



## Installation Tasks

---

- [Before You Begin, on page 1](#)
- [Touchless Installation for Virtual Machine, on page 2](#)
- [Install Software, on page 7](#)
- [Apply a Patch to Upgrade During Installation, on page 10](#)
- [Configure Installation, on page 14](#)

## Before You Begin

Before you begin the installation, review the following information:

- Make sure that the subscriber nodes that you are installing can connect to the publisher node server during the installation.
- Make sure that all Cisco Unified Communications Manager servers in a cluster have the same software version. Make sure that all IM and Presence servers in a cluster have the same version of the released software. The only exception is during a cluster software upgrade, during which a temporary mismatch is allowed. If you are installing IM and Presence nodes, Cisco Unified Communications Manager and IM and Presence Service software versions must have the same major and minor release number.
- Do not attempt to perform any configuration tasks during the installation.
- Be aware that directory names and filenames that you enter while you are running the installation program are case-sensitive.
- For a short period of time after you install Cisco Unified Communications Manager or switch over after upgrading to a different product version, settings changes made by phone users might get reset. Examples of phone user settings includes call forwarding and message waiting indication light settings. This can occur because Cisco Unified Communications Manager synchronizes the database after an installation or upgrade, which can overwrite phone user settings changes.

## Installation Wizard

The following table provides instructions on how to navigate within the installation wizard.

Table 1: Installation Wizard Navigation

To Do This	Press This
Move to the next field	Tab
Move to the previous field	Alt-Tab
Choose an option	Space bar or Enter
Scroll up or down in a list	Up or down arrow
Go to the previous window	Space bar or Enter to choose Back (when available)
Get help information on a window	Space bar or Enter to choose Help (when available)



**Note** The installation wizard supports the following characters:

- alphanumeric: A-Z, a-z, and 0-9- spaces
- spaces and # (except as the first character)
- only the following special characters: \, - \_ ; { } ( ) [ ]

all other characters are not supported.

## Touchless Installation for Virtual Machine

Previous releases of Cisco Unified Communications Manager cluster environment required you to install the publisher node first before you proceed to install the subscriber nodes. You had to install the subscriber nodes after adding them to the server page of the publisher node and repeat the same procedure for each subscriber node. With the touchless installation feature, the subscriber nodes are configured dynamically along with the publisher node during their installation.

Touchless installation is a new feature in Cisco Unified Communications Manager. This feature makes the installation process seamless and promotes simplified cluster installation. The touchless installation proceeds without the requirement to provide any subscriber details in the installation wizard. Subscribers are not dependent on the installation of the publisher. This feature has the following benefits:

- No manual intervention and scheduling during the deployment of a new cluster.
- No manual entry of each subscriber and simplifies the addition of new subscribers to an existing cluster.
- No requirement to wait until the publisher node is active.

## Automatic Sequencing of Touchless Server

Automatic sequencing is an approach that facilitates the installations of both the publisher node and the subscriber nodes in a cluster at the same time without manual intervention. Subscriber nodes wait for the publisher node to complete its installation, and then get added to the database of the publisher node to continue

with their own installation. After the publisher node is installed, it authenticates each subscriber. After authentication, each subscriber node receives a signal from the publisher node and the installation of that subscriber node continues automatically.

Initiate automatic sequencing by enabling the **Dynamic Cluster Config Enable** timer checkbox and providing a value in the **Dynamic Cluster Config Timer** field. You can enable this timer by using one of the following methods:

- Answer File Generator (AFG) tool.
- Command line interface (CLI) command on the Cisco Unified Communications Manager publisher node.

## Answer File Generator

Use the Answer File Generator (AFG) tool ([http://www.cisco.com/web/cuc\\_afg/index.html](http://www.cisco.com/web/cuc_afg/index.html)) to generate the answer files or floppy image files for configuration. These files include `clusterConfig.xml` and `platformConfig.xml` files. The `clusterConfig.xml` file is a new file in Cisco Unified Communications Manager Release 10.5(2).

Start the virtual machine on which you mounted the ISO and floppy image to start the Cisco Unified Communications Manager installation. No manual intervention is required during installation of a standalone node or a cluster.

In a cluster environment, you can install both the publisher node and the subscriber nodes simultaneously. Sometimes, the installation of the subscriber nodes can stop during the installation of the publisher node. In this case, after the publisher node installation is complete, it generates a signal for the subscriber nodes to continue their installation.

## Predefined Cluster Configurations (AFG Process)

With the implementation of this feature, the Answer File Generator (AFG) tool generates the `clusterConfig.xml` file along with the existing the `platformConfig.xml` file. If you provide the details of subscriber nodes to the AFG tool, the `clusterConfig.xml` file includes those details. After the Cisco Unified Communications Manager publisher is installed, it reads the `clusterConfig.xml` file and if the publisher finds any subscriber nodes, it adds them to its processnode tables. Adding the subscribers to processnode tables eliminates the need to wait for the Cisco Unified Communications Manager publisher to finish its installation, and then manually add the subscribers on the server page. The entire installation process occurs automatically.

