C H A P T E R **13**

Additional Management Tools and Interfaces

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Introduction

This chapter contains the following information:

The SCA BB Service Configuration Utility

The Cisco Service Control Application for Broadband (SCA BB) Service Configuration Utility (**servconf**) is a command-line utility (CLU) for applying and retrieving service configurations. Use it in a scripting environment to automate service configuration tasks on multiple Service Control Engine (SCE) platforms.

The Service Configuration Utility can run in Windows, Solaris, and Linux environments.

servconf Syntax

The command-line syntax of **servconf** is:

```
servconf <operation> [<option>] [<option>]...
```

Table 13-1 lists the **servconf operations**.

Table 13-2, Table 13-3, Table 13-4, Table 13-5, and Table 13-6 list the **servconf** options.

Table 13-1   servconf Operations

Operation	Abbreviation	Description
--apply	**-a**	Copies the specified service configuration file to the specified SCE platforms and activates it
--retrieve	**-r**	Retrieves the current service configuration
--update-dc	**-u**	Updates a Cisco Service Control Management Suite (SCMS) Collection Manager (CM) with service configuration values
--status		Shows the service configuration status on the SCE platform
--update-signature		Updates the SCE platform with a new protocol pack
--update-signature-pqi		Updates the SCE platform with a new SPQI protocol pack
--signature-info	**-i**	Shows information about the Dynamic Signature Script (DSS) file
--help		Displays help, then exits
--version		Displays the program version number, then exits

Table 13-2   servconf File Options

File Option	Abbreviation	Description
--file=_filename_	-f	Specifies a service configuration file or DSS file
--backup-directory=_directory_	-b	Specifies the directory to which to save the retrieved PQB file before applying a new protocol pack

Table 13-3   servconf Connection Options

File Option	Abbreviation	Description
--se=_address_	**-S**	Specifies the IP address of the destination SCE platform. To specify multiple SCE platforms, list the IP addresses separated by semicolons (see Example 1 in the following section). When using a semicolon in a Unix command line, the command-line argument must be enclosed in quotation marks.
--dc=_address_	**-D**	Specifies the IP address of the destination SCMS-CM platform (required only for the **--update-dc** operation).

Table 13-3   servconf Connection Options (continued)

File Option	Abbreviation	Description
--password=_password_	**-P**	Specifies the password for connecting to the SCE platform.
--username=_username_	**-U**	Specifies the username for connecting to the SCE platform. If this option is not specified, the following default values are used: • SCE—admin • CM—pcube • SM—pcube

Table 13-4   servconf Reference SCE Option

File Option	Description
--refer-se=_address_	Specifies the IP address of the SCE platform to which the service configuration values refer (required only for **--update-dc** operation)

Table 13-5   servconf Apply Options

File Option	Description
--no-dc	(Optional) Specifies that the --apply operation should not automatically update the SCMS-CM with service configuration values.
--no-default-signature	Applies the service configuration without adding the default DSS to it.
--force-default-signature	Forces the replacement of the DSS in the retrieved PQB with the default DSS, even if the signatures of the existing DSS are mapped to services. Without this flag, trying to update a PQB containing a DSS will fail.

Table 13-6   servconf Update Signature Option

File Option	Description
--force-signature	Forces replacement of the DSS in the retrieved PQB, even if the signatures of the existing DSS are mapped to services. Without this flag, trying to update a PQB containing a DSS will fail.

servconf Examples

Example 1

To copy the service configuration file config.pqb from the local machine to two SCE platforms (at 63.111.106.7 and 63.111.106.12), and activate this configuration:

```
servconf "--se=63.111.106.7;63.111.106.12" --username Alice --password ***** --apply
--file config.pqb
```

Example 2

To retrieve the current service configuration from the SCE platform at 63.111.106.7, and save it in file my_files\config.pqb on the local machine:

```
servconf -S 63.111.106.7 -U Bob -P ***** --retrieve --file my_files\config.pqb
```

