



# ***Installing Cisco Unified CallManager Release 5.1(3)***

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Because Cisco Unified CallManager Release 5.1(3) uses a different installation framework than previous releases, review all installation instructions before you install Cisco Unified CallManager 5.1(3).

This document includes information about installing Cisco Unified CallManager Release 5.1(3) on one server or several servers in a cluster environment, and it also contains information about adding a new server to an existing cluster.

For information about upgrading from a previous release of Cisco Unified CallManager to an appliance-based release (5.0 and higher), refer to *Upgrading Cisco Unified CallManager Release 5.1.3*.

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## Related Documentation

For additional installation-related information, refer to the following documents:

- *Upgrading Cisco Unified CallManager Release 5.1(3)*  
[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html)
- *Replacing a Single Server or Cluster for Cisco Unified CallManager Release 5.1(3)*  
[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html)

For further information about related Cisco IP telephony applications and products, refer to the *Cisco Unified Communications Manager Documentation Guide*,  
[http://cisco.com/en/US/products/sw/voicesw/ps556/products\\_documentation\\_roadmaps\\_list.html](http://cisco.com/en/US/products/sw/voicesw/ps556/products_documentation_roadmaps_list.html).

Table 1 lists URLs for software and additional documentation.

**Table 1** Quick Reference for URLs

Related Information and Software	URL
Cisco MCS data sheets	<a href="http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html">http://www.cisco.com/en/US/products/hw/voiceapp/ps378/index.html</a>

**Table 1** Quick Reference for URLs (continued)

Related Information and Software	URL
Software-only servers	<a href="http://www.cisco.com/en/US/products/hw/voice-app/ps378/prod_brochure_list.html">http://www.cisco.com/en/US/products/hw/voice-app/ps378/prod_brochure_list.html</a>
Cisco Unified CallManager service releases	<a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a>

## Installation Scenarios

You can use this document to perform the following different installation scenarios:

- Install software from a DVD on the first node
- Install software from a DVD on a subsequent node
- Apply a patch during installation of the first node
- Apply a patch during installation of a subsequent node
- Add a new node to an existing cluster

The following sections provide an overview of the high-level tasks that you must perform for each of these installation scenarios. Each high-level task also includes a link to another section of the document, which you can follow for detailed information about the task.


**Note**

For information about replacing a server or cluster, refer to *Replacing a Single Server or Cluster for Cisco Unified CallManager Release 5.1(3)*.

## Install Software from a DVD on the First Node

To install software that you have on a DVD on the first node in a cluster, follow the steps in [Table 2](#).

**Table 2** Installing Software from a DVD on the First Node

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1 on page 6</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software on the DVD to your server.	See the “Starting the Installation” section on <a href="#">page 19</a> .
<b>Step 3</b>	Follow the procedure for performing a basic installation.	See the “Performing the Basic Installation” section on <a href="#">page 25</a> .
<b>Step 4</b>	When the First Node Configuration window displays, choose <b>Yes</b> to configure the new server as the first node.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on <a href="#">page 25</a> .
<b>Step 5</b>	Follow the procedure to configure the first node.	See “Configuring the First Node” section on <a href="#">page 26</a>
<b>Step 6</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 13 on page 29</a> .

## Install Software from a DVD on a Subsequent Node

To install software that you have on a DVD, follow the steps in [Table 3](#).

**Table 3** *Installing Software from a DVD on the First Node*

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 7</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software on the DVD to your server.	See “ <a href="#">Starting the Installation</a> ” section on page 19.
<b>Step 3</b>	Follow the procedure for performing a basic installation.	See “ <a href="#">Performing the Basic Installation</a> ” section on page 25.
<b>Step 4</b>	When the First Node Configuration displays, choose <b>No</b> to configure the new server as a subsequent node.	See <a href="#">Step 10</a> in the “ <a href="#">Performing the Basic Installation</a> ” section on page 25.
<b>Step 5</b>	Follow the procedure to configure a subsequent node in the cluster.	See the “ <a href="#">Configuring a Subsequent Node</a> ” section on page 28.
<b>Step 6</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 13</a> .

## Apply a Patch During Installation of the First Node

You can upgrade to a later release by downloading and applying a patch during installation. To apply a patch during installation of the first node, follow the steps in [Table 4](#).

**Table 4** *Applying a Patch During Installation of the First Node*

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 7</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software on the DVD to your server.	See “ <a href="#">Starting the Installation</a> ” section on page 19.
<b>Step 3</b>	Follow the procedure to apply a software patch.	See “ <a href="#">Applying a Patch</a> ” section on page 22.
<b>Step 4</b>	Follow the procedure for performing a basic installation.	See “ <a href="#">Performing the Basic Installation</a> ” section on page 25.
<b>Step 5</b>	When the First Node Configuration window displays, choose <b>Yes</b> to configure the new server as the first node.	See <a href="#">Step 10</a> in the “ <a href="#">Performing the Basic Installation</a> ” section on page 25.
<b>Step 6</b>	Follow the procedure to configure the first node in the cluster.	See the “ <a href="#">Configuring the First Node</a> ” section on page 26.
<b>Step 7</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 13</a> .

## Apply a Patch During Installation of a Subsequent Node

You can upgrade to a later release by downloading and applying a patch during installation. To apply a patch during installation of the first node, follow the steps in [Table 5](#).

**Table 5** Applying a Patch During Installation of a Subsequent Node

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 7</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software on the DVD to your server.	See “Starting the Installation” section on page 19.
<b>Step 3</b>	Follow the procedure to apply a software patch.	See “Applying a Patch” section on page 22.
<b>Step 4</b>	Follow the procedure for performing a basic installation.	See “Performing the Basic Installation” section on page 25.
<b>Step 5</b>	When the First Node Configuration window displays, choose <b>No</b> to configure the new server as the first node.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on page 25.
<b>Step 6</b>	Follow the procedure to configure a subsequent node in the cluster.	See the “Configuring a Subsequent Node” section on page 28.
<b>Step 7</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 13</a> .

