Cisco Service Control Engine (SCE)

CLI Command Reference

Version 3.0.3
OL-7825-04

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Customer Order Number: DOC-7825-04=
Text Part Number: OL-7825-04

Printed in the USA on recycled paper containing 10% postconsumer waste.

*Cisco **SCE** CLI Command Reference*

CONTENTS

Preface

This guide contains Command-Line Interface (CLI) commands to maintain the SCE platform. This guide assumes a basic familiarity with telecommunications equipment and installation procedures.

Throughout the book, the procedures shown are examples of how to perform typical SCE platform management functions. Because of the large number of functions available, not every possible procedure is documented in the instructional chapters. The *CLI Command Reference* (on page 2-1) provides a complete listing of all possible commands. The other chapters provide examples of how to implement the most common of these commands, general information on the interrelationships between the commands and the conceptual background of how to use them.

Document Revision History

Cisco Service Control Release	Part Number	Publication Date
Release 3.0.3	OL-7825-04	May, 2006

DESCRIPTION OF CHANGES

Added CLI commands related to the following new features:

- MPLS/VPN support
- VLAN translation
- VAS over 10G

Cisco Service Control Release	Part Number	Publication Date
Release 3.0	OL-7825-03	December, 2005

DESCRIPTION OF CHANGES

Added CLI commands related to the following new features:

- Value Added Services traffic forwarding
- TACACS+ authentication, authorization and accounting
- Management port redundancy

Release 2.5.7	OL-7825-02	August, 2005

DESCRIPTION OF CHANGES

Complete reorganization and revision of product documentation.

Audience

This guide is intended for the networking or computer technician responsible for configuring and maintaining the SCE platform on-site. It is also intended for the operator who manages the SCE platform(s). This guide does not cover high-level technical support procedures available to Root administrators and Cisco technical support personnel.

Organization

This guide covers the following topics:

Chapter	Title	Description
Chapter 1	*Command Line Interface* (on page 1-1)	Describes how to use the SCE platform Command-Line Interface (CLI), its hierarchical structure, authorization levels and its help features.
Chapter 2	*CLI Command Reference* (on page 2-1)	Provides an alphabetical list of the available CLI commands that you can use to configure the SCE platform.

Related Publications

This *Cisco Service Control Engine (SCE) CLI Command Reference* should be used in conjunction with the following SCE platform manuals to provide a detailed explanation of the commands:

- *SCE 2000 4xGBE Installation and Configuration Guide*
- *SCE 2000 4/8xFBE Installation and Configuration Guide*
- *SCE 1000 2xGBE Installation and Configuration Guide*
- *Cisco Service Control Engine (SCE) Software Configuration Guide*

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Commands and keywords are in **boldface**.
italic font	Arguments for which you supply values are in *italics*.
[ ]	Elements in square brackets are optional.

Convention	Description
{x | y | z}	Alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string, or the string will include the quotation marks.
`screen` font	Terminal sessions and information the system displays are in `screen` font.
`boldface screen` font	Information you must enter is in **`boldface screen`** font.
`italic screen` font	Arguments for which you supply values are in *`italic screen`* font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Notes use the following conventions:

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

Cautions use the following conventions:

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

Warnings use the following conventions:

Warning Means *reader be warned.* You are capable of doing something that might result in bodily injury.

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The following sections provide sources for obtaining documentation from Cisco Systems.

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You can access the most current Cisco documentation on the World Wide Web at the following sites:

- *http://www.cisco.com*
- *http://www-china.cisco.com*
- *http://www-europe.cisco.com*

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Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

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- Registered Cisco Direct Customers can order Cisco Product documentation from the networking Products MarketPlace:

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- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

  http://www.cisco.com/pcgi-bin/marketplace/welcome.pl

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

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To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides *Cisco.com* (on page xv) as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

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To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for *Cisco.com* (on page xv), go to the following website:

http://tools.cisco.com/RPF/register/register.do

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

Command-Line Interface

This chapter describes how to use the SCE platform Command-Line Interface (CLI), its hierarchical structure, authorization levels and its help features. The Command-Line Interface is one of the SCE platform management interfaces.

This chapter contains the following sections:

The CLI is accessed through a Telnet session or directly via the console port on the front panel of the SCE platform. When you enter a Telnet session, you enter as the simplest level of user, in the User Exec mode.

The SCE platform supports up to six concurrent CLI sessions; five sessions initiated by Telnet connection, and one session on the console port.

Getting Help

To obtain a list of commands that are available for each command mode, enter a question mark (?) at the system prompt. You also can obtain a list of keywords and arguments associated with any command using the context-sensitive help feature.

The following table lists commands you can enter to get help that is specific to a command mode, a command, a keyword, or an argument.

Table 1-1 Getting Help

Command	Purpose
abbreviated-command-entry?	Obtain a list of commands that begin with a particular character string. (Do not leave a space between the command and question mark.)
abbreviated-command-entry<Tab>	Complete a partial command name.
?	List all commands available for a particular command mode.
command ?	List the keywords associated with the specified command. Leave a space between the command and question mark.
command keyword ?	List the arguments associated with the specified keyword. Leave a space between the keyword and question mark.

Authorization and Command Levels (Hierarchy)

When using the CLI there are two important concepts that you must understand in order to navigate:

- **Authorization Level —** Indicates the level of commands you can execute. A user with a simple authorization level can only view some information in the system, while a higher level administrator can actually make changes to configuration.

  This manual documents commands at the User, Viewer, and Admin authorization level. See CLI Command Hierarchy.

- **Command Hierarchy Level —** Provides you with a context for initiating commands. Commands are broken down into categories and you can only execute each command within the context of its category. For example, in order to configure parameters related to the Line Card, you need to be within the LineCard Interface Configuration Mode. See CLI Command Hierarchy.

The following sections describe the available Authorization and Command Hierarchy Levels and how to maneuver within them.

The on-screen prompt indicates both your authorization level and your command hierarchy level, as well as the assigned host name. See *Prompt Indications* (on page 1-7).

Note Throughout the manual, ***SCE*** is used as the sample host name.

CLI Command Hierarchy

The set of all CLI commands is grouped in hierarchical order, according to the type of the commands. The first three levels in the hierarchy are the User Exec, Viewer, and Privileged Exec modes. These are non-configuration modes in which the set of available commands enables the monitoring of the SCE platform, file system operations, and other operations that cannot alter the configuration of the SCE platform.

The next levels in the hierarchy are the Global and Interface configuration modes, which hold a set of commands that control the global configuration of the SCE platform and its interfaces. Any of the parameters set by the commands in these modes should be saved in the startup configuration, such that in the case of a reboot, the SCE platform restores the saved configuration.

The following table shows the available CLI modes.

Table 1-2 CLI Modes

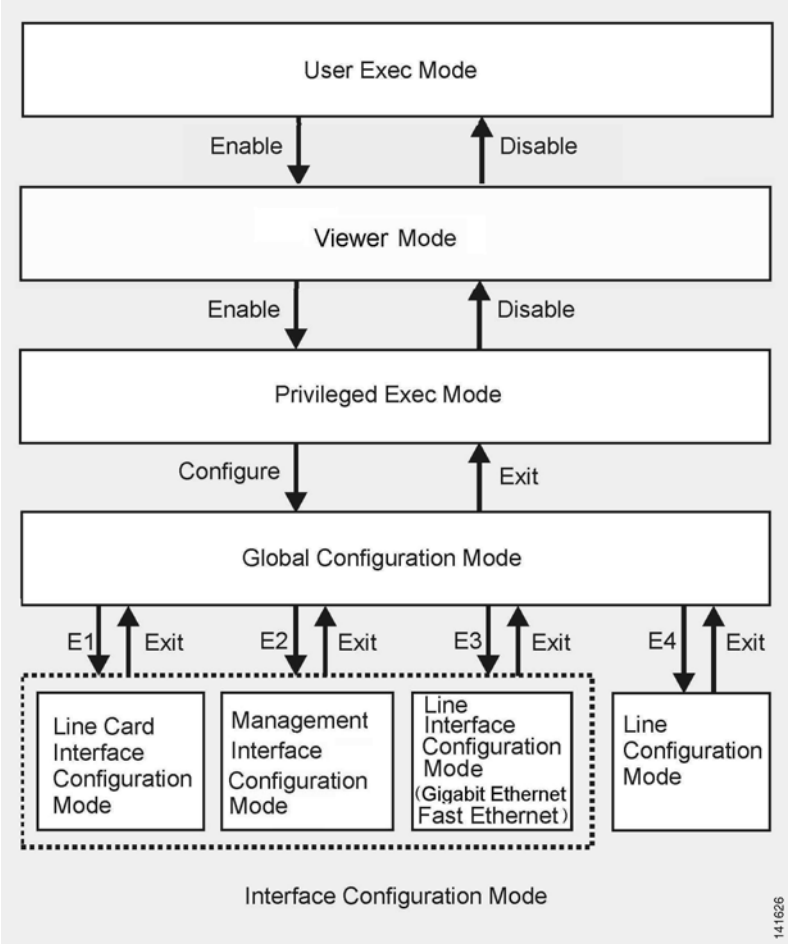
Mode	Description	Level	Prompt indication
User Exec	Initial mode with very limited functionality.	User	***SCE***>
Viewer	Monitoring (show commands).	Viewer	***SCE***>
Privileged Exec	General administration; file system manipulations and control of basic parameters that do not change the configuration of the SCE platform.	Admin	***SCE***#
Global Configuration	Configuration of general system parameters, such as DNS, host name, and time zone.	Admin	***SCE***`(config)#`
Management Interface Configuration	Configuration of management interface parameters, such as the Ethernet interface properties and selection of the active port.	Admin	***SCE***`(config if)#`
Interface Configuration	Configuration of specific system interface parameters, such as the Line Card, and the Ethernet interfaces.	Admin	***SCE***`(config if)#`
Line Configuration	Configuration of Telnet lines, such as an access-list.	Admin	***SCE***`(config-line)#`

When you login to the system, you have the User authorization level and enter User Exec mode. Changing the authorization level to Viewer automatically moves you to Viewer mode. In order to move to any of the configuration modes, you must enter commands specific to that mode.

The list of available commands in each mode can be viewed using the question mark '?' at the end of the prompt.

The figure below, illustrates the hierarchical structure of the CLI modes, and the CLI commands used to enter and exit a mode.

Figure 1-1: CLI Command Hierarchy



The following commands are used to enter the different configure interface modes and the Line Configuration Mode:

- E1 **interface LineCard 0**
- E2 **interface Mng** *0/1* or *0/2* (management port, all platforms)
- E3 **interface GigabitEthernet** *0/1* or *0/2* (line ports, SCE 1000 platform)
- E3 **interface GigabitEthernet** *0/1, 0/2, 0/3,* or *0/4* (line ports, SCE 2000 4xGBE platform)
- E3 **interface FastEthernet** *0/1, 0/2, 0/3, or 0/4* (line ports, SCE 2000 4/8xFE platform)
- E4 **line vty 0**

Note Although the system supports up to five concurrent Telnet connections, you cannot configure them separately. This means that any number you enter in the **`line vty`** command (**0**, **1**, **2**, **3** or **4**) will act as a **0** and configure all five connections together.

Note In order for the auto-completion feature to work, when you move from one interface configuration mode to another, you must first exit the current interface configuration mode (as illustrated in the above figure).

EXAMPLE:

This example illustrates moving into and out of configuration modes as follows:

- Enter global configuration mode
- Configure the SCE platform time zone
- Enter Mng Interface configuration mode for Mng port 1
- Configure the speed of the management interface
- Exit the Mng Interface configuration mode to the global configuration mode
- Enter the LineCard Interface configuration
- Define the link mode.
- Exit LineCard Interface configuration mode to the global configuration mode
- Exit global configuration mode

```
SCE#configure
SCE(config)#clock timezone PST -10
SCE(config)#interface Mng 0/1
SCE(config if)#speed 100
SCE(config if)#exit
SCE(config)#interface LineCard 0
SCE(config if)#link-mode all-links forwarding
SCE(config if)#exit
SCE(config)#exit
SCE#
```

CLI Authorization Levels

The SCE platform has four authorization levels, which represent the user access permissions. When you initially connect to the SCE platform, you automatically have the most basic authorization level, that is User, which allows minimum functionality.

In order to monitor the system, you must have Viewer authorization, while in order to perform administrative functions on the SCE platform, you must have Admin or Root authorization. A higher level of authorization is accessed by logging in with appropriate password, as described in the procedures below.

In each authorization level, all the commands of the lower authorization layers are available in addition to commands that are authorized only to the current level.

Note This manual covers the functions that can be performed by the Admin level user, unless otherwise noted.

The following CLI commands are related to authorization levels:

- `enable`
- `disable`

Each authorization level has a value (number) corresponding to it. When using the CLI commands, use the values, not the name of the level, as shown in the following table.

Table 1-3 Authorization Levels

Level	Description	Value	Prompt
User	Password required. This level enables basic operational functionality.	0	>
Viewer	Password required. This level enables monitoring functionality. All show commands are available to the Viewer authorization level, with the exception of those that display password information.	5	>
Admin	Password required. For use by general administrators, the Admin authorization level enables configuration and management of the SCE platform.	10	#
Root	Password required. For use by technical field engineers, the Root authorization level enables configuration of all advanced settings, such as debug and disaster recovery. The Root level is used by technical engineers only and is not documented in this manual.	15	#>

To change from User to Viewer level authorization:

Step 1 From the ***SCE>*** prompt, type **`enable 5`** and press **Enter**.

The system prompts for a password by showing the prompt `Password`:

Step 2 Type in the password for the Viewer level and press **Enter**.

Note that the password is an access-level authorization setting, not an individual user password.

The system prompt ***SCE>*** does not change when you move from User to Viewer level.

A telnet session begins with a request for password, and will not continue until the proper user password is supplied. This enhances the security of the system by not revealing its identity to unauthorized people.

To log in with Admin level authorization:

Step 1 Initiate a telnet connection.

Step 2 A `Password:` prompt appears. Type in the user level password and press **Enter**.

The ***SCE>*** prompt appears.

You now have user level authorization.

Step 3 From the ***SCE>*** prompt, type **`enable 10`** and press **Enter**.

The system prompts for a password by showing the prompt `Password`:

Step 4 Type in the password for the Admin level and press **Enter**.

Note that the password is an access-level authorization setting, not an individual user password.

The system prompt changes to ***SCE#*** to show you are now in Admin level.

EXAMPLE:

The following example illustrates how to change the authorization level from User to Admin, and then revert back to Viewer. No password is required for moving to a lower authorization level.

```
SCE>enable 10
Password:  cisco
SCE#disable
SCE>
```

Prompt Indications

The on-screen prompt indicates your authorization level, your command hierarchy level, and the assigned host name. The structure of the prompt is:

`<hostname(mode-indication)level-indication>`

Authorization levels are indicated as follows:

This prompt...	Indicates this...
>	indicates User and Viewer levels
#	indicates Admin level
#>	indicates Root level

Command hierarchy levels are indicated as follows:

This command hierarchy...	Is indicated as...
User Exec	***SCE>***
Privileged Exec	***SCE#***

This command hierarchy...	Is indicated as...
Global Configuration	***SCE***`(config)#`
Interface Configuration	***SCE***`(config if)#`
Line Configuration	***SCE***`(config-line)#`

EXAMPLE:

The prompt `My`***SCE***`(config if)#` indicates:

- The name of the SCE platform is `My`***SCE***
- The current CLI mode is Interface configuration mode
- The user has Admin authorization level

Exiting Modes

This section describes how to revert to a previous mode.

- To exit from one authorization level to the previous one, use the **disable** command.
- To exit from one mode to another with the Admin authorization level (these are the various configuration modes), use the **exit** command.

To exit from the Privileged Exec mode and revert to the Viewer mode:

At the ***SCE***# prompt, type **`disable`**, and press **Enter**.

The ***SCE>*** prompt for the Viewer and User Exec mode appears.

To exit from the Global Configuration Mode:

At the ***SCE***`(config)#` prompt, type **`exit`**, and press **Enter**.

The appropriate prompt for the previous level appears.

EXAMPLE:

The following example shows the system response when you exit the Interface Configuration mode.

```
SCE(config if)#exit
SCE(config)#
```

Navigating Between Configuration Modes

Entering and Exiting Global Configuration Mode

To enter the Global Configuration Mode:

At the ***SCE***# prompt, type **`configure`**, and press **Enter**.

The ***SCE***(config)# prompt appears.

To exit the Global Configuration Mode:

At the ***SCE***(config)# prompt, type exit and press **Enter**.

The ***SCE***# prompt appears.

Interface Configuration Modes

The components that are configured by the Interface Configuration Modes are:

- Card
  - LineCard — **`Interface LineCard 0`**

    The LineCard interface configures the main functionality of viewing and handling traffic on the line.
- Ports
  - See *Configuring the Physical Ports* (on page 1-9)
- Telnet
  - Line Configuration Mode — **`Line vty 0`**

    The Line Configuration Mode enables you to configure Telnet parameters.

Configuring the Physical Ports

The SCE platform contains the following physical port interfaces:

- Management:

  `Interface Mng 0/1 or 0/2`

  The Management Interface mode configures the settings for the interface to a remote management console. The two management ports support management interface redundancy.

  The following commands are used to configure the management port:

- *ip address* (on page 2-85)
- *duplex* (on page 2-302)
- *speed* (on page 2-302)
- active-port (SCE 2000 platform only)
- fail-over

- Fast Ethernet (SCE 2000 4/8xFE):

  Interface FastEthernet 0/1, 0/2, 0/3, or 0/4

  The FastEthernet Interface mode configures the settings for the FastEthernet interface to the Internet traffic on the wire. Each of the four ports can be set individually.

  The following commands are used to configure the Fast Ethernet line ports:

  - *bandwidth* (on page 2-302)
  - *duplex* (on page 2-67)
  - *queue* (on page 2-302)
  - *speed* (on page 2-302)

- Gigabit Ethernet (SCE 1000 platform):

  Interface GigabitEthernet 0/1, or **0/2**

  The GigabitEthernet Interface mode configures the settings for the GigabitEthernet interface to the Internet traffic on the wire. Each of the two ports can be set individually.

- Gigabit Ethernet (SCE 2000 4xGBE platform):

  Interface GigabitEthernet 0/1, 0/2, 0/3, or 0/4

  The GigabitEthernet Interface mode configures the settings for the GigabitEthernet interface to the Internet traffic on the wire. Each of the four ports can be set individually.

  The following commands are used to configure the Gigabit Ethernet line ports:

  - *auto-negotiate (GigabitEthernet only)* (on page 2-26)
  - *bandwidth* (on page 2-141)
  - *queue* (on page 2-141)

Note You must specify the slot number/interface number when referencing any interface. The slot number is always 0, and the interfaces are numbered as follows:
Management Interface: **1,2**
Ethernet Line Interfaces:
SCE 1000 platform: **1,2**
SCE 2000 platform: **1,2,3,4**

Entering Management Interface Configuration Mode

Before you can configure the parameters for the management interface, you must be in the Mng Interface Configuration Mode.

To enter Mng Interface Configuration Mode, perform the following steps:

Step 1 To enter Global Configuration Mode, type **`configure`** and press **Enter**.

The ***SCE***`(config)#` prompt appears.

Step 2 Type **`interface Mng [0/1|0/2]`** and press **Enter**.

The ***SCE***`(config if)#` prompt appears.

The system prompt changes to reflect the higher level mode.

To return to the Global Configuration mode, use the following command:

Type **`exit`**.

Entering LineCard Interface Configuration Mode

The following procedure is for entering Line Card Interface Configuration mode. The procedures for entering the other interfaces are the same except for the interface command as described above and in *CLI Command Reference* (on page 2-1).

To enter LineCard Interface Configuration mode:

Step 1 To enter Global Configuration Mode, at the ***SCE#*** prompt, type **`configure`**, and press **Enter**.

The ***SCE***`(config)#` prompt appears.

Step 2 Type **`interface LineCard`** 0, and press **Enter**.

The ***SCE***`(config if)#` prompt appears.

Step 3 To return to Global Configuration Mode, type **`exit`** and press **Enter**.

The ***SCE***`(config)#` prompt appears.

Step 4 To exit Global Configuration Mode, type **`exit`** and press **Enter**.

The ***SCE#*** prompt appears.

Entering Ethernet Line Interface Configuration Mode

Entering the Fast Ethernet Line Interface Configuration Mode

To enter the FastEthernet Interface Configuration Mode:

Step 1 To enter Global Configuration Mode, type **configure** and press **Enter**.

The ***SCE***(config)# prompt appears.

Step 2 For the SCE 2000, type **interface FastEthernet [0/1|0/2|0/3|0/4]** and press **Enter**.

The ***SCE***(config if)# prompt appears.

EXAMPLE:

The following example shows how to enter Configuration Mode for the FastEthernet Interface number 3.

```
SCE(config)#interface FastEthernet 0/3
SCE(config if)#
```

Entering the Gigabit Ethernet Line Interface Configuration Mode

To enter the GigabitEthernet Interface Configuration Mode:

Step 1 To enter Global Configuration Mode, type **configure** and press **Enter**.

The ***SCE***(config)# prompt appears.

Step 2 For the SCE 1000, type **interface GigabitEthernet [0/1|0/2]** and press **Enter**.

Step 3 For the SCE 2000, type **interface GigabitEthernet [0/1|0/2|0/3|0/4]** and press **Enter**.

The ***SCE***(config if)# prompt appears.

EXAMPLE:

The following example shows how to enter Configuration Mode for the GigabitEthernet Interface number 2.

```
SCE(config)#interface GigabitEthernet 0/2
SCE(config if)#
```

Navigating between the Interface Configuration Modes

To navigate from one Interface Configuration Mode to another:

Step 1 Type **exit**.

You are returned to the Global Configuration Mode.

Step 2 Type the appropriate command to enter a different Interface Configuration Mode.

The "do" Command: Executing Commands Without Exiting

There are four configuration command modes:

- Global configuration mode
- Management interface configuration mode
- Interface configuration mode
- Line configuration mode

When you are in one of these configuration modes, it is possible to execute an EXEC mode command (such as a show command) or a privileged EXEC (such as **show running-config**) without exiting to the relevant command mode. Use the 'do' command for this purpose.

To execute an exec mode command from a configuration command mode, use the following command:

At the ***SCE***`config#` (or ***SCE***`config if#`) prompt, type **do <*command*>**.

The specified command executes without exiting to the appropriate exec command mode.

EXAMPLE

The following example shows how to display the running configuration while in interface configuration mode.

```
SCEconfig if# do show running-config
```

CLI Help Features

CLI provides context sensitive help. Two types of context sensitive help are supported:

- Partial help
- Argument help

Partial Help

To obtain a list of commands that begin with a particular character string, enter the abbreviated command entry immediately followed by a question mark (?). This form of help is called partial help, because it lists only the keywords or arguments that begin with the abbreviation you entered.

EXAMPLE:

The following example illustrates how typing **c?** displays all available arguments that start with the letter c.

```
SCE(config)#snmp-server c?
Community          contact
SCE(config)#snmp-server c
```

Argument Help

To obtain a list of command's associated keywords or parameters, type a question mark (?) in place of a keyword or parameter on the command line.

Note that if <**Enter**> is acceptable input, the symbol <cr> represents the **Enter** key.

EXAMPLE:

The following example illustrates how to get a list of all arguments or keywords expected after the command **snmp-server**.

```
SCE(config)#snmp-server ?
Community     Define community string
Contact       Set system contact
Enable        Enable the SNMP agent
Host          Set traps destination
Location      Set system location
SCE(config)# snmp-server
```

When asking for help on particular parameter, the system informs you of the type of data that is an accepted legal value. The types of parameters supported are:

STRING	When a String is expected, you can enter any set of characters or digits. If the string has a space as one of its characters, use double-quote (") marks to enclose the string.
DECIMAL	Any decimal number. Positive number is assumed, for negative numbers use the "–" symbol.
HEX	A hexadecimal number; must start with either 0x or 0X.

EXAMPLE:

The following example illustrates the use of **?** to get help on commands syntax. In this example, you can enter either the word **running-config**, or any name of a file, after the word **copy**.

```
SCE#copy ?
   running-config       Copy running configuration file
   STRING               Source file name
SCE#copy
```

The [no] Prefix

Many CLI commands offer the option of adding the word **no** before the command to disable the feature controlled by the command or revert it to its default configuration. This notation is shown in the *CLI Command Reference* (on page 2-1) as **[no]** to denote it is optional.

For example, **no service telnetd** disables the telnet server. Enabling the telnet server is done by typing **service telnetd**.

Navigational and Shortcut Features

Command History

CLI maintains a history buffer of the most recent commands you used in the current CLI session for quick retrieval. Using the keyboard, you can navigate through your last commands, one by one, or all commands that start with a given prefix. By default, the system saves the last 30 commands you typed. You can change the number of commands remembered using the **history size** command.

To use the history functions, use the keys shown in the following table.

Table 1-4 Keyboard Shortcuts for History Functions

Arrow	Shortcut	Description
Up arrow	Ctrl-P	Moves cursor to the previous command with the same prefix.
Down arrow	Ctrl-N	Moves cursor to the next command with the same prefix as original.
	Ctrl-L Ctrl-R	Re-display the current command line.

Keyboard Shortcuts

The SCE platform has a number of keyboard shortcuts that make it easier to navigate and use the system. The following table shows the keyboard shortcuts available.

You can get a display the keyboard shortcuts at any time by typing **help bindings**.

Table 1-5 Keyboard Shortcuts

Description	Shortcut Key
Navigational shortcuts	
Move cursor one character to the right.	CTRL-F /->
Move cursor one character to the left.	CTRL-B /<-
Move cursor one word to the right (forward).	ESC-F
Move cursor one word to the left (backward.	ESC-B
Move cursor to the start of the line.	CTRL-A
Move cursor to the end of the line.	CTRL-E

Description	Shortcut Key
Editing shortcuts	
Delete the character where the cursor is located.	CTRL-D
Delete from the cursor position to the end of the word.	ESC-d
Delete the character before the current location of the cursor.	Backspace
Delete the character before the current location of the cursor.	CTRL-H
Deletes from the cursor position to the end of the line	CTRL-K
Deletes all characters from the cursor to the beginning of the line	CTRL-U
Deletes all characters from the cursor to the beginning of the line. (Same functionality as CTRL-U.)	CTRL-X
Delete the word to the left of the cursor.	CTRL-W
Recall the last item deleted.	CTRL-Y
Completes the word when there is only one possible completion.	<Tab>
Completes the word when there is only one possible completion. (Same functionality as <Tab>.)	CTRL-I

Tab Completion

The CLI interface features tab completion. When you type in the first letters of a command and type **<Tab>**, the system automatically fills in the rest of the command or keyword. This feature works only when there is one possible command that could be possible using the starting letters.

EXAMPLE:

The letters **snm** followed by **<Tab>** will be completed to the command **snmp-server.**

```
SCE(config)#snm<Tab>
SCE(config)#snmp-server
```

If you type **<Enter>** instead of **<Tab>**, and there is no ambiguity, the system actually carries out the command which would be filled in by the rest of the word.

EXAMPLE:

The following example displays how the system completes a partial (unique) command for the **enable** command. Because **enable** does not require any parameters, the system simply carries out the **enable** command when the user presses **Enter**.

```
SCE>en<Enter>
Password:
SCE#
```

FTP User Name and Password

CLI enables saving ftp user name and password to be used in FTP operations—download and upload, per session.

These settings are effective during the current CLI session.

EXAMPLE:

The following example illustrates how to set FTP password and user name and the use in these settings for getting a file named *config.tmp* from a remote station using FTP protocol.

```
SCE#ip ftp password vk
SCE#ip ftp username vk
SCE#copy ftp://@10.1.1.253/h:/config.tmp myconf.txt
connecting 10.1.1.253 (user name vk password vk) to retrieve
config.tmp
SCE#
```

Managing Command Output

Some commands, such as many **show** commands, may have many lines of output. There are several ways of managing the command output:

- Scrolling options — When the command output is too large to be displayed all at once, you can control whether the display scrolls line by line or refreshes the entire screen.
- Filtering options — You can filter the output so that output lines are displayed only if they include or exclude a specified expression.
- Redirecting to a file — You can send the output to a specified file

Scrolling the Screen Display

The output of some **show** and **dir** commands is quite lengthy and cannot all be displayed on the screen at one time. Commands with many lines of output are displayed in chunks of 24 lines. You can choose to scroll the display line by line or refresh the entire screen. At the prompt after any line, you can type one of the following keys for the desired action:

- **<Enter>**– show one more line
- **<Space>** – show 24 more lines (a new chunk)
- **<g>** – Stop prompting for more
- **<?>** – Display a help string showing possible options
- Any other key – quit showing the file

Filtering Command Output

You can filter the output of certain commands, such as **show**, **more**, and **dir,** so that output lines are displayed only if they include or exclude a specified expression. The filtering options are as follows:

- **include** — Shows all lines that include the specified text.
- **exclude** — Does not show any lines that include the specified text.
- **begin** — Finds the first line that includes the specified text, and shows all lines starting from that line. All previous lines are excluded.

The syntax of filtered commands is as follows:

- **<command> | include <expression>**

- **<command> | exclude <expression>**
- **<command> | begin <expression>**

The <expression> in these commands is case sensitive.

EXAMPLE

Following is an example of how to filter the **show version** command to display only the last part of the output, beginning with the version information.

```
SCE# show version begin revision
```

Redirecting Command Output to a File

You can redirect the output of commands, such as **show**, **more**, and **dir**, to a file. When writing the output of these commands to a file, you can specify either of the following options:

- **redirect** — The new output of the command will overwrite the existing contents of the file.
- **append** — The new output of the command will be appended to the existing contents of the file.

The syntax of redirection commands is as follows:

- **<command> | redirect <file-name>**
- **<command> | append <file-name>**

EXAMPLE

Following is an example of how to do the following:

- Filter the **more** command to display from a *csv* subscriber file only the gold package subscribers.
- Redirect that output to a file named *current_gold_subscribers*. The output should not overwrite existing entries in the file, but should be appended to the end of the file.

```
SCE# more subscribers_10.10.2004 include gold append
current_gold_subscribers
```

CLI Scripts

The CLI scripts feature allows you to record several CLI commands together as a script and play it back. This is useful for saving repeatable sequence of commands , such as software upgrade. For example, if you are configuring a group of SCE platforms and you want to run the same configuration commands on each platform, you could create a script on one platform and run it on all the other SCE platforms.

The available script commands are:

- `script capture`
- `script stop`
- `script print`
- `script run`

To create a script:

Step 1 At the ***SCE#*** prompt, type **`script capture`** *`sample1.scr`* where *`sample1.scr`* is the name of the script.

Step 2 Perform the actions you want to be included in the script.

Step 3 Type **`script stop`**.

The system saves the script.

EXAMPLE:

The following is an example of recording a script for upgrading software.

```
SCE#script capture upgrade.scr
SCE#configure
SCE(config)#boot system new.pkg
Verifying package file...
Package file verified OK.
SCE(config)#exit
SCE#copy running-config startup-config
Writing general configuration file to temporary location...
Extracting files from '/tffs0/images/new.pkg'...
Verifying package file...
Package file verified OK.
Device '/tffs0/' has 81154048 bytes free, 21447973 bytes are
needed for extraction, all is well.
Extracting files to temp locations...
Renaming temp files...
Extracted OK.
Backing-up general configuration file...
Copy temporary file to final location...
SCE#script stop
SCE#
```

To run the script recorded above, type:

```
SCE#script run upgrade.scr
```

CHAPTER 2

CLI Command Reference

This chapter contains all the CLI commands available on the SCE platform.

Each command description is broken down into the following sub-sections:

Command syntax	The general format of the command.
Description	Description of what the command does.
Default	If relevant, the default setting for the command.
Authorization	The level of user authorization required for using the command.
Mode	The mode (command line) from which the command can be invoked.
Parameters	Description of parameters and switches for the command.
Usage guidelines	Information about when to invoke the command and additional details.
Example	An illustration of how the command looks when invoked. Because the interface is straightforward, some of the examples are obvious, but they are included for clarity.

Syntax and Conventions

The CLI commands are written in the following format:

command *required-parameter* [*optional-parameter*]

[no] is an optional parameter that may appear before the command name.

- When typing commands, you may enclose parameters in double-quote marks, and you *must* do so when there is a space within a parameter name.
- Examples are shown in courier style. **Bold courier** is used to show the commands as you type them and regular courier is used for system prompts and responses.

CLI Commands

?

Lists all of the commands available for the current command mode. You can also use the ? command to get specific information on a keyword or parameter.

To obtain a list of commands that begin with a particular character string, enter the abbreviated command entry immediately followed by a question mark (?). This form of help is called partial help, because it lists only the keywords or arguments that begin with the abbreviation you entered.

Syntax Description

This command has no arguments or keywords

Defaults

This command has no default settings

Command Modes

All

Usage Guidelines

To list a command's associated keywords or arguments, enter a question mark (?) in place of a keyword or parameter on the command line. This form of help is called argument help because it lists the keywords or arguments that apply based on the command, keywords, and arguments you have already entered.

Authorization: User

Examples

The following example shows ways of requesting help using the ? wildcard.

```
SCE(config)#ip ?
default-gateway  Sets the default gateway
domain-lookup    Enables the IP DNS-based host name-to-address
translation
domain-name      Define a default domain name
host             Add a host to the host table
name-server      Specify the address of one or more name servers
to use for name and address resolution
route            Add IP routing entry
SCE(config)#ip d?
default-gateway  domain-lookup  domain-name
SCE(config)#ip de?
default-gateway
SCE(config)#ip de
```

Related Commands

access-class

Restricts Telnet server access to those addresses listed in the specified access list.

Use the [no] form of this command to set the Telnet server to accept access from any IP address.

access-class *number* **in**
no access-class *number* **in**

Syntax Description

number	An access-list number (1–99).

Defaults

By default, no access list is configured (Telnet access is available from any IP address).

Command Modes

Line Configuration Mode

Usage Guidelines

Authorization: admin

Examples

The following are examples of the access-class command:

EXAMPLE 1

The following example configures an access class for all Telnet lines.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#line vty 0
SCE(config-line)#access-class 1 in
SCE(config-line)#
```

EXAMPLE 2

The following example removes an access class for Telnet lines.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#line vty 0
SCE(config-line)#no access-class in
SCE(config-line)#
```

Related Commands

access-list (on page 2-9)

show access-lists (on page 2-172)

aaa accounting commands

Enables TACACS+ accounting.

Use the **no** form of the command to disable TACACS+ accounting.

aaa accounting commands *level* **default stop-start group tacacs+**

no aaa accounting commands *level* **default**

Syntax Description

level	The privilege level for which to enable the TACACS+ accounting 0: User 5: Viewer 10: Admin 15: Root

Defaults

By default, TACACS+ accounting is disabled.

Command Modes

Global Configuration

Usage Guidelines

If TACACS+ accounting is enabled, the SCE platform sends an accounting message to the TACACS+ server after every command execution. The accounting message is logged in the TACACS+ server for the use of the network administrator.

The **start-stop** keyword (required) indicates that the accounting message is sent at the beginning and the end (if the command was successfully executed) of the execution of a CLI command.

Authorization: admin

Examples

The following example enables TACACS+ accounting for the admin privilege level (10).

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#aaa accounting commands 10 default stop-start group
tacacs+
SCE(config)#
```

Related Commands

aaa authentication attempts (on page 2-5)

aaa authentication enable default (on page 2-6)

aaa authentication login default (on page 2-8)

show tacacs (on page 2-280)

aaa authentication attempts

Sets the maximum number of login attempts that will be permitted before a Telnet session is terminated.

aaa authentication attempts login *number-of-attempts*

Syntax Description

number-of-attempts	the maximum number of login attempts that will be permitted before the telnet session is terminated

Defaults

Default *number-of-attempts* = 3

Command Modes

Global Configuration

Usage Guidelines

The maximum number of login attempts is relevant only for Telnet sessions. From the local console, the number of re-tries is unlimited.

Authorization: admin

Examples

The following example shows how to set the maximum number of logon attempts to five.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)# aaa authentication attempts login 5
SCE(config)#
```

Related Commands

aaa authentication accounting commands (on page 2-4)

aaa authentication enable default (on page 2-6)

aaa authentication login default (on page 2-8)

show tacacs (on page 2-280)

aaa authentication enable default

Specifies which privilege level authentication methods are to be used, and in what order of preference.

Use the no form of the command to delete the privilege level authentication methods list.

aaa authentication enable default *method1 [method2...]*

no aaa authentication enable default

Syntax Description

method	the privilege level authentication methods to be used. You may specify up to four different methods, in the order in which they are to be used

Defaults

Default privilege level authentication method = **enable** only

Command Modes

Global Configuration

Usage Guidelines

Use this command to configure "backup" privilege level authentication methods to be used in the event of failure of the primary privilege level authentication method.

