



Cisco Business Edition 7000 Installation Guide, Release 10.6

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Introduction

The Cisco Business Edition 7000 (BE7000) solution offers premium voice, video, mobility, messaging, conferencing, instant messaging and availability; and contact center features on a single, integrated platform. The solution provides core communication capabilities that enterprise businesses need for improved collaboration across their value chain.

This document provides step-by-step guidance on how to configure a BE7000M or BE7000H server and how to install a selection of collaboration applications, including those listed below:

- Cisco Prime Collaboration Provisioning
- Cisco Unified Communications Manager
- Cisco Unity Connection
- Cisco Unified Communications Manager IM and Presence Service
- Cisco Expressway
- Cisco TelePresence Conductor
- Cisco TelePresence Server
- Cisco TelePresence Management Suite
- Cisco Unified Contact Center Express
- Cisco Emergency Responder
- Cisco TelePresence Video Communication Server
- Cisco Unified Attendant Console
- Cisco Paging Server
- Cisco TelePresence Content Server



Note

This list does not include all the applications that you can install on a BE7000M or BE7000H server. See <http://www.cisco.com/go/uc-virtualized> for the complete list of supported applications. To check if you can use a Cisco or third-party virtualized application under a VMware Embedded Hypervisor License or a VMware License, see the [Cisco Business Edition 6000 and Cisco Business Edition 7000 Co-residency Policy Requirements](#) document.

BE7000M consists of a Cisco Unified Computing System C240 M4S2 Rack-mount server (SFF drives with 16-drive backplane and integrated expander), prepared in manufacturing as follows:

- 12 disk drives that are pre-configured as two RAID-5 disk arrays (six disks per array)
- Cisco Unified Communications Virtualization Hypervisor (VMware ESXi), preinstalled and licensed [1](#)
- Predeployed Cisco Collaboration virtual machines
- Installation media for Cisco Collaboration applications preloaded in the datastore

BE7000H consists of a Cisco Unified Computing System C240 M4SX Rack-mount server (SFF drives with 24-drive backplane and expander), prepared in manufacturing as follows:

- 20 disk drives that are pre-configured as four RAID-5 disk arrays (five disks per array)
- Cisco Unified Communications Virtualization Hypervisor (VMware ESXi), preinstalled with a Cisco Virtualization Hypervisor embedded license
- Predeployed Cisco Collaboration virtual machines
- Installation media for Cisco Collaboration applications preloaded in the hypervisor datastore

For design and virtualization details, see “How to Design” section at the following location: [Cisco Business Edition 6000 and Cisco Business Edition 7000 Co-residency Policy Requirements](#) .

¹ Refer to the *Cisco Business Edition 6000 and Cisco Business Edition 7000 Co-residency Policy Requirements* document where embedded hypervisor licenses are used.



Preparation

- [Collect Required Network Information, page 1](#)

Collect Required Network Information

Before you begin the installation, collect the following network information from the data network administrator. You will need this information for the installation:

- IP Addresses for the following:
 - VMware Hypervisor (ESXi)
 - Each collaboration application to be installed
 - (optional) CIMC, if remote console access is required
- Subnet Mask
- Gateway IP address
- DNS server IP address
- Hostname for each application
- (optional) Domain Name
- NTP server IP address
- Time zone
- (optional) SMTP server

The next sections list the steps to install a BE7000 server. After collecting the required network information, follow the rest of the document carefully. For general information on the Cisco UCS C240 M4 server used in Cisco Business Edition 7000, see the [Cisco UCS C240 M4 Server Installation and Service Guide](#).



Installation

- [Power On and Initial Setup, page 3](#)
- [Customize Virtualization Hypervisor for Remote Access, page 6](#)
- [Access and Configure Virtualization Hypervisor, page 9](#)
- [Using Predeployed Virtual Machines, page 14](#)
- [Deploy New Virtual Machines , page 14](#)
- [Install Applications on Virtual Machines, page 16](#)

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 4](#) and [Figure 2: Power and LED Status - BE7000H Server, on page 4](#).