## Add a New Node to an Existing Cluster

To add a new node to an existing cluster, follow the steps in [Table 6](#).

**Table 6** Adding a New Node to an Existing Cluster

	Task	For More Information
<b>Step 1</b>	Before you make any changes to your existing cluster, be sure that you have a current backup file.	For more information, refer to the <i>Disaster Recovery System Administration Guide</i> .
<b>Step 2</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 7</a> .
<b>Step 3</b>	Ensure that you have the appropriate number of licenses to support adding a new node.	For more information on specifying the required number of licenses, refer to the License Unit Calculator chapter in the <i>Cisco Unified CallManager Administration Guide</i> .
<b>Step 4</b>	Before you install the new node, ensure that you have configured it on the first node.	From Cisco Unified CallManager Administration on the first node, choose <b>System &gt; Server</b> , and configure the IP address for the subsequent nodes. For more information, see the <i>Cisco Unified CallManager Administration Guide Release 5.1(3)</i> .
<b>Step 5</b>	Record the configuration settings for each server that you plan to install.	To record your configuration settings, see <a href="#">Table 10 on page 12</a> .
<b>Step 6</b>	You must install the same software version on all nodes in the cluster. If you do not have the correct version on DVD, you need to either download updated software from Cisco.com or follow the procedure for applying a patch during the installation procedure.	For more information on the different installation options, see the “Installation Overview” section on page 16.
<b>Step 7</b>	Follow the procedure to begin installing the software on the DVD to your server.	See “Starting the Installation” section on page 19.

**Table 6** Adding a New Node to an Existing Cluster (continued)

	Task	For More Information
<b>Step 8</b>	If you need to upgrade the version of Cisco Unified CallManager that you have on DVD, continue with the procedure for applying a software patch.	See the “Applying a Patch” section on page 22.
<b>Step 9</b>	Follow the procedure for performing the basic installation.	See “Performing the Basic Installation” section on page 25.
<b>Step 10</b>	When the First Node Configuration displays, choose <b>No</b> to configure the new server as a subsequent node.	See Step 10 in the “Performing the Basic Installation” section on page 25.
<b>Step 11</b>	Follow the procedure for configuring a subsequent node.	See the “Configuring a Subsequent Node” section on page 28.
<b>Step 12</b>	Perform all post-installation tasks that apply to your site.	See Table 13 on page 29.
<b>Step 13</b>	If your cluster is running in mixed mode, ensure that you have your USB key and the latest security plug-in installed on the PC that you use to communicate with the first node. After you finish installing the new node, you will need to update the CTL file on all nodes.	For more information, see “Applying Security to a New Node in a Secure Cluster” section on page 31.

## Pre-Installation Tasks

Table 7 contains a list of pre-installation tasks that you need to perform to ensure that you can successfully install Cisco Unified CallManager.

**Table 7** Pre-Installation Tasks

	Task	Important Notes
<b>Step 1</b>	Read this entire document to familiarize yourself with the installation procedure.	
<b>Step 2</b>	Verify the integrity of any new server hardware (such as hard drives and memory) by running any manufacturer-provided utilities.	
<b>Step 3</b>	Ensure that your servers are listed as supported hardware and sized appropriately to support the load of the cluster.	<p>For information about the capacity of server models, refer to the following documentation:</p> <ul style="list-style-type: none"> <li>Release notes for your product release</li> <li><a href="http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html">http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html</a></li> </ul> <p>Make sure to account for any growth that has occurred since initial system configuration.</p>

Table 7 Pre-Installation Tasks (continued)

	Task	Important Notes
Step 4	If you are installing a cluster or adding a node, verify that the links between servers meet the 40-ms round-trip time (RTT) requirement and that you have enough bandwidth to support database replication.	For more information on the 40-ms RTT requirement, refer to the <i>Cisco Unified Communications Solution Reference Network Design (SRND) Based on Cisco Unified CallManager Release 5.x</i> , which you can find at the following URL: <a href="http://www.cisco.com/en/US/products/sw/voicesw/products556/products_implementation_design_guides_list.html">http://www.cisco.com/en/US/products/sw/voicesw/products556/products_implementation_design_guides_list.html</a>
Step 5	If your firewall is not in the routing path, disable the firewall between nodes, if possible. Also, increase the firewall timeout settings until after you complete the installation.	To temporarily allow network traffic in and out of the nodes (for example, setting the firewall rule for these nodes to IP any/any) does not always suffice. The firewall might still close necessary network sessions between nodes due to timeouts.
Step 6	Do not run Network Address Translation (NAT) or Port Address Translation (PAT) between Cisco Unified CallManager nodes.	
Step 7	Record the network interface card (NIC) speed and duplex settings of the switch port to which you will connect the new server.  You should configure the same NIC settings on the server and on the switch port. For GigE (1000/FULL), you should set NIC and switch port settings to Auto/Auto; do not set hard values.	If you are using Network Fault Tolerance, the Network Fault Tolerance configuration gets lost during the replacement. You will need to configure it on each server after the upgrade.  Enable PortFast on all switch ports that are connected to Cisco servers. With Portfast enabled, the switch immediately brings a port from the blocking state into the forwarding state by eliminating the forwarding delay [the amount of time that a port waits before changing from its Spanning-Tree Protocol (STP) learning and listening states to the forwarding state].
Step 8	If you use DNS, verify that all servers on which you plan to install Cisco Unified CallManager are properly registered in DNS.	For more information, see “ <a href="#">Verifying DNS Registration</a> ” section on page 11.
Step 9	Obtain a Cisco Unified CallManager license file.	See “ <a href="#">Obtaining a License File</a> ” section on page 17.  <b>Note</b> For more information on specifying the required number of licenses, refer to the License Unit Calculator chapter in the <i>Cisco Unified CallManager Administration Guide</i> .
Step 10	Record the configurations settings for each server that you plan to install.	To record your configuration settings, see <a href="#">Table 10</a> .
Step 11	Configure any subsequent nodes on the first node before you install a subsequent node.	From Cisco Unified CallManager Administration on the first node, choose <b>System &gt; Server</b> , and configure the IP address for the subsequent nodes. For more information, see the <i>Cisco Unified CallManager Administration Guide Release 5.1(3)</i> .

