



APPENDIX **B**

Command Line Utilities

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Introduction

This module describes the Command Line Utilities (CLU) that are distributed with the Subscriber Manager (SM) application.

Information About the Command Line Utilities

The CLU is designed mainly for viewing SM operations and statistics, and subscriber management, therefore only subscriber-related CLU changes are persistent. The CLU is used for configuration only indirectly, in that it loads the edited configuration file to the SM.

This module describes in detail all of the CLU commands with their operations and options. The shorter descriptions of the CLU commands provided in the [Configuration and Management](#) module is oriented towards performing routine management and configuration tasks.

CLU commands are executable only when the user is logged into the machine using the **pcube** account, which is always installed (see [Installation and Upgrading, page 4-1](#)). In general, the CLU runs as a separate process to the configured entity and communicates with it via a predefined communication port and interface. Therefore, the configured entity must keep a certain communication port open locally on the configured machine at all times.

Description of the CLU Commands

This section describes in detail all of the CLU commands with their operations and options:

- [Informative Output, page B-3](#)
- [Parsing CLU Operations and Options, page B-3](#)
- [Information About the p3batch Utility, page B-4](#)
- [Information About the p3cable Utility, page B-5](#)
- [Information About the p3clu Utility, page B-6](#)
- [Information About the p3cluster Utility, page B-6](#)
- [Information About the p3db Utility, page B-7](#)
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- [Information About the p3ftp Utility, page B-9](#)
- [Information About the p3http Utility, page B-10](#)
- [Information About the p3inst Utility, page B-10](#)
- [Information About the p3log Utility, page B-12](#)
- [Information About the p3net Utility, page B-13](#)
- [Information About the p3rdr Utility, page B-15](#)
- [Information About the p3rpc Utility, page B-16](#)
- [Information About the p3sm Utility, page B-18](#)
- [Information About the p3subs Utility, page B-22](#)
- [Information About the p3subsdb Utility, page B-26](#)
- [Information About the p3vpn Utility, page B-29](#)

The following CLUs are not documented in this guide:

- [Information About the p3bgp Utility, page B-32](#)
- [Information About the p3dhcpsniff Utility, page B-32](#)
- [Information About the p3leasequery Utility, page B-32](#)
- [Information About the p3radius Utility, page B-32](#)
- [Information About the p3radiussniff Utility, page B-32](#)
- [Information About the p3qm Utility, page B-33](#)
- [Information About the p3soap Utility, page B-33](#)
- [Information About the p3vlink Utility, page B-33](#)

Informative Output

All CLU commands support the following operations for informative output:

Operation	Description
<code>--help</code>	Prints the help for the specified CLU command, then exits.
<code>--version</code>	Prints the SM program version number, then exits.

Parsing CLU Operations and Options

Place in quotation marks a command operation or option containing any of the following characters:

- A space character
- A separation sign (comma “,”; ampersand “&”; colon “:”)
- An escape character (backslash “\”)
- Parenthesis (“(“or”)”)
- An exclamation mark (“!”)
- The comparison operators (“<“or”>”)

A command operation or option that contains any of the following characters must have that character preceded by an escape character:

- An equal sign (=)
- A quotation mark (“or”)
- An escape character (backslash “\”)
- An exclamation mark (“!”)
- The “\$” character

The following table shows several examples of the above rules:

Operation/option contains the character	Example of how operation/option should be written
Space character	<code>--property="file name"</code>
Escape character (backslash “\”)	<code>--property="good\bad"</code>
Equal sign (=)	<code>--property="x=y"</code>
Quotation marks (“or”)	<code>--name=" \"myQuotedName\" "</code> (in the above example, inner quotation marks are escaped)
Separation characters	
comma (,)	<code>--names="x,y"</code>
ampersand (&)	<code>--names="x&y"</code>
colon (:)	<code>--names="myHost:myDomain"</code>

One-letter abbreviations are available for some of the operations and options. For example, **-d** is an abbreviation for **--domain**. Note that only one hyphen (-), not two, precedes the letter for an abbreviation, and that if the operation or option takes a parameter, there is a space and not an equal sign before the parameter.

Example of using full name	--domain=subscribers
Example of using abbreviated name	-d subscribers

Information About the p3batch Utility

- [p3batch Utility, page B-4](#)
- [Examples of using the p3batch Utility, page B-4](#)

p3batch Utility

The **p3batch** utility enables you to run many operations on a single connection with the SM. You can use any text editor to create a batch file that contains a series of CLU commands, one command per line (terminated by a new-line sign). Use the **p3batch** utility to run this file and execute the commands, where empty lines are skipped.

All batch file command line operations use the same connection option. The **p3batch** utility ignores any connection options in the script file commands. While processing the operations in the batch file, a progress indicator is displayed. The command format is:

```
p3batch [FILE-OPTION] [ERROR-OPTION]
```

[Table B-1](#) and [Table B-2](#) list the **p3batch** options.

Table B-1 p3batch File Option

File Operation	Abbreviation	Description	Notes
--file=FILE	-f	Runs a batch file, where FILE specifies the CLU script (batch) file to run.	A progress indicator is displayed.

Table B-2 p3batch Error Option

Error Option	Description
--skip-errors	Specifies that the batch operation should <i>not</i> halt if an error occurs. If this flag is not used, the batch operation <i>will</i> halt if an error occurs.

Examples of using the p3batch Utility

- To run a batch file that will halt if an error occurs.


```
p3batch --file=mainBatchFile.txt
```
- To run a batch file that will not halt if an error occurs.


```
p3batch --file=mainBatchFile.txt --skip-errors
```

Information About the p3cable Utility

- [p3cable Utility, page B-5](#)
- [Examples of using the p3cable Utility, page B-6](#)

p3cable Utility

In a cable environment, the CPE is modeled as the subscriber, and inherits its policy and domain from the cable modem (CM) through which it connects to the network. Each cable modem is linked with one or more CPEs. For background information about special characteristics of the cable environment, see [CPE as Subscriber in Cable Environment, page C-1](#).

You can use the **p3cable** utility commands to import cable modem information from a CSV file to the SM and to export the cable modem information from the SM to a CSV file. You can also use this utility to clear the repository of all cable modems, and to show whether to allow or deny the login of CPEs that belong to unfamiliar cable modems; i.e., cable modems that do not exist in the SM database. However, to specify whether to allow or deny such a login, use the [Cable Adapter Section](#) of the configuration file **p3sm.cfg**.

