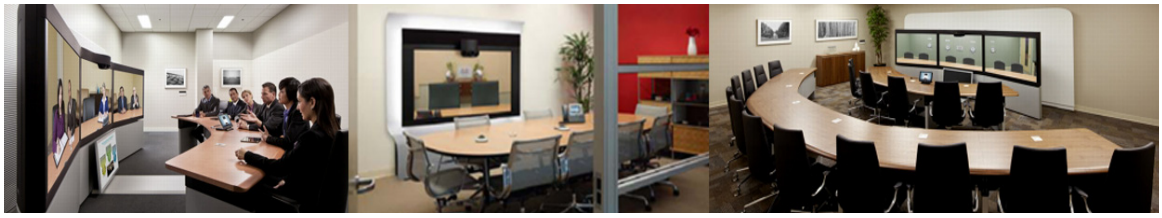

CHAPTER 8

Configuring UCS Server and VMware for Cisco TelePresence Manager

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Contents

Introduction

This chapter describes how to configure the UCS C-210 M2 server and VMware for Cisco TelePresence (CTS) Manager.

Note If you are going to install CTS-Manager on an MCS server, skip this chapter and go directly to Chapter 9, "Installing or Upgrading Cisco TelePresence Manager."

Installation Guidelines

The purpose of this section is to provide the information you need in order to install the CTS-Manager software.

The tasks required to install and configure CTS-Manager are provided in the following table.

Table 8-1 Installation Overview for CTS-Manager

Setup Procedures	Description	Location
Configuring the UCS Server and VMware for Cisco TelePresence Manager		Current chapter
Installing or Upgrading Cisco TelePresence Manager		Chapter 9, "Installing or Upgrading Cisco TelePresence Manager"
Initializing CTS-Manager	After installing the CTS-Manager software, the next process is to initialize Cisco TelePresence Manager to enable access to information sources such as Microsoft Exchange Server for meeting requests from Microsoft Outlook, Active Directory for accessing user and conference room (endpoint) information, and Cisco Unified Communications Manager for conference room (endpoint) availability and telephone support	Chapter 10, "Initializing Cisco TelePresence Manager"
Additional Installation Procedures for CTS-Manager	The administrator makes use of the Configure section to perform system configuration tasks such as synchronizing system databases, managing security, and reconfiguring system settings	Chapter 11, "Additional Installation Configurations for Cisco TelePresence Manager"
Configuring Cisco TelePresence WebEx OneTouch for CTS-Manager	Describes how to set up Cisco TelePresence WebEx OneTouch in CTS-Manager, which allows WebEx participants to join TelePresence meetings.	Chapter 12, "Configuring Cisco WebEx OneTouch for Cisco TelePresence Manager"
Next Step after Pre-Configuration		
Monitoring CTS-Manager	Monitoring and updating meeting schedules and monitoring the status of rooms (endpoints) and system services	Chapter 13, "Monitoring and Supporting Cisco TelePresence Manager"

Requirements

Before you begin, make sure you have the following items:

- Hostname and IP address for the VMware ESXi host (UCS server)
- Hostname and IP address for Cisco TelePresence Manager (Virtual machine)
- IP address of DNS server
- Subnet mask
- Default gateway
- Domain name
- IP address of NTP server
- Cisco UCS Server Configuration Utility CD
- VMware ESXi 4.0, 4.1 or 5.0/vSphere 5 Standard for 1 processor (Purchase from Cisco or VMware.)
  - When purchasing from Cisco, use the following SKU: VMW-VS5-STD-1A.
  - When downloading the VMware software, make sure to select ESXi 4.0, 4.1 or 5.0.
- OVF template file for CTS-Manager (Download from Cisco.com)
- PC running Microsoft Windows connected to the same network as the UCS server
- CTS-Manager 1.8 installation software

Note Only a single CTS-Manager can be installed on a UCS server at one time. Except for the required VMware software, no other software can be installed on the UCS. This includes Cisco TelePresence Multipoint Switch (CTMS) and Cisco TelePresence Recording Server (CTRS).

Firmware Recommendation and Upgrade

For the best results, Cisco recommends UCS firmware version 1.2.2d or later.

Checking the Firmware Version on the UCS Server

To check the firmware version on the UCS server:

Step 1 Set up Cisco Integrated Management Controller (CIMC) for your UCS Server.

For more information, refer to:
http://www.cisco.com/en/US/products/ps10493/products_configuration_example09186a0080b10d66.shtml

Step 2 In the CIMC Configuration Utility, configure the IP address and save the changes:

- NIC mode: dedicated
- NIC redundancy: none

Step 3 Open a browser and go to the CIMC IP address.

