

Installation

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Power On and Initial Setup

Procedure

- **Step 1** Verify that the monitor and keyboard are connected as described in the *Quick Start Guide*.
- **Step 2** Power on the monitor.
- **Step 3** Verify that power is connected and the Power LED status, as shown in Figure 1: Power and LED Status BE7000M Server, on page 2 and Figure 2: Power and LED Status BE7000H Server, on page 2.

When the server is powered off, the power button LED (3) is orange, and the power supply LED (6) is green. If not, check the electrical and network connections.



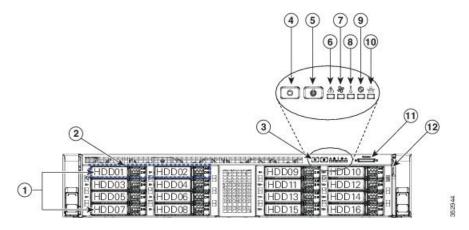
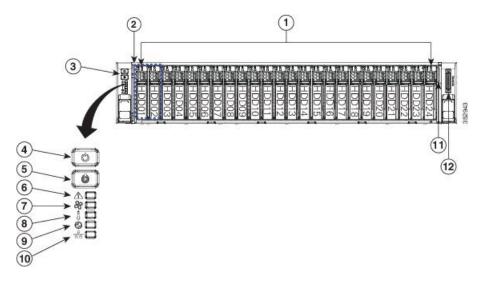


Figure 2: Power and LED Status - BE7000H Server



- Step 4 Push the power button (3) 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 open the CIMC Configuration window when prompted. In the CIMC Configuration window, reset the CIMC password, 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 you are using CIMC for remote console access, browse to the IP address that you configured and do one of the following:
 - If you have changed the CIMC password in step 6, provide the new password.

- If you have not changed the CIMC password in step 6, use the default username **admin** and password **password**.
- Step 8 If you use the default username and password to log in to the Cisco Integrated Management Controller screen, the system prompts you to change the password. Changing the password is mandatory. The CIMC screen in Figure 3 offers various tasks, such as turning On Locater LED and launching KVM Console.
 - Note In the Server Properties section, the Product Name appears as UCS C240 M4S2 for BE7000M and as UCS C240 M4SX for BE7000H.

cisco Cisco Integra	ted Managemen	t Controller	Cisco IMC Hostnam Logged in a	
Overall Server Status	C 1 3 3 🔳 🔍	0 0		
Good				
	Server Summary			
Server Admin Storage	Actions	Server Properties		
Summary	Power On Server	Product Name:	UCS C240 M4SX	
Inventory	Power Off Server	Serial Number:	FCH1851V2RB	
Sensors			UCSC-C240-M4SX	
Remote Presence	Shut Down Server		9D434991-D3DB-4352-A50F-ED2E0462BDF4	
BIOS	O Power Cycle Server	BIOS Version:	C240M4.2.0.3c.0.091920142008	
Power Policies	Hard Reset Server	Description:		
Faults and Logs	Launch KVM Console	Server Status		
Troubleshooting	O Turn On Locator LED	Power State:	0.00	
		Overall Server Status:		
		Temperature:		
		Overall DIMM Status:		
		Power Supplies:		
			Good	
		Locator LED:	O off	
		Overall Storage Status:	Good	
		Server Utilization		
		Overall Utilization (%):	0	
		CPU Utilization (%):	0	
		Memory Utilization (%):	0	
		IO Utilization (%):	0	
		Cisco Integrated Manag	ement Controller (Cisco IMC) Information	
		Hostname:	BE7H-M4-K9	
		IP Address:	10.1.1.66	
		MAC Address:	64:F6:9D:79:BF:2C	
		Firmware Version:	2.0(3e)	
		Current Time (UTC):	Mon Jul 6 05:08:46 2015	
		Local Time:	Mon Jul 6 05:08:46 2015 UTC	
		Timezone:	UTC (Select Timezone)	
				Reast Values
			Save Changes	Reset Values

Figure 3: Cisco Integrated Management Controller Web Interface

Customize Virtualization Hypervisor for Remote Access

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

Procedure

- **Step 1** When the hypervisor has booted, the Direct Console User Interface displays on the monitor as shown in Figure 4.
 - **Note** For release 10.5(1) and later, you are notified about preinstalled applications.