## Touchless Installation Configuration Task Flow

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<a href="#">Generate and Download a Floppy Image, on page 4.</a>	Generate the floppy image using the Answer File Generator tool. The floppy image consists of two precreated answer files— <code>platformConfig.xml</code> and <code>ClusterConfig.xml</code> files that are downloaded automatically when you download the floppy image.

	Command or Action	Purpose
<b>Step 2</b>	<p><a href="#">Install a Cluster, on page 5</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Install a Cluster When the Dynamic Cluster Configuration Timer is Enabled, on page 5</a></li> <li>• <a href="#">Install the Cluster When the Dynamic Cluster Configuration Timer is Not Enabled, on page 5</a></li> </ul>	<p>Install a cluster in one of the following ways:</p> <ul style="list-style-type: none"> <li>• Install the publisher node and subscriber nodes with no manual intervention by enabling the <b>Dynamic Cluster Config Enable</b> timer.</li> <li>• Install the subscriber nodes when you do not enable the <b>Dynamic Cluster Config Enable</b> timer while generating the answer files.</li> </ul>

## Generate and Download a Floppy Image

The Cisco Unified Communications Answer File Generator web application generates the answer files for Cisco Unified Communications installations. These precreated answer files are `platformConfig.xml` and `ClusterConfig.xml` files and are included in the floppy image.

Perform the following procedure to generate and download the floppy image:

### Procedure

- 
- Step 1** Log in to the Cisco Unified Communications Answer File Generator application.
- Step 2** Enter details in the **Clusterwide Configuration** section.
- Step 3** Enter details for the primary node in the **Primary Node Configuration** section.
- Step 4** To enable Dynamic Cluster Configuration, from the **Dynamic-Cluster-Configuration** section, enable the **Dynamic Cluster Config Enable** timer check box and enter a value in the **Dynamic Cluster Config Timer** field.
- Specify a value from 1 to 24 for this field, where the number indicates hours.
- Note** If you do not enable the **Dynamic Cluster Config Enable** timer and specify its value in the **Dynamic Cluster Config Timer** field while you to generate the answer files, you will have to enable this timer later when the publisher node gets installed automatically but the subscriber nodes are waiting for installation. Then, you will have to add the subscriber nodes manually so that their installation occurs automatically.
- Step 5** Enter details for the secondary node in the **Secondary Node Configuration** section.
- Step 6** In the **List of Secondary Nodes** list box, select **Add Secondary Node**.  
The node that you add as secondary node appears in this list box.
- Step 7** Repeat Steps 5 and 6 for additional secondary nodes.
- Step 8** Click **Generate Answer Files**.  
A dialog box appears showing the details for the primary node, the secondary node, and the `clusterConfig` file.
- Step 9** In the **Communications Answer File Generator** dialog box, follow the download instructions, and then click the **Download File** button to download the answer files to your computer.
-

## Install a Cluster

Depending on whether you enabled the **Dynamic Cluster Config Enable** timer in the Answer File Generator tool or not, you can choose one of the following ways to install a cluster:

- Install the publisher node and subscriber nodes with no manual intervention by enabling the **Dynamic Cluster Config Enable** timer. See [Install a Cluster When the Dynamic Cluster Configuration Timer is Enabled, on page 5](#).
- Install the subscriber nodes when you do not enable the **Dynamic Cluster Config Enable** timer while generating the answer files. See [Install the Cluster When the Dynamic Cluster Configuration Timer is Not Enabled, on page 5](#).

### Install a Cluster When the Dynamic Cluster Configuration Timer is Enabled

#### Before you begin

Enable the **Dynamic Cluster Config Timer** field by one of the following ways:

- Click the **Dynamic Cluster Config Enable** timer checkbox and enter a value in the **Dynamic Cluster Config Timer** field in the Answer File Generator tool. For details, see Step 4 of the [Generate and Download a Floppy Image, on page 4](#) procedure.
- Enter the **set network cluster subscriber dynamic-cluster-configuration** *{default | no. of hours}* CLI command.

#### Procedure

---

**Step 1** Mount the floppy image on the virtual machine.

**Note** If the virtual machine is Cisco Unified Communications Manager publisher node, then the floppy image contains both the `platformConfig.xml` and `ClusterConfig.xml` files. However, if the virtual machine is Cisco Unified Communications Manager subscriber node or IM and Presence publisher node or subscriber nodes, the floppy image contains only the `platformConfig.xml` file.