## Important Considerations

Before you proceed with the installation, consider the following requirements and recommendations:

- Be aware that when you install on an existing server, the hard drive gets formatted, and all existing data on the drive gets overwritten.
- Install the Cisco Unified CallManager software on the first node server first and then on the subsequent nodes.
- Make sure that the subsequent node servers that you are installing can connect to the first node server during the installation.
- When you enter the Security password on the first node, be sure that you write it down and save it. You must enter the same password on each subsequent node that you install in the cluster.
- Install the software during off-peak hours or a maintenance window to avoid impact from interruptions.
- Configure the server by using static IP addressing to ensure that the server obtains a fixed IP address and that the Cisco Unified IP Phones can register with the application when you plug the phones into the network.
- Do not attempt to perform any configuration tasks until after you install all the nodes in the cluster.
- Do not install any Cisco-verified applications until you complete the installation.
- Be aware that directory names and filenames that you enter while you are running the installation program are case-sensitive.

## Frequently Asked Questions About the Installation

The following section contains information about commonly asked questions and responses. Review this section carefully before you begin the installation.

### What Passwords do I Need to Specify?

During the installation, you must specify the following user names and passwords:

**Note**

The system does strength checking on all passwords. You can find general guidelines about what constitutes a strong password at the following URL:

<http://www.nsrc.org/security/index.html#passwords>

- Administrator account

You use the Administrator username and password to log in to the following areas:

- Cisco Unified Communications Operating System Administration
- Disaster Recovery System
- Command Line Interface

The Administrator login must start with an alphabetic character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. You can change the Administrator password or add a new Administrator account by using the command line interface. See the *Cisco Unified Communications Operating System Administration Guide* for more information.

- Application User password

You use the Application User password as the default password for applications that are installed on the system, including the following areas:

- Cisco Unified CallManager Administration
- Cisco Unified CallManager Serviceability
- Cisco Real Time Monitoring Tool
- Cisco Unified Reporting

You can change the application user password for each application by using the web interface. See the online help for more information.

- Database Access Security Password

The system uses this password to authorize communications between nodes, and you must ensure that this password is identical on all nodes in the cluster.

The Database Access Security password must start with an alphanumeric character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores.

## Which servers does Cisco support for this installation?

For information about supported server models, refer to the following documentation:

- Release notes for your product release
- [http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod\\_brochure\\_list.html](http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html)

Make sure to account for any growth that has occurred since initial system configuration.

## May I install other software on the server?

You must do all software installations and upgrades by using Cisco Unified Communications Operating System Administration. The system can upload and process only software that Cisco Systems approved.

You cannot install or use third-party or Windows-based software applications that you may have been using with a previous version of Cisco Unified CallManager with Cisco Unified CallManager 5.1(3).

## Browser Requirements

You can access Cisco Unified CallManager Administration, Cisco Unified CallManager Serviceability, Cisco Unified Reporting, Cisco Unified Communications Operating System Administration, and Disaster Recovery System by using the following browsers:

- Microsoft Internet Explorer version 6.x
- Microsoft Internet Explorer version 7.x

# Configuring the Hardware

As a part of software installation, the system installer configures the system BIOS and RAID settings for the new operating system and Cisco Unified CallManager application. See [Table 8](#) for the BIOS settings and [Table 9](#) for the RAID settings that are set up during installation.



**Note**

If the hardware configuration process fails during installation, you can use boot-time utilities that are found on both the IBM and HP servers to manually configure the RAID and BIOS settings, as shown in [Table 8](#) and [Table 9](#). However, if your servers are not compatible with this release, the installation will fail.

**Table 8** BIOS Configuration Settings for HP and IBM Servers

HP Servers	IBM Servers
OS Selection: Linux (not applicable on newer models)	OS Selection: Not applicable
Boot order: CD, C:, Floppy	Boot order: CD, C:, Floppy
Post F1 prompt: Delayed	Post F1 prompt: Delayed
Hyperthreading: Enabled	Hyperthreading: Enabled

**Table 9** RAID Settings

MCS 7825 Servers (HP and IBM)	MCS 7835 Servers (HP and IBM)	MCS 7845 Servers (HP and IBM)
Software RAID	Logical drives: 1	Logical drives: 2
Software RAID	RAID type: 1(1+0)	RAID type: 1(1+0)
<p><b>Note</b> For the HP 7825H1 and the IBM 7825I1, SATA RAID is enabled, and the RAID type specifies 1(1+0), with one logical drive.</p>		

## Verifying DNS Registration

If you use DNS, verify that all servers to be added are registered in DNS properly by performing the following actions:

### Procedure

- 
- Step 1** Open a command prompt.
  - Step 2** To ping each server by its DNS name, enter **ping <DNS name>**.
  - Step 3** To look up each server by IP address, enter **nslookup <IP address>**.
- 

## Gathering Information for an Installation

Use [Table 10](#) to record the information about your server. Gather this information for each Cisco Unified CallManager server that you are installing in the cluster. You may not need to obtain all the information; gather only the information that is pertinent to your system and network configuration. You should make copies of this table and record your entries for each server in a separate table.



### Note

Because some of the fields are optional, they may not apply to your configuration. For example, you may choose not to set up an SMTP host.



### Caution

You cannot change some of the fields after installation without reinstalling the software, so be sure to enter the values that you want.

The last column in the table shows whether a field can be changed after installation, and if so, whether you can change it through Cisco Unified Communications Operating System Administration or through the Command Line Interface (CLI).