Step 4 Log in to the CIMC

By default, the username is **admin** and the password is **password**.

Step 5 Go to **Admin > Firmware Management**.

The firmware version is displayed here. It is also displayed on the login page.

Step 6 If you want to upgrade the firmware, go to the next section: Upgrading the Firmware on the UCS Server, page 8-4

Upgrading the Firmware on the UCS Server

To upgrade the firmware on the UCS server:

Step 1 Download the firmware from Cisco:

a. Go to: http://cisco.com/support
b. Click the **Downloads** tab
c. Click in the Find field, enter **UCS** and click **Find**.

   The Select a Product page appears.
d. Click the link for the **Cisco UCS C-210 M2 Rack-Mount Server Software**.

   The Download Software page appears.
e. Click the link for **Unified Computing System (UCS) Server Firmware**.

   The available firmware releases are displayed.
f. Select a firmware release and click **Download Now**.
g. Log in to Cisco.com (if required).
h. In the Download Cart page, click **Proceed With Download**.

   The End User License Agreement page appears.
i. Click **Agree**.
j. Select one of the available download options.
k. Click the **Download** link.

Step 2 Log in to the CIMC (if not already logged in).

Step 3 Go to **Admin > Firmware Management**

Step 4 Click **Install CIMC Firmware through Browser Client**.

The Install Firmware window appears.

Step 5 Click **Browse**, select the firmware you downloaded and click **Install Firmware**.

Step 6 When a message appears indicating the upgrade is completed successfully, click **Activate CIMC Firmware**.

Step 7 The upgrade takes about 20 minutes.

Step 8 When the upgrade is complete, reboot the UCS server.

Configuring RAID on the UCS Server

This section describes the process for configuring RAID on the UCS server. RAID must be configured before installing VMware, setting up the virtual machine and installing CTS-Manager.

Note If the UCS server was purchased from the TelePresence Technology Group (TTG) or Voice Technology Group (VTG) at Cisco, the RAID will be preconfigured. In this case, skip this section and start in the Installing VMware on the UCS Server section.

To configure RAID on the UCS Server:

Step 1 Insert the Cisco UCS Server Configuration Utility CD and reboot UCS server.

Cisco UCS Server Configuration Utility version 1.0.0 screen appears.

Step 2 Wait for application to load and the License Agreement screen to appear.

Step 3 Click **I Accept** and click **Next**.

The My Server screen appears.

Step 4 Click RAID Configuration

The Choose RAID Controllers screen appears.

Step 5 Click **LSI MegaRAID SAS 9261-8i (External)** and click **Next**.

Step 6 The RAID Configuration screen appears.

Step 7 Click **Create custom or multiple RAID Arrays (advanced)** and click **Next**.

The Select Drives for Logical Drive screen appears.

Step 8 Select Disks **0** and **1** and click **Next**.

The Select Hotspare Drives screen appears.

Step 9 Click **Next**.

The Define Array Attributes screen appears.

Step 10 Set the fields the following way:

- RAID Level: **1**
- Stripe size: **64k** (only option)
- Read policy: **Read Ahead** (other options: No Read Ahead, Adaptive Read Ahead)
- Write Policy: **Write Through** (other option: Write Back)
- Cache Policy: **Direct IO** (other option: Cache IO)
- Size(MB): **139236**

Step 11 Click **Next**.

The Summary screen appears displaying RAID array information.

Step 12 Click **Create Array**.

The Array Definition Complete screen appears with the message “Virtual Drive Created Successfully”.

Step 13 Click **Create Another Array**.

The Choose RAID Controllers screen appears.

Step 14 Click **LSI MegaRAID SAS 9261-8i (External)** and click **Next**.

Step 15 Click **Create custom or multiple RAID Arrays (advanced)** and click **Next**.

The Select Drives for Logical Drive screen appears.

Step 16 Select disks **2** through **9** and click **Next**.

The Define Array Attributes screen appears.

Step 17 Set the fields the following way:

- RAID Level: **5**
- Stripe size: **64k** (only option)
- Read policy: **Read Ahead** (other options: No Read Ahead, Adaptive Read Ahead)
- Write Policy: **Write Through** (other option: Write Back)
- Cache Policy: **Direct IO** (other option: Cache IO)
- Size(MB): **974652**

Step 18 Click **Next**.

The Summary screen appears displaying RAID array information.

Step 19 Click **Create Array**.

The Array Definition Complete screen appears with the message “Virtual Drive Created Successfully.”

Step 20 Click **Finish**.

The My Server screen appears.

Step 21 Eject the CD.

