Installation

Power On and Initial Setup

Before You Begin

Ensure that the BE6000 server has been rack mounted, connected to a power supply, connected to the data network, and a monitor and keyboard is connected to the server, as described in the *Quick Start Guide*.

Procedure

Step 1 Verify that the monitor and keyboard are connected to the console port as shown in the figure below.

Step 2 Verify that power is connected and the LED status is as shown in the figure below.

The power button LED (2) is orange, and the five smaller LEDs between the console port (1) and power button are green. If not, check the electrical and network connections.

Figure 1: Power and LED Status

Electrical Power is connected.
But server is not powered on yet.
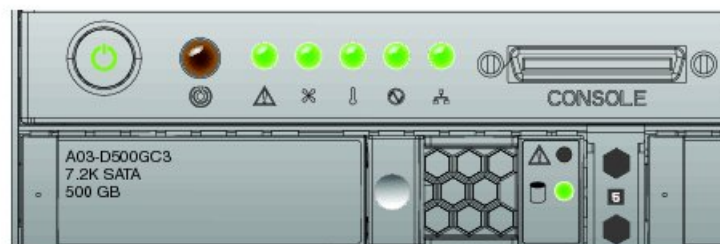
LEDs status after Power-On

Step 3 Power on the monitor.

Step 4 Push the power button (Figure 1) and verify that the power button LED the disk LED disk drive change to green.

Step 5 Watch the boot process on the monitor.

Step 6 (Optional) Press **F8** to enter the CIMC configuration dialog to configure the management interface IP address and then exit.

Note The Cisco Integrated Management Controller (CIMC) is the management interface for the C-Series Servers. CIMC runs within the server, allowing remote administration, configuration, and monitoring of the server via web or SSH command line access.

Step 7   (Optional) If using CIMC for console access, browse to the IP address that you configured, and use the default username **admin** and password **password**. The CIMC screen (figure 2) offers various tasks, such as Locater LED and KVM Console.

Figure 2: Cisco Integrated Management Controller
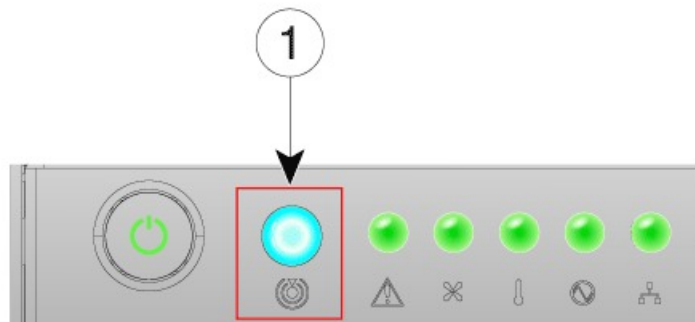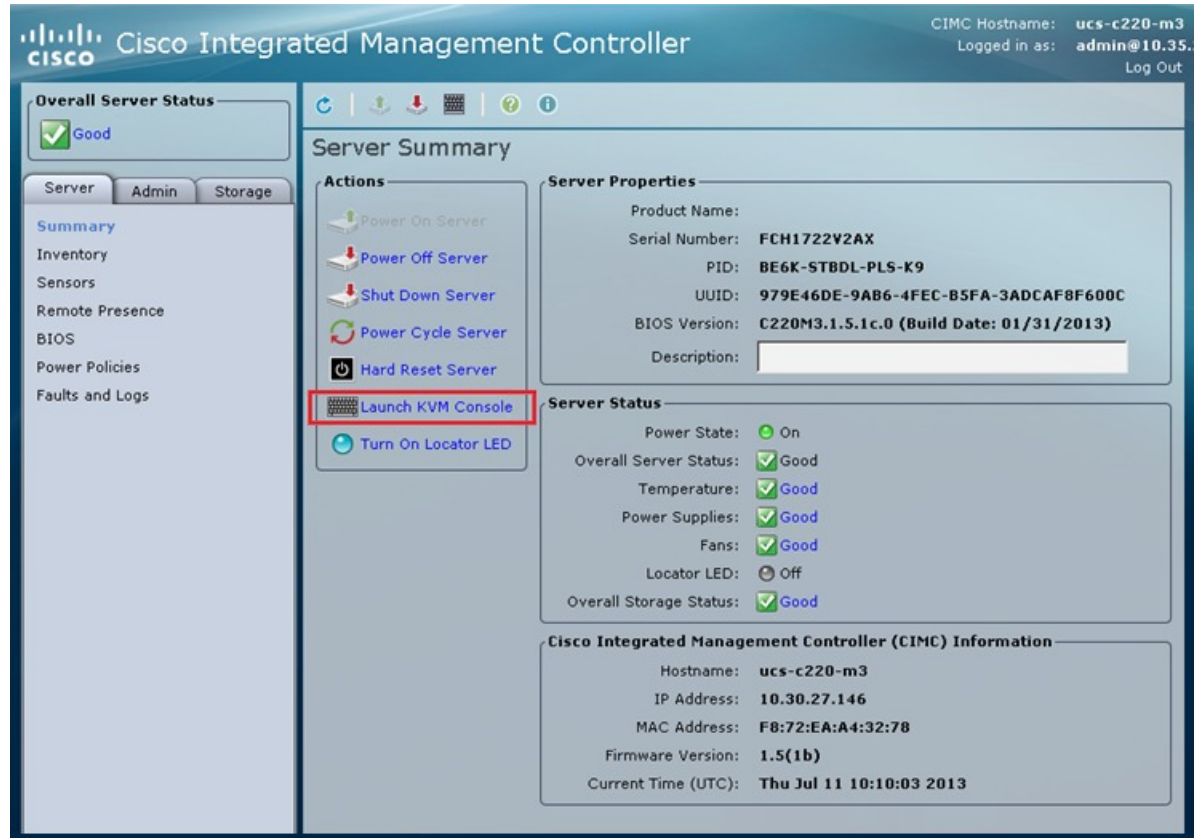
Step 8   When the server reboots, the hypervisor Direct Console User Interface is displayed on the monitor.

