Installation

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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*.
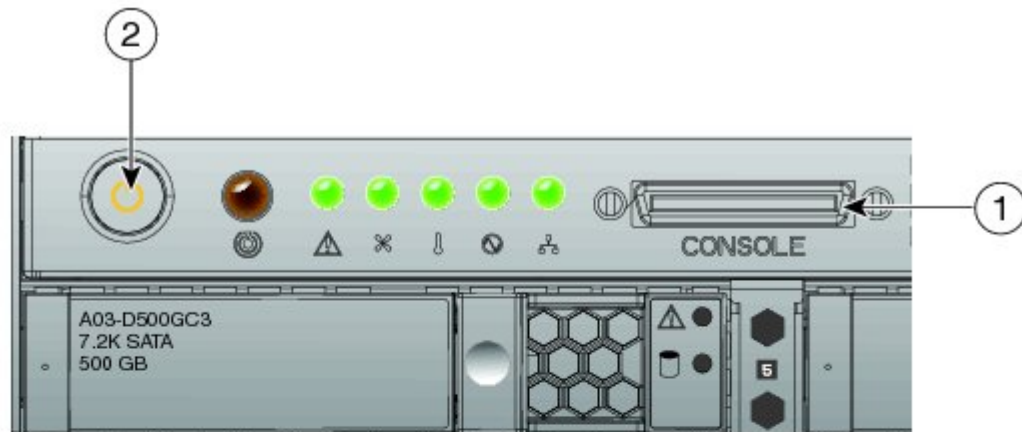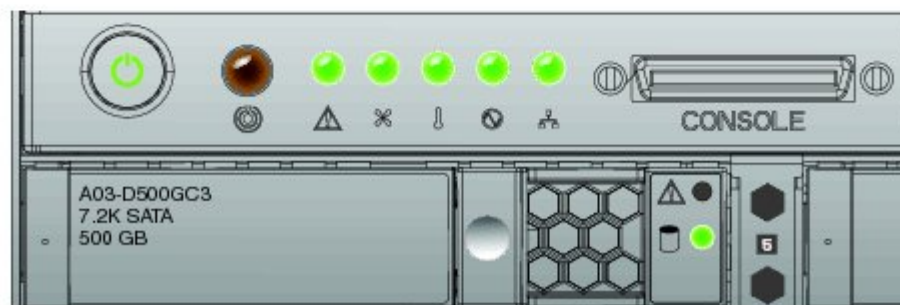
Procedure

Step 1 Verify that power is connected and the LED status is as shown in Figure 2.

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

Figure 1: Power On, Console Port, and LED Status

Electrical Power is connected.
But server is not powered on yet.

LEDs status after Power-On

Step 2   Verify that the monitor and keyboard are connected to the console port. (Figure 2-1).

Step 3   Power on the monitor.

Step 4   Push the power button (Figure 2-1) 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.

CIMC is needed if you want remote control, the ability to monitor UCS hardware, and also remote access to the console. Configure the IP address for CIMC, and then exit.

Step 7 (Optional) If using CIMC for console access, browse to the IP address that you configured, and use the default username as admin and password as password. The CIMC screen is shown in Figure 3. Navigate the CIMC for various tasks, such as Locater LED, and KVM Console as marked in Figure 3.

