



Release Notes for Cisco Service Control Subscriber Manager, Release 3.7.x

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Note

This document supports all 3.7.x releases.

Contents

This document consists of the following sections:

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- [Cisco SCMS Subscriber Manager Release 3.7.1, page 10](#)
- [Cisco SCMS Subscriber Manager Release 3.7.0, page 16](#)
- [Obtaining Documentation and Submitting a Service Request, page 27](#)

Introduction

The release notes for the Cisco Service Control Management Suite (SCMS) Subscriber Manager (SM) describe the enhancements provided in Cisco SCMS Subscriber Manager Release 3.7.x.

This document outlines the issues that have been resolved in Cisco SCMS Subscriber Manager Release 3.7.5, Cisco SCMS Subscriber Manager, Release 3.7.2, Cisco SCMS Subscriber Manager Release 3.7.1, and Cisco SCMS Subscriber Manager Release 3.7.0.

For a list of caveats that are applicable to Cisco SCMS Subscriber Manager Release 3.7.5, see the [“Open Caveats, Release 3.7.5”](#) section on page 4.

For a list of caveats that are applicable to Cisco SCMS Subscriber Manager Release 3.7.2, see the [“Open Caveats, Release 3.7.2”](#) section on page 7.



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For a list of caveats that are applicable to Cisco SCMS Subscriber Manager Release 3.7.1, see the “[Open Caveats, Release 3.7.1](#)” section on page 11.

For a list of caveats that are applicable to Cisco SCMS Subscriber Manager Release 3.7.0, see the “[Open Caveats, Release 3.7.0](#)” section on page 22.

To access the online Cisco Service Control documentation site, follow these instructions:

1. On Cisco.com, go to the following page:
<http://www.cisco.com/cisco/web/psa/default.html?mode=prod>
2. Choose **Products > Service Exchange > Cisco Service Control > Cisco Service Control Management Suite > Cisco Service Control Subscriber Manager**.

Cisco SCMS Subscriber Manager Release 3.7.5

This section describes the functional enhancements, interoperability of the APIs, and resolved issues in Cisco SCMS Subscriber Manager Release 3.7.5:

- [Information About New Features, page 2](#)
- [API Interoperability, page 3](#)
- [Resolved Issues, Release 3.7.5, page 3](#)
- [Open Caveats, Release 3.7.5, page 4](#)

Information About New Features

Cisco SCMS Subscriber Manager Release 3.7.5 contains the following new features:

- Cisco Service Control Engine (SCE) APIs for virtual links creation.
- The DHCP Lease Query LEG to support the active-active mode with multiple servers.
- The IPDR, along with the SNMP-BG query option with enhanced options.

API Interoperability

Table 1 shows the Cisco SCMS Subscriber Manager Release 3.7.5 and Cisco SCE Release 3.7.5 software components along with versions of the Cisco SCMS Subscriber Manager C/C++ API, Cisco SCMS Subscriber Manager Java API, and the Cisco SCE Subscriber API with which they are compatible.

Table 1 API Interoperability

API	Cisco SCE 3.7.5	Cisco SCMS SM 3.7.5
SM C/C++ API	—	3.7.0, 3.7.1,3.7.2, and 3.7.5.
SM Java API	—	3.7.0, 3.7.1,3.7.2, and 3.7.5.
SCE Subscriber API	3.7.0, 3.7.1,3.7.2, and 3.7.5.	—
CNR LEG ¹	—	3.7.0, 3.7.1,3.7.2, and 3.7.5.

1. CNR LEG=Cisco Network Registrar Login Event Generator

Resolved Issues, Release 3.7.5

This section describes the issues resolved in Cisco SCMS Subscriber Manager Release 3.7.5.

CSCtu29658

When the bucket size value of a base profile was configured with a value that was greater than the bucket size value of the penalty_profile parameter, the following error message is displayed:

```
Error - Failed to display quota
```

This issue is resolved.

CSCtx13751

Users were not able to clear the subscriber state using the following command:

```
p3subs --clear-state
```

This issue is resolved.

CSCts72545

In the cluster mode of the Subscriber Manager, users could copy only the p3sm configuration file to the remote Subscriber Manager using the following command:

```
p3sm --load-config -r
```

This issue is resolved.

CSCtw91217

Users were not able to clear all the quota information from the Subscriber Manager database using the following command:

```
p3subsdB --clear-all-states
```

This issue is resolved.

CSCty04383

The Cisco Quota Manager did not differentiate between the profiles of the subscribers in breach state when the following command was used:

```
p3qm --show-subs-in-breach --quota-profile
```

This issue is resolved.

Open Caveats, Release 3.7.5

CSCty77154

The virtual links created by the virtual link API gets deleted when the SCE was reloaded.

Workaround:

Before reloading the Cisco SCE, execute the following command in order to retain the virtual links when the Cisco SCE is up:

```
:copy running-config startup-config
```

CSCty80287

In the cluster mode of the Subscriber Manager, when the Subscriber Manager was loaded, import.csv file and export.csv file from the configuration directory of the Active Subscriber Manager was not copied to the Remote Subscriber Manager.

Workaround:

In the cluster mode of the Subscriber Manager, when the Subscriber Manager was loaded, manually copy the import.csv file and export.csv file from the configuration directory of the active Subscriber Manager to the standby server. Also, perform a manual fail over and issue the **p3vlink import cmts** command.

CSCty59940

When the Subscriber Manager was in the cluster mode, connection to the CMTS was established from the active Subscriber Manager. In case of failover, the collector-exporter connection from the Subscriber Manager in the standby mode should have been dropped and established from the active Subscriber Manager. However, during the failover, the connection from the standby Subscriber Manager was not dropped.

Workaround:

Restart the Subscriber Manager in the new active mode.

