Release Notes for Cisco Intercompany Media Engine Release 8.6(2)

September 20, 2011

This document contains information pertinent to Cisco Intercompany Media Engine (IME) Release 8.6(2).

Contents

This document includes the following information:

Introduction

The Cisco Intercompany Media Engine server and software function as a key component of the Cisco Intercompany Media Engine feature that provides a technique for establishing direct IP connectivity between enterprises by combining peer-to-peer technologies with the existing public switched telephone network (PSTN) infrastructure.

These release notes are based on software versions Cisco Intercompany Media Engine: 8.6.2.10000-5.

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System Requirements

The following sections comprise the system requirements for this release of Cisco Intercompany Media Engine.

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Server Support

Make sure that you install and configure Cisco Intercompany Media Engine on a Cisco Media Convergence Server (MCS).

The following servers are compatible with this release:

- MCS-7825-H3
- MCS-7825-I3
- MCS-7825-H4
- MCS-7825-I4
- MCS-7825-I5
- MCS-7845-H2
- MCS-7845-I2
- MCS-7845-H3
- MCS-7845-I3

Uninterruptible Power Supply

Cisco recommends that you connect each Cisco Intercompany Media Engineserver to an uninterruptible power supply (UPS) to provide backup power and protect your system against a power failure.

Note You must connect MCS-7825 servers to a UPS to prevent file system corruption during power outages.

Upgrading to Cisco Intercompany Media Engine 8.6(2)

The following sections contain information that is pertinent to upgrading to this release of Cisco Intercompany Media Engine.

- Before You Begin, page 3
- Pre-Upgrade Tasks, page 3
- Supported Upgrades, page 5
- Obtaining the Upgrade File, page 5
- Upgrade Paths, page 6
- Ordering the Upgrade Media, page 6

Before You Begin

Caution When you upgrade to Cisco Intercompany Media Engine 8.6(2) the system reboots as part of the upgrade process. Therefore, you may want to perform the upgrade during a scheduled down time for your organization to avoid service interruptions.

Caution In Cisco Intercompany Media Engine 8.6(2), the image available for download from Cisco.com is a bootable image that can be burned to DVD and used for both upgrades and fresh installs. Cisco Intercompany Media Engine 8.6(2) upgrade DVDs ordered from Cisco are also bootable for use with upgrades or fresh installs.

If performing an L2 upgrade, choose no for automatic reboot.

Pre-Upgrade Tasks

Before you begin the upgrade, perform the following tasks:

- Ensure that you have the necessary license files for the new release.

  For more information on obtaining and installing licenses, see the License File Upload chapter in the *Cisco Intercompany Media Engine Installation and Configuration Guide*.

- Before you begin the upgrade, back up your system. This is particularly important if you are upgrading software on HP7825H3 hardware as there is no option to revert to the previous version.

- If you are upgrading software on HP7825H3 hardware, ensure that you have a 16GB USB device available to migrate your data to the new system.

- Before you upgrade to a later release, refer to the documentation for your currently installed COP files to identify any special considerations related to upgrading Cisco Intercompany Media Engine.

- If upgrading from 8.5(2) or earlier complete the Installing the COP file, page 6.

Caution Any existing data on the USB device that is needed for the HP7825H3 upgrade is lost during migration.

Overview of the Software Upgrade Process

With this version of Cisco Intercompany Media Engine, you cannot install upgrade software on your server while the system continues to operate.

⚠️
Caution If you are upgrading your software on HP 7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. To perform an upgrade on one of these machines you must use a 16GB USB device to facilitate data migration from the old system to the new installation.

When you install 8.6 upgrade software, there will be a temporary server outage while the IME software is installed. Once you kick off the upgrade using the command the data will be exported, and the system will be automatically rebooted at which point the server outage will begin. The duration of this outage will depend on your configuration and amount of data. During the upgrade, progress can be monitored via the console until such time that command line interface has been restored. Once restored, you can use the command line interface to continue to monitor upgrade progress.

If an administrator user makes changes during the upgrade process (export of data), that data could be lost after upgrade.

When you initiate the upgrade, you can indicate to activate the partition with the new upgrade software or return to using the partition with the previous version of the software at upgrade completion. With the exception of HP 7825H3 hardware upgrades, the previous software remains in the inactive partition until the next upgrade. Your configuration information migrates automatically to the upgraded version in the active partition.

If for any reason you decide to back out of the upgrade, you can restart the system to the inactive partition that contains the older version of the software. However, any configuration changes that you made since you upgraded the software will get lost.

✎
Note You can only make changes to the configuration on the active partition. The configuration on the inactive partition does not get updated. If you make changes to the configuration after an upgrade, you must repeat those changes after switching the partition.

You can upgrade from a DVD (local source), a local copy of the ISO image, or from a network location (remote source) that the Cisco Intercompany Media Engine server can access.

⚠️
Caution Be sure to back up your system data before starting the software upgrade process. For more information, see the *Disaster Recovery System Administration Guide*. If you are upgrading your software on HP 7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. If you do not back up your system data before starting the software upgrade process your data will be lost if your upgrade fails for some reason. If you chose to revert to the prior version, you will need to install the prior version and restore your data from your DRS backup.

Making Configuration Changes During an Upgrade

This section describes the restrictions that apply to the configuration and provisioning changes that you can make during an upgrade.

Administration Changes

The administrator must not make any configuration changes to Cisco Intercompany Media Engine during an upgrade.

Any configuration changes that you make during an upgrade could get lost after the upgrade completes, and some configuration changes can cause the upgrade to fail.

If you are upgrading your system, you must complete the upgrade tasks in this section before you perform any configuration tasks.

> **Caution** If you fail to follow these recommendations, unexpected behavior may occur; for example, ports may not initialize as expected.

Upgrade Tasks

To successfully complete the upgrade, perform the upgrade tasks in the following order before you begin making configuration changes.

> **Note** Cisco strongly recommends that you do not perform configuration tasks until the upgrade completes and you have switched the servers over to the upgraded partition.

Procedure

Step 1 Stop all configuration tasks; that is, do not perform configuration tasks in the CLI (with the exception of performing the upgrade).

> **Tip** For detailed information about the upgrade process, see the *Cisco Intercompany Media Engine Installation and Configuration Guide*.

Step 2 If upgrading from 8.5(1) or earlier complete the Installing the COP file, page 6.

Step 3 Upgrade the Cisco Intercompany Media Engine.

Step 4 When all other upgrade tasks are complete, you can perform any needed configuration tasks as required.

Supported Upgrades

For information about supported upgrades, the Cisco Intercompany Media Engine Compatibility Matrix at the following URL:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/compat/ccmcompmatr.html

Obtaining the Upgrade File

Before you begin the upgrade process, you must obtain the appropriate upgrade file from Cisco.com.

You can access the upgrade file during the installation process from either a local DVD or from a remote FTP or SFTP server. Be aware that directory names and filenames that you enter to access the upgrade file are case-sensitive

Upgrade Paths

For information about supported Cisco Intercompany Media Engine upgrades, see the *Cisco Unified Communications Manager Software Compatibility Matrix* at the following URL:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/compat/ccmcompmatr.html

Ordering the Upgrade Media

To upgrade to Cisco Intercompany Media Engine Release 8.6(2) from a release prior to 8.0(1), use the Product Upgrade Tool (PUT) to obtain a media kit and license or purchase the upgrade from Cisco Sales.

To use the PUT, you must enter your Cisco contract number (Smartnet, SASU or ESW) and request the DVD/DVD set. If you do not have a contract for Unified CM, you must purchase the upgrade from Cisco Sales.

For more information about supported Cisco Intercompany Media Engine upgrades, see the *Cisco Unified Communications Manager Software Compatibility Matrix* at the following URL:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/compat/ccmcompmatr.html

See the "Software Upgrades" chapter of the *Cisco Intercompany Media Engine Installation and Configuration Guide*.

Software Upgrade Procedures

This section provides procedures for upgrading from either a local or a remote source and contains the following topics:

Installing the COP file

For upgrades from an 8.5(x) or earlier release to an 8.6(x) release, this patch (COP file) must be applied prior to initiating the upgrade. Before you upgrade from compatible versions of Cisco Intercompany Media Engine, install the COP file named **ciscocm.refresh_upgrade_v1.1.cop.sgn** that you can find under from www.Cisco.com, select **Support > Download Software** . Navigate to **Products >Voice and Unified Communications > IP Telephony > Call Control > Cisco Intercompany Media Engine > Unified Communications Manager / CallManager / Cisco Unity Connection Utilities-COP-Files**.

Upgrading from a Local Source

To upgrade the software from local DVD, follow this procedure:

Procedure

Step 1 If upgrading from 8.5(1) or earlier complete the Installing the COP file, page 6.

Step 2 If you are upgrading software on HP7825H3 hardware insert the 16GB USB device to facilitate data migration from the old system to the new installation.

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Caution If you are upgrading your software on HP7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. To perform an upgrade on one of these machines you must use a 16GB USB device to facilitate data migration from the old system to the new installation.

Step 3 If you do not have a Cisco-provided upgrade disk, create an upgrade disk by burning the upgrade file that you downloaded onto a DVD as an ISO image.

Step 4 Just copying the .iso file to the DVD will not work. Most commercial disk burning applications can create ISO image disks. Insert the new DVD into the disc drive on the local server that is to be upgraded.

Step 5 Log in to the Cisco Intercompany Media Engine server.

Step 6 Enter utils system upgrade initiate and select the appropriate option for the location of the upgrade media.

Step 7 To use the Email Notification feature, enter your Email Destination and SMTP Server in the fields provided.

Step 8 Continue the upgrade process.

Step 9 Choose the upgrade version that you want to install.

Step 10 In the next window, monitor the progress of the download.