**Table 10 Node Configuration Data**

Parameter	Description	Can Entry Be Changed After Installation?
<b>Administrator ID</b> Your entry:	This field specifies the User ID that you use for secure shell access to the CLI, for logging into Cisco Unified Communications Operating System Administration, and for logging into the Disaster Recovery System.	No, you cannot change the entry after installation.  <b>Note</b> After installation, you can create additional administrator passwords, but you cannot change the original administrator password.
<b>Administrator Password</b> Your entry:	This field specifies the password that you use for secure shell access to the CLI, for logging into Cisco Unified Communications Operating System Administration, and for logging into the Disaster Recovery System.  Ensure the password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscore.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set password admin</b>
<b>Application User Password</b> Your entry:	You use the Application User password as the default password for applications that are installed on the system, including Cisco Unified CallManager and Cisco Unified CallManager Serviceability.  <b>Note</b> When you initially log in, use the default user name: CCMAAdministrator.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>utils reset_ui_administrator_password</b>
<b>Country</b> Your entry:	Choose the appropriate country for your installation.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set web-security</b>
<b>DHCP</b> Your entry:	If you want to use DHCP to automatically configure the network settings on your server, choose <b>Yes</b> .  If you choose <b>No</b> , you must enter a hostname, IP Address, IP Mask, and Gateway.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set network dhcp</b>
<b>DNS Primary</b> Your entry:	Enter the IP address of the DNS server that you want to specify as the primary DNS server. Enter the IP address in dotted decimal format as ddd.ddd.ddd.ddd.  Consider this field mandatory if DNS is set to <b>yes</b> .	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set network dns</b>
<b>DNS Secondary (optional)</b> Your entry:	Enter the IP address of the DNS server that you want to specify as the optional secondary DNS server.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set network dns</b>

Table 10 Node Configuration Data (continued)

Parameter	Description	Can Entry Be Changed After Installation?
<b>Domain</b> Your entry:	This field represents the name of the domain in which this machine is located.  Consider this field mandatory if DNS is set to <b>yes</b> .	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set network domain</b>
<b>DNS Enable</b> Your entry:	A DNS server resolves a hostname into an IP address or an IP address into a hostname. If you do not have a DNS server, enter <b>No</b> .  If you have a DNS server, Cisco recommends that you enter <b>Yes</b> to enable DNS.  <b>Note</b> When DNS is not enabled, you should only enter IP addresses (not host names) for all network devices in your Cisco Unified CallManager network.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set network dns</b>
<b>Gateway Address</b> Your entry:	Enter the IP address of the network gateway.  If you do not have a gateway, you must still fill in this field by setting it to 255.255.255.255. Not having a gateway may limit you to only being able to communicate with devices on your subnet.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set network gateway</b>
<b>Hostname</b> Your entry:	Enter a host name that is unique to your server.  The host name can comprise up to 64 characters and can contain alphanumeric characters and hyphens.  If DHCP is set to <b>No</b> , consider this field mandatory.	No, you cannot change the entry after installation.
<b>IP Address</b> Your entry:	Enter the IP address of your server.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set network IP</b>  <b>Note</b> If there are IP addresses (not host names) configured in Cisco Unified CallManager Administration under <b>System &gt; Servers</b> , you must change the IP address there before changing it here, or call processing will fail.
<b>IP Mask</b> Your entry:	Enter the IP subnet mask of this machine.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set network ip eth0</b>

**Table 10 Node Configuration Data (continued)**

Parameter	Description	Can Entry Be Changed After Installation?
<b>Location</b> Your entry:	Choose the appropriate location for the server.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set web-security</b>
<b>MTU Size</b> Your entry:	The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network.  Enter the MTU size in bytes for your network. If you are unsure of the MTU setting for your network, use the default value.  Default: 1500 bytes	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set network mtu</b>
<b>NIC Duplex</b> Your entry:	Choose the duplex mode for the network interface card (NIC), either Full or Half.  <b>Note</b> This parameter only displays when you choose not to use Automatic Negotiation.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set network nic</b>
<b>NIC Speed</b> Your entry:	Choose the speed for the NIC, either 10 megabits per second or 100 megabits per second.  <b>Note</b> This parameter only displays when you choose not to use Automatic Negotiation.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set network nic</b>
<b>NTP Server</b> Your entry:	Enter the hostname or IP address of one or more network time protocol (NTP) servers with which you want to synchronize.  <b>Note</b> You can enter up to five NTP servers.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>utils ntp config</b>
<b>Organization</b> Your entry:	Enter the name of your organization.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set web-security</b>
<b>Security Password</b> Your entry:	Servers in the cluster use the security password to communicate with one another.  The password must contain at least six alphanumeric characters. It can contain hyphens and underscores, but it must start with an alphanumeric character.  <b>Note</b> Save this password. You will be asked to enter the same security password for each subsequent node in the cluster.	Yes, you can change the entry after installation by using the following CLI command: CLI > <b>set password security</b>

Table 10 Node Configuration Data (continued)

Parameter	Description	Can Entry Be Changed After Installation?
<b>SMTP Location</b> Your entry:	Enter the hostname or IP address for the SMTP server that is used for outbound e-mail.  The hostname can contain alphanumeric characters, hyphens, or periods, but it must start with an alphanumeric character.  <b>Note</b> You must fill in this field if you plan to use electronic notification.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set smtp</b>
<b>State</b> Your entry:	Enter the state where the server is located.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set web-security</b>
<b>Time Zone</b> Your entry:	This field specifies the local time zone and offset from Greenwich Mean Time (GMT).  Choose the time zone that most closely matches the location of your machine.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set timezone</b>

## Using the Cisco Unified Communications Answer File Generator

Cisco Unified Communications Answer File Generator, a web application, generates answer files for unattended installations of Cisco Unified CallManager. Individual answer files get copied to a USB key or a floppy diskette that accompanies the Cisco Unified CallManager DVD during the installation process.

The web application supports the following features:

- Allows simultaneous generation and saving of answer files for unattended installs on the first node and on all subsequent nodes.
- Provides syntactical validation of data entries.
- Provides online help and documentation.

The following usage requirements apply:

- The web application supports only fresh installs (for example, it does not include upgrades).
- If DHCP client is being used on the first node, and subsequent node answer files are also being generated, you must specify the first node IP address.

