100. 1. 0. 20**

## notify \* rotate-logs

<b>Syntax</b>	noti fy <task> rotate-l ogs	
<b>Arguments</b>	<task>	Enter the tasks' process and protocol trace logs to rotate
	<i>Values</i>	<ul style="list-style-type: none"><li>• sipd</li><li>• sysmand</li><li>• berpd</li><li>• brokerd</li><li>• lemd</li><li>• mbcd</li><li>• h323d</li><li>• algd</li><li>• radd</li><li>• all</li></ul>
<b>Notes</b>	This command only applies until a reboot occurs; it is not persistent after a reboot.	

**Example** ACMEPACKET# **noti fy mbcd rotate-l ogs**

## notify nosyslog

<b>Syntax</b>	noti fy nosysl og <i paddress>	
<b>Arguments</b>	<ipaddress>	Enter the IP address of syslog server to disable the logging of syslog messages. The <b>notify nosyslog</b> command executed without an argument prompts the Net-Net SBC to disable the logging of syslog messages sent from the system to all syslog destinations.
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.0 / Most recent update: 1.1	
<b>Example</b>	ACMEPACKET# <b>noti fy nosysl og 100. 1. 20. 30</b>	

## packet-capture

---

The **packet-capture** command captures and views packets from a designated interface.

**Syntax** `packet-capture <state> <slot> <port>`

**Arguments**

<code>&lt;state&gt;</code>	Select the state of packet capturing on the slot and port pair
<i>Values</i>	<ul style="list-style-type: none"> <li>• enabled—Enable packet capturing</li> <li>• disabled—Disable packet capturing</li> </ul>
<code>&lt;slot&gt;</code>	Select the media interface slot
<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
<code>&lt;port&gt;</code>	Select the media interface port
<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>

**Example** `ACMEPACKET# packet-capture enabled 0 1`

## packet-capture clear

**Syntax** `packet-capture clear`

Empty the packet buffer of captured packets

**Example** `ACMEPACKET# packet-capture clear`

## packet-capture modify

**Syntax** `packet-capture modify <integer> <y [es] | n [o]>`

**Arguments**

<code>&lt;integer&gt;</code>	Enter the number of packets to show in the buffer
<i>Default</i>	100
<i>Values</i>	Min: 0 / Max: 1000
<code>&lt;y[es]   n[o]&gt;</code>	Signify whether the packet buffer wraps when full

*Default* n

*Values* y[es] | n[o]

**Example** ACMEPACKET# **packet-capture modify 50 y**

## packet-capture show

**Syntax** packet-capture show

**Notes** Displays a summary of the most recently captured packets on the screen

**Example** ACMEPACKET# **packet-capture show**

## packet-capture detail

**Syntax** packet-capture detail <integer>

**Arguments** <integer> Identify the packet number to view

**Mode** Superuser

**Release** First appearance: 1.0 / Most recent update: 1.2.1

**Example** ACMEPACKET# **packet-capture detail 100**

## packet-trace

---

The **packet-trace-start** command starts packet tracing on the Net-Net SBC. Once the trace is initiated, the Net-Net SBC duplicates all packets sent to and from the endpoint identified by the IP address that are sent or received on the specified Net-Net SBC network interface.

**Syntax** packet-trace <start> <stop>

**Arguments** <start> Start packet-tracing on the Net-Net SBC. Once the trace is initiated, the Net-Net SBC duplicates all packets sent to and from the endpoint identified by the IP address that are sent or received on the specified Net-Net SBC network interface.

- **network-interface**—The name of the network interface on the Net-Net SBC from which you want to trace packets; this value can be entered as either a name alone or as a name and subport identifier value (name:subportid)
- **ip-address**—IP address of the endpoint to and from which the Net-Net SBC will mirror calls

- **local-port**—Layer 4 port number on which the Net-Net SBC receives and from which it sends. This is an optional parameter; if no port is specified or if it is set to 0, then all ports will be traced.
- **remote-port**—Layer 4 port to which the Net-Net SBC sends and from which it receives. This is an optional parameter; if no port is specified or if it is set to 0, then all ports are traced.

**<stop>** Manually stop packet tracing on the Net-Net SBC. With this command you can either stop an individual packet trace or all packet traces that the Net-Net SBC is currently conducting.

- **network-interface**—The name of the network interface on the Net-Net SBC from which you want to stop packet tracing. This value can be entered either as a name alone or as a name and subport identifier value (name:subportid).
- **ip-address**—IP address of the endpoint to and from from which you want the Net-Net SBC to stop mirroring calls.
- **local-port**—Layer 4 port number on which to stop from receiving and sending. This is an optional parameter; if no port is specified or if it is set to 0, then all port tracing will be stopped.
- **remote-port**—Layer 4 port number on which to stop the Net-Net SBC from receiving and sending. This is an optional parameter; if no port is specified or if it is set to 0, then all port tracing will be stopped.

**Mode** Superuser

**Release** First appearance: 5.0

**Example** ACMEPACKET# **packet-trace start public:0 111.0.12.5**

## password-secure-mode

---

The **password-secure-mode** command allows you to enable and view the status of the password secure mode functionality on the Net-Net SBC.

**Syntax** password-secure-mode <enable> <status>

**Arguments** <enable> Enable the password secure mode on the Net-Net SBC

<status> Display the current status of the password secure mode functionality on the Net-Net SBC.

**Mode** Superuser

**Release** First appearance: 5.0

**Example** ACMEPACKET# **password-secure-mode enable**

## ping

---

The **ping** command pings a remote IP address.

### Syntax

`ping <ip-address> [vlan] [source-ip]`

### Arguments

<code>&lt;ip-address&gt;</code>	Enter the IP address of host to ping
<code>&lt;vlan&gt;</code>	Enter the network interface or vlan to use. This is an optional argument.
<code>&lt;source-ip&gt;</code>	Enter the source IP address to use. This is an optional argument.

### Mode

User

### Release

First appearance: 1.0

### Notes

This command sends ICMP echo messages, and displays:

- minimum round trip time (RTT)
- maximum RTT
- average RTT
- number of packets transmitted
- number of packets received
- percentage of packets lost

The default ping timeout is 64ms.

### Example

ACMEPACKET# **ping 100.20.11.30**

## prompt-enabled

---

The Net-Net SBC lets you know if a configuration has been changed and you've applied the **done** command, but have not saved and activated yet. When you issue the **done** command and return to Superuser mode, the ACLI prompt prefixes two asterisks (\*\*). When you have saved, but not yet activated, the ACLI prompt prefixes one asterisk (\*).

The **prompt-enabled** command allows you to decide whether or not you want the Net-Net SBC to give you this prompt. When this command is entered without an argument, the Net-Net SBC displays the current setting of the prompt.

### Syntax

`prompt-enabled <enabled | disabled>`

`<enabled>` Enable the `prompt-enabled` feature

`<disabled>` Disable the `prompt-enabled` feature

### Mode

Superuser

**Release** First appearance: 5.0

**Example** ACMEPACKET# **prompt-enabled disabled**

## realm-specifics

---

The **realm-specifics** command displays all configuration elements that have a specified realm ID configured.

**Syntax** `realm-specifics <realm-ID>`

**Arguments** <realm-ID> Enter the name of realm

**Mode** User

**Release** First appearance: 2.0

**Notes** If a specified realm-ID appears as a configuration parameter in any configuration element, that full element is displayed on the screen. The **realm-specifics** command acts as a “grep” command for a realm name that appears in any configuration element.

**Example** ACMEPACKET# **realm-specifics test1**

## reboot

---

The **reboot** command reboots the Net-Net SBC.

**Syntax** `reboot <arguments>`

**Arguments** <arguments> The following are arguments for this command:

*Values*

- **force**—Reboot the Net-Net SBC system using the last running configuration. The confirmation prompt is bypassed when using this command.
- **activate**—Reboot the Net-Net SBC system using the last-saved configuration. You are presented with a confirmation prompt when using this command.
- **no argument**—Reboot the Net-Net SBC system using the last running configuration

**Mode** Superuser

**Release** First appearance: 1.0 / Most recent update: 1.2.1

**Example** ACMEPACKET# **reboot activate**

## regenerate-config

---

The **regenerate-config** command updates the configuration to the current version of the Net-Net SBC system software.

<b>Syntax</b>	regenerate-config
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 1.1
<b>Notes</b>	This command rebuilds the configuration database information without causing downtime. You can use it after a system upgrade or if configuration information becomes corrupted.

**Example** ACMEPACKET# **regenerate-config**

## request audit

---

The request audit command allows you to request the audit of a specified endpoint for SIP, H.323, or MGCP.

<b>Syntax</b>	request audit <registration>
	<registration>      Select SIP, H.323, or MGCP registration
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 5.0

**Example** ACMEPACKET# **request audit SIP**

## request collection

---

The **request collection** command allows you to start and stop data collection manually in one or all collection groups.

<b>Syntax</b>	request collection <start   stop   restart   > <collection object>
	<start>              Start data collection. If a collection object is not specified, collection is performed on all groups.
	<stop>                Stop data collection
	<restart>             Restart data collection in general or for the collection object specified
	<purge>              Delete all data files resident on the Net-Net SBC for collection function



<collection-object> Enter the collection groups you can configure to collect data information from. This is an optional argument and when no group is specified, the Net-Net SBC collects information from all groups. The following is a list of collection groups:

- Values*
- algd-ACL—Request collection on the ALGD ACL Operations group
  - algd-state—Request collection on the ALGD State group
  - fan—Request collection on the fan group
  - h323-stats—Request collection on the H323 Statistics group
  - interface—Request collection on the interface group
  - mgcp-ACL—Request collection on ALGD MGCP ACL Status group
  - mgcp-media-events—Request collection on the ALGD MGCP Media Events group
  - mgcp-trans—Request collection on the ALGD MGCP transactions group
  - session-agent—Request collection on the session agent group
  - session-realm—Request collection on the session realm group
  - sip-ACL-oper—Request collection on the SIP ACL Operations group
  - sip-ACL-status—Request collection on the SIP ACL Status group
  - sip-client—Request collection on the SIP Client Transaction group
  - sip-errors—Request collection on the SIP Errors/Events group
  - sip-policy—Request collection on the SIP Policy/Routing group
  - sip-server—Request collection on the SIP Server Transaction group
  - sip-sessions—Request collection on the SIP Session Status group
  - sip-status—Request collection on the SIP Status group
  - system—Request collection on the system group
  - temperature—Request collection on the temperature group
  - voltage—Request collection on the voltage group

**Mode** Superuser

**Release** First appearance: 5.0

**Example** ACMEPACKET# **request collection stop h323-stats**

## reset

---

The **reset** command resets statistic counters.

**Syntax** reset <statistic>

**Arguments** <statistic> The following is a list of specific statistics which you can tell the Net-Net SBC to reset:

- Values*
- algd—Reset algd-related statistics shown in the **show algd** command
  - all—Reset the statistics shown in the following commands: **show sipd**, **show mbc**d, **show algd**, **show mbc**d **redundancy**, **show algd redundancy**, **show sipd redundancy**, **show redundancy mbc**d, **show redundancy algd**, **show redundancy**, **show memory**

- application—Reset the application statistics shown in the **show application** command
- ebmd—Reset EMBD statistics
- h323d—Reset the h323-related signaling statistics
- mbcd—Reset mbcd-related statistics shown in the **show mbcd** command (except statistics related to high availability)
- nsep-stats—Reset counters for NSEP-related statistics; to reset counters for a specific r-value, add the specific r-value to the end of the command
- redundancy—Reset the redundancy statistics shown in the **show mbcd redundancy**, **show algd redundancy**, **show sipd redundancy**, **show redundancy mbcd**, **show redundancy algd**, and **show redundancy sipd** commands
- session-agent <hostname>—Reset statistics for a specified session agent
- sipd—Reset sipd statistics in the **show sipd** command
- snmp-community-table—Reset the counters on SNMP community table statistics
- trap-receiver—Reset the counters for trap receiver statistics
- net-management-control—Reset Network Management Control statistics
- lrt—Reset Local Routing statistics
- enum—Reset ENUM statistics
- dns—Reset DNS statistics

**Mode** Superuser

**Release** First appearance: 1.0.1 / Most recent update: 2.0.1

**Notes** This command is used to clear existing SIP, MBCD, ALGD, high availability, and application statistics and to reset the values for one or all of these statistics to zero. Executing the reset command sets the period and lifetime statistics totals to zero, but the active statistics counts are still retained.

**Example** ACMEPACKET# **reset h323d**

## restore-backup-config

---

The **restore-backup-config** command restores a named backup configuration.

**Syntax** restore-backup-config <config-name> [saved | running]

**Arguments**

<config-name>	Enter the name of backup configuration to restore
<saved>	Restore the configuration to the last saved configuration. This is an optional argument.

<running> Restore the configuration to the last running configuration. This is an optional argument.

**Mode** Superuser  
**Release** First appearance: 1.0  
**Notes** Use the **display-backups** command to view the backups that are available to be restored.

**Example** ACMEPACKET# **restore-backup-config FEB\_07.gz saved**

## save-config

---

The **save-config** command saves the current configuration to the Net-Net SBC's last-saved configuration, stored in flash memory.

**Syntax** save-config  
**Mode** Superuser  
**Release** First appearance: 1.0 / Most recent update: 1.2.1  
**Notes** When this command is executed and resources are sufficient, the Net-Net SBC notifies you that the configuration has been saved successfully and the current configuration number will be incremented by one.

**Example** ACMEPACKET# **save-config**

## secret

---

The **secret** command sets the User and Superuser passwords.

**Syntax** secret <user level >

**Arguments** <user level> Each user level argument is listed and explained below.  
*Values*

- login—Set the Net-Net SBC's user password
- enable—Set the Net-Net SBC's superuser password
- backup—Set the backup password
- config—Set the configuration password

**Mode** Superuser  
**Release** First appearance: 1.0  
**Notes** For security reasons, the ACLI does not echo the password information you enter. You will be prompted to enter the new password twice for both commands. The passwords must be 6-8 characters including one non-alpha character. For security purposes, please use different passwords for the user and superuser accounts.  
 We recommend that you do not change the default User and Superuser passwords on Net-Net SBCs in your lab and testing facilities.

**Example** ACMEPACKET# **secret login**

## set-front-interface

---

The **set-front-interface** command quickly sets the parameters of the front media interfaces. This command is used to configure front interfaces on a one time basis. Use the **phy-interface** configuration element to permanently configure a physical interface.

### set-front-interface admin-state

**Syntax** set-front-interface <slot> <port> <admin state>

<b>Arguments</b>	<slot>	Select the media interface slot
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
	<port>	Select the media interface port
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>
	<admin state>	Select the interface admin state
	<i>Values</i>	<ul style="list-style-type: none"> <li>• enabled—Enable the administrative state</li> <li>• disabled—Disable the administrative state</li> </ul>

**Notes** This command sets administrative mode for the front interfaces. Values configured via the **set-front-interface admin-state** command take effect at runtime, and are not persistent after a reboot.

For information about the **admin-state** field, refer to its description in the **phy-interface** section of this document.

**Example** ACMEPACKET# **set-front-interface admin-state 0 3 enabled**

### set-front-interface auto-negotiation

**Syntax** set-front-interface auto-negotiation <slot> <port> <state>

<b>Arguments</b>	<slot>	Select the media interface slot
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> </ul>

	• 1—Right slot
<port>	Select the media interface port
Values	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>
<state>	Select the interface admin state
Values	<ul style="list-style-type: none"> <li>• enabled—Enable auto-negotiation</li> <li>• disabled—Disable auto-negotiation</li> </ul>

**Notes** This command sets the auto-negotiation protocol for the front interfaces. Values configured via the auto-negotiation command take effect at runtime.

**Example** ACMEPACKET# **set-front-interface auto-negotiation 1 2 disabled**

## set-front-interface duplex-mode

**Syntax** set-front-interface duplex-mode <slot> <port> <duplex mode>

<b>Arguments</b>	<slot>	Select the media interface slot
	Values	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
	<port>	Select the media interface port
	Values	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>
	<duplex mode>	Select the interface duplex mode
	Values	<ul style="list-style-type: none"> <li>• full—Enable full-duplex mode on the selected FastE interface</li> <li>• half—Enable half-duplex mode on the selected FastE interface</li> </ul>

**Notes** This command sets full-duplex or half-duplex mode for the Net-Net SBC's front interfaces (10/100 physical interface cards only). Values configured via the duplex-mode command take effect at runtime and are persistent across reboot.

**Example** ACMEPACKET# **set-front-interface 0 0 full**

## set-front-interface speed

<b>Syntax</b>	set-front-interface speed <slot> <port> <port speed>	
<b>Arguments</b>	<slot>	Select the media interface slot
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Left slot</li> <li>• 1—Right slot</li> </ul>
	<port>	Select the media interface port
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 0—Leftmost port</li> <li>• 1—Second from left port</li> <li>• 2—Third from left port (not applicable for GigE cards)</li> <li>• 3—Rightmost port (not applicable for GigE cards)</li> </ul>
	<port speed>	Select the port speed for selected slot and port pair
	<i>Values</i>	<ul style="list-style-type: none"> <li>• 10—Set the port to 10 Mbps</li> <li>• 100—Set the port to 100 Mbps</li> </ul>
<b>Notes</b>	This command sets the front interface cards (10/100 Phy cards only) to 10 Mbps or 100. Values configured via the speed command take effect at runtime and are not persistent after reboot.	
<b>Example</b>	ACMEPACKET# <b>set-front-interface 1 2 100</b>	
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 1.1	

## set-system-state

---

The **set-system-state** command sets the Net-Net SBC as either online or offline.

<b>Syntax</b>	set-system-state <state>	
<b>Arguments</b>	<state>	Select the system state
	<i>Values</i>	<ul style="list-style-type: none"> <li>• online—Enable online system state</li> <li>• offline—Enable offline system state</li> </ul>
<b>Mode</b>	Superuser	
<b>Release</b>	First appearance: 2.0	
<b>Notes</b>	The offline setting puts the Net-Net SBC into a state where it is powered on and available for administrative purposes, but does not accept calls. Existing calls in progress are not affected.	
<b>Example</b>	ACMEPACKET# <b>set-system-state online</b>	

## show

---

The **show** command displays Net-Net SBC statistics, configurations, and other information. Many of the show commands display period and lifetime statistic counts.

### show about

**Syntax**

```
show about
```

This command displays credit information including version number for the Net-Net SBC.

**Example**

```
ACMEPACKET# show about
```

### show acl

**Syntax**

```
show acl <arguments>
```

Displays ACL information regarding either a specified entry or all entries.

**Arguments**

<arguments>

*Values*

The following are **show acl** arguments:

- denied—Display denied ACL entries
- untrusted—Display untrusted ACL entries
- trusted—Display trusted ACL entries
- all—Display all ACL entries
- info—Display amount of space used in the CAM with regard to ACL entries. Number of entries, percent utilization, and maximum entries are displayed for each ACL type. The following are the ACL types displayed:
  - Denied
  - Trusted
  - Media
  - Untrusted
- ip—Display the same output as show acl all, but takes an IP address as an argument to filter all ACL statistics for the given IP address
- reset—Reset the summary counts of all host ACL entries
- summary—Display a summary of all host ACL entries

**Example**

```
ACMEPACKET# show acl untrusted
```

## show algd

### Syntax

`show algd <algd-stats>`

Displays ALGD statistics for either a specified command or all command statistics.

### Arguments

`<algd-stats>`

The following is a list of algd stats:

*Values*

- `statistics`—Display MGCP statistics
- `errors`—Display MGCP error statistics
- `acls`—Display ACL statistics for MGCP
- `rsip`—Display RSIP command statistics
- `rqnt`—Display RQNT command statistics
- `ntfy`—Display NTFY command statistics
- `crcx`—Display CRCX command statistics
- `mdcx`—Display MDCX command statistics
- `dlcx`—Display DLCX command statistics
- `auelp`—Display AUEP command statistics
- `aucx`—Display AUCX command statistics
- `epcf`—Display EPCF command statistics
- `other`—Display other MGCP command statistics
- `redundancy`—Display MGCP redundancy statistics
- `all`—Display all ALG statistics

### Notes

Executing the `show algd` command with no arguments returns the equivalent of the `show algd statistics` command.

### Example

ACMEPACKET# `show algd rsip`

## show arp

### Syntax

`show arp`

This command displays the current Internet-to-Ethernet address mappings in the ARP table.

The first section of the `show arp` command displays the following information about the wancom (rear) interface and media (front) interfaces:

- destination
- gateway
- flags
- reference count
- use



- interface

The second section of the **show arp** command displays contains the following information that refers only to media (front) interfaces:

- interface
- VLAN
- IP Address
- MAC address
- time stamp
- type

The third section of the **show arp command** shows reachability data for all configured IP gateways.

A section on ARP table information which contains CAM entry data is also included.

**Example** ACMEPACKET# **show arp**

## show backup-config

**Syntax** show backup-config <config-file>

**Arguments** <config-file> Enter the name of the saved configuration file

The **show backup-config** command displays a specified configuration file saved on the Net-Net SBC's standard backup file directory.

**Example** ACMEPACKET# **show backup-config config1\_25Jun.gz**

## show buffers

**Syntax** show buffers

This command shows memory buffer statistics divided into three sections.

- The first section displays the number of specific buffer types.
- The second section displays the total number of buffers and number of times the system failed, waited, or had to empty a protocol to find space.
- The third section displays the cluster pool table.

**Example** ACMEPACKET# **show buffers**

## show call-recording-server

**Syntax** show call-recording-server [crs-id]

This command displays information regarding the IP call replication for call recording (IPRCR) feature configured on the Net-Net SBC. Entering this command without the optional IPRCR ID displays all IPRCR endpoints configured on the Net-Net SBC along with their state.

**Arguments** [crs-id] You can specify a IPRCR whose information you want to view. When you specify an ID, the ACLI displays all session agents created for the IPRCR endpoint, it's IP address, its state, and the last time a failover occurred.

**Example** ACMEPACKET# **show call-recording-server crs1**

## show clock

**Syntax** show cl ock  
 This command displays the current date and time for your Net-Net SBC.

**Example** ACMEPACKET# **show cl ock**

## show configuration

**Syntax** show confi gurati on [to-fi le] [confi gurati on-el ement]  
 This command entered without any arguments displays the current configuration. If you use any configuration element as an argument, this show command will display each instance of only the specified configuration element.

**Arguments** <to-file> Send all output from the **show config** command to a specified file located on the local flash file system instead of to the ACLI. This is an optional argument.

<configuration-element>Specify the configuration element you want to view. This is an optional argument. If you do not specify a configuration element, the Net-Net SBC displays the entire configuration. The following is a list of valid configuration elements:

- Values*
- account-config—Show account-config configuration
  - access-control—Show access-control configuration
  - authentication—Show the authentication configuration
  - call-recording-server—Show call-recording-server configurations
  - certificate-record—Show the certificate record configuration
  - class policy—Show all ClassPolicy configuration
  - dns-config—Show all dns-config configurations

- enum-config—Show the enum-config configuration
- ext-policy-server—Show the external-policy-server configuration
- h323-config—Show h323 configuration
- h323-stack—Show all h323-stack configurations
- iwf-stack—Show iwf-stack configuration
- host-route—Show all host-route configurations
- local-policy—Show all local-policy configurations
- local-response-map—Show sip-local-map configuration
- media-profile—Show all media-profile configurations
- media-manager—Show media-manager configuration
- media-policy—Show all MediaPolicy configurations
- mgcp-config—Show mgcp-config configurations
- network-interface—Show all network-interface configurations
- network-parameters—Show all network-parameters configurations
- ntp-config—Show ntp-config configuration
- capture-receiver—Show capture-receiver configurations
- phy-interface—Show all phys-interface configurations
- realm-config—Show all realm configurations
- q850-sip-map—Show q850-sip-map configurations
- redundancy-config—Show redundancy-config configuration
- sip-response-map—Show all response map configurations
- rph-profile—Show rph-profile configurations
- rph-policy—Show rph-policy configurations
- session-agent—Show all session-agent configurations
- session-group—Show all session-group configurations
- session-translation—Show all session-translation configurations
- session-router—Show session-router configuration
- sip-config—Show all sip-config configurations
- sip-feature—Show all sip-feature configurations
- sip-interface—Show all sip-interface configurations
- sip-manipulation—Show all of the sip-manipulation configurations
- sip-nat—Show all sip-nat configurations

- enforcement-profile—Show enforcement-profile configurations
- sip-q850-map—Show sip-q850-map configuration
- snmp-community—Show all snmp-community configurations
- static-flow—Show all static-flow configurations
- steering-pool—Show all steering-pool configurations
- realm-group—Show realm-group configurations
- surrogate-agent—Show all of the surrogate-agent configurations
- system-config—Show system-config configuration
- tls-profile—Show TLS profile configurations
- translation-rules—Show all translation-rules configurations
- trap-receiver—Show all TrapReceiver configurations
- codec-policy—Show all codec-policy configurations
- local-routing-config—Show all local-routing configurations
- net-management-control—Show all net-management-control configurations
- security-association—Show all security-association configurations
- security-policy—Show all security-policy configurations
- password-policy—Show password-policy configuration
- session-constraints—Show all session-constraint configurations
- system-access-list—Show all system-access-list configurations
- tls-global—Show all tls-global configurations
- inventory—Display an inventory of all configured elements on the Net-Net SBC

**Example**

ACMEPACKET# **show configuration snmp-community**

**show dns**

**Syntax**

show dns <arguments>

This command displays DNS statistics.

<arguments> Each valid dns argument is listed below:

**Arguments**

*Values* • stats—Show the statistics for the dns configuration

- cache-entry—Look in the DNS cache for a specific entry  
Your entries must follow the formats below:
  - NAPTR records—NAPTR:abc.com
  - SRV records—SRV:\_sip.\_tcp.abc.com
  - A records—A:abc.com

**Example** ACMEPACKET# **show dns stats**

## show enum

**Syntax** show enum <arguments>  
Displays ENUM statistics for your Net-Net SBC.

<arguments> Each valid enum argument is listed below:

**Arguments** *Values*

- stats—Show the statistics for the enum configuration
- cache-entry—Look in the ENUM cache for a specific entry
- lookup—Query an ENUM cache for a specific E.164 number

**Example** ACMEPACKET# **show enum lookup**

## show ext-band-mgr

**Syntax** show ext-band-mgr  
This command shows the external bandwidth manager / PDP/RACF statistics for the active, period, and lifetime monitoring spans. COPS message counts are shown for Recent and lifetime monitoring spans.

**Example** ACMEPACKET# **show ext-band-mgr**

## show ext-clf-svr

**Syntax** show ext-clf-svr  
This command shows the CLF connection statistics for the active, period, and lifetime monitoring spans. CLF message counts are shown for Recent and lifetime monitoring spans.

**Example** ACMEPACKET# **show ext-clf-svr**

## show features

### Syntax

show features

This command shows the currently enabled features based on added licenses.

### Example

ACMEPACKET# **show features**

## show h323d

### Syntax

show h323d <h323d-statistics>

This command displays H.323 statistics for your Net-Net SBC.

### Arguments

<h323d-stats>

The following is a list of h323d statistics:

#### Values

- status—Display H.323 server status. The following statistics are displayed when this command is entered:
  - Incoming Calls—Number of incoming H.323 calls; displayed for period, lifetime, and active counts
  - Outgoing Calls—Number of outgoing H.323 calls; displayed for period, lifetime, and active counts
  - Connected Calls—Number of currently connected H.323 calls; displayed for period, lifetime, and active counts
  - Incoming Channels—Number of established incoming channels; displayed for period, lifetime, and active counts
  - Outgoing Channels—Number of established outgoing channels; displayed for period, lifetime, and active counts
  - Contexts—Number of established H.323 contexts; displayed for period, lifetime, and active counts
  - Queued Messages—Number of messages queued; displayed for current and lifetime durations
  - TPKT Channels—Number of TPKT channels open(ed); displayed for current and lifetime durations
  - UDP Channels—Number of UDP channels open(ed); displayed for current and lifetime durations
- config—Display the H.323 configuration
- stacklist—Display the configured H.323 stacks
- stackconfig—Display detailed H.323 stack information. **show h323d stackconfig** <stack-name> shows detailed information about the stack-name you specify.
- agentlist—Display H323 session agents
- grouplist—Display H.323 session agent groups
- agentconfig—Display H.323 session agents configuration. **show h323d agentconfig** <hostname> shows detailed

information about the session agent specified by its IP address in the <hostname> argument.

- **groupconfig**—Display H.323 session agent group configuration
- **agentstats**—Display H.323 session agent statistics. **show h323d agentstats <agent>** shows the activity for the H.323 session agent that you specify in the <agent> argument.
- **groupstats**—Display session information for session agent groups
- **h323stats**—Display H.323 stacks and statistics on the Net-Net SBC. The display identifies the H.323 stack by its name and then provides the data for each H.323 stack. **show h323d h323stats <stack-name>** displays detailed statistics for the H.323 stack that you specify in the <stack name> argument. This information is displayed according to the following categories: H.225, H.245, and RAS.
- **registrations**—Display H.323 registration endpoints information
- **sessions all**—Display all H.323 sessions currently on the system
- **sessions by-agent <agent name>**—Display H.323 sessions for the session agent specified; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- **sessions by-callid <call ID>**—Display H.323 sessions for the call ID specified; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- **sessions by-ip <endpoint IP address>**—Display H.323 sessions for the specified IP address for an endpoint; adding **iw** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- **sessions by-user <calling or called number>**—Display H.323 sessions for the specified user; adding **iw** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- **stackCallstats**—Show a summary of H.323 call statistics for all stacks
- **stackPvtstats**—Show a summary of H.323 stack's internal data structures
- **stackDisconnectInstats**—Show a summary of H.323 pvt statistics for all stacks
- **stackDisconnectOutstats**— Show Summary of H.323 pvt statistics for all stacks

Executing the **show h323** command without any arguments will return the same output as using the status argument.

**Example** ACMEPACKET# **show h323d status**

## show health

**Syntax** show heal th

In HA architectures, the show health command displays the following information:

- Health score
- Current Net-Net SBC HA state as active, standby, or out of service
- If media flow information is synchronized for all supported protocols: SIP, H.323, and MGCP (true/false). If media flow information is not available, **Media Synchronized disabled** will be displayed in the show health output.
- If SIP signaling information is synchronized (true/false). If SIP signaling is not available, **SIP Synchronized disabled** will be displayed in the show health output.
- If MGCP signaling information is synchronized (true/false). If MGCP signaling is not available, **MGCP Synchronized disabled** will be displayed in the show health output.
- If configuration information is synchronized (true/false). If configuration checkpointing is not available, **Config Synchronized disabled** will be displayed in the show health output.
- IP address of the current HA Net-Net SBC's active peer (no peer is denoted with an IP address of 0.0.0.0)
- Last message received from the HA Net-Net SBC peer
- A switchover log containing the last 20 switchover events

**Example** ACMEPACKET# **show health**

## show hosts

**Syntax** show hosts

The **show hosts** command shows a list of remote hostnames, their IPv4 addresses, and aliases.

**Examples** ACMEPACKET# **show hosts**

## show interfaces

**Syntax** show interfaces [brief]



The **show interfaces** command shows all information concerning the Net-Net SBC's rear interfaces:

- Flags (such as loopback, broadcast, promiscuous, ARP, running, and debug)
- Type
- Internet address
- VLAN ID (if applicable)
- Broadcast address (if applicable)
- Netmask
- Subnet mask (if applicable)
- Gateway (if applicable)
- Ethernet (MAC) address (if applicable)
- Route metric
- Maximum transfer unit size
- Number of octets sent and received on this interface (if applicable)
- Number of packets sent and received on this interface
- Number of non-unicast packets sent and received on this interface (if applicable)
- Number of unicast packets sent and received on this interface (if applicable)
- Number of multicast packets sent and received on this interface (if applicable)
- Number of input discards (if applicable)
- Number of input unknown protocols (if applicable)
- Number of input and output errors
- Number of collisions
- Number of drops

This command also displays information for loopback interfaces.

**Arguments**                    <brief>                    Allows you to view key running statistics about the interfaces within a single screen. This is an optional argument.

**Example**                        ACMEPACKET# **show interfaces**

## show ip

**Syntax**                        show ip <ip-stats>  
 Displays IP statistics for your Net-Net SBC.

**Arguments**                    <ip-stats>                    The following is a list of valid ip-stats:  
*Values*                            • statistics—Display detailed IP statistics  
                                       • connections—Display all TCP and UDP connections

- TCP—Display all TCP statistics
- UDP—Display all UDP statistics

Executing the **show ip** command with no arguments returns the equivalent of the **show ip statistics** command.

**Example** ACMEPACKET# **show ip connections**

## show logfile

**Syntax** show logfile [filename]

Display log files saved onto the Net-Net SBC. Entering this command without specifying a filename displays a complete list of log files.

**Arguments** [filename] Specify the file whose logs you want to view. This is an optional argument.

**Example** ACMEPACKET# **show logfile**

## show loglevel

**Syntax** show loglevel <task> [<type> | <verbose>] [filename]

This command displays loglevel statistics for your Net-Net SBC.

**Arguments** <task> Enter the name of the Net-Net SBC task for which you are requesting information. By typing **all**, you are given an abbreviated display of all running processes.

<type> Select the log type whose level is to be displayed.

<verbose> Type **verbose** at the end of the **show loglevel** command to view a verbose display of either a specified task or all tasks. This is an optional argument.

[file-name] Enter the name of the specific logfile you want to view. This is an optional argument.

**Example** ACMEPACKET# **show loglevel sipd verbose**

## show lrt

**Syntax** show lrt <route-entry> | "stats">

This command displays Local Routing Table (LRT) statistics on the Net-Net SBC.

<b>Arguments</b>	<route-entry>	Display a specific entry in the LRT
	<stats>	Display all LRT statistics

**Example** ACMEPACKET# **show lrt stats**

## show mbcd

**Syntax** show mbcd <mbcd-stats>

The **show mbcd** command displays MBCD statistics for your Net-Net SBC.

<b>Arguments</b>	<mbcd-stats>	The following is a list of all mbcd-stats:
	<i>Values</i>	<ul style="list-style-type: none"> <li>• statistics—Display information related media flows established by the MBCD task. The following is a list of the MBCD statistics displayed when you enter this command: <ul style="list-style-type: none"> <li>–Client Sessions—Number of media sessions established by application clients of the MBCD task. Clients of MBCD include all signaling protocol tasks (SIP, MGCP, and H.323).</li> <li>–Client Trans—Number of MBCD transactions in the application clients to create, modify and remove flows</li> <li>–Contexts—Number of Contexts in the MBCD task. A Context represents the MBCD Server side of a media session. It contains all flows for the media session.</li> <li>–Flows—Number of unidirectional flows established in MBCD. This includes both static flows defined by the signaling configuration, and dynamic flows for media sessions.</li> <li>–Flow-Port—Number of "anchor" ports established by MBCD. MBCD maintains a mapping of the RTP steering port allocated for a flow so it can recognize flows that hairpin or spiral through the SD. This statistic reflects the number of entries in that table.</li> <li>–Flow-NAT—Number of entries in the MBCD table that maps CAM entry indexes to flows. An entry is added to this table when a NAT entry is added to the CAM for a flow.</li> <li>–Flow-RTCP—Number of special NAT table entries for RTCP. For Hosted NAT Traversal (HNT), the RTP and RTCP flows must be treated separately because the source port of the RTCP cannot be predicted.</li> <li>–Flow-Hairpin—Number of hairpined/spiraled flows recognized by MBCD. This occurs when the signaling originates in an access realm, goes into a backbone realm, and then back into the same access realm, or another access realm on the same network interface.</li> </ul> </li> </ul>

-Flow-Released—Number of hairpinned/spiraled flows released back into the original realm (when mm-in-realm or mm-in-network is disabled)

-MSM-Release—Number of flows that have been released as part of the SIP distributed (multi-system) release feature

-NAT Entries—Number of NAT table entries in the CAM established by MBCD for its flows. The NAT table can be viewed with the **show nat** commands.

-Free Ports—Number of ports available from configured steering pools

-Used Ports—Number of ports allocated to flows

-Port Sorts—Number of times the free ports list had to be sorted because consecutive ports (for RTP & RTCP) could not be found

-MBC Trans—Number of MBC transactions currently in progress

-MBC Ignored—Number of requests ignored because it is in standby mode in an HA configuration

-ARP Trans—Number of ARP Transactions. In some cases, MBCD must obtain the MAC address of the destination of a flow before an entry can be added to the NAT table. This statistic shows the number of outstanding ARP requests for MBCD flows.

- nat—Display statistics about MBCD's usage of the NAT Table and flow guard timer events. The following is a list of all MBCD NAT statistics:

- Adds—Number of times an entry was added to the NAT table

- Deletes—Number of times an entry was removed from the NAT table

- Updates—Number of times a NAT table entry was updated, including updates due to the "latching" event when the first packet for a flow is received

- Non-Starts—Number of initial flow guard timeouts (i.e. number of times a packet was never received for a NAT table entry)

- Stops—Number of subsequent flow guard timeouts (i.e. number of times that packets stopped for a NAT table entry)

- Timeouts—Number of total session limit timeouts (i.e. number of times the session limit for a flow was exceeded)

- acls—Display MBCD Access Control statistics, starting with a time stamp showing when the current period began. The following is a list of each entry count:

*The following ACL statistics are shown for the Period and Lifetime monitoring spans:*

- Static Trusted

- Static Blocked

- Dynamic Trusted
- Dynamic Blocked

*The following ACL statistics are shown for the Lifetime monitoring span:*

- Add Requests
- Added
- Removed
- Dropped

- errors—Display MBCD task error statistics, starting with a time stamp showing when the current period began; statistics for client and server are included. The following is a list of MBCD error statistics displayed when you enter this command:

*Client statistics count errors and events encountered by applications that use the MBCD to set up and tear down media sessions:*

- Client Errors—Number of errors in the client application related to MBC transactions that are otherwise uncategorized
- Client IPC Errors—Number of errors in the client application related to the Inter-Process Communication
- No Session (Open)—Number of MBC transactions creating or updating a media session that could not be sent to MBCD because the media session state information could not be located
- No Session (Drop)—Number of MBC transactions deleting a media session that could not be sent to MBCD because the media session state information could not be located
- Exp Flow Events—Number of flow timer expiration notifications received from the MBCD by all applications
- Exp Flow Not Found—Number of flow timer expiration notifications received from the MBCD by all applications for which no media session or flow information was present in the application
- Transaction Timeouts—Number of MBC transaction timeouts

*Server statistics count errors and events encountered by MBCD:*

- Server Errors—Number of uncategorized errors in the MBC server
- Server IPC Errors—Number of errors on the server related to the IPC
- Flow Add Failed—Number of errors encountered when attempting to add an entry to the NAT table
- Flow Delete Failed—Number of errors encountered when attempting to remove an entry from the NAT table

-Flow Update Failed—Number of errors encountered when attempting to update an entry in the NAT table upon receipt of the first packet for a media flow

-Flow Latch Failed—Number of errors when attempting to locate an entry in the NAT table upon receipt of the first packet for a media flow

-Pending Flow Expired—Number of flow timer expirations for pending flows that have not been added to the NAT table

-ARP Wait Errors—Number of errors and timeouts related to obtaining the Layer 2 addressing information necessary for sending media

-Exp CAM Not Found—Number that the NAT table entry for an expired flow could not find in the NAT table. This usually occurs due to a race condition between the removal of the NAT entry and the flow timer expiration notification being sent to MBCD.