CSCuc06530

While updating a subscriber using the updateSubscriberDetails SOAP API, the Package Id for the subscriber is updated correctly, but the subscriber is always moved to the default domain “subscribers” even if the subscriber belongs to a different domain.

Workaround:

Configure the default domain name (subscribers) in the p3sm.cfg file.

CSCuc53070

When quota reached its threshold value or when a quota depletion occurred within 10 seconds of quota provisioning, the Cisco Service Control Subscriber Manager ignored the notification. In a multibucket scenario, when both the buckets got depleted, the Cisco Service Control Subscriber Manager considered only one notification. Hence, only one bucket was updated. The second bucket never got updated.

Workaround:

There is no known workaround.

CSCud07221

In a multiple Cisco SCE scenario, fast traffic on one Cisco SCE and slow traffic on the second Cisco SCE impacts the quota management penalty process.

Workaround:

There is no known workaround.

Cisco CMTS Caveats

The following known caveats in Cisco CMTSs may cause partial or no Vlink mappings for subscriber:

- CSCtw80211—Channel Set ID may not be mapped to the upstream channels in the docsIf3UsChSetChList.
- CSCtx03129—docsIf3DsChSetChList may not populate the channel set of the bonding group.
- CSCto47157—The Cisco CMTS router generates a CPE 'stop' IPDR messages (<RecType> 2 </RecType>) for the affected CPE, and no login messages (<RecType> 3 </RecType>) corresponding to that CPE are generated during dynamic channel changes.

Cisco SCMS Subscriber Manager Release 3.7.2

This section describes the functional enhancements, interoperability of the APIs, and resolved issues in Cisco SCMS Subscriber Manager, Release 3.7.2:

- [Information About New Features, page 5](#)
- [API Interoperability, page 6](#)
- [Resolved Issues, Release 3.7.2, page 6](#)
- [Open Caveats, Release 3.7.2, page 7](#)

Information About New Features

Cisco SCMS Subscriber Manager Release 3.7.2 contains these new features:

- Cisco SCMS Quota Manager support for multiple buckets with penalty support.
- Fair usage policy for RADIUS listener Login Event Generator (LEG) and RADIUS sniffer LEG.
- Support for Adhoc-based Internet Protocol Detail Record (IPDR) sessions.
- Support for SOAP LEG standalone topology.

API Interoperability

Table 2 shows the Cisco SCMS Subscriber Manager Release 3.7.2 and Cisco SCE Release 3.7.2 software components and versions of the Cisco SCMS Subscriber Manager C/C++ API, Cisco SCMS Subscriber Manager Java API, and the Cisco SCE Subscriber API with which they are compatible.

Table 2 **API Interoperability**

API	Cisco SCE 3.7.2	Cisco SCMS SM 3.7.2
SM C/C++ API	—	3.6.x, 3.7.0, 3.7.1,3.7.2
SM Java API	—	3.6.x, 3.7.0, 3.7.1,3.7.2
SCE Subscriber API	3.6.x, 3.7.0, 3.7.1,3.7.2	—
CNR LEG ¹	—	3.6.x, 3.7.0, 3.7.1,3.7.2

1. CNR LEG=Cisco Network Registrar Login Event Generator

Resolved Issues, Release 3.7.2

This section describes the issues resolved in Cisco SCMS Subscriber Manager Release 3.7.2.

CSCtx23824

During IPDR login, when the Cisco SCMS Subscriber Manager failed to retrieve the UpVlink or DownVlink ID of a subscriber during the first SNMP query (primary queue query), Cisco SCMS SM tried to retrieve the ID during the retry query (retry queue query). Cisco SCMS SM handled the retry queue query during the same interval as the primary queue query.

This issue is resolved.

CSCtx50259

There is no wait time between primary queue query and retry queue query.

This issue is resolved.

The Cisco SCMS SM handles the retry queue query for the subscriber after the data wait time configured in the retry queue query.

CSCtx39697

In Cisco SCMS SM, when the bulk query option is configured as true, the first IPDR message retrieved the Vlink association and updated the SM database with the details. But, the second IPDR message failed to retrieve the Vlink association, even though, the mapping table had the mapping for MAC/subscribers.

This issue is resolved.

CSCts47802

The Cisco SCMS Subscriber Manager failed to synchronize the Cisco SCEs when the topology had a large number of Cisco SCEs.

This issue is resolved.

CSCts50192

The Cisco Service Management Suite Subscriber Manager allowed subscribers to be introduced in the SM database without a domain.

This issue is resolved.

CSCtr74456

In topologies with multiple Cisco SCEs, when a subscriber logged in from different Cisco SCEs, but was active only on one Cisco SCE, the SCMS Quota Manager failed to calculate the quota correctly.

This issue is resolved.

CSCso24477

The RADIUS Listener LEG failed to report binding errors.

This issue is resolved.

Open Caveats, Release 3.7.2

This section describes the open caveats in Cisco SCMS Subscriber Manager Release 3.7.2.

CSCtx18348

In Cisco SCMS SM, the delayed login of subscribers in IPDR is handled by the same thread that handles the normal IPDR login.

Workaround:

There is no known workaround.

CSCtx48264

In Cisco SCMS SM, when IPDR SNMP option is used, the Channelset ID mapping is not learned for Arris device topology.

Workaround:

There is no known workaround.

CSCtx09852

From Cisco SCMS Subscriber Manager Release 3.7.2, synchronization between Cisco SCMS Subscriber Manager and the Cisco SCE will not be triggered during Subscriber Manager restart or when the Subscriber Manager moves from the standby state to the active state in a cluster as expected.

