Cisco Unified Contact Center Express Install and Upgrade Guide, Release 12.5(1) SU2

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Preface

Change History

This table lists changes made to this guide. Most recent changes appear at the top.

Change	See	Date
Initial Release of Document for Release 12.5(1) SU2		
Added a note about DVDs not being supported	Unified CCX Installation > Install Unified CCX from Installation DVD	**April 2022**
Added info about the unavailability of the Service Update (SU) upgrade from the installation disk	Unified CCX Installation > Service Update During Installation	
Added details about preupgrade COP files	Unified CCX Upgrade > Preupgrade Tasks	
Added note under Important Considerations for Unified CCX upgrade	Unified CCX Upgrade	

About This Guide

This guide explains the deployment options, how to install, upgrade, uninstall, and patch Unified CCX, and how to change a Unified CCX deployment.

Audience

System installers and administrators or anyone who installs or configures Unified CCX and a Unified IP IVR telephony system.

Conventions

This manual uses the following conventions.

Convention	Description
boldface font	Boldface font is used to indicate commands, such as user entries, keys, buttons, and folder and submenu names. For example: • Choose **Edit** > **Find** • Click **Finish**.
italic font	Italic font is used to indicate the following: • To introduce a new term. Example: A *skill group* is a collection of agents who share similar skills. • For emphasis. Example: *Do not* use the numerical naming convention. • An argument for which you must supply values. Example: IF (*condition*, *true-value*, *false-value*) • A book title. Example: See the *Cisco Unified Contact Center Express Installation Guide*.

`window` font	Window font, such as Courier, is used for the following:
	• Text as it appears in code or information that the system displays. Example:
	`<html><title> Cisco Systems,Inc. </title></html>`
	• File names. Example: `tserver.properties`.
	• Directory paths. Example:
	`C:\Program Files\Adobe`

Convention	Description
string	Nonquoted sets of characters (strings) appear in regular font. Do not use quotation marks around a string or the string will include the quotation marks.
[ ]	Optional elements appear in square brackets.
{ x | y | z }	Alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
< >	Angle brackets are used to indicate the following: • For arguments where the context does not allow italic, such as ASCII output. • A character string that the user enters but that does not appear on the window such as a password.
^	The key labeled Control is represented in screen displays by the symbol ^. For example, the screen instruction to hold down the Control key while you press the D key appears as ^D.

Related Documents

Document or Resource	Link
Cisco Unified Contact Center Express Documentation Guide	https://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_documentation_roadmaps_list.html
Cisco Unified CCX documentation	https://www.cisco.com/en/US/products/sw/custcosw/ps1846/tsd_products_support_series_home.html
Cisco Unified Intelligence Center documentation	https://www.cisco.com/en/US/products/ps9755/tsd_products_support_series_home.html
Cisco Finesse documentation	https://www.cisco.com/en/US/products/ps11324/tsd_products_support_series_home.html
Cisco Customer Collaboration Platform documentation **Note** From Unified CCX Release 12.5(1), CCP documents are available in the Cisco Unified CCX documentation folder.	https://www.cisco.com/en/US/products/sw/custcosw/ps1846/tsd_products_support_series_home.html

Document or Resource	Link
Cisco Unified CCX Virtualization Information	https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-contact-center-express.html
Cisco Unified CCX Compatibility Information	https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html

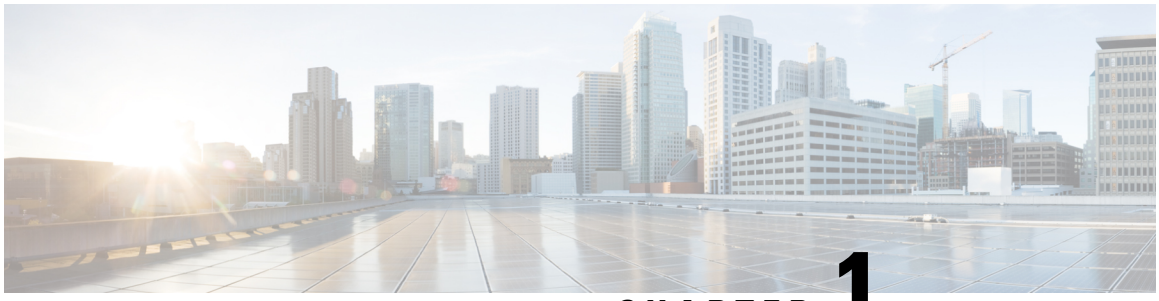
Documentation and Support

To download documentation, submit a service request, and find additional information, see *What's New in Cisco Product Documentation* at https://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

Documentation Feedback

To provide your feedback for this document, send an email to:

contactcenterproducts_docfeedback@cisco.com



CHAPTER 1

Installation Preparation

Installation Scenarios

Unified CCX installation has the following installation options:

- Standard installation - This option allows you to install Unified CCX software from the installation disc.
- Unattended installation - This option allows you to use the installation disc and a preconfigured USB disk to install Unified CCX software unattended.
- Virtualization - Unified CCX supports installation on a virtual machine.

Note For more information, see the Unified CCX Virtualization related information located at: https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-contact-center-express.html.