For details on how to create a floppy a new virtual floppy image, see [http://docwiki.cisco.com/wiki/How\\_to\\_Use\\_the\\_AFG\\_with\\_the\\_Virtual\\_Floppy\\_Drive](http://docwiki.cisco.com/wiki/How_to_Use_the_AFG_with_the_Virtual_Floppy_Drive).

**Step 2** Start the publisher node and all subscriber nodes.  
Publisher node and subscriber nodes get installed automatically with no manual intervention. Each subscriber node gets automatically added to the publisher through the automatic sequencing approach.

---

### Install the Cluster When the Dynamic Cluster Configuration Timer is Not Enabled

If you do not enable the **Dynamic Cluster Config Timer** field in the Answer File Generator tool, the publisher node gets installed automatically. However, the subscriber nodes will be waiting for their installation.

To avoid the waiting time of the subscriber nodes so that the cluster installation continues, perform one of following tasks:

- From the Cisco Unified Communications Manager, select the **Web Interface** and click the **Server** tab and add the subscriber nodes manually.
- Enable the **Dynamic Cluster Config Timer** field from the CLI of the publisher node with the new CLI command that is available in Cisco Unified Communications Manager Release 10.5(2)—**set network cluster subscriber dynamic-cluster-configuration** {*default* | *no. of hours*}. After you enable this timer, the subscriber nodes get added to the publisher automatically and the installation of the subscriber nodes proceeds.

**Note**

- If you need to add one or more subscribers as specified for the publisher node, you can add them while you generate the `platformconfig.xml` file. You have to specify the publisher node and the subscriber nodes. If the **Dynamic Cluster Config Timer** timer is still active, subscribers get automatically added to the publisher and the installation of the subscriber nodes continues.
- This feature has no limitation on predefining the number of subscriber nodes that you need to add to a publisher node.

---

Use the WinImage tool to create the disk images. Mount the ISO images through VMware ESXi.

**Before you begin**

Place the floppy image at datastore from where it is accessible to virtual machine for mounting.

**Procedure**

- 
- Step 1** Start the virtual machine to start the cluster installation.
- Step 2** From the **VM** menu, choose **Edit settings** to mount the floppy image that you have created from the Answer File Generator tool.  
The **Virtual Machine Properties** dialog box appears.
- Step 3** From the available hardware list, select **Floppy drive 1**.
- Step 4** In the **Device Type** section, select **Use the existing floppy image in the database**, and then click **Browse** to navigate to the floppy image.
- Step 5** Click **OK**.  
The floppy image is attached.
- Step 6** Select the **CD/DVD Drive 1 > Connect to ISO image on local disk** option from the toolbar and choose **CD/DVD Drive1 > Connect to ISO image on a datastore**, navigate to the data store to select the installer ISO image, and click **OK**.  
The ISO image is attached and the installation starts.
- Step 7** (Optional) If you want to test the media before the installation, click **OK** in the **Disc Found** message box, or click **Skip** to skip testing the media before the installation.  
The installation proceeds without any manual intervention. The publisher is installed and the subscribers are added to the publisher.
-

## IM and Presence Service Integration

This feature supports heterogeneous cluster-wide installation that includes Cisco Unified Communications Manager and IM and Presence Service nodes. The concept and installation process for IM and Presence Service is same as the installation process for Cisco Unified Communications Manager in a cluster.

From the AFG tool, check the **Dynamic Cluster Config Timer** check box, select IM and Presence Service, and enter the details for Cisco Unified Communications Manager publisher node, IM and Presence Service publisher node, and IM and Presence Service subscriber details (if any). Then, AFG tool generates the `clusterConfig.xml` file along with `platformConfig.xml` file for each node. You can use this `clusterConfig.xml` file only with Cisco Unified Communications Manager publisher node along with `platformConfig.xml` file that is generated for this node. For all other nodes, only `platformConfig.xml` file is used.

Answer File Generator (AFG) saves the domain name of IM and Presence Service publisher in the `clusterConfig.xml` file along with the existing details.

The integration of Cisco Unified Communications Manager with IM and Presence includes the following tasks:

- The IM and Presence Service publisher is added to the processnode table with domain name after the installation of Cisco Unified Communications Manager.
- Cisco Unified Communications Manager and IM and Presence Service nodes are added to the processnode table using the IP address, if available.
- When you add the IM and Presence Service publisher through CLI, the domain is added.

## Install Software

Use the procedures in this section to begin the software installation.

### Start Basic Installation

To start the installation, follow this procedure.



---

**Note** If you are installing a subscriber node or adding a node to an existing cluster, you must configure the hostname or IP address of the new node on the publisher node in the cluster. From Cisco Unified CM Administration on the publisher node, choose **System > Server** and enter the IP address or hostname of the subscriber node. For more information, see the *Cisco Unified Communications Manager Administration Guide*.