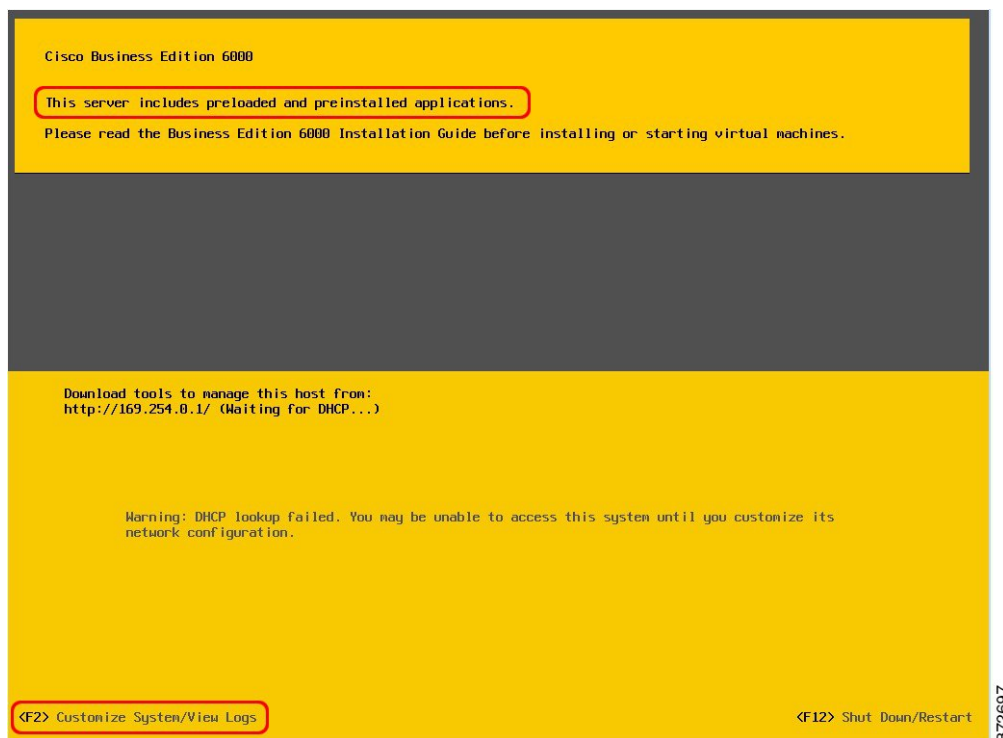# Customize Virtualization Hypervisor for Remote Access

Follow this procedure to customize the Virtualization Hypervisor (VMware vSphere Hypervisor) to enable remote access from your PC using the vSphere client.

Procedure

Step 1 When the hypervisor boots, the ESXi Direct Console User Interface displays on the monitor as shown in the following figure.

Note   For release 10.5(1) and later, you are notified about preinstalled applications.

Figure 3: Console Screen After ESXi Loads

```
Cisco Business Edition 6000

This server includes preloaded and preinstalled applications.

Please read the Business Edition 6000 Installation Guide before installing or starting virtual machines.




            Download tools to manage this host from:
            http://169.254.0.1/ (Waiting for DHCP...)



                  Warning: DHCP lookup failed. You may be unable to access this system until you customize its
                  network configuration.




<F2> Customize System/View Logs                                          <F12> Shut Down/Restart     372697
```

Step 2 Press **F2** to enter the System Customization menu as shown in the following figure.

The default username is `root` and password is `password`.