The command format is:

```
p3cable OPERATION [FILE-OPTIONS]
```

[Table B-3](#) and [Table B-4](#) list the **p3cable** operations and options.

Table B-3 *p3cable Operations*

Operation	Description
<code>--import-cm</code>	Imports cable modems from a CSV file. The filename that is to be imported is specified using the format <code>--file=import-filename</code> . The results go to a results file.
<code>--export-cm</code>	Exports cable modems to a CSV file. The filename that is to be exported is specified using the format <code>--output=export-filename</code> . The results go to a results file.
<code>--clear-all-cm</code>	Clears the repository of all cable modems.
<code>--show-dynamic-mode</code>	Shows whether to allow or deny the login of CPEs that belong to unfamiliar cable modems; for example, cable modems that do not exist in the SM database.

Table B-4 *p3cable File Options*

File Option	Abbreviation	Description
<code>--file=FILE</code>	<code>-f FILE</code>	Specifies the CSV FILE to import from.
<code>--output=FILE</code>	<code>-o FILE</code>	Specifies the subscriber CSV FILE to export to.

Examples of using the p3cable Utility

- To import cable modem information from the specified csv file:
`p3cable --import-cm -f CMfile.csv`
- To export cable modem information to the specified csv file:
`p3cable --export-cm --outfile=myCMfile.csv`
- To clear the repository of all cable modems:
`p3cable --clear-all-cm`
- To display whether the login of CPEs that belong to unfamiliar cable modems (cable modems that do not exist in SM database) is allowed or denied:
`p3cable --show-dynamic-mode`

Information About the p3clu Utility

- [p3clu Utility, page B-6](#)
- [Example of using the p3clu Utility, page B-6](#)

p3clu Utility

The **p3clu** utility prints a list of all supported CLU utilities and options.

The command format is:

`p3clu OPERATION`

[Table B-5](#) lists the **p3clu** operations.

Table B-5 *p3clu Operations*

Operation	Description
<code>--help</code>	Prints the currently supported CLU commands.

Example of using the p3clu Utility

- To display a listing of all supported CLU utilities and operations:
`p3clu --help`

Information About the p3cluster Utility

- [p3cluster Utility, page B-7](#)
- [Example of using the p3cluster Utility, page B-7](#)

p3cluster Utility

The **p3cluster** utility displays the redundancy state of a cluster of two SM nodes and its components. This utility also supports operations that alter the redundancy state of the SM. These operations are used by the SM Cluster Agent and for administrative tasks.

The command format is:

```
p3cluster OPERATION
```

Table B-6 lists the **p3cluster** operations.

Table B-6 *p3cluster Operations*

Operation	Description
<code>--show</code>	Displays the redundancy status of the SM and its components.
<code>--active</code>	Make the SM become the active SM in the cluster.
<code>--standby</code>	Make the SM become the standby SM in the cluster.

Example of using the p3cluster Utility

- To display the redundancy status of the SM and its components:

```
p3cluster --show
```

Information About the p3db Utility

- [p3dbUtility, page B-7](#)
- [Examples of using the p3db Utility, page B-8](#)

p3dbUtility

The **p3db** utility manages and monitors the TimesTen database. The CLU exposes capabilities of some of the TimesTen CLUs with respect to specific needs of the SM.

The command format is:

```
p3db OPERATION [OPTIONS]
```

Table B-7 and Table B-8 list the **p3db** operations and options.

**Note**

Use caution when activating commands that can affect the database. If used incorrectly, these commands can possibly damage the database.

Table B-7 *p3db Operations*

Operation	Description
<code>--rep-status</code>	Displays status of the replication agent.
<code>--rep-start</code>	Starts the replication agent. Note Use only for database recovery.
<code>--rep-stop</code>	Stops the replication agent. Note Use only for database recovery.

Table B-7 *p3db Operations (continued)*

Operation	Description
<code>--rep-pause</code>	Pause the replication agent. To be used in cluster upgrades.
<code>--rep-continue</code>	Continue the replication agent. To be used in cluster upgrades.
<code>--set-rep-scheme</code>	Assign a replication scheme to the database.
<code>--drop-rep-scheme</code>	Drop the replication scheme from the database.
<code>--status</code>	Displays the database status.
<code>--destroy-rep-db</code>	Destroys the replicated data-store.
<code>--destroy-local-db</code>	Destroys the local data-store.
<code>--duplicate</code>	Copies the data-store from the <i>remote</i> machine to the <i>local</i> machine. Note This option is applicable only for a <i>cluster setup</i> . For additional information, see Data Duplication Procedure , page 4-22.
<code>--upgrade-rep-protocol</code>	Upgrade the replication protocol between the databases in the cluster.
<code>--keep-in-mem [SECS]</code>	Indicates to the database daemon how many seconds to keep the database in the memory, after the last connection to the database is down. Use this option with large databases to reduce the SM restart time. Note To prevent limitations in performing a database destroy, do not use values above a few minutes (that is, above a few hundred seconds).
<code>--num-of-subs</code>	Displays the current number of subscribers in the database.
<code>--sub-exists</code>	Verifies whether certain subscriber exists in the database.

Table B-8 *p3db Options*

Option	Description
<code>--local=LOCAL_HOSTNAME</code>	Specifies the local machine.
<code>--remote=REMOTE_HOSTNAME</code>	Specifies the remote machine.

Examples of using the p3db Utility

- To display the status of the replication agent:
`p3db --rep-status`

Information About the p3domains Utility

- [p3domains Utility](#), page B-9
- [Examples of using the p3domains Utility](#), page B-9

p3domains Utility

The **p3domains** utility displays the subscriber domains. When a system has more than one SCE platform, you can configure the platforms into groups or domains. A subscriber domain is one or more SCE platforms that share a specified group of subscribers. You must add the SCE platform to the network and create the domain before you can add an SCE platform to a domain.

The command format is:

```
p3domains OPERATION [OPTIONS]
```

Table B-9 and Table B-10 list the **p3domains** operations and options.

Table B-9 *p3domains Operations*

Operation	Description
<code>--show-all</code>	Displays all configured domains.
<code>--show</code>	Displays a domain and its associated network elements.