The following is the p3net --show output for all the Cisco SCEs connected to the Cisco SCMS Subscriber Manager, when the latter is restarted:

```
p3net --show-all --detail
=====
| Name           | Host           | Conn-   | Sync-   | Domain           |
|               |               | Status  | Status  |                 |
|-----|-----|-----|-----|-----|
| sce8k         | 10.78.241.211 | up      | not-done | Cisco           |
| sce8k         | 10.78.242.212 | up      | not-done | cisco1          |
|-----|-----|-----|-----|-----|
```

The sync-status moves to done only after a manual synchronization or after a successful auto synchronization. Synchronization is automatically triggered if the Cisco SCE connection goes down and gets reconnected to the Cisco SCMS Subscriber Manager, except during the Cisco SCMS Subscriber Manager restart.

Workaround:

Perform a manual synchronization, if required.

CSCts34315

In Cisco SCMS Quota Manager, if the value of the penalty quota is configured higher than the value of the base quota, the Command Line Utility (CLU) displays wrong output.

Workaround:

Configure the base quota such that the value is greater than or equal to the value of the penalty quota.

CSCtx02917

In the IPDR configuration file, the bulk query parameter contains a dot near the parameter. The IPDR configuration file fails to load if the bulk parameter is enabled by uncommenting the parameter.

Workaround:

Remove the dot near the enable_bulk_query parameter before you load the configuration.

CSCtx03604

When converting the channel sets for nonhexadecimal characters, the conversion fails to handle numbers less than 16.

Workaround:

There is no known workaround.

CSCtx05713

While learning the downstreamchset table, special character spaces are replaced by empty spaces and Cisco SCMS Subscriber Manager fails to handle these spaces correctly. Hexadecimal conversion fails for these spaces.

Workaround:

There is no known workaround.

CSCtx07159

When multiple upstream bonding groups exists in a MAC domain, during device learning, the Subscriber Manager adds the first upstream bonding group until the channel ID is 4. The Cisco SCMS Subscriber Manager fails to add other bonding groups in the MAC domain.

Workaround:

There is no known workaround.

Cisco CMTS Caveats

The following known caveats in Cisco CMTSs may cause partial or no Vlink mappings for subscriber:

- CSCtw80211—Channel Set ID may not be mapped to the upstream channels in the docsIf3UsChSetChList.
- CSCtx03129—docsIf3DsChSetChList may not populate the channel set of the bonding group.
- CSCto47157—The Cisco CMTS router generates a CPE 'stop' IPDR messages (<RecType> 2 </RecType>) for the affected CPE, and no login messages (<RecType> 3 </RecType>) corresponding to that CPE are generated during dynamic channel changes.

Cisco SCMS Subscriber Manager Release 3.7.1

This section describes the functional enhancements, interoperability of the APIs, and resolved issues in Cisco SCMS Subscriber Manager Release 3.7.1:

- [Information About New Features, page 10](#)
- [API Interoperability, page 10](#)
- [Resolved Issues, Release 3.7.1, page 11](#)
- [Open Caveats, Release 3.7.1, page 11](#)

Information About New Features

Cisco SCMS Subscriber Manager Release 3.7.1 contains these new Cable features:

- Learning cable modem and associated bonding groups through SNMP query.
- IPDR LEG fair usage policy.
- Show command to see the channel details when the DOCSIS 2.0 modem is assigned to a single primary channel.
- p3vlink command to see the upstream and downstream vlink mappings that the virtual link manager learnt from all configured CMTSs.

For details on these features, see the *Cisco Service Control for Managing Remote Cable MSO Links Solution Guide*.

API Interoperability

[Table 3](#) shows the Cisco SCMS Subscriber Manager Release 3.7.1 and Cisco SCE Release 3.7.1 software components and versions of the Cisco SCMS Subscriber Manager C/C++ API, Cisco SCMS Subscriber Manager Java API, and the Cisco SCE Subscriber API with which they are compatible.

Table 3 *API Interoperability*

API	Cisco SCE 3.7.1	Cisco SCMS SM 3.7.1
SM C/C++ API	—	3.6.x, 3.7.0, 3.7.1
SM Java API	—	3.6.x, 3.7.0, 3.7.1
SCE Subscriber API	3.6.x, 3.7.0, 3.7.1	—
CNR LEG ¹	—	3.6.x, 3.7.0, 3.7.1

1. CNR LEG=Cisco Network Registrar Login Event Generator

Resolved Issues, Release 3.7.1

This section describes the issues resolved in Cisco SCMS Subscriber Manager Release 3.7.1.

CSCtr11916

When the DHCP server was configured to allow lease time longer than 24 days for a subscriber, the Subscriber Manager showed the subscriber IP address mapping as expired for that subscriber. All pull requests pertaining to the specific IP address was ignored.

This issue is resolved.

CSCtq96367

Regular expression support to associate package ID using mapping rules defined in the IPDR login event generator was not functional.

This issue is resolved.

CSCtq89320

Subscriber login failed when the MdIfIndex was configured as the package field in CPE mode.

This issue is resolved.

Open Caveats, Release 3.7.1

This section describes the open caveats in Cisco SCMS Subscriber Manager, Release 3.7.1.

CSCts72545

In a cluster environment, the `p3sm --load-config -r` command copies only the `p3sm.cfg` file to the remote Subscriber Manager.

Workaround:

Copy the remaining configuration files to the remote Subscriber Manager manually.

CSCts85532

After upgrading to Cisco SCMS Subscriber Manager Release 3.7.1, the IPDR mappings shows the value as 0.

Workaround:

Restart the Cisco SCMS Subscriber Manager.

CSCtq86108

In some rare scenario, if the Export configuration is modified in the `ipdr.cfg`, the IPDR collector fails to start while loading the configuration.

Workaround:

Restart the Cisco SCMS Subscriber Manager.

