# Cisco Service Control Engine (SCE) CLI Command Reference, Rel 3.1.5

November 2007

**Americas Headquarters**
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Customer Order Number:
Text Part Number: OL-7825-08

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

*Cisco Service Control Engine (SCE) CLI Command Reference, Rel 3.1.5*

# CONTENTS

About this Guide xiii

Audience xiii

Document Revision History xiv

Organization xvi

Related Publications xvi

Conventions xvii

Obtaining Documentation and Submitting a Service Request xviii

CHAPTER 1 Command Line Interface 1-1

Information About Getting Help 1-1

Information About Authorization and Command Levels (Hierarchy) 1-2

CLI Command Hierarchy 1-2

Prompt Indications 1-5

Information About CLI Help Features 1-6

Partial Help 1-6

Argument Help 1-6

The [no] Prefix 1-7

Information About Navigational and Shortcut Features 1-7

Command History 1-7

Keyboard Shortcuts 1-8

Tab Completion 1-9

FTP User Name and Password 1-9

Information About Managing Command Output 1-9

Scrolling the Screen Display 1-10

Filtering Command Output 1-10

Redirecting Command Output to a File 1-10

CLI Authorization Levels 1-11

How to change from User to Viewer level authorization 1-12

How to log in with Root level authorization 1-12

Exiting Modes 1-12

How to exit from the Privileged Exec mode and revert to the Viewer mode 1-13

How to exit from the Global Configuration Mode 1-13

Information About Navigating Between Configuration Modes 1-13

Entering and Exiting Global Configuration Mode 1-13
How to enter the Global Configuration Mode 1-13
How to exit the Global Configuration Mode 1-14
Information About Interface Configuration Modes 1-14
Configuring the Physical Ports 1-14
Entering Management Interface Configuration Mode 1-15
How to enter Linecard Interface Configuration mode 1-16
Entering Ethernet Line Interface Configuration Mode 1-16
How to navigate from one Interface Configuration Mode to another 1-17
The "do" Command: Executing Commands Without Exiting 1-17
How to create a CLI script 1-18

CHAPTER 2 CLI Command Reference 2-1
? 2-2
aaa accounting commands 2-3
aaa authentication attempts 2-5
aaa authentication enable default 2-6
aaa authentication login default 2-8
accelerate-packet-drops 2-10
access-class 2-12
access-list 2-13
active-port 2-16
application slot replace force completion 2-17
attack-detector default 2-18
attack-detector 2-20
attack-detector <number> 2-21
attack-detector TCP-port-list|UDP-port-list 2-24
attack-filter 2-25
attack-filter dont-filter | force-filter 2-27
attack-filter subscriber-notification ports 2-30
auto-fail-over 2-31
auto-negotiate (GigabitEthernet only) 2-32
bandwidth 2-33
blink 2-35
boot system 2-36
calendar set 2-37
cd 2-38

clear arp-cache 2-39

clear interface linecard counters 2-40

clear interface linecard mpls vpn 2-41

clear interface linecard subscriber 2-42

clear interface linecard subscriber db counters 2-43

clear interface linecard traffic-counter 2-44

clear interface linecard vas-traffic-forwarding vas counters health-check 2-45

clear interface linecard vpn 2-46

clear interface linecard vpn name upstream-mpls all 2-47

clear logger 2-48

clear management-agent notifications counters 2-50

clear rdr-formatter 2-51

clear scmp name counters 2-52

clock read-calendar 2-53

clock set 2-54

clock summertime 2-55

clock timezone 2-58

clock update-calendar 2-59

configure 2-60

connection-mode (SCE 1000 platform) 2-61

connection-mode (SCE 2000 platform) 2-62

copy 2-64

copy ftp:// 2-65

copy-passive 2-66

copy running-config startup-config 2-67

copy source-file ftp:// 2-68

copy source-file startup-config 2-69

copy startup-config destination-file 2-70

default subscriber template all 2-71

delete 2-72

dir 2-73

disable 2-74

do 2-76

duplex 2-77

enable 2-79

enable password 2-81

erase startup-config-all 2-83

exit 2-84

failure-recovery operation-mode 2-86

force failure-condition (SCE 2000 only) 2-87

help 2-88

history 2-89

history size 2-90

hostname 2-91

interface fastethernet (SCE 2000 4/8xFE platform only) 2-92

interface gigabitethernet 2-93

interface linecard 2-94

interface mng 2-95

ip access-class 2-96

ip address 2-97

ip advertising 2-99

ip default-gateway 2-100

ip domain-lookup 2-101

ip domain-name 2-102

ip filter fragment 2-103

ip filter monitor 2-105

ip ftp password 2-107

ip ftp username 2-108

ip host 2-109

ip name-server 2-110

ip radius-client retry limit 2-111

ip route 2-112

ip rpc-adapter 2-114

ip rpc-adapter port 2-115

ip rpc-adaptor security-level 2-116

ip ssh 2-117

ip ssh access-class 2-118

ip ssh key 2-119

ip-tunnel l2tp skip 2-121

l2tp identify-by 2-122

line vty 2-123

link failure-reflection 2-124

link mode 2-125

logger add-user-message 2-127

logger device 2-128

logger device user-file-log max-file-size 2-129

logger get support-file 2-130

logger get user-log file-name 2-131

logout 2-132

mac-resolver arp 2-133

management-agent sce-api ignore-cascade-violation 2-134

management-agent sce-api logging 2-135

management-agent sce-api timeout 2-136

management-agent system 2-137

mkdir 2-138

more 2-139

more user-log 2-141

mpls 2-142

mpls vpn pe-id 2-144

no mpls vpn pe-database 2-146

no subscriber 2-147

no subscriber anonymous-group 2-148

no subscriber mappings included-in 2-149

ping 2-150

pqi install file 2-151

pqi rollback file 2-152

pqi uninstall file 2-153

pqi upgrade file 2-154

pwd 2-155

queue 2-156

rdr-formatter category number 2-158

rdr-formatter destination 2-159

rdr-formatter destination protocol NetflowV9 template data timeout 2-162

rdr-formatter forwarding-mode 2-164

rdr-formatter history-size 2-165

rdr-formatter protocol NetflowV9 dscp 2-166

rdr-formatter rdr-mapping 2-167

reload 2-169

reload shutdown 2-170

rename 2-171

rmdir 2-172

scmp 2-173

scmp keepalive-interval 2-175

scmp loss-of-sync-timeout 2-176

scmp name 2-177

scmp reconnect-interval 2-179

scmp subscriber force-single-sce 2-180

scmp subscriber id append-to-guid 2-181

scmp subscriber send-session-start 2-183

script capture 2-184

script print 2-185

script run 2-186

script stop 2-187

service-bandwidth-prioritization-mode 2-188

service password-encryption 2-189

service rdr-formatter 2-190

service telnetd 2-191

setup 2-192

show access-lists 2-194

show blink 2-195

show calendar 2-196

show clock 2-197

show failure-recovery operation-mode 2-198

show hostname 2-199

show hosts 2-200

show interface fastethernet 2-201

show interface gigabitethernet 2-203

show interface global-controller 2-204

show interface linecard 2-205

show interface linecard accelerate-packet-drops 2-206 show interface linecard application 2-207

show interface linecard asymmetric-routing-topology 2-208

show interface linecard attack-detector 2-210

show interface linecard attack-filter 2-213

show interface linecard connection-mode 2-215

show interface linecard counters 2-216

show interface linecard duplicate-packets-mode 2-217

show interface linecard flow-open-mode 2-218

show interface linecard ip-tunnel 2-219

show interface linecard l2tp 2-220

show interface linecard link mode 2-221

show interface linecard link-to-port-mappings 2-222

show interface linecard mac-mapping 2-223

show interface linecard mac-resolver arp 2-224

show interface linecard mpls 2-225

show interface linecard mpls vpn 2-226

show interface linecard physically-connected-links (SCE 2000 only) 2-228

show interface linecard service-bandwidth-prioritization-mode 2-229

show interface linecard shutdown 2-230

show interface linecard silent 2-231

show interface linecard subscriber 2-232

show interface linecard subscriber aging 2-234

show interface linecard subscriber anonymous 2-235

show interface linecard subscriber anonymous-group 2-236

show interface linecard subscriber db counters 2-237

show interface linecard subscriber mapping 2-240

show interface linecard subscriber name 2-242

show interface linecard subscriber properties 2-243

show interface linecard subscriber sm-connection-failure 2-244

show interface linecard subscriber templates 2-245

show interface linecard subscriber tp-mappings statistics 2-246

show interface linecard subscriber tp-ip-range 2-247

show interface linecard subscriber mapping included-in tp-ip-range 2-248

show interface linecard tos-marking 2-249

show interface linecard traffic-counter 2-251

show interface linecard traffic-rule 2-252
show interface linecard vas-traffic-forwarding 2-253
show interface linecard vlan 2-256
show interface linecard vlan translation 2-257
show interface linecard vpn 2-258
show interface linecard wap 2-260
show interface mng 2-261
show inventory 2-262
show ip access-class 2-263
show ip advertising 2-264
show ip default-gateway 2-265
show ip filter 2-266
show ip radius-client 2-268
show ip route 2-269
show ip rpc-adapter 2-270
show ip ssh 2-271
show jvm 2-272
show line vty 2-273
show log 2-274
show logger device 2-275
show management-agent 2-277
show pqi file 2-278
show pqi last-installed 2-279
show rdr-formatter 2-280
show rdr-formatter connection-status 2-281
show rdr-formatter counters 2-283
show rdr-formatter destination 2-285
show rdr-formatter enabled 2-287
show rdr-formatter forwarding-mode 2-288
show rdr-formatter history-size 2-289
show rdr-formatter protocol NetflowV9 dscp 2-290
show rdr-formatter rdr-mapping 2-291
show rdr-formatter statistics 2-293
show running-config 2-295
show scmp 2-297

show snmp 2-299

show snmp community 2-301

show snmp contact 2-302

show snmp enabled 2-303

show snmp host 2-304

show snmp location 2-305

show snmp mib 2-306

show snmp traps 2-307

show sntp 2-308

show startup-config 2-309

show system operation-status 2-310

show system-uptime 2-311

show tacacs 2-312

show telnet sessions 2-314

show telnet status 2-315

show timezone 2-316

show users 2-317

show version 2-318

show version all 2-320

show version software 2-322

silent 2-323

snmp-server 2-324

snmp-server community 2-325

snmp-server contact 2-326

snmp-server enable traps 2-327

snmp-server host 2-329

snmp-server location 2-330

sntp broadcast client 2-331

sntp server 2-332

sntp update-interval 2-333

speed 2-334

subscriber aging 2-336

subscriber anonymous-group export csv-file 2-337

subscriber anonymous-group import csv-file 2-338

subscriber anonymous-group name scmp name 2-339 subscriber export csv-file 2-340

subscriber import csv-file 2-341

subscriber name property 2-342

subscriber sm-connection-failure 2-344

subscriber template export csv-file 2-346

subscriber template import csv-file 2-347

subscriber tp-mappings 2-348

subscriber tp-ip-range name ip-range target-tp 2-350

subscriber tp-ip-range {import | export} csv-file 2-352

tacacs-server host 2-354

tacacs-server key 2-356

tacacs-server timeout 2-357

telnet 2-358

timeout 2-359

tracert 2-360

traffic-counter 2-361

traffic-rule 2-363

unzip 2-366

username 2-367

username privilege 2-369

vas-traffic-forwarding 2-370

vas-traffic-forwarding traffic-link 2-372

vas-traffic-forwarding traffic-link auto-select 2-374

vas-traffic-forwarding vas health-check 2-376

vas-traffic-forwarding vas server-id 2-378

vas-traffic-forwarding vas server-id health-check 2-380

vas-traffic-forwarding vas server-id vlan 2-383

vas-traffic-forwarding vas server-group 2-385

vas-traffic-forwarding vas server-group failure 2-387

vlan 2-389

vlan translation 2-391

wap 2-393

# About this Guide

Revised: November 29, 2007, OL-7825-09

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.

This reference provides a complete listing of all commands at the **admin** authorization level or below, with examples of how to use each command to perform typical SCE platform management functions.

This introduction provides information about the following topics:

- Audience, page xiii
- Document Revision History, page xiv
- Organization, page xvi
- Related Publications, page xvi
- Conventions, page xvii
- Obtaining Documentation and Submitting a Service Request, page xviii

# 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.

# Document Revision History

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 3.1.5 | OL-7825-09 | November, 2007 |

**Description of Changes**

Added, removed, and updated CLI commands related to the following updated features:

- VPN support (automatic VPNs)

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 3.1.5 LA | OL-7825-08 | August, 2007 |

**Description of Changes**

Added, removed, and updated CLI commands related to the following updated features:

- VPN support (handling of VLANs and MPLS/VPNs)
- TOS marking

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 3.1.0 | OL-7825-07 | May, 2007 |

**Description of Changes**

Added and updated CLI commands related to the following new features:

- Asymmetrical routing
- Support for NetFlowV9

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 3.0.5 | OL-7825-06 | February, 2006 |

**Description of Changes**

Updated sections relating to the Viewer authorization level.

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 3.0.5 | OL-7825-05 | November, 2006 |

### Description of Changes

Added CLI commands related to the following new features:

- SCMP
- Unique Device Identifier (UDI)

| 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

| Cisco Service Control Release | Part Number | Publication Date |
|---|---|---|
| Release 2.5.7 | OL-7825-02 | August, 2005 |

### Description of Changes

Complete reorganization and revision of product documentation.

# Organization

The major sections of this guide are as follows:

***Table 1 Document Organization***

| Chapter | Title | Description |
|---|---|---|
| Chapter 1 | Command Line Interface, 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, 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:

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

# Conventions

This document uses the following conventions:

*Table 2 Document 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. |
| {x I y I z} | Alternative keywords are grouped in braces and separated by vertical bars. |
| [x I y I 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 that 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. |

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

Means *reader be careful* . In this situation, you might do something that could result in equipment damage or loss of data.

Means *reader be warned* . In this situation, you might do something that could result in bodily injury.

# Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

CHAPTER 1

# 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.

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.

- Information About Getting Help, page 1-1
- Information About Authorization and Command Levels (Hierarchy), page 1-2
- Information About CLI Help Features, page 1-6
- Information About Navigational and Shortcut Features, page 1-7
- Information About Managing Command Output, page 1-9
- CLI Authorization Levels, page 1-11
- Exiting Modes, page 1-12
- Information About Navigating Between Configuration Modes, page 1-13
- How to create a CLI script, page 1-18

## Information About 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.<br>(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. |
| command keyword? | List the arguments associated with the specified keyword.<br>Leave a space between the keyword and question mark |

# Information About Authorization and Command Levels (Hierarchy)

When using the CLI there are two important concepts that you must understand 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 all authorization levels.

- 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, to configure parameters related to the Line Card, you need to be within the Linecard Interface Configuration Mode. CLI Command Hierarchy, page 1-2

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.

**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 two levels in the hierarchy are the User Exec 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. Also allows monitoring of the system (show commands). | User/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<br>Root | `SCE #`<br>`SCE #>` |
| Global Configuration | Configuration of general system parameters, such as DNS, host name, and time zone. | Admin<br>Root | `SCE (config)#`<br>`SCE (config)# >` |
| Management Interface Configuration | Configuration of management interface parameters, such as the Ethernet interface properties and selection of the active port. | Admin<br>Root | `SCE(config if)#`<br>`SCE(config if)#>` |
| Interface Configuration | Configuration of specific system interface parameters, such as the Line Card, and the Ethernet interfaces. | Admin<br>Root | `SCE (config if)#`<br>`SCE(config if)#>` |
| Line Configuration | Configuration of Telnet lines, such as an access-list. | Admin<br>Root | `SCE (config-line)#`<br>`SCE (config-line)#>` |

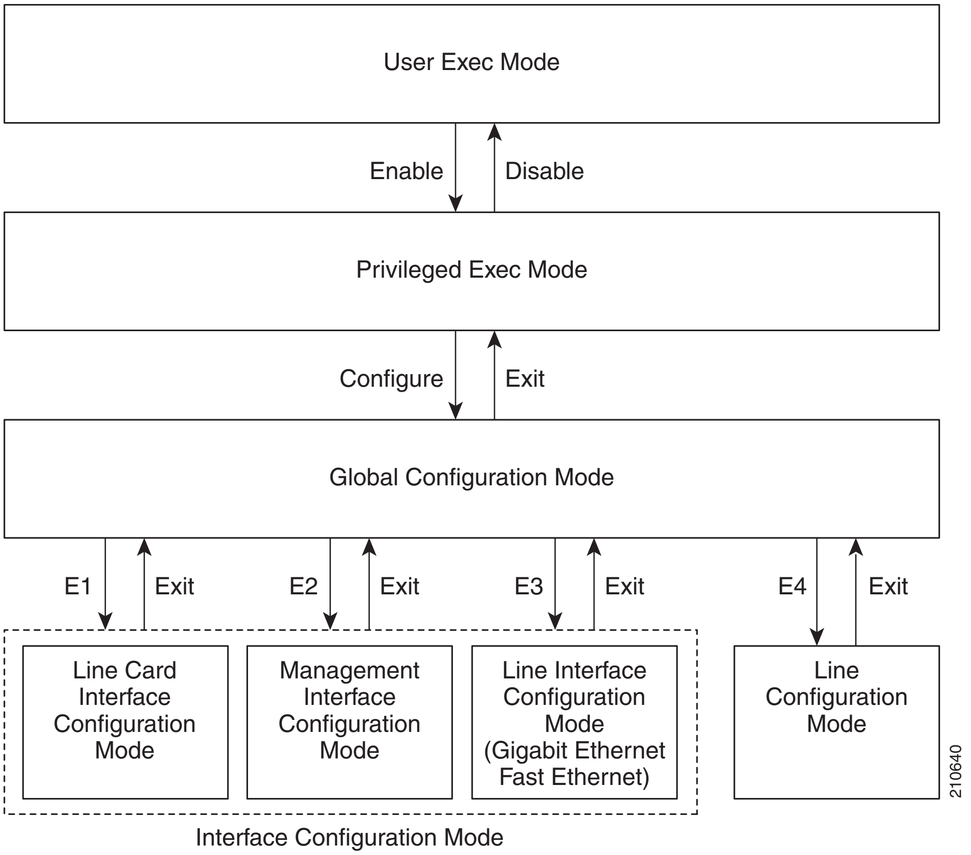
When you login to the system, you have the User authorization level and enter User Exec mode. Changing the authorization level to Viewer does not change the mode. Changing the authorization level to Admin automatically moves you to Privileged Exec mode. To move to any of the configuration modes, you must enter commands specific to that mode.

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.