Table B-10 *p3domains Domain/Network Element (NE) Options*

Domain/NE Option	Abbreviation	Description	Notes
<code>--domain=DOMAIN</code>	<code>-d DOMAIN</code>	DOMAIN specifies logical name.	none cannot be used, it is a reserved word.

Examples of using the p3domains Utility

- To display all configured domains:

```
p3domains --show-all
```
- To display the specified domain and its associated network elements:

```
p3domains --show --domain=myDomain
```

Information About the p3ftp Utility

- [p3ftp Utility, page B-9](#)
- [Examples of using the p3ftp Utility, page B-10](#)

p3ftp Utility

The **p3ftp** utility monitors the SM internal FTP server.

The command format is:

```
p3ftp OPERATION
```

Table B-11 lists the **p3ftp** operations and options.

Table B-11 *p3ftp Operations*

Operation	Description
<code>--show</code>	Displays the port number the FTP server listens to, the passive FTP port range the server uses, the current number of open sessions, the maximum number of sessions supported, and the state (ONLINE/OFFLINE) of the FTP server.

Examples of using the p3ftp Utility

- To display the port number that the FTP server listens to, the passive FTP port range that the server uses, the current number of open sessions, the maximum number of sessions supported, and the state (ONLINE/OFFLINE) of the FTP server.

```
p3ftp --show
```

Information About the p3http Utility

- [p3http Utility, page B-10](#)
- [Examples of using the p3http Utility, page B-10](#)

p3http Utility

The **p3http** utility monitors the HTTP adapter server.

**Note**

The HTTP adapter server is a technician interface and normally should not be used.

The command format is:

```
p3http OPERATION
```

[Table B-12](#) lists the **p3http** operations:

Table B-12 *p3http Operations*

Operation	Description
<code>--show</code>	Displays the port number that the server listens to, the state of the server, and the current number of open sessions.

Examples of using the p3http Utility

- To display the port number to which the server listens, the state of the server, and the current number of open sessions:

```
p3http --show
```

Information About the p3inst Utility

- [p3inst Utility, page B-11](#)
- [Examples of using the p3inst Utility, page B-12](#)

p3inst Utility

The **p3inst** utility installs or uninstalls an application (pqi file).

**Note**

Before using **p3inst** to install an application pqi file, read the application installation instructions that came with the application you are using.

The command format is:

```
p3inst OPERATION [FILE-OPTION] [ARGUMENT-OPTION]
```

Table B-13, Table B-14, and Table B-15 list the **p3inst** operations and options.

Table B-13 *p3inst Operations*

Operation	Abbreviation	Description	Notes
--install	-i	Installs the specified application pqi file to the SM. It may be necessary to specify arguments for the installation procedure in the command line. Requires a file option.	Progress indicator
--uninstall	—	Uninstalls the specified application pqi file from the SM. Requires a file option.	Progress indicator
--upgrade	—	Upgrades an existing application using the specified application pqi file. It may be necessary to specify arguments for the upgrade procedure in the command line. Requires a file option.	Progress indicator
--rollback	—	Returns the specified application to the previous version. Rollback is the opposite of an upgrade operation: it reverses the upgrade.	Progress indicator
--describe	-d	Displays the contents of the specified application pqi file.	—
--show-last	—	Lists the details of the last installed application pqi file.	—

Table B-14 *p3inst File Options*

File Option	Abbreviation	Description
--file=FILE[;FILE...]	-f FILE[;FILE...]	Specifies one or more installation FILEs to use. If there is more than one FILE, semicolons should separate them.

Table B-15 *p3inst Argument Options*

Argument Option	Description
--arg=ARG1[, ARG2...]	Specifies one or more arguments for the install and upgrade procedures.

Examples of using the p3inst Utility

- To install the specified installation file:
`p3inst --install --file=myInstallation.pqi`
- To uninstall the specified installation file:
`p3inst --uninstall -f oldInstallation.pqi`
- To upgrade an existing application using the specified application pqi file:
`p3inst --upgrade --file=newInstallation.pqi`
- To upgrade an existing application using the specified application pqi file, using arguments in the command line:
`p3inst --upgrade -f newInstallation.pqi`
- To return the specified application to the previous version:
`p3inst --rollback`
- To display the contents of the specified application pqi file:
`p3inst --describe --file=myInstallation.pqi`
- To list the details of the last installed application pqi file:
`p3inst --show-last`

Information About the p3log Utility

- [p3log Utility, page B-12](#)
- [Examples of using the p3log Utility, page B-13](#)

p3log Utility

The **p3log** utility configures and manages the SM user log. The user log contains all user-related events and errors. Use the user log to view the history of the system events and errors.

The command format is:

```
p3log OPERATION [FILE-OPTION]
```

[Table B-16](#) and [Table B-17](#) list the **p3log** operations and options.

Table B-16 *p3log Operations*

Operation	Description	Notes
<code>--extract</code>	Retrieves the user log from the agent.	Progress indicator
<code>--reset</code>	Clears the user log.	—

Table B-17 *p3log File Option*

File Option	Abbreviation	Description
<code>--output=FILE</code>	<code>-o FILE</code>	Specifies to where the SM user log file should be extracted.

Examples of using the p3log Utility

- To extract the SM user log to the specified file:

```
p3log --extract -o aug20.log
```

- To clear the SM user log:

```
p3log --reset
```

Information About the p3net Utility

- [p3net Utility, page B-13](#)
- [Examples of using the p3net Utility, page B-14](#)

p3net Utility

The **p3net** utility shows the connection status of network elements and tries to reconnect disconnected elements.

The command format is:

```
p3net OPERATION [NETWORK-ELEMENT-OPTION]
```

[Table B-18](#) and [Table B-19](#) list the **p3net** operations and options.

Table B-18 *p3net Operations*

Operation	Description
<code>--show-all</code>	Shows all the configured network elements.
<code>--show</code>	Shows the element connection status/general information.
<code>--connect</code>	Tries to connect a disconnected element.

Table B-19 *p3net Network Element Options*

Network Element Option	Abbreviation	Description
<code>--ne-name=NAME</code>	<code>-n NAME</code>	Specifies the logical NAME for the network element, or the CM when working with the VLM.
<code>--detail</code>	—	(Optional) Used with the <code>--show-all</code> operation for displaying additional information as a table.