The following method options are available:

- **group tacacs+**: Use TACACS+ authentication.
- **local**: Use the local username database for authentication.
- **enable** (default): Use the "**enable**" password for authentication
- **none:** Use no authentication.

If the privilege level authentication methods list is deleted, the default privilege level authentication method only **(enable** password) will be used. TACACS+ authentication will not be used.

Authorization: admin

Example

This example shows how to configure privilege level authentication methods,

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)# aaa authentication enable default group tacacs+
enable  none
SCE(config)#
```

Related Commands

aaa authentication login default (on page 2-8)

aaa authentication accounting commands (on page 2-4)

aaa authentication attempts (on page 2-5)

show tacacs (on page 2-280)

aaa authentication login default

Specifies which login authentication methods are to be used, and in what order of preference.

Use the no form of the command to delete the login authentication methods list.

aaa authentication login default *method1 [method2...]*

no aaa authentication login default

Syntax Description

method	the login authentication methods to be used. You may specify up to four different methods, in the order in which they are to be used

Defaults

Default login authentication method = **enable** only

Command Modes

Global Configuration

Usage Guidelines

Use this command to configure "backup" login authentication methods to be used in the event of failure of the primary login authentication method.

The following method options are available:

- **group tacacs+**: Use TACACS+ authentication.
- **local**: Use the local username database for authentication.
- **enable** (default): Use the "**enable**" password for authentication
- **none**: Use no authentication.

If the login authentication methods list is deleted, the default login authentication method only **(enable** password) will be used. TACACS+ authentication will not be used.

Authorization: admin

Example

This example shows how to configure login authentication methods.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)# aaa authentication login default group tacacs+
enable  none
SCE(config)#
```

Related Commands

aaa authentication enable default (on page 2-6)

aaa authentication accounting commands (on page 2-4)

aaa authentication attempts (on page 2-5)

show tacacs (on page 2-280)

access-list

Adds an entry to the bottom of the specified access list.

Use the **no** form of the command to remove an entry from the specified access list.

access-list *number permission address*

no access-list *number*

Syntax Description

number	An access-list number (1–99).
permission	Indicates whether the IP address should be allowed or denied access permission as described in the Valid Permission Values table in the Usage Guidelines..
address	Addresses to be matched by this entry as described in the Valid Address Values table in the Usage Guidelines.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

The SCE platform can be configured with Access Control Lists (ACLs), which are used to permit or deny incoming connections on any of the management interfaces. An access list is an ordered list of entries, each consisting of the following:

- A permit/deny field
- An IP address
- An optional wildcard “mask” defining an IP address range

The order of the entries in the list is important. The default action of the first entry that matches the connection is used. If no entry in the Access List matches the connection, or if the Access List is empty, the default action is **deny**.

Table 2-1 Valid Permission Values

deny	Deny access to list member
permit	Permit access to list member.

Table 2-2 Valid Address Values

any	All IP addresses are matched by this entry. This is equivalent to specifying the address 0.0.0.0 255.255.255.255
ip-address	The IP address or range of IP addresses, matched by this entry. This can be one address in the x.x.x.x format or a range of addresses in the format x.x.x.x y.y.y.y where x.x.x.x specifies the prefix bits common to all IP addresses in the range, and y.y.y.y is a mask specifying the bits that are ignored. In this notation, '1' means bits to ignore. For example, the address 0.0.0.0 255.255.255.255 means any IP address. The address 10.0.0.0 0.1.255.255 means IP addresses from 10.0.0.0 to 10.1.255.255. The address 1.2.3.4 0.0.0.255 means IP addresses from 1.2.3.0 to 1.2.3.255 (A more natural way of expressing the same range is 1.2.3.0 0.0.0.255).

Authorization: admin

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following example adds entries to the bottom of access-list 1. The first entry permits access to 10.1.1.0 through 10.1.1.255. The second entry denies access to any address. Together this list allows access only to addresses 10.1.1.*.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#access-list 1 permit 10.1.1.0 0.0.0.255
SCE(config)#access-list 1 deny any
SCE(config)#
```

EXAMPLE 2

The following example defines access list 2, a list that denies access to all IP addresses in the range: 10.1.2.0 to 10.1.2.255, permits access to all other addresses in the range 10.1.0.0 to 10.1.15.255, and denies access to all other IP addresses. Note that since the first range is contained within the second range, the order of entries is important. If they had been entered in the opposite order, the **deny** entry would not have any effect.

```
SCE>enable 10
Password:pcube
SCE#config
SCE (config)#access-list 2 deny 10.1.2.0 0.0.0.255
SCE (config)#access-list 2 permit 10.1.0.0 0.0.15.255
SCE(config)#
```

Related Commands

access-class (on page 2-3)

snmp-server community (on page 2-293)

show access-lists (on page 2-172)

active-port

Specifies which management port is currently active.

active-port

Syntax Description

This command has no arguments or keywords

Defaults

Default Mng port is 0/1.

Command Modes

Mng Interface Configuration

Usage Guidelines

The command must be executed from the Mng interface that is to be defined as the active port, as follows:

- Use the *interface Mng* (on page 2-83) command, specifying the desired port number (0/1 or 0/2) to enter the proper command mode.
- Execute the **active-port** command.

The use of this command varies slightly, depending on whether the management interface is configured as a redundant interface (auto fail-over enabled) or not (auto fail-over disabled)

- auto fail-over enabled (automatic mode): the specified port becomes the currently active port, in effect forcing a fail-over action even if a failure has not occurred.
- auto fail-over disabled (manual mode): the specified port should correspond to the cabled Mng port, which is the only functional port and therefore must be and remain the active management port

Authorization: admin

Examples

The following example shows how to use this command to configure Mng port 2 as the currently active management port.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface mng 0/2
SCE(config-if)#active-port
SCE(config-if)#
```

Related Commands

auto-fail-over (on page 2-25)

interface Mng (on page 2-83)

application slot replace force completion

Forces the current application replace process to complete and immediately start finalization (killing all old flows).

application slot *slot-number* **replace force completion**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

When replacing an application, the application replace operation is considered to be 'in progress' until all old flows die. Rather than manually forcing the completion of the application replace process, you could define an automatic limit to the operation in either of two ways:

- When a specified amount of time passes since the process started *replace completion time* (on page 2-157)
- When the number of old flows goes below a specified threshold (*replace completion num-flows* (on page 2-155))

Authorization: admin

Examples

The following example illustrates how to force the application replace operation to complete immediately.

```
SCE>enable 10
Password:pcube
SCE#application slot 0 replace force completion
SCE#
```

Related Commands

replace completion num-flows (on page 2-155)

replace completion time (on page 2-157)

attack-detector default

Defines default thresholds and attack handling action. If a specific attack detector is defined for a particular situation (protocol/attack direction/side), it will override these defaults.

Use the **no** version of this command to delete the user-defined defaults. The system defaults will then be used.

attack-detector default protocol *protocol* **attack-direction** *attack-direction* **side** *side [***action** *action] [***open-flows** *open-flows] [***ddos-suspected-flows** *ddos-suspected-flows]* [**suspected-flows-ratio** *suspected-flows-ratio***] [notify-subscriber|dont-notify-subscriber] [alarm|no-alarm]**

no attack-detector default protocol *protocol* **attack-direction** *attack-direction* **side** *side [***action** *action] [***open-flows** *open-flows] [***ddos-suspected-flows** *ddos-suspected-flows]* [**suspected-flows-ratio** *suspected-flows-ratio***]**

Syntax Description

protocol	**TCP, UDP, IMCP, other**
attack-direction	**attack-source, attack-destination, both**
side	**subscriber, network, both**
action	**report, block**
open-flows	Threshold for concurrently open flows (new open flows per second).
ddos-suspected-flows	Threshold for DDoS-suspected flows (new suspected flows per second).
suspected-flows-ratio	Threshold for ratio of suspected flow rate to open flow rate.

Defaults

The default values for the default attack detector are

- Action — Report
- Thresholds — Varies according to the attack type
- Subscriber notification — Disabled
- Sending an SNMP trap — Disabled

Command Modes

LineCard Interface Configuration

Usage Guidelines

The following arguments must always be specified:

- protocol
- attack-direction
- side

The following arguments are optional:

- action

- open-flows
- ddos-suspected-flows
- suspected-flows-ratio

Use the optional keywords as follows:

- Use the *notify-subscriber* keyword to enable subscriber notification. (Use the *attack-filter subscriber-notification ports* (on page 2-24)command to configure the port to be used for subscriber notification.)
- Use the *dont-notify-subscriber* keyword to disable subscriber notification.
- Use the *alarm* keyword to enable sending an SNMP trap.
- Use the *no-alarm* keyword to disable sending an SNMP trap.

Use the *attack-detector <number>* (on page 2-16) command to configure a specific attack detector.

Authorization: admin

Examples

The following examples illustrate the use of the **attack-detector default** command:

EXAMPLE 1:

The following example configures a default attack detector for TCP flows from the attack source.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-detector default protocol TCP attack-
direction attack-source side both action report open-flows 500
ddos-suspected-flows 75 suspected-flows-ratio 50
SCE(config if)#
```

EXAMPLE 2:

The following example enables subscriber notification for the specified default attack detector.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-detector default protocol TCP attack-
direction attack-source side both notify-subscriber
SCE(config if)#
```

Related Commands

attack-detector <number> (on page 2-16)

attack-filter subscriber-notification ports (on page 2-24)

show interface LineCard attack-detector (on page 2-188)

attack-detector

Enables the specified attack detector and assigns an access control list (ACL) to it.

attack-detector <*number*> **access-list** *access-list*

Syntax Description

number	The attack detector number.
access-list	The number of the ACL containing the IP addresses selected by this detector

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the following commands to define the attack detector and the ACL:

- Attack detector: *attack-detector <number>* (on page 2-16)
- ACL: *access-list* (on page 2-9)

Authorization: admin

Examples

The following example enables attack detector number "2", and assigns ACL "8".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-detector 2 access-list 8
SCE(config if)#
```

Related Commands

access-list (on page 2-9)

attack-detector <number> (on page 2-16)

show interface LineCard attack-detector (on page 2-188)

show access-lists (on page 2-172)

attack-detector <number>

Configures a specific attack detector for a particular attack type (protocol/attack direction/side) with the assigned number.

Use the **default** form of this command to configure the default attack detector for the specified attack type.

Use the **no** form of this command to delete the specified attack detector.

attack-detector <*number*> **protocol (((TCP|UDP) [dest-port (specific|not-specific|both)])|ICMP|other|all) attack-direction (single-side-source|single-side-destination|single-side-both|dual-sided|all) side (subscriber|network|both) [action (report|block)]** *[***open-flows** *open-flows] [***ddos-suspected-flows** *ddos-suspected-flows]* [**suspected-flows-ratio** *suspected-flows-ratio***] [notify-subscriber|dont-notify-subscriber] [alarm|no-alarm]**

no attack-detector <*number*>

attack-detector default protocol (((TCP|UDP) [dest-port (specific|not-specific|both)])|ICMP|other|all) attack-direction (single-side-source|single-side-destination|single-side-both|dual-sided|all) side (subscriber|network|both) [action (report|block)] *[***open-flows** *open-flows] [***ddos-suspected-flows** *ddos-suspected-flows]* [**suspected-flows-ratio** *suspected-flows-ratio***] [notify-subscriber|dont-notify-subscriber] [alarm|no-alarm]**

no attack-detector default protocol (((TCP|UDP) [dest-port (specific|not-specific|both)])|ICMP|other|all) attack-direction (single-side-source|single-side-destination|single-side-both|dual-sided|all) side (subscriber|network|both)

Syntax Description

number Assigned number for attack-detector

protocol **TCP, UDP, IMCP, other**

destination port {TCP and UDP protocols only): Defines whether the default attack detector applies to specific (port-based) or not specific (port-less) detections.

attack-direction `single-side-destination|single-side-both|dual-sided|all`

side **subscriber, network, both**

action **report, block**

open-flows-rate Threshold for rate of open flows (new open flows per second).

suspected-flows-rate Threshold for for rate of suspected DDoS flows (new suspected flows per second)

suspected-flows-ratio Threshold for ratio of suspected flow rate to open flow rate.

Defaults

The default values for the default attack detector are:

- Action: Report

- Thresholds: Varies according to the attack type
- Subscriber notification: Disabled
- Sending an SNMP trap: Disabled

Command Modes

LineCard Interface Configuration

Usage Guidelines

If a specific attack detector is defined for a particular attack type, it will override the configured default attack detector.

The following arguments must always be specified:

- protocol
- attack-direction
- side

The following arguments are optional:

- action
- open-flows
- ddos-suspected-flows
- suspected-flows-ratio

Use the appropriate keyword to enable or disable subscriber notification by default:

- **notify-subscriber**: Enable subscriber notification. (Use the *attack-filter subscriber-notification ports* (on page 2-24)command to configure the port to be used for subscriber notification.)
- **dont-notify-subscriber**: Disable subscriber notification.

Use the appropriate keyword to enable or disable sending an SNMP trap by default:

- **alarm**: Enable sending an SNMP trap.
- **no-alarm**: Disable sending an SNMP trap.

If the selected protocol is either TCP or UDP, specify whether the destination port is specific, not specific, or both. If the destination port or ports are specific, the specific destination ports are configured using the *attack-detector TCP-port-list|UDP-port-list* (on page 2-19) command.

Use the *attack-detector* (on page 2-15) command to enable a configured attack detector.

Use the *attack-detector default* (on page 2-13) command to configure a default attack detector.

Authorization: admin

Examples

The following examples illustrate the use of the **attack-detector <number>** command:

EXAMPLE 1:

The following example configures the attack detector number "2".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# attack-detector 2 protocol UDP dest-port not-
specific attack-direction single-side-destination side both
action block open-flows-rate 500 suspected-flows-rate 500
suspected-flows-ratio 50 notify-subscriber alarm
SCE(config if)#
```

EXAMPLE 2:

The following example deletes attack detector number "2".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no attack-detector 2
SCE(config if)#
```

EXAMPLE 3:

The following example disables subscriber notification for attack detector number "2".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-detector 2 protocol UDP dest-port not-
specific attack-direction single-side-destination side both dont-
notify-subscriber
SCE(config if)#
```

Related Commands

attack-detector (on page 2-15)

attack-detector TCP-port-list|UDP-port-list (on page 2-19)

attack-filter subscriber-notification ports (on page 2-24)

attack-detector default (on page 2-13)

show interface LineCard attack-detector (on page 2-188)

attack-detector TCP-port-list|UDP-port-list

Defines the list of destination ports for specific port detections for TCP or UDP protocols.

attack-detector <*number*> **(TCP-port-list|UDP-port-list)** *(all|(<port1> [<port2> …]))*

Syntax Description

number	number of the attack detector for which this list of specific ports is relevant

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

TCP and UDP protocols may be configured for specified ports only (port-based). Use this command to configure the list of specified destination ports per protocol.

Up to 15 different TCP port numbers and 15 different UDP port numbers can be specified.

Configuring a TCP/UDP port list for a given attack detector affects only attack types that have the same protocol (TCP/UDP) and are port-based (i.e. detect a specific destination port). Settings for other attack types are not affected by the configured port list(s).

Specify either **TCP-port-list** or **UDP-port-list.**

Use the **all** keyword to include all ports in the list.

Authorization: admin

Examples

This example shows how to configure the destination port list for the TCP protocol for attack detector #10.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-detector 10 TCP-port-list 100 101 102 103
SCE(config if)#
```

Related Commands

attack-detector <number> (on page 2-16)

attack-filter (LineCard Interface Configuration) (on page 2-20)

attack-filter (LineCard Interface Configuration)

Enables specific attack detection for a specified protocol and attack direction.

Use the **no** form of the command to disable attack detection.

attack-filter [protocol (((TCP|UDP) [dest-port (specific|non-specific|both)])|ICMP|other)] [attack-direction (single-side-source|single-side-destination|single-side-both|dual-sided|all)]

no attack-filter [protocol (((TCP|UDP) [dest-port (specific|non-specific|both)])|ICMP|other)] [attack-direction (single-side-source|single-side-destination|single-side-both|dual-sided|all)]

Syntax Description

protocol TCP, UDP, ICMP, or Other

attack direction: defines whether specific IP detection is enabled or disabled for single sided or dual sided attacks.

destination port (TCP and UDP protocols only): Defines whether specific IP detection is enabled or disabled for port-based (specific) or port-less (non-specific) detections.

Defaults

By default, attack-filter is enabled.

Default *protocols*: all protocols (no protocol specified)

Default *attack direction*: all directions

Default *destination port*: both port-based and port-less

Command Modes

LineCard Interface Configuration

Usage Guidelines

Specific attack filtering is configured in two steps:

- Enabling specific IP filtering for the particular attack type (using this command).
- Configuring an attack detector for the relevant attack type (using the *attack-detector <number>* (on page 2-16) command). Each attack detector specifies the thresholds that define an attack and the action to be taken when an attack is detected.

In addition, the user can manually override the configured attack detectors to either force or prevent attack filtering in a particular situation (using the *attack-filter (Privileged Exec)* (on page 2-22) command).

By default, specific-IP detection is enabled for all attack types. You can configure specific IP detection to be enabled or disabled for a specific, defined situation only, depending on the following options:

- For a selected protocol only.
- For TCP and UDP protocols, for only port-based or only port-less detections.
- For a selected attack direction, either for all protocols or for a selected protocol.

If the selected protocol is either TCP or UDP, specify whether the destination port is specific (port-based), not specific (port-less), or both. If the destination port or ports are specific, the specific destination ports are configured using the *attack-detector TCP-port-list|UDP-port-list* (on page 2-19) command.

Authorization: admin

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following example shows how to enable specific, dual-sided attack detection for TCP protocol only.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-filter protocol TCP dest-port specific
attack-direction dual-sided
SCE(config if)#
```

EXAMPLE 2

The following example shows how to enable single-sided attack detection for ICMP protocol only.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# protocol ICMP attack-direction single-side-source
SCE(config if)#
```

EXAMPLE 3

The following example disables attack detection for all non TCP, UDP, or ICMP protocols.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#**no attack-filter protocol other attack-direction all**
SCE(config if)#

attack-detector TCP-port-list|UDP-port-list (on page 2-19)

attack-detector <number> (on page 2-16)

show interface LineCard attack-filter (on page 2-193)

attack-filter (Privileged Exec)

The **attack-filter** command prevents attack filtering for a specified IP address/protocol. If filtering is already in process, it will be stopped.

When attack filtering has been stopped, it remains stopped until explicitly restored by another CLI command (either specific or general). Use the **no** form of this command to restore attack filtering.

The **force-filter** keyword forces attack filtering for a specified IP address/protocol. When attack filtering has been forced, it continues until explicitly stopped by another CLI command (either specific or general). Use the **no** form of this command to stop attack filtering.

attack-filter *slot-number* **ip** *ip-address* **protocol** *protocol* **attack-direction** *attack-direction* **side** *side* [**dont-filter**]
attack-filter *slot-number* **ip** *ip-address* **action** *action* **protocol** *protocol* **attack-direction** *attack-direction* **side** *side* [**force-filter**]
no attack-filter *slot-number* [**dont-filter**] [**all**]
no attack-filter *slot-number* [**force-filter**] [**all**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
ip-address	IP address from which traffic will not be filtered.
action	`report, block`
protocol	`TCP, UDP, IMCP, other`
attack-direction	`attack-source, attack-destination, both`
side	`subscriber, network, both`

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

After configuring the attack detectors, the SCE Platform automatically detects attacks and handles them according to the configuration. However, there are scenarios in which a manual intervention is desired, either for debug purposes, or because it is not trivial to reconfigure the SCE attack-detectors properly.

The user can use the CLI attack filtering commands to do the following:

- Prevent/stop filtering of an attack related to a specified IP address
- Force filtering of an attack related to a specified IP address

Attack filtering can be prevented for a specified IP address/protocol by executing a **`dont-filter`** CLI command. If filtering is already in process, it will be stopped. When attack filtering has been stopped, it remains stopped until explicitly restored by another CLI command (either **`force-filter`** or **`no dont-filter`**).

Attack filtering can be forced for a specified IP address/protocol. If filtering is already in process, it will be stopped. Forced attack filtering will continue until undone by an explicit CLI command (either **no force-filter** or **dont-filter**).

Use the all keyword to restore or stop all filtering.

Authorization: admin

Examples

The following are examples of the **attack-filter** command:

EXAMPLE 1:

The following example prevents attack filtering for the specified conditions.

```
SCE>enable 10
Password:pcube
SCE#
SCE#attack-filter 0 ip 10.10.10.10 protocol TCP attack-direction
attack-source side both dont-filter
SCE#
```

EXAMPLE 2:

The following example restores all attack filtering.

```
SCE>enable 10
Password:pcube
SCE#no attack-filter 0  dont-filter all
SCE#
```

EXAMPLE 3:

The following example forces attack filtering.

```
SCE>enable 10
Password:pcube
SCE#attack-filter 0 action block ip 10.10.10.10 protocol TCP
attack-direction attack-source side both
SCE#
```

EXAMPLE 4:

The following example stops all forced attack filtering.

```
SCE>enable 10
Password:pcube
SCE#no attack-filter 0 force-filter all
SCE#
```

Related Commands

attack-filter (LineCard Interface Configuration) (on page 2-20)

show interface LineCard attack-filter (on page 2-193)

attack-filter subscriber-notification ports

Specifies a port as subscriber notification port. TCP traffic from the subscriber side to this port will never be blocked by the attack filter, leaving it always available for subscriber notification.

Use the [**no**] form of this command to remove the port from the subscriber notification port list.

attack-filter subscriber-notification ports *port*

no attack-filter subscriber-notification ports *port*

Syntax Description

port	Port number. One port can be specified as the subscriber notification port.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use this command to configure the port to be used for subscriber notification as configured using the *attack-filter (LineCard Interface Configuration)* (on page 2-20) and *attack-detector <number>* (on page 2-16) commands.

Authorization: admin

Examples

The following example specifies port 100 as the subscriber notification port.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#attack-filter subscriber-notification ports 100
SCE(config if)#
```

Related Commands

attack-detector default (on page 2-13)

attack-detector <number> (on page 2-16)

show interface LineCard attack-filter (on page 2-193) (**subscriber-notification ports** option)

auto-fail-over

Enables automatic fail-over on the Mng ports.

Use the no form of the command to disable automatic fail-over on the Mng ports.

auto-fail-over

no auto-fail-over

Syntax Description

This command has no arguments or keywords.

Defaults

By default, the auto fail-over mode is enabled.

Command Modes

Interface Management Configuration

Usage Guidelines

This parameter can be configured for either management port, and is applied to both ports with one command.

The automatic mode must be enabled to support management interface redundancy. This mode automatically switches to the backup management link when a failure is detected in the currently active management link.

When the automatic fail-over mode is disabled, by default Mng port 1 is the active port. If Mng port 2 will be the active port, it must be explicitly configured as such (see *active-port* (on page 2-11))

Authorization: admin

Examples

This example shows how to disable the auto fail-over mode.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface Mng 0/1
SCE(config if)#no auto-fail-over
SCE(config if)#
```

Related Commands

active-port (on page 2-11)

auto-negotiate (GigabitEthernet only)

Configures the GigabitEthernet interface auto-negotiation mode. Use this command to either enable or disable auto-negotiation. When set to no auto-negotiate, auto-negotiation is always disabled, regardless of the connection mode.

auto-negotiate
no auto-negotiate
default auto-negotiate

Syntax Description

This command has no arguments or keywords.

Defaults

By default, auto-negotiation is:

- On for inline connection mode
- Off for receive-only connection mode

Command Modes

GigabitEthernet Interface Configuration

Usage Guidelines

Note that auto-negotiation does not work when the SCE platform is connected via an optical splitter (receive-only connection mode).

Authorization: admin

Examples

The following example configures GigabitEthernet line interface #1 (0/1) to perform no auto-negotiation.

```
SCE_GBE>enable 10
Password:pcube
SCE_GBE#config
SCE_GBE(config)#interface GigabitEthernet 0/1
SCE_GBE(config if)#no auto-negotiate
SCE_GBE(config if)#
```

Related Commands

show interface GigabitEthernet (on page 2-184)

bandwidth

Sets Ethernet shaping for the FastEthernet or GigabitEthernet line interfaces.

bandwidth *bandwidth* **burst-size** *burstsize*

Syntax Description

bandwidth	Bandwidth measured in kbps.
burstsize	Burst size in bytes.

Defaults

Bandwidth = 100000K (100 Mbps)
burst-size = 5000 (5K bytes)

Command Modes

FastEthernet Interface Configuration
GigabitEthernet Interface Configuration

Usage Guidelines

This command is valid for a specified FastEthernet or GigabitEthernet line interface only. It must be executed explicitly for each interface.

Use the *interface FastEthernet* (on page 2-80) or *interface GigabitEthernet* (on page 2-81) command to access the configuration mode for the desired interface.

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1

The following sets bandwidth and burst size for a Fast Ethernet line interface (0/1) of a SCE 2000 4/8xFE.

```
SCEconfig
SCE(config)#interface FastEthernet 0/1
SCE(config-if)#bandwidth 100000 burstsize 5000
SCE(config-if)#
```

EXAMPLE 2

The following sets bandwidth and burst size for a Gigabit Ethernet line interface (0/2) of a SCE 2000 4xGBE or SCE 1000 2xGBE.

```
SCEconfig
SCE(config)#interface GigabitEthernet 0/2
SCE(config-if)#bandwidth 100000 burstsize 5000
SCE(config-if)#
```

Related Commands

interface FastEthernet (on page 2-80)

interface GigabitEthernet (on page 2-81)

queue (on page 2-141)

blink

Blinks a slot LED for visual identification. Use the **no** form of this command to stop the slot blinking.

blink slot *slot-number*
no blink slot *slot-number*

Syntax Description	
slot-number	The number of the identified slot. Enter a value of 0.

Defaults

Not blinking

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example configures the SCE platform to stop blinking.

```
SCE>enable 10
Password:pcube
SCE#no blink slot 0
SCE#
```

Related Commands

show blink (on page 2-175)

boot system

Specifies a new package file to install. The SCE platform extracts the actual image file(s) from the specified package file only during the **copy running-config startup-config** command.

boot system ftp://*username*[:*password*]**@***server-address*[:*port*]/*path/source-file destination-file*

no boot system

Syntax Description

ftp://…destination-file	The ftp site and path of a package file that contains the new firmware. The filename should end with the .pkg extension.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Use this command to upgrade the SCE platform embedded firmware. The package file is verified for the system and checked that it is not corrupted. The actual upgrade takes place only after executing the **copy running-config startup-config** command and rebooting the SCE platform.

Authorization: admin

Examples

The following example upgrades the system.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#boot system
ftp://vk:vk@10.1.1.230/downloads/SENum.pkg.pkg
Verifying package file…
Package file verified OK.
SCE(config)#do copy running-config startup-config
Backing –up configuration file…
Writing configuration file…
Extracting new system image…

Extracted OK.
```

Related Commands

calendar set

Sets the system calendar. The calendar is a system clock that continues functioning even when the system shuts down.

calendar set *hh:mm:ss day month year*

Syntax Description

hh:mm:ss	Current local time in hours in 24-hour format, minutes and seconds (HH:MM:SS).
day	Current day (date) in the month.
month	Current month (by three-letter abbreviated name).
year	Current year using a 4-digit number.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Always coordinate between the calendar and clock by using the `clock read-calendar` command after setting the calendar.

Authorization: admin

Examples

The following example sets the calendar to 20 minutes past 10 AM, January 13, 2006, synchronizes the real-time clock to the calendar time, and displays the result.

```
SCE>enable 10
Password:pcube
SCE#calendar set 10:20:00 13 jan 2006
SCE#clock read-calendar
SCE#show calendar
10:20:03  UTC  THU  January  13  2006
SCE#show clock
10:20:05  UTC  THU  January  13  2006
SCE#
```

Related Commands

clock read-calendar (on page 2-43)

clock set (on page 2-44)

clock update-calendar (on page 2-50)

clock timezone (on page 2-49)

clock summertime (on page 2-45)

show calendar (on page 2-176)

show clock (on page 2-177)

cd

Changes the path of the current working directory.

cd *new-path*

Syntax Description

new-path	The path name of the new directory. This can be either a full path or a relative path.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The new path should already have been created in the local flash file system.

Authorization: admin

Examples

The following example shows the current directory (root directory) and then changes the directory to the log directory located under the root directory.

```
SCE>enable 10
Password:pcube
SCE#pwd
tffs0
SCE#cd log
SCE#pwd
tffs0:log
SCE#
```

Related Commands

pwd (on page 2-140)

mkdir (on page 2-123)

clear arp-cache

Deletes all dynamic entries from the ARP cache.

The Address Resolution Protocol (ARP) is a TCP/IP protocol that converts IP addresses to physical addresses. Dynamic entries are automatically added to and deleted from the cache during normal use. Entries that are not reused age and expire within a short period of time. Entries that are reused have a longer cache life.

clear arp-cache

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears the ARP cache.

```
SCE>enable 10
Password:pcube
SCE#clear arp-cache
SCE#
```

Related Commands

clear interface linecard

Clears the linecard Interface counters.

clear interface linecard *slot-number* **counters**

Syntax Description	*slot-number* The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears the Line-Card 0 counters.

```
SCE>enable 10
Password:pcube
SCE#clear interface linecard 0 counters
SCE#
```

Related Commands

show interface LineCard counters (on page 2-197)

clear interface linecard 0 VAS-traffic-forwarding VAS all counters health-check

Clears the VAS health check counters.

Use the **all** keyword to clear counters for all VAS servers.

clear interface linecard *slot-number* **VAS-traffic-forwarding VAS server-id** *number* **counters health-check**

clear interface linecard *slot-number* **VAS-traffic-forwarding VAS all counters health-check**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
number	ID number of the specified VAS server clear the counters.

Defaults

This command has no default settings.

Command Modes

Privilege Exec

Usage Guidelines

Use the **all** keyword to clear counters for all VAS servers.

Authorization: admin

Examples

This example illustrates how to clear the health check counters for all VAS servers.

```
SCE>enable 10
Password:pcube
SCE#clear interface linecard 0 VAS-traffic-forwarding VAS all
counters health-check
SCE#
```

Related Commands

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

show interface linecard 0 VAS-traffic-forwarding (on page 2-233) (To display the VAS health check counters)

clear interface linecard MPLS VPN

Clears the specified MPLS VPN counter:

- bypassed VPNs
- non-VPN-mappings

clear interface linecard *slot-number* **MPLS VPN** [**bypassed-VPNs**][**non-VPN-mappings**]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

bypassed-VPNs Displays all currently bypassed VPNs, grouped by downstream label

non-VPN-mappings Displays the mappings of upstream labels that belong to non-VPN flows

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears the MPLS VPN counter for non-VPN-mappings.

```
SCE>enable 10
Password:pcube
SCE#clear interface linecard 0 MPLS VPN non-VPN-mappings
SCE#
```

Related Commands

show interface LineCard MPLS (on page 2-207)

no MPLS VPN PE-database (on page 2-131)

clear interface linecard subscriber

Clears all anonymous subscribers in the system.

clear interface linecard *slot-number* **subscriber anonymous all**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears all anonymous subscribers.

```
SCE>enable 10
Password:pcube
SCE#clear interface LineCard 0 subscriber anonymous all
SCE#
```

Related Commands

no subscriber (on page 2-132)

no subscriber anonymous-group (on page 2-133)

show interface LineCard subscriber anonymous (on page 2-215)

clear interface linecard subscriber db counters

Clears the "total" and "maximum" subscribers database counters.

clear interface linecard *slot-number* **subscriber db counters**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears all anonymous subscribers.

```
SCE>enable 10
Password:pcube
SCE#clear interface linecard 0 subscriber db counters
SCE#
```

Related Commands

show interface LineCard subscriber db counters (on page 2-217)

clear interface linecard traffic-counter

Clears the specified traffic counter.

clear interface linecard *slot-number* **traffic-counter** *name* [**all**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
name	Name of the traffic counter to be cleared.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use the **all** keyword to clear all traffic counters.

Authorization: admin

Examples

The following example clears the traffic counter name counter1.

```
SCE>enable 10
Password:pcube
SCE#clear interface linecard 0 traffic-counter name counter1
SCE#
```

Related Commands

traffic-counter (on page 2-328)

show interface LineCard traffic-counter (on page 2-231)

clear logger

Clears SCE platform logger (user log files). This erases the information stored in the user log files.

When using the **counters** keyword, it clears the counters of the SCE platform logger (user log files). The counters keep track of the number of info, warning, error and fatal messages.

When using the **nv-counters** keyword, it clears the non-volatile counters for the entire log or only the specified SCE platform. These counters are not cleared during bootup, and must be cleared explicitly by using this command.

clear logger [**device** *User-File-Log*|*Line-Attack-File-Log*] [**counters**|**nv-counters**]

Syntax Description

device	The device name to be cleared, either user-file-log or line-attack-file-log

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The users log files have a size limit, with new entries overwriting the oldest entries. Therefore, there is no need to regularly clear the log files. Use this operation when you are certain that the information contained on the logs is irrelevant and might be confusing (For example, when re-installing the system at a new site, whose administrators should not be confused with old information).

Authorization: admin

Examples

The following examples illustrate the use of the **clear logger** command:

EXAMPLE 1:

The following example clears the SCE platform user file logs:

```
SCE>enable 10
Password:pcube
SCE#clear logger device User-File-Log
Are you sure?Y
SCE#
```

EXAMPLE 2:

The following example clears the SCE platform user log file counters.

```
SCE>enable 10
Password:pcube
SCE#clear logger device User-File-Log counters
Are you sure?Y
SCE#
```

EXAMPLE 3:

The following example clears the user log file non-volatile counters.

```
SCE>enable 10
Password:pcube
SCE#clear logger device user-file-log nv-counters
Are you sure?Y
SCE#
```

Related Commands

logger device User-File-Log max-file-size (on page 2-115)

show logger device (on page 2-249)

show log (on page 2-248)

clear management-agent notifications counters

Clears the counters for the number of notifications sent to the management agent.

clear management-agent notifications counters

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears the management agent notifications counters.

```
SCE>enable 10
Password:pcube
SCE#clear management-agent notifications counters
SCE#
```

Related Commands

management-agent notifications[1]

[1] Enables sending notifications to the management agent that a dynamic CLI command was invoked. Use either the no or the default form of the command to disable sending notifications about dynamic CLI commands to the management agent.management-agent notifications [all | module-list module-list| notification-list notification-list]no management-agent notifications default management-agent notifications Syntax Descriptionmodule-listList of module numbers to be enabled. All notifications in each list ...

clear RDR-formatter

Clears the RDR formatter counters.

clear RDR-formatter

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example clears the RDR-formatter counters.

```
SCE>enable 10
Password:pcube
SCE#clear RDR-formatter
SCE#
```

Related Commands

show RDR-formatter counters (on page 2-256)

clock read-calendar

Synchronizes clocks by setting the system clock from the calendar.

clock read-calendar

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example updates the system clock from the calendar.

```
SCE>enable 10
Password:pcube
SCE#clock read-calendar
SCE#
```

Related Commands

calendar set (on page 2-30)

clock update-calendar (on page 2-50)

show calendar (on page 2-176)

show clock (on page 2-177)

clock set

Manually sets the system clock.

clock set *hh:mm:ss day month year*

Syntax Description

hh:mm:ss	Current local time in hours in 24-hour format, minutes and seconds (HH:MM:SS).
day	Current day (date) in the month.
month	Current month (by three-letter abbreviated name).
year	Current year using a 4-digit number.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Always coordinate between the calendar and clock by using the **clock update-calendar** command after setting the clock.

Authorization: admin

Examples

The following example sets the clock to 20 minutes past 10 PM, January 13, 2006.

```
SCE>enable 10
Password:pcube
SCE#clock set 22:20:00 13 jan 2006
SCE#clock update-calendar
SCE#show clock
22:21:10  UTC  THU  January  13  2006
SCE#show calendar
22:21:18  UTC  THU  January  13  2006
SCE#
```

Related Commands

clock update-calendar (on page 2-50)

show calendar (on page 2-176)

show clock (on page 2-177)

clock summertime

Configures the SCE platform to automatically switch to daylight savings time on a specified date, and also to switch back to standard time. In addition, the three-letter time zone code can be configured to vary with daylight savings time if required. (For instance, in the eastern United States, standard time is designated EST, and daylight savings time is designated EDT).