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 1: Power and LED Status - BE7000M Server

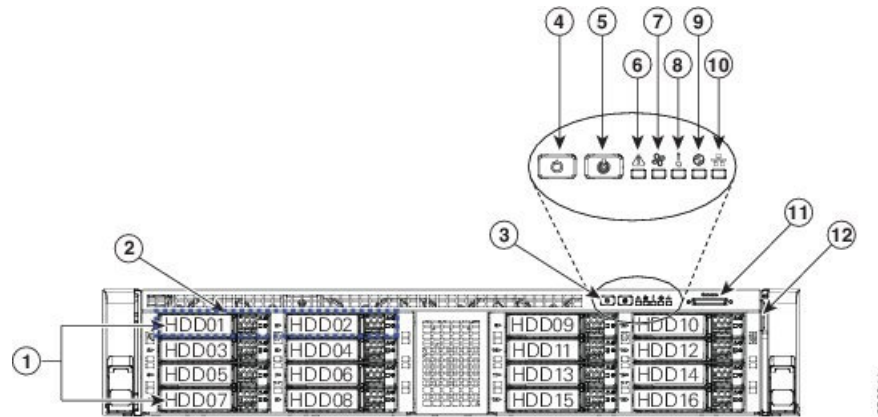
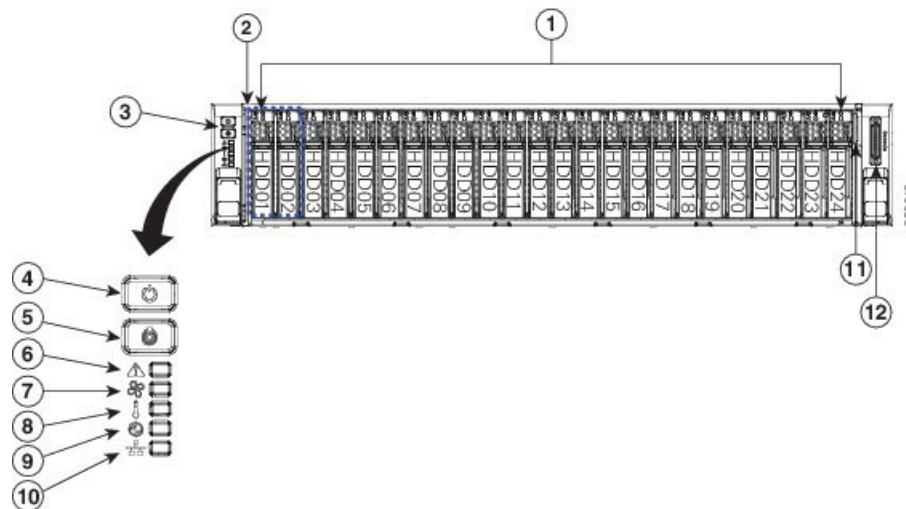


Figure 2: Power and LED Status - BE7000H Server



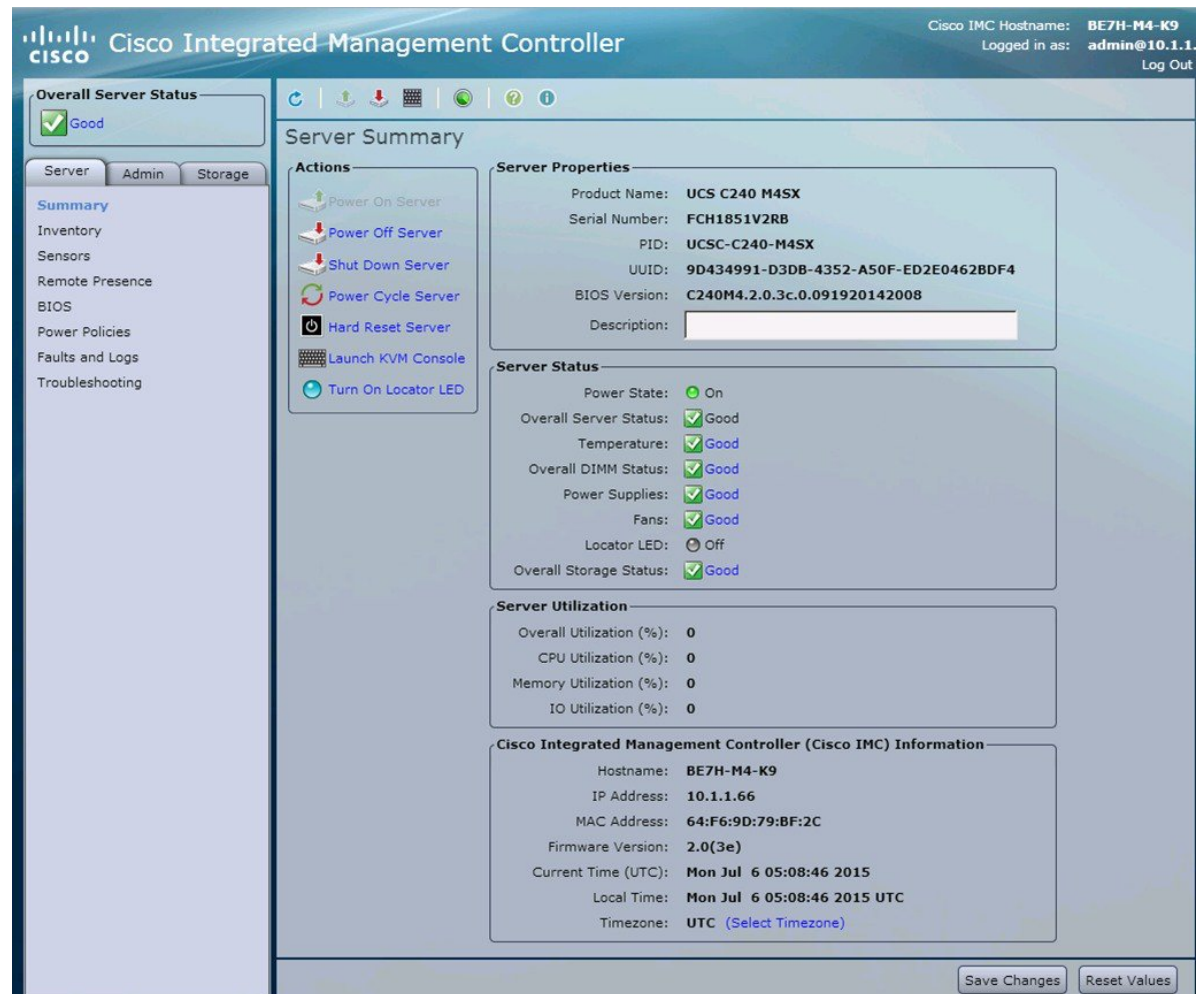
- Step 4** Push the power button (3) and verify that the power button LED the disk LED disk drive change to green.
- Step 5** Watch the boot process on the monitor.
- Step 6** (Optional) Press **F8** to open the CIMC Configuration window when prompted. In the CIMC Configuration window, reset the CIMC 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 Locator 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