Examples of using the p3net Utility

- To connect a disconnected element to the network:

```
p3net --connect -n mainNE
```

- To display the names of all configured network elements:

```
p3net --show-all
Network Element name list:
=====
sceRome
sceLondon
```

sceRome is a cascade setup containing two SCEs. This is displayed as a single entry in the list.

- To display all configured network elements details (as a table):

```
p3net --show-all --detail
=====
| Name                | Host          | Conn- | Sync- | Domain
|                     |               | Status| Status|
|=====|=====|=====|=====|=====
| sceRome              | 1.2.3.4*     | up    | done  | subscribers
| sceRome              | 1.2.3.5      | up    | done  | subscribers
| sceLondon            | 1.2.3.6      | up    | done  | domain1
```

sceRome is a cascade setup containing two SCEs. This is displayed as two entries with the same name where '*' represents the currently active SCE.

**Note**

The SM does not synchronize the standby SCE; therefore, the **Subscriber Management** field on the standby SCE might appear as **not-done** if the SCE was never active.

- To display the connection status of the specified network element:

```
p3net --show --ne-name=mainNE
Network Element Information:
=====
Name:          mainNE
Host:          1.1.1.1
Ip:            1.1.1.1
Port:          14374
Status:        Connection ready
Type:          SCE2000
Domain:        subscribers
Synchronization Status: done
Redundancy Status: Standalone
Quarantine Status: ok
```

- To display the connection status of cascaded SCEs, use the SCE name that appears in the configuration file:

```

p3net --show -n test
Network Element Information:
=====
Name:          test
Host:          1.1.1.1
Ip:           1.1.1.1
Port:         14374
Status:       Connection ready
Type:         SCE2000
Domain:       subscribers
Synchronization Status: done
Redundancy Status: Active
Quarantine Status: ok
Network Element Information:
=====
Name:          test
Host:          2.2.2.2
Ip:           2.2.2.2
Port:         14374
Status:       Connection ready
Type:         SCE2000
Domain:       subscribers
Synchronization Status: not-done
Redundancy Status: Standby
Quarantine Status: ok

```

Information About the p3rdr Utility

- [p3rdr Utility, page B-15](#)
- [Examples of using the p3rdr Utility, page B-16](#)

p3rdr Utility

The **p3rdr** utility displays configuration and statistics information about the RDR server.

The command format is:

```
p3rdr OPERATION
```

[Table B-20](#) lists the **p3rdr** operations.

Table B-20 p3rdr Operations

Operation	Description
--show	Displays the RDR server configuration, as well as other general information; for example, the maximum number of connections.
--show-statistics	Displays counters of RDR messages handled or failed for each connection.
--show-connections	Displays a list of active connections.
--reset-statistics	Resets the counters of the handled RDR messages and rates.

Examples of using the p3rdr Utility

- To display the status of the RDR server and the current configuration:

```
p3rdr --show
Active:    true
Port:     33001
Connections:
           Max-limit: 10 connections
           Current:   2 connections
Command terminated successfully
>
```

- To display the current RDR statistics:

```
p3rdr --show-statistics
RDR Server Statistics:
=====
Handled RDRs: 12
Bad RDRs:     0
Current rate: 12.0 RDRs per second
Peak rate:    12.0 RDRs per second
Client statistics:
-----:
Connection from 10.1.8.81 statistics:
  Handled RDRs: 7
  Bad RDRs:    0
  Current rate: 7.0
  Is connected: true
  Times connected: 1
Connection from 10.1.8.82 statistics:
  Handled RDRs: 5
  Bad RDRs:    0
  Current rate: 5.0
  Is connected: true
  Times connected: 1
Command terminated successfully
>
```

- To display the current number of RDR server connections:

```
p3rdr --show-connections
The following clients are connected:
10.1.8.81 - 1 connection
10.1.8.82 - 1 connection
Command terminated successfully
>
```

Information About the p3rpc Utility

- [p3rpc Utility, page B-16](#)
- [Examples of using the p3rpc Utility, page B-18](#)

p3rpc Utility

The **p3rpc** utility displays the information of the proprietary Cisco RPC (Remote Procedure Call) server interface to the SM. It also authenticates users.

The command format is:

```
p3rpc OPERATION [OPTIONS]
```


Table B-21, Table B-22, and Table B-23 list the **p3rpc** operations and options.

Table B-21 *p3rpc Operations*

Operation	Description
--show	Displays the port number to which the PRPC server listens, the maximum number of connections, the current number of active connections, and the host IP to which the server listens.
--show-client-names	Displays the names of the connected clients. Can be used for extracting the LEG_NAME key, see LEG-Domains Association Section, page A-5 .
--show-statistics	Displays the PRPC server statistics. They contain information about the number of current PRPC sessions and statistics for PRPC server actions such as invocations and errors.
--reset-statistics	Clears the PRPC server statistics.
--set-user	Adds or updates the username and password.
--validate-password	Validates the username and password.
--delete-user	Deletes a user configuration.
--show-users	Displays all configured users.

Table B-22 *p3rpc User Options*

User Option	Abbreviation	Description
--username=USER-NAME	-u	Specifies the name of the user. Used with --set-user , --validate-password , and --delete-user operations.
--password=USER-PASSWORD	-p	Specifies the password of the user. Used with --set-user , --validate-password , and --delete-user operations.

Table B-23 *p3rpc Miscellaneous Options*

Option	Abbreviation	Description
--remote=IP[:port]	-r	(Optional) Used with --set-user , --validate-password , and --delete-user for users operations on the remote SM in High Availability setups. The port option should be used if the PRPC Server port on the remote SM machine differs from the default value (14374).

Examples of using the p3rpc Utility

- To display the port number to which the PRPC server listens, the maximum number of connections, the current number of active connections, the host IP to which the server listens, and the name of the configuration file used by the server:

```
p3rpc --show
```

- To display the statistics of the PRPC server:

```
p3rpc --show-statistics
```

- To clear the statistics of the PRPC server:

```
p3rpc --reset-statistics
```

- To show all the users configured at the PRPC server:

```
p3rpc --show-users
```

Information About the p3sm Utility

- [p3sm Utility, page B-18](#)
- [Examples of using the p3sm Utility, page B-21](#)

p3sm Utility

The **p3sm** utility performs general configuration and management of the SM.

The command format is:

```
p3sm OPERATION [OPTIONS]
```

[Table B-24](#), [Table B-25](#), [Table B-26](#), and [Table B-27](#) list the **p3sm** operations and options.