Table 1: Installation Scenarios

Installation Scenario	Tasks
Standalone (Single Node) Setup	Standard Installation: • Install Unified CCX from Installation DVD, on page 5 • Configure the first node Unattended Installation: • Perform Unattended Installation Using Answer File Generator, on page 8 • Configure the first node

Installation Scenario	Tasks
High Availability (Two Node) Setup	Standard Installation: • Install Unified CCX from Installation DVD, on page 5 • Configure the First Node • Add Second Node • Install Unified CCX on Second Node, on page 6 • Configure the second node Unattended Installation: • Perform Unattended Installation Using Answer File Generator, on page 8 • Configure the first node • Add Second Node • Perform Unattended Installation Using Answer File Generator, on page 8 • Configure the second node

Note You can use the Cisco Prime Collaboration Deployment application also to install your cluster. For more information, see *Cisco Prime Collaboration Deployment Administration Guide*.

System Requirements

For information about system requirements, see the Unified CCX Compatibility related information located at:

https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html

Note For more information about VMware ESXi's that are supported, refer to the *Virtualization for Cisco Unified Contact Center Express*.

Important Considerations Before Installation

Read the following information carefully before you proceed with the installation:

- For 100 agent profile, if you want to deploy Cloud Connect on the BE6000, you must configure 14GB of vRAM. For 400 agent profile, you must use the new OVA for which, you must configure 20GB of vRAM.

Note Ensure that the reservation of CPU and memory adhere to the specifications mentioned in the Virtualization Wiki.

- Unified CCX can only be installed on virtual machines and not on bare metal servers.
- DNS configuration and domain fields are mandatory for Unified CCX installation. Both forward and reverse lookups are required. DNS is required for the Unified CCX Chat feature to function and for integration with ICM by hostname in Unified IP IVR.
- When you Install Unified CCX on an existing server formats the hard drive, it overwrites all existing data on the drive. It also upgrades the system BIOS, firmware, and Redundant Array of Inexpensive Disks (RAID) configuration if they are outdated.
- Ensure that you connect each Unified CCX node to an uninterrupted power supply (UPS). This protects the Unified CCX server from unexpected power failure that damages the physical media.
- All servers in a cluster must run the same release of Unified CCX. The only exception is while upgrading cluster software, during which a temporary mismatch is allowed.
- Configure the server by using a static IP address so that the server IP address remains unchanged.
- Do not attempt to perform any configuration tasks during the installation.
- The field values (namely hostname and passwords) that you enter while you are running the installation program are case-sensitive. Hostname must be in lower case and the character limit is 24 characters.
- Ensure that the administrator username is not the same as that of any end user in CUCM.
- When you insert or remove a USB drive, you might see error messages on the console similar to “sdb: assuming drive cache: write through.” You can safely ignore these messages.
- Ensure that the third-party web services support TLS version 1.2 before you integrate any third-party web services.
- After the installation of Unified CCX, you have to select appropriate Smart License Type. For Smart Licensing details, see *Cisco Unified Contact Center Express Features Guide*.
- When creating the OS Administrator ID, ensure that it does not start with “uccx” or “UCCX” because such IDs conflict with system account names that are used internally within the Unified CCX server. Ensure that the OS Administration password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscores.
- Ensure that the Application User password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscores.

Preinstallation Tasks

Step 1 If the system time is from an Network Time Protocol (NTP) server (mandatory for VMware deployments), verify that the first node synchronizes with the NTP server before you install a second node.

Note If the first node fails to synchronize with an NTP server, installation of a second node also fails.

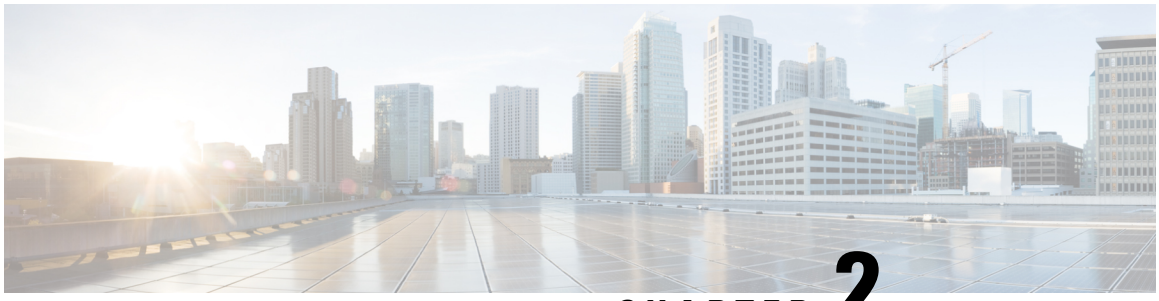
Step 2 If the firewall is in the routing path, disable the firewall between nodes. Increase the firewall timeout settings until you complete the installation.

Step 3 Record the network interface card (NIC) speed and duplex settings of the switch port to which you will connect the new server.

Step 4 Enable PortFast on all switch ports that are connected to Cisco servers.

Caution Do not run Network Address Translation (NAT) or Port Address Translation (PAT) between Unified CCX nodes.

Step 5 If you choose to apply a patch during installation, use a Secure File Transfer Protocol (SFTP) server that is certified by Cisco through the Cisco Technology Developer Partner program (CTDP). For more information about Supported SFTP Servers, see *System Requirements* section in *Cisco Unified Contact Center Express Admin and Operations Guide*.