Figure 2: Cisco Integrated Management Controller
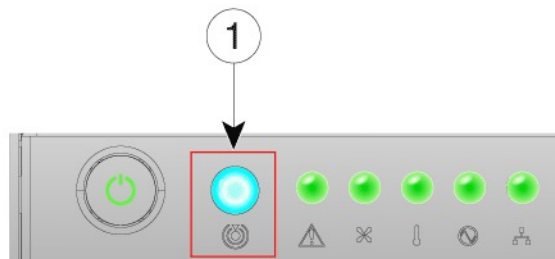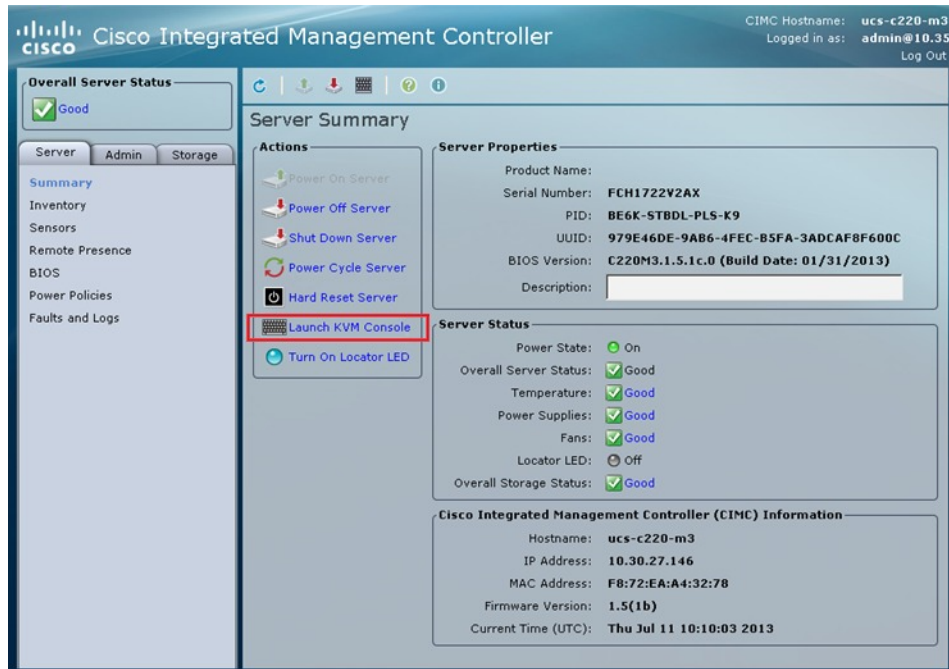
Step 8 (Optional) Test the locator LED by clicking **Locator LED** on the CIMC menu, and verify that bright blue LED (Figure 3-1) is turned on. This CIMC feature helps locate the server in a large datacenter.

Step 9 Wait until the ESXi loads and displays the configuration screen on the console.

Customize ESXi Host for Remote Access

Follow this procedure to customize the ESXi host (the VMware hypervisor) to enable remote access through the vSphere client.

Procedure

Step 1   Load the ESXi host software.

The console screen appears, as shown in the following figure.

Figure 3: Console Screen After ESXi Loads

Step 2   Press **F2** to enter the System Customization menu as shown in the following figure. Select **Configure Password** to change the password.
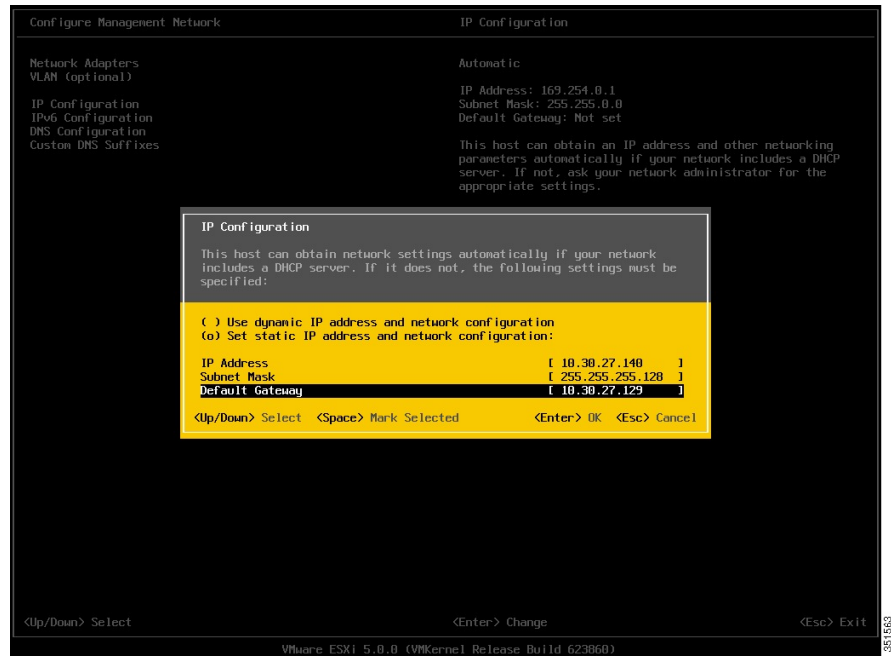
The default username is `root` and password is `password`.

*Figure 4: ESXi System Customization Menu*

Step 3 Assign a static IP address to ESXi. Enter the Configure Management Network menu, and follow the instructions on screen to change "IP Configuration" as shown in Figure 6.

Figure 5: Assign Static IP Address to ESXi Host

Step 4   Connect your PC to the data network, and verify that you can browse to the ESXi IP address that you configured in the previous step. Verify the web page as shown in Figure 7.