Step 11 If you want to run the upgraded software at the completion of the upgrade process and automatically reboot to the upgraded partition, choose **Switch to new version after upgrade**. The system restarts and is running the upgraded software.

Step 12 If you want to install the upgrade and then manually switch to the upgraded partition at a later time, do the following steps:

    a. Choose **Do not switch to new version after upgrade**.

       The Upgrade Status window displays the Upgrade log.

    b. To restart the system and activate the upgrade, on the IME CLI enter **utils system switch versions**. The system restarts and is running the upgraded software.

The system restarts running the upgraded software.

Upgrading from a Local ISO File Copy

To upgrade the software from local local ISO file copy, follow this procedure:

Procedure

Step 1 If upgrading from 8.5(1) or earlier complete the Installing the COP file, page 6.

Step 2   If you are upgrading software on HP7825H3 hardware insert the 16GB USB device to facilitate data migration from the old system to the new installation.

⚠️
Caution   If you are upgrading your software on HP7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. To perform an upgrade on one of these machines you must use a 16GB USB device to facilitate data migration from the old system to the new installation.

Step 3   Using SFTP place the ISO imageon the IME Server.
The user id is **adminsftp** and the password is the configured administration password. After you start the SFTP session, you must change to the **upgrade** directory and put the ISO image in that location.

Step 4   Log in to the Cisco Intercompany Media Engine server.

Step 5   Enter **utils system upgrade** initiate and select option 4 **Local Upload Directory**.

Step 6   To use the Email Notification feature, enter your Email Destination and SMTP Server in the fields provided.

Step 7   Continue the upgrade process.

Step 8   Choose the upgrade version that you want to install.

Step 9   In the next window, monitor the progress of the download.

Step 10   If you want to run the upgraded software at the completion of the upgrade process and automatically reboot to the upgraded partition, choose **Switch to new version after upgrade**. The system restarts and is running the upgraded software.

Step 11   If you want to install the upgrade and then manually switch to the upgraded partition at a later time, do the following steps:

   a.   Choose **Do not switch to new version after upgrade**.

   The Upgrade Status window displays the Upgrade log.

   b.   To restart the system and activate the upgrade, on the IME CLI enter **utils system switch versions**. The system restarts and is running the upgraded software.

   The system restarts running the upgraded software.

Upgrading from a Remote Source

⚠️
Caution   If you are upgrading your software on HP7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. To perform an upgrade on one of these machines you must use a 16GB USB device to facilitate data migration from the old system to the new installation.

Supported SFTP Servers

Cisco allows you to use any SFTP server product but recommends SFTP products that have been certified with Cisco through the Cisco Technology Developer Partner program (CTDP). CTDP partners, such as GlobalSCAPE, certify their products with specified versions of Cisco Intercompany Media Engine. For information on which vendors have certified their products with your version of Cisco Intercompany Media Engine, refer to the following URL:

http://www.cisco.com/pcgi-bin/ctdp/Search.pl

For information on using GlobalSCAPE with supported Cisco Intercompany Media Engine versions, refer to the following URL:

http://www.globalscape.com/gsftps/cisco.aspx

Cisco uses the following servers for internal testing. You may use one of the servers, but you must contact the vendor for support:

- Open SSH (refer to http://sshwindows.sourceforge.net/)
- Cygwin (refer to http://www.cygwin.com/)
- Titan (refer to http://www.titanftp.com/)

Cisco does not support using the SFTP product free FTDP. This is because of the 1GB file size limit on this SFTP product.

For issues with third-party products that have not been certified through the CTDP process, contact the third-party vendor for support.

To upgrade the software from a network location or remote server, use the following procedure.

Procedure

Step 1   If upgrading from 8.5(1) or earlier complete the Installing the COP file, page 6.

Step 2   If you are upgrading software on HP7825H3 hardware insert the 16GB USB device to facilitate data migration from the old system to the new installation.

Step 3   Put the upgrade file on an FTP or SFTP server that the server that you are upgrading can access.

Step 4   Log in to Cisco Intercompany Media Engine server.

Step 5   Enter **utils system upgrade initiate**.

Step 6   From the **Source** list, choose **Remote Filesystem**.

Step 7   In the **Directory** field, enter the path to the directory that contains the patch file on the remote system.

If the upgrade file is located on a Linux or Unix server, you must enter a forward slash at the beginning of the directory path. For example, if the upgrade file is in the patches directory, you must enter /patches

If the upgrade file is located on a Windows server, remember that you are connecting to an FTP or SFTP server, so use the appropriate syntax, including

- Begin the path with a forward slash (/) and use forward slashes throughout the path.
- The path must start from the FTP or SFTP root directory on the server, so you cannot enter a Windows absolute path, which starts with a drive letter (for example, C:).

Step 8   In the **Server** field, enter the server name or IP address.

Step 9   In the **User Name** field, enter your user name on the remote server.

Step 10   In the **User Password** field, enter your password on the remote server.

Step 11   Select the transfer protocol from the **Transfer Protocol** field.

Step 12   To use the Email Notification feature, enter your Email Destination and SMTP Server in the fields provided.

Step 13   Choose the upgrade version that you want to install.

Step 14   In the next window, monitor the progress of the download.

> **Note** If you lose your connection with the server, you may see the following message when you try to access the Software Upgrades menu again:
>
> Warning: Another session is installing software, click Assume Control to take over the installation.
>
> If Assume Control does not display, you can also monitor the upgrade with the Real Time Monitoring Tool.

Step 15 If you want to install the upgrade and automatically reboot to the upgraded partition, choose **Switch to new version after upgrade**. The system restarts and runs the upgraded software.

Step 16 If you want to install the upgrade and then manually reboot to the upgraded partition at a later time, complete the following steps:

    a. Choose **Do not switch to new version after upgrade**.

        The Upgrade Status window displays the Upgrade log.

    b. To restart the system and activate the upgrade, on the IME CLI enter utils system switch versions. The system restarts and is running the upgraded software.

Reverting to a Previous Version

After upgrading, you can revert to the software version that was running before the upgrade, by using the Switch Version option to switch the system to the software version on the inactive partition.

This section contains the following topics:

> **Caution** If you are upgrading your software on HP7825H3 hardware, there is no option to revert to the previous version of Cisco Intercompany Media Engine. To perform an upgrade on one of these machines you must use a 16GB USB device to facilitate data migration from the old system to the new installation.

> **Note** After upgrading IME from 8.5.1.10000-13 to 8.6.2.10000-5 and switching back to 8.5.1, the inactive version displays inaccurately as Inactive Master Version: 0.0.0.0-0 but the active version is displayed correctly.

> **Note** This document does not apply to Cisco Unified Communications Manager Business Edition.

Cisco Intercompany Media Engine on Virtualized Servers

The following is the unique technical information that you need to run Cisco Intercompany Media Engine on Virtualized Servers.

Deployment of Cisco Intercompany Media Engine on Virtualized Servers

Cisco supports running Cisco Intercompany Media Engine under ESXi. For more information about running Cisco Intercompany Media Engine under ESXi, see Unified Communications VMware Requirements on www.cisco.com/go/uc-virtualized.

How to Run Cisco Intercompany Media Engine

VMware Tools are specialized drivers for virtual hardware that is installed in the UC applications when they are running virtualized. It is very important that the VMware tools version running in the UC application be in sync with the version of ESXi being used. For information on how to upgrade the tools, see:

http://docwiki.cisco.com/wiki/VMware_Tools.

How to Disable LRO on the ESXi Host

For information on how to disable LRO on the ESXi Host, see:
http://docwiki.cisco.com/wiki/Disable_LRO.

Installation, Upgrade, and Migration Options

There are two main approaches to installing, upgrading, and migrating servers:

- Specs-based
- Tested reference configuration

For information relating to specs-based configuration, refer to the following section:

- Cisco Intercompany Media Engine on VMware Specs-Based Support, page 11

For information on the tested reference configurations, refer to one of the following sections:

- Cisco UCS B-200 Blade Servers, page 12
- Cisco UCS C210 Rack-Mount Servers, page 15
- Cisco UCS C200 Rack-Mount Servers, page 24

Cisco Intercompany Media Engine on VMware Specs-Based Support

If you want to use VMware Specs-based support with Cisco Intercompany Media Engine, refer to the following:

http://docwiki.cisco.com/wiki/Specification-Based_Hardware_Support

The following sections describe the changes for installation, upgrade, and migration of VMware Specs-based support:

- System requirements, page 12
- VMware feature support, page 12
- Migration, page 12

System requirements

VMware feature system requirements are available from:

http://docwiki.cisco.com/wiki/Implementing_Virtualization_Deployments#Configuring_Hardware_Platforms

VMware feature support

VMware feature support is available from:

http://docwiki.cisco.com/wiki/Implementing_Virtualization_Deployments#VMware_Feature_Support

Migration

Migrating from an existing server to a VMware Specs-Based configuration follows a procedure that is very similar to replacing server hardware, which is described in the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*.

For an overview of the migration process and references to other pertinent documentation, refer to the following sections:

- Migrating To Cisco UCS B-200 Blade Servers, page 13
- Migrating To Cisco UCS C210 Rack-Mount Servers, page 21
- Migrating To Cisco UCS C200 Rack-Mount Servers, page 30

Cisco UCS B-200 Blade Servers

Cisco supports running Cisco Intercompany Media Engine on the Cisco UCS B-Series Blade Server.

The following sections describe the changes for installation, upgrade, and migration in Cisco UCS B-200 Blade Servers:

- System Requirements, page 13
- VMware Feature Support, page 13
- Migrating To Cisco UCS B-200 Blade Servers, page 13
- Cisco UCS B-200 Blade Servers External Media, page 15

System Requirements

To run Cisco UCS B-200 Blade Servers, your system must meet the requirements listed in Table 1 on page 13.

