



# Installation Overview

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## Installation Overview

You can use the procedures in this section to install both the Cisco Unified Communications Manager and the IM and Presence Service.

If you are installing both Cisco Unified Communications Manager and IM and Presence Service nodes in your cluster, you must complete the installation and configuration tasks in the following order:

1. Install the Cisco Unified Communications Manager software on the first node and configure it as the publisher node for the cluster.
2. Install the Cisco Unified Communications Manager software on the subscriber nodes and configure them.
3. Perform all post-installation tasks for Cisco Unified Communications Manager nodes.
4. Install the IM and Presence Service and configure the node as the IM and Presence Service database publisher node.
5. Install the IM and Presence Service on the subscriber nodes and configure them.
6. Perform all post-installation tasks for the IM and Presence Service nodes.

## Types of Installation

You can perform a basic installation, or you can upgrade during an installation. The table below describes these two options.

Table 1: Installation Types

Installation Types	Description
Basic installation	<p>This option represents the basic Cisco Unified Communications Manager installation, which installs the software from the installation disc or from an ISO file stored in a virtual machine. This option does not use any imported data.</p> <p>You can use this option to install the software manually, or you can use an answer generator file to perform an unattended installation.</p> <p>You can also use this option when you have a server on which the software is pre-installed.</p>
Apply a patch to upgrade during an installation (available on Unified Communications Manager nodes only)	<p>This option allows you to upgrade the software version that is contained on the installation disc with a later release. You can only apply one patch during the installation process.</p> <p><b>Note</b> Ensure that you have the software image available on DVD or on a remote server prior to choosing this option.</p>

**Important**

- Install the software during off-peak hours or during a maintenance window to avoid impact from interruptions.
- 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 may be lost. Examples of phone user settings include 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 and Configuration Task Lists

The following sections provide a list of the high-level tasks that you must perform for each of the installation scenarios. For detailed information about how to perform these tasks, refer to the list of Related Topics included with each task list.

**Note**

For information about replacing a Unified Communications Manager server or cluster, or for information about changing the specifications of a virtual machine, refer to *Replacing a Single Server or Cluster for Cisco Unified Communications Manager*.

## Perform a Basic Installation

Complete the high-level tasks listed in this section when you perform a basic installation on a Cisco Unified Communications Manager publisher node, or on a subscriber node in the cluster. Subscriber nodes can be either Cisco Cisco Unified Communications Manager nodes, or IM and Presence nodes.

### Procedure

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- Step 1** Perform all pre-installation tasks that apply to your site.
- Step 2** Follow the procedure to start installing the software for a basic installation.
- Step 3** Follow the procedure for configuring a basic installation.
- Step 4** When the Configuration window displays, specify whether the server is the first node in the cluster (the publisher node), or a subscriber node:
- choose **Yes** to configure the new server as the Cisco Cisco Unified Communications Manager publisher node
  - choose **No** to configure the new server as a subscriber node
- Step 5** Follow the procedure to set up the node. Use the procedure for setting up the publisher node, or for setting up subscriber nodes, depending on the option that you chose in the previous step.
- Step 6** Perform all post-installation tasks that apply to your site.
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### Related Topics

[Start Basic Installation](#)

[Configure Basic Installation](#)

[Set Up Cisco Unified Communications Manager Publisher Node](#)

[Set Up Subscriber Node](#)

## Apply a Patch to Upgrade During an Installation

Complete the high-level tasks listed in this section when you apply a patch and upgrade to a newer version of Unified Communications Manager during an installation. This option is available only for Unified Communications Manager nodes.

You can upgrade to a later release by downloading and applying a patch during installation of the Unified Communications Manager publisher node.

When you upgrade during an installation, the software versions must have the same major and minor release number. Major and minor release numbers are defined as follows:

10.x

where 10 = major release number and x = minor release number

### Procedure

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- Step 1** Perform all pre-installation tasks that apply to your site.
- Step 2** Follow the procedure to start installing the software for a basic installation.

- Step 3** Follow the procedure to apply a software patch.
- Step 4** Follow the procedure for configuring a basic installation.
- Step 5** When the Configuration window displays, specify whether the server is the first node in the cluster (the publisher node), or a subscriber node:
- choose **Yes** to configure the new server as the Cisco Cisco Unified Communications Manager publisher node
  - choose **No** to configure the new server as a subscriber node
- Step 6** Follow the procedure to set up the node. Use the procedure for setting up the first node, or for setting up subscriber nodes, depending on the option that you chose in the previous step.
- Step 7** Perform all post-installation tasks that apply to your site.

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### Related Topics

- [Apply a Patch to Upgrade During Installation](#)
- [Configure Basic Installation](#)
- [Set Up Cisco Unified Communications Manager Publisher Node](#)
- [Set Up Subscriber Node](#)

## Install a New Node in an Existing Cluster

Complete the high-level tasks listed in this section when you install a new Cisco Unified Communications Manager node or a new IM and Presence node in an existing cluster. The new node must be a subscriber node and cannot be a Cisco Unified Communications Manager publisher node.