Figure 6: The ESXi Host on BE6000
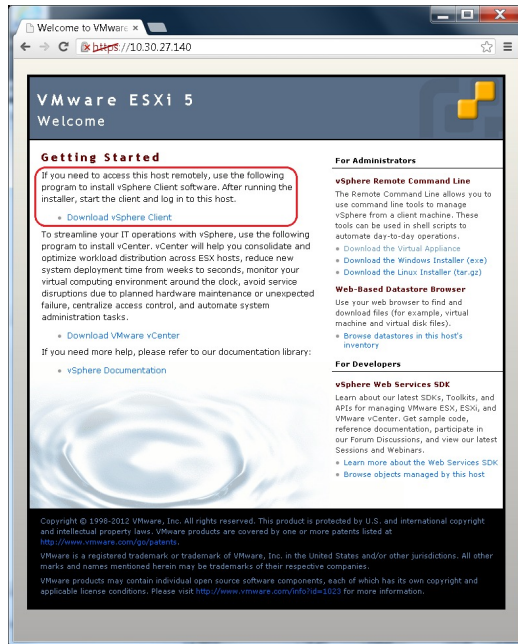
**Step 5**   If not already installed on your PC, download and install the vSphere client.

Access and Configure ESXi Host

Some applications on BE6000 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, 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 ESXi host.

Figure 7: Access ESXi Host Using vSphere Client
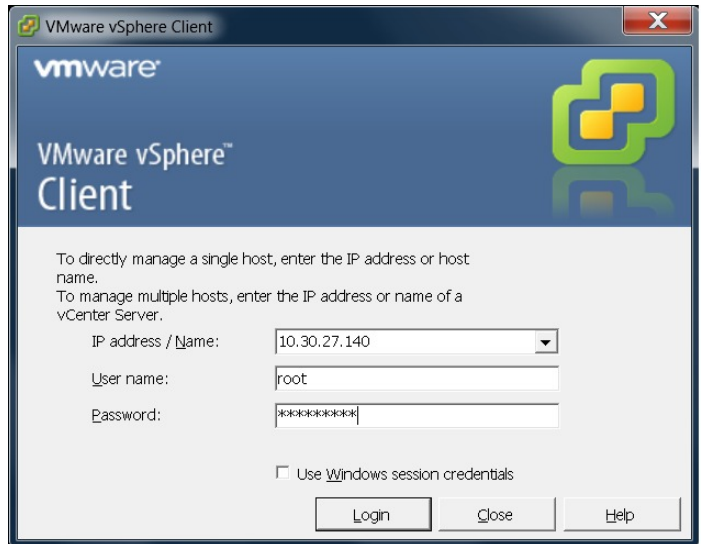
Step 2 Use the login credentials that you configured during ESXi system customization.

Step 3 (optional) For BE6000 before Version 9.1.2, the VMware license is not preinstalled, and you may be presented with a 60 day evaluation license warning. This scenario can happen if you performed a factory reset to the UCS server. In these cases, follow these steps to apply the license. You may also verify the license status using these steps:

a) Locate the envelope marked "Cisco Vmware vSphere Hypervisor 5.0" in the shipping box.

b) Locate the card titled "Right to Use Notification" in the envelope.

c) Note the Master serial number, which is the license activation key.

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

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

f) Click **Enter Key...**.

g) Type in the Master serial number.

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

Figure 8: Configuring and Managing ESXi Host and Virtual Machine
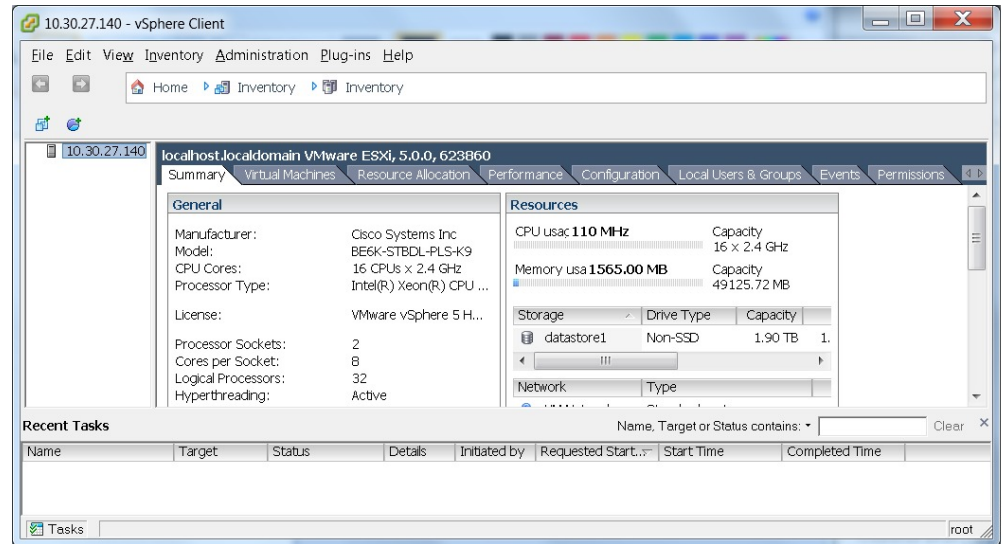
Step 4   Add the NTP server:

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 Figure 10.
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 Figure 10.

Note   By default, only one NIC is enabled in ESXi and identified as vmnic0.

*Figure 9: Fault Tolerance for BE6000 Network Connectivity*
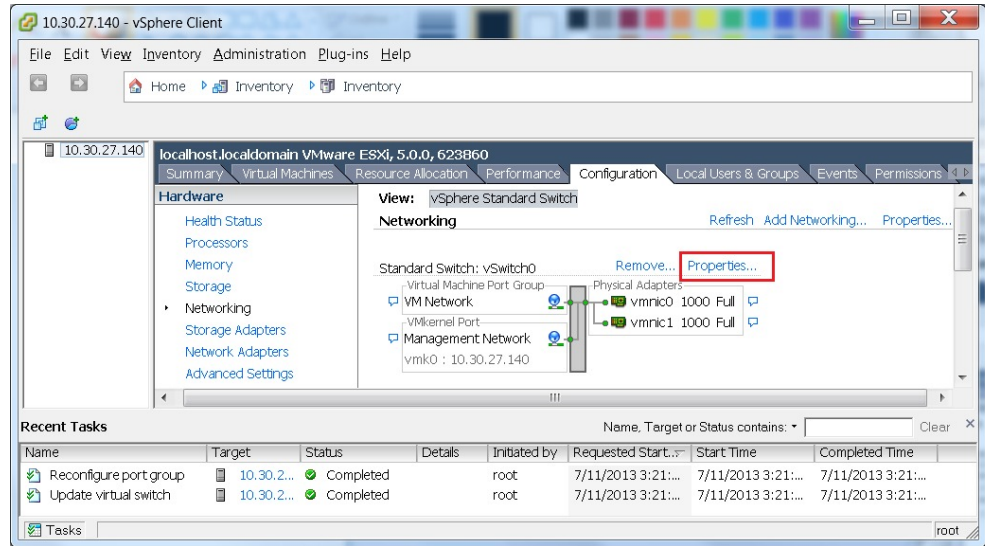
The ESXi host is now ready for deploying virtual machines, which will host individual collaboration applications. Software for these applications are preloaded on the datastore of the BE6000 server.

Step 6   Browse the datastore:

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

b) Click **Datastore** to list the datastores in the BE6000 server.

c) Select a datastore, then right-click and select **Browse Datastore** as shown in Figure 11.

Figure 10: Browse Datastore to View Preloaded Collaboration Software, License, and Open Virtualization Archive Files
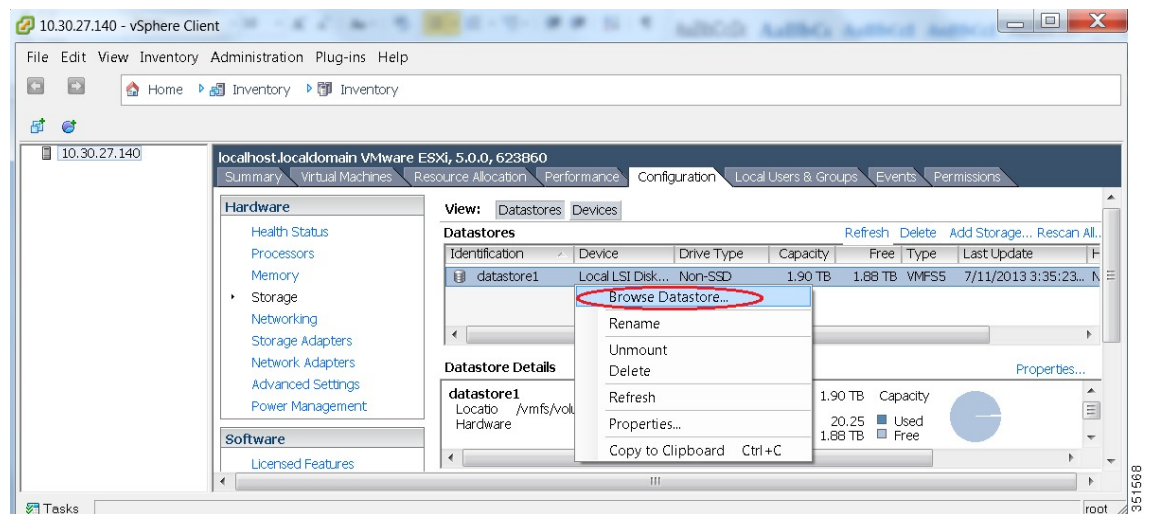
Step 7 Download all Open Virtualization Archive (OVA) and license files to the desktop of your PC. Make sure you have sufficient space to download these files.