Example 3

To update the SCMS-CM at 63.121.116.17 with service configuration values from file config.pqb, as if they were applied to the SCE platform at 63.111.106.7 (but without actually applying them to the SCE platform):

```
servconf -D 63.121.116.17 -U Alice -P ***** --update-dc
--refer-se 63.111.106.7 --file config.pqb
```

Example 4

To distribute the protocol pack file new_signature.spqi to the SCE platforms at 10.56.216.33 and 10.56.216.36:

```
servconf --update-signature-pqi -f new_signature.spqi
-S "10.56.216.33;10.56.216.36" -U user123 -P *****
```

The SCA BB Real-Time Monitoring Configuration Utility

SNMP-based monitoring tools, such as MRTG, allow network administrators to monitor the activity and health of network devices in real time. SCA BB includes an SNMP-based real-time monitoring solution, which is implemented using MRTG and a graphics utility (RRD Tool).

The SCA BB Real-Time Monitoring Configuration Utility (**rtmcmd)** is a command-line utility (CLU) for automating the production of the files required by the MRTG tool.

For installation instructions, see How to Install the SCA BB Configuration Utilities, page 4-8. For more information about installing and using the SCA BB SNMP-based real-time monitoring solution, see the *Cisco SCA BB SNMP Real Time Monitoring User Guide*.

- rtmcmd Syntax, page 13-4
- rtmcmd Examples, page 13-5
- The rtmcmd User Configuration File, page 13-6
- An rtmcmd User Configuration File Example, page 13-7

rtmcmd Syntax

The command-line syntax of the SCA BB Real-Time Monitoring Configuration Utility is:

```
rtmcmd --sce <SCE (SNMP) addresses> {--file <PQB filename> | (--pqb-sce
<SCE (PQB) addresses> --username <username> --password <password>)} --source-dir <dir>
--dest-dir <dir> --config-file <file>
```

Table 13-7 lists the **rtmcmd** options.

Table 13-7   rtmcmd Options

Option	Abbreviation	Description
--sce *address*	**-S**	Specifies the IP address or hostname of the SCE platform from which SNMP data will be collected. To specify multiple SCE platforms, list the IP addresses separated by semicolons. When using a semicolon in a Unix command line, the command-line argument must be enclosed in quotation marks.
--file *filename*	**-f**	(Required if --pqb-sce is not included) Specifies the service configuration file to use when generating the configuration and report files. If this option is specified, the **--username/-U** and **--password/-P** options are prohibited.
--pqb-sce *address*	**-q**	(Required if --file is not included) Specifies the hostname or IP address of the SCE platform from which the service configuration should be retrieved. This option requires the **--username/-U** and **--password/-P** options.
--username *<username>*	**-U**	(Required if **--pqb-sce** is included) Specifies the username for connecting to the SCE platform.
--password *<password>*	**-P**	(Required if **--username** is included) Specifies the password for connecting to the SCE platform.
--source-dir *<dir>*	**-s**	Specifies the location of the report template files.
--dest-dir *<dir>*	**-d**	Specifies the directory where the processed report templates should be stored.
--config-file *<file>*	**-c**	Specifies the configuration file. (See The rtmcmd User Configuration File, page 13-6).

You can invoke additional operations (see Table 13-8) to display information about the **rtmcmd** using the following syntax:

rtmcmd *<operation>*

Table 13-8   rtmcmd Operations

Operation	Description
--version	Displays the program version number, then exits
--help	Displays help, then exits

rtmcmd Examples

Example 1

To use the service configuration file servicecfg.pqb to create configuration and report files for the collecting and reporting of SNMP information from two SCE platforms (at 63.111.106.7 and 63.111.106.12):

```
rtmcmd --sce="63.111.106.7;63.111.106.12" --file=servicecfg.pqb
--source-dir=/rtm-templates --dest-dir=/rtm-output -c./rtmcmd.cfg
```

Example 2

To use the service configuration loaded on the SCE platform at 63.111.106.7 to create configuration and report files for the collecting and reporting of SNMP information from two SCE platforms (at 63.111.106.7 and 63.111.106.12):

```
rtmcmd -S "63.111.106.7;63.111.106.12" -U user123 -P **** --pqb-sce=63.111.106.7
--source-dir=/rtm-templates --dest-dir=/rtm-output -c./rtmcmd.cfg
```

The rtmcmd User Configuration File

The user configuration file contains user-specific information required by the **rtmcmd** utility. The SCA BB utilities distribution package contains a sample configuration file, named rtmcmd.cfg. You should edit this file according to the details of your setup.