**Note** You must add an IM and Presence server using Cisco Unified CM Administration before installing the server node in a cluster. See topics related to adding a server before installing the node in the cluster in the *Administration Guide for Cisco Unified Communications Manager* .

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### Procedure

- Step 1** Before you make any changes to your existing cluster, be sure that you have a current backup file.
- Step 2** Perform all pre-installation tasks that apply to your site.
- Step 3** Ensure that you have the appropriate number of licenses to support adding a new node.
- Step 4** Before you install the new node, ensure that you have configured the new node as the publisher node. From Cisco Unified CM Administration on the publisher node, choose **System > Server** and configure the IP address for the subscriber nodes.
- For more information, see the *Cisco Unified Communications Manager Administration Guide*.
- Step 5** Record the configuration settings for each server that you plan to install.
- Step 6** Follow the procedure to begin installing the software for a basic installation.
- You must install the same software version on all nodes in the cluster. If you do not have the correct version, you need to download updated software from Cisco.com.

- Step 7** Follow the procedure to configure the basic installation.
- Step 8** When the First Node Configuration displays, choose **No** to configure the new server as the subscriber node.
- Step 9** Follow the procedure for configuring a subscriber node.
- Step 10** Apply security to the new node in the cluster.
- Step 11** Perform all post-installation tasks that apply to your site.
- Step 12** If your cluster is running in mixed mode, ensure that you have your USB key and the latest CTL Client installed on the PC that you use to communicate with the publisher node. After you finish installing the new node, you will need to update the CTL file on all nodes.

**Note** You can collect the logs from RTMT of a new node added to the existing FQDN cluster, only when you restart the trace collection service. When you sign in to Unified RTMT without restarting the trace collection, the following error message is displayed: `Could not connect to 'Server' <new node name>`.

**Important**

After you install a new node in an existing cluster, all phones that are registered to the cluster are reset.

**Related Topics**

- [Required Installation Information](#)
- [Start Basic Installation](#)
- [Configure Basic Installation](#)
- [Set Up Subscriber Node](#)
- [Apply Security](#)

## Configure a Server with Pre-Installed Software

Complete the high-level tasks listed in this section if you have a new server with either the Cisco Cisco Unified Communications Manager software or the IM and Presence software pre-installed. You must perform these tasks to configure the pre-installed software.

**Procedure**

- Step 1** Perform all pre-installation tasks that apply to your site.
- Step 2** Follow the procedure to start installing the software for a basic installation. When the Platform Installation Wizard window displays, choose **Skip**.
- Step 3** Follow the procedure to enter preexisting configuration information.
- Step 4** Follow the procedure for configuring a basic installation.
- Step 5** Perform all post-installation tasks that apply to your site.

**Related Topics**

- [Start Basic Installation](#)
- [Enter Preexisting Configuration Information](#)

- [Configure Basic Installation](#)
- [Set Up Cisco Unified Communications Manager Publisher Node](#)
- [Set Up Subscriber Node](#)

## Perform an Unattended Installation

Complete the high-level tasks listed in this section when you use the Cisco Unified Communications Answer File Generator to perform an unattended installation. This option is available only for fresh installations and is not supported if you are performing an upgrade during an installation. You can perform an unattended installation on either Cisco Unified Communications Manager nodes, or IM and Presence nodes.

### Procedure

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- Step 1** Perform all pre-installation tasks that apply to your site.
- Step 2** Ensure that a floppy image is mounted with an empty file that is named `POWER_OFF_AFTER_SKIP_INSTALL` before you begin the installation procedure.
- Step 3** Use the *Cisco Unified Communications Answer File Generator* to generate answer files.
- Step 4** Ensure that the USB key where you store the answer files has a FAT32 file system.
- Step 5** Follow the procedure to start installing the software for a basic installation.
- Step 6** Follow the procedure for configuring a basic installation.
- Step 7** When the **Configuration** window displays, specify whether the server is the publisher node in the cluster, or a subscriber node:
  - Choose **Yes** to configure the new server as the Cisco Unified Communications Manager publisher node
  - Choose **No** to configure the new server as a subscriber node
- Step 8** Follow the procedure to set up the node. Use the procedure for setting up the publisher node, or for setting up subscriber nodes, depending on the option that you chose in the previous step.
- Step 9** Perform all post-installation tasks that apply to your site.

### Related Topics

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- [Generate answer file](#)
- [Reformat USB key to FAT32 file system](#)
- [Start Basic Installation](#)
- [Configure Basic Installation](#)
- [Set Up Cisco Unified Communications Manager Publisher Node](#)
- [Set Up Subscriber Node](#)

## Install a Unified Communications Manager Cluster in Parallel

Complete the high-level tasks listed in this section to install Unified Communications Manager nodes in parallel. When you install nodes in parallel, you begin the installation of the publisher node and subscriber nodes at the same time.