> **Note** As of Release 9.1(2), you must download the Unified Contact Center Express ISO image to extract the evaluation license. You also must download the ISO image of the paging server and extract the OVA template file for the paging server.

What to Do Next

Deploy virtual machines.

Preloaded Files on Datastore

Cisco BE6000 is shipped with some selected Collaboration software, license files and Open Virtualization Archive (OVA) files that are preloaded on the datastore. Consider the following points for a basic understanding of the file types that are preloaded in the datastore:

ISO

An ISO file is a DVD image that was used to distribute application software in the past.

OVA

Open Virtualization Archive (OVA), a file with the ".ova" extension, is used to package and distribute the virtual machine template.

Some OVA files may also have application software preinstalled on the virtual machine. In this case, an ISO image is not needed (for example, `cpc-provisioning-9.5.0-245-small.ova`, listed in the *Preloaded Files for Cisco Business Editition 6000 Export Restricted K9 Software* here: http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/BE6000/releasenotes/BE6000SoftwareLoadSummary-9X10X-K9-01.pdf).

Some OVA files do not have application software preinstalled. In this case, you must 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`, listed in the *Preloaded Files for Cisco Business Editition 6000 Export Restricted K9 Software* here: http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/BE6000/releasenotes/BE6000SoftwareLoadSummary-9X10X-K9-01.pdf) .

> **Note** For pre-loaded files in the Export Restricted version 9X10X-K9 and Export Unrestricted version 9X10X-XU, refer to the relevant Release Note here: http://www.cisco.com/c/en/us/support/unified-communications/business-edition-6000/products-release-notes-list.html.

Deploy Virtual Machines

Follow this procedure to deploy virtual machines for applications that are listed in the *Preloaded Files for Cisco Business Editition 6000 Export Restricted K9 Software* here: http://www.cisco.com/c/dam/en/us/td/

docs/voice_ip_comm/cucm/BE6000/releasenotes/BE6000SoftwareLoadSummary-9X10X-K9-01.pdf. The OVA template file defines the virtual machine for specific applications.

Note the following:

- Blank OVAs are deployed in 1-3 minutes, and a preinstalled OVA may take 10-15 minutes to deploy.

- Figure 12 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 Figure 12 is for the High Density (HD) server model (see the SKU that is highlighted below), which can host nine applications. The Medium Density (MD) server model of BE 6000 can host five applications.

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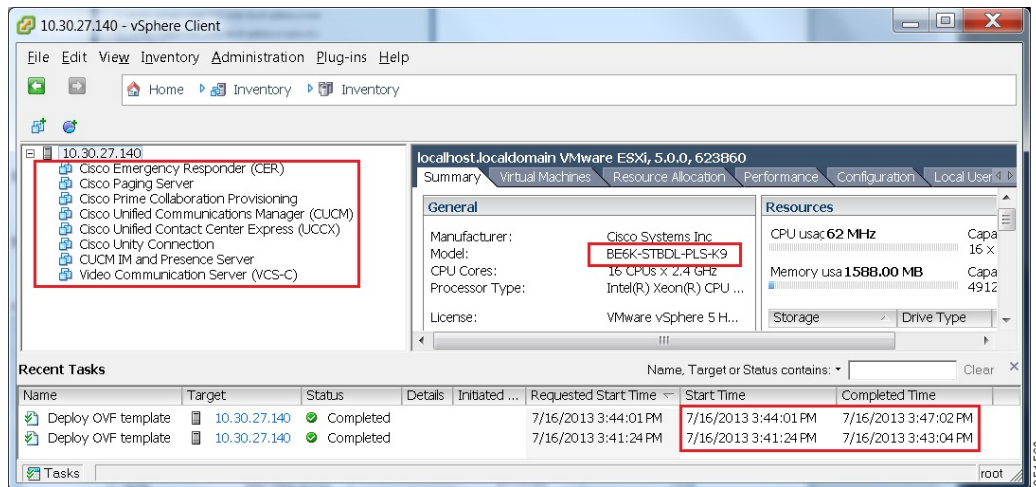
Procedure

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 *Preloaded Files for Cisco Business Editition 6000 Export Restricted K9 Software* here: http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/BE6000/releasenotes/BE6000SoftwareLoadSummary-9X10X-K9-01.pdf.