Use the **no** form of this command to cancel the daylight savings time transitions configuration.

clock summertime
no clock summertime

The format of the command varies somewhat, depending on how the dates for the beginning and end of daylight savings time are determined for the particular location:

- recurring: If daylight savings time always begins and ends on the same day every year, (as in the United States):
  - Use the **clock summer-time recurring** command
  - The *year* parameter is not used
- not recurring: If the start and end of daylight savings time is different every year, (as in Israel):
  - Use the **clock summer-time** command
  - The *year* parameter must be specified

General guidelines for configuring daylight savings time transitions:

- Specify the three letter time zone code for daylight savings time.
- recurring: specify a day of the month (week#|first|last/day of the week/month).
- not recurring: specify a date (month/day of the month/year).
- Define two days:
  - Day1 = beginning of daylight savings time.
  - Day2 = end of daylight savings time.

  In the Southern hemisphere, month2 must be before month1, as daylight savings time begins in the fall and ends in the spring.
- Specify the exact time that the transition should occur (24 hour clock).
  - Time of transition into daylight savings time: according to local standard time.
  - Time of transition out of daylight savings time: according to local daylight savings time.

For the **clock summer-time recurring** command, the default values are the United States transition rules:

- Daylight savings time begins: 2:00 (AM) on the first Sunday of April.
- Daylight savings time ends: 2:00 (AM) on the last Sunday of October.

Syntax Description

zone	The 3-letter code for the time zone for daylight savings.
week1/week2	The week of the month on which daylight savings begins (week1) and ends (week2). A day of the week, such as Monday, must also be specified. The week/day of the week is defined for a recurring configuration only. Default: Not used
day1/day2	The day of the week on which daylight savings begins (day1) and ends (day2). For recurrent configuration: day is a day of the week, such as Sunday. Use the keywords first/last to specify the occurrence of a day of the week in a specified month: For example: last Sunday March. For non-recurrent configuration: day is a day in the month, such as 28. Default: day1 = first Sunday, day2 = last Sunday
month1/month2	The month in which daylight savings begins (*month1*) and ends (*ends2)*. Default: month1 = April, month2 = October
year1/year2	The year in which daylight savings begins (month1) and ends (ends2). For non - recurring configuration only. Default = not used
time1/time2	The time of day (24-hour clock) at which daylight savings begins (*time1*) and ends (*time2)*. Required for all configurations. Default: time1/time2 = 2:00
offset	The difference in minutes between standard time and daylight savings time. Default = 60

Defaults

recurring, offset = 60 minutes

By default, the following recurrent time changes are configured:

- Daylight savings time begins: 2:00 (AM) on the first Sunday of April.
- Daylight savings time ends: 2:00 (AM) on the last Sunday of October.

Command Modes

Global Configuration

Usage Guidelines

Use the **recurring** keyword to enable subscriber notification.

Use the **first/last** keywords to specify the occurrence of a day of the week in a specified month: For example: last Sunday March.

Use a specific date including the year for a not recurring configuration. For example: March 29, 2004.

Use week/day of the week/month (no year) for a recurring configuration:

- Use first/last occurrence of a day of the week in a specified month. For example: last, Sunday, March (the last Sunday in March).

- Use the day of the week in a specific week in a specified month. For example: 4,Sunday, March (the fourth Sunday in March). This would be different from the last Sunday of the month whenever there were five Sundays in the month.

Authorization: admin

Examples

The following examples illustrate the use of the **clock summertime** command:

EXAMPLE 1:

The following example shows how to configure recurring daylight savings time for a time zone designated "DST" as follows:

- Daylight savings time begins: 0:00 on the last Sunday of March.
- Daylight savings time ends: 23:59 on the Saturday of fourth week of November.
- Offset = 1 hour (default)

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#clock summer-time DST recurring last Sunday March
00:00 4 Saturday November 23:59
SCE(config)#
```

EXAMPLE 2:

The following example shows how to configure non-recurring daylight savings time for a time zone designated "DST" as follows:

- Daylight savings time begins: 0:00 on April 16, 2005.
- Daylight savings time ends: 23:59 October 23, 2005.
- Offset = 1 hour (default)

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#clock summer-time DST April 16 2005 00:00 October 23
2005 23:59
SCE(config)#
```

EXAMPLE 3:

The following example shows how to cancel the daylight savings configuration.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no clock summer-time
SCE(config)#
```

Related Commands

clock set (on page 2-44)

calendar set (on page 2-30)

show calendar (on page 2-176)

show clock (on page 2-177)

clock timezone

Sets the time zone. Use the no version of this command to remove current time zone setting. The purpose of setting the time zone is that the system can correctly interpret time stamps data coming from systems located in other time zones.

clock timezone *zone hours* [*minutes*]

no clock timezone

Syntax Description

zone	The name of the time zone to be displayed.
hours	The hours offset from GMT (UTC). This must be an integer in the range –23 to 23.
minutes	The minutes offset from GMT (UTC). This must be an integer in the range of 0 to 59. Use this parameter to specify an additional offset in minutes when the offset is not measured in whole hours.

Defaults

GMT (hours = 0)

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets the time zone to Pacific Standard Time with an offset of 10 hours behind GMT.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#clock timezone PST –10
SCE(config)#
```

Related Commands

calendar set (on page 2-30)

clock set (on page 2-44)

show calendar (on page 2-176)

show clock (on page 2-177)

clock update-calendar

Synchronizes clocks by setting the calendar from the system clock.

clock update-calendar

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example updates the calendar according to the clock.

```
SCE>enable 10
Password:pcube
SCE#clock update-calendar
SCE#
```

Related Commands

clock set (on page 2-44)

calendar set (on page 2-30)

clock read-calendar (on page 2-43)

show calendar (on page 2-176)

show clock (on page 2-177)

configure

Enables the user to move from Privileged Exec Mode to Configuration Mode.

configure

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

After the user enters the **configure** command, the system prompt changes from <`host-name`># to <`host-name`>(`config`)#, indicating that the system is in Global Configuration Mode. To leave Global Configuration Mode and return to the Privileged Exec Mode prompt, type **`exit`**.

Authorization: admin

Examples

The following example enters the Global Configuration Mode.

```
SCE>enable 10
Password:pcube
SCE#configure
SCE(config)#
```

Related Commands

exit (on page 2-72)

connection-mode (SCE 1000 platform)

Sets the connection mode parameters for an SCE 1000 platform.

connection-mode *connection-mode* **on-failure** *on-failure*

Syntax Description

connection-mode	inline or receive-only setting. **inline** SCE platform is connected in a bump-in-the-wire topology. **receive-only** SCE platform is connected in an out-of-line topology using a splitter or switch.
On-failure	determines system behavior on failure of the SCE platform. (inline topologies only) **Bypass** **cutoff**

Defaults

connection mode = inline

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets the connection-mode to inline and the on-failure mode to cutoff.

```
SCE1000>enable 10
Password:pcube
SCE1000#config
SCE1000(config)#interface LineCard 0
SCE1000(config if)#connection-mode inline on-failure cutoff
SCE1000(config if)#
```

Related Commands

show interface LineCard slot-number connection-mode (on page 2-196)

connection-mode (SCE 2000 platform)

Sets the connection mode parameters for an SCE 2000 platform.

connection-mode *connection-mode* **physically-connected-links** *physically-connected-links* **Priority** *Priority* **On-failure** *On-failure*

Syntax Description

connection mode **`inline`**: single SCE platform inline
`receive-only`: single SCE platform receive-only
`inline-cascade`: two SCE platforms inline
`receive-only-cascade`: two SCE platforms receive-only

physically-connected-links The number of the link connected to the SCE platform. (two SCE platform topology only)
`link 0`
`link 1`

priority Defines which is the primary SCE platform.(two SCE platform topologies only).
`primary`
`secondary`

on-failure Determines system behavior on failure of the SCE platform. (inline topologies only)
`bypass`
`cutoff`

Defaults

connection mode = inline

physically-connected-links =link 0

priority = primary

on-failure = bypass

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example show how to configure the primary SCE 2000 platform in a two-SCE platform inline topology. Link "0" is connected to this SCE platform, and the behavior of the SCE platform if a failure occurs is “bypass”.

```
SCE2000>enable 10
Password:pcube
SCE2000#config
SCE2000(config)#interface LineCard 0
SCE2000(config if)#connection-mode inline-cascade physically-
connected-links link-0 priority primary on-failure bypass
SCE2000(config if)#
```

Related Commands

show interface LineCard slot-number connection-mode (on page 2-196)

copy

Copies any file from a source directory to a destination directory on the local flash file system.

copy *source-file destination-file*

Syntax Description

source-file The name of the original file.

destination-file The name of the new destination file.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Both file names should be in 8.3 format, that is, there are a maximum of 8 characters before the period and three characters following it.

Authorization: admin

Examples

The following example copies the local analysis.sli file located in the root directory to the applications directory.

```
SCE>enable 10
Password:pcube
SCE#copy analysis.sli applications/analysis.sli
SCE#
```

Related Commands

copy ftp://

Downloads a file from a remote station to the local flash file system, using FTP.

copy ftp://*username*[*:password*]**@***server-address*[*:port*]/*path*/*source-file destination-file*

Syntax Description

username	The username known by the FTP server.
password	The password of the given username.
server-address	The dotted decimal IP address of the FTP server.
port	Optional port number on the FTP server.
source-file	The name of the source file located in the on the server.
destination-file	The name of the file to be saved in the local flash file system. The file should be in 8.3 format, that is 8 digits, dot, then 3 digits.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use the following syntax for remote upload/download using FTP:

```
ftp://username[:password]@server-address[:port]/path/file
```

You can configure keyword shortcuts for the **copy** command using the following commands:

- *ip ftp password* (on page 2-94) to configure a password shortcut.
- *ip ftp username* (on page 2-95) to configure a username shortcut.

Authorization: admin

Examples

The following example downloads the ftp.sli file from the host 10.1.1.105 with user name “vk” and password “vk”.

```
SCE>enable 10
Password:pcube
SCE#copy ftp://vk:vk@10.1.1.105/p:/applications/ftp.sli
SCE#
```

Related Commands

copy-passive (on page 2-57)

ip ftp password (on page 2-94)

ip ftp username (on page 2-95)

copy-passive

Uploads or downloads a file using passive FTP.

copy-passive *source-file* **ftp:**//*username*[:*password*]**@***server-address*[:*port*]/*path*/*destination-file* **[overwrite**]

Syntax Description

source-file	The name of the source file located in the local flash file system.
username	The username known by the FTP server.
password	The password of the given username.
server-address	The dotted decimal IP address.
port	Optional port number on the FTP server.
destination-file	The name of the file to be created in the FTP server.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use the following format for remote upload/download using FTP:
`ftp://username[:password]@serveraddress[:port]/path/file`

Use the **overwrite** keyword to permit the command to overwrite an existing file.

You can configure keyword shortcuts for the **`copy`** command using the following commands:

- *ip ftp password* (on page 2-94) to configure a password shortcut.
- *ip ftp username* (on page 2-95) to configure a username shortcut.

Authorization: admin

Examples

The following example performs the same operation as the previous copy ftp example using passive FTP.

```
SCE>enable 10
Password:pcube
SCE#copy-passive appl/analysis.sli
ftp://myname:mypw@10.1.1.105/p:/applications/analysis.sli
SCE#
```

Related Commands

copy ftp:// (on page 2-56)

ip ftp password (on page 2-94)

ip ftp username (on page 2-95)

copy running-config startup-config

Builds a configuration file with general configuration commands called `config.txt`, which is used in successive boots.

copy running-config startup-config

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

This command must be entered to save newly configured parameters, so that they will be effective after a reboot. You can view the running configuration before saving it using the **more running-config** command.

The old configuration file is automatically saved in the `tffs0:system/prevconf` directory.

Authorization: admin

Examples

The following example saves the current configuration for successive boots.

```
SCE>enable 10
Password:pcube
SCE#copy running-config startup-config
Backing-up configuration file...
Writing configuration file...
SCE#
```

Related Commands

more (on page 2-124)

show running-config (on page 2-265)

copy source-file ftp://

Uploads a file to a remote station, using FTP.

copy *source-file* **ftp:**//*username*[:*password*]**@***server-address*[:*port*]/*path*/*destination-file*

Syntax Description

source-file	The name of the source file located in the local flash file system.
username	The username known by the FTP server.
password	The password of the given username.
server-address	The dotted decimal IP address.
port	Optional port number on the FTP server.
destination-file	The name of the file to be created in the FTP server.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use the following format for remote upload/download using FTP:
`ftp://username[:password]@serveraddress[:port]/path/file`

You can configure keyword shortcuts for the **`copy`** command using the following commands:

- **`IP ftp password`** to configure a password shortcut.
- **`IP ftp userName`** to configure a username shortcut.

Authorization: admin

Examples

The following example uploads the analysis.sli file located on the local flash file system to the host 10.1.1.105.

```
SCE>enable 10
Password:pcube
SCE#copy /appl/analysis.sli
ftp://myname:mypw@10.1.1.105/p:/applications/analysis.sli
SCE#
```

Related Commands

copy ftp:// (on page 2-56)

copy source-file startup-config

Copies the specified source file to the startup-config file.

Use this command to upload a backup configuration file created using the **copy startup-config destination-file** command.

This is useful in a cascaded solution for copying the configuration from one SCE platform to the other.

copy *source-file* **startup-config**

Syntax Description

source-file	The name of the backup configuration file. ftp://user:pass@host/drive:/dir/bckupcfg.txt /tffs0

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The source file name should be in 8.3 format, that is, there are a maximum of 8 characters before the period and three characters following it.

Authorization: admin

Examples

The following example shows how to upload a backup configuration file.

```
SCE>enable 10
Password:pcube
SCE#copy ftp://user:pass@host/drive:/dir/bakupcfg.txt startup-config
SCE#
```

Related Commands

copy startup-config destination-file (on page 2-61)

copy startup-config destination-file

Copies the startup-config file to the specified destination file.

Use this command to create a backup configuration file.

This is useful in a cascaded solution for copying the configuration from one SCE platform to the other. The file created by this command can then be uploaded to the second SCE platform using the **copy source-file startup-config** command.

copy startup-config *destination-file*

Syntax Description

destination-file	The name of the file to which the configuration is copied. ftp://user:pass@host/drive:/dir/bckupcfg.txt /tffs0

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The destination file name should be in 8.3 format, that is, there are a maximum of 8 characters before the period and three characters following it.

Authorization: admin

Examples

The following example shows how to create a backup configuration file.

```
SCE>enable 10
Password:pcube
SCE#copy startup-config
ftp://user:pass@host/drive:/dir/bckupcfg.txt
SCE#
```

Related Commands

copy source-file startup-config (on page 2-60)

default subscriber template all

Removes all user-defined subscriber templates from the system. The default template only remains.

default subscriber template all

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example removes all user-defined subscriber templates.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# default subscriber template all
SCE(config if)#
```

Related Commands

subscriber template import csv-file (on page 2-313)

show interface LineCard subscriber templates (on page 2-225)

delete

Deletes a file from the local flash file system.

Use the recursive switch to delete a complete directory and its contents. When used with the recursive switch, the filename argument specifies a directory rather than a file.

delete *file-name* [/**recursive**]

Syntax Description

file-name	The name of the file or directory to be deleted.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the delete command:

EXAMPLE 1:

The following example deletes the oldlog.txt file.

```
SCE>enable 10
Password:pcube
SCE#delete oldlog.txt
SCE#
```

EXAMPLE 2:

The following example deletes the oldlogs directory.

```
SCE>enable 10
Password:pcube
SCE#delete oldlogs /recursive
3 files and 1 directories will be deleted.
Are you sure? y
3 files and 1 directories have been deleted.
SCE#
```

Related Commands

dir (on page 2-64)

dir

Displays the files in the current directory.

dir [**applications**] [**-r**]

Syntax Description

applications	Filters the list of files to display only the application files in the current directory.
-r	Includes all files in the subdirectories of the current directory as well as the files in the current directory.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example displays the files in the current directory (root).

```
SCE>enable 10
Password:pcube
SCE#dir
File list for /tffs0/
512   TUE JAN 01 00:00:00 1980   LOGDBG          DIR
512   TUE JAN 01 00:00:00 1980   LOG             DIR
7653  TUE JAN 01 00:00:00 1980   FTP.SLI
29    TUE JAN 01 00:00:00 1980   SCRIPT.TXT
512   TUE JAN 01 00:00:00 1980   SYSTEM          DIR
SCE#
```

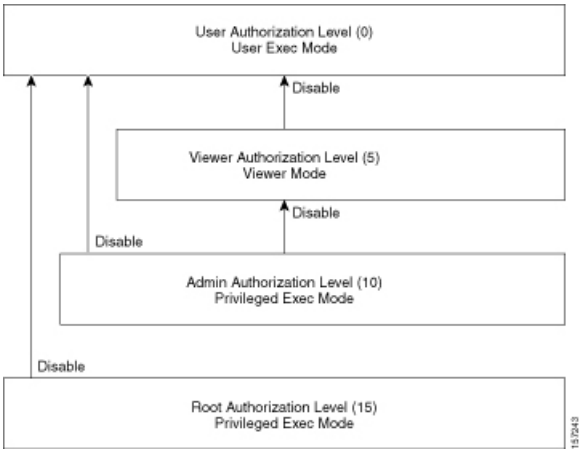
Related Commands

pwd (on page 2-140)

cd (on page 2-31)

disable

Moves the user from a higher level of authorization to a lower user level, as illustrated in the following figure.



disable [*level*]

Syntax Description

level	User authorization level (0, 5, 10, 15) as specified in *CLI Authorization Levels* (on page 1-5).

Defaults

This command has no default settings.

Command Modes

Privileged Exec and Viewer

Usage Guidelines

Use this command with the level option to lower the user privilege level. If a level is not specified, it defaults to User mode.

Note that you must **exit** to the Privileged Exec command mode to use this command.

Authorization: user

Examples

The following example shows how to change from root to admin mode:

```
SCE>enable 15
Password:pcube
SCE#>disable 10
SCE#
```

Related Commands

enable (on page 2-69)

do

Use the 'do' command to execute an EXEC mode command (such as a show command) or a privileged EXEC command (such as **show running-config**) without exiting to the relevant command mode.

do *command*

Syntax Description

command	command to be executed.

Defaults

This command has no default settings.

Command Modes

All configuration modes

Usage Guidelines

Use this command when in any configuration command mode (global configuration, linecard configuration, or any interface configuration) to execute a user, viewer, or privileged exec command.

Enter the entire command with all parameters and keywords as you would if you were in the relevant command mode.

Authorization: admin

Examples

The following example assumes that the on-failure action of the SCE platform has been changed to 'bypass'. The connection mode configuration is then displayed to verify that the parameter was changed. The do command is used to avoid having to exit to the privileged exec mode.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#connection-mode on-failure bypass
SCE(config if)#do show interface LineCard 0 connection-mode
SCE(config if)#
```

Related Commands

duplex

Configures the duplex operation of a FastEthernet Interface (may be either line or management interface).

duplex *mode*
no duplex

Syntax Description

mode	Set to the desired duplex mode: **full:** full duplex **half:** half duplex **auto:** auto-negotiation (do not force duplex on the link)

Defaults

mode = Auto

Command Modes

FastEthernet Interface Configuration

Mng Interface Configuration

Usage Guidelines

Use this command to configure the duplex mode of any Fast Ethernet interface. There are two types of Fast Ethernet interfaces:

- Fast Ethernet management interface: The management interfaces on all SCE platforms are Fast Ethernet interfaces.
  - command mode = Mng Interface Configuration
  - interface designation = 0/1 or 0/2
- Fast Ethernet line interface: Only the SCE 2000 4/8xFE platform has Fast Ethernet line interfaces.
  - command mode = FastEthernet Interface Configuration
  - interface designation = 0/1, 0/2, 0/3, or 0/4

If the speed (see *speed* (on page 2-302)) of the relevant interface is configured to **auto**, changing this configuration has no effect.

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1

The following example configures line FastEthernet port #3 to half duplex mode.

```
SCE2000>enable 10
Password:pcube
SCE2000FE#config
SCE2000FE(config)#interface FastEthernet 0/3
SCE2000FE(config if)#duplex half
SCE2000FE(config if)#
```

EXAMPLE 2

The following example configures management port #2 to auto mode.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface mng 0/2
SCE(config if)#duplex auto
SCE(config if)#
```

Related Commands

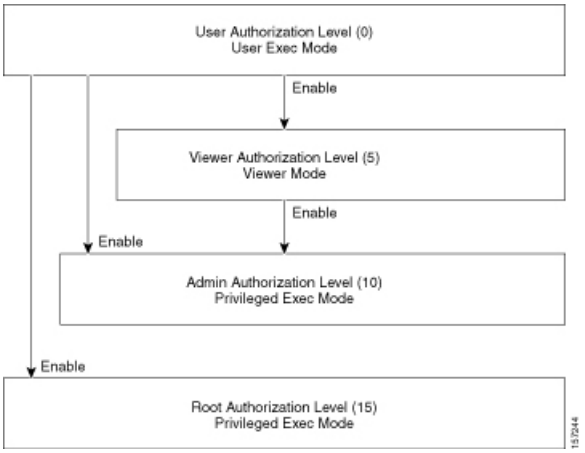
speed (on page 2-302)

show interface Mng (on page 2-185)

show interface FastEthernet (on page 2-181)

enable

Enables the user to access a higher authorization level, as illustrated in the following figure.



enable [*level*]

Syntax Description

level	User authorization level (0, 5, 10, 15) as specified in *CLI Authorization Levels* (on page 1-5).

Defaults

level = admin

Command Modes

User Exec or Viewer

Usage Guidelines

If a level is not specified, the level defaults to admin authorization, level 10.

Note that you cannot use the enable command from the Privileged Exec or any of the configuration command modes.

Authorization: User

Examples

The following example accesses the administrator authorization level. Note that the prompt changes from ***SCE>*** to ***SCE#***, indicating that the privilege is the administrator privilege level.

```
SCE>enable
Password:pcube
SCE#
```

Related Commands

disable (on page 2-65)

enable password

Configures a password for the specified authorization level, thus preventing unauthorized users from accessing the SCE platform.

Use the **no** form of the command to disable the password for the specified authorization level.

enable password [**Level** *level*] [*encryption-type*] *password*

no enable password [**Level** *level*]

Syntax Description

level	User authorization level (0, 5, 10, 15) as specified in *CLI Authorization Levels* (on page 1-5). If no level is specified, the default is Admin (10).
encryption-type	If you want to enter the encrypted version of the password, set the *encryption type* to **5**, to specify the algorithm used to encrypt the password.
password	A regular or encrypted password set for the access level. If you specify *encryption-type*, you must supply an encrypted password.

Defaults

password: **pcube** or **cisco**

Command Modes

Global Configuration

Usage Guidelines

After the command is entered, any user executing the **enable** command must supply the specified password.

- Passwords must be at least 4 and no more than 100 characters long.
- Passwords can contain any printable characters.
- Passwords must begin with a letter.
- Passwords cannot contain spaces.
- Passwords are case-sensitive.

Authorization: admin

Examples

The following example sets a level 10 password as a123*man.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#**enable password Level 10 a123*man**
SCE(config)#

Related Commands

no enable password

erase startup-config-all

Removes all current configuration by removing all configuration files.

erase startup-config-all

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The following data is deleted by this command:

- General configuration files
- Application configuration files
- Static party DB files
- Management agent installed MBeans

After using this command, the SCE platform should be reloaded immediately to ensure that it returns to the 'factory default' state.

Authorization: admin

Example

The following example shows how to erase the startup configuration.

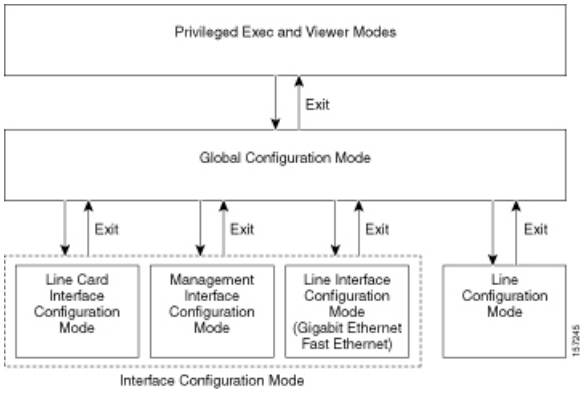
```
SCE>enable 10
Password:pcube
SCE#erase startup-config-all
```

Related Commands

reload (on page 2-152)

exit

Exits from the current mode to the next "lower" mode, as illustrated in the following figure.



exit

Syntax Description

This command has no arguments and keywords.

Defaults

This command has no default settings.

Command Modes

All

Usage Guidelines

Use this command each time you want to exit a mode. The system prompt changes to reflect the lower-level mode.

Authorization: admin

Examples

The following example exits from the LineCard Interface Configuration Mode to Global Configuration Mode and then to Privileged Exec and Viewer Modes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#exit
SCE(config)#exit
SCE#
```

Related Commands

failure-recovery operation-mode

Specifies the operation mode to be applied after boot resulting from failure. When using the **default** switch, you do not have to specify the mode.

failure-recovery operation-mode *mode*

default failure-recovery operation-mode

Syntax Description

mode	**operational** or **non-operational**. Indicates whether the system will boot as operational or not following a failure.

Defaults

mode = operational

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets the system to boot as operational after a failure

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#failure-recovery operation-mode operational
SCE(config)#
```

Related Commands

force failure-condition (SCE 2000 only)

Forces a virtual failure condition, and exits from the failure condition, when performing an application upgrade.

force failure-condition

no force failure-condition

Syntax Description

This command has no arguments or keywords

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example forces a virtual failure condition.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#force failure-condition
SCE(config if)#
```

Related Commands

help

Displays information relating to all available CLI commands.

help bindings|tree

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Exec

Usage Guidelines

Use the *bindings* keyword to print a list of keyboard bindings (shortcut commands).

Use the *tree* keyword to display the entire tree of all available CLI commands.

Authorization: User

Examples

The following example shows the partial output of the help bindings command.

```
SCE>help bindings
Line Cursor Movements
---------------------
Ctrl-F /-> Moves cursor one character to the right.
Ctrl-B /<- Moves cursor one character to the left.
Esc-F      Moves cursor one word to the right.
Esc-B      Moves cursor one word to the left.
Ctrl-A          Moves cursor to the start of the line.
Ctrl-E          Moves cursor to the end of the line.
Esc F           Moves cursor forward one word.
Esc B      Moves cursor backward one word.

Editing
-------
Ctrl-D          Deletes the character where the cursor is
located.
Esc-D      Deletes from the cursor position to the end of the
word.
Backspace  Deletes the character before the current location of
the cursor.
Ctrl-H          "      " "        "  " "  "  " " "
Ctrl-K          Deletes from the cursor position to the end of
the line.
Ctrl-U          Deletes all characters from the cursor to the
beginning of the line.
Ctrl-X          "      " "        "  " "  "  " " "
Ctrl-W          Deletes the word to the left of the cursor.
Ctrl-Y          Recall the last item deleted.

Help and Operation Features
---------------------------
?          Argument help.
<Tab>      Toggles between possible endings for the typed
prefix.
<Esc><Tab> Displays all the possible arguments backwards.
Ctrl-I          <TAB>
SCE>
```

Related Commands

history

Enables the history feature, that is, a record of the last command lines that executed. Use the no form of this command to disable history.

history
no history

Syntax Description

This command has no arguments or keywords.

Defaults

History is enabled.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1

The following example enables the **history** feature.

```
SCE>enable 10
Password:pcube
SCE#history
SCE#
```

EXAMPLE 2

The following example disables the **history** feature.

```
SCE>enable 10
Password:pcube
SCE#no history
SCE#
```

Related Commands

history size (on page 2-78)

history size

Sets the number of command lines that the system records in the history.

history size *size*
no history size

Syntax Description

size	The number of command lines stored in the history of commands for quick recall.

Defaults

size = 10 lines

Command Modes

Privileged EXEC

Usage Guidelines

The size of the history buffer can be any number from 0-50. Use the [**no**] form of this command to restore the default size.

Authorization: admin

Examples

The following example sets the history buffer size to 50 command lines.

```
SCE>enable 10
Password:pcube
SCE#history size 50
SCE#
```

Related Commands

history (on page 2-77)

hostname

Modifies the name of the SCE platform. The host name is part of the displayed prompt.

hostname *host-name*

Syntax Description

host-name	The new host name.

Defaults

host-name = ***SCE***

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example changes the host name to MyHost.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#>hostname MyHost
MyHost(config)#>
```

Related Commands

show hostname (on page 2-179)

interface FastEthernet (SCE 2000 4/8xFE platform only)

Enters FastEthernet Interface Configuration mode to configure a specified Fast Ethernet line interface. This command is supported by the SCE 2000 4/8xFE platform only.

To configure a management port (which is also a Fast Ethernet interface) use the *interface Mng* (on page 2-83) command.

interface FastEthernet *slot-number/interface-number*

Syntax Description

slot-number The number of the identified slot. Enter a value of **0**.

interface-number The FastEthernet interface number. Enter a value between **1** and **4** to configure one of the line ports for an SCE 2000 4/8xFE platform.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

This command is used to configure the line ports (SCE 2000 4/8xFE platform only).

To return to the Global Configuration Mode, type **exit**.

The system prompt changes to reflect the Fast Ethernet Interface Configuration mode.

Authorization: admin

Examples

The following example enters into FastEthernet Configuration Interface Mode for line port #3.

```
SCE2000FE>enable 10
Password:pcube
SCE2000FE#config
SCE2000FE(config)#interface FastEthernet 0/3
SCE2000FE(config if)#
```

Related Commands

interface Mng (on page 2-83)

interface GigabitEthernet

Enters GigabitEthernet Interface Configuration mode to configure a specified Gigabit Ethernet line interface. This command is not supported by the SCE 2000 4/8xFE platform, which has no Gigabit Ethernet interfaces.

To configure a management port, use the *interface Mng* (on page 2-83) command.

interface GigabitEthernet *slot-number/interface-number*

Syntax Description

slot-number Enter a value of **0**.

interface-number The GigabitEthernet line interface number.
SCE 2000 4xGBE platform: Enter a value between **1** and **4**
SCE 1000 2xGBE platform: Enter a value of either **1** or **2**

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Use this command to configure the line ports for an SCE 2000 4xGBE or SCE 1000 2xGBE platform. This command is not used for configuring the management ports.

To return to the Global Configuration Mode, type **exit**.

The SCE 1000 platform uses line ports 1 - 2 and the SCE 2000 platform uses line ports 1 - 4.

The system prompt changes to reflect the GigabitEthernet Interface Configuration mode.

Authorization: admin

Examples

The following example enters into GigabitEthernet Configure Interface Mode to configure line port 1.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface GigabitEthernet 0/1
SCE(config)#interface GigabitEthernet 0/1
SCE(config if)#
```

Related Commands

interface Mng (on page 2-83)

interface LineCard

Enters LineCard Interface Configuration Mode.

interface LineCard *slot-number*

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

The system prompt is changed to reflect the Line Card Configuration mode. To return to the Global Configuration Mode, type **exit**.

Authorization: admin

Examples

The following example enters LineCard Interface Configuration Mode.

```
SCE(config)#interface LineCard 0
SCE(config if)#
```

Related Commands

interface Mng

Enters Management Interface Configuration mode.

interface Mng *slot-number/interface-number*

Syntax Description

slot-number The number of the identified slot. Enter a value of **0**.

interface-number The Management interface number. Enter a value of **1** or **2** to configure the desired Management port.

Defaults

This command has no default settings.

Command Modes

Management Interface Configuration

Usage Guidelines

Use this command to configure the management ports for the SCE platforms.

The system prompt is changed to reflect the Management Interface Interface Configuration mode. To return to the Global Configuration Mode, type **exit**.

Authorization: admin

Examples

The following example enters into Management Interface Configure Interface Mode.

```
SCE(config)#interface Mng 0/1
SCE(config if)#
```

Related Commands

ip access-class

Sets the global IP access class. The access list defined here contains the definitions for all IP addresses with permission to access the SCE platform. IP addresses not permitted in this access list cannot access or detect the SCE platform, that is, even a ping command will receive no response if it is not from a permitted IP address.

Use the **no** form of the command to reset global access to the SCE platform from any IP address.

ip access-class *number*

no ip access-class

Syntax Description

number	The number of the access list (1–99) to use to allow global access to the SCE platform.

Defaults

none (all IP addresses can access the system)

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets access list 1 as the global access list.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip access-class 1
SCE(config)#
```

Related Commands

access-list (on page 2-9)

show access-lists (on page 2-172)

ip address

Sets the IP address and subnet mask of the Management Interface.

When both management ports are connected, only one port is active at any given time, while the second management port provides a redundant management interface. In this case, the configured IP address acts as a virtual IP address for the currently active management interface, regardless of which port is the active port.

ip address *new-address subnet-mask*

Syntax Description

new-address The new IP address.

subnet-mask The network mask for the associated IP network.

Defaults

This command has no default settings.

Command Modes

Mng Interface Configuration

Usage Guidelines

Since this IP address always acts as a virtual IP address for the currently active management port, regardless of which port is the active port, this command can be executed from the Mng Interface Configuration for either management port.

Note Changing the IP address of the management interface via telnet will result in loss of the telnet connection and inability to reconnect with the interface.

If there is a routing table entry mapped to the old address, but not to the new address, the command may fail.

Authorization: admin

Examples

The following example sets the IP address of the SCE platform to 10.1.1.1 and the subnet mask to 255.255.0.0.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface mng 0/1
SCE(config if)#ip address 10.1.1.1 255.255.0.0
SCE(config if)#
```

Related Commands

ip advertising

Enables IP advertising. If the destination and/or interval is not configured, the default values are assumed.

Use the **no** version of the command to disable IP advertising.

Use the **default** version of the command to restore IP advertising destination or interval to the default values.

ip advertising [*destination destination*] [*interval interval*]
no ip advertising
default ip advertising

Syntax Description

destination	The IP address of the destination for the ping requests
interval	The frequency of the ping requests in seconds

Defaults

By default, IP advertising is disabled

destination = 127.0.0.1

interval = 300 seconds

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **ip advertising** command:

EXAMPLE 1:

The following example enables IP advertising, specifying 10.1.1.1 as the destination and an interval of 240 seconds.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip advertising destination 10.1.1.1 interval 240
SCE(config)#
```

EXAMPLE 2:

The following example restores the IP advertising destination to the default value.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#default ip advertising destination
SCE(config)#
```

Related Commands

show ip advertising (on page 2-240)

ip default-gateway

Configures the default gateway for the SCE platform. Use the **no** form of this command to unset the SCE platform default gateway.

ip default-gateway *x.x.x.x*

no ip default-gateway

Syntax Description

x.x.x.x	The IP address of the default gateway for the SCE platform.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets the default gateway IP of the SCE platform to 10.1.1.1.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#**ip default-gateway 10.1.1.1**
SCE(config)#

Related Commands

show ip default-gateway (on page 2-243)

ip domain-lookup

Enables or disables the domain name lookups.

Use the **no** form of the command to disable the domain name lookup.

ip domain-lookup

no ip domain-lookup

Syntax Description

This command has no arguments or keywords.

Defaults

By default, domain name lookup is enabled.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1:

The following example enables the domain lookup.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip domain-lookup
SCE(config)#
```

EXAMPLE 2:

The following example disables the domain lookup.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip domain-lookup
SCE(config)#
```

Related Commands

ip domain-name (on page 2-90)

ip name-server (on page 2-97)

show hosts (on page 2-180)

ip domain-name

Defines a default domain name. Use the **no** parameter of this command to remove the current default domain name. When using the **no** parameter, you do not have to specify the domain name.

ip domain-name *domain-name*

no ip domain-name

Syntax Description

domain-name	The default domain name used to complete host names that do not specify a domain. Do not include the initial period that separates an unqualified name from the domain name.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **ip domain-name** command:

EXAMPLE 1:

The following example configures the domain name.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip domain-name Cisco.com
SCE(config)#
```

EXAMPLE 2:

The following example removes the configured domain name.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip domain-name
SCE(config)#
```

Related Commands

ip domain-lookup (on page 2-89)

ip name-server (on page 2-97)

show hosts (on page 2-180)

ip filter fragment

Use this command to enable the filtering out of IP fragments.

Management security is defined as the capability of the SCE platform to cope with malicious management conditions that might lead to global service failure.

There are two parallel security mechanisms:

- Automatic security mechanism — monitors the TCP/IP stack rate at 200 msec intervals and throttles the rate from the device if necessary.
- User-configurable security mechanism — accomplished via two IP filters at user-configurable intervals:
  - IP fragment filter: Drops all IP fragment packets
  - IP filter monitor: Measures the rate of accepted and dropped packets for both permitted and not-permitted IP addresses.

This command enables the IP fragment filter.