CHAPTER 2

Unified CCX Installation

Install Unified CCX from Installation DVD

To install Unified CCX from an installation DVD, perform the following steps:

Step 1 Boot from the installation DVD.

Step 2 The installer checks the integrity of the DVD before beginning installation. Click **Yes** to perform a media check.

a) If the media check fails, create another DVD.

b) If the media check passes, click **OK** to proceed with installation.

Step 3 Follow the instructions on the screen. When the **Apply Patch** window appears, select **No** to begin the basic installation.

Note If you want to perform a service upgrade by applying patch, see **Service Update During Installation**.

Step 4 Follow the instructions on the screen to complete the installation. Use the information from **Server Configuration Information for Installation** to enter the basic configuration information.

What to do next

Configure the first node.

Note If you are installing on the second node, configure the first node and then add the second node.

Note Starting from Release 12.0(1), DVD support is not available. You can download the ISO files from https://software.cisco.com/download/home/270569179.

Add Second Node

Configure the IP address of the second node on the first node.

Note If you are using Smart Licensing and have already registered the first node with Cisco SSM, ensure that you have purchased HA license. Else, the product instance will be moved to out-of-compliance state.

Step 1 Log in to the Cisco Unified CCX Administration web interface of the first node.

Step 2 Choose **System** > **Server**.

Step 3 Click **Add New**.

Step 4 Enter the IP address or the host name of the second node in the **Host Name/IP Address** field.

Note When a new Unified CCX node is added , the Customer Collaboration Platform Configurations must be saved again in the **Subsystems** menu of **Cisco Unified Contact Center Express Administration**. This enables the change to take effect to re-create all the notifications for email and chat in Customer Collaboration Platform. For more details on this, see the guide at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-maintenance-guides-list.html.

Step 5 Enter the IPv6 Address in **IPv6 Address (for dual IPv4/IPv6)** field.

Step 6 Enter the MAC address details in the **MAC Address** field.

Step 7 Click **ADD**.

What to do next

Install Unified CCX on Second Node, on page 6

Install Unified CCX on Second Node

Perform the following steps to install Unified CCX on the second node in the cluster:

Note Perform this installation during off-peak hours to avoid possible dropped calls during the formation of a cluster.

Step 1 Verify that the first node is synchronized with an NTP server.

a) From the CLI on the first node, enter **utils ntp status**. The output indicates the synchronization state.

Note If the first node is not synchronized with an NTP server, installation of the second node fails.

Step 2 Install Unified CCX on the second node using the procedure Install Unified CCX from Installation DVD, on page 5. The system checks that the second node connects to the first node during the installation.

Note

a. If you have configured an SMTP server for the first node, you must configure it for the second node also.

b. During the installation procedure, when you are prompted to enter the administrator user name and password, enter the administrator user name and password that you set up in the first node of Unified CCX. Otherwise, the installation fails.

Caution After installing Unified CCX on the second node, configure it immediately. Until the second node is configured, do not change the security password or enable FIPS 140-2 mode on the first node.

What to do next

Configure the second node.

Unattended Installation

Unified Communications Answer File Generator generates answer files for unattended installations of Unified CCX 11.6(1) or later. Go to https://www.cisco.com/c/en/us/applicat/content/cuc-afg/index.html (Cisco Unified Communications Answer File Generator web page) for details on the Answer File Generator.

The Answer File Generator supports the following features:

- Allows simultaneous generation and saving of answer files for unattended installation on the publisher node and the subscriber node.
- Provides syntactical validation of data entries.
- Provides online help and documentation.

Note

1. Unattended installation supports only basic installations and not the upgrades.
2. Use a USB disk that is preformatted to be compatible with Linux 2.6 for the configuration file. This key has a FAT32 format.

Perform Unattended Installation Using Answer File Generator

Step 1 Go to https://www.cisco.com/c/en/us/applicat/content/cuc-afg/index.html (Cisco Unified Communications Answer File Generator web page).

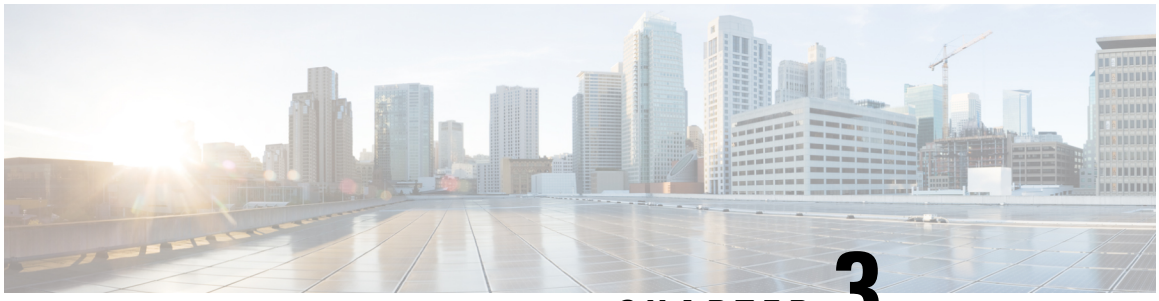
Step 2 Save the `platformConfig.xml` file to a Linux-compatible USB drive.