Table 1   System Requirements

This parameter...	...Must be this value to meet the Cisco supported configuration.
Supported Virtual Machine Configuration	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized
	Use the Cisco-provided OVA template to create VMs, to ensure that the VMs are correctly configured. Refer to the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34.
	For more information about virtual machine configurations, refer to the documentation at: http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization_Downloads_%28including_OVA/OVF_Templates%29.
IOPS per virtual machine (VM)	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized
VM oversubscription per blade	None
VMware version	Minimum required ESXi version is ESXi 4.0 Update 1.
	Note Refer to the documentation at: http://www.cisco.com/go/uc-virtualized for updated ESXi version compatibility.

VMware Feature Support

For current information about VMware feature support, refer to the documentation at: http://docwiki.cisco.com/wiki/Unified_Communications_VMWare_Requirements

Migrating To Cisco UCS B-200 Blade Servers

Migrating from a Media Convergence Server (MCS server) to Cisco UCS B-200 Blade Servers follows a procedure that is very similar to replacing server hardware, which is described in the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*.

Table 2 on page 14 provides an overview of the migration process and references to other pertinent documentation.

Table 2   *Migrating to Cisco UCS B-200 Blade Servers Process Overview*

Configuration Steps		Related Procedures and Topics
Step 1	Review the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*. This document describes how to replace server hardware, which is very similar to migrating from an MCS server to a Cisco UCS B-Series Blade Server. You should perform the document's pre-replacement and post-replacement tasks, and review the procedures for installing Cisco Intercompany Media Engine and migrating data.	*Replacing a Single Server or Cluster for Cisco Unified Communications Manager*
Step 2	Upgrade the MCS server to Cisco Intercompany Media Engine Release 8.0(2c) or later.	Upgrading to Cisco Intercompany Media Engine 8.6(2), page 3
Step 3	If the UCS VM will use a different IP address or hostname than the MCS server, change the IP address and hostname of the MCS server to the values that the UCS VM will use. This is required for DRS backup and restore to work.	Refer to the topic "Changing the Cluster IP Addresses for Publisher Servers That Are Defined by Host Name" in the *Changing the IP Address and Host Name for Cisco Unified Communications Manager* guide.
Step 4	Perform a DRS backup on the MCS server. **Note** Cisco UCS B-200 Blade Servers does not support tape drive as the backup media.	*Disaster Recovery System Administration Guide* Cisco UCS B-200 Blade Servers External Media, page 15
Step 5	Use the Answer File Generator to generate a license MAC for the Cisco UCS B-200 Blade Servers server. The license MAC is required to obtain licenses for the server. After you obtain the license MAC, you can rehost the licenses for your new server.	Customer Impact from New Licensing Procedures, page 33. *Installation and Cisco IME Server Configuration* Answer File Generator: http://www.cisco.com/web/cuc_afg/index.html
Step 6	Create the virtual machines (VMs) on the Cisco UCS B-200 Blade Servers server that will be used as the replacements for the MCS nodes.	Use the Cisco-provided OVA template to create VMs. Refer to the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34.
Step 7	Install Cisco Intercompany Media Engine Release 8.0(2c) or later on the Cisco UCS B-Series Blade Server. **Note** Cisco UCS B-200 Blade Servers does not support installation from a DVD. **Note** Cisco UCS B-200 Blade Servers does not support a hardware clock; you must use NTP. The option to configure a hardware clock is not available in the installation program.	*Installation and Cisco IME Server Configuration* Cisco UCS B-200 Blade Servers External Media, page 15
Step 8	Install Cisco Intercompany Media Engine Release 8.0(2c) or later on the Cisco UCS B-Series Blade Server.	*Cisco Unified Communications Operating System Administration Guide*

Table 2 **Migrating to Cisco UCS B-200 Blade Servers Process Overview (continued)**

Configuration Steps		Related Procedures and Topics
Step 9	Perform a DRS restore to restore the data backed up from the MCS server to the Cisco UCS B-Series Blade Server. **Note** Cisco UCS B-200 Blade Servers does not support tape drive as the restore media.	*Disaster Recovery System Administration Guide* Cisco UCS B-200 Blade Servers External Media, page 15
Step 10	Upload the new licenses to the Cisco UCS B-Series Blade Server. If you did not obtain licenses for the new server already, you must request the licenses first. **Note** The previous license will no longer be valid. Refer to "Obtaining Rehosted Licenses When You Change License MAC Parameters" section on page 34.	Cisco Intercompany Media Engine on Virtualized Servers Licensing, page 33 *Cisco Unified Communications Operating System Administration Guide*

Cisco UCS B-200 Blade Servers External Media

Cisco UCS B-200 Blade Servers uses "soft media" such as ISO or FLP (virtual floppy) for procedures that require external media (such as installation and upgrade). Physical external devices such as USB drives are not supported.

Note Backup and restore are not supported on soft media.

The virtual USB interface is not supported on VMware. The following are examples of differences in external media support between MCS servers and Cisco UCS B-200 Blade Servers:

- Install logs cannot get dumped to a USB key. These logs get dumped to a file through the serial port of the VM.

- The answer file generated by the Answer File Generator (platformConfig.xml) cannot get read from a USB key to perform an unattended installation. Instead, you must put the answer file into a FLP image to be mounted in the floppy drive.

- USB tape drive backup is not supported. Use SFTP instead.

- Music On Hold through a USB connection is not supported. Use a Cisco 7800 Series Media Convergence Server instead.

- Cisco Messaging Interface (CMI) for Message Waiting Indication (MWI) is not supported over the serial port. Use a Cisco 7800 Series Media Convergence Server instead.

Cisco UCS C210 Rack-Mount Servers

Cisco supports running Cisco Intercompany Media Engine on the Cisco UCS C-Series Rack-Mount Server.

The following sections describe the changes for installation, upgrade, and migration in Cisco UCS C210 Rack-Mount Servers:

- System Requirements, page 16
- VMware Feature Support, page 16

System Requirements

To run Cisco UCS C210 Rack-Mount Servers, your system must meet the requirements listed in Table 3 on page 16.

Table 3   System Requirements

This parameter...	...Must be this value to meet the Cisco supported configuration.
Supported Virtual Machine Configuration	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized Use the Cisco-provided OVA template to create VMs, to ensure that the VMs are correctly configured. Refer to the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34. For more information about virtual machine configurations, refer to the documentation at: http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization_Downloads_%28including_OVA/OVF_Templates%29.
IOPS per virtual machine (VM)	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized
CPU and RAM oversubscription	None
VMware version	Minimum required ESXi version is ESXi 4.0 Update 1. Refer to the documentation at http://www.cisco.com/go/uc-virtualized for updated ESXi version compatibility.

To operate Cisco UCS C210 Rack-Mount Servers successfully, you should have the experience and skills to manage a host server running VMware ESXi. If you do not have this experience and want to obtain the required information quickly, consider using VMware GO, a Web-based application that facilitates VMware installations. For more information, refer to the VMware GO documentation.

Note   Even if you use VMware GO, you still need to use the supported VMware configuration on Cisco UCS C210 Rack-Mount Servers, which are documented at both http://www.cisco.com/go/swonly and http://www.cisco.com/go/uc-virtualized.

VMware Feature Support

For current information about VMware feature support, refer to the documentation at http://docwiki.cisco.com/wiki/Unified_Communications_VMWare_Requirements

Installing Cisco UCS C210 Rack-Mount Servers

This following sections describe how to perform a fresh installation of Cisco UCS C210 Rack-Mount Servers:

- Configuration Checklist for Installing and Configuring the Server, page 17
- Preparing To Install, page 18
- Configuring RAID, page 18
- Installing vSphere Client, page 20
- Aligning the Datastore Used for VMs, page 20
- Creating Virtual Machines, page 20
- Installing Cisco Intercompany Media Engine On a VM, page 21

Configuration Checklist for Installing and Configuring the Server

Table 4 on page 17 provides a checklist of the major steps required to install and configure Cisco UCS C210 Rack-Mount Servers. The Related Documentation column contains references to documentation that is related to the step.

Table 4   Configuration Checklist for Installing and Configuring the Server

	Configuration Steps	Related Documentation
Step 1	Prepare to install the server.	Preparing To Install, page 18 *Cisco UCS C210 Installation and Service Guide*
Step 2	Physically install and connect the server.	*Cisco UCS C210 Installation and Service Guide*
Step 3	Power on the server and Configure Cisco Integrated Management Controller (CIMC) for remote management.	*Cisco UCS C210 Installation and Service Guide*
Step 4	If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C210 Rack-Mount Servers, configure the RAID settings to the following specifications: • The first 2 drives are configured as a RAID 1 (mirrored) drive. This drive is for ESXi installation. • The remaining drives, if any exist, are configured as a RAID 5 array. This array is for Cisco Unified Communications Manager application VMs.	Configuring RAID, page 18 *Cisco UCS C210 Installation and Service Guide*

Step 5	If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C210 Rack-Mount Servers, configure the BIOS to the following specifications:
	
	 • Disable Quiet Mode
	
	 • Enable Enhanced SATA for CDROM access
	
	 • Configure the following boot order:
	   – SATA5:Optiarc DVD first
	   – PCI Raid Adapter second
		Cisco UCS C210 Installation and Service Guide

Table 4   *Configuration Checklist for Installing and Configuring the Server*

	Configuration Steps	Related Documentation
Step 6	Install and configure VMware ESXi on the smaller of the two available disks. Refer to Table 3 on page 16 for the supported versions of VMware ESXi.	*Cisco UCS C-Series Servers VMware Installation Guide* VMware ESXi documentation
Step 7	Install vSphere Client.	Installing vSphere Client, page 20 vSphere Client documentation
Step 8	Align the datastores for the VMs.	Aligning the Datastore Used for VMs, page 20
Step 9	Install and configure virtual machines (VMs).	Creating Virtual Machines, page 20 Downloading Virtual Machine Templates (OVA Templates), page 34
Step 10	Install Cisco Intercompany Media Engine on VMs.	Installing Cisco Intercompany Media Engine On a VM, page 21

Preparing To Install

This section describes how to prepare to install a Cisco UCS C210 Rack-Mount Servers server in a standalone configuration, meaning that it is not in a datacenter.