Use the *ip filter moniter* (on page 2-92) command to configure the IP filter monitor.

ip filter fragment enable
ip filter fragment disable

Syntax Description

This command has no arguments or keywords.

Defaults

By default, IP fragment filtering is disabled.

Command Modes

Global Configuration

Usage Guidelines

Use the **enable** keyword to enable IP fragment filtering.

Use the **disable** keyword to disable IP fragment filtering.

Authorization: admin

Examples

The following example shows how to enable IP fragment filtering.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip filter fragment enable
SCE(config)#
```

Related Commands

ip filter moniter (on page 2-92)

show ip filter (on page 2-241)

ip filter monitor

Configures the limits for permitted and not-permitted IP address transmission rates.

Management security is defined as the capability of the SCE platform to cope with malicious management conditions that might lead to global service failure.

There are two parallel security mechanisms:

- Automatic security mechanism — monitors the TCP/IP stack rate at 200 msec intervals and throttles the rate from the device if necessary.
- User-configurable security mechanism — accomplished via two IP filters at user-configurable intervals:
  - IP fragment filter: Drops all IP fragment packets
  - IP filter monitor: Measures the rate of accepted and dropped packets for both permitted and not-permitted IP addresses.

This command configures the IP filter monitor.

Use the *ip filter fragment* (on page 2-91) command to enable the IP fragment filter.

ip filter monitor {**ip_permited** | **ip_not_permited**} **low_rate** *low_rate* **high_rate** *high_rate* **burst** *burst size*

Syntax Description

low_rate	lower threshold; the rate in Mbps that indicates the attack is no longer present
high_rate	upper threshold; the rate in Mbps that indicates the presence of an attack
burst size	duration of the interval in seconds that the high and low rates must be detected in order for the threshold rate to be considered to have been reached

Defaults

low rate = 20 Mbps

high rate = 20 Mbps

burst size = 10 seconds

Command Modes

Global Configuration

Usage Guidelines

Use the **ip permitted** keyword to apply configured limits to permitted IP addresses.

Use the **ip not-permitted** keyword to apply configured limits to not-permitted IP addresses.

If neither keyword is used, it is assumed that the configured limits apply to both permitted and not-permitted IP addresses.

Authorization: admin

Examples

The following example shows how to configure the rates for permitted IP addresses.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)# ip filter monitor ip permitted low_rate 25 high_rate
30 burst 15
SCE(config)#
```

Related Commands

ip filter fragment (on page 2-91)

show ip filter (on page 2-241)

ip ftp password

Specifies the password to be used for FTP connections for the current session. The system will use this password if no password is given in the copy FTP command.

ip ftp password *password*

Syntax Description

password	The password for FTP connections.

Defaults

Default password is **admin**

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example sets the password to be used in the FTP connection to mypw.

```
SCE>enable 10
Password:pcube
SCE#ip ftp password mypw
SCE#
```

Related Commands

copy ftp:// (on page 2-56)

copy-passive (on page 2-57)

ip ftp username (on page 2-95)

ip ftp username

Configures the username for FTP connections for the current session. This username will be used if no username is given in the copy FTP command.

ip ftp username *user-name*

Syntax Description

user-name	The username for FTP connections.

Defaults

Default username is **anonymous**

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example sets *myname* as the username for FTP connections.

```
SCE>enable 10
Password:pcube
SCE#ip ftp username myname
SCE#
```

Related Commands

copy ftp:// (on page 2-56)

copy-passive (on page 2-57)

ip ftp password (on page 2-94)

ip host

Adds a host name and address to the host table.

Use the **no** form of the command to remove a host name and address from the host table.

ip host *hostname ip-address*

no ip host *hostname* [*ip-address*]

Syntax Description

hostname	The host name to be added or removed.
ip-address	The host IP address in x.x.x.x format.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example adds a host to the host table.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip host PC85 10.1.1.1
SCE(config)#
```

Related Commands

show hosts (on page 2-180)

ip name-server

Specifies the address of 1–3 servers to use for name and address resolution. The system maintains a list of up to 3 name servers. If the current list is not empty, this command adds the specified servers to the list. The no option of this command removes specified servers from the current list.

ip name-server *server-address1* [*server-address2*] [*server-address3*]
no ip name-server

Syntax Description

server-address1 The IP address of the name server.

server-address2 The IP address of an additional name server.

server-address3 The IP address of an additional name server.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example adds the DNS 10.1.1.1 and 10.1.1.2 to the configured servers list.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip name-server 10.1.1.1 10.1.1.2
SCE(config)#
```

Related Commands

ip domain-lookup (on page 2-89)

show hosts (on page 2-180)

ip route

Adds an IP routing entry to the routing table. Use the **no** option to remove an IP routing entry from the routing table.

ip route *ip-address mask* [*next-hop*]
no ip route *prefix mask* [*next-hop*]
no ip route all

Syntax Description

ip-address	The IP address of the new entry.
mask	The relevant subnet mask.
next-hop	The next hop in the route.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

All addresses must be in dotted notation.

The next-hop must be within the Management FastEthernet Interface subnet.

Use the **all** keyword with the **no** form of the command to remove all IP routing entries from the routing table.

Authorization: admin

Examples

The following examples illustrate the use of the **ip route** command:

EXAMPLE 1:

The following example sets the next-hop to 10.1.1.2 for IP addresses in the range 244.50.4.0 to 244.50.4.255.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip route 244.50.4.0 255.255.255.0 10.1.1.2
SCE(config)#
```

EXAMPLE 2:

The following example removes the entry added in the previous example.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip route 244.50.4.0 255.255.255.0
SCE(config)#
```

Related Commands

show ip route (on page 2-244)

ip rpc-adapter

Enables the RPC adapter. Use the **no** option of this command to disable the RPC adapter.

ip rpc-adapter

no ip rpc-adapter

Syntax Description

This command has no arguments or keywords

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **ip rpc-adapter** command:

EXAMPLE 1:

The following example enables the RPC adapter.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip rpc-adapter
SCE(config)#
```

EXAMPLE 2:

The following example disables the RPC adapter.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip rpc-adapter
SCE(config)#
```

Related Commands

ip rpc-adapter port (on page 2-101)

show ip rpc-adapter (on page 2-245)

ip rpc-adapter port

Defines the RPC adapter port. Use the **default** option to reset the RPC adapter port assignment to the default port of 14374.

ip rpc-adapter port *port-number*

default ip rpc-adapter port

Syntax Description

port-number	The number of the port assigned to the RPC adapter.

Defaults

port number = 14374

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **ip rpc-adapter port** command:

EXAMPLE 1:

The following example shows how to configure the RPC interface, specifying 1444 as the RPC adapter port.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip rpc-adapter
SCE(config)#ip rpc-adapter port 1444
```

EXAMPLE 2:

The following example shows how reset the RPC adapter port.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#default ip rpc-adapter port
```

Related Commands

ip rpc-adapter (on page 2-100)

show ip rpc-adapter (on page 2-245)

ip ssh

Enables the SSH server.

Use the **no** option to disable the SSH server.

ip ssh

no ip ssh

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

When using an SSH server, you should also do the following:

- Generate an SSH key set (*ip ssh key* (on page 2-104)). A set of keys must be generated at least once before enabling the SSH server
- Assign an ACL to the SSH server (*ip ssh access-class* (on page 2-103))

Authorization: admin

Examples

The following examples illustrate the use of the **ip ssh** command:

EXAMPLE 1:

The following example enables the SSH server.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip ssh
SCE(config)#
```

EXAMPLE 2:

The following example disables the SSH server.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip ssh
SCE(config)#
```

Related Commands

ip ssh access-class (on page 2-103)

ip ssh key (on page 2-104)

show ip ssh (on page 2-246)

ip ssh access-class

Assigns an access class list (ACL) to the SSH server, so that access to the SSH server is limited to the IP addresses defined in the ACL. (See *access-list* (on page 2-9).)

Use the **no** keyword to remove the ACL assignment from the SSH server.

ip ssh access-class *access-list-number*
no ip ssh access-class

Syntax Description

access-list-number	The access list number of an ACL

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

When using an SSH server, you should also do the following:

- Enable the SSH server (*ip ssh* (on page 2-102))
- Generate an SSH key set (*ip ssh key* (on page 2-104))

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1:

The following example assigns an existing ACL to the SSH server.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip ssh access-class 4
SCE(config)#
```

EXAMPLE 2:

The following example removes the ACL assignment from the SSH server.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no ip ssh access-class
SCE(config)#
```

Related Commands

ip ssh (on page 2-102)

ip ssh key (on page 2-104)

show ip ssh (on page 2-246)

ip ssh key

Generates or removes the SSH key set. A set of keys must be generated at least once before enabling the SSH server.

ip ssh key [*generate*|*remove*]

Syntax Description

generate	generates a new SSH key set and saves it to non-volatile memory. Key size is always 2048 bits.
remove	removes the existing key set.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Each SSH server should define a set of keys (DSA2, RSA2 and RSA1) to be used when communicating with various clients. The key sets are pairs of public and private keys. The server publishes the public key while keeping the private key in non-volatile memory, never transmitting it to SSH clients.

Note that the keys are kept on the tffs0 file system, which means that a person with knowledge of the 'enable' password can access both the private and public keys. The SSH server implementation provides protection against eavesdroppers who can monitor the management communication channels of the SCE platform, but it does not provide protection against a user with knowledge of the 'enable' password.

When using an SSH server, you should also do the following:

- Enable the SSH server (*ip ssh* (on page 2-102))
- Assign an ACL to the SSH server (*ip ssh access-class* (on page 2-103))

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1:

The following example generates a new SSH key set.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip ssh key generate
SCE(config)#
```

EXAMPLE 2:

The following example removes the SSH key set,

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#ip ssh key remove
SCE(config)#
```

Related Commands

ip ssh (on page 2-102)

ip ssh access-class (on page 2-103)

show ip ssh (on page 2-246)

ip-tunnel L2TP skip

Configures the recognition of L2TP tunnels and skipping into the internal IP packet. Use the **no** form of this command to disable tunnel recognition and classify traffic by the external IP address.

ip tunnel L2TP skip

no ip tunnel

L2TP is an IP-based tunneling protocol, therefore the system must be specifically configured to recognize the L2TP flows, given the UDP port used for L2TP. The SCE platform can then skip the external IP, UDP, and L2TP headers, reaching the internal IP, which is the actual subscriber traffic. If L2TP is not configured, the system treats the external IP header as the subscriber traffic, thus all the flows in the tunnel are seen as a single flow.

Syntax Description

This command has no arguments or keywords

Defaults

By default, IP tunnel recognition is disabled (**no ip tunnel**).

Command Modes

LineCard Interface Configuration

Usage Guidelines

An IP tunnel is mutually exclusive with other tunnel-based classification.

Use the *L2TP identify-by* (on page 2-107) command to configure the port number that the LNS and LAC use for L2TP tunnels.

Authorization: admin

Examples

The following example enables recognition of L2TP tunnels.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#ip tunnel L2TP skip
SCE(config if)#
```

Related Commands

show interface LineCard ip-tunnel (on page 2-201)

L2TP identify-by (on page 2-107)

L2TP identify-by

Configures the port number that the LNS and LAC use for L2TP tunnels.

L2TP identify-by port-number *port-number*

L2TP identify-by default port

Syntax Description

port-number	The port number to be configured for L2TP tunnels.

Defaults

port-number = 1701

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **default port** keyword to replace the user-configured port number with the default port.

Note that if external fragmentation exists in the L2TP environment, it is required to configure a Traffic Rule (see the section "Configuring Traffic Rules and Counters" in the *Cisco SCE Software Configuration Guide*) that bypasses all IP traffic targeted to either the LNS or LAC IP address. This will make sure that any packets not having the L2TP port indication (i.e. non-first fragments) will not require handling by the traffic processors.

Authorization: admin

Examples

The following example configures port# 1000 as the L2TP port.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#L2TP identify-by port-number 1000
SCE(config if)#
```

Related Commands

show interface LineCard L2TP (on page 2-202)

line vty

Enters Line Configuration Mode for Telnet lines, configuring all Telnet lines.

line vty *start-number* [*end-number*]

Syntax Description

start-number	A number in the range 0-4. The actual number supplied does not matter. All telnet lines will be configured by this command.
end-number	A number in the range 0-4. The actual number supplied does not matter. All telnet lines will be configured by this command.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

The system prompt changes to reflect the Line Configuration mode. To return to Global Configuration Mode, type **exit**.

Authorization: admin

Examples

The following example enters the Line Configuration Mode for all lines.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#line vty 0
SCE(config-line)#
```

Related Commands

show line vty (on page 2-247)

link failure-reflection

Enables/disables the link failure reflection.

link failure-reflection [on-all-ports] [linecard-aware]

no link failure-reflection [linecard-aware-mode]

Syntax Description

on-all-ports	Enables reflection of a link failure to all ports
linecard-aware	Prevents link failure reflection if the indications are that the failure is in the line card (SCE 2000 4xGBE platforms only)

Defaults

By default, link failure reflection is disabled

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **on-all-ports** keyword to enable reflection of a link failure to all ports

Use the **linecard-aware** keyword when each link of the SCE 2000 platform (Subscriber-side interface and the corresponding Network-side interface) is connected to a different linecard.

This mode reflects a failure of one port to the other three ports of the SCE 2000, differently, depending on whether the failure appears to be in the SCE platform itself or not, as follows:

- One interface of the SCE 2000 is down, indicating a problem with the SCE platform: Link failure is reflected to the other three SCE platform ports.
- Two reciprocal ports of the SCE 2000 are down, indicating a problem in the linecard to which the SCE platform is connected and not the interface: No action is taken. This allows the second link in the SCE platform to continue functioning without interruption

Use the **no** form of this command to disable failure reflection. The **on-all-ports** keyword is not used in the **no** form of the command.

Use the **no** form of this command with the **linecard-aware-mode** keyword to disable the linecard aware mode, without disabling link failure reflection itself.

Authorization: admin

Examples

The following example enables the reflection of a link failure to all ports:

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#link failure-reflection on-all-ports
SCE(config if)#
```

Related Commands

link mode

Configures the link mode. The link mode allows the user to enforce the specified behavior on the link. This may be useful during installation and for debugging the network.

link mode *link mode*

Syntax Description

link	**Use this parameter for SCE 2000 platforms only** GBE: **GBE1-GBE2** **GBE3-GBE4** FE: **LINK1** **LINK2** **all-links**
mode	**Forwarding** **Bypass** **Cutoff** **Sniffing**

Defaults

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the *link* parameter for the SCE 2000 4xGBE and the SCE 2000 4/8xFE platforms only. Since the SCE 1000 platform has only one link, it is not necessary to specify the link.

Use the **all-links** keyword to configure the link mode for all links (SCE 2000 platforms only).

The **sniffing** mode can be configured only for all links (use the **all-links** keyword).

Authorization: admin

Examples

The following examples illustrate the use of the link mode command:

EXAMPLE 1:

The following example configures "bypass" as the link mode on the first link for the SCE 2000 GBE platform.

```
SCE2000GBE>enable 10
Password:pcube
SCE2000GBE#config
SCE2000GBE(config)#interface LineCard 0
SCE2000GBE(config if)#link mode GBE1-GBE2 bypass
SCE2000GBE(config if)#
```

EXAMPLE 2:

The following example configures "forwarding" as the link mode for the SCE 1000 GBE platform.

```
SCE1000GBE>enable 10
Password:pcube
SCE1000GBE#config
SCE1000GBE(config)#interface LineCard 0
SCE1000GBE(config if)#link mode forwarding
SCE1000GBE(config if)#
```

EXAMPLE 3:

The following example configures "sniffing" as the link mode on all links for the SCE 2000 GBE platform.

```
SCE2000GBE>enable 10
Password:pcube
SCE2000GBE#config
SCE2000GBE(config)#interface LineCard 0
SCE2000GBE(config if)#link mode all-links sniffing
SCE2000GBE(config if)#
```

Related Commands

show interface LineCard slot-number link mode (on page 2-203)

logger add-user-message

Adds a message string to the user log files.

logger add-user-message *message-text*

Syntax Description

message-text The message string you wish to add.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example adds "testing 123" as the message to the user log files:

```
SCE>enable 10
Password:pcube
SCE#Logger add-user-message “testing 123”
SCE#
```

Related Commands

logger device User-File-Log

Disables or enables the logger device.

logger device User-File-Log *status*

Syntax Description		
	status	**enabled** or **disabled**, indicating whether to turn on or off logging.

Defaults

By default,the User-File-Log is enabled.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example disables the User-File-Log device.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#logger device User-File-Log disabled
SCE(config)#
```

Related Commands

logger device User-File-Log max-file-size (on page 2-115)

show logger device (on page 2-249)

logger get user-log file-name (on page 2-117)

clear logger (on page 2-39)

logger device User-File-Log max-file-size

Sets the maximum log file size.

logger device User-File-Log max-file-size

Syntax Description

size	The maximum size for the user log (in bytes).

Defaults

1,000,000 bytes

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example configures the maximum size of the User-File-Log device to 65000 bytes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#logger device User-File-Log max-file-size 65000
SCE(config)#
```

Related Commands

logger device User-File-Log (on page 2-114)

show logger device (on page 2-249)

logger get support-file

Generates a log file for technical support. Note that this operation may take some time.

logger get support-file *filename*

Syntax Description		
	filename	Name of the generated log file.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example generates a log file named *tech_sup* for technical support.

```
SCE>enable 10
Password:pcube
SCE#logger get support-file tech_sup
SCE#
```

Related Commands

logger get user-log file-name (on page 2-117)

logger get user-log file-name

Outputs the current user log to a target file. The output file name can be a local path, full path, or full ftp path file name.

logger get user-log file-name *target-file*

Syntax Description

target-file	The log file name where the system will write the log file information.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example retrieves the current user log files.

```
SCE>enable 10
Password:pcube
SCE#logger get user-log file-name
ftp://myname:mypw@10.1.1.205/d:/log.txt
SCE#
```

Related Commands

logger get support-file (on page 2-116)

logout

Logs out of the Command-Line Interface of the SCE platform.

Logout

Syntax Description

This command has no arguments or keywords

Defaults

This command has no default settings.

Command Modes

Exec

Usage Guidelines

The system prompts for confirmation of the **logout** command with '**N**'. Type '**Y**' to confirm the logout.

Authorization: User

Examples

The following example shows how the user logs out (and confirms the logout).

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#exit
SCE>**logout**
Are you sure? **Y**

Related Commands

mac-resolver arp

Adds a static IP entry to the MAC resolver database. Use the **no** form of the command to remove the static IP entry from the data base.

mac-resolver arp *ip_address* **[vlan** *vlan_tag***]** *mac_address*

no mac-resolver arp *ip_address* **[vlan** *vlan_tag***]** *mac_address*

Syntax Description

ip address	IP address entry to be added to the database.
vlan tag	VLAN tag that identifies the VLAN that carries this IP address (if applicable).
mac address	MAC address assigned to the IP address, in xxxx.xxxx.xxxx format.

Defaults

This command has no default settings.

Command Modes

Interface Linecard Configuration

Usage Guidelines

When adding an entry, if a client has previously registered a dynamic entry with the same IP address and VLAN tag, the entry receives the MAC address specified in the CLI command, and the entry is changed to static.

When removing an entry, if an entry has been added both as a dynamic entry and a static entry, it exists in the database as a static entry only (see above). Removing the static configuration changes the entry from a static entry to a dynamic entry and deletes the corresponding user-configured MAC address.

Authorization: admin

Examples

The following example assigns the MAC address 111.222.333 to the IP address 10.20.30.40.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#mac-resolver arp 10.20.30.40 111.222.333
SCE(config if)#
```

Related Commands

show interface LineCard mac-resolver arp (on page 2-206)

management-agent sce-api logging

Enables the SCE subscriber API trouble-shooting logging, which is written to the user-log.

Use the **no** form of this command to disable SCE subscriber API trouble-shooting logging.

management-agent sce-api logging

no management-agent sce-api logging

Syntax Description

This command has no arguments or keywords

Defaults

By default, the SCE subscriber API trouble-shooting logging is disabled.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example enables SCE subscriber API trouble-shooting logging.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)# management-agent sce-api logging
SCE(config)#
```

Related Commands

management-agent sce-api timeout

Defines the timeout interval for disconnection of an SCE subscriber API client, after which the resources allocated for this client would be released.

management-agent sce-api timeout *timeout-interval*

Syntax Description

timeout-interval default time in seconds that the client waits before timing out.

Defaults

Default = 300 seconds

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

This example shows how to configure a timeout interval of 10 seconds.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)# management-agent sce-api timeout 10
```

Related Commands

management-agent system

Specifies a new package file to install for the management agent. The SCE platform extracts the actual image file(s) from the specified package file only during the **copy running-config startup-config** command.

When using the **no** version of this command, you do not have to specify the package-file-name.

management-agent system *package-file-name*

no management-agent system

Syntax Description

Package file name	The name of a package file that contains the new management agent software. The filename should end with the .pkg extension.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Use this command to upgrade the SCE platform management agent. The package file is verified for the system and checked that it is not corrupted. The actual upgrade takes place only after executing the *copy running-config startup-config* (on page 2-58) command and rebooting the SCE platform.

Authorization: admin

Examples

The following example upgrades the system with the *mng45.pkg* package.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#management-agent system mng45.pkg
Verifying package file…
Package file verified OK.
SCE(config)#do copy running-config startup-config
Backing –up configuration file…
Writing configuration file…
Extracting new management agent…

Extracted OK.
```

Related Commands

copy running-config startup-config (on page 2-58)

mkdir

Creates a new directory.

mkdir *directory-name*

Syntax Description

directory-name The name of the directory to be created.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example creates a new directory named mydir.

```
SCE>enable 10
Password:pcube
SCE#mkdir mydir
SCE#
```

Related Commands

dir (on page 2-64)

more

Displays the contents of a file.

more *file-name*|**running-config**|**startup-config**

Syntax Description

file-name	The name of the file to be displayed.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The **running-config** option displays the running configuration file.

The **startup-config** option displays the startup configuration file.

Authorization: admin

Examples

The following sample output displays the contents of the running configuration file.

```
SCE>enable 10
Password:pcube
SCE#more running-config
#This is a general configuration file (running-config).
#Created on 16:48:11  UTC  WED  June  13  2001

cli-type 1
#version 1

service logger


no service password-encryption
enable password level 10 0 “pcube”
enable password level 15 0 “pcube”
service RDR-formatter
no RDR-formatter destination all
RDR-formatter history-size 0
clock timezone UTC 0
ip domain-lookup
no ip domain-name
no ip name-server
service telnetd

FastEthernet 0/0
ip address 10.1.5.120 255.255.0.0
speed auto
duplex auto


exit
ip default-gateway 10.1.1.1
no ip route all

line vty 0 4
no access-class in
timeout 30
exit

SCE#
```

Related Commands

show running-config (on page 2-265)

show startup-config (on page 2-277)

more user-log

Displays the user log on the CLI console screen.

more user-log

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example displays the user log on the CLI console screen.

```
SCE>enable 10
Password:pcube
SCE#more user-log
 <INFO>    | 01/28/97  22:29:22 | CPU #000 | Logger: Task
Initialized successfully
```

Related Commands

logger get user-log file-name (on page 2-117)

show log (on page 2-248)

MPLS

Configures the MPLS environment. MPLS labels are supported up to a maximum of 15 labels per packet.

MPLS Traffic-Engineering skip (ignore tunnel, inject unlabeled)

MPLS VPN skip (ignore tunnel, inject labeled)

MPLS VPN auto-learn (MPLS L3 VPN as subscriber)

default MPLS

(When the tunneling information is ignored, the subscriber identification is the subscriber IP of the IP packet carried inside the tunnel.)

Syntax Description

See "Usage Guidelines".

Defaults

By default, **Traffic-Engineering skip** is enabled.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **Traffic-Engineering skip** form of the command when all IP addresses are unique, and the MPLS labels may be omitted (a non-MPLS/VPN environment).

Use the **VPN skip** form of the command when all IP addresses are unique, but MPLS labels are used (an MPLS non-VPN environment).

Use the **VPN auto-learn** form of the command when the MPLS labels must be read and matched (an MPLS/VPN environment).

Use the **default** keyword to set the MPLS configuration to the default value.

Authorization: admin

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following example illustrates the use of this command in a non MPLS/VPN environment.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#MPLS Traffic-Engineering skip
SCE(config if)#
```

EXAMPLE 2

The following example illustrates the use of this command in an MPLS/VPN environment.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#MPLS VPN auto-learn
SCE(config if)#
```

Related Commands

show interface LineCard MPLS (on page 2-207)

MPLS VPN PE-ID (on page 2-129)

MPLS VPN PE-ID

Defines a PE router, with the interface IP address of that PE router. Use the **no** form of the command to remove a router definition.

MPLS VPN PE-ID *pe-id-ip* **interface-IP** *if-ip* **[vlan** *vlan-id***] [interface-IP** *if-ip* **[vlan** *vlan-id***]]**

no MPLS VPN PE-ID *pe-id-ip* **interface-IP** *if-ip*

no MPLS VPN PE-ID *pe-id-ip*

Syntax Description

pe-id-ip	IP address that identifies the PE router
if-ip	Interface IP address for the PE router. This is used for MAC resolution. See "Usage Guidelines" for more information.
vlan-id	A VLAN tag can optionally be provided for each interface IP .

Defaults

By default, no PE routers are defined.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Refer to the following guidelines when defining the PE router and its interfaces.

- At least one interface IP address must be defined per PE router.
- Multiple interface IP addresses may be defined for one PE router.
- Only one MAC address is configured per PE router. Therefore, if the PE router has multiple interfaces, some or all of which have the same MAC address, only one interface IP address is configured.
- Two interfaces cannot be defined with the same IP address, even if they have different VLAN tags. If such a configuration is attempted, it will simply update the VLAN tag information for the existing PE interface.

Refer to the following guidelines when removing a PE router or its interfaces.

- You cannot remove a PE if it retains any MPLS mappings. You must logout the VPN before removing the router it uses.
- Removing the last interface of a PE router removes the router as well. Therefore, you must logout the relevant VPN in order to remove the last interface.

Use the **no MPLS VPN PE-ID** *pe-id-ip* **interface-IP** *if-ip* form of the command to remove an interface from the PE router.

Use the **no MPLS VPN PE-ID** *pe-id-ip* form of the command to remove a PE router.

Authorization: admin

The following examples illustrate the use of this command.

Examples

EXAMPLE 1

The following example illustrates how to define a PE router with two interfaces.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#MPLS VPN PE-ID 10.10.10.10 interface-IP
10.10.10.20 interface-IP 10.10.10.30
SCE(config if)#
```

EXAMPLE 2

The following example illustrates how to remove the above PE router.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no MPLS VPN PE-ID 10.10.10.10
SCE(config if)#
```

Related Commands

show interface LineCard MPLS (on page 2-207)

MPLS (on page 2-127)

no MPLS VPN PE-database (on page 2-131) (removes all PE router entries)

no MPLS VPN PE-database

Removes all configured PE router enties.

no MPLS VPN PE-database

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

All MPLS VPNs must be logged out before using this command, since it removes all PE routers.

Authorization: admin

Examples

The following example illustrates the use of this command.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no MPLS VPN PE-database
SCE(config if)#
```

Related Commands

show interface LineCard MPLS (on page 2-207)

MPLS (on page 2-127)

MPLS VPN PE-ID (on page 2-129)

no subscriber

Removes a specified subscriber from the system. Use the 'all' form to remove all introduced subscribers.

no subscriber name *subscriber-name* [**mapping upstream-mpls all**]

no subscriber all [**with-tunnel-mappings**]

Syntax Description

subscriber-name	The specific subscriber name to be removed from the system.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **with-tunnel-mappings** keyword with the **all** keyword to remove all the subscribers that have VLAN or MPLS/VPN mappings from the SCE platform.

This option allows you to switch out of MPLS/VPN mode without reload when the SM is down.

Use the **mapping upstream-mpls all** option to clear the upstream labels learnt for the specified subscriber.

Authorization: admin

Examples

The following example removes all subscribers.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# no subscriber all
SCE(config if)#
```

Related Commands

show interface LineCard subscriber (on page 2-212)

no subscriber anonymous-group

Removes a specified anonymous subscriber group from the system. Use the 'all' form to remove all anonymous subscriber groups.

no subscriber anonymous-group name *group-name*
no subscriber anonymous-group all

Syntax Description

group-name The anonymous subscriber group to be removed from the system.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example removes all anonymous subscriber groups.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# no subscriber anonymous-group all
SCE(config if)
```

Related Commands

show interface LineCard subscriber anonymous-group (on page 2-216)

no subscriber mappings included-in

Use this command to remove all existing subscriber mappings from a specified TIR or IP range.

no subscriber mappings included-in TP-IP-range name *TP-IP-range-name IP-range*

no subscriber mappings included-in IP-range *P-range*

Syntax Description

TP-IP-range-name	Meaningful name assigned to this traffic processor IP range
IP-range	IP address and mask length defining the IP range

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **TP-IP-range name** parameter to remove all existing subscriber mappings from a specified TIR.

Use the **IP-range** parameter to remove all existing subscriber mappings from a specified IP range.

Authorization: admin

Examples

The following example removes any existing subscriber mappings from the CTMS1 TIR.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# no subscriber mappings included-in TP-IP-range
name CMTS1
```

Related Commands

show interface LineCard subscriber mapping included-in TP-IP-range (on page 2-228)

ping

Pings the given host to test for connectivity. The ping program sends a test message (packet) to an address and then awaits a reply. Ping output can help you evaluate path-to-host reliability, delays over the path, and whether the host can be reached or is functioning.

ping *host*

Syntax Description

host	The host name or IP address of a remote station to ping.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example pings the host 10.1.1.201.

```
SCE>enable 10
Password:pcube
SCE#ping 10.1.1.201
pinging 10.1.1.201 ...
PING 10.1.1.201: 56 data bytes
64 bytes from host (10.1.1.201): icmp_seq=0. time=0. ms
64 bytes from host (10.1.1.201): icmp_seq=1. time=0. ms
64 bytes from host (10.1.1.201): icmp_seq=2. time=0. ms
64 bytes from host (10.1.1.201): icmp_seq=3. time=0. ms
----10.1.1.201 PING Statistics----
4 packets transmitted, 4 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/0/0
SCE#
```

Related Commands

pqi install file

Installs the specified *pqi* file using the installation options specified (if any). This may take up to 5 minutes.

pqi install file *filename* [*options options*]

Syntax Description

filename	The filename of the *pqi* application file to be installed.
options	The desired installation options. Use the *show pqi file* (on page 2-252) command to display the available installation options.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Always run the **pqi uninstall file (on page 2-138)** command before installing a new pqi file to prevent accumulation of old files on the disk.

Authorization: admin

Examples

The following example installs the Subscriber Manager anr10015.pqi file. No options are specified.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#pqi install file anr10015.pqi
SCE(config if)#
```

Related Commands

show pqi file (on page 2-252)

pqi uninstall file **(on page 2-138)**

pqi rollback file

Reverses an upgrade of the specified *pqi* file. This may take up to 5 minutes.

pqi rollback file *filename*

Syntax Description

filename	The filename of the *pqi* application file to be rolled-back. It must be the *pqi* file that was last upgraded.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Always specify the last *pqi* file that was upgraded. Use the *show pqi last-installed* (on page 2-253) command.

Authorization: admin

Examples

The following example reverses the upgrade for the Subscriber Manager using the anr100155.pqi file.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#pqi rollback file anr100155.pqi
SCE(config if)#
```

Related Commands

show pqi last-installed (on page 2-253)

pqi uninstall file

Uninstalls the specified *pqi* file. This may take up to 5 minutes.

pqi uninstall file *filename*

Syntax Description		
	filename	The filename of the *pqi* application file to be uninstalled. It must be the *pqi* file that was installed last.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Always specify the last *pqi* file that was installed. Use the *show pqi last-installed* (on page 2-253).

Always run the **pqi uninstall** command before installing a new pqi file to prevent accumulation of old files on the disk.

Authorization: admin

Examples

The following example uninstalls the Subscriber Manager anr10015.pqi file.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#pqi uninstall file anr10015.pqi
SCE(config if)#
```

Related Commands

show pqi last-installed (on page 2-253)

pqi install file (on page 2-136)

pqi upgrade file

Upgrades the application using the specified *pqi* file and the upgrade options specified (if any). This may take up to 5 minutes.

pqi upgrade file *filename* **[options** *options*]

Syntax Description

filename	The filename of the *pqi* application file to be used for the upgrade.
options	The desired upgrade options. Use the *show pqi file* (on page 2-252) command to display the available options.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

A given *pqi* upgrade file is suitable for upgrading only from specific previously installed *pqi* files. The upgrade procedure checks that an upgrade is possible from the currently installed *pqi* file. The upgrade procedure will be stopped with an error message if the upgrade is not possible.

Authorization: admin

Examples

The following example upgrades the Subscriber Manager using the anr100155.pqi file. No options are specified.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#pqi upgrade file anr100155.pqi
SCE(config if)#
```

Related Commands

show pqi file (on page 2-252)

pwd

Displays the current working directory.

pwd

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example shows the current working directory as tffs0.

```
SCE>enable 10
Password:pcube
SCE#pwd
tffs0:
SCE#
```

Related Commands

queue

Sets the queue shaping.

queue *queue-number* **bandwidth** *bandwidth* **burst-size** *burstsize*

Syntax Description

queue-number	Queue-number from 1–4, where 4 is the highest priority (fastest). 1=BE, 2, 3=AF, and 4=EF. BE is the best effort queue, that is the lowest priority. EF is the Expedited Forwarding queue, that is the highest priority forwarding. The AF (Assured Forwarding) queues are middle-priority, with 3 being a higher priority queue, that is, packets from queue 3 are transferred faster than those in queue 2.
bandwidth	Bandwidth measured in kbps. 0 disables packet transmission from the queue. The maximum bandwidth is determined by the line rate. Bandwidth is set in resolutions of ~140Kbps, that is rounded to the nearest multiple of approximately 140 Kbps.
burstsize	Burst size in bytes, from 0–16000000.

Defaults

Bandwidth = 100000K (100 Mbps)

Burst size = 8000 (8K bytes)

Command Modes

FastEthernet Interface Configuration

GigabitEthernet Interface Configuration

Usage Guidelines

This command is valid for a specified FastEthernet or GigabitEthernet line interface only. It must be executed explicitly for each interface.

Use the *interface FastEthernet* (on page 2-80) or *interface GigabitEthernet* (on page 2-81) command to access the configuration mode for the desired interface.

Authorization: admin

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following example configures queue shaping for queue 1 for GBE port #4.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface GigabitEthernet 0/4
SCE(config if)#queue 1 bandwidth 20000 burstsize 1000
SCE(config if)#
```

EXAMPLE 2

The following example configures queue shaping for queue 1 for FE port #2 (SCE 2000 4/8xFE platform only).

```
SCE2000FE>enable 10
Password:pcube
SCE2000FE#config
SCE2000FE(config)#interface FastEthernet 0/2
SCE2000FE(config if)#queue 1 bandwidth 20000 burstsize 1000
SCE2000FE(config if)#
```

Related Commands

bandwidth (on page 2-27)

interface FastEthernet (on page 2-80)

interface GigabitEthernet (on page 2-81)

RDR-formatter category-number

Assigns a meaningful name to a category. This category name can then be used in any **rdr-formatter** command instead of the category number. It also defines the buffer size.

Use the **no** option of this command to disassociate the name from the category. The name will then not be recognized by any CLI commands.

Use the **default** form of this command to remove all configuration (name and buffer size).

RDR-formatter category-number [*1-4*] **name** *category name*

no RDR-formatter category-number [*1-4*] **name** *category name*

RDR-formatter category-number [1-4] buffer-size *size*

default RDR-formatter category-number [1-4] buffer-size

Syntax Description

category name	The user-defined name to be assigned to the category.
size	Buffer size

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example assigns the name “prepaid” to Category 1.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#RDR-formatter category-number 1 name prepaid
SCE(config)#
```

Related Commands

show RDR-formatter (on page 2-254)

service RDR-formatter (on page 2-166)

RDR-formatter destination

Configures an RDR destination entry. Up to four entries can be configured. Each entry must have a different priority. The entry with the highest priority is used by the RDR formatter, provided that a connection with this destination can be established. This is where the RDR–formatter sends the RDRs it produces.

Use the **no** form of the command to remove the mappings of an RDR formatter destination to categories. When all categories for a destination are removed, the entire destination is removed.