Step 3 Plug in the USB drive to the server on which you will install Unified CCX.

Step 4 Follow the instructions in Install Unified CCX from Installation DVD, on page 5.

Service Update During Installation

Unified CCX Release 12.5(1) SU2 does not support the Service Update (SU) upgrade from the installation disc. To upgrade to Release 12.5(1) SU2, see Preupgrade Tasks, on page 17.



CHAPTER 3

Post-Installation Tasks

Configure the First Node

Before you begin

After a successful installation, perform one of the following:

- If the Cisco Unified Communications Manager (CUCM) cluster is using the self-signed certificate, upload Tomcat certificates from all the nodes of CUCM cluster into the Unified CCX Tomcat trust store. To upload certificates, use the Cisco Unified OS Administration interface (for example, `https://<uccx-hostname>/cmplatform`) or the **`set cert import trust tomcat`** CLI.

- If the Cisco Unified Communications Manager (CUCM) cluster is using the CA signed certificate, upload the root CA certificate into Unified CCX Tomcat trust store.

Verify that the following users are added in Unified Communications Manager application:

- Unified CM Users - These are end users in Unified Communications Manager, who are assigned in Unified CCX as administrators. Using administrator credentials, you can login to the following components for Unified CCX:
    - Unified CCX Application Administration
    - Cisco Unified CCX Serviceability
    - Cisco Finesse Administration
    - Cisco Unified Intelligence Center Administration
    - Cisco Identity Service
    - Disaster Recovery System
    - Cisco Unified Serviceability

These users are required to integrate Unified Communications Manager with Unified CCX. For information on adding Unified CM users, see topic "Adding Users to a User Group" under the “User Management Configuration” section and “User Group Configuration” sub section in the *Cisco Unified Communications Manager Administration Guide* at:

https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Step 1 Log in to **Cisco Unified CCX Administration** page on the first node to initiate the configuration using the following URL format:

```
http://<servername or IP address>/appadmin
```

Note Use the credentials entered for **`Application User Name`** and **`Application User Password`** during installation.

User IDs are case-sensitive when logging into the Unified CCX Administration web interface. To make them case-insensitive, you must install 12.5(1) SU1 ES02.

Step 2 Follow instructions on the screen to complete the configurations.

Note Use the credentials of the Unified Communications Manager End User having administrator privileges in Unified CCX to configure the application users (AXL users).

What to do next

Add Second Node, on page 6

Configure the Second Node

Upload Tomcat certificates from all the nodes of Cisco Unified Communications Manager cluster into the second node and restart it.

Step 1 Log in to Cisco Unified CCX Administration page of the second node to initiate the configuration.

Note Use the credentials entered for **`Application User Name`** and **`Application User Password`** during installation.

User IDs are case-sensitive when logging into the Unified CCX Administration web interface. To make them case-insensitive, you must install 12.5(1) SU1 ES02.

Step 2 In the **Welcome to Unified CCX Replication Wizard** page, enter values for all the fields and click **Next**.

Step 3 In the **Component Activation** page, wait until all the components get activated and then click **Next**.

If you have selected **Network Deployment Type** as LAN, the **Cisco Unified CCX Setup Result Information** page gets displayed.

Step 4 If you have selected **Network Deployment Type** as WAN, enter appropriate values in **Cisco Unified CM Configuration** page. Follow the instructions on the screen to complete the configurations.

Step 5 Restart the first node and then restart the second node.

Configure Network Protocol for the Unified Intelligence Center Cluster

Cisco Unified Intelligence Center supports Multicast and TCP/IP as the network protocol. The default configuration is Multicast.

If Unified CCX is in an HA over WAN deployment where Multicast is not supported, then the following CLI command must be executed to configure the network protocol to TCP/IP:

- **utils cuic cluster mode tcp-ip**

The CLI must be executed on both the nodes of the Unified Intelligence Center. Restart the Cisco Unified Intelligence Center Service for the changes to take effect. To view the latest settings, you can execute the following CLI commands:

- **utils cuic cluster show**

Switch Network Deployment from LAN to WAN

You can change a LAN-based two-node setup to work over WAN. To change the network deployment from LAN to WAN for a two-node setup, do the following:

Step 1 Log in to the first node using the Unified CCX Administration web interface.

Step 2 Choose **System** > **Server**, and delete the second node from the list.

Step 3 Add the second node details again on the first node. See **Add Second Node**.

Step 4 Reinstall node 2. See **Install Unified CCX on Second Node**

Step 5 Configure the second node, and select the **Network Deployment Type** as WAN. See **Configure Second Node**.

Step 6 Add or configure new Unified Communications Manager Telephony Call Control Groups for the second node.

For more information, see the *Unified CM Telephony Call Control Group configuration* section in *Cisco Unified Contact Center Express Admin and Operations Guide*.

Upload Self-Signed Certificate

The following procedure is an example for uploading the CUCM self-signed certificate to Unified CCX Tomcat trust store.

Note The same procedure can be followed to upload CCP and Standalone CUIC self-signed certificates.

Step 1 Log in to Cisco Unified OS Platform CLI using administrator credentials.