Figure 4: ESXi System Customization Menu

```
┌─────────────────────────────────────────────────────────────────────────────────┐
│ System Customization                    │ Configure Password                       │
│                                          │                                          │
│ ┌─────────────────────────────┐         │ Hostname:                                │
│ │ Configure Password          │         │ localhost                                │
│ └─────────────────────────────┘         │                                          │
│  Configure Lockdown Mode                │ IP Address:                              │
│                                          │ 169.254.0.1                             │
│  Configure Management Network           │                                          │
│  Restart Management Network             │ To view or modify this host's management │
│  Test Management Network                │ network settings in detail, press <Enter>.│
│  Restore Network Settings               │                                          │
│  Restore Standard Switch                │                                          │
│                                          │                                          │
│  Configure Keyboard                     │                                          │
│  Troubleshooting Options                │                                          │
│                                          │                                          │
│  View System Logs                       │                                          │
│                                          │                                          │
│  View Support Information               │                                          │
│                                          │                                          │
│  Reset System Configuration             │                                          │
│                                          │                                          │
│                                          │ <Enter> More              <Esc> Log Out │
│        VMware ESXi 5.0.0 (VMKernel Release Build 623860)                          │
└─────────────────────────────────────────────────────────────────────────────────┘
```

Step 3 (Recommended) Choose **Configure Password** to change the password.

Step 4 To assign a static IP address, enter the Configure Management Network menu, and follow the instructions on screen to change "IP Configuration" as shown in the figure below.

Figure 5: Assign Static IP Address to ESXi Host
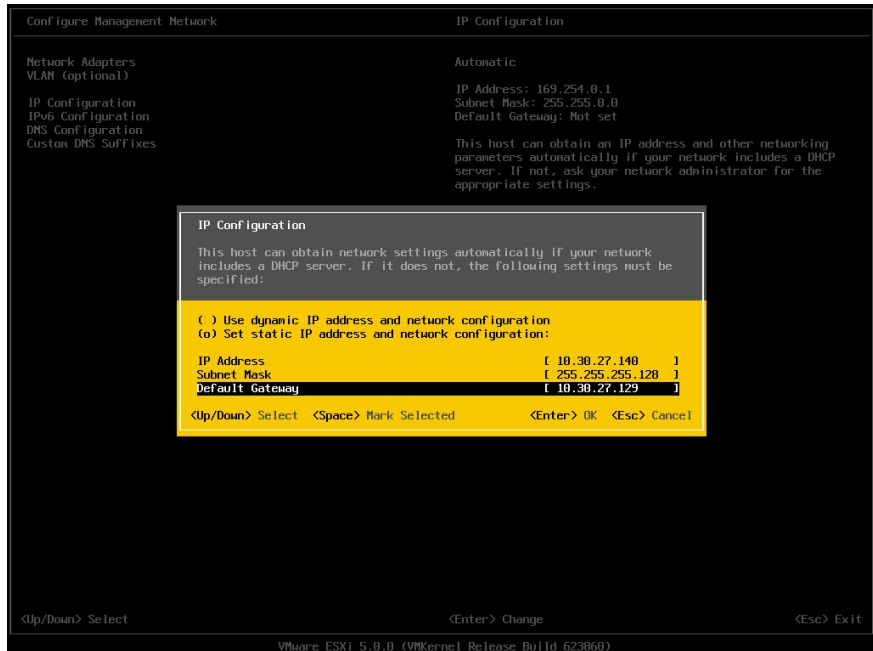
Step 5 Connect your PC to the data network, and browse to the new hypervisor IP address. Verify the web page as shown in the figure below.

Figure 6: Hypervisor Welcome Page
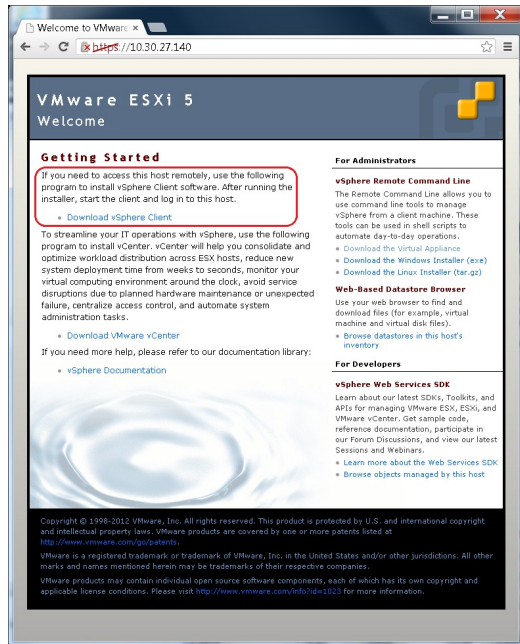
Step 6 If not already installed on your PC, download and install the vSphere client.
Internet access is required to download the vSphere client.