## Procedure

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- Step 1** Perform all pre-installation tasks that apply to your site.
- Step 2** Follow the procedure to start installing the software for a basic installation. Begin the installation on all nodes.
- Step 3** Follow the procedure for configuring a basic installation.
- Step 4** When the **Configuration** window displays, designate one node to be the first node (the publisher node) and designate the remaining nodes as subscriber nodes:
- choose **Yes** to configure one node as the Cisco Unified Communications Manager publisher node
  - choose **No** on the remaining nodes to configure them as subscriber nodes
- Do not proceed further with the installation of the subscriber nodes at this point. You must wait until you complete the installation of the publisher node before you continue with the installation of the subscriber nodes.
- Step 5** Follow the procedure for setting up a Unified Communications Manager publisher node.
- Step 6** Associate each of the subscriber nodes in the cluster with the publisher node using the Cisco Unified CM Administration interface. For more information, see the Administration Guide for Cisco Unified Communications Manager .
- Step 7** Follow the procedure to set up a subscriber node.
- Step 8** Perform all post-installation tasks that apply to your site.
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## Related Topics

[Start Basic Installation](#)

[Configure Basic Installation](#)

[Set Up Cisco Unified Communications Manager Publisher Node](#)

[Set Up Subscriber Node](#)

# Install an IM and Presence Service Cluster

Follow this sequence of tasks when you are configuring your multi-node IM and Presence Service deployment. You configure the IM and Presence Service multi-node feature, and manage your clusters, nodes and users using Cisco Unified CM Administration.

You can create the subscriber nodes in your topology before you install the IM and Presence Service software on these nodes. However, you cannot assign these subscriber nodes to a presence redundancy group before you install IM and Presence Service software on these subscriber nodes.

## Before you begin

- Determine the type of multi-node deployment model that you are going to configure.
- The Cisco XCP Router must be running for all availability services to function properly on IM and Presence Service (both SIP-based and XMPP-based client messaging).

## Restriction

Your hardware must comply with the multi-node hardware recommendations.

## Procedure

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- Step 1** Install and configure Cisco Unified Communications Manager.
- Step 2** Install and configure the IM and Presence Service database node (the first server in the IM and Presence Service cluster).
- Note** Complete the installation of the IM and Presence Service database publisher node and confirm that services are running before you begin to install IM and Presence Service subscriber nodes.
- Step 3** (On the Cisco Unified Communications Manager publisher node) Create all presence redundancy groups and nodes in the cluster.
- Note** Do not add a node in the Cisco Unified Communications Manager server list during the installation process.
- Step 4** (On the IM and Presence Service database node) Associate each of the subscriber nodes in the cluster with the publisher node. You must associate the subscriber node with the publisher node before you install that subscriber IM and Presence Service node.
- Step 5** Install and configure each of the subscriber nodes in the cluster.
- Step 6** (On the Cisco Unified Communications Manager publisher node) Assign these nodes to the appropriate presence redundancy group.
- Do not assign the subscriber node to a presence redundancy group until after you install it. If you assign a subscriber IM and Presence Service node to a cluster before you install it, users in remote clusters will not receive availability information. An availability outage will occur until you install the subscriber node.
- Note** Before you assign or move a node to a presence redundancy group, check the following:
- From the System troubleshooter page, verify that the Cisco IM and Presence Data Monitor service is running on all nodes.
  - On the **Network services** screen in Cisco Unified Serviceability (on the subscriber node), verify that all IM and Presence Service services are running.
  - If you plan to move or unassign a node in a presence redundancy group, you must turn off high-availability in that presence redundancy group before you move or unassign the node.
- Step 7** Turn on high-availability in the presence redundancy group as required. See the *Administration Guide for Cisco Unified Communications Manager* for more information.
- Step 8** Turn on the Sync Agent service on the publisher node to synchronize with the Cisco Unified Communications Manager user and device configuration information.
- Step 9** When the synchronization is complete, turn on the Cisco SIP Proxy services, and verify that the Cisco XCP Router service is turned on.
- Step 10** Turn on the XCP services applicable to the features in your deployment. See the documentation for those features to determine what XCP services you must turn on.
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## Troubleshooting Tips

- If you assign a node before you start the IM and Presence Service services, there is a possibility that users will not be able to sign in to Cisco Jabber. If this scenario occurs, restart the Cisco Client Profile



Agent service. To start or restart IM and Presence Service services, select **Cisco Unified Serviceability > Tools > Control Center - Network Services**.

- The Cisco IM and Presence Data Monitor service delays feature service startup on subscriber nodes if IDS replication is not successfully established.

