



Release Notes for Cisco 6400 Service Connection Manager, Release 2.0

The 6400 Service Connection Manager (SCM) is a Cisco Element Manager Framework (CEMF) based element and service management solution for the Cisco 6400 Universal Access Concentrator. This release note contains compatibility and known problem information which may be relevant for installers and end users of the 6400 SCM solution. Also noted are a number of Cisco 6400 UAC hardware issues that may impact the otherwise correct operation of the 6400 SCM software.

Release 2.0 of the SCM is a major enhancement release, aimed at supporting the new features and scalability of CEMF v3, including CORBA Gateway integration capability for provisioning operational support system integration.

Who Should Use This Software?

The SCM 2.0 release is applicable only for customers who are installing it for the first time (without any existing installation of previous version of SCM). It is also applicable for customers who are interested in using this product in a lab trial environment.

It is NOT applicable for customers who have existing installations of SCM from a previous release (SCM 1.x). Customers who have existing installations of SCM 1.x must wait for an update to SCM 2.0 that will be available to facilitate upgrade to the latest SCM release.

New Software Features in 6400 SCM Release 2.0

Release 2.0 of the Cisco 6400 SCM software contains additional features as listed below.

- Runs on Release 3.0.4 of the Cisco EMF platform. Release 3.0 of the Cisco EMF software incorporates a number of changes that are visible when using the Cisco 6400 SCM software:
- A “Quick Start” Deployment option is provided to enable users to deploy a 6400 quickly with 6400 SCM. This can be launched from the “**Deployment => Deploy 6400 Quick Start**” menu option. This will result in a fully, discovered 6400 chassis in your chosen site. Please consult the 6400 SCM User Guide for more information and constraints on this feature.



- A number of the icons (displayed on the Cisco EMF launchpad) have changed. The Cisco EMF release 2.x Map Viewer and Object Manager applications have been combined into a single “Viewer” application. Refer to the “Cisco EMF Launchpad” section on page 3-4 for further details
- Support for Telecom Graphic Objects (TGO) in the Viewer application. TGO, a TeleManagement Forum sponsored standard for EMS and NMS applications, displays additional information icons on top of the existing object icons displayed in Map Viewer. The additional information icons indicate a variety of information, for example, information on the state of the object or event status information. Refer to the “Cisco 6400 SCM Services” section in the User Guide for further details
- Support for carrier class security for Cisco 6400 SCM users. Refer to “Security” for further details
- Introduces connection templates (that is, Cisco IOS VC Classes). Connection template allow you to configure ingress and egress QoS parameters that can be applied over and over again when connecting a subscriber to a service instance and replace subscriber QoS objects
- Adds NRP capacity statistics. Refer to “Cisco 6400 NRP Capacity Statistics” section in the User Guide.
- Now supports OC-3, OC-12 and DS-3 Node Line Cards (NLC). Release 1.x of the Cisco 6400 SCM software supported OC-3, and DS-3 NLCs only
- Integrates a number of common components, giving common EMS Windows between a number of distinct Cisco EMF EMSs, including 6400 SCM, Cisco DSL Manager and the GSR 12000 EMS
- Simplified and improved Service/Subscriber provisioning windows: Subscriber QoS in SCM v1.x has been replaced by Connection Templates (which supports correct IOS VC class use). Additionally, in order to reflect proper support for the Cisco Service Selection Gateway (SSG), two connection methods are supported, in order to reflect the multi-domain nature
- Support for the Cisco EMF CORBA Gateway. Systems integrators intending to integrate the 6400 SCM into OSSs via CORBA can do so, by using the CEMF CORBA Gateway Developer Toolkit (please refer to Cisco Connection On-Line for more information on this product).

6400 Services Supported in 6400 SCM, Release 2.0

The following 6400 aggregation services are supported in this release:

- ATM switching
- PPPoA Single Domain
- PPPoA over L2TP
- RFC1483 Bridging
- RCF1483 IRB
- RFC1483 Routing (snap)
- IP Uplink, with 6400 Service Selection Gateway, subscriber connection options as follows:
 - PPP Terminated Aggregation to Multiple Domains, PTA-MD (PPPoA and PPPoE)
 - Routed Bridge Encapsulation (RBE)

System Requirements

CEMF v3 has been designed for managing large-scale deployments. Customers planning to upgrade to this release are advised that the recommended deployment hardware specification for the CEMF v3.0 Server is:

- Sun Ultra 60 workstation, 2 CPUs
- 4 GB Disk, + one additional disk for database performance
- 512 MB RAM (1 GB recommended)
- 2 GB swap space
- 17" color monitor
- Solaris 2.6



Note

In lab trials, it is possible to run CEMF v3 and 6400 SCM Release 2.0 on the Sun Ultra 5 workstation, with the above specifications for swap and RAM. Note however that the applications will appear slow.

Please contact Cisco for advice and consultation on planning large scale deployments (>100,000 subscribers).