Customize Virtualization Hypervisor for Remote Access

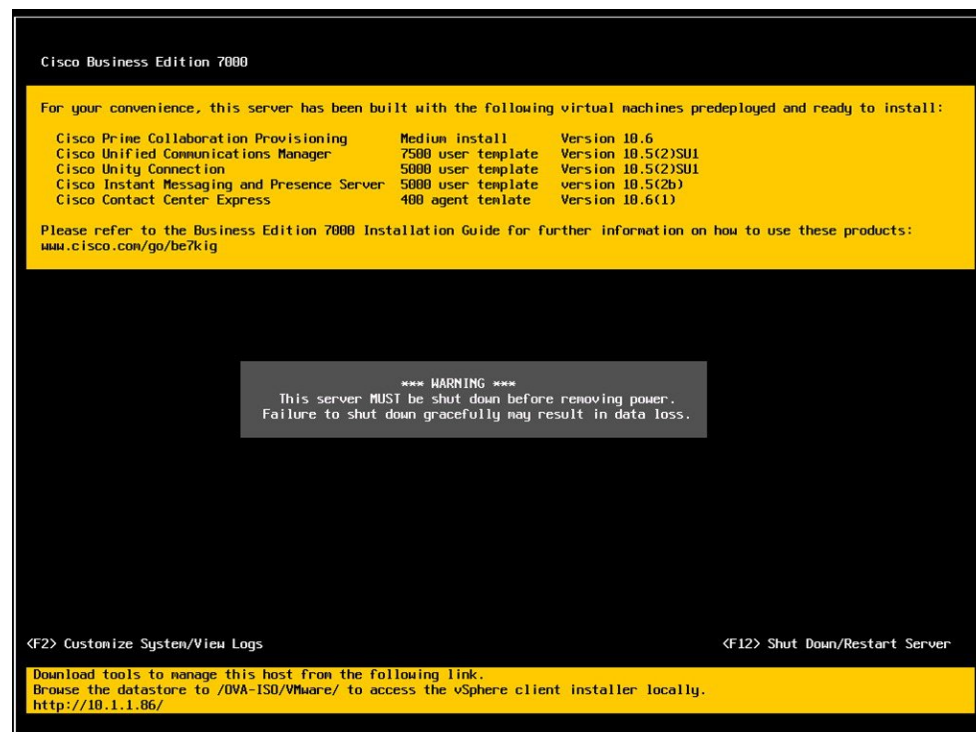
Follow this procedure to customize the Hypervisor (VMware vSphere Hypervisor) to enable remote access from your PC using the vSphere client.

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.

