



CHAPTER 7

Cisco MGC Software Release 9.1(5) Installation

This chapter describes how to install Release 9.1(5) of the Cisco Media Gateway Controller (MGC) software.



Note

For Release 7.4 and later, the Cisco telephony controller software is called the Cisco Media Gateway Controller software. The Cisco MGC software files and processes are located the `/opt/CiscoMGC` directory.

This chapter contains the following sections:

- [Before You Start, page 7-2](#)
- [Installing the Cisco MGC Software Release 9.1\(5\), page 7-3](#)
- [Installing the Cisco Security Package, page 7-7](#)



Note

For information on configuring the Cisco MGC software, see the following publication:
Cisco Media Gateway Controller Software Release 9 Provisioning Guide

Before You Start

Before you start, perform the following steps:

- Review the hardware and software requirements found in the document *Release Notes for the Cisco Media Gateway Controller Software Release 9*.
- Have your company's internal support and Cisco support contact information readily available so you can get help with the installation if needed. (If you have questions or need assistance, see the “[Obtaining Documentation, Obtaining Support, and Security Guidelines](#)” section on page xvii of the Cisco support contact information.)
- Ensure that you have access to the console port on your Cisco MGC host.

Cautions, Notes, and Tips



Caution

To prevent the system from running out of disk space during installation and to avoid removal of data files and databases to compensate, you must first verify that there is enough hard disk space to support your intended installation. You can delete unnecessary log files (platform*.log), user-generated trace files (*.btr), call detail record (CDR) files (.bin or .csv), old *.tar files, or user-generated toolkit files (in the /var/cust_specific/toolkit directory) to free space. You also need at least 4 GB of disk space for the /opt file system.



Caution

Make sure to follow the Cisco MGC software installation and uninstallation sequence listed in [Cisco MGC Software Installation/Uninstallation Sequence, page 7-3](#).



Note

For the software to work properly, you must reboot the system every time you modify any file in the */etc* directory.



Note

Monitor system output frequently for error messages during the installation process and correct any error conditions before continuing with the installation.



Tip

Allow for at least 2 hours to install the Sun Solaris 2.6 operating system and approximately 1 hour to install the Cisco MGC software.

Installation Overview

Before you begin installing the Cisco MGC software, make sure the Sun Operating System is properly installed. The following table provides the location of the installation procedure you may require.

Table 7-1 Installation Overview and Reference Sections

Installation Procedure	Refer to...
If the Sun Solaris 2.6 operating system is not yet installed, you must first install it.	Start with Chapter 8, “Sun Solaris 2.6 Operating System Installation.”
With the Sun Solaris 2.6 operating system installed, go to the correct section in this chapter:	<ul style="list-style-type: none"> If you are upgrading from a previous release, follow the procedures found in the “Upgrading to Software Release 9.1(5)” section on page 9-5. If you are installing the software for the first time, follow the procedures found in the “Installing the Cisco MGC Software Release 9.1(5)” section on page 7-3.

Cisco MGC Software Installation/Uninstallation Sequence

For the system to work properly, it is important that Cisco MGC software installation be performed in the following order:

**Note**

At this point, the Solaris Operating System 2.6 and Solaris Operating System 2.6 patch cluster (CSCOh007) should be already installed in your system.

1. Cisco MGC software
2. Solaris System Security Patch (CSCOh013)

**Caution**

Software must be uninstalled in the **reverse order** in which it is installed. For example, you must first uninstall software package CSCOh013 **before** you uninstall the Cisco MGC software.

**Note**

You do not have to uninstall the Cisco MGC if only software package CSCOh013 requires updating but the Cisco MGC does not.

Installing the Cisco MGC Software Release 9.1(5)

**Note**

For a sample output listing from the `install.sh` script, see [Appendix D, “Sample Output from `install.sh`”](#) section on page D-1.

**Note**

Remove `/usr/ucb` from the path environment variable before the initial installation of the Cisco MGC software. However, if `/usr/ucb` is needed, make sure that it is located in the path variable in the user profile *after* `/usr/sbin`.

Installing on a Simplex System

To install the Cisco MGC software, complete the following steps:

-
- Step 1** Log in as root.
 - Step 2** Enter the following command:

```
cd /etc
```
 - Step 3** Open the **passwd** file with your editor (such as vi).
 - Step 4** Save any changes to the **passwd** file.
 - Step 5** Close the **passwd** file.
 - Step 6** Insert the Cisco MGC Software Release 9 CD into the CD-ROM drive.