Figure 4: Direct Console Screen After Hypervisor Loads

Cisco Business Edition 7000		
For your convenience, this server has	been built with the following	virtual machines predeployed and ready to install:
Cisco Prime Collaboration Provision Cisco Unified Communications Manage Cisco Unity Connection Cisco Instant Messaging and Presenc Cisco Contact Center Express	r 7500 user template 5000 user template e Server 5000 user template 400 agent temlate	Version 10.6 Version 10.5(2)SU1 Version 10.5(2)SU1 version 10.5(2b) Version 10.6(1)
Please refer to the Business Edition www.cisco.com/go/be7kig	7000 Installation Guide for fur	inther information on how to use these products:
	*** WARNING *** erver MUST be shut down before to shut down gracefully may res	
<f2> Custonize Systen/Vie⊭ Logs</f2>		(F12) Shut Down/Restart Server
Download tools to manage this host fro Browse the datastore to /OVA-ISO/VMwar http://10.1.1.86/		t installer locally.

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 5: Virtualization Hypervisor System Customization Menu

System Customization	Configure Password
Configure Password Configure Lockdown Mode Configure Management Network Restart Management Network Network Restore Options Configure Keyboard Troubleshooting Options View System Logs View System Logs View Support Information Reset System Configuration	Set To prevent unauthorized access to this system, set the passuord for the user.
VMware ESXI 5 5 A (VMKerne	al Dalance Ruild 2000190)

- 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 Figure 6.

Figure 6: Assign Static IP Address to ESXi Host

Configure Management N			
Network Adapters VLAN (optional) IP Configuration IPvG Configuration DMS Configuration Custon DMS Suffixes		Automatic IP Address: 10.1.1.86 Submet Mask: 255.255.255.0 Default Goteway: 10.1.1.10 This host can obtain an IP address and other netw parameters automatically if your network includes server. IF not, ask your network administrator fo appropriate settings.	
	IP Configuration This hast can obtain network setting includes a DHCP server. If it does n specified: () Use dynamic IP address and networ (o) Set static IP address and networ Schnet Mask Default Gateway (d) Romess Submet Mask Schnet Mask Default Schway	ot, the following settings must be rk configuration (19,1,1,86) (255,255,255,8) (19,1,1,19)	
	- (Up/Down) Select - (Space) Mark Select		
<up down=""> Select</up>	WMware FSXi 5 5 0 (VMKern		

Step 5 Connect your PC to the data network, and browse to the new Hypervisor IP address. Verify the web page as shown in Figure 7.

Figure 7: Hypervisor Welcome Page



Step 6 If not already installed on your PC, download and install the vSphere client from the link on the hypervisor welcome page.

You need internet access to download the vSphere client from this link. If Internet access is not available, you can download the client installation file from the datastore.

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 8: Access Virtualization Hypervisor Using vSphere Client

🕖 VMware vSphere Client		
vmware [.] VMware vSphere Client		R
name.	bst, enter the IP address or host ter the IP address or name of a 10.30.27.140 root root	•
	Use Windows session credentials	Help

- **Step 2** Use the login credentials that you previously configured.
- **Step 3** (Optional) If you order BE7000 with factory-preloaded embedded license, then the BE7000 Virtualization Hypervisor license is preinstalled and is therefore ready for use on delivery. If you need to reapply the license, follow these steps:
 - a) Note the Master Serial Number that is shipped with the server. The Master Serial Number is the license activation key.
 - Note The Master Serial Number is pre-activated. You do not need to register it at http:// www.VMware.com.
 - **Note** This serial number is hardcoded for a two-CPU system. You cannot combine it, or register it, with other licenses at http://www.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.

Note Notice the preinstalled applications listed in the inventory pane of Figure 9.