-Drop Unknown Exp Flow—Number of flows deleted by the MBCD because of a negative response from the application to a flow timer expiration notification

-Unk Exp Flow Missing—Number of negative responses from the application to a flow timer expiration notification for which the designated flow could not be found in MBCD's tables

-Exp Notify Failed—Number of errors encountered when the MBCD attempted to send a flow timer expiration notification to the application

-Unacknowledged Notify—Number of flow expiration notification messages sent from MBCD to the application for which MBCD did not receive a response in a timely manner

-No Ports Available—Number of steering port allocation requests not be satisfied due to a lack of free steering ports in the realm

-Invalid Realm—Number of flow setup failures due to an unknown realm in the request from the application

-Insufficient Bandwidth—Number of flow setup failures due to insufficient bandwidth in the ingress or egress realm

-Open Streams Failed—Number of MBC transactions creating or updating a media session that could not be sent to the MBCD because the media session state information could not be located

-Drop Streams Failed—Number of MBC transactions deleting a media session that could not be sent to MBCD because the media session state information could not be located

-Drop/Exp Flow Missing—Number of negative responses from the application to a flow timer expiration notification for which the designated flow could not be found in MBCD's tables

-Stale Ports Reclaimed—For an HA node, this is the number of ports that were reclaimed when the standby had a stale

flow that the active system replaced; when the flow is replaced, the steering ports are also reallocated properly (i.e., according to the active system)

–Stale Flows Replaced—For an HA node, this is the number of times that the standby system had entries in its flow tables that did not match those on the active system; the active system replaced the standby's stale flows with valid ones

–Pipe Alloc Errors—For communication between the Net-Net SBC's tasks (sipd, h323d, and algd) and middlebox control protocol tasks, this is the number of times that buffer allocation failed

–Pipe Write Errors—For communication between the Net-Net SBC's tasks (sipd, h323d, and algd) and middlebox control protocol tasks, this is the number of times that messages were not sent (possibly because of a pipe/buffer allocation error)

- add—List statistics of mbcdd transactions that include an Add command. Statistics are given for Recent, Total, and PerMax periods. The following is a list of MBCDD add statistics displayed when you enter this command:

*Add incoming statistics when an add message is received by the Net-Net SBC:*

–Incoming requests received—Number of mbcdd add commands received

–Incoming replies sent—Number of responses sent in response to an mbcdd add

–Incoming errors sent—Number of errors sent in response to an mbcdd add

*Add outgoing statistics when an mbcdd add message is sent by the Net-Net SBC:*

–Outgoing requests sent—Number of MBCDD add commands sent from the Net-Net SBC

–Outgoing replies received—Number of responses received in response to a sent Add message

–Outgoing errors received—Number of errors received in response to a sent Add message

- modify—List statistics of mbcdd transactions that include a modify command. The following is a list of MBCDD modify statistics displayed when you enter this command:

*Add incoming statistics when a modify message is received by the Net-Net SBC:*

–Incoming requests received—Number of mbcdd modify commands received

–Incoming replies sent—Number of responses sent in response to an mbcdd modify

–Incoming errors sent—Number of errors sent in response to an mbcd modify

*Add outgoing statistics when an mbcd modify message is sent by the Net-Net SBC.*

–Outgoing requests sent—Number of MBCD modify commands sent from the Net-Net SBC

–Outgoing replies received—Number of responses received in response to a sent modify message

–Outgoing errors received—Number of errors received in response to a sent modify message

- subtract—List statistics of mbcd transactions that include a subtract command. The following is a list of MBCD subtract statistics that are displayed when you enter this command:

*Add incoming statistics when a subtract message is received by the Net-Net SBC:*

–Incoming requests received—Number of mbcd subtract commands received

–Incoming replies sent—Number of responses sent in response to an mbcd subtract

–Incoming errors sent—Number of errors sent in response to an mbcd subtract

*Add outgoing statistics when an MBCD subtract message is sent by the Net-Net SBC:*

–Outgoing requests sent—Number of MBCD subtract commands sent from the Net-Net SBC

–Outgoing replies received—Number of responses received in response to a sent subtract message

–Outgoing errors received—Number of errors received in response to a sent subtract message

- notify—List statistics of mbcd transactions that include a notify command. The following is a list of MBCD notify statistics that are displayed when you enter this command:

*Add incoming statistics when a notify message is received by the Net-Net SBC:*

–Incoming requests received—Number of mbcd notify commands received

–Incoming replies sent—Number of responses sent in response to an mbcd notify

–Incoming errors sent—Number of errors sent in response to an mbcd notify

*Add outgoing statistics when an mbcd notify message is sent by the Net-Net SBC:*



–Outgoing requests sent—Number of MBCD notify commands sent from the Net-Net SBC

–Outgoing replies received—Number of responses received in response to a sent notify message

–Outgoing errors received—Number of errors received in response to a sent notify message

- other—List statistics of mbcid transactions related to non-compliant protocols used by specific customers. The following is a list of statistics displayed when you enter this command:

*Add incoming statistics when a customer-specific message is received by the Net-Net SBC:*

–Incoming requests received—Number of customer-specific mbcid commands received

–Incoming replies sent—Number of responses sent in response to a customer-specific mbcid command

–Incoming errors sent—Number of errors sent in response to a customer-specific mbcid command

*Add outgoing statistics when a customer-specific mbcid message is sent by the Net-Net SBC:*

–Outgoing requests sent—Number of MBCD notify commands sent from the Net-Net SBC

–Outgoing replies received—Number of responses received in response to a customer-specific message

–Outgoing errors received—Number of errors received in response to a sent customer-specific message

- realms—Display steering ports and bandwidth usage for home, public, and private realms. The following is a list of statistics displayed when you enter this command:

–Used—Number of steering ports used

–Free—Number of free steering ports

–No Ports—Number of times that a steering port could not be allocated

–Flows—Number of established media flows

–Ingress—Amount of bandwidth being used for inbound flows

–Egress—Amount of bandwidth being used for outbound flows

–Total—Maximum bandwidth set for this realm

–Insuf BW—Number of times that a session was rejected due to insufficient bandwidth

- realms <realm-name>—Display mbcid realm statistics for a given realm; given for period and lifetime durations. The following is a list of statistics displayed when you enter this command:

- Ports Used—Number of ports used
- Free Ports—Number of free ports
- No Ports Avail—Number of times no steering ports were available
- Ingress Band—Amount of bandwidth used for inbound flows
- Egress Band—Amount of bandwidth used for outbound flows
- BW Allocations—Number of times that bandwidth was allocated
- Band Not Avail—Number of times a session was rejected due to insufficient bandwidth
- redundancy—Display the equivalent of the **show redundancy mbc** command
- all—Display information related to many of the show mbc subcommands. Only those MBC messages for which there are statistics are shown. Rather than entering the individual subcommands, all information is displayed for the following:
  - MBC status
  - NAT entries
  - MBC errors
  - MBC messages including: add, modify, subtract, notify, and other
- stun—Display STUN server statistics
  - Servers—The number of STUN servers (the same as the number of realms configured with a STUN server).
  - Server Ports—Number of ports per STUN server; there will be four ports per STUN server.
  - Binding Requests—Number of STUN Binding Request messages received by all STUN servers.
  - Binding Responses—Number of STUN Binding Response messages sent by all STUN servers.
  - Binding Errors—Number of STUN Binding Error messages sent by all STUN servers.
  - Messages Dropped—Number of messages dropped by all STUN servers.

**Example**                      ACMEPACKET# **show mbc errors**

**show media**

**Syntax**                      show medi a <medi a-stats> <sl ot> <port> <vl an>

**Arguments**

<media-stats>	The following is a list of admin state arguments:
<i>Values</i>	<ul style="list-style-type: none"> <li>• <b>classify</b>—Display network processor statistics; requires slot and port arguments</li> <li>• <b>host-stats</b>—Display statistics for the host processor including number of packets received at a specific port and types of packets received; requires slot and port arguments</li> <li>• <b>frame-stats</b>—Display frame counts and drops along the host path; does not require port and slot specification</li> <li>• <b>network</b>—Display network interface details; does not require port and slot specification</li> <li>• <b>physical</b>—Display all phy-interface information; does not require port and slot specification</li> <li>• <b>phy-stats</b>—Display data/packets received on the front interface (media) ports; shows the physical level of front interface statistics according to slot and port numbers and is displayed according to received data/packets and transmitted data/packets; requires slot and port arguments</li> <li>• <b>tm-stats</b>—Show all of the traffic manager statistics and shows the results of the traffic policing due to NetSAFE configuration.</li> </ul>
<slot>	Select the media interface slot
<i>Values</i>	0 (left slot)   1 (right slot)
<port>	Select the media interface port
<i>Values</i>	0 (leftmost)   1   2   3 (rightmost)
<vlan>	Enter the VLAN ID if required

**Example**

```
ACMEPACKET# show medi a network 1 2 0
```

**show memory****Syntax**

```
show memory <memory-stats>
```

This command displays statistics related to the memory of your Net-Net SBC.

**Arguments**

<memory-stats>	The following is a list of each memory statistic:
<i>Values</i>	<ul style="list-style-type: none"> <li>• <b>usage</b>—Display system-wide memory usage statistics. If the show memory command is issued without any arguments, the equivalent of this argument is displayed.</li> <li>• <b>application</b>—Display application memory usage statistics</li> <li>• <b>l2</b>—Display layer 2 cache status</li> <li>• <b>l3</b>—Display layer 3 cache status</li> </ul>

**Example** ACMEPACKET# **show memory application**

## show mgcp

**Syntax** show mgcp <type>

This command displays MGCP statistics on the Net-Net SBC.

<type> The type of MGCP statistics you want to view.

- Values*
- acls—Display MGCP ACL statistics
  - all—Display all ALG statistics
  - aucx—Display AUCX command statistics
  - auep—Display AUEP command statistics
  - crcx—Display CRCS command statistics
  - dlcx—Display DLCX command statistics
  - epcf—Display EPCF command statistics
  - errors—Display MGCP error statistics
  - mdcx—Display MDCX command statistics
  - ntfy—Display NTFY command statistics
  - other—Display Other MGCP command statistics
  - redundancy—Display MGCP redundancy statistics
  - rqnt—Display RQNT command statistics
  - rsip—Display RSIP command statistics
  - statistics—Display ALG MGCP statistics

**Example** ACMEPACKET# **show mgcp ntfy**

## show monthly-minutes

**Syntax** show monthly-minutes <realm-id>

Display the monthly minutes for a specified realm.

**Arguments** <realm-id> Enter the specific realm whose monthly minutes you want to view

**Example** ACMEPACKET# **show monthly-minutes realm1**

## show nat

**Syntax** show nat <display-type>

Displays NAT statistics for a specified NAT time on the Net-Net SBC.

**Arguments** <display-type> The following is a list of each method to display the nat table:

*Values*

- **by-index** —Display a specified range of entries in the NAT table, with a maximum of 5024 entries. The syntax for using the `show nat by-index` command is:

**show nat by-index** <starting entry> <ending entry>

The default range is 1 through 200. The range corresponds to line numbers in the table, and not to the number of the entry itself.

- **in-tabular** —Display a specified range of entries in the NAT table display in table form, maximum of 5024 entries.

The syntax is modeled on the `show nat by-index` command:

**show nat in-tabular** <starting entry> <ending entry>

- **by-addr**—Display NAT table information matching source and destination addresses. You must specify source address (SA) and/or destination address (DA) values.

If no addresses are entered, the Net-Net SBC shows all of the table entries. NAT entries can be matched according to SA or DA or both.

**show nat by-addr** <source IPv4 address> <destination IPv4 address>

- **info**—Display general NAT table information. The output is used for quick viewing of a Net-Net SBC's overall NAT functions, including the maximum number of NAT table entries, the number of used NAT table entries, the length of the NAT table search key, the first searchable NAT table entry address, the length of the data entry, the first data entry address, and whether or not aging and policing are enabled in the NAT table.

- **flow-info**—Display NAT table entry debug information. You must specify if you want to view NAT data for all entries or if you want to specify an address or a switch ID.

**show nat flow-info** <all> <by-addr><by-switchid>

**Example**

ACMEPACKET# **show nat by-index**

**show net-management-control****Syntax**

`show net-management-control [string | all]`

This command displays network management control statistics on the Net-Net SBC.

**Arguments**

<string> Enter a name for the **net-management-control** configuration whose statistics you want to view. This is an optional argument.

<all> Enter **all** to view statistics for all net-management-control entries. This is an optional argument.

**Example**

ACMEPACKET# **show net-management-control**

## show nsep-stats

<b>Syntax</b>	show nsep-stats [ <i>all</i>   <i>rvalue</i> ]	
	The <b>show nsep-stats</b> command displays information about inbound sessions and r-values.	
<b>Arguments</b>	<all>	Display information about inbound sessions and r-values for the Net-Net SBC's NSEP support feature. This is an optional argument.
	<rvalue>	View statistics for a specific r-value. An r-value is a namespace and priority combination entered in the following format: <b>namespace. priority</b> . The display also shows the specified r-value for which it is displaying data. This is an optional argument.
<b>Mode</b>	User, Superuser	
<b>Release</b>	First appearance: 5.1	

## show ntp

<b>Syntax</b>	show ntp <arguments>	
	The <b>show ntp</b> command displays information about NTP servers configured for use with the system	
<b>Arguments</b>	<arguments>	The following is a list of valid arguments:
	<i>Values</i>	<ul style="list-style-type: none"> <li>• <b>servers</b>—Display information about the quality of the time being used in terms of offset and delay measurement; maximum error bounds are also displayed</li> <li>• <b>status</b>—Display information about configuration status, NTP daemon synchronization, NTP synchronizations in process, if NTP is down</li> </ul>
<b>Mode</b>	User, Superuser	
<b>Release</b>	First appearance: 5.1	
<b>Example</b>	ACMEPACKET# <b>show ntp servers</b>	

## show packet-trace

<b>Syntax</b>	show packet-trace	
	The <b>show packet-trace</b> command allows you to check whether the Net-Net SBC's tracing status is currently enabled or disabled.	

<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 5.0
<b>Example</b>	ACMEPACKET# <b>show packet-trace</b>

## show power

The **show power** command allows you to view Net-Net SBC power supply information including the state of the power supply and the installation position.

<b>Example</b>	ACMEPACKET# <b>show power</b>
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## show privilege

<b>Syntax</b>	show privilege
	Displays the current level of privilege on which the user is operating:
	<ul style="list-style-type: none"> <li>• Privilege level 0 refers to Level 0:User Mode</li> <li>• Privilege level 1 refers to Level1: Superuser Mode</li> </ul>

<b>Example</b>	ACMEPACKET# <b>show privilege</b>
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## show processes

<b>Syntax</b>	show processes <process>
	The <b>show processes</b> command, executed without arguments, displays statistics for all active processes. The following task information is displayed: names of tasks, entries, task identification codes, task priorities, status, program counter, error numbers, and protector domain (PD) identification.

<b>Arguments</b>	<process>	The following is a list of each process argument:
	<i>Values</i>	<ul style="list-style-type: none"> <li>• sysmand—Display sysmand process statistics related to the system's startup tasks</li> <li>• acliSSH0— Show acliSSH0 process statistics</li> <li>• acliSSH1—Show acliSSH1 process statistics</li> <li>• acliSSH2—Show acliSSH2 process statistics</li> <li>• acliSSH3— Show acliSSH3 process statistics</li> <li>• acliSSH4— Show acliSSH4 process statistics</li> <li>• acliTelnet0— Show acliTelnet0 process statistics</li> <li>• acliTelnet1— Show acliTelnet1 process statistics</li> </ul>

- acliTelnet2— Show acliTelnet2 process statistics
- acliTelnet3— Show acliTelnet3 process statistics
- acliTelnet4— Show acliTelnet4 process statistics
- embd— Show embd process statistics
- h323d— Show h323d process statistics
- lid— Show lid process statistics
- pusher— Show pusher process statistics
- snmpd— Show snmpd process statistics
- cliworker— Show CliWorker process statistics
- berpd—Display statistics for the border element redundancy protocol tasks; only accessible if your system is operating in an HA node
- lemd—Display lemd process statistics
- brokerd—Display brokerd process statistics
- mbcdd—Display mbcdd process statistics related to the middlebox control daemon
- radd—Display radd process statistics related to RADIUS; only accessible if your Net-Net SBC is using RADIUS
- algd—Display algd process statistics
- sipd—Display sipd process statistics
- acliConsole—Display acliConsole process statistics
- current—Show the date and time that the current monitoring period began and statistics for the current application process events. The following fields explain the output of the **show processes current** command:
  - Svcs—Number of times the process performs actions for different services (e.g., sockets, timeout queues, etc.)
  - TOQ—Number of active timers (in the Timed Objects) placed in the timeout queue
  - Ops—Number of times the process was prompted (or polled) to perform an action
  - Rcvd—Number of messages received by the process
  - Sent—Number of messages sent by the process
  - Events—Number of times a TOQ entry timed out
  - Alrm—Number of alarms the process sent
  - Slog—Number of times the process wrote to the system log
  - Plog—Number of times the process wrote to the process log
  - CPU—Average CPU usage over the last minute
  - Now—CPU usage for the last second



- **total**—Display the total statistics for all of the application processes applicable to your Net-Net SBC. The following fields explain the output of the **show processes total** command:

- Svcs—Number of times the process performed actions for different services (e.g., sockets, timeout queues, etc.)
- Rcvd—Number of messages received by the process
- Sent—Number of messages sent by the process
- Events—Number of times a TOQ entry timed out
- Alarm—Number of alarms the process sent
- Slog—Number of times the process wrote to the system log
- Plog—Number of times the process wrote to the process log
- CPU—Average CPU usage since last reboot
- Max—Maximum percentage of CPU usage in a 60 second period

- **CPU**—Display information about the CPU usage for your Net-Net SBC, categorized on a per task/process basis. The following fields explain the output of the **show processes cpu** command:

- Task Name—Name of the Net-Net SBC task or process
- Task Id—Identification number for the task or process
- Pri—Priority for the CPU usage
- Status—Status of the CPU usage
- Total CPU—Total CPU usage since last reboot in hours, minutes, and seconds
- Avg—Displays percentage of CPU usage since the Net-Net SBC was last rebooted
- Now—CPU usage in the last second

- **collect**—Show collector process statistics

- **all**—Display many of the show processes subcommands. You can see all of the information displayed for the processes including the following:

- sysmand
- tSnmpd
- berpd
- lcmd
- brokerd
- mbcd
- radd
- tCliWorker

Only those processes for which there are statistics will be shown.

**Example** ACMEPACKET# **show processes sysmand**

## show prom-info

**Syntax** show prom-i nfo <devi ces>

The **show prom-info** command displays hard-coded information about Net-Net SBC hardware.

**Arguments** <devices> The following is a list of each prom-info argument:

*Values*

- mainboard—Display mainboard PROM information
- CPU—Display CPU PROM information
- PHY0—Display left physical interface card PROM information
- PHY1—Display right physical interface card PROM information
- CAM— Display CAM PROM information
- all—Show all above PROM information

**Example** ACMEPACKET# **show prom-i nfo mai nboard**

## show qos

**Syntax** show qos <hi story | usage>

The **show qos** command displays information about the Net-Net SBC's QoS FPGA.

<history> Display the QoS history for an FPGA entry

<revision> Display the QoS FPGA hardware revision

<usage> Display the current QoS FPGA usage

**Example** ACMEPACKET# **show qos usage**

## show radius

**Syntax** show radi us <radi us-stats>

This command displays radius statistics.

**Arguments** <radius-stats> The following is a list of each radius argument:

*Values*

- **accounting**—Display the status of established RADIUS accounting connections. A successful RADIUS connection is displayed as **READY**, and an unsuccessful connection is displayed as **DISABLED**.

The command's output is divided into three sections:

*Client Display*—Display general accounting setup (as established in the `accountconfig` element); includes the following information:

- state of the RADIUS client
- accounting strategy
- IP address and port on which the Net-Net SBC's server is listening
- maximum message delay in seconds
- number of configured accounting servers

*Waiting Queue*—Display the number of accounting (RADIUS) messages waiting to be sent that are queued on the client side

*<IP Address:Port>*—IP Address and port headings indicated will be per the referenced RADIUS server active on the IP Address and port shown; also includes information about the accounting server's state

- **authentication**—Show the authentication statistics
- **all**—Show both accounting and authentication statistics

**Example**

```
ACMEPACKET# show radi us authenti cati on
```

**show ramdrv**

Displays RAMdrive usage, including the log cleaner threshold values and the size of the most recently saved configuration.

**Example**

```
ACMEPACKET# show ramdrv
```

**show realm****Syntax**

```
show real m <real m-id>
```

Display all realm-specific configurations based on a specified realm ID.

*<realm-id>* Specify the realm-id whose realm-specific data you want to view; includes QoS routing data for internal and external transactions

**Example** ACMEPACKET# **show realm realm1**

## show redundancy

**Syntax** show redundancy <redundancy-stats>

Display HA statistics for a redundant Net-Net SBC.

### Arguments

<redundancy-stats> The following is a list of all redundancy arguments:

#### Values

- mbcd—Display the synchronization of media flows for the members of an HA Net-Net SBC pair
- algd—Display the synchronization of MGCP signaling for the members of an HA Net-Net SBC pair
- sipd—Display the synchronization of SIP signaling for the members of an HA Net-Net SBC pair
- config—Display the synchronization of configuration information for the members of an HA Net-Net SBC pair
- collect—Display the Collect redundancy statistics
- link—Display the Link redundancy statistics
- radius-cdr—Display the number of CDRs that have been synchronized from active to standby when the local CDR storage is enabled
- rotated-cdr—Display statistics for rotated CDRs on the Net-Net SBC

*The following HA statistics are shown for the Period and Lifetime monitoring spans.*

- Queued entries—Number of transactions not yet sent to standby Net-Net SBC peer
- Red Records—Total number of HA transactions created
- Records Dropped—Number of HA transaction records lost because the standby Net-Net SBC fell behind in synchronization
- Server Trans—Number of HA transactions in which the Net-Net SBC acted was the server
- Client Trans—Number of HA transactions where the Net-Net SBC was the client

*The following HA transaction statistics are shown for the Lifetime monitoring span.*

- Requests received—Number of HA requests received by the Net-Net SBC, acting as server
- Duplicate requests—Number of situations in which an HA request was received by the Net-Net SBC, and (acting as the server side in the client-server relationship) the Net-Net SBC

responded to it, but the client system did not receive the response in time and retransmitted its original request

–Success responses—Number of HA requests that were received followed by a successful response to the client

–Error responses—Number of HA requests that were received followed by an error response to the client

–Request sent—Number of HA requests that were sent by the standby Net-Net SBC

–Retransmission sent—Number of times an HA request was retransmitted after no response

–Success received—Number of HA requests receiving a reply from the other SD in an HA pair

–Errors received—Number of errors received in response to HA requests

–Transaction timeouts—Number of HA transactions that timed out

The numerical identifier for the last redundant transaction processed is also displayed in the **show redundancy** output.

**Example** ACMEPACKET# **show redundancy sipd**

## show registration

**Syntax** `show registration <protocol> <by-ip | by-user> <ip-address | by-endpoint>`

To expand the capabilities of the **show registration** command, enter either **by-user** or **by-ip** after the protocol argument.

<b>Arguments</b>	<protocol>	Select the protocol whose registration you want to view
	<i>Values</i>	<ul style="list-style-type: none"> <li>• sipd</li> <li>• mgcp</li> <li>• h323</li> </ul>
	<by-user>	Show registration information for a specific IP address
	<i>Values</i>	<ul style="list-style-type: none"> <li>• IP address—IP address of an endpoint, or a wildcarded IP address value with an asterisk (*) at the end.</li> </ul>
	<by-realm>	Display information for calls that have registered through a specified ingress realm
	<i>Values</i>	<ul style="list-style-type: none"> <li>• realm—Enter the realm whose registration cache information you want to view. This value can be wildcarded.</li> </ul>
	<by-registrar>	Display information for calls that use a specific registrar

<i>Values</i>	<ul style="list-style-type: none"> <li>• IP address—Enter the IP address of the registrar whose registration cache information you want to view. This value can be wildcarded.</li> </ul>
<code>&lt;by-route&gt;</code>	Display information for calls by their Internet-routable IP address. This allows you to view the endpoints associated with public addresses.
<i>Values</i>	<ul style="list-style-type: none"> <li>• IP address—Enter the IP address whose registration cache information you want to view. This value can be wildcarded.</li> </ul>
<code>&lt;by-endpoint&gt;</code>	Show registration information for a specific phone number or username
<i>Values</i>	<ul style="list-style-type: none"> <li>• IP address—IP address of an endpoint, or a wildcarded IP address value with an asterisk (*) at the end. This command is only available if you configure the reg-via-key parameter in the SIP interface configuration prior to endpoint registration. The reg-via-key parameter keys all registered endpoints by IP address and username.</li> <li>• Phone number or username—Full phone number or username, or a wildcarded number/username with an asterisk (*)</li> </ul> <p><i>The display shows statistics for the Period and Lifetime monitoring spans.</i></p> <ul style="list-style-type: none"> <li>-user Entries—The number of unique SIP Addresses of Record in the cache</li> <li>-Local Contacts—The number of contact entries in the cache</li> <li>-Free Map Ports—The number of ports available in the free signaling port pool</li> <li>-Used Map Ports—The number of signaling ports allocated for registration cache entries</li> <li>-Forwards—Number of registration requests forwarded to the real registrar</li> <li>-Refreshes—Number of registrations the Net-Net SBC answered without having to forward registrations to the real registrar</li> <li>-Rejects—Number of unsuccessful registrations sent to real registrar</li> <li>-Timeouts—Number of times a refresh from the HNT endpoint was not received before the timeout</li> <li>-Fwd Postponed—The number of times sipd responded out of the cache instead of forwarding to the registrar due to the max-register-forward threshold</li> <li>-Fwd Rejected—The number of REGISTER 503s done after checking for a cached entry</li> <li>-Refr Extension—The number of times the max-register-refresh threshold was exceeded. The "Active" and "High" show the number of seconds added to the expiration</li> </ul>

–Refresh Extended—The number of times the expire time in a REGISTER response was extended due to the max-register-refresh threshold

–Surrogate Regs— The total number of surrogate registers

–Surrogate Sent— The total number of surrogate registers sent

–Surrogate Reject—The total number of surrogate register rejects

–Surrogate Timeout— The total number of surrogate register timeouts

**Example** ACMEPACKET# **show registration sipd by user\***

## show route-stats

**Syntax** show route-stats

The show route-stats command shows routing statistics including bad routing redirects, dynamically created routes, new gateway due to redirects, destinations found unreachable, and use of a wildcard route.

**Example** ACMEPACKET# **show route-stats**

## show routes

**Syntax** show routes

The **show routes** command displays the current system routing table. This table displays the following information:

- destination
- netmask
- TOS
- gateway
- flags
- reference count
- use
- interface
- protocol information

**Example** ACMEPACKET# **show routes**

## show running-config

### Syntax

`show running-config <configuration-element> <to-file>`

The **show running-config** entered without any arguments displays the running configuration information in use on the Net-Net SBC. If you use any configuration element keyfield as an argument, this show command will display only that specified configuration element.

### Arguments

**<to-file>** Send all output from the **show config** command to a specified file located on the local flash file system instead of to the ACLI. This is an optional argument.

**<configuration-element>** Specify the configuration element you want to view. This is an optional argument. If you do not specify a configuration element, the Net-Net SBC displays the entire configuration. The following is a list of valid configuration elements:

#### Values

- access-control—Show access-control configuration
- account-config—Show account-config configuration
- authentication—Show authentication configuration
- call-recording-server—Show call-recording-server configurations
- certificate-record—Show certificate records configuration
- ext-policy-server—Show external-policy-server configuration
- h323-config—Show h323-config configuration
- h323-stack—Show all h323-stack configurations
- enum-config—Shows enum-config configuration
- iwf-stack—Show iwf-stack configuration
- host-route—Show all host-route configurations
- local-policy—Show all local-policy configurations
- media-profile—Show all media-profile configurations
- media-manager—Show media-manager configuration
- mgcp-config—Show mgcp-config configuration
- dns-config—Show all dns-config configurations
- network-interface—Show all network-interface configurations
- ntp-config—Show ntp-config configuration
- capture-receiver—Show capture-receiver configurations
- phys-interface—Show all phys-interface configurations
- realm—Show all realm configurations
- MediaPolicy—Show all MediaPolicy configurations



- ClassPolicy—Show all ClassPolicy configurations
- redundancy-config—Show redundancy-config configuration
- ResponseMap—Show all ResponseMap configurations
- rph-profile—Show rph-profile configurations
- rph-policy—Show rph-policy configurations
- session-agent—Show all session-agent configurations
- session-group—Show all session-group configurations
- session-translation—Show all session-translation configurations
- translation-rules—Show all translation-rules configurations
- session-router—Show session-router configuration
- sip-config—Show all sip-config configurations
- sip-feature—Show all sip-feature configurations
- sip-interface—Show all sip-interface configurations
- sip-manipulation—Show all sip-manipulation configurations
- sip-nat—Show all sip-nat configurations
- enforcement-profile—Show enforcement-profile configurations
- snmp-community—Show all snmp-community configurations
- static-flow—Show all static-flow configurations
- steering-pool—Show all steering-pool configurations
- realm-group—Show realm-group configurations
- surrogate-agent—Show all surrogate-agent configurations
- system-config—Show system-config configuration
- tls-profile—Show tls configurations
- TrapReceiver—Show all TrapReceiver configurations
- local-response-map—Show sip-local-map configuration
- sip-q850-map—Show sip-q850-map configuration
- q850-sip-map—Show q850-sip-map configuration
- codec-policy—Show all codec-policy configurations
- local-routing-config—Show all local-routing configurations
- net-management-control—Show all net-management-control configurations
- packet-trace-config—Show all packet-trace configurations

- security-association—Show all security-association configurations
- security-policy—Show all security-policy configurations
- password-policy—Show password-policy configuration
- session-constraints—Show all session-constraint configurations
- system-access-list—Show all system-access-list configurations
- tls-global—Show all tls-global configurations
- inventory—Display an inventory of all configured elements on the Net-Net SBC

**Example** ACMEPACKET# **show running-config host-route**

**show sa**

**Syntax** show sa or show sa stats

This command displays the security associations information for IMS-AKA.

**Example** ACMEPACKET# **show sa stats**

**show security**

**Syntax** show security <argument>

This command displays configured security information on the Net-Net SBC.

**Arguments** <certificates> Show certificate information on the Net-Net SBC.

- Values*
- brief—Display a brief certificate description
  - detail—Display a detailed certificate description
  - pem—Display certificate information in Privacy Enhanced Mail (PEM) form

<ipsec> Show IPSEC related information on the Net-Net SBC. You can specify the name of the network interface whose IPSEC information you want to view.

- Values*
- sad—Display IPSEC SAD information
  - spd—Display IPSEC SDP information
  - statistics—Display IPSEC statistics
  - status—Display the interface IPSEC status

<ssm-accelerator>Display the SSM status on the Net-Net SBC

<tls> Display TLS related information

*Values* • session-cache—Display TLS session cache information

<ssh-pub-key> Displays public key record information including login name, fingerprint, fingerprint raw, comment (detailed view only), and public key (detailed view only).

*Values* • brief—View a brief display  
• detail—View a detailed display

**Example** ACMEPACKET# **show security ipsec spd m10**

## show sessions

**Syntax** show sessions

Displays session capacity for license and session use.

–Capacity—The total call capacity based on license

*The Session Statistics are shown for the Period and Lifetime monitoring spans:*

–Total Sessions—The aggregation of all current active subscriber sessions (H.323 call/SIP session/MGCP connection) and is the total session count against the capacity license.

–SIP Sessions—The total current active SIP sessions

–H.323 Calls—The total current active H.323 calls

–MGCP Connections—The total current active MGCP connections

*The IWF Statistics are shown for the Period and Lifetime monitoring spans.*

–H.323 to SIP Calls—The calls that come in H.323 and go out SIP. Note that these calls are included in “H.323 Calls” in the Session Statistics.

–SIP to H.323 Calls—The calls that come in SIP and go out H.323. Note that these calls are included in “SIP Sessions” in the Session Statistics.

**Example** ACMEPACKET# **show sessions**

## show sipd

**Syntax** show sipd <si pd-stats>

The **show sipd** command displays SIP statistics on your Net-Net SBC.

**Arguments** <si pd-stats> The following is a list of all **show sipd** arguments:

*Values*

- **status**—Display information about SIP transactions. These statistics are given for the Period and Lifetime monitoring spans. This display also provides statistics related to SIP media events. The following statistics are displayed when using the **show sipd status** command.

- Dialogs—Number of end-to-end SIP signaling connections

- Sessions—Number of sessions established by an INVITE

- Rejections—Number of rejected INVITES

- ReINVITES—Number of ReINVITES

- Media Sessions—Number of successful media sessions

- Media Pending—Number of media sessions waiting to be established

- Client Trans—Number of client transactions

- Server Trans—Number of server transactions that have taken place on the Net-Net SBC

- Resp Contexts—Number of current response contexts

- Sockets—Number of active SIP sockets

- DNS Trans—Number of DNS transactions

- **errors**—Display statistics for SIP media event errors. These statistics are errors encountered by the SIP application in processing SIP media sessions, dialogs, and session descriptions (SDP). Errors are only displayed for the lifetime monitoring span.

- SDP Offer Errors—Number of errors encountered in setting up the media session for a session description in a SIP request or response which is an SDP Offer in the Offer/Answer model (RFC 3264)

- SDP Answer Errors—Number of errors encountered in setting up the media session for a session description in a SIP request or response which is an SDP Answer in the Offer/Answer model (RFC 3264)

- Drop Media Errors—Number of errors encountered in tearing down the media for a dialog or session that is being terminated due to: a) non-successful response to an INVITE transaction; or b) a BYE transaction received from one of the participants in a dialog/session; or c) a BYE initiated by the Net-Net SBC due to a timeout notification from MBCD

- Transaction Errors—Number of errors in continuing the processing of the SIP client transaction associated with setting up or tearing down of the media session

- Missing Dialog—Number of requests received by the SIP application for which a matching dialog count not be found

- Application Errors—Number of miscellaneous errors in the SIP application that are otherwise uncategorized

- Media Exp Events—Flow timer expiration notifications received from MBCD

–Early Media Exps—Flow timer expiration notifications received for media sessions that have not been completely set up due to an incomplete or pending INVITE transaction

–Exp Media Drops—Number of flow timer expiration notifications from the MBCD that resulted in the termination of the dialog/session by the SIP application

–Multiple OK Drops—Number of dialogs terminated upon reception of a 200 OK response from multiple UASs for a given INVITE transaction that was forked by a downstream proxy

–Multiple OK Terms—Number of dialogs terminated upon reception of a 200 OK response that conflicts with an existing established dialog on the Net-Net SBC

–Media Failure Drops—Number of dialogs terminated due to a failure in establishing the media session

–Expired Sessions—Number of sessions terminated due to the session timer expiring

*Lifetime displays show information for recent, total, and period maximum error statistics:*

–Recent—Number of errors occurring in the number of seconds listed after the time stamp

–Total—Number of errors occurring since last reboot

–PerMax—Identifies the highest individual Period Total over the lifetime of the monitoring

- policy—Display SIP local policy / routing statistics for lifetime duration

- server—Display statistics for SIP server events when the Net-Net SBC is acting as a SIP server in its B2BUA role. Period and Lifetime monitoring spans for SIP server transactions are given.

–All States—Number of all server transactions

–Initial—Number of times the “initial” state was entered after a request was received

–Trying—Number of times the “trying” state was entered due to the receipt of a request

–Proceeding—Number of times a server transaction has been constructed for a request

–Cancelled—Number of INVITE transactions that received a CANCEL

–Established—Number of times the server sent a 2xx response to an INVITE

–Completed—Number of times the server received a 300 to 699 status code and entered the “completed” state

–Confirmed—Number of times that an ACK was received while the server was in “completed” state and transitioned to “confirmed” state

-Terminated—Number of times that the server received a 2xx response or never received an ACK in the “completed” state, and transitioned to the “terminated” state

- client—Display statistics for SIP client events when the Net-Net SBC is acting as a SIP client in its B2BUA role. Period and Lifetime monitoring spans are displayed.

-All States—Number of all client transactions

-Initial—State when initial server transaction is created before a request is sent

-Trying—Number of times the “trying” state was entered due to the sending of a request

-Calling—Number of times that the “calling” state was entered due to the receipt of an INVITE request

-Proceeding—Number of times that the “proceeding” state was entered due to the receipt of a provisional response while in the “calling” state

-Early Media—Number of times that the “proceeding” state was entered due to the receipt of a provisional response that contained SDP while in the “calling” state

-Completed—Number of times that the “completed” state was entered due to the receipt of a status code in the range of 300-699 when either in the “calling” or “proceeding” state

-SetMedia—Number of transactions in which the Net-Net SBC is setting up NAT and steering ports

-Established—Number of situations when client receives a 2xx response to an INVITE, but cannot forward it because it NAT and steering port information is missing

-Terminated—Number of times the “terminated” state was entered after a 2xx message

- acls—Display ACL information

*Period and Lifetime monitoring spans are displayed for SIP ACL status.*

-Total entries—Total ACL Entries, including both trusted and blocked

-Trusted—Number of trusted ACL entries

-Blocked—Number of blocked ACL entries

*Lifetime monitoring span is displayed for SIP ACL Operations.*

-ACL Requests—Number of ACL requests

-Bad Messages —Number of bad messages

-Promotions—Number of ACL entry promotions

-Demotions—Number of ACL entry demotions

- sessions—Display the number of sessions and dialogs in various states

The following session statistics are shown for the Period and Lifetime monitoring spans, in addition to the current Active count:

–Sessions—Identical to the identically named statistic on the `show sip status` command

–Initial—Displays sessions for which an INVITE of SUBSCRIBE is being forwarded

–Early—Displays sessions for which the first provisional response (1xx other than 100) is received

–Established—Displays sessions for which a success (2xx) response is received

–Terminated—Displays sessions for which the session is ended by receiving or sending a BYE for an "Established" session or forwarding an error response for an "Initial" or "Early" session. The session will remain in the "Terminated" state until all the resources for the session are freed.

–Dialogs—Identical to the identically named statistic on the `show sip status` command

–Early—Displays dialogs that were created by a provisional response

–Confirmed—Displays dialogs that were created by a success response. An "Early" dialog will transition to "Confirmed" when a success response is received

–Terminated—Displays dialogs that were ended by receiving/sending a BYE for an "Established" session or receiving/sending error response "Early" dialog. The dialog will remain in the "Terminated" state until all the resources for the session are freed.

- sessions all—Display all SIP sessions currently on the system
- sessions by-agent <agent name>—Display SIP sessions for the session agent specified; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- sessions by-ip <endpoint IP address>—Display SIP sessions for the specified IP address for an endpoint; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- sessions by-user <calling or called number>—Display SIP sessions for the specified user; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information
- sessions by-callid <call ID>—Display SIP sessions for the specified call ID; adding **iwf** to the end of the command shows sessions for the IWF; adding **detail** to the end of the command expands the displayed information

- **redundancy**—Display sipd redundancy statistics. Executing the **show sipd redundancy** command is the equivalent to the **show redundancy sipd** command

- **agents [hostname][method]**—Display statistics related to defined SIP session agents. Entering this command without any arguments list all SIP session agents. By adding the IP address or hostname of a session agent as well as a specified method at the end of the command, you can display statistics for that specific session agent and method. For a specific session agent, identified by IP address, the **show sipd agents** command lists:

–session agent state

- I—in-service
- O—out-of-service
- S—transitioning from out-of-service to in-service
- D—disabled

–inbound and outbound statistics

–average and maximum latency for each session agent

–maximum burst rate for each session agent as total number of session invitations sent to or received from the session agent within the amount of time configured in the burst-rate-window field

*Inbound Statistics:*

–Active—Number of active sessions sent to each session agent listed

–Rate—Average rate of session invitations (per second) sent to each session agent listed

–ConEx—Number of times the constraints have been exceeded

*Outbound Statistics:*

–Active—Number of active sessions sent from each session agent

–Rate—Average rate of session invitations (per second) sent from each session agent listed

–ConEx—Number of times the constraints have been exceeded

*Latency:*

–Avg—Average latency for packets traveling to and from each session agent

–Max—Maximum latency for packets traveling to and from each session agent listed

- **interface [interface-id][method]**—Display SIP interface statistics. By adding the optional interface-id and method



arguments you can narrow the display to view just the interface and method you want to view.

- `ip-cac <IP address>`—Display CAC parameters for an IP address
- `publish`—Display statistics related to incoming SIP PUBLISH messages
- `agent <agent>`—Display activity for the session agent that you specify

*Inbound Sessions:*

- Rate Exceeded—Number of times session or burst rate was exceeded for inbound sessions
- Num Exceeded—Number of times time constraints were exceeded for inbound sessions

*Outbound Sessions:*

- Rate Exceeded—Number of times session or burst rate was exceeded for outbound sessions
- Num Exceeded—Number of times time constraints were exceeded for inbound sessions
- Burst—Number of times burst rate was exceeded for this session agent
- Out of Service—Number of times this session agent went out of service
- Trans Timeout—Number of transactions timed out for this session agent
- Requests Sent—Number of requests sent via this session agent
- Requests Complete—Number of requests that have been completed for this session agent
- Messages Received—Number of messages received by this session agent
- `realm`—Display realm statistics related to SIP processing
- `routers`—Display status of Net-Net SBC connections for session router functionality
- `directors`—Display the status of Net-Net SBC connections for session director functionality
- `<message>`—Add one of the below arguments to the end of a **show sipd** command to display information about that type of SIP message:
  - INVITE—Display the number of SIP transactions including an INVITE method
  - REGISTER—Display the number of SIP transactions including a REGISTER method
  - OPTIONS—Display the number of SIP transactions including an OPTIONS method

- CANCEL—Display the number of SIP transactions including a CANCEL method
- BYE—Display the number of SIP transactions including a BYE method
- ACK—Display the number of SIP transactions including an ACK method
- INFO—Display the number of SIP transactions including an INFO method
- PRACK—Display the number of SIP transactions including a PRACK method
- SUBSCRIBE—Display the number of SIP transactions including a SUBSCRIBE method
- NOTIFY—Display the number of SIP transactions including a NOTIFY method
- REFER—Display the number of SIP transactions including a REFER method
- UPDATE—Display the number of SIP transactions including an UPDATE method
- other—Display the number of SIP transactions including non-compliant methods and protocols used by specific customers

*The following lists information displayed for each individual SIP message statistic. Some or all of the following messages/events may appear in the output from a `show sipd` command.*

- INVITE Requests—Number of times method has been received or sent
- Retransmissions—Information regarding sipd message command requests received by the Net-Net SBC
- 100 Trying—Number of times some unspecified action is being taken on behalf of a call (e.g., a database is being consulted), but user has not been located
- 180 Ringing—Number of times called UA identified a location where user has registered recently and is trying to alert the user
- 200 OK—Number of times request has succeeded
- 408 Request Timeout—Number of times server could not produce a response before timeout
- 481 Does Not Exist—Number of times UAS received a request not matching existing dialog or transaction
- 486 Busy Here—Number of times callee's end system was contacted successfully but callee not willing to take additional calls
- 487 Terminated—Number of times request was cancelled by a BYE or CANCEL request
- 4xx Client Error—Number of times the 4xx class of status code appeared for cases where the client seems to have erred

–503 Service Unavail—Number of times server was unable to handle the request due to a temporary overloading or maintenance of the server

–5xx Server Error—Number of times the 5xx class of status code appeared

–Response Retrsns—Number of response retransmissions sent and received

–Transaction Timeouts— Number of times a transaction timed out. The timer related to this transaction is Timer B, as defined in RFC 3261

**show sipd <message>** output is divided in two sections: Server and Client, with information for recent, total, and period maximum time frames. This command also displays information about the average and maximum latency. For each type of SIP message, only those transactions for which there are statistics are shown. If there is no data available for a certain SIP message, the system displays the fact that there is none and specifies the message about which you inquired.