Step 2 Enter the **show cert own tomcat** command to view the CUCM certificate details.
The CUCM certificate is displayed.

Step 3 Copy the certificate information starting from `-----BEGIN CERTIFICATE-----` to `-----END CERTIFICATE-----` and press **Enter**.

Example:

A sample certificate is as follows:

```
-----BEGIN CERTIFICATE-----
MIID+TCCAuGgAwIBAgIQRMN6rnHtbGwm1nNqJ1pCfTANBgkqhkiG9w0BAQsFADB1
MQswCQYDVQQGEwJJTjEOMAwGA1UECgwFQ0lTQ08xDjAMBgNVBAsMBUNCQUJVMR4w
HAYDVQQDDBVsb2FkdWNjeC1uMS5jaXNjby5jb20xEjAQBgNVBAgMCUtBUk5BVEFL
QTESMBAGA1UEBwwJQkFOR0FMT1JFMB4XDTIwMTAxMjA2NDQzN1oXDTIyMTAxMjA2
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RTyBJc9tnhG4LjD0ykokeSp+5u77Xug9ZCtAgiliHZu7cWpGu9lRToiFklgah23+
XbRBYlZpO5v7rd6HbQ==
-----END CERTIFICATE-----
```
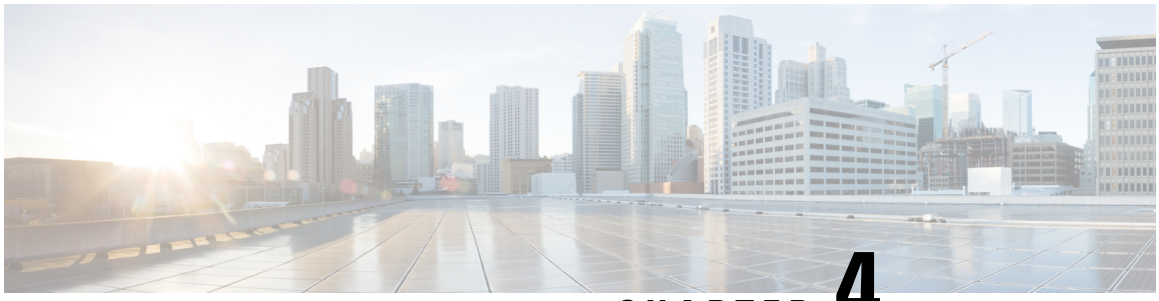

Step 4 Log in to Unified CCX CLI using administrator credentials.

Step 5 Enter the **set cert import trust tomcat** command to provide the CUCM certificate details.

a) Paste the copied CUCM certificate details and press **Return**.

The CUCM certificate is imported to Unified CCX Tomcat trust store.



CHAPTER 4

Unified CCX Upgrade

Unified CCX Upgrade Types

You can upgrade to Unified CCX version 12.5(1) SU2 only from Unified CCX versions 11.6(2), 12.0, 12.5(1), and 12.5(1) SU1. If you are using any prior release of Unified CCX, you have to upgrade to 11.6(2) or 12.0 and then upgrade to 12.5(1) SU2.

Note To upgrade to 12.5(1) SU2, apply the release-specific preupgrade COP file. For more information on release versions and their corresponding COP files, see Preupgrade Tasks, on page 17.

Table 2: Upgrade Details

Upgrade File Type	Upgrade Method	Apply Upgrade From
ISO Image	• Command Line Interface (CLI) • Cisco Unified OS Administration Web Interface	• Local ISO • FTP/SFTP server

Note

- There is service interruption during the upgrade and subsequent server restart.
- The new version installs on the inactive partition.
- For more information on supported component versions and browsers, see the Unified CCX Compatibility related information that is located at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.

Note You can use the Cisco Prime Collaboration Deployment application also to upgrade your cluster. For more information, see *Cisco Prime Collaboration Deployment Administration Guide*.

Important Considerations for Upgrade

- To manage your license better, migrate to smart Licensing. For more information about Smart Licensing, see *Cisco Unified Contact Center Express Features Guide*.

  If you want to continue using Cisco WFO, you must remain on Classic Licensing as Cisco WFO does not support Smart Licensing.

- For systems upgrading from 12.5.1 SU1 or earlier to 12.5.1 SU2 or higher, you must update `AssertionConsumerService` URL manually on IDP, or as part of normal configuration process you must disable SSO, generate new Service Provider XML file, and reconfigure SSO.

  Upon upgrading from 12.5.1 SU1 to SU2, the SP XML File on UCCX changes as below:

  - For 12.5.1 SU1 or prior, `https://FQDN:8553/ids/saml/response`
  - For 12.5.1 SU2 or higher, `https://FQDN:8553/ids/saml/response?metaAlias=/sp`

- For a 100 agent profile, if you want to deploy Cloud Connect, you must configure 14GB of vRAM. For a 400 agent profile, you must configure 20GB of vRAM.

Note

- A 300 agent profile is not available. You cannot switch versions.
- For a 100 agent profile, if you do not want to deploy Cloud Connect, there is no change.
- Ensure that the reservation of CPU and memory adhere to the specifications mentioned in the Virtualization Wiki.