Table B-24 *p3sm Operations*

Operation	Description	Notes
<code>--show</code>	Displays the current SM configuration and statistics.	—
<code>--load-config</code>	Reloads the SM configuration file. If the <code>-f</code> option is not used, file p3sm.cfg is loaded.	—
<code>--resync</code>	Resynchronizes subscribers of specified SCE with the SM database. The SCE is specified using the option --ne-name=SCE_NAME .	Progress indicator
<code>--resync-all</code>	Resynchronizes all subscribers of all SCEs with the SM database.	Progress indicator
<code>--start [--wait]</code>	Starts the server. The option --wait causes the CLU to return only after the SM is up.	Default: started

Table B-24 p3sm Operations (continued)

Operation	Description	Notes
<code>--stop</code>	<p>Stops the server.</p> <p>Note When using fail-over, a simple shut-down of the SM does <i>not</i> work, the Veritas Cluster Server identifies that the SM is down and attempts to restart it. The correct procedure is:</p> <ol style="list-style-type: none"> 1. Perform the manual fail-over. See Subscriber Manager Fail-Over. 2. Use the Veritas Cluster Manager Application to stop the monitoring (probing) of the SM. 3. Use the SM CLU (p3sm --stop) to stop the SM 	—
<code>--restart [--wait]</code>	Stops the server operation and then restarts it. The option <code>--wait</code> causes the CLU to return only after the SM is up.	—
<code>--sm-version</code>	Displays the currently installed SM version.	—
<code>--sm-status [--detail]</code>	Displays the SM operational status: whether the SM is running or not, and whether it is Active or Standby. If errors have occurred, it also displays their summary. To receive a detailed description, use the option <code>--detail</code> .	—
<code>--extract-support-file</code>	<p>Retrieves the support file from the agent.</p> <p>This command extracts the SM support information to a defined file, which is defined using the option <code>--output=FILE</code>. SM support information should be extracted and sent to Cisco customer support with each support request.</p>	—
<code>--reset-sm-status</code>	Clears errors and warnings that were displayed to the user.	—
<code>--logging=[on/off]</code>	<p>Enables/disables the logging of user logon to the UserLog.</p> <p>Note Enabling this flag may affect performance.</p>	—

Table B-24 *p3sm Operations (continued)*

Operation	Description	Notes
<code>--show-stats</code>	Displays statistics information regarding logon operations and inactive subscriber removal operations. The rate results are updated once every 10 seconds.	—
<code>--reset-stats</code>	Resets the statistics information.	—

Table B-25 *p3sm SM Options*

SM Option	Abbreviation	Description
<code>--ne-name=NAME</code>	<code>-n NAME</code>	Specifies logical NAME of the SCE platform to resynchronize.

Table B-26 *p3sm File Options*

File Option	Abbreviation	Description
<code>--output=FILE</code>	<code>-o FILE</code>	Where to extract the support information file, relative to the SM root directory
<code>--file=FILE</code>	<code>-f FILE</code>	File to load the configuration from, relative to the SM configuration directory.

Table B-27 *p3sm Miscellaneous Options*

File Option	Abbreviation	Description
<code>--ignore-warnings</code>	<code>-i</code>	Ignore configuration validation warnings while loading the configuration file.
<code>--remote=IP[:port]</code>	<code>-r</code>	Used with <code>--load-config</code> to load the local configuration file to both the local SM and the remote SM.
<code>--detail</code>	—	Displays a detailed view of the SM status.
<code>--wait</code>	—	Used with <code>--start</code> or <code>--restart</code> to signal the CLU to return only when the SM is up.

Examples of using the p3sm Utility

- To start the server:

```
p3sm --start
```

- To stop the server:

```
p3sm --stop
```

**Note**

When using fail-over, a simple shut-down of the SM does *not* work, the Veritas Cluster Server identifies that the SM is down and attempts to restart it. The correct procedure is:

- Perform the manual fail-over. See [Subscriber Manager Fail-Over, page 3-1](#).
 - Use the Veritas Cluster Manager Application to stop the monitoring (probing) of the SM.
 - Use the SM CLU (**p3sm --stop**) to stop the SM
- To display the SM configuration:

```
>p3sm --show
Subscriber Management Module Information:
=====
Persistency in SCE (static):      false
Auto-resync at SCE reconnect:    true
Save subscriber state on logout:  false
Pull mode is on:                 false
LEG block mode is on:           false
Logon logging is on:            false
Statistics:
Number of logins:                1872423
Number of logouts:              1824239
Number of auto-logout:          0
Number of pull requests:        0
LEG-SM link failure:
Clear all subscribers mappings:   false
Timeout:                        60
Up time:                        4 hours 16 minutes 44 seconds
Inactive Subscribers Removal:
Is Enabled:                      false
Inactivity timeout:              1 hours
Max removal rate:                10 subscribers per second
Task interval:                   10 minutes
Last run time:                   Was never run
Automatic Logout (lease-time support):
Is Enabled:                      false
Max logout rate:                 50 IP addresses per second
Task interval:                   disabled
Grace period:                    10 seconds
Last run time:                   Was never run
Command terminated successfully
```

- To resynchronize the subscribers of the specified SCE with the SM database:

```
p3sm --resync --ne-name=my_SCE_100
```

- To stop the server operation and then restart it:

```
p3sm --restart
```

- To reload the SM configuration file, p3sm.cfg:
p3sm --load-config
- To display the SM operational status (active or inactive):
>p3sm --sm-status
SM is running.
SM operational state is Active
Command terminated successfully
- To extract the SM support information to the specified file:
p3sm --extract-support-file --output=support.zip
- To display statistics information regarding logon operations and inactive subscriber removal:

```
>p3sm --show-stats
Subscriber Management Statistics Information:
=====
Number of logins:                1872423
Login rate:                      10.34
Number of logouts:              1824239
Logout rate:                    10.67
Number of auto-logout:          0
Auto-logout rate:               0
Number of pull requests:        0
Pull requests rate:             0
Inactive Subscriber Removal Information:
=====
Number of inactive subscribers removed: 56732
Inactive subscribers removal rate:    9.98
Command terminated successfully
```

Information About the p3subs Utility

- [p3subs Utility, page B-22](#)
- [Examples of using the p3subs Utility, page B-25](#)

p3subs Utility

The **p3subs** utility manipulates individual subscriber information in the SM database. The subscriber properties that are supported by the SCA BB Console are packageId, upVlinkId, and downVlinkId. For a description of the subscriber properties, see *Cisco Service Control Application for Broadband User Guide*.