You should allocate the following resources before installation:

- Space in a rack to receive a 2 RU Cisco UCS C-Series Rack-Mount Server
- 3 Ethernet ports on a switch close to the Cisco UCS C-Series Rack-Mount Server:
  - One port for the CIMC
  - Two ports for the LAN on motherboard (LOM) NICs
- Optionally, up to four IP addresses for the Broadcom NIC, if your server has it
- An IP address for the CIMC management port
- An IP address for the virtual host. This is the Cisco UCS C-Series Rack-Mount Server's IP address and is used by ESXi.
- A maximum of four IP addresses for the LAN on motherboard (LOM) NICs
- A hostname, and optionally configure DNS for the virtual hosts' hostname
- IP addresses for the VMs

Configuring RAID

If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C210 Rack-Mount Servers, configure the RAID settings to the following specifications:

- The first 2 drives are configured as a RAID 1 (mirrored) drive. This drive is for ESXi installation.
- The remaining drives, if any exist, are configured as a RAID 5 drive. This drive is for Cisco Intercompany Media Engine application VMs.

Follow this procedure to perform this task:

Step 1 Make sure that Quiet Boot is disabled by following these steps:

  a. Boot the server and watch for the F2 prompt during bootup.

b. Press **F2** when prompted to enter the BIOS Setup utility.

c. On the Main page of the BIOS Setup utility, set Quiet Boot to **Disabled**. This allows non-default messages, prompts, and POST messages to display during bootup instead of the Cisco logo screen.

d. Press **F10** to save your changes and exit the utility.

Step 2 During server bootup, press Ctrl+Y to enter the preboot CLI.

Step 3 Enter the following commands to determine the current RAID configuration:

-ldinfo -l0 -a0

-ldinfo -l1 -a0

The required configuration is two drives in a RAID 1 array for logical drive 0, and for servers with more drives, the remaining drives in a RAID 5 array for Logical drive 1. If the RAID configuration is wrong, continue with this procedure.

✎

Note Do not continue with this procedure if RAID is configured correctly.

Step 4 Enter the command **-cfgclr –a0** to clear the RAID configuration.

⚠

Caution Clearing the RAID configuration deletes all data on the hard drives.

Step 5 Determine the Device ID of the enclosure that contains the disk drives by entering the command **-encinfo -a0 -page 20**.

If necessary, page through the output to find the Device ID of the enclosure that has a non-zero entry for Number of Physical Drives. Substitute this Device ID value where *deviceID* appears in the commands in this procedure.

Step 6 Determine the starting slot number in the enclosure that you identified by entering the command **-pdinfo -physdrv** [*deviceID***:0**] **-a0**.

If this command generates meaningful output, the drives start at slot zero. If it generates an error, the drives start at slot one.

Step 7 Configure the first RAID array by entering one of the following commands, depending on the starting slot number:

- If your drives start at slot zero, run this command:

   -cfgldadd -r1 [*deviceID***:0,** *deviceID***:1**] **-a0**

- If your drives start at slot one, run this command:

   -cfgldadd -r1 [*deviceID***:1,** *deviceID***:2**] **-a0**

Step 8 If your server contains 6 total disk drives, enter the following command to configure the second RAID array:

-cfgldadd -r5 [*deviceID***:2,** *deviceID***:3,** *deviceID***:4** *deviceID***:5**] **-a0**

Step 9 If your server contains 10 total disk drives, configure the second RAID array by entering one of the following commands, depending on the starting slot number:

- If your drives start at slot zero, run this command:

   -cfgldadd -r5 [*deviceID***:2,** *deviceID***:3,** *deviceID***:4** *deviceID***:5,** *deviceID***:6,** *deviceID***:7,** *deviceID***:8,** *deviceID***:9**] **-a0**

- If your drives start at slot one, run this command:

-cfgldadd -r5 [*deviceID*:**3,** *deviceID*:**4** *deviceID*:**5,** *deviceID*:**6,** *deviceID*:**7,** *deviceID*:**8,** *deviceID*:**9,** *deviceID*:**10**] -a0

Step 10 If the hard drives did not have a RAID configuration previously, you are done configuring RAID. If the hard drives had a RAID configuration before, continue with this procedure.

Step 11 Enter the following commands to initialize the logical volumes.

-ldinit -start -full -l0 -a0 (l0 is the letter l and the number 0, not the number 10)

-ldinit -start -full -l1 -a0 (l1 is the letter l and the number 1, not the number 11)

This clears data on the drives and initializes the new array.

Step 12 Allow these commands to finish running before exiting the Preboot CLI. Enter the following commands to display the progress of the commands:

-ldinit -showprog -l0 -a0

-ldinit -showprog -l1 -a0

When both commands report that no initialization is running, it is safe to quit the Preboot CLI.

Step 13 After configuring the two logical volumes, you can exit the Preboot CLI by entering **q**.

Installing vSphere Client

When the virtual host is available on the network, you can browse to its IP address to bring up a web-based interface. The vSphere Client is Windows-based, so the download and install must be performed from a Windows PC.

Once the vSphere Client is installed, you can run it and log into the virtual host using the virtual host's name or IP address, the root login ID, and the password you configured.

You can join the host to a vCenter if you want to manage it through vCenter.

Aligning the Datastore Used for VMs

Note This section does not apply to servers that contain only 2 disk drives. There is only one logical volume on such servers.

When you install VMWare ESXi, the second logical volume is automatically imported unaligned. VMs have better disk performance when all partitions (physical, ESXi and VM) start on the same boundary. This prevents disk blocks being fragmented across the different boundaries.

To ensure that the ESXi partition used for VMs will be aligned, you should delete the unaligned datastore (the larger disk partition), then recreate the datastore using vSphere client.

Creating Virtual Machines

Cisco provides a VM template for you to download and transfer to your virtual host. Use this template to create the VMs for Cisco UCS C210 Rack-Mount Servers installation.

Before you deploy the template and create VMs, you should have a hostname and IP address allocated for each new VM.

Follow these steps to create a VM and prepare to install Cisco UCS C210 Rack-Mount Servers on it:

Step 1   Download the VM template for your application.

See the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34 for more information.

Step 2   Upload the template to a datastore on the Cisco UCS C-Series Rack-Mount Server.

It is recommended to use the smaller datastore (with ESXi installed on it) for this.

Step 3   Make this template available to the Cisco UCS C-Series Rack-Mount Server.

Step 4   Deploy the template file using vSphere Client. Enter the following information for the new VM:

- hostname
- datastore—Select the larger datastore

Step 5   Complete creating the VM.

At this point a new VM has been created with the correct amount of RAM, number of CPUs, size and number of disks for the intended application.

Step 6   Install Cisco Intercompany Media Engine on the VM. See the "Installing Cisco Intercompany Media Engine On a VM" section on page 21 for more information.

Installing Cisco Intercompany Media Engine On a VM

Follow this procedure to install Cisco Intercompany Media Engine on a new VM:

Step 1   In vSphere Client, edit the VM to force entry into BIOS setup the next time the VM reboots.

Step 2   Make the Cisco Intercompany Media Engine installation media available to the VM DVD-ROM drive.

Step 3   Power on the VM, then in BIOS setup, promote CD ROM to boot before the hard drive.

Step 4   Complete booting the VM.

The Cisco Intercompany Media Engine installation program starts. For information about performing the installation, see the document *Installation and Cisco IME Server Configuration*.

Note   Cisco UCS C210 Rack-Mount Servers does not support a hardware clock; you must use NTP. The option to configure a hardware clock is not available in the installation program.

Migrating To Cisco UCS C210 Rack-Mount Servers

Migrating from a Media Convergence Server (MCS server) to a Cisco UCS C210 Rack-Mount Servers server follows a procedure that is very similar to replacing server hardware, which is described in the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*.

Table 5 on page 22 provides an overview of the migration process and references to other pertinent documentation.

Table 5   Migrating to Cisco UCS C210 Rack-Mount Servers Process Overview

Configuration Steps		Related Procedures and Topics
Step 1	Review the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*. This document describes how to replace server hardware, which is very similar to migrating from an MCS server to a Cisco UCS C210 Rack-Mount Servers server. You should perform the document's pre-replacement and post-replacement tasks, and review the procedures for installing Cisco Intercompany Media Engine and migrating data.	*Replacing a Single Server or Cluster for Cisco Unified Communications Manager*
Step 2	Upgrade the MCS server to Cisco Intercompany Media Engine Release 8.0(2) or later.	Upgrading to Cisco Intercompany Media Engine 8.6(2), page 3
Step 3	If the UCS VM will use a different IP address or hostname than the MCS server, change the IP address and hostname of the MCS server to the values that the UCS VM will use. This is required for DRS backup and restore to work.	Refer to the topic "Changing the Cluster IP Addresses for Publisher Servers That Are Defined by Host Name" in the *Changing the IP Address and Host Name for Cisco Unified Communications Manager* guide.
Step 4	Perform a DRS backup on the MCS server.	*Disaster Recovery System Administration Guide*
Step 5	Use the Answer File Generator to generate a license MAC for the Cisco UCS C210 Rack-Mount Servers server. The license MAC is required to obtain licenses for the server. After you obtain the license MAC, you can rehost the licenses for your new server.	Customer Impact from New Licensing Procedures, page 33. *Installation and Cisco IME Server Configuration*
Step 6	Create the virtual machine (VM) on the Cisco UCS C210 Rack-Mount Servers server that will be used as the replacement for the MCS node.	Installing Cisco UCS C210 Rack-Mount Servers, page 17
Step 7	Install the same release of Cisco Intercompany Media Engine on the Cisco UCS C210 Rack-Mount Servers server that you installed on the MCS server.	Installing Cisco UCS C210 Rack-Mount Servers, page 17 *Installation and Cisco IME Server Configuration*
Step 8	Perform a DRS restore to restore the data backed up from the MCS server to the Cisco UCS C210 Rack-Mount Servers server.	*Disaster Recovery System Administration Guide*
Step 9	Upload the new licenses to the Cisco UCS C210 Rack-Mount Servers server. If you did not obtain licenses for the new server already, you must request the licenses first. **Note** The previous license will no longer be valid. Refer to "Obtaining Rehosted Licenses When You Change License MAC Parameters" section on page 34.	Cisco Intercompany Media Engine on Virtualized Servers Licensing, page 33 *Cisco Unified Communications Operating System Administration Guide*

VMware Support

Consider the following, when using Cisco UCS C210 Rack-Mount Servers:

- Install, upgrade, and recovery procedures now use "soft media" such as ISO or FLP (virtual floppy) if the server does not have a DVD drive.