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 Modes*


User Exec Mode
Enable
Disable
Privileged Exec Mode
Configure
Exit
Global Configuration Mode
E1
Exit
E2
Exit
E3
Exit
E4
Exit
Line Card Interface Configuration Mode
Management Interface Configuration Mode
Line Interface Configuration Mode (Gigabit Ethernet Fast Ethernet)
Line Configuration Mode
210640
Interface Configuration Mode

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#
```

## 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#` |
| Global Configuration | `SCE` (config)# |
| Interface Configuration | `SCE` (config if)# |
| Line Configuration | `SCE` (config-line)# |

Example:

The prompt `SCE1(config if)#` indicates:

- The name of the SCE platform is `SCE1`
- The current CLI mode is Interface configuration mode
- The user has Admin authorization level

# Information About 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
interface Set interface parameters
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
startup-config  Backup the startup-config to a specified destination
STRING          Source file
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 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.**

# Information About Navigational and Shortcut Features

- Command History, page 1-7
- Keyboard Shortcuts, page 1-8
- Tab Completion, page 1-9
- FTP User Name and Password, page 1-9

## 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 1-3 Keyboard Shortcuts for History Functions*

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

## Keyboard Shortcuts

The SCE platform has several 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 1-4 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 |
| **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 |
| 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 worksonly when there is one 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.

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#
```

# Information About 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.

Note that by default, the show commands act the same as the more commands; that is, the output is displayed interactively a single screen at a time. Use the no more (on page ) command to disable this feature so that show commands display the complete output all at one time.

# 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>

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>

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 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.

To monitor the system, you must have Viewer authorization, while 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.

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 1-5 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 | `number` |
| 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. | 15 | `#>` |

## How to change from User to Viewer level authorization

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.

**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.

## How to log in with Root 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 15** and press **Enter**.

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

**Step 4** Type in the password for the Root 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 Root level.

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

```
SCE>enable 15
Password:  <Cisco>
SCE#>disable
sce>
```

# 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.

## How to exit from the Privileged Exec mode and revert to the Viewer mode

**Step 1** At the **sce#** prompt, type **disable,** and press **Enter.**

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

## How to exit from the Global Configuration Mode

**Step 1** At the **SCE** (config)# prompt, type **exit,** and press **Enter.**

The appropriate prompt for the previous level appears.

Example:

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

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

# Information About Navigating Between Configuration Modes

- Entering and Exiting Global Configuration Mode, page 1-13
- Information About Interface Configuration Modes, page 1-14

## Entering and Exiting Global Configuration Mode

- How to enter the Global Configuration Mode, page 1-13
- How to exit the Global Configuration Mode, page 1-14

### How to enter the Global Configuration Mode

**Step 1** At the `sce#` prompt, type **configure,** and press **Enter**.

The `SCE` (config)# prompt appears.

### How to exit the Global Configuration Mode

**Step 1** At the `sce#` prompt, type **exit,** and press **Enter**.

The `sce#` prompt appears.

## Information About 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
  - Configuring the Physical Ports, page 1-14
- 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
  - duplex
  - speed
  - active-port (SCE 2000 platform only
  - auto-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
  - duplex
  - queue
  - speed

- 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):

- 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)
  - bandwidth
  - queue

**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.

- How to enter Mng Interface Configuration Mode, page 1-15
- How to return to the Global Configuration mode, page 1-16

### How to enter Mng Interface Configuration Mode

**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.

### How to return to the Global Configuration mode

**Step 1** Type **Exit.**

## How to enter 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.

**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**.

## Entering Ethernet Line Interface Configuration Mode

- How to enter the FastEthernet Interface Configuration Mode, page 1-16
- How to enter the GigabitEthernet Interface Configuration Mode:, page 1-17

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

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

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

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

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

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

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

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

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

## How 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.

### How to execute an exec mode command from a configuration command mode

**Step 1** At the `SCE(config)#` (or `SCE(config if)#` ) prompt, type **do** <*command*>.

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

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

```
SCE(config if#) do show running-config
```

# How to create a CLI script

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

**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.

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#
```

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:

*Table 2-1 Command Description*

| | |
|---|---|
| Description | Description of what the command does. |
| Command Syntax | The general format of the command. |
| Syntax Description | Description of parameters and options for the command. |
| Default | If relevant, the default setting for the command. |
| Mode | The mode (command line) from which the command can be invoked. |
| Usage guidelines | Information about when to invoke the command and additional details. |
| Authorization | The level of user authorization required for using the command. |
| 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. |
| Related Commands | Other commands that might be used in conjunction with the command. |

### 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.

# ?

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.

## 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
```

# aaa accounting commands

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<br>0: User<br>5: Viewer<br>10: Admin<br>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:<cisco>
SCE#config
SCE(config)# aaa accounting commands 10 default stop-start group tacacs+
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| aaa authentication attempts | Sets the maximum number of login attempts that will be permitted before a Telnet session is terminated. |
| aaa authentication enable default | Specifies which privilege level authentication methods are to be used, and in what order of preference. |
| aaa authentication login default | Specifies which login authentication methods are to be used, and in what order of preference. |

| Command | Description |
|---|---|
| tacacs-server host | Defines a new TACACS+ server host that is available to the SCE platform TACACS+ client. |
| tacacs-server key | Defines the global default encryption key for the TACACS+ server hosts. |

# aaa authentication attempts

**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:<cisco>
SCE#config
product>(config)# aaa authentication attempts login 5
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| aaa authentication accounting commands | Enables TACACS+ accounting. |
| aaa authentication enable default | Specifies which privilege level authentication methods are to be used, and in what order of preference. |
| aaa authentication login default | Specifies which login authentication methods are to be used, and in what order of preference. |

# 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

## Examples

This example shows how to configure privilege level authentication methods.

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

## Related Commands

| Command | Description |
|---|---|
| aaa authentication login default | |
| aaa authentication accounting commands | |

| Command | Description |
|---|---|
| aaa authentication attempts | |
| show tacacs | |

# 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

## Examples

This example shows how to configure login authentication methods.

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

## Related Commands

| Command | Description |
|---|---|
| aaa authentication enable default | |
| aaa authentication accounting commands | |
| aaa authentication attempts | |
| show tacacs | |

# accelerate-packet-drops

Enables the drop-wred-packets-by-hardware mode. This improves performance, but prevents the application from being able to count all dropped packets. Use the **no** form to disable the drop-wred-packets-by-hardware mode, enabling the software to count all dropped packets (at the expense of some loss of performance).

**accelerate-packet-drops**

**no accelerate-packet-drops**

## Syntax Description

This command has no arguments or keywords.

## Defaults

By default, accelerate-packet-drops (the drop-wred-packets-by-hardware mode) is enabled.

## Command Modes

Interface Linecard Configuration

## Usage Guidelines

By default, the SCE platform hardware drops WRED packets (packets that are marked to be dropped due to BW control criteria). However, this presents a problem for the user who needs to know the number of dropped packets per service.

The user can disable the drop-wred-packets-by-hardware mode. The application can then retrieve the number of dropped packets for every flow and provide the user with better visibility into the exact number of dropped packets and their distribution.

Note that counting all dropped packets has a considerable affect on system performance, and therefore, by default, the drop-wred-packets-by-hardware mode is enabled.

**Note** The MIB object *tpTotalNumWredDiscardedPackets* counts dropped packets. The value in this counter is absolute only in **no accelerate-packet-drops** mode. When in **accelerate-packet-drops** mode (default mode), this MIB counter provides only a relative value indicating the trend of the number of packet drops, with a factor of approximately 1:6.

Authorization: admin

## Examples

The following example shows how to disable the drop-wred-packets-by-hardware mode so that the application can count all dropped packets.

```
SCE>enable 10
password:<cisco>
SCE#>config
SCE(config)#interface linecard 0
SCE(config if)#no accelerate-packet-drops
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard accelerate-packet-drops | |

# access-class

Restricts Telnet server access to those addresses listed in the specified access list. Use the **no** form of this command to either remove a specified ACL or 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#line vty 0
SCE(config-line)#access-class 1 in
SCE(config-line)#
```

## Related Commands

| Command | Description |
|---|---|
| access-list | |
| show access-lists | |

# 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 2-2 Valid Permission Values***

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

*Table 2-2 Valid Permission Values (continued)*

| | |
|---|---|
| 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:<cisco>
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-line)#
```

### 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:<cisco>
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-line)#
```

## Related Commands

| Command | Description |
|---|---|
| access-class | |
| snmp-server community | |
| show access-lists | |

# 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 interfacethat is to be defined as the active port, as follows:

- Use the **interface mng** 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 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:<cisco>
SCE#config
SCE (config)#interface mng 0/2
SCE (config-if)#active-port
SCE(config-if)#
```

# 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

Authorization: admin

## Examples

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

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

# 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 protocol** *protocol* **attack-direction** *attack-direction* **side** *side* **[action** *action ]* **[open-flows** *open-flows]* **[ddos-suspected-flows** *ddos-suspected-flows]* **[suspectedflows-ratio** *suspectedflows- ratio]* **[notify-subscriber | dont-notify-subscriber] [alarm |noalarm]**

**no attack-detector protocol** *protocol* **attack-direction** *attack-direction* **side** *side* **[action** *action]* **[open-flows** *open-flows]* **[ddos-suspected-flows** *ddos-suspected-flows]* **[suspectedflows-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 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>**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:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| attack-detector <number> | |
| attack-filter subscriber-notification ports | |
| show interface LineCard attack-detector | |

# 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>
- ACL: access-list

Authorization: admin

## Examples

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

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

## Related Commands

| Command | Description |
|---|---|
| access-list | |
| attack-detector <number> | |
| show interface LineCard attack-detector | |
| show access-lists | |

# 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** *destination port* **])|ICMP|other|all) 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** *number*

**attack-detector default protocol (((TCP|UDP) [dest-port** *destination port* **])|ICMP|other|all) 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 (((TCP|UDP) [dest-port** *destination port* **])|ICMP|other|all) attack-direction** *attack-direction* **side** *side*

**default attack-detector {all |all-numbered}**

**default attack-detector number protocol (((all | IMCP | other | TCP | UDP) [dest-port** *destination port* **attack-direction** *attack-direction* **side** *side*

## 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.<br>specific, not-specific, both |
| **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 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 command.

Use the attack-detector command to enable a configured attack detector.

Use the attack-detector default 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:<cisco>
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:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| attack-detector | |
| attack-detector TCP-port-list\|UDP-port-list | |
| attack-filter subscriber-notification ports | |
| attack-detector default | |
| show interface LineCard attack-detector | |

# 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 |
| **port1, port2** | List of up to 15 specific port numbers. |

## 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:<cisco>
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

| Command | Description |
|---|---|
| attack-detector <number> | |
| attack-filter (LineCard Interface Configuration) | |

# attack-filter

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** *destination port* ])|**ICMP**|**other**|**all**) **attack-direction** *attack-direction* **side** *side*

**no attack-filter protocol** (((**TCP**|**UDP**) [**dest-port** *destination port* ])|**ICMP**|**other**|**all**) **attack-direction** *attack-direction* **side** *side*

## Syntax Description

| | |
|---|---|
| **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.<br>specific, not-specific, both |
| **attack-direction** | single-side-destination, single-side-both, dual-sided, all |
| **side** | subscriber, network, both |

## 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> 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 force filter | don't-filter** 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 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# attack-filter 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:<cisco>
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)#no attack-filter protocol other attack-direction all
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| attack-detector TCP-port-list\|UDP-port -list | |
| attack-detector <number> | |
| show interface LineCard attack-filter | |

# attack-filter dont-filter | force-filter

This 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 force-filter protocol ((TCP|UDP) [dest-port (*port-number* |not-specific)]|ICMP|other) attack-direction (((single-side-source|single-side-destination|single-side-both) ip *ip-address* )|(dual-sided source-ip *ip-address* destination-ip *ip-address* )) side *side***

**attack-filter dont-filter protocol ((TCP|UDP) [dest-port (*port-number* |not-specific)]|ICMP|other) attack-direction (((single-side-source|single-side-destination|single-side-both) ip *ip-address* )|(dual-sided source-ip *ip-address* destination-ip *ip-address* )) side *side***

**no attack-filter dont-filter protocol ((TCP|UDP) [dest-port (*port-number* |not-specific)]|ICMP|other) attack-direction (((single-side-source|single-side-destination|single-side-both) ip *ip-address* )|(dual-sided source-ip *ip-address* destination-ip *ip-address* )) side *side***

**no attack-filter force-filter protocol ((TCP|UDP) [dest-port (*port-number* |not-specific)]|ICMP|other) attack-direction (((single-side-source|single-side-destination|single-side-both) ip*ip-address* )|(dual-sided source-ip *ip-address* destination-ip *ip-address* )) side *side***

**no attack-filter force-filter all**

**no attack-filter dont-filter all**

## Syntax Description

| | |
|---|---|
| **protocol** | TCP, UDP, ICMP, or Other |
| **destination port** | (TCP and UDP protocols only): Defines whether specific IP detection is forced or prevented for the specified port number or is port-less (non-specific).<br>*port-number* , not-specific |
| **attack direction** | Defines whether specific IP detection is forced or prevented for single-sided or dual-sided attacks.<br>• Single-sided: specify the direction (single-side-source, single-side-destination, single-side-both) and the IP address.<br>• Dual-sided: Specify **'dual-sided'** and both the source and the destination IP addresses. |

| | |
|---|---|
| **ip-address** | IP address from which traffic will not be filtered.<br>• For single-sided filtering, only one IP address is specified.<br>• For dual-sided filtering, both a source IP address and a destination IP address are specified. |
| **side** | subscriber, network, both |

## Defaults

This command has no default settings.

## Command Modes

Linecard Interface Configuration

## 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 protocol, direction and specified IP address
- Force filtering of an attack related to a protocol, direction and 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 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** ).

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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#attack-filter dont-filter protocol other attack-direction
single-side-source ip 10.10.10.10 side both SCE(config if)#
```

### EXAMPLE 2:

The following example restores all attack filtering.

```
SCE>enable 10
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no attack-filter dont-filter all
SCE(config if)#
Password:<cisco>
```

### EXAMPLE 3:

The following example forces attack filtering.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#attack-filter force-filter protocol TCP dest-port not-specific
attack-direction dual-sided source-ip 10.10.10.10 destination-ip 20.20.20.20 side both
SCE(config if)#
```

### EXAMPLE 4:

The following example stops all forced attack filtering.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no attack-filter force-filter all
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| attack-filter | |

# 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** and **attack-detector <number>**commands.

Authorization: admin

## Examples

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

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

## Related Commands

| Command | Description |
|---|---|
| attack-detector default | |
| attack-detector <number> | |
| show interface linecard attack-filter | |

# 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** )

Authorization: admin

## Examples

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

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

## Related Commands

| Command | Description |
|---|---|
| active-port | |

# 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:<cisco>
SCE_GBE#config
SCE_GBE(config)#interface GigabitEthernet 0/1
SCE_GBE(config if)#no auto-negotiate
SCE_GBE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface GigabitEthernet | |

# 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.

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

| Command | Description |
|---|---|
| interface fastethernet | |
| interface gigabitethernet | |
| queue | |

# 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:<cisco>
SCE#no blink slot 0
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show blink | |

# 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

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

## 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:<cisco>
SCE#config
SCE(config)#boot system ftp://user:1234@10.10.10.10/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

| Command | Description |
|---|---|
| copy running-config startup-config | |

# 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:<cisco>
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

| Command | Description |
|---|---|
| clock read-calendar | |
| clock set | |
| clock update-calendar | |

# 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:<cisco>
SCE>enable 10
SCE#pwd
tffs0
SCE#cd log
SCE#pwd
tffs0:log
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| pwd | |
| mkdir | |

# 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:<cisco>
SCE#clear arp-cache
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| clear interface linecard<br>mac-resolver arp-cache | |

# clear interface linecard counters

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:<cisco>
SCE#clear interface linecard 0 counters
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard counters | |

# clear interface linecard mpls vpn

Clears the specified MPLS VPN counter: bypassed VPNs and 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:<cisco>
SCE#clear interface linecard 0 mpls vpn non-vpn-mappings
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard mpls | |
| no mpls vpn pe-database | |

# 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:<cisco>
SCE#clear interface linecard 0 subscriber anonymous all
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| no subscriber | |
| no subscriber anonymous-group | |
| show interface linecard subscriber anonymous | |

# 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:<cisco>
SCE#clear interface linecard 0 subscriber db counters
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber db counters | |

# 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:<cisco>
SCE#clear interface linecard 0 traffic-counter name counter1
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| traffic-counter | |
| show interface linecard traffic-counter | |

# clear interface linecard vas-traffic-forwarding vas 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 for which to 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:<cisco>
SCE#clear interface linecard 0 vas-traffic-forwarding vas all counters health-check
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding vas server-id health-check | |
| show interface linecard vas-traffic-forwarding | |

# clear interface linecard vpn

Removes VLAN VPNs that were created automatically by the SCE platform.

**clear interface linecard *slot-number* vpn automatic**

## 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 illustrates the use of this command.

```
SCE>enable 10
Password:<cisco>
SCE#clear interface linecard 0 vpn automatic
SCE#
```

# clear interface linecard vpn name upstream-mpls all

Removes all learned upstream labels of a specified VPN.

**clear interface linecard** ***slot-number*** **vpn name** ***vpn-name*** **upstream-mpls all**

## Syntax Description

| | |
|---|---|
| **slot-number** | The number of the identified slot. Enter a value of 0. |
| **vpn-name** | The name of the VPN for which to clear the learned upstream labels. |

## Defaults

This command has no default settings.

## Command Modes

This command has no default settings.

## Usage Guidelines

Authorization: admin

## Examples

The following example clears all learned upstream labels for the specified VPN.

```
SCE>enable 10
Password:<cisco>
SCE#clear interface linecard 0 vpn name vpn1 upstream-mpls all
SCE#
```

# clear logger

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

**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 user 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 in 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).

- Use the **counters** keyword to clear the counters of the SCE platform logger (user log files). These counters keep track of the number of info, warning, error and fatal messages.
- Use the **nv-counters** keyword to clear 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.

Authorization: admin

## Examples

### EXAMPLE 1:

The following example clears the SCE platform user log file.

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

### Related Commands

| Command | Description |
|---|---|
| show logger device | |
| show log | |

# 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:<cisco>
SCE#clear management-agent notifications counters
SCE#
```

# clear rdr-formatter

Clears the RDR formatter counters and statistics.

**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:<cisco>
SCE#clear rdr-formatter
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter counters | |

# clear scmp name counters

Clears the counters for the specified SCMP peer device.

**clear scmp name** ***name*** **counters**

## Syntax Description

| | |
|---|---|
| **name** | Name of the SCMP peer device. |

## Defaults

This command has no default settings.