- Install Unified CCX only on virtual machines. Unified CCX will not run on bare metal.
- In the virtual machine, change the Guest OS version to match the OS version of Unified CCX.
- DNS is mandatory. Before you upgrade, configure the domain name and DNS server IPs and ensure the forward and reverse lookups on the DNS server are correct.
- Do not make any configuration changes during upgrade because changes are lost after upgrade.
- Always ensure to perform the backup on the first node before you start upgrading the second node.
- Upgrade Unified CCX during off-peak hours or during a maintenance window to avoid service interruptions.
- In an HA deployment of Unified CCX, you must switch both the Unified CCX nodes to the newer version during the same maintenance window.

  If the contact center is expected to function with only the first node that is switched to the new version, ensure that the following conditions are met until the switch version on the second node is complete:

  - No agents are logged in to the second node.
  - The services, **Cisco Finesse Tomcat**, **Cisco Unified CCX Engine**, and **Cisco Unified CCX Database** are in **Stopped** state on the second node.

- Upgrade Unified CCX and Cisco Customer Collaboration Platform in the same maintenance window and perform the upgrade on Cisco Customer Collaboration Platform first, followed by Unified CCX.
- After the upgrade of Cisco Customer Collaboration Platform, unread and unhandled emails are downloaded from the mail server and added to Unified CCX. However, the draft emails are not downloaded.
- Ensure that a valid Cisco Customer Collaboration Platform OVA is deployed for a successful install or upgrade. The upgrade stops if no Cisco Customer Collaboration Platform OVA is found in the deployment.
- Both the nodes in a cluster must run the same release of Unified CCX. The only exception is while you are upgrading the cluster software, during which a temporary mismatch is allowed.
- Upgrade VMware tools and change the NIC adapter type for Unified CCX after the refresh upgrade and before initiating the switch version.
- For more information on Certificates, see *Cisco Unified Contact Center Certificate Management Guide* available at: https://www.cisco.com/c/en/us/support/docs/customer-collaboration/unified-contact-center-express/118855-configure-uccx-00.html.
- Unified CCX 10.0(1) and later versions include a feature in the VMware Installation information line to indicate if the disk partitions are aligned. For aligned disk partitions, the VMware installation information line indicates "Partitions aligned". After upgrading, if the VMware installation information line indicates

"ERROR-UNSUPPORTED: Partitions unaligned.", it means that Cisco cannot provide support for any performance issues. To correct a virtual machine with unaligned partitions, you must perform the applicable restore (with rebuild) scenario procedure in Unified CCX Administration. For more information, see *Cisco Unified Contact Center Express Admin and Operations Guide*.

- After the upgrade, the OS Administration lists the manually uploaded third-party CA certificates but does not list the third-party CA certificates that are packaged with Unified CCX.
- If any Unified Intelligence Center user was made an Administrator using the **utils cuic user make-admin [user-name]** command before an upgrade of Unified CCX, the user loses the Cisco Cisco Unified Intelligence Center Administrator capabilities after the upgrade. Execute the CLI again, after the upgrade, to make the user a Cisco Unified Intelligence Center Administrator.
- In an HA setup, do not switch versions on both the first and second nodes at the same time.
- When you upgrade Unified CCX in an HA deployment, ensure that the following conditions are met before the switch version is initiated on Node 2:
  - If you have upgraded Node 1 to a new version and then reinstalled Node 2 with an older version, you must upgrade Node 1 and Node 2 again to the new version, before you start the switch version.
  - The switch version of Node 1 is complete and the node is successfully restarted. Otherwise, the upgrade might fail or there might be discrepancy in data.

Note The switch version of Node 1 automatically initiates a node restart and there is no need to manually restart Node 1.

  - Ensure that you are able to log in successfully to Cisco Unified Intelligence Center, on Node 1, using the Administrator or Reporting User credentials.

- You may experience a delay of approximately 30 minutes for the services to start during the first restart of the Unified CCX system after switching the version. This is due to the application of security policies after upgrade. This delay will not appear in subsequent restarts.
- Do not modify the Hostname or IP address of the Unified CCX server during the upgrade process.
- After the upgrade of Unified CCX, agents and supervisors must clear the browser cache and cookies before logging in to the Cisco Finesse Desktop and the Cisco Unified Intelligence Center.
- After a successful installation or upgrade, download and install the language pack COP to use the Cisco Unified Intelligence Center interface and the Cisco Finesse Desktop interface in a language other than English.
- After the upgrade, you must manually remove the Context Service gadget from the Cisco Finesse desktop (Desktop Layout and Team Desktop Layout).
- After the upgrade of Unified CCX, if necessary, the administrator can copy the sample configurations for customizing desktop properties from the **View Default Layout** (Cisco Finesse Administration console > **Desktop Layout**) and add to the respective custom layouts.

  For more information, see the *Upgrade* section in the *Cisco Finesse Installation and Upgrade Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/finesse/products-installation-guides-list.html.