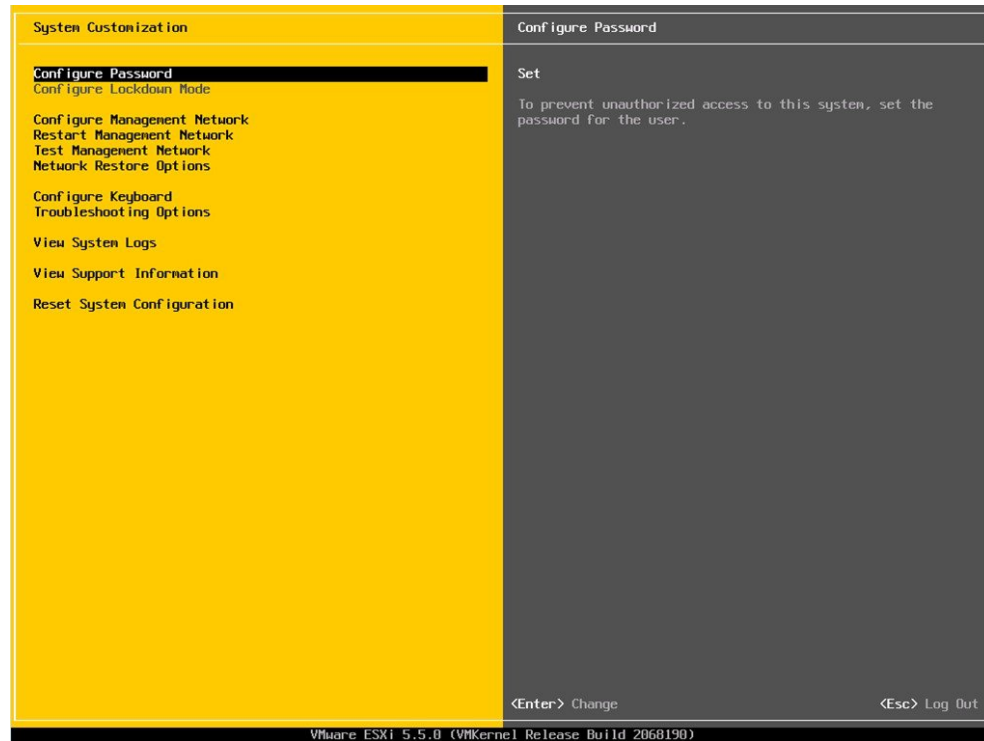
Figure 4: Direct Console Screen After Hypervisor Loads



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

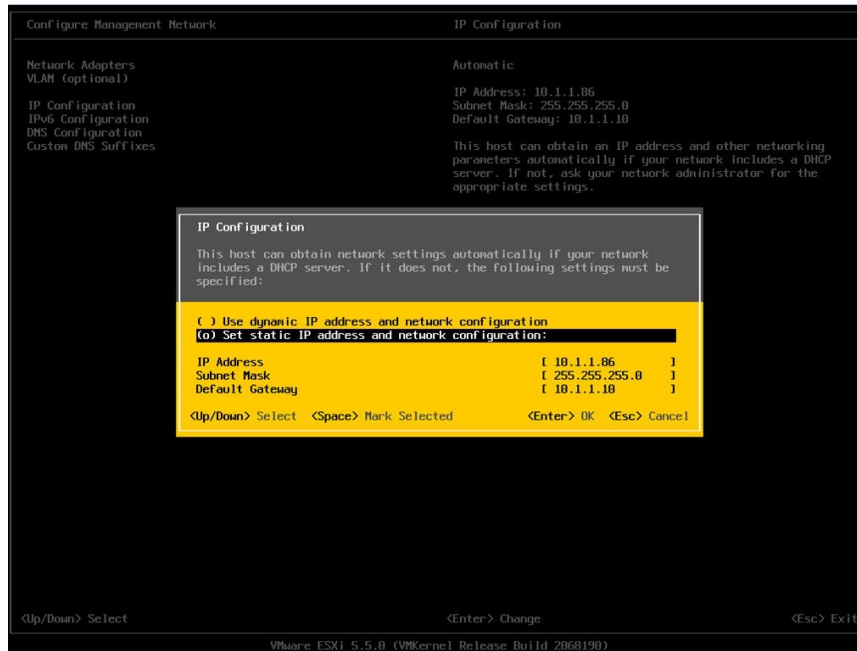
The default username is `root` and password is `password`.