RDR-formatter destination *ip-address* **port** *port-number* **[category** {**name** *category name* }| {**number** [*1-4]*}] [**priority** *priority-value*]
no RDR-formatter destination *ip-address* **port** *port-number* [category {name *category name* }| {number [*1-4*]}]
no RDR-formatter destination all

Syntax Description

ip-address	The destination IP address.
port-number	The destination port number.
category	(Optional) Use this parameter to assign a priority to a particular category for this destination.
category name	(Optional) User-defined name that identifies the category
number	(Optional) Use this parameter to identify the category by number (1 to 4).
priority-value	The priority of the destination. The priority value may be any number between 1 (lowest) to 100 (highest).

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

The category may be identified by either name or number.

Assign a high priority to send RDRs from the specified category to this destination. Assign a low priority if RDRs from the specified category should not be sent to this destination.

For the first entry, if no priority is set, the highest priority is automatically assigned.

For all subsequent entries, the priority must be explicitly defined.

It is also possible to assign a different priority to each category for each destination. If no category is specified, the same priority is assigned to all categories for that destination.

Use the **all** keyword with the **no** form of the command to remove all of the configured RDR-formatter categories from the specified destination, thus removing the destination itself.

Authorization: admin

The following examples illustrate the use of the **RDR-formatter destination** command:

Examples

EXAMPLE 1:

The following example configures an RDR-formatter destination with the default priority (highest) to be used by all categories.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#RDR-formatter destination 10.1.1.205 port 33000
SCE(config)#
```

EXAMPLE 2:

The following example configures an RDR-formatter destination for two categories with a different priority for each category. This configuration will send RDRs from category 2 to this destination, but generally not RDRs from category 1.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#RDR-formatter destination 10.1.1.206 port 34000
category number 1 priority 10 category number 2 priority 90
SCE(config)#
```

Related Commands

show RDR-formatter destination (on page 2-257)

service RDR-formatter (on page 2-166)

RDR-formatter forwarding-mode

Defines the mode in which the RDR formatter will send the RDRs to the destinations.

RDR-formatter forwarding-mode *mode*

Syntax Description

mode	Settings: **redundancy, multicast, simple-load-balancing** as described in the Valid Mode Settings table in the Usage Guidelines.

Defaults

Default *mode* = **redundancy**

Command Modes

Global Configuration

Usage Guidelines

Table 2-3 Valid Mode Settings

redundancy	All RDRs are sent only to the primary (active) connection.
multicast	All RDRs are sent to all destinations.
simple-load-balancing	Not currently supported

Authorization: admin

Examples

The following example sets the RDR formatter mode to "**redundancy**".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#RDR-formatter forwarding-mode redundancy
SCE(config)#
```

Related Commands

show RDR-formatter forwarding-mode (on page 2-259)

RDR-formatter history-size

Configures the size of the history buffer.

This command is currently not supported.

RDR-formatter history-size *size*

Syntax Description

size	Size of the history buffer in bytes. Must be = 0 only (default)

Defaults

Default size = 0

Command Modes

Global Configuration

Usage Guidelines

Do not change the size of the history buffer from the default value.

Since currently only RDRv1 is supported, the size of the history buffer must be zero bytes, even though the system will accept a command specifying a larger size

Authorization: admin

Examples

Related Commands

show RDR-formatter history-size (on page 2-260)

RDR-formatter protocol

Defines the protocol (RDR formatter version) of the RDR formatter.

This command is currently not supported.

RDR-formatter protocol *protocol-version*

Syntax Description		
	protocol-version	Must be **RDRv1**

Defaults

Default protocol-version = RDRv1

Command Modes

Global Configuration

Usage Guidelines

Do not change the RDR-formatter protocol version.

Only the default value, RDRv1, is supported.

Authorization: admin

Examples

Related Commands

show RDR-formatter protocol (on page 2-261)

RDR-formatter protocol RDRv2 connection-timeout

Configures the amount of time after which an inactive RDR formatter connection will timeout.

This command is currently not supported.

RDR-formatter protocol RDRv2 connection-timeout *time*

Syntax Description

time	Timeout value in seconds.

Defaults

Default time = 10

Command Modes

Global Configuration

Usage Guidelines

This command is currently not supported.

Authorization: admin

Examples

Related Commands

RDR-formatter rdr-mapping

Adds a dynamic RDR mapping to a category or removes one from a category.

Use the no form of this command to remove an existing mapping.

RDR-formatter rdr-mapping (tag-ID *tag number* **category-number** *category number***)**

no RDR-formatter rdr-mapping (tag-ID *tag number* **category-number** *category number***)**

Syntax Description

tag number	The complete 32 bit value given as an hexadecimal number. The RDR tag must be already configured in the Formatter by the application.
category number	Number of the category (1-4) to which to map the RDR tag

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

The configuration of categories to RDR tags is done by adding and removing mappings. You can add a mapping of RDR tag to a category and remove a mapping, including the default mapping. If the table already contains a mapping with the same tag and category number, an error is issued and nothing is done.

If only one category is left configured for a certain tag, it cannot be removed.

Authorization: admin

Examples

The following examples illustrate how to add and remove mappings, and how to restore default mapping

EXAMPLE 1

This example shows how to add a mapping to a category.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#**RDR-formatter rdr-mapping tag-ID 0xf0f0f000 category-number 1**
SCE(config)#

EXAMPLE 2

This example shows how to to restore the default mapping for a specified RDR tag.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#default RDR-formatter rdr-mapping tag-ID 0xf0f0f000
SCE(config)#
```

Related Commands

show RDR-formatter rdr-mapping (on page 2-262)

reload

Reboots the SCE platform.

reload

Warning In order not to lose the current configuration, use the **copy running-config-all startup-config-all** command before using the **reload** command.

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example shows backing up of the configuration and performing a system reboot.

```
SCE>enable 10
Password:pcube
SCE#copy running-config-all startup-config-all
SCE#reload
Are you sure? Y
The system is about to reboot, this will end your CLI session
```

Related Commands

copy running-config startup-config (on page 2-58)

reload shutdown

Shuts down the SCE platform, preparing it for being turned off.

reload shutdown

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use this command to shut down the SCE platform in an orderly manner, before turning it off. After issuing this command, the only way to revive the SCE platform from its power-down state is to turn it off, then back on.

This command can only be issued from the serial CLI console port. When issued during a telnet CLI session, an error message is returned and the command is ignored. This is done to prevent the possibility of shutting it down from a remote location, from which it is not possible to power back up.

Authorization: admin

Examples

The following example shows the shutdown process.

```
SCE>enable 10
Password:pcube
SCE#reload shutdown
You are about to shut down the system.
The only way to resume system operation after this
is to cycle the power off, and then back on.
Continue?
Y
IT IS NOW SAFE TO TURN THE POWER OFF.
```

Related Commands

rename

Changes the file name to the specified name.

rename *existing-file-name new-file-name*

Syntax Description

existing-file-name	The original name of the file.
new-file-name	The new name of the file.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example changes the name of file test1.pkg to test3.pkg.

```
SCE>enable 10
Password:pcube
SCE#rename test1.pkg test3.pkg
SCE#
```

Related Commands

replace completion num-flows

Sets a limit for completing the application replace operation according to the number of old flows remaining. When the number of old flows goes below the amount specified by this command, the remaining flows will be killed and the application replace operation will be completed.

Use the no form of this command to disable the number-of-remaining-flows limit. In this case, the application replace operation is completed only after all old flows have naturally died.

Use the default form of this command to set the number-of-remaining-flows limit to the default value (no remaining flows).

replace completion num-flows *number*

no replace completion num-flows

default replace completion num-flows

Syntax Description

number	The number of remaining old flows at which all remaining flows will be killed and the application replace operation completed.

Defaults

number = 0

Command Modes

LineCard Interface Configuration

Usage Guidelines

When replacing an application, the application replace operation is considered to be 'in progress' until all old flows die. In order to limit how long the replace operation takes, you can define a limit to the operation in two ways:

- When a specified amount of time passes since the process started (*replace completion time* (on page 2-157))
- When the number of old flows goes below a specified threshold

You can also force the immediate completion of the application replace operation using the *application slot replace force completion* (on page 2-12) command.

Authorization: admin

Examples

The following example illustrates how to set the limit for completing the application replace operation to when 20 old flows remain.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#replace completion num-flows 20
SCE(config if)#
```

Related Commands

replace completion time (on page 2-157)

application slot replace force completion (on page 2-12)

replace completion time

Sets a time limit (in minutes) for completing the application replace operation and killing all old flows. The time is measured from the execution of the **application replace** command.

Use the no form of this command to disable the time limit. In this case, the application replace operation is completed only after all old flows have naturally died.

Use the default form of this command to set the time limit to the default value (60 minutes).

replace completion time *minutes*

no replace completion time

default replace completion time

Syntax Description

minutes	The time limit (in minutes) for completing the application replace operation and killing all old flows

Defaults

minutes = 60

Command Modes

LineCard Interface Configuration

Usage Guidelines

When replacing an application, the application replace operation is considered to be 'in progress' until all old flows die. In order to limit how long the replace operation takes, you can define a limit to the operation in two ways:

- When a specified amount of time passes since the process started
- When the number of old flows goes below a specified threshold (*replace completion num-flows* (on page 2-155))

You can also force the immediate completion of the application replace operation using the *application slot replace force completion* (on page 2-12) command.

Authorization: admin

Examples

The following example illustrates how to set the time limit for the application replace operation to 30 minutes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#replace completion time 30
SCE(config if)#
```

Related Commands

replace completion num-flows (on page 2-155)

application slot replace force completion (on page 2-12)

rmdir

Removes an empty directory.

To remove a directory that is not empty, use the *delete* (on page 2-63) command with the recursive switch.

rmdir *directory-name*

Syntax Description

directory-name The name of the directory to be removed.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

You can only remove an empty directory. Use the *dir* (on page 2-64) command to verify that no files are listed in this directory.

Authorization: admin

Examples

The following example deletes the **code** directory.

```
SCE>enable 10
Password:pcube
SCE#rmdir code
SCE#
```

Related Commands

dir (on page 2-64)

delete (on page 2-63)

script capture

Begins the recording of a script. It tracks all commands typed until the *script stop* (on page 2-164) command is used.

Use this command to capture a sequence of repeated commands into a file for the purpose of executing the commands again.

Use the *script stop* (on page 2-164) command to stop capturing the script.

script capture *script-file-name*

Syntax Description

script-file-name The name of the output file where the script is stored.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example shows the script capture for the script1.txt.

```
SCE>enable 10
Password:pcube
SCE#script capture script1.txt
SCE#cd log
SCE#cd ..
SCE#pwd
SCE#script stop
```

Related Commands

script stop (on page 2-164)

script print

Displays a script file.

script print *script-file-name*

Syntax Description

script-file-name The name of the file containing the script.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example prints the commands captured in script1.txt.

```
SCE>enable 10
Password:pcube
SCE#script print script1.txt
cd log
cd ..
pwd
script stop
SCE#
```

Related Commands

script capture (on page 2-160)

script run (on page 2-162)

script run

Runs a script. The script may be created using the **script capture** command**,** or it may be created as a text file containing the appropriate commands.

script run *script-file-name* [**halt**]

Syntax Description

script-file-name The name of the file containing the script.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Use this command to run a script that you have previously created using the **script capture** command.

Use the **halt** keyword to break script on errors.

Authorization: admin

Examples

The following example runs the script named *monitor.txt*, which contains the following commands to enable the generation of the real-time subscriber usage RDRs for the specified subscribers:

configure
interface LineCard 0
subscriber name Jerry property monitor value 1
subscriber name George property monitor value 1
subscriber name Elaine property monitor value 1
subscriber name Kramer property monitor value 1
subscriber name Newman property monitor value 1

```
SCE>enable 10
Password:pcube
SCE#script run monitor.txt
SCE#configure
SCE(config)#interface LineCard 0
SCE(config if)#subscriber name Jerry property monitor value 1
SCE(config if)#subscriber name George property monitor value 1
SCE(config if)#subscriber name Elaine property monitor value 1
SCE(config if)#subscriber name Kramer property monitor value 1
SCE(config if)#subscriber name Newman property monitor value 1
SCE(config if)#
```

Related Commands

script capture (on page 2-160)

script print (on page 2-161)

script stop

Stops script capture. Used in conjunction with the *script capture* (on page 2-160) command, it marks the end of a script being recorded.

script stop

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example stops the capturing of a script.

```
SCE>enable 10
Password:pcube
SCE#script capture script1.txt
SCE#cd log
SCE#cd ..
SCE#pwd
SCE#script stop
SCE#
```

Related Commands

script capture (on page 2-160)

service password-encryption

Enables password encryption, so that the password remains secret when the configuration file is displayed. Use the **no** form of this command to disable password encryption.

service password-encryption
no service password-encryption

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled (no encryption)

Command Modes

Global Configuration

Usage Guidelines

Passwords that were configured in an encrypted format are not deciphered when password encryption is disabled.

Authorization: admin

Examples

The following example shows the effect of enabling password encryption.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#enable password abcd
SCE(config)#do more running-config
#This is a general configuration file (running-config).
#Created on 10:20:57  ISR  TUE  July  3  2001
…
enable password level 10 0 “abcd”
…
SCE(config)#service password-encryption
SCE(config)#do more running-config
#This is a general configuration file (running-config).
#Created on 10:21:12  ISR  TUE  July  3  2001
…
service password-encryption
enable password level 10 0 “e2fc714c4727ee9395f324cd2e7f331f”
…
SCE(config)#
```

Related Commands

enable password (on page 2-70)

service RDR-formatter

Enables/disables the RDR-formatter. The RDR-formatter is the element that formats the reports of events produced by the LineCard and sends them to an external data collector.

Use the **no** keyword of this command to disable the RDR-formatter.

service RDR-formatter

no service RDR-formatter

Syntax Description

This command has no arguments or keywords

Defaults

Enabled

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **service RDR-formatter** command:

EXAMPLE 1:

The following example enables the RDR-formatter.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#service rdr-formatter
SCE(config)#
```

EXAMPLE 2:

The following example disables the RDR-formatter.

```
SCE(config)#no service rdr-formatter
SCE(config)#
```

Related Commands

show RDR-formatter enabled (on page 2-258)

RDR-formatter category-number (on page 2-143)

RDR-formatter destination (on page 2-144)

service telnetd

Enables/disables Telnet daemon. Use the **no** form of this command to disable the daemon preventing new users from accessing the SCE platform via Telnet.

service telnetd

no service telnetd

Syntax Description

This command has no arguments or keywords,

Defaults

Telnet daemon enabled

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following examples illustrate the use of the **service telnetd** command:

EXAMPLE 1:

The following example enables the Telnet daemon.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#service telnetd
SCE(config)#
```

EXAMPLE 2:

The following example disables the Telnet daemon.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no service telnetd
SCE(config)#
```

Related Commands

show telnet status (on page 2-283)

telnet (on page 2-322)

setup

Invokes the setup utility, which is a dialog, or series of questions, that guides the user through the basic configuration process. This utility runs automatically upon initial connection to the local terminal. The utility may also be invoked explicitly to make changes to the system configuration.

setup

Following is a brief list of the parameters configured via the setup command:

- Host ID parameters: IP address, subnet mask, and hostname
- Passwords: admin password, password encryption

  The root password can be configured upon initial system configuration and when accessed from the root user.
- Time settings: time zone, offset from UTC, local time and date
- SNTP configuration: multicast client, unicast server, unicast query interval
- Domain Name Server configuration: default domain name and IP address (up to 3)
- RDR-formatter destination: IP address and TCP port number
- Access Control Lists: up to 100 lists, with 20 IP addresses in each list, each entry can be designated as permitted or denied.

  Create ACLs for IP access, Telnet access, SNMP GET community access, and SNMP SET community access as needed:
- SNMP configuration:

  Define the following:
  - GET community names (up to 20)
  - SET community names (up to 20)
  - trap managers (up to 20): IP address, community string, version
  - name of system manager
- Topology configuration:

  Define the following:
  - connection mode
  - administrative status after abnormal reboot
  - SCE 1000 Platform:
    - link-bypass mode when operational
    - redundancy
    - link-bypass mode when not operational
  - SCE 2000 Platform:
    - deployment type
    - physically-connected-link index

- priority
- on-failure link behavior

For a complete description of the command, see the *SCE Platform Installation and Configuration Guide*.

Syntax Description

The setup command does not include parameters in the usual sense of the word. However, the setup utility questions prompt for many global configuration parameters. Following is a table listing all parameters for which values may be requested by the setup dialog.

The table in the *Usage Guidelines* lists all the parameter values that are necessary to complete the initial configuration. It is recommended that you obtain all these values before beginning the setup.

Defaults

Command Modes

Privileged EXEC

Usage Guidelines

Table 2-4 Setup Command Parameters

Parameter	Definition
IP address	IP address of the SCE platform.
subnet mask	Subnet mask of the SCE platform.
default gateway	Default gateway.
hostname	Character string used to identify the SCE platform
admin password	Admin level password.
	Character string from 4-100 characters beginning with an alpha character.
root password	Root level password.
	Character string from 4-100 characters beginning with an alpha character.
password encryption status	Enable or disable password encryption?
Time Settings	
time zone name and offset	Standard time zone abbreviation and minutes offset from UTC.
local time and date	Current local time and date. Use the format:
	00:00:00 1 January 2002
SNTP Configuration	
broadcast client status	Set the status of the SNTP broadcast client.
	If enabled, the SCE will synchronize its local time with updates received from SNTP broadcast servers.
unicast query interval	Interval in seconds between unicast requests for update (64 – 1024)

Parameter	Definition
unicast server IP address	IP address of the SNTP unicast server.
DNS Configuration	
DNS lookup status	Enable or disable IP DNS-based hostname translation.
default domain name	Default domain name to be used for completing unqualified host names
IP address	IP address of domain name server. (maximum of 3 servers)
RDR Formatter Destination Configuration	
IP address	IP address of the RDR-formatter destination
TCP port number	TCP port number of the RDR-formatter destination
Access Control Lists	
Access Control List number	How many ACLs will be necessary? What IP addresses will be permitted/denied access for each management interface? You may want ACLs for the following: • Any IP access • Telnet access • SNMP GET access • SNMP SET access
list entries (maximum 20 per list)	IP address, and whether permitted or denied access.
IP access ACL	ID number of the ACL controlling IP access.
telnet ACL	ID number of the ACL controlling telnet access.
SNMP Configuration	
SNMP agent status	Enable or disable SNMP management.
GET community names	Community strings to allow GET access and associated ACLs (maximum 20).
SET community names	Community strings to allow SET access and associated ACLs (maximum 20).
trap managers (maximum 20)	Trap manager IP address, community string, and SNMP version.
Authentication Failure trap status	Sets the status of the Authentication Failure traps.
enterprise traps status	Sets the status of the enterprise traps.
system administrator	Name of the system administrator.
Topology Configuration (Both Platforms)	
connection mode	Is the SCE platform installed in bump-in-the-wire topology (inline) or out of line using splitter or switch (receive-only)?
Admin status of the SCE platform after abnormal boot	After a reboot due to a failure, should the SCE platform remain in a Failure status or move to operational status provided no other problem was detected?
Topology Configuration (SCE 1000)	

Parameter	Definition
link bypass mode on operational status	When the SCE 1000 is operational, should it bypass trafific or not?
redundant SCE 1000 platform?	Is there a redundant SCE 1000 installed as a backup?
link bypass mode on non-operational status	When the SCE 1000 is not operational, should it bypass traffic or cut it off?
Topology Configuration (SCE 2000)	
type of deployment	Is this a cascade topology, with two SCE platforms connected via the cascade ports? Or is this a single platform topology?
physically connected link (cascade topology only)	In a cascade deployment this parameter sets the index for the link that this SCE 2000 is deployed on. The options for the SCE 2000 are link-0 or link-1. In a single-SCE 2000 Platform deployment this parameter is not relevant since one SCE 2000 is deployed on both links. In this case the link connected to port1-port2 is by default link-0 and the link connected to port3-port4 is by default link-1.
priority (cascade topology only)	If this is a cascaded topology, is this SCE 2000 the primary or secondary SCE 2000?
on-failure behavior (inline connection mode only)	If this SCE 2000 is deployed inline, should the failure behavior be bypass or cutoff of the link?

Authorization: admin

Examples

The following example runs the setup utility.

```
SCE>enable 10
Password:pcube
SCE#setup
                --- System Configuration Dialog ---

At any point you may enter a question mark '?' followed by
'Enter' for help.
Use ctrl-C to abort configuration dialog at any prompt.
Use ctrl-Z to jump to the end of the configuration dialog at any
prompt.
Default settings are in square brackets '[]'.

Would you like to continue with the System Configuration Dialog?
[yes/no]: y
```

Related Commands

show access-lists

Shows all access-lists or a specific access list.

show access-lists [*number*]

Syntax Description		
	number	Number of the access list to show

Defaults

Default access list number = 1.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example displays the configuration of access-list 5.

```
SCE>enable 5
Password:pcube
SCE#show access-lists 5
Standard IP access list 5
    Permit 10.1.1.0, wildcard bits 0.0.0.255
    deny   any
SCE#
```

Related Commands

access-list (on page 2-9)

show applications slot replace

Shows the current state of the application replace process:

- Current application replace stage
- Current completion criterion
- Current completion status (time or number of flows on each traffic processor)
- Upgrade or downgrade
- Values for spare memory (configurable only via ROOT command)

show applications slot *slot-number* **replace**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to use this command.

```
SCE>enable 5
Password:pcube
SCE>show applications slot 0 replace
Application loaded, replace in progress.
Time to complete: 3549 seconds.
Amount of old flows: 16524.
Replace type: Upgrade.

Replace support is enabled (Effective on next application load).

Configured completion criterions:
Time criterion: 60 minutes.
Num-flows criterion: 0 flows.
This means that the replace process will end when no more old
flows exist, or 60 minutes pass since the replace process began,
whichever occurs first.

Configured spare memory parameters:
code: 1000000 bytes
global: 100000 bytes
subscriber: 0 bytes
Current spare memory sizes:
code: 6625144 bytes used out of 7625144.
global: 3276253 bytes used out of 3376260.
subscriber: 0 bytes used out of 0.

SCE>
```

Related Commands

replace completion num-flows (on page 2-155)

replace completion time (on page 2-157)

show blink

Displays the blinking status of a slot. A slot blinks after it receives a blink command.

show blink slot *slot-number*

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the blink status of slot 0.

```
SCE>enable 5
Password:pcube
SCE>show blink slot 0
Slot 0 blink status: off
SCE>
```

Related Commands

blink (on page 2-28)

show calendar

Displays the time maintained by the real-time system calendar clock.

show calendar

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the current system calendar.

```
SCE>enable 5
Password:pcube
SCE>show calendar
12:50:03  GMT  MON  November 13 2005
SCE>
```

Related Commands

calendar set (on page 2-30)

show clock

Displays the time maintained by the system clock.

show clock

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the current system clock.

```
SCE>enable 5
Password:pcube
SCE>show clock
12:50:03  GMT  MON  November 13 2005
SCE>
```

Related Commands

clock set (on page 2-44)

show failure-recovery operation-mode

Displays the operation mode to apply after boot resulted from failure.

show failure-recovery operation-mode

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example displays the failure recovery operation mode:

```
SCE>enable 5
Password:pcube
SCE>show failure-recovery operation-mode
System Operation mode on failure recovery is: operational
SCE>
```

Related Commands

failure-recovery operation-mode (on page 2-73)

show hostname

Displays the currently configured hostname.

show hostname

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows that ***SCE*** is the current hostname.

```
SCE>enable 5
Password:pcube
SCE>show hostname
SCE
SCE>
```

Related Commands

hostname (on page 2-79)

show hosts

Displays the default domain name, the address of the name server, and the content of the host table.

show hosts

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the domain and hosts configured.

```
SCE>enable 5
Password:pcube
SCE>show hosts
Default domain is cisco.com
Name/address lookup uses domain service
Name servers are 10.1.1.60, 10.1.1.61
Host                 Address
----                 -------
PC85                 10.1.1.61
SCE>
```

Related Commands

hostname (on page 2-79)

show interface FastEthernet

Displays the details of a FastEthernet Interface.

show interface FastEthernet *slot-number/interface-number* [**counters** [*direction*]|**duplex**|**speed**|**queue** *queue-number*]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

interface-number The FastEthernet interface number.

Enter a value from 1 to 4 for a line interface of a SCE 2000 4/8xFE platform only.

direction Optional direction specification, to show only counters of a specific direction. Use **`in`** or **`out.`**

queue-number Number of queue, in the range 0-3.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

The following keywords are relevant to the line interfaces (1 – 4) of the SCE 2000 4/8xFE platform only:

- The **duplex** keyword displays the configured and actual duplex mode of the specified interface.
- The **speed** keyword displays the configured and actual speed of the specified interface.
- The **counters** keyword displays the values of counters for the specified line interface.
- The **queue** keyword displays the bandwidth and burst size of the specified queue in the specified line interface.

Authorization: viewer

Examples

The following examples illustrate the use of the **show interface FastEthernet** command:

EXAMPLE 1:

The following example shows the FastEthernet details for a line interface.

```
SCE>enable 5
Password:pcube
SCE>show interface FastEthernet 0/1
Configured speed: auto, configured duplex: auto
AutoNegotiation is On, link is Up, actual speed: 100Mb/s, actual
duplex: full
Bandwidth: 100000 Kbps, Burst-size: 5000 bytes
SCE>
```

EXAMPLE 2:

The following example shows the FastEthernet interface counters.

```
SCE>show interface FastEthernet 0/1 counters
In total octets: 191520
In good unicast packets: 560
In good multicast packets: 0
In good broadcast packets: 0
In packets discarded: 0
In packets with CRC/Alignment error: 0
In undersized packets: 0
In oversized packets: 0
Out total octets: 0
Out unicast packets: 0
Out non unicast packets: 0
Out packets discarded: 0
SCE>
```

EXAMPLE 3:

The following example shows the FastEthernet interface duplex mode configuration and status.

```
SCE>enable 5
Password:pcube
SCE>show interface FastEthernet 0/1 duplex
Configured duplex: auto
AutoNegotiation is On, link is Up, actual duplex: half
SCE>
```

EXAMPLE 4:

The following example shows the FastEthernet interface speed configuration and status.

```
SCE>enable 5
Password:pcube
SCE>show interface FastEthernet 0/3 speed
Configured speed: auto
AutoNegotiation is On, link is Up, actual speed: 100
SCE>
```

EXAMPLE 5:

The following example shows the FastEthernet interface queue number 3.

```
SCE>enable 5
Password:pcube
SCE>show interface FastEthernet 0/4 queue 3
Bandwidth: 100000 Kbps, Burst-size: 8000 bytes
SCE>
```

Related Commands

interface FastEthernet (on page 2-80)

show interface GigabitEthernet

Displays the details of a GigabitEthernet Interface.

show interface GigabitEthernet *slot-number/interface-number* [**counters** [*direction*]|**queue** *queue-number*]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

interface-number GigabitEthernet interface number 1 - 2, or 1 - 4.

direction Optional direction specification, to show only counters of a specific direction. Use **in** or **out.**

queue-number Number of queue, in the range 0-3

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Enter a value of 1 - 2 for the *interface-number* parameter for line ports 1 - 2 to show information on the line interfaces for the **SCE 1000 2xGBE** platform.

Enter a value of 1 - 4 for the *interface-number* parameter for line ports 1 - 4 to show information on the line interfaces for the **SCE 2000 4xGBE** platform.

The **counters** keyword displays the values of counters of a line GigabitEthernet interface.

The **queue** keyword displays the bandwidth and burst size of a queue in a line GigabitEthernet interface.

Authorization: viewer

Examples

The following example shows the GigabitEthernet details.

```
SCE>enable 5
Password:pcube
SCE>show interface GigabitEthernet 0/1

SCE>
```

Related Commands

interface GigabitEthernet (on page 2-81)

show interface Mng

Displays the following information for the specified management interface.

- speed
- duplex
- IP address
- auto-fail-over (SCE 2000 platform only)

show interface Mng {0/1 | 0/2} [auto-fail-over|duplex|ip address|speed]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

interface-number Management interface number: 1 or 2.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Speed and duplex parameters are specific to the selected interface (port), while other parameters apply to both ports and are displayed by a command to either interface.

If no keyword is specified, all information is displayed.

Authorization: viewer

Examples

This example shows how to display all information for Management port 1.

```
SCE>enable 5
Password:pcube
SCE> show interface Mng 0/1
ip address: 10.1.6.145
subnet mask: 255.255.0.0
Configured speed: auto, configured duplex: auto
AutoNegotiation is On, link is Up, actual speed: 100, actual
duplex: half
SCE>
```

Related Commands

interface Mng (on page 2-83)

show interface LineCard

Displays information for a specific LineCard Interface.

show interface LineCard *slot-number*

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to use this command.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0
The application assigned to slot 0 is /tffs0/app/eng30102.sli
Silent is off
Configured shutdown is off
Shutdown due to sm-connection-failure is off
Resulting current shutdown state is off
WAP handling is disabled
SCE>
```

Related Commands

interface LineCard (on page 2-82)

show interface LineCard application

Displays the name of the application loaded on the LineCard Interface.

show interface LineCard *slot-number* **application**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the currently loaded application.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 application
/tffs0/app/eng30102.sli
SCE>
```

Related Commands

show interface LineCard attack-detector

Displays the configuration of the specified attack detector.

The following information is displayed:

- Protocol
- Side — Whether the attack detector applies to attacks originating at the subscriber or network side.
- Direction — Whether the attack detector applies to single sided or dual sided attacks.
- Action to take if an attack is detected.
- Thresholds:
  - open-flows-rate — Default threshold for rate of open flows (new open flows per second).
  - suspected-flows-rate — Default threshold for rate of suspected DDoS flows (new suspected flows per second).
  - suspected-flows-ratio — Default threshold for ratio of suspected flow rate to open flow rate.
- Subscriber notification — enabled or disabled.
- Alarm: sending an SNMP trap enabled or disabled.

show interface LineCard *slot-number* **attack-detector** [**default**|**all**]

show interface LineCard *slot-number* **attack-detector** *attack-detector*

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
attack-detector	The number of the specific attack detector to be displayed.
all	Displays the configuration of all existing attack detectors
default	Displays the default attack detector configuration.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **all** keyword to display the configuration of all existing attack detectors.

Use the **default** keyword to display default attack detector configuration.

Authorization: viewer

Examples

The following examples illustrate the **show interface LineCard attack-detector** command:

EXAMPLE 1:

The following example displays the configuration of attack detector number 3.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 attack-detector 3
Detector #3:
Comment: 'Sample'
Access-list: 1
Effective only for TCP port(s) 21,23,80
Effective for all UDP ports

Protocol|Side|Direction  ||Action|     Thresholds
|Sub- |Alarm
        |    |           ||      |Open flows|Ddos-Suspected
flows|notif|
        |    |           ||      |rate      |rate        |ratio
|     |
--------|----|-----------||------|----------|------------|------
-|-----|-----
TCP     |net.|source-only||      |          |            |
|     |
TCP     |net.|dest-only  ||      |          |            |
|     |
TCP     |sub.|source-only||      |          |            |
|     |
TCP     |sub.|dest-only  ||      |          |            |
|     |
TCP     |net.|source+dest||      |          |            |
|     |
TCP     |sub.|source+dest||      |          |            |
|     |
TCP+port|net.|source-only||Block |          |            |
|     |Yes
TCP+port|net.|dest-only  ||      |          |            |
|     |
TCP+port|sub.|source-only||Block |          |            |
|     |Yes
TCP+port|sub.|dest-only  ||      |          |            |
|     |
TCP+port|net.|source+dest||      |          |            |
|     |
TCP+port|sub.|source+dest||      |          |            |
|     |
UDP     |net.|source-only||      |          |            |
|     |
UDP     |net.|dest-only  ||      |          |            |
|     |
UDP     |sub.|source-only||      |          |            |
|     |
UDP     |sub.|dest-only  ||      |          |            |
|     |
UDP     |net.|source+dest||      |          |            |
|     |
```

```
UDP     |sub.|source+dest||      |          |             |
|     |
UDP+port|net.|source-only||      |          |             |
|     |
UDP+port|net.|dest-only  ||      |          |             |
|     |
UDP+port|sub.|source-only||      |          |             |
|     |
UDP+port|sub.|dest-only  ||      |          |             |
|     |
UDP+port|net.|source+dest||      |          |             |
|     |
UDP+port|sub.|source+dest||      |          |             |
|     |
ICMP    |net.|source-only||      |          |             |
|     |
ICMP    |net.|dest-only  ||      |          |             |
|     |
ICMP    |sub.|source-only||      |          |             |
|Yes  |
ICMP    |sub.|dest-only  ||      |          |             |
|     |
other   |net.|source-only||      |          |             |
|     |
other   |net.|dest-only  ||      |          |             |
|     |
other   |sub.|source-only||      |          |             |
|     |
other   |sub.|dest-only  ||      |          |             |
|     |

Empty fields indicate that no value is set and configuration
from
the default attack detector is used.
```

SCE>

EXAMPLE 2:

The following example displays the configuration of the default attack detector.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 attack-detector default
Protocol|Side|Direction  ||Action|       Thresholds                |Sub- |Alarm
        |    |           ||      |Open flows|Ddos-Suspected Flows|notif|
        |    |           ||      |rate      |rate        |ratio  |     |
--------|----|-----------||------|----------|------------|-------|-----|-----
TCP     |net.|source-only||Report|      1000|         500|50     |No   |No
TCP     |net.|dest.-only ||Report|      1000|         500|50     |No   |No
TCP     |sub.|source-only||Report|      1000|         500|50     |No   |No
TCP     |sub.|dest.-only ||Report|      1000|         500|50     |No   |No
TCP     |net.|source+dest||Report|       100|          50|50     |No   |No
TCP     |sub.|source+dest||Report|       100|          50|50     |No   |No
TCP+port|net.|source-only||Report|      1000|         500|50     |No   |No
TCP+port|net.|dest.-only ||Report|      1000|         500|50     |No   |No
TCP+port|sub.|source-only||Report|      1000|         500|50     |No   |No
TCP+port|sub.|dest.-only ||Report|      1000|         500|50     |No   |No
TCP+port|net.|source+dest||Report|       100|          50|50     |No   |No
TCP+port|sub.|source+dest||Report|       100|          50|50     |No   |No
UDP     |net.|source-only||Report|      1000|         500|50     |No   |No
UDP     |net.|dest.-only ||Report|      1000|         500|50     |No   |No
UDP     |sub.|source-only||Report|      1000|         500|50     |No   |No
UDP     |sub.|dest.-only ||Report|      1000|         500|50     |No   |No
UDP     |net.|source+dest||Report|       100|          50|50     |No   |No
UDP     |sub.|source+dest||Report|       100|          50|50     |No   |No
UDP+port|net.|source-only||Report|      1000|         500|50     |No   |No
UDP+port|net.|dest.-only ||Report|      1000|         500|50     |No   |No
UDP+port|sub.|source-only||Report|      1000|         500|50     |No   |No
UDP+port|sub.|dest.-only ||Report|      1000|         500|50     |No   |No
UDP+port|net.|source+dest||Report|       100|          50|50     |No   |No
UDP+port|sub.|source+dest||Report|       100|          50|50     |No   |No
ICMP    |net.|source-only||Report|       500|         250|50     |No   |No
ICMP    |net.|dest.-only ||Report|       500|         250|50     |No   |No
ICMP    |sub.|source-only||Report|       500|         250|50     |No   |No
ICMP    |sub.|dest.-only ||Report|       500|         250|50     |No   |No
other   |net.|source-only||Report|       500|         250|50     |No   |No
other   |net.|dest.-only ||Report|       500|         250|50     |No   |No
other   |sub.|source-only||Report|       500|         250|50     |No   |No
other   |sub.|dest.-only ||Report|       500|         250|50     |No   |No
SCE>
```

Related Commands

attack-detector (on page 2-15)

attack-detector default (on page 2-13)

attack-detector <number> (on page 2-16)

show interface LineCard attack-filter

Displays the attack filtering configuration.

show interface LineCard *slot-number* **attack-filter** [*option*]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
option	See Usage Guidelines for the list of options.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Following is a list of options that may be displayed:

- **query IP configured**: displays the configured threshold values and action as follows:
  - **query single-sided IP** *ip-address* **configured:** displays the configured threshold values and action for attack detection for a specified IP address (single-sided detection)
  - **query dual-sided source-IP** *ip-address1* **dest** *ip-address2* **configured**: displays the configured threshold values and action for attack detection between two specified IP addresses (dual-sided detection)
  - **dest-port** port#: displays the configured threshold values and action for the specified port. You can include this argument with both single-sided and dual-sided queries.
- **query IP current**: displays the current counters for a specified attack detector for all protocols and attack directions as follows:
  - **query single-sided IP** *ip-address* **current:** displays the current counters for attack detection for a specified IP address (single-sided detection)
  - **query dual-sided source-IP** *ip-address1* **dest** *ip-address2* **current**: displays the current counters for attack detection between two specified IP addresses (dual-sided detection)
  - **dest-port** port#: displays the configured threshold values and action for the specified port. You can include this argument with both single-sided and dual-sided queries.
- **current-attacks**: displays all currently handled attacks
- **counters**: displays all attack detection counterd
- **dont-filter**: displays all existing stopped attack filters
- **force-filter**: displays all existing forced attack filters
- **subscriber-notification ports**: displays the list of subscriber-notification ports
- **subscriber-notification redirect**: displays the configuration of subscriber-notification redirection, such as the configured destination and dismissal URLs, and allowed hosts.