Access and Configure Virtualization Hypervisor

Some Business Edition applications require the services of a valid NTP server. Follow these steps to access the ESXi host, configure NTP, configure fault tolerance for network interface cards (NICs) using the NIC teaming feature, view preinstalled applications, and browse the datastore to verify the preloaded collaboration application software.

Procedure

Step 1   Launch the vSphere client application and type the IP address of the Virtualization Hypervisor.

Figure 7: Access Virtualization Hypervisor Using vSphere Client
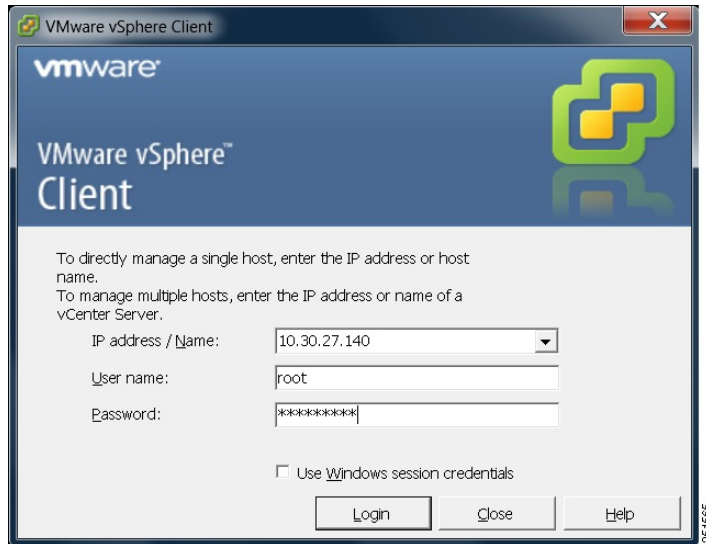
Step 2   Use the login credentials that you previously configured.

Step 3   Optional. The BE6000 Virtualization Hypervisor license is installed during manufacture and is therefore ready for use on delivery. If you need to reapply the license, follow the steps below.

a) A Master Serial Number is shipped with each server. The Master Serial Number is the license activation key.

   Note   The Master Serial Number is pre-activated. You need not register it at vmware.com.

   Note   This serial number is hardcoded for a two-CPU system. You need not combine it at vmware.com. You cannot change the serial number to single-CPU or greater than two-CPU.

b) Navigate to **Configuration** > **Software** > **Licensed Features**, and click **Edit.**

c) Select **Assign a new license key to this host**.

d) Click **Enter Key...**.

e) Type in the Master serial number.

f) Click **OK** to close configuration dialogs and apply the license.

Figure 8: Configuring and Managing ESXi Host and Virtual Machine

   Note   Notice the preinstalled applications listed in the inventory pane of the following figure.
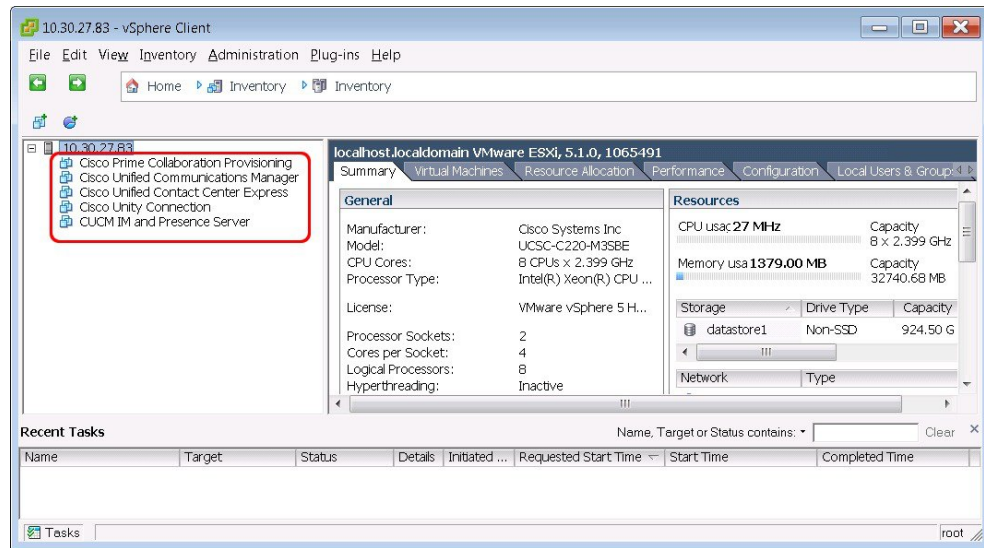
Step 4 Add the NTP server:

a) Navigate to **Configuration** > **Software** > **Time Configuration**.

b) Click **Properties** to launch the **Time Configuration** screen.

c) Update the Time Click **Options...** .

d) Select NTP Settings.

e) Click **Add** and type the IP address of NTP server.

f) Click **OK**, and select General, select Start and stop with host, and click Start button, followed by click OK to close the configuration screens.