Table 13-9 lists the configuration parameters that should be present in the user configuration file:

Table 13-9   rtmcmd User Configuration File Parameters

Parameter Description	Description	Default Value	Required/ Optional
rrdtool_bin_dir	The absolute path to the directory where RRDTool and RRDCGI binary files are installed.		Required
rtm_dir	The absolute path to the directory where RRD archives and CGI files are stored. This is under the web server web directory.		Required
mrtg_bin_dir	The absolute path to the directory where MRTG binary files are installed. This location is used to create MRTG invocation commands in the crontab sample file.		Required
snmpCommunityString	The SNMP community string to use when accessing the SCE platforms.	Public	Required

The configuration text file is a listing of key-value pairs, where the key is one of the parameters listed above, in the following format:

- Each key-value pair is on a separate line.
- A key-value pair may be extended across several adjacent lines by putting a back slash character, "\", at the end of each line.
- To use an actual back slash in the value (as in directory names on Windows), the back slash should be escaped with a second back slash, like this: "\\" (or use a slash "/").
- To comment a line, add "#" or "!" at the beginning of the line.

For example:

```
# This is a comment line.
# Directory names should use escape backslashes:
rtm_dir=D:\\PROGRA~1\\APACHE~1\\Apache2.2\\htdocs
```

An rtmcmd User Configuration File Example

```
#The absolute path to the RRD tool's execution files folder
#Use '\\' or '/' as path separator
rrdtool_bin_dir=C:/rrdtool-1.2.15/rrdtool/Release

#The absolute path where RTM files will be placed.
#This path will be used by MRTG to create and update the RRD files
#Note: path must not contain white spaces!
rtm_dir=C:/PROGRA~1/APACHE~1/Apache2.2/htdocs

#The absolute path to the MRTG bin folder.
#This path will be used to create file crontab.txt
mrtg_bin_dir=C:/mrtg-2.14.5/bin

#The SCE's community string
snmpCommunityString=public
```

The SCA BB Signature Configuration Utility

The SCA BB Signature Configuration Utility (**sigconf**) is a command-line utility for installing and managing the default DSS.

The Signature Configuration Utility can run in Windows, Solaris, and Linux environments.

For installation instructions, see How to Install the SCA BB Configuration Utilities, page 4-8.

sigconf Syntax

The command-line syntax of the SCA BB Signature Configuration Utility is:

```
sigconf <operation> [--file <filename>]
```

Table 13-10 lists the **sigconf** operations.

Table 13-11 lists the **sigconf** option.

Table 13-10   sigconf Operations

Operation	Abbreviation	Description
--set-default-dynamic-signature	**-d**	Installs the default DSS on this workstation
--remove-default-dynamic-signature		Uninstalls the default DSS from this workstation
--get-default-dynamic-signature		Fetches the default DSS installed on this workstation
--help		Displays help, then exits

Table 13-11   sigconf File Option

File Option	Abbreviation	Description
--file *filename*	**-f**	Specifies a DSS file

sigconf Examples

Example 1

To install the file new_signature.dss as the default DSS:

```
sigconf --set-default-dynamic-signature --file new_signature.dss
```

Example 2

To retrieve the installed default DSS file, and save it as default_backup.dss:

```
sigconf --get-default-dynamic-signature --file default_backup.dss
```

Overview of SNMP, MIB, and Traps

Cisco provides complete network FCAPS (Fault, Configuration, Accounting, Performance, Security) management.