You can access the Cisco Unified Communications Answer File Generator at the following URL:

[http://www.cisco.com/web/cuc\\_afg/index.html](http://www.cisco.com/web/cuc_afg/index.html)

The Cisco Unified Communications Answer File Generator supports Internet Explorer version 6.0 or higher and Mozilla version 1.5 or higher.

**Note**

If you are using a USB key to perform an unattended installation of Cisco Unified CallManager, Cisco recommends that you use USB keys that are preformatted to be compatible with Linux 2.4. These keys will have a W95 FAT32 format.

## Handling Network Errors During Installation

During the installation process, the installation program verifies that the server can successfully connect to the network by using the network configuration that you enter. If it cannot connect, a message displays, and you get prompted to select one of the following options:

- **RETRY** —The installation program tries to validate networking again. If validation fails again, the error dialog box displays again.
- **REVIEW (Check Install)**—This option allows you to review and modify the networking configuration. The installation program returns to the network configuration windows.  
Networking gets validated after you complete each networking window, so the message might display multiple times. If the message displays while you are reviewing the network configuration windows, choose **IGNORE** to move to the next window. If you choose **REVIEW**, the first network configuration window displays again.
- **HALT**— The installation halts. You can copy the installation log files to a USB disk to aid troubleshooting of your network configuration.
- **IGNORE** —The installation continues. The networking error gets logged. In some cases, the installation program validates networking multiple times, so this error dialog box might display multiple times.

## Installation Overview

Cisco Unified CallManager 5.1(3) uses a different installation framework than previous releases. The installation process allows you to perform a basic installation, upgrade to a newer service release during the installation, and upgrade from Cisco Unified CallManager 4.x to Cisco Unified CallManager 5.1(3). For a more detailed description of the different installation types, see [Table 11](#).

**Table 11**      *Installation Options*

Installation Types	Description
Basic Install	This option represents the basic Cisco Unified CallManager 5.1(3) installation, which installs the software from the installation disc and does not use any imported data.

**Table 11**      *Installation Options (continued)*

Installation Types	Description
Applying a Patch	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.  <b>Note</b> Ensure that you have the software image available on DVD or on a remote server prior to choosing this option.
Windows Upgrade	This option allows you to import database information from a Cisco Unified CallManager 4.x system by using a file that the Data Migration Assistant (DMA) tool produces.  <b>Note</b> For more information on performing a Windows upgrade, see the document <i>Upgrading Cisco Unified CallManager</i> .

**Note**

This document describes only the first two installation types: Basic Install and Applying a Patch. For information on performing a Windows Upgrade, refer to *Upgrading Cisco Unified CallManager*.

## Obtaining a License File

Licensing helps manage Cisco Unified CallManager licenses and enforces the licenses for Cisco Unified CallManager applications and the number of IP phones. This section provides information on obtaining licenses for new Cisco Unified CallManager systems and/or phone installations as well as for Cisco Unified CallManager nodes that have been upgraded from various releases.

**Note**

You do not need to obtain new licenses if you are upgrading within a software release train, such as 5.0(1) to 5.1(1).

## New Cisco Unified CallManager Servers and Devices

Use the following procedure to obtain a node license file for new Cisco Unified CallManager servers and to obtain device licenses for new devices that require additional device license units.

Each node in your cluster requires one node license unit. Each device type requires a fixed number of licenses units, depending on the type. For example, Cisco Unified IP Phone 7920 require four license units, and Cisco Unified IP Phone 7970 require five units. If you want licenses for four Cisco Unified IP Phones 7920 and four Cisco Unified IP Phones 7970 phones, you require 36 phone license units.

You use the Product Authorization Key (PAK) that came with your product to obtain the necessary permanent licenses, as described in the following procedure.

### Procedure

- 
- Step 1**    Enter the Product Authorization Key (PAK) that you received with your Cisco Unified CallManager or phone order in the License Registration web tool at <http://www.cisco.com/go/license>.
- Step 2**    Click **Submit**.

- Step 3** Follow the system prompts. You must enter the MAC address of the Ethernet 0 NIC of the first node of the Cisco Unified CallManager cluster. You must enter a valid e-mail address as well as the number of nodes and device license units for which you want licenses.



**Note** For information on calculating the number of device license units that are required for the devices in your system, refer to the “License Unit Calculator” section in the *Cisco Unified CallManager Administration Guide*.

The system sends the license file(s) to you via e-mail by using the E-mail ID that you provided. The format of a license file specifies CCM<timestamp>.lic. If you retain the .lic extension, you can rename the license file. You cannot use the license if you edit the contents of the file in any way.



**Note** One license file may apply to more than one node in your cluster. For information on how to interpret the license file, see the “License File Contents” section of the *Cisco Unified CallManager System Guide*.

- Step 4** You must upload the license file to the server with the matching MAC address that you provided in [Step 3](#). See the “[Uploading a License File](#)” section on [page 30](#). This server then takes on the functionality of the license manager.



**Note** You can use the licenses that are specified in the license file only within the cluster on which the license file is uploaded.

## Installing the New Operating System and Application

This section describes how to install the operating system and Cisco Unified CallManager application. You install the operating system and application by running one installation program. This document divides the procedure for using this installation program into the following major topics:

- [Navigating Within the Installation Wizard, page 18](#)
- [Starting the Installation, page 19](#)
- [Entering Preexisting Configuration Information, page 21](#)
- [Applying a Patch, page 22](#)
- [Performing the Basic Installation, page 25](#)
- [Configuring the First Node, page 26](#)
- [Configuring a Subsequent Node, page 28](#)

## Navigating Within the Installation Wizard

For instructions on how to navigate within the installation wizard, see [Table 12](#).

**Table 12** Installation Wizard Navigation

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

## Starting the Installation



### Note

If you are installing a subsequent node or adding a node to an existing cluster, you must configure the host name or IP address of the new node on the first node in the cluster. From Cisco Unified CallManager Administration on the first node, choose **System > Server** and enter the IP address or host name of the subsequent node. For more information, see the *Cisco Unified CallManager Administration Guide*.