Step 5 Configure fault tolerance by using the NIC teaming feature in VMware:

a) Navigate to **Configuration** > **Hardware** > **Networking**.

b) Click **Properties** for "Standard Switch: vSwitch0," as shown in the figure below.

c) In the configuration screen **vSwitch0 Properties,** select the tab **Network Adapters**.

d) Click **Add**… to add the NIC that is connected to data network.

e) Follow the interactive configuration dialogs and close the configuration screens until you see two or more NICs are added to vSwitch0, as shown in the figure below.

Note   By default, only one NIC is enabled for the hypervisor and identified as vmnic0.

Note   If connecting teamed NICs to a Cisco switch channel-group, ensure that the NIC teaming load balancing policy is set to **Route based on IP hash**. For more information about this policy and other aspects of hypervisor networking for Cisco Collaboration applications, see *Deploying Expressway with Business Edition* at http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/BE6000/ InstallationGuide/10_01/Deploying_Expressway_with_Business_Edition.pdf

Figure 9: Fault Tolerance for Business Edition Network Connectivity
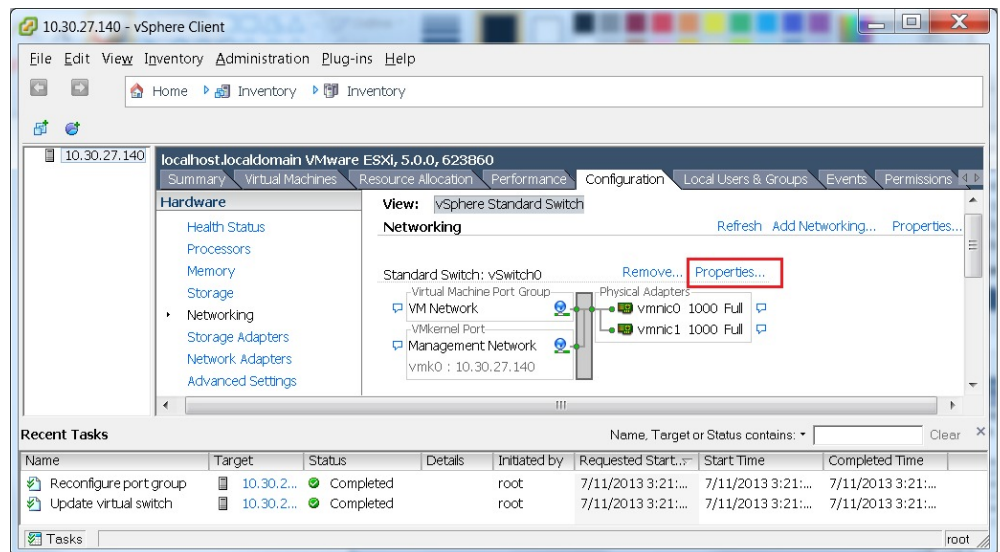
The hypervisor is now ready to host virtualized collaboration applications. Virtual machines for five of the most commonly used collaboration applications are predeployed on the hypervisor for you. Software for these and additional applications are also preloaded in the datastore for your convenience if you wish to install, or reinstall these.

Step 6   Browse the datastore:

a) Navigate to **Configuration** > **Hardware** > **Storage**.

b) Click **Datastore** to list the datastores in the Business Edition server.

c) Select a datastore, then right-click and select **Browse Datastore** as shown in the figure below. Preloaded software is stored in the `/OVA-ISO` directory.

Figure 10: Browse Datastore to View Preloaded Collaboration Virtual Machines and Preloaded Software
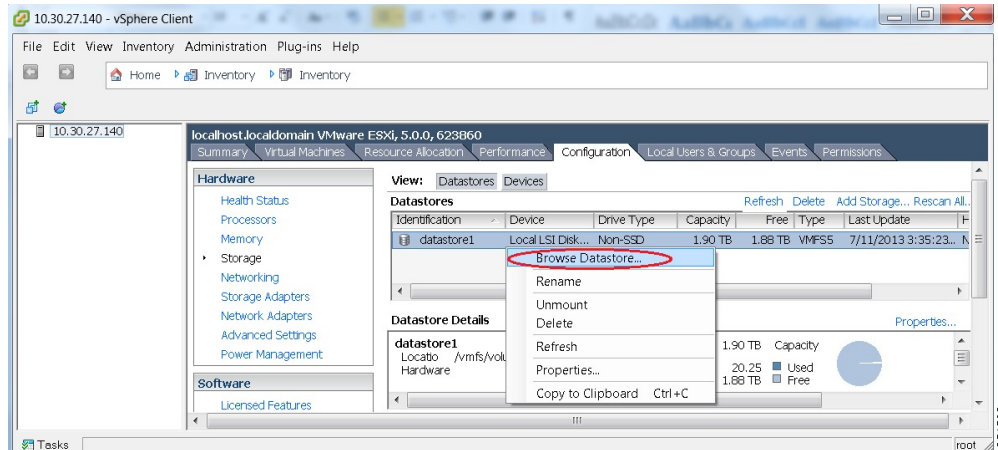
Step 7   (Optional) Cisco recommends that you archive the OVA-ISO directory locally. If a server fails, the replacement product will not include preloaded content.