- **groups**—Display cumulative information for all session agent groups on the Net-Net SBC. This information is compiled by totaling the session agent statistics for all of the session agents that make up a particular session agent group. While the **show sipd groups** command accesses the subcommands that are described in this section, the main **show sipd groups** command (when executed with no arguments) displays a list of all session agent groups.
- **groups -v**—Display statistics for the session agents that make up the session agent groups that are being reported. The **-v** (meaning “verbose”) executed with this command must be included to provide verbose detail.
- **groups <specific group name>**—Display statistics for the specified session agent group
- **endpoint-ip <phone number>**—Displays registration information for a designation endpoint entered in the **<phone number>** argument; also show IMS-AKA data
- **all**—Display all the **show sipd** statistics listed above
- **sip-endpoint-ip**—See **show sipd endpoint-ip**
- **sa-nsep-burst**—Display NSEP burst rate for all SIP session agents
- **subscriptions-by-user**—Display data for SIP per user subscribe dialog limit

## Example

```
ACMEPACKET# show si pd errors
```

## show snmp-community-table

**Syntax** `show snmp-community-table`

The **show snmp-community-table** command displays all information for configured SNMP communities including request and responses for each community.

**Example** `ACMEPACKET# show snmp-community-table`

## show support-info

**Syntax** `show support-info [filename] [custom | standard]`

This command allows you to gather a set of information commonly requested by the Acme Packet TAC when troubleshooting customers.

**Arguments**

[filename]	Specify the name of the file in which to store output. This is an optional argument and not specifying a filename sends output to the screen.
[custom]	Display information in the <code>/code/supportinfo.cmds</code> file to determine what commands should be encompassed. If the file does not exist, then the system notifies you.
[standard]	Display information for all commands the <b>show support-info</b> command encompasses.

**Example** `ACMEPACKET show support-info FEB_11.gz`

## show system-state

**Syntax** `show system-state`

Displays the system state based on the latest setting of the **set-system-state** command.

**Example** `ACMEPACKET# show system-state`

## show temperature

**Syntax** `show temperature`

Displays the temperature in Celsius for all given components with temperature sensors.

**Example** ACMEPACKET# **show temperature**

## show timezone

**Syntax** show timezone

Displays the information set with the **timezone-zet** command including the name of the timezone, its minutes from UTC, and the start and stop date and hours for daylight saving time.

**Example** ACMEPACKET# **show timezone**

## show trap-receiver

**Syntax** show trap-receiver

The show trap-receiver command displays trap receiver information for each configured SNMP community.

**Example** ACMEPACKET# **show trap-receiver**

## show uptime

**Syntax** show uptime

The **show uptime** command displays information about the length of time the system has been running in days, hours, minutes, and seconds, as well as the current date and time information.

**Example** ACMEPACKET# **show uptime**

## show users

**Syntax** show users

The **show users** command displays all users currently logged into the Net-Net SBC by index number. Other display information includes:

- Task-ID
- remote IP address—Only displayed for telnet or SSH connections
- IdNumber
- Duration of connection
- Connection Type
- State—\* Denotes the current connection

**Example** ACMEPACKET# **show users**

## show version

**Syntax** show versi on

The **show version** command shows the OS version information including: the OS version number, the date that the current copy of the OS was made, and other information.

**Example** ACMEPACKET# **show versi on**

## show virtual-interfaces

**Syntax** show vi rtual -i nterface

The **show virtual-interface** command shows the virtual interfaces for Net-Net SBC signaling services; for example, SIP-NAT external address, H.323 interface (stack) IP interface, and MGCP IP interface.

**Example** ACMEPACKET# **show vi rtual -i nterfaces**

## show voltage

**Syntax** show vol tage

Displays current operating voltages for components in the Net-Net SBC.

**Mode** User and Superuser

**Release** First appearance: 1.0 / Most recent update: 4.1

**Example** ACMEPACKET# **show vol tage**

## show wancom

**Syntax** show wancom

Displays negotiated duplex mode and speed for all Net-Net system control interfaces.

**Mode** User and Superuser

**Release** First appearance: S-C6.1.0

**Example** ACMEPACKET# **show wancom**

## ssh-password

---

The **ssh-password** command creates SSH login accounts and passwords for secure access into a Net-Net SBC.

**Syntax** ssh-password <username> <password>

**Arguments** <username> Enter the username of the new account or the username of the existing SSH account

<password> Enter a password for the new account or a new password for the existing account

**Mode** Superuser

**Release** First appearance: 2.0

**Notes** Passwords must be 6-8 characters with at least one non-alphabetical character. To execute this command, you must type **ssh-password** and press <enter>. You will be prompted for the user name to create and the password for the account. You can change the password of a previously existing account by entering the existing username when prompted. You will be prompted a second time to re-enter the password for confirmation.

**Example** ACMEPACKET# **ssh-password user1 acme**

## ssh-pub-key

---

The **ssh-pub-key** command allows you to import and delete public key records on the Net-Net SBC.

**Syntax** ssh-pub-key <import | delete> <login name>

**Arguments** <import> Import a specified public record key. After you complete this procedure, you can confirm the public key has been imported by using the **show security ssh-pub-key** command.

<delete> Delete a specified public record key. After you complete this procedure, you can confirm the public key has been deleted by using the **show security ssh-pub-key** command.

<login name> Specify the login name of the public record key you want to either import or delete on the Net-Net SBC

**Mode** Superuser

**Release** First appearance: 5.1.1

**Example** ACMEPACKET# **ssh-pub-key import j doe**

## stack

---

The **stack** command shows the function call stack trace for a specified stack.

**Syntax** stack <task>

**Arguments** <task> Enter a task name or task ID

**Mode** Superuser

**Release** First appearance: 1.0

**Notes** This command displays a list of nested routine calls for the specified stack. Each routine call and its parameters are shown.

**Example** ACMEPACKET# **stack si pd**

## stop-task

---

The **stop-task** command shuts down a specified task.

**Syntax** stop-task <task>

**Arguments** <task> Enter a task name or task ID

**Mode** Superuser

**Release** First appearance: 1.0

**Notes** Use this command with caution as there is no direct way to restart a task without rebooting the Net-Net SBC.

**Example** ACMEPACKET# **stop-task si pd**

## switchover-redundancy-link

---

The **switchover-redundancy-link** command allows you to switchover the physical interface to standby in a redundant link configuration.

**arguments** <slot> Select the slot number to switchover the link from active to standby.

*Values* 1 | 2

**Mode** Superuser

**Release** First appearance: 5.0



**Example** ACMEPACKET# `swi tchover-redundancy-link 2`

## systemtime-set

---

The **systemtime-set** command sets the system clock.

**Syntax** `systemtime-set`

**Mode** Superuser

**Release** First appearance: 1.0 / Most recent update: 1.2.1

**Notes** The **systemtime-set** command prompts the user for the date and time and updates the system clock. The command will not set the system time if an invalid year, month, or day is entered. Attempting to change the date and time on the Net-Net SBC displays a warning message as use of this command could be service affecting.

**Example** ACMEPACKET# `systemtime-set`

## tail-logfile-close

---

The **tail-logfile-close** command ends the echoing of a process's logfile to the screen as initiated by the **tail-logfile-open** command.

**Syntax** `tail -logfile-close <process> [<logfile>]`

**Arguments**

<code>&lt;process&gt;</code>	Enter the name of the process that is writing to the specified logfile.
<code>&lt;logfile&gt;</code>	Enter the logfile's name that you want to stop being echoed to the screen. This argument is optional.

**Mode** Superuser

**Release** First appearance: 4.0

**Notes** Must be a valid logfile that is currently being written to.

**Example** ACMEPACKET# `tail -logfile-close sipd`

## tail-logfile-open

---

The **tail-logfile-open** command displays all messages on the console that are normally written to a specified logfile. As a message is written to the logfile, it is also displayed on the screen. The specified logfile will continue to be updated on the Net-Net SBC's filesystem.

**Syntax** `tail -logfile-open <process> [<logfile>]`

<b>Arguments</b>	<p>&lt;process&gt;      Enter the name of the process that is writing to the specified logfile</p> <p>&lt;logfile&gt;      Enter an alternate logfile's name for which you want new entries echoed to the console screen. Not entering the logfile argument forces the default log for the named process to be displayed on the screen. This argument is optional.</p>
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 4.0
<b>Notes</b>	Must be a valid logfile that is currently being written to. The level of detail displayed on the screen is related to the loglevel of the process.
<b>Example</b>	ACMEPACKET# <b>tail -l logfile-open sipd</b>

## tcb

---

The **tcb** command displays task control block (TCB) information for a particular task.

<b>Syntax</b>	tcb <task>
<b>Arguments</b>	<task>      Enter a task name or task ID
<b>Mode</b>	Superuser
<b>Release</b>	First appearance: 1.1
<b>Notes</b>	This command returns a pointer to the TCB for a specified task. Although all task state information is contained in the TCB, you must not modify it directly. This command is used only for debugging purposes.
<b>Example</b>	ACMEPACKET# <b>tcb sipd</b>

## test-pattern-rule

---

The **test-pattern-rule** command allows you to test header manipulation pattern rules for expression validation.

<b>arguments</b>	<p>&lt;expression&gt;    Enter the regular expression that you want to test. The Net-Net SBC informs you whether or not there is a match.</p> <p>&lt;string&gt;      Enter the string against which you want to compare the regular expression</p> <p>&lt;show&gt;      View the test pattern you entered, whether there was a match, and if so, the number of matches</p> <p>&lt;exit&gt;      End the test</p>
<b>Mode</b>	User

<b>Release</b>	First appearance: 5.0
<b>Example</b>	ACMEPACKET# <b>test-pattern-rule</b> <b>expression</b> ' . * ; tgi d=(. +). *'
<b>Notes</b>	This command exists both as a command and as a configuration element.

## test-policy

---

The **test-policy** command is used to test routes configured for the address translation feature. This command is also found in the session-router path. Details on its use are found in the Configuration Elements N-Z chapter.

**Syntax** `test-policy <argument>`

<b>Arguments</b>	<argument>	The following are <b>test-policy</b> arguments:
	<i>Values</i>	<ul style="list-style-type: none"> <li>• <b>carriers</b>—Enter names of permitted carriers set in the carriers fields set in configured local-policy elements. This field is formatted as a list of comma-separated text strings enclosed in quotation marks.</li> <li>• <b>from-address</b>—Enter the “from” address of the local policy to look up/test. From addresses should be entered as SIP-URLs in the form of si p: 19785551212@netnetsystems. com.</li> <li>• <b>media-profiles</b>—List media profiles</li> <li>• <b>show</b>—Show the next hop and the associated carrier information for all routes matching the “from” and “to” addresses entered</li> <li>• <b>source-realm</b>—Enter the name set in the source-realm field of a configured local policy. Entering an “*” in this field matches for any source realm. Leaving the field empty indicates that only the “global” realm will be tested.</li> <li>• <b>time-of-day</b>—Decide whether to use the time of day value set in the start-time and end-time fields set in configured local-policy elements –enabled   disabled</li> <li>• <b>to-address</b>—Enter the “to” address of the local policy to look up/test. To addresses should be entered as SIP-URLs in the form of si p: 19785551212@netnetsystems. com.</li> <li>• <b>exit</b>—End the test</li> </ul>

<b>Mode</b>	User
<b>Release</b>	First appearance: 1.0
<b>Notes</b>	This command exists both as a command and as a configuration element.

**Example** ACMEPACKET# **test-policy time-of-day enabled**

## test-translation

---

The **test-translation** command is used to test translation rules configured for the address translation feature. This command is also found in the session-router path. Details on its use are found in the Configuration Elements N-Z chapter.

**Syntax** test-translation <argument>

**Arguments** <argument> The following is a list of **test-translation** arguments:

*Values*

- called-address—Enter the address on which the called rules are be applied. This entry is required.
- calling-address—Enter the address on which the calling rules will be applied. This entry is required.
- show—Show results of translation
- translation-id—Enter translation rules to test
- exit—Exit the test translation

**Mode** User

**Release** First appearance: 1.3

**Example** ACMEPACKET# **test-translation show**

## timezone-set

---

The **timezone-set** command sets the time zone and daylight savings time on the Net-Net SBC.

**Syntax** timezone-set

**Mode** Superuser

**Release** First appearance: 1.0.

**Notes** The **timezone-set** command prompts the user for time zone, UTC offset, and daylight saving time information. If daylight savings time for your time zone changes start and stop dates yearly, this command must be set yearly.

**Example** ACMEPACKET# **timezone-set**

## verify-config

---

The **verify-config** command verifies the Net-Net SBC's current configuration.

**Syntax** verify-config

The **verify-config** command checks the consistency of configuration elements that make up the current configuration and should be carried out prior to activating a configuration on the Net-Net SBC.

**Mode** Superuser

**Release** First appearance: 1.3; Most recent update: S-C6.1.0

The **verify-config** command, entered either directly or via the **save-config** command, checks for address duplication for a given network-interface within a configuration. Addresses are checked for duplication based on the following criteria:

- Every address entered is checked against the Primary and Secondary Utility addresses
- All UDP, TCP, and TFTP addresses are checked against other UDP, TCP, and TFTP addresses respectively within the same port range

**Notes** For detailed information, refer to the *Net-Net 4000 ACLI Maintenance and Troubleshooting Guide*.

**Example** ACMEPACKET# **verify-config**

## watchdog

---

The **watchdog** command sets or queries the state of the watchdog timer. If the system becomes unstable causing the watchdog timer to not reset, the system reboots.

**Syntax** watchdog <arguments>

**Arguments** <arguments> The following is a list of valid arguments:

*Values*

- enable—Enable the watchdog timer
- disable—Disable the watchdog timer
- fetch—Display the watchdog timer configuration

**Mode** User

**Release** First appearance: 2.0.1

**Notes** The **fetch** argument can be accessed from user mode.

**Example** ACMEPACKET# **watchdog enable**



## access-control

---

The **access-control** configuration element is used to manually create ACLs for the host path in the Net-Net SBC.

### Syntax

```
access-control <realm-id | description | source-address |
destination-address | application-protocol | transport-protocol |
access | average-rate-limit | trust-level | minimum-reserved-
bandwidth | invalid-signal-threshold | maximum-signal-threshold |
untrusted-signal-threshold | deny-period | nat-trust|threshold |
select | no | show | done | exit>
```

### Parameters

**realm-id**—Enter the ingress realm of traffic destined to host to apply this ACL

**description**—Provide a brief description of the **access-control** configuration element

**destination-address**—Enter the destination address, net mask, port number, and port mask to specify traffic matching for this ACL. Not specifying a port mask implies an exact source port. Not specifying an address mask implies an exact IP address. This parameter is entered in the following format:

```
<i p-address>[/<num-bits>][: <port>][/<port-bits>]
```

*Default* 0.0.0.0

**source-address**—Enter the source address, net mask, port number, and port mask to specify traffic matching for this ACL. Not specifying a port mask implies an exact source port. Not specifying an address mask implies an exact IP address. This parameter is entered in the following format:

```
<i p-address>[/<num-bits>][: <port>][/<port-bits>]
```

*Default* 0.0.0.0

**application-protocol**—Select the application-layer protocol configured for this ACL entry

*Values*

- SIP
- MGCP
- NONE

**transport-protocol**—Select the transport-layer protocol configured for this ACL entry

*Default* ALL

*Values*

- ALL

- TCP
- UDP

**access**—Select the access control type for this entry

*Default* permit

- Values*
- permit—Puts the entry in trusted or untrusted list depending on the **trust-level** parameter. This gets promoted and demoted according to the trust level configured for the host.
  - deny—Puts this entry in the deny list.

**average-rate-limit**—Enter the allowed sustained rate in bytes per second for host path traffic from a trusted source within the realm. A value of 0 disables the policing.

*Default* 0

*Values* Min: 0 / Max: 999999999

**trust-level**—Select the trust level for the host

*Default* None

- Values*
- none—Hosts will always remain untrusted. Will never be promoted to trusted list or will never get demoted to deny list.
  - low—Hosts can be promoted to trusted-list or can get demoted to deny-list
  - medium—Hosts can get promoted to trusted, but can only get demoted to untrusted. Hosts will never be put in deny-list.
  - high—Hosts always remain trusted

**minimum-reserved-bandwidth**—Enter the minimum reserved bandwidth in bytes per second that you want for the session agent, which will trigger the creation of a separate pipe for it. This parameter is only valid when the **trust-level** parameter is set to **high**. Only a non-zero value will allow the feature to work properly.

*Default* 0

*Values* Min: 0 / Max: 4294967295

**invalid-signal-threshold**—Enter the rate of signaling messages per second to be exceeded within the tolerance-window that causes a demotion event. This parameter is only valid when **trust-level** is configured as low or medium. A value of 0 means no threshold.

*Default* 0

*Values* Min: 0 / Max: 999999999

**maximum-signal-threshold**—Enter the maximum number of signaling messages per second that one host can send within the tolerance-window. The host will be demoted if the Net-Net SBC receives messages more than the configured number. This parameter is only valid when **trust-level** is configured low or medium. A value of 0 means no threshold.

*Default* 0

*Values* Min: 0 / Max: 999999999



**untrusted-signal-threshold**—Enter the maximum number of signaling messages from untrusted sources allowed within the tolerance window

*Default* 0

*Values* Min: 0 / Max: 999999999

**deny-period**—Enter the time period in seconds a deny-listed or deny entry is blocked by this ACL. The host is taken out of deny-list after this time period elapses.

*Default* 30

*Values* Min: 0 / Max: 999999999

**nat-trust-threshold**—Enter maximum number of untrusted endpoints allowed before an entire NAT device is demoted to untrusted. 0 means dynamic demotion of NAT devices is disabled.

*Default* 0

*Values* Min: 0 / Max: 999999999

<b>Path</b>	<b>access-control</b> is an element of the session-router path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; access-control</b> .
<b>Release</b>	First appearance: 2.0 / Most recent update: 4.0
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## account-config

---

The **account-config** configuration element allows you to set the location where accounting messages are sent.

<b>Syntax</b>	<pre>account-config &lt;hostname   port   strategy   state   max-msg- delay   max-wait-failover   trans-at-close   generate-start   generate-interim   file-output   file-path   max-file-size   max- files   file-rotate-time   ftp-push   ftp-address   ftp-port   ftp-user   ftp-password   ftp-remote-path   account-servers   intermediate-period   cdr-output-redundancy   prevent-duplicate- attrs   vsa-id-range   cdr-output-inclusive   file-rotate-time   select   no   show   done   exit&gt;</pre>
---------------	---

<b>Parameters</b>	<b>hostname</b> —Enter the hostname of this Net-Net SBC; must be set to “localhost” or the accounting configuration will not work properly. Entries are in FQDN format.
-------------------	---

*Default* Localhost name

**port**—Enter the UDP port number from which RADIUS messages are sent

*Default* 1813

*Values* Min: 1025 / Max: 65535

**strategy**—Select the strategy used to select the current accounting server

*Default* Hunt

- Values*
- hunt—Selects accounting servers in the order in which they are listed
  - failover—Uses first and subsequent servers in accounting server list until a failure is received from that server
  - roundrobin—Selects accounting server in order, distributing the selection of each accounting server evenly over time
  - fastestrtt—Selects accounting server with the fastest RTT observed during transactions with the servers
  - fewestpending—Selects accounting server with the fewest number of unacknowledged accounting messages

**state**—Enable or disable the accounting system

*Default* enabled

*Values* enabled | disabled

**max-msg-delay**—Enter the time in seconds the Net-Net SBC continues to send each accounting message

*Default* 60

*Values* Min: 0 / Max: 2<sup>32</sup>-1

**max-wait-failover**—Enter the number of accounting messages held in message waiting queue before a failover situation status is enacted

*Default* 100

*Values* Min: 1 / Max: 4096

**trans-at-close**—Enable the Net-Net SBC to transmit accounting message information at the close of a session only. Setting this parameter to disabled tells the Net-Net SBC to transmit accounting information at the start of a session (Start), during the session (Interim), and at the close of a session (Stop).

*Default* disabled

*Values* enabled | disabled

**generate-start**—Select the type of SIP event that triggers the Net-Net SBC to transmit a RADIUS Start message

*Default* ok

- Values*
- none—RADIUS Start message is not generated
  - invite—RADIUS Start message is generated once a SIP session INVITE is received
  - ok—RADIUS Start message is generated an OK message in response to an INVITE is received

**generate-interim**—SBC to transmit a RADIUS Interim message

*Default* reinvite-response

- Values*
- ok—RADIUS Start message is generated when an OK message is received in response to an INVITE

- **reinvite**—RADIUS Interim message is generated when a SIP session reINVITE message is received
- **reinvite-response**—RADIUS Interim message is generated when a SIP session reINVITE is received and the system responds to it
- **reinvite-cancel**—RADIUS Interim message is generated when a SIP session reINVITE is received, and the Reinvite is cancelled before the Net-Net SBC responds to it
- **unsuccessful-attempt**—RADIUS Interim message is generated when a session set-up attempt from a preference-ordered list of next-hop destinations is unsuccessful. This can happen when a local policy lookup, LRT lookup, ENUM query response, or SIP redirect returns a preference-ordered list of next-hop destinations. The interim message contains: the destination IP address, the disconnect reason, a timestamp for the failure, and the number that was called

**file-output**—Enable or disable the output of comma-delimited CDRs

*Default* disabled

*Values* enabled | disabled

**file-path**—Enter the path in which to save the comma-delimited CDR file. Most common settings for this parameter are /ramdrv or /ramdrv/logs directories. You cannot set this parameter to the /code or /boot directories.

**max-file-size**—Set the maximum file size in bytes for each CDR file

*Default* 1000000

*Values* Min: 1000000 / Max: 100000000

**max-files**—Set the maximum number of files to store on the Net-Net SBC

*Default* 5

*Values* Min: 1 / Max: 10

**file-rotate-time**—Set the time in minutes that the Net-Net SBC rotates the CDR files; the Net-Net SBC will overwrite the oldest file first

*Default* 60

*Values* Min: 2 / Max: 2147483647

**ftp-push**—Enable or disable the FTP push feature

*Default* disabled

*Values* enabled | disabled

**ftp-address**—Enter the IP address for the FTP server used with the FTP push feature

**ftp-port**—Set the TCP port on the FTP server to use with the FTP push feature

*Default* 21

*Values* Min: 1 / Max: 65535

**ftp-user**—Enter the username the Net-Net SBC will use to log in to the FTP server

**ftp-password**—Enter the password the Net-Net SBC will use to log in to the FTP server

**ftp-remote-path**—Enter the file path the Net-Net SBC will use to work in on the FTP server

**intermediate-period**—Set the time interval used to generate periodic interim records during a session

*Default* 0

*Values* Min: 0 / Max: 999999999

**account-servers**—Access the account-server subelement

**cdr-output-redundancy**—Enable or disable the redundant storage of comma-delimited CDR files

*Default* enabled

*Values* enabled | disabled

**prevent-duplicate-attribs**—Enable or disable the prevention of duplicate accounting attributes

*Default* disabled

*Values* enabled | disabled

**vsa-id-range**—Enter the range of accounting attributes to include in CDRs. A blank field means this feature is turned off and all attributes are included.

**cdr-output-inclusive**—Enable or disable the guarantees placement of attributes in CSV files used for local CDR storage and FTP push.

*Default* disabled

*Values* enabled | disabled

<b>Path</b>	<b>account-config</b> is an element of the session-router path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; account-config</b> .
<b>Release</b>	First appearance: 1.0 / Most recent update: 2.1.1
<b>RTC Status</b>	Unsupported
<b>Notes</b>	This is a single instance configuration element.

## **account-config > account-server**

---

The **account-server** configuration subelement stores the accounting server information for the account-config.

**Syntax**

```
account-server <hostname | port | state | min-round-trip | max-
inactivity | restart-delay | bundle-vsa | secret | NAS-ID |
priority | select | no | show | done | exit>
```

**Parameters**

**hostname**—Enter the hostname of the accounting server. Entries are in FQDN or IP Address Format

**port**—Enter the UDP port number associated with the accounting server is configured here

*Default* 1813

*Values* Min: 1025 / Max: 65535

**state**—Enable or disable this account-server

*Default* enabled

*Values* enabled | disabled

**min-round-trip**—Enter the time in milliseconds of the minimum RTT for an accounting message for use with the fastest RTT strategy method

*Default* 250

*Values* Min: 10 / Max: 5000

**max-inactivity**—Enter the maximum time in seconds the Net-Net SBC waits when accounting messages are pending without a response before this account server is set as inactive for its failover scheme

*Default* 60

*Values* Min: 1 / Max: 300

**restart-delay**—Enter the time in seconds the Net-Net SBC waits after declaring an accounting server inactive before resending an accounting message to that same accounting server

*Default* 30

*Values* Min: 1 / Max: 300

**bundle-vsa**—Enable or disable the bundling of the VSAs within RADIUS accounting on the account-server

*Default* enabled

*Values* enabled | disabled

**secret**—Enter the secret passed from the account-server to the client server; entries in this field must follow the Text Format

**NAS-ID**—Enter the value the account-server uses to identify the Net-Net SBC so messages can be transmitted; entries in this field must follow the Text Format

**priority**—Enter the number corresponding to the priority for this account server to have in relation to the other account servers to which you send traffic. The default is 0, meaning there is no set priority.

*Default* 0

*Values* Min: 0

## Path

**account-server** is a subelement of the account-config element. The full path from the topmost CLI prompt is: **configure terminal > session-router > account-config > account-servers**.

## Release

First appearance: 1.0

**RTC Status** Unsupported

**Notes** This list can contain as many accounting servers as necessary. By default, this list remains empty. RADIUS will not work unless an account server is configured. This is a multiple instance configuration element.

## authentication

---

The **authentication** configuration element is used for configuring an authentication profile.

**Syntax** authentication <source-port | type | protocol | allow-local-authorization | login-as-admin | radius-servers | select | no | show | done | exit>

**Parameters** **source-port**—Enter the port number on the Net-Net SBC to send messages to the RADIUS server

*Default* 1812

*Values* 1645 | 1812

**type**—Enter the type of user authentication

*Default* local

*Values* local | radius

**protocol**—Select the protocol type to use with your RADIUS server(s)

*Default* pap

*Values* pap | chap | mschapv2

**allow-local-authorization**—Enable this parameter if you want the Net-Net SBC to authorize users to enter Super (administrative) mode locally even when your RADIUS server does not return the ACME\_USER\_CLASS VSA or the Cisco-AVPair VSA.

*Default* disabled

*Values* enabled | disabled

**login-as-admin**—Enable this parameter if you want users to be logged automatically in Superuser (administrative) mode.

*Default* disabled

*Values* enabled | disabled

**radius-servers**—Enter the radius-servers subelement

**Path** **authentication** is an element under the security path. The full path from the topmost prompt is: **configure terminal > security > authentication.**

**Release** First appearance: 4.0

**RTC Status** Supported

## authentication > radius-servers

---

The **radius-servers** subelement defines and configures the RADIUS servers that the Net-Net SBC communicates with.

### Syntax

```
radius-servers <address | port | state | secret | nas-id | retry-
limit | retry-time | maximum-sessions | class | dead-time |
authentication-methods | select | no | show | done | exit>
```

### Parameters

**address**—Enter the IP address for the RADIUS server

**port**—Enter the port number on the remote IP address for the RADIUS server

*Default* 1812

*Values* 1645 | 1812

**state**—Enable or disable this configured RADIUS server

*Default* enabled

*Values* enabled | disabled

**secret**—Enter the password the RADIUS server and the Net-Net SBC share. This password is not transmitted between the two when the request for authentication is initiated.

**nas-id**—Enter the NAS ID for the RADIUS server

**retry-limit**—Set the number of times the Net-Net SBC retries to authenticate with this RADIUS server

*Default* 3

*Values* Min: 1 / Max: 5

**retry-time**—Enter the time in seconds the Net-Net SBC waits before retrying to authenticate with this RADIUS server

*Default* 5

*Values* Min: 5 / Max: 10

**maximum-sessions**—Enter the maximum number of sessions to maintain with this RADIUS server

*Default* 255

*Values* Min: 1 / Max: 255

**class**—Select the class of this RADIUS server as either primary or secondary. A connection to the primary server is tried before a connection to the secondary server is tried.

*Default* primary

*Values* primary | secondary

**dead-time**—Set the time in seconds before the Net-Net SBC retries a RADIUS server that it has designated as dead

*Default* 10

*Values* Min: 10 / Max: 10000

**authentication-methods**—Select the authentication method the Net-Net SBC uses when communicating with the RADIUS server

*Default* pap

*Values* all | pap | chap | mschapv2

**Path** **radius-servers** is a subelement under the **authentication** configuration element under the security path. The full path from the topmost prompt is: **configure terminal > security > authentication > radius-servers**.

**Release** First appearance: 4.0

**RTC Status** Supported

## bootparam

---

The **bootparam** command establishes the parameters that a Net-Net SBC uses when it boots.

**Syntax** bootparam <boot device | processor number | hostname | file name | inet on ethernet | inet on backplane | host inet | gateway inet | user | ftp password | flags | target name | startup script | other>

**Notes** In the physical interface and the network interface configuration elements, you can set values that may override the values set within the boot configuration parameters. If you are configuring these elements and enter information that matches information in the boot configuration parameters, the system will warn you that your actions may change the boot configuration parameters.

The **bootparam** command presents you with the parameters to enter on a line-by-line basis. You can press <Enter> to accept a given default parameter and move to the next parameter.

**boot device**—Enter the name and port number of the device from which an image is downloaded (e.g., wancom0). This parameter is only required if you are booting from an external device; if you are doing so, the name must be wancom followed by the port number.

**processor number**—Enter the processor number on the backplane

**host name**—Enter the name of the boot host used when booting from an external device

**file name**—Enter the name of the file containing the image to be booted. If you are booting off the system flash memory, this filename must always match the filename that you designate when you FTP the image from the source to the Net-Net SBC.



When booting off the system flash memory, this filename must always start with: /tffs0/.

*Values*

- tffs0=/boot
- tffs1=/code

**inet on ethernet**—Enter the internet address of the Net-Net SBC's Ethernet interface. An optional subnet mask in the form `inet_adrs:subnet_mask` is available. If DHCP is used to obtain the configuration parameters, lease timing information may also be included. This information takes the form of `lease_duration:lease_origin` and is appended to the end of the field. The subnet mask for this parameter is given in hex.

**inet on backplane**—Not used

**host inet**—Enter the internet address of the boot host, used when booting from an external device

**gateway inet**—Enter the IP gateway for the management interface's subnet

**user**—Enter the FTP username on the boot host

**ftp password**—Enter the FTP password for the FTP user on the boot host

**flags**—Set the Net-Net SBC to know from where to boot. Also sets how to use the files in the booting process.

*Values*

- 0x08—Quickboot. The system bypasses the 7 second countdown prior to booting.
- 0x10008—This flag does the same as 0x08. In addition, it connects to `usr/acme` on the boot host defined in the boot parameters. Connecting externally to `usr/acme` is useful for copying data off the Net-Net SBC to the external host over NFS.
- 0x30008—This flag does all of the above, and in addition it makes `/usr/acme` on the boot host defined in the boot parameters the correct directory for logs rather than locally on the Net-Net SBC.
- 0x70008—This flag does all of the above. In addition, it stores the configuration in `usr/acme` on the boot host defined in the boot parameters rather than in `/code` in the system flash memory file system.
- 0x80008—Source based routing.

**target name**—Enter the name of this Net-Net SBC. This field also sets the name of the Net-Net SBC as it appears in the system prompt (e.g., `ACMEPACKET>` or `ACMEPACKET#`).

**startup script**—Internal use only

**other**—Internal use only

## Path

**bootparam** is in the configuration path. The full path from the topmost prompt is: **configure terminal > bootparam.**

## Release

First appearance: 1.0

**RTC Status**                      Unsupported

## call-recording-server

---

The **call-recording-server** configuration element allows you to forward both signaling and media packets to and from a realm to a specified destination.

### Syntax

```
call-recording-server <name | primary-network | primary-
signaling-addr | primary-media-addr | secondary-network |
secondary-signaling-addr | secondary-media-addr | ping-method |
ping-interval | select | no | show | done | exit>
```

### Parameters

**name**—Enter the name of the IPRCR you are configuring

**primary-realm**—Enter the primary realm to which you want this IPRCR to be associated. This must be an existing realm or the IPRCR will be considered invalid and this server will be ignored.

**primary-signaling-addr**—Enter the primary address you want to use as a destination for forwarding signaling packets

**primary-media-addr**—Enter the primary address you want to use as a destination for forwarding media packets. If both the signaling and media primary addresses are the same, this parameter can be left blank

**secondary-realm**—Enter the secondary realm you want this IPRCR to be associated with if the primary-network becomes unreachable. This must be an existing realm or the IPRCR will be considered invalid and this server will be ignored.

**secondary-signaling-addr**—Enter the address you want to use as a destination for forwarding signaling packets if the address you entered in the **primary-signaling-addr** parameter becomes unreachable.

**secondary-media-addr**—Enter the address you want to use as a destination for forwarding media packets if the address you entered in the **primary-media-addr** parameter becomes unreachable

**ping-method**—Enter the SIP method you want to be used for ping messages sent to the IPRCR

**ping-interval**—Enter the time in seconds to allow between the transmission of ping requests in an HA configuration. A value of 0 means this parameter is disabled.

*Default*                              0

*Values*                                Min: 0; 2 / Max: 9999999

### Path

**call-recording-server** is an element under the **session-router** path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > call-recording-server**.

### Release

First appearance: 6.0

### RTC Status

Supported

### Notes

This is a multiple instance element.

## capture-receiver

---

The **capture-receiver** configuration element allows you to configure packet tracing functionality on your Net-Net SBC.

### Syntax

```
packet-trace-config <state | address | network-interface | select
| no | show | done | exit>
```

**state**—Enable or disable the Net-Net SBC's TRACE capability

*Default* disabled

*Values* enabled | disabled

**address**—Enter the TRACE server IP address

**network-interface**—Enter the TRACE server outbound interface

### Path

**packet-trace-config** is an element of the system path. The full path from the topmost CLI prompt is: **configure terminal > system > packet-trace-config**.

### Release

First appearance: 5.0

### RTC Status

Supported

## certificate-record

---

This configuration element configures certificate records for TLS support.

### Syntax

```
certificate-record <name | country | state | locality |
organization | unit | common-name | key-size | alternate-name |
trusted | key-usage-list | extended-key-usage-list | select | no
| show | done | exit>
```

**name**—Enter the name of the certificate record

**country**—Enter the name of the country

*Default* US

**state**—Enter the name of the state for the country

*Default* MA

**locality**—Enter the name of the locality for the state

*Default* Burlington

**organization**—Enter the name of the organization holding the certificate

*Default* Engineering

**unit**—Enter the name of the unit for holding the certificate within the organization

**common-name**—Enter the common name for the certificate record

**key-size**—Set the size of the key for the certificate

*Default* 1024  
*Values* 512 | 1024 | 2048

**alternate-name**—Enter the alternate name of the certificate holder

**trusted**—Enable or disable trust of this certificate

*Default* enabled  
*Values* enabled | disabled

**key-usage-list**—Enter the usage extensions to use with this certificate record; can be configured with multiple values

*Default* **digitalSignature** and **keyEncipherment**

**extended-key-usage-list**—Enter the extended key usage extensions you want to use with this certificate record

*Default* serverAuth

<b>Path</b>	<b>certificate-record</b> is an element under the security path. The full path from the topmost prompt is: <b>configure terminal &gt; security &gt; certificate-record</b> .
<b>Release</b>	First appearance: 4.1.
<b>RTC Status</b>	Supported

## class-profile

---

The **class-profile** configuration element lets you access the **class-policy** configuration element for creating classification policies for ToS marking for SIP or H.323.

**Syntax** `class-profile <policy | exit>`

**Parameters** **policy**—Enter the class-policy subelement

**Path** **class-profile** is an element under the session-router path. The full path from the topmost prompt is: **configure terminal > session-router > class-profile**.

**Release** First appearance: 1.3 / Most recent update: 2.0

**RTC Status** Supported

## class-profile > policy

---

The **class-policy** configuration subelement lets you create classification policies that are used to create a ToS marking on incoming traffic based upon a matching **media-policy** and destination address.

**Syntax** `policy <profile-name | to-address | media-policy | select | no | show | done | exit>`

<b>Parameters</b>	<p><b>profile-name</b>—Enter the classification profile name</p> <p><b>to-address</b>—Enter a list of addresses to match for when determining when to apply this class-policy. Addresses can take the forms:</p> <ul style="list-style-type: none"> <li>• +&lt;number&gt;—E164 address</li> <li>• &lt;number&gt;—Default address type</li> <li>• [&lt;host&gt;]. domain—Host and/or domain address</li> </ul> <p><b>media-policy</b>—Enter the media-policy used for this class-policy</p>
<b>Path</b>	<b>class-policy</b> is a subelement under the session-router path. The full path from the topmost prompt is: <b>configure terminal &gt; session-router &gt; class-profile &gt; policy.</b>
<b>Release</b>	First appearance: 1.3 / Most recent update: 2.0
<b>RTC Status</b>	Unavailable

## codec-policy

---

The **codec-policy** configuration element allows you to configure codec policies, sets of rules that specify the manipulations to be performed on SDP offers and answers.

<b>Syntax</b>	<code>codec-policy &lt;name   allow-codecs   order-codecs   select   no   show   done   exit&gt;</code>
---------------	---

<b>Parameters</b>	<p><b>name</b>—Enter the unique name for the codec policy. This is the value you will use to refer to this codec policy when you apply it to realms or session agents. This is a required parameter.</p>
-------------------	--

**allow-codecs**—Enter the list of media format types (codecs) to allow for this codec policy. In your entries, you can use the asterisk (\*) as a wildcard, the force attribute, or the no attribute so that the allow list you enter directly reflect your configuration needs. The codecs that you enter here must have corresponding media profile configurations.

**order-codecs**—Enter the order in which you want codecs to appear in the outgoing SDP offer. You can use the asterisk (\*) as a wildcard in different positions of the order to directly reflect your configuration needs. The codecs that you enter here must have corresponding media profile configurations.

<b>Path</b>	<b>codec-policy</b> is an element of the media-manager path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; media-manager &gt; codec-policy.</b>
-------------	--

<b>Release</b>	First appearance: 4.1.1
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<b>RTC Status</b>	Supported
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## dns-config

---

The **dns-config** configuration element configures the DNS-ALG on a per-client realm basis.

<b>Syntax</b>	<code>dns-config &lt;client-realm   description   client-address-list   server-dns-attributes   select   no   show   done   exit&gt;</code>
<b>Parameters</b>	<p><b>client-realm</b>—Enter the realm from which DNS queries are received. This value is the name of a configured realm.</p> <p><b>description</b>—Describe the dns-alg configuration element</p> <p><b>client-address-list</b>—Enter the IP client realm address(es) from which the Net-Net SBC can receive DNS queries. This field is required.</p> <p><b>server-dns-attributes</b>—Enter the server-dns-attributes subelement</p>
<b>Path</b>	<b>dns-config</b> is a subelement under the media-manager path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; media-manager &gt; dns-config.</b>
<b>Release</b>	First appearance: 1.3
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## dns-config > server-dns-attributes

---

The **server-dns-attributes** subelement configures DNS servers.

<b>Syntax</b>	<code>server-dns-attributes &lt;server-realm   domain-suffix   server-address-list   source-address   source-port   transaction-timeout   address-translation   select   no   show   done   exit&gt;</code>
<b>Parameters</b>	<p><b>server-realm</b>—Enter the realm from which DNS responses are sent. This value must be the name of a configured realm. This value is required.</p> <p><b>domain-suffix</b>—Enter the domain suffixes for which this DNS server attribute list is used. This field is required, and can start with an asterisk or a period.</p> <p><b>server-address-list</b>—Enter a list of DNS server IP addresses used for the specified domains. This field is required, and can include multiple entries.</p> <p><b>source-address</b>—Enter the source IP address from which the ALG sends queries to the DNS server (i.e., a layer 3/layer 4 source address). This field is required.</p> <p><b>source-port</b>—Enter the UDP port number from which the ALG sends queries to the DNS server (i.e., layer 3/layer 4 source address). This value is required.</p> <p><i>Default</i> 53</p> <p><i>Values</i> Valid Range: 1025-65535</p> <p><b>transaction-timeout</b>—Enter the number of seconds that the ALG maintains information to map a DNS server response to the appropriate client request. This value is required.</p> <p><i>Default</i> 10 seconds</p>

Values Min: 0 / Max: 999999999

**address-translation**—Access the address-translation subelement

<b>Path</b>	<b>server-dns-attributes</b> is a subelement under the dns-config element. The full path from the topmost CLI prompt is: <b>configure terminal &gt; media-manager &gt; dns-config &gt; server-dns-attributes.</b>
<b>Release</b>	First appearance: 1.3
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## dns-config > server-dns-attributes > address-translation

---

The **address-translation** subelement sets the list of IP address translations and determines how the NAT function for this feature occurs. Multiple entries in this field allow one DNS-ALG network entity to service multiple Net-Net SBCs or multiple sets of addresses.

**Syntax** address-translation <server-prefix | client-prefix | select | no | show | done | exit>

**Parameters** **server-prefix**—Enter the address/prefix returned by the DNS server. The server-prefix is an IP address and number of bits in slash notation.

**client-prefix**—Enter the address/prefix to which a response is returned. The client-prefix is an IP address and number of bits in slash notation.

**Path** **address-translation** is a sub-subelement of the media-manager element. The full path from the topmost CLI prompt is: **configure terminal > media-manager > dns-config > server-dns-attributes > address-translation.**

**Release** First appearance: 1.3

**RTC Status** Supported

**Notes** Values specified for the number of bits dictates how much of the IP address will be matched. If the number of bits remains unspecified, then the Net-Net SBC will use all 32 bits for matching. Setting the bits portion after the slash to 0 is the same as omitting it. This is a multiple instance configuration element.

## enforcement-profile

---

The **enforcement-profile** sets groups of SIP methods to apply in the global SIP configuration, a SIP interface, a SIP session agent, or a realm.