Caution If you are upgrading to a new software release, you must first copy the new software from the CD-ROM to an appropriate directory in your system (for example, create a directory as root user under **/opt**), then perform the installation from that directory. This step prevents possible CD-ROM ejection problems.

When the upgrade has successfully completed, it is strongly recommended that you delete the software you copied from the CD-ROM to your directory, to avoid running out of disk space.

- Step 7** To install the Release 9 Cisco MGC software, enter the following commands:

```
# ./install.sh
```

- Step 8** The following prompt is displayed:

```
Use supplied admin file for unattended install? [n] [y,n,?,q]
```

Answer **y** to perform an unattended installation. If you answer **n**, you must answer prompts and press **Enter** for each package that is installed.

- Step 9** The following prompt is displayed:

```
Base directory for Toolkit (default /opt/Toolkit) [?,q]
```

Press **Enter** to accept **/opt/Toolkit**, the default directory.

- Step 10** The following prompt is displayed:

```
The CSC0gu000 utilities package must be installed prior to other components but has not
been detected on your system.
Would you like to install it now? [y] [y,n,?,q]
```

Answer **y** to install the utilities package. This package must be installed before installing the rest of the software.

- Step 11** The following prompts are displayed:

```
Base directory for CiscoMGC (default /opt/CiscoMGC) [?,q]
Enter CiscoMGC user name [mgcusr]
Enter CiscoMGC UID [20000]
Enter CiscoMGC group name [mgcgrp]
Enter CiscoMGC GID [20000]
```

We recommend that you accept the default values (by pressing **Enter**).

You can, however, specify a different user ID and a group ID. If the ID you specify already exists on the system, the corresponding ID will be determined and reused, or you will be prompted to enter another ID.



Caution No validation is performed on the IDs you enter. If you enter an invalid ID, the utilities package does not add any accounts.

The system returns a message stating that the CSCCOgu000 utilities package was successfully installed.

Step 12 Rebooting after a successful utilities package installation might not be necessary, depending on your system configuration.



Note Rebooting may take approximately 5 minutes.

If a reboot is *not* required, the installation continues uninterrupted.

If a reboot *is* required, perform the following steps when prompted:

- a. Type the command displayed on the screen and press **Enter**.



Note If the command shown on the screen does not work, you can enter the `/usr/sbin/reboot` command to reboot the system.

- b. After the reboot finishes, restart `install.sh` to install the remaining packages. To restart `install.sh`, type the following command at the `#` prompt and press **Enter**:

```
# ./install.sh
```



Note This procedure can take approximately an hour to complete.

- c. The following prompts display:

```
Use supplied admin file for unattended install? [n] [y,n,?,q]
```

- d. Type `y` and press **Enter**.



Note The installation of the application software may take some time.

Step 13 The system checks the memory and CPUs in the host. If you do not have enough memory or CPUs, a caution appears. After the check is complete and the software packages are installed, the performance profile script is automatically invoked. The following prompt appears:

```
Configure System for (1) Standard Performance Profile (2) Maximum Sustained Calls
(3) Maximum Call Throughput
Enter 1, 2, or 3
```



Note Options 1, 2, and 3 are performance tuning options that allow optimizing certain parameters and settings on the system for better performance, based on your system requirements. This choice should have been resolved when Cisco analyzed your system requirements. We recommend selecting Option 1.

When you select a performance profile, the performance profile script sets the parameters in XECfgParm.dat that are appropriate for your selected profile.

Selected performance profiles do not take effect until the Cisco MGC is started.

Enter **1**, **2** or **3** to choose the performance profile you want and press **Enter**.



Caution The performance profile can only be selected during the MGC software installation. If a wrong selection is made and the host is rebooted, you must uninstall and re-install the Cisco MGC software.

Step 14 If you have a simplex configuration, proceed to the [“Installing the Cisco Security Package”](#) section on page 7-7.

Step 15 After installing the Cisco Security Package, continue to the [“Configuring Groups and Users”](#) section on page 5-10.

This completes the installation of the Cisco MGC software for a simplex configuration. For a sample install.sh log file, see [Appendix D, “Sample Output from install.sh”](#) section on page D-1.

See the *Cisco Media Gateway Controller Provisioning Guide* for information on provisioning the Cisco MGC software on a simplex system.

If you have a redundant configuration, continue to the section [“Installing on a Fault Tolerant System”](#) section on page 7-6.

If you have questions or need assistance, see the [“Obtaining Documentation, Obtaining Support, and Security Guidelines”](#) section on page xvii.