What to Do Next

Install virtual machines.

Preloaded Files on Datastore

In addition to a number of predeplyed virtual machines, Cisco Business Edition servers are shipped with selected Collaboration application software that is preloaded on the datastore. Consider the following points for a basic understanding of the preloaded file types:

ISO

An ISO file is a DVD image containing application install files.

OVA

Open Virtualization Archive (OVA) is used to package and distribute the virtual machine.

Some OVA files may include a prepared disk that includes preinstalled software (for example, `cpc-provisioning-9.5.0-245-small.ova`).

Other OVA files do not include application software. In this case, you must deploy the OVA template and then install the software using the ISO file that is provided on datastore (for example, `cucm_9.1_vmv8_v1.7.ova` and associated ISO file `Bootable_UCSInstall_UCOS_9.1.2.10000-28.sgn.iso`).

![Note pencil icon]

Note   For details of files that ship with each server, see the relevant Release Note here: http://www.cisco.com/
c/en/us/support/unified-communications/business-edition-6000/products-release-notes-list.html.

Deploy New Virtual Machines

Follow this procedure to deploy virtual machines for applications that are listed in the preloaded files. For
preloaded files in the Export Restricted or Export Unrestricted software, see the relevant Release Note here:
http://www.cisco.com/c/en/us/support/unified-communications/business-edition-6000/
products-release-notes-list.html.

The OVA template file defines the virtual machine for specific applications.

Note the following:

• OVA templates are deployed in seconds, while a packaged OVA may take 10-15 minutes to deploy.

• The figure below shows the view of vSphere client after deployment of various collaboration applications
virtual machines. You can also see the time that is taken to deploy the last two virtual machines.

• The example in the figure below is for the High Density (H) server model, which can host four
collaboration applications plus Prime Collaboration Provisioning. The Medium Density (M) server
model of a Business Edition server can also host four collaboration applications plus Prime Collaboration
Provisioning.

Figure 11: Deployed Virtual Machines for Applications Viewed in VSphere Client

![Note pencil icon]

Note   In Release 10.5(1) and later, five applications are preinstalled. If you are deploying
virtual machines using any of these five applications, you can skip the following
procedure.

Procedure

Step 1 On the vSphere Client, navigate to **File** > **Deploy OVF Template**.
The Deploy OVF Template screen is launched.

Step 2 Browse and select the source OVA template file on your PC. For application and filename mapping, see the Release Note pertaining to Export Restricted software here: http://www.cisco.com/c/en/us/support/unified-communications/business-edition-6000/products-release-notes-list.html.

Step 3 Continue to click **Next** to accept license agreements and default values.

Step 4 Configure your deployment:

- For Cisco Unified Communications Manager, Cisco Unity Connection and IM and Presence Service, select 1000 Users.

- For Cisco Unified Contact Center Express, select 100 Agents.

- For Cisco Emergency Responder, select 12000 user node – C200 only from the drop-down menu.

Step 5 Specify a meaningful name for the VM.

What to Do Next

After deploying all required virtual machines, install individual collaboration applications.

Install Applications on Virtual Machines

Follow this procedure to install and set up the applications on their designated virtual machines.

The approximate time that is required for each application is as follows:

- Cisco Unified Communications Manager: 60 minutes

- Cisco Unity Connection: 60 minutes

- Cisco Unified Communications Manager IM and Presence Service: 45 minutes

- Cisco Prime Collaboration Provisioning: 30 minutes

- Cisco Unified Contact Center Express: 60 minutes

- Cisco Emergency Responder: 45 minutes

- Video Communication Server: 60 minutes

- Cisco Paging Server: 15 minutes

✎

Note   • Do not install Unified Communications Manager and Cisco Unity Connection simultaneously, because they use the same ISO image.

• You can install multiple applications concurrently to save time.

• In Release 10.5(1) and later, the time it takes to install preinstalled applications is approximately 20 minutes less.

Procedure

Step 1   Contact the data network administrator and make sure that you collect the network information that is described in "Preparation."

Step 2   Plan the sequence of installing the applications to minimize the time that is required.

Step 3   Using vSphere client, select an application's virtual machine. The client changes the panel name to application name, and adds one more tab named "Getting Started". Right click to open the action menu as shown in the figure below.

