

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 1 and Figure 2: Power and LED Status BE7000H Server, on page 2.

Figure 1: Power and LED Status - BE7000M Server

If the status of the Power LED is orange, that indicates server is off. If it is not, check the electrical and network connections. If the status of the Power LED is green, skip forward to step 5.



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.

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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.

Figure 3: Cisco Integrated Management Controller Web Interface

cisco Cisco Integra	ited Managemen	t Controller	Cisco IMC Hostnam Logged in a	e: BE7H-M4-K9 s: admin@10.1.1 Log Out
Overall Server Status	C 1 3 5 🔳 🔍	0 0	and the second	
Good	Server Summary			
Server Admin Channes	Actions	Server Properties		
Admin Storage	1	Product Name:	UCS C240 M4SX	
Summary	Power on Server	Serial Number:	FCH1851V2RB	
Inventory	Power Off Server	PID:	UCSC-C240-M4SX	
Sensors Remote Presence	Shut Down Server	UUID:	9D434991-D3DB-4352-A50F-ED2E0462BDF4	
RIOS	Dever Cycle Server	BIOS Version:	C240M4.2.0.3c.0.091920142008	
Power Policies	Hard Reset Server	Description:		
Faults and Logs	Launch KVM Console	Comune Status		
Troubleshooting	O Turn On Locator LED	Power State	0.00	
		Overall Server Status:	Good	
		Temperature:	Good	
		Overall DIMM Status:	Good	
		Power Supplies:	Good	
		Fans:	Good	
		Locator LED:	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)	
			Save Change	Reset Values

Customize 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



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

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The default username is root and password is password.

Figure 5: Hypervisor System Customization Menu

- 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 Ne			
Network Adapters VLAN (optional) IP Configuration IPo6 Configuration DNS Configuration Custon DNS Suffixes		Automatic IP Address: 10.1.1.86 Submet Mask: 255.255.255.0 DeFault Gateway: 10.1.1.10 This host can obtain an IP address and other network parameters automatically if your network includes a server. If not, ask your network administrator for 4 appropriate settings.	cing DHCP the
	IP Configuration This host can obtain network setting includes a DHCP server. If it does n specified: C Use dynamic IP address and networ (o) Set static IP address and networ IP Address Subnet Hosk Default Gateway	s automatically if your network ot, the following settings must be rk configuration [10.1.1.06] [10.1.1.10]	
	(Up/Down) Select (Space) Mark Select	d Center> UK CEsc> Concel	
<up down=""> Select</up>		<enter> Change <e< td=""><td></td></e<></enter>	

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

VMware ESXi 5 Welcome			
Getting Started	For Administrators		
If you need to access this host remotely, use the following program to install vSphere Client software. After running the installer, start the client and log in to this host.	vSphere Remote Command Line The Remote Command Line allows you to use command line tools to manage vSphere from a client machine. These		
To streamline your IT operations with vSphere, use the following program to install vCenter, vCenter will help you consolidate and optimize workload distribution across ESX hosts, reduce new system deployment time from weeks to seconds, monitor your	tools can be used in shell scripts to automate day to-day operations. • Download the Virtual Appliance • Download the Windows Installer (exe) • Download the Linux Installer (for.gz)		
intual computing environment around the clock, avoid service isruptions due to planned hardware maintenance or unexpected alure, centralize access control, and automate system dministration tasks.	Web-Based Datastore Browser Use your web browser to find and download files (for example, virtual machine and virtual disk files).		
Download VMware vCenter If you need more help, please refer to our documentation library:	 Browse datastores in this host's inventory 		
vSphere Documentation	For Developers		
6	vSphere Web Services SDK Learn about our latest SDKs, Toolkits, and APIs for managing VMware ESX, ESXi, and VMware vCenter. Get sample code, reference documentation, participate in our Forum Discussions, and view our latest Sessions and Webinars.		
	 Learn more about the Web Services SDK Browse objects managed by this host 		
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VMware is a registered trademark or trademark of VMware, Inc. in the Unit marks and names mentioned herein may be trademarks of their respective	ed States and/or other jurisdictions. All other companies.		

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 [datastore1] /OVA-ISO/vmware. A link to browse the datastore is provided on the right of the screen shown in figure 7.

Access and Configure Hypervisor

Some Business Edition applications require the host to have a valid time reference. Follow these steps to access the ESXi host, configure NTP, configure fault tolerance for network interface cards (NICs) using the NIC teaming feature, view predeployed 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 Hypervisor.

VMware vSphere Client **vm**ware[•] VMware vSphere" Client To directly manage a single host, enter the IP address or host name. To manage multiple hosts, enter the IP address or name of a vCenter Server IP address / Name: 10.30.27.140 • root User name: Password: **** Use Windows session credentials Login Close Help

Figure 8: Access Hypervisor Using vSphere Client

- **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 Cisco UC Virtualization Foundation license is predeployed 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 predeployed applications listed in the inventory pane of Figure 9.