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 For VCS and Paging server, provide a meaningful name.

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: 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.

• A carefully planned installation should not take more than three hours.

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   On the 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". Compare Figure 12 and Figure 13. Right click to open the action menu as shown in Figure 13.

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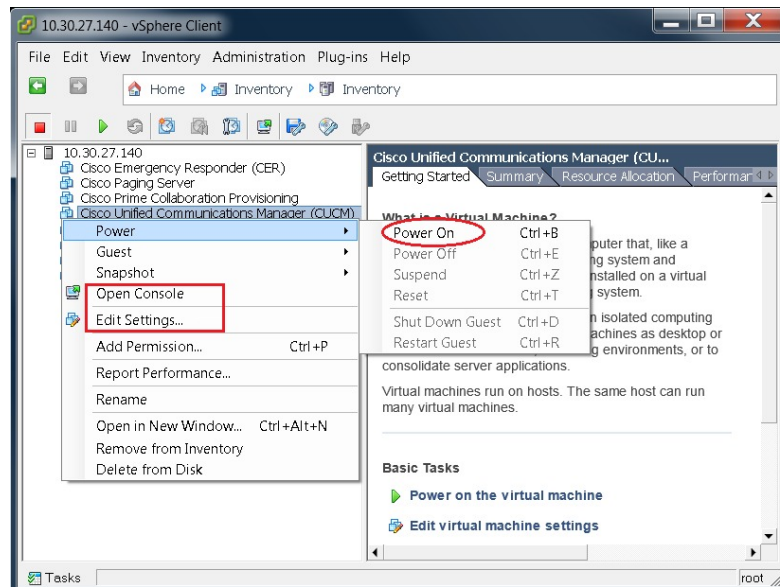
Step 4   For VMs that are deployed using blank OVA templates, you need to edit the settings of virtual machines to connect the ISO image of application software at power on. Note that Unified Communications Manager and Cisco Unity Connection use same ISO file (see *Preloaded Files for Cisco Business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

Restricted K9 Software here: http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/BE6000/releasenotes/BE6000SoftwareLoadSummary-9X10X-K9-01.pdf).

Figure 13: Edit Virtual Machine Settings to Connect ISO Image of Application Software
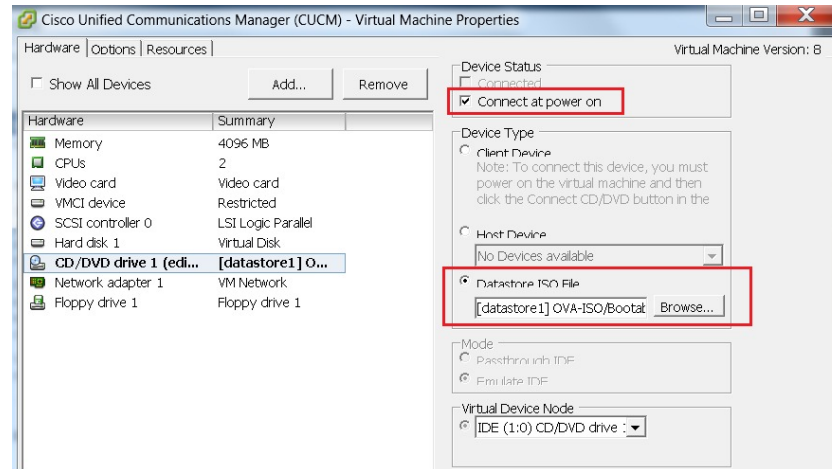
a) In the Device Type section, select the Datastore ISO File radio button.

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 Figure 14.

Step 5 Select **Edit Settings**… from the right-click menu as shown in Figure 13.
The Virtual Machines Properties editing screen appears, as shown in Figure 14.

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 console using the right click menu shown in Figure 13.

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).

Install Cisco Unified Communications Manager

Procedure

Step 1 Power on and open the console of the virtual machine, as illustrated in Figure 13.

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 13.

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.