Figure 5: Virtualization Hypervisor System Customization Menu



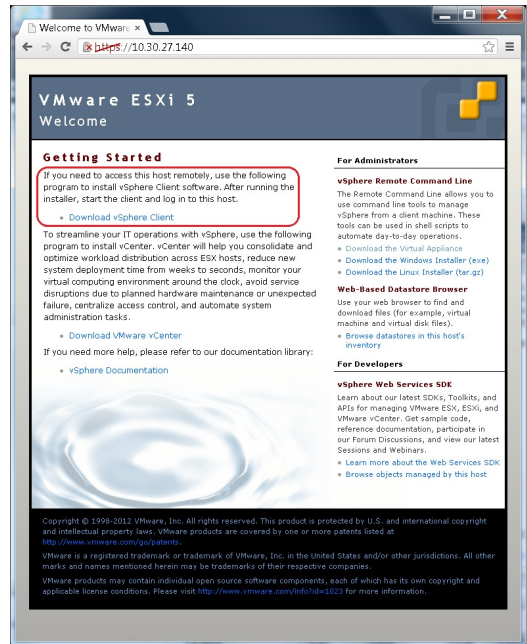
- Step 3** (Recommended) Choose **Configure Password** to change the password.
- Step 4** To assign a static IP address, enter the Configure Management Network menu, and follow the instructions on screen to change “IP Configuration” as shown in Figure 6.

Figure 6: Assign Static IP Address to ESXi Host



- 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.

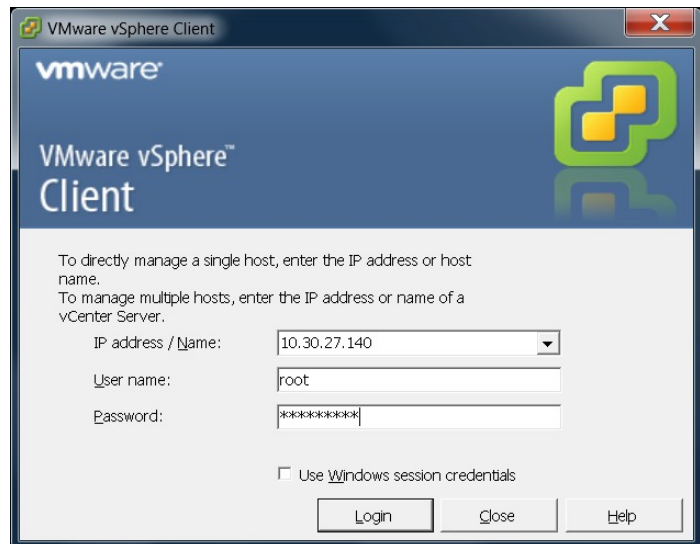
Access and Configure Virtualization Hypervisor

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.

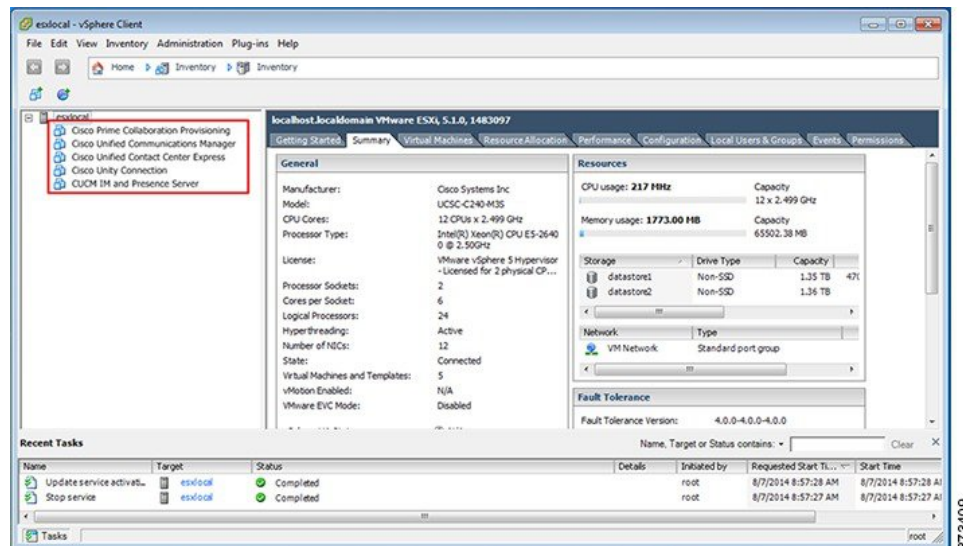
Figure 8: Access Virtualization Hypervisor Using vSphere Client



- 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:
- 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.
 - Navigate to **Configuration > Software > Licensed Features**, and click **Edit**.
 - Select **Assign a new license key to this host**.
 - Click **Enter Key...**.
 - Type in the Master serial number.
 - Click **OK** to close configuration dialogs and apply the license.