---



---

**Note** Do not use single quotes ( ' ') in the Description field while adding the node details.

---

## Procedure

---

- Step 1** If you are using a configuration file created by the Answer File Generator, ensure that the file is accessible to the system:
- insert the USB key with the configuration information now
  - place the virtual floppy image in a location where the virtual machine can access it
- Note** If you have a new server with the software pre-installed, you do not need to install from a DVD or ISO file, unless you want to re-image the server with a later product release. Go directly to the configure basic installation procedure to enter the configuration information; see the Related Topics below for more information.
- Step 2** Perform one of the following actions:
- If you are installing from a DVD drive a VMware ESXi server host, insert the installation DVD into the tray and restart the server, so that it boots from the DVD.
  - If you are installing from a data store ISO file located on the local ESXi host or on a storage area network (SAN), edit the CD/DVD drive on the virtual machine to select the data store ISO file. Select the option to connect at power on, and restart the virtual machine. If you configured the virtual machine to use the ISO at the same time that you created the virtual machine using the OVA file, skip this step and complete the rest of the procedure.
- After the server completes the boot sequence, the **DVD Found** window displays.
- Step 3** To perform the media check, choose **Yes** or, to skip the media check, choose **No**.
- The media check checks the integrity of the DVD. If your DVD passed the media check previously, you might choose to skip the media check.
- Step 4** If you choose **Yes** to perform the media check, the **Media Check Result** window displays. Perform these tasks:
- a) If the **Media Check Result** displays **Pass**, choose **OK** to continue the installation.
  - b) If the media fails the Media Check, either download another copy from Cisco.com or obtain another DVD directly from Cisco.
- Step 5** In the **Product Deployment Selection** window, specify the product to install:
- If you are installing the IM and Presence Service, select **OK**.
  - If you are installing a Cisco Unified Communications Manager application, select the product to install and choose **OK**. You can choose from the following options:
    - Cisco Unified Communications Manager
    - Cisco Unity Connection
    - Cisco Prime License Manager
- Note** The window indicates which products are supported and not supported by your hardware. If only one product is supported, you do not choose which product to install.

**Note** Cisco Prime License Manager is installed co-resident automatically as part of this installation. Following the installation, Cisco Prime License Manager can be used to provide simplified, enterprise-wide management of user-based licensing, including license fulfillment. Cisco Prime License Manager handles licensing fulfillment, supports allocation and reconciliation of licenses across supported products, and provides enterprise level reporting of usage and entitlement. For more information, see the *Cisco Prime License Manager User Guide*.

**Step 6** If software is currently installed on the server, the **Overwrite Hard Drive** window opens and displays the current software version on your hard drive and the version on the DVD or ISO file. Choose **Yes** to continue with the installation or **No** to cancel.

**Caution** If you choose **Yes** on the **Overwrite Hard Drive** window, all existing data on your hard drive gets overwritten and destroyed.

The **Platform Installation Wizard** window displays.

**Step 7** Choose one of the following options:

- To enter your configuration information manually and have the installation program install the configured software on the server, choose **Proceed** and continue with this procedure.
- To do any of the following tasks, choose **Skip** and perform the configure basic installation procedure to enter the configuration information.
  - Manually configure the software that is pre-installed on your server – In this case you do not need to install the software, but you must configure the pre-installed software.
  - Perform an unattended installation – In this case, you provide preexisting configuration information on a USB key or floppy disk.
  - Install the software before manually configuring it – In this case the installation program installs the software, then prompts you to configure it manually. You can choose **Skip** if you want to pre-install the application on all your servers first and then enter the configuration information at a later time. This method might cause you to spend more time performing the installation than the other methods.

**Step 8** In the **Apply Additional Release** window, choose one of the following installation types:

- To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue to perform the procedure to apply a patch.
- To skip this step or to install IM and Presence nodes, choose **No**.
- To return to the previous window, choose **Back**.

**Step 9** In the **Basic Install** window, choose **Continue** to install the software or configure the pre-installed software. Perform the configure basic installation procedure to configure the basic installation.

---

## Enter Preexisting Configuration Information

Follow this procedure if you have a server that has the product pre-installed, or if you installed the product earlier but chose **Skip** in the Platform Installation Wizard window to configure the server at a later time.

### Procedure

---

- Step 1** After the system restarts, the **Preexisting Installation Configuration** window displays.
- Step 2** If you have preexisting configuration information that the Answer File Generator created, that is stored on a USB key, insert the USB key now and choose **Continue**. The installation wizard will read the configuration information during the installation process.
- Note** If a popup window states that the system detected new hardware, press any key and then choose **Install** from the next window.
- The **Platform Installation Wizard** window displays.
- Step 3** To continue with the **Platform Installation Wizard**, choose **Proceed**.
- Step 4** In the **Apply Additional Release** window, choose one of the following installation types:
- To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue to perform the procedure to apply a patch.
  - To skip this step, choose **No**.
  - To return to the previous window, choose **Back**.
- Step 5** In the **Basic Install** window, choose **Continue**. Perform the configure basic installation procedure to configure the basic installation.
- 

## Apply a Patch to Upgrade During Installation

This option is available when you install Unified Communications Manager nodes. It is not available for IM and Presence nodes.