Installing VMware on the UCS Server

This section describes how to install VMware on the UCS C-210 M2 server. VMware ESXi 4.0, 4.1 and 5.0 are supported for this version of CTS-Manager on the UCS C-210 M2 server.

To install VMware on the UCS server:

Step 1 Insert the VMware Installer CD.

Step 2 Reboot the UCS server by doing either of the following:

- If RAID on your UCS server was preconfigured by Cisco: Reboot the UCS server.
- If you configured RAID on your UCS (following the steps in the previous section): In the My Server screen, click **Exit** and then click **OK** to confirm and reboot the UCS server.

The VMware screen appears.

Step 3 Wait for the bootup process to complete. Do not press any keys.

The bootup is complete when the VMware ESXi Installer screen appears with a welcome message.

Step 4 Press **Enter** to install VMware.

The End User License Agreement (EULA) screen appears.

Step 5 Press **F11** to accept the agreement and continue.

The Select a Disk screen appears displaying the installed disks and their size.

Step 6 Use the arrow keys to select the disk for the RAID 1 array and press **Enter**.

Note The RAID 1 array is the smaller of the two RAID arrays.

The Confirm Install screen appears.

Step 7 Press **F11** to start the installation.

The installation begins.

The installation is finished when the Installation Complete screen appears.

Step 8 Eject the VMware CD.

Step 9 Press **Enter** to reboot the UCS server.

When bootup is complete, the VMware ESXi screen appears with the message:

“Download tools to manage this host from:” followed by a URL.

Step 10 Press **F2** to customize the system.

The System Customization screen appears.

Step 11 Select Configure Password (selected by default) and press **Enter**.

The Configure Password screen appears.

Step 12 In the New Password field, enter a password and press **Tab**.

Step 13 In the Confirm Password field, re-enter that password and press **Enter**.

Step 14 Select **Configure Management Network** and press **Enter**.

The Configure Management Network screen appears.

Step 15 Select Network Adaptors (selected by default) and press **Enter**.

The Network Adaptors screen appears.

Step 16 Select the adaptor which is connected and press **Enter.**

Step 17 Select IP configuration and press **Enter**.

The IP Configuration screen appears.

Step 18 Select **Set Static IP address and network configuration**.

Step 19 Enter IP address, Subnet Mask and Default Gateway and press **Enter**.

Step 20 Select **DNS Configuration** and press **Enter**.

Step 21 The DNS Configuration screen appears.

Step 22 Select **Use the following DNS server addresses and hostname**.

Step 23 Enter Primary DNS Server and Hostname (including domain name) and press **Enter**.

Step 24 In the Configure Management Network window, press **Esc** to return to the System Customization window.

Step 25 Select Test Management Network and press **Enter**.

The Test Management Network screen appears.

Step 26 Press **Enter**.

The VMware software will attempt to ping your default gateway, DNS server and hostname. The test should display “OK” for each ping attempt.

Step 27 Press **Enter**.

The System Customization window appears.

Step 28 Log out of the VMware ESXi Installer by pressing **Esc**.

The VMware ESXi screen appears.

Step 29 Note the IP address displayed on this screen. You will use this IP address to download the VMware vSphere client to your PC to create your virtual machine in the next section.

Installing the VMware Client and Setting Up the Datastore

This section describes how to install the VMware vSphere Client and create the datastore for the CTS-Manager virtual machine. To complete this section, you must use a PC that is connected to the same network as your UCS server.

To install the VMware client and set up the datastore:

Step 1 From your PC, open a web browser and go to the IP address displayed on the VMware ESXi screen at the end of the previous section.

The VMware ESXi Welcome page appears.

Step 2 Click Download vSphere Client and follow the on-screen instructions to install the vSphere Client on your PC.

Note During the installation, you have the option of installing the vSphere Host Update Utility. You can install this, but it is not required.

Step 3 Open the VMware vSphere Client.

Step 4 Log in to the ESXi host on the UCS server using the following information:

- IP address / name: IP address of UCS server (used in step 1)
- User name: **root**
- Password: VMware password created during installation on the UCS server

A Security Warning window appears, indicating that an untrusted SSL certificate is installed.

Step 5 Click the checkbox for "Install this certificate and do not display any security warnings" and click **Ignore**.

A VMware Evaluation Notice window appears, indicating that you must upgrade your ESX Host license. The initial evaluation license expires 60 days after installation.

Step 6 Click **OK** to close the VMware Evaluation Notice window.

The vSphere Client window opens with the UCS server (identified by IP address) displayed in the left-hand side of the window.

The next step is to align the datastore on which you will set up the CTS-Manager virtual machine, which improves disk performance and prevents disk blocks from being fragmented.