**Syntax** enforcement-profile <name | allowed-methods | sdp-address-check | select | no | show | done | exit>

**Parameters** **name**—Enter the name of the ENUM configuration

**allowed-methods**—Select a list of SIP methods that you want to allow in this set.

*Default* None

*Values* INVITE, REGISTER, PRACK, OPTIONS, INFO, SUBSCRIBE, NOTIFY, REFER, UPDATE, MESSAGE, PUBLISH

**sdp-address-check**—Enable or disable SDP address checking on the Net-Net SBC.

*Default* disabled

*Values* enabled | disabled

**Path** **enforcement-profile** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > enforcement-profile**.

**Release** First appearance: 5.1; Last updated: S-C6.1.0

**RTC Status** Supported

## enforcement-profile>subscribe-event

---

The **subscribe-event** subelement defines subscription event limits for SIP per-user dialogs.

**Syntax** enforcement-profile>subscribe-event <name | event-type | select | no | show | done | exit>

**Parameters** **name**—Enter a name for this enforcement profile

**event-type**—Enter the SIP subscription event type for which to set up limits. You can wildcard this value (meaning that this limit is applied to all event types except the others specifically configured in this enforcement profile). To use the wildcard, enter an asterisk (\*) for the parameter value.

**Path** **subscribe-event** is a subelement under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > enforcement-profile>subscribe-event**.

**Release** First appearance: S-C6.1.0

**RTC Status** Supported

## enum-config

---

The **enum-config** is used to configure ENUM functionality on your Net-Net SBC.

**Syntax** enum-config <name | top-level-domain | realm-id | enum-servers | timeout | cache-inactivity-timer | lookup-length | max-response-size | service-type | select | no | show | done | exit>

**Parameters** **name**—Enter the name of the ENUM configuration



**top-level-domain**—Enter the domain extension used to query the ENUM servers for this configuration. The query name is a concatenation of the number and the domain.

**realm-id**—Enter the realm-id is used to determine on which network interface to issue an ENUM query

**enum-servers**—Enter the name of an ENUM server and its corresponding redundant servers to be queried. In a query, separate each server address with a space and enclose list within parentheses.

**timeout**—Enter the total time, in seconds, that should elapse before a query sent to a server (and its retransmissions) will timeout. If the first query times out, the next server is queried and the same timeout is applied. This process continues until all the servers in the list have timed out or one of the servers responds. The retransmission of ENUM queries is controlled by three timers:

- Values*
- **Init-timer**—The initial retransmission interval. The minimum value allowed for this timer is 250 milliseconds.
  - **Max-timer**—The maximum retransmission interval. The interval is doubled after every retransmission. If the resulting retransmission interval is greater than the value of max-timer, it is set to the max-timer value.
  - **Expire-timer**—The query expiration timer. If a response is not received for a query and its retransmissions within this interval, the server will be considered non-responsive and the next server in the list will be tried.

**cache-inactivity-timer**—Enter the time interval, in seconds, after which you want cache entries created by ENUM requests deleted, if inactive for this interval. If the cache entry gets a hit, the timer restarts and the algorithm is continued until the cache entry reaches its actual time to live.

*Default* 3600

*Values* Min: 0 / Max: 999999999

**lookup-length**—Specify the length of the ENUM query, starting from the most significant bit

*Values* Min: 0 / Max: 255

**max-response-size**—Set the maximum size in bytes for UDP datagram responses

**service-type**—Enter the ENUM service types you want supported in this ENUM configuration. Possible entries are E2U+sip and sip+E2U (the default), and the types outlines in RFCs 2916 and 3721. If you add to the pre-existing E2U+sip and sip+E2U list and want those values to remain, you must enter them with your new values.

*Default* E2U+sip and sip+E2U

*Values* Min: 0 / Max: 999999999

*Default* 512

*Values* Min: 512 / Max: 65535

## Path

**enum-config** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > enum-config**.

**Release** First appearance: 2.1.1/4.1

**RTC Status** Supported

## ext-policy-server

---

The **ext-policy-server** is used for configuring PDP/RACF or CLF functionality on the Net-Net SBC.

### Syntax

```
ext-policy-server <name | state | operation-type | protocol |
address | port | realm | num-connections | reserve-incomplete |
permit-conn-down | product-name | application-mode | application-
id | frame-ip-addr-encoding | dest-realm-format | ingress-realm-
location | domain-name-suffix | allow-srv-proxy | watchdog-ka-
timer | options | select | no | show | done | exit>
```

### Parameters

**name**—Enter the name of this external policy server configuration

**state**—Enable or disable the operational state of this external policy server configuration

*Default* enabled

*Values* enabled | disabled

**operation-type**—Select the function this external policy server performs

*Default* disabled

*Values*

- disabled
- admission-control—Net-Net SBC acts as a PEP in a PDP/RACF deployment
- bandwidth-mgmt—Net-Net SBC communicates with a CLF to obtain location string

**protocol**—Select the external policy server communication protocol

*Default* C-SOAP

*Values*

- COPS—Standard COPS implementation. COPS client type is 0x7929 for CLF, and 0x7926 for PDP/RACF usage as defined in the operation-type parameter.
- A-COPS—Vendor specific protocol. COPS client type is 0x4AC0 for admission-control operation-type.
- SOAP—Not used
- C-SOAP—Not used
- DIAMETER—Connects the Net-Net SBC to the policy-server

**address**—Enter the IP address of external policy server

**port**—Enter the port on the external policy server to connect to for COPS messages. The standard port for COPS is 3288.

*Default* 80

*Values* Valid Range: 0-65535

**realm**—Enter the realm where the external policy server exists

**num-connections**—Enter the number of TCP connections to external policy server

*Default* 1

*Values* Min: 0 / Max: 65535

**reserve-incomplete**—Enable or disable admission requests being made before all of the details of the call are known

*Default* enabled

*Values*

- Enabled—Supports the usual behavior when the AAR is sent upon SDP offer as well as SDP answer. This mode ensures backwards compatibility with releases prior to Release S-C6.1.0.
- Orig-realm-only—Allows calls originating from a realm with a policy server associated with it to send the AAR upon SDP offer; calls terminating at a realm with a policy server associated with it send the AAR post SDP exchange.
- Disabled—Allows no bandwidth reservation for incomplete flows.

**permit-conn-down**—Enable or disable the Net-Net SBC's ability to permit calls if there is no connection to the external policy server

*Default* disabled

*Values* enabled | disabled

**product-name**—Enter the vendor product name

**application-mode**—Select the mode in which the policy server interface is operating

*Default* none

*Values* Rq | Rx | Gq | e2 | pktmm3

**application-id**—Enter the application mode of this interface

*Default* 0

*Values* Min: 0 / Max: 999999999

**framed-ip-addr-encoding**—Set the format of the Frame-IP-Address (AVP 8) value in Diameter messages.

*Default* octet-string

*Values* octet-string (i.e., 0xC0A80A01) | ascii-string (i.e., 192.168.10.1)

**dest-realm-format**—Set the format for the Destination-Realm AVP.

*Default* user\_with\_realm

*Values* user\_with\_realm | user\_only | realm\_only

**ingress-realm-location**—Set this parameter to configure the child realm or its parent for the Address-Realm in the Globally-Unique-Address AVL in DIAMETER UDR messages that the Net-Net SBC sends to the policy server.

*Default* realm-in

*Values*

- realm-in—This setting means that the Net-Net SBC will use the same realm on which the REGISTRATION request arrived

- **sip-interface**—This setting means that the Net-Net SBC will use the realm associated with the SIP interface on which the REGISTRATION request arrived

**domain-name-suffix**—Sets the suffix for Origin-Realm and Origin-Host AVPs that have a payload string constructed as a domain name. If your entry does not include the dot, the system prepends one.

*Default* .com

**allow-srv-proxy**—Enable this parameter if you want to the proxy bit in the header

*Default* enabled

*Values* enabled | disabled

**watchdog-ka-timer**—Enter the number of seconds to define the interval for watchdog/keep-alive messages; this is the time in which the Net-Net SBC must receive a COPS-KA message from the policy server to ensure collection is still valid.

*Default* 0

*Values* Min: 0 / Max: 999999999

**options**—Enter any customer-specific features and/or parameters for this external policy server. This parameter is optional.

#### Path

**ext-policy-server** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > ext-policy-server**.

#### Release

First appearance: 4.0

#### RTC Status

Supported

## h323

---

The **h323** configuration element is the top level of the H.323 configuration, and it contains h323 parameters that apply globally.

#### Syntax

```
h323 <state | log-level | response-tmo | connect-tmo | options |
h323-stacks | rfc2833-payload | alternate-routing | codec-
fallback | enum-sag-match | select | no | show | done | exit>
```

#### Parameters

**state**—Enable or disable H.323 functionality

*Default* enabled

*Values* enabled | disabled

**log-level**—Select the log level for monitoring H.323 functionality. This parameter overrides the process-log level field value set in the system-config element only for H.323 functionality. If the state parameter in this element is set to disabled, this parameter still overrides the process-log-level field from the system-config element for H.323.

*Default* INFO

*Values* EMERGENCY | CRITICAL | MAJOR | MINOR | WARNING | NOTICE | INFO | TRACE | DEBUG

**response-tmo**—Set the number of seconds Net-Net SBC waits between sending a SETUP message and receiving no response before the call is torn down

*Default* 4

*Values* Min: 0 / Max: 999999999

**connect-tmo**—Set the number of seconds Net-Net SBC waits between sending out a SETUP message and failing to receive a CONNECT message before the call is torn down. If the Net-Net SBC receives a PROCEEDING or ALERT message from the endpoint, it will tear down the session after this timer elapses if a CONNECT message is not received.

*Default* 32

*Values* Min: 0 / Max: 999999999

**options**—Enter customer-specific features and/or parameters that affect H.323 behavior globally. This parameter sets a comma-separated list of “feature=value” or “feature” parameters.

**h323-stacks**—Enter the h323-stacks subelement

**rfc2833-payload**—Enter the payload type used by the H.323 stack in preferred rfc2833-mode

*Default* 101

*Values* Valid Range: 96-127

**alternate-routing**— Choose between pre-4.1 or 4.1 behavior:

- Pre-4.0 behavior—Alternate routing is disabled, and the Net-Net SBC sends a release complete message back to the caller, **proxy**
- 4.1 behavior—The Net-Net SBC performs alternate routing, **recur**

*Default* proxy

*Values* proxy | recur

**codec-fallback**—Enable or disable slow start to fast start codec negotiation

*Default* disabled

*Values* enabled | disabled

**enum-sag-match**—Enable or disable matching against the hostnames in ENUM/LRT lookup responses and session agent groups

*Default* disabled

*Values* enabled | disabled

## Path

**h323** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > h323**.

## Release

First appearance: 1.2.1 / Most recent update: 4.1

**RTC Status** Supported

**Notes** Unlike other single-instance configuration elements, the h323 element does not have to be selected before it can be viewed. The options field does not appear in the output for the show command within the h323 element or for running-config subcommand unless it contains configured values.  
This is a single instance configuration element.

## h323 > h323-stacks

---

The **h323-stack** subelement supports the SFIWF, FSIWF, H.323<—>SIP traffic, and general H.323 functionality.

### Syntax

```
h323-stacks <name | description | state | isgateway | realm-id |
assoc-stack | local-ip | max-calls | max-channels | registration-
ttl | terminal-alias | ras-port | auto-gk-discovery | multicast |
gatekeeper | gk-identifier | q931-port | alternate-transport |
q931-max-calls | h245-tunneling | fs-in-first-msg | call-start-
fast | call-start-slow | media-profiles | prefixes | process-
registration | allow-anonymous | options | proxy-mode | h245-
stage | q931-start-port | q931-number-ports | dynamic-start-port
| dynamic-number-ports | filename | tcp-keepalive | rfc2833-mode
| select | no | show | done | exit>
```

### Parameters

**name**—Enter the name of H.323 stack. This value is required and must be unique. The value you enter in this parameter for your H.323 interface (stack) configuration cannot start with a number; it must start with a letter. The Net-Net SBC considers names that start with numbers to be invalid.

**description**—Provide a brief description of the **h323-config** configuration element

**state**—Enable or disable this h323-stack

*Default* enabled

*Values* enabled | disabled

### Notes

This parameter is not RTC supported.

**isgateway**—Enable or disable H.323 stack functionality as a Gateway. When this field is set to enabled, the H.323 stack runs as a Gateway. When this field is set to disabled, the H.323 stack runs as a Gatekeeper proxy.

*Default* enabled

*Values* enabled | disabled

### Notes

This parameter is not RTC supported.

**realm-id**—Enter the realm served by this H.323 stack. This value must be a valid identifier for a realm configuration.

### Notes

This parameter is not RTC supported

**assoc-stack**—Enter the name of associated outbound H.323 stack for this h323-stack instance. If not configured, the Net-Net SBC will use policy-based stack selection based on a local policy (configured in a local-policy element). If you wish to use static stack selection, then each configured h323-stack subelement must have an associated outbound stack. This parameter must correspond to a valid name field value in another instance of the h323-stack subelement.

### Notes

This parameter is not RTC supported.

**local-ip**—Enter the IP address H.323 stack uses when opening sockets. This field value is the default H.323 stack address.

**Notes** *Default* 0.0.0.0  
This command is not RTC supported

**max-calls**—Enter the maximum number of calls allowed for the network associated with this H.323 stack

*Default* 200

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes** This command is not RTC supported.

**max-channels**—Enter the maximum number of concurrent channels (or pathways used between nodes) allowed for each call associated with this H.323 stack

*Default* 6

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes** This command is not RTC supported.

**registration-ttl**—Enter the TTL in seconds before a registration becomes invalid. During the initial registration process, after a registration is confirmed, the TTL value set by the Gatekeeper in the RCF message will override this field value. This field is only applicable when the h323-stack:isgateway field is set to enabled.

*Default* 120

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes** This command is not RTC supported.

**terminal-alias**—Enter a list of alias addresses that identify the H.323 stack terminal. This field value must be entered as a space-separated type=value string (e.g., h323-ID=acme01). This field is only applicable when the isgateway field is set to enabled.

*Values*

- h323-ID
- e164
- url
- email
- ipAddress

**Notes** This command is not RTC supported.

**ras-port**—Select a listening port number for RAS requests. When this field value is 0, H.323 stack uses port assigned by the operating system and not the well-known port 1719.

*Default* 1719

*Values* Min: 0, Max: 65535

**Notes** This command is not RTC supported.

**auto-gk-discovery**—Enable or disable Automatic Gatekeeper discovery feature upon start-up. This field is applicable only when h323-stack:isgateway field is enabled.

*Default* disabled

*Values* enabled | disabled



- Notes** This parameter is not RTC supported.
- multicast**—Enter the multicast address and port of the RAS Multicast IP Group used for automatic gatekeeper discovery. In order to clear this field, you must enter an empty string by typing a space. 224.0.1.41:1718 is the well known value used to discover the Gatekeeper.
- Default* 0.0.0.0:0
- Notes** This parameter is not RTC supported.
- gatekeeper**—Enter the IP address and RAS port of the Gatekeeper. In order to clear this field, you must enter an empty string.
- Default* 0.0.0.0:0
- Notes** This parameter is not RTC supported.
- gk-identifier**—Enter the gatekeeper identifier with which the H.323 stack registers
- Values* 1 to 128 characters
- Notes** This parameter is not RTC supported.
- q931-port**—Enter the Q.931 call signaling port. This is the port for the h323-stack: local-ip address set above.
- Default* 1720
- Values* Min: 0 / Max: 65535
- Notes** This parameter is not RTC supported.
- alternate-transport**—Enter the alternate transport addresses and ports (i.e., the Annex E address(es) and port(s)). If this field is left empty, the H.323 stack will not listen for incoming Annex E requests.
- Notes** This parameter is not RTC supported.
- q931-max-calls**—Set the maximum number of concurrent, active calls allowed on the Net-Net SBC. If this field value is exceeded, the H.323 stack returns a state of "busy."
- Default* 200
- Values* Min: 0 / Max: 65535
- Notes** This parameter is not RTC supported.
- h245-tunneling**—Enable or disable H.245 tunneling supported by this H.323 stack
- Default* disabled
- Values* enabled | disabled
- Notes** This parameter is not RTC supported.
- fs-in-first-msg**—Enable or disable Fast Start fields sent in the first message in response to a SETUP message that contains Fast Start fields
- Default* disabled
- Values* enabled | disabled

**call-start-fast**—Enable or disable conversion of an incoming Slow Start call into a Fast Start call. This H.323 stack must be the outgoing stack for conversion to work. If this field is set to disabled, the outgoing call will be set up with the same starting mode as the incoming call. This parameter must take the opposite value as the call-start-slow parameter.

*Default* enabled

*Values* enabled | disabled

**call-start-slow**—Enable or disable conversion of an incoming Fast Start call into a Slow Start call. This H.323 stack must be the outgoing stack for this conversion to work. If this field is set to disabled, the outgoing call will be set up to have the same starting mode as the incoming call. This parameter must take the opposite value as the call-start-slow parameter.

*Default* disabled

*Values* enabled | disabled

**media-profiles**—Enter a list of media profile names used for the logical channels of the outgoing call. These names are configured in the media-profile element. The media-profiles field value must correspond to a valid name field entry in a media-profile element that has already been configured.

**prefixes**—Enter a list of supported prefixes for this particular H.323 stack

*Values* e164 | url | h323-ID | ipAddress

## Notes

This parameter is not RTC supported.

**process-registration**—Enable or disable registration request processing for this H.323 stack. Net-Net SBC will process any RRQs that arrive on this H.323 stack if enabled. Net-Net SBC will not acknowledge any requests and drop all RRQ if disabled.

*Default* disabled

*Values* enabled | disabled

**allow-anonymous**—Enter the admission control of anonymous connections accepted and processed by this H.323 stack

*Default* all

*Values*

- all—allow all anonymous connections
- agents-only—only requests from session agents allowed
- realm-prefix—session agents and address matching realm prefix

**options**—Enter customer-specific features and/or parameters on a per-stack basis. This parameter sets a comma-separated list of “feature=value” or “feature” parameters. This options field affects H.323 behavior for this particular h323 stack whereas the options field in the main h323 element affects H.323 behavior globally.

## Notes

This command is not RTC supported.

**proxy-mode**—Select the proxy functionality for signaling only operation

*Values* H225 | H245

**Notes**

This command is not RTC supported.

**h245-stage**—Select the H.245 stage at which the Net-Net SBC allows either of the following:

- Transfer of the H.245 address to remote side of the call
- Acting on the H.245 address sent by the remote side

*Default* connect

*Values*

- setup
- proceeding
- alerting
- connect
- early
- facility
- noh245
- dynamic

**q931-start-port**—Set the starting port number for Q.931 port range used for Q.931 call signalling

*Default* 0

*Values* 0 | 1024 | 2048 | 4096 | 8192 | 16384 | 32768

**q931-number-ports**—Set the number of ports in Q.931 port range used for the H.323 registration proxy feature

*Default* 0

*Values* 0 | 1024 | 2048 | 4096 | 8192 | 16384 | 32768

**dynamic-start-port**—Set the starting port number for Q.931 port range used for the H.323 registration proxy feature

*Default* 0

*Values* 0 | 1024 | 2048 | 4096 | 8192 | 16384 | 32768

**dynamic-number-ports**—Enter the number of ports in port range used for dynamic TCP connections the H.323 registration proxy feature

*Default* 0

*Values* 0 | 1024 | 2048 | 4096 | 8192 | 16384 | 32768

**filename**—Enter the name of the configuration file used to override the default configuration. H.323 stack configuration is read from the file specified by this field value. The configuration file does not override manually configured values; the configuration uses the values you have configured plus the information that resides in the file. This file resides in <default-dir>/H323CfgFile, where <defaultdir> is usually /ramdrv.

**Notes**

This parameter is not RTC supported.

**tcp-keepalive**—Enable or disable TCP keepalive processing on call-signaling port

*Default* disabled

*Values* enabled | disabled

**rfc2833-mode**—Select whether 2833/UII negotiation will be transparent to the Net-Net SBC (pre-4.1 behavior), or use 2833 for DTMF and signal it in its TCS

*Default* transparent

*Values* transparent | preferred

**Path**

**h323-stacks** is a subelement under the h323 element. The full path from the topmost CLI prompt is: **configure terminal > session-router > h323 > h323-stacks**.

**Release**

First appearance: 1.2 / Most recent update: 4.1

**RTC Status**

Supported

**Notes**

This is a multiple instance configuration subelement.

## host-route

---

The **host-route** configuration element establishes routing exceptions on the Net-Net SBC for management traffic.

**Syntax**

host-route <dest-network | netmask | gateway | description | select | no | show | done | exit>

**Parameters**

**dest-network**—Enter the IP address of the destination network for this host route. No two host-route elements can have the same dest-network field value.

**netmask**—Enter the destination network subnet mask. The network-interface element will not function properly unless this field value is valid.

**gateway**—Enter the gateway used to leave the local network. The gateway field identifies the next hop to use when forwarding a packet out of the originator's LAN.

**description**—Provide a brief description of this **host-route** configuration

**Path**

**host-route** is an element under the system path. The full path from the topmost CLI prompt is: **configure terminal > system > host-route**.

**Release**

First appearance: 1.0.1

**RTC Status**

Supported

**Notes**

This is a multiple instance configuration element.

## ims-aka-profile

---

The **ims-aka-profile** configuration element establishes supports IP Media Subsystem-Authentication and Key Agreement, defined in 3GPP7 (specifications in TS 33.203 and call flows in TS 24.228).

### Syntax

```
ims-aka-profile <name | protected-server-port | protected-client-
port | encr-alg-list | auth-alg-list | select | no | show | done |
exit>
```

### Parameters

**name**—Enter the name for this IMS-AKA profile

**protected-server-port**—Enter the port number on which the Net-Net SBC receives protected messages; 0 disables the function

*Default* 0

*Values* Min: 1025 / Max: 65535

**protected-client-port**—Enter the port number on which the Net-Net SBC sends out protected messages

*Default* 0

*Values* Min: 1025 / Max: 65535

**encr-alg-list**—Enter the list of encryption algorithms

*Default* aes-cbc | des-ede3-cbc | null

**auth-alg-list**—Enter the list of authentication algorithms

*Default* hmac-sha-1-96

### Path

**ims-aka-profile** is an element under the security path. The full path from the topmost ACLI prompt is: **configure terminal > security > ims-aka-profile**.

### Release

First appearance: S-C6.1.0

### RTC Status

Supported

### Notes

This is a multiple instance configuration element.

## ipsec

---

The **ipsec** configuration element allows you to configure security policies and security associations on your Net-Net SBC.

### Syntax

`ipsec <security-policy | security-association | exit>`

### Parameters

**security-policy**—Enter the security-policy configuration element

**security-association**—Enter the security-association configuration element

### Path

**ipsec** is an element of the security path. The full path from the topmost CLI prompt is: **configure terminal > security> ipsec**.

### Release

First appearance: 5.0

### RTC Status

Supported

## ipsec>ipsec-global-config

---

The **ipsec-global-config** subelement allows you to configure establish the parameters governing system-wide IPSec functions and behavior, including IPSec redundancy.

### Syntax

`ipsec-global-config <red-ipsec-port | red-max-trans | red-sync-start-time | red-sync-comp-time | options | select | no | show | done | exit>`

### Parameters

**red-ipsec-port**—Enter the port on which the Net-Net SBC should listen for redundancy IPSec synchronization messages

*Default* 1994

*Values* Min: 1025 / Max: 65535

**red-max-trans**—Enter the maximum number of redundancy transactions to retain on the active

*Default* 10000

*Values* Min: 0 / Max: 999999999

**red-sync-start-time**—Enter the time in milliseconds before the system starts to send redundancy synchronization requests

*Default* 5000

Min: 0 / Max: 999999999

**red-sync-comp-time**—Enter the time in milliseconds to define the timeout for subsequent synchronization requests once redundancy synchronization has completed

*Default* 1000

Min: 0 / Max: 999999999

**options**—Enter the appropriate option name for the behavior you want to configure

<b>Path</b>	<b>security-association</b> is a subelement of the ipsec path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; security&gt; ipsec&gt;security-association.</b>
<b>Release</b>	First appearance: S-C6.1.0
<b>RTC Status</b>	
<b>Notes</b>	This is a single instance configuration element.

## ipsec>security-association

---

The **security-association** subelement allows you to configure a security association (SA), the set of rules that define the association between two endpoints or entities that create the secured communication.

<b>Syntax</b>	securi ty-associ ati on <manual   exi t>
<b>Parameters</b>	<b>manual</b> —Enter the <b>manual</b> subelement where you can manually configure a security association
<b>Path</b>	<b>security-association</b> is a subelement of the ipsec path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; security&gt; ipsec&gt;security-association.</b>
<b>Release</b>	First appearance: 5.0
<b>RTC Status</b>	Supported

## ipsec>security-association>manual

---

The **manual** subelement is where you manually configure a security association on the Net-Net SBC.

<b>Syntax</b>	manual <name   spi   network-i nterface   local -ip-addr   remote- ip-addr   local -port   remote-port   trans-protocol   ipsec- protocol   di recti on   ipsec-mode   auth-al go   encr-al go   auth- key   encr-key   aes-ctr-nounce   tunnel -mode   select   no   show   done>
	<b>name</b> —Enter the name for this security policy
	<b>spi</b> —Set the security parameter index
	<i>Default</i> 256
	<i>Values</i> Min: 256 / Max: 2302

**network-interface**—Enter the network interface and VLAN where this security association applies in the form of: `interface_name: VLAN`

**local-ip-addr**—Enter the local IP address to match for traffic selectors for this SA

**remote-ip-addr**—Enter the remote IP address to match for traffic selectors for this SA

**local-port**—Enter the local port to match for traffic selectors for this SA

*Default* 0

*Values* Min: 0 (disabled) / Max: 65535

**remote-port**—Enter the remote port to match for traffic selectors for this SA

*Default* 0

*Values* Min: 0 (disabled) / Max: 65535

**trans-protocol**—Select the transport protocol to match for traffic selectors for this SA

*Default* ALL

*Values*

- UDP
- TCP
- ALL
- ICMP

**ipsec-protocol**—Select the IPsec protocol used for this SA

*Default* esp

*Values* esp | ah

**direction**—Set the direction of traffic this security association can apply to

*Default* both

*Values* in | out | both

**ipsec-mode**—Select the IPsec mode of this SA

*Default* transport

*Values* tunnel | transport

**auth-algo**—Select the IPsec authentication algorithm for this SA

*Default* null

*Values*

- hmac-md5
- hmac-sha1
- null

**encr-algo**—Enter the IPsec encryption algorithm for this SA

*Default* null

*Values*

- des
- 3des
- aes-128-cbc
- aes-256-cbc
- aes-128-ctr
- aes-256-ctr
- null



**auth-key**—Enter the authentication key for the previously chosen authentication algorithm for this SA

**encr-key**—Enter the encryption key for the previously chosen encryption algorithm for this SA

**aes-ctr-nonce**—Enter the AES nonce. This only applies if `aes-128-ctr` or `aes-256-ctr` are chosen as your encryption algorithm.

*Default* 0

**tunnel-mode**—Enter the `tunnel -mode` subelement

**Path** **security-association** is a subelement under the `ipsec` element. The full path from the topmost CLI prompt is: `configure-terminal > security > ipsec > security-association`.

**Release** First appearance: 5.0

**RTC Status** Supported

## ipsec>security-association>tunnel-mode

---

This configuration element allows you to configure the addresses in the security-association. These addresses represent the external, public addresses of the termination points for the IPSEC tunnel.

**Syntax** `tunnel -mode <local -ip-addr | remote-ip-addr | select | no | show | done | exit>`

**local-ip-addr**—Enter the local IP address of this tunnel mode profile

**remote-ip-addr**—Enter the remote IP address of this tunnel mode profile

**Path** **tunnel-mode** is a subelement under the `ipsec>security-association` element. The full path from the topmost CLI prompt is: `configure-terminal > security > ipsec > security-association>tunnel-mode`.

**Release** First appearance: 5.0

**RTC Status** Supported

## ipsec>security-policy

---

The **security-policy** configuration element allows you to configure IPsec security policies on your Net-Net SBC.

**Syntax** `security-policy <name | network-interface | priority | local-ip-addr-match | remote-ip-addr-match | local-port-match | remote-port-match | trans-protocol-match | direction | local-ip-mask | remote-ip-mask | action | outbound-sa-fine-grained-mask | select | no | show | done>`

**name**—Enter the name for this security policy

**network-interface**—Enter the network interface and VLAN where this security policy applies in the form: `interface_name: VLAN`

**priority**—Set the priority number of this security policy

*Default* 0

*Values* Min: 0 / Max: 254

**local-ip-addr-match**—Enter the local IP address to match traffic selectors for this security policy

*Default* 0.0.0.0

**remote-ip-addr-match**—Enter the remote IP address to match traffic selectors for this security policy

*Default* 0.0.0.0

**local-port-match**—Enter the local port to match traffic selectors for this security policy

*Default* 0

*Values* Min: 0 / Max: 65535

**remote-port-match**—Enter the remote port to match traffic selectors for this security policy

*Default* 0

*Values* Min: 0 / Max: 65535

**trans-protocol-match**—Select the transport protocol to match traffic selectors for this security policy

*Default* all

*Values* TCP | UDP | ALL | ICMP

**direction**—Set the direction of traffic this security policy can apply to

*Default* both

*Values* in | out | both

**local-ip-mask**—Enter the local IP address mask, in dotted-decimal notation

*Default* 255.255.255.255

**remote-ip-mask**—Enter the remote IP address mask, in dotted-decimal notation

*Default* 255.255.255.255

**action**—Select the action the Net-Net SBC should take when this policy matches outbound IPsec traffic. The choices are:

*Default* ipsec

*Values*

- ipsec—continue processing as IPsec traffic
- allow—forward the traffic without any security processing
- discard—discard the traffic

**outbound-sa-fine-grained-mask**—Enter the outbound-sa-fine-grained-mask subelement

## Path

**security-policy** is a subelement under the ipsec element. The full path from the topmost ACLI prompt is: **configure-terminal > security > ipsec > security-policy**.

## Release

First appearance: 5.0

**RTC Status** Supported

## ipsec>security-policy>outbound-sa-fine-grained-mask

---

This configuration element allows you to configure a fine grained security policy.

**Syntax** `outbound-sa-fine-grained-mask <local-ip-mask | remote-ip-mask | local-port-mask | remote-port-mask | trans-protocol-mask | vlan-mask | ip-protocol-mask | trans-protocol-mask | valid | select | no | show | done | exit>`

**Parameters**

**local-ip-mask**—Enter the local IP address mask  
*Default* 255.255.255.255

**remote-ip-mask**—Enter the remote IP address mask  
*Default* 255.255.255.255

**local-port-mask**—Enter the local port mask for this security policy  
*Default* 0  
*Values* Min: 0 / Max: 65535

**remote-port-mask**—Enter the remote port mask for this security policy  
*Default* 0  
*Values* Min: 0 / Max: 65535

**trans-protocol-mask**—Enter the transport protocol mask for this security policy  
*Default* 0  
*Values* Min: 0 / Max: 255

**vlan-mask**—Enter the VLAN ID mask  
*Default* 0x000  
*Values* 0x000 (disabled)-0xFFF

**Path** `outbound-sa-fine-grained-mask` is a subelement under the `ipsec>security-policy` element. The full path from the topmost CLI prompt is: `configure-terminal > security > ipsec > security-policy > outbound-sa-fine-grained-mask`.

**Release** First appearance: 5.0

**RTC Status** Supported

## iwf-config

---

The `iwf-config` element enables the H.323—SIP interworking (IWF) and provides a list of media profiles to use when IWF translations occur.

**Syntax** `iwf-config <state | media-profiles | logging | add-reason-hdr | no-sdp-in-invite | select | no | show | done | exit>`

**Parameters** **state**—Enable or disable the Net-Net SBC's IWF

*Default* disabled

*Values* enabled | disabled

**media-profiles**—Set the default media SDP profiles that Net-Net SBC uses for Slow Start IWF calls. This field does not have a relationship with the media-profiles field found in the h323-stack subelement, as the values configured there affect calls that take place entirely in H.323. This list must be populated with the SDP codec names.

*Values*

- PCMU
- PCMA
- G722
- G723
- G726-32
- G728
- G729
- H261
- H263

**logging**—Enable or disable IWF-related SIP messages logging

*Default* disabled

*Values* enabled | disabled

**add-reason-hdr**—Enable or disable adding the Reason header to IWF calls

*Default* disabled

*Values* enabled | disabled

**no-sdp-in-invite**—Enable or disable sending an SDP offer in the SIP INVITE for an IWF call originating in H.323 slow start

*Default* disabled

*Values* enabled | disabled

**Path** **iwf-config** is an element under the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > iwf-config**.

**Release** First appearance: 1.2.1

**RTC Status** Supported

**Notes** This is a single instance configuration element.

## license

---

The **license** configuration element is used for configuring Acme Packet licenses.

<b>Syntax</b>	<code>license &lt;add   no   show   exit&gt;</code>
<b>Parameters</b>	<p><b>add</b>—Add a license by entering a key obtained from Acme Packet</p> <p><b>no</b>—Delete licenses by feature. You are prompted to choose a license for deletion based on license features.</p>
<b>Path</b>	<code>licenses</code> is an element under the system-config path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; system &gt; license</b> .
<b>Release</b>	First appearance: 2.0
<b>RTC Status</b>	Supported

## local-policy

---

The **local-policy** configuration element determines where session signaling messages are routed and/or forwarded.

**Syntax** `local-policy <from-address | to-address | source-realm | description | activate-time | deactivate-time | state | policy-priority | policy-attributes | select | no | show | done | exit>`

**Parameters** **from-address**—Enter the source IP address, POTS number, E.164 number, or hostname for the local-policy element. At least one address must be set within this list, but it can include as many addresses as necessary. This parameter may be wildcarded, or entered with a DS: prefix (dialed string).

**to-address**—Enter the destination IP address, POTS number, E.164 number, or hostname for the local-policy element. At least one address must be set within this list, but it can include as many addresses as necessary. This parameter may be wildcarded.

**source-realm**—Enter the realms used to determine how to route traffic. This list identifies incoming traffic on a realm and is used for routing by ingress realm via the local policy element. Source-realm entries must be a valid realm.

*Default* \*

**description**—Provide a brief description of the **local-policy** configuration element

**activate-time**—Set the time when selected local-policy becomes valid

`activate-time yyyy-mm-dd hh:mm:ss.zzz`

y=year; m=month; d=day h=hour (24-hour clock) m=minute; s=second;  
z=millisecond

**deactivate-time**—Set the time when selected local-policy becomes invalid

`deactivate-time yyyy-mm-dd hh:mm:ss.zzz`

y=year; m=month; d=day h=hour (24-hour clock) m=minute; s=second;  
z=millisecond

**state**—Enable or disable the local-policy element

*Default* enabled

*Values* enabled | disabled

**policy-priority**—Set the policy priority parameter for this local policy. It is used to facilitate emergency sessions from unregistered endpoints. This value is compared against a policy priority parameter in a SIP interface configuration element.

*Default* none

*Values* none | normal | non-urgent | urgent | emergency

**policy-attributes**—Access the policy-attributes subelement

**Path**

**local-policy** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > local-policy**.

**Release**

First appearance: 1.0 / Most recent update: 1.2.1

**RTC Status**

Supported

**Notes**

This is a multiple instance configuration element.

## local-policy > policy-attributes

---

The **policy-attributes** subelement in conjunction with local-policy make routing decisions for the session based on the next-hop field value.

**Syntax**

```
policy-attributes <next-hop | realm | action | carrier | start-time | end-time | days-of-week | cost | state | app-protocol | media-profiles | terminate-recursion | methods | select | no | show | done | exit>
```

**Parameters**

**next-hop**—Enter the next signaling host IP address, SAG, hostname, or ENUM config; ENUM is also an accepted value

**realm**—Enter the egress realm, or the realm of the next hop. If traffic is routed using the local policy, and the selected route entry identifies an egress realm, then this realm field value will take precedence. This value must be a valid entry in a realm configuration.

**action**—Set this parameter to redirect if you want to send a redirect next-hop message back to the calling party with the information in the Contact. The calling party then needs to send an INVITE using that information.

*Default* none

*Values*

- none—No specific action requested
- replace-uri—To replace the Request-URI with the next hop
- redirect—To send a redirect response with this next hop as contact

**carrier**—Enter the carrier for this local-policy. Carrier names are arbitrary names used to affect the routing of SIP signaling messages based on their being specified

in the local-policy, session-agent, and the sip-config. These carrier names are global in scope, especially if they are exchanged in TRIP.

**start-time**—Set the time of day these policy attributes considered for preference determination

*Default* 0000

*Values* Min: 0000 / Max: 2400

**end-time**—Set the time of day these policy attributes cease to be considered for preference determination

*Default* 2400

*Values* Min: 0000 / Max: 2400

**days-of-week**—Enter the combination of days of the week plus holidays that policy attributes can be considered for preference determination. A holiday entry coincides with a configured holiday. At least one day or holiday must be specified in this field.

*Default* U-S

*Values*

- U—Sunday
- M—Monday
- T—Tuesday
- W—Wednesday
- R—Thursday
- F—Friday
- S—Saturday
- H—Holiday

**cost**—Enter the cost configured for local policy to rank policy attributes. This field represents the cost of a route relative to other routes reaching the same destination address.

*Default* 0

*Values* Min: 0 / Max: 999999999

**state**—Enable or disable these policy attributes as part of the local-policy element

*Default* enabled

*Values* enabled | disabled

**app-protocol**—Select the signaling protocol used when sending messages to the configured next-hop. When the Net-Net SBC receives an ingress signaling message and uses local policy to determine the message's destination, it will interwork the signaling between protocols (H.323<—>SIP or SIP<—>H.323) if the signaling type does not match the value configured in the app-protocol field.

*Values* H323 | SIP

**media-profiles**—Enter the names of media-profile elements related to the policy attribute. Media profiles define a set of media formats that the Net-Net SBC can recognize in SDP. This list does not have to be configured. However, if this list is configured, there can be as many entries within it as necessary.

**terminate-recursion**—Terminate route recursion with this next hop

*Default* disabled

*Values* enabled | disabled

**methods**—Enter the SIP methods you want to use for matching this set of policy attributes

**Path**

**policy-attributes** is a subelement under the local-policy element. The full path from the topmost ACLI prompt is: **configure terminal > session-router > local-policy > policy-attributes**.

**Release**

First appearance: 1.0 / Most recent update: S-C6.1.0

**RTC Status**

Supported

**Notes**

You must select a local-policy element to which you want to add policy attributes before you enter those elements. If you do not select a local-policy element prior to entering configurations for the policy attributes, your information will be lost. This is a multiple instance configuration element.

## local-response-map

---

The **local-response-map** configuration element is used for RFC3326 support.

**Syntax**

local -response-map <entries | delete | edit | select | no | show | done | exit>

**Arguments**

**entries**—Enter the entries configuration subelement

**delete**—Remove the specified response map entry type

*Values*

- invalid-message—response map for invalid message
- cpu-overload—response map for CPU overload
- media-released—response map for media released condition
- media-not-allocated—response map for media not allocated

**edit**—Select a pre-configured RFC 3326 response map to edit

**Path**

**local-response-map** is an element under the session router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > local-response-map**.

**Release**

First appearance: 4.0

**RTC Status**

Supported



## local-response-map > entries

---

The **entries** subelement is used to add a local response map entry for RFC3326 support.

### Syntax

```
entries <local -error | sip-status | q850-cause | sip-reason |
q850-reason | method | register-response-expires | select | no |
show | done | exit>
```

### Parameters

**local-error**—Enter the local error that triggers the use of this local response map

*Values*

- invalid-message
- cpu-overload
- media-released
- media-not-allocated
- enum-void-route

**sip-status**—Enter the SIP response code to use for this error

*Values*    Min: 100 / Max: 699

**q850-cause**—Enter the Q.850 cause code

**sip-reason**—Enter the SIP response code description

**q850-reason**—Enter the Q850 cause code description

**method**—Enter the name of the locally generated SIP failure response message you want to map to a 200 OK. When this parameter is left blank, the SIP registration response mapping feature is turned off.

**register-response-expires**—Enter the time, in seconds, you want to use for the expires time when mapping the SIP method you identified in the **method** parameter.

*Values*                            Min: 0 / Max: 999999999

### Path

**local-response-map-entries** is an subelement under the local-response-map configuration element. The full path from the topmost ACLI prompt is: **configure terminal > session-router > local-response-map > local-response-map-entries**.

### Release

First appearance: 4.0

### RTC Status

Supported

## local-routing-config

---

The **local-routing-config** element allows you to configure local route tables, giving the Net-Net SBC the ability to determine next hops and map E.164 to SIP URIs locally, providing extensive flexibility for routing.

**Syntax** `local -routing- config <name | filename | prefix-length | select | no | show | done | exit>`

**Parameters** **name**—Enter a unique identifier for the local route table. This is the name you use to refer to this local route table when you configure policy attributes. This is a required parameter.

**filename**—Enter the name for the file from which the database corresponding to this local route table is created. You should use the .gz format, and the file should be placed in the /code/lrt/ directory. This is a required parameter.

**prefix-length**—Enter the number of significant digits/bits to be used for lookup and cache storage

*Default* 0

*Values* Min: 0 / Max: 999999999

**Path** **local-routing-config** is an element of the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > local-routing-config**.

**Release** First appearance: 4.1.1

**RTC Status** Supported

## media-manager-config

---

This **media-manager-config** element defines parameters used in the media steering functions performed by the Net-Net SBC including the flow timers.