## Command Modes

Privileged EXEC

## Usage Guidelines

Authorization: admin

## Examples

The following example clears the counters for the SCMP peer device named device_1.

```
SCE>enable 10
Password:<cisco>
SCE#clear scmp name device_1 counters

SCE#
```

## Related Commands

| Command | Description |
|---|---|
| show scmp | |

# 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:<cisco>
SCE#clock read-calendar
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| calendar set | |
| clock update-calendar | |
| show calendar | |

# 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). |

## 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:<cisco>
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

| Command | Description |
|---|---|
| clock update-calendar | |
| show calendar | |
| show clock | |

# 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 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
```

## Syntax Description

| | |
|---|---|
| **zone** | The 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.<br>Default: Not used |
| **day1/day2** | The day of the week on which daylight savings begins (day1) and ends (day2).<br>For recurrent configuration: day is a day of the week, such as Sunday.<br>Use the keywords **first/last** to specify the occurrence of a day of the week in a specified month. For example: last Sunday March.<br>For non-recurrent configuration: day is a day in the month, such as 28.<br>Default: day1 = second Sunday, day2 = first Sunday |
| **month1/month2** | The month in which daylight savings begins (month1) and ends (ends2).<br>Default: month1 = March, month2 = November |
| **year1/year2** | The year in which daylight savings begins (month1) and ends (ends2).<br>For non -recurring configuration only.<br>Default = not used |
| **time1/time2** | The time of day (24-hour clock) at which daylight savings begins (time1) and ends (time2).<br>Required for all configurations. Default: time1/time2 = 2:00 |
| **offset** | The difference in minutes between standard time and daylight savings time.<br>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 second Sunday of March.
- Daylight savings time ends: 2:00 (AM) on the first Sunday of November.

## Command Modes

Global Configuration

## Usage Guidelines

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 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 second Sunday of March.
- Daylight savings time ends: 2:00 (AM) on the first Sunday of November.

Use the **recurring** keyword if daylight savings time always begins and ends on the same day every year.

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 this 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:<cisco>
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, 2007.
- Daylight savings time ends: 23:59 October 23, 2007.
- Offset = 1 hour (default)

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

## Related Commands

| Command | Description |
|---|---|
| clock set | |
| calendar set | |
| show calendar | |
| show clock | |

# 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 so 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 UTC. This must be an integer in the range –23 to 23. |
| **minutes** | The minutes offset from 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

UTC (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 UTC.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#clock timezone PST -10
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| calendar set | |
| clock set | |
| show calendar | |

# 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:<cisco>
SCE#clock update-calendar
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| clock set | |
| calendar set | |
| clock read-calendar | |

# 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, use the **exit** command.

Authorization: admin

## Examples

The following example enters the Global Configuration Mode.

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

## Related Commands

| Command | Description |
|---|---|
| exit | |

# 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.<br>• **inline** SCE platform is connected in a bump-in-the-wire topology.<br>• **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)<br>• **bypass**<br>• **cutoff** |

## Defaults

connection mode = inline

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

This command can only be used if the line card is in either **no-application** or **shutdown** mode.

Authorization: admin

## Examples

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

```
SCE1000>enable 10
Password:<cisco>
SCE#config
SCE1000(config)#interface linecard 0
SCE1000(config if)#connection-mode inline on-failure cutoff
SCE1000(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard connection-mode | |

# 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<br>• **receive-only** : single SCE platform receive-only<br>• **inline-cascade** : two SCE platforms inline<br>• **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)<br>• **link 0**<br>• **link 1** |
| **priority** | Defines which is the primary SCE platform.(two SCE platform topologies only).<br>• **primary**<br>• **secondary** |
| **on-failure** | Determines system behavior on failure of the SCE platform. (inline topologies only)<br>• **bypass**<br>• **cutoff** |

## Defaults

connection mode = inline

physically-connected-links =link 0

priority = primary

on-failure = bypass

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

This command can only be used if the line card is in either **no-application** or **shutdown** mode.

**Note** When the 'inline-cascade' connection mode is configured, extra care should be given to the configuration of the link shapers. Configuring the shaper in an aggressive manner might result in very high rate of tail-dropped packets. In extreme situations, packets that are used for the High Availability protocol monitoring and control may be dropped. Thus, an extreme situation could result in false detection of a failure in the SCE platform and an unnecessary switchover between the active and standby SCE platforms.

Authorization: admin

## Examples

The following example shows 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: <cisco>
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

| Command | Description |
|---|---|
| show interface linecard connection-mode | |
| show interface linecard physically-connected-links (SCE 2000 only) | |

# 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:<cisco>
SCE#copy analysis.sli applications/analysis.sli
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy ftp:// | |
| copy-passive | |

# 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 eight characters, dot, then three characters. |

## 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** to configure a password shortcut.
- **ip ftp username** to configure a username shortcut.

Authorization: admin

## Examples

The following example downloads the ftp.sli file from the host 10.10.10.10 with user name “user” and password “a1234”.

```
SCE>enable 10
Password:<cisco>
SCE#copy
 ftp://user:a1234@10.10.10.10/p:/applications/ftp.sli
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy-passive | |
| ip ftp password | |
| ip ftp username | |

# 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 password of the given username. |
| **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** to configure a password shortcut.
- **ip ftp username** 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:<cisco>
SCE#copy-passive appl/analysis.sli
ftp://myname:mypw@10.1.1.105/p:/applications/analysis.sli
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy ftp:// | |
| ip ftp password | |
| ip ftp username | |

# 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:<cisco>
SCE#copy running-config startup-config Backing-up configuration file...
Writing configuration file...
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| more | |
| show running-config | |

# 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:<cisco>
SCE#copy /appl/analysis.sli ftp://myname:mypw@10.1.1.105/p:/applications/analysis.sli
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy ftp:// | |

# 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.<br>• *ftp://user:pass@host/drive:/dir/bckupcfg.txt*<br>• */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.The following example shows how to upload a backup configuration file.

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

## Related Commands

| Command | Description |
|---|---|
| copy startup-config destination-file | |

# 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.<br>• *ftp://user:pass@host/drive:/dir/bckupcfg.txt*<br>• */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:<cisco>
SCE#copy startup-config ftp://user:pass@host/drive:/dir/bckupcfg.txt
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy source-file startup-config | |

# 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:<cisco>
SCE#config
SCE(config)#interface LineCard 0
SCE(config if)# default subscriber template all SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber template import csv-file | |
| show interface linecard subscriber template | |

# 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 how to use this command:

### EXAMPLE 1:

The following example deletes the *oldlog.txt* file.

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

### EXAMPLE 2:

The following example deletes the *oldlogs* directory.

```
SCE>enable 10
Password:<cisco>
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

| Command | Description |
|---|---|
| dir | |
| rmdir | |

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

## Related Commands

| Command | Description |
|---|---|
| pwd | |
| cd | |

# disable

Moves the user from a higher level of authorization to a lower user level.

**disable [*level* ]**

## Syntax Description

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

## Defaults

This command has no default settings.

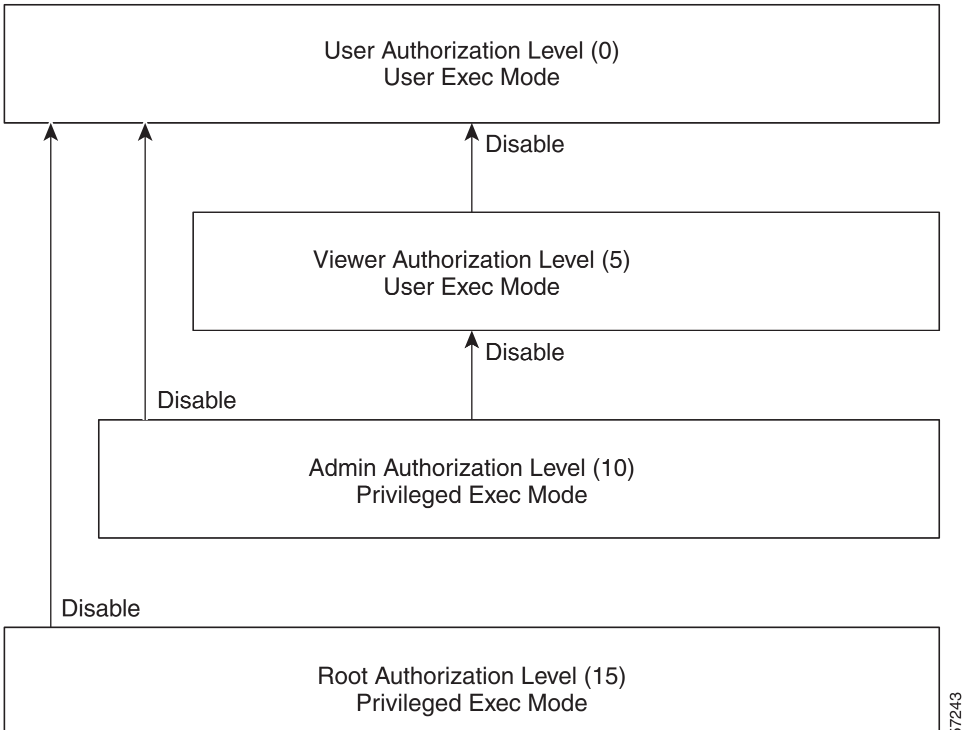
## Command Modes

Privileged Exec and Viewer

## Usage Guidelines

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

*Figure 2-1 Disable Command*


User Authorization Level (0)
User Exec Mode
Disable
Viewer Authorization Level (5)
User Exec Mode
Disable
Disable
Admin Authorization Level (10)
Privileged Exec Mode
Disable
Root Authorization Level (15)
Privileged Exec Mode
i7243

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:<cisco>
SCE#>disable 10
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| enable | |

# 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 exec 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 user exec mode.

```
SCE>enable 10
Password:<cisco>
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
slot 0 connection mode
Connection mode is inline
slot failure mode is bypass
Redundancy status is standalone
SCE(config if)#
```

# 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:<br>• **full** : full duplex<br>• **half** : half duplex<br>• **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** ) 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface mng 0/2
SCE(config if)#duplex
 auto
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| speed | |
| interface fastethernet | |
| interface mng | |
| show interface mng | |
| show interface fastethernet | |

# enable

Enables the user to access a higher authorization level.

**enable [*level* ]**

## Syntax Description

| | |
|---|---|
| **level** | User authorization level (0, 5, 10, 15) as specified in *"CLI Authorization Levels"* . |

## Defaults

level = admin

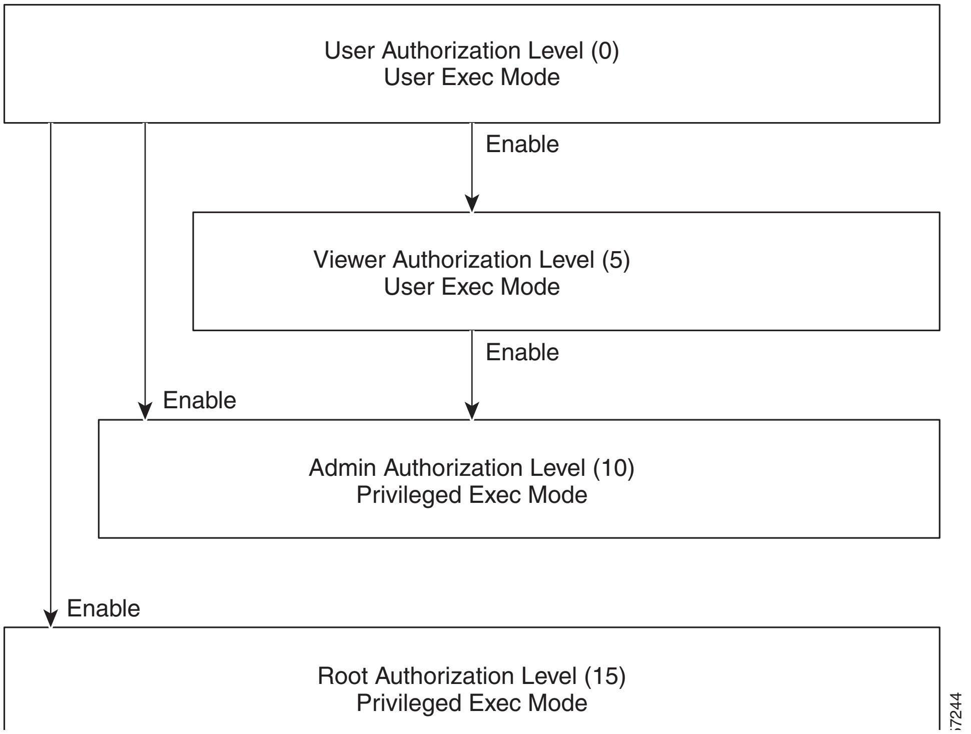
## Command Modes

User Exec

## Usage Guidelines

Authorization levels are illustrated in the following figure

***Figure 2-2 Enable Command***


User Authorization Level (0)
User Exec Mode
Enable
Viewer Authorization Level (5)
User Exec Mode
Enable
Enable
Admin Authorization Level (10)
Privileged Exec Mode
Enable
Root Authorization Level (15)
Privileged Exec Mode
7244

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 level is the administrator privilege level.

```
SCE>enable
Password:<cisco>
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| disable | |
| enable password | |

# 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"* . 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 = **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:<cisco>
SCE#config
SCE(config)#enable password level
 10 a123*man
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| enable | |
| service password-encryption | |

# 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.

You can use the **copy startup-config destination-file** command to create a backup of the current configuration before it is deleted.

Authorization: admin

## Examples

The following example shows how to erase the startup configuration.

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

## Related Commands

| Command | Description |
|---|---|
| reload | |
| copy startup-config destination-file | |

# exit

Exits from the current mode to the next "lower" mode.

**exit**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

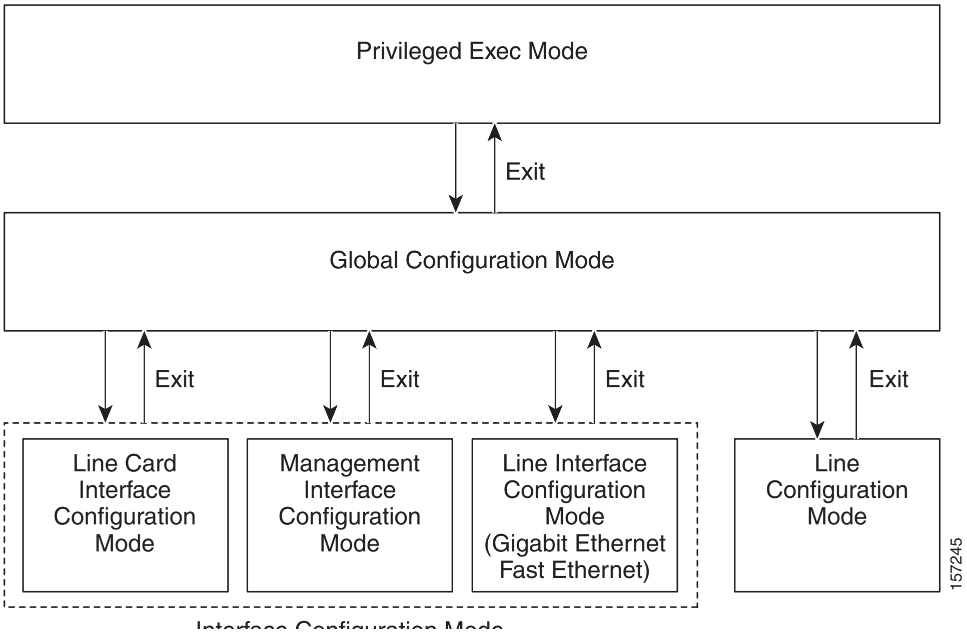
## Command Modes

All

## Usage Guidelines

Use this command each time you want to exit a mode, as illustrated in the following figure. The system prompt changes to reflect the lower-level mode.

***Figure 2-3 Exit Command***


Privileged Exec Mode
Exit
Global Configuration Mode
Exit
Exit
Exit
Exit
Line Card Interface Configuration Mode
Management Interface Configuration Mode
Line Interface Configuration Mode (Gigabit Ethernet Fast Ethernet)
Line Configuration Mode
157245
Interface Configuration 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#exit
SCE(config)#exit
SCE#
```

### Related Commands

| Command | Description |
|---|---|
| configure | |
| interface fastethernet | |
| interface gigabitethernet | |
| interface linecard | |
| interface mng | |
| line vty | |

# 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 or not the system will boot as operational 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:<cisco>
SCE#config
SCE(config)#failure-recovery operation-mode
 operational
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show failure-recovery operation-mode | |

# 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

When upgrading the application in a cascaded system, use this command to force failure in the active SCE 2000 platform (see 'System Upgrades' in the Chapter "Redundancy and Fail-Over" in the *Cisco Service Control Engine Software Configuration Guide* ).

Authorization: admin

## Examples

The following example forces a virtual failure condition.

At the displayed '**n**', type '**Y**' and press **Enter** to confirm the forced failure.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#force failure-condition
Forcing failure will cause a failover - do you want to continue? n
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| pqi upgrade file | |

# 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-FMoves cursor one word to the right.
Esc-BMoves cursor one word to the left.
Ctrl-AMoves cursor to the start of the line.
Ctrl-EMoves cursor to the end of the line.
Esc F Moves cursor forward one word.
Esc BMoves cursor backward one word.
Editing
-------
Ctrl-DDeletes the character where the cursor is located.
Esc-DDeletes from the cursor position to the end of the word.
BackspaceDeletes the character before the current location of the cursor.
Ctrl-H Deletes the character before the current location of the cursor.
Ctrl-KDeletes from the cursor position to the end of the line.
Ctrl-UDeletes all characters from the cursor to the beginning of the line.
Ctrl-XDeletes all characters from the cursor to the beginning of the line.
Ctrl-WDeletes the word to the left of the cursor.
Ctrl-YRecall 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>
```

# 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.