CSCsy66517

Dynamic devices are not getting deleted from Cisco SCE, or giaddr is not aging out.

Workaround:

Use the **p3vlink --remove-device -d <devicename>** CLU to remove the dynamic device.

CSCsw41184

Next IP removal time is incorrect.

Workaround:

- For static device, there is no known workaround.
- For dynamic devices, use the **p3vlink --remove-device -d <devicename>** CLU to remove the dynamic device.

CSCtj01171

If the interim aging is enabled when the Radius Listener and Radius Sniffer LEGs are used, the VPN subscriber mapping is not removed after the interim aging interval.

Workaround:

There is no known workaround.

CSCsq44686

The system suffers from slow performance when working with multiple LEGs or multiple SM APIs and when the support_ip_ranges parameter is set to true.

Workaround:

There is no known workaround.

CSCsu64446

A change of NAS name in the p3sm.cfg file is not supported.

When using the same NAS IP for loading the p3sm.cfg configuration file two times, but with different NAS names, the load fails with an error that indicates that the IP is already in use.

Workaround:

To rename the NAS, complete these steps:

1. Remove the NAS name from the configuration file (or comment the section).
2. Load the SM configuration.
3. Uncomment and change the name of the NAS.
4. Load the SM configuration again.

CSCsw24358

When the Subscriber Manager restarts in a Cluster Topology, the **p3culster -show** and **p3sm -sm-status** commands show that the system is in initialization state.

Workaround:

1. Wait for five minutes, the SM will change its state to active or standby according to the Cluster decision.
2. Run the **p3cluster -standby** command. This will change the SM status to standby.

CSCsx96511

When trying to manage the subscribers from the Cisco SCA BB Subscriber Manager GUI after the Collection Manager is configured in the p3sm.cfg for VLM, this exception is generated in the UMlog:

```
[rpc-40-[worker#0]:usr.engage]", ERROR, "com.pcube.apps.engage.sm.En
gageSM_MBean", "Failed receiving packages from se x.x.x.x"
(see attachment for full stack trace).
, being "x.x.x.x" the CM and not an SCE.
```

Workaround

Remove the Collection Manager configuration from the p3sm.cfg.

CSCsz06190

The Subscriber Manager installation or upgrade procedure might fail on Linux because the TT database creation with specific memory configuration fails.

This error is logged in the UMlog:

```
BRST", "[main]", ERROR, "com.pcube.management.smm.database.DataRepositoryTimesTenImpl", "[Time
sTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0837: Cannot attach data store
shared-memory segment, error 12 -- file "db.c", lineno 7896, procedure "sbDbCreate",
sqlState: 08001, errorCode: 837"
```

The `./p3sm --sm-status` command output also contains a similar error.

Workaround

If possible, reduce the Subscriber Manager process size.

CSCsz47864

During a Cluster upgrade, to release 3.5.5, the prompt is not returned when the following command is run:

```
# /export/home/pcube/sm/server/bin/p3db --upgrade-rep-protocol
.....
SM is down
The pcubesm22 daemon has stopped successfully.
The pcubesm22 daemon has started successfully.
Starting SM
waiting for SM to come up
SM is up..
```

Workaround:

1. Open a new Telnet session to the Subscriber Manager.
2. Run the `p3sm --sm-status` command until the status of Subscriber Manager is initialization or standby.
3. Go to the Telnet connection, where you ran the `p3db --upgrade-rep-protocol` command.
4. Press Ctrl-C.

CSCsr47706

The Subscriber Manager core is hard-coded to wait for a certain amount of time for the command to finish executing on the SCE. The timeout is suitable for SCE 2000 and should be adapted to SCE 8000.

As a result, the `p3subsdB` CLU returns to the user while the command is still running on the SCE.

Workaround:

There is no known workaround.

CSCsy92046

During failover (cables disconnected) the RADIUS Listener was not stopped properly on the faulted Subscriber Manager and as a result the RADIUS accounting port was not released.

The Netstat output shows that the port (1813) is active on both active and standby SMs.

When performing another failover, the Subscriber Manager failed to bind because the port is already in use.

Workaround:

There is no known workaround.

CSCtb31249

Subscriber Manager RADIUS Listener does not send a response in certain circumstances.

Workaround:

There is no known workaround.

CSCta10461

The import failed because there were anonymous subscribers with the same IPs. However, the subscribers were added to the SCE and the IP was removed from the anonymous subscribers. As a result, the anonymous subscribers remained in the SCE with no mapping or mappings.

Workaround:

There is no known workaround.

CSCsz87209

When stopping the SM database on a Subscriber Manager server member of a Veritas cluster, the database restarts properly, but the **p3sm --show-status** command output shows this error message:

```
$ p3sm --sm-status
SM is running.
SM operational state is Standby
Error - Times-Ten DB is not set up correctly:
[TimesTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0799: Unable to connect
to daemon; check daemon status -- file "db.c", lineno 9162, procedure "sbDbConnect"
Errors/warnings - during SM startup:
=====
1) Error occured while validating configuration: SMM:name=SMM:
RuntimeException thrown by the invoke method of the Dynamic MBean

Use "--reset-sm-status" option in order to reset the errors.
Command terminated successfully

"Errors/warnings - during SM startup:" should actually come before "Error - Times-Ten DB
is not set up correctly"
```

Workaround:

Verify that the database is running properly by using the **p3db --status** command.

CSCsz87189

When stopping the SM database on a Subscriber Manager server member of a Veritas cluster, the database restarts properly, but the **p3sm --show-status** command output always shows this error message, even after using the **p3sm --reset-sm-status**:

```
$ p3sm --sm-status
```

```

SM is running.
SM operational state is Standby
Error - Times-Ten DB is not set up correctly:
[TimesTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0799: Unable to connect
to daemon; check daemon status -- file "db.c", lineno 9162, procedure "sbDbConnect"
Errors/warnings - during SM startup:
=====
1) Error occurred while validating configuration: SMM:name=SMM:
RuntimeException thrown by the invoke method of the Dynamic MBean

Use "--reset-sm-status" option in order to reset the errors.
Command terminated successfully

```

Workaround:

Verify that the database is running properly by using the **p3db --status** command.