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

Figure 9: Configuring and Managing Hypervisor and Virtual Machines



Step 4 Configure NTP:

- Navigate to **Configuration > Software > Time Configuration**.
- Click **Properties** to launch the **Time Configuration** screen.
- Update the Time Click **Options...**
- Select NTP Settings.
- Click **Add** and type the IP address of NTP server. Repeat this step to add multiple NTP servers.
- Click **OK**.
- Select **General > Start and Stop with Host**.
- Click **Start** button. Click **OK** to close the configuration screens.

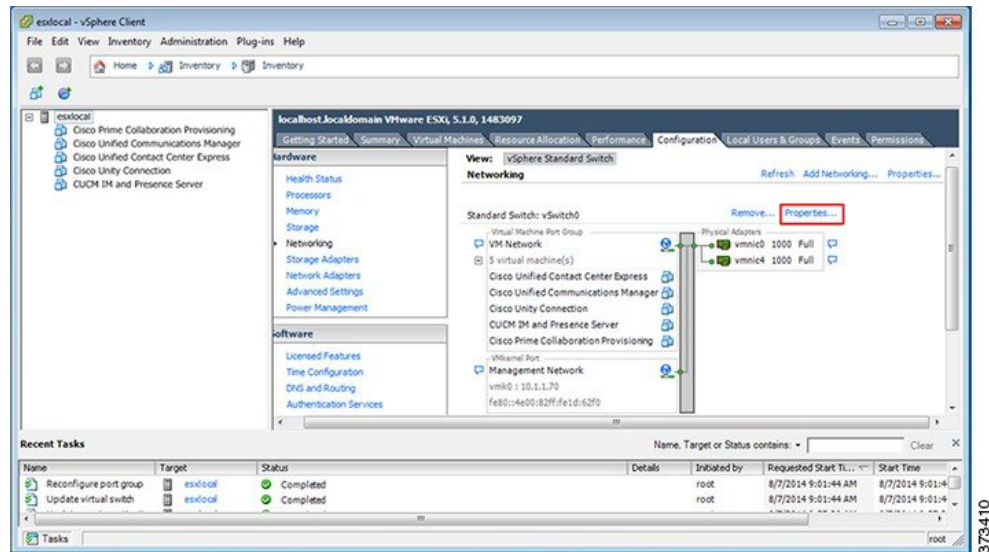
Step 5 Configure fault tolerance by using the NIC teaming feature in VMware:

- Navigate to **Configuration > Hardware > Networking**.
- Click **Properties** for "Standard Switch: vSwitch0," as shown in the figure below.
- In the configuration screen **vSwitch0 Properties**, select the tab **Network Adapters**.
- Click **Add...** to add the NIC that is connected to data network.
- 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

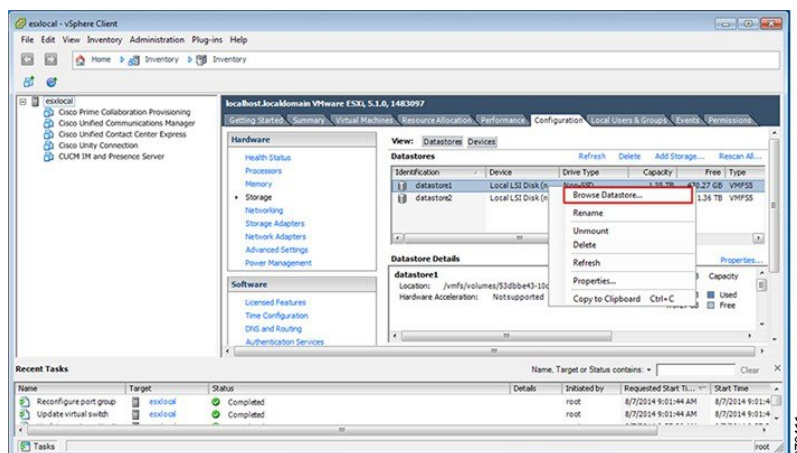


The Hypervisor is now ready to host virtualized collaboration applications. Virtual machines for five of the most commonly used collaboration applications are predeployed on the hypervisor for you. Software for these collaboration applications and additional applications are also preloaded in the datastore for your convenience.

- Step 6** Browse the datastore:
- Navigate to **Configuration > Hardware > Storage**.
 - 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`).

**Note**

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 4** Power 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>.