Step 7 Click the **Summary** tab.

Step 8 In the Datastore area, right-click the datastore with the largest capacity and select **Delete**.

A confirmation window appears.

Step 9 Click **Yes** to confirm you want to delete the datastore.

In the Recent Tasks area at the bottom of the window, the Remove Datastore task appears.

Step 10 Wait for the task to display a status of "Completed."

Step 11 Click the **Configuration** tab.

Step 12 In the Hardware area on the left, click **Storage**.

In the Datastores area, the remaining datastore is displayed.

Step 13 In the upper right above the Datastores area, click **Add Storage…**.

The Add Storage window opens and the Select Storage Type screen is displayed.

Step 14 Select **Disk/LUN** (selected by default) and click **Next**.

The Select Disk/LUN screen appears.

Step 15 Click the **Local LSI Disk** and click **Next**.

The Current Disk Layout screen appears confirming the disk partition you will create.

Step 16 Click **Next**.

The Properties screen appears.

Step 17 Enter a name for your datastore and click **Next**.

The Disk/LUN Formatting screen appears.

Step 18 From the Maximum file size drop-down list, choose **256 GB, Block size: 1 MB** and make sure **Maximize Capacity** is checked.

Step 19 Click **Next**.

The Ready to Complete screen appears.

Step 20 Click **Finish**.

In the Recent Tasks area at the bottom of the window, the Create VMFS Datastore task appears.

Step 21 Wait for the task to display a status of "Completed."

After completion, you have two datastores. The datastore with the smaller capacity is the RAID 1 configuration, where the VMware software is installed, and the datastore with the larger capacity is the RAID 5 configuration, where you will deploy the virtual machine and install CTS-Manager.

Disabling LRO

If you are running VMware ESXi 4.0, 4.1 or 5.0 on the UCS server, you may experience slow TCP performance of the virtual machine. You can resolve this by disabling Large Receive Offload (LRO) on the ESXi host.

To disable LRO:

Step 1 Log into the ESXi host on the UCS server with the VMware vSphere Client (if not already logged in).

Step 2 Click the UCS server icon in the left-hand side of the window.

Step 3 Click the **Configuration** tab.

Step 4 In the Software section, click **Advanced Settings**.

Step 5 Select **Net** and scroll down slightly more than half way.

Step 6 Set the following parameters from 1 to 0:

- Net.VmxnetSwLROSL
- Net.Vmxnet3SwLRO
- Net.Vmxnet3HwLRO
- Net.Vmxnet2SwLRO
- Net.Vmxnet2HwLRO

Step 7 Right-click the UCS server and select **Reboot**.

Your virtual machine should now have normal TCP networking performance.

Creating the Virtual Machine

This section describes how to deploy the Open Virtualization Format (OVF) template for CTS-Manager to create the virtual machine on which to install the CTS-Manager software. OVF is a standard for packaging and distributing virtual machines. The OVF template streamlines the process of setting provided by Cisco contains all the virtual machine settings required for CTS-Manager.

To create the virtual machine:

Step 1 Download the OVF template from Cisco:

a. Go to: http://cisco.com/support

b. Click the **Downloads** tab

c. Click in the Find field, enter **Cisco TelePresence Manager** and click **Find**.

The Select a Product page appears.

d. Click the link for the **Cisco TelePresence Manager Release 1.8**.

The Download Software page appears.

e. Find **CTSMAN_1.8_v1.0.ova** and click **Download Now**.

f. Log in to Cisco.com (if required).

g. In the Download Cart page, click **Proceed With Download**.

The End User License Agreement page appears.

h. Click **Agree**.

i. Select one of the available download options.

j. Click the **Download** link.

Step 2 Log into the ESXi host on the UCS server with VMware vSphere Client (if not already logged in).

Step 3 Select **File > Deploy OVF Template**.

The Deploy OVF Template window opens.

Step 4 Select **Deploy from File**.

Step 5 Click **Browse**

Step 6 Select the OVF template that you downloaded and click **Open**.

Step 7 Click **Next**.

The OVF Template Details page appears.

Step 8 Click **Next**.

Step 9 Enter a name for your virtual machine and click **Next**.

The Datastore page appears.

Step 10 Click the datastore (with the largest capacity) that you created in the Installing the VMware Client and Setting Up the Datastore section and click **Next**.

The Ready to Complete page appears.

Step 11 Click **Finish**.

Step 12 When the OVF template is deployed successfully, the Deployment Completed Successfully window appears.

Step 13 Click **Close**.

Installing CTS-Manager

This section describes how to install CTS-Manager on the virtual machine you created and configured.