The command format is:

```
p3subs OPERATION [SUBSCRIBER-OPTIONS]
```

[Table B-28](#) and [Table B-29](#) list the **p3subs** operations and options.

Table B-28 *p3subs Operations*

Operation	Description
<code>--add</code>	Adds/updates a subscriber. The operation fails if the subscriber exists, unless the <code>--overwrite</code> option is used.
<code>--set</code>	Adds/updates mappings and/or properties for the specified subscriber. A new mapping overwrites all existing mappings, unless the <code>--additive-mapping</code> option is used. A property is overwritten only when a new value is assigned to it, but not when a <i>different</i> property has a new value assigned to it.
<code>--show</code>	Displays information for the specified subscriber.
<code>--remove</code>	Removes the specified subscriber.
<code>--show-all-mappings</code>	Displays all the mappings for the specified subscriber.
<code>--remove-mappings</code>	Removes the specified mapping of the specified subscriber.
<code>--remove-all-mappings</code>	Removes all the mappings of the specified subscriber.
<code>--show-property</code>	Displays the value of the specified property of the specified subscriber.
<code>--show-all-properties</code>	Displays the values of all the properties of the specified subscriber.
<code>--show-all-property-names</code>	Displays all the property names and descriptions.
<code>--reset-property</code>	Resets the specified property of the specified subscriber to its default value.
<code>--remove-properties</code>	Removes all properties and custom properties from the subscriber record.
<code>--clear-state</code>	Clears applicative state of specified subscriber. This command clears <i>only</i> the backup copy at the SM; it does <i>not</i> clear the applicative state record in the SCE platform.

Table B-29 *p3subs Subscriber Options*

Subscriber Option	Abbreviation	Description
<code>--overwrite</code>	—	Used in add operations to replace the existing subscriber configuration, instead of failing.
<code>--subscriber=NAME</code>	<code>-s NAME</code>	Performs operation using specified subscriber NAME.
<code>--additive-mappings</code>	—	Adds the new mapping(s) to any existing ones. (Without this option, any existing mappings are overwritten.)

Table B-29 p3subs Subscriber Options (continued)

Subscriber Option	Abbreviation	Description
<code>--ip=IP1[/RANGE] [, ...] [@VPN-NAME]</code>	—	Performs the operation using specified IP mapping(s). IP is in dotted notation. “/RANGE” is used for specifying several consecutive mappings, by specifying the number of consecutive set bits in the mask. For example, 1.1.1.0/30 means 1.1.1.0 to 1.1.1.3 , or 1.1.1.0 with mask 255.255.255.252 . “@VPN-NAME” is used to specify a tunneled IP address or the range of a VPN.
<code>--vpn=VPN-NAMES-LIST</code>	—	Performs the operation using all the tunneled IP addresses of a VPN (full-range). This has the same meaning as --ip=0.0.0.0/0@VPN-NAME .
<code>--community=AS:value@VPN-NAME [, ...]</code>	—	Performs the operation using the community field of a VPN.
<code>--property=KEY1[=VAL1] [; ...]</code>	<code>-p KEY1[=VAL1] [; ...]</code>	Performs operation using the specified KEY=VAL property/properties. These properties are defined by the application and influence the subscriber service in the SCE.
<code>--custom-property=KEY1[=VAL1] [; ...]</code>	—	Performs operation using the specified KEY=VAL custom property/properties. These properties are user defined and have no influence on the service the subscriber receives.
<code>--domain=DOMAIN</code>	<code>-d DOMAIN</code>	Performs operation on specified DOMAIN. If DOMAIN is none , the operation refers to subscribers who have no domain specified.
<code>--up-vlink-name</code>	—	Perform the operation using the specified up-vlink-name .
<code>--down-vlink-name</code>	—	Perform the operation using the specified down-vlink-name .
<code>--giaddr</code>	—	Perform the operation using the specified giaddr IP value.

Examples of using the p3subs Utility

- To add a subscriber with the specified IP address:

```
p3subs --add --subscriber=xyz --ip=96.142.12.7
```
- To overwrite subscriber information (because the subscriber **xyz** already exists, this operation would fail, but the **overwrite** option allows the IP address to be overwritten):

```
p3subs --add --subscriber=xyz --ip=96.128.128.42 --overwrite
```
- To set a property value for the specified subscriber:

```
p3subs --set --subscriber=xyz --property=packageId=1
```
- To add new mappings for the specified subscriber; any existing ones are overwritten:

```
p3subs --set --subscriber=xyz --ip=96.142.12.8
```
- To add new mappings to the existing ones for the specified subscriber:

```
p3subs --set --subscriber=xyz --ip=96.142.12.0/24 --additive-mappings
```
- To add tunneled IP addresses of a VPN, existing mappings are overwritten:

```
p3subs --set --subscriber=xyz --ip=10.1.1.0/24@myVpn
```
- To add all tunneled IP addresses of a VPN, existing mappings are overwritten:

```
p3subs --set --subscriber=xyz --vpn=myVpn
```
- To add community of a VPN, existing mappings are overwritten:

```
p3subs --set --subscriber=xyz --community=1:10@myVpn
```
- To display information for the specified subscriber:

```
p3subs --show --subscriber=xyz
```
- To remove the specified subscriber:

```
p3subs --remove --subscriber=xyz
```
- To display all the mappings for the specified subscriber:

```
p3subs --show-all-mappings --subscriber=zyz
```
- To remove the specified mappings for the specified subscriber:

```
p3subs --remove-mappings --subscriber=xyz --ip=96.142.12.7,96.128.128.42
```
- To remove a range of consecutive mappings for the specified subscriber:

```
p3subs --remove-mappings --subscriber=xyz --ip=1.1.1.0/30
```
- To remove all the mappings for the specified subscriber:

```
p3subs --remove-all-mappings --subscriber=xyz
```
- To display the value of the specified property for the specified subscriber:

```
p3subs --show-property --subscriber=xyz --property=reporting
```

- To display the values of all the properties for the specified subscriber:
`p3subs --show-all-properties --subscriber=xyz`
- To display all the property names and descriptions:
`p3subs --show-all-property-names`
- To reset specified property of specified subscriber to its default value:
`p3subs --reset-property --subscriber=xyz --property=rdr.transaction.generate`
- To clear the applicative state of the specified subscriber. This command clears only the backup copy at the SM, it does **not** clear the applicative state record in the SCE platform:
`p3subs --clear-state --subscriber=xyz`

Information About the p3subsdB Utility

- [p3subsdB Utility, page B-26](#)
- [Subscriber CSV File Format used by SCA BB Console for import/export, page B-28](#)
- [Import or Export Subscribers with Extended Attributes, page B-28](#)
- [Examples of using the p3subsdB Utility, page B-29](#)

p3subsdB Utility

The **p3subsdB** utility manages the subscriber database and performs operations on groups of subscribers.