Two interfaces are provided for network management:

- Command-line interface (CLI)—Accessible through the console port on the front panel of the SCE platform or through a Telnet connection to the SCE platform, the CLI is used for configuration and security functions.

- SNMP (Simple Network Management Protocol)—Provides fault management (via SNMP traps) and performance monitoring functionality.

SNMP

SNMP is a set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network. SNMP-compliant devices, called agents, store data about themselves in Management Information Bases (MIBs) and return this data to the SNMP requesters.

The SCE platform operating system includes an SNMP agent. Configuring the SNMP agent parameters and enabling the SNMP interface is described in either the "Configuring the Management Interface and Security" chapter of the *Cisco SCE8000 10GBE Software Configuration Guide* or the "Configuring the Management Interface and Security" chapter of the *Cisco SCE8000 GBE Software Configuration Guide*.

MIB

Management Information Bases (MIBs) are databases of objects that can be monitored by a network management system. SNMP uses standardized MIB formats that allow standard SNMP tools to monitor any device defined by a MIB.

The SCE platform supports the following MIBs:

- MIB-II—Defined in RFC 1213, *(Management Information Base for Network Management of TCP/IP-based Internets)*
- Cisco Service Control Enterprise MIB—Described by a number of MIB files

The Cisco proprietary MIB allows external management systems to retrieve general information about the SCE platform operating status and resource utilization, extract real-time measurements of bandwidth utilization and network statistics, and receive notifications of critical events and alarms.

The part of the Cisco proprietary MIB that provides configuration and runtime status for SCA BB is documented in the "SCA BB Proprietary MIB Reference" chapter of the *Cisco Service Control Application for Broadband Reference Guide.* Other parts of the Cisco proprietary MIB are documented in either the "Proprietary MIB Reference" appendix of the *Cisco SCE8000 10GBE Software Configuration Guide* or the "Proprietary MIB Reference" appendix of the *Cisco SCE8000 GBE Software Configuration Guide*. These books also explain the order in which the MIB must be loaded.

Traps

Traps are unsolicited messages generated by the SNMP agent that resides inside the SCE platform. Traps are generated when an event occurs. When the Network Management System receives the trap message, it can take suitable actions, such as logging the occurrence or ignoring the signal.

The SCE platform supports two general categories of traps:

- Standard SNMP traps—As defined in RFC 1157 and using the conventions defined in RFC 1215
- Proprietary Cisco Service Control Enterprise traps—As defined in the Cisco proprietary MIB

  For a description of the SNMP traps and an explanation of how to configure the SNMP trap managers, see either the "Configuring and Managing the SNMP Interface" section in the "Configuring the Management Interface and Security" chapter of the *Cisco SCE8000 10GBE Software Configuration Guide* or the "Configuring and Managing the SNMP Interface" section in the "Configuring the Management Interface and Security" chapter of the *Cisco SCE8000 10GBE Software Configuration Guide*.

Installing PQI Files from the Command Line

- How to Install a SCA BB PQI File on an SCE Platform, page 13-9
- How to Enter Line Interface Configuration Mode, page 13-10

How to Install a SCA BB PQI File on an SCE Platform

You can install a SCA BB PQI file on an SCE platform using the SCE platform Command-Line Interface (CLI).

Step 1   Make sure that the PQI file is available.

Do one of the following:

- Locate the PQI file on the SCE platform.
- Upload the appropriate PQI file to the SCE via FTP.

Step 2   Enter line interface configuration mode. (See How to Enter Line Interface Configuration Mode, page 13-10.)

Step 3   Type **pqi install file engXXXXX.pqi**.

Step 4   Monitor the installation progress until it is completed.

What to Do Next

After you install the Console, you can use the Network Navigator tool to install PQI files. See How to Install PQI Files on SCE Devices, page 5-24.

How to Enter Line Interface Configuration Mode

Step 1   At the SCE platform CLI prompt `(SCE#)`, type **configure**.