**Syntax** `media-manager <state | latching | flow-time-limit | initial-guard-timer | subsq-guard-timer | tcp-flow-time-limit | tcp-initial-guard-timer | tcp-subsq-guard-timer | tcp-number-of-ports-per-flow | hnt-rtcp | algd-log-level | mbc-d-log-level | red-flow-port | red-mgcp-port | red-max-trans | red-sync-start-time | red-sync-comp-time | media-policing | max-signaling-bandwidth | app-signaling-bandwidth | min-media-allocation | min-trusted-allocation | deny-allocation | max-untrusted-signaling | min-untrusted-signaling | tolerance-window | rtcp-rate-limit | anonymous-sdp | arp-message-bandwidth | fragment-msg-bandwidth | rfc2833-timestamp | default-2833-duration | rfc2833-end-pkts-only-for-non-sig | translate-non-rfc2833-event dnsalg-server-timeout | select | no | show | done | exit>`

**Parameters** **state**—Enable or disable media management functionality

*Default* enabled

*Values* enabled | disabled

**latching**—Enable or disable the Net-Net SBC obtaining the source of the first packet received for a dynamic flow. This parameter is only applicable to dynamic flows. If packet source is unresolved, but Net-Net SBC expects a packet, it will use newly arrived packet's source address if latching is enabled. All subsequent packets for the dynamic flow must come from the "latched" source address; otherwise, the packets are dropped.

*Default* enabled

*Values* enabled | disabled

**flow-time-limit**—Enter the total time limit in seconds for the flow. The Net-Net SBC notifies the signaling application when this time limit is exceeded. This field is only applicable to dynamic flows. A value of 0 seconds disables this function and allows the flow to continue indefinitely.

*Default* 86400

*Values* Min: 0 / Max: 999999999

**initial-guard-timer**—Enter the time in seconds allowed to elapse before first packet of a flow arrives. If first packet does not arrive within this time limit, Net-Net SBC notifies the signaling application. This field is only applicable to dynamic flows. A value of 0 seconds indicates that no flow guard processing is required for the flow and disables this function.

*Default* 300

*Values* Min: 0 / Max: 999999999

**subsq-guard-timer**—Enter the maximum time in seconds allowed to elapse between packets in a flow. The Net-Net SBC notifies the signaling application if this timer is exceeded. This field is only applicable to dynamic flows. A field value of zero seconds means that no flow guard processing is required for the flow and disables this function.

*Default* 300

*Values* Min: 0 / Max: 999999999

**tcp-flow-time-limit**—Enter the maximum time in seconds that a media-over-TCP flow can last

*Default* 86400

*Values* Min: 0 / Max: 999999999

**tcp-initial-guard-timer**—Enter the maximum time in seconds allowed to elapse between the initial SYN packet and the next packet in a media-over-TCP flow

*Default* 300

*Values* Min: 0 / Max: 999999999

**tcp-subsq-guard-timer**—Enter the maximum time in seconds allowed to elapse between all subsequent sequential media-over-TCP packets

*Default* 300

*Values* Min: 0 / Max: 999999999

**tcp-number-of-ports-per-flow**—Enter the number of ports, inclusive of the server port, to use for media over TCP. The total number of supported flows is this value minus one.

*Default* 2

*Values* Min: 2 / Max: 5

**hnt-rtcp**—Enable or disable support of RTCP when the Net-Net SBC performs HNT. If disabled, the Net-Net SBC will only do RTP for endpoints behind a NAT. If enabled, the Net-Net SBC will add a separate CAM entry for the RTCP flow so that it can send the RTCP back to the endpoint behind the NAT.

*Default* disabled

*Values* enabled | disabled

**algd-log-level**—Select the log level for the MGCP process

*Default* notice

*Values*

- emergency
- critical
- major
- minor
- warning
- notice
- info
- trace
- debug
- detail

**mbcd-log-level**—Select the log level for the MBCD process

*Default* notice

*Values*

- notice
- emergency
- critical
- major
- minor
- warning
- notice
- info
- trace
- debug
- detail

**red-flow-port**—Enter the number of the port for checkpointing media flows associated with the HA interface. Setting the red-flow-port value to 0 disables media flow HA.

*Default* 1985

*Values* Min: 1025 / Max: 65535

## Notes

This parameter is not RTC supported.

**red-mgcp-port**—Enter the number of the port for checkpointing MGCP signaling associated with the HA interface. Setting the red-mgcp-port value to 0 disables MGCP HA.

*Default* 1986

*Values* Min: 1025 / Max: 65535

**Notes**

This parameter is not RTC supported.

**red-max-trans**—Set the size of media flow and MGCP signaling transaction lists (i.e., Number of media flow or MGCP signaling transactions to store in memory at a time)

*Default* 10000

*Values* Min: 0 / Max: 999999999

**Notes**

This parameter is not RTC supported.

**red-sync-start-time**—Enter the time in milliseconds before this HA Net-Net SBC should start media flow or MGCP signaling state checkpointing. This timer begins immediately upon entering the Active state. After the timer expires, the HA Net-Net SBC checks to see if it is still active. If this Net-Net SBC is no longer active and becomes standby, it needs to checkpoint with its HA Net-Net SBC peer, now the active Net-Net SBC peer.

*Default* 5000

*Values* Min: 0 / Max: 999999999

**Notes**

This parameter is not RTC supported.

**red-sync-comp-time**—Enter the time in milliseconds that this standby Net-Net SBC waits before checkpointing again with the active Net-Net SBC to obtain the latest media flow and/or MGCP signaling transaction information once the initial checkpointing process is complete

*Default* 1000

*Values* Min: 0 / Max: 999999999

**Notes**

This parameter is not RTC supported.

**media-policing**—Enable or disable the media policing feature

*Default* enabled

*Values* enabled | disabled

**max-signaling-bandwidth**—Enter the maximum signaling bandwidth allowed to the host-path in bytes per second

*Default* 1000000

*Values* Min: 71000 / Max: 10000000

**app-signaling-bandwidth**—Select the percentage of the untrusted bandwidth reserved for specific application messages. Currently the only supported application message is RSIP for MGCP and NCS.

*Default* 0

*Values* Min: 1 / Max: 100

**min-media-allocation**—Enter the minimum number of entries devoted specifically to media flows

*Default* 32000

*Values* Min: 0 / Max: 62988 for 64K Cam; 251952 for 256K Cam

**min-trusted-allocation**—Enter the minimum number of entries devoted specifically to trusted flows

*Default* 1000

*Values* Min: 0 / Max: 62988 for 64K Cam; 120000 for 256K Cam

**deny-allocation**—Enter the number of entries devoted specifically to denied entries

*Default* 1000

*Values* Min: 0 / Max: 62988 for 64K Cam; 251952 for 256K Cam

**max-untrusted-signaling**—Set the percentage of signaling bandwidth that can be used by untrusted hosts

*Default* 100

*Values* Min: 1 / Max: 100

**min-untrusted-signaling**—Set the percentage of signaling bandwidth guaranteed for untrusted hosts

*Default* 30

*Values* Min: 1 / Max: 100

**tolerance-window**—Enter the tolerance window size in seconds used to measure host access limits

*Default* 30

*Values* Min: 0 / Max: 999999999

**rtcp-rate-limit**—Enter the maximum speed in bytes per second for RTCP traffic

*Default* 0

*Values* Min: 0 / Max: 125000000

**anonymous-sdp**—Enable or disable username and session name fields anonymous in SDP

*Default* disabled

*Values* enabled | disabled

**arp-msg-bandwidth**—Enter the maximum bandwidth that can be used by an ARP message

*Default* 32000

*Values* Min: 2000 / Max: 200000

**fragment-msg-bandwidth**—Enter the maximum bandwidth that can be used by IP fragment messages

*Default* 0

*Values* Min: 0 (fragment packets are treated as untrusted bandwidth); 2000 / Max: 10000000

**rfc2833-timestamp**—Enable or disable use of a timestamp value calculated using the actual time elapsed since the last RTP packet for H.245 to 2833 DTMF interworking

*Default* disabled

*Values* enabled | disabled

**default-2833-duration**—Enter the time in milliseconds for the Net-Net SBC to use when receiving an alphanumeric UII or SIP INFO with no specified duration.

*Default* 100

*Values* Min: 50 / Max: 5000

**rfc2833-end-pkts-only-for-non-sig**—Enable this parameter if you want only the last three end 2833 packets used for non-signaled digit events. Disable this parameter if you want the entire start-interim-end RFC 2833 packet sequence for non-signaled digit events.

*Default* enabled

*Values* enabled | disabled

**translate-non-rfc2833-event**—Enable or disable the Net-Net SBC’s ability to translate non-rfc2833 events.

*Default* disabled

*Values* enabled | disabled

**dnalg-server-timeout**—Enable or disable allowing DNS queries to be sent to the next configured server, even when contacting the Net-Net SBC’s DNS ALG on a single IP address; uses the transaction timeout value set in the **dns-server-attributes** configuration (part of the **dns-config**).

*Default* disabled

*Values* enabled | disabled

**Path** **media-manager-config** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > media-manager**.

**Release** First appearance: 1.0 / Most recent update: 5.1

**RTC Status** state, latching, flow-time-limit, initial-guard-timer, and subsq-guard-timer are supported. The remaining parameters are not supported.

**Notes** This is a single instance configuration element.

## media-policy

---

The **media-policy** element sets the TOS/DiffServ values that define an individual type or class of service.

**Syntax** `media-policy <name | tos-settings | select | no | show | done | exit>`

**Parameters**

**name**—Name of this media policy

**tos-settings**—Enter into the tos-values subelement

**Path** **media-policy** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > media-policy**.

**Release** First appearance: 1.2.1

**RTC Status** Supported

**Notes** This configuration element sets the Packet Marking for Media features and defines an individual type or class of service for the Net-Net SBC. Media policies can be chosen on a per-realm basis. This is a multiple instance configuration element.

## media-policy > tos-settings

---

The **tos-settings** configuration subelement bases media classification on type and subtype to create any media type combination allowed by IANA standards.

**Syntax** `tos-settings < media-type | media-sub-type | media-attributes | tos-values | select | no | show | done | exit>`

**Parameters**

**media-type**—Enter the type of media to use for this set of TOS settings

*Default* None

*Values* Any IANA-defined media type, such as: audio, image, model

**media-sub-type**—Enter the media sub-type to use for the specified media type

*Default* None

*Values* Any of the media sub-types IANA defines for the selected media type

**media-attribute**—Enter a list of one or more media attributes that will match in the SDP

*Default* None

**tos-values**—Enter the TOS value to apply to matching traffic

*Default* None (must be a decimal or hexadecimal value)

*Values* Range from 0x00 to 0xFF



<b>Path</b>	<b>tos-settings</b> is a subelement under the media-policy element. The full path from the topmost CLI prompt is: <b>configure terminal &gt; media-manager &gt; media-policy&gt;tos-settings</b> .
<b>Release</b>	First appearance: 1.2.1
<b>RTC Status</b>	Supported
<b>Notes</b>	This configuration element sets the Packet Marking for Media features and defines an individual type or class of service for the Net-Net SBC. Media policies can be chosen on a per-realm basis. This is a multiple instance configuration element.

## media-profile

---

**Syntax**

```
media-profile <name | media-type | payload-type | transport |
req-bandwidth | frames-per-packet | parameters | average-rate-
limit | peak-rate-limit | max-burst-size | sdp-rate-limit-
headroom | sdp-bandwidth | police-rate | subname | select | no |
show | done | exit>
```

**Parameters**

**name**—Enter the encoding name used in the SDP rtpmap attribute. This is a required field. No two media-profile elements can have the same name field value.

**media-type**—Select the type of media used in SDP m lines

*Values*

- audio
- video
- application
- data
- image
- text

**payload-type**—Enter the format in SDP m lines. No payload type number is assigned for newer, dynamic codecs. For RTP/AVP media-profile elements, this field should only be configured when there is a standard payload type number that corresponds to the encoding name. Otherwise, this field should be left blank. This field is used by the system to determine the encoding type when the SDP included with a session identifies the standard payload type on the m line, but does not include an a-rtpmap entry.

**transport**—Select the type of transport protocol used in the SDP rtpmap attribute

*Default* RTP/AVP

*Values* UDP | RTP/AVP

**req-bandwidth**—Enter the total bandwidth in kilobits that the media requires

*Default* 0

*Values* Min: 0 / Max: 2<sup>32</sup>-1

**frames-per-packet**—Enter the number of frames per RTP packet. This field is used to specify a media profile to facilitate Slow Start translations to Fast Start. A value of 0 means that this field is not being used.

*Default* 0

*Values* Min: 0 / Max: 256

**parameters**—Enter any additional information for codecs

**average-rate-limit**—Enter the maximum speed in bytes per second for a flow that this media profile applies to

*Default* 0

*Values* Min: 0 / Max: 125000000

**peak-rate-limit**—Enter the flowspec parameter r (bucket rate) / p (peak rate) value to insert into COPS message for RACF/PDP configuration

*Default* 0

*Values* Min: 0 / Max: 125000000

**max-burst-size**—Enter the flowspec parameter b ( bucket depth) / m (minimum policed unit) / M (maximum datagram size ) value to insert into COPS message for RACF/PDP configuration

*Default* 0

*Values* Min: 0 / Max: 125000000

**sdp-rate-limit-headroom**—Specify the percentage of headroom to be added while using the AS bandwidth parameter while calculating the **average-rate-limit** (rate limit for the RTP flow)

*Default* 0

*Values* Min: 0 / Max: 100

**sdp-bandwidth**—Enable or disable the use of the AS modifier in the SDP if the **req-bandwidth** and **sdp-rate-limit-headroom** parameters are not set to valid values in the corresponding media profile

*Default* disabled

*Values* enabled | disabled

**police-rate**—Enter the rate at which the Net-Net SBC polices media for external bandwidth

*Default* 0

*Values* Min: 0 / Max: 999999999

**subname**—Enter a subname to create multiple media profiles with the same codec name; using a bandwidth value is convenient. For example, you might set a subname of 64k for a **media-profile** with a **name** value of **PCMU**.

## Path

**media-profile** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > media-profile**.

## Release

First appearance: 1.0 / Most recent update: 4.0

**RTC Status**

Supported

**Notes**

This element supports new SDP formats when they are defined. This element is used to associate bandwidth requirements with SDP requirements from information passed during the establishment of sessions. The names established in the media-profile elements are used to populate the corresponding fields in other elements.

This is a multiple instance configuration element.

## mgcp-config

---

The **mgcp-config** element provides ALG functionality for MGCP messages between media gateways and media gateway controllers.

### Syntax

```
mgcp-config <private-realm | private-address | private-port |
public-realm | public-ca-host | public-ca-address | public-ca-
port | public-gw-host | public-gw-address | public-gw-port |
second-public-gw-port | alg-port | mode | divisor | uni t-prefix |
audi t-interval | nat-traversal | dns-authentication | dns-
transl ation | ca-redundancy | ca-pi ng-method | ca-pi ng-interval |
rsip-fai lures | ca-fai llover-ip-addresses | options | port-map-
start | port-map-end | select | no | show | done | exit>
```

### Parameters

**private-realm**—Enter the private realm (location of the media gateways). This is a required field. This private-realm field value must correspond to a valid identifier field entry in a realm-config.

**private-address**—Enter the IP address on the media interface in the private realm that the media gateways use as their call agent or softswitch IP address. This is a required field.

**private-port**—Enter the port of IP address on the media interface in the private realm that call agent or softswitch use

*Default* 2727

*Values* Min: 1025 / Max: 65535

**public-realm**—Enter the public realm of the call agent or softswitch. This is a required field. This public-realm field value corresponds to a valid identifier field entry in a realm-config that has already been configured.

**public-ca-host**—Enter the hostname for the public CA

**public-ca-address**—Enter the public IP address of call agent or softswitch. This is a required field. Entries in this field must follow the IP Address format.

**public-ca-port**—Enter the public UDP Port of call agent or softswitch

*Default* 2727

*Values* Min: 1025 / Max: 65535

**public-gw-host**—Enter the FQDN to use in the endpoint MGCP messages on the public side of the Net-Net SBC. If this field is left empty, the host part of the endpoint name will be the public gateway IP address (i.e., the public-gw-address field value).

**public-gw-address**—Enter the IP address on the media interface in the public realm. This field value is the media gateway address that the Net-Net SBC uses to communicate with the call agent or softswitch. This is a required parameter. If this parameter is entered with a subnet mask in slash notation, 1:1 gateway mapping is enabled.

*Default* 0.0.0.0

**public-gw-port**—Enter the port on media interface in the public realm. This field value is the media gateway port that the Net-Net SBC uses to communicate with the call agent or softswitch.

*Default* 2427

*Values* Min: 1025 / Max: 65535

**second-public-gw-port**—Enter the second UDP port on public-gw-address where Net-Net SBC receives packets from the call agent or softswitch. Net-Net SBC can receive messages from the call agent or softswitch on either the public-gw-port or the second-public-gw-port.

*Default* 0

*Values* Min: 1025 / Max: 65535

**alg-port**—Enter the port used to send a packet from the network processor to the host processor. Each mgcp-config must have a unique ALG port so the ALG function can distinguish which mgcp-config element applies to packets sent up from the network processor.

*Default* 2427

*Values* Min: 1025 /Max: 65535

**mode**—Set the MGCP-NAT mode. This field defines how endpoint names are translated as MGCP flows traverse the Net-Net SBC. This is a required field.

*Default* LineUnit

*Values*

- **Host**—A “unit” term is added to endpoint name on public side to uniquely identify the gateway/host on the private side. The left-most part of the private FQDN is used as the unit term (or unit name).
- **LinePrefix**—Divisor field value is used to compute a number to insert into the localname part of the endpoint name. The number to be inserted is the IP address modulo the divisor. This mode inserts this number before the channel number. Example: aaln/1 becomes aaln/1231. The IP address part is replaced by the public-gw-address.
- **LineUnit**—Divisor field value is used to compute a number to insert into localname part of endpoint name. The number inserted is the IP address modulo the divisor. This mode adds the unit-number term defined in the conventions section of <ftp://ftp.rfc-editor.org/in-notes/rfc3435.txt> (e.g., aaln/2 becomes aaln/123/2). The IP address part is replaced by the public-gw-address (also defined in this element).
- **FQDN**—Dots are removed from the host portion of the private endpoint. Example: the address aaln/2@abc.xyz.com on the private (i.e., gateway) side would become aaln/abcxyzcom/2@sd.com on the public (i.e., call agent) side.
- **FQDN2**—Dots are retained in the host portion of the private endpoint. Example: the address aaln/2@abc.xyz.com on the private (i.e., gateway) side would become aaln/abc.xyz.com/2@sd.com on the public (i.e., call agent) side.
- **OnlyHost**—Endpoint name is not translated.
- **None**—Endpoint name is not translated.

**divisor**—Enter the unit for computing name of an endpoint. This field is used to determine the number for the LinePrefix or LineUnit. The remainder of the private IP address divided by this number becomes the prefix/unit number. If FQDNs are used for network addressing, the divisor field is not used.

*Default* 256

*Values* 256 | 65535 | 16777216 | 4294967296

**unit-prefix**—Enter the prefix for the unit term of the endpoint name. For modes that add a unit term to the user part of the endpoint name, this field value is placed in front of the unit number or name when creating a public endpoint name.

**audit-interval**—Enter the number of seconds between AUEP commands that the Net-Net SBC sends to the endpoint (gateway/IAD). No AUEPs are sent by default.

*Default* 0

*Values* Min: 0 / Max: 999999999

**nat-traversal**—Enable or disable whether or not MGCP ALG assumes that all (gateway) endpoints are behind a NAT

*Default* disabled

*Values* enabled | disabled

**dns-authentication**—Enable or disable MGCP DNS authentication functionality on the Net-Net SBC

*Default* disabled

*Values* enabled | disabled

**dns-translation**—Enter the translation rule to use, i.e., what characters in the address will be added, replaced, or deleted. If you enable the MGCP DNS authentication feature, then this field is required. The value of this field must be a configured session translation.

**ca-redundancy**—Enable or disable the call agent redundancy feature

*Default* disabled

*Values* enabled | disabled

**ca-ping-method**—Enter the ping method used for call agent redundancy. This parameter is the prototype of a ping method sent to a call agent to determine its state.

**ca-ping-interval**—Enter the amount of time in seconds between pings sent to the call agent to check for health

*Default* 0

*Values* Min: 0 / Max: 999999999

**rsip-failures**—Enter the range of 5xx return codes that trigger MGCP endpoint removal or that will fail to create an MGCP session. To empty the default, enter a <Space> enclosed in quotation marks.

*Default* 500-509,511-519,522-599

*Values* 5xx return codes per RFC 3435

**ca-failover-ip-addresses**—Enter the IP addresses for call agent redundancy support. You must enter the list of IP addresses enclosed in parentheses and separate each IP address with a <Space>. You can enter one or more entries.

**options**—Enter the MGCP options. Used to place 911 calls for MGCP by use of the Via parameter. This parameter is set by entering **#options x-via= <endpoint | both>** in the CLI

*Values*

- endpoint—Endpoint is either a router or a phone
- both—There are two addresses, the phone number of the endpoint and the IP address of the Net-Net SBC

Also used to communicate with send-only devices by typing **#options drain-sendonly**

**port-map-start**—Enter the port number marking the beginning of the range of ports you want to use for MGCP port mapping.

*Default* 0 (disabled)

*Values* Min: 0; 1025/ Max: 65535

**port-map-end**—Enter the port number marking the end of the range of ports you want to use for MGCP port mapping. When MGCP port mapping is enabled, this value must be greater than the **port-map-start** value.

*Default* 0 (disabled)

*Values* Min: 0; 1025 / Max: 65535

#### Path

**mgcp-config** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > mgcp-config**.

#### Release

First appearance: 1.0 / Most recent update: 4.1

#### RTC Status

Supported

#### Notes

The combination of entries in the private-realm field and the private-address field must be unique. No two mgcp-config elements can have the same entries in the private-realm field and the private-address entries. This is a multiple instance configuration element.





## net-management-control

---

The **net-management-control** configuration element allows you to control multimedia traffic, specifically for static call gapping and 911 exception handling. These controls limit the volume or rate of traffic for a specific set of dialed numbers or dialed number prefixes.

### Syntax

```
net-management-control <name | state | type | value | treatment |
next-hop | realm-next-hop | protocol-next-hop | status-code |
cause-code | gap-rate-max-count | gap-rate-window-size |
destination-identifier | add-destination-identifier | remove-
destination-identifier | rph-feature | rph-profile | rph-policy |
select | no | show | done>
```

### Parameters

**name**—Enter the name of this network management control rule

**state**—Select the state of this network management control rule

*Default* enabled

*Values* enabled | disabled

**type**—Enter the control type that you want to use

*Values* GAP-RATE | GAP-PERCENT | PRIORITY

**value**—Enter the control value of the net management control. This parameter applies only when you set the control type to either GAP-RATE or GAP-PERCENT.

*Default* 0

*Values*

- GAP-RATE: 0-2147483647
- GAP-PERCENTAGE: 0-100

**treatment**—Enter the treatment method you want to use or leave this parameter set to NONE

*Values* REJECT | DIVERT

**next-hop**—Enter the next hop for the Net-Net SBC to use when the treatment method is DIVERT. This value should contain one of the following:

- hostname(:port)
- IP address(:port)
- Name of a valid, configured session agent
- Name of a valid, configured session agent group. When you set this parameter to a session agent group, you must specify that it is a session agent group by prepending the name of the group with either SAG: or sag: . For example, the entry for a session agent group with Group2 as its name would be SAG: Group2 or sag: Group2.

**realm-next-hop**—Enter the realm identifier to designate the realm of the next hop when the treatment type is DI VERT

**protocol-next-hop**—Enter the signaling protocol for the next hop when the treatment type is DI VERT

**status-code**—Enter the SIP response code that you want the Net-Net SBC to use when the treatment method is REJECT

*Default* 503

*Values* Min: 1 / Max: 699

**cause-code**—Enter the Q.850 cause code that you want the Net-Net SBC to use when the treatment method is REJECT

*Default* 63

*Values* Min: 1 / Max: 999999999

**gap-rate-max-count**—Enter the maximum token counter value for gapping rate

*Default* 0

*Values* Min: 0 / Max: 999999999

**gap-rate-window-size**—Enter the window size (in seconds) for gapping rate calculation

*Default* 0

*Values* Min: 0 / Max: 999999999

**destination-identifier**—Enter the classification key. This parameter specifies information about the destination, which can be an IP address, an FQDN, and destination (called) number, or destination prefix. You can wildcard characters in the classification key using the carat symbol (^).

This parameter can accommodate a list of entries so that, if necessary, you can specify multiple classification keys.

**add-destination-identifier**—Add a destination identifier

**remove-destination-identifier**—Remove a destination identifier

**rph-feature**—Set the state of NSEP support for this NMC rule

*Default* disabled

*Values* enabled | disabled

**rph-profile**—Enter the name of the RPH profile to apply to this NMC rule

*Default* None

*Values* Name of an rph-profile

**rph-policy**—Enter the name of the RPH policy to apply to this NMC rule

*Default* None

*Values* Name of an rph-policy

## Path

**net-management-control** is an element of the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > net-management-control**.

**Release** First appearance: 4.1.1

**RTC Status** Supported

## network-interface

---

The **network-interface** element creates and configures a logical network interface.

### Syntax

```
network-interface <name | sub-port-id | description | hostname |
ip-address | pri-utility-addr | sec-utility-addr | netmask |
gateway | sec-gateway | gw-heartbeat | dns-ip-primary | dns-ip-
backup1 | dns-ip-backup2 | dns-domain | dns-timeout | add-hi p-ip
| remove-hi p-ip | add-ftp-ip | remove-ftp-ip | add-icmp-ip |
remove-icmp-ip | add-snmp-ip | remove-snmp-ip | add-tel net-ip |
remove-tel net-ip | select | no | show | done | exit>
```

### Parameters

**name**—Enter the name of the physical interface with which this network-interface element is linked. Network-interface elements that correspond to phy-interface elements with an operation type of Control or Maintenance must start with “wancom.”

**sub-port-id**—Enter the identification of a specific virtual interface in a physical interface (e.g., a VLAN tag). A value of 0 indicates that this element is not using a virtual interface. The sub-port-id field value is only required if the operation type is Media.

*Default* 0

*Values* Min: 0 / Max: 4095

**description**—Enter a brief description of this network interface

**hostname**—Enter the hostname of this network interface. This is an optional entry that must follow FQDN Format or IP Address Format.

**ip-address**—Enter the IP address of this network interface. This is a required entry that must follow the IP Address Format.

**pri-utility-addr**—Enter the utility IP address for the primary HA peer in an HA architecture

**sec-utility-addr**—Enter the utility IP address for the secondary Net-Net SBC peer in an HA architecture

**netmask**—Enter the netmask portion of the IP address for this network interface entered in IP address format. The network-interface element will not function properly unless this field value is valid.

**gateway**—Enter the gateway this network interface uses to forward packets. Entries in this field must follow the IP Address Format. No packets are forwarded if this value is 0.0.0.0.

**sec-gateway**—Enter the gateway to use on the secondary Net-Net SBC in an HA pair. Entries in this field must follow the IP address format.

**gw-heartbeat**—Access the gateway-heartbeat subelement

**dns-ip-primary**—Enter the IP address of the primary DNS to be used for this interface

**dns-ip-backup1**—Enter the IP address of the first backup DNS to be used for this interface

**dns-ip-backup2**—Enter the IP address of the second backup DNS to be used for this interface

**dns-domain**—Set the default domain name used to populate incomplete hostnames that do not include a domain. Entries must follow the Name Format.

**dns-timeout**—Enter the total time in seconds you want to elapse before a query (and its retransmissions) sent to a DNS server timeout

*Default* 11

*Values* Min: 1/ Max: 999999999

**add-hip-ip**—Enter a list of IP addresses allowed to access signaling and maintenance protocol stacks via this front interface using the HIP feature

**remove-hip-ip**—Remove an IP address added using the add-hip-ip parameter

**add-ftp-ip**—Enter a list of IP addresses from which FTP traffic can be received and acted upon by a front media interface

**remove-ftp-ip**—Remove an IP address added using the add-ftp-ip parameter

**add-icmp-ip**—Enter a list of IP addresses from which ICMP traffic can be received and acted upon by a front media interface

**remove-icmp-ip**—Remove an IP address added using the add-icmp-ip parameter

**add-snmp-ip**—Enter a list of IP addresses from which SNMP traffic can be received and acted upon by a front media interface

**remove-snmp-ip**—Remove an IP address added using the add-snmp-ip parameter

**add-telnet-ip**—Enter a list of IP addresses from which telnet traffic can be received and acted upon by a front media interface

**remove-telnet-ip**—Remove an IP address added using the add-telnet-ip field

**Path**

**network-interface** is an element under the system element. The full path from the topmost ACLI prompt is: **configure terminal > system > network-interface**.

**Release**

First appearance: 1.0 / Most recent update: 4.1.

**RTC Status**

Supported

**Notes**

This is a multiple instance configuration subelement.

## network-interface > gw-heartbeat

---

The **gw-heartbeat** subelement supports the front interface link failure detection and polling feature.

### Syntax

```
gw-heartbeat <state | heartbeat | retry-count | retry-timeout |
health-score | select | no | show | done | exit>
```

### Parameters

**state**—Enable or disable front interface link detection and polling functionality on the Net-Net SBC for this network-interface element

*Default* enabled

*Values* enabled | disabled

**heartbeat**—Enter the time interval in seconds between heartbeats for the front interface gateway

*Default* 0

*Values* Min: 0 / Max: 65535

**retry-count**—Enter the number of front interface gateway heartbeat retries before a gateway is considered unreachable

*Default* 0

*Values* Min: 0 / Max: 65535

**retry-timeout**—Enter the heartbeat retry timeout value in seconds

*Default* 1

*Values* Min: 1 / Max: 65535

**health-score**—Enter the amount to subtract from the health score if the front interface gateway heartbeat fails (i.e., expires). The health score will be decremented by the amount set in this field if the timeout value set in the gw-heartbeat: retry-timeout field is exceeded without the front interface gateway sending a response.

*Default* 0

*Values* Min: 0 / Max: 100

### Path

**gw-heartbeat** is a subelement of the network-interface element. The full path from the topmost CLI prompt is: **configure terminal > system > network-interface > gw-heartbeat**.

### Release

First appearance: 1.2.1

### RTC Status

Supported

### Notes

The values configured in the fields of a gw-heartbeat subelement apply to the Net-Net SBC on a per-network-interface basis, and can override the values configured in the redundancy element's corresponding front interface link detection and polling fields.

This is a single instance configuration subelement.

## network-parameters

---

The **network-parameters** element enables and configures the TCP keepalive feature used for keeping H.323 connections open.

### Syntax

```
network-parameters <tcp-keepalive-count | tcp-keepalive-timer |
tcp-keepalive-mode | tcp-keepinit-timer | tcp-keepalive-interval-
timer | sctp-send-mode | options | show | done | exit>
```

### Parameters

**tcp-keepalive-count**—Enter the number of outstanding keepalives before connection is torn down

*Default* 8

*Values* Min: 0 / Max:  $2^{32}-1$

**tcp-keepalive-idle-timer**—Enter the idle time in seconds before triggering keepalive processing. If you have upgraded the release you are running and a value outside of the acceptable range was configured in an earlier release, the default value is used and a log message is generated.

*Default* 7200

*Values* Min: 30 / Max: 7200

**tcp-keepalive-mode**—Enter the TCP keepalive mode

*Default* 0

*Values*

- 0—The sequence number is sent un-incremented
- 1—The sequence number is sent incremented
- 2—No packets are sent

**tcp-keepinit-timer**—Enter the TCP connection timeout period if a TCP connection cannot be established. If you have upgraded the release you are running and a value outside of the acceptable range was configured in an earlier release, the default value is used and a log message is generated.

*Default* 75

*Values* 0-999999999

**tcp-keepalive-interval-timer**—Enter the TCP retransmission time if a TCP connection probe has been idle for some amount of time

*Default* 75

*Values* Min: 15 / Max: 75

**sctp-send-mode**—Leave this parameter set to its default (unordered) so data delivery can occur without regard to stream sequence numbering. If data delivery must follow stream sequence number, change this parameter to **ordered**.

*Default* unordered

*Values* ordered | unordered

**options**—Enter any optional features or parameters

<b>Path</b>	<b>network-parameters</b> is an element under the system path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; system &gt; network-parameters</b> .
<b>Release</b>	First appearance: 2.0; Last updated: S-C6.1.0
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a single instance configuration subelement.

## ntp-sync

---

The **ntp-sync** element sets the ntp server IP address for correct and accurate time synchronization.

### Syntax

```
ntp-sync <add-server | del -server | select | no | show | done |
exit>
```

### Parameters

**add-server**—Add IP address of NTP server; entries must follow the IP Address Format

**del-server**—Remove a previously entered NTP server. Entries must follow the IP Address Format.

### Path

**ntp-sync** is a top-level element. The full path from the topmost ACLI prompt is: **configure terminal > ntp-sync**.

### Release

First appearance: 1.0 / Most recent update: 1.1

### RTC Status

Unsupported

### Notes

In order for any changes to the NTP synchronization functionality to take effect, a save-config must be performed followed by a system reboot.

## qos-constraints

---

The **qos-constraints** configuration element allows you to enable QoS based routing, which uses the R-Factor on a per-realm basis to either cut back on the traffic allowed by a specific realm.

### Syntax

```
qos-constraints <name | state | major-factor | critical-factor |
call-load-reduction | select | no | show | done | exit>
```

### Parameters

**name**—Enter the name of a QoS constraints configuration

**state**—Enable or disable a set of QoS constraints

*Default* enabled

*Values* enabled | disabled

**major-factor**—Enter a numeric value set the threshold that determines when the Net-Net SBC applies the call reduction rate; must be less than the **critical-rfactor**

*Default* 0

*Values* Min: 0 / Max: 9321

**critical-rfactor**—Enter a numeric value to set the threshold that determines when the Net-Net SBC rejects all inbound calls for the realm, and rejects outbound calls when there is no alternate route

*Default* 0

*Values* Min: 0 / Max: 9321



**call-load-reduction**—Enter the percentage by which the Net-Net SBC will reduce calls to the realm if the **major-rfactor** is exceeded; a value of 0 means the call load will not be reduced

*Default* 0

*Values* Min: 0 / Max: 100

**Path** **qos-constraints** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router> qos-constraints**.

**Release** First appearance: S-C6.1.0

**RTC Status** Supported

## password-policy

---

The **password-policy** element configures password rules for password secure mode.

**Syntax** password-policy <min-secure-pwd-len | select | no | show | done | exit>

**Parameters** **min-secure-pwd-len**—Enter the minimum password length to use when system is in secure password mode. The maximum allowable length for any password is 64 characters.

*Default* 8

*Values* 8-64

*Default*

**Path** **password-policy** is an element under the security path. The full path from the topmost CLI prompt is: **configure terminal> security> password-policy**.

**Release** First appearance: 5.1

**RTC Status** Supported

**Notes** The password using this minimum length value must contain three out of four of these requirements: upper case letters, lower case letters, numbers, punctuation marks.

## phy-interface

---

The **phy-interface** element is used to configure physical interfaces.

**Syntax** phy-interface <name | operation-type | port | slot | virtual-mac | admin-state | auto-negotiation | duplex-mode | speed | wancom-health-score | select | no | show | done | exit>

**Parameters**

**name**—Enter the name for this physical interface. Physical interfaces with an operation-type of Control or Maintenance must begin with “wancom.” This is a required field. Entries in this field must follow the Name Format. Name values for the phy-interface must be unique.

**operation-type**—Select the type of physical interface connection

*Default* Control

*Values*

- Media—Front-panel interfaces only. Port: 0-3 Slot: 0 or 1
- Control—Rear-panel interfaces only. Port 0, 1, or 2 Slot: 0
- Maintenance—Rear-panel interfaces only. Port 0, 1, or 2 Slot: 0

**port**—Select the physical port number on an interface of the phy-interface being configured

*Default* 0

*Values*

- 0-2 for rear-panel interfaces
- 0-1 for two possible GigE ports on front of Net-Net SBC chassis
- 0-3 for four possible FastE ports on front of Net-Net SBC chassis

**slot**—Select the physical slot number on the Net-Net SBC chassis

*Default* 0

*Values*

- 0 is the motherboard (rear-panel interface) if the name begins with “wancom”
- 0 is the left Phy media slot on front of Net-Net SBC chassis
- 1 is the right Phy media slot on front of Net-Net SBC chassis

**virtual-mac**—Enter the MAC address identifying a front-panel interface when the Net-Net SBC is in the Active state. This field value should be generated from the unused MAC addresses assigned to a Net-Net SBC. The virtual-mac field is only applicable for front interfaces.

**admin-state**—Enable or disable the Net-Net SBC to allow incoming and outgoing traffic to be processed using the front physical interface cards

*Default* enabled

*Values* enabled | disabled

**auto-negotiation**—Enable or disable auto negotiation on front Phy card interfaces taking place before either end begins sending packets over the Ethernet link. The auto-negotiation field is only applicable for front interfaces. The value configured in this field does not change the Net-Net SBC status at runtime.

*Default* enabled

*Values* enabled | disabled

**duplex-mode**—Set whether the 10/100 Phy card interfaces located on the front panel of Net-Net SBC operate in full-duplex mode or half-duplex mode

*Default* full

*Values* full | half

**speed**—Set the speed in Mbps of the front-panel 10/100 Phy interfaces; this field is only used if the auto-negotiation field is set to disabled for 10/100 Phy cards

*Default* 100

*Values* 10 | 100

**wancom-health-score**—Enter the amount to subtract from the Net-Net SBC's health score if a rear interface link goes down

*Default* 50

*Values* Min: 0 / Max: 100

**Notes** This parameter is not RTC supported

**Path** **phy-interface** is an element under the system path. The full path from the topmost CLI prompt is: **configure terminal > system > phy-interface**.

**Release** First appearance: 1.0 / Most recent update: 1.2.1

**RTC Status** Supported

**Notes** Certain fields are visible based on the setting of the operation-type parameter. This is a multiple instance configuration subelement.

## q850-sip-map

---

The **q850-sip-map** configuration element is used to map q850 cause codes to SIP response codes.

**Syntax** `q850-sip-map <entries | delete | edit | select | no | show | done | exit>`

**Parameters** **entries**—Enter the entries configuration subelement

**delete**—Delete a q850 to SIP mapping. Enter the q850 code.

**edit**—Edit a response map by number

**Path** **q850-sip-map** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > q850-sip-map**.

**Release** First appearance: 4.0

**RTC Status** Supported

## q850-sip-map > entries

---

The **entries** subelement is used to create the mapping of q850 cause to SIP reason code.

**Syntax** `entries <q850-cause | sip-status | sip-reason | select | no | show | done | exit>`

<b>Parameters</b>	<p><b>q850-cause</b>—Enter the q850 cause code to map to a SIP reason code</p> <p><b>sip-status</b>—Enter the SIP response code that maps to this q850 cause code</p> <p><i>Values</i> Min: 100 / Max: 699</p> <p><b>sip-reason</b>—Describe the mapped SIP response code</p>
<b>Path</b>	<b>entries</b> is a subelement under the <b>q850-sip-map</b> configuration element, which is located under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; q850-sip-map &gt; entries</b> .
<b>Release</b>	First appearance: 4.0
<b>RTC Status</b>	Supported

## realm-config

---

The **realm-config** element is used to configure realms.

<b>Syntax</b>	<pre>realm-config &lt;identifier   description   addr-prefix   network- interfaces   mm-in-realm   mm-in-network   msm-release   qos- enable   max-bandwidth   ext-policy-svr   max-latency   max- jitter   max-packet-loss   observ-window-size   parent-realm   dns-realm   media-policy   class-profile   in-translation-id   out-translation-id   in-manipulation-id   out-manipulation-id   early-media-allow   additional-prefixes   add-additional-prefixes   remove-additional-prefixes   accounting-enable   mm-same-ip   mm-in-system   untrusted-signal-threshold   restricted-latching   restriction-mask   average-rate-limit   access-control-trust- level   invalid-signal-threshold   maximum-signal-threshold   deny-period   symmetric-latching   pai-strip   trunk-context   bw-cac-non-mm   user-cac-mode   user-cac-bandwidth   user-cac- sessions   monthly-minutes   net-management-control   delay- media-update   refer-call-transfer   codec-policy   codec-manip- in-realm   generate-udp-checksum   enforcement-profile   options   constraint-name   call-recording-server-id   icmp-detect- multiplier   icmp-advertisement-interval   icmp-target-ip   fallback-bandwidth   max-priority-bandwidth   nat-trust-threshold   match-media-profiles   qos-constraints   stun-enable   stun- server-ip   stun-server-port   stun-changed-ip   stun-changed- port   select   no   show   done   exit&gt;</pre>
---------------	---

<b>Parameters</b>	<p><b>identifier</b>—Enter the name of the realm associated with this Net-Net SBC. This is a required field. The identifier field value must be unique.</p> <p><b>description</b>—Provide a brief description of the <b>realm-config</b> configuration element</p> <p><b>addr-prefix</b>—Enter the IP address prefix used to determine if an IP address is associated with the realm. This field is entered as an IP address and number of bits in the network portion of the address in standard slash notation.</p> <p><i>Default</i> 0.0.0.0</p>
-------------------	---

**network-interfaces**—Enter the network interface through which this realm can be reached. Entries in this parameter take the form: <network-interface-ID>: <subport>.

**mm-in-realm**—Enable or disable media being steered through the Net-Net SBC when the communicating endpoints are located in the same realm

*Default* disabled

*Values* enabled | disabled

**mm-in-network**—Enable or disable media being steered through the Net-Net SBC when the communicating endpoints are located in different realms within the same network (on the same network-interface). If this field is set to enabled, the Net-Net SBC will steer all media traveling between two endpoints located in different realms, but within the same network. If this field is set to disabled, then each endpoint will send its media directly to the other endpoint located in a different realm, but within the same network.

*Default* enabled

*Values* enabled | disabled

**msm-release**—Enable or disable the inclusion of multi-system (multiple Net-Net SBCs) media release information in the SIP signaling request sent into the realm identified by this realm-config element. If this field is set to enabled, another Net-Net SBC is allowed to decode the encoded SIP signaling request message data sent from a SIP endpoint to another SIP endpoint in the same network to restore the original SDP and subsequently allow the media to flow directly between those two SIP endpoints in the same network serviced by multiple Net-Net SBCs. If this field is set to disabled, the media and signaling will pass through both Net-Net SBCs. If this field is set to enabled, the media is directed directly between the endpoints of a call.