The command format is:

```
p3subsdB OPERATION [OPTIONS] [FILE-OPTIONS]
```

[Table B-30](#), [Table B-31](#), and [Table B-32](#) list the **p3subsdB** operations and options.

Table B-30 *p3subsdB Operations*

Operation	Description	Notes
<code>--clear-all</code>	Removes all subscriber records from the SM database.	Progress indicator
<code>--clear-domain</code>	Removes all subscriber records from the specified domain.	Progress indicator
<code>--show-num</code>	Displays number of subscribers in database for the specified domain.	—
<code>--show-all</code>	Lists all the subscriber names.	—
<code>--show-domain</code>	Lists all the subscriber names in the specified domain.	—

Table B-30 p3subsdB Operations (continued)

Operation	Description	Notes
<code>--import</code>	<p>Imports subscribers to the database from a specified CSV file. See Subscriber CSV File Format used by SCA BB Console for import/export.</p> <p>The filename that is to be imported is specified using the format “<code>--file=import-filename</code>”.</p> <p>The results go to a result file, import-results.txt, which is created in the same directory as the CSV file.</p>	Progress indicator
<code>--export</code>	<p>Exports subscribers from the database to a specified CSV file. See Subscriber CSV File Format used by SCA BB Console for import/export.</p> <p>The filename that is to be exported is specified using the format “<code>--output=export-filename</code>”.</p> <p>The results go to a result file, export-results.txt, which is created in the same directory as the CSV file.</p>	Progress indicator
<code>--clear-all-states</code>	Clears the state of all subscribers in the SM database.	—
<code>--remove-property</code>	<p>Removes a specified property from all subscribers in the system.</p> <p>Note After running this command you should re-synchronize all SCE devices.</p>	—
<code>--remove-all-ip</code>	Removes all the IP addresses of all subscribers.	—
<code>--remove</code>	Removes all the subscribers that are specified in the CSV file from the SM.	—

Table B-31 *p3subsdB Options*

Option	Abbreviation	Description
<code>--prefix=NAME</code>	—	Used in the export operation for filtering the export.
<code>--property=PROP</code>	—	Used in removing of property PROP from all of the subscribers.
<code>--domain=DOMAIN</code>	<code>-d DOMAIN</code>	Performs the operation on the specified DOMAIN. If DOMAIN is none , the operation refers to the subscribers who have no domain specified.

Table B-32 *p3subsdB File Options*

File Option	Abbreviation	Description
<code>--file=FILE</code>	<code>-f FILE</code>	Specifies the subscriber CSV FILES to import from.
<code>--output=FILE</code>	<code>-o FILE</code>	Specifies the subscriber CSV FILE to export to.

Subscriber CSV File Format used by SCA BB Console for import/export

Lines in subscriber CSV files have the following fixed format:

```
subscriber-id,domain,mappings,package-id,upstream Virtual Link id,downstream Virtual Link id
```

If no domain is specified, the default domain (subscribers) is assigned.

The following is an example CSV file for use with the SM CLU:

```
JerryS,subscribers,80.179.152.159,0,0,0
ElainB,,194.90.12.2,3,12,1
```

For a full description of the subscriber properties see [Cisco Service Control Application for Broadband User Guide](#).

Import or Export Subscribers with Extended Attributes

This feature is an enhancement introduced in SCMS SM, Release 3.6.5. To import or export subscribers with extended attributes, update the property file (where the format of the CSV file is defined) subaware.pro with the attributes properties. Add the attributes to `smm.ssu.maindecoder.fields` while including the “attributes.” prefix with each of the attributes. Attributes defined in `smm.ssu.maindecoder.fields` must also be configured in the Radius Listener or Radius Sniffer configuration file. Attribute data for any attribute not defined in either configuration file will not be imported or exported.

**Note**

Whenever the property file subaware.pro is changed, you must restart the SM.

Examples of using the p3subsdB Utility

- To import subscribers from a specified CSV file:
`p3subsdB --import --file=mySubscriberFile.csv`
- To export subscribers to a specified CSV file:
`p3subsdB --export -o mySubscriberFile.csv`
- To export subscribers to a specified CSV file, using filtering options:
`p3subsdB --export --prefix=a --output=mySubscriberFile.csv`
- To export subscribers to a specified CSV file, using filtering options:
`p3subsdB --export --prefix=a -o a.csv`
- To remove all subscriber records from the SM database:
`p3subsdB --clear-all`
- To remove all subscriber records from the specified domain:
`p3subsdB --clear-domain --domain=myDomain`
- To list all the subscribers:
`p3subsdB --show-all`
- To list all subscribers in a specified domain:
`p3subsdB --show-domain --domain=myDomain`
- To show the number of subscribers in a specified domain:
`p3subsdB --show-num --domain=myDomain`
- To list all subscribers who have no domain specified:
`p3subsdB --show-domain --domain=none`
- To clear the state of all subscribers in the SM database:
`p3subsdB --clear-all-state`
- To remove a property from all subscriber records:
`p3subsdB --remove-property --property=monitor`

Information About the p3vpn Utility

- [p3vpn Utility, page B-29](#)
- [VPN CSV File Format for import/export, page B-31](#)
- [Examples of using the p3vpn Utility, page B-31](#)

p3vpn Utility

The **p3vpn** utility manages the VPN entities in the SM.

The command format is:

```
p3vpn OPERATION [OPTIONS] [FILE-OPTIONS]
```

[Table B-33](#), [Table B-34](#), and [Table B-35](#) list the **p3vpn** operations and options.