🖉 esdocal - vSphere Client							
File Edit View Inventory A	dministration Plu	g-ins Help					
Ed Ed E2 none P 8	a numeron h (a	1 suvencery					
6 6							
esdocal		localhost.localdomain VMware E	SXI, 5.1.0, 1483097				
Cisco Prime Collaborat	tion Provisioning	Getting Started Summary Virtu	al Machines Resource Allocation	Performance Configu	ration Local L	sers & Groups Events	Permissions
Cisco Unified Contact Center Express	General		Resources				
CUCM IM and Presence	te Server	Manufacturer:	Osco Systems Inc	CPU usage: 217 MHz		Capacity 12 x 2.499 GHz	
		CPU Cores: Processor Type:	12 CPUs x 2.499 GHz Intel(R) Xeon(R) CPU E5-2640	Memory usage: 1773.0	IO MB	Capacity 65502.38 MB	8
		License:	 VMware vSphere S Hypervisor Licensed for 2 physical CP 	Storage	Drive Type	Capacity	471
	Processor Sockets: Cores per Socket:	2 6	datastore2	Non-SSD	1.36 TB		
	Logical Processors:	24	*	1.		N. Contraction of the second s	
	Number of NICs:	12	Network WM Natwork	Type Gandarda	ad on p	A COLORED	
	State:	Connected			, and the second s		
	Virtual Machines and Templates:	5		(1987) (1987)			
	vMotion Enabled:	N/A	Fault Tolerance			2	
		whithare Evo Prode:	Dogoeo	Fault Tolerance Version:	4.0.0-	4.0.0-4.0.0	
ecent Tasks			A	Name, Ta	arget or Status o	ontains: •	Clear
lame To	arget	Status		Details	Initiated by	Requested Start Ti	C Sart Time
Update service activat. Stop service	esidocal esidocal	Completed Completed			root	8/7/2014 8:57:28 AM 8/7/2014 8:57:27 AM	8/7/2014 8:57:28 8/7/2014 8:57:27
(lie							
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 network 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 seven 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-11.2.0-523-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_11.5_vmv8_v1.0.ova and associated ISO file Bootable UCSInstall UCOS 11.5.1.13900-1.sgn.iso).



For details of which files ship with each server, see the Build Summary PDF in the datastore OVA-ISO directory, or download from here http://www.cisco.com/c/en/us/support/unified-communications/ business-edition-6000/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 partially for fully preinstalled, 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

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.

File Edit View Inventory Administration Plug-ins Help A Home > 👌 Inventory > 🗐 In R 61 e ESXL 5.1.0, 148 o Unified Con Osco Systems Inc UCSC-C240-M35 12 CPUs x 2.499 GHs ed Contact Center Exp CPU usage: 110 MHz Manufach Capacity 12 x 2,499 GHz CPU Cores ry usage: 1830.00 MB Capacity 65502.38 MB Intel(R) Xeon(R) CPU E5-2640 0 @ 2.50GHz are vSphere 5 Hy nsed for 2 physic when Turn 1.35 TB 88 Non-SS 1.36 TE datas Cores per Socket Type Standard port grou 2 Requested Start Ti. Sart Time Completer Completer うりつ 8/7/2014 9:14:12 AM 20 23 23 8/7/2014 9:12:51 AM 7/2014 9:12:51 AM 8/7/2014 9:16:53 AM 373412 014 9:12:04 AM /7/2014 9:12:05 Tasks

Figure 12: 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** Continue to click **Next** to accept license agreements if prompted.
- **Step 3** Select the appropriate virtual machine size for your deployment.
- **Step 4** 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:

1

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 Assurance and Analytics Business	30
Cisco Prime Collaboration Deployment	20
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.

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 AFH/ directory in the datastore. Name the files as follows to ensure that they are used by the predeployed 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 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).

Show All Devices	Add Remove	Device Status
dware (Memory CPUs Video card VMCI device SCSI controller 0 Hard disk 1 CD/DVD drive 1 (edited) Network adapter 1 Floppy drive 1	Summary 6144 MB 2 Video card Restricted LSI Logic Parallel Virtual Disk [datastore1] OVA-I VM Network Floppy drive 1	Connect at power on Connect at power on Connect at power on Connect this device, you must power on the virbual machine and then click the Connect CD/DVD button in the toobar. Host Device CD/DVD Drive 1 (Device unavailable) Datastore ISO File [datastore I] OVA-ISO/CUCM-CUC/v: Browse Mode C Passthrough IDE (recommended) Emulate IDE Virbual Device Node C IDE (1:0) CD/DVD drive 1 C

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 or if you are using a predeployed virtual machine, go to Step 6, on page 17.
 - **Note** For predeployed VM, you do not need to configure the virtual machine Floppy drive settings to connect to the appropriate flp file on power on.



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.

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