Installing on a Fault Tolerant System



Caution To ensure the successful installation of a fault tolerant configuration, after [Step 12](#) of the [“Installing on a Simplex System”](#) section on page 7-4, make sure that you provision the software for the active Cisco MGC host first, before proceeding to [Step 1](#), below. Refer to the *Cisco Media Gateway Controller Provisioning Guide* for information about the following:

- Provisioning the active Cisco MGC host
- Procedures for converting the active Cisco MGC host to standby host

Note that only one active provisioning session is permitted and provisioning is only permitted on the active Cisco MGC host.

Exit the provisioning session on the active host and continue to [Step 1](#), below. If software is not provisioned after it is installed on the active Cisco MGC host, the standby host will not be synchronized with the active host. As a result, a forced switchover may cause the switchover to fail.

To install the Cisco MGC software on a fault tolerant system (with two Cisco MGC hosts and Cisco SLTs), complete the following steps:

**Note**

The **MGC-install.log** and the **MGC_pkgerrors.log** are stored in the **/var/adm** directory.

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- Step 1** Continuing from [Step 15](#) of the “[Installing on a Simplex System](#)” section on page 7-4, exit server 1.
- Step 2** Log in to server 2 as root and go to the # prompt.
- Step 3** Insert the Cisco MGC Software Release 9 CD into the server 2 CD-ROM drive.
- Step 4** Follow the instructions in [Step 7](#) through [Step 15](#) of the “[Installing on a Simplex System](#)” section on page 7-4.
- Step 5** Configure the execution environment parameters and database replication for fault tolerant systems, using the following sections:
- [Configuring Switchover, page 5-41](#)
 - [Initializing the Provisioning Object Manager, page 5-43](#)
 - [Initializing the Call Screening Database, page 5-57](#)

This completes the installation of the Cisco MGC software. Continue to the “[Configuring Groups and Users](#)” section on page 5-10 to configure groups and users. If you have questions or need assistance, see the “[Obtaining Documentation, Obtaining Support, and Security Guidelines](#)” section on page xvii.

**Note**

Always check CCO (<http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>) to ensure that you have the latest required patch version released by Cisco on your system, CD, or file system (if downloaded previously from CCO).

Installing the Cisco Security Package

The system security patches install the Cisco Security Package. This package reduces the number of known system security vulnerabilities.

Do the following procedures to install the Cisco Security Package.

**Note**

The Sun Solaris 2.6 operating system and Cisco MGC software must already be installed in your system before you can install the Cisco Security Package.

You must have system administrator privileges to install this package.

**Caution**

If you are planning to run **mgcrestore**, make sure you are installing the same version of the Cisco Security Package that was installed on your system when **mgcbbackup** was run. Or, if the Cisco Security Package was not installed on your system when **mgcbbackup** was run, you must first run **mgcrestore** before installing the Cisco Security Package.

Use the command **pkginfo -l CSCOh013** to determine the Cisco Security Package version.

Step 1

Before installing the Cisco Security Package, you must first determine the Solaris release version of the package installed on your system. Type the following command and press **Enter**:

```
pkginfo -l <package instance>
```

The following is similar to the text that is displayed when the **pkginfo** command is used:

```
hostname% pkginfo -l CSCOh007
  PKGINST:CSCOh007
    NAME:Media Gateway Controller Solaris 2.6 patch cluster
  CATEGORY:utilities
    ARCH:sparc
  VERSION:1.0(7)
  BASEDIR:/opt/sun_install
  VENDOR:Cisco System, Inc.
  PSTAMP:2002/01/07 22:10 GMT (embassy)
  INSTDATE:Jan 07 2002 17:12
  EMAIL:sctac@cisco.com
  STATUS:completely installed
  FILES: 154 installed pathnames
         2 shared pathnames
         2 directories
         4 executables
        561747 blocks used (approx)
```

**Note**

If you have an older version of the Cisco Security patch, you must remove it before installing the new patch. For package removal procedures, see [Removing the Cisco Security Package, page 7-11](#).

Step 2

Install latest version of the Cisco Security Package either by downloading the software from CCO or from a CD-ROM.