- After the upgrade, you can move to Smart Licensing. For Smart Licensing details, see *Cisco Unified Contact Center Express Features Guide*.
- From Unified CCX Release 12.5(1) SU1, the connection between RmCm Subsystem and Unified CM can be secured by enabling Secure Real–Time Transport Protocol (SRTP) in AppAdmin. If you had enabled SRTP before upgrading to Unified CCX Release 12.5(1) SU1, disable and enable it again after upgrade. Otherwise, the connection between RmCm Subsystem and Unified CM will not be secure.
- When SRTP is enabled in Unified CCX release 12.5(1), after upgrading to Unified CCX release 12.5(1) SU1, the RmCm subsystem will be out of service on the subscriber node. Disable and enable SRTP again to operate Unified CCX in SRTP-enabled mode.
- When SRTP is enabled in Unified CCX release 12.5(1) SU1, if you switch back to Unified CCX release 12.5(1), the RmCm subsystem will be out of service on both the nodes. Disable and enable SRTP again to operate Unified CCX in SRTP-enabled mode.

Preupgrade Tasks

Note All the nodes in a cluster must be on the same version. However, if you have upgraded only some nodes and want **Intelligence Center Reporting Service** available on the upgradednodes, do one of the following:

- Stop the **Intelligence Center Reporting Service** on all the nodes that aren't upgraded and then restart the upgraded nodes.
- Before the upgrade, change the cluster mode to UDP on all the nodes using the utils cuic cluster mode CLI command. After upgrading all the nodes, set the cluster mode to TCP. For more information, see the section in the Administration Console User Guide Cluster Configuration for JVM Using Hazelcast for Cisco Unified Intelligence Center.

Step 1 Obtain the pre-upgrade COP from https://software.cisco.com/download/home/270569179.

The following table lists the release versions and their corresponding COP files to upgrade to Release 12.5(1) SU2:

Table 3: Release Versions and COP Files for Unified CCX

Version	Release 12.5(1) SU2 Pre-Upgrade COP Name
11.6(2)	ciscouccx.1162.1251SU2PREUPGRADE.41.cop.sgn ucos.keymanagement.v01.cop.sgn
12.0(1)	ciscouccx.1201.1251SU2PREUPGRADE.3.cop.sgn ucos.keymanagement.v01.cop.sgn
12.5(1)	ciscouccx.1251.1251SU2PREUPGRADE.3.cop.sgn ucos.keymanagement.v01.cop.sgn

Version	Release 12.5(1) SU2 Pre-Upgrade COP Name
12.5(1) SU1	ciscouccx.1251.SU1.1251SU2PREUPGRADE.37.cop.sgn ucos.keymanagement.v02.cop.sgn

Table 4: Release Versions and COP Files for Customer Collaboration Platform

Version	Release 12.5(1) SU2 Pre-Upgrade COP Name
11.6(2)	ciscosm.keymanagement.cop.sgn ciscocvos.enable-sha512sum-signing-key-v1.0.cop
12.0(1)	ciscosm.keymanagement.cop.sgn ciscocvos.enable-sha512sum-signing-key-v1.0.cop
12.5(1)	ciscoccp.keymanagement.cop.sgn ciscocvos.enable-sha512sum-signing-key-v1.0.cop
12.5(1) SU1	ciscoccp.keymanagement.cop.sgn ciscocvos.enable-sha512sum-signing-key-v1.0.cop
12.5(1) SU2	ciscoccp.keymanagement.cop.sgn ciscocvos.enable-sha512sum-signing-key-v1.0.cop

Note There is no specific order you must follow while installing the pre-upgrade COP files.

You must install the COP files on both the publisher and the subscriber nodes. The changes take effect immediately after you install the pre-upgrade COP files. Reboot is not needed.

For information on installing COP files, see Apply COP File, on page 22.

Step 2 Obtain the ISO file from https://software.cisco.com/download/home/270569179.

Step 3 Create an ISO image of the upgrade file and place the ISO image on an FTP/SFTP server to which your server has access.

Step 4 Obtain the license file.

Note You require the license file only if you continue to use Classic Licensing.

Step 5 Back up all the existing data. For more information, see the *Cisco Unified Contact Center Express Admin and Operations Guide*.

Step 6 In the Unified CCX Administration, navigate to **Tools** > **Password Management**. Ensure that the passwords are same in both the nodes.

Step 7 Upload the Customer Collaboration Platform certificate to the Unified CCX Tomcat trust store using the Cisco Unified OS Administration interface. You can also use the **`set cert import trust tomcat`** CLI.

Step 8 Perform one of the following:

a) If the Cisco Unified Communications Manager (CUCM) cluster is using the self-signed certificate, upload the Tomcat certificates from all the nodes of the cluster to the Unified CCX Tomcat trust store. To upload certificates, use the Cisco Unified OS Administration interface (for example, `https://<uccx-hostname>/cmplatform`) or the **`set cert import trust tomcat`** CLI.

b) If the Cisco Unified Communications Manager (CUCM) cluster is using a CA-signed certificate, upload the root and the intermediate CA certificates to the Unified CCX Tomcat trust store.

Note

- For adding the UCCX certificate to the CUCM Phone trust store, refer to Finesse IP Phone Agent Certificate Management section in the Cisco Unified Contact Center Express Admin and Operations Guide.
- For information on using secure ports, refer to Finesse Port Utilization section in the Port Utilization Guide for Cisco Unified Contact Center Express Solution.
- The single button FIPPA service must be added to CUCM.

Step 9 Install the COP files. Refer to Step 1, on page 17 for the list of Unified CCX and Customer Collaboration Platform COP files and the corresponding releases.