Step 2   Press **Enter.**

The `SCE(config)#` prompt appears.

Step 3   Type **interface LineCard 0**.

Step 4   Press **Enter.**

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

Managing Subscribers via Other System Components

Other components of the Cisco Service Control solution offer alternatives for subscriber management (as opposed to using the Subscriber Manager GUI tool in the Console):

- The Cisco Service Control Management Suite (SCMS) Subscriber Manager (SM) has options that are not available from the Console.

- The SCE platform has a wide range of subscriber-related functions.

This section gives an overview of these alternatives, with emphasis on the SCA BB-specific subscriber management options. For in-depth explanations, see the appropriate Service Control documentation.

- Anonymous Subscriber Mode, page 13-10

- Subscriber-Aware Mode, page 13-11

- Selecting Subscribers for Real-Time Usage Monitoring, page 13-13

- Managing Subscriber CSV Files, page 13-15

Anonymous Subscriber Mode

An anonymous subscriber is one with a name generated automatically by the SCE platform according to an anonymous subscriber group specification. An anonymous subscriber is always mapped to a single IP address. The actual identity of the customer is unknown to the system.

An anonymous group is a specified IP range, possibly assigned a subscriber template. If an anonymous group is configured, the SCE platform generates anonymous subscribers for that group when it detects traffic with an IP address in the specified IP range. If a subscriber template is assigned to the group, the anonymous subscribers generated have properties defined by that template. If no subscriber template is assigned, the default template is used, which cannot be changed by template import operations. Initially, 32 templates are preconfigured, one for each package ID.

Anonymous subscriber groups and subscriber templates are managed using the SCE platform Command-Line Interface (CLI). You can enter CLI commands via a Telnet session. For more information, see the *Cisco SCE 8000 CLI Command Reference* or the *Cisco SCE 2000 and SCE 1000 CLI Command Reference*.

Use the following commands to import anonymous subscriber groups and subscriber templates from CSV files and to export subscriber data to these files:

- subscriber anonymous-group import csv-file
- subscriber anonymous-group export csv-file
- subscriber template import csv-file
- subscriber template export csv-file

> **Note** The preceding CLI commands are line interface configuration commands. You must enter line interface configuration mode (see How to Enter Line Interface Configuration Mode, page 13-10) and see the `SCE(config if)#` prompt displayed before entering a command.

Use the following commands to delete anonymous groups or subscriber templates from the system.

- no subscriber anonymous-group [all] [name <groupname>]
- clear subscriber anonymous
- default subscriber template all

> **Note** The preceding CLI commands are line interface configuration commands. You must enter line interface configuration mode (see How to Enter Line Interface Configuration Mode, page 13-10) and see the `SCE(config if)#` prompt displayed before entering a command.

Use the following commands to display anonymous subscriber information:

- show interface LineCard 0 subscriber templates [index]
- show interface LineCard 0 subscriber anonymous-group [all] [name <groupname>]
- show interface LineCard 0 subscriber amount anonymous [name <groupname>]
- show interface LineCard 0 subscriber anonymous [name <groupname>]

Subscriber-Aware Mode

In subscriber-aware mode, each subscriber is a specific customer with an externally generated name. This externally generated name allows the subscriber to be mapped to more than one IP address and still be identified. Each traffic session (single IP flow, or a group of related IP flows) processed by the SCE platform is assigned to a recognized subscriber on the basis of the configured subscriber mappings.

There are three options for introducing and managing these subscribers:

- The SM GUI tool (see Using the SM GUI Tool, page 11-1)
- The SCE platform subscriber CLI
- The SM subscriber management CLU

The SCE Platform Subscriber CLI

Use the following commands to import subscriber data from CSV files and to export subscriber data to these files:

```
subscriber import csv-file
subscriber export csv-file
```

Note The preceding CLI commands are line interface configuration commands. You must enter line interface configuration mode (see How to Enter Line Interface Configuration Mode, page 13-10) and see the SCE(config if)# prompt displayed before entering a command.