```
SCE>enable 10
Password:<cisco>
SCE#history
SCE#
```

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

```
SCE>enable 10 Password:<cisco>
SCE#no history SCE#
```

## Related Commands

| Command | Description |
|---|---|
| history size | |

# 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:<cisco>
SCE#history size 50 SCE#
```

## Related Commands

| **Command** | **Description** |
|---|---|
| history | |

# 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. Maximum length is 20 characters. |

## 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:<cisco>
SCE#config
SCE(config)#>hostname MyHost MyHost(config)#>
```

## Related Commands

| Command | Description |
|---|---|
| show hostname | |

# 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** command.

**interface fastethernet** ***slot-number/interface-number***

**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, use the **exit** command.

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:<cisco>
SCE2000FE#config
SCE2000FE(config)#interface fastethernet 0/3 SCE2000FE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| interface mng | |
| exit | |
| show interface fastethernet | |
| interface fastethernet | |
| duplex | |
| speed | |

# 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** command.

**interface gigabitethernet** ***slot-number/interface-number***

## Syntax Description

| | |
|---|---|
| **slot-number** | Enter a value of *0* . |
| **interface-number** | The GigabitEthernet line interface number.<br>• SCE 2000 4xGBE platform: Enter a value between **1** and **4**<br>• 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, use the **exit** command.

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:<cisco>
SCE#config
SCE(config)#interface gigabitethernet 0/1 SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| interface mng | |
| exit | |
| interface fastethernet | |
| show interface gigabitethernet | |

# 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, use the **exit** command.

Authorization: admin

## Examples

The following example enters LineCard Interface Configuration Mode.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0 SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| exit | |

# 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, use the **exit** command.

Authorization: admin

## Examples

The following example enters into Management Interface Configure Interface Mode.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface mng 0/1 SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| exit | |
| show interface mng | |
| duplex | |
| speed | |

# ip access-class

Specifies which access control list (ACL) controls global access to the SCE platform. Use the **no** form of the command to permit 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

The ACL specified in this command 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; even a **ping** command will receive no response if it is not from a permitted IP address.

Authorization: admin

## Examples

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

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

## Related Commands

| Command | Description |
|---|---|
| access-list | |
| show access-lists | |

# ip address

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

**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

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.

Since this IP address always acts as a virtual IP address for the currently active management 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.

**Note** After changing the IP address, you must reload the SCE platform (see **reload** ) so that the change will take effect properly in all internal and external components of the SCE platform.

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:<cisco>
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

| Command | Description |
|---|---|
| interface Mng | |

# 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 [destination | interval]**

## 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 this 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#default ip advertising destination SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show ip advertising | |

# ip default-gateway

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

**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:<cisco>
SCE#config
SCE(config)#ip default-gateway 10.1.1.1 SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show ip default-gateway | |

# 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:<cisco>
SCE#config
SCE(config)#ip domain-lookup SCE(config)#
```

### EXAMPLE 2:

The following example disables the domain lookup

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

## Related Commands

| Command | Description |
|---|---|
| ip domain-name | |
| ip name-server | |
| show hosts | |

# 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 this command.

### EXAMPLE 1:

The following example configures a domain name

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

## Related Commands

| Command | Description |
|---|---|
| ip domain-lookup | |
| ip name-server | |
| show hosts | |

# ip filter fragment

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

**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

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

  This command enables the IP fragment filter.

  - IP filter monitor: Measures the rate of accepted and dropped packets for both permitted and not-permitted IP addresses.

  Use the **ip filter moniter** command to configure the IP filter monitor.

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:<cisco>
SCE#config
SCE(config)#ip filter fragment enable
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip filter moniter | |
| show ip filter | |

# ip filter monitor

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

**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

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

  Use the **ip filter fragment** command to enable the IP fragment filter.

  - 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 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:<cisco>
SCE#config
SCE(config)# ip filter monitor ip permitted low_rate 25 high_rate 30 burst 15 SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip filter fragment | |
| show ip filter | |

# 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:<cisco>
SCE#ip ftp password mypw SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy ftp:// | |
| copy-passive | |
| ip ftp username | |

# 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:<cisco>
SCE#ip ftp username myname SCE#
```

## Related Commands

| Command | Description |
|---|---|
| copy ftp:// | |
| copy-passive | |
| ip ftp password | |

# 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:<cisco>
SCE#config
SCE(config)#ip host PC85 10.1.1.1 SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show hosts | |

# 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:<cisco>
SCE#config
SCE(config)#ip name-server 10.1.1.1 10.1.1.2 SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip domain-lookup | |
| show hosts | |

# ip radius-client retry limit

Configures the parameters for retransmitting unacknowledged RADIUS client messages.

**ip radius-client retry limit** ***times*** **[timeout** ***timeout*** **]**

## Syntax Description

| | |
|---|---|
| **times** | The maximum number of times the RADIUS client can try unsuccessfully to send a message. |
| **timeout** | Timeout interval for retransmitting a message, in seconds |

## Defaults

times = 3

timeout = 5 second

## Command Modes

Global Configuration

## Usage Guidelines

Due to the unreliable nature of UDP, the RADIUS client retransmits requests to the SCMP peer device if they were not acknowledged within the configured number of seconds. Messages that were not acknowledged can be retransmitted up to the configured maximum number of retries.

The optional timeout parameter limits the time interval for retransmitting a message.

Authorization: admin

## Examples

The following example illustrates how to configure the retransmission parameters.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)# ip radius-client retry limit 5 timeout 5 SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| scmp name | |
| show ip radius-client | |

# 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 this command:

### EXAMPLE 1:

The following example sets the next-hop to 20.2.2.2 for IP addresses in the range 10.10.10.0 to 10.10.10.255.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#ip route 10.10.10.0 255.255.255.0 20.2.2.2 SCE(config)#
```

### EXAMPLE 2:

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

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#no ip route 10.10.10.0 255.255.255.0 SCE(config)#
```

### Related Commands

| Command | Description |
|---|---|
| show ip route | |

# 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 this command.

### EXAMPLE 1:

The following example enables the RPC adapter.

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

### EXAMPLE 2:

The following example disables the RPC adapter.

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

## Related Commands

| Command | Description |
|---|---|
| ip rpc-adapter port | |
| show ip rpc-adapter | |
| ip rpc-adaptor security-level | |

# 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 this command:

### EXAMPLE 1:

The following example shows how to configure the RPC interface, specifying 1444 as the RPC adapter port.

```
SCE>enable 10
Password:<cisco>
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:<cisco>
SCE#config
SCE(config)#default ip rpc-adapter port
```

## Related Commands

| Command | Description |
|---|---|
| ip rpc-adapter | |
| show ip rpc-adapter | |

# ip rpc-adaptor security-level

Sets the PRPC server security level.

**ip rpc-adaptor security-level {full|semi|none}**

## Syntax Description

| | |
|---|---|
| | full, semi, none |

## Defaults

default = semi

## Command Modes

Global Configuration

## Usage Guidelines

Specify the desired PRPC server security level:

- **full** : all PRPC connections require authentication
- **semi** : PRPC connections that supply a user-name and password during connection establishment are authenticated. Connections that do not supply a user-name and password are accepted with no authentication

**Note** If the SCE platform AAA configuration permits connecting with the "enable" passwords, and the rpc-adapter security level is set to semi, the SCA-BB console can connect using any username with the ADMIN level password. (See the aaa authentication enable default and aaa authentication login default commands.)

- **none** : no authentication is performed

Authorization: admin

## Examples

The following example illustrates how to set the PRPC server security level.

```
SCE>enable 10
Password:<cisco>
SCE#configure
SCE(config)#ip rpc-adaptor security-level full SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip rpc-adapter | |
| show ip rpc-adapter | |

# 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** command). 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** command)

Authorization: admin

## Examples

The following examples illustrate the use of this command:

### EXAMPLE 1:

The following example enables the SSH server.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#ip ssh SCE(config)#
```

### EXAMPLE 2:

The following example disables the SSH server.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#no ip ssh SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip ssh access-class | |
| ip ssh key | |
| show ip ssh | |

# 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**.) Use the **no** option 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** command).
- Generate an SSH key set ( **ip ssh key** command).

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:<cisco>
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:<cisco>
SCE#config
SCE(config)#no ip ssh access-class SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip ssh | |
| ip ssh key | |
| show ip ssh | |

# 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** command).
- Assign an ACL to the SSH server ( **ip ssh access-class** command).

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:<cisco>
SCE#config
SCE(config)#ip ssh key generate SCE(config)#
```

### EXAMPLE 2:

The following example removes the SSH key set,

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#ip ssh key remove SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| ip ssh | |
| ip ssh access-class | |
| show ip ssh | |

# 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**

## Syntax Description

This command has no arguments or keywords.

## Defaults

By default, IP tunnel recognition is disabled.

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

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.

The IP tunnel mode is mutually exclusive with other MPLS- or VLAN-based classification.

Use the **L2TP identify-by** 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#ip tunnel L2TP skip SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard ip-tunnel | |
| L2TP identify-by | |
| MPLS | |
| VLAN | |

# 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 *quick-forwarding-ignore* 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.

In addition, in order to prevent reordering of L2TP tunneled fragments, it is advised to define a *quick-forwarding* traffic-rule for all the L2TP traffic. This can be done based on the IP ranges in use by the internal IPs in the tunnel (as allocated by the LNS), or simply for all of the traffic passing through the SCE platform.

Note that flow redirection and flow blocking cannot be performed on the quick-forwarded traffic.

Authorization: admin

## Examples

The following example configures port# 1000 as the L2TP port.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#l2tp identify-by port-number 1000 SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard l2tp | |
| ip tunnel | |

# 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, use the **exit** command.

Authorization: admin

## Examples

The following example enters the Line Configuration Mode for all lines.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#line vty 0 SCE(config-line)#
```

## Related Commands

| Command | Description |
|---|---|
| show line vty | |
| exit | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#link failure-reflection on-all-ports
SCE(config if)#
```

# link mode

Configures the link mode. The link mode allows the user to force 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<br>• GBE:<br>– **GBE1-GBE2**<br>– **GBE3-GBE4**<br>• FE:<br>– **LINK1**<br>– **LINK2**<br>• **all-links** |
| **mode** | • **Forwarding**<br>• **Bypass**<br>• **Cutoff**<br>• **Sniffing** |

## 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:<cisco>
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:<cisco>
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:<cisco>
SCE2000GBE#config
SCE2000GBE(config)#interface linecard 0
SCE2000GBE(config if)#link mode all-links sniffing
SCE2000GBE(config if)#
```

### Related Commands

| Command | Description |
|---|---|
| show interface linecard | |
| link mode | |

# 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:<cisco>
SCE#logger add-user-message testing 123
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| logger (ROOT level options) | |

# logger device

Disables or enables the specified logger device.

**logger device {line-attack-file-log | statistics-file-log | user-file-log}** *status*

## Syntax Description

| | |
|---|---|
| **status** | **enabled** or **disabled** , indicating whether to turn on or off logging. |

## Defaults

By default, the log devices are enabled.

## Command Modes

Global Configuration

## Usage Guidelines

Available logger devices are:

- Line-Attack-File-Log
- SCE-agent-Statistics-Log
- User-File-Log

Authorization: admin

## Examples

The following example disables the User-File-Log device.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#logger device user-file-log disabled
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| logger device user-file-log max-file-size | |
| logger get user-log file-name | |
| clear logger | |
| logger device (ROOT level options) | |

# logger device user-file-log max-file-size

Sets the maximum log file size.

**logger device User-File-Log max-file-size** *size*

## Syntax Description

| | |
|---|---|
| **size** | The maximum size for the user log (in bytes). |

## Defaults

size = 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:<cisco>
SCE#config
SCE(config)#logger device user-file-log max-file-size 65000
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| logger device | |
| show logger device | |

# logger get support-file

Generates a log file for technical support via FTP. Note that this operation may take some time.

**logger get support-file** *filename*

## Syntax Description

| | |
|---|---|
| **filename** | Name of the generated log file. The specified file must be located on an FTP site, not on the local file system. |

## Defaults

This command has no default settings.

## Command Modes

Privileged EXEC

## Usage Guidelines

Authorization: admin

## Examples

The following example generates a technical support log file (via FTP) named *support.zip* .

```
SCE>enable 10
Password:<cisco>
SCE#logger get support-file ftp://user:1234@10.10.10.10/c:/support.zip
SCE#
```

# 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 name of the output file to which 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:<cisco>
SCE#logger get user-log file-name ftp://myname:mypw@10.1.1.205/d:/log.txt
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| logger get support-file | |

# 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.

## Examples

The following example shows how the user logs out (and confirms the logout).

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#exit
SCE>logout Are you sure? Y
```

# 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 (as explained in the preceding paragraph). 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 1111.2222.3333 to the IP address 10.20.30.40.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#mac-resolver arp 10.20.30.40 1111.2222.3333 SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard mac-resolver arp | |

# management-agent sce-api ignore-cascade-violation

Configures the agent to ignore the errors issued when logon operations are performed on a standby SCE platform. Use the **no** form of this command to configure the agent to issue an error when a logon operation is performed on a standby SCE platform. Use the**default** form of this command to set the value to the default (the default behavior is to issue an error when a logon operation is performed on a standby SCE platform).

**management-agent sce-api ignore-cascade-violation**

**no management-agent sce-api ignore-cascade-violation**

**default management-agent sce-api ignore-cascade-violation**

## Syntax Description

This command has no arguments or keywords.

## Defaults

By default, an error is issued when a logon operation is performed on a standby SCE platform ( **no** form of the command).

## Command Modes

Global Configuration

## Usage Guidelines

Starting in release 3.1.0, the SCE platform issues an error message when a logon operation is performed on the standby SCE platform in a cascaded system. This behavior is not backward compatible for previous versions of the SCE Subscriber API.

Use this command with SCOS release 3.1.0 to provide backward-compatible behavior to previous releases in which such errors were not issued.

Authorization: admin

## Examples

The following example illustrates how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)# management-agent sce-api ignore-cascade-violation
SCE(config)#
```

# 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:<cisco>
SCE#config
SCE(config)# management-agent sce-api logging
SCE(config)#
```

# 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:<cisco>
SCE#config
product>(config)# management-agent sce-api timeout 10
```

# 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** command and rebooting the SCE platform.

Authorization: admin

## Examples

The following example upgrades the system with the mng45.pkg package.

```
SCE>enable 10
Password:<cisco>
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

| Command | Description |
|---|---|
| copy running-config startup-config | |

# 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:<cisco>
SCE#mkdir mydir SCE#
```

## Related Commands

| Command | Description |
|---|---|
| dir | |

# more

Displays the contents of a file.

**more {*file-name* | running-config [all-data] | startup-config}**

## Syntax Description

| | |
|---|---|
| **file-name** | The name of the file to be displayed. |
| **all data** | Displays defaults as well as non-default settings (running-config option only) |

## Defaults

This command has no default settings.

## Command Modes

Privileged EXEC

## Usage Guidelines

The **running-config** option displays the running configuration file. You can use the **all data** switch with this option to see sample usage for many CLI configuration commands.

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:<cisco>
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 “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

| Command | Description |
|---|---|
| show running-config | |
| show startup-config | |

# 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:<cisco>
SCE#more user-log <INFO>| 01/28/97 22:29:22 | CPU #000 | Logger: Task Initialized
successfully
```

## Related Commands

| Command | Description |
|---|---|
| logger get user-log file-name | |
| show log | |

# mpls

Configures the MPLS environment. MPLS labels are supported up to a maximum of 15 labels per packet.

**mpls traffic-engineering skip**

**mpls vpn skip**

**mpls vpn auto-learn**

**default mpls**

## 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 MPLS labels are not mandatory (a non-MPLS/VPN environment).

Use the **VPN skip** form of the command when all IP addresses are unique, but MPLS labels are used.

Use the **VPN auto-learn** form of the command in an MPLS/VPN environment where auto-learning is required due to the existence of private IP addresses and/or VPN based subscribers.

Use the **default** keyword to set the MPLS configuration to the default value.

### CHANGING VPN MODES

VPNs can only exist in either **VLAN symmetric classify** or **MPLS VPN auto-learn** , but these two modes cannot be enabled simultaneously. When changing from one of these VPN-related modes to another, keep the following guidelines in mind:

- All VPN-based subscribers must be cleared in order to change the tunneling mode. If the connection with the SM is down, use the **no subscriber all with-vpn-mappings** CLI command.
- All VPN mappings must also be removed. This can only be done via the SM CLU (which means that the connection with the SM must be up).

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:<cisco>
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 with VPN-based subscribers.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#mpls vpn auto-learn
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard mpls | |

# 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

## Examples

The following examples illustrate the use of this command.

### EXAMPLE 1

The following example illustrates how to define a PE router with two interfaces.

```
SCE>enable 10
Password:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no mpls vpn pe-id 10.10.10.10
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard mpls | |
| mpls | |
| no mpls vpn pe-database | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no mpls vpn pe-database
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard mpls | |
| show interface linecard mpls vpn (root level options) | |
| mpls vpn pe-id | |

# no subscriber

Removes a specified subscriber from the system. Use the**all** option to remove all introduced subscribers.

**no subscriber name** ***subscriber-name***

**no subscriber scmp name** ***scmp-name*** **all**

**no subscriber sm all**

**no subscriber all [with-vpn-mappings]**

## Syntax Description

| | |
|---|---|
| **subscriber-name** | The specific subscriber name to be removed from the system. |
| **scmp-name** | Name of an SCMP peer device. |

## Defaults

This command has no default settings.

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

Use the **all with-vpn-mappings** keywords to remove all the subscribers that have VPN-based subscribers from the SCE platform.

This option allows you to switch out of MPLS/VPN mode when the SM is down.

**Note** Use the **with-vpn-mappings** option ONLY when the SCE platform is disconnected from the SM.

Use the **scmp name all** option to remove all subscribers managed by the specified SCMP peer device.

Use the **sm all** option to remove all subscribers managed by the SM.

Authorization: admin

## Examples

The following example removes all subscribers.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# no subscriber all
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber | |

# no subscriber anonymous-group

Removes a specified anonymous subscriber group from the system. Use the **all** option 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# no subscriber anonymous-group all SCE(config if)
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber anonymous-group | |
| no subscriber | |

# 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***

**no subscriber mappings included-in ip-range** ***IP-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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# no subscriber mappings included-in TP-IP-range name CMTS1
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber mapping included-in tp-ip-range | |

# 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:<cisco>
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#
```

# 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** 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** 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#pqi install file anr10015.pqi SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show pqi file | |
| pqi uninstall file | |

# 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** command.

Authorization: admin

## Examples

The following example reverses the upgrade for the Subscriber Manager using the anr100155.pqi file.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#pqi rollback file anr100155.pqi
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show pqi last-installed | |

# 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** command.

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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#pqi uninstall file anr10015.pqi
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show pqi last-installed | |
| pqi install file | |

# 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** 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.

When upgrading the application in a cascaded system, use the **force failure-condition** command to force failure in the active SCE 2000 platform (see 'System Upgrades' in the Chapter "Redundancy and Fail-Over" in the *Cisco Service Control Engine Software Configuration Guide* ).