Figure 12: Select an Application VM to Edit Settings, Associate the ISO with the VM, Power On, and Take Any Other Administrative Action
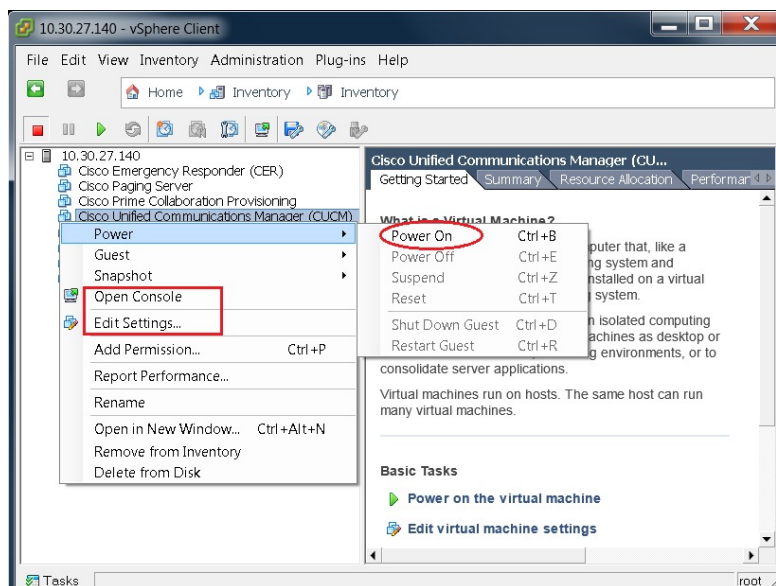
Step 4   For VMs that are deployed using blank OVA templates, you need to edit the settings of virtual machines to connect the ISO image of application software at power on. Note that Unified Communications Manager and Cisco Unity Connection use same ISO file (see the Preloaded files for Cisco Business Edition 6000 here:

http://www.cisco.com/c/en/us/support/unified-communications/business-edition-6000/products-release-notes-list.html).

Figure 13: Edit Virtual Machine Settings to Connect ISO Image of Application Software
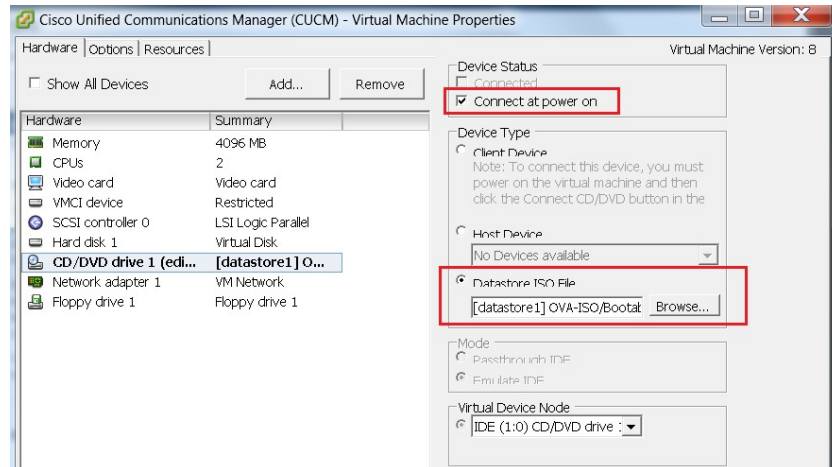

a) In the Device Type section, select the Datastore ISO File radio button.

b) Browse to the datastore and select the ISO file for the application.

c) Make sure to check the box **Connect at Power On** as shown in the figure below.

Step 5 Select **Edit Settings** from the right-click menu as shown in Figure 12. The Virtual Machines Properties editing screen appears, as shown in the Figure 13.

a) Go to the following URL and generate the `platformconfig.xml` file: http://www.cisco.com/web/cuc_afg/index.html.

b) Using any freeware virtual floppy application, convert the platformconfig.xml file to ***.flp** image and copy this *.flp image to the Answer File Generator directory in the datastore.

c) Make sure that the floppy drive settings are changed accordingly to pick up the *.flp file from the datastore.