🧭 esdocal - vSphere Client								x
File Edit View Inventory	Administration Plu							_
Image: Second	oration Provisioning nunications Manager	localbost.localdomain VHware E Getting Started Summary Virtu		1.6	ration (Local U	sers & Groups \ Event	Permissions	
Cisco Unity Connec	tion	General		Resources				1
CUCM IM and Pres	ence Server	Manufacturer: Model: CPU Cores: Processor Type:	Osco Systems Inc UCSC-C240-M35 12 CPUs x 2-499 GHz Intel(R) Xeon(R) CPU E5-2640	CPU usage: 217 MHz Memory usage: 1773.0	00 MB	Capacity 12 x 2.499 GHz Capacity 65502.38 M8		
		License: Processor Sockets:	0 @ 2.50GHz VMware vSphere 5 Hypervisor - Licensed for 2 physical CP 2	Storage datastorel	 Drive Type Non-SSD 	Capacity 1.35 TB	47(
		Cores per Socket: Logical Processors: Hyperthreading:	6 24 Active	datastore2	Non-SSD	1.36 18		
		Number of NICs: State: Vrtual Machines and Templates:	12 Connected	Metwork	Standard p	ort group	•	
		vMotion Enabled: VMiware EVC Mode:	N/A Disabled	Fault Tolerance	4004	40.0-40.0		
Recent Tasks		11	· ····	11	arget or Status o		Clea	
Name	Target	Salus		Details	Initiated by	Requested Start Ti		
Dupdate service activat. Stop service	esolocal esolocal esolocal	Completed Completed		Oecails	root root	8/7/2014 8:57:28 AM 8/7/2014 8:57:27 AM	8/7/2014 8:5	
Tasks								root ,

Figure 9: Configuring and Managing Hypervisor and Virtual Machines

Step 4 Configure NTP:

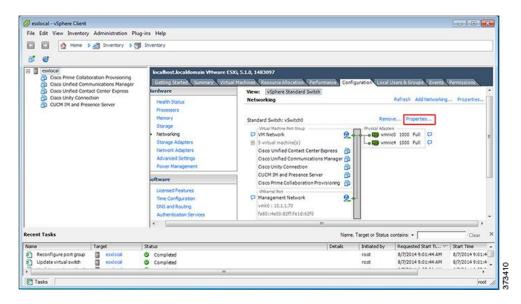
- a) Navigate to Configuration > Software > Time Configuration.
- b) Click Properties to launch the Time Configuration screen.
- c) Update the Time Click Options....
- d) Select NTP Settings.
- e) Click Add and type the IP address of NTP server. Repeat this step to add multiple NTP servers.
- f) Click **OK**.
- g) Select General > Start and Stop with Host.
- h) Click Start button. 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 10: 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 collaboration applications and additional applications are also preloaded in the datastore for your convenience.

- **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 Figure 11. Preloaded software is stored in the /OVA-ISO directory.

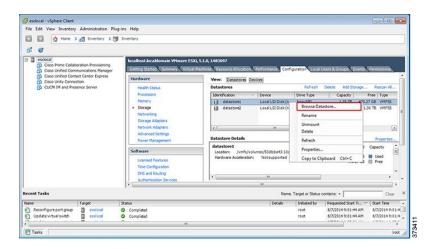


Figure 11: Browse Datastore to View Preloaded Collaboration Virtual Machines and Preloaded Software

Step 7 (Optional) Cisco recommends that you archive the OVA-ISO directory locally. If a server fails, the replacement product does not include preloaded content.

What to Do Next

Install virtual machines.

Preloaded Files on Datastore

In addition to a number of predeployed virtual machines, Cisco Business Edition servers are shipped with selected Collaboration application software 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-10.6.0-1015-medium.ova).

Other OVA files do not include application software preinstalled. 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_10.5_vmv8_v1.9.ova and associated ISO file Bootable UCSInstall UCOS 10.5.2.10000-5.sgn.iso).



For details of which files ship with each server, see the relevant Release Note here: http://www.cisco.com/ c/en/us/support/unified-communications/business-edition-7000/products-release-notes-list.html.

Using Predeployed Virtual Machines

To simplify the installation of the BE7000, a number of the most popular application virtual machines have been predeployed, ready for you to add configuration information to complete the installation.

To complete this process, launch the hypervisor console for the virtual machine you wish to use, power on and follow the instructions.