Table B-33 *p3vpn Operations*

Operation	Description
<code>--add</code>	Adds a VPN to the SM. The operation fails if the VPN exists.
<code>--set</code>	Updates a VPN in the SM. A new mapping overwrites all existing mappings, unless the --additive-mapping option is used.
<code>--remove</code>	Removes the specified VPN.
<code>--remove-mappings</code>	Removes the specified mappings of the specified VPN.
<code>--remove-all-mappings</code>	Removes all mappings of the specified VPN.
<code>--show</code>	Displays information for the specified VPN.
<code>--show-subs</code>	Displays all the subscribers that belong to the specified VPN.
<code>--show-all</code>	Displays all VPN names.
<code>--show-all-mappings</code>	Displays all the mappings for the specified VPN.
<code>--show-num</code>	Displays the total number of VPNs.
<code>--import</code>	Imports VPNs from a CSV file. See VPN CSV File Format for import/export, page B-31 . The filename that is to be imported is specified using the format “ <code>--file=import-filename</code> ”. The results go to a result file, import-results.txt , which is created in the same directory as the CSV file.
<code>--export</code>	Export VPNs to a CSV file. See VPN CSV File Format for import/export, page B-31 . The filename that is to be exported is specified using the format “ <code>--output=export-filename</code> ”. The results go to a result file, export-results.txt , which is created in the same directory as the CSV file.
<code>--remove</code>	Remove the VPNs specified by a CSV file. The filename that contains the VPNs to be removed is specified using the format “ <code>--file=remove-filename</code> ”. The results go to a result file, remove-results.txt , which is created in the same directory as the CSV file.
<code>--remove-all-vlan</code>	Removes all the VLAN-ids of all VPNs.
<code>--remove-all-mp1s-1pn</code>	Removes all the MPLS/VPN mappings of all VPNs.

Table B-34 *p3vpn Options*

Option	Abbreviation	Description
<code>--vpn=VPN-NAME</code>	—	Performs the operation using the specified VPN name.
<code>--mp1s-1pn=RT@PE, . . .</code>	—	Performs the operation using the specified RT/RD@PE mappings.

Table B-34 *p3vpn Options (continued)*

Option	Abbreviation	Description
<code>--vlan=VLAN</code>	—	Performs the operation using the specified VLAN mapping(s).
<code>--domain=DOMAIN</code>	<code>-d DOMAIN</code>	Performs the operation on the specified DOMAIN.

Table B-35 *p3vpn File Options*

File Option	Abbreviation	Description
<code>--file=FILE</code>	<code>-f FILE</code>	Specifies the CSV FILE from which to import or remove VPNs.
<code>--output=FILE</code>	<code>-o FILE</code>	Specifies the CSV FILE to which the VPNs are exported.
<code>--force</code>	—	Used together with <code>--remove-vpn</code> or <code>--remove-all</code> to perform the removal operation even if subscribers contain tunneled mappings of the removed VPN. The subscribers tunneled mappings of the removed VPN are removed as well.

**Note**

When working with VLAN mapping types, the SCE must be configured using the following CLI:

```
SCE2000#>configure
SCE2000 (config)#>in li 0
SCE2000 (config if)#>VLAN symmetric classify
```

VPN CSV File Format for import/export

Lines in VPN CSV files have the following fixed format:

```
vpn-id,domain,mappings
```

If no domain is specified, the default domain (subscribers) is assigned.

The following is an example CSV file for use with the SM CLU:

```
MPLS-VPN,subscribers,1:1000@1.1.1.1
VLAN-VPN,subscribers,10
```

Examples of using the p3vpn Utility

- To add a VPN with the specified VLAN:


```
p3vpn --add -vpn=myVpn --vlan-id=10
```
- To add new mappings for the specified VPN; any existing ones are overwritten:


```
p3vpn --set --vpn=myVpn --vlan-id=11
```
- To add new mappings to the existing ones for the specified subscriber:

```
p3vpn --set --vpn=myVpn --vlan-id=12 --additive-mappings
```

- To add a VPN with the specified MPLS/VPN mappings:

```
p3vpn --add --vpn=myVpn --mpls-vpn=1:100@96.142.12.7
```

- To display information for the specified VPN:

```
p3vpn --show --vpn=myVpn
```

- To remove the specified VPN:

```
p3vpn --remove --vpn=myVpn
```

- To display all the mappings for the specified VPN:

```
p3vpn --show-all-mappings --vpn=myVpn
```

- To remove the specified mappings for the specified VPN:

```
p3vpn --remove-mappings --vpn=myVPN --vlan-id=10
```

- To remove all the mappings for the specified subscriber:

```
p3vpn --remove-all-mappings --vpn=myVpn
```

Information About the p3bgp Utility

The **p3bgp** utility controls the operation of the BGP LEG and displays its status. For information about this CLU, see the “[Using the MPLS/VPN BGP LEG CLU](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3dhcpsniff Utility

The **p3dhcpsniff** utility displays the SCE-Sniffer DHCP LEG configuration, status, and statistics. For information about this CLU, see the “[Using the SCE-Sniffer DHCP LEG CLU](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3leasequery Utility

The **p3leasequery** utility displays the DHCP Lease Query LEG configuration, status, and statistics. For information about this CLU, see the “[Subscriber Manager Integration - Configuration](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3radius Utility

The **p3radius** utility displays the statistics of the RADIUS Listener LEG. For information about this CLU, see the “[Using the RADIUS Listener LEG CLU](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3radiusniff Utility

The **p3radiusniff** utility displays the SCE-Sniffer RADIUS LEG configuration and statistics. For information about this CLU, see the “[Using the SCE-Sniffer RADIUS LEG CLU](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3qm Utility

The **p3qm** utility displays the quota manager configuration, status, and statistics. For information about this CLU, see the “[Using the Quota Manager CLU](#)” chapter in *Cisco Service Control Management Suite Quota Manager User Guide*.

Information About the p3soap Utility

The **p3soap** utility displays the SOAP LEG configuration and statistics. For information about this CLU, see the “[Using the SOAP LEG CLU](#)” chapter in *Cisco SCMS SM LEGs User Guide*.

Information About the p3vlink Utility

The **p3vlink** utility displays the virtual link statistics of the Virtual Link Manager. For information about this CLU, see *Cisco Service Control for Managing Remote Cable MSO Links Solution Guide*.