If you choose **Yes** in the Apply a Patch window, the installation wizard installs the software version that is on the DVD or ISO image first, and then restarts the system. You must obtain the appropriate upgrade file from Cisco.com before you can upgrade during installation.



- Note** You can upgrade to any supported higher release, so long as you have a full patch, not an ES or an SR, in which case you can only upgrade to a later service release within the same maintenance release.
- 

For information about supported upgrades, see the Release Notes for your product release and the Cisco Unified Communications Manager Compatibility Matrix at [http://www.cisco.com/en/US/products/sw/voicesw/ps556/products\\_device\\_support\\_tables\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_device_support_tables_list.html).

You can access the upgrade file during the installation process from an ISO image on a data store, a local disk (DVD), or from a remote FTP or SFTP server.

### Procedure

---

- Step 1** The **Install Upgrade Retrieval Mechanism Configuration** window displays.
- Step 2** Choose the upgrade retrieval mechanism to use to retrieve the upgrade file:

- SFTP - Retrieves the upgrade file from a remote server by using the Secure File Transfer Protocol (SFTP). Skip to the procedure to upgrade from a remote server..
  - FTP - Retrieves the upgrade file from a remote server by using File Transfer Protocol (FTP). Skip to the procedure to upgrade from a remote server.
  - LOCAL - Retrieves the upgrade file from a local DVD or from an ISO image on a data store. Continue with the procedure to upgrade from a local disk.
- 

## Upgrade From a Local Source

Before you can upgrade from a local source, you must download the appropriate patch file from Cisco.com. You must create an ISO image from the upgrade file and then either place it on a DVD or in the DVD drive of a virtual machine.

### Procedure

---

- Step 1** When the **Local Patch Configuration** window displays, enter the patch directory and patch name, if required, and choose **OK**.  
The **Install Upgrade Patch Selection Validation** window displays.
- Step 2** The window displays the patch file. To update the system with this patch, click **Continue**.
- Step 3** Choose the upgrade patch to install. The system installs the patch, then restarts the system with the upgraded software version running.  
After the system restarts, the **Preexisting Configuration Information** window displays.
- Step 4** To continue the installation, choose **Proceed**.  
The **Platform Installation Wizard** window displays.
- Step 5** To continue the installation, click **Proceed** or click **Cancel** to stop the installation.  
If you click **Proceed**, the **Apply Patch** window displays. Continue with the next step.  
If you click **Cancel**, the system halts, and you can safely power down the server.
- Step 6** When the **Apply Patch** window displays, choose **No**.
- Step 7** The **Upgrade** window displays.
- Step 8** Click **No** and perform the procedure to configure the basic installation.
- 

## Upgrade From a Remote Server

Use this procedure to upgrade Unified Communications Manager nodes from a remote server. This option is not available for IM and Presence nodes.

Before you can upgrade Unified Communications Manager from a remote server, you must download the appropriate patch file from Cisco.com to an FTP or SFTP server that the server can access.

Cisco allows you to use any SFTP server product but recommends SFTP products that have been certified with Cisco through the Cisco Technology Developer Partner program (CTDP). CTDP partners, such as GlobalSCAPE, certify their products with specified version of Cisco Unified Communications Manager. For information on which vendors have certified their products with your version of Cisco Unified Communications Manager, refer to <http://www.cisco.com/pcgi-bin/ctdp/Search.pl>. For information on using GlobalSCAPE with supported Cisco Unified Communications versions, refer to <http://www.globalscape.com/gsftps/cisco.aspx>. Cisco uses the following servers for internal testing. You may use one of the servers, but you must contact the vendor for support:

- Open SSH (for Unix systems. Refer to <http://sshwindows.sourceforge.net/>)
- Cygwin (<http://www.cygwin.com/>)
- Titan (<http://www.titanftp.com/>)




---

**Note** For issues with third-party products that have not been certified through the CTDP process, contact the third-party vendor for support.

---

If you chose to upgrade through an FTP or SFTP connection to a remote server, you must first configure network settings so that the server can connect to the network.