Use the following command to remove subscribers from the system.

```
no subscriber [all] [name <subscriber-name>]
```

Note The preceding CLI command is a line interface configuration commands. You must enter line interface configuration mode (see How to Enter Line Interface Configuration Mode, page 13-10) and see the SCE(config if)# prompt displayed before entering the command.

Use the following commands to display subscribers meeting various criteria:

```
show interface LineCard 0 subscriber [amount]
[prefix <prefix>] [property <propertyname> equals | greater-than | less-than
<property-val>]
show interface LineCard 0 subscriber [amount] prefix <prefix>
show interface LineCard 0 subscriber [amount] suffix <suffix>
show interface LineCard 0 subscriber mapping IP <iprange>
show interface LineCard 0 subscriber [amount] mapping intersecting IP <iprange>
show interface LineCard 0 subscriber mapping VLANid <vlanid>
```

Use the following commands to display information about a specific subscriber:

```
show interface LineCard 0 subscriber properties
show interface LineCard 0 subscriber name <name>
show interface LineCard 0 subscriber name <name> mappings
show interface LineCard 0 subscriber name <name> counters
show interface LineCard 0 subscriber name <name> properties
```

The SM Subscriber Management CLU

The SM Subscriber Management Utility (**p3subs**) is a CLU for managing subscribers. You can use it to add or remove subscribers. You can also manage subscriber properties and mappings with this utility.

For more information about **p3subs,** see the *Cisco Service Control Management Suite Subscriber Manager User Guide.*

p3subs Syntax

You run **p3subs** from the Solaris shell prompt. The command-line syntax of the utility is:

```
p3subs <operation> --subscriber=<Subscriber-Name> [--ip=<IP-address>]
[--property=<property-name=value>] [--domain=<domain-name>] [--overwrite]
```

The following table lists the **p3subs** operations relevant to managing subscribers.

Table 13-12   p3subs Subscriber Operations

Operation	Description
--add	Adds a subscriber or replaces the existing subscriber configuration
--set	Updates mappings and properties for the specified subscriber
--remove	Removes the specified subscriber
--show	Displays information for specified subscriber

Selecting Subscribers for Real-Time Usage Monitoring

Real-Time Subscriber Usage RDRs report the network activity of a single subscriber per service per metric, in real-time. You must enable the generation of these subscriber usage RDRs separately for each subscriber that you wish to monitor.

⚠

Caution   Generating and collecting Real-Time Subscriber Usage RDRs for many subscribers can compromise performance. Enable Real-Time Subscriber Usage RDR generation only for subscribers that must be monitored.

Generation of Real-Time Subscriber Usage RDRs is controlled by the `monitor` subscriber property. By default, generation of these RDRs is disabled (`monitor = 0`). To enable generation of the RDRs, change the value of the property to 1.

You can modify this property for selected subscribers using either the SM Command-Line Utility (CLU) or the SCE platform CLI.

- Managing Subscriber Monitoring via the SM, page 13-13
- Managing Subscriber Monitoring via the SCE Platform, page 13-14

Managing Subscriber Monitoring via the SM

You can enable or disable the generation of the Real-Time Subscriber Usage RDRs using the SM **p3subs** utility. You can also create a file that processes a batch of subscribers. For more information, see the *Cisco Service Control Management Suite Subscriber Manager User Guide*.

- How to Enable Subscriber Monitoring for a Subscriber, page 13-13
- How to Disable Subscriber Monitoring for a Subscriber, page 13-14
- How to Enable Subscriber Monitoring for Multiple Subscribers, page 13-14
- How to Verify that Subscriber Monitoring is Enabled for a Subscriber, page 13-14

How to Enable Subscriber Monitoring for a Subscriber

You can enable subscriber monitoring for a specified subscriber.

Step 1   From the command line, run **sm/server/bin/p3subs --set --subscriber Smith --property monitor=1.**

How to Disable Subscriber Monitoring for a Subscriber

You can disable subscriber monitoring for a specified subscriber.