*Default* disabled

*Values* enabled | disabled

**qos-enable**—Enable or disable the use of QoS in this realm

*Default* disabled

*Values* enabled | disabled

**max-bandwidth**—Enter the total bandwidth budget in kilobits per second for all flows to/from the realm defined in this element. A max-bandwidth field value of 0 indicates unlimited bandwidth.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**ext-policy-svr**—Enter the name of the external policy server configuration used for this realm

**max-latency**—Enter the maximum latency in milliseconds allowed for flows within this realm. If this parameter is set to 0, then no alarm condition is set and no requests to/from the realm are rejected. Reserved for future use.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**max-jitter**—Enter the maximum jitter in milliseconds allowed for flows within this realm. If this field is set to 0, then no alarm condition is set and no requests to/from the realm are rejected. Reserved for future use.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**max-packet-loss**—Enter the maximum packet loss percentage in hundredths of a percent allowed for flows within this realm. If this parameter is set to 0, then no alarm condition is set and no requests to/from the realm are rejected. Reserved for future use.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**observ-window-size**—Enter the minimum time in milliseconds a threshold (latency, jitter, and packet loss) must be exceeded before triggering an alarm. Reserved for future use.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**parent-realm**—Enter the parent realm for this particular realm. This must reference an existing realm identifier.

**dns-realm**—Enter the realm whose network interface's DNS server should be used to resolve FQDNs for requests sent into the realm. If this field value is left empty, the Net-Net SBC will use the DNS of the realm's network interface.

**media-policy**—Select a media-policy on a per-realm basis (via an association between the name field value configured in this field). When the Net-Net SBC first sets up a SIP or H.323 media session, it identifies the egress realm of each flow and then determines the media-policy element to apply to the flow. This parameter must correspond to a valid name entry in a media policy element.

**class-profile**—Enter the name of class-profile to use for this realm for ToS marking

**in-translationid**—Enter the identifier/name of a session-translation element. The Net-Net SBC applies this group of rules to the incoming addresses for this realm. There can be only one entry in this parameter.

**out-translationid**—Enter the identifier/name of a session-translation element. The Net-Net SBC applies this group of rules to the outgoing addresses for this realm. There can be only one entry in this parameter.

**in-manipulationid**—Enter the inbound SIP manipulation rule name

**out-manipulationid**—Enter the outbound SIP manipulation rule name

**early-media-allow**—Select the early media suppression for the realm

*Values*

- none: No early media is allowed in either direction
- both: Early media is allowed in both directions
- reverse: Early media received by Net-Net SBC in the reverse direction is allowed

**additional-prefixes**—Enter one or more additional address prefixes. Not specifying the number of bits to use implies all 32 bits of the address are used to match.

**add-additional-prefixes**—Add one or more additional address prefixes. Not specifying the number of bits to use implies all 32 bits of the address are used to match.

**remove-additional-prefixes**—Remove one or more additional address prefixes. Not specifying the number of bits to use implies all 32 bits of the address are used to match.

**accounting-enable**—Select whether you want accounting enabled within the realm

*Default* enabled

*Values* enabled | disabled

**mm-same-ip**—Enable the media to go through this Net-Net SBC if the mm-in-realm . When not enabled, the media will not go through the Net-Net SBC for endpoints that are behind the same IP.

*Default* enabled

*Values* enabled | disabled

**mm-in-system**—Decide whether to do media managing in the Net-Net SBC

*Default* enabled

*Values* enabled | disabled

**untrusted-signal-threshold**—Enter the allowed maximum signaling messages within a tolerance window

*Default* 0

*Values* Min: 0 / Max: 4294967295

**restricted-latching**—Set the restricted latching mode

*Default* None

*Values*

- none: No restricted latching
- sdp: Use the IP address specified in the SDP for latching purpose
- peer-ip: Use the peer-ip (Layer 3 address) for the latching purpose

**restriction-mask**—Set the restricted latching mask value

*Default* 32

*Values* Min: 1 / Max: 32

**average-rate-limit**—Enter the average data rate in bits per second for host path traffic from a trusted source

*Default* 0 (disabled)

*Values* Min: 0 / Max: 4294967295

**access-control-trust-level**—Select a trust level for the host within the realm

*Default* none

*Values*

- high—Hosts always remains trusted
- medium—Hosts belonging to this realm can get promoted to trusted, but can only get demoted to untrusted. Hosts will never be put in black-list.
- low—Hosts can be promoted to trusted list or can get demoted to untrusted list
- none—Hosts will always remain untrusted. Will never be promoted to trusted list or will never get demoted to untrusted list

**invalid-signal-threshold**—Enter the acceptable invalid signaling message rate falling within a tolerance window

*Default* 0

*Values* Min: 0 / Max: 4294967295

**maximum-signal-threshold**—Enter the maximum number of signaling messages allowed within the tolerance window

*Default* 0 (disabled)

*Values* Min: 0 / Max: 4294967295

**pai-strip**—Enable or disable P-Asserted-Identity headers being stripped from SIP messages as they exit the Net-Net SBC. The PAI header stripping function is dependent on this parameter and the trust-me parameter.

*Default* disabled

*Values* enabled | disabled

**deny-period**—Enter the length of time an entry is posted in the deny list

*Default* 30

*Values* Min: 0 / Max: 4294967295

**symmetric-latching**—Enable or disable symmetric latching between endpoints for RTP traffic

*Default* disabled

*Values* enabled | disabled

**trunk-context**—Enter the default trunk context for this realm

**bw-cac-non-mm**—Set this parameter to enabled to turn on bandwidth CAC for media release

*Default* disabled



*Values* enabled | disabled

**user-cac-mode**—Set this parameter to the per user CAC mode that you want to use

*Default* none

*Values*

- none—No user CAC for users in this realm
- AOR—User CAC per AOR
- IP—User CAC per IP

**user-cac-bandwidth**—Enter the maximum bandwidth per user for dynamic flows to and from the user. By leaving this parameter set to 0 (default), there is unlimited bandwidth and the per user CAC feature is disabled for constraint of bandwidth.

*Default* 0

*Values* Min: 0 / Max: 999999999

**user-cac-sessions**—Enter the maximum number of sessions per user for dynamic flows to and from the user. Leaving this parameter set to 0 (default), there is unlimited sessions and the CAC feature is disabled for constraint on sessions.

*Default* 0

*Values* Min: 0 / Max: 999999999

**monthly-minutes**—Enter the monthly minutes allowed

*Default* 0

*Values* Min: 0 / Max: 71582788

**net-management-control**—Enable or disable network management controls for this realm

*Default* disabled

*Values* enabled | disabled

**delay-media-update**—Enable or disable media update delay

*Default* disabled

*Values* enabled | disabled

**refer-call-transfer**—Enable or disable the refer call transfer feature for this realm

*Default* disabled

*Values* enabled | disabled

**codec-policy**—Select the codec policy you want to use for this realm

**codec-manip-in-realm**—Enable or disable codec policy in this realm

*Default* disabled

*Values* enabled | disabled

**generate-udp-checksum**—Enable or disable the realm to generate a UDP checksum for RTP/RTCP packets.

*Default* disabled

*Values* enabled | disabled

**enforcement-profile**—Enter the name of the enforcement profile (SIP allowed methods).

**options**—Enter any optional features or parameters

**constraint-name**—Enter the name of the constraint you want to use for this realm

**call-recording-server-id**—Enter the name of the call recording server associated with this realm

**icmp-detect-multiplier**—Enter the multiplier to use when determining how long to send ICMP pings before considering a target unreachable. This number multiplied by the time set for the **icmp-advertisement-interval** determines the length of time

*Default* 0

*Values* Min: 0

**icmp-advertisement-interval**—Enter the time in seconds between ICMP pings the Net-Net SBC sends to the target.

*Default* 0

*Values* Min: 0

**icmp-target-ip**—Enter the IP address to which the Net-Net SBC should send the ICMP pings so that it can detect when they fail and it needs to switch to the fallback bandwidth for the realm.

*Default* (empty)

**fallback-bandwidth**—Enter the amount of bandwidth available once the Net-Net SBC has determined that the target (of ICMP pings) is unreachable.

*Default* 0

*Values* Min: 0

**max-priority-bandwidth**—Enter the amount of bandwidth amount of bandwidth you want to want to use for priority (emergency) calls; the system first checks the max-bandwidth parameter, and allows the call if the value you set for priority calls is sufficient.

*Default* 0

*Values* Min: 0 / Max: 999999999

**nat-trust-threshold**—Enter maximum number of untrusted endpoints allowed before an entire NAT device is demoted to untrusted. 0 means dynamic demotion of NAT devices is disabled.

*Default* 0

*Values* Min: 0 / Max: 999999999

**match-media-profiles**—Enter the media profiles you would like applied to this realm in the form <name>::<subname>. See the *Net-Net 4000 ACLI Configuration Guide* for information about wildcard values.

**qos-constraints**—Enter the name value from the QoS constraints configuration you want to apply to this realm

**stun-enable**—Enable or disable the STUN server support for this realm

*Default* disabled

*Values* enabled | disabled

**stun-server-ip**—Enter the IP address for the primary STUN server port

*Default* 0.0.0.0

**stun-server-port**—Enter the port to use with the **stun-server-ip** for primary STUN server port

*Default* 3478

*Values* Min. 1025/Max. 65535

**stun-changed-ip**—Enter the IP address for the CHANGED-ADDRESS attribute in Binding Requests received on the primary STUN server port; must be different from than the one defined for the **stun-server-ip**

*Default* 0.0.0.0

**stun-changed-port**—Enter the port combination to define the CHANGED-ADDRESS attribute in Binding Requests received on the primary STUN server port

*Default* 3479

*Values* Min. 1025/Max. 65535

<b>Path</b>	<b>realm-config</b> is an element under the media-manager path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; media-manager &gt; realm-config</b> .
<b>Release</b>	First appearance: 1.0 / Most recent update: S-C6.1.0
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration subelement.

## realm-group

---

The **realm-group** configuration element allows you to configure realm groups. Realm groups are sets of source and destination realms that allow early media to flow in the direction you configure.

<b>Syntax</b>	<pre>real m-group &lt;name   source-real m   dest ination-real m   early- medi a-all ow-di recti on   state   select   no   show   done   exi t&gt;</pre> <p><b>name</b>—Enter the name of this realm group</p> <p><b>source-realm</b>—Enter the list of one or more global/SIP realms that you want to designate as source realms for the purpose of blocking early media; this is the realm identifier value for the realms you want on the list. To enter more than one realm in this list, list all items separated by a comma and enclose the entire entry in quotation marks.</p> <p><b>destination-realm</b>—Enter the list of one or more global/SIP realms that you want to designate as destination realms for the purpose of blocking early media; this is the realm identifier value for the realms you want on the list. To enter more than one realm in the list, list all items separated by a comma and enclose the entire entry in quotation marks.</p>
---------------	--

**early-media-allow-direction**—Set the direction for which early media is allowed for this realm group.

*Default* both

*Values*

- none—Turns off the feature for this realm group by blocking early media
- reverse—Allows early media to flow from called to caller
- both—Allows early media to flow to/from called and caller

**state**—Enable or disable this realm group

*Default* disabled

*Values* enabled | disabled

**Path** realm-group is an element of the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > realm-group**.

**Release** First appearance: 4.1.4

**RTC Status** Supported

## redundancy

---

The **redundancy** element establishes HA parameters for a Net-Net SBC that participates in an HA architecture.

**Syntax**

```
redundancy <state | log-level | health-threshold | emergency-
threshold | port | advertisement-time | percent-drift | initial-
time | becoming-standby-time | becoming-active-time | cfg-port |
cfg-max-trans | cfg-sync-start-time | cfg-sync-comp-time |
gateway-heartbeat-interval | gateway-heartbeat-retry | gateway-
heartbeat-timeout | gateway-heartbeat-health | media-if-
peercheck-time | peers | select | no | show | done | exit>
```

**Parameters** **state**—Enable or disable HA for the Net-Net SBC

*Default* enabled

*Values* enabled | disabled

**Notes** This parameter is not RTC supported.

**log-level**—Select the starting log level for the HA process. This value supersedes the value configured in the process-log-level field in the system-config element for the HA process.

*Default* info

*Values*

- emergency
- critical
- major
- minor
- warning
- notice
- info
- trace
- debug

- detail

**health-threshold**—Enter the health score at which standby Net-Net SBC switches over to the Active state and takes control of all system functionality as the active Net-Net SBC

*Default* 75

*Values* Min: 1 / Max: 100

**emergency-threshold**—Enter the low health score value that triggers the initializing standby Net-Net SBC to become the active Net-Net SBC immediately. In addition, the active but unhealthy Net-Net SBC, regardless of its health, will not relinquish its Active state if the HA Net-Net SBC peer poised to become active upon switchover also has a health score below this emergency-threshold value.

*Default* 50

*Values* Min: 1 / Max: 100

**port**—Enter the port number on which the border element redundancy protocol is listening

*Default* 9090

*Values* Min: 1025 / Max: 65535

## Notes

This parameter is not RTC supported.

**advertisement-time**—Enter the time in milliseconds the Net-Net SBC continually sends its health score to its HA Net-Net SBC peer(s)

*Default* 500

*Values* Min: 50 / Max: 999999999

**percent-drift**—Set the percentage of an HA Net-Net SBC peer's advertisement time for this HA Net-Net SBC to wait before considering its peer to be out of service

*Default* 210

*Values* Min: 100 Max: 65535

**initial-time**—Enter the number of milliseconds to set the longest amount of time the Net-Net SBC will wait at boot time to change its state from initial to either becoming active or becoming standby. This field is independent of the advertisement-time and percent-drift parameters; it is a timer used to decide the state transition.

*Default* 1250

*Values* Min: 5 / Max: 999999999

**becoming-standby-time**—Enter the time in milliseconds to wait before transitioning to the Standby state. This field allows the HA Net-Net SBC enough time to synchronize with its HA Net-Net SBC peer. If the HA Net-Net SBC has not become fully synchronized within the time frame established in this field, it will be declared out of service. We recommend setting this parameter to no less than 180000 if configuration checkpointing is used.

*Default* 45000

*Values* Min: 5 / Max: 999999999

**becoming-active-time**—Enter the time in milliseconds a previously standby Net-Net SBC takes to become active. This field applies to the following scenarios:

- When the health of an active Net-Net SBC has failed
- When the standby Net-Net SBC is healthier than the active Net-Net SBC

This is a transitional state.

*Default* 100

*Values* Min: 5 / Max: 999999999

**cfg-port**—Enter the port number from which HA checkpoint messages are sent and received. This field supports Configuration Checkpointing. Setting the **cfg-port** field value to 0 disables configuration checkpointing.

*Default* 1987

*Values* Min: 1025 / Max: 65535; 0

**Notes**

This parameter is not RTC supported.

**cfg-max-trans**—Enter the size of the HA checkpoint transaction list to store in memory at a time

*Default* 10000

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes**

This parameter is not RTC supported.

**cfg-sync-start-time**—Enter the time in milliseconds before HA Net-Net SBC begins sending HA configuration checkpointing requests. This timer begins immediately upon entering the Active state. As long as the active peer is healthy and active, it remains in a constant cycle of (re)setting this parameter's timer and checking to see if it has become standby.

*Default* 5000

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes**

This parameter is not RTC supported.

**cfg-sync-comp-time**—Enter the time in milliseconds the standby Net-Net SBC waits before checkpointing with the active Net-Net SBC to obtain the latest configuration transaction information once the initial checkpointing process is complete.

*Default* 1000

*Values* Min: 0 / Max:  $2^{32}-1$

**Notes**

This parameter is not RTC supported.

**gateway-heartbeat-interval**—Enter the time in seconds between heartbeats on the front interface gateway. This parameter is applicable until a front interface gateway failure occurs. This parameter applies globally to Net-Net SBCs operating in an HA node, but can be overridden on a network interface-by-network interface

basis by the value configured in the gw-heartbeat: heartbeat field of the gw-heartbeat subelement in the network-interface element.

*Default* 0

*Values* Min: 0 / Max: 65535

**Notes**

This parameter is not RTC supported.

**gateway-heartbeat-retry**—Enter the number of front interface gateway heartbeat retries after a front interface gateway failure occurs. The value configured in this field applies globally to Net-Net SBCs operating in HA pair architectures, but can be overridden on a per network interface basis by the value configured in the gw-heartbeat: retry-count field.

*Default* 0

*Values* Min: 0 / Max: 65535

**Notes**

This parameter is not RTC supported.

**gateway-heartbeat-timeout**—Enter the heartbeat retry timeout value in seconds between subsequent ARP requests to establish front interface gateway communication after a front interface gateway failure occurs. The value configured in this field applies globally to Net-Net SBCs operating in HA pair architectures, but can be overridden on a network interface basis by the value configured in the gw-heartbeat: retry-timeout field.

*Default* 1

*Values* Min: 0 / Max: 65535

**Notes**

This parameter is not RTC supported.

**gateway-heartbeat-health**—Enter the health score amount to subtract if the timeout value set in the gateway-heartbeat-timeout field has been exceeded without receiving a response from the front interface gateway. The value configured in this field applies globally to Net-Net SBCs operating in HA nodes, but can be overridden on a network interface basis by the value configured in the gw-heartbeat > health-score field of the gw-heartbeat. A field value of 0 means that the health score is not affected.

*Default* 0

*Values* Min: 0 / Max: 100

**Notes**

This parameter is not RTC supported.

**media-if-peercheck-time**—Enter the amount of time in milliseconds for the standby system in an HA node to receive responses to its ARP requests via the front interface before it takes over the active role from its counterpart. A value of 0 turns the HA front interface keepalive off.

*Default* 0

*Values* Min: 0 / Max: 500

**peers**—Access the **peers** subelement

**Path**

**redundancy** is an element under the system path. The full path from the topmost CLI prompt is: **configure terminal > system > redundancy**.

<b>Release</b>	First appearance: 1.1 / Most recent update: 1.2.1
<b>RTC Status</b>	This element has both supported and unsupported parameters. Unsupported parameters are marked with a note.
<b>Notes</b>	This is a single instance configuration element.

## redundancy > peers

---

The **peers** subelement establishes the name and state of an HA node.

**Syntax** `peers <name | state | type | destinations | select | no | show | done | exit>`

**Parameters** **name**—Enter the hostname of the HA Net-Net SBC peer. The name configured in this field identifies each Net-Net SBC in an HA node uniquely.

**state**—Enable or disable HA

*Default* enabled

*Values* enabled | disabled

**type**—Select the HA peer type and which utility address to use

*Default* unknown

*Values*

- **primary**—HA peer set as the primary Net-Net SBC. It is associated with the utility address configured in the `pri-utility-addr` field of each network-interface element.
- **secondary**—HA peer set as the secondary Net-Net SBC. It is associated with the utility address configured in the `sec-utility-addr` field of each network-interface element.
- **unknown**—Not assigned HA peer type with associated utility address unknown. This type field option is not valid for configuration checkpointing. Although unknown is the default value, Primary or Secondary field option must be set in order for configuration checkpointing to function properly.

**destinations**—Access the destinations subelement

**Path** **peers** is a subelement under the redundancy element. The full path from the topmost CLI prompt is: **configure terminal > system > redundancy > peers.**

**Release** First appearance: 1.0.1 / Most recent update: 1.2.1

**RTC Status** Unsupported

**Notes** This is a multiple instance configuration subelement.



## redundancy > peers > destinations

---

The **destinations** subelement establishes locations where health and state information is sent and received.

**Syntax** `destinations <address | network-interface | select | no | show | done | exit>`

**Parameters**

**address**—Enter the IP address and port on the interface of the HA Net-Net SBC peer where this HA Net-Net SBC peer sends HA messages. The parameter format is an IP address and port combination (IP address:port). This IP address must match the interface identified in its HA Net-Net SBC peer's corresponding `rdncy-peer-dest > network-interface` field. The port portion of this parameter must match the port identified in its HA Net-Net SBC peer's corresponding port field.

**network-interface**—Enter the name and subport ID of the interface where the HA Net-Net SBC receives HA messages (e.g., `wancom1:0`). Valid interface names are `wancom1` and `wancom2` only.

**Path** **destinations** is a subelement under the **peers** subelement. The full path from the topmost CLI prompt is: **configure terminal > system > redundancy > peers > destinations**.

**Release** First appearance: 1.0.1

**RTC Status** Unsupported

**Notes** The **destinations** prompt is displayed as: `rdncy-peer-dest`. This is a multiple instance configuration element.

## rph-policy

---

The **rph-policy** element defines an override resource value and an insert resource value for ETS/WPS namespaces. These are applied to NMC rules.

**Syntax** `rph-policy <name | override-r-value | insert-r-value | select | no | show | done | exit>`

**Parameters**

**name**—Enter the name of this RPH policy; this is the value used when applying this RPH policy to an NMC rule.

*Default* None

**override-r-value**—Set the value the Net-Net SBC uses to override the r-values in the original RPH.

*Default* None

**insert-r-value**—Set the value the Net-Net SBC inserts into the RPH.

**Path** **rph-policy** is an element under the **session-router** path. The full path from the topmost CLI prompt is: **configure terminal > session-router > rph-policy**.

**Release** First appearance: 5.1

**RTC Status** Supported

## rph-profile

---

The **rph-profile** contains information about how the Net-Net SBC should act on the namespace(s) present in Resource-Priority headers.

**Syntax** `rph-profile <name | r-values | media-policy | call-treatment | select | no | show | done | exit>`

**Parameters** **name**—Enter the name of this RPH profile; this is the value used when applying this RPH profile to an NMC rule.

*Default* None

**r-value**—Enter a list of one or more r-values used for matching; WPS values must be entered before ETS values.

*Default* None

**media-policy**—Enter the name of the media-policy to apply; overrides media policies set for realms when there is an ETS call.

*Default* None

**call-treatment**—Select the call treatment method for a non-ETS call that contains RPH matching this profile.

*Default* accept

*Values* accept | reject | priority

**Path** **rph-profile** is an element under the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router> rph-profile**.

**Release** First appearance: 5.1

**RTC Status** Supported

## session-agent

---

The **session-agent** element defines a signaling endpoint that can be configured to apply traffic shaping attributes and information regarding next hops or previous hops.

### Syntax

```
session-agent <hostname | ip-address | port | state | app-
protocol | app-type | transport-method | realm-id | egress-realm-
id | description | carriers | allow-next-hop-ip | constraints |
max-sessions | max-outbound-sessions | max-burst-rate | max-
sustain-rate | time-to-resume | ttr-no-response | in-service-
period | burst-rate-window | sustain-rate-window | req-uri-
carrier-mode | proxy-mode | redirect-action | loose-routing |
send-media-session | response-map | ping-method | ping-interval |
ping-send-mode | options | media-profiles | in-translationid |
out-translationid | trust-me | request-uri-headers | stop-recurse
| local-response-map | ping-to-user-part | ping-from-user-part
| li-trust-me | in-manipulationid | out-manipulationid | p-
asserted-id | trunk-group | max-register-sustain-rate | min-
seizures | min-asr | early-media-allow | invalidate-registrations
| rfc2833-mode | rfc2833-payload | max-inbound-sessions | max-
inbound-burst-rate | max-outbound-burst-rate | max-inbound-
sustain-rate | codec-policy | enforcement-profile | refer-call-
transfer | reuse-connections | tcp-keepalive | tcp-reconn-
interval | max-register-burst-rate | register-burst-window |
ping-in-service-response-codes | out-service-response-codes |
manipulation-string | select | no | show | done | exit>
```

### Parameters

**hostname**—Enter the hostname of this session agent. This is a required entry that must follow the Hostname (or FQDN) Format or the IP Address Format. Hostname values must be unique.

**ip-address**—Enter the IP address of session agent if hostname value is an FQDN

**port**—Enter the port number for this session agent.

*Default* 5060

*Values* Min: 0; 1025 / Max: 65535

**state**—Enable or disable the session agent

*Default* enabled

*Values* enabled | disabled

**app-protocol**—Select the signaling protocol used to signal with the session agent

*Default* SIP

*Values* H323 | SIP

**app-type**—Set the H.323 session agent type as a gateway or a gatekeeper. This field is mandatory if the app-protocol parameter is set to H323. If the app-protocol parameter is set to SIP, then this field must be left blank.

*Values* H323-GW | H323-GK

**transport-method**—Select the IP protocol used for communicating with this session agent

*Default* UDP

- Values*
- UDP—UDP used as the transport method
  - UDP+TCP—Initial transport method of UDP, followed by a subsequent transport method of TCP if and when a failure or timeout occurs in response to a UDP INVITE. If this transport method is selected, then INVITEs are always sent via UDP as long as a response is received.
  - DynamicTCP—Dynamic TCP connections are the transport method for this session agent. A new connection must be established for each session originating from the session agent. This connection is torn down at the end of a session.
  - StaticTCP—Static TCP connections are the transport method for this session agent. Once a connection is established, it will remain and not be torn down.
  - SCTP—SCTP is used as the transport method.

**realm-id**—Enter the realm for sessions coming from or going to this session agent. Entries in this field must follow the Name Format. This field must correspond to a valid identifier field entry in a realm-config.

**egress-realm-id**—Enter the name of the realm you want defined as the default egress realm used for ping messages. The Net-Net SBC will also use this realm when it cannot determine the egress realm for normal routing.

**description**—Describe the session-agent element. Entries in this field must follow the Text Format.

**carriers**—Enter the carrier names associated with this session agent. If this list is empty, any carrier is allowed. If it is not empty, only local policies that reference one or more of the carriers in this list will be applied to requests coming from this session agent. This list can contain as many entries within it as necessary. Entries in this field must follow the Carrier Format.

**allow-next-hop-ip**—Enable or disable the session agent as the next hop in a local policy

*Default* enabled

*Values* enabled | disabled

**constraints**—Enable or disable the constraints established in this element in the fields that follow (maximum numbers of sessions allowed, maximum session rates, and timeout values) that are applied to the sessions sent to the session agent

*Default* disabled

*Values* enabled | disabled

**max-sessions**—Enter the maximum number of sessions allowed by the session agent; 0 means there is no constraint

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**max-outbound-sessions**—Enter the maximum number of simultaneous outbound sessions that are allowed to the session agent; 0 means there is no constraint

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**max-burst-rate**—Enter the number of session invitations per second allowed to be sent to or received from the session agent. A session is rejected if the calculated per-second rate exceeds this value.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**max-sustain-rate**—Enter the maximum rate of session invitations per second allowed to or from the session agent within the current window. The period of time over which the rate is calculated is always between one and two window sizes. A session is rejected only if the calculated per-second rate exceeds the max-sustain-rate value. The value set for the max-sustain-rate field must be larger than the value set for the max-burst-rate field.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**time-to-resume**—Enter the time in seconds after which SIP or H.323 proxy should resume sending session invitations to this session agent. This value only takes effect when the proxy stops sending invitations because a constraint is exceeded.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**ttr-no-response**—Enter the time delay in seconds the SIP or H.323 proxy must wait from the time that it sends an invitation to a session-agent and gets no response before it tries again to elicit a response from a previously unresponsive session agent

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**in-service-period**—Enter the time in seconds the session-agent must be operational (once communication is re-established) before the session agent is declared to be in-service. This value gives the session agent adequate time to initialize.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**burst-rate-window**—Enter the burst window period in seconds used to measure the burst rate. The term “window” refers to the period of time over which the burst rate is computed.

*Default* 0

*Values* Min: 0 / Max:  $2^{32}-1$

**sustain-rate-window**—Enter the sustained window period in seconds used to measure the sustained rate. The term “window” refers to the period of time over which the sustained rate is computed.

*Default* 0

*Values* Min: 0 / Max: 2<sup>32</sup>-1

**req-uri-carrier-mode**—Select how a carrier determined by the local policy element should be added to the outgoing message

*Default* None

*Values*

- None—Carrier information will not be added to the outgoing message
- uri-param—Adds a parameter to the Request-URI (e.g., cic-XXX)
- prefix—Adds the carrier code as a prefix to the telephone number in the Request-URI (in the same manner as is done in the PSTN)

**proxy-mode**—Select how SIP proxy forwards requests coming from the session agent. If this parameter is empty, its value is set to the value of the proxy-mode parameter in the **sip-interface** element by default. If the proxy-mode field in the element is also empty, the default is proxy.

*Values*

- proxy—If the Net-Net SBC is an SR, the system will proxy the request coming from the session agent and maintain the session and dialog state. If the Net-Net SBC is a Net-Net SBC, system will behave as a B2BUA when forwarding the request.
- redirect—System will send a SIP 3xx reDIRECT response with contacts (found in the local-policy) to the previous hop
- record-route—The Net-Net SBC forwards requests with a record-route

**redirect-action**—Select the action the SIP proxy takes when it receives a Redirect (3xx) response from the session agent. If the response comes from a session agent and this field is empty, the redirect action value will be recurse.

*Values*

- proxy—SIP proxy passes the response back to the previous hop. The response will be sent based on the proxy-mode of the original request.
- recurse—SIP proxy sends the original request to the list of contacts in the Contact header of the response, serially (in the order in which the contacts are listed in the response)

**loose-routing**—Enable or disable loose routing

*Default* enabled

*Values* enabled | disabled

**send-media-session**—Enable or disable the inclusion of a media session description in the INVITE sent by the Net-Net SBC. The only instance in which this field should be set to disabled is for a session agent that always redirects requests, meaning that it returns an error or 3xx response instead of forwarding an INVITE message. Setting this field to disabled prevents the Net-Net SBC from establishing flows for that INVITE message until it recurses the 3xx response.

*Default* enabled

*Values* enabled | disabled

**response-map**—Enter the name of the sip-response-map element set in the session router element to use for translating inbound final response values

**ping-method**—Enter the SIP message/method to use to “ping” a session agent

**ping-interval**—Set how often to ping a session agent in seconds

*Default* 0

*Values* Min: 0 / Max: 999999999

**ping-send-mode**—Set the mode with which you want to send ping messages to session agents

*Default* keep-alive

*Values* keep-alive | continuous

**options**—Establish customer-specific features and/or parameters. This value can be a comma separated list of “feature=<value>” or “feature” parameters.

**media-profiles**—Start up an outgoing call as a Fast Start call with the information in the media profile used for the logical channels when the incoming call is slow start for an H.323 operation. This list is used to determine if a source and/or destination of a call is a session agent on that list. If a media profiles list is configured in the matching session-agent element, then the frame and codec information in the corresponding media profile will be used for the outgoing call. If the media-profiles list in the session-agent element is empty, the h323-stack > media-profiles list will be consulted. This field should reference the codec that you expect the gatekeeper/gateway to use. This media-profiles entry must correspond to at least one valid name field entry in a media profile element that has already been configured.

**in-translationid**—Enter the identifier/name of the configured session translation to apply. The Net-Net SBC applies this group of rules to the incoming leg of the call for this session agent. There can be only one entry in this field.

**out-translationid**—Enter the identifier/name of the configured session translation to apply. The Net-Net SBC applies this group of rules to the outgoing leg of the call for this session agent. There can be only one entry in this field.

**trust-me**—Enable or disable the trust of this session agent; used for privacy features

*Default* enabled

*Values* enabled | disabled

**request-uri-headers**—Enter a list of embedded headers extracted from the Contact header that will be inserted in the re INVITE message

**stop-recurse**—Enter a list of returned response codes that this session agent will watch for in order to stop recursion on the target’s or contact’s messages

**local-response-map**—Enter the name of local response map to use for this session agent. This value should be the name of a sip-response-map configuration element.

**ping-to-user-part**—Set the user portion of the To: header in a session agent ping message

**ping-from-user-part**—Set the user portions of the Request-URI and the From: header in a session agent ping message

**li-trust-me**—Set this parameter to enabled to designate this session agent as trusted for P-DCS-LAES use

*Default* disabled

*Values* enabled | disabled

**in-manipulationid**—Enter the name of the SIP header manipulations configuration to apply to the traffic entering the Net-Net SBC via this session agent

**out-manipulationid**—Enter the name of the SIP header manipulations configuration to apply to the traffic exiting the Net-Net SBC via this session agent

**p-asserted-id**—Set the configurable P-Asserted-Identity header for this session agent. This value should be a valid SIP URI.

**trunk-group**—Enter trunk group names and trunk group contexts to match in either IPTEL or custom format; one session agent can accommodate 500 trunk groups. If left blank, the Net-Net SBC uses the trunk group in the realm for this session agent. Multiple entries are surrounded in parentheses and separated from each other with spaces. You can add and delete single entries from the list using plus (+) and minus (-) signs without having to overwrite the whole list.'

Entries for this list must one of the following formats: **trgp: context** or **trgp. context**.

**max-register-sustain-rate**—Specify the registrations per second for this session agent. The constraints parameter must be enabled for this parameter to function.

*Default* 0 (disabled)

*Values* Min: 0 / Max: 4294967295

**min-seizures**— Enter the minimum number of seizures that, when exceeded, cause the session agent to be marked as having exceeded its constraints. Calls will not be routed to the session agent until the time-to-resume has elapsed.

*Default* 5

*Values* Min: 1 / Max: 999999999

**min-asr**— Enter the minimum percentage, that if the session agent's ASR for the current window falls below this percentage, the session agent is marked as having exceeded its constraints and calls will not be routed to it until the time-to-resume has elapsed

*Default* 0%

*Values* Min: 0% / Max: 100%

**early-media-allow**— Select the early media suppression for the session agent



- Values*
- none—No early media allowed
  - reverse—Allow early media in the direction of calling endpoint
  - both—Allow early media in both directions

**invalidate-registrations**—Enable or disable the invalidation of all the registrations going to this SA when its state transitions to “out of service”

*Default* disabled

*Values* enabled | disabled

**rfc2833-mode**— Select whether 2833/UII negotiation will be transparent to the Net-Net SBC (pre-4.1 behavior), or use 2833 for DTMF

*Default* none

- Values*
- none—The 2833-UII interworking will be decided based on the h323-stack configuration.
  - transparent—The session-agent will behave exactly the same way as before and the 2833 or UII negotiation will be transparent to the Net-Net SBC. This overrides any configuration in the h323-stack even if the stack is configured for “preferred” mode.
  - preferred—The session-agent prefers to use 2833 for DTMF transfer and would signal that in its TCS. However, the final decision depends on the remote H323EP.

**rfc2833-payload**—Enter the payload type used by the SA in preferred rfc2833-mode

*Default* 0

*Values* Valid Range: 0, 96-127

**Note:** When this value is zero, the global “rfc2833-payload” configured in the H323 configuration element will be used instead. For SIP SA, the payload defined in the SIP Interface will be used, if the SIP-I is configured with rfc2833-mode as “preferred”.

**max-inbound-sessions**—Enter the maximum number of inbound sessions allowed from this session agent

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-burst-rate**—Enter the maximum inbound burst rate in INVITEs per second from this session agent

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-burst-rate**—Enter the maximum outbound burst rate in INVITEs per second

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-sustain-rate**—Enter the maximum inbound sustain rate in INVITEs per second

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-sustain-rate**—Enter the maximum outbound sustain rate in INVITEs per second

*Default* 0

*Values* Min: 0 / Max: 999999999

**codec-policy**—Enter the codec policy you want to apply to this session agent

**enforcement-profile**—Enter the enforcement policy set of allowed SIP methods you want to use for this session agent

*Default* None

*Values* Name of a valid enforcement-profile element

**refer-call-transfer**—Enable or disable the refer call transfer feature for this session agent

*Default* disabled

*Values* enabled | disabled

**reuse-connections**—Enter the SIP TCP connection reuse mode.

*Default* tcp

*Values* tcp | sctp | none

**tcp-keepalive**—Enable or disable standard keepalive probes to determine whether or not connectivity with a remote peer is lost.

*Default* none

*Values* none | enabled | disabled

**tcp-reconn-interval**—Set the amount of time in seconds before retrying a TCP connection.

*Default* 0

*Values* 0, 2-300

**register-burst-window**—Enter the window size in seconds for the maximum number of allowable SIP registrations.

*Default* 0

*Values* Min: 0 / Max: 999999999

**rate-constraints**—Access the **rate-constraints** subelement

**max-register-burst-rate**—Enter the maximum number of new registrations you want this session agent to accept within the registration burst rate window. When this threshold is exceeded, the Net-Net SBC responds to new registration requests with 503 Service Unavailable messages.

*Default* 0

*Values* Min: 0 / Max: 999999999

**ping-in-service-response-codes**—Enter the response codes that keep a session agent in service when they appear in its response to the Net-Net SBC's ping request.

*Default* None

*Values* SIP Response codes

**out-service-response-codes**—Enter the response codes that take a session agent out of service when they appear in its response to the Net-Net SBC's ping request or any dialog-creating request.

*Default* None

*Values* SIP Response codes

**manipulation-string**—Enter a value to references the \$HMR\_STRING variable used to populate SIP headers and elements using HMR

## Notes

N/A

## Path

**session-agent** is an element under the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > session-agent**.

## Release

First appearance: 1.0 / Most recent update: S-C6.1.0

## RTC Status

Supported

## Notes

This is a multiple instance configuration element.

## session-agent>rate-constraints

---

The **rate-constraints** subelement for the **session-agent** configuration element allows you to configure rate constraints for individual session agents, which can then be applied to the SIP interface where you want them used.

## Syntax

```
rate-constraints <method | max-inbound-burst-rate | max-outbound-
burst-rate | max-inbound-sustain-rate | max-outbound-sustain-rate
| select | no | show | done | exit>
```

## Parameters

**method**—Enter the SIP method name for the method you want to throttle

*Values*

- NOTIFY
- OPTIONS
- MESSAGE
- PUBLISH
- REGISTER

**max-inbound-burst-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the inbound burst rate on the SIP interface where you apply these constraints.

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-burst-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the outbound burst rate on the SIP interface where you apply these constraints.

*Default* 0  
*Values* Min: 0 / Max: 999999999

**max-inbound-sustain-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the inbound sustain rate on the SIP interface where you apply these constraints

*Default* 0  
*Values* Min: 0 / Max: 999999999

**max-outbound-sustain-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the outbound sustain rate on the SIP interface where you apply these constraints

*Default* 0  
*Values* Min: 0 / Max: 999999999

**Path** `session-agent> rate-constraints` is an element of the `session-router path`. The full path from the topmost ALCI prompt is: `configure terminal > session-router > session-agent > rate-constraints`.

**Release** First appearance: 5.1.1

**RTC Status** Supported

## session-agent-group

---

The **session-agent-group** element creates a group of Session Agents and/or groups of other SAGs. The creation of a SAG indicates that its members are logically equivalent and can be used interchangeably. This allows for the creation of constructs like hunt groups for application servers or gateways.

**Syntax** `session-group <group-name | description | state | app-protocol | strategy | dest | trunk-group | sag-recursion | stop-sag-recurse | select | no | show | done | exit>`

**Parameters** **group-name**—Enter the name of the session-agent-group element. This required entry must follow the Name Format, and it must be unique.

**description**—Describe the session agent group element

**state**—Enable or disable the session-agent-group element

*Default* enabled

*Values* enabled | disabled

**app-protocol**—Distinguish H.323 session agent groups from SIP session agent groups

*Default* SIP

*Values* H323 | SIP

**strategy**—Select the session agent allocation options for the session-agent-group. Strategies determine how session agents will be chosen by this session-agent-group element.

*Default* Hunt

- Values*
- Hunt—Selects session agents in the order in which they are listed
  - RoundRobin—Selects each session agent in the order in which they are listed in the dest list, selecting each agent in turn, one per session. After all session agents have been used, the first session agent is used again and the cycle continues.
  - LeastBusy—Selects the session agent that has the fewest number of sessions relative to the max-outbound-sessions constraint or the max-sessions constraint (i.e., lowest percent busy) of the session-agent element
  - PropDist—Based on programmed, constrained session limits, the Proportional Distribution strategy proportionally distributes the traffic among all of the available session-agent elements
  - LowSusRate—Routes to the session agent with the lowest sustained rate of session initiations/invitations

**dest**—Enter the destinations (i.e., next hops) available for use by this session agent group. If this list is configured, it can contain as many destinations as necessary. A dest list value must correspond to a valid group name in another session agent group or to a valid hostname.

**trunk-group**—Enter trunk group names and trunk group contexts to match in either IPTEL or custom format. If left blank, the Net-Net SBC uses the trunk group in the realm for this session agent group. Multiple entries are surrounded in parentheses and separated from each other with spaces.

Entries for this list must one of the following formats: **trgp: context** or **trgp. context**.

**sag-recursion**—Enable or disable SIP SAG recursion for this SAG

*Default* disabled

*Values* enabled | disabled

**stop-sag-recurse**—Enter the list of SIP response codes that terminate recursion within the SAG. On encountering the specified response code(s), the Net-Net SBC returns a final response to the UAC. You can enter the response codes as a comma-separated list or as response code ranges.

*Default* 401, 407

**Path**

**session-agent-group** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > session-group**.

**Release**

First appearance: 1.0 / Most recent update: 1.2.1

**RTC Status**

Supported

**Notes**

This is a multiple instance configuration element.

## session-constraints

---

The **session-constraints** configuration element allows you to create session layer constraints in order to manage and police session-related traffic including maximum concurrent sessions, maximum outbound concurrent sessions, maximum session burst rate, and maximum session sustained rate.

### Syntax

```
session-constraints <name | state | max-sessions | max-inbound-
sessions | max-outbound-sessions | max-burst-rate | max-inbound-
burst-rate | max-outbound-burst-rate | max-sustain-rate | max-
inbound-sustain-rate | max-outbound-sustain-rate | min-seizures |
min-asr | time-to-resume | ttr-no-response | in-service-period |
burst-rate-window | sustain-rate-window | rate-constraints |
select | no | show | done | exit>
```

### Parameters

**name**—Enter the name for this session constraint. This must be a unique identifier that you use when configuring a SIP interface on which you are applying it. This is a required parameter.