Some collaboration applications (such as Unified Communications Manager, Unity Connection, UCM Instant Messaging and Presence Service and Unified Contact Center Express) also accept a configuration file to automate this process. To use this feature, follow these steps:

Procedure

- Step 1 Create an answer file for your application using the online tool at www.cisco.com/web/cuc_afg/.
- **Step 2** Add this file to a virtual floppy (vFloppy) image. Name the file as UCM.flp, CUC.flp, IMP.flp or CCX.flp based on the application.
- **Step 3** Copy this file to the AFG folder in the hypervisor datastore.
- Step 4Power on the virtual machine.The application completes the installation automatically.

Deploy New Virtual Machines

Follow this procedure to deploy additional 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-7000/ 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.

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• 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.

File Edit View Inventory Administration Plug-ins Help Ame > 👌 Inventory > 🗐 In R 61 re ESXI, 5.1.0, 148309 isco Unified Communications Ma isco Unified Contact Center Expr Cisco Systems Inc UCSC-C240-M35 12 CPUs x 2.499 GHz Intel(R) Xeon(R) CPU E5-2640 0 @ 2.50GHz CPU usage: 110 HHz Manufacture Capacity 12 x 2,499 GHz Model: CPU Cores ory usage: 1830.00 MB Capacity 65502.38 MB Processor Ty Capacity 1.35 TB 1.36 TB Mware vSphere 5 Hypervi Licensed for 2 physical CP Drive Type datastorel Non-SSD Non-SSD Processor So Cores per Socket Logical Pro Hyperthreading Type Standard port group Number of NICs 12 2 Name. Target or Status cor Requested Start Ti... Targel 240 Initiated by Start Time Completed Tim Deploy OVF te Deploy OVF te Deploy OVF te Completed
 Completed
 Completed
 Completed loy OVF ter esxloca esxloca esxloca 8/7/2014 9:14:12 AM 8/7/2014 9:12:51 AM 8/7/2014 9:16:53 AM 8/7/2014 9:12:51 AM 8/7/2014 9:12:04 AM 2014 9:12:04 AM 8/7/2014 9:12:05 Tasks

Figure 12: Deployed Virtual Machines for Applications Viewed in VSphere Client



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 here: http://www.cisco.com/c/en/us/support/unified-communications/business-edition-7000/products-release-notes-list.html. Note For some applications, the OVA that you select determines the virtual machine size and therefore the capacity. For other applications, virtual machine size is selected during OVA deployment.
Step 3	Continue to click Next to accept license agreements if prompted.
Step 4	Select the appropriate virtual machine size for your deployment.
Step 5	Specify a meaningful name for the virtual machine.

What to Do Next

After deploying all the required virtual machines, complete installation where required and set up applications that are ready for use.

Install Applications on Virtual Machines

To install Unified Communications applications, including Cisco Unified Communications Manager, Cisco Unified Communications Manager IM and Presence Service, Cisco Unity Connection, Cisco Emergency responder, and Cisco Unified Contact Center Express you can either use answer files to automate the installation process, or opt for manual installation. The following procedure describes both these options to install and set up the virtualized applications that are ready for use.

The following table describes the approximate installation time for each application:

Application	Approximate Installation Time (In Minutes)
Cisco Unified Communications Manager	60
Cisco Unity Connection	60
Cisco Unified Communications Manager IM and Presence Service	45
Cisco Prime Collaboration Provisioning	15
Cisco Emergency Responder	45
Cisco Unified Contact Center Express and Cisco Unified IP Interactive Voice Response	60
Cisco Expressway	30
Cisco TelePresence Video Communication Server Control	30
Cisco TelePresence Conductor	30
Cisco TelePresence Server Virtual Machine	15
Cisco TelePresence Management Suite	60
Cisco Paging Server	15
Cisco TelePresence Content Server	60



You can install multiple applications concurrently to save time.

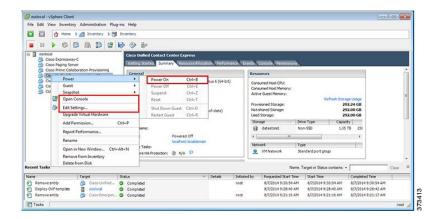
- Do not install Unified Communications Manager and Cisco Unity Connection simultaneously, because they use the same ISO image.
- You can install multiple applications concurrently to save time.
- Preinstalled applications take approximately 20 minutes or less to complete installation.