Step 1   From the command line, run **sm/server/bin/p3subs --set --subscriber Smith --property monitor=0.**

How to Enable Subscriber Monitoring for Multiple Subscribers

You can enable subscriber monitoring for multiple subscribers.

Step 1   Create a text file (named monitor.txt in this example) containing the sequence of CLU invocations.

The file would look something like this:

```
p3subs --set --subscriber Jerry --property monitor=1
p3subs --set --subscriber George --property monitor=1
p3subs --set --subscriber Elaine --property monitor=1
p3subs --set --subscriber Kramer --property monitor=1
p3subs --set --subscriber Newman --property monitor=1
```

Step 2   From the command line, run **sm/server/bin/p3batch -f monitor.txt**.

How to Verify that Subscriber Monitoring is Enabled for a Subscriber

You can check to see whether subscriber monitoring is enabled for a specific subscriber.

Step 1   From the command line, run **sm/server/bin/p3subs --show-property --subscriber Smith --property monitor.**

Managing Subscriber Monitoring via the SCE Platform

You can also enable or disable the generation of the Real-Time Subscriber Usage RDRs using the SCE platform. For more information, see the *Cisco SCE8000 CLI Command Reference.*

How to Enable Subscriber Monitoring for a Subscriber

You can enable subscriber monitoring for a specified subscriber.

Step 1   Enter line interface configuration mode. (See How to Enter Line Interface Configuration Mode, page 13-10.)

Step 2   At the `SCE(config if)#` prompt, run **subscriber name Smith property name monitor value 1.**

How to Disable Subscriber Monitoring for a Subscriber

You can disable subscriber monitoring for a specified subscriber.

Step 1   Enter line interface configuration mode. (See .)

Step 2   At the `SCE(config if)#` prompt, run **subscriber name Smith property name monitor value 0.**

How to Enable Subscriber Monitoring for Multiple Subscribers

You can enable subscriber monitoring for multiple subscribers.

Step 1   Create a text file (named monitor.txt in this example) containing the sequence of CLI invocations, including the commands to access the appropriate CLI mode.

The file would look something like this:

```
configure
interface LineCard 0
subscriber name Jerry property name monitor value 1
subscriber name George property name monitor value 1
subscriber name Elaine property name monitor value 1
subscriber name Kramer property name monitor value 1
subscriber name Newman property name monitor value 1
```

Step 2   From the SCE platform CLI prompt `(SCE#)`, run **script run monitor.txt.**

How to Verify that Subscriber Monitoring is Enabled for a Subscriber

You can check to see whether subscriber monitoring is enabled for a specific subscriber.

Step 1   From the SCE platform CLI prompt `(SCE#)`, run **show interface LineCard 0 subscriber name Smith properties.**

The properties are displayed; `monitor` is the relevant parameter.

```
Subscriber smith properties:
subscriberPackage=0
monitor=1
Subscriber 'smith' read-only properties
```

Managing Subscriber CSV Files

Use the **p3subsdb** SM utility to import and export subscriber CSV files. You can import subscriber information for a group of subscribers from a CSV file into the SM database. You can also export subscriber information from the SM database to a CSV file.

For more information, see the *Cisco Service Control Management Suite Subscriber Manager User Guide.*

CSV file structure is described in the "CSV File Formats" chapter of the *Cisco Service Control Application for Broadband Reference Guide.*

- How to Import Subscriber CSV Files, page 13-16
- How to Export Subscriber CSV Files, page 13-16

How to Import Subscriber CSV Files

Step 1   At the Solaris shell prompt, run **p3subsdb --import <filename>.**

How to Export Subscriber CSV Files

Step 1   At the Solaris shell prompt, run **p3subsdb --export <filename>**.

Example: Filtering and Exporting Subscribers

The following example exports every subscriber whose name begins with 'a' to the file silverSubscriberFile.csv

p3subsdb --export --prefix=a --output=silverSubscriberFile.csv