- The answer file generated by the Answer File Generator (platformConfig.xml) cannot get read from a USB key to perform an unattended installation. Instead, you must put the answer file into a FLP image to be mounted in the floppy drive.

- Music On Hold external source and Cisco Messaging Interface requires a mixed MCS/UCS cluster.

- USB tape backup is not supported.

- NIC teaming is configured at the VMware virtual switch.

- Hardware SNMP and syslog move to VMware and UCS Manager.

- Install logs are written only to the virtual serial port.

- Unattended installs use virtual floppy instead of USB.

- Basic UPS Integration, as used with a Cisco 7800 Series Media Convergence Server, is not supported.

- Boot order is controlled by the BIOS of the VMware VM.

- Hardware BIOS, firmware, and drivers must be the required level and configured for compatibility with Cisco Unified Communications Manager-supported VMware product and version.

- Hardware MIBs are not supported.

- Hardware Failure alert and Hardware failure syslog messages are not available.

- CLI does not support hardware information.

- SNMP Hardware agent does not run on VMware.

- Real–Time Management Tool Client—Hardware alerts are not generated. The scope is limited to Virtual Machine and not to Physical Machine.

- CDP reports as a Virtual Machine.

- Certain kinds of Cisco UCS B-Series Blade Server and Cisco UCS C-Series Rack-Mount Server hardware alerts are only available via CIM alerting, and must be viewed in VMware vCenter or an equivalent CIM-compliant console. For more information, see the "Related Documentation" section on page 35.

For more information on the Cisco UCS C-Series Rack-Mount Server, go to the following URL:

http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/gui/config/guide/1.1.1/b_Cisco_UCS_C-Series_Servers_Integrated_Management_Controller_Configuration_Guide_1_1_1.html

To view the list of product installation and configuration guides for Cisco UCS C-Series Integrated Management Controller, go to the following URL:

http://www.cisco.com/en/US/products/ps10739/products_installation_and_configuration_guides_list.html

To view the list of product installation and configuration guides for Cisco UCS Manager, go to following URL:

http://www.cisco.com/en/US/products/ps10281/products_installation_and_configuration_guides_list.html

Performing Daily Operations on Cisco UCS C210 Rack-Mount Servers

Daily operations for Cisco UCS C210 Rack-Mount Servers software applications are identical to when the application is installed on an MCS server.

There are some differences in hardware management and monitoring, because Cisco UCS C210 Rack-Mount Servers operates in a virtual environment. For more information, see the "Related Documentation" section on page 35.

The following sections describe how to perform these tasks:

- Monitoring Hardware from the VM, page 24
- Monitoring from CIMC, page 24
- Monitoring from vSphere Client and vCenter, page 24

Monitoring Hardware from the VM

Applications running in a VM have no ability to monitor the physical hardware. Any hardware monitoring must be done from the CIMC, ESXi plugins, vCenter, or by physical inspection (for flashing LEDs, etc.).

Monitoring from CIMC

The CIMC provides the following hardware monitoring:

- An overview of CPU, memory and power supply health
- An overview of hardware inventory, including CPUs, memory, power supplies and storage
- Monitoring of sensors for power supplies, fans, temperature and voltage
- A system event log that contains BIOS and sensor entries

Monitoring from vSphere Client and vCenter

The vSphere Client provides the following monitoring features:

- When you are logged into vCenter, the vSphere Client displays hardware and system alarms defined on the Alarms tab.
- VM resource usage displays on the Virtual Machines tab, and on the Performance tab for each VM.
- Host performance and resource usage display on the Performance tab for the Host.
- When ESXi is used standalone (without vCenter), hardware status and resource usage are available, but alarming is not possible.

Cisco UCS C200 Rack-Mount Servers

Cisco supports running Cisco UCS C200 Rack-Mount Servers.

The following sections describe the changes for installation, upgrade, and migration in Cisco UCS C200 Rack-Mount Servers:

- System Requirements, page 25
- Cisco UCS C200 Rack-Mount Servers External Media, page 25
- Installing Cisco UCS C200 Rack-Mount Servers, page 26
- Migrating To Cisco UCS C200 Rack-Mount Servers, page 30
- VMware Support, page 31
- Performing Daily Operations on Cisco UCS C200 Rack-Mount Servers, page 32

System Requirements

To run Cisco UCS C200 Rack-Mount Servers, your system must meet the requirements listed in Table 6 on page 25.

Table 6   *System Requirements*

This parameter...	...Must be this value to meet the Cisco supported configuration.
Supported Virtual Machine Configuration	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized Use the Cisco-provided OVA template to create VMs, to ensure that the VMs are correctly configured. Refer to the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34. For more information about virtual machine configurations, refer to the documentation at: http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization_Downloads_%28including_OVA/OVF_Templates%29.
IOPS per virtual machine (VM)	Refer to the documentation at: http://www.cisco.com/go/uc-virtualized
CPU and RAM oversubscription	None
VMware version	ESXi 4.0 Update 1 or later **Note** Ensure that you use ESXi, rather than ESX, to run Cisco UCS C200 Rack-Mount Servers. However, the rack server can be part of a VMware vCenter that includes ESX hosts.

To operate Cisco UCS C200 Rack-Mount Servers successfully, you should have the experience and skills to manage a host server running VMware ESXi. If you do not have this experience and want to obtain the required information quickly, consider using VMware GO, a Web-based application that facilitates VMware installations. For more information, refer to the VMware GO documentation.

Note Even if you use VMware GO, you still need to use the supported VMware configuration on Cisco UCS C200 Rack-Mount Servers, which are documented at both http://www.cisco.com/go/swonly and http://www.cisco.com/go/uc-virtualized.

Cisco UCS C200 Rack-Mount Servers External Media

Cisco UCS C200 Rack-Mount Servers uses "soft media" such as ISO or FLP (virtual floppy) for procedures that require external media (such as installation and upgrade). Physical external devices such as USB drives are not supported.

Note Backup and restore are not supported on soft media.

The virtual USB interface is not supported on VMware. The following are examples of differences in external media support between MCS servers and Cisco UCS C200 Rack-Mount Servers:

- Install logs cannot get dumped to a USB key. These logs get dumped to a file through the serial port of the VM.
- The answer file generated by the Answer File Generator (platformConfig.xml) cannot get read from a USB key to perform an unattended installation. Instead, you must put the answer file into a FLP image to be mounted in the floppy drive.
- USB tape drive backup is not supported. Use SFTP instead.
- Music On Hold through a USB connection is not supported. Use a Cisco 7800 Series Media Convergence Server instead.
- Cisco Messaging Interface (CMI) for Message Waiting Indication (MWI) is not supported over the serial port. Use a Cisco 7800 Series Media Convergence Server instead.

Installing Cisco UCS C200 Rack-Mount Servers

This following sections describe how to perform a fresh installation of Cisco UCS C200 Rack-Mount Servers:

- Configuration Checklist for Installing and Configuring the Server, page 26
- Preparing To Install, page 27
- Configuring RAID, page 27
- Installing vSphere Client, page 29
- Creating Virtual Machines, page 29
- Installing Cisco Intercompany Media Engine On a VM, page 30

Configuration Checklist for Installing and Configuring the Server

Table 7 on page 26 provides a checklist of the major steps required to install and configure Cisco UCS C200 Rack-Mount Servers. The Related Documentation column contains references to documentation that is related to the step.

Table 7   Configuration Checklist for Installing and Configuring the Server

	Configuration Steps	Related Documentation
Step 1	Prepare to install the server.	Preparing To Install, page 27 *Cisco UCS C200 Installation and Service Guide*
Step 2	Physically install and connect the server.	*Cisco UCS C200 Installation and Service Guide*
Step 3	Power on the server and Configure Cisco Integrated Management Controller (CIMC) for remote management.	*Cisco UCS C200 Installation and Service Guide*
Step 4	If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C200 Rack-Mount Servers, configure the RAID settings to the following specifications: - RAID 10 array for logical drive 0 - RAID 10 volume of 4 drives	Configuring RAID, page 27 *Cisco UCS C200 Installation and Service Guide*

Table 7   *Configuration Checklist for Installing and Configuring the Server*

	Configuration Steps	Related Documentation

Step 5	If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C200 Rack-Mount Servers, configure the BIOS to the following specifications:
	
	• Disable Quiet Mode
	• Enable Enhanced SATA for CDROM access
	• Configure the following boot order:
	  – SATA5:Optiarc DVD first
	  – PCI Raid Adapter second
		Cisco UCS C200 Installation and Service Guide

Step 6	Install and configure VMware ESXi. Refer to Table 6 on page 25 for the supported versions of VMware ESXi.	*Cisco UCS C-Series Servers VMware Installation Guide* VMware ESXi documentation
Step 7	Install vSphere Client.	Installing vSphere Client, page 29 vSphere Client documentation
Step 8	Install and configure virtual machines (VMs).	Creating Virtual Machines, page 29 Downloading Virtual Machine Templates (OVA Templates), page 34
Step 9	Install Cisco Intercompany Media Engine on VMs.	Installing Cisco Intercompany Media Engine On a VM, page 30

Preparing To Install

This section describes how to prepare to install a Cisco UCS C200 Rack-Mount Servers server in a standalone configuration, meaning that it is not in a datacenter.