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** If you want to use the answer files, follow this step to prepare the required files. Select **Edit Settings** from the right-click menu as shown in Figure 14. The Virtual Machines Properties editing screen appears, as shown in the Figure 15.
 - 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. Name the files as follows to ensure that they are used by the preloaded applications:
 - Cisco Unified Communications Manager: UCM.flp
 - Cisco Unified Communications Manager IM and Presence Service: IMP.flp
 - Cisco Unity Connection: cuc.flp
 - Cisco Unified Contact Center Express: ccx.flp

Step 4 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 13: Select an Application VM to Edit Settings, Associate the ISO with the VM, Power On, and Take Any Other Administrative Action



Step 5 For VMs that are deployed using blank OVA templates, you need to edit the virtual machine CD/DVD drive settings to connect the application software ISO image from the datastore at power on. This step is not required for preloadedpredeployed applications. Cisco Unified Communications Manager and Cisco Unity Connection

use same ISO file (see the preloaded files for Cisco Business Edition 7000 here: http://www.cisco.com/c/en/us/support/unified-communications/business-edition-7000/products-release-notes-list.html).

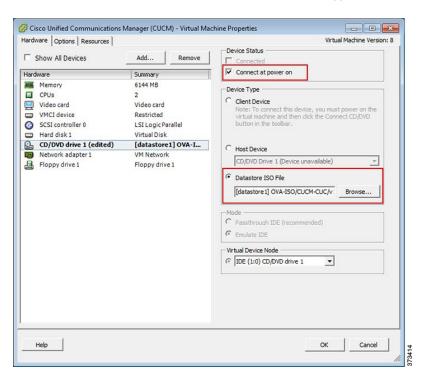


Figure 14: Edit Virtual Machine Settings to Connect ISO Image of Application Software

- a) In the CD/DVD drive Device Type section, select Datastore ISO File.
- b) Browse to the datastore and select the ISO file for the application.
- c) Make sure to check the Connect at Power On checkbox.

d) If you have created answer files in Step 3, on page 15, then configure the virtual machine Floppy drive settings to connect to the appropriate flp file on power on. If you want to enter the configuration settings manually, go to Step 6, on page 18.

Summary 6144 MB 2 Video card Restricted LSI Logic Parallel	Connect at power on Device Type C Client Device Note: To connect this device, you must power on
2 Video card Restricted	C Client Device Note: To connect this device, you must power on
Virtual Disk CD-ROM 1 VM Network [datastore1]AFG/UCM.f	He virtual machine and then dick the Connect Floppy button in the toolbar. Host Device No Physical Devices Available Vise existing floppy image in datastore: [datastore1] AFG/JCM.ftp Browse Create new floppy image in datastore: Browse
	VM Network

Figure 15: Edit Virtual Machine Settings to Connect Floppy Drive to Read Configuration Settings from FLP File

- e) In the **Options** tab, choose **Advanced Settings** > **Boot Options** and select **Force BIOS Setup**.
- f) When you boot the virtual machine later, select the BIOS Boot menu, and then use the key to move Removable Devices down to the bottom of the boot list to ensure that the virtual machine boots from the DVD drive.
- **Step 6** To begin installation of each application, follow these steps:
 - a) Power on the virtual machine, right click and choose Open Console as shown in Figure 13.
 - b) If you are not using installation answer files, follow the interactive installation procedure in the console. Use the information that you collected in Step 1, on page 15.
 - c) Installation is complete and successful when you are able to successfully log in from the console.
 - For Prime Collaboration, type setup at the "localhost login:" prompt to configure the application and complete installation. After that, the installation script asks for network information and various credentials (passwords for admin, root, globaladmin) information.
 - For a VCS or Expressway server, set up the application by logging in using the default username (admin) and password (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 7000 Support Documents website, listed in For More Information section.

What to Do Next

After installing all required applications, access applications using a web browser. Add licenses and configure features as required.

1