Authorization: admin

## Examples

The following example upgrades the Subscriber Manager using the anr100155.pqi file. No options are specified.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#pqi upgrade file anr100155.pqi
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show pqi file | |
| force failure-condition<br>(SCE 2000 only) | |

# 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:<cisco>
SCE#pwd tffs0:
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| cd | |

# 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).<br>• 1=BE. BE is the best effort queue, that is the lowest priority.<br>• 2, 3=AF. 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.<br>• 4=EF. EF is the Expedited Forwarding queue, that is the highest priority forwarding |
| **bandwidth** | Bandwidth measured in kbps. The maximum bandwidth is determined by the line rate.<br>0 disables packet transmission from the queue.<br>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** or **interface gigabitethernet** 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:<cisco>
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:<cisco>
SCE2000FE#config
SCE2000FE(config)#interface fastethernet 0/2
SCE2000FE(config if)#queue 1 bandwidth 20000 burstsize 1000
SCE2000FE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| bandwidth | |
| interface fastethernet | |
| interface gigabitethernet | |

# 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. 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.

**rdr-formatter category number** ***[1-4]*** **name** ***category name***

**no rdr-formatter category number** ***[1-4]*** **name** ***category name***

## Syntax Description

| | |
|---|---|
| **category name** | The user-defined name to be assigned to the category. |

## 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:<cisco>
SCE#config
SCE(config)#rdr-formatter category number 1 name prepaid
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter | |
| service rdr-formatter | |
| rdr-formatter buffer-size | |

# rdr-formatter destination

Configures an RDRV1 or Netflow destination. This is where the RDR formatter sends the records (RDRs or export packets) it produces. Use the**no** form of the command to remove the mappings of a 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* **] [category …] protocol {RrdrV1 | NetflowV9} [transport {udp | tcp}]**

**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** | (Optional) The priority of the destination. The priority value may be any number between 1 (lowest) to 100 (highest). |
| **protocol** | The protocol configured for this destination. Specify either of the following:<br>• **RDRv1**<br>• **NetflowV9** |
| **transport** | (Optional) The transport type configured for this destination. Specify either of the following:<br>• **UDP** when protocol = Netflow<br>• **TCP** when protocol = RDRv1. |

## Defaults

Default protocol = RDRv1

## Command Modes

Global Configuration

## Usage Guidelines

Up to eight destinations can be configured. Multiple destinations over the same category must have distinct priorities. In redundancy mode, the entry with the highest priority is used by the RDR formatter; in multicast mode or load-balancing mode priorities have no meaning.

In its simplest form, this command specifies only the IP address and port number of the destination and the protocol being used. In addition, a global priority may be assigned to the destination. Or a specific priority may be assigned to any or all of the four categories for the specified destination. If a global priority is not explicitly configured, the highest priority is assigned automatically.

Categories may be identified by either name or number.

A certain destination may be configured to one or more categories on the same time. A maximum of three destinations may be assigned to a specific category.

**Note** RDRv1 may only be configured with transport type of TCP and NetflowV9 may only be configured with transport type of UDP.

### PRIORITIES

Following are some guidelines for configuring priorities for the report destinations:

- In redundancy mode, the entry with the highest priority is used by the RDR formatter, provided that a connection with this destination can be established
- Priority configuration is not relevant in multicast mode, since all reports are sent to all destinations.
- Priority configuration is not relevant in load-balancing mode, since all destinations are used for load balancing
- For the first destination defined, if no priority is set, the highest priority is automatically assigned.
- For all subsequently defined destinations, the priority must be explicitly defined, otherwise it will collide with the first destination priority.
- 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.
- The same priority cannot be assigned to the same category for two different destinations.

Authorization: admin

## Examples

The following examples illustrate the use of this command:

### EXAMPLE 1:

The following example configures a Netflow destination with the default priority (highest) to be used by all categories.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#rdr-formatter destination 10.1.1.205 port 33000 protocol NetflowV9 transport
udp
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:<cisco>
SCE#config
SCE(config)#rdr-formatter destination 10.1.1.206 port 34000 category number 1 priority 10
category number 2 priority 90 protocol RrdrV1
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter destination | |
| service rdr-formatter | |
| rdr-formatter protocol NetflowV9 dscp | |
| rdr-formatter destination protocol netflowv9 template data timeout | |

# rdr-formatter destination protocol NetflowV9 template data timeout

Configures the interval after which all Netflow templates must be exported to the specified destination (refreshed). Use the**no** or the **default** form of the command to disable the template refresh mechanism.

**rdr-formatter destination** *ip-address* **port** *port-number* **protocol NetflowV9 template data timeout** *timeout-value*

**no rdr-formatter destination** *ip-address* **port** *port-number* **protocol NetflowV9 template data**

**default rdr-formatter destination** *ip-address* **port** *port-number* **protocol NetflowV9 template data**

## Syntax Description

| | |
|---|---|
| **ip-address** | The destination IP address. |
| **port-number** | The destination port number. |
| **timeout-value** | The time interval, in seconds, .between exporting the Netflow templates to the specified destination. Valid range is 1 – 86400 seconds. |

## Defaults

By default, the refresh mechanism is disabled.

## Command Modes

Global Configuration

## Usage Guidelines

A template record defines the structure of each Netflow data record. The RDR formatter transmits the templates only along with their matching data records. The RDR formatter refreshes the templates on the collector by resending them at configured intervals.

The **no** form of the command disables the refresh mechanism.

The **default** form of the command also disables the refresh mechanism, since the default state is disabled.

Authorization: admin

## Examples

The following example illustrates the use of this command:

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#rdr-formatter destination 10.1.1.205 port 33000 protocol NetflowV9 template
data timeout 240
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter destination | |
| rdr-formatter destination | |

# 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** | Each successive record is sent to a different destination, one destination after the other, in a round robin manner. |

Authorization: admin

## Examples

The following example sets the RDR formatter mode to “redundancy”.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#rdr-formatter forwarding-mode redundancy
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter forwarding-mode | |

# 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

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter history-size | |

# rdr-formatter protocol NetflowV9 dscp

Defines the DSCP value to be assigned to the Netflow packets.

**rdr-formatter protocol NetflowV9 dscp** ***dscp-value***

## Syntax Description

| | |
|---|---|
| **dscp-value** | DSCP value to be assigned to the Netflow packets, in HEX format. Accepted range is 0-63. |

## Defaults

Default dscp-value = 0

## Command Modes

Global Configuration

## Usage Guidelines

You can assign a DSCP value to specify the diffserv value of the Netflow traffic exported from your SCE platform.

Authorization: admin

## Examples

The following example illustrates the use of this command.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#rdr-formatter protocol NetflowV9 dscp 0x20
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter protocol NetflowV9 dscp | |

# 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 all categories are removed from a tag, this tag will be ignored and will not be formatted and sent – this is ‘ignore mapping'.

Authorization: admin

## Examples

The following examples illustrate how to use this command.

### EXAMPLE 1

This example shows how to add a mapping to a category.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#rdr-formatter rdr-mapping tag-id 0xf0f0f000 category-number 1
SCE(config)#
```

### EXAMPLE 2

This example shows how to restore the default mapping for a specified RDR tag.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#default rdr-formatter rdr-mapping tag-id 0xf0f0f000
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter rdr-mapping | |

# reload

Note In order not to lose the current configuration, use the **copy running-config-all startup-config-all** command before using the **reload** command.

Reboots the SCE platform.

**reload**

## 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:<cisco>
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

| Command | Description |
|---|---|
| copy running-config startup-config | |
| reload shutdown | |

# 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:<cisco>
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

| Command | Description |
|---|---|
| reload | |

# 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:<cisco>
SCE#rename test1.pkg test3.pkg
SCE#
```

# rmdir

Removes an empty directory. To remove a directory that is not empty, use the **delete** 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** 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:<cisco>
SCE#rmdir code
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| dir | |
| delete | |
| delete (ROOT level option) | |

# scmp

Enables the Service Control Management Protocol functionality. Use the **no** form of the command to disable the SCMP.

**scmp**

**no scmp**

## Syntax Description

This command has no arguments or keywords.

## Defaults

By default, SCMP is disabled.

## Command Modes

Global Configuration

## Usage Guidelines

SCMP is a protocol by which an SCE platform communicates with peers such as Cisco routers running ISG to manage subscriber sessions.

SCMP performs the following functions:

- Manages the connection status to all SCMP peer devices
- Encodes and decodes the SCMP messages
- Orders northbound messages per subscriber

When the SCMP is disabled, all subscribers provisioned via this interface are removed.

Authorization: admin

## Examples

The following example illustrates how to disable the SCMP.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#no scmp
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| scmp keepalive-interval | |
| scmp<br>loss-of-sync-timeout | |
| scmp name | |
| scmp reconnect-interval | |
| scmp subscriber<br>force-single-sce | |

## Related Commands

| Command | Description |
|---|---|
| scmp subscriber id append-to-guid | |
| scmp subscriber send-session-start | |
| no subscriber | |
| show scmp | |

# scmp keepalive-interval

Defines interval between keep-alive messages to the SCMP peer device.

**scmp keepalive-interval** *interval*

## Syntax Description

| | |
|---|---|
| **interval** | Interval between keep-alive messages from the SCE platform to the SCMP peer device. |

## Defaults

interval = 5 seconds

## Command Modes

Global Configuration

## Usage Guidelines

The SCE platform sends keep-alive messages to all connected SCMP peer device at the defined interval.

- If a response is received within the defined interval, the keep-alive time-stamp is updated.
- If a response is not received within the defined interval, the connection is assumed to be down; the connection state is changed to not-connected, and the SCMP begins attempts to reconnect.

Authorization: admin

## Examples

The following example illustrates how to define the SCMP keepalive message interval.

```
SCE>enable 10
Password:<cisco>
SCE#configure
SCE(config)#scmp keepalive-interval 10
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show scmp | |

# scmp loss-of-sync-timeout

Defines the loss of sync timeout interval; that is the amount of time between loss of connection between the SCE platform and an SCMP peer device and the loss-of-sync event.

**scmp loss-of-sync-timeout** ***interval***

### Syntax Description

| | |
|---|---|
| **interval** | Loss of sync timeout interval in seconds |

### Defaults

interval = 90 seconds

### Command Modes

Global Configuration

### Usage Guidelines

If the connection between an SCE platform and an SCMP peer device fails, a timer starts. If the configured loss of sync timeout interval is exceeded, the connection is assumed to be not-in-sync, a loss-of-sync event occurs, and the following actions are performed:

- connection status is set to not-in-sync
- all messages are removed from the SCMP buffers
- all subscribers associated with the SCMP peer device are removed

Authorization: admin

### Examples

The following example illustrates how to define loss of sync timeout interval.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)# scmp loss-of-sync-timeout 120
SCE(config)#
```

### Related Commands

| Command | Description |
|---|---|
| show scmp | |
| scmp reconnect-interval | |

# scmp name

Adds an SCMP peer device. Use the **no** form of the command to delete the specified SCMP peer device.

**scmp name** *name* **radius** *host-name* **secret** *secret* **[auth-port** *auth-port#* **acct-port** *acct-port#* **]**

**no scmp name** *name*

## Syntax Description

| | |
|---|---|
| **name** | Name of the SCMP peer device |
| **host-name** | IP address or name of the RADIUS host |
| **secret** | RADIUS shared secret |
| **auth-port#** | authentication port number |
| **acct-port#** | accounting port number |

## Defaults

Default: Ports configuration as specified in RFC #2865 and RFC #2866

Authentication port = 1812

Accounting port = 1813

## Command Modes

Global Configuration

## Usage Guidelines

After defining an SCMP peer device, you must associate it with one or more unmapped anonymous groups (see **subscriber anonymous-group name scmp name** ). This provides the ability to query the SCMP peer regarding unmapped IP addresses in cases where the SCE platform is not updated when the subscriber session has started (see **scmp subscriber send-session-start** ) or in recovery scenarios.

You cannot delete an SCMP device that has anonymous groups assigned to it. Use the **no** form of the **subscriber anonymous-group name scmp name** command to remove all associated anonymous groups before deleting the device.

Authorization: admin

## Examples

The following example illustrates how to define an SCMP peer device.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)# scmp name peer_device1 radius radius1 secret abcdef
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber anonymous-group name scmp name | |
| no subscriber | Use the 'scmp name scmp-name all' option to remove subscribers managed by a specified SCMP peer device |
| ip radius-client retry limit | |
| show scmp | |

# scmp reconnect-interval

Defines the SCMP reconnect interval; that is the amount of time between attempts by the SCE platform to reconnect with an SCMP peer.

**scmp reconnect-interval** ***interval***

## Syntax Description

| | |
|---|---|
| **interval** | Interval between attempts by the SCE platform to reconnect with an SCMP peer, in seconds |

## Defaults

interval = 30 seconds

## Command Modes

Global Configuration

## Usage Guidelines

The SCE platform attempts to reconnect to the SCMP peer device at the defined intervals by sending an establish peering request message. If a valid reply is received, the SCMP connection state for the SCMP peer is changed, and the SCMP performs the required reconnection operations, such as the following:

- Re-querying the peer regarding all subscribers provisioned by this device
- Querying the peer regarding all anonymous subscribers created using the anonymous group assigned to this peer

Authorization: admin

## Examples

The following example illustrates how to define the SCMP reconnect interval.

```
SCE>enable 10
Password:<cisco>
SCE#configure
SCE(config)#scmp reconnect-interval 60
SCE(config)#>
```

## Related Commands

| Command | Description |
|---|---|
| show scmp | |
| scmp<br>loss-of-sync-timeout | |

# scmp subscriber force-single-sce

Configures the SCMP to make the SCMP peer device verify that each subscriber is only provisioned for one SCE platform. This configuration must be enabled in MGSCP deployments. Use the **no** form of the command to disable verifying each subscriber is only provisioned for one SCE platform.

**scmp subscriber force-single-sce**

**no scmp subscriber force-single-sce**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Default is disabled.

## Command Modes

Global Configuration

## Usage Guidelines

This command takes effect only if it is set before the connection with the SCMP peers is established. Use the **no scmp** and **scmp** commands to stop and then restart the SCMP if active connections exist.

Authorization: admin

## Examples

The following example illustrates how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#scmp subscriber force-single-sce
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show scmp | |
| scmp | |

# scmp subscriber id append-to-guid

Defines the subscriber ID structure for subscribers provisioned via the SCMP interface. Use the **no** form of the command to clear the subscriber ID structure setting.

**scmp subscriber id append-to-guid radius-attributes Calling-Station-Id | NAS-Port-Id | User-Name [Calling-Station-Id | NAS-Port-Id | User-Name] [Calling-Station-Id | NAS-Port-Id | User-Name]**

**no scmp subscriber id append-to-guid**

## Syntax Description

This command has no arguments or keywords.

## Defaults

By default, all settings are cleared.

## Command Modes

Global Configuration

## Usage Guidelines

The GUID is a global unique ID assigned to each subscriber session by the SCMP peer device.

The user can define the structure of the subscriber ID via this command by specifying which of the following RADIUS attributes to include and in which order:

- Calling-Station-Id
- NAS-port
- User-Name

The GUID is always appended at the end of the subscriber ID as defined by this command.

The **no** form of the command clears the subscriber ID structure setting, resulting in no other elements being used with the GUID to form the subscriber ID.

You must disable the SCMP interface before executing this command. (Use the command **no scmp** .)

Authorization: admin

## Examples

The following example illustrates how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#no scmp
SCE(config)#scmp subscriber id append-to-guid radius-attributes User-Name
Calling-Station-Id NAS-Port-Id
SCE(config)#scmp
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| scmp | |
| show scmp | |

# scmp subscriber send-session-start

Configures the SCMP to make the SCMP peer device push sessions to the SCE platform immediately when the session is created on the peer device. Use the **no** form of the command to disable pushing of sessions from the SCMP peer device to the SCE platform.

**scmp subscriber send-session-start**

**no scmp subscriber send-session-start**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Default is disabled.

## Command Modes

Global Configuration

## Usage Guidelines

This command takes effect only if it is set before the connection with the SCMP peers is established. Use the **no scmp** and **scmp** commands to stop and then restart the SCMP if active connections exist.

This feature must be disabled in MGSCP deployments.

Authorization: admin

## Examples

The following example illustrates how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#scmp subscriber send-session-start
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show scmp | |

# script capture

Begins the recording of a script. It tracks all commands typed until the **script stop** command is used.

**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

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** command to stop capturing the script.

Authorization: admin

## Examples

The following example shows the script capture for the script1.txt.

```
SCE>enable 10
Password:<cisco>
SCE#script capture script1.txt
SCE#cd log
SCE#cd ..
SCE#pwd
SCE#script stop
```

## Related Commands

| Command | Description |
|---|---|
| script stop | |

# 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:<cisco>
SCE#script print script1.txt cd log
cd ..
pwd
script stop
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| script capture | |
| script run | |

# 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 commands to enable the generation of the real-time subscriber usage RDRs for the specified subscribers.

Following is the contents of the file:

```
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
```

The following show how to run the script:

```
SCE>enable 10
Password:<cisco>
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)#
```

## Related Commands

| Command | Description |
|---|---|
| script capture | |
| script print | |

# script stop

Stops script capture. Used in conjunction with the **script capture** 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:<cisco>
SCE#script capture script1.txt
SCE#cd log
SCE#cd ..
SCE#pwd
SCE#script stop
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| script capture | |

# service-bandwidth-prioritization-mode

Defines the service bandwidth prioritization mode.

**service-bandwidth-prioritization-mode {global | subscriber-internal}**

## Syntax Description

This command has no arguments.

## Defaults

default = subscriber-internal

## Command Modes

Interface Linecard Configuration

## Usage Guidelines

This parameter configures how bandwidth controllers compete for bandwidth by specifying which assurance level (AL) value is used when allocating bandwidth between bandwidth controllers. The AL can either be taken from either of the following:

- **global** prioritization mode — the global controller AL is taken from current bandwidth controller Assurance Level.
- **subscriber-internal** prioritization mode — the global controller AL of each bandwidth controller is taken from the Primary BWC Relative Priority (the party or “total” bandwidth-controller Relative-Priority value)

Authorization: admin

## Examples

The following example shows how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#configure
SCE(config)#interface linecard 0
SCE(config if)#service-bandwidth-prioritization-mode global
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard service-bandwidth-prioritization-mode | |

# 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:<cisco>
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

| Command | Description |
|---|---|
| | enable password |

# 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:<cisco>
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

| Command | Description |
|---|---|
| show rdr-formatter enabled | |
| rdr-formatter category-number | |
| rdr-formatter destination | |

# service telnetd

Enables the 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:<cisco>
SCE#config
SCE(config)#service telnetd
SCE(config)#
```

### EXAMPLE 2:

The following example disables the Telnet daemon.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#no service telnetd
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show telnet status | |
| telnet | |

# 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**

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.

This table 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.

## Syntax Description

| | |
|---|---|
| **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.<br>Maximum length is 20 characters. |
| **admin password** | Admin level password.<br>Character string from 4-100 characters beginning with an alpha character. |
| **root password** | Root level password.<br>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. |

## Command Modes

Privileged EXEC

## Usage Guidelines

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 *Cisco SCE Platform Installation and Configuration Guide* .

Authorization: admin

## Examples

The following example runs the setup utility.