### Procedure

- Step 1** If you have a USB key with configuration information in files that the Answer File Generator generated, insert it now.
- Step 2** Insert the installation DVD into the tray and restart the server, so it boots from the DVD. 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 has passed the media check previously, you might choose to skip the media check.



### Note

If you have a new server with Cisco Unified CallManager preinstalled, you do not need to install from a DVD, unless you want to reimage the server with a later product release. You can go directly to the [“Entering Preexisting Configuration Information” procedure on page 21](#).

- Step 4** If you choose **Yes** to perform the media check, the system installer performs the media check and displays the Media Check Result window. Perform these tasks:
- If the Media Check Result displays Pass, choose **OK** to continue the installation.
  - If the media fails the media check, either download another copy of the software from Cisco.com or obtain another disc directly from Cisco.
- Step 5** The system installer performs the following hardware checks to ensure that your system is correctly configured. If the installer makes any changes to your hardware configuration settings, you will get prompted to restart your system. Leave the DVD in the drive during the reboot.
- First, the installation process checks for the correct drives, and you may see the following warning:
 

```
No hard drives have been found. You probably need to manually choose device drivers
for install to succeed. Would you like to select drivers now?
```

To continue the installation, choose **Yes**.

- The installation next checks to see whether you have a supported hardware platform. If your server does not meet the exact hardware requirements, the installation process fails with a critical error. If you think this is not correct, capture the error and report it Cisco support.
- The installation process next verifies RAID configuration and BIOS settings.




---

**Note** If this step repeats, choose **Yes** again.

---

**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. 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.

---




---

**Note** If you inserted a USB key that contains configuration information from the Answer File Generator, the installation wizard will read the configuration information on the USB key and complete the installation without prompting you to enter additional information.

---

The Platform Installation Wizard window displays.

**Step 7** To configure the platform now, choose **Proceed**. If you want to configure the platform later, choose **Skip**.

- If you want to install and configure the software at this time, choose **Proceed** and the Apply Patch window displays. Continue with [Step 8](#).
- If you want to install the software now and configure it later or if you have a server that has Cisco Unified CallManager preinstalled, choose **Skip** and continue with the [“Entering Preexisting Configuration Information”](#) section on page 21.




---

**Note** Choosing **Skip** in [Step 7](#) allows you to lay down the operating system on the machine first and enter the configuration information later. With this method, your total time required to complete the installation time may increase.

---

**Step 8** Choose the type of installation to perform by doing the following steps. See [Table 11](#) for more information on installation options:

- a. In the Apply Patch window, choose one of the options:
  - To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue with the [“Applying a Patch”](#) section on page 22.
  - To skip this step and install the software version on the DVD, choose **No** and continue with [Step 10](#).
  - To return to the previous window, choose **Back**.

The Import Windows Data window displays.

**Step 9** In the Import Windows Data window, choose **No**.



**Note** This document does not describe the Windows Upgrade. To perform a Windows Upgrade, that is, to upgrade from a Windows version of Cisco Unified CallManager to Cisco Unified CallManager 5.1(3), see *Upgrading Cisco Unified CallManager* for more information.

The Basic Install window displays.

**Step 10** In the Basic Install window, choose **Continue** to install the software version on the DVD. Continue with the “[Performing the Basic Installation](#)” section on page 25.

## Entering Preexisting Configuration Information

Start here if you have a server that has the product preinstalled or if you chose **Skip** in the Platform Installation Wizard window.

### Procedure

- Step 1** After the system restarts, the Preexisting Installation Configuration window displays.
- Step 2** If you have preexisting configuration information that was generated by the Answer File Generator, that is stored on a floppy disc or a USB key, insert the disc or 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** Choose the type of installation to perform by doing the following steps. See [Table 11](#) for more information on installation options:
- a. In the Apply Additional Release window, choose one of the options:
    - To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue with the “[Applying a Patch](#)” section on page 22.
    - To skip this step, choose **No**.
    - To return to the previous window, choose **Back**.
  - b. In the Import Windows Data window, choose **No**.



**Note** To perform a Windows Upgrade, that is, to upgrade from a Windows version of Cisco Unified CallManager to Cisco Unified CallManager 5.1(3), see *Upgrading Cisco Unified CallManager* for more information.

**Step 5** In the Basic Install window, choose **Continue**. Continue with the “[Performing the Basic Installation](#)” section on page 25.

## Applying a Patch

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


**Note**

You can upgrade to any 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 of the same number.

If you are upgrading from Cisco Unified CallManager Release 5.x, the upgrade file name uses the following format:

```
cisco-ipt-k9-patchX.X.X.X-X.tar.gz.sgn
```

Where X.X.X.X-X represents the release and build number.


**Note**

Do not rename the patch file before you install it because the system will not recognize it as a valid file.


**Note**

Do not unzip or untar the file. If you do, the system may not be able to read the upgrade files.

You can access the upgrade file during the installation process from either a local disk (CD or DVD) or from a remote FTP or TFTP server.


**Note**

You can only apply one patch during the installation process.

### 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 [“Upgrading from a Remote Server” section on page 23](#).
  - **FTP**—Retrieves the upgrade file from a remote server by using File Transfer Protocol (FTP). Skip to the [“Upgrading from a Remote Server” section on page 23](#).
  - **LOCAL**—Retrieves the upgrade file from a local CD or DVD. Continue with the [“Upgrading from a Local Disk” section on page 22](#).

## Upgrading from a Local Disk

Before you can upgrade from a local disk, you must download the appropriate patch file from Cisco.com and copy the file to a CD or DVD. Because of the size of the patch files, you will need to copy it to a DVD in most cases.

### Procedure

- Step 1** When the Local Patch Configuration window displays, enter the patch directory and patch name, if required, and choose **OK**.