CSCsw30642

This warning message appears when reloading the Subscriber Manager:

```

"Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.SSUMBean", "createMainModuleFromPropertiesFile: could not
find /export/home/pcube/sm/server/root/ssu/anonymus.pro." "Day-Mon Year", "TT:MM:SS.msec
xxx", "[main]", WARN , "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname" "Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname" "Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname"

```

Workaround:

There is no known workaround.

CSCtg77699

When the RADIUS event rate is very high (number of incoming RADIUS packet at the maximum rate) and the CPU deals with other Subscriber Manager operations, The Subscriber Manager Java process memory size increases gradually and reaches the maximum memory usage limit.

When the process hits maximum memory size, Java triggers Full time Garbage collection (FGC) to free up some un-used object space for the process to continue using the memory without any issues. During this period, Java FGC pauses all the process applications thread. RADIUS Listener, being a UDP-based multithreaded component, stops processing packets during this Java FGC and this leads to packet drops.

Workaround:

There is no known workaround.

Cisco SCMS Subscriber Manager Release 3.7.0

This section describes the functional enhancements, inter-operability of the APIs, and resolved issues in Cisco SCMS Subscriber Manager Release 3.7.0:

- [Information About New Features, page 16](#)
- [API Interoperability, page 17](#)
- [Resolved Issues, Release 3.7.0, page 17](#)
- [Open Caveats, Release 3.7.0, page 22](#)

Information About New Features

Cisco SCMS Subscriber Manager Release 3.7.0 contains these new features:

- Cable features:
 - IPDR LEG support—Supports IPDR as a source of information for Subscriber to VLINK mappings.
 - Detect Dynamic Channel Changes—Enables effective control of channels and VLINK utilization by identifying dynamic channel changes of cable modems.
 - Multiple Primary Channels—Supports multiple primary channels defined under a VLINK in downstream direction.
 - Overlapping Bonding group—Supports configurations where in a single channel can be part of more than one bonding group.
 - Upstream Bonding group—Supports bonding of multiple channels to a single, virtual interface to provide higher bandwidth for the cable modems in the upstream direction.
 - Upstream logical channel—Supports upstream logical channels for better bandwidth management.
 - Support for 3G60 card—Supports Cisco uBR-MC3GX60V Broadband Processing Engine (BPE). The Cisco uBR-MC3GX60V Broadband Processing Engine (BPE) is a high-capacity, DOCSIS 3.0-capable line card for the Cisco uBR10012 Universal Broadband Router.
 - Support for non-Cisco CMTS—Supports Arris CMTS.

For details on these features, see the *Cisco Service Control for Managing Remote Cable MSO Links Solution Guide*.

- Quota Manager features:
 - Multiple SCEs—Supports quota consumption monitoring from multiple SCEs.

For details on the Multiple SCE feature, see the *Cisco SCMS Quota Manager User Guide*.

API Interoperability

Table 4 shows the Cisco SCMS Subscriber Manager Release 3.7.0 and Cisco SCE Release 3.7.0 software components and versions of the Cisco SCMS Subscriber Manager C/C++ API, Cisco SCMS Subscriber Manager Java API, and the Cisco SCE Subscriber API with which they are compatible.

Table 4 API Interoperability

API	Cisco SCE 3.7.0	Cisco SCMS SM 3.7.0
SM C/C++ API	—	3.5.x, 3.6.x, 3.7.0
SM Java API	—	3.5.x, 3.6.x, 3.7.0
SCE Subscriber API	3.5.x, 3.6.x, 3.7.0	—
CNR LEG ¹	—	3.5.x, 3.6.x, 3.7.0

1. CNR LEG=Cisco Network Registrar Login Event Generator

Resolved Issues, Release 3.7.0

This section describes the issues resolved in Cisco SCMS Subscriber Manager Release 3.7.0.

CSCtf48274

The Cisco SCE worked when AllowLoginWithNoPolicy and UseDefault were configured to true.

If the packet type in dhcp_sniff.cfg is configured as:

```
packet_types = DHCP_ACK, DHCP_RELEASE
start = yes
```

and [DHCP.Policy.Package] in dhcp_pkg.cfg is configured as:

```
[DHCP.Policy.Package]
options_order_for_policy_name=giaddr,82:1
options_type=integer,binary
name_seperator_value=_
use_default=true
default_policy=2
allow_login_with_no_policy=true
policy_property_name=packageId
mapping_table.no_match_38353031313032=444
```

After loading the p3sm.cfg file, instead of displaying an error message, the SCE worked with the new configuration.

This issue is resolved.

CSCth07424

In Cisco SCMS Quota Manager, when multiple buckets were configured in profiles, subscriber was not moved from breached state to normal.

When the Quota Manager profile is configured with four buckets, four dosages, no penalty, and no sliding window, the subscriber quota got depleted and the subscriber was moved to the breached state. The subscriber quota was replenished by using the CLU. There was no negative value and all buckets were full. But, the subscriber continued to be in breached state, when verified by using the **p3qm --show-subs-in-breach** CLU.

This issue was not seen when a single bucket was used in the configuration.

This issue is resolved.

CSCth23394

The Cisco SCE displayed a “Failed to Display Policy...” error when the **p3dhcpsniff --show-policy** CLU was used to view a policy.

The dhcpsniff and the dhcp_pkg files were configured correctly and the p3sm.cfg was loaded successfully.