Authorization: viewer

Examples

The following examples illustrate the use of the **show interface LineCard attack-filter** command.

EXAMPLE 1:

The following example displays the configuration of attack detection between two specified IP addresses (dual-sided) for destination port 101.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 attack-filter query dual-sided
source-IP 10.10.10.10 dest 10.10.10.145 dest-port 101 configured

SCE>
```

EXAMPLE 2:

The following example displays all existing forced attack filters.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 attack-filter force-filter
No force-filter commands are set for slot 0
SCE>
```

EXAMPLE 3:

The following example displays the subscriber notification ports.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 attack-filter subscriber-
notification ports
Configured Subscriber notification ports:  100
SCE>
```

Related Commands

attack-filter (LineCard Interface Configuration) (on page 2-20)

attack-filter (Privileged Exec) (on page 2-22)

show interface LineCard accelerate-packet-drops

Displays the currently configured hardware packet drop mode.

show interface LineCard *slot-number* **accelerate-packet-drops**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example illustrates the use of the **show interface LineCard accelerate-packet-drops** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 accelerate-packet-drops
Accelerated packet drops mode is enabled
SCE>
```

Related Commands

accelerate-packet-drops

show interface LineCard connection-mode

Shows the current configuration of the SCE platform link connection.

show interface LineCard *slot-number* **connection-mode**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example shows how to use this command.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 connection-mode
Connection mode is inline
slot failure mode is bypass
Redundancy status is standalone
SCE>
```

Related Commands

connection-mode (SCE 2000 platform) (on page 2-53)

connection-mode (SCE 1000 platform) (on page 2-52)

show interface LineCard counters

Displays the LineCard Interface hardware counters.

show interface LineCard *slot-number* **counters [bandwidth] [cpu-utilization]**

show interface LineCard *slot-number* **counters VAS-traffic-bandwidth]** (SCE 2000 platform only)

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Specify any of the optional keywords to display only the desired counters.

The **VAS-traffic-bandwidth** option is supported by the SCE 2000 platform only.

Authorization: viewer

Example

The following example shows the hardware counters for the LineCard Interface.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 counters
DP packets in: 100
DP packets out: 100
DP IP packets in: 90
DP Non-IP packets: 10
DP IP packets with CRC error: 0
DP IP packets with length error: 0
DP IP broadcast packets: 10
DP IP fragmented packets: 0
DP IP packets with TTL=0 error: 0
DP Non TCP/UDP packets: 10
DP TCP/UDP packets with CRC error: 0
FF counter #0: 0
FF counter #1: 0
FF counter #2: 0
FF counter #3: 0
...
SCE>
```

Related Commands

clear interface linecard (on page 2-33)

show interface LineCard dropped-bytes-counting-mode

Displays the currently configured dropped bytes counting mode.

show interface LineCard *slot-number* **dropped-bytes-counting-mode**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Authorization: viewer

Usage Guidelines

Example

The following example illustrates the use of the **show interface LineCard dropped-bytes-counting-mode** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 dropped-bytes-counting-mode
Dropped bytes counting mode is: per Global Controller
SCE>
```

Related Commands

show interface LineCard duplicate-packets-mode

Displays the currently configured duplicate packets mode.

show interface LineCard *slot-number* **duplicate-packets-mode**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Authorization: viewer

Usage Guidelines

Example

The following example illustrates the use of the **show interface LineCard duplicate-packets-mode** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 duplicate-packets-mode
Packet duplication of flows due to Delay Sensitive <bundles> is
enabled
Packet duplication of flows due to No-Online-Control <set-flow>
is enabled
Packet duplication of flows due to No-Online-Control <set-flow>
ratio percent is 70
Packet duplication in case of shortage is enabled
SCE>
```

Related Commands

show interface LineCard flow-open-mode

Displays the currently configured flow open mode.

show interface LineCard *slot-number* **flow-open-mode**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Authorization: viewer

Usage Guidelines

Example

The following example illustrates the use of the **show interface LineCard flow-open-mode** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 flow-open-mode
Enhanced flow open mode is disabled
SCE>
```

Related Commands

show interface LineCard ip-tunnel

Displays the current IP tunnel configuration.

show interface LineCard *slot-number* **ip-tunnel**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example illustrates the use of the **show interface LineCard ip-tunnel** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 ip-tunnel
no IP tunnel
SCE>
```

Related Commands

ip tunnel (on page 2-106)

show interface LineCard L2TP

Displays the currently configured L2TP support parameters.

show interface LineCard *slot-number* **L2TP**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example illustrates the use of the **show interface LineCard L2TP** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 L2TP
L2TP identify-by port-number 1701
SCE>
```

Related Commands

L2TP identify-by (on page 2-107)

show interface LineCard link mode

Displays the configured LineCard Interface link mode.

show interface LineCard *slot-number* **link mode**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the configured link mode for the LineCard Interface.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 link mode
Link mode on port1-port2
Current link mode is            :forwarding
Actual link mode on active is   :forwarding
Actual link mode on failure is  :monopath-bypass
SCE>
```

Related Commands

link mode (on page 2-111)

show interface LineCard link-to-port-mappings

Displays the link ID to port ID mappings.

show interface LineCard *slot-number* **link-to-port-mappings**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example shows the link ID to port ID mapping for the LineCard Interface.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 link-to-port-mappings
Link Id    |  Upstream Port <Out>  | Downstream Port <Out>
-----------------------------------------------------------
0          |    0/2                |    0/1
SCE>
```

Related Commands

show interface LineCard mac-mapping

Displays the linecard MAC mapping information.

show interface LineCard *slot-number* **mac-mapping**

Syntax Description	*slot-number* The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example shows the MAC mapping information.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 mac-mapping
MAC mapping status is: disabled
MAC mapping default mapping is: none set
MAC mapping dynamic insertion to table is enabled
SCE>
```

Related Commands

mac-resolver arp (on page 2-119)

show interface LineCard mac-resolver arp

Displays a listing of all IP addresses and corresponding MAC addresses currently registered in the MAC resolver database.

show interface LineCard 0 mac-resolver arp

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to display the entries in the MAC-resolver ARP database.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 mac-resolver arp
There are no entries in the mac-resolver arp database
SCE>
```

Related Commands

mac-resolver arp (on page 2-119)

show interface LineCard MPLS

Displays information about MPLS configuration and current VPN mappings. The following information can be displayed:

- OS counters (current number of subscribers and various types of mappings)
- bypassed VPNs
- non-VPN-mappings
- PE router configuration

show interface LineCard *slot-number* **MPLS** [**bypassed-VPNs**][**non-VPN-mappings**][**PE-database** [**PE-ID** *pe-ip*]]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

bypassed-VPNs Displays all currently bypassed VPNs, grouped by downstream label

non-VPN-mappings Displays the mappings of upstream labels that belong to non-VPN flows

PE-database Displays the configured PE routers and their interfaces. If a PE-ID is specified, only that PE is displayed.

pe-ip IP address of the specified PE router.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

If no keyword is used, the OS counters are displayed (current number of subscribers and various types of mappings).

Use the **PE-database** keyword to display information about all currently configured PE routers. Include the **PE-ID** argument to specify a particular PE router to display.

Authorization: viewer

Examples

The following example illustrates the use of the **show interface LineCard MPLS** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 MPLS
MPLS/VPN auto-learn mode is enabled.
MPLS/VPN subscribers: 0 used out of 2015 max
Total HW MPLS/VPN mappings utilization: 0 used out of 57344 max
MPLS/VPN mappings are divided as follows:
     downstream VPN subscriber mappings: 0
     upstream VPN subscriber mappings: 0
     non-vpn upstream mappings: 0
     downstream bypassed VPN mappings: 0
     upstream bypassed VPN mappings: 0
SCE>
```

Related Commands

MPLS (on page 2-127)

clear interface linecard MPLS VPN (on page 2-35)

MPLS VPN PE-ID (on page 2-129)

show interface LineCard physically-connected-links (SCE 2000 only)

Displays the link mapping for the LineCard Interface.

show interface LineCard *slot-number* **physically-connected-links**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the link mapping for the LineCard Interface.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 physically-connected-links
slot 0 is connected to link-0 and link-1
SCE>
```

Related Commands

show interface LineCard service-bandwidth-prioritization-mode

Displays the currently configured service bandwidth prioritization mode.

show interface LineCard *slot-number* **service-bandwidth-prioritization-mode**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example illustrates the use of the **show interface LineCard service-bandwidth-prioritization-mode** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 service-bandwidth-prioritization-
mode
Service bandwidth prioritization mode is: Subscriber Internal
SCE>
```

Related Commands

show interface LineCard silent

Displays the current LineCard Interface silent state. When the silent state is Off, the LineCard events reporting function is enabled.

show interface LineCard *slot-number* **silent**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the LineCard Interface silent mode.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 silent
off
SCE>
```

Related Commands

silent (on page 2-291)

show interface LineCard subscriber

Displays names of subscribers or the number of subscribers meeting one of the following specified criteria:

- Having a value of a subscriber property that is equal to, larger than, or smaller than a specified value
- Having a subscriber name that matches a specific prefix
- Having a subscriber name that matches a specific suffix

show interface LineCard *slot-number* **subscriber** [amount] [**prefix** *prefix*] [**suffix** *suffix*] [**property** *propertyname* **equals**|**bigger-than**|**less-than** *property-val*] [**all-names**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
prefix	The desired subscriber name prefix to match.
suffix	The desired subscriber name suffix to match.
propertyname	The name of the subscriber property to match.
property-val	The value of the specified subscriber property. Specify whether to search for values equal to, greater than, or less than this value.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **amount** keyword to display the number of subscribers meeting the criteria rather than listing actual subscriber names.

Use the **all-names** keyword to display the names of all subscribers currently in the SCE platform subscriber database.

Authorization: viewer

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

Following is an example that lists the number of subscribers with the prefix ‘gold’ in the subscriber name

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber amount prefix gold
There are 40 subscribers with name prefix 'gold'.
SCE>
```

EXAMPLE 2

Following is an example that lists all subscribers currently in the SCE platform subscribers database.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber all-names
There are 8 subscribers in the database.
john_doe
mary_smith
david_jones
betty_peters
bill_jackson
jane_doe
bob_white
andy_black
SCE>
```

Related Commands

show interface LineCard subscriber aging

Displays the subscriber aging configuration for the specified type of subscriber (anonymous or introduced).

show interface LineCard *slot-number* **subscriber aging** [**anonymous**|**introduced**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **anonymous** keyword to display the subscriber aging configuration for anonymous subscribers.

Use the **introduced** keyword to display the subscriber aging configuration for introduced subscribers.

Authorization: viewer

Examples

The following is an example of how to display the aging of introduced subscribers.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber aging introduced
Introduced subscriber aging is enabled.
Introduced subscriber aging time is 30 minutes.
SCE>
```

Related Commands

subscriber aging (on page 2-317)

show interface LineCard subscriber anonymous

Displays the subscribers in a specified anonymous subscriber group.

Use the “amount” form to display the number of subscribers in the group rather than a complete listing of members.

show interface LineCard *slot-number* **subscriber anonymous** [**amount**] [**name** *group-name*]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
group-name	The anonymous subscriber group.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

If no group-name is specified, all anonymous subscribers in all groups are displayed.

Authorization: viewer

Examples

The following is an example of how to display the number of subscribers in the anonymous subscriber group anon1.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber anonymous amount name
anon1

SCE>
```

Related Commands

clear interface linecard subscriber (on page 2-35)

show interface LineCard subscriber anonymous-group

Displays the configuration of the specified anonymous subscriber group.

Use the "all" form with no group name to display all existing anonymous subscriber groups.

show interface LineCard *slot-number* **subscriber anonymous-group** [**name** *group-name*] [**all**]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

group-name The anonymous subscriber group.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following is an example of how to display the anonymous subscriber groups.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber anonymous-group all
name                  IP range              Template #
----                  --------              ----------
Group1                10.10.10.10/99        0

1 anonymous groups are configured
SCE>
```

Related Commands

show interface LineCard subscriber db counters

Displays following subscriber database counters:

- Current number of subscribers
- Current number of introduced subscribers
- Current number of anonymous subscribers
- Current number of active subscribers (with active traffic sessions)
- Current number of subscribers with mappings
- Current number of IP mappings
- Current number of vlan mappings
- Max number of subscribers that can be introduced
- Max number of subscribers with mappings
- Max number of subscribers with mappings date / time
- Total aggregated number introduced
- Total number of aged subscribers
- Total number of pull events

Number of traffic sessions currently assigned to the default subscriber

show interface LineCard *slot-number* **subscriber db counters**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to display the subscriber database counters:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 subscriber db counters
Current values:
===============
Subscribers: 555 used out of 99999 max.
Introduced subscribers: 555.
Anonymous subscribers: 0.
Subscribers with mappings: 555 used out of 79999 max.
IP mappings: 555 used.
VLAN Entries: 0 used.
Subscribers with open sessions: 0.
Subscribers with TIR mappings: 0.
Sessions mapped to the default subscriber: 0.

Peak values:
============
Peak number of subscribers with mappings: 555
Peak number occurred at: 17:55:20  UTC  THU  December  15  2005
Peak number cleared at: 13:28:49  UTC  THU  December  15  2005

Event counters:
===============
Subscriber introduced: 555.
Subscriber pulled: 0.
Subscriber aged: 0.
Pull-request notifications sent: 0.
State notifications sent: 0.
Logout notifications sent: 0.
Subscriber mapping TIR contradictions: 0.
SCE>
```

Related Commands *clear interface linecard subscriber db counters* (on page 2-37)

show interface LineCard subscriber mapping

Displays subscribers whose mapping meets one of the following specified criteria:

- Is within a specified range of IP addresses
- Intersects a specified IP range
- Matches a specified VLAN tag
- Matches a specified MPLS/VPN mapping
- Has no mapping

Use the "amount" form to display the number of subscribers meeting the criteria rather than listing actual subscriber names.

show interface LineCard *slot-number* **subscriber mapping** [**amount**] [**IP** *iprange]* [**included-in** *iprange*] **[IP** *ipadress/range***] [MPLS-VPN PE-ID** *PE-id* **BGP-label** *BGP-label]* **[VLANid** *vlanid*] [**none**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
iprange	Specified range of IP addresses.
vlanid	Specified VLAN tag.
PE-id	loopback IP address of the relevant PE router (must also specify the **BGP-label**)
BGP-label	label of the relevant BGP LEG (must also specify the **MPLS-VPN PE-ID)**

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

When specifying an MPLS/VPN mapping, you must specify both the **MPLS-VPN PE-ID** and the **BGP-label.**

Authorization: viewer

Examples

The following is an example that lists the number of subscribers with no mapping.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber mapping amount none
Subscribers with no mappings:
DefaultParty
Total 1 subscribers listed.
SCE>
```

Related Commands

show interface LineCard subscriber name

Displays information about a specified subscriber. The following information can be displayed:

- Mappings
- OS counters (bandwidth and current number of flows)
- All values of subscriber properties
- VAS servers used per VAS Server Group
- All of the above

If no category is specified, a complete listing of property values, mappings and counters is displayed.

show interface LineCard *slot-number* **subscriber name** *name* [**mappings**] [**counters**] [**properties**] [**VAS-servers]**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
name	The subscriber name.
mappings	Display subscriber mappings.
counters	Display OS counters.
properties	Display values of all subscriber properties
vas-servers	Display the VAS servers used by the specified subscriber (SCE 2000 platform only)

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following is an example of how to list the mappings for the specified subscriber.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber name gold123 mappings
Subscriber 'gold123' mappings:
IP 10.0.0.0 - Expiration (sec): Unlimited
SCE>
```

Related Commands

show interface LineCard subscriber properties

Displays all existing subscriber properties.

show interface LineCard *slot-number* **subscriber properties**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Mode

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following is an example of how to display the subscriber properties.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber properties
Subscriber properties:
"monitor" : int16, minValue=0, maxValue=1.
"new_classification_policy" : Uint16.
"packageId : Uint16, minValue=0, maxValue=4999.
"QpLimit" : int32[18].
"QpSet" : Uint8[18].
Subscriber read-only properties:
"concurrentAttacksNumber" : Uint8.
"PU_QP_QuotaSetCounter"  : Uint8[18].
"PU_QP_QuotaUsageCounter"  : int32[18].
"PU_REP_nonReportedSessionsInTUR"  : int32.
"P_aggPeriodType" :Uint8.
"P_blockReportCounter : int32
"P_endOfAggPeriodTimestamp : Uint32.
"P_firstTimeParty" : bool.
"P_localEndOfAggPeriodTimestamp : Uint32.
"P_mibSubCounters16" : Uint16[36][2].
"P_mibSubCounters32" : Uint32[36][2].
"P_newParty" : bool.
"P_numOfRedirections : Uint8.
"P_partyCurrentPackage : Uint16
"P_partyGoOnlineTime :  Uint32
"P_partyMonth : Uint16
SCE>
```

Related Commands

show interface LineCard subscriber sm-connection-failure

Displays the current state of the SM-SCE platform connection, as well as the configured action to take in case of failure of that connection.

show interface LineCard *slot-number* **subscriber sm-connection-failure [timeout]**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **timeout** keyword to display the configured SM-SCE platform link failure timeout value.

Authorization: viewer

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following is an example of how to display the state of the SM-SCE platform connection.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber subscriber sm-
connection-failure
Current SM link state: down.
Please note that this refers to the logical connection,
which means the synchronization with the SM i.e.
There might be cases where the connection at the SM will be up
and down at the SE since synchronization hasn't been completed
yet.
Configured action to take when SM link is down: No action
SCE>
```

EXAMPLE 2

The following is an example of how to display the configured timeout value for the SM-SCE platform connection.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber subscriber sm-
connection-failure timeout
SM SCE link failure timeout is: 90
SCE>
```

Related Commands

subscriber sm-connection-failure (on page 2-310)

show interface LineCard subscriber templates

Displays a specified subscriber template.

show interface LineCard *slot-number* **subscriber templates [all|index** *template-number***]**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

template-number The index number of the template to be displayed.

Defaults

This command has no default settings.

Command Mode

Viewer

Usage Guidelines

Use the **all** keyword to display all existing subscriber templates.

Authorization: viewer

Examples

The following is an example of how to display a specified subscriber template.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber templates index 3
Subscriber template 3 properties
monitor=0
new_classification_policy=0
packageId=0
QpLimit[0..17]=0*17,8
QpSet[0..17]=0*17,1
SCE>
```

Related Commands

show interface LineCard subscriber TP-mappings statistics

Displays the traffic processor mappings statistics.

show interface LineCard *slot-number* **subscriber TP-mappings statistics**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following is an example of how to display the traffic processor mapping statistics .

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber TP-mappings statistics

SCE>
```

Related Commands

subscriber TP-mappings (on page 2-315)

show interface LineCard subscriber TP-IP-range

Displays the configuration of a specified TIR.

show interface LineCard *slot-number* **subscriber TP-IP-range** *TP-IP-range-name* [**all**]

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

TP-IP-range-name Name of the TIR to be displayed.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **all** keyword to display all existing TIR configurations.

Authorization: viewer

Examples

Following is an example of how to display all existing TIR configurations.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber TP-IP-range all

SCE>
```

Related Commands

subscriber TP-IP-range (on page 2-316)

show interface LineCard subscriber mapping included-in TP-IP-range

Displays the existing subscriber mappings for a specified TIR or IP range.

show interface LineCard *slot-number* **subscriber** [**amount**] **mapping included-in TP-IP-range** [*TP-IP-range-name* | *IP*]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
TP-IP-range-name	Name of the TIR for which mappings should be displayed.
IP	IP range for which mappings should be displayed.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **amount** keyword to display the number of existing mappings only, rather than the mappings themselves.

Authorization: viewer

Examples

The following examples illustrate the **show interface LineCard subscriber mapping included-in TP-IP-range** command:

EXAMPLE 1:

Following is an example of how to display all existing mappings for TIR CMTS1.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber mapping included-in TP-IP-range CMTS1

SCE>
```

EXAMPLE 2:

Following is an example of how to display the number of existing mappings for TIR CMTS1.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 subscriber amount mapping included-in TP-IP-range CMTS1

SCE>
```

Related Commands

subscriber TP-IP-range (on page 2-316)

show interface LineCard tos-marking mode

Displays the current LineCard TOS marking status.

show interface LineCard *slot-number* **tos-marking mode**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows that the tos marking mode is enabled:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 tos-marking mode
ToS marking mode on slot 0 is enabled
SCE>
```

Related Commands

tos-marking mode (on page 2-324)

show interface LineCard tos-marking table

Displays the current LineCard TOS marking table.

show interface LineCard *slot-number* **tos-marking table**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the ToS marking table:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 tos-marking table
                BE    AF1   AF2   AF3   AF4   FE
green      0x0  0xa   0x12  0x1a  0x22  0x2e
yellow          0x0   0xc   0x14  0x1c  0x24  0x2e
red        0x0  0xe   0x16  0x1e  0x24  0x2e
SCE>
```

Related Commands

tos-marking set-table-entry (on page 2-326)

show interface LineCard traffic-counter

Displays the specified traffic counter.

show interface linecard *slot-number* **traffic-counter** *name* [**all**]

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
name	Name of the traffic counter to be displayed.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **all** keyword to display all traffic counters.

Authorization: viewer

Examples

The following example displays information for all existing traffic counters.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 traffic-counter all
Counter 'cnt' value: 0 packets. Rules using it: None.
Counter 'cnt2' value: 1284 packets. Rules using it: Rule2.
2 counters listed out of 32 available.
SCE>
```

Related Commands

traffic-counter (on page 2-328)

clear interface linecard traffic-counter (on page 2-38)

show interface LineCard traffic-rule

Displays the specified traffic rule configuration.

show interface linecard *slot-number* **traffic-rule name** *name*|**tunnel-id-mode**|**all**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
name	Name of the traffic rule to be displayed.

Defaults

This command has no default settings.s

Command Modes

Viewer

Usage Guidelines

Use the **all** keyword to display all traffic counter rules.

Use the tunnel-id-mode to display all rules defined in tunnel-id-mode.

Authorization: viewer

Examples

The following example displays traffic rule information.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 traffic-rule name Rule1
0 rules listed out of 127 available.
SCE>
```

Related Commands

traffic-rule (on page 2-330)

show interface LineCard VAS-traffic-forwarding

Displays the following information for VAS configuration and operational status summary.

- Global VAS status summary — VAS mode, the traffic link used
- VAS Server Groups information summary — operational status, number of configured servers, number of current active servers.

This information may be displayed for a specific server group or all server groups

- VAS servers information summary — operational status, Health Check operational status, number of subscribers mapped to this server.

This information may be displayed for a specific server or all servers

- VAS health check counters

show interface linecard *slot-number* **VAS-traffic-forwarding**

show interface linecard *slot-number* **VAS-traffic-forwarding health-check**

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-group** *number*

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-group all**

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-id** *number*

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-id all**

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-id** *number* **counters health-check**

show interface linecard *slot-number* **VAS-traffic-forwarding VAS server-id all counters health-check**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.
number	ID number of either the specified VAS server or VAS server group for which to display information

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the basic command with no parameters to display global VAS traffic forwarding information.

Use the **VAS server-group** parameter to display information relating to VAS server groups.

Use the **VAS server-id** parameter to display information relating to individual VAS servers.

Use the **counters health-check** parameter with the **VAS server-id** parameter to display information relating to VAS health check.

Use the **all** keyword with the **VAS server-group** parameter or the **VAS server-id** parameter to display information for all servers or server groups.

Authorization: viewer

Examples

The following examples illustrate how to display VAS traffic forwarding information and provide sample outputs.

EXAMPLE 1

This example shows how to display global VAS status and configuration.

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 VAS-traffic-forwarding
VAS traffic forwarding is enabled
VAS traffic link configured: Link-1   actual: Link-1
SCE>
```

EXAMPLE 2

This example shows how to display operational and configuration information for a specific VAS Server Group.

SCE>enable 5
Password:*pcube*
SCE>**show interface linecard 0 VAS-traffic-forwarding VAS server-group 0**
VAS server group 0:
State: Failure configured servers: 0 active servers: 0
minimum active servers required for Active state: 1 failure action: Pass
SCE>

EXAMPLE 3

This example shows how to display operational and configuration information for a specific VAS server.

SCE>enable 5
Password:*pcube*
SCE>**show interface linecard 0 VAS-traffic-forwarding VAS server-id 0**
VAS server 0:
configured mode: enable actual mode: enable VLAN: 520 server group: 3
State: UP
Health Check configured mode: enable status: running
Health Check source port: 63140 destination port: 63141
Number of subscribers: 0
SCE>

EXAMPLE 4

This example shows how to display health check counters for a specific server. (To clear these counters, see *clear interface linecard VAS-traffic-forwarding VAS counters health-check* (on page 2-34).)

```
SCE>enable 5
Password:pcube
SCE>show interface linecard 0 VAS-traffic-forwarding VAS server-id 0 counters health-
check
Health Checks statistics for VAS server '0'    Upstream      Downstream
--------------------------------------------------------------------------------
Flow Index '0'
----------------
Total packets sent                  :      31028  :      31027 :
Total packets received              :      31028  :      31027 :
Good packets received               :      31028  :      31027 :
Error packets received              :          0  :          0  :
Not handled packets                 :          0  :          0  :
Average roundtrip (in millisecond)      :          0  :          0  :

Error packets details
--------------------------
Reordered packets                   :          0  :          0  :
Bad Length packets                  :          0  :          0  :
IP Checksum error packets           :          0  :          0  :
L4 Checksum error packets           :          0  :          0  :
L7 Checksum error packets           :          0  :          0  :
Bad VLAN tag packets                :          0  :          0  :
Bad Device ID packets               :          0  :          0  :
Bad Server ID packets               :          0  :          0  :
SCE>
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding server-id VLAN (on page 2-350)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

show interface LineCard subscriber name (on page 2-221) (To display VAS server used by specified subscriber)

show interface LineCard counters (on page 2-197) (To display VAS bandwidth and VAS dropped bytes)

clear interface linecard VAS-traffic-forwarding VAS counters health-check (on page 2-34)

show interface LineCard VLAN

Displays the VLAN tunnel configuration.

show interface LineCard *slot-number* **VLAN**

Syntax Description

slot-number	The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the VLAN configuration.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 VLAN
VLAN symmetric skip
SCE>
```

Related Commands

MPLS
L2TP identify-by (on page 2-107)
ip tunnel (on page 2-106)
VLAN (on page 2-356)

show interface LineCard vlan translation

Displays the VLAN translation configuration.

show interface LineCard *slot-number* **vlan translation**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: Viewer

Examples

The following example shows the vlan translation configuration.

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 vlan translation
vlan translation constant: increment 20
SCE>
```

Related Commands

vlan translation (on page 2-358)

show interface LineCard wap

Displays the current WAP handling state.

show interface LineCard *slot-number* **wap**

Syntax Description

slot-number The number of the identified slot. Enter a value of 0.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Example

The following example illustrates the use of the **show interface LineCard wap** command:

```
SCE>enable 5
Password:pcube
SCE>show interface LineCard 0 wap
WAP handling is disabled
SCE>
```

Related Commands

wap (on page 2-360)

show ip access-class

Shows the access list defined for global IP access to the SCE platform. Only IP addresses permitted access according to this access list are allowed access to the system.

show ip access-class

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the IP access class mapping.

```
SCE>enable 5
Password:pcube
SCE>show ip access-class
IP layer is using access-list # 1.
SCE>
```

Related Commands

ip access-class (on page 2-84)

show ip advertising

Shows the status of IP advertising, the configured destination and the configured interval.

Use the [destination] and [interval] versions of the command to display only the configured destination or interval, respectively.

show ip advertising [**destination**|**interval**]

Syntax Description

destination	Displays IP advertising destination.
interval	Displays the interval between ping commands

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the form **show ip advertising destination** to display the IP advertising destination.

Use the form **show ip advertising interval** to display the interval between ping commands.

Authorization: viewer

Examples

The following example shows the IP advertising status and configuration.

```
SCE>enable 5
Password:pcube
SCE>show ip advertising
IP advertising is disabled
IP advertising destination is 10.10.10.10
IP advertising interval is 853 seconds
SCE>
```

Related Commands

ip advertising (on page 2-86)

show ip filter

Displays the following information for management interface IP filtering.

- IP fragment filter enabled or disabled
- configured attack threshold (permitted and not-permitted IP addresses)
- configured end of attack threshold (permitted and not-permitted IP addresses)
- burst size in seconds (permitted and not-permitted IP addresses)

show ip filter

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following command shows how to display information for management interface IP filtering

```
SCE>enable 5
Password:pcube
SCE> show ip filter
is fragment filtered    : 0
Input Bandwidth         : 0 Kb/sec
Input packets  rate     : 2 Pkt/sec
Input bandwidth policer   : CIR: 20000.00 Kb/sec  BTime: 200
msec LP: 100 %
Input packet rate policer : CIR: 5000.00 Pkt/sec  BTime: 200
msec LP: 100 %
Permit monitor            :state : no_attack  BW: 0
High : CIR: 20000.00 Kb/sec  BTime: 10000 msec LP: 100 %
Low  : CIR: 20000.00 Kb/sec  BTime: 10000 msec LP: 100 %
Denied monitor            :state : no_attack  BW: 0
High : CIR: 20000.00 Kb/sec  BTime: 10000 msec LP: 100 %
Low  : CIR: 20000.00 Kb/sec  BTime: 10000 msec LP: 100 %
in_bytes             : 85115466
in_pkt               : 371598
in_pkt_accept        : 371598
in_pkt_denied        : 0
drop_fragment_cnt    : 0
action_delay_due_bw  : 0
action_delay_due_pkt : 0
```

```
 PERMIT events
       meStartAttack    : 0
       meStopAttack    : 0
 DENIED events
        meStartAttack    : 0
SCE>
```

Related Commands

ip filter fragment (on page 2-91)

ip filter moniter (on page 2-92)

show ip default-gateway

Shows configured default gateway.

show ip default-gateway

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example displays the default gateway.

```
SCE>enable 5
Password:pcube
SCE>show ip default-gateway
Default gateway: 10.1.1.1
SCE>
```

Related Commands

ip domain-lookup (on page 2-89)

show ip route

Shows the entire routing table and the destination of last resort (default-gateway). When using the *prefix* and *mask* parameters, it shows the routing entries from the subnet specified by the prefix and mask pair.

show ip route [*prefix mask*]

Syntax Description

prefix	The prefix of the routing entries to be included.
mask	Used to limit the search of routing entries.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following examples illustrate the use of the **show ip route** command:

EXAMPLE 1:

The following example shows the default gateway.

```
SCE>enable 5
Password:pcube
SCE>show ip route
gateway of last resort is        10.1.1.1
SCE>
```

EXAMPLE 2:

The following example shows retrieval of the ip route.

```
SCE>enable 5
Password:pcube
SCE>show ip route 10.1.60.0 255.255.255.0
|    prefix       |     mask        |    next hop     |
|-----------------|-----------------|-----------------|
|     10.1.60.0   |   255.255.255.0 |        10.1.1.5 |
SCE>
```

Related Commands

ip route (on page 2-98)

show ip rpc-adapter

Displays the status of the RPC adapter (enabled or disabled) and the configured port.

show ip rpc-adapter [sessions]

Syntax Description		
	sessions	Display information regarding RPC adapter sessions.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the configuration of the RPC adapter.

```
SCE>enable 5
Password:pcube
SCE>show ip rpc-adapter
RPC Server is OFFLINE
RPC Server port is 14374
SCE>
```

Related Commands

ip rpc-adapter (on page 2-100)

ip rpc-adapter port (on page 2-101)

show ip ssh

Shows the status of the SSH sever, including current SSH sessions.

show ip ssh

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to retrieve the current SSH status.

```
SCE>enable 5
Password:pcube
SCE>show ip ssh
SSH server is disabled.
SSH server does not use any access-list.
There are no active SSH sessions.
SCE>
```

Related Commands

ip ssh (on page 2-102)

show line vty

Displays the Telnet configuration.

show line vty timeout|access-class in

Syntax Description

timeout	Shows the timeout configured to the Telnet sessions.
access-class in	Shows the access list configured to the Telnet server that contains the list of addresses that have access to the system.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the access list configured for telnet lines.

```
SCE>enable 5
Password:pcube
SCE>show line vty access-class in
Telnet server is using access-list # 1.
SCE>
```

Related Commands

line vty (on page 2-108)

show log

Displays the contents of the user log file.

show log]

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example illustrates the use of this command.

```
SCE>enable 5
Password:pcube
SCE>show log
2006-01-25 00:14:46 |  INFO  | CPU #000 | User message files
were successfully cleared, new files were opened
2006-01-25 00:23:07 |  INFO  | CPU #000 | A new password was set
for level 10
2006-01-25 00:49:41 |  INFO  | CPU #000 | System hostname
changed to :ecco"
2006-01-25 01:02:41 |  INFO  | CPU #000 | Time zone set to GMT
2006-01-25 01:06:33 |  INFO  | CPU #000 | A new password was set
for level 15
2006-01-25 01:08:07 |  INFO  | CPU #000 | A new password was set
for level 5
2006-01-25 01:23:07 |  INFO  | CPU #000 | IP address of slot 0,
port 0 set to 10.10.10
2006-01-25 01:56:44 |  INFO  | CPU #000 | Configuration file
'/tffs0/system/config.txt' was saved - file size 1200
2006-01-25 05:34:45 |  INFO  | CPU #000 | A telnet session from
20.20.20.20 was established
SCE>
```

Related Commands

clear logger (on page 2-39)

logger get user-log file-name (on page 2-117)

more user-log (on page 2-126)

show logger device

Displays the configuration of the specified SCE platform logger file.

Also displays the current user log counters.

show logger device Line-Attack-File-Log|SCE-agent-Statistics-Log|User-File-Log[counters|max-file-size|status|nv-counters]

Syntax Description

See "Usage Guidelines".

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Specify the desired logger device:

- **Line-Attack-File-Log:** displays the following information:
  - Status
  - Maximum file size
- **SCE-agent-Statistics-Log:** displays the following information:
  - Status
  - Maximum file size
  - Maximum number of backup files
- **User-File-Log:** displays the following information:
  - Status
  - Maximum file size

If you specify **User-File-Log,** you can specify one of the following options:

- counters: Displays the User-File-Log counters
- max-file-size: Displays the currently configures maximum file size for the User-File-Log
- nv-counters: Displays the User-File-Log non-volatile counters
- status: Displays the current status of the User-File-Log

Authorization: viewer

Examples

The following examples illustrate the use of this command.

EXAMPLE 1

The following example shows the SCE platform Line-Attack-File-Log status and configuration.

```
SCE>enable 5
Password:pcube
SCE>show logger device Line-Attack-File-Log
Line-Attack-File-Log status: Enabled
Line-Attack-File-Log file size: 1000000
SCE>
```

EXAMPLE 2

The following example shows the SCE platform SCE-agent-Statistics-Log status and configuration.

```
SCE>enable 5
Password:pcube
SCE>show logger device SCE-agent-Statistics-Log
SCE-agent-Statistics-Log status: Enabled
SCE-agent-Statistics-Log max file size: 204800
SCE-agent-Statistics-Log max backup files: 10
SCE>
```

EXAMPLE 3

The following example shows the SCE platform User-File-Log counters.

```
SCE>enable 5
Password:pcube
SCE>show logger device Line-Attack-File-Log counters
Logger device User-File-Log counters
Total info messages:     62
Total warning messages:  4
Total error messages:    0
Total fatal messages:    0
Last time these counters were cleared: 02:23:27  GMT  TUES
January 17   2006
SCE>
```

Related Commands

logger device User-File-Log (on page 2-114)

clear logger (on page 2-39)

show management-agent

Displays the following information for the management agent:

- status (enabled or disabled)
- access control list number assigned

show management-agent

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to display the information for the management-agent.

```
SCE>enable 5
Password:pcube
SCE>show management-agent
management agent is enabled.
management agent is active, version: SCE Agent 3.0.3 Build 15
management agent does not use any access-list.
SCE>
```

Related Commands

show pqi file

Displays information, such as installation options, about the specified application file.

show pqi file *filename* **info**

Syntax Description		
	filename	The filename of the desired application file.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to display application file information.