### Procedure

---

- Step 1** Configure the auto negotiation setting.
- To enable automatic negotiation, choose **Yes**. This option sets the speed and duplex settings of the Ethernet network interface card (NIC) by using automatic negotiation. The **MTU Configuration** window displays. Skip the next step then continue.
- Note** To use this option, your hub or Ethernet switch must support automatic negotiation.
- To disable automatic negotiation, choose **No**. The NIC Speed and Duplex Configuration window displays. Continue with the next step.
- Step 2** If you chose to disable automatic negotiation, manually choose the appropriate NIC speed and duplex settings now and choose **OK** to continue.
- The **MTU Configuration** window displays.
- Step 3** In the **MTU Configuration** window, you can change the MTU size from the operating system default.
- The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network. If you are unsure of the MTU setting for your network, use the default value.
- Caution** If you configure the MTU size incorrectly, your network performance can be affected.
- To accept the default value (1500 bytes), choose **No**.
  - To change the MTU size from the operating system default, choose **Yes**, enter the new MTU size, and choose **OK**.
- The **DHCP Configuration** window displays.

- Step 4** For network configuration, you can choose to either set up static network IP addresses for the node and gateway or to use Dynamic Host Configuration Protocol (DHCP). Static IP addresses are recommended. If you use DHCP, use static DHCP.
- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes**. The installation process attempts to verify network connectivity.
  - If you want to configure static IP addresses for the node, choose **No**. The Static Network Configuration window displays.
- Step 5** If you chose not to use DHCP, enter your static network configuration values and choose **OK**. The **DNS Client Configuration** window displays.
- Step 6** To enable DNS, choose **Yes**, enter your DNS client information, and choose **OK**. After the system configures the network and checks for connectivity, the Remote Patch Configuration window displays.
- Step 7** Enter the location and login information for the remote file server. The system connects to the remote server and retrieves a list of available upgrade patches.
- If the upgrade file is located on a Linux or Unix server, you must enter a forward slash at the beginning of the directory path. For example, if the upgrade file is in the patches directory, you must enter **/patches**
- If the upgrade file is located on a Windows server, remember that you are connecting to an FTP or SFTP server, so use the appropriate syntax, including:
- Begin the path with a forward slash (/) and use forward slashes throughout the path.
  - The path must start from the FTP or SFTP root directory on the server, so you cannot enter a Windows absolute path, which starts with a drive letter (for example, C:).
- The **Install Upgrade Patch Selection** window displays.
- Step 8** Choose the upgrade patch to install. The system downloads, unpacks, and installs the patch and then restarts the system with the upgraded software version running.
- After the system restarts, the **Preexisting Configuration Information** window displays.
- Step 9** To continue the installation, choose **Proceed**. The **Platform Installation Wizard** window displays.
- Step 10** Choose **Proceed** or Choose **Cancel** to stop the installation.
- If you choose **Proceed**, the **Apply Patch** window displays. Continue with the next step.
- If you choose **Cancel**, the system halts, and you can safely power down the server.
- Step 11** In the **Apply Patch** window displays, choose **No**. The **Windows Upgrade** window displays.
- Step 12** Choose **No** and perform the configure basic installation procedure to configure the basic installation.
-

# Configure Installation

Use the procedures in this section to configure the servers and complete the installation.

## Configure Basic Installation

### Procedure

---

- Step 1** In the **Timezone Configuration** window, choose the appropriate time zone for the server and then choose **OK**.  
The **Auto Negotiation Configuration** window is displayed.
- Step 2** The installation process allows you to automatically set the speed and duplex settings of the Ethernet network interface card (NIC) by using automatic negotiation. You can change this setting after installation.
- To enable automatic negotiation, choose **Yes**.  
The **MTU Configuration window** is displayed.  
**Note** To use this option, your hub or Ethernet switch must support automatic negotiation.
  - To disable automatic negotiation, choose **No** and continue with the next step.  
The **NIC Speed and Duplex Configuration** window is displayed.
- Step 3** If you chose to disable automatic negotiation, manually choose the appropriate NIC speed and duplex settings now and choose **OK** to continue.  
The **MTU Configuration** window displays.
- Step 4** In the **MTU Configuration** window, you can change the MTU size from the operating system default.  
The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network. If you are unsure of the MTU setting for your network, use the default value, which is 1500 bytes.
- Caution** If you configure the MTU size incorrectly, your network performance can be affected.
- To accept the default value (1500 bytes), choose **No**.
  - To change the MTU size from the operating system default, choose **Yes**, enter the new MTU size, and choose **OK**.
- The **DHCP Configuration** window displays.
- Step 5** For network configuration, you can choose to either set up a static network IP address for the node or to use Dynamic Host Configuration Protocol (DHCP). Static IP addresses are recommended. If you use DHCP, use static DHCP.
- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes**. The network restarts, and the **Administrator Login Configuration** window is displayed.

- If you want to configure a static IP address for the node, choose **No**. The Static Network Configuration window displays.

**Step 6** If you chose not to use DHCP, enter your static network configuration values and choose **OK**. The **DNS Client Configuration** window is displayed.