You should allocate the following resources before installation:

• Space in a rack to receive a 2 RU Cisco UCS C-Series Rack-Mount Server

• 3 Ethernet ports on a switch close to the Cisco UCS C-Series Rack-Mount Server:

  – One port for the CIMC

  – Two ports for the LAN on motherboard (LOM) NICs

• Optionally, up to four IP addresses for the Broadcom NIC, if your server has it

• An IP address for the CIMC management port

• An IP address for the virtual host. This is the Cisco UCS C-Series Rack-Mount Server's IP address and is used by ESXi.

• A maximum of four IP addresses for the LAN on motherboard (LOM) NICs

• A hostname, and optionally configure DNS for the virtual hosts' hostname

• IP addresses for the VMs

Configuring RAID

If you purchased the Cisco UCS C-Series Rack-Mount Server server separately from Cisco UCS C200 Rack-Mount Servers, configure the RAID settings to the following specifications:

- RAID 10 array for logical drive 0
- RAID 10 volume of 4 drives

Follow this procedure to perform this task:

Step 1 Boot the server and watch for the F2 prompt during bootup.

Step 2 Press F2 when prompted to enter the BIOS Setup utility.

Step 3 On the Main page of the BIOS Setup utility, verify or set Quiet Boot to Disabled. This allows non-default messages, prompts, and POST messages to display during bootup instead of the Cisco logo screen.

Step 4 Press F10 to save your changes and exit the utility.

Step 5 During server bootup, press Ctrl+Y to enter the preboot CLI.

Step 6 Enter the following commands to determine the current RAID configuration:

-ldinfo -l0 -a0

The required configuration is four drives in a RAID 10 array for logical drive 0. If the RAID configuration is wrong, continue with this procedure.

> **Note** Do not continue with this procedure if RAID is configured correctly.

Step 7 Enter the command **-cfgclr –a0** to clear the RAID configuration.

⚠
Caution Clearing the RAID configuration deletes all data on the hard drives.

Step 8 Determine the Device ID of the enclosure that contains the disk drives by entering the command **-encinfo -a0 -page 20**.

> **Note** For UCS C200 M2 Rack-Mount Servers with 4 drives, the Device ID is typically 252. If this is not the case, please use the Enclosure ID obtained from the output of **encinfo**.

Step 9 Determine the starting slot number in the enclosure that you identified by entering the command **-pdinfo -physdrv** [*deviceID*:**0**] **-a0**.

If this command generates meaningful output, the drives start at slot zero. If it generates an error, the drives start at slot one.

> **Note** UCS C200 M2 Rack-Mount Servers with 4 drives, the drives start at slot zero.

Step 10 Configure the RAID array by entering the following command:

-CfgSpanAdd -r10 -Array0[*enclosureID*:0,*enclosureID*:1] -Array1[*enclosureID*:2,*enclosureID*:3] -a0

Step 11 If the hard drives did not have a RAID configuration previously, you are done configuring RAID. If the hard drives had a RAID configuration before, continue with this procedure.

Step 12 Enter the following command to initialize the logical volumes.

-ldinit -start -full -l0 -a0 (l0 is the letter l and the number 0, not the number 10)

This clears data on the drives and initializes the new array. Allow this command to finish running before exiting the Preboot CLI.

Step 13 If you want to do so, you can enter the following command to display the progress of the command you entered in Step 12:

-ldinit -showprog -l0 -a0

When the display command in Step 13 reports that no initialization is running, it is safe to quit the Preboot CLI.

Step 14 After configuring the two logical volumes, you can exit the Preboot CLI by entering **q**.

Tip If you can't get to the Preboot CLI even after Quiet Boot is disabled (in other words, if you have no Ctrl+Y option and that key sequence isn't working), you can configure RAID 10 by using the WebBios (Ctrl+H). To use the Web Bios, you must have a USB Keyboard and a USB mouse, rather than a PS2 keyboard and mouse. Use 2 drive groups (DGs) with DG0 containing Disks 0,1 and DG1 containing Disks 2,3.

Installing vSphere Client

When the virtual host is available on the network, you can browse to its IP address to bring up a web-based interface. The vSphere Client is Windows-based, so the download and install must be performed from a Windows PC.

Once the vSphere Client is installed, you can run it and log into the virtual host using the virtual host's name or IP address, the root login ID, and the password you configured.

You can join the host to a vCenter if you want to manage it through vCenter.

Creating Virtual Machines

Cisco provides a VM template for you to download and transfer to your virtual host. Use this template to create the VMs for Cisco UCS C200 Rack-Mount Servers installation.

Before you deploy the template and create VMs, you should have a hostname and IP address allocated for each new VM.

Follow these steps to create a VM and prepare to install Cisco UCS C200 Rack-Mount Servers on it:

Step 1 Download the VM template for your application.

See the "Downloading Virtual Machine Templates (OVA Templates)" section on page 34 for more information.

Step 2 Upload the template to a datastore on the Cisco UCS C-Series Rack-Mount Server.

Step 3 Make this template available to the Cisco UCS C-Series Rack-Mount Server.

Step 4 Deploy the template file using vSphere Client. Enter the following information for the new VM:

- hostname
- datastore—Select datastore

Step 5 Complete creating the VM.

At this point a new VM has been created with the correct amount of RAM, number of CPUs, size and number of disks for the intended application.

Step 6 Install Cisco Unified Communications Manager on the VM. See the "Installing Cisco Intercompany Media Engine On a VM" section on page 30 for more information.

Installing Cisco Intercompany Media Engine On a VM

Follow this procedure to install Cisco Intercompany Media Engine on a new VM:

Step 1 In vSphere Client, edit the VM to force entry into BIOS setup the next time the VM reboots.

Step 2 Make the Cisco Intercompany Media Engine installation media available to the VM DVD-ROM drive.

Step 3 Power on the VM, then in BIOS setup, promote CD ROM to boot before the hard drive.

Step 4 Complete booting the VM.

The Cisco Unified Communications Manager installation program starts. For information about performing the installation, see the document *Installation and Cisco IME Server Configuration.*.

Migrating To Cisco UCS C200 Rack-Mount Servers

Migrating from a Media Convergence Server (MCS server) to a Cisco UCS C200 Rack-Mount Servers server follows a procedure that is very similar to replacing server hardware, which is described in the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*.

Table 8 on page 30 provides an overview of the migration process and references to other pertinent documentation.

Table 8   Migrating to Cisco UCS C200 Rack-Mount Servers Process Overview

Configuration Steps		Related Procedures and Topics
Step 1	Review the document *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*. This document describes how to replace server hardware, which is very similar to migrating from an MCS server to a Cisco UCS C200 Rack-Mount Servers server. You should perform the document's pre-replacement and post-replacement tasks, and review the procedures for installing Cisco Unified Communications Manager and migrating data.	*Replacing a Single Server or Cluster for Cisco Unified Communications Manager*
Step 2	Upgrade the MCS server to Cisco Intercompany Media Engine Release 8.0(2c) or later.	Upgrading to Cisco Intercompany Media Engine 8.6(2), page 3
Step 3	If the UCS VM will use a different IP address or hostname than the MCS server, change the IP address and hostname of the MCS server to the values that the UCS VM will use. This is required for DRS backup and restore to work.	Refer to the topic "Changing the Cluster IP Addresses for Publisher Servers That Are Defined by Host Name" in the *Changing the IP Address and Host Name for Cisco Unified Communications Manager* guide.
Step 4	Perform a DRS backup on the MCS server.	*Disaster Recovery System Administration Guide*

Table 8   *Migrating to Cisco UCS C200 Rack-Mount Servers Process Overview (continued)*

Configuration Steps		Related Procedures and Topics
Step 5	Use the Answer File Generator to generate a license MAC for the Cisco UCS C200 Rack-Mount Servers server. The license MAC is required to obtain licenses for the server. After you obtain the license MAC, you can rehost the licenses for your new server.	Customer Impact from New Licensing Procedures, page 33. *Installation and Cisco IME Server Configuration.*
Step 6	Create the virtual machine (VM) on the Cisco UCS C200 Rack-Mount Servers server that will be used as the replacement for the MCS node.	Installing Cisco UCS C200 Rack-Mount Servers, page 26
Step 7	Install the same release of Cisco Intercompany Media Engine on the Cisco UCS C200 Rack-Mount Servers server that you installed on the MCS server.	Installing Cisco UCS C200 Rack-Mount Servers, page 26 *Installation and Cisco IME Server Configuration.*
Step 8	Perform a DRS restore to restore the data backed up from the MCS server to the Cisco UCS C200 Rack-Mount Servers server.	*Disaster Recovery System Administration Guide*
Step 9	Upload the new licenses to the Cisco UCS C200 Rack-Mount Servers server. If you did not obtain licenses for the new server already, you must request the licenses first. **Note** The previous license will no longer be valid. Refer to "Obtaining Rehosted Licenses When You Change License MAC Parameters" section on page 34.	Cisco Intercompany Media Engine on Virtualized Servers Licensing, page 33 *Cisco Unified Communications Operating System Administration Guide*

VMware Support

Consider the following, when using Cisco UCS C200 Rack-Mount Servers:

- For details about VMware feature support, refer to the documentation at http://docwiki.cisco.com/wiki/Unified_Communications_VMWare_Requirements#VMware_Infrastructure_Feature_Support

- Install, upgrade, and recovery procedures now use "soft media" such as ISO or virtual floppy (FLP) if the server does not have a DVD drive. For more information, refer to Cisco UCS B-200 Blade Servers External Media, page 15

- NIC teaming is configured at the VMware virtual switch.