Note

It is particularly important that any Sun workstation used to run CEMF v3 element managers such as 6400 SCM has sufficient swap space (2GB) and RAM (512 MB Minimum). Do not install this software on machines without this minimum specification.



Note

Use the Solaris commands `swap -s` and `prtconf` to determine the available amount of swap and RAM (respectively) on your machine.

Software Compatibility

This software release has been tested on release 2.6 of the Solaris operating environment, for Sun SPARC workstations, and for Year 2000 Compliance.

Additionally, 6400 SCM Release 2.0 has been tested with the following versions of Cisco IOS:

- NSP: 12.0(5) DB
- NRP: 12.0(5)DC

Determining the Software Version

To determine installed Cisco EMF packages, and version numbers, use the CEMF command:

```
<CEMFROOT>/bin/cemf install -show
```

**Note**

<CEMFROOT> is the convention adopted in CEMF documentation to indicate the installation directory for CEMF and the 6400 SCM software. This default location is `/opt/cemf`

Alternatively, to determine installed Cisco EMF packages, use the Solaris command sequence:

```
pkginfo | grep -v SUNW
```

To determine the versions of installed Cisco EMF packages, use the Solaris command:

```
pkginfo -l <package name>
```

Upgrading to 6400 SCM Release 2.0

Note that the SCM 2.0 release does not include automated support for upgrading the CEMF databases from CEMF v2.14, 6400 SCM v1.2, 1.3, to this release.

An update to the SCM 2.0 release will provide support for customer upgrading from 6400 SCM Release 1.2 or Release 1.3.

Installation Notes

The 6400 SCM software must be installed onto a running CEMF Server, so please ensure that the appropriate release of CEMF is installed prior to 6400 SCM installation. Also, please check Cisco Connection On-Line for latest patches which must be installed.

CEMF 3.0.4 with patch 3 is required for SCM release 2.0.

**Note**

CEMF v3 supports on-line element manager installation, and so 6400 SCM must be installed onto a running CEMF Server

**Note**

The installation of the 6400 SCM takes a long time on Sun Ultra 5 workstations (45 minutes). Note also that the Sun Ultra 5 is not a recommended deployment platform.

Version Supported

In particular, for this 6400 SCM release, the following components must be installed:

CEMF v3.0.4, and CEMF v3.0.4 patch 3 (or later)

Uninstall

To uninstall 6400 SCM, use the option “cemfinstall -r” as described in the Installation Guide

Important Notes: Adding Additional Swap Space

CEMF v3.0.x requires 2GB of swap space. In general, if your machine requires additional swap space, you are advised to re-partition one of the disks to allocate a new swap partition. Use the Solaris command `format(1M)` and in particular the partition option of this command to partition appropriate swap space.



Note

Please consult a Solaris system administrator if you must re-partition an existing disk in order to increase swap space, as re-partitioning a disk means that you will lose all data on that disk.

A simple, but less efficient (in performance terms) method of increasing swap space is to create a file as follows and add it to your available swap. The following example shows how to add 1GB swap to your Sun workstation (assuming sufficient available free disk space).

```
mkfile 1000m /opt/MY_EXTRA_SWAP_FILE
swap -a /opt/MY_EXTRA_SWAP_FILE
```

To ensure that this file is added to your swap after a system reboot, please remember to add it to your machine's `/etc./vfstab` file. If in doubt, please consult a Solaris system administrator.



Note

This is not a particularly efficient swap file system, and will result in slower application performance.

Important Notes: For 6400 SCM Release 2.0 EFT Users

Customers who have the 6400 SCM Release 2.0 EFT release installed should upgrade to this release as follows:

- De-install the EFT release
- Stop the CEMF Server
- As part of the EFT agreement, there is no upgrade from the EFT release to this release. Reset the CEMF databases - note this will lose your database information (as explained in the EFT release note) i.e. execute the command `cemf reset`
- Install this release of 6400 SCM
- Deploy your 6400 chassis in CEMF as per normal operation.

Caveats

This section describes caveats identified in the Cisco EMF and SCM software.

Cisco EMF v3 Caveats

For a full list of known problems in Cisco EMF v3.0.4, please consult the appropriate CEMF release note.

In particular, a number of CEMF issues are pertinent to the operation of the Cisco 6400 SCM Release 2.0, and are listed here:

- CSCdr19677 Under the select relationship dialog in the generic deployment wizard, if you select the “PHYSICAL” object more than twice it will give an error message indicating no object was selected.

As part of the automatic view resolution carried out by the deployment wizard on ContainmentWizard Screen the following occurs:

User selects a parent using the object selector for a specific view, for example, PHYSICAL. Deployment Wizard then checks if the users choice is valid for any of the other unresolved paths. If it is it automatically fills out that path on the Containment Screen.

However, if the user has chosen root of a view, when it automatically assigns this value to other views they get displayed as PHYSICAL, which for no physical views is not correct. The system does not perform the correct process and put the object in the root of the correct view.