This issue is resolved.

CSCth33815

The **p3qm -replenish-quota** CLU did not replenish the full quota when the sliding window feature was used.

For example, for this Quota Profile:

```
Bucket size = 1000
Aggregation period = 60 minutes
Slice period = 10
```

After the subscriber breached the quota of 1000, the **p3qm -replenish-quota** CLU replenished the quota only to 996 instead of 1000.

This issue is resolved.

CSCtj08989

The Cisco SCE UMlog received this exception:

```
"java.lang.ClassNotFoundException: int"
17-Aug 2010 10:31:49.901 GMT [rpc-57-[worker#0]:mcn.QuotaManager-
10.56.24.36_10.56.24.4_SCE.J.API.PRPC] ERROR
com.pcube.management.framework.rpc.AsnclassesEncoderDecoder -
convertJavaObjectToParameter could not find int
java.lang.ClassNotFoundException: int
```

The UMlog may have received the exception when the SCE received get quota status for a subscriber who did not exist in the SCE or who had moved out of the specific SCE. The SCE user may have run Get Quota CLU (**p3qm**) from the Subscriber Manager, and the subscriber may have moved to a different SCE.

This issue is resolved.

CSCtj08989

While configured to support multiple Cisco SCEs, the Cisco SCMS Quota Manager **p3qm --show-quota -s subscribername** CLU displayed a wrong value for the latest SCE that consumed quota.

This issue is resolved.

CSCtk05725

The Cisco SCMS Subscriber Manager GUI failed to display the number of concurrent sessions, while the SCE CLI was showing active subscriber and open flows.

This issue is resolved.

CSCtk07720

In Cisco SCE 2000 and Cisco SCE 8000 Release 3.6.5, exporting subscriber information to a CSV file in SCE by using **subscriber export csv-file new.csv** CLU failed. This could be because, all subscribers were marked as dynamic. Information on static subscribers are not exported to the CSV file.

This issue is resolved.

CSCti05462

With multiple Cisco SCEs configured, in provision mode, the Quota Manager provisioned quota to new Cisco SCEs even after the full quota for a subscriber was provisioned.

This issue is resolved.

CSCti19617

When login failed for too many subscribers because of unmapped invalid policy, the Subscriber Manager process resulted in “Out of Memory” error. The Subscriber Manager process was slow to respond to any login and logout processing.

This issue is resolved.

CSCti22380

A wrong MIB object was used to identify primary channels and the corresponding ifIndex for the modular cables.

This issue is resolved.

CSCti96279

The user failed to set or add a quota for the breached subscriber.

This issue is resolved.

CSCtn44083

When the RADIUS sniffer LEG was being used, the Subscriber Manager failed to synchronize, between the SCE and LEG, the logout information of subscribers associated with multiple IP address mappings on SCE.

This issue is resolved.

CSCtn92906

In VLM, the PIR value of Vlinks was different in Subscriber Manger and SCE. In the Subscriber Manager, the values were displayed in Mb/s, but it was labeled as kb/s. When the PIR value from CLU output is converted to kb/s, the value did not match the SCE provisioned values.

This issue is resolved.

CSCto58973

The Cisco SCE had sent the Subscriber Attribute section to Subscriber Manager in RDR when the Subscriber Manager configuration was loaded even after commenting or removing the [Radius.Subscriber Attributes] section in the configuration.

This issue is resolved.

CSCto80085

The 3GPP-User-Location-Info and 3GPP-RAT-Type attributes were displayed in ASCII format instead of hexadecimal format. The problem was present in the Subscriber Manager, the reports, and the SCE.

This issue is resolved.

CSCtq39831

The Cisco SCMS Quota Manager failed to retrieve quota information from the Cisco SCE if the subscriber was already in the SM database. After a subscriber logged in and logged out, the Cisco SCMS Quota Manager stopped working. This error was added to the UMlog:

```
"17-May 2011", "16:21:37.157
AST", "[mcn.QuotaManager-172.31.22.3_172.31.22.1_SCE.J.API.PRPC_172.31.22.3[notify]]", INFO
, "com.pcube.logger.userlog.UserLog", "SM: Got quota notification quota-status for
subscriber 590690354837, Bucket IDs = 1, Bucket values = 49253, Quota profile ID = 213,
reason = 0, time = Tue May 17 16:19:31 AST 2011"
"17-May 2011", "16:21:37.159
AST", "[mcn.QuotaManager-172.31.22.3_172.31.22.1_SCE.J.API.PRPC_172.31.22.3[notify]]", WARN
, "com.pcube.logger.userlog.UserLog", "SM: Subscriber 590690354837 has more quota in SCE
than expected (bucket ID=1, last quota=0, current quota=49253). Possible causes: Another
server provisions quota to this subscriber, QM restart"
"17-May 2011", "16:21:37.160
AST", "[mcn.QuotaManager-172.31.22.3_172.31.22.1_SCE.J.API.PRPC_172.31.22.3[notify]]", ERROR
, "com.pcube.management.smm.database.DataRepositoryTimesTenImpl", "[TimesTen][TimesTen
7.0.5.0.0 ODBC Driver]Numeric value out of range, sqlState: 22003, errorCode: 0"
java.sql.SQLException: [TimesTen][TimesTen 7.0.5.0.0 ODBC Driver]Numeric value out of
range
    at com.timesten.jdbc.JdbcOdbc.createSQLException(JdbcOdbc.java:9559)
    at com.timesten.jdbc.JdbcOdbc.standardError(JdbcOdbc.java:9693)
    at com.timesten.jdbc.JdbcOdbc.standardError(JdbcOdbc.java:9658)
    at com.timesten.jdbc.JdbcOdbc.SQLExecute(JdbcOdbc.java:7174)
    at
com.timesten.jdbc.JdbcOdbcPreparedStatement.execute(JdbcOdbcPreparedStatement.java:329)
    at
com.timesten.jdbc.JdbcOdbcPreparedStatement.executeUpdate(JdbcOdbcPreparedStatement.java:2
63)
    at
com.pcube.management.smm.database.SmDbConnection.executeUpdate(SmDbConnection.java:3026)
    at
com.pcube.management.smm.database.SmDbConnection.deleteQmSceBucketsData(SmDbConnection.jav
a:4270)
    at
com.pcube.management.smm.database.DataRepositoryTimesTenImpl.updateSubscriberQuotaData(Dat
aRepositoryTimesTenImpl.java:2421)
    at
com.pcube.management.smm.database.DataRepositoryTimesTenImpl.setSubscriberQuota(DataReposi
toryTimesTenImpl.java:2154)
    at
com.scms.qm.QuotaManagerListener.handleQuotaIndication(QuotaManagerListener.java:727)
    at
com.scms.qm.QuotaManagerListener.quotaStatusIndication(QuotaManagerListener.java:1197)
    at
com.scms.api.sce.prpc.PRPC_SCESubscriberApi$QuotaNotificationsListener.handleNotification(
PRPC_SCESubscriberApi.java:3167)
```

```

        at
com.pcube.management.framework.rpc.ClientObjectNotificationBroadcaster.sendNotification(Cl
ientObjectNotificationBroadcaster.java:115)
        at
com.pcube.management.framework.rpc.ClientNotificationDispatcher.run(ClientNotificationDisp
atcher.java:235)