**Step 7** In the **DNS Client Configuration** window, click **Yes** to enable DNS and enter the DNS client information.

**Step 8** Click **OK** and choose one of the following in the Basic Installation procedure:

- **Proceed:**

- Click **Proceed** to restart the network using the new configuration. The **Administrator Login Configuration** window is displayed.
- Enter Administrator login **User Name** and **Password**

**Note** Make sure that the **User Name** contains alphanumeric characters. Use the same login credentials to Cisco Unified Communications Operating System Administration, the Command Line Interface, and the Disaster Recovery System.

- **Software Location of Data to Import**

- Enter Remote Server Name or IP, Export Data Directory, Remote Login ID, Remote Password, and Confirm Password. Click **OK** to restart the network using the new configuration.

**Step 9** The **Certificate Information** window is displayed.

**Step 10** In **Certificate Information** window, enter your certificate signing request information and click **OK**.

**Step 11** In the **First Node Configuration** window, choose how you want to assign this node:

- **Yes**—Choose this option to assign this node as the Cisco Unified Communications Manager publisher node.
- **No**—Choose this option to assign this node as a Cisco Unified Communications Manager subscriber node, or as an IM and Presence Service node.

---

## Set Up Unified Communications Manager Publisher Node

Follow this procedure to configure the first server where you install Cisco Unified Communications Manager software as the publisher node for the cluster. Perform this procedure after you have completed the basic installation and configured the basic installation.



---

**Note** You can configure Smart Call Home on the publisher node only. For more information on Smart Call Home, refer to Smart call home section in the Cisco Unified Serviceability Administration Guide.

---

## Procedure

---

**Step 1** The **Network Time Protocol Client Configuration** window appears.

Cisco recommends that you use an external NTP server to ensure accurate system time on the publisher node. Subscriber nodes in the cluster will get their time from the first node.

**Step 2** Choose whether you want to configure an external NTP server or manually configure the system time.

**Note** Ensure that the VMware ESXi software underneath the Cisco Unified Communications Manager is using the same NTP server as the Cisco Unified Communications Manager application or NTP servers having the same Stratum. See VMware documentation for more information.

- To set up an external NTP server, choose **Yes** and enter the IP address, NTP server name, or NTP server pool name for at least one NTP server. You can configure up to five NTP servers, and Cisco recommends that you use at least four, ideally five. Choose **Proceed** to continue with the installation.

The system contacts an NTP server and automatically sets the time on the hardware clock.

**Note** If the **Test** button appears, you can choose **Test** to check whether the NTP servers are accessible.

- To manually configure the system time, choose **No** and enter the appropriate date and time to set the hardware clock. Choose **OK** to continue with the installation.

The **Database Access Security Configuration** window appears.

**Step 3** Enter the Security password from Required Installation Information.

**Note** The Security password must start with an alphanumeric character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. The system uses this password to authorize communications between nodes, and you must ensure this password is identical on all nodes in the cluster.

The **SMTP Host Configuration** window appears.

**Step 4** If you want to configure an SMTP server, choose **Yes** and enter the SMTP server name. If you do not want to configure the SMTP server, choose **No**, which redirects to Smart Call Home page. To go to previous page, choose **Back** and to see the information about the SMTP configuration, choose **Help**.

**Note** You must configure an SMTP server to use certain platform features; however, you can also configure an SMTP server later by using the platform GUI or the command line interface.

**Step 5** Choose **OK**. The **Smart Call Home Enable** window appears.

**Step 6** On the Smart Call Home Enable Page, perform one of the following.

a) Select **Enable Smart Call Home on System Start** to enable the Call Home, and then click **OK**. The Smart Call Home Configuration window appears.

1. Select the method for sending data to the Cisco Technical Assistance Center.

- Secure Web (HTTPS)
- Secure Web (HTTPS) through Proxy

Enter the Hostname/IP Address and port number for Proxy

- Hostname/IP Address—Enter the IP address or the hostname of the proxy server to send the Call Home messages through an indirect network connection.
- Port—Enter the port number on which the proxy server is enabled.

- Email

**Note** You must have configured the SMTP for Email to be sent successfully.

2. To send a copy of the Call Home messages to multiple email recipients, enter the email addresses separated with a comma. You can enter up to a maximum of 1024 characters.
3. Enter the email address of the customer in the Customer Contact Details field.
4. Click **Continue** to proceed, or select **Back** to return to the previous menu. If you click **Continue**, a message appears as Cisco Call Home includes reporting capabilities that allow Cisco to receive diagnostic and system information from your Unified Communications Manager cluster. Cisco may use this information for proactive debugging, product development or marketing purposes. To learn more about this feature, please visit: [http://www.cisco.com/en/US/products/ps7334/serv\\_home.html](http://www.cisco.com/en/US/products/ps7334/serv_home.html).