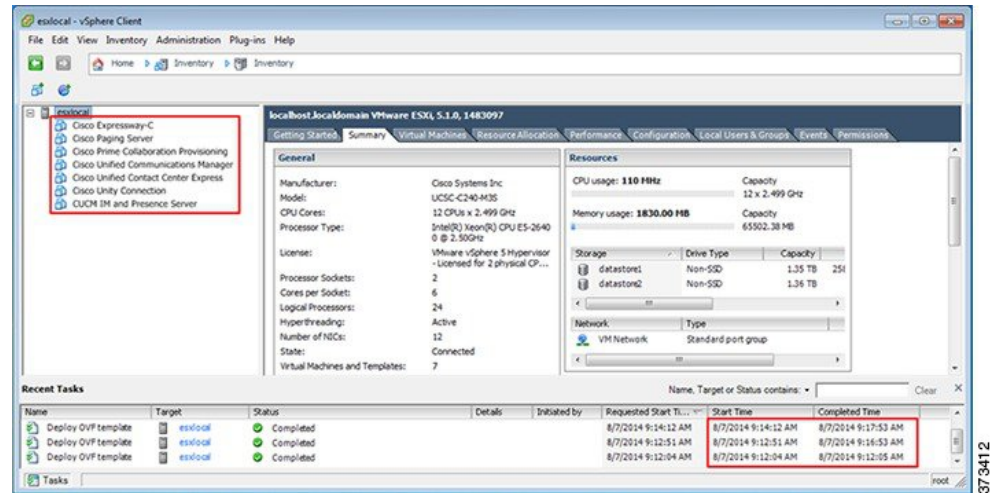
The OVA template file defines the virtual machine for specific applications.

Note the following:

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

- 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.

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

**Note**

You can install multiple applications concurrently to save time.

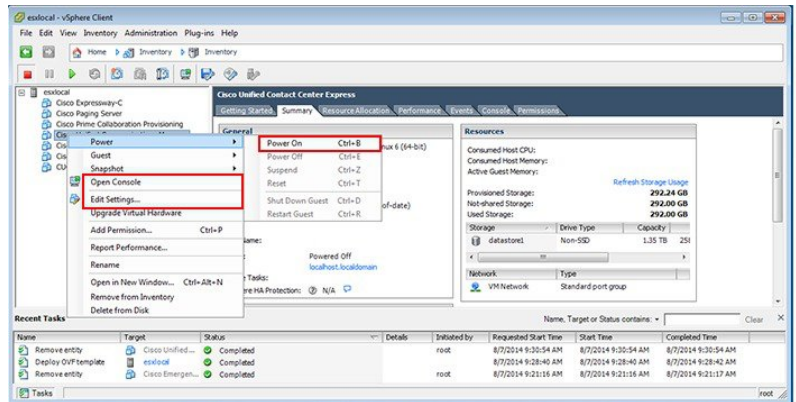
- Do not install Unified Communications Manager and Cisco Unity Connection simultaneously, because they use the same ISO image.
- You can install multiple applications concurrently to save time.
- Preinstalled applications take approximately 20 minutes or less to complete installation.

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.

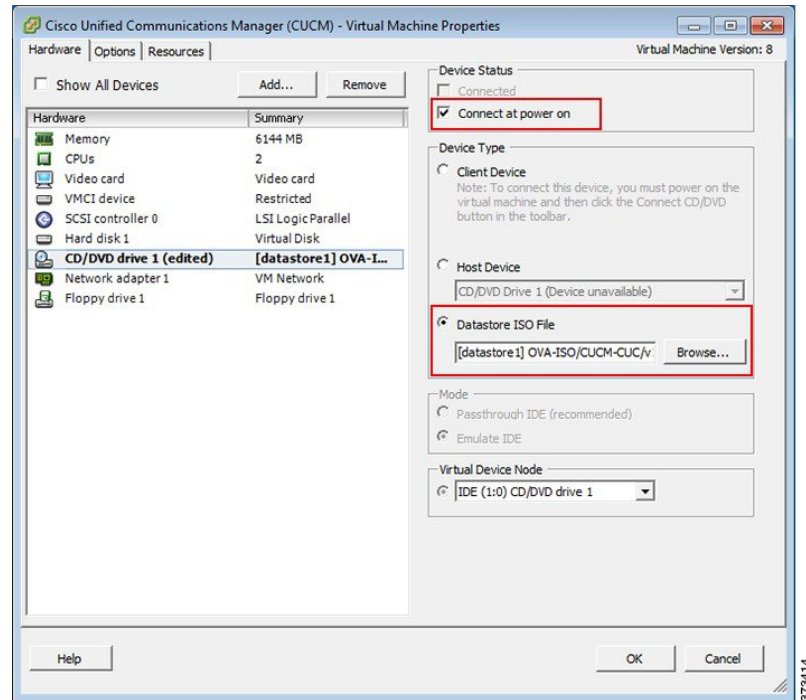
Figure 13: Select an Application VM to Edit Settings, Associate the ISO with the VM, Power On, and Take Any Other Administrative Action



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 preloaded/predeployed 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>).