Figure 14: Edit Virtual Machine Settings to Connect Floppy Drive to Read Configuration Settings from FLP File
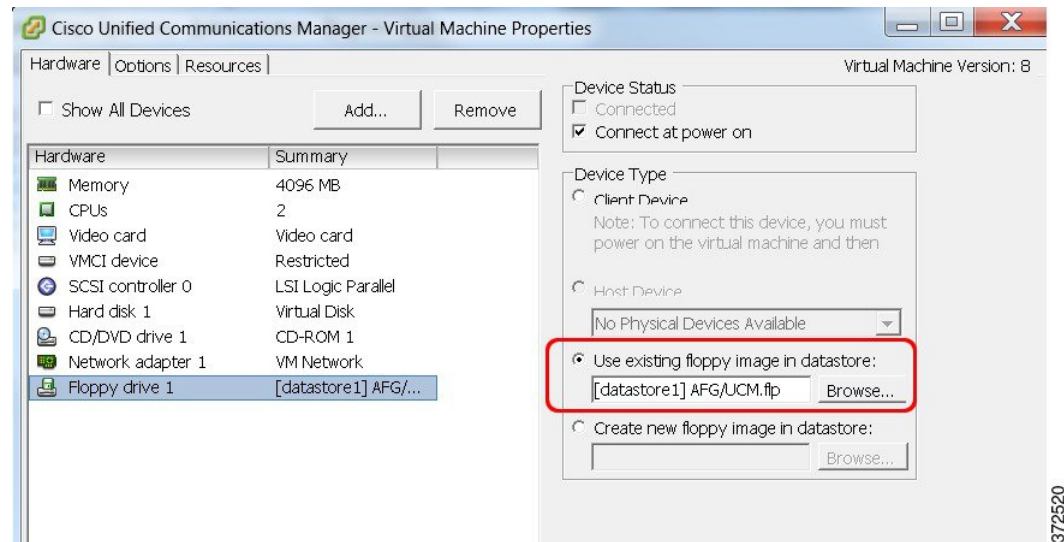
Step 6 To begin installation of each application, follow these steps: Installation will continue automatically for the time listed in Step 2.

a) Power on the virtual machine and open the console using the right-click menu shown in Figure 12.

b) Follow the interactive installation procedure on console.

c) Accept the defaults and provide the information that you collected in Step 1. Installation is complete and successful when you are able to do a successful login on console.

 • For Prime Collaboration, Installation starts after typing setup for the "localhost login:". After that, the installation script asks for network information and various credentials (passwords for admin, root, globaladmin) information. Installation continues for 30 minutes.

 • For a VCS server, installation starts after using first-time username password as admin and TANDBERG. Type y when asked "Run install wizard [n]:" and continue with interactive installation.

Note If you require detailed installation guidance, see the Installation Guide of the applications on the Cisco Business Edition 6000 Support Documents website, listed in "For More Information".

What to Do Next

After installing all required applications, access applications using a web browser and perform initial setup of some applications.

Examples of Application Installation

The following are steps to install Cisco Unified Communications Manager (a blank OVA) and Cisco Video Communications Server (a preinstalled OVA).

Note   If the application is preinstalled and the FLP file is copied in the Answer File Generator directory, as described in previous section, installation will happen automatically without installer intervention

Install Cisco Unified Communications Manager

Procedure

Step 1   Power on and open the console of the virtual machine, as illustrated in Figure 12.

Step 2   On the DVD Found window, select **No** for media check.

Step 3   In the Product Deployment Selection window, select **Cisco Unified Communications Manager**, then select **OK**. Finally, select Yes in the next Proceed with Install window.
Note   Enterprise License Manager is also deployed as part of this installation.

Step 4   Perform the following steps:

a) In the Platform Installation Wizard window, select **Proceed**.

b) In the Apply Patch window, select **No**.

c) In the Basic Install window, select **Continue**.

d) Select **Timezone** in the next window followed by **Auto Negotiation** for Ethernet connection, and the default size for MTU.

Step 5   Select **No** for DHCP.
The Static Network Configuration window appears.

Step 6   Enter the hostname, (such as CUCM), IP address, IP mask, and gateway address; then select **OK**. Select **Yes** for DNS Client, followed by entering DNS server information in next window.

Step 7   The next two windows prompt you to set up administrative login information and organization information, followed by confirming whether the server is the first node; in most cases, select **Yes**.

Step 8   In the next windows, select **No** for network connectivity test, and again provide the hostname, IP address and security password. Finally, provide a valid reachable NTP server.

Step 9   The next two windows prompt you to set a security password and SMTP server information. Finally, application user information is required, followed by the last window Platform Configuration Confirmation. Select **OK** to continue the installation, which will last for approximately 60 minutes without any user interaction on the console. After you see the login prompt on the console, access the Unified Communications Manager IP address in a web browser.

Install Cisco Video Communications Server

Procedure

Step 1 Power on and open the console of the virtual machine, as illustrated in Figure 12.

Step 2 At the login prompt, enter admin for username and TANDBERG for the password.

Step 3 At the Run Install Wizard prompt, type Y and press Enter.

Step 4 To change password, type Y and press **Enter**, and at the prompt type the new password and click **Enter**.

Step 5 The next series of prompts are for network information. Select the IP Protocol (the default is IPv4), provide the IP address, subnet mask, and default gateway address. Finally, select the ethernet speed of the LAN (the default is auto).

Step 6 For the Run SSH (Secure shell) daemon, type Y and press **Enter**.

Step 7 At the Restart Now prompt, type Y and press **Enter**.

Step 8 After the system reboots, access the Cisco Video Communication Server in a web browser.