```
SCE>enable 10
Password:<cisco>
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
```

# 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:<cisco>
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

| Command | Description |
|---|---|
| access-list | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the blink status of slot 0.

```
SCE>enable 5
Password:<cisco>
SCE>show blink slot 0
Slot 0 blink status: off
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| blink | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the current system calendar.

```
SCE>enable 5
Password:<cisco>
SCE>show calendar
12:50:03 GMT MON November 13 2005
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| calendar set | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the current system clock.

```
SCE>enable 5
Password:<cisco>
SCE>show clock
12:50:03 GMT MON November 13 2005
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| clock set | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example displays the failure recovery operation mode:

```
SCE>enable 5
Password:<cisco>
SCE>show failure-recovery operation-mode
System Operation mode on failure recovery is: operational
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| failure-recovery operation-mode | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows that SCE2000 is the current hostname.

```
SCE>enable 5
Password:<cisco>
SCE>show hostname
SCE2000
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| hostname | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the domain and hosts configured.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| hostname | |
| ip domain-name | |
| ip name-server | |

# 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.<br>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

User Exec

## 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:<cisco>
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:<cisco>
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:<cisco>
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:<cisco>
SCE>show interface fastethernet 0/4 queue 3
Bandwidth: 100000 Kbps, Burst-size: 8000 bytes
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| interface fastethernet | |

# 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

User Exec

## 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 GigabitEthernet line interface.

The **queue** keyword displays the bandwidth and burst size of a queue in a GigabitEthernet line interface.

Authorization: viewer

## Examples

The following example shows the GigabitEthernet details.

```
SCE>enable 5
Password:<cisco>
SCE>show interface gigabitethernet 0/1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| interface gigabitethernet | |

# show interface global-controller

Displays the rate and assurance level of the specified global controller on the specified interface.

**show interface gigabitethernet** *slot/port* **global-controller** *GC#*

**show interface fastethernet** *slot/port* **global-controller** *GC#*

## Syntax Description

| | |
|---|---|
| **slot/port** | The number of the identified slot and port, as follows:<br>• GigabitEthernet: 0/1, 0/2, 0/3 or 0/4<br>• FastEthernet: 0/1 or 0/2 |
| **CG#** | Number of the global controller |

## Defaults

This command has no default settings.

## Command Modes

Privileged exec

## Usage Guidelines

Use the appropriate form of the command (GigabitEthernet or FastEthernet) for the type of SCE platform you are using.

Authorization: root

## Examples

The following example shows how to use this command.

```
SCE>enable 15
Password:<cisco>
SCE#>show interface gigabitethernet 0/1 global-controller 0
Name: default Configured BW: 100000 Current BW: 0 [Kbps]
SCE#>
```

## Related Commands

| Command | Description |
|---|---|
| global-controller | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to use this command.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| interface linecard | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

Authorization: viewer

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 accelerate-packet-drops
Accelerated packet drops mode is enabled
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| accelerate-packet-drops | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the currently loaded application.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 application
/tffs0/app/eng30102.sli
SCE>
```

# show interface linecard asymmetric-routing-topology

Displays information relating to asymmetric routing topology.

**show interface linecard** ***slot-number*** **asymmetric-routing-topology**

## Syntax Description

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

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Displays the following:

- Current asymmetric routing topology status
- The ratio of TCP unidirectional flows to total TCP flows per traffic processor ( *TCP unidirectional flows ratio* ).

  The unidirectional flows ratio is displayed only for TCP flows, and reflects the way the flows were opened. It is calculated over the period of time since the SCE platform was last reloaded, or since the counters were last reset.

  To reset the asymmetric routing mode counters, see **clear interface linecard asymmetric-routing-topology counters** .

**Note** The SCE platform identifies unidirectional flows by default and regardless of the asymmetric routing mode.

Authorization: viewer

## Examples

The following example illustrates how to use this command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 asymmetric-routing-topology
Asymmetric Routing Topology mode is disabled
TCP Unidirectional flows ratio statistics:
==========================================
Traffic Processor 1 : 2%
Traffic Processor 2 : 7%
Traffic Processor 3 : 0%
The statistics are updated once every two minutes
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| asymmetric-routing-topology enabled | |
| clear interface linecard asymmetric-routing-topology counters | |

# show interface linecard attack-detector

Displays the configuration of the specified attack detector.

**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

User Exec

## 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.

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.

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:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| attack-detector | |
| attack-detector default | |
| attack-detector <number> | |

# 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

User Exec

## 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 this 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:<cisco>
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:<cisco>
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:<cisco>
SCE>show interface linecard 0 attack-filter
subscriber-notification ports
Configured Subscriber notification ports: 100
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| attack-filter | |
| attack-filter force-filter \| dont-filter | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to use this command.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 connection-mode
slot 0 connection mode
Connection mode is inline
slot failure mode is bypass
Redundancy status is standalone
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| connection-mode (SCE 2000 platform) | |
| connection-mode (SCE 1000 platform) | |

# show interface linecard counters

Displays the Linecard Interface hardware counters.

**show interface linecard** ***slot-number*** **counters [bandwidth] [cpu-utilization]**

**The VAS-traffic-bandwidth option is supported on the SCE 2000 platform only**

**show interface linecard** ***slot-number*** **counters VAS-traffic-bandwidth**

## Syntax Description

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

## Defaults

This command has no default settings.

## Command Modes

User Exec

## 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

## Examples

The following example shows the hardware counters for the Linecard Interface.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| clear interface linecard | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of the **show interface linecard duplicate-packets-mode** command:

```
SCE>enable 5
Password:<cisco>
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>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of this command.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 flow-open-mode
Enhanced flow open mode is disabled
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| flow-open-mode |  |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of the **show interface linecard ip-tunnel** command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 ip-tunnel
no IP tunnel
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip tunnel | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of the **show interface linecard L2TP** command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 l2tp
L2TP identify-by port-number 1701
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| l2tp identify-by | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the configured link mode for the Linecard Interface.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| link mode | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the link ID to port ID mapping for the Linecard Interface.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 link-to-port-mappings
Link Id | Upstream Port <Out>| Downstream Port <Out>
------------------------------------------------------------
0  | 0/2  | 0/1
SCE>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the MAC mapping information.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| show interface linecard mac-resolver arp | |
| mac-resolver | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to display the entries in the MAC-resolver ARP database.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 mac-resolver arp
There are no entries in the mac-resolver arp database
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| mac-resolver arp | |

# show interface linecard mpls

Displays the current MPLS tunnelling configuration.

**show interface linecard** ***slot-number*** **mpls**

## Syntax Description

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

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of this command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 mpls
MPLS Traffic-Engineering skip
SCE>
```

# show interface linecard mpls vpn

Displays information about MPLS configuration and current VPN mappings.

**show interface linecard** ***slot-number*** **mpls vpn [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

User Exec

## Usage Guidelines

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

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:<cisco>
SCE>show interface linecard 0 mpls
MPLS/VPN auto-learn mode is enabled.
MPLS based VPNs with subscribers mappings: 2 used out of 2015 max
Total HW MPLS/VPN mappings utilization: 4 used out of 57344 max
MPLS/VPN mappings are divided as follows:
downstream VPN subscriber mappings: 4
upstream VPN subscriber mappings: 0
non-vpn upstream mappings: 0
downstream bypassed VPN mappings: 0
upstream bypassed VPN mappings: 0
SCE>
```

### Related Commands

| Command | Description |
|---|---|
| mpls | |
| clear interface linecard mpls vpn | |
| mpls vpn pe-id | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the link mapping for the Linecard Interface.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 physically-connected-links
slot 0 is connected to link-0 and link-1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| connection-mode (SCE 2000 platform) | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of this command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 service-bandwidth-prioritization-mode
Service bandwidth prioritization mode is: Subscriber Internal
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| service-bandwidth-prioritization-mode | |

# show interface linecard shutdown

Displays the current shutdown state.

**show interface linecard *slot-number* shutdown**

## Syntax Description

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

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the linecard Interface silent mode.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 shutdown
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| shutdown | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the Linecard Interface silent mode.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 silent
off
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| silent | |

# show interface linecard subscriber

Displays subscribers meeting specified criteria.

**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

User Exec

## Usage Guidelines

Use this command to display 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

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:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| subscriber name property | |

# 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

User Exec

## 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:<cisco>
SCE>show interface linecard 0 subscriber aging introduced
Introduced subscriber aging is enabled.
Introduced subscriber aging time is 30 minutes.
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber aging | |

# 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

User Exec

## 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:<cisco>
SCE>show interface linecard 0 subscriber anonymous amount name anon1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| clear interface linecard subscriber | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following is an example of how to display the anonymous subscriber groups.

```
SCE>enable 5
Password:<cisco>
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>
```

# show interface linecard subscriber db counters

Displays the subscriber database counters.

**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

User Exec

## Usage Guidelines

Authorization: viewer

### Counter Definitions

The following sections present definitions of the counters displayed in the output of this command.

**Current values:**

Subscribers: Number of currently existing subscribers (excluding subscribers waiting to be removed).

Introduced subscribers: Number of introduced subscribers.

Anonymous subscribers: Number of anonymous subscribers.

Subscribers with mappings: Number of subscribers with mappings.

Single non-VPN IP mappings: Number of mappings to single IP addresses that are not within a VPN.

non-VPN IP Range mappings: Number of mappings to ranges of IP addresses that are not within a VPN.

IP Range over VPN mappings: Number of mappings to ranges of IP addresses that are within a VPN.

Single IP over VPN mappings: Number of mappings to single IP addresses that are within a VPN.

MPLS/VPN mappings (appears only if MPLS/VPN-based subscribers are enabled): Total number of MPLS/VPN mappings used out of maximum available.

**Note** This value reflects the total number of MPLS/VPN mappings currently used, not only the mappings used by MPLS/VPN-based subscribers. Bypassed VPNs and non-VPN labels also consume MPLS/VPN mappings.

MPLS based VPNs with subscriber mappings (appears only if MPLS/VPN-based subscribers are enabled): Number of VPNs that currently have logged-in subscribers.

VLAN based subscribers (appears only if VLAN-based subscribers are enabled): Number of VLAN based VPNs with subscribers.

Subscribers with open sessions: Number of subscribers with open flows (sessions).

Subscribers with TIR mappings: Number of subscribers with mapping to a TP-IP range.

Sessions mapped to the default subscriber: Number of open flows (sessions) related to the default party.

**Peak values:**

Peak number of subscribers with mappings:

Peak number occurred at:

Peak number cleared at:

**Event counters:**

Subscriber introduced: Number of login calls resulting in adding a subscriber.

Subscriber pulled: Number of pullResponse calls.

Subscriber aged: Number of aged subscribers.

Pull-request notifications sent: Number of pull request notifications sent.

State notifications sent: Number of state change notifications sent to peers.

Logout notifications sent: Number of logout events.

Subscriber mapping TIR contradictions: Number of contradicting configured TIRs that are invalid.

## Examples

The following examples illustrate the output for this command.

### EXAMPLE 1

The following example shows the output for a system with MPLS/VPN-based subscribers enabled:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber db counters
Current values:
===============
Subscribers: 3 used out of 9999 max.
Introduced/Pulled subscribers: 3.
Anonymous subscribers: 0.
Subscribers with mappings: 3 used out of 9999 max.
Single non-VPN IP mappings: 1.
non-VPN IP Range mappings: 1.
IP Range over VPN mappings: 1.
Single IP over VPN mappings: 3.
MPLS/VPN based subscribers are enabled.
MPLS/VPN mappings: 4 used out of 16384 max.
MPLS based VPNs with subscriber mappings: 3 used out of 2015 max
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: 3
Peak number occurred at: 17:55:20 UTC THU June 15 2007
Peak number cleared at: 13:28:49 UTC THU June 15 2007
Event counters:
===============
Subscriber introduced: 2.
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>
```

### EXAMPLE 2

The following example shows partial output for a system with VLAN-based subscribers enabled:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber db counters
Current values:
===============
Subscribers: 3 used out of 9999 max.
Introduced/Pulled subscribers: 3.
Anonymous subscribers: 0.
Subscribers with mappings: 3 used out of 9999 max.
Single non-VPN IP mappings: 1.
non-VPN IP Range mappings: 1.
IP Range over VPN mappings: 1.
Single IP over VPN mappings: 3.
VLAN based VPNs with subscribers: 2 used out of 2047
Subscribers with open sessions: 0.
Subscribers with TIR mappings: 0.
Sessions mapped to the default subscriber: 0.
```

## Related Commands

| Command | Description |
|---|---|
| clear interface linecard subscriber db counters | |

# show interface linecard subscriber mapping

Displays subscribers whose mapping meets the specified criteria.

**show interface linecard** *slot-number* **subscriber mapping [IP** *ipaddress/range* **] [[amount] included-in IP** *iprange* **[VPN***vpn-name* **]] [MPLS-VPN PE-ID** *PE-id* **BGP-label** *BGP-label* **] [VLAN-id** *vlan-id* **] [none]**

## Syntax Description

| | |
|---|---|
| **slot-number** | The number of the identified slot. Enter a value of 0. |
| **ip-range** | Specified range of IP addresses. |
| **vpn-name** | Name of VPN in which to search for the IP address. Displays a subscriber with a private IP mapping. |
| **vlan-id** | Specified VLAN tag. |
| **PE-id** | Loopback IP address of the relevant PE router (must also specify the **BGP-label** ) |
| **BGP-label** | BGP label of the MPLS/VPN to search for (must also specify the **MPLS-VPN PE-ID** ) |

## Defaults

BGP label of the MPLS/VPN to search for (must also specify the MPLS-VPN PE-ID)

## Command Modes

User Exec

## Usage Guidelines

Use this command to display subscribers whose mapping meets one of the following specified criteria:

- Matches a specified IP address or range of IP addresses (exact match of the specified range)
- Intersects a specified IP range (not necessarily an exact match of the specified range, but with IP addresses that are within the specified range).

  Use the **amount** keyword to display the number of subscribers meeting the criteria rather than listing actual subscriber names.
- Matches a specified VLAN tag (This option is provided for backwards compatibility and has certain restrictions. See **Note** below)
- Matches a specified MPLS/VPN mapping (This option is provided for backwards compatibility and has certain restrictions. See **Note** below)
- Has no mapping

When specifying an MPLS/VPN mapping, you must specify both the **MPLS-VPN PE-ID** and the **BGP-label** .

Note the specific results of the following options:

- VLAN—if the VLAN tag is configured as a single subscriber (mapped to 0.0.0.0/0 on the VPN that is mapped to the specified VLAN tag) this option displays that subscriber.
- MPLS-VPN PE-ID BGP-label—if the MPLS mapping is configured as a single subscriber (mapped to 0.0.0.0/0 on the VPN that is mapped to the specified MPLS) this option displays that subscriber.

- included-in IP (no VPN specified)—matches non-VPN mappings only
- included-in IP VPN—matches private-IP mappings

**Note** The VLAN and MPLS-VPN PE-ID BGP-label options are provided for backward compatibility. These options require that the entire VLAN or MPLS/VPN be defined as a single subscriber with an IP address of 0.0.0.0/0@vpn, which corresponds to the MPLS/VPN and VLAN subscriber definition of pre-3.1.5 versions.

Authorization: viewer

## Examples

The following examples illustrate how to use this command.

### EXAMPLE 1

The following example lists the number of subscribers with no mapping.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber mapping amount none
Subscribers with no mappings:
DefaultParty
Total 1 subscribers listed.
SCE>
```

### EXAMPLE 2

The following example lists the subscribers that have IP mappings in the specified range in the specified VPN.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber mapping included-in IP 0.0.0.0/0 VPN Vpn1
Subscribers with IP mappings included in IP range '0.0.0.0/0@Vpn1':
Subscriber 'debugSub10', mapping '10.1.4.146/32@Vpn1'.
Subscriber 'debugSub10', mapping '18.0.0.0/16@Vpn1'.
Subscriber 'debugSub10', mapping '10.1.4.145/32@Vpn1'.
Total 1 subscribers found, with 3 matching mappings.
SCE>
```

### EXAMPLE 3

The following example displays the number of VPN subscribers within the specified IP range.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber mapping amount included-in IP 0.0.0.0/0 VPN Vpn1
There are 1 subscribers with 3 IP mappings included in IP range '0.0.0.0/0@Vpn1'
SCE>
```

# show interface linecard subscriber name

Displays information about a specified subscriber.

**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

User Exec

## Usage Guidelines

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.