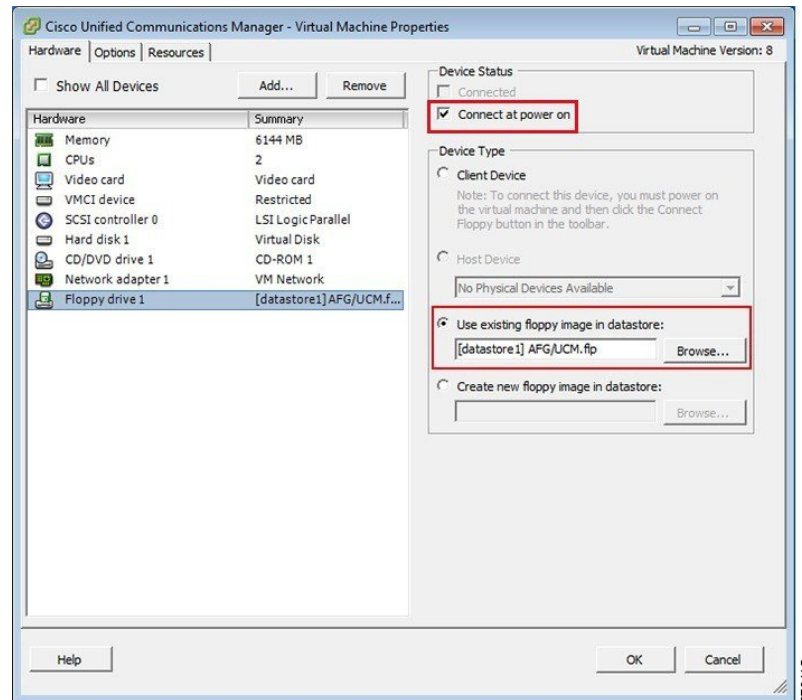
Figure 14: Edit Virtual Machine Settings to Connect ISO Image of Application Software



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

- d) If you have created answer files in [Step 3, on page 17](#), 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 20](#).

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:

- Power on the virtual machine, right click and choose **Open Console** as shown in Figure 13.
- 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 17](#).
- 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 , on page 24](#) section.

What to Do Next

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



CHAPTER

3

Application Configuration

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- [Where To Go From Here](#), page 24
- [For More Information](#), page 24

Set up Applications and Apply Licenses



Note

This procedure applies to application licenses, not VMware licenses.

Follow these steps to access each application, perform first-time setup for some applications, and apply the licenses.

Procedure

- Step 1** To access the administration portal for each individual application, browse to the IP address of application. Consider the following information:
- Optional. For Paging Server installations: Collect information about the application URL from the virtual machine console. The default first-time username and password are admin and changeMe.
 - Cisco Prime Collaboration Provisioning: Browse to the IP address and use globaladmin as the username.
- Step 2** After you purchase an application license, Cisco sends a Product Authorization Key (PAK) via mail or email. You can use the PAK to generate a license key for your specific installation using the Cisco Product License Registration portal at www.cisco.com/go/license or you can enter the information directly in Cisco Prime License Manager.
- Step 3** Apply license keys using the application administration portal. Refer to the following points for licensing information specific to whichever applications that you have installed:
- Cisco Prime Collaboration Provisioning: No license is required to use Cisco Prime Collaboration Provisioning Standard Edition. You may purchase an upgrade to Cisco Prime Collaboration Provisioning Advanced Edition if required.

- Paging Server: No license is required to use Basic Paging Server. You may purchase an upgrade to Advanced Edition if required.
 - Unified Communications Manager and Cisco Unity Connection: Browse the IP Address of Unified Communications Manager and click **Cisco Enterprise License Manager**. Select **License > Install License File** and follow instructions.
Note Cisco Enterprise License Manager (ELM) is automatically installed as part of the Unified Communications manager installation.
 - For Cisco VCS, Expressway, TelePresence Server, and Conductor installations: After registering the license PAK two keys are provided—Release key and Option key. In the administration portal, select **Maintenance > Option keys**. Apply the Release key first, and then apply the Option key (s).
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Related Topics

[Product License Registration](#)

[Cisco Product Upgrade Tool \(PUT\)](#)

Where To Go From Here

After you verify successful installation, see <http://www.cisco.com/c/en/us/products/unified-communications/business-edition-7000/index.html>.

For More Information

- Cisco Business Edition 7000 Main website
<http://www.cisco.com/c/en/us/products/unified-communications/business-edition-7000/index.html>
- Cisco Business Edition 7000 Support Documents
<http://www.cisco.com/c/en/us/support/unified-communications/business-edition-7000/tsd-products-support-series-home.html>