- Hardware SNMP and syslog move to VMware and UCS Manager.

- Install logs are written only to the virtual serial port.

- Basic UPS Integration, as used with a Cisco 7800 Series Media Convergence Server, is not supported.

- Boot order is controlled by the BIOS of the VMware VM.

- Hardware BIOS, firmware, and drivers must be the required level and configured for compatibility with Cisco Unified Communications Manager-supported VMware product and version.

- Hardware MIBs are not supported.

- Hardware Failure alert and Hardware failure syslog messages are not available.

- CLI does not support hardware information.

- SNMP Hardware agent does not run on VMware.

- Real–Time Management Tool Client—Hardware alerts are not generated. The scope is limited to Virtual Machine and not to Physical Machine.

- CDP reports as a Virtual Machine.

- Certain kinds of Cisco UCS C-Series Rack-Mount Server hardware alerts are only available via CIM alerting, and must be viewed in VMware vCenter or an equivalent CIM-compliant console. For more information, see the "Related Documentation" section on page 35.

For more information on the Cisco UCS C-Series Rack-Mount Server, go to the following URL:

http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/gui/config/guide/1.1.1/b_Cisco_UCS_C-Series_Servers_Integrated_Management_Controller_Configuration_Guide_1_1_1.html

To view the list of product installation and configuration guides for Cisco UCS C-Series Integrated Management Controller, go to the following URL:

http://www.cisco.com/en/US/products/ps10739/products_installation_and_configuration_guides_list.html

To view the list of product installation and configuration guides for Cisco UCS Manager, go to following URL:

http://www.cisco.com/en/US/products/ps10281/products_installation_and_configuration_guides_list.html

Performing Daily Operations on Cisco UCS C200 Rack-Mount Servers

Daily operations for Cisco UCS C200 Rack-Mount Servers software applications are identical to when the application is installed on an MCS server.

There are some differences in hardware management and monitoring, because Cisco UCS C200 Rack-Mount Servers operates in a virtual environment. For more information, see the "Related Documentation" section on page 35.

The following sections describe how to perform these tasks:

- Monitoring Hardware from the VM, page 32

- Monitoring from CIMC, page 32

- Monitoring from vSphere Client and vCenter, page 33

Monitoring Hardware from the VM

Applications running in a VM have no ability to monitor the physical hardware. Any hardware monitoring must be done from the CIMC, ESXi plugins, vCenter, or by physical inspection (for flashing LEDs, etc.).

Monitoring from CIMC

The CIMC provides the following hardware monitoring:

- An overview of CPU, memory and power supply health

- An overview of hardware inventory, including CPUs, memory, power supplies and storage

- Monitoring of sensors for power supplies, fans, temperature and voltage

- A system event log that contains BIOS and sensor entries

Monitoring from vSphere Client and vCenter

The vSphere Client provides the following monitoring features:

- When you are logged into vCenter, the vSphere Client displays hardware and system alarms defined on the Alarms tab.

- VM resource usage displays on the Virtual Machines tab, and on the Performance tab for each VM.

- Host performance and resource usage display on the Performance tab for the Host.

- When ESXi is used standalone (without vCenter), hardware status and resource usage are available, but alarming is not possible.

Cisco Intercompany Media Engine on Virtualized Servers Licensing

The following sections describe licensing for Cisco Intercompany Media Engine on Virtualized Servers:

Note For more information about licensing of your operating system, see http://www.vmware.com.

Customer Impact from New Licensing Procedures

Cisco Intercompany Media Engine on Virtualized Servers uses a different licensing model than Cisco Intercompany Media Engine on an MCS server. The MAC address of the NIC card is no longer used to associate the license to the server.

Instead, the license gets associated to a license MAC, which is a 12 digit HEX value created by hashing the following parameters that you configure on the server:

- Time zone
- NTP server 1 (or "none")
- NIC speed (or "auto")
- Hostname
- IP Address (or "dhcp")
- IP Mask (or "dhcp")
- Gateway Address (or "dhcp")
- Primary DNS (or "dhcp")
- SMTP server (or "none")
- Certificate Information (Organization, Unit, Location, State, Country)

The ways to obtain the license MAC are as follows:

- Before installation, use the Answer File Generator (http://www.cisco.com/web/cuc_afg/index.html). When you generate the answer file, you also get the license MAC.

✎
Note If you use this method, ensure that you enter the identical parameter values in the Answer File Generator and the Cisco Unified Communications Manager installation program, or the license will be invalid.

- After installation, navigate to **Show > System** in Cisco Intercompany Media Engine.
- After installation, use the CLI command **show status**.

Obtaining New Licenses

The process to redeem a Product Activation Key (PAK) for licenses at www.cisco.com/go/license is changed for a license MAC. When redeeming a PAK for a license MAC at this URL, you get prompted to select the type of license that you want to obtain:

- A physical MAC address — this is used when Cisco Intercompany Media Engine will be installed on an MCS server.
- A license MAC address — this is used when Cisco Intercompany Media Engine will be installed on Cisco Intercompany Media Engine on Virtualized Servers.

After you make this selection, the generation and installation of the license file follows the same process.

Obtaining Rehosted Licenses When You Change License MAC Parameters

When you change any of the parameters that create the license MAC, the license that you obtained with it becomes invalid. You must request a rehosting of the license to obtain a valid license.

To rehost your licenses, you must open a case with the licensing team to obtain a license for your replacement server. Contact the licensing team at licensing@cisco.com.

Supported Virtual Machine Configurations and Licensing

The virtual machine configuration for running Cisco Intercompany Media Engine on Virtualized Servers must match the stated specifications to get support from Cisco.

While Cisco Intercompany Media Engine can be installed and licensed in other virtual machine configurations, Cisco does not support these configurations.

Downloading Virtual Machine Templates (OVA Templates)

The configuration of a Cisco Intercompany Media Engine virtual machine must match a supported virtual machine template.

Perform the following procedure to obtain the virtual machine template for Cisco Intercompany Media Engine on Virtualized Servers:

Procedure

Step 1 Select this URL in your browser:

http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240

Step 2 If your browser prompts you to do so, type your Cisco.com **User Name:** and **Password:** in the text boxes, then click the **Log In** button.

Step 3 Choose **IP Telephony > Call Control > Cisco Intercompany Media Engine > Cisco Intercompany Media Engine Version 8.0.**

Step 4 Click the **Unified Communications Manager Virtual Machine Templates** link.

Step 5 In the Latest Releases folder, click the **1.0(1)** link.

Step 6 Click the **Download Now** button. Follow the prompts and provide the required information to download the software.

Step 7 When the Download Cart window displays, click the "Readme" link to view the virtual machine template's release information.

Related Documentation

- The *UCS RAID Controller SMI-S Reference Guide*, which describes Storage Management Initiative Specification (SMI-S) support in the Cisco UCS Servers, is available at the following URL:

  http://www.cisco.com/en/US/docs/unified_computing/ucs/sw/utilities/raid/reference/guide/ucs_raid_smis_reference.html

- The official list of supported servers for Cisco Intercompany Media Engine releases is available at the following URL:

  http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/prod_brochure0900aecd8062a4f9.html

- Technical specifications of Cisco Unified Communications virtualized servers are available at the following URL:

  http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/solution_overview_c22-597556.html

- TCP and UDP ports for vCenter Server, ESX hosts, and other network components' management access are listed in article 1012382 at the following URL:

  http://kb.vmware.com

- The Cisco Unified Communications Virtualization wiki, which discusses deployment of other Cisco Unified Communications products on virtualized servers, is available at the following URL:

  http://docwiki.cisco.com/wiki/Unified_Communications_Virtualization

Service Updates

After you install or upgrade to this release of Cisco Intercompany Media Engine, check to see if Cisco has released critical patches or Service Updates. Service Updates, or SUs, contain fixes that were unavailable at the time of the original release, and often include security fixes, firmware updates, or software fixes that could improve operation.

To check for updates, from www.Cisco.com, select **Support > Download Software** . Navigate to the "Voice and Unified Communications" section and select **IP Telephony > Call Control > Cisco Unified Communications Manager (CallManager) >** *the appropriate version of Cisco Intercompany Media Engine for your deployment*.

For continued notification of updates for your Cisco products, subscribe to the Cisco Notification Service at:

http://www.cisco.com/cisco/support/notifications.html

Related Documentation

You can view documentation that supports this release of Cisco Intercompany Media Engine at http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html

Limitations and Restrictions

A list of compatible software releases represents a major deliverable of Cisco Intercompany Media Engine System testing. The recommendations, which are not exclusive, represent an addition to interoperability recommendations for each individual voice application or voice infrastructure product.

Important Notes

The following section contains important information that applies to Cisco Intercompany Media Engine Release 8.6(2).

- Cisco Intercompany Media Engine Limitations and Interactions, page 36
- Validation Parameters, page 37
- CSCti60604 Several syntax and command changes needed in IME ASA setup guide, page 37
- Set the VAP Interface Between the Cisco IME Servers and the Associated Cisco Unified CMs to Encrypted, page 39
- NTP Server Configuration, page 39
- Customer Information, page 39

Cisco Intercompany Media Engine Limitations and Interactions

This section describes the limitations for the Cisco Intercompany Media Engine (Cisco IME) and the interactions with other features.

Limitations

- Cisco IME learned routes do not get generated when a user makes a Mobile Voice Access call from a remote destination to another enterprise.