```
SCE>enable 5
Password:pcube
SCE>show pqi file myfile.txt info
application:   sm
description:   SCE 1000 sm
target SCE: SCE 1000
module names:  sm20001.pm0
SCE>
```

Related Commands

pqi install file (on page 2-136)

show pqi last-installed

Displays the name of the last pqi file that was installed.

show pqi last-installed

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows how to find out what pqi file is installed.

```
SCE>enable 5
Password:pcube
SCE>show pqi last-installed
package name:   SACS BB
package version 3.0.1. build 02
package date:   Tue Jun 10 17:27:55 GMT+00:00 2006
operation:      Upgrade
SCE>
```

Related Commands

pqi install file (on page 2-136)

show RDR-formatter

Displays the RDR formatter configuration.

show RDR-formatter

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the configuration of the RDR formatter.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter
Status: enabled
Connection is: down
Forwarding mode: redundancy
Connection table:
-------------------------------------------------------------
Collector    | Port | Status  | Priority per Category:   |
IP Address / |      |         |--------------------------|
Host-Name    |      |         | Category1   | Category2  |
-------------------------------------------------------------
10.1.1.205   |33000 | Down    | 100         | 100        |
10.1.1.206   |33000 | Down    | 60          | 60         |
10.12.12.12  |33000 | Down    | 40          | 40         |
-------------------------------------------------------------
RDR:    read:         0 ,sent:         0, thrown:        0
UM:     read:         0 ,sent:         0, thrown:        0
Logger: read:         0 ,sent:         0, thrown:        0
Errors: thrown:         0
Last time these counters were cleared: 14:05:57 UTC SUN February
23 2003
SCE>
```

Related Commands

RDR-formatter destination (on page 2-144)

service RDR-formatter (on page 2-166)

show RDR-formatter connection-status

Shows the current RDR formatter connection table and status (main connection status: up\down, forwarding mode, and connection/activity information for each destination).

show RDR-formatter connection-status

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the RDR-formatter connection status.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter connection-status
Connection is: up
Forwarding mode: redundancy
Connection table:
-------------------------------------------------------------
Collector    | Port | Status  | Priority per Category:   |
IP Address / |      |         |--------------------------|
Host-Name    |      |         | Category1   | Category2  |
-------------------------------------------------------------
10.1.1.205   |33000 | Up      | 100 primary | 100 primary|
10.1.1.206   |33000 | Down    | 60          | 60         |
10.12.12.12  |33000 | Up      | 40          | 40         |
-------------------------------------------------------------
SCE>
```

Related Commands

show RDR-formatter counters

Shows the RDR-formatter counters.

show RDR-formatter counters

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the RDR-formatter counters.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter counters
RDR:    read:      0 ,sent:     0, thrown:         0
UM:     read:      0 ,sent:     0, thrown:         0
Logger: read:      0 ,sent:     0, thrown:         0
Errors: thrown:         0
Last time these counters were cleared: 14:05:57 GMT SUN January
23 2006
SCE>
```

Related Commands

show RDR-formatter destination

Shows the RDR-formatter destinations.

show RDR-formatter destination

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the RDR-formatter configured destinations.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter destination
Destination: 10.1.1.205
Port: 33000
Destination: 10.1.1.206
Port: 33000
Destination: 10.10.12.10
Port: 33000
SCE>
```

Related Commands

RDR-formatter destination (on page 2-144)

show RDR-formatter enabled

Shows the RDR-formatter status (enabled/disabled).

show RDR-formatter enabled

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows that the RDR formatter is enabled.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter enabled
Status:  enabled
SCE>
```

Related Commands

service RDR-formatter (on page 2-166)

show RDR-formatter forwarding-mode

Shows the configured RDR-formatter forwarding-mode (redundancy/multicast/simple load balancing).

show RDR-formatter forwarding-mode

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the RDR formatter forwarding-mode.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter forwarding-mode
Forwarding mode:  redundancy
SCE>
```

Related Commands

RDR-formatter forwarding-mode (on page 2-146)

show RDR-formatter history-size

Shows the configured size of the RDR formatter history buffer.

show RDR-formatter history-size

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the size of the RDR formatter history buffer.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter history-size
History buffer size:  16000 bytes
SCE>
```

Related Commands

RDR-formatter history-size (on page 2-147)

show RDR-formatter protocol

Shows the RDR protocol version of the RDR formatter.

show RDR-formatter protocol

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

The only version of the RDR formatter protocol that is currently supported is RDRv1.

Authorization: viewer

Examples

The following example illustrates the use of this command:

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter protocol
RDR protocol:  RDRv1
SCE>
```

Related Commands

RDR-formatter protocol (on page 2-148)

show RDR-formatter rdr-mapping

Shows to which RDR formatter category a specified RDR tag is mapped.

show RDR-formatter rdr-mapping all|*tag-ID*

Syntax Description

tag-ID	The RDR tag to be displayed (in HEX).

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Use the **all** keyword to display all current RDR-category mappings.

Authorization: viewer

Examples

The following example illustrates the use of this command, showing partial output:

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter rdr-mapping all
Tag           Categories
---           ----------
0xb2d05e01     1
0xb2d05e02     1
0xb2d05e04     1
0xb2d05e05     1
0xf0f0f000     1
0xf0f0f002     1
0xf0f0f004     1
0xf0f0f005     1
0xf0f0f010     1
0xf0f0f016     1
0xf0f0f017     1
0xf0f0f018     1
---More---

SCE>
```

Related Commands

RDR-formatter rdr-mapping (on page 2-150)

show RDR-formatter statistics

Shows the current RDR formatter statistics.

show RDR-formatter statistics

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the current RDR statistics.

```
SCE>enable 5
Password:pcube
SCE>show RDR-formatter statistics
RDR-formatter statistics
========================
Category 1
  sent:     0
  in-queue: 0
  thrown:   0
  rate:     0 RDRs per second
  max rate: 0 RDRs per second

Category 2
  sent:     0
  in-queue: 0
  thrown:   0
  rate:     0 RDRs per second
  max rate: 0 RDRs per second

Category 3
  sent:     0
  in-queue: 0
  thrown:   0
  rate:     0 RDRs per second
  max rate: 0 RDRs per second
```

```
Category 4
  sent:     0
  in-queue: 0
  thrown:   0
  rate:     0 RDRs per second
  max rate: 0 RDRs per second

Destination:   10.1.1.205  Port: 33000 Status: down
   Sent:       0
   Rate:  0    Max:   0
Last connection establishment: 2 days,  10 hours,  25 minutes,
40 seconds
Destination:    10.1.1.206  Port: 33000 Status: down
   Sent:        0
   Rate:  0    Max:   0
Last connection establishment: 13 hours,  32 minutes, 58 seconds
Destination:   10.10.12.10  Port: 33000 Status: down
   Sent:        0
   Rate:  0    Max:   0
Last connection establishment: 2 days,  8 hours,  34 minutes, 14
seconds
SCE>
```

Related Commands

show running-config

Shows the current configuration.

show running-config [**all-data**]
more running-config [**all-data**]

Syntax Description

all data	Displays defaults as well as non-default settings.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

The **all data** switch may to see sample usage for many CLI configuration commands.

Authorization: admin

Examples

The following example shows the partial output of the **show running-config** command.

```
SCE>enable 10
Password:pcube
SCE#>show running-config all-data
#This is a general configuration file (running-config).
#Created on 16:48:11  UTC  WED  May  13  2006

cli-type 1
#version 1

service logger


no service password-encryption
enable password level 10 0 “cisco”
enable password level 15 0 “cisco”
service RDR-formatter
no RDR-formatter destination all
RDR-formatter history-size 0
clock timezone UTC 0
ip domain-lookup
no ip domain-name
no ip name-server
service telnetd
```

```
FastEthernet 0/0
ip address 10.1.5.120 255.255.0.0
speed auto
duplex auto

exit
ip default-gateway 10.1.1.1
no ip route all

line vty 0 4
no access-class in
timeout 30
exit
SCE#
```

Related Commands

more (on page 2-124)

show snmp

Displays the SNMP configuration and counters.

show snmp

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the SNMP server configuration and status.

```
SCE>enable 5
Password:pcube
SCE>show snmp
SNMP server status: Enabled
Location: London_Office
Contact: Brenda
Authentication Trap Status: Enabled
Communities:
------------
Community: public,    Access Authorization: RO,     Access List
Index: 1
Trap managers:
------------
SNMP stats:
    29 SNMP packets input
     0 Bad SNMP version errors
    29 Unknown community name
     0 Illegal operation for community name supplied
     0 Encoding errors
     0 Number of requested variables
     0 Number of altered variables
     0 Get-request PDUs
     0 Get-next PDUs
     0 Set-request PDUs
```

```
29 SNMP packets output
     0 Too big errors
     0 No such name errors
     0 Bad values errors
     0 General errors
     0 Response PDUs
    29 Trap PDUs
SCE>
```

Related Commands

show snmp community

Displays configured communities.

show snmp community

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the SNMP manager communities.

```
SCE>enable 5
Password:pcube
SCE>show snmp community
Community: public, Access Authorization: RO,
Access List Index: 1
SCE>
```

Related Commands

snmp-server community (on page 2-293)

show snmp contact

Displays the configured MIB-2 variable sysContact.

show snmp contact

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the system contact.

```
SCE>enable 5
Password:pcube
SCE>show snmp contact
Contact: Brenda@mycompany.com
SCE>
```

Related Commands

snmp-server contact (on page 2-294)

show snmp enabled

Displays the SNMP agent status (enabled/disabled).

show snmp enabled

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the SNMP server enabled status.

```
SCE>enable 5
Password:pcube
SCE>show snmp enabled
SNMP server status: Enabled
SCE>
```

Related Commands

snmp-server (on page 2-292)

show snmp host

Displays the destination hosts for SNMP traps.

show snmp host

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the destination hosts for SNMP traps.

```
SCE>enable 5
Password:pcube
SCE>show snmp host
Trap host: 10.1.1.205, community: public, version: SNMPv2c
SCE>
```

Related Commands

snmp-server host (on page 2-297)

show snmp location

Displays the configured MIB-2 variable sysLocation.

show snmp location

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the system location.

```
SCE>enable 5
Password:pcube
SCE>show snmp location
Location: London_Office
SCE>
```

Related Commands

snmp-server location (on page 2-298)

show snmp MIB

Displays MIB variables.

show snmp MIB *mib* **variables** *variables*

Syntax Description

mib	Name of MIB to display. **MIB-II** **pcube-SE-MIB**
variables	Name of group to display. **MIB-II:** Use one of the following values: AT, ICMP, interfaces, IP, SNMP, system, TCP or UDP. **pcube-SE-MIB:** Use one of the following values: *application, chassis, disk, global-controller, link, logger, module, port, rdr-formatter, subscriber, system, traffic-counters, tx-queue, vas-traffic-forwarding*

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the MIB-2 system group.

```
SCE>enable 5
Password:pcube
SCE>show snmp MIB MIB-II system
sysDescr.0 = CiSco Service Engineering,
SW version: Control Card Version 1.30 build 29,
HW version: SCE GE "RevE"
sysObjectID.0 = 1.3.6.1.4.1.5655.1.2
sysUpTime.0 =  14 hours, 25 minutes, 59 seconds
sysContact.0 = Brenda@mycompany.com
sysName.0 = SCE
sysLocation.0 = London_Office
sysServices.0 = 2
SCE>
```

Related Commands

show snmp traps

Displays the SNMP traps generation status (enabled/disabled).

show snmp traps

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the SNMP server traps status.

```
SCE>enable 5
Password:pcube
SCE>show snmp traps
Authentication-failure trap status: Disabled
operational-status traps status:    Enabled
system-reset trap status:           Enabled
chassis traps status:               Enabled
RDR-formatter traps status:         Enabled
Telnet traps status:                Enabled
logger traps status:                Enabled
SNTP traps status:                  Enabled
link-bypass traps status:           Enabled
subscriber traps status:            Enabled
pull-request-failure traps status:           Disabled
attack traps status:                Enabled
vas-traffic-forwarding traps status:           Enabled
port-operational-status traps status:        Enable
SCE>
```

Related Commands

snmp-server enable traps (on page 2-295)

show sntp

Displays the SNTP configuration and update statistics.

show sntp

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows statistics from the SNTP clients.

```
SCE>enable 5
Password:pcube
SCE>show sntp
SNTP broadcast client: disabled
last update time: not available

SNTP uni-cast client: enabled
there is one server:
1: 128.182.58.100
last update time: Feb 10 2002, 14:06:41
update interval: 100 seconds

SCE>
```

Related Commands

sntp server (on page 2-300)

show startup-config

Shows the startup configuration file. Use this command to review the configuration used by the SCE platform at boot time in comparison with the current configuration to make sure that you approve of all the differences before saving the configuration by using **copy running-config startup-config** command.

show startup-config
more startup-config

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example shows a sample output.

```
SCE>enable 10
Password:pcube
SCE#more startup-config
#Created on 20:17:46  UTC  THU  January 1 2001
#cli-type 1
#version 1
logger SCE User-File-Log max-file-size 20000
ip domain-name *pcube*
ip name-server 10.1.1.1
interface FastEthernet 0/0
ip address 10.1.4.202 255.0.0.0
interface LineCard 0
silent
SCE#
```

Related Commands

more (on page 2-124)

show system operation-status

Displays the operation status of the system.

show system operation-status

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the system operation status:

```
SCE>enable 5
Password:pcube
SCE>show system operation-status
System Operation status is Operational
Port status is:
Link on port #1 is down
Link on port #2 is down
SCE>
```

Related Commands

show system-uptime

Displays the length of time the system has been running since the last reboot..

show system-uptime

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the system uptime for the SCE platform.

```
SCE>enable 5
Password:pcube
SCE>show system-uptime
SCE uptime is 4 days, 13 hours, 21 minutes, 37 seconds
SCE>
```

Related Commands

show tacacs

Displays statistics for the TACACS+ servers.

show tacacs

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

The '**all**' option is available only at the Privileged Exec level.

Use the **all** keyword to display keys and timeouts as well as other statistics.

Note that, although most show commands are accessible to viewer level users, the '**all**' option is available only at the admin level. Use the command '**enable 10**' to access the admin level.

Authorization: viewer

The '**all**' option is at the admin authorization level.

Example 1

This example shows how to display statistics for all TACACS+ servers.

```
SCE>enable 5
Password:pcube
SCE> show tacacs
Server: 100.10.10.10./49: opens=0 closes=0 error=0
        messages in=0  messages out=0
SCE>
```

Example 2

This example shows how to display statistics, including keys and timeouts, for all TACACS+ servers.

```
SCE>enable 10
Password:pcube
SCE# show tacacs all
Server: 100.10.10.10./49: opens=0 closes=0 error=0
        messages in=0  messages out=0
        timeout=20
        uses default timeout= yes
        key= a
        uses default key= no
SCE#
```

Related Commands

tacacs-server host (on page 2-318)

tacacs-server key (on page 2-320)
tacacs-server timeout (on page 2-321)

show telnet sessions

Displays any active Telnet sessions.

show telnet sessions

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows that there is one active Telnet session.

```
SCE>enable 5
Password:pcube
SCE>show telnet sessions
There is 1 active telnet session:

Index | Source
================
 0    | 10.1.1.201
SCE>
```

Related Commands

telnet (on page 2-322)

show telnet status

Displays the status of the telnet server daemon.

show telnet status

Syntax Description	This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows that the telnet daemon is currently enabled.

```
SCE>enable 5
Password:pcube
SCE>show telnet status
Telnet daemon is enabled.
SCE>
```

Related Commands

service telnetd (on page 2-167)

show timezone

Displays the current time zone and daylight saving time configuration as configured by the user.

show timezone

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the time zone configured by the user.

```
SCE>enable 5
Password:pcube
SCE>show timezone
Time zone: ISR   minutes offset from UTC: 120
SCE>
```

Related Commands

clock timezone (on page 2-49)

show users

Displays the users in the local database, including passwords.

show users

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privilege Exec

Usage Guidelines

Note that, although most show commands are accessible to viewer level users, this command is available only at the admin level. Use the command '**enable 10**' to access the admin level.

Authorization: admin

Examples

This example shows how to display the users in the local database.

```
SCE>enable 10
Password:pcube
SCE# show users
User:  name = Joe
       privilege level = 10
       password = joespwd
       is password encrypted = no
SCE#
```

Related Commands

username (on page 2-334)

username privilege (on page 2-336)

show version

Displays the configuration information for the system including the hardware version, the software version, the application used, and other configuration information.

show version

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the current version information of the SCE platform.

```
SCE>enable 5
Password:pcube
SCE>show version
System version: Version 3.0.0 Build 240
Build time: Dec 11 2005, 07:34:47
Software version is: Version 3.0.0 Build 240
Hardware information is:
rx            : 0x0075
dp            : 0x1808
tx            : 0x1708
ff            : 0x0077
cls           : 0x1721
cpld          : 0x0025
Lic           : 0x0176
rev           : G001
Bootrom       : 2.1.0
L2 cache      : Samsung 0.5
lic type      : MFEoptic mode    :
Part number: 53AA-BXC1-AAAA
Revision: A02A
Software revision: G001
Serial number: 043P6982
Power Supply type: AC

SML Application information is:
Application file: /tffs0/temp.sli
Application name:
Application help:
Original source file:
H:\work\Emb\jrt\V2.5\sml\actions\drop\drop_basic_anyflow.san
Compilation date: Wed, November 22, 2005 at 21:25:21
Compiler version: SANc v3.00 Build 32 gcc_codelets=true
built on: Tue November 21 2005 09:51:57 AM.;SME plugin v1.1
Default capacity option used.

Logger status: Enabled

Platform: SCE 2000 - 4xFE
Management agent interface version: SCE Agent 3.0.0 Build 18
Software package file:
ftp://vk:vk@10.1.8.22/P:/EMB/LatestVersion/3.0.0/se1000.pkg

SCE2000 uptime is 21 minutes, 37 seconds
SCE>
```

Related Commands

show version all

Displays the complete version information as well as the running configuration for all components.

show version all

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows version and configuration information for all the system components.

```
SCE>enable 5
Password:pcube
SCE>show version all
System version: Version 3.0.0 Build 240
Build time: Dec 11 2005, 07:34:47
Software version is: Version 3.0.0 Build 240
Hardware information is:

rx            : 0x0075
dp            : 0x1808
tx            : 0x1708
ff            : 0x0077
cls           : 0x1721
cpld          : 0x0025
Lic           : 0x0176
rev           : G001
Bootrom       : 2.1.0
L2 cache      : Samsung 0.5
lic type      : MFE
optic mode    :
Part number: 53AA-BXC1-AAAA
Revision: A02A
Software revision: G001
Serial number: 043P6982
Power Supply type: AC
```

```
SML Application information is:
Application file: /tffs0/temp.sli
Application name:
Application help:
Original source file:
H:\work\Emb\jrt\V2.5\sml\actions\drop\drop_basic_anyflow.san
Compilation date: Wed, September 22, 2004 at 21:25:21
Compiler version: SANc v3.0.0 Build 32 gcc_codelets=true built
on: Tue November 22 2004 09:51:57 AM.;SME plugin v1.1
Default capacity option used.


Logger status: Enabled


Platform: SCE2000 - 4xFE
Management agent interface version: SCE Agent 3.0.0 Build 18
Software package file:
ftp://vk:vk@10.1.8.22/P:/EMB/LatestVersion/3.0.0/se1000.pkg
SCE2000 uptime is 21 minutes, 37 seconds


Current configuration:
======================
#This is a general configuration file (running-config).
#Created on 10:14:59  UTC  TUE  December 11  2005
.
interface LineCard 0
connection-mode active
no silent
.
.

Software package file: Not available
Unified management package file: /tffs0/images/um13012.pkg
SCE>
```

Related Commands

show version software

Displays version information for the current software.

show version software

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Viewer

Usage Guidelines

Authorization: viewer

Examples

The following example shows the current software version.

```
SCE>enable 5
Password:pcube
SCE>show version software
Software version is: Version 3.0.0 Build 240
SCE>
```

Related Commands

silent

Disables the LineCard from reporting events. Use the [no] form of this command if you want the LineCard to send reports.

silent
no silent

Syntax Description	This command has no arguments or keywords.

Defaults

No silent

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example changes the LineCard state to silent.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#silent
SCE(config if)#
```

Related Commands

show interface LineCard silent (on page 2-211)

snmp-server

Enables the SNMP agent. You can use any of the other SNMP-server commands to enable the SNMP agent.

Use the **no** form to disable the SNMP agent from responding to SNMP managers. All SNMP settings are saved and are restored when the SNMP agent is re-enabled.

snmp-server enable
no snmp-server

Syntax Description	This command has no arguments or keywords

Defaults

disabled

Command Modes

Global Configuration

Usage Guidelines

You must define at least one community string in order to allow SNMP access. For complete information on community strings.

Authorization: admin

Examples

The following example disables the SNMP server.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#no snmp-server
SCE(config)#
```

Related Commands

snmp-server community (on page 2-293)

show snmp (on page 2-267)

snmp-server community

Sets a community string. Use the **no** form of the command to remove a community string.

The optional **acl-number** parameter states the access list number to restrict the managers that can use this community.

snmp-server community *community-string* [*read-option*] [*acl-number*]
no snmp-server community *community-string* [*read-option*] [*acl-number*]
no snmp-server community all

Syntax Description

community-string	The SNMPv1 and SNMPv2c security string that identifies a community of managers that can access the SNMP server.
read-option	Legal values are **ro** and **rw**. The default **ro** (read-only) option allows managers to view MIB variables. **rw** sets the variable to read-write.
acl-number	Number of the access list that lists the managers who may access the SCE platform via SNMP.

Defaults

no SNMP access

Command Modes

Global Configuration

Usage Guidelines

Use the **all** keyword with the **no** form of the command to remove all configured communities.

Authorization: admin

Examples

The following example configures an SNMP managers community that has read-only permissions for the SCE platform MIB. Only SNMP managers in access list 1 can access the SCE platform.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#snmp-server community public ro 1
SCE(config)#
```

Related Commands

access-list (on page 2-9)

show access-lists (on page 2-172)

snmp-server contact

Sets the MIB-2 variable system contact. Use the **no** form of this command to remove the contact setting.

snmp-server contact *contact*

no snmp-server contact

Syntax Description

contact	A string that identifies the system contact.

Defaults

This command has no default settings.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example configures the system contact.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#**snmp-server contact Brenda@MyCompany.com**
SCE(config)#

Related Commands

show snmp contact (on page 2-270)

snmp-server enable traps

Enables/disables SNMP traps (only authentication-failure traps and enterprise traps can be controlled using this command). Use the [**default**] form of this command to reset SNMP traps to the default status.

snmp-server enable traps [snmp [snmp *trap name*]] **[enterprise [enterprise** *trap name*]]

no snmp-server enable traps [snmp [*snmp trap name*]] **[enterprise** *[enterprise trap name*]]

default snmp-server enable traps [snmp [*snmp trap name*]] **[enterprise** *[enterprise trap name*]]

Syntax Description

snmp trap name Optional parameter used with the snmp parameter to control a specific snmp trap.

Setting = **Authentication**

enterprise trap name Optional parameter used with the enterprise parameter to control a specific enterprise trap.

Settings = **attack, chassis, link-bypass, logger, operational-status, port-operational-status, pull-request-failure, RDR-formatter, session, SNTP, subscriber, system-reset, telnet, vas-traffic-forwarding**

Defaults

snmp traps: disabled

enterprise traps: enabled

Command Modes

Global Configuration

Usage Guidelines

There are two classes of SNMP traps that are controlled by this command

- snmp traps
- enterprise traps

The options **snmp** and **enterprise** are parameters specifying the class of traps that are to be enabled/disabled by this command. Each class, or type, is composed of specific traps. Use these parameters as follows:

- To enable/disable all traps of one type: Specify only **snmp** or **enterprise.**
- To enable/disable only one specific trap: Specify **snmp** or **enterprise** with the additional trap name parameter naming the desired trap.
- To enable/disable all traps: Do not specify either **snmp** or **enterprise.**

Since, at this time, the only snmp type trap is the authentication trap, the **snmp** and **authentication** parameters are currently redundant.

Authorization: admin

Examples

The following example configures the SNMP server to send traps.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#snmp-server enable traps
SCE(config)#
```

Related Commands

show snmp traps (on page 2-275)

snmp-server host

Sets destination hosts for SNMP traps.

snmp-server host *address* [**traps**] [**version** *version*] *community-string*
no snmp-server host *address* [**traps**] [**version** *version*] *community-string*
no snmp-server host all

Syntax Description

address	The IP address of the SNMP server host.
traps	Optional switch, does not influence command functionality.
version	Version of the SCE platform software running in the system. Can be set to 1 or 2c.
community-string	The SNMPv1 and SNMPv2c security string that identifies a community of managers that are able to access the SNMP server.

Defaults

No hosts

Command Modes

Global Configuration

Usage Guidelines

If no communities are specified by the **snmp-server community** command, the community string specified by this command is used by the SCE platform, as if an **snmp-server community community-string ro** was given.

Use the **all** keyword with the **no** form of the command to remove all configured hosts.

Authorization: admin

Examples

The following example adds a host destination for SNMP traps.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#snmp-server host 10.1.1.205 version 2c public
SCE(config)#
```

Related Commands

show snmp host (on page 2-272)

snmp-server location

Gives a name to the SCE platform location, setting the MIB-2 variable sysLocation. Use the **no** form of this command to remove the location setting.

snmp-server location *location*
no snmp-server location

Syntax Description

location	A string that specifies the system location.

Defaults

no location

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example configures the system location.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#snmp-server location London_Office
SCE(config)#
```

Related Commands

show snmp location (on page 2-273)

sntp broadcast client

Enables the SNTP multicast client to accept SNTP broadcasts from any SNTP server.

Use the **no** form of this command to disable the SNTP multicast client.

sntp broadcast client
no sntp broadcast client

Syntax Description

This command has no arguments or keywords.

Defaults

By default, the SNTP multicast client is disabled.

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example enables the SNTP multicast client.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#sntp broadcast client
SCE(config)#
```

Related Commands

show sntp (on page 2-276)

sntp server

Enables the SNTP uni-cast client to query the specified SNTP server. Use the **no** form of this command to disable the SNTP uni-cast server.

sntp server {*address*|*hostname*}
no sntp server *hostname*
no sntp server all

Syntax Description

address	The IP address of the SNTP server.
hostname	The hostname of the SNTP server.

Defaults

SNTP uni-cast server is disabled

Command Modes

Global Configuration

Usage Guidelines

Use the **all** keyword with the **no** form of this command to disable all SNTP uni-cast servers.

Authorization: admin

Examples

The following example enables an SNTP server at a specified IP address.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#sntp server 128.182.58.100
SCE(config)#
```

Related Commands

show sntp (on page 2-276)

sntp update-interval

Defines the interval (in seconds) between SNTP uni-cast update queries.

sntp update-interval interval

Syntax Description		
	interval	The interval between queries in seconds.

Defaults

interval = 900 seconds

Command Modes

Global Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets the SNTP update interval for 100 seconds.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#sntp update-interval 100
SCE(config)#
```

Related Commands

show sntp (on page 2-276)

speed

Configures the speed of the FastEthernet Interface (may be either line or management interface) to either 10 Mbps or 100 Mbps. Auto means auto-negotiation (do not force speed on the link).

speed *speed*
no speed

Syntax Description

speed	The speed in Mbps or auto-negotiation. Can be set to **10**, **100** or **auto**.

Defaults

speed = auto

Command Modes

FastEthernet Interface Configuration

Mng Interface Configuration

Usage Guidelines

Use this command to configure the speed of any Fast Ethernet interface. There are two types of Fast Ethernet interfaces:

- Fast Ethernet management interface: The management interfaces on all SCE platforms are Fast Ethernet interfaces.
  - command mode = Mng Interface Configuration
  - interface designation = 0/1 or 0/2
- Fast Ethernet line interface: Only the SCE 2000 4/8xFE platform has Fast Ethernet line interfaces.
  - command mode = FastEthernet Interface Configuration
  - interface designation = 0/1, 0/2, 0/3, or 0/4

If the duplex mode (see *duplex* (on page 2-67)) of the relevant interface is configured to **auto**, changing this configuration has no effect.

Authorization: admin

Examples

The following examples illustrate how to use this command.

EXAMPLE 1

The following example configures the speed of line FastEthernet port #3 to auto.

```
SCE2000>enable 10
Password:pcube
SCE2000FE#config
SCE2000FE(config)#interface FastEthernet 0/3
SCE2000FE(config if)#speed 100
SCE2000FE(config if)#
```

EXAMPLE 2

The following example configures the speed of management port #1 to auto.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface mng 0/1
SCE(config if)#speed auto
SCE(config if)#
```

Related Commands

duplex (on page 2-67)

interface FastEthernet (on page 2-80)

interface Mng (on page 2-83)

subscriber anonymous-group export csv-file

Exports anonymous groups to the specified csv file.

subscriber anonymous-group export csv-file *filename*

Syntax Description

filename	Name of the csv file to which the anonymous groups information is to be exported.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example exports anonymous groups information to the specified file

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber anonymous-group export csv-file
s_g_0507.csv
SCE(config if)#
```

Related Commands

subscriber anonymous-group import csv-file

Creates anonymous groups by importing anonymous subscribers from the specified csv file.

subscriber anonymous-group import csv-file *filename*

Syntax Description

filename	Name of the *csv* file containing the anonymous groups information.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Anonymous Group *csv* files have a fixed format. All lines have the same structure, as described below:

Anonymous-group-name, IP-range [, subscriber-template-number].

If no subscriber-template-number is specified, then the anonymous subscribers of that group will use the default template (#0), which cannot be changed by template import operations.

Following is an example of an anonymous group *csv* file:

```
group1, 10.1.0.0/16, 2
group2, 176.23.34.0/24, 3
group3, 10.2.0.0/16
```

Authorization: admin

Examples

The following example imports subscriber from the file *subscribers_groups.csv*.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber anonymous-group import csv-file
subscribers_groups.csv
SCE(config if)#
```

Related Commands

subscriber export csv-file

Exports subscribers to the specified csv file. Subscriber csv files are application-specific. Refer to the relevant application documentation for the definition of the file format.

subscriber export csv-file *filename*

Syntax Description

filename	Name of the *csv* file to which the subscriber information is to be exported.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Subscriber *csv* files are application-specific. Refer to the relevant application documentation for the definition of the file format.

Authorization: admin

Examples

The following example exports subscribers to the specified file.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber export csv-file
gold_subscribers_04072003.csv
SCE(config if)#
```

Related Commands

subscriber import csv-file

Imports subscribers from the specified csv file.

subscriber import csv-file *filename*

Syntax Description

filename	Name of the *csv* file containing the subscriber information.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Subscriber *csv* files are application-specific. Refer to the relevant application documentation for the definition of the file format.

Authorization: admin

Examples

The following example imports subscriber from the file *gold_subscribers.csv*.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber import csv-file gold_subscribers.csv
SCE(config if)#
```

Related Commands

subscriber name property

Assigns a value to the specified property of the specified subscriber.

subscriber name *subs-name* **property** *propertyname* **value** *property-val*

Syntax Description

subs-name	Name of the subscriber.
propertyname	The subscriber property for which the value is to be assigned
property-val	The value to be assigned

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

This command can be used to enable or disable the generation of the real-time subscriber usage RDRs (see example below).

To enable RDR generation, set *propertyname* = monitor and *property-val* = 1

To disable RDR generation, set *propertyname* = monitor and *property-val* = 0

To enable subscriber monitoring for a group of subscribers, create a text file containing the sequence of CLI commands, including the commands to access the appropriate CLI mode. The file would look something like this:

```
configure
interface LineCard 0
subscriber name Jerry property monitor value 1
subscriber name George property monitor value 1
subscriber name Elaine property monitor value 1
subscriber name Kramer property monitor value 1
subscriber name Newman property monitor value 1
```

Use the *script run* (on page 2-162) command to run the script.

Authorization: admin

Examples

The following example disables the generation of the real-time subscriber usage RDRs for subscriber jane_smith.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#subscriber name jane_smith property monitor value
0
SCE(config if)#
```

Related Commands

show interface LineCard subscriber name (on page 2-221)

subscriber sm-connection-failure

Configures the behavior of the system in case of communication failure between the SM and the SCE platform.

subscriber sm-connection-failure action [force-failure|none|remove-mappings|shut]

subscriber sm-connection-failure action timeout *timeout*

default subscriber sm-connection-failure

Syntax Description

timeout	The timeout interval in seconds.
force-failure	Force failure of the SCE platform in the event of any loss of connection with the SM The SCE platform then acts according to the behavior configured for the failure state.
none	No action needs to be taken in the event of any loss of connection between the SCE platform and the SM
remove-mappings	Remove all current subscriber mappings n the event of any loss of connection between the SCE platform and the SM
shut	The SCE platform shuts down and quits providing service.

Defaults

Default action = none

Command Modes

LineCard Interface Configuration

Usage Guidelines

If SM functionality is not critical to the operation of the system: no action needs to be configured.

If SM functionality is critical to the operation of the system: configure forced failure of the SCE platform in the event of any loss of connection with the SM.

Use the **timeout** parameter to configure the time interval after which a failure condition is detected and the specified action will be taken by the system.

Authorization: admin

Examples

The following example configures forced failure of the SCE platform in case of failure of the SM.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE (config if)#subscriber sm-connection-failure action force-
failure
SCE (config if)#
```

Related Commands

show interface LineCard subscriber sm-connection-failure (on page 2-224)

subscriber template export csv-file

Exports a subscriber template to the specified csv file, according to the party template.

subscriber template export csv-file *filename*

Syntax Description

filename	Name of the *csv* file to which the subscriber template is to be exported.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example exports the subscriber template to the specified file.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber template export csv-file gold0507.csv
SCE(config if)#
```

Related Commands

subscriber template import csv-file

Imports a subscriber template from the specified csv file, creating a party template.

subscriber template import csv-file *filename*

Syntax Description

filename	Name of the *csv* file containing the subscriber template.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example imports the subscriber template from the file *gold0507.csv*.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# subscriber template import csv-file gold0507.csv
SCE(config if)#
```

Related Commands

subscriber TP-IP-range name IP-range target-TP

Use this command to create or update a TIR. Use the **no** form of this command to delete a specified TIR.

subscriber TP-IP-range name *TP-IP-range-name* **IP-range target-TP** *IP-range target-TP* **[remove-subscriber-mapping]**

no subscriber TP-IP-range [name *name* **| all] [remove-subscriber-mapping]**

Syntax Description

TP-IP-range name	Meaningful name assigned to this traffic processor IP range
IP-range	IP address and mask length defining the IP range
target-TP	number of the traffic processor to which this TIR is to be assigned

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **remove-subscriber-mappings** keyword when editing or deleting a TIR to remove any existing subscriber mappings. If mappings exist, and this keyword is not used, the command will not execute.

- When deleting a TIR, only the range name is required.
- To delete all existing TIRs, use the [no] form of the command with the **all** keyword instead of the range name.

Authorization: admin

Examples

The following example creates a TIR named CMTS1 and assigns it to traffic processor# 5. The **remove-subscriber-mappings** keyword is used to remove any existing subscriber mappings.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#subscriber TP-IP-range name CMTS1 IP-range
10.10.10.0/128 target-TP 5 remove-subscriber-mappings
SCE(config if)#
```

Related Commands

show interface LineCard subscriber mapping included-in TP-IP-range (on page 2-228)

subscriber TP-mappings

Reserves a specified number of subscriber rules for TIRs.

subscriber TP-mappings max-TP-IP-ranges *max-TP-IP-ranges*

default subscriber TP-mappings

Syntax Description

max-TP-IP-ranges	Number of rules to allocate for TIRs

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The maximum number of allowed reserved rules is 4096.

- By default 0 (zero) rules are reserved for TIRs.
- Updating this configuration is a major system event and can only be performed when no subscriber mappings or TIRs are configured.

Use the **default** version of this command to restore default subscriber rule allocation.

Authorization: admin

Examples

The following example reserves 500 subscriber rules for TIRs.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#subscriber TP-mappings max-TP-IP-ranges 500
SCE(config if)#
```

Related Commands

subscriber TP-IP-range

Use this command to import TIR definitions from a *csv* file and to export TIR definitions to a *csv* file.

subscriber TP-IP-range {**import | export**} **csv-file** *filename*

Following is the format of the *csv* file:

range name, ip-address/mask-length, target-TP

Syntax Description

csv-filename	*csv* file to be imported or exported to
import	Import from the specified csv file.
export	Export to the specified csv file.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **remove-subscriber-mappings** keyword when importing TIR definitions to remove any existing subscriber mappings for specified IP ranges. If mappings exist, and this keyword is not used, the import command will not execute.