```

This issue is resolved.

CSCtq48402

In Cisco SCE Release 3.6.5, the Cisco SCMS Quota Manager restarted after the subscriber logged out.

This issue is resolved.

CSCtc42204

The Cisco SCMS Subscriber Manager Cluster Upgrade failed constantly even after following the upgrade documentation. First upgrade attempt failed and a roll back was done.

This issue is resolved.

CSCsr47499

This incorrect error was observed in the import.csv file when VPNs were imported by using the Subscriber Manager in Pull Mode:

```
RuntimeException thrown by the invoke method of the Dynamic MBean.
```

The error that should have been generated was:

```
pull mode is not supported for vpns.
```

This issue is resolved.

CSCsr50960

The Cisco SCMS Subscriber Manager did not synchronize multiple Cisco SCEs that were previously part of a cascade pair. The Cisco SCEs were configured as standalone SCEs.

This issue is resolved.

CSCta14867

The **p3sm --load-config** CLI command did not read some part of the p3sm.cfg file. As a result, in some cases, Subscriber Manager had to be restarted after the configuration changed.

This issue is resolved.

CSCto41438

Dynamic channel changes using the **dcc** CLI command did not work in releases earlier than CISCO IOS Release 12.2S.

This issue was resolved in CISCO IOS Release 12.2S.

CSCtn44083

The Cisco SCMS Subscriber Manager was not synchronizing the logout information with the Cisco SCE when using the RADIUS sniffer LEG. This could be because the subscribers were associated with multiple IP address mappings on the Cisco SCE.

This issue is resolved.

Open Caveats, Release 3.7.0

This section describes the open caveats in Cisco SCMS Subscriber Manager Release 3.7.0.

CSCtr11916

If the DHCP server is configured to allow lease time longer than 24 days for a subscriber, the Subscriber Manager shows the subscriber IP address mapping as expired for that subscriber. All pull requests pertaining to this IP address is ignored.

Workaround:

Configure the DHCP server to lease subscriber IP address for a period less than 24 days.

CSCtq96367

Regular expression support to associate package ID using mapping rules defined in the IPDR login event generator is not functional.

Workaround:

Use static rules.

CSCtq89320

Subscriber login fails when the MdIfIndex is configured as the package field in CPE mode.

Workaround:

Confirm that there are no redundant keys for packageID configuration.

CSCtq86108

In some rare scenario, if the Export configuration is modified in the ipdr.cfg, the IPDR collector fails to start while loading the configuration.

Workaround:

Restart the Subscriber Manager.

CSCsy66517

Dynamic devices are not getting deleted from SCE, or giaddr is not aging out.

Workaround:

Use the **p3vlink --remove-device -d <devicename> CLU** to remove the dynamic device.

CSCsw41184

Next IP removal time is incorrect.

Workaround:

- For static device, there is no known workaround.
- For dynamic devices, use the **p3vlink --remove-device -d <devicename> CLU** to remove the dynamic device.

CSCtj01171

If the interim aging is enabled when the Radius Listener and Radius Sniffer LEGs are used, the VPN subscriber mapping is not removed after the interim aging interval.

Workaround:

No known workaround.

CSCsq44686

The system suffers from slow performance when working with multiple LEGs or multiple SM APIs and when the `support_ip_ranges` parameter is set to true.

Workaround:

No known workaround.

CSCsu64446

A change of NAS name in the `p3sm.cfg` file is not supported.

When using the same NAS IP for loading the `p3sm.cfg` configuration file two times, but with different NAS names, the load fails with an error that indicates that the IP is already in use.

Workaround:

To rename the NAS, complete these steps:

1. Remove the NAS name from the configuration file (or comment the section).
2. Load the SM configuration.
3. Uncomment and change the name of the NAS.
4. Load the SM configuration again.

CSCsw24358

When the Subscriber Manager restarts in a Cluster Topology, the `p3cluster -show` and `p3sm -sm-status` commands show that the system is in initialization state.

Workaround:

1. Wait for five minutes, the SM will change its state to active or standby according to the Cluster decision.
2. Run the `p3cluster -standby` command. This will change the SM status to standby.