To avoid this problem, do not use the root view when selecting a view and using the Deployment Wizard.

- CSCdr19684 CEMF Access security by management region (Data partitioning) does not function correctly if the domain is setup at a CEMF Site level.

6400 SCM Release 2.0 Caveats: Installation and Startup Times

Please note the following conditions regarding installation and startup times. This is particularly true if hardware specifications lower than the minimum recommended in this document are used.

- When installed for the first time, CEMF can take up to 30 minutes to startup. This is due to initial database setup which only occurs on the first startup. Subsequent re-starts are significantly faster.
- Subsequent to installation, CEMF is re-started immediately when the Sun system is booted. This can take up to 30 minutes in some cases. This will result in the Solaris boot taking longer than expected. If you do not wish CEMF to re-start during the Solaris boot process, please rename the CEMF startup file as follows:

```
mv /etc/rc2.d/S99cemf /etc/rc2.d/Unused-S99cemf
```

Alternatively, you may wish to background this command.

- Installation of 6400 SCM has the advantage the other CEMF element manager systems (EMSs) also installed on your system do not have to be shut down during the installation of 6400 SCM. Note that this installation time can take up to one hour (or more if below minimum hardware is used).

6400 SCM Release 2.0 Caveats

The following known problems exist in this release of the 6400 SCM. Unless otherwise noted, there is no workaround at Cisco.

- CSCdr34017: It is not possible to disable power supplies via the Chassis Management tab. Use CLI commands to enable and disable power supplies.
- CSCdr34032: There is an occasional intermittent problem with sub-chassis auto-discovery: occasionally cards which are actually present do not appear in the c6400Manager View.... however, they do appear in the physical view. Workaround is to refer to the physical view in these cases.
- CSCdr34047: If you manually deploy a 6400 chassis, and subsequently run CEMF auto-discovery over this range, this chassis will be displayed twice.
- CSCdr34055: It can take up to 5 minutes to detect that a card (e.g. NRP or NLC) has physically been removed from the 6400 chassis i.e. until you see an alarm condition in the Map Viewer application.
- CSCdr34070: Launching CEMF Auto-Discovery from the NSP object in a 6400 chassis will result in all discovered network elements being placed as children of the NSP in the Physical View.
- CSCdr34490: ATM port configuration changes can on occasion not be saved: MIB attribute sets on the 6400 component fail.
- CSCdr34493: When CEMF IP Auto Discovery is run, NRPs can be discovered
Whenever auto discovery is launched from a site, the physical view is populated with the respective shelves and the NRPs lying in that range underneath it, giving the impression that the NRPs are contained within the site, which is not correct. They should be either placed under the Chassis or should not appear at all until the chassis is commissioned.
- CSCdr34498: It is possible to use the CEMF 'Delete' menu option to delete subscribers and services. This deleted the CEMF object but does not remove the relevant IOS configuration from the 6400. The workaround is to use the appropriate 6400 SCM Windows, as described in the 6400 SCM User Guide, to decommission the connections prior to deletion of the subscriber of service object.
- CSCdr34504: Occasionally the de-configuration of the PPPoE base configuration on the SSG Configuration Window fails. If this happens, retry the de-configuration.
- CSCdr34523: The Over Subscription Management button in the L2TP, RFC1483 Bridging and RFC1483 Routed Service is redundant and in fact should not be present. This button has no function, do not use it.
- CSCdr34536: The Restore option (of previous running configuration) for the NSP object functions correctly but actually prints out an error message stating that a problem has occurred - the error message is incorrect, the restore has worked! This option does however function correctly for the NRP i.e. with no erroneous error message.
- CSCdr34627: If a line card (e.g. NRP, NLC) is physically removed from the chassis, 6400 SCM will correctly raise an alarm which can be viewed on the CEMF Event Browser. The 6400 SCM Map View does not reflect this error condition.
- CSCdr34648: It is possible to delete Connection Templates using the CEMF Map Viewer 'Delete' menu, while subscribers are still connected using this Connection template. Please ensure that all subscribers are first disconnected before deleting the Connection Template object.

Related Documentation

As well as the 6400 SCM Release 2.0 documentation, you should consult the CEMF v3 User Guide and CEMF v3 Installation Guide.

Obtaining Documentation

The 6400 SCM Release 2.0 user and installation guides are contained within the software tar file. They are PDF files, viewable via the Adobe (R) Acrobat (R) Reader.

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: [cco.cisco.com](telnet://cco.cisco.com)
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.



Note

If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM, a member of the Cisco Connection Family, is updated monthly. Therefore, it might be more current than printed documentation. To order additional copies of the Documentation CD-ROM, contact your local sales representative or call customer service. The CD-ROM package is available as a single package or as an annual subscription. You can also access Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

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Obtaining Technical Assistance

Please contact the Cisco TAC for product support on 6400 SCM Release 2.0.