The **remove-subscriber-mappings** keyword is not applicable when exporting to a *csv* file.

Authorization: admin

Examples

The following example imports TIR information from the csv file *TIR_definitions*. The remove-subscriber-mappings keyword is used to remove any subscriber mappings that currently exist in the system on any of the IP ranges specified in the file.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#SCE(config if)#subscriber TP-IP-range import csv-
file TIR_definitions remove-subscriber-mappings
```

Related Commands

show interface LineCard subscriber TP-IP-range (on page 2-227)

subscriber aging

Enables/disables subscriber aging for the specified type of subscribers (anonymous or introduced).

The aging period may also be defined when aging is enabled.

subscriber aging anonymous|introduced [timeout *aging-time*]
no subscriber aging anonymous|introduced

Syntax Description

aging-time	In minutes.
anonymous	Anonymous groups subscribers
introduced	Introduced subscribers

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The most common usage for aging is for anonymous subscribers, since this is the easiest way to ensure that anonymous subscribers who have logged-out of the network are removed from the SCE platform and are no longer occupying resources. Aging time can be configured individually for introduced subscribers and for anonymous subscribers.

Authorization: admin

Examples

The following example enables subscriber aging for anonymous subscribers with a timeout period of 10 minutes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#subscriber aging anonymous timeout 10
SCE(config if)#
```

Related Commands

show interface LineCard subscriber aging (on page 2-214)

tacacs-server host

Defines a new TACACS+ server host that is available to the SCE platform TACACS+ client.

Use the **no** form of the command to remove a TACACS+ server host.

The Service Control solution supports a maximum of three TACACS+ server hosts.

tacacs-server host *host-name* **[port** *port#***] [timeout** *timeout-interval***] [key** *key-string***]**

no tacacs-server host *host-name*

Syntax Description

host-name	name of the server
port #	TACACS+ port number
timeout-interval	time in seconds that the server waits for a reply from the server host before timing out
key-string	encryption key that the server and client will use when communicating with each other. Make sure that the specified key is actually configured on the TACACS+ server host.

Defaults

Default *port#* = 49

Default *timeout-interval* = 5 seconds or user-configured global default timeout interval

Default *key-string* = no key or user-configured global default key

Command Modes

Global Configuration

Usage Guidelines

The user can configure a global default timeout interval that will be applied as the timeout to all TACACS+ server hosts. The timeout interval then does not need to be configured explicitly for each server. (See *tacacs-server timeout)* (on page 2-321)

Similarly, the user can configure a global default key that will be applied to all TACACS+ server hosts. (See *tacacs-server key)* (on page 2-320)

If the global default timeout interval and key string are configured, an explicitly configured value for a specific TACAS+ server overrides the global default for that server.

Authorization: admin

Examples

The following example shows how to configure a TACACS+ server host using the default port and no key.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#tacacs-server host server1 timeout 8
SCE(config)#
```

Related Commands

tacacs-server key (on page 2-320)

tacacs-server timeout (on page 2-321)

show tacacs (on page 2-280)

tacacs-server key

Defines the global default encryption key for the TACACS+ server hosts.

Use the **no** form of the command to clear the TACACS+ key.

tacacs-server key *key-string*

no tacacs-server key

Syntax Description

key-string	default encryption key that all TACACS servers and clients will use when communicating with each other. Make sure that the specified key is actually configured on the TACACS+ server hosts.

Defaults

Default is no encryption

Command Modes

Global Configuration

Usage Guidelines

This default key can be overridden for a specific TACACS+ server host by explicitly configuring a different key for that TACACS+ server host.

If no global default key is defined, each TACACS+ server host may still have a specific key defined. However, any server host that does not have a key explicitly defined (uses the global default key) is now configured to use no key.

Authorization: admin

Examples

The following example show how to configure the keystring.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#tacacs-server key ABCDE
SCE(config)#
```

Related Commands

tacacs-server host (on page 2-318)

show tacacs (on page 2-280)

tacacs-server timeout

Defines the global default timeout interval for the TACACS+ server hosts.

Use the **no** form of the command to clear the global default timeout interval.

tacacs-server timeout *timeout-interval*

no tacacs-server timeout

Syntax Description

timeout-interval	default time in seconds that the server waits for a reply from the server host before timing out.

Defaults

Default = 5 seconds

Command Modes

Global Configuration

Usage Guidelines

This default timeout interval can be overridden for a specific TACACS+ server host by explicitly configuring a different timeout interval for that TACACS+ server host.

If no global default timeout interval is defined, each TACACS+ server host may still have a specific timeout interval defined. However, any server host that does not have a timeout interval explicitly defined (uses the global default timeout interval) is now configured to a five second timeout interval.

Authorization: admin

Examples

This example shows how to configure a default timeout interval of 10 seconds.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)#tacacs-server timeout 10
product>(config)#
```

Related Commands

tacacs-server host (on page 2-318)

show tacacs (on page 2-280)

telnet

Starts a Telnet session.

telnet *address* [*ports*]

Syntax Description

address	Telnet access address.
ports	Optional port number.

Defaults

Default port is 23.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example starts a telnet session:

```
SCE>enable 10
Password:pcube
SCE#telnet 10.1.5.120
connecting to 10.1.5.120:23...
```

Related Commands

show telnet sessions (on page 2-282)

service telnetd (on page 2-167)

timeout

Configures the timeout for the Telnet session when the Telnet session is idle. After this time, the Telnet session is disconnected.

Use the **no** form of the command to configure the Telnet server to work with no timeout. No matter how long there is no activity on the Telnet session, the system does not automatically disconnect the Telnet session.

timeout *time*
no timeout

Syntax Description

time	Timeout length in minutes.

Defaults

time = 30 minutes

Command Modes

Line Configuration Mode

Usage Guidelines

Authorization: admin

Examples

The following example sets the timeout to 45 minutes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config-line)#timeout 45
SCE(config-line)#
```

Related Commands

tos-marking mode

Enables TOS marking. The SCE platform can mark the IP ToS field of transmitted packets, according to the Diffserv scheme standard code points.

Use the no form of the command to disable the TOS marking.

The platform supports the association of services to the following Diffserv classes: BE (Best effort), EF (Expedited forwarding), AF1, AF2, AF3 and AF4 (Assured forwarding 1-4, respectively). When packets exceed the bandwidth limit they are configured with, they are internally marked in RED color and dropped by the SCE platform itself. Packets that are below their limit are marked with either green or yellow drop precedence depending on their actual relative rate.

Note When TOS marking is enabled, the first few TCP packets are associated and marked with a default AF4 class that is mapped to the AF-4 queue. This occurs because the SCE platform transmits the first few packets before classifying the flow and identifying the application or service

tos-marking mode *mode*
no tos-marking mode *mode*

Syntax Description

mode	Mode for TOS marking. Currently the system supports only **`Diffserv`**.

Defaults

By default, TOS marking is disabled.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example enables TOS marking:

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#tos-marking mode Diffserv
SCE(config if)#
```

Related Commands

show interface LineCard tos-marking mode (on page 2-229)

tos-marking reset-table

Resets TOS settings to the Diffserv defaults.

tos-marking reset-table

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example resets the TOS marking.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#tos-marking reset-table
SCE(config if)#
```

Related Commands

tos-marking set-table-entry (on page 2-326)

tos-marking set-table-entry

The SCE platform supports configuration via CLI of the mapping between the class and coloring and the exposed DSCP (Diffserv Code Points) values. The default of this table is direct mapping of the Diffserv standard code points.

The TOS table reads the class and color of the packet being transmitted, and assigns the value set in the table according to the color and class.

tos-marking set-table-entry class *class* **color** *color* **value** *value*

Syntax Description

class	Internal class of service assigned to the packet. Legal values are **BE**, **AF1**, **AF2**, **AF3**, **AF4** and **EF**.
color	Internal color assigned to the packet. Legal values are **green**, **yellow**, **red** and **any**.
value	Value of the TOS marking, assigned to the packet IP header, as transmitted by the SCE platform. This is a 6-bit value, expressed as a hex number in the range **0x0** to **0x3f**.

Defaults

Diffserv defaults

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example sets a TOS marking table entry.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# tos-marking set-table-entry class AF4 color
yellow value 0x24
SCE(config if)#
```

Related Commands

show interface LineCard tos-marking table (on page 2-230)

tos-marking reset-table (on page 2-325)

tracert

Determines the route packets take to reach a specified host.

tracert [*hostname|IP-address]*

Syntax Description

hostname	Destination hostname
IP-address	Destination IP address

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The destination of the traceroute function can be specified as either a known hostname or an IP address.

Authorization: admin

Examples

Following is a tracert command with sample output.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#tracert 64.103.125.118
traceroute to 10.56.217.103, 30 hops max, 40 byte packets
 1         10.56.217.1 (     10.56.217.1)     0 ms  1 ms  0 ms
 2         10.56.223.9 (     10.56.223.9)     1 ms  0 ms  1 ms
 3      64.103.115.209 (  64.103.115.209)     0 ms  1 ms  0 ms
 4      64.103.125.118 (  64.103.125.118)     0 ms  0 ms  0 ms

 Trace complete.
SCE(config if)#
```

Related Commands

show ip route (on page 2-244)

traffic-counter

Defines a new traffic counter. Use the no form of the command to delete an existing traffic counter.

traffic-counter name *name* {**count-bytes** | **count-packets**}

no traffic-counter {name *name* |**all}**

Syntax Description

name	Name to be assigned to this traffic counter.

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The following are usage guidelines for the **traffic-counter** command:

- Use the **count-bytes** keyword to enable counting the bytes in each packet.

  The counter will increment by the number of bytes in each packet.
- Use the **count-packets** keyword to enable counting whole packets.

  The counter will increment by one for each packet.

Use the **all** keyword with the **no** form to delete all existing traffic counters.

Authorization: admin

Examples

The following are examples of the **traffic-counter** command:

EXAMPLE 1:

Following is an example of creating a traffic counter that will count bytes.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#traffic-counter name counter1 count-bytes
SCE(config if)#
```

EXAMPLE 2:

The following example demonstrates how to delete all traffic counters.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no traffic-counter all
SCE(config if)#
```

Related Commands

show interface LineCard traffic-counter (on page 2-231)

clear interface linecard traffic-counter (on page 2-38)

traffic-rule

Defines a new traffic rule. Use the no form of the command to delete an existing traffic rule.

traffic-rule *name* **IP addresses** *IP-addresses* **protocol** *protocol [***tunnel-id** *tunnel-id***] direction** *direction* **traffic-counter** *traffic-counter* **action** *action*

traffic-rule tunnel-id-mode

no traffic-rule {name *name* **|all|tunnel-id-mode}**

Syntax Description

name	name to be assigned to this traffic rule.
IP-addresses	subscriber-side and network-side <IP specification> (see below)
protocol	Any one of the following protocols: `TCP/UCP/ICMP/IGRP/EIGRP/IS-IS/OSPF/Other`
tunnel-id	Tunnel ID, <tunnel Id specification> (see below).
direction	upstream/downstream/both
traffic-counter	name of traffic counter/none
action	`block` | `ignore`

Defaults

This command has no default settings.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The following are the usage guidelines for the **traffic-rule** command:

IP specification:

all|([all-but] (<ip-address>|<ip-range>))

- <ip-address> is a single IP address in dotted-decimal notation, such as 10.1.2.3
- <ip-range> is an IP subnet range, in the dotted-decimal notation followed by the number of significant bits, such as 10.1.2.0/24.

tunnel id specification:

all|([all-but] tunnel id)

- tunnel id is a Hex Tunnel id range, in the format '(HEX)Tunnel-id' or '(HEX)MinTunnelId:(HEX)MaxTunnelId'

traffic-counter:

Either of the following:

- *Name of an existing traffic counter:* Packets meeting the criteria of the rule are to be counted in the specified counter. If a counter name is defined, the "count" action is also defined implicitly.
- *none:* If **none** is specified, then an action must be explicitly defined via the **action** option.

- Use the **all** keyword with the no form to delete all existing traffic rules.
- Use the **tunnel-id-mode** keyword to enable or disable defining the traffic rule according to the tunnel ID.

Authorization: admin

Examples

The following are examples of the traffic-rule command:

EXAMPLE 1:

This example creates the following traffic rule:

Name = rule2

IP addresses: subscriber side = all IP addresses, network side = all IP addresses EXCEPT the subnet 10.10.10.0/24

Protocol = TCP

Direction = downstream

Traffic counter = counter2

Action = Block

The actions performed will be counting and blocking

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE (config if)# traffic-rule rule2 IP-addresses subscriber-side
all network-side all-but 10.10.10.0/24 protocol TCP  direction
downstream traffic-counter counter2 action block
SCE(config if)
```

EXAMPLE 2:

This example creates the following traffic rule:

Name = rule3

IP addresses: all

Protocol = IS-IS

Direction = upstream

Traffic counter = none

Action = ignore (required since traffic-counter = none)

The only action performed will be **Ignore**.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE (config if)# traffic-rule rule3 IP-addresses all protocol IS-
IS direction upstream traffic-counter none action ignore
SCE(config if)
```

EXAMPLE 3:

The following example demonstrates how to delete all traffic rules.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no traffic-rule all
SCE(config if)
```

Related Commands

show interface LineCard traffic-rule (on page 2-232)

unzip

Extracts a zip file to the current directory.

unzip *filename*

Syntax Description

filename	Zip file to be extracted.

Defaults

This command has no default settings.

Command Modes

Privileged EXEC

Usage Guidelines

Authorization: admin

Examples

The following example extracts the zipfile.zip:

```
SCE>enable 10
Password:pcube
SCE#unzip zipfile.zip
Unzipping '/tffs0/zipfile.zip'...
Zip file has 3 entries:
  1.sli, 13429 bytes extracted
  preflut.sli, 12558 bytes extracted
  temp/SLI/x/IpraeLut.sli, 12929 bytes extracted
Finished, Extracted 3 files.
```

Related Commands

username

Adds a new user to the local database

Use the **no** form of the command to remove a user from the database.

username *name* **{password** *password* **| nopassword | secret {0** *password* **|5** *password***}**

no username *name*

Syntax Description

name	name of the user to be added
password	a clear text password.
secret	the password is saved in MD5 encrypted form. The keywords **0** or **5** indicate the format of the password as entered in the command:

Defaults

Command Modes

Global Configuration

Usage Guidelines

Up to 100 users may be defined.

The password is defined with the username. There are several password options:

- **No password**: use the *nopassword* keyword.
- **Password:** Password is saved in clear text format in the local list.

  Use the *password* parameter.
- **Encrypted password**: Password is saved in encrypted (MD5) form in the local list. Use the *secret* keyword and either of the following options.

  Password may be defined by either of the following methods:

  - Specify a clear text password, which is saved in MD5 encrypted form
  - Specify an MD5 encryption string, which is saved as the user MD5-encrypted secret password

The following keywords are available:

- **nopassword**: There is no password associated with this user
- **secret**: the password is saved in MD5 encrypted form. Use with either of the following keywords to indicate the format of the password as entered in the command:
  - **0**: the <*password*> parameter specifies a clear text password that will be saved in MD5 encrypted form
  - **5:** the <*password*> parameter specifies an MD5 encryption string that will be saved as the user MD5-encrypted secret password

Authorization: admin

The following examples illustrate how to use this command.

Examples

EXAMPLE 1

This example shows how to add a new user to the local database with a clear text password.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)#username johndoe password mypassword
product>(config)#
```

EXAMPLE 2

This example shows how to add a new user to the local database with no password.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)#username johndoe nopassword
product>(config)#
```

EXAMPLE 3

This example shows how to add a new user to the local database with with an MD5 encrypted password entered in clear text.

```
SCE>enable 10
Password:pcube
SCE#config
product>(config)#username johndoe secret 0 mypassword
product>(config)#
```

Related Commands

show users (on page 2-285)

username privilege

Sets the privilege level of the specified user.

username *name* **privilege** *level*

Syntax Description

name	name of the user whose privilege level is set
level	the privilege level permitted to the specified user. These levels correspond to the CLI authorization levels, which are entered via the **enable** command: 0: User 5: Viewer 10: Admin 15: Root

Defaults

Default level = 15

Command Modes

Global Configuration

Usage Guidelines

When a user requests an authorization for a specified privilege level, by using the "**enable**" command, the SCE platform sends an authentication request to the TACACS+ server specifying the requested privilege level. The SCE platform grants the requested privilege level only after the TACACS+ server authenticates the "**enable**" command password and verifies that the user has sufficient privileges the enter the requested privilege level.

Authorization: admin

Examples

The following level sets the privilege level for the user to "Viewer".

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#username johndoe privilege 5
SCE(config)#
```

Related Commands

show users (on page 2-285)

VAS-traffic-forwarding

Enables VAS traffic forwarding.

Use the **no** form of the command to disable VAS traffic forwarding. Refer to the example below for complete instructions on how to disable VAS traffic.

VAS-traffic-forwarding

no VAS-traffic-forwarding

Syntax Description

This command has no arguments or keywords.

Defaults

By default, VAS traffic forwarding is disabled.

Command Modes

Interface Linecard Configuration

Usage Guidelines

There are certain other SCE platform features that are incompatible with VAS traffic forwarding. Before enabling VAS traffic forwarding, it is the responsibility of the user to make sure that no incompatible features or modes are configured.

The features and modes listed below cannot coexist with VAS mode:

- Line-card connection modes: receive-only, receive-only-cascade, inline-cascade
- Link mode other than forwarding
- All link encapsulation protocols, including VLAN, MPLS, L2TP

Authorization: admin

Examples

This example shows how to disable VAS traffic forwarding. You must first shutdown the linecard before disabling VAS forwarding, since there may still be some open flows that have already been forwarded to the VAS servers. If the VAS feature is stopped while there are still such flows open, their packets coming back from the VAS servers may be routed to their original destination with the VLAN tag of the VAS server on it.

Note that you must enter the ROOT authorization level (15) to shutdown the linecard.

SCE>**`enable 15`**
Password:*pcube*
SCE#>config
SCE(config if)#>**`interface LineCard 0`**
SCE(config if)#>**`shutdown`**
SCE(config if)#>**no VAS-traffic-forwarding**
SCE(config if)#>**`no shutdown`**
SCE(config if)#>

Related Commands

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding VAS health-check

Configures the health check for compatibility with VAS over 10G (multiple GBE platform) topology. It also defines the IP addresses to be used for the VAS health check in a VAS over 10G topology.

Use the **ip-address** keyword to define source and destination IP addresses to be used by the health check packets.

Use the **no** form of this command to disable health check compatibility for VAS over 10G.

Use either the **no** or **default** form of this command with the **ip-address** keyword to remove the IP address configuration.

VAS-traffic-forwarding health-check topology MGSCP

VAS-traffic-forwarding health-check ip-address source *source-ip* **destination** *dest-ip*

no VAS-traffic-forwarding health-check topology MGSCP

default VAS-traffic-forwarding health-check topology MGSCP

no VAS-traffic-forwarding health-check ip-address

default VAS-traffic-forwarding health-check ip-address

Syntax Description

source-ip	Health check source IP address. The source-ip must include a range indication (x.x.x.x/x).
dest-ip	Health check destination IP address. The dest-ip does not include a range indication.

Defaults

By default, the compatibility with VAS over 10G (multiple GBE platforms) is disabled.

Command Modes

Interface Linecard Configuration

Usage Guidelines

Use the **topology MGSCP** keywords to enable or disable (use the **no** form of the command) health check compatibility for VAS over 10G.

Use the **ip-address** keyword to define **source** and **destination** IP addresses to be used by the health check packets.

- A range of source IP addresses (at least eight) is required.
- The configured IP addresses should not be in use in the network. They must be reserved for the VAS health check only.
- The same IP address should be configured for all the SCE platforms under the same EtherChannel.

Authorization: admin

Examples

The following examples illustrate how to enable multiple GBE platform compatibility for the VAS health check, and how to define the IP addresses.

EXAMPLE 1

This example shows how to enable multiple GBE platform compatibility for the VAS health check.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding health-check topology MGSCP
SCE(config if)#
```

EXAMPLE 2

This example shows how to define the source and destination IP addresses.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding health-check ip-address
source 20.20.20.20/28 destination 10.10.10.10
SCE(config if)#
```

EXAMPLE 3

This example shows how to remove the IP address configuration using the **no** keyword.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no VAS-traffic-forwarding health-check ip-address
SCE(config if)#
```

EXAMPLE 4

This example shows how to remove the IP address configuration using the **default** keyword.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#default VAS-traffic-forwarding health-check ip-
address
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding VAS server-id health-check

Enables or disables the VAS health check, and defines the ports it should used.

Use the **UDP ports** keyword to define source and destination UDP ports to be used by the health check packets.

Use the **no** form of this command to disable the health check.

Use either the **no** or **default** form of this command with the **UDP ports** keyword to remove the UDP port configuration.

VAS-traffic-forwarding VAS server-id *number* **health-check**

VAS server-id *number* **health-check UDP ports source** <*port number*> **destination** <*port number*>

no VAS-traffic-forwarding VAS server-id *number* **health-check**

no VAS-traffic-forwarding VAS server-id *number* **health-check UDP ports**

default VAS-traffic-forwarding VAS server-id *number* **health-check UDP ports**

Syntax Description

number	ID number of the VAS server for which to enable or disable the health check
port-number	source or destination port number (use with the **source** and **destination** options)

Defaults

By default, the health check is enabled.

Default port numbers = <63140,63141> used for server #0 through <63154,63155> used for server #7.

Command Modes

Interface Linecard Configuration

Usage Guidelines

Use the **UDP ports** keyword to define **source** and **destination** UDP ports to be used by the health check packets.

Note that the health check is activated only if all the following conditions are true. If the health check is enabled but one or more of the following conditions are not met, the server state will be **Down**:

- VAS Traffic Forwarding mode is enabled
- Pseudo IPs are configured for the SCE platform GBE ports on the VAS traffic link
- VAS server is enabled
- Server has a VLAN tag
- Health check for the server is enabled

If the health check of the server is disabled, its operational status depends on the following (requirements for **Up** state are in parentheses):

- admin status (enable)
- VLAN tag configuration (VLAN tag defined)
- group mapping (assigned to group)

Authorization: admin

Examples

The following examples illustrate how to disable the health check, and how to define the UDP ports.

EXAMPLE 1

This example shows how to disable the health check for VAS server 5.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no VAS-traffic-forwarding VAS server-id 5 health-check
SCE(config if)#
```

EXAMPLE 2

This example shows how to define the source and destination ports for VAS server 5 and enable the health check.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding VAS server-id 5 health-check UDP ports source 63150 destination 63151
SCE(config if)#VAS-traffic-forwarding VAS server-id 5 health-check
SCE(config if)#
```

EXAMPLE 3

This example shows how to remove the UDP port configuration using the **no** keyword.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#**no VAS-traffic-forwarding VAS server-id <number> health-check UDP ports**
SCE(config if)#

EXAMPLE 4

This example shows how to remove the UDP port configuration using the **default** keyword.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#default VAS-traffic-forwarding VAS server-id
<number> health-check UDP ports
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding VAS server-group

Adds servers to and removes them from a specified VAS server group.

Use the **no** form of this command to remove a specified server from the VAS server group.

VAS-traffic-forwarding VAS server-group *group-number* **server-id** *server-number*

no VAS-traffic-forwarding VAS server-group *group-number* **server-id** *server-number*

Syntax Description

group-number	The ID number of the VAS server group
server-number	The ID number of the VAS server

Defaults

This command has no default settings.

Command Modes

Interface Linecard Configuration

Usage Guidelines

The user may define up to eight VAS server groups. Each VAS server group has the following parameters:

- Server Group ID
- A list of VAS servers attached to this group.
- Failure detection — minimum number of active servers required for this group so it will be considered to be Active. If the number of active servers goes below this minimum, the group will be in Failure state.
- Failure action — action performed on all new data flows that should be mapped to this Server Group while it is in Failure state.

If no VAS server ID is specified in the **no** form of the command, all servers are removed from the server group and all group parameters (failure detection and action) are set to the default values (see *VAS-traffic-forwarding VAS server-group failure* (on page 2-346)).

Authorization: admin

Examples

The following examples illustrate how to add servers to and remove servers from a specified VAS server group.

EXAMPLE 1

This example shows how to add VAS server 5 to VAS server group 1.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding VAS server-group 1 VAS
server-id 5
SCE(config if)#
```

EXAMPLE 2

This example shows how to remove VAS server 5 from VAS server group 1.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no VAS-traffic-forwarding VAS server-group 1 VAS
server-id 5
SCE(config if)#
```

EXAMPLE 3

This example shows how to remove all VAS servers from VAS server group 1 and set all group parameters (failure detection and action) to the default values.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no VAS-traffic-forwarding VAS server-group 1
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding VAS server-group failure

Configures the failure parameters for the specified VAS server group.

Use either the **no** form or the **default** form of the command to set the specified failure parameter to the default value.

VAS-traffic-forwarding VAS server-group *group-number* **failure minimum-active-servers** *min-number*

VAS-traffic-forwarding VAS server-group *group-number* **failure action {block | pass}**

default VAS-traffic-forwarding VAS server-group *group-number* **failure minimum-active-servers**

no VAS-traffic-forwarding VAS server-group *group-number* **failure minimum-active-servers**

default VAS-traffic-forwarding VAS server-group *group-number* **failure action**

no VAS-traffic-forwarding VAS server-group *group-number* **failure action**

Syntax Description

group-number The ID number of the VAS server group

min-number The minimum number of active servers required for the specified server group.

failure action The action to be applied to all new flows mapped to this server group while it is Failure state

block — all new flows assigned to the failed VAS server group will be blocked by the SCE platform

pass — all new flows assigned to the failed VAS server group will be considered as regular non-VAS flows, and will be processed without VAS service.

Defaults

Default failure minimum-active-servers min-number = 1

Default failure action = pass

Command Modes

Interface Linecard Configuration

Usage Guidelines

To set both group parameters (failure detection and action) to the default values, use the **no** form of the command without specifying any parameter (see *VAS-traffic-forwarding VAS server-group* (on page 2-344).)

Authorization: admin

Examples

The following examples illustrate how to set the failure parameters to specified values or to the default value.

EXAMPLE 1

The following example shows how to configure the minimum number of active servers for VAS server group 5.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#SCE(config-if)#VAS-traffic-forwarding VAS server-
group 5 failure minimum-active-servers 3
SCE(config if)#
```

EXAMPLE 2

The following example shows how to reset the minimum number of active servers for VAS server group 5 to the default value.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#SCE(config-if)#default VAS-traffic-forwarding VAS
server-group 5 failure minimum-active-servers
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

VAS-traffic-forwarding VAS server-group (on page 2-344)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding VAS server-id

Enables or disables a VAS server. Use the **enable** keyword to enable a new or existing VAS server.

Use the **disable** keyword to disable an existing VAS server (server properties are not deleted).

Use the **no** form or the **default** form of this command to delete all server properties from a specified VAS server.

VAS-traffic-forwarding VAS server-id *number* **enable**

VAS-traffic-forwarding VAS server-id *number* **disable**

no VAS-traffic-forwarding VAS server-id *number*

default VAS-traffic-forwarding VAS server-id *number*

Syntax Description

number	The ID number of the VAS server

Defaults

By default, a defined VAS server is enabled.

Command Modes

LineCard Interface Configuration

Usage Guidelines

The VAS server is not operational until the VLAN tag is defined (*VAS-traffic-forwarding server-id VLAN* (on page 2-350)).

Authorization: admin

Examples

The following examples illustrate how to create, enable, and disable a VAS server:

EXAMPLE 1:

The following example defines a VAS server, server ID number = 4, that is not yet operational.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# **VAS-traffic-forwarding VAS server-id 4 enable**
SCE(config if)#

EXAMPLE 2:

The following example disables the VAS server, but does not delete the server definition or the associated VLAN tag.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# VAS-traffic-forwarding VAS server-id 4 disable
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding server-id VLAN (on page 2-350)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

VAS-traffic-forwarding VAS server-id health-check (on page 2-341)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding server-id VLAN

Assigns the VLAN ID to a specified VAS server.

Use the **no** form or the **default** form of this command to delete the VLAN tag assignment from a specified VAS server.

VAS-traffic-forwarding VAS server-id *number* **VLAN** *vlan-number*

no VAS-traffic-forwarding VAS server-id *number* **VLAN**

default VAS-traffic-forwarding VAS server-id *number* **VLAN**

Syntax Description

number	The ID number of the VAS server
vlan-number	The VLAN tag to use for the specified VAS server

Defaults

Default vlan-number = No VLAN

Command Modes

LineCard Interface Configuration

Usage Guidelines

Note the following important points:

- The VAS server is not operational until the VLAN tag is defined.
- Disabling the server does not remove the VLAN tag number configured to the server.
- The **no** form of the command (same as the **default** form of the command), removes the previously configured VLAN tag (no VLAN is the default configuration).

Authorization: admin

Examples

The following example assigns the vlan id = 10 to server ID number = 4.

SCE>enable 10
Password:*pcube*
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#**VAS-traffic-forwarding VAS server-id 4 VLAN 10**
SCE(config if)#

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding traffic-link

Configures the link on which to transmit VAS traffic (the link to which the VAS servers are connected).

Use the **no** form of the command to remove the VAS link configuration and revert to the VAS link defaults.

VAS-traffic-forwarding traffic-link *{link-0|link-1|auto-select}*

no VAS-traffic-forwarding traffic-link

Syntax Description

	Enter the link number on which to transmit VAS traffic
	`Link-0`
	`Link-1`
	`auto-select:` the active VAS link is selected by the system

Defaults

Default traffic link = Link-1

Command Modes

Interface Linecard Configuration

Usage Guidelines

Use the **`auto-select`** keyword with VAS over 10G. For VAS over 10G, the VAS link should always be set to auto-select, so that the system can switch to the backup link when necessary.

Note The VAS traffic link should be in Forwarding mode.

Authorization: admin

Examples

This example shows how to configure link 0 for VAS traffic.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding traffic-link-0
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding (on page 2-337)

VAS-traffic-forwarding VAS server-id (on page 2-348)

VAS-traffic-forwarding VAS server-group (on page 2-344)

VAS-traffic-forwarding VAS server-group failure (on page 2-346)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VAS-traffic-forwarding traffic-link auto-select

Configures the VAS traffic link for VAS over 10G.

For VAS over 10G, since the link used for forwarding VAS traffic may change automatically due to a failover situation, the following options must be configured:

- Set the VAS traffic link to auto-select, so that the system can select the link connected to the active 7600/VAS servers system.
- Specify the minimum time allowed between two consecutive link switches.
- Specify the link on which to transmit VAS traffic after a system reload and when in auto-select mode

VAS-traffic-forwarding traffic-link auto-select [**link-switch-delay** *<switch-time>*|**initial-selection** **{***link-0*|*link-1***}**]

no VAS-traffic-forwarding traffic-link auto-select [**link-switch-delay**|**initial-selection**]

default VAS-traffic-forwarding traffic-link auto-select [**link-switch-delay**|**initial-selection**]

Syntax Description

switch-time The time in seconds to delay between two consecutive link switches on initial health check state.

initial-selection Enter the link number to be set as the active VAS link (the link on which to transmit VAS traffic after a system reload and when working in auto-select mode).

Link-0

Link-1

Defaults

Default switch-time = 30 seconds

Default traffic link = Link-1

Command Modes

Interface Linecard Configuration

Usage Guidelines

To set the VAS traffic link to auto-select, use the basic command with no options (the same as using the *VAS-traffic-forwarding VAS traffic-link* (on page 2-352) command and specifying auto-select).

To set the minimum time allowed between two consecutive link switches, use the **link-switch-delay** option. In 10G topology, the default delay between two consecutive link switches (30 seconds) is less than the time it takes for the health check to fail. This means that in cases where there is at least one failed VAS server group on both links, the SCE platform will flip continuously between the links. To avoid the constant flip between the links in such a case, it is recommended to configure a link-switch-delay time greater than 3 minutes.

To specify the link on which to transmit VAS traffic after a system reload and when in auto-select mode (the active VAS link), use the **initial-selection** option. Note that when executed, this command triggers an immediate link switch if the currently active VAS traffic link used is different from the one specified in the command.

Use the **default** form of the command to set either the **link-switch-delay** or the **initial-selection** to the default value. You can also use the **no** form of the command for the same purpose, since it removes the configured value, which results in the default value being restored.

Authorization: admin

Examples

The following examples show how to use this command.

EXAMPLE 1

This example shows how to set the **initial-selection** to link-0.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding traffic-link auto-select -
initial-selection link-0
SCE(config if)#
```

EXAMPLE 2

This example shows how to set the **link-switch-delay** to 60 seconds.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#VAS-traffic-forwarding traffic-link auto-select -
link-switch-delay 60
SCE(config if)#
```

Related Commands

VAS-traffic-forwarding VAS traffic-link (on page 2-352)

show interface linecard VAS-traffic-forwarding (on page 2-233)

VLAN

Configures the VLAN environment. A single VLAN tag is supported per packet (no QinQ support).

VLAN symmetric skip (ignore tunnel)

VLAN a-symmetric skip (ignore tunnel, asymmetric)

VLAN symmetric classify (VLAN tag as subscriber)

default VLAN

(When the tunneling information is ignored, the subscriber identification is the subscriber IP of the IP packet carried inside the tunnel.)

Syntax Description

See "Usage Guidelines"

Defaults

symmetric skip

Command Modes

LineCard Interface Configuration

Usage Guidelines

Use the **symmetric skip** form of the command to skip the VLAN header when subscriber and flow classification do not use the VLAN tag. VLAN tags are symmetric.

Use the **a-symmetric skip** form of the command to skip the VLAN header when subscriber and flow classification do not use the VLAN tag. VLAN tags are asymmetric. Note that this form of the command incurs a performance penalty.

Use the **symmetric classify** form of the command when subscriber and flow classification use the VLAN tag. VLAN tags are symmetric. Using VLAN classification is mutually exclusive with any other tunnel-based classification.

Use the **default** keyword to set the VLAN configuration to the default value.

A symmetric environment is one in which the same VLAN tags are used for carrying a transaction in the upstream and downstream directions.

An asymmetric environment is one in which the upstream and downstream VLAN tags might not be the same.

The SCE platform is configured by default to work in symmetric environments. A specific command (`a-symmetric skip`) is necessary in order to allow correct operation of the SCE platform in an asymmetric environments, and instruct it to take into consideration that the upstream and downstream of each flow has potentially different VLAN tags.

Authorization: admin

Examples

The following example configures the VLAN environment:.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#vlan symmetric skip
SCE(config if)#
```

Related Commands

vlan translation (on page 2-358)

show interface LineCard VLAN (on page 2-236)

vlan translation

Sets the VLAN translation constant for the network port side, and specifies whether to increment or decrement the received VLAN tag. The subscriber port side automatically performs the reverse operation.

Use the **no** form of this command to disable vlan translation for this port (sets the value to zero).

vlan translation {increment | decrement} value *value*

no vlan translation

Syntax Description

value	Integer value by which the VLAN tag is to incremented or decremented at the network port side.

Defaults

value = 0

Command Modes

LineCard Interface Configuration

Usage Guidelines

The configured translation is applied to the network port side. The reverse operation is automatically performed at the subscriber side.

For example, if "increment 5" is defined, at the network port the VLAN is incremented by 5, and at the subscriber port the VLAN is decremented by 5.

In this case, the network side VLAN tags might be 105, 205, 305, and the subscriber side the VLAN tags would then be 100, 200, 300.

Make sure that the same VLAN translation constant is configured for all SCE platforms in the system.

Note the following limitations when VLAN translation is enabled:

- LIC Bypass not supported – In general, installations using the VLAN translation feature should rely on cutoff on failure and at upgrade (use redundant SCE platform).
- STP hazard – VLAN translation may interfere with Spanning Tree Protocol. This should be taken in consideration when deploying the solution.

Authorization: admin

Examples

The following example specifies a VLAN translation constant of 20 for the network port side.

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#vlan translation increment value 20
SCE(config if)#
```

Related Commands

VLAN (on page 2-356)

show interface LineCard vlan translation (on page 2-237)

wap

Enables or disables operating in a WAP-based environment.

Use the **no** form of the command to disable operating in a WAP-based environment

wap

no wap

Syntax Description

This command has no arguments or keywords

Defaults

By default, operating in a WAP environment is disabled.

Command Modes

LineCard Interface Configuration

Usage Guidelines

Authorization: admin

Examples

The following example iliustrates how to enable operating in a WAP-based environment

```
SCE>enable 10
Password:pcube
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#wap
SCE(config if)#
```

Related Commands

show interface LineCard wap (on page 2-238)

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