- When endpoints with Cisco IME-enrolled DIDs are remotely located with VPN connectivity into the enterprise, latency and jitter characteristics for calls with these endpoints will be amplified and could result in the Cisco IME-enabled ASAs triggering more frequent fallbacks to the PSTN. If fallbacks occur too frequently for a specific endpoint, it might be necessary either to configure these devices with a device pool that has a fallback profile with no fallback enabled, to lower the fallback sensitivity levels, or to remove the enrolled DID from Cisco IME.

- When a Cisco IME call gets placed and a loss of Internet connectivity between enterprises occurs, the originating Cisco Unified Communications Manager initiates a call over the PSTN. The initial Invite from the originating Cisco Unified Communications Manager causes the called phone in the

terminating enterprise to ring. When the PSTN call reaches the phone in the terminating cluster, a second call occurs on the called phone. If the first call still exists on the phone, the user called party sees two calls on the phone—the actual call and a ghost call.

Interactions (Number-to-Remote-Destination Mapping)

If the Remote Destination exists as a learned pattern in the Cisco IME network, calls that are targeted for Remote Destination get rerouted over Cisco IME.

Validation Parameters

The Cisco IME server relies on validation parameters to establish the security (number of calls required to learn a route) for call validation. By default, the system uses "medium security" values, and these values are designed to provide a sufficient level of security for most Cisco IME deployments. These "medium security" values will require multiple calls to numbers enrolled at a remote Cisco IME server before any routes can be learned to Cisco Unified Communications Manager servers attached to that Cisco IME server. It may take 2 hours or more before a route is learned even if there is a sufficient call volume to numbers enrolled at a remote Cisco IME server. During system installation and configuration, you may wish to see a validation happen quickly. This can be done by lowering the validation parameter settings. It is very important to note: if you set these parameters low for testing, be sure to set them back to their default settings as soon as installation/testing is complete. This will insure good security for normal system operation.

To set the values to minimum security levels, use the ime validator minsecurity CLI command. To reset the values to default security levels, use the ime validator defaultsecurity CLI command.

CSCti60604 Several syntax and command changes needed in IME ASA setup guide

The following procedures have been corrected for Caveat CSCti60604:

Configuring NAT for Cisco Intercompany Media Engine Proxy

To configure auto NAT rules for the Cisco UCM server, complete the following steps:

Step 1 Run the following command to set up a network object for the real address of Cisco UCM that you want to translate: **hostname(config)# object network name**

```
Example: hostname(config)# object network ucm_real_1
```

Step 2 Run the following command to specify the real IP address of the Cisco UCM host for the network object: **hostname(config-network-object)# host ip_address**

```
Example: hostname(config-network-object)# host 192.168.10.30
```

Step 3 (Optional) Run the following command to provide a description of the network object: **hostname(config-network-object)# description string**

```
Example: hostname(config-network-object)# description "Cisco UCM #1 Real IP Address"
```

Step 4 Repeat steps 1 through 3 for any other Cisco UCM nodes that you want to translate. **hostname(config-network-object)# host ip_address**

```
Example: object ucm_real_2 will contain host 192.160.10.31
```

Step 5 Run the following command to set up a network object for the outside (translated) addresses of Cisco UCMs:
hostname(config)# object network name

```
Example: hostname(config) # object network ucm_map_1
```

Step 6 Run the following command to specify the translated IP address of the Cisco UCM host for the network object: **hostname(config-network-object)# host ip_address**

```
Example: hostname(config-network-object) # host 209.165.200.227
```

Step 7 (Optional) Run the following command to provide a description of the network object:**hostname(config-network-object)# description string**

```
Example: hostname(config-network-object)# description "Cisco UCM Translated IP Address"
```

Step 8 Repeat steps 5 through 7 for any other Cisco UCM nodes that you want to translate.

```
Example: object ucm_map_2 will contain host 209.165.200.228
```

Step 9 Run the following command to specify the address translation on the network objects created in this example:

```
Example:
hostname(config)# object network ucm_real_1
hostname(config-network-object)# nat (inside,outside) static ucm_map_1
hostname(config-network-object)# exit
hostname(config)# object network ucm_real_2
hostname(config-network-object)# nat (inside,outside) static ucm_map_2
```

(Optional) Configuring TLS within the Local Enterprise

The trustpoint needs to be enrolled before an identity certificate can be exported. The following step was added after step 2 of the procedure(Optional) Configuring TLS within the Local Enterprise:

Enroll the trustpoint before exporting the identity certificate. **(config mode) crypto ca enroll <trustpoint>**

The trustpoint in this case is local-asa.

Enabling SIP Inspection for the Cisco Intercompany Media Engine Proxy

In Step 9 and 12 of the procedure Enabling SIP Inspection for the Cisco Intercompany Media Engine Proxy, the "inspect" syntax is incorrect. The correct syntax is:

inspect sip [sip_map] uc-ime <uc_ime_map> tls-proxy <proxy_name>

Set the VAP Interface Between the Cisco IME Servers and the Associated Cisco Unified CMs to Encrypted

Cisco recommends that you set the VAP interface between the Cisco IME servers and the associated Cisco Unified Communications Manager servers to encrypted.

Check to see if the authentication mode for all vapservers is already set to "Encrypted" by executing the **show ime vapserver all** command from the Cisco IME server CLI.

If they are not set to encrypted, refer to the *Cisco Intercompany Media Engine Installation and Configuration Guide* for instructions.

> **Note**   To set encryption, you will have to change the configuration setting on the Cisco Unified Communications Manager, set the vapserver authentication mode on the Cisco IME server, and install certificates.

When adding a new vapserver using the add ime vapserver CLI command, you get prompted for the parameters, including the encryption mode.

NTP Server Configuration

The Cisco IME server requires a properly functioning NTP server configuration.

To verify NTP operation, execute the **utils ntp status** CLI command and insure that the Cisco IME server is connected to the appropriate NTP server and that the UTC and local times are correct.

Customer Information

The Cisco IME server stores contact information for your location which allows Cisco IME administration to contact you if the server is not configured properly (if, for example, it rejects connections from other servers).

To display the customer information settings, execute the **show ime customerinfo** command.

To change or add to the customer information settings, exectue the **set ime customerinfo** command. You will be prompted for contact information.

Caveats

The following sections contain information on how to obtain the latest resolved caveat information and descriptions of open caveats of severity levels 1, 2, and 3.

Caveats describe unexpected behavior on a Cisco Intercompany Media Engine server. Severity 1 caveats represent the most serious caveats, severity 2 caveats represent less serious caveats, and severity 3 caveats represent moderate caveats.

Resolved Caveats

You can find the latest resolved caveat information for Cisco Intercompany Media Engine Release 8.6(2) by using Bug Toolkit, which is an online tool that is available for customers to query defects according to their own needs.

Tip You need an account with Cisco.com (Cisco Connection Online) to use the Bug Toolkit to find open and resolved caveats of any severity for any release.

To access the Bug Toolkit, log on to http://tools.cisco.com/Support/BugToolKit.

UsingBug Toolkit

The system grades known problems (bugs) according to severity level. These release notes contain descriptions of the following bug levels:

- All severity level 1 or 2 bugs.
- Significant severity level 3 bugs.

You can search for problems by using the Cisco Software Bug Toolkit.

To access Bug Toolkit, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

To use the Software Bug Toolkit, follow these steps:

Procedure

Step 1 Access the Bug Toolkit, http://tools.cisco.com/Support/BugToolKit.

Step 2 Log in with your Cisco.com user ID and password.

Step 3 If you are looking for information about a specific problem, enter the bug ID number in the "Search for Bug ID" field, and click **Go**.

Tip Click **Help** on the Bug Toolkit page for information about how to search for bugs, create saved searches, create bug groups, and so on.

Open Caveats

Open Caveats for Cisco Intercompany Media Engine Release 8.6(2) as of September 20, 2011 describe possible unexpected behaviors in Cisco Intercompany Media Engine Release 8.6(2), which are sorted by component.

Tip For more information about an individual defect, click the associated Identifier in the "Open Caveats for Cisco Intercompany Media Engine Release 8.6(2) as of September 20, 2011" section on page 41 to access the online record for that defect, including workarounds.

Understanding the Fixed-in Version Field in the Online Defect Record

When you open the online record for a defect, you will see data in the "First Fixed-in Version" field. The information that displays in this field identifies the list of Cisco Intercompany Media Engine interim versions in which the defect was fixed. These interim versions then get integrated into Cisco Intercompany Media Engine releases.

Some more clearly defined versions include identification for Engineering Specials (ES) or Service Releases (SR); for example 03.3(04)ES29 and 04.0(02a)SR1. However, the version information that displays for the Cisco Intercompany Media Engine maintenance releases may not be as clearly identified.

The following example shows how you can decode the maintenance release interim version information. These examples show you the format of the interim version along with the corresponding Cisco Intercompany Media Engine release that includes that interim version. You can use this examples as guidance to better understand the presentation of information in these fields.

- 8.0(2.20000-x) = Cisco Intercompany Media Engine Release 8.0(2)

Because defect status continually changes, be aware that the "Open Caveats for Cisco Intercompany Media Engine Release 8.6(2) as of September 20, 2011" section on page 41 reflects a snapshot of the defects that were open at the time this report was compiled. For an updated view of open defects, access Bug Toolkit and follow the instructions as described in the "UsingBug Toolkit" section on page 40.

Tip Bug Toolkit requires that you have an account with Cisco.com (Cisco Connection Online). By using the Bug Toolkit, you can find caveats of any severity for any release. Bug Toolkit may also provide a more current listing than this document provides. To access the Bug Toolkit, log on to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Open Caveats for Cisco Intercompany Media Engine Release 8.6(2) as of September 20, 2011

The following information comprises unexpected behavior (as of September 20, 2011) that you may encounter in Release 8.6(2) of Cisco Intercompany Media Engine.

There are currently no caveats for Release 8.6(2).

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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