**Note** You only need to enter the patch directory when the patch is not stored in the root directory of the CD or DVD. If the patch is stored in the root directory, enter a slash (/) in the directory field.

The Install Upgrade Patch Selection Validation window displays.

- Step 2** The window displays the patch file that is available on the CD or DVD. To update the system with this patch, choose **Continue**.

- Step 3** Choose the upgrade patch to install. The system installs the patch, then restarts the system, which is now running the upgraded software version.

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, choose **Proceed** or click **Cancel** to stop the installation.

If you choose **Proceed**, the Apply Patch window displays. Continue with [Step 6](#).

If you choose **Cancel**, the system halts, and you can safely power down the server.

- Step 6** When the Apply Patch window displays, choose **No**.



**Note** You can only apply one patch during the upgrade process.

The Windows Upgrade window displays.

- Step 7** Choose **No** and continue with [“Performing the Basic Installation” section on page 25](#).

## Upgrading from a Remote Server

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

### Procedure

- Step 1** In the Auto Negotiation Configuration window, 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.



**Note** To use this option, your hub or Ethernet switch must support automatic negotiation.

- To enable automatic negotiation, choose **Yes**.

The MTU Configuration window displays. Continue with [Step 3](#).

- To disable automatic negotiation, choose **No**. The NIC Speed and Duplex Configuration window displays. Continue with [Step 2](#).

**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).

- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes**. The system restarts and checks for network connectivity. Skip to [Step 7](#).
- 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**. See [Table 10](#) for field descriptions.

The DNS Client Configuration window displays.

**Step 6** To enable DNS, choose **Yes**, enter your DNS client information, and choose **OK**. See [Table 10](#) for field descriptions.

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. See [Table 10](#) for field descriptions. After the network restarts, 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, check with your system administrator for the correct directory path.

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, which is now running the upgraded software version.

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** To continue the installation, choose **Proceed** or click **Cancel** to stop the installation.

If you choose **Proceed**, the Apply Patch window displays. Continue with [Step 11](#).

If you choose **Cancel**, the system halts, and you can safely power down the server.

**Step 11** When the Apply Patch window displays, choose **No**.



**Note** You can only apply one patch during the upgrade process.

The Windows Upgrade window displays.

**Step 12** Choose No and continue with [“Performing the Basic Installation” section on page 25](#).

## Performing the Basic Installation

To continue installing the software, either on the DVD or the upgraded software, follow this procedure.

### Procedure

**Step 1** When the Timezone Configuration window displays, choose the appropriate time zone for the server and then choose **OK**.

The Auto Negotiation Configuration window displays.

**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** and continue with [Step 4](#).

The MTU Configuration window displays.



**Note** To use this option, your hub or Ethernet switch must support automatic negotiation.

- To disable automatic negotiation, choose **No** and continue with [Step 3](#).

The NIC Speed and Duplex Configuration window displays.

**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).

- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes** and continue with [Step 8](#).

The Administrator Login Configuration window displays.

- If you want to configure a static IP address for the node, choose **No** and continue with [Step 6](#).

The Static Network Configuration window displays.

**Step 6** If you chose not to use DHCP, enter your static network configuration values and choose **OK**. See [Table 10](#) for field descriptions.

The DNS Client Configuration window displays.

**Step 7** To enable DNS, choose **Yes**, enter your DNS client information, and choose **OK**. See [Table 10](#) for field descriptions.

The Administrator Login Configuration window displays.

**Step 8** Enter your Administrator login and password from [Table 10](#).




---

**Note** The Administrator login must start with an alphabetic character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. You will need the Administrator login to log in to Cisco Unified Communications Operating System Administration, the command line interface, and the Disaster Recovery System.

---

The Certificate Information window displays.

**Step 9** Enter your certificate signing request information and choose **OK**.

The First Node Configuration window displays.

**Step 10** You can configure this server as either the first node in a Cisco Unified CallManager cluster or as a subsequent node.

- To configure this server as the first Cisco Unified CallManager node, choose **Yes** and continue with the [“Configuring the First Node”](#) section on page 26.

The Network Time Protocol Client Configuration window displays.

- To configure this server as a subsequent node in the cluster, choose **No** and continue with the [“Configuring a Subsequent Node”](#) section on page 28.

The First Node Configuration window displays.

---

## Configuring the First Node

After you finish the basic installation, follow this procedure to configure the server as the first node in the cluster.

### Procedure

**Step 1** Choose whether you want to configure an external NTP server or manually configure the system time.



**Note** Cisco recommends that you use an external NTP server to ensure accurate system time on the first node. Ensure the external NTP server is stratum 9 or higher (meaning stratum 1-9). Subsequent nodes in the cluster will get their time from the first node.

- 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 three. To continue with the installation, choose **Proceed**.

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



**Note** If you have already entered the network configuration information and the system has rebooted (a Skip installation), the Test button displays. 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. To continue with the installation, choose **OK**.

The Database Access Security Configuration window displays.

**Step 2** Enter the Database Access Security password from [Table 10](#).



**Note** The Database Access Security password must start with an alphanumeric character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. Be sure you save the Database Access Security password. You must enter the same password on all nodes in the cluster.

The SMTP Host Configuration window displays.

**Step 3** If you want to configure an SMTP server, choose **Yes** and enter the SMTP server name.



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

**Step 4** Choose **OK**.

The Platform Configuration Confirmation window displays.

**Step 5** To continue with the installation, choose **OK**.

The Application User Configuration window displays.



**Note** If you need to change one of your previous entries, choose **Back**, make the change, and continue with the installation.

**Step 6** Enter the Application User password from [Table 10](#) and confirm the password by entering it again.

**Step 7** Choose **OK**.

The system installs and configures the software. The DVD drive ejects, and the server reboots. Do not reinsert the DVD.

- Step 8** When the installation process completes, you get prompted to log in by using the Administrator account and password.
- Step 9** Complete the post-upgrade tasks that are listed in the “[Post-Installation Tasks](#)” section on page 29.
- 

## Configuring a Subsequent Node

To configure a subsequent node in the cluster, follow these steps.