Authorization: viewer

## Examples

The following is an example of how to list the mappings for the specified subscriber.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber name gold123 mappings
Subscriber 'gold123' mappings:
IP 10.0.0.0 - Expiration (sec): Unlimited
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber name property | |

# 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 Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following is an example of how to display the subscriber properties.

```
SCE>enable 5
Password:<cisco>
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>
```

# 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

User Exec

## 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:<cisco>
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:<cisco>
SCE>show interface linecard 0 subscriber subscriber sm-connection-failure timeout
SM SCE link failure timeout is: 90
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber sm-connection-failure | |

# 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 Modes

User Exec

## 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
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>
Password:<cisco>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following is an example of how to display the traffic processor mapping statistics.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 subscriber tp-mappings statistics
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber tp-mappings | |

# 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

User Exec

## 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:<cisco>
SCE>show interface linecard 0 subscriber tp-ip-range all
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber tp-ip-range | |

# 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

User Exec

## 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 how to use this command:

### EXAMPLE 1:

Following is an example of how to display all existing mappings for TIR CMTS1.

```
SCE>enable 5
Password:<cisco>
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:<cisco>
SCE>show interface linecard 0 subscriber amount mapping included-in tp-ip-range CMTS1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| subscriber tp-ip-range | |

# show interface linecard tos-marking

Displays the current TOS marking state.

**show interface linecard** ***slot-number*** **tos-marking**

## Syntax Description

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

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Use this command to display the current TOS marking state, including:

- translation table
- marking mode per interface (enable/disable)

Authorization: viewer

## Examples

The following example shows a sample of the output from this command.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 tos-marking
ToS Translation Table
=====================
| tos-id | tos-value (DSCP) |
|--------|------------------|
| 1 | 00 (0x00) |
| 2 | 00 (0x00) |
| 3 | 00 (0x00) |
| 4 | 00 (0x00) |
| 5 | 00 (0x00) |
| 6 | 00 (0x00) |
| 7 | 00 (0x00) |
ToS Marking state by egress interface
=====================================
| Interface | State |
|------------|----------|
| 1 | Disabled |
| 2 | Disabled |
| 3 | Disabled |
| 4 | Disabled |
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| tos-marking enabled | |
| tos-marking clear-table | |
| tos-marking set-table-entry | |

# 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

User Exec

## 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:<cisco>
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

| Command | Description |
|---|---|
| traffic-counter | |
| clear interface linecard traffic-counter | |

# 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

User Exec

## Usage Guidelines

Use the **all** keyword to display all traffic counter rules.

Use the **tunnel-id-mode** keyword to display all rules defined in *tunnel-id-mode* .

Authorization: viewer

## Examples

The following example displays traffic rule information.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 traffic-rule name Rule1
0 rules listed out of 127 available.
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| traffic-rule | |

# show interface linecard vas-traffic-forwarding

Displays tnformation regarding VAS configuration and operational status summary.

**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

User Exec

## Usage Guidelines

Use this command to display the following for VAS traffic-forwarding information:

- 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

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:<cisco>
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:<cisco>
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:<cisco>
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** .)

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id health-check | |
| vas-traffic-forwarding vas server-group | |
| vas-traffic-forwarding vas server-group failure | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding server-id vlan | |
| vas-traffic-forwarding vas traffic-link | |
| show interface linecard subscriber name | |
| show interface linecard counters | |
| clear interface linecard vas-traffic-forwarding vas counters health-check | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the VLAN configuration.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 vlan
VLAN symmetric skip
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| vlan | |

# 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

User Exec

## Usage Guidelines

Authorization: Viewer

## Examples

The following example shows the vlan translation configuration.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 vlan translation
vlan translation constant: increment 20
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| vlan translation | |

# show interface linecard vpn

Displays information regarding currently logged-in VPNs.

**show interface linecard** ***slot-number*** **VPN {name** ***vpn-name*** **| all-names [automatic]}**

## Syntax Description

| | |
|---|---|
| **slot-number** | The number of the identified slot. Enter a value of 0. |
| **vpn-name** | The name of the VPN to show. |

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Use the **name** option to specify a specific currently logged-in VPN for which to display the details.

Use the **all-names** keyword to display the names of all VPNs that are currently logged into the system.

Use the **automatic** keyword with the **all-names** option to display the names of all VPNs that were created automatically by the SCE platform.

Authorization: viewer

## Examples

The following examples illustrate how to use this command.

### EXAMPLE 1

The following example displays names of all currently logged in VPNs.

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 VPN all-names
There are 2 VPNs in the data-base:
VPN1
VPN2
SCE>
```

### EXAMPLE 2

The following example illustrates the output of this command for an MPLS-based VPN:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 VPN name Vpn1
VPN name: Vpn1
PE-ID = 1.0.0.1 Mpls Label = 20
PE-ID = 1.0.0.1 Mpls Label = 30
=======>Total Downstream Mappings: 2
Upstream MPLS Mappings:
=======>Total Upstream Mappings: 0
Number of subscriber mappings: 0
Explicitly introduced VPN
SCE>
```

### EXAMPLE 3

The following example illustrates the output of this command for an empty VPN:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 VPN name Vpn2
VPN name: Vpn2
VPN has no mappings
Number of subscriber mappings: 0
Explicitly introduced VPN
SCE>
```

### EXAMPLE 4

The following example illustrates the output of this command for a VLAN-based VPN:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 VPN name Vpn3
VPN name: Vpn3
VLAN: 2
Number of subscriber mappings: 0
Explicitly introduced VPN
SCE>
```

### EXAMPLE 5

The following example illustrates the output of this command for an automatically created VLAN VPN:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 VPN name Vpn2
VPN name: Vpn2
VLAN: 2
Number of subscriber mappings: 1
Automatically created VPN
SCE>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates how to use this command:

```
SCE>enable 5
Password:<cisco>
SCE>show interface linecard 0 wap
WAP handling is disabled
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| wap | |

# show interface mng

Displays information regarding the specified management interface.

**show interface mng {0/1 | 0/2} [auto-fail-over|duplex|ip address|speed]**

## Syntax Description

This command has no arguments.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Use this command to display the following information for the specified management interface:

- speed
- duplex
- IP address
- auto-fail-over (SCE 2000 platform only)

If no keyword is specified, all information is displayed.

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.

Authorization: viewer

## Examples

This example shows how to display all information for Management port 1.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| interface mng | |

# show inventory

Displays UDI information for the SCE platform.

**show inventory**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Use this command to display the following UDI information for the SCE platform:

- Device name
- Description
- Product identifier
- Version identifier
- Serial number

Authorization: viewer

## Examples

The following example displays the UDI information for the SCE platform.

```
SCE>enable 5
Password:<cisco>
SCE>show inventory
NAME: "Chassis", DESCR: "Cisco SCE 2020 Service Control Engine, Multi Mode, 4-port GE"
PID: SCE2020-4XGBE-MM , VID: V01, SN: CAT093604K3
SCE>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the IP access class mapping.

```
SCE>enable 5
Password:<cisco>
SCE>show ip access-class
IP layer is using access-list # 1.
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip access-class | |

# show ip advertising

Shows the status of IP advertising, the configured destination and the configured interval.

**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

User Exec

## 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:<cisco>
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

| Command | Description |
|---|---|
| ip advertising |  |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example displays the default gateway.

```
SCE>enable 5
Password:<cisco>
SCE>show ip default-gateway
Default gateway: 10.1.1.1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip default-gateway | |

# show ip filter

Displays information regarding the management interface IP filtering.

**show ip filter**

### Syntax Description

This command has no arguments or keywords.

### Defaults

This command has no default settings.

### Command Modes

User Exec

### Usage Guidelines

Use this command to display 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)

Authorization: viewer

### Examples

The following command shows how to display information for management interface IP filtering

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| ip filter fragment | |
| ip filter moniter | |

# show ip radius-client

Displays the RADIUS client general configuration.

**show ip radius-client**

## 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 illustrates how to use this command.

```
SCE>enable 10
Password:<cisco>
SCE#show ip radius-client
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip radius-client retry limit | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following examples illustrate the use of this command.

### EXAMPLE 1:

The following example shows the default gateway.

```
SCE>enable 5
Password:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| ip route | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the configuration of the RPC adapter.

```
SCE>enable 5
Password:<cisco>
SCE>show ip rpc-adapter
RPC Server is OFFLINE
RPC Server port is 14374
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| ip rpc-adapter | |
| ip rpc-adapter port | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to retrieve the current SSH status.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| ip ssh | |

# show jvm

Displays information regarding the built in Java machine (jvm) configuration options.

**show jvm input-string [cold-start|warm-start|all]**

**show jvm class-path**

## Syntax Description

| | |
|---|---|
| | Specify the input string to display:<br>• cold-start<br>• warm-start<br>• all |

## Defaults

By default, the warm-start jvm input string is displayed.

## Command Modes

Privileged exec

## Usage Guidelines

The following options are available for display:

- jvm input string — specify either cold start input string, warm start input string or all. If no keyword is included, the warm-start jvm input string is displayed.
- jvm class-path — displays the path for searching for java classes

Authorization: root

## Examples

The following example shows how to use this command.

```
SCE>enable 15
Password:<cisco>
SCE#>show jvm input-string
JVM warm-start input string = -Dcom.pcube.WarmStart StartSE
SCE#>
```

## Related Commands

| Command | Description |
|---|---|
| jvm input-string | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the access list configured for telnet lines.

```
SCE>enable 5
Password:<cisco>
SCE>show line vty access-class in
Telnet server is using access-list # 1.
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| line vty | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of this command.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| clear logger | |
| logger get user-log file-name | |
| more user-log | |

# 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 | user-file-log[counters|max-file-size|status|nv-counters]}**

## Syntax Description

See "Usage Guidelines".

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Specify the desired logger device:

- **Line-Attack-File-Log** : displays the following information:
  - Status
  - Maximum file size
- **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:<cisco>
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 User-File-Log counters.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| logger device | |
| clear logger | |

# show management-agent

Displays information regarding the management agent.

**show management-agent**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Use this command to display the following information for the management agent:

- status (enabled or disabled)
- access control list number assigned

Authorization: viewer

## Examples

The following example shows how to display the information for the management-agent.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| management-agent access-class | |
| service management-agent | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to display application file information.

```
SCE>enable 5
Password:<cisco>
SCE>show pqi file myfile.pqi info
application: sm
description: SCE 1000 sm
target SCE : SCE 1000
module names: sm20001.pm0
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| pqi install file | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows how to find out what pqi file is installed.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| pqi rollback file | |
| pqi uninstall file | |

# show rdr-formatter

Displays the RDR formatter configuration.

**show rdr-formatter**

## Syntax Description

This command has no arguments or keywords.

## Command Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the configuration of the RDR formatter.

```
SCE>enable 5
Password:<cisco>
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: queued: 0 , sent:4460807, thrown: 0, format-mismatch:0
UM: queued: 0 , sent: 0, thrown: 0
Logger: queued: 0 , sent: 39, thrown: 0
Last time these counters were cleared: 20:23:05 IST WED March 14 2007
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| rdr-formatter destination | |
| service rdr-formatter | |

# show rdr-formatter connection-status

Displays information regarding the RDR formatter connections.

**show rdr-formatter connection-status**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Displays the following information regarding the RDR formatter connections:

- main connection
- status: status and forwarding mode connection table with the following information for each destination:
  - port
  - status
  - priority

Authorization: viewer

## Examples

The following example shows the RDR formatter connection status.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| show rdr-formatter | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |
| show rdr-formatter protocol NetflowV9 dscp | |
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# show rdr-formatter counters

Displays 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the RDR-formatter counters.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter counters
RDR: queued: 0 , sent:4460807, thrown: 0, format-mismatch:0
UM: queued: 0 , sent: 0, thrown: 0
Logger: queued: 0 , sent: 39, thrown: 0
Last time these counters were cleared: 20:23:05 IST WED March 14 2007
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |
| show rdr-formatter protocol NetflowV9 dscp | |

| Command | Description |
|---|---|
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# show rdr-formatter destination

Displays the RDR formatter destinations, including protocol and transport type.

**show rdr-formatter destination**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the configured RDRv1 formatter destinations.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter destination
Destination: 10.56.201.50
Port: 33000
Protocol: RDRv1
Destination: 10.56.204.7
Port: 33000
Protocol: NetflowV9
Destination: 10.56.204.10
Port: 33000
Protocol: RDRv1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| rdr-formatter destination | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |

| Command | Description |
|---|---|
| show rdr-formatter protocol NetflowV9 dscp | |
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows that the RDR formatter is enabled.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter enabled Status: enabled
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| service rdr-formatter | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the RDR formatter forwarding-mode.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter forwarding-mode
Forwarding mode: redundancy
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| rdr-formatter forwarding-mode | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter history-size | |
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the size of the RDR formatter history buffer.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter history-size
History buffer size: 16000 bytes
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| rdr-formatter history-size | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter rdr-mapping | |
| show rdr-formatter statistics | |

# show rdr-formatter protocol NetflowV9 dscp

Displays the NetflowV9 assigned DSCP value.

**show rdr-formatter protocol NetflowV9 dscp**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example illustrates the use of this command.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter protocol NetflowV9 dscp
Configured DSCP for Netflow traffic: 0
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| rdr-formatter protocol NetflowV9 dscp | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter statistics | |

# 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

User Exec

## 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:<cisco>
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

| Command | Description |
|---|---|
| rdr-formatter rdr-mapping | |
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |
| show rdr-formatter statistics | |

# show rdr-formatter statistics

Displays 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

User Exec

## Usage Guidelines

Use this command to display the following RDR formatter statistics:

- Rates and counters per connection
- Protocol and transport attributes for each connection
- For Netflow destinations only:
  - Number of templates sent
  - Number of records sent

Authorization: viewer

## Examples

The following example shows the current RDR statistics.

```
SCE>enable 5
Password:<cisco>
SCE>show rdr-formatter statistics
RDR-formatter statistics:
=========================
Category 1:
sent:  1794517
in-queue:  0
thrown:  0
format-mismatch: 0
unsupported-tags: 1701243
rate:  2 RDRs per second
max-rate:  64 RDRs per second
Category 2:
sent:  12040436
in-queue:  0
thrown:  0
format-mismatch: 0
unsupported-tags: 0
rate:  12 RDRs per second
max-rate:  453 RDRs per second
Category 3:
sent:  0
in-queue:  0
thrown:  0
```

```
format-mismatch: 0
unsupported-tags: 0
rate:  0 RDRs per second
max-rate:  0 RDRs per second
Category 4:
sent:  0
in-queue:  0
thrown:  0
format-mismatch: 0
unsupported-tags: 0
rate:  0 RDRs per second
max-rate:  0 RDRs per second
Destination: 10.56.201.50 Port: 33000 Status: up
Sent: 13835366
Rate: 211 Max: 679
Last connection establishment: 17 hours, 5 minutes, 14 seconds
Destination: 10.56.204.7 Port: 33000 Status: up
Sent: 12134054
Rate: 183 Max: 595
Sent Templates:  13732
Sent Data Records: 12134054
Refresh Timeout (Sec): 5
Last connection establishment: 17 hours, 5 minutes, 15 seconds
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| show rdr-formatter | |
| show rdr-formatter connection-status | |
| show rdr-formatter counters | |
| show rdr-formatter destination | |
| show rdr-formatter enabled | |
| show rdr-formatter forwarding-mode | |
| show rdr-formatter history-size | |
| show rdr-formatter protocol NetflowV9 dscp | |
| show rdr-formatter rdr-mapping | |

# show running-config

Shows the current configuration.

**show 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

Use the all data switch 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:<cisco>
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

| Command | Description |
|---|---|
| more | |

# show scmp

Displays the SCMP (ISG) general configuration and status.

**show scmp [all | name *name* ] [counters]**

## Syntax Description

| | |
|---|---|
| **name** | Display configuration or counters for the specified destination (SCMP peer device). |

## Defaults

This command has no default settings.

## Command Modes

Privileged Exec

## Usage Guidelines

You can display configuration for a specified destination by using the name argument. Use the **all** keyword to display configuration for all destinations.

Use the **counters** keyword to display the statistics per destination. For this option, you must either specify the desired destination, using the **name** argument, or use the **all** keyword to display statistics for all destinations.

Authorization: admin

## Examples

The following example illustrates how to display the SCMP counters for a specified destination.

```
SCE>enable 10
Password:<cisco>
SCE#show scmp name scmp_peer1 counters
SCMP Connection 'scmp_peer1' counters:
Total messages sent:  72
Total messages received: 72
Establish requests sent: 1
Establish replies received: 1
Accounting requests sent: 20
Accounting replies received: 20
Subscriber queries sent: 0
Subscriber query response recv: 0
Request retry exceeded:  0
Requests replied with errors: 0
Subscriber requests received: 50
Subscriber responses sent: 50
Failed Requests:  0
Keep-alive sent:  1
Keep-alive received:  1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| clear scmp name counters | |
| scmp | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the SNMP server configuration and statistics.

```
SCE>enable 5
Password:<cisco>
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:
------------
Trap host: 10.1.1.205, community: public, version: SNMPv2c
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

| Command | Description |
|---|---|
| show snmp community | |
| show snmp contact | |
| show snmp enabled | |
| show snmp host | |
| show snmp location | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the SNMP manager communities.

```
SCE>enable 5
Password:<cisco>
SCE>show snmp community
Community: public, Access Authorization: RO,
Access List Index: 1
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| snmp-servercommunity | |
| show snmp | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the system contact.

```
SCE>enable 5
Password:<cisco>
SCE>show snmp contact
Contact: Brenda@mycompany.com
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| snmp-server contact | |
| show snmp | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the SNMP server enabled status.

```
SCE>enable 5
Password:<cisco>
SCE>show snmp enabled
SNMP server status: Enabled
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| snmp-server | |
| show snmp | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the destination hosts for SNMP traps.

```
SCE>enable 5
Password:<cisco>
SCE>show snmp host
Trap host: 10.1.1.205, community: public, version: SNMPv2c
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| snmp-server host | |
| show snmp | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the system location.

```
SCE>enable 5
Password:<cisco>
SCE>show snmp location
Location: London_Office
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| snmp-server location | |
| show snmp | |

# show snmp mib

Displays MIB variables.

**show snmp mib** ***mib variables***

## Syntax Description

| | |
|---|---|
| **mib** | Name of MIB to display.<br>**MIB-II**<br>**pcube-SE-MIB** |
| **variables** | Name of group to display.<br>**MIB-II** : Use one of the following values: AT, ICMP, interfaces, IP, SNMP, system, TCP or UDP.<br>**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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the MIB-2 system group.

```
SCE>enable 5
Password:<cisco>
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>
```

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the SNMP server traps status.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| snmp-server enable traps | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows statistics from the SNTP clients.

```
SCE>enable 5
Password:<cisco>
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

| Command | Description |
|---|---|
| sntp server | |
| sntp broadcast client | |
| sntp update-interval | |

# 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**

## 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 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 (use the **copy running-config startup-config** command to save the configuration).

Authorization: admin

## Examples

The following example shows a sample output.

```
SCE>enable 10
Password:<cisco>
SCE#show 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 *<cisco>*
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

| Command | Description |
|---|---|
| more | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the system operation status:

```
SCE>enable 5
Password:<cisco>
SCE>show system operation-status
System Operation status is Operational
SCE>
```

# 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

User Exec

### Usage Guidelines

Authorization: viewer

### Examples

The following example shows the system uptime for the SCE platform.

```
SCE>enable 5
Password:<cisco>
SCE>show system-uptime
SCE uptime is 4 days, 13 hours, 21 minutes, 37 seconds
SCE>
```

# show tacacs

Displays statistics for the TACACS+ servers.

**show tacacs [all]**

## Syntax Description

This command has no arguments or keywords.

## Defaults

This command has no default settings.

## Command Modes

User Exec

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.

## Usage Guidelines

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.

## Examples

The following examples illustrate how to use this command.

### EXAMPLE 1

This example shows how to display statistics for all TACACS+ servers.

```
SCE>enable 5
Password:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| tacacs-server host | |
| tacacs-server key | |
| tacacs-server timeout | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows that there is one active Telnet session.

```
SCE>enable 5
Password:<cisco>
SCE>show telnet sessions
There is 1 active telnet session:
Index | Source
================
0 | 10.1.1.201
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| telnet | |
| show telnet status | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows that the telnet daemon is currently enabled.