CSCsx96511

When trying to manage the subscribers from the Cisco SCA BB Subscriber Manager GUI after the Collection Manager is configured in the p3sm.cfg for VLM, this exception is generated in the UMlog:

```
[rpc-40-[worker#0]:usr.engage] ", ERROR, "com.pcube.apps.engage.sm.En
gageSM_MBean", "Failed receiving packages from se x.x.x.x"
(see attachment for full stack trace).
, being "x.x.x.x" the CM and not an SCE.
```

Workaround

Remove the Collection Manager configuration from the p3sm.cfg.

CSCsz06190

The Subscriber Manager installation or upgrade procedure might fail on Linux because the TT database creation with specific memory configuration fails.

This error is logged in the UMlog:

```
BRST", "[main]", ERROR, "com.pcube.management.smm.database.DataRepositoryTimesTenImpl", "[Time
sTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0837: Cannot attach data store
shared-memory segment, error 12 -- file "db.c", lineno 7896, procedure "sDbbCreate",
sqlState: 08001, errorCode: 837"
```

The `./p3sm --sm-status` command output also contains a similar error.

Workaround

If possible, reduce the Subscriber Manager process size.

CSCsz47864

During a Cluster upgrade, to release 3.5.5, the prompt is not returned when the following command is run:

```
# /export/home/pcube/sm/server/bin/p3db --upgrade-rep-protocol
.....
SM is down
The pcubesm22 daemon has stopped successfully.
The pcubesm22 daemon has started successfully.
Starting SM
waiting for SM to come up
SM is up..
```

Workaround:

1. Open a new Telnet session to the Subscriber Manager.
2. Run the `p3sm --sm-status` command until the status of Subscriber Manager is initialization or standby.
3. Go to the Telnet connection, where you ran the `p3db --upgrade-rep-protocol` command.
4. Press Ctrl-C.

CSCsr47706

The Subscriber Manager core is hard-coded to wait for a certain amount of time for the command to finish executing on the SCE. The timeout is suitable for SCE 2000 and should be adapted to SCE 8000.

As a result, the `p3subsdB` CLU returns to the user while the command is still running on the SCE.

Workaround:

No known workaround.

CSCsy92046

During failover (cables disconnected) the RADIUS Listener was not stopped properly on the faulted Subscriber Manager and as a result the RADIUS accounting port was not released.

The Netstat output shows that the port (1813) is active on both active and standby SMs.

When performing another failover, the Subscriber Manager failed to bind because the port is already in use.

Workaround:

No known workaround.

CSCtb31249

Subscriber Manager RADIUS Listener does not send a response in certain circumstances.

Workaround:

No known workaround.

CSCta10461

The import failed because there were anonymous subscribers with the same IPs. However, the subscribers were added to the SCE and the IP was removed from the anonymous subscribers. As a result, the anonymous subscribers remained in the SCE with no mapping or mappings.

Workaround:

No known workaround.

CSCsz87209

When stopping the SM database on a Subscriber Manager server member of a Veritas cluster, the database restarts properly, but the **p3sm --show-status** command output shows this error message:

```
$ p3sm --sm-status
SM is running.
SM operational state is Standby
Error - Times-Ten DB is not set up correctly:
[TimesTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0799: Unable to connect
to daemon; check daemon status -- file "db.c", lineno 9162, procedure "sbDbConnect"
Errors/warnings - during SM startup:
=====
1) Error occured while validating configuration: SMM:name=SMM:
RuntimeException thrown by the invoke method of the Dynamic MBean

Use "--reset-sm-status" option in order to reset the errors.
Command terminated successfully

"Errors/warnings - during SM startup:" should actually come before "Error - Times-Ten DB
is not set up correctly"
```

Workaround:

Verify that the database is running properly by using the **p3db --status** command.

CSCsz87189

When stopping the SM database on a Subscriber Manager server member of a Veritas cluster, the database restarts properly, but the **p3sm --show-status** command output always shows this error message, even after using the **p3sm --reset-sm-status**:

```
$ p3sm --sm-status

SM is running.
SM operational state is Standby
Error - Times-Ten DB is not set up correctly:
[TimesTen][TimesTen 7.0.5.2.0 ODBC Driver][TimesTen]TT0799: Unable to connect
to daemon; check daemon status -- file "db.c", lineno 9162, procedure "sbDbConnect"
Errors/warnings - during SM startup:
=====
1) Error occured while validating configuration: SMM:name=SMM:
RuntimeException thrown by the invoke method of the Dynamic MBean

Use "--reset-sm-status" option in order to reset the errors.
Command terminated successfully
```

Workaround:

Verify that the database is running properly by using the **p3db --status** command.

CSCsw30642

This warning message appears when reloading the Subscriber Manager:

```
"Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.SSUMBean", "createMainModuleFromPropertiesFile: could not
find /export/home/pcube/sm/server/root/ssu/anonymus.pro." "Day-Mon Year", "TT:MM:SS.msec
xxx", "[main]", WARN , "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname" "Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname" "Day-Mon Year", "TT:MM:SS.msec xxx", "[main]", WARN
, "com.pcube.management.smm.ssu.MainModule", "no value given for property
smm.ssu.application.classname"
```

Workaround:

No known workaround.

CSCtg77699

When the RADIUS event rate is very high (number of incoming RADIUS packet at the maximum rate) and the CPU deals with other Subscriber Manager operations, The Subscriber Manager Java process memory size increases gradually and reaches the maximum memory usage limit.

When the process hits maximum memory size, Java triggers Full time Garbage collection (FGC) to free up some un-used object space for the process to continue using the memory without any issues. During this period, Java FGC pauses all the process applications thread. RADIUS Listener, being a UDP-based multithreaded component, stops processing packets during this Java FGC and this leads to packet drops.

Workaround:

None

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