**Note** If you select **Secure Web (HTTPS) through Proxy** and click **Continue**, Smart Call Home Proxy Configuration Page appears.

5. Click **Confirm** to proceed with normal installation or select **Back** to return to the Smart Call Home Enable Page.

- b) Select **Enable Anonymous Call Home on System Start** to enable the Anonymous Call Home, and then click **OK**. The Anonymous Call Home Configuration window appears.

1. Select the method for sending data to the Cisco Technical Assistance Center.

- Secure Web (HTTPS)
- Secure Web (HTTPS) through Proxy

Enter the Hostname/IP Address and port number for Proxy

- Hostname/IP Address—Enter the IP address or the hostname of the proxy server to send the Call Home messages through an indirect network connection.
- Port—Enter the port number on which the proxy server is enabled.

- Email

**Note** You must have configured the SMTP for Email to be sent successfully.

2. To send a copy of the Call Home messages to multiple email recipients, enter the email addresses separated with a comma. You can enter up to a maximum of 1024 characters.
3. Click **Continue** to proceed, or select **Back** to return to the previous menu. If you click **Continue**, a message appears as To help improve the Cisco Unified Communications Manager experience, click Confirm to allow Cisco Systems to securely receive usage statistics from the server. This information will be used by

Cisco to help understand how customers are using our product and ultimately drive product direction. If you prefer not to participate, you may choose to opt-out.

**Note** If you select **Secure Web (HTTPS) through Proxy** and click **Continue**, Anonymous Call Home Proxy Configuration Page appears.

4. Click **Confirm** to proceed with normal installation or select **Back** to return to the Smart Call Home Enable Page.
- c) Select **Remind me Later to configure Smart Call Home** to configure the Smart Call Home service after installation, using Cisco Unified Serviceability pages.

A reminder message appears in Cisco Unified CM Administration.

Smart Call Home is not configured. To configure Smart Call Home or disable the reminder, please go to Cisco Unified Serviceability > Call Home.

- d) Select **Disable All Call Home on System Start** to disable the Smart Call Home service. However, you can activate the Smart Call Home service after installation using Cisco Unified Serviceability pages.

**Note** You can reconfigure the service in Cisco Unified Serviceability page after installation. For more information, see the *Cisco Unified Serviceability Administration Guide*.

**Step 7** Choose **OK**. The Application User Configuration window appears.

**Step 8** Enter the Application User name and password from and confirm the password by entering it again.

**Step 9** Choose **OK**. The Platform Configuration Confirmation window appears.

**Step 10** To continue with the installation, choose **OK**; or to modify the platform configuration, choose **Back**.

The system installs and configures the software. The server reboots.

When the installation process completes, you are prompted to log in by using the Administrator account and password.

## Set Up Subscriber Node

Use the following procedure to configure a subscriber node in the cluster.

### Before you begin

For both Cisco Unified Communications Manager and IM and Presence Service subscriber nodes, you must add the node in the Server Configuration window (System > Server) on the Cisco Unified Communications Manager publisher node before you complete this procedure.

For information on how to add a node to a cluster, see the *Administration Guide for Cisco Unified Communications Manager*.

## Procedure

---

**Step 1** If you have configured Network Time Protocol on the publisher node, ensure that it is synchronized with an NTP server before you install a subscriber node. From the Command Line Interface on the publisher node, enter `utils ntp status`. Ensure that the output indicates that the node is synchronized with an NTP server.

**Note** If the publisher node is not synchronized with an NTP server, installation of the subscriber node will fail.

**Step 2** On the First Node Configuration window, read the Warning and make sure that you have correctly configured the first node as the publisher node. To continue with the installation of the subscriber node, click **OK**.  
The Network Connectivity Test Configuration window displays.

**Step 3** During installation of a subscriber node, the system checks to ensure that the subscriber node can connect to the publisher node.

- To pause the installation after the system successfully verifies network connectivity, choose **Yes**.
- To continue the installation with a pause, choose **No**.

The First Node Access Configuration window displays.

**Step 4** Enter the publisher node connectivity information and choose **OK**.

The system checks for network connectivity.

If you chose to pause the system after the system successfully verifies network connectivity, the Successful Connection to First Node window displays. Choose **Continue**.

**Note** If the network connectivity test fails, the system always stops and allows you to go back and reenter the parameter information.

The **SMTP Host Configuration** window displays.

**Step 5** If you want to configure an SMTP server, choose **Yes** and enter the SMTP server name.

**Note** To use certain operating system features, you must configure an SMTP server; however, you can also configure an SMTP server later by using the operating system GUI or the command line interface.

The Platform Configuration Confirmation window displays.

**Step 6** Choose **OK** to start installing the software or choose **Back** to change the configuration.

**Step 7** When the installation process completes, you get prompted to log in by using the Administrator account and password.

---