- a. If you are downloading the software from CCO, store the Cisco Security Package on your UNIX platform. To determine the Solaris release version of the package you downloaded, use the following command:

```
pkg -l -d <package instance>.pkginfo
```

The following is similar to the text that is displayed when using the **-d** option with the **pkginfo** command:

```
hostname% pkginfo -l -d CSCOh013.pkg
  PKGINST:CSCOh013
    NAME:Media Gateway Controller Security 2.6 package installation and patches
  CATEGORY:utilities
    ARCH:sparc
  VERSION:1.0(5)
  BASEDIR:/opt/sun_install
  VENDOR:Cisco System, Inc.
  PSTAMP:2001/07/20 17:48 GMT (embassy)
  EMAIL:sctac@cisco.com
  STATUS:spooled
  FILES: 8 spooled pathnames
         2 directories
         1 executables
         5 package information files
```

4 blocks used (approx)

- b. If you are installing the software from a CD-ROM, insert the Cisco Media Gateway Controller Software CD into the CD-ROM drive.

Step 3 Type the following command at the # prompt and press **Enter**.

- a. If you are using the file downloaded from CCO, enter the following command:

```
# pkgadd -d ./CSCOh013.pkg
```

- b. If you are installing from a CD-ROM, enter the following command:

```
# pkgadd -d /cdrom/cdrom0/solaris_patches/CSCOh013.pkg
```

The following text is displayed:

```
The following packages are available:
1 CSCOh013      Media Gateway Controller Security package compatible with Solaris 2.6 and
Solaris 8
(sparc) 1.0(x)
```

```
Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:
```

Step 4 Select **all** by pressing **Enter**. The following is an example of the text display:

```
Processing package instance <CSCOh013> from </auto/mgc-build/BUILD/SUN/1.xx/CSCOh013.pkg>
```

```
Media Gateway Controller Security 2.6 and Solaris 8
(sparc) 1.0(x)
Cisco System, Inc.
Using </opt/sun_install> as the package base directory.
## Processing package information.
## Processing system information.
   2 package pathnames are already properly installed.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.
```

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
```

```
Do you want to continue with the installation of <CSCOh013> [y,n,?] y
```

Step 5 Type **y** and press **Enter** to install the package. The following is an example of the text display:

```
Installing Media Gateway Controller Security 2.6 package compatible with Solaris 2.6 and
Solaris 8 as <CSCOh013>
```

```
## Executing preinstall script.
Platform is SUNW,Ultra-5_10
```

```
NOTICE: Architecture checks passed
```

```
## Installing part 1 of 1.
/var/sadm/pkg/CSCOh013/save/CiscoSec.sh
[ verifying class <none> ]
```

```
## Executing postinstall script.
```

```
Logfile is /var/adm/CSCOh013.install.log
```

```
*** Installation of system security update package started...Wed Dec 12 10:36:37 EST 2001
***
```

```
Output will be logged in /var/adm/CSCOh013.install.log
```

You are running as root - Good...

Operating System: SunOS 5.6

Backup directory does not exist - creating it now...

Original files will be saved. Run this script
with the parameter 'uninstall' to restore
system to its original state

The following files will be removed from /etc/rc2.d:

Remove /etc/rc2.d/K60nfs.server
File /etc/rc2.d/K77dmi not found
Remove /etc/rc2.d/S47asppp
Remove /etc/rc2.d/S71rpc
Remove /etc/rc2.d/S73cacheofs.daemon
Remove /etc/rc2.d/S73nfs.client
Remove /etc/rc2.d/S74autofs
Remove /etc/rc2.d/S76nscd
Remove /etc/rc2.d/S80lp
Remove /etc/rc2.d/S80spc
Remove /etc/rc2.d/S85power
Remove /etc/rc2.d/S88sendmail
Remove /etc/rc2.d/S89bdconfig
Remove /etc/rc2.d/S91leoconfig
Remove /etc/rc2.d/S92rtvc-config
Remove /etc/rc2.d/S92volmgt
Remove /etc/rc2.d/S93cacheos.finish
File /etc/rc2.d/S99dtlogin not found

Remove the following users from the password file

Remove lp from password file
Remove uucp from password file
Remove nuucp from password file
Remove smtp from password file
Remove listen from password file

Remove lp crontab entry
Create new inetd.conf file with only ftp,
telnet and echo services enabled

Adjust kernel parameters in the /etc/system file

Force TCP/IP to use random initial seeds

Enable recording of failed login attempts

Create a new (minimal) inetd startup file

Restrict FTP Usage

Don't allow telnet users to log in as root

Disable keyboard abort sequence

Add /bin/true to the /etc/shells file

Create /etc/init.d/nddconfig file

```
*****
*****
**                                     **
** NOTE!! The machine must be REBOOTED in order **
**         for these changes to take effect      **
```

```

**
*****
*****

```

Step 6 Reboot your machine with the **-r** option. To do so, type the following command and press **Enter**:

```
# /usr/sbin/shutdown -y -go -i6
```

Step 7 When the machine finishes rebooting, the text similar to the following is displayed:

```
Done!
```

```
Installation of <CSCOh013> was successful.
```

This completes the installation of the Cisco Security Package. If you have questions or need assistance, see the [“Obtaining Documentation, Obtaining Support, and Security Guidelines”](#) section on page xvii.

Removing the Cisco Security Package

Do the following procedure if you need to remove the Cisco Security Package. Contact Cisco TAC if you need assistance (see the [“Obtaining Documentation, Obtaining Support, and Security Guidelines”](#) section on page xvii).



Caution

Removing the Cisco Security Package (CSCOh013) is the first step in removing the Cisco MGC software. Remove the Cisco Security Package *only* if you intend to perform tasks such as upgrading the Cisco MGC or upgrading to a new version of CSCOh013. Otherwise, the **/etc/system** files might be corrupted if removed out of order and security might be compromised if CSCOh013 is removed without removing the Cisco MGC.



Note

Make sure the Sun Solaris 2.6 operating system and the Cisco MGC software are still installed in your system before you remove the Cisco Security Package.

Step 1 Type the following command at the # prompt and press **Enter**:

```
# pkgrm CSCOh013
```

Text similar to the following is displayed:

```
The following package is currently installed:
```

```

CSCOh013      Media Gateway Controller Security package compatible with Solaris 2.6
and Solaris 8
              (sparc) 1.0(6)

```

```
Do you want to remove this package? y
```

Step 2 Type **y** and press **Enter** to remove the package. Text similar to the following is displayed:

```
## Removing installed package instance <CSCOh013>
```

```
This package contains scripts which will be executed with super-user
permission during the process of removing this package.
```

```
Do you want to continue with the removal of this package [y,n,?,q] y
```

Step 3 Type **y** and press **Enter** to continue the removal of the package. Text similar to the following is displayed:

```
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
Logfile is /var/adm/CSCOh013.uninstall.log

*** Removal of system security update package started...Wed Dec 12 10:38:13 EST 2001 ***
Output will be logged in /var/adm/CSCOh013.uninstall.log

You are running as root - Good...

Operating System: SunOS 5.6File K77dmi not found
Restore /etc/rc2.d/S47asppp
Restore /etc/rc2.d/S71rpc
Restore /etc/rc2.d/S73cachefs.daemon
Restore /etc/rc2.d/S73nfs.client
Restore /etc/rc2.d/S74autofs
Restore /etc/rc2.d/S76nscd
Restore /etc/rc2.d/S80lp
Restore /etc/rc2.d/S80spc
Restore /etc/rc2.d/S85power
Restore /etc/rc2.d/S88sendmail
Restore /etc/rc2.d/S89bdconfig
Restore /etc/rc2.d/S91leoconfig
Restore /etc/rc2.d/S92rtvc-config
Restore /etc/rc2.d/S92volmgt
Restore /etc/rc2.d/S93cacheos.finish
File S99dtlogin not found

Replace the following userids in the password file
lp uucp nuucp smtp listen

Restore lp crontab entry

Restore /etc/inetd.conf file

Restore /etc/system file

Restore /etc/default/inetinit file

Disable recording of failed login attempts

Restore /etc/init.d/inetsvc file

/etc/ftpusers did not exist - delete existing file

Restore /etc/default/login file

Restore /etc/default/kbd file

Restore /etc/shells file

Restoring system to original configuration...

Restore /etc/rc2.d/K60nfs.server

/etc/init.d/nddconfig did not exist originally
Delete existing file
/etc/rc2.d/S70nddconfig did not exist - delete existing file
```

```
Backup directory is being removed
*****
*****
**                                     **
** NOTE!! The machine must be REBOOTED in order **
**           for these changes to take effect   **
**                                     **
*****
*****
```

Step 4 Reboot your machine with the **-r** option. To do so, type the following command and press **Enter**:

```
# reboot -- -r
```

Text similar to the following is displayed:

```
Done!
## Removing pathnames in class <none>
/var/tmp <shared pathname not removed>
/var/sadm/pkg/CSCOh013/save/CiscoSec.sh
/opt/sun_install <shared pathname not removed>
## Updating system information.

Removal of <CSCOh013> was successful.
```

This completes the removal of the Cisco Security Package. If you have questions or need assistance, see the [“Obtaining Documentation, Obtaining Support, and Security Guidelines”](#) section on page xvii.

To configure the Cisco MGC software, go to [Chapter 5, “Configuring the Cisco MGC Software.”](#)