```
SCE>enable 5
Password:<cisco>
SCE>show telnet status
Telnet daemon is enabled.
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| service telnetd | |
| show telnet sessions | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the time zone configured by the user.

```
SCE>enable 5
Password:<cisco>
SCE>show timezone
Time zone: ISR minutes offset from UTC: 120
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| clock timezone | |

# 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:<cisco>
SCE# show users
User: name = Joe
privilege level = 10
password = joespwd
is password encrypted = no
SCE#
```

## Related Commands

| Command | Description |
|---|---|
| username | |
| username privilege | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the current version information of the SCE platform.

```
SCE>enable 5
Password:<cisco>
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 :
optic mode : MM
Product S/N : CAT093604K3
Product ID : SCE2020-4XGBE-MM
Version ID : V01
Deviation :
Part number : 800-26601-01
Revision : B0
Software revision: G001
LineCard S/ : CAT09370L1Q
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, 2006 at 21:25:21
```

```
Compiler version: SANc v3.0.5 Build 32 gcc_codelets=true built on: Tue November 12 2006
09:51:57 AM.;SME plugin v1.1
Default capacity option used.
Logger status: Enabled
Platform: SCE 2000 - 4xGBE
Management agent interface version: SCE Agent 3.0.0 Build 18
Software package file: ftp://vk:vk@10.1.8.22/P:/EMB/LatestVersion/3.0.5/se1000.pkg
SCE2000 uptime is 21 minutes, 37 seconds
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| show version all | |
| show version software | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows version and configuration information for all the system components.

```
SCE>enable 5
Password:<cisco>
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 : MM
Product S/N : CAT093604K3
Product ID : SCE2020-4XGBE-MM
Version ID : V01
Deviation :
Part number : 800-26601-01
Revision : B0
Software revision : G001
LineCard S/N : CAT09370L1Q
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, 2006 at 21:25:21
Compiler version: SANc v3.0.5 Build 32 gcc_codelets=true built on: Tue November 12 2006
```

```
09:51:57 AM.;SME plugin v1.1
Default capacity option used.
Logger status: Enabled
Platform: SCE2000 - 4xGBE
Management agent interface version: SCE Agent 3.0.5 Build 18
Software package file: ftp://vk:vk@10.1.8.22/P:/EMB/LatestVersion/3.0.5/se1000.pkg
SCE2000 uptime is 21 minutes, 37 secondsCurrent configuration:
======================
#This is a general configuration file (running-config).
#Created on 10:14:59 UTC TUE November 12 2006
.
interface LineCard 0
connection-mode active
no silent
.
.
Software package file: Not available
Unified management package file: /tffs0/images/um13012.pkg
SCE>
```

### Related Commands

| Command | Description |
|---|---|
| show version | |
| show version software | |

# 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

User Exec

## Usage Guidelines

Authorization: viewer

## Examples

The following example shows the current software version.

```
SCE>enable 5
Password:<cisco>
SCE>show version software
Software version is: Version 3.0.5 Build 240
SCE>
```

## Related Commands

| Command | Description |
|---|---|
| show version | |
| show version all | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#silent
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard silent | |

# 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:<cisco>
SCE#config
SCE(config)#no snmp-server
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| snmp-server community | |
| show snmp | |

# 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:<cisco>
SCE#config
SCE(config)#snmp-server community public ro 1
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| access-list | |
| show access-lists | |

# 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:<cisco>
SCE#config
SCE(config)#snmp-server contact Brenda@MyCompany.com
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show snmp contact | |

# 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.<br>Setting = **Authentication** |
| **enterprise trap name** | Optional parameter used with the enterprise parameter to control a specific enterprise trap.<br>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:<cisco>
SCE#config
SCE(config)#snmp-server enable traps
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show snmp traps | |

# 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** | SNMP version 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:<cisco>
SCE#config
SCE(config)#snmp-server host 10.1.1.205 version 2c public
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show snmp host | |

# 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:<cisco>
SCE#config
SCE(config)#snmp-server location London_Office
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show snmp location | |

# 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:<cisco>
SCE#config
SCE(config)#sntp broadcast client
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show sntp | |
| sntp server | |
| sntp update-interval | |

# 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:<cisco>
SCE#config
SCE(config)#sntp server 128.182.58.100
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show sntp | |
| sntp broadcast client | |
| sntp update-interval | |

# sntp update-interval

Defines the interval (in seconds) between SNTP uni-cast update queries.

**sntp update-interval** *interval*

## Syntax Description

| | |
|---|---|
| **interval** | interval |

## 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:<cisco>
SCE#config
SCE(config)#sntp update-interval 100
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show sntp | |
| sntp server | |
| sntp broadcast client | |

# 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** ) 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface mng 0/1
SCE(config if)#speed auto
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| duplex | |
| interface fastethernet | |
| interface mng | |
| show interface mng | |
| show interface fastethernet | |

# 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.

**Note** Introduced subscriber aging is not supported when using VPN-based subscribers.

Authorization: admin

## Examples

The following example enables subscriber aging for anonymous subscribers with a timeout period of 10 minutes.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#subscriber aging anonymous timeout 10
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber aging | |

# 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:<cisco>
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

| Command | Description |
|---|---|
| subscriber anonymous-group import csv-file | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# subscriber anonymous-group import csv-file subscribers_groups.csv
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber anonymous-group export csv-file | |

# subscriber anonymous-group name scmp name

Assigns the anonymous group to the specified SCMP destination. Use the **no** form of the command to remove the anonymous group from the specified SCMP destination.

**subscriber anonymous-group name** *group-name* **[IP-range** *range* **template** *template* **] scmp name** *name*

**no subscriber anonymous-group name** *group-name* **[IP-range** *range* **template** *template* **] scmp name** *name*

## Syntax Description

| | |
|---|---|
| **group-name** | Name of the anonymous group |
| **range** | IP range of the anonymous group (optional) |
| **template** | Group template for the anonymous group (optional) |
| **name** | Name of the SCMP peer device |

## Defaults

This command has no default settings.

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

An anonymous group is a specified IP range, possibly assigned a subscriber template. This command defines the specified anonymous group to be the IP range managed by the SCMP peer device.

Subscribers for this anonymous group are generated when subscriber traffic from the SCMP peer device is detected. If a subscriber template has been assigned to the group, the anonymous subscribers generated have properties as defined by that template. If no subscriber template has been assigned, the default template is used.

You must define the specified SCMP peer device before assigning the anonymous group (see **scmp name** ).

Authorization: admin

## Examples

The following example illustrates how to assign an anonymous group to an SCMP device.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#scmp name peer_device1 radius radius1 secret abcdef
SCE(config)#interface linecard 0
SCE(config if)#subscriber anonymous-group name anon_group IP-range 192.54.65.0/8 template
2 scmp name peer_device1
SCE(config if)#
```

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# subscriber export csv-file gold_subscribers_04072003.csv
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber import csv-file | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# subscriber import csv-file gold_subscribers.csv
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber export csv-file | |

# 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** 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#subscriber name jane_smith property monitor value 0
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber name | |

# 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 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<br>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 examples illustrate how to use this command

### EXAMPLE 1

The following example configures forced failure of the SCE platform in case of failure of the SM.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE (config if)#subscriber sm-connection-failure action force-failure
SCE (config if)#
```

### EXAMPLE 2

The following example sets the timeout interval to 120 seconds.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE (config if)#subscriber sm-connection-failure timeout 120
SCE (config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber sm-connection-failure | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# subscriber template export csv-file gold0507.csv
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber template import csv-file | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# subscriber template import csv-file gold0507.csv
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| subscriber template export csv-file | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#subscriber tp-mappings max-tp-ip-ranges 500
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard subscriber mapping included-in tp-ip-range | |
| show interface linecard subscriber tp-mappings statistics | |
| subscriber tp-ip-range name ip-range target-tp | |
| subscriber tp-ip-range {import \| export} csv-file | |

# 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** *ip-range* **target-tp** *target-tp* **[remove-subscriber-mapping]**

**no subscriber tp-ip-range [name** *name* **| all] [remove-subscriber-mapping]**

## Syntax Description

| | |
|---|---|
| **TP-IP-range nam** | 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:<cisco>
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

| Command | Description |
|---|---|
| show interface linecard subscriber tp-ip-range | |
| show interface linecard subscriber tp-mappings statistics | |

## Related Commands

| Command | Description |
|---|---|
| subscriber tp-mappings | |
| subscriber tp-ip-range {import \| export} csv-file | |

# subscriber tp-ip-range {import | export} csv-file

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* **[remove-subscriber-mapping]**

## 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

Following is the format of the csv file:

```
range name, ip-address/mask-length, target-TP
```

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:<cisco>
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

| Command | Description |
|---|---|
| show interface linecard subscriber TP-IP-range | |
| show interface linecard subscriber TP-mappings statistics | |

| Command | Description |
|---|---|
| subscriber TP-mappings | |
| subscriber TP-IP-range name IP-range target-TP | |

# 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** )

Similarly, the user can configure a global default key that will be applied to all TACACS+ server hosts. (See **tacacs-server key** )

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:<cisco>
SCE#config
SCE(config)#tacacs-server host server1 timeout 8
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| tacacs-server key | |
| tacacs-server timeout | |
| show tacacs | |

# 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:<cisco>
SCE#config
SCE(config)#tacacs-server key ABCDE
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| tacacs-server host | |
| tacacs-server timeout | |
| show tacacs | |

# 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:<cisco>
SCE#config
product>(config)#tacacs-server timeout 10
product>(config)#
```

## Related Commands

| Command | Description |
|---|---|
| tacacs-server host | |
| tacacs-server key | |
| show tacacs | |

# 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:<cisco>
SCE#telnet 10.1.5.120
connecting to 10.1.5.120:23...
```

## Related Commands

| Command | Description |
|---|---|
| show telnet sessions | |
| service telnetd | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config-line)#timeout 45
SCE(config-line)#
```

## Related Commands

| Command | Description |
|---|---|
| telnet | |

# 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:<cisco>
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

| Command | Description |
|---|---|
| show ip route | |

# 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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no traffic-counter all
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard traffic-counter | |
| clear interface linecard traffic-counter | |

# traffic-rule

Defines a new traffic rule. Use the **no** form of the command to delete an existing traffic rule.

**traffic-rule name** *name* **ip addresses** *ip-addresses* **protocol** *protocol* **[tunnel-id** *tunnel-id* **] direction** *direction* **traffic-counter name** *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 Usage Guidelines) |
| **protocol** | Any one of the following protocols:<br>**TCP/UDP/ICMP/IGRP/EIGRP/IS-IS/OSPF/Other** |
| **Tunnel-id** | Tunnel ID, <tunnel Id specification>(see Usage Guidelines) |
| **direction** | upstream/downstream/both |
| **traffic-counter** | name of traffic counter/none |
| **action** | action to be performed on flows that meet the rule criteria (see Usage Guidelines) |

## 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 an 8-bit Hex value range, in the format '(HEX) *Tunnel-id* ' or '(HEX) *MinTunnelId* :(HEX) *MaxTunnelId* ', which reflects the lower eight bits of the VLAN tag

  Tunnel-ID-based rules can only be used in " *VLAN symmetric classify* " mode (see the **vlan** command), and only when *tunnel id* mode is enabled.

**traffic-counter name:**

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.

**action:**

One of the following:

- block — Block the specified traffic
- ignore — Bypass the specified traffic; traffic receives no service
- quick-forwarding — Quick forwarding (duplication) of delay-sensitive packets with service.
- quick-forwarding-ignore — Quick forwarding (duplication) of delay-sensitive packets with no service.

Authorization: admin

## Examples

The following examples illustrate how to use this 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# traffic-rule name rule2 ip-addresses subscriber-side all network-side
all-but 10.10.10.0/24 protocol tcp direction downstream traffic-counter name 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# traffic-rule name rule3 ip-addresses all protocol is-is direction upstream
traffic-counter name none action ignore
SCE(config if)
```

### Example 3:

The following example demonstrates how to delete all traffic rules.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# no traffic-rule all
SCE(config if)
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard traffic-rule | |

# 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:cisco>
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.
```

# 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.<br>The keywords **0** or **5** indicate the format of the password as entered in the command: |

## 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

## Examples

The following examples illustrate how to use this command.

### Example 1

This example shows how to add a new user to the local database with a clear text password.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#username johndoe
password
 mypassword
SCE(config)#
```

### Example 2

This example shows how to add a new user to the local database with no password.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#username johndoe
nopassword

SCE(config)#
```

### Example 3

This example shows how to add a new user to the local database with an MD5 encrypted password entered in clear text.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#username johndoe
secret 0
 mypassword
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show users | |
| username privilege | |

# username privilege

Sets the privilege level for 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:<br>• 0 : User<br>• 5: Viewer<br>• 10: Admin<br>• 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 to enter the requested privilege level.

Authorization: admin

## Examples

The following level sets the privilege level for the user to "Viewer".

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#username johndoe
privilege
 5
SCE(config)#
```

## Related Commands

| Command | Description |
|---|---|
| show users | |
| username | |

# 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 , although this command is an admin level command, you must enter the ROOT authorization level (15) to shutdown the linecard.

```
SCE>enable 15
Password:<cisco>
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

| Command | Description |
|---|---|
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas traffic-link | |
| vas-traffic-forwarding vas server-id health-check | |
| vas-traffic-forwarding vas server-group | |
| vas-traffic-forwarding vas server-group failure | |
| show interface linecard vas-traffic-forwarding | |

# 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<br>• **Link-0**<br>• **Link-1**<br>• **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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#vas-traffic-forwarding traffic-link link-0
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas server-group | |

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding vas server-group failure | |
| show interface linecard vas-traffic-forwarding | |

# vas-traffic-forwarding traffic-link auto-select

Configures the VAS traffic link for VAS over 10G.

**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).<br>• **Link-0**<br>• **Link-1** |

## Defaults

Default switch-time = 30 seconds

Default traffic link = Link-1

## Command Modes

Interface Linecard Configuration

## Usage Guidelines

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

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** 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:<cisco>
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 ilink-switch-delay to 60 seconds.

```
SCE>enable 10
Password:<cisco>
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

| Command | Description |
|---|---|
| vas-traffic-forwarding vas traffic-link | |
| show interface linecard vas-traffic-forwarding | |

# vas-traffic-forwarding vas health-check

Configures the health check for compatibility with VAS over 10G (multiple GBE platform (MGSCP)) 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.<br>The source-ip must include a range indication (x.x.x.x/x). |
| **dest-ip** | Health check destination IP address.<br>The dest-ip does not include a range indication. |

## Defaults

By default, the compatibility with VAS over 10G (multiple GBE platforms(MGSCP)) 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 dummy IP addresses that are reserved for the VAS health check only. (Use the **pseudo-ip** command to configure these IP addresses.)
- 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:<cisco>
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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no vas-traffic-forwarding health-check ip-address
SCE(config if)#
```

### Example 3

This example shows how to remove the IP address configuration using the **default** keyword.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#default vas-traffic-forwarding health-check ip-address
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| show interface linecard vas-traffic-forwarding | |
| pseudo-ip | |

# 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).

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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)# vas-traffic-forwarding vas server-id 4
disable
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding server-id vlan | |
| vas-traffic-forwarding vas traffic-link | |
| vas-traffic-forwarding vas server-id health-check | |
| vas-traffic-forwarding vas server-group | |
| vas-traffic-forwarding vas server-group failure | |
| show interface linecard vas-traffic-forwarding | |

# 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-traffic-forwarding 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 = two port numbers for each server, starting with ports 63140 and 63141 used for server #0 through ports 63154 and 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:<cisco>
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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no vas-traffic-forwarding vas server-id 5 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#default vas-traffic-forwarding vas server-id 5 health-check udp ports
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas traffic-link | |

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding vas server-group | |
| vas-traffic-forwarding vas server-group failure | |
| show interface linecard vas-traffic-forwarding | |

# vas-traffic-forwarding vas 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#vas-traffic-forwarding vas server-id 4
vlan
 10

SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas server-group | |

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding vas server-group failure | |
| vas-traffic-forwarding vas traffic-link | |
| show interface linecard vas-traffic-forwarding | |

# 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** ).

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:<cisco>
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:<cisco>
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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#no vas-traffic-forwarding vas server-group 1

SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas traffic-link | |
| vas-traffic-forwarding vas server-id health-check | |
| vas-traffic-forwarding vas server-group failure | |
| show interface linecard vas-traffic-forwarding | |

# 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 in Failure state<br>• **block** — all new flows assigned to the failed VAS server group will be blocked by the SCE platform<br>• **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** .)

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:<cisco>
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:<cisco>
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

| Command | Description |
|---|---|
| vas-traffic-forwarding | |
| vas-traffic-forwarding vas server-id | |
| vas-traffic-forwarding vas traffic-link | |
| vas-traffic-forwarding vas server-id health-check | |
| vas-traffic-forwarding vas server-group | |
| show interface linecard vas-traffic-forwarding | |

# vlan

Configures the VLAN environment. A single VLAN tag is supported per packet (no QinQ support).

**vlan symmetric skip**

**vlan a-symmetric skip**

**vlan symmetric classify**

**default vlan**

## Syntax Description

See "Usage Guidelines"

## Defaults

Default mode = symmetric skip

## Command Modes

Linecard Interface Configuration

## Usage Guidelines

The various VLAN modes act as follows:

- **vlan symmetric skip** : ignore tunnel
- **vlan a-symmetric skip** : ignore tunnel, asymmetric
- **vlan symmetric classify** : VLAN tag as subscriber
- When the tunneling information is ignored, the subscriber identification is the subscriber IP of the IP packet carried inside the tunnel.

Use the **symmetric skip** form of the command to skip the VLAN header when VPN 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 VPN 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 VPN 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.

### Symmetric and Asymmetric Environments

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 of the same flow 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.

### Changing VPN Modes

VPNs can only exist in either **VLAN symmetric classify** or **MPLS VPN auto-learn** , but these two modes cannot be enabled simultaneously. When changing from one of these VPN-related modes to another, keep the following guidelines in mind:

- All VPN-based subscribers must be cleared in order to change the tunneling mode. If the connection with the SM is down, use the **no subscriber all with-vpn-mappings** CLI command.
- All VPN mappings must also be removed. This can only be done via the SM CLU (which means that the connection with the SM must be up).

Authorization: admin

## Examples

The following example enables VLAN-based classification.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#vlan symmetric classify
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vlan translation | |
| show interface linecard vlan | |

# 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:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#vlan translation increment value 20
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| vlan | |
| show interface linecard vlan translation | |

# 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 illustrates how to enable operating in a WAP-based environment.

```
SCE>enable 10
Password:<cisco>
SCE#config
SCE(config)#interface linecard 0
SCE(config if)#wap
SCE(config if)#
```

## Related Commands

| Command | Description |
|---|---|
| show interface linecard wap | |