**state**—Enable or disable this session constraint

*Default* enabled

*Values* enabled | disabled

**max-sessions**—Enter the maximum sessions allowed for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-sessions**—Enter the maximum inbound sessions allowed for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-sessions**—Enter the maximum outbound sessions allowed for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-burst-rate**—Enter the maximum burst rate (invites per second) allowed for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-burst-rate**—Enter the maximum inbound burst rate (number of session invitations per second) for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-burst-rate**—Enter the maximum outbound burst rate (number of session invitations per second) for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-sustain-rate**—Enter the maximum rate of session invitations allowed within the current window for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-sustain-rate**—Enter the maximum inbound sustain rate (of session invitations allowed within the current window) for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-sustain-rate**—Enter the maximum outbound sustain rate (of session invitations allowed within the current window) for this constraint

*Default* 0

*Values* Min: 0 / Max: 999999999

**min-seizures**—Enter the minimum number of seizures for a no-answer scenario

*Default* 5

*Values* Min: 1 / Max: 999999999

**min-asr**—Enter the minimum ASR in percentage

*Default* 0

*Values* Min: 0 / Max: 100

**time-to-resume**—Enter the number of seconds that is used to place an element (like a session agent) in the standby state when it has been taken out of service because of excessive transaction timeouts

*Default* 0

*Values* Min: 0 / Max: 999999999

**ttr-no-response**—Enter the time delay in seconds to wait before changing the status of an element (like a session agent) after it has been taken out of service because of excessive transaction timeouts

*Default* 0

*Values* Min: 0 / Max: 999999999

**in-service-period**—Enter the time in seconds that elapses before an element (like a session agent) can return to active service after being placed in the standby state

*Default* 0

*Values* Min: 0 / Max: 999999999

**burst-rate-window**—Enter the time in seconds that you want to use to measure the burst rate

*Default* 0

*Values* Min: 0 / Max: 999999999

**sustain-rate-window**—Enter the time in seconds used to measure the sustained rate

*Default* 0

*Values* Min: 0 / Max: 999999999

**rate-constraints**—Access the **rate-constraints** subelement

#### Path

**session-constraints** is an element of the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > session-constraints**.

#### Release

First appearance: 4.1.1

#### RTC Status

Supported

## session-constraints>rate-constraints

---

The **rate-constraints** subelement for the **session-constraints** configuration element allows you to configure rate constraints for individual session constraints, which can then be applied to the SIP interface where you want them used.

#### Syntax

```
rate-constraints <method | max-inbound-burst-rate | max-outbound-burst-rate | max-inbound-sustain-rate | max-outbound-sustain-rate | select | no | show | done | exit>
```

**method**—Enter the SIP method name for the method you want to throttle

*Values*

- NOTIFY
- OPTIONS
- MESSAGE
- PUBLISH
- REGISTER

**max-inbound-burst-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the inbound burst rate on the SIP interface where you apply these constraints.

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-outbound-burst-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the outbound burst rate on the SIP interface where you apply these constraints.

*Default* 0

*Values* Min: 0 / Max: 999999999

**max-inbound-sustain-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the inbound sustain rate on the SIP interface where you apply these constraints

*Default* 0

*Values* Min: 0 / Max: 999999999



**max-outbound-sustain-rate**—For the SIP method you set in the **method** parameter, enter the number to restrict the outbound sustain rate on the SIP interface where you apply these constraints

*Default*                    0  
*Values*                    Min: 0 / Max: 999999999

**Path**                    **session-constraints> rate-constraints** is an element of the **session-router path**. The full path from the topmost ALCI prompt is: **configure terminal > session-router > session-constraints > rate-constraints**.

**Release**                    First appearance: 5.1.1

**RTC Status**                Supported

## **session-router-config**

---

The **session-router-config** element allows you to configure whether or not session-related functionality is enabled within your network, whether it contains a Net-Net SBC SR or SD.

**Syntax**                    `session-router <state | system-number-type | sr-primary-name | sr-primary-address | sr-secondary-name | sr-secondary-address | divide-resources | session-directors | holidays | match-ip-src-parent-realms | nested-realms-stats | forced-report-trunk-info | select | no | show | done | exit>`

**Parameters**                **state**—Enable or disable this session-related functionality on the system

*Default*    enabled  
*Values*    enabled | disabled

**system-number-type**—Define the telephone number format used in local policy and local policy lookups

*Default*    Pots  
*Values*    • Pots—Telephone numbers are in Decimal routing number format (0-9). This is the default and recommended setting.  
 • E164—Telephone numbers are in E.164 format as defined by the global-number format of the tel URI defined in RFC 3966  
 • Routing—Telephone numbers are in Penta Decimal routing numbers (0-9, A-F). This value is not currently used but reserved for future enhancements.

**sr-primary-name**—Enter the name of the primary session router; must match the target name in the boot parameters of the primary SR

**sr-primary-address**—Enter the IP Address of the maintenance interface of the primary session router; must match the "inet on ethernet" address in the boot parameters of the primary SR

**sr-secondary-name**—Enter the name of the secondary session router; must match the target name in the boot parameters of the secondary SR

**sr-secondary-address**—Enter the IP Address of the maintenance interface of the secondary session router. This must match the "inet on ethernet" address in the boot parameters of the secondary SR.

**divide-resources**—Indicate whether or not resources are divided by the number of configured session directors. This includes:

- realm-config bandwidth
- session-agent max-sessions
- session-agent max-outbound-sessions
- session-agent max-burst-rate
- session-agent max-sustain-rate

*Default* disabled

*Values* enabled | disabled

**match-ip-src-parent-realms**—Enable or disable local policy parent realm matching based on a parent realm

*Default* disabled

*Values* enabled | disabled

**nested-realm-stats**—Enable or disable using session constraints for nested realms across the entire system

*Default* disabled

*Values* enabled | disabled

**forced-report-trunk-info**—Enable or disable generation of VSAs for trunk group information even when you are not using trunk-group routing; VSAs 65-68 to report originating and terminating trunk group information

*Default* disabled

*Values* enabled | disabled

**session-directors**—Access the session-directors subelement

**holidays**—Access the session-router-holidays subelement

## Path

**session-router-config** is an element under the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > session-router.**

## Release

First appearance: 1.0 / Most recent update: S-C6.1.0

## RTC Status

Supported

## Notes

This is a single instance configuration element.

## session-router > holidays

---

The **session-router-holidays** configuration subelement establishes the holiday schedule to which the Net-Net SBC conforms.

<b>Syntax</b>	<code>holidays &lt;date   description   select   no   show   done   exit&gt;</code>
<b>Parameters</b>	<p><b>date</b>—Enter the date of a holiday in YYYY-MM-DD format. A session router holidays entry will not function properly unless it is a valid date.</p> <p><b>description</b>—Describe the holiday</p>
<b>Path</b>	<b>session-router-holidays</b> is a subelement under the <b>session-router-config</b> element. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; session-router &gt; holidays</b> .
<b>Release</b>	First appearance: 1.0
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## session-translation

---

The **session-translation** element defines how translation rules are applied to incoming and outgoing numbers. Multiple translation rules can be referenced and applied; this configuration element group rules together and allows them to be referenced by a single identifier.

<b>Syntax</b>	<code>session-translation &lt;id   rules-calling   rules-called   select   no   show   done   exit&gt;</code>
<b>Parameters</b>	<p><b>id</b>—Enter the identifier or name for this set of session translation rules. This parameter is required.</p> <p><b>rules-calling</b>—Enter the rule(s) defined in the translation rules element applied to the calling number</p> <p><b>rules-called</b>—Enter the rule(s) defined in the translation rules element applied to the called number</p>
<b>Path</b>	<b>session-translation</b> is an element under the <b>session-router</b> path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; session-translation</b> .
<b>Release</b>	First appearance: 1.0
<b>RTC Status</b>	Supported
<b>Notes</b>	The Net-Net SBC applies the translation rules established in this field cumulatively, in the order in which they are entered. If this field is configured with a value of "rule1 rule2 rule3", rule1 will be applied to the original number first, rule2 second,

and rule3 last.  
This is a multiple instance configuration element.

## sip-config

---

The **sip-config** element is used to define the parameters for this protocol specific to the Net-Net SBC communicating with SIP.

### Syntax

```

sip-config <state | operation-mode | dialog-transparency | home-
realm-id | egress-realm-id | nat-mode | registrar-domain |
registrar-host | registrar-port | register-service-route | init-
timer | max-timer | trans-expire | invite-expire | inactive-
dynamic-conn | red-sip-port | red-max-trans | red-sync-start-time
| red-sync-comp-time | options | add-reason-header | sip-message-
len | enum-sag-match | extra-method-stats | rph-feature | nsep-
user-sessions-rate | enforcement-profile | registration-cache-
limit | add-ucid-header | nsep-sa-sessions-rate | register-use-
to-for-1p | select | no | show | done | exit>

```

### Parameters

**state**—Enable or disable the SIP operations

*Default* enabled

*Values* enabled | disabled

**operation-mode**—Select the SIP operation mode

*Default* dialog

*Values*

- disabled—SIP operation disabled
- stateless—Stateless proxy forwarding. SIP requests are forwarded based on the Request-URI and local policy. No transaction, session or dialog state is maintained. No media state is maintained, and session descriptions in the SIP messages are not modified.
- transaction—Transaction stateful proxy mode. SIP requests are forwarded based on the Request-URI and local policy. The Net-Net SBC maintains transaction state in accordance with RFC 3261. No session or dialog state is maintained. No media state is maintained, and session descriptions in the SIP messages are not modified.
- session—Session stateful proxy mode. SIP requests are forwarded based on the Request-URI and local policy. The Net-Net SBC maintains transaction state in accordance with RFC 3261. The SD also maintains session state information. A Record-Route header is inserted in requests so that the Net-Net SBC will remain in the path. No media state is maintained, and session descriptions in the SIP messages are not modified.
- dialog—Dialog stateful B2BUA mode. The Net-Net SBC maintains full transaction, session, and dialog state. If media management is enabled, full media state is also maintained and the Net-Net SBC modifies session descriptions in SIP messages to cause the media to flow through the Net-Net SBC.

**dialog-transparency**—Enable or disable SIP dialog transparency service to prevent the Net-Net SBC from generating a unique Call-ID and modifying dialog tags

*Default* enabled

*Values* enabled | disabled

**home-realm-id**—Enter the identifier of the home realm. This is the network to which the Net-Net SBC's SIP proxy (B2BUA) is logically connected. If configured, this field must correspond to a valid identifier field entry in a realm-config.

**egress-realm-id**—Enter the default egress realm identifier

**nat-mode**—Select the home realm NAT mode. This is used to indicate whether the home realm is "public" or "private" address space for application of the SIP-NAT function.

*Default* none

*Values*

- none—No SIP-NAT is necessary
- private—Indicates that the home realm is private address space, and all other external realms are public address space. Addresses in the home realm will be encoded in SIP URIs sent into the external realm. The addresses are decoded when the URIs enter the home realm.
- public—Indicates that the home realm is public address space. Addresses from external realms are encoded in SIP URIs as they enter the home realm. Addresses are decoded as they enter the external realm that the address originated in.

**registrar-domain**—Enter the domain name for identifying which requests for which Hosted NAT Traversal (HNT) or registration caching applies. The right-most portion of the "host" part of the Request-URI is matched against this value. An asterisk "\*" is used to indicate any domain.

**registrar-host**—Enter the hostname or IP address of the SIP registrar for the HNT and registration caching function. An asterisk "\*" is used when there are multiple SIP registrars and normal routing using the Request-URI or local policy is to be applied.

**registrar-port**—Enter the port number of the SIP registrar server

*Default* 0

*Values* Min: 1024 / Max: 65535; 0

**register-service-route**—Select the service-route usage for REGISTER requests

*Default* always

*Values*

- never—Never use service-route for REGISTER
- always—Always user service-route for REGISTER
- removal—Use service-route for de-registration
- session—Use service-route when the UA has a session
- session+removal—Use service-route for de-registration and for when the UA has a session

**init-timer**—Enter the initial timeout value in milliseconds for a response to an INVITE request, and it applies to any SIP request in UDP. In RFC 3261, this value is also referred to as TIMER\_T1.

*Default* 500

*Values* Min: 0 / Max: 999999999

**max-timer**—Enter the maximum retransmission timeout in milliseconds for SIP. In RFC 3261, this value is also referred to as `TIMER_T2`.

*Default* 4000

*Values* Min: 0 / Max: 999999999

**trans-expire**—Enter the TTL in seconds for SIP transactions. This timer is equivalent to `TIMER_B` in RFC 3261, and the same value is used for `TIMER_D`, `TIMER_F`, `TIMER_H`, and `TIMER_J` as set out in the same RFC.

*Default* 32

*Values* Min: 0 / Max: 999999999

**invite-expire**—Enter the TTL in seconds for a SIP client transaction after receiving a provisional response. This timer is equivalent to `TIMER_C` in RFC 3261.

*Default* 180

*Values* Min: 0 / Max: 999999999

**inactive-dynamic-conn**—Enter the time limit in seconds for inactive dynamic connections

*Default* 32

*Values* Min: 1 / Max: 999999999

**red-sip-port**—Enter the port for sending or receiving SIP checkpoint messages. Setting this to 0 disables SIP HA on the Net-Net SBC.

*Default* 1988

*Values* Min: 1024 / Max: 65535; 0

**Notes**

This parameter is not RTC supported.

**red-max-trans**—Enter the size of the SIP signaling transaction list in entries stored in memory

*Default* 10000

*Values* Min: 0 / Max: 999999999

**Notes**

This parameter is not RTC supported.

**red-sync-start-time**—Enter the time in milliseconds before the HA Net-Net SBC begins SIP signaling state checkpointing. As long as this HA Net-Net SBC is healthy and active, it remains in a constant cycle of (re)setting this field's timer and checking to see if it has become standby.

*Default* 5000

*Values* Min: 0 / Max: 999999999

**Notes**

This parameter is not RTC supported.

**red-sync-comp-time**—Enter the time in milliseconds the standby Net-Net SBC waits before checkpointing with the active Net-Net SBC to obtain the latest SIP signaling transaction information once the initial checkpointing process is complete

*Default* 1000

*Values* Min: 0 / Max: 999999999

## Notes

This parameter is not RTC supported.

**options**—Enter customer-specific features and/or parameters. This optional field allows for a comma separated list of "feature=<value>" or "feature" parameters for the sip-config element.

**sip-message-len**—Set the size constraint in bytes on a SIP message

*Default* 4096

*Values* Min: 0 / Max: 65535

**add-reason-header**—Enable or disable adding the reason header for rfc 3326 support

*Default* disabled

*Values* enabled | disabled

**enum-sag-match**—Enable or disable matching this SAG's group name to hostname portions of ENUM NAPTR or LRT replacement URIs.

*Default* disabled

*Values* enabled | disabled

**extra-method-stats**—Enable or disable the expansion SIP Method tracking feature.

*Default* disabled

*Values* enabled | disabled

**nsep-user-sessions-rate**—Set the CPS for call rates on a per user basis for NSEP. A value of 0 disables the call admission control on a per user basis.

*Default* 50

*Values* 0-999999999

**rph-feature**—Set the state of NSEP support for the global SIP configuration

*Default* disabled

*Values* enabled | disabled

**enforcement-profile**—Enter the name of the enforcement profile (SIP allowed methods).

**registration-cache-limit**—Set the maximum number of SIP registrations that you want to keep in the registration cache. A value means there is no limit on the registration cache, therefore disabling this feature.

*Default* 0

*Values* Min: 0 / Max: 999999999

**add-ucid-header**—Enable or disable the using the UCID to correlate replicated SIP message information when you use SRR.

*Default* disabled

*Values* enabled | disabled

**nsep-sa-sessions-rate**—Enter maximum acceptable number of SIP INVITES (NSEP sessions) per second to allow for SIP session agents. 0 means there is no limit.

*Default* 0

*Values* Min: 0 / Max: 999999999

**register-use-to-for-1p**—Enable or disable the use of an ENUM query to return the SIP URI of the Registrar for a SIP REGISTER message for routing purposes

*Default* disabled

*Values* enabled | disabled

**Path**

**sip-config** is an element under the session-router path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > sip-config**.

**Release**

First appearance: 1.0 / Most recent update: S-C6.1.0

**RTC Status**

Supported

**Notes**

This is a single instance configuration element.



## sip-feature

---

The **sip-feature** element defines how the Net-Net SBC's B2BUA should treat specific option tags in SIP headers.

### Syntax

```
sip-feature <name | realm | support-mode-inbound | required-mode-
inbound | proxy-require-mode-inbound | support-mode-outbound |
require-mode-outbound | proxy-require-mode-outbound | select | no
| show | done | exit>
```

### Parameters

**name**—Enter the option tag name that will appear in the Require, Supported, or Proxy-Require headers of SIP messages

**realm**—Enter the realm with which the feature is associated; to make the feature global, leave this parameter blank

**support-mode-inbound**—Select the treatment of feature (option tag) in a Supported header for an inbound packet

*Default* pass

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - strip—Tag should be excluded in the outgoing message. Use strip mode to not use the extension.

**required-mode-inbound**—Select the treatment of feature (option tag) in a Require header for an inbound packet

*Default* reject

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - reject—B2BUA should reject the request with a 420 (Bad Extension) response. The option tag will be included in an Unsupported header in the reject response.

**proxy-require-mode-inbound**—Select the treatment of feature (option tag) in a Proxy-Require header for an inbound packet

*Default* pass

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - reject—B2BUA should reject the request with a 420 (Bad Extension) response. The option tag will be included in an Unsupported header in the reject response.

**support-mode-outbound**—Select the treatment of feature (option tag) in a Supported header for an outbound packet

*Default* pass

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - strip—Tag should be excluded in the outgoing message

**require-mode-outbound**—Select the treatment of feature (option tag) in a Require header for an outbound packet

*Default* reject

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - reject—B2BUA should reject the request with a 420 (Bad Extension) response. The option tag will be included in an Unsupported header in the reject response.

**proxy-require-mode-outbound**—Select the treatment of feature (option tag) in a Proxy-Require header for an outbound packet

*Default* pass

- Values*
- pass—B2BUA should include the tag in the corresponding outgoing message
  - reject—B2BUA should reject the request with a 420 (Bad Extension) response. The option tag will be included in an Unsupported header in the reject response.

**Path**

**sip-feature** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > sip-feature**.

**Release**

First appearance: 1.0 / Most recent update: 2.0

**RTC Status**

Supported

**Notes**

If an option tag is encountered that is not configured as a SIP feature, the default treatments described in each of the field descriptions (name, support-mode, require-mode, and proxy-require-mode) included in this section will apply. Therefore, a sip-feature element only needs to be configured when non-default treatment is required.  
This is a multiple instance element.

## sip-interface

---

The **sip-interface** element allows you to configure a SIP interface for your Net-Net SBC.

### Syntax

```
sip-interface <state | realm-id | description | sip-ports |
carriers | proxy-mode | redirect-action | contact-mode | nat-
traversal | nat-interval | registration-caching | min-reg-expire
| registration-interval | route-to-registrar | teluri-scheme |
uri-fqdn-domain | options | trust-mode | max-nat-interval | nat-
int-increment | nat-test-increment | sip-dynamic-hnt | stop-
recurse | port-map-start | port-map-end | in-manipulationid |
out-manipulationid | sip-ims-feature | operator-identifier |
anonymous-priority | network-id | ext-policy-server | default-
location-string | term-tgrp-mode | charging-vector-mode |
charging-function-address-mode | ccf-address | ecf-address |
secured-network | max-incoming-conns | per-scrip-max-incoming-
conns | inactive-conn-timeout | implicit-service-route | rfc2833-
payload | rfc2833-mode | trans-expire | invite-expire | tcp-nat-
interval | constraint-name | response-map | local-response-map |
max-redirect-contacts | untrusted-conn-timeout | enforcement-
profile | refer-call-transfer | route-unauthorized-calls | tcp-
keepalive | add-sdp-invite | add-sdp-profiles | ims-aka-feature |
select | no | show | done | exit>
```

### Parameters

**state**—Enable or disable the SIP interface

*Default* enabled

*Values* enabled | disabled

**realm-id**—Enter the name of the realm to which the SIP interface applies

**description**—Provide a brief description of the **sip-interface** configuration element

**sip-ports**—Access the sip-ports subelement

**carriers**—Enter a list of carriers related to the sip-config. Entries in this field must follow the Carrier Format.

**proxy-mode**—Set the default SIP request proxy mode

*Values*

- proxy—Forward all SIP requests to other session agents
- redirect—Send a SIP 3xx redirect response with contacts (found in the local policy) to the previous hop
- record-route—Forward requests with Record-Route (for stateless and transaction and operation modes only)

**redirect-action**—Set handling of Redirect (3xx) response messages from a session agent

*Values*

- Proxy—Send the response back to the previous hop
- Recurse—Recurse on the contacts in the response

**contact-mode**—Select the contact header routing mode

*Default* none

*Values*

- none
- maddr
- strict
- loose

**nat-traversal**—Select the type of HNT functionality for SIP

*Default* none

*Values*

- none—NAT Traversal is disabled
- always—Performs HNT when SIP-Via and transport addresses do not match
- rport—Performs HNT when Via rport parameter is present and SIP-Via and transport addresses do not match

**nat-interval**—Enter the expiration time in seconds for the Net-Net SBC's cached registration entry for an endpoint doing HNT

*Default* 30

*Values* Min: 0 / Max: 999999999

**registration-caching**—Enable or disable registration cache used for all UAs rather than those behind NATs

*Default* disabled

*Values* enabled | disabled

**min-reg-expire**—Enter the minimum registration expiration time in seconds for HNT registration caching

*Default* 300

*Values* Min: 1 / Max: 999999999

**registration-interval**—Enter the expiration time in seconds for the Net-Net SBC's cached registration entry for an endpoint (non-HNT)

*Default* 3600

*Values* Min: 1 / Max: 999999999

**route-to-registrar**—Indicate whether or not the SD should forward a request addressed to the registrar to the SIP registrar as opposed to sending the request to the registered contact in the registration cache

*Default* disabled

*Values* enabled | disabled

**teluri-scheme**—Enable or disable the conversion of SIP URIs to Tel URIs

*Default* disabled

*Values* enabled | disabled

**uri-fqdn-domain**—Change the host part of the URIs to the FQDN value set here. This applies to the Request-URI, From header, and To header in non-dialog requests sent from the SIP interface.

**options**—Enter optional features and/or parameters

**trust-mode**—Select the trust mode for this SIP interface

*Default* all

- Values*
- all—Trust all previous and next hops except untrusted session agents
  - agents-only—Trust only trusted session agents
  - realm-prefix—Trust only trusted session agents or address matching realm prefix
  - registered—Trust only trusted session agents or registered endpoints
  - None—Trust nothing

**sip-dynamic-hnt**—Enable or disable adaptive HNT

*Default* disabled

*Values* enabled | disabled

**max-nat-interval**—Enter the amount of time in seconds that testing should not exceed for adaptive HNT. The Net-Net SBC will keep the expires interval at this value.

*Default* 3600

*Values* Min: 0 / Max: 999999999

**nat-int-increment**—Enter the amount of time in seconds to use as the increment in value in the SIP expires header for adaptive HNT

*Default* 10

*Values* Min: 0 / Max: 999999999

**nat-test-increment**—Enter the amount of time in seconds that will be added to the test timer for adaptive HNT

*Default* 30

*Values* Min: 0 / Max: 999999999

**stop-recurse**—Enter a list of returned response codes that this SIP interface will watch for in order to stop recursion on the target's or contact's messages

**port-map-start**—Set the starting port for the range of SIP ports available for SIP port mapping. A value of 0 disables SIP port mapping.

*Default* 0

*Values* Min: 1025 / Max: 65535

**port-map-end**—Set the ending port for the range of SIP ports available for SIP port mapping. A value of 0 disables SIP port mapping. This value must be larger than the port-map-start parameter's value.

*Default* 0

*Values* Min: 1025 / Max: 65535

**in-manipulationid**—Enter the name of the SIP header manipulations configuration to apply to the traffic entering the Net-Net SBC via this SIP interface

**out-manipulationid**—Enter the name of the SIP header manipulations configuration to apply to the traffic exiting the Net-Net SBC via this SIP interface

**sip-ims-feature**—Enable or disable IMS functionality on this SIP interface

*Default* disabled

*Values* enabled | disabled

**operator-identifier**—Set the operator identifier value to be inserted into a P-Charging-Vector header. The direction of the call determines whether this value is inserted into the orig-ioi or the term-ioi parameter in the P-Charging-Vector header. This string value **MUST** begin with an alpha character.

**anonymous-priority**—Set the policy priority parameter for this SIP interface. It is used to facilitate emergency sessions from unregistered endpoints. This value is compared against a policy priority parameter in a local policy configuration element.

*Default* none

*Values*

- none
- normal
- non-urgent
- urgent
- emergency

**network-id**—Set the value that will be inserted into the P-Visited-Network-ID header

**ext-policy-server**—Enter the name of external policy server used as the CLF for this SIP interface

**default-location-string**—Set a default location string to insert into P-Access-Network-Info header when the CLF does not return this value

**term-tgrp-mode**—Select the mode for routing for terminating trunk group URIs

*Default* none

*Values*

- none—Disable routing based on trunk groups
- iptel—Use trunk group URI routing based on the IPTEL formats
- egress-uri—Use trunk group URI routing based on the egress URI format

**charging-vector-mode**—Set the state of P-Charging-Vector header handling

*Default* pass

*Values*

- none—Pass the P-Charging-Vector header received in an incoming SIP message untouched as the message is forwarded out of the Net-Net SBC, not extracting RADIUS information

- **pass**—Pass the P-Charging-Vector header received in an incoming SIP message untouched as the message is forwarded out of the Net-Net SBC, extracting RADIUS information
- **delete**—Delete the P-Charging-Vector header received in an incoming SIP message before it is forwarded out of the Net-Net SBC
- **insert**—Inserts the P-Charging-Vector header in an incoming SIP message that does not contain the P-Charging-Vector header. If the incoming message contains the P-Charging-Vector header, the Net-Net SBC will overwrite the P-Charging-Vector header with its values.
- **delete-and-respond**—Removes the P-Charging-Vector from incoming requests for a session and store it. Then the Net-Net SBC inserts it into outbound responses related to that session in a P-Charging-Vector header.

## Notes

Note that the default setting for the **charging-vector-mode** is **pass** for new SIP interface configurations. If you are upgrading and there are pre-existing SIP interfaces in your (upgraded) configuration, the default becomes **none**.

**charging-function-address-mode**—Set the state of P-Charging-Function-Address header handling

*Default* pass

- Values*
- **none**—Pass the P-Charging-Function-Address header received in an incoming SIP message untouched as the message is forwarded out of the Net-Net SBC, not extracting RADIUS information
  - **pass**—Pass the P-Charging-Function-Address header received in an incoming SIP message untouched as the message is forwarded out of the Net-Net SBC, extracting RADIUS information
  - **delete**—Delete the P-Charging-Function-Address header received in an incoming SIP message before it is forwarded out of the Net-Net SBC
  - **insert**—Inserts the P-Charging-Function-Address header in an incoming SIP message that does not contain the P-Charging-Function-Address header. If the incoming message contains the P-Charging-Function-Address header, the Net-Net SBC will prepend its configured values to the header.
  - **insert-reg-cache**—To be configured on the SIP interface facing the UE, configures the Net-Net SBC to replace the PCFA with the most recently cached values rather than the **ccf-address** and **ecf-address** you set to be static in your configuration. The cached values come from one of the following that the Net-Net SBC has received most recently: request, response, registration, or local configuration.
  - **delete-and-respond**—To be configured on the SIP interface facing the S-CPCF, configures the Net-Net SBC to strip out the latest cached PCFA.

## Notes

Note that the default setting for the **charging-function-address-mode** is **pass** for new SIP interface configurations. If you are upgrading and there are pre-existing SIP interfaces in your (upgraded) configuration, the default becomes **none**.

**ccf-address**—Set the CCF address value that will be inserted into the P-Charging-Function-Address header

**ecf-address**—Set the ECF address value that will be inserted into the P-Charging-Function-Address header

**secured-network**—Enable or disable sending messages on unsecured transport

*Default* disabled

*Values* enabled | disabled

**max-incoming-conns**—Enter the maximum number of TCP/TLS connections for this sip interface

*Default* 0

*Values* Min: 0 / Max: 40000; setting a value of 0 disables this parameter

**per-scr-ip-max-incoming-conns**—Enter the maximum number of TCP/TLS connections per peer IP address

*Default* 0

*Values* Min: 0 / Max: 40000; setting a value of 0 disables this parameter.

**inactive-conn-timeout**—Enter the timeout, measured in seconds for idle TCP/TLS connections

*Default* 0

*Values* Min: 0 / Max: 999999999; setting a value of 0 disables the timer.

**implicit-service-route**—Enable or disable the implicit service route behavior

*Default* disabled

*Values*

- enabled
- disabled
- strict

**rfc2833-payload**—Enter the payload type used by the SIP interface in preferred rfc2833-mode

*Default* 101

*Values* Min: 96 / Max: 127

**rfc2833-mode**—Choose whether the SIP interface will behave exactly the same way as before and the 2833 or UII negotiation will be transparent to the Net-Net SBC, transparent, or whether the sip-interface prefers to use 2833 for DTMF transfer and would signal that in its SDP, preferred. However the final decision depends on the remote endpoint.

*Default* transparent

*Values* transparent | preferred | dual

**trans-expire**—Set the transaction expiration timer in seconds

*Default* 0

*Values* Min: 0 / Max: 999999999

**invite-expire**—Set the INVITE transaction expiration timer in seconds



*Default* 0

*Values* Min: 0 / Max: 999999999

**tcp-nat-interval**—Enter the TCP NAT traversal registration interval in seconds

*Default* 90

*Values* Min: 0 / Max: 999999999

**constraint-name**—Enter the name of the constraint being applied to this interface

**response-map**—Enter the name of the response map being applied to this interface

**local-response-map**—Enter the name of the local response map being applied to this interface

**max-redirect-contacts**—Enter the maximum number of contact and route attempts in case of a redirect

*Default* 0

*Values* Min: 0 / Max: 10

**untrusted-conn-timeout**—Enter the timeout time, in seconds, for untrusted endpoints on TCP/TLS connections

*Default* 0

*Values* Min: 0 (disabled) / Max: 999999999

**enforcement-profile**—Enter the name of the enforcement profile associated with this SIP interface

**refer-call-transfer**—Enable or disable the refer call transfer feature.

*Default* disabled

*Values* enabled | disabled

**route-unauthorized-calls**—Enter the name of the SA or SAG you want to route unauthorized calls

**tcp-keepalive**—Enable or disable standard keepalive probes to determine whether or not connectivity with a remote peer is lost.

*Default* none

*Values* none | enabled | disabled

**add-sdp-invite**—Enable or disable this SIP interface inserting an SDP into either an INVITE or a REINVITE

*Default* disabled

*Values*

- disabled—Do not insert an SDP
- invite—Insert an SDP in the invite
- reinvite—Insert an SDP in the reinvite

**add-sdp-profile**—Enter a list of one or more media profile configurations you want to use when the Net-Net SBC inserts SDP into incoming INVITES that have no SDP. The media profile contains media information the Net-Net SBC inserts in outgoing INVITE.

**ims-aka-feature**—Enable or disable IMS-AKA use for a SIP interface

*Default* disabled

*Values* enabled | disabled

<b>Path</b>	<b>sip-interface</b> is an element under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; sip-interface</b> .
<b>Release</b>	First appearance: 1.0 / Most recent update: 4.1
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## sip-interface > sip-ports

---

The **sip-ports** subelement indicates the ports on which the SIP proxy or B2BUA will listen for connections.

**Syntax**

```
sip-ports <address | port | transport-protocol | tls-profile |
anonymous-connection | ims-aka-profile | select | no | show | done
| exit>
```

<b>Parameters</b>	<p><b>address</b>—Enter the IP address of the host associated with the sip-port entry.</p> <p><b>port</b>—Enter the port number for this sip-port</p> <p><i>Default</i> 5060</p> <p><i>Values</i> Min: 1025 / Max: 65535</p> <p><b>transport-protocol</b>—Select the transport protocol associated for this sip-port</p> <p><i>Default</i> UDP</p> <p><i>Values</i></p> <ul style="list-style-type: none"> <li>• TCP</li> <li>• UDP</li> <li>• TLS</li> <li>• SCTP</li> </ul> <p><b>tls-profile</b>—Enter the TLS profile name</p> <p><b>allow-anonymous</b>—Select the type of anonymous connection from session agents allowed</p> <p><i>Default</i> all</p> <p><i>Values</i></p> <ul style="list-style-type: none"> <li>• all—Allow all anonymous connections</li> <li>• agents-only—Only requests from session agents allowed</li> <li>• realm-prefix—Session agents and address matching realm prefix</li> <li>• registered—Session agents and registered endpoints (REGISTER allowed from any endpoint)</li> <li>• register-prefix—All connects from SAs that match agents-only, realm-prefix, and registered agents</li> </ul> <p><b>ims-aka-profile</b>—Enter the <b>name</b> value for the IMS-AKA profile configuration to use for a SIP port</p>
-------------------	---

<b>Path</b>	<b>sip-ports</b> is a subelement is under the sip-config element. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; sip-interface &gt; sip-ports</b> .
<b>Release</b>	First appearance: 1.0 / Most recent update: 4.1
<b>RTC Status</b>	Supported
<b>Notes</b>	There must be at least one sip-port entry configured within the sip-config and there can be as many entries as necessary for the sip-port. This is a multiple instance configuration element.

## sip-manipulation

---

The **sip-manipulation** feature lets the Net-Net SBC add, modify, and delete SIP headers and SIP header elements.

<b>Syntax</b>	si p-mani pul ati on <name   header-rul es   descri pti on   select   no   show   done   exi t>
<b>Parameters</b>	<p><b>name</b>—Enter the name of this list of header rules</p> <p><b>header-rules</b>—Access the header rules subelement</p> <p><b>description</b>—Describe what the set of header rules is doing</p>
<b>Path</b>	<b>sip-manipulation</b> is an element under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; sip-manipulation</b> .
<b>Release</b>	First appearance: 4.0
<b>RTC Status</b>	Supported

## sip-manipulation > header-rules

---

The **header-rules** subelement is used to define one action to perform on a given SIP header.

<b>Syntax</b>	header-rul es <name   action   match-val ue   msg-type   methods   el ement-rul es   header-name   compari son-type   new-val ue   select   no   show   done   exi t>
<b>Parameters</b>	<p><b>name</b>—Enter the name of the header to which this rule applies. This name must match a header name.</p> <p><b>action</b>—Select the action you want applied to the header specified in the name parameter</p> <p><i>Default</i> none</p> <p><i>Values</i></p> <ul style="list-style-type: none"> <li>• add—Add a new header, if that header does not already exist</li> <li>• delete—Delete the header, if it exists</li> <li>• manipulate—Manipulate this header according to the element rules configured</li> <li>• store—Store this header</li> <li>• none—Take no action</li> </ul> <p><b>match-value</b>—Enter the exact value to be matched. The action you specify is only performed if the header value matches.</p> <p><b>msg-type</b>—Select the message type to which this header rule applies</p> <p><i>Default</i> any</p> <p><i>Values</i></p> <ul style="list-style-type: none"> <li>• any—Both Requests and Reply messages</li> </ul>

- request—Request messages only
- reply—Reply messages only

**methods**—Enter a list of SIP methods that this header rule applies to. An empty value applies this header rule to all SIP method messages.

*Default* none

**element-rules**—Access the element rules sub-subelement

**header-name**—Enter the header name for which the rules need to be applied

**comparison-type**—Select the comparison type that the match-value uses

*Default* case-sensitive

- Values*
- case-sensitive
  - case-insensitive
  - pattern-rule

**new-value**—The new value to be used in add or manipulate actions. To clear the new-value enter an empty string.

#### Path

**header-rules** is a subelement under the **sip-manipulation** configuration element, under the **session-router** path. The full path from the topmost CLI prompt is: **configure terminal > session-router > sip-manipulation > header-rules**.

#### Release

First appearance: 4.0

#### RTC Status

Supported

## sip-manipulation > header-rules > element-rules

---

The **element-rules** sub-subelement is used to define a list of actions to perform on a given SIP header.

#### Syntax

```
element-rules <name | type | action | match-value-type | match-value | new-value | parameter-name | comparison-type | select | no | show | done | exit>
```

**name**—Enter the name of the element to which this rule applies. The name parameter does not apply for the following element types: header-value, uri-user, uri-host, uri-port, uri-header. You still need to enter a dummy value here for tracking purposes.

**type**—Select the type of element on which to perform the action

*Default* none

- Values*
- header-value—Full value of the header
  - header-param-name—Header parameter name
  - header-param—Parameter portion of the header
  - uri-display—Display of the SIP URI
  - uri-user—User portion of the SIP URI
  - uri-host—Host portion of the SIP URI
  - uri-port—Port number portion of the SIP URI
  - uri-param-name—Name of the SIP URI param
  - uri-param—Parameter included in the SIP URI

- uri-header-name—SIP URI header name
- uri-header—Header included in a request constructed from the URI
- uri-user-param—User parameter of the SIP URI
- status-code—Status code of the SIP URI
- reason-phrase—Reason phrase of the SIP URI
- uri-user-only—URI username without the URI user parameters
- uri-phone-number-only—User part of the SIP/TEL URI without the user parameters when the user qualifies for specific BNF

**action**—Select the action to take to the element specified in the name parameter, if there is a match value

*Default* none

- Values*
- none—No action taken
  - add—Add a new element, if it does not already exist
  - replace—Replace the elements
  - delete-element—Delete the specified element, if it exists
  - delete-header—Delete the specified header, if it exists
  - store—Store the elements

**match-val-type**—Select the type of value that needs to be matched for the action to be performed

*Default* ANY

- Values*
- IP—IP address value
  - FQDN—FQDN value
  - ANY—Both IP or FQDN values

**match-value**—Enter the value to match against the element value for a manipulation action to be performed

**new-value**—Enter the explicit value for a new element or replacement value for an existing element. You can enter an expression that includes a combination of absolute values, pre-defined parameters, and operators.

- Use double quotes around string values
- Pre-defined parameters always start with a \$. Valid pre-defined parameters are:

Parameter	Description
\$ORIGINAL	Original value of the element is used.
\$LOCAL_IP	Local IP address is used when you receive an inbound address.
\$REMOTE_IP	Remote IP address is used.
\$REMOTE_VIA_HOST	Remote VIA host part is used.
\$TRUNK_GROUP	Trunk group is used.
\$TRUNK_GROUP_CONTEXT	Trunk group context is used.

- Operators are:

Operator	Description
+	Append the value to the end. For example: "acme"+"packet" generates "acmepacket"
+^	Prepends the value. For example: "acme"+"^"packet" generates "packetacme"
-	Subtract at the end. For example: "112311"-"11" generates "1123"
.^	Subtract at the beginning. For example: "112311"-"^"11" generates "2311"

**parameter-name**—Enter the element parameter name for which the rules need to be applied

**comparison-type**—Select the type of comparison to be used for the match-value

*Default* case-sensitive

*Values*

- case-sensitive
- case-insensitive
- pattern-rule

## Path

**element-rules** is a sub-subelement under the **header-rules** subelement under the **sip-manipulation** configuration element, under the **session-router** path. The full path from the topmost ACLI prompt is: **configure terminal > session-router > sip-manipulation > header-rules > element-rules**.

## Release

First appearance: 4.0

## RTC Status

Supported

## sip-nat

The **sip-nat** element is used for configuring SIP-NAT across realms.

## Syntax

```

sip-nat <realm-id | domain-suffix | ext-proxy-address | ext-
proxy-port | ext-address | home-address | home-proxy-address |
home-proxy-port | route-home-proxy | address-prefix | tunnel-
redirect | use-url-parameter | parameter-name | user-nat-tag |
host-nat-tag | headers | delete-headers | select | no | show |
done | exit>

```

## Parameters

**realm-id**—Enter the name of the external realm. This required realm-id must be unique.

**domain-suffix**—Enter the domain name suffix of the external realm. This suffix is appended to encoded hostnames that the SIP-NAT function creates. This is a required field.

**ext-proxy-address**—Enter the IP address of the default next-hop SIP element (a SIP proxy) in the external network. This is a required field. Entries in this field must follow the IP Address Format.

**ext-proxy-port**—Enter the port number of the default next-hop SIP element (a SIP proxy) in the external network

*Default* 5060

*Values* Min: 1025 / Max: 65535

**ext-address**—Enter the IP address on the network interface in the external realm. This required entry must follow the IP address format.

**home-address**—Enter the IP address on the network interface in the home realm. This required entry must follow the IP address format.

**home-proxy-address**—Enter the IP address for the home proxy (from the perspective of the external realm). An empty home-proxy-address field value signifies that there is no home proxy, and the external address will translate to the address of the Net-Net SBC's SIP proxy. Entries in this field must follow the IP Address Format.

**home-proxy-port**—Enter the home realm proxy port number

*Default* 0

*Values* Min: 0; 1025 / Max: 65535

**route-home-proxy**—Enable or disable requests being routed from a given SIP-NAT to the home proxy

*Default* disabled

*Values* enabled | disabled | forced

**address-prefix**—Enter the address prefix subject to SIP-NAT encoding. This field is used to override the address prefix from the realm config for the purpose of SIP-NAT encoding.

*Default* \*

*Values*

- <IP address>:[/num-bits]
- \*—indicates that the addr-prefix in the realm-config is to be used
- 0.0.0.0—indicates that addresses NOT matching the address prefix of the home realm should be encoded

**tunnel-redirect**—Enable or disable certain headers in a 3xx Response message being received and NATed when sent to the initiator of the SIP INVITE message

*Default* disabled

*Values* enabled | disabled

**use-url-parameter**—Select how SIP headers use the URL parameter (parameter-name) for encoded addresses that the SIP-NAT function creates. A value of none indicates that Net-Net SBC functionality remains unchanged and results in the existing behavior of the Net-Net SBC. From-to and phone are used for billing issues



related to extracting digits from the encoded portion of SIP messages along with the parameter-name field.