To install CTS-Manager:

Step 1 Insert the installer DVD into your PC (unless the you downloaded the software from Cisco.com).

Note If a CDROM window appears asking what you want Windows to do, click **Cancel**.

Step 2 Log into the ESXi host on the UCS server with VMware vSphere Client (if not already logged in).

Step 3 In the left-hand side of the window, click the virtual machine you created for CTS-Manager and click the **Console** tab.

Step 4 Right-click the CTS-Manager virtual machine and choose **Power > Power On**.

Step 5 On the toolbar, click the button with the CD and Wrench icon and wait for the menu to pop up.

Step 6 Choose **CD/DVD Drive 1 > Connect to D:** (or the letter associated with the drive in which you inserted the DVD).

Note If you downloaded the CTS-Manager software to your PC from Cisco.com, select **Connect to ISO image on local disk. . .**, select the CTS-Manager .iso file and click **Open**.

Step 7 Right-click the CTS-Manager virtual machine and select **Guest > Send Ctrl + Alt + del**.

The CTS-Manager virtual machine reboots.

After bootup, the installer startup process begins in the console window.

Step 8 Click inside the console window to make it active, so you can use your keyboard during the installation process.

Note After clicking in the console window, you can no longer use your mouse. This is normal behavior, because you cannot use the mouse in the console. If at any time you need to regain control of your mouse, press **Ctrl+Alt**. To make the console window active again, click in the console window.

Step 9 Follow the rest of the installation as detailed in Installing Cisco TelePresence Manager from DVD, page 9-3 of Chapter 9, “Installing or Upgrading Cisco TelePresence Manager.”

Step 10 After completing the installation, press **Ctrl+Alt** to exit the console window and regain control of your mouse.

Step 11 Close the VMware vSphere Client by selecting **File > Exit**.

Upgrading VMware Tools

This section describes how to upgrade the VMware tools which is required after installing CTS-Manager.

To upgrade VMware tools:

Step 1 Log into the ESXi host on the UCS server with VMware vSphere Client.

Step 2 Make sure the virtual machine for CTS-Manager is powered on.

Step 3 Right-click the CTS-Manager virtual machine, and choose **Guest > Install/Upgrade VMware Tools**.

Step 4 In the popup window that appears, choose **Automatic Tools Upgrade** and click **OK**.

Step 5 In the Recent Tasks area at the bottom of the vSphere Client window, wait for the VMware Tools Installer Mount to display a status of Completed.

Installing the VMware License Key

This section describes how to install the VMware software license key. After installation, the VMware software works for 60 days. Before the 60 days have elapsed, you must install a license key to continue using the software.

When you purchase ESXi 4.1/vSphere 5, you receive a licensing confirmation email with your license key. You can also retrieve your license key from the vSphere License portal at: http://downloads.vmware.com/licensing/license.portal

To install the VMware license key:

Step 1 Log in to the VMware vSphere Client.

The VMware vSphere Client opens and a VMware Evaluation Notice window appears.

Step 2 Click **OK** to close the VMware Evaluation Notice window.

Step 3 Click the VMware host icon at the top of the left-hand column of the vSphere Client window.

Step 4 Click the **Configuration** tab.

Step 5 In the Software area in the middle-left side of the vSphere Client window, click **Licensed Features**.

The Licensed Features information for the ESX Server License Type appears.

Step 6 In the upper-right part of the window, click **Edit**.

The Assign License window appears.

Step 7 Click **Assign a new license key to this host** and click **Enter Key**.

Step 8 The Add License Key window appears.

Step 9 Enter the license key you received from VMware and click **OK**.

Step 10 Click **OK** again to close the Assign License window.

Setting Automatic Startup for CTS-Manager

You can configure your CTS-Manager virtual machine to automatically start when the UCS server is started. The advantage of enabling Automatic Startup is that in the event of a power outage, you only need to start up the UCS server to get CTS-Manager up and running again.

To set Automatic Startup for CTS-Manager:

Step 1 Log in to the VMware vSphere Client.

Step 2 Click the VMware host in the left side of the vSphere Client window to select it.

Step 3 Click the **Configuration** tab.

Step 4 In the Software area in the middle-left side of the vSphere Client window, click **Virtual Machine Startup/Shutdown**.

The Virtual Machine Startup and Shutdown information appears.

Step 5 In the upper-right part of the window, click **Properties**.

The Virtual Machine Startup and Shutdown window appears.

Step 6 Check **Allow virtual machines to start and stop automatically with the system**.

Step 7 Select the CTS-Manager virtual machine in the table and move it up to the Automatic Startup section.

Step 8 Click **OK**.