### Caution

You must configure a subsequent node on the first node by using Cisco Unified CallManager Administration before you install the subsequent node. For more information, see the *Cisco Unified CallManager Administration Guide*.

---

### Procedure

---

- Step 1** On the First Node Configuration window, read the Warning and make sure you have correctly configured the first node. To continue with the installation of the subsequent node, click **OK**.

The Network Connectivity Test Configuration window displays.

- Step 2** During installation of a subsequent node, the system checks to ensure that the subsequent node can connect to the first 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 3** Enter the first node connectivity information from [Table 10](#) 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 4** 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 5** To start installing the software, choose **OK**, or, if you want to change the configuration, choose **Back**.

- Step 6** When the installation process completes, you get prompted to log in by using the Administrator account and password.
- Step 7** Complete the post-upgrade tasks that are listed in the [“Post-Installation Tasks”](#) section on page 29.

## Post-Installation Tasks

After installing Cisco Unified CallManager on your server, you must set some configuration parameters and perform other post-installation tasks before you can begin using it. Perform these tasks for the server that you install and complete the tasks before other servers in the cluster are installed.

For post-installation tasks that you must complete after the installation, see [Table 13](#).

**Table 13** *Post-Installation Tasks*

Post-Installation Tasks	Important Notes
Log in as the Cisco Unified CallManager Application User and change the Application User passwords.	See the <a href="#">“Changing the Default Application User Passwords”</a> section on page 30.
Upload your license file to the first node server.	See the <a href="#">“Uploading a License File”</a> section on page 30.
Activate Cisco Unified CallManager feature services that you want to run.  Before you activate feature services, you must perform required preactivation tasks. For service activation requirements, refer to the <i>Cisco Unified CallManager Serviceability System Guide</i> .	Refer to <i>Cisco Unified CallManager Serviceability System Guide</i> .
Configure the backup settings.  Remember to back up your Cisco Unified CallManager data daily.	Refer to <i>Disaster Recovery System Administration Guide</i> .
The locale English_United_States installs automatically on the server; however, you can add new locales to the server, if required.	Refer to <i>Cisco Unified Communications Operating System Administration Guide</i> .
If applicable, configure any network management systems in use at your site.	Refer to <i>Cisco Unified CallManager Serviceability System Guide</i> .
If you want to set up a secure cluster, you can run your Cisco IP Telephony network in mixed mode.	For more information, see the “Installing the CTL Client” and “Configuring the CTL Client” procedures in the <i>Cisco Unified CallManager Security Guide</i> .
Configure the system.	For more information, refer to the <i>Cisco Unified CallManager System Guide</i> .

## Changing the Default Application User Passwords

The installation sets all Application User passwords to the same Application User password that you entered during installation. Cisco recommends that you log in to Cisco Unified CallManager Administration and change these passwords. Refer to *Cisco Unified CallManager Administration Guide* for the procedure for changing a password.

## Uploading a License File

Use the following procedure to upload a license file to the Cisco Unified CallManager server with the matching MAC address that is provided when a license file is requested. For information about obtaining a license file, see the [“Obtaining a License File” section on page 17](#). The Cisco Unified CallManager server where the license file is loaded takes on the functionality of the license manager.


**Note**


---

Upload the license file on the first node of the Cisco Unified CallManager cluster.

---

**Procedure**


---

**Step 1** Choose **System > Licensing > License File Upload**.

The License File Upload window displays.

**Step 2** The Existing License Files drop-down list box displays the license files that are already uploaded to the server.


**Note**


---

To view the file content of any existing files, click **View File**.

---

**Step 3** To choose a new license file to upload, click **Upload License File**.

The Upload File pop-up window displays.

**Step 4** To upload to the server, click **Browse** to choose a license file.


**Note**


---

The file name format of the license file that you receive is CCM<timestamp>.lic. If you retain the .lic extension, you can rename the license file. You cannot use the license if you edit the contents of the file in any way.

---

**Step 5** Click **Upload**.

After the upload process is complete, the Upload Result file displays.

**Step 6** Click **Close**.

In the License File Upload window, the status of the uploaded file displays.

**Note**

The license file gets uploaded into the database, only if the version specified in the license file is greater than or equal to the Cisco Unified CallManager version that is running in the cluster. If the version check fails, an alarm gets generated, and you should get a new license file with the correct version. The system bases the version check only on major releases.

## Applying Security to a New Node in a Secure Cluster

Use the following procedure to apply security to a new node in a secure cluster after you have successfully added the node. For more information on adding a new node to a cluster, see the [“Add a New Node to an Existing Cluster”](#) section on page 5.

**Note**

For more information, refer to the “Configuring the CTL Client” procedure in the *Cisco Unified CallManager Security Guide*.

### Procedure

- Step 1** Activate the Cisco CTL Provider service on the new node.
- Step 2** Use an etoken from the existing CTL file and run the CTL client again to get the certificates from all the servers in the cluster, including the new server, into the CTL file. You must be running the Cisco CTL Provider on all servers in the cluster to generate the certificates and update the CTL file.
- Step 3** Restart the Cisco TFTP service on all TFTP servers.
- Step 4** Restart the Cisco CallManager service on all the nodes.
- Step 5** Reset all devices to distribute the new CTL file to the devices.

## Examining Log Files

If you encounter problems with the installation, you can obtain and examine the install log files by entering the following commands in Command Line Interface.

To obtain a list of install log files from the command line, enter

```
CLI > file list install
```

To view the log file from the command line, enter

```
CLI > file view install log_file
```

where *log\_file* is the log file name.

You can also view logs by using the Real-Time Monitoring Tool. For more information on using and installing the Real-Time Monitoring Tool, refer to the *Cisco Unified CallManager Serviceability Administration Guide* and the *Cisco Unified CallManager Serviceability System Guide*.

# Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

## Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>. If you require further assistance please contact us by sending email to [export@cisco.com](mailto:export@cisco.com).

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