*Default* none

*Values*

- none
- from-to
- phone
- all

**parameter-name**—Enter the URL parameter name used when constructing messages. This field is used in SIP-NAT encoding addresses that have a use-url-parameter field value of either from-to or all. This field can hold any value, but it should not be a recognized name that another proxy might use.

**user-nat-tag**—Enter the username prefix used for SIP URLs

*Default* -acme-

**host-nat-tag**—Enter the hostname prefix used for SIP URLs

*Default* ACME-

**headers**—Enter the type of SIP headers to be affected by the Net-Net SBC's sip-nat function. The URIs in these headers will be translated and encrypted, and encryption will occur according to the rules of this sip-nat element. Entries in this field must follow this format: <header-name>=<tag>.

*Default* Type headers -d <enter>

The default behavior receives normal SIP-NAT treatment. SIP-NAT header tags for SIP IP address replacement are listed below:

- fqdn-ip-tgt—Replaces the FQDN with the target address
- fqdn-ip-ext—Replaces the FQDN with the SIP-NAT external address
- ip-ip-tgt—Replaces FROM header with target IP address
- ip-ip-ext—Replaces FROM header with SIP-NAT external address

**delete-headers**—Remove headers from the list of SIP headers configured in the headers field

<b>Path</b>	<b>sip-nat</b> is an element under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; sip-nat</b> .
<b>Release</b>	First appearance: 1.0 / Most recent update: 2.0
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## sip-q850-map

---

The **sip-q850-map** configuration element is used to map SIP response codes to q850 cause codes.

<b>Syntax</b>	<code>si p-q850-map &lt;en tr ies   del ete   edi t   sel ect   no   sh ow   don e   exi t&gt;</code>
<b>Parameters</b>	<p><b>en tr ies</b>—Enter the entries configuration subelement</p> <p><b>del ete</b>—Delete a SIP to q850 mapping. Enter the SIP code.</p> <p><b>edi t</b>—Edit a response map by number</p>
<b>Path</b>	<b>si p-q850-map</b> is an element under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; sip-q850-map</b> .
<b>Release</b>	First appearance: 4.0
<b>RTC Status</b>	Supported

## sip-q850-map > en tr ies

---

The **en tr ies** subelement is used to create the mapping of q850 cause to SIP reason code.

<b>Syntax</b>	<code>en tr ies &lt;si p-sta tus   q850-ca use   q850-re ason   sel ect   no   sh ow   don e   exi t&gt;</code>
<b>Parameters</b>	<p><b>q850-ca use</b>—Enter the q850 cause code to map to a SIP reason code</p> <p><b>si p-sta tus</b>—Enter the SIP response code that maps to this q850 cause code <i>Values</i> Min: 100 / Max: 699</p> <p><b>q850-re ason</b>—Describe text to accompany the mapped SIP response code</p>
<b>Path</b>	En tr ies is a subelement under the <b>si p-q850-map</b> configuration element, which is located under the session-router path. The full path from the topmost CLI prompt is: <b>configure terminal &gt; session-router &gt; sip-q850-map &gt; en tr ies</b> .
<b>Release</b>	First appearance: 4.0
<b>RTC Status</b>	Supported

## sip-response-map

---

The **sip-response-map** element establishes SIP response maps associated with the upstream session agent.

**Syntax** `si p-response-map <name | entries | delete | edit | select | no | show | done | exit>`

**Parameters**

**name**—Name of SIP response map

**entries**—Access the entries subelement

**delete**—Remove the selected response-map entry

**Path** **sip-response-map** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > sip-response-map**.

**Release** First appearance: 1.1

**RTC Status** Supported

**Notes** This is a multiple instance configuration element.

## sip-response-map > entries

---

The **entries** subelement establishes the status code(s) for both received and transmitted messages and the reason phrase(s) of a SIP response map.

**Syntax** `entries <recv-code | xmit-code | reason | method | register-response-expires | select | no | show | done | exit>`

**Parameters**

**recv-code**—Enter the original SIP response code received

*Values* Min: 1 / Max: 699

**xmit-code**—Enter the setting of translated SIP response code transmitted

*Values* Min: 1 / Max: 699

**reason**—Enter the setting of translated response comment or reason phrase to send denoted by an entry in quotation marks

**method**—Enter the SIP method name you want to use for this SIP response map entry

**register-response-expires**—Enter the time you want to use for the expires time when mapping the SIP method you identified in the method parameter. By default, the expires time is the Retry-After time (if there is one in the response) of the expires value in the Register request (if there is no Retry-After expires time). Any value you configure in this parameter (when not using the defaults) should never exceed the Register request's expires time.

*Values* Min: 0 / Max: 999999999

<b>Path</b>	<b>entries</b> is a subelement of the sip-response-map element. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; sip-response-map &gt; entries</b> .
<b>Release</b>	First appearance: 1.1
<b>RTC Status</b>	Supported
<b>Notes</b>	This is a multiple instance configuration element.

## snmp-community

---

The **snmp-community** element defines the NMSs from which the Net-Net SBC will accept SNMP requests.

**Syntax** `snmp-community <community-name | access-mode | ip-addresses | select | no | show | done | exit>`

**Parameters** **community-name**—Enter the name of the SNMP community to which a particular NMS belongs. This required entry must follow the Name Format. The community-name field values must be unique.

**access-mode**—Select the access level for each snmp-community element

*Default* READ-ONLY

*Values*

- READ-ONLY—Allows GET requests
- READ-WRITE—Allows both GET and SET requests

**ip-addresses**—Enter the IP address(es) for SNMP communities for authentication purposes. Entries must follow the IP Address Format.

**Path** **snmp-community** is an element under the system path. The full path from the topmost ACLI prompt is: **configure terminal > system > snmp-community**.

**Release** First appearance: 1.0

**RTC Status** Unsupported

**Notes** This is a multiple instance configuration element.

## static-flow

---

The **static-flow** element sets preconfigured flows that allow a specific class of traffic to pass through the Net-Net SBC unrestricted.

**Syntax** `static-flow <in-realm-id | description | in-source | in-destination | out-realm-id | out-source | out-destination | protocol | alg-type | start-port | end-port | flow-time-limit | initial-guard-timer | subsq-guard-timer | average-rate-limit | select | no | show | done | exit>`

**Parameters** **in-realm-id**—Enter the ingress realm or interface source of packets to match for static flow translation. This in-realm-id field value must correspond to a valid

identifier field entry in a realm-config. This is a required field. Entries in this field must follow the Name Format.

**description**—Provide a brief description of the **static-flow** configuration element

**in-source**—Enter the incoming source IP address and port of packets to match for static flow translation. IP address of 0.0.0.0 matches any source address. Port 0 matches packets received on any port. The port value has no impact on system operation if either ICMP or ALL is the selected protocol. The in-source parameter takes the format:

```
in-source <i p-address>[: <port>]
```

*Default* 0.0.0.0

*Values* Port: Min: 0 / Max: 65535

**in-destination**—Enter the incoming destination IP address and port of packets to match for static-flow translation. An IP address of 0.0.0.0 matches any source address. Port 0 matches packets received on any port. The port value has no impact on system operation if either ICMP or ALL is the selected protocol. The in-source parameter takes the format:

```
in-destination <i p-address>[: <port>]
```

*Default* 0.0.0.0

*Values* Port: Min: 0 / Max: 65535

**out-realm-id**—Enter the ingress realm or interface source of packets to match for static flow translation. This in-realm-id field value must be a valid identifier for a configured realm. This required entry must follow the Name Format.

**out-source**—Enter the outgoing source IP address and port of packets to translate to for static flow translation. IP address of 0.0.0.0 translates to any source address. Port 0 translates to packets sent on any port. The port value has no impact on system operation if either ICMP or ALL is the selected protocol. The in-source parameter takes the format:

```
out-source <i p-address>[: <port>]
```

*Default* 0.0.0.0

*Values* Port: Min: 0 / Max: 65535

**out-destination**—Enter the outgoing destination IP address and port of packets to translate to for static-flow translation. An IP address of 0.0.0.0 matches any source address. Port 0 translates to packets sent on any port. The port value has no impact on system operation if either ICMP or ALL is the selected protocol. The in-source parameter takes the format:

```
in-destination <i p-address>[: <port>]
```

*Default* 0.0.0.0

*Values* Port: Min: 0 / Max: 65535

**protocol**—Select the protocol for this static-flow. The protocol selected must match the protocol in the IP header. The protocol remains the same for the inbound and outbound sides of the packet flow.

*Default* UDP

*Values*

- UDP—UDP used for this static-flow element
- TCP—TCP used for this static-flow element
- ICMP—ICMP used for this static-flow element
- ALL—Static-flow element can accept flows via any of the available protocols.

**alg-type**—Select the type of NAT ALG to use

*Default* none

*Values*

- none—No dynamic ALG functionality
- NATP—Configure as NATP ALG
- TFTP—Configure as TFTP ALG

**average-rate-limit**—Enter the maximum speed in bytes per second for this static flow

*Default* 0

*Values* Min: 0 / Max: 125000000

**start-port**—Enter the internal starting ALG ephemeral port

*Default* 0

*Values* Min: 1025 / Max: 65535

**end-port**—Enter the internal ending ALG ephemeral port

*Default* 0

*Values* Min: 1025 / Max: 65535

**flow-time-limit**—Enter the time limit for a flow, measured in seconds

*Values* Min: 0 / Max: 999999999

**initial-guard-timer**—Enter the initial flow guard timer, measured in seconds

*Values* Min: 0 / Max: 999999999

**subsq-guard-timer**—Enter the subsequent flow guard timer, measured in seconds

*Values* Min: 0 / Max: 999999999

#### Path

**static-flow** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > static-flow**.

#### Release

First appearance: 1.0 / Most recent update: 4.1

#### RTC Status

Supported

#### Notes

This is a multiple instance configuration element.

## steering-pool

---

The **steering-pool** element defines sets of ports that are used for steering media flows through the Net-Net SBC. The Net-Net SBC can provide packet steering in order to ensure a determined level of quality or routing path.

### Syntax

```
steering-pool <ip-address | start-port | end-port | realm-id |  
network-interface | select | no | show | done | exit>
```

### Parameters

**ip-address**—Enter the target IP address of the steering pool. This required entry must follow the IP Address Format. The combination of entries in the ip-address, start-port, and realm-id fields must be unique. No two steering-pool elements can have the same entries in the ip-address, start-port, and realm-id fields.

**start-port**—Enter the port number that begins the range of ports available to this steering pool element. This is a required entry. The steering pool will not function properly unless this entry is a valid port.

*Default* 0

*Values* Min: 0 / Max: 65535

**end-port**—Enter the port number that ends the range of ports available to this steering-pool element. This is a required field. The steering-pool element will not function properly unless this field is a valid port value.

*Default* 0

*Values* Min: 0 / Max: 65535

**realm-id**—Enter the steering-pool element's realm identifier used to restrict this steering pool to only the flows that originate from this realm. This required entry must be a valid identifier of a realm.

**network-interface**—Enter the name of network interface this steering pool directs its media toward. A valid value for this parameter must match a configured name parameter in the **network-interface** configuration element.

### Path

**steering-pool** is an element under the media-manager path. The full path from the topmost CLI prompt is: **configure terminal > media-manager > steering-pool**.

### Release

First appearance: 1.0 / Most recent update: 2.1

### RTC Status

Supported

### Notes

This is a multiple instance configuration element.

## surrogate-agent

---

The **surrogate-agent** configuration element allows you to configure the Net-Net SBC for surrogate registration. This feature lets the Net-Net SBC explicitly register on behalf of Internet Protocol Branch Exchange (IP-PBX).

### Syntax

```
surrogate-agent <register-host | register-user | state | realm-id
| description | customer-host | customer-next-hop | register-
contact-host | register-contact-user | password | register-
expires | replace-contact | route-to-registrar | aor-count |
auth-user | count-start | options | select | no | show | done |
exit>
```

**register-host**—Enter the registrar’s hostname to be used in the Request-URI of the REGISTER request

**register-user**—Enter the user portion of the Address of Record

**state**—Enable or disable this surrogate agent

*Default* enabled

*Values* enabled | disabled

**realm-id**—Enter the name of the realm where the surrogate agent resides

**description**—Describe the surrogate agent. This parameter is optional.

**customer-host**—Enter the domain or IP address of the IP-PBX, which is used to determine whether it is different than the one used by the registrar. This parameter is optional.

**customer-next-hop**—Enter the next hop to this surrogate agent

**register-contact-host**—Enter the hostname to be used in the Contact-URI sent in the REGISTER request

**register-contact-user**—Enter the user part of the Contact-URI that the Net-Net SBC generates

**password**—Enter the password to be used for this agent

**register-expires**—Enter the expire time in seconds to be used in the REGISTER

*Default* 600,000 (1 week)

*Values* Min: 0 / Max: 999999999

**replace-contact**—Specify whether the Net-Net SBC needs to replace the Contact in the requests coming from the surrogate agent

*Default* disabled

*Values* enabled | disabled

**route-to-registrar**—Enable or disable requests coming from the surrogate agent being routed to the registrar if they are not explicitly addressed to the Net-Net SBC

*Default* enabled



*Values* enabled | disabled

**aor-count**—Enter the number of registrations to do on behalf of this IP-PBX

*Default* 1

*Values* Min: 0 / Max: 999999999

**auth-user**—Enter the authentication user name you want to use for the surrogate agent

**max-register-attempt**—Enter the number of times to attempt registration; a 0 value means registration attempts are unlimited

*Default* 3

*Values* Min: 0 / Max: 10

**register-retry-time**—Enter the amount of time in seconds to wait before reattempting registration

*Default* 300

*Values* Min: 10 / Max: 3600

**count-start**—Enter the number of registrations to do on behalf of this IP-PBX

*Default* 1

*Values* Min: 0 / Max: 999999999

**options**—Enter non-standard options or features

**Path**

**surrogate-agent** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > surrogate-agent**.

**Release**

First appearance: 4.1; Last update: 5.1

## system-access-list

---

The **system-access-list** configuration element allows you to configure system access control of the management interface on your Net-Net SBC. Once configured, any access from hosts that are not part of the system access IP address or subnet are denied. When this element is not configured, any host can access management ports.

**Syntax**

```
system-access-list <source-address | netmask | description |
select | no | show | done | exit>
```

**source-address**—Enter the network source address

**netmask**—Enter the source subnet mask

**description**—Provide a brief description of this **system-access-list** configuration.

**Path**

**system-access-list** is an element of the system path. The full path from the topmost CLI prompt is: **configure terminal > system> system-access-list**.

**Release** First appearance: 5.0

**RTC Status** Supported

## system-config

---

The **system-config** element establishes general system information and settings.

### Syntax

```
system-config <hostname | description | location | mib-system-
contact | mib-system-name | mib-system-location | snmp-enabled |
enable-snmp-auth-traps | enable-snmp-syslog-notify | enable-snmp-
monitor-traps | enable-env-monitor-traps | snmp-syslog-his-
table-length | snmp-syslog-level | syslog-servers | system-log-
level | process-log-level | process-log-ip-address | process-log-
port | collect | default-gateway | restart | call-trace |
internal-trace | log-filter | remote-control | alarm-threshold |
exceptions | telnet-timeout | console-timeout | link-redundancy-
state | cli-audit-trail | source-routing | cli-more | terminal-
height | debug-timeout | trap-event-lifetime | options | select |
no | show | done | exit>
```

### Parameters

**hostname**—Enter the main hostname that identifies the Net-Net SBC. Entries must follow either the Hostname (or FQDN) Format or the IP Address Format.

**description**—Describe the Net-Net SBC. Entries must follow the Text Format.

**location**—Enter the physical location of the Net-Net SBC used for informational purposes. Entries must follow the Text Format.

**mib-system-contact**—Enter the contact information for this Net-Net SBC for SNMP purposes. This field value is the value reported for MIB-II when an SNMP GET is issued by the NMS. Entries must follow the Text Format.

**mib-system-name**—Enter the identification of the Net-Net SBC for SNMP purposes. This value has no relation to the **system-config > hostname** field. By convention, this is the node's FQDN. If this field remains empty, the Net-Net SBC name that appears in SNMP communications will be the target name configured in the boot parameters and nothing else.

**mib-system-location**—Enter the physical location of the Net-Net SBC for SNMP purposes. This parameter has no direct relation to the location field identified above. Entries must follow the Text Format.

**snmp-enabled**—Enable or disable SNMP is enabled. If SNMP is enabled, then the system will initiate the SNMP agent. If SNMP is disabled, then the SNMP agent will not be initiated, and the trap-receiver and snmp-community elements will not be functional.

*Default* enabled

*Values* enabled | disabled

**enable-snmp-auth-traps**—Enable or disable the SNMP authentication traps

*Default* disabled

*Values* enabled | disabled

**enable-snmp-syslog-notify**—Enable or disable sending syslog notifications to an NMS via SNMP; determines whether SNMP traps are sent when a Net-Net SBC generates a syslog message

*Default* disabled

*Values* enabled | disabled

**enable-snmp-monitor-traps**—Determine whether traps are sent out in ap-smgmt.mib trap. (See 400-0010-00, MIB Reference Guide for more information)

*Default* disabled

*Values* enabled | disabled

**enable-env-monitor-traps**—Determine whether the environmental monitoring MIB is sent from the Net-Net SBC. This trap will be sent any time there is a change in state in fan speed, temperature, voltage (SD 2 only), power supply (SD 1 for rev 1.32 or higher, SD 2 w/QoS for rev 1.32 or higher, SD II no QoS for rev 1.3 or higher), phy-card insertion, or I2C bus status. If this parameter is set to enabled, fan speed, temperature, and power supply notifications are not sent out in other traps.

*Default* disabled

*Values* enabled | disabled

**snmp-syslog-his-table-length**—Enter the maximum entries that the SNMP Syslog message table contains. The system will delete the oldest table entry and add the newest entry in the vacated space when the table reaches maximum capacity.

*Default* 1

*Values* Min: 1 / Max: 500

**snmp-syslog-level**—Set the log severity levels that send syslog notifications to an NMS via SNMP if snmp-syslog-notify is set to enabled

If the severity of the log being written is of equal or greater severity than the snmp-syslog-level value, the log will be written to the SNMP syslog history table.

If the severity of the log being written is of equal or greater severity than the snmp-syslog-level field value and if enabled-snmp-syslog-notify field is set to enabled, the system will send the syslog message to an NMS via SNMP.

If the severity of the log being written is of lesser severity than the snmp-syslog-level value, then the log will not be written to the SNMP syslog history table and it will be disregarded.

*Default* warning

*Values*

- emergency
- critical
- major
- minor
- warning

- notice
- info
- trace|
- debug
- detail

**syslog-servers**—Access the syslog-servers subelement

**system-log-level**—Set the system-wide log severity levels write to the system log

*Default* warning

- Values*
- emergency
  - critical
  - major
  - minor
  - warning
  - notice
  - info
  - trace
  - debug
  - detail

**process-log-level**—Set the default log level that processes running on the Net-Net SBC start

*Default* notice

- Values*
- emergency
  - critical
  - major
  - minor
  - warning
  - notice
  - info
  - trace
  - debug
  - detail

**process-log-ip-address**—Enter the IP address of server where process log files are stored. Entries must follow the IP Address Format. The default value of 0.0.0.0 causes log messages to be written to the local log file.

*Default* 0.0.0.0

**process-log-port**—Enter the port number associated with server IP address where process log files are stored. The default value of 0 writes log messages to the local log file.

*Default* 0

*Values* Min: 0; 1025 / Max: 65535

**default-gateway**—Enter the IP address of the gateway to use when IP traffic sent by the Net-Net SBC is destined for a network other than one of the LANs on which the 10/100 Ethernet interfaces could be. Entries must follow the IP Address Format. A value of 0.0.0.0 indicates there is no default gateway.

*Default* 0.0.0.0

**restart**—Enable or disable the Net-Net SBC rebooting when a task is suspended. When set to enabled, this field causes the Net-Net SBC to reboot automatically when it detects a suspended task. When this field is set to disabled and a task is suspended, the Net-Net SBC does not reboot.

*Default* enabled

*Values* enabled | disabled

**call-trace**—Enable or disable protocol message tracing for sipmsg.log for SIP and alg.log for MGCP

*Default* disabled

*Values* enabled | disabled

**internal-trace**— Enable or disable internal ACP message tracing for all processes

*Default* disabled

*Values* enabled | disabled

**log-filter**—Set to logs or all to send the logs to the log server

*Default* all

*Values*

- none
- traces
- traces-fork
- logs
- log-fork
- all
- all-fork

**remote-control**—Enable or disable listening for remote ACP config and control messages before disconnecting

*Default* enabled

*Values* enabled | disabled

**alarm-threshold**—Select the remote ACP control for user-configurable alarm-thresholds

*Values* type

- cpu
- memory
- session

*Values* severity

- minor
- major
- critical

*Values* value

**exceptions**—Select system tasks that have no impact on system health or cause the system to restart. This field contains the name(s) of the task(s) surrounded by quotation marks. If there are multiple entries, they should be listed within quotation marks, with each entry separated by a <Space>.

**telnet-timeout**—Enter the time in seconds the Net-Net SBC waits when there is no Telnet activity before an administrative telnet session is terminated. A value of 0 disables this functionality.

*Default* 0

*Values* Min: 0 / Max: 65535

**console-timeout**—Enter the time in seconds the Net-Net SBC waits when there is no activity on an ACLI administrative session before it terminates the session. The ACLI returns to the User Access Verification login sequence after it terminates a console session. A value of 0 disables this functionality.

*Default* 0

*Values* Min: 0 / Max: 65535

**link-redundancy-state**—Enable or disable the link redundancy

*Default* disabled

*Values* enabled | disabled

**collect**—Accesses the collect subelement

**cli-audit-trail**—Enable or disable the ACLI command audit trail

*Default* enabled

*Values* enabled | disabled

**source-routing**—Enable or disable source routing egress HIP packets based on source IP addresses

*Default* disabled

*Values* enabled | disabled

**cli-more**—Enable this parameter to have the ACLI “more” paging feature working consistently across console, Telnet, or SSH sessions with the Net-Net SBC. When this parameter is disabled, you must continue to set this feature on a per session basis.

*Default* disabled

*Values* enabled | disabled

**terminal-height**—Set the Net-Net SBC terminal height when the **more** prompt option is enabled

*Default* 24

*Values* Minimum: 5 / Maximum: 1000

**debug-timeout**—Enter the time, in seconds, you want to the Net-Net SBC to timeout log levels for system processes set to **debug** using the ACLI **notify** and **debug** commands. A value of 0 disables this parameter.

*Default* 0

*Values* Min: 0 / Max: 65535

**trap-event-lifetime**—Set this parameter to the number of days you want to keep the information in the alarm synchronization table; 0 turns alarm synchronization off

*Default* 0

*Values* Min: 0 / Max: 7

**options**—Enter any customer-specific features and/or parameters for this global system configuration. This parameter is optional.

**Notes**

Under the **system-config** element, options are not RTC supported.

**Path**

**system-config** is an element under the system path. The full path from the topmost ACLI prompt is: **configure terminal > system > system-config**.

**Release**

First appearance: 1.0 / Most recent update: 5.1

**RTC Status**

Supported

**Notes**

This is a single instance configuration element.

## system-config>collect

---

The **collect** configuration element allows you to configure general collection commands for data collection on the Net-Net SBC.

**Syntax**

```
collect <boot-state | sample-interval | push-interval | start-time | end-time | red-collect-state | red-max-trans | red-sync-start-time | red-sync-comp-time | push-receiver | group-settings | push-success-trap-state | select | no | show | done | exit>
```

**Parameters**

**sample-interval**—Enter the data collection sampling interval, in minutes

*Default* 0

*Values* Min: 1 / Max: 120

**push-interval**—Enter the data collecting push interval, in minutes

*Default* 0

*Values* Min: 0 / Max: 120

**start-time**—Enter the date and time to start data collection. Enter in the form of: yyyy-mm-dd-hh:mm:ss (y=year; m=month; d=day; h=hours; m=minutes; s=seconds)

*Default* now

**end-time**—Enter the date and time to stop data collection. Enter in the form of: yyyy-mm-dd-hh:mm:ss (y=year; m=month; d=day; h=hours; m=minutes; s=seconds)

*Default* never

**boot-state**—Enable or disable group collection on reboot

	<i>Default</i> disabled
	<i>Values</i> enabled   disabled
<b>Notes</b>	This parameter is not RTC supported.
	<b>red-collect-state</b> —Enable or disable HA support for the collection function
	<i>Default</i> disabled
	<i>Values</i> enabled   disabled
	<b>red-max-trans</b> —Enter the maximum number of redundancy sync transactions to keep on active
	<i>Default</i> 1000
	<i>Values</i> Min: 0 / Max: 999999999
	<b>red-sync-start-time</b> —Enter the time to start redundancy sync timeout, in milliseconds.
	<i>Default</i> 5000
	<i>Values</i> Min: 0 / Max: 999999999
	<b>red-sync-comp-time</b> —Enter the time to complete a redundancy sync, in milliseconds.
	<i>Default</i> 1000
	<i>Values</i> Min: 0 / Max: 999999999
	<b>push-receiver</b> —Access the <b>push-receiver</b> subelement
	<b>group-settings</b> —Access the <b>group-settings</b> subelement
	<b>push-success-trap-state</b> —Enable this parameter if you want the Net-Net SBC to send a trap confirming successful data pushes to HDR servers
	<i>Default</i> disabled
	<i>Values</i> enabled   disabled
<b>Path</b>	<b>collect</b> is a subelement of the system-config element. The full path from the topmost CLI prompt is: <b>configure terminal &gt; system &gt; system-config &gt; collect</b> .
<b>Release</b>	First appearance: 5.0
<b>RTC Status</b>	Supported

## system-config>collect>push-receiver

---

The **push-receiver** configuration subelement allows you to configure the Net-Net SBC to push collected data to a specified node.

**Syntax**

```
push-receiver <address | user-name | password | data-store |
protocol | select | no | show | done | exit>
```

**Parameters**

**address**—Enter the hostname or IP address to which the Net-Net SBC pushes collected data

**user-name**—Enter the login user name for the specified server used when pushing collected data



**password**—Enter the login password for the specified server used when pushing collected data

**data-store**—Enter a directory on the specified server in which to put collected data

**protocol**—Set the protocol with which to send HDR collection record files.

*Default* FTP

*Values* FTP | SFTP

#### Path

**push-receiver** is a subelement of the system-config>collect subelement. The full path from the topmost ACLI prompt is: **configure terminal > system > system-config > collect > push-receiver**.

#### Release

First appearance: 5.0

#### RTC Status

Supported

## system-config>collect>group-settings

---

The **group-settings** subelement allows you to configure and modify collection parameters for specific groups.

#### Syntax

```
group-settings <group-name | sample-interval | start-time | end-time | boot-state | select | no | show | done | exit>
```

#### Parameters

**group-name**—Enter the name of the object the configuration parameters are for. There can only be one object per group.

*Values*

- system
- interface
- session-agent
- session-realm
- voltage
- fan
- temperature
- sip-sessions
- sip-ACL-oper
- sip-ACL-status
- sip-client
- sip-server
- sip-policy
- sip-errors
- sip-status
- algd-state
- mgcp-trans
- mgcp-media-events
- mgcp-ACL
- algd-ACL
- h323-stats

*Values*

- system
- interface
- session-agent
- session-realm

- voltage
- fan
- temperature
- sip-sessions
- sip-ACL-oper
- sip-ACL-status
- sip-client
- sip-server
- sip-policy
- sip-errors
- sip-status
- algd-state
- mgcp-trans
- mgcp-media-events
- mgcp-ACL
- algd-ACL
- h323-stats

**sample-interval**—Enter the group data collection sampling interval, in minutes

*Default* 0

*Values* Min: 0 / Max: 120

**start-time**—Enter the date and time to start group data collection. Enter in the form of: yyyy-mm-dd-hh:mm:ss (y=year; m=month; d=day; h=hour; m=minute; s=second)

**end-time**—Enter the date and time to stop group data collection. Enter in the form of: yyyy-mm-dd-hh:mm:ss (y=year; m=month; d=day; h=hour; m=minute; s=second)

**boot-state**—Enable or disable data collection for this group.

*Default* disabled

*Values* enabled | disabled

**Path** group-settings is a subelement of the system-config>collect subelement. The full path from the topmost ACLI prompt is: **configure terminal > system > system-config > collect > group-settings**.

**Release** First appearance: 5.0

**RTC Status** Supported

## system-config > syslog-servers

---

The **syslog-servers** subelement configures multiple syslog servers.

**Syntax** `syslog-servers <address | port | facility | select | no | show | done | exit>`

**Parameters** **address**—Enter the syslog server's IP address

**port**—Enter the port number on the syslog server that the Net-Net SBC sends log

*Default* 514

**facility**—Enter the user-defined facility value sent in every syslog message from the Net-Net SBC to the syslog server. This value must conform to IETF RFC 3164.

*Default* 4

<b>Path</b>	<b>syslog-servers</b> is a subelement under the system-config element. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; system &gt; system-config &gt; syslog-servers</b> .
<b>Release</b>	First appearance: 1.2.1
<b>RTC Status</b>	Supported
<b>Notes</b>	We recommend configuring no more than 8 syslog-config subelements. This is a multiple instance configuration subelement.

## test-pattern-rule

---

The **test-pattern-rule** configuration element allows you to test the regular expression that you might use in SIP manipulation rules to see if it yields the results you require. This element is useful for testing the regex values that you devise because it will tell you whether that value is valid or not.

<b>Syntax</b>	<code>test-pattern-rule &lt;expression   string   show   exit&gt;</code>
<b>Parameters</b>	<p><b>expression</b>—Enter the regular expression that you want to test. The Net-Net SBC will inform you whether or not there is a match.</p> <p><b>string</b>—Enter the string against which you want to compare the regular expression</p> <p><b>show</b>—Show the test pattern you entered, whether there was a match, and the number of matches</p>
<b>Path</b>	<b>test-pattern-rule</b> is an element of the session-router path. The full path from the topmost ACLI prompt is: <b>configure terminal &gt; session-router &gt; test-pattern-rule</b> .
<b>Release</b>	First appearance: 5.0
<b>RTC Status</b>	Supported
<b>Notes</b>	The <b>test-pattern-rule</b> element can also be configured in Superuser mode as a command.

## test-policy

---

The **test-policy** element tests and displays local policy routes from the ACLI.

<b>Syntax</b>	<code>test-policy &lt;source-realm   from-address   to-address   time-of-day   carriers   media-profiles   show   exit&gt;</code>
<b>Parameters</b>	<b>source-realm</b> —Enter the name set in the source-realm field of a configured local policy. Entering an "*" in this field matches for any source realm. Leaving the field empty indicates that only the "global" realm will be tested.

**from-address**—Enter the “from” address of the local policy to look up/test. From addresses should be entered as SIP-URLs in the form of  
 sip: 19785551212@netnetsystems. com.

**to-address**—Enter the “to” address of the local policy to look up/test. To addresses should be entered as SIP-URLs in the form of  
 sip: 19785551212@netnetsystems. com.

**time-of-day**—Enable or disable use of the time of day value set in the start-time and end-time fields you set in configured local-policy elements

*Values* enabled | disabled

**carriers**—Enter the names of permitted carriers set in the carriers fields set in configured local-policy elements. This field is formatted as a list of comma-separated text strings enclosed in quotation marks.

**media-profile**—Enter a list of media profiles

**show**—Show the next hop and the associated carrier information for all routes matching the “from” and “to” addresses entered

**Path**

Type **test-policy** at the topmost CLI prompt.

**Release**

First appearance: 1.0 / Most recent update: 1.2.1

**RTC Status**

Supported

**Notes**

Type the show command to perform the actual test lookup after parameters have been entered.

The **test-policy** element can also be configured in Superuser mode as a command.

## test-translation

---

The **test-translation** element tests translation rules configured for the Address Translation feature.

**Syntax**

test-translation <called-address | calling-address | translation-id | exit | show>

**Parameters**

**called-address**—Enter the address on which the called rules will be applied. This entry is required.

**calling-address**—Enter the address on which the calling rules will be applied. This entry is required.

**translation-id**—Enter the translation rules to test. This entry is required.

**show**—Show results of translation

**Path**

Type **test-translation** at the topmost CLI prompt.

**Release**

First appearance: 1.3

**RTC Status**

Supported.

**Notes** The **test-translation** element can also be configured in Superuser mode as a command.

## tls-global

---

The **tls-global** configuration element allows you to configure global TLS parameters.

**Syntax** `tls-global <session-caching | session-cache-timeout | select | no | show | done | exit>`

**Parameters**

**session-caching**—Enable or disable the Net-Net SBC’s session caching capability  
*Default* disabled  
*Values* enabled | disabled

**session-cache-timeout**—Enter the session cache timeout in hours  
*Default* 12  
*Values* Min: 0 (disabled) / Max: 24

**Path** **tls-global** is an element of the security path. The full path from the topmost ACLI prompt is: **configure terminal > security> tls-global**.

**Release** First appearance: 5.0

**RTC Status** Supported

## tls-profile

---

The **tls-profile** configuration element holds the information required to run SIP over TLS.

**Syntax** `tls-profile <name | end-entity-certificate | trusted-ca-certificates | cipher-list | verify-depth | mutual-authenticate | tls-version | select | no | show | done | exit>`

**name**—Enter the name of the TLS profile

**end-entity-certificate**—Enter the name of the entity certification record

**trusted-ca-certificates**—Enter the names of the trusted CA certificate records

**cipher-list**—Enter the default ALL, or enter a list of supported ciphers which you can find in the TLS section of the *Net-Net 4000 ACLI Configuration Guide’s Security* chapter. As of Release S-C6.1.0, TLSv1 and SSLv3 have been removed made redundant by the **tls-version** parameter).

*Default* all

**verify-depth**—Enter the maximum depth of the certificate chain that will be verified

*Default* 10  
*Values* Min: 0 / Max: 10

**mutual-authenticate**—Enable or disable mutual authentication on the Net-Net SBC

*Default* disabled  
*Values* enabled | disabled

**tls-version**—Enter the TLS version you want to use with this TLS profile

*Default* compatability  
*Values* TLSv1 | SSLv3 | compatability

**Mode** Superuser

**Path** **tls-profile** is an element under the security path. The full path from the topmost prompt is: **configure terminal > security > tls-profile**.

**Release** First appearance: 4.1; Most recent update S-C6.1.0

**RTC Status** Supported

## translation-rules

---

The **translation-rules** element creates unique sets of translation rules to apply to calling and called party numbers. The fields within this element specify the type of translation to be performed, the addition for deletion to be made, and where in the address that change should be made.

**Syntax** `translation-rules <id | type | add-string | add-index | delete-string | delete-index | select | no | show | done | exit>`

**Parameters** **id**—Enter the identifier or name for this translation rule. This field is required.

**type**—Select the address translation type to be performed

*Default* none

*Values*

- add—Adds a character or string of characters to the address
- delete—Deletes a character or string of characters from the address
- replace—Replaces a character or string of characters within the address
- none—Translation rule is disabled

**add-string**—Enter the string to be added during address translation to the original address. The value in this field should always be a real value; i.e., this field should not be populated with at-signs (@) or dollar-signs (\$).

When the type is set to **replace**, this field is used in conjunction with the **delete-string** value. The value specified in the **delete-string** field is deleted and the value specified in the **add-string** field is inserted. If no value is specified in the **delete-string** field and the type field is set to **replace**, then nothing will be inserted into the address.

*Default* blank string

**add-index**—Enter the location in the original address where the string specified in the add-string value is inserted. This value is the character position starting at 0 to insert the add-string value.

When a dollar-sign (\$) is used for the add-index, it appends the add-string to the end of the number. This is represented by “999999999” when a show is performed.

*Default* 0

*Values* Min: 0 / Max: 999999999

**delete-string**—Enter the string to be deleted from the original address during address translation. Unspecified characters are denoted by the at-sign symbol (@).

When the type is set to `replace`, this value is used in conjunction with the add-string value. The value specified in the delete-string field is deleted and the value specified in the add-string field is inserted. If no value is specified in the delete-string parameter and the type field is set to `replace`, then nothing will be inserted into the address.

*Default* blank string

**delete-index**—Enter the location in the address to delete the string specified in the delete-string field. This value of this field is the character position starting at 0 to insert the add-string value. This is not used when only deleting a given string.

*Default* 0

*Values* Min: 0 / Max: 999999999

#### Path

**translation-rules** is an element under the session-router path. The full path from the topmost CLI prompt is: **configure terminal > session-router > translation-rules**.

#### Release

First appearance: 1.3

#### RTC Status

Supported

#### Notes

You can delete unspecified characters from an original address by using the at-sign (@).

This is a multiple instance configuration element.

## trap-receiver

---

The **trap-receiver** element defines the NMSs to which the Net-Net SBC sends SNMP traps for event reporting.

#### Syntax

```
trap-receiver <ip-address | filter-level | community-name |
select | no | show | done | exit>
```

#### Parameters

**ip-address**—Enter the IP address and port for an NMS. If no port value is specified, the Net-Net SBC uses a default port of 162. This required field must follow the IP Address format.

**filter-level**—Set the filter level for the NMS identified within this trap-receiver element

*Default* critical

- Values*
- All—All alarms, syslogs, and other traps will be trapped out. That is, the corresponding NMS will receive informational, warning, and error events.
  - Minor—All syslogs generated with a severity level greater than or equal to MINOR and all alarms generated with a severity level greater than or equal to MINOR will be trapped out
  - Major—All syslogs generated with a severity level greater than or equal to MAJOR and all alarms generated with a severity level greater than or equal to MAJOR will be trapped out
  - Critical—Syslogs generated with a severity level greater than or equal to CRITICAL and all alarms generated with a severity level greater than or equal to CRITICAL will be trapped out

**community-name**—Enter the name of the community to which a particular NMS belongs. This required entry must follow the Name format.

**Path**

**trap-receiver** is an element under the system path. The full path from the topmost CLI prompt is: **configure terminal > system > trap-receiver.**

**Release**

First appearance: 1.0 / Most recent update: 1.3

**RTC Status**

Unsupported

**Notes**

This is a multiple instance configuration element.



# 6

# ACLI Command Summary

## ACLI Commands

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Command	Mode	Notes
acl-show	Superuser	
acquire-config	Superuser	
activate-config	Superuser	
archives	User	multi-parameter
arp-add	Superuser	
arp-check	Superuser	
arp-delete	Superuser	
backup-config	Superuser	
check-space-remaining	Superuser	
check-stack	Superuser	
clear-alarm	Superuser	
clear-cache	Superuser	multi-parameter
clear-deny	Superuser	
clear-sess	Superuser	multi-parameter
clear-trusted	Superuser	
cli	User	
configure	Superuser	
delete-backup-config	Superuser	
delete-config	Superuser	
delete-status-file	Superuser	
display-alarms	User	
display-backups	User	
display-current-cfg-version	User	
display-logfiles	User	
display-running-cfg-version	User	
enable	User	

<b>Command</b>	<b>Mode</b>	<b>Notes</b>
exit	User	
generate-certificate-request	User	
generate-key	User	
import-certificate	User	
kill	Superuser	
load-image	Superuser	
log-level	Superuser	
management	Superuser	
monitor	User	
notify	Superuser	
packet-capture	Superuser	
packet-trace	Superuser	multi-parameter
password-secure-mode	Superuser	
ping	User	
prompt-enabled	Superuser	
realm-specifics	User	
reboot	Superuser	
regenerate-config	Superuser	
request	Superuser	multi-parameter
reset	Superuser	
restore-backup-config	Superuser	
save-config	Superuser	
secret	Superuser	
set-front-interface	Superuser	
set-system-state	Superuser	
show	User	multi-parameter
ssh-password	Superuser	
ssh-pub-key	Superuser	
stack	Superuser	
stop-task	Superuser	
switchover-redundancy-link	Superuser	
syslime-set	Superuser	

Command	Mode	Notes
tail-logfile-close	Superuser	
tail-logfile-open	Superuser	
tcb	Superuser	
test-pattern-rule	User	multi-parameter
test-policy	User	multi-parameter
test-translation	User	multi-parameter
timezone-set	Superuser	
verify-config	Superuser	
watchdog	User	

## Multi-parameter ACLI Commands

The archives, test-policy, test-translation, and show commands are multi-parameter commands. This means that the command's functionality is dependent on the first argument you pass to it.

Command	Parameter
archives	create
	delete
	display
	exit
	extract
	get
	rename
	send
clear-cache	dns
	enum
	tls
	registration
clear-sess	h323d
	sipd
packet-trace	start
	stop

Command	Parameter
request	audit
	collection
test-pattern-rule	expression
	string
	show
	exit
test-policy	carriers
	exit
	from-address
	media-profiles
	show
	source-realm
	time-of-day
	to-address
test-translation	called-address
	calling-address
	exit
	show
	translation-id
show	about
	acl
	algd
	arp
	backup-config
	buffers
	call-recording-server
	certificates
	clock
	configuration
	dns
	enum
	ext-band-mgr

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**ext-clf-svr**  
**features**  
**h323d**  
**health**  
**hosts**  
**interfaces**  
**ip**  
**logfile**  
**loglevel**  
**lrt**  
**mbcd**  
**media**  
**memory**  
**mgcp**  
**monthly-minutes**  
**nat**  
**net-management-control**  
**nsep**  
**packet-trace**  
**power**

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**privilege**  
**processes**  
**prom-info**  
**qos**  
**radius**  
**ramdrv**  
**realm**  
**redundancy**  
**registration**  
**route-stats**  
**routes**  
**running-config**  
**security**

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**sessions**  
**sipd**  
**snmp-community-table**  
**support-info**  
**system-state**  
**temperature**  
**trap-receiver**  
**uptime**  
**users**  
**version**  
**virtual-interfaces**  
**voltage**

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