For information about installing the COP files, see COP File, on page 21.

Note If you do not install these COP files, the upgrade fails.

Unified CCX Upgrade Scenarios

The following table lists the required tasks to upgrade a Single Node and a High Availability (HA) setup for Refresh Upgrade and Linux to Linux Upgrade types.

Note During Refresh Upgrade to Release 12.5.1 SU2, the `system-history.log` file may contain the following information, which can be ignored:

```
Switch Version 12.5.1.11002-XYZ to 12.0.1.10000-24 Aborted
```

Table 5: Upgrade Scenarios

Upgrade Scenario	Tasks
11.6.x/12.0/12.5(1)/12.5(1) SU1/12.5(1) SU2 to 12.5(1) SU3	Preupgrade Task Obtain the required preupgrade COP file from https://software.cisco.com/download/home/270569179. To know more about the preupgrade files needed for your release version, see Preupgrade Tasks, on page 17. Single Node Setup: 1. Upgrade Unified CCX Using Web Interface, on page 22 Or Upgrade Unified CCX Using CLI, on page 23 2. Verify Version of Unified CCX, on page 26 3. Verify Status of Services, on page 26

Upgrade Scenario	Tasks
	HA Setup: 1. Upgrade Unified CCX Using Web Interface, on page 22 or Upgrade Unified CCX Using CLI, on page 23. a. Upgrade the first node. Check all the services in the first Node from CLI and GUI and ensure that all the services are in Good/In_Service state. b. Upgrade the second node. 2. **Check and Perform Switch Version**. **Note** Check all the services in the first Node from CLI and GUI and ensure that all the services are in Good/In_Service state. a. Perform switch version on the first node. b. Perform switch version on the second node. **Note** After the switch version is complete on the second node, open the **Unified CCX Administration** page of the first node to check if the page is requesting for a license. Provide the license on the first node. 3. Verify Version of Unified CCX, on page 26 4. Verify Status of Services, on page 26 5. Verify Unified CCX Database Replication, on page 27

COP File

The COP file is the Cisco Options Package file. It is a compressed TAR file or an RPM file that has a `cop.sgn` file extension, and is signed by Cisco. COP files are installed on the active partition. You can apply the COP file using the CLI. The COP files for a specific release version can be downloaded from the location, Download Software. (For example, browse to **Unified Contact Center Express Upgrade Utilities** for a specific release version from the following location, **Products** > **Customer Collaboration** > **Contact Center Solutions** > **Unified Contact Center Express**).

Apply COP File

Attention See the documentation that is provided with the COP file for additional instructions on how to apply the COP file.

Attention Contact Cisco if you want to roll back the COP file.

Note For an HA setup, repeat this procedure for node 2 only after restarting node 1 after successful COP installation.

Before you begin

1. Place the COP file on an FTP/STFP server to which your server has access.

Step 1 Follow Steps 1 to 8 from Upgrade Unified CCX Using CLI, on page 23.

Step 2 Enter the command **utils system restart** to restart the server.

Upgrade Unified CCX Using Web Interface

You can upgrade Unified CCX either from a local DVD or from a FTP/SFTP server.

Step 1 Log in to **Cisco Unified OS Administration** using administrator username and password.

Step 2 Choose **Software Upgrades** > **Install/Upgrade**.

Step 3 Choose source as either **DVD/CD** or **Remote Filesystem** from the **Source** list.

Step 4 Enter the path of the upgrade file in the **Directory** field. For **Remote Filesystem**, enter a forward slash (/) followed by the directory path.

Step 5 If you chose **Remote Filesystem**, follow the instructions on the screen; otherwise, skip to **Step 6**.

Step 6 Click **Next** to see the list of upgrades that are available.

Step 7 Choose the appropriate upgrade file, and click **Next**.

Step 8 Enter relevant information in the **Email Destination** and **SMTP server** fields to use the Email Notification feature.

Step 9 Click **Next** to initiate the upgrade process.

Note After upgrading Unified CCX, the CAs that are not approved by Cisco are removed from the platform trust store. However, you can add them back, if necessary.

- For information about the list of CAs that Cisco supports, see Cisco Trusted External Root Bundle in https://www.cisco.com/security/pki.
- For information about adding a certificate, follow the procedure mentioned from step 5 under *Obtain and Upload CA Certificate* section in *Cisco Unified Contact Center Express Admin and Operations Guide*.

Upgrade Unified CCX Using CLI

Step 1 Log in to Cisco Unified OS Platform CLI using administrator username and password.

Step 2 Enter the command **show version active** and check the current version.

Step 3 Enter the command **utils system upgrade status** and check that the node is ready for upgrade.

Step 4 Enter the command **utils system upgrade initiate** to initiate the upgrade process.

Step 5 Choose the source where the upgrade file is placed.

Step 6 Follow the instructions on the screen.

Your entries are validated and the available files list is displayed.

Step 7 After the installation is complete, enter the **show version inactive** command to check the upgraded version.

Note If you enter **show version active** command during the upgrade process (by using an ISO image), it displays the version that is being upgraded to.

After upgrading Unified CCX, the CAs that are not approved by Cisco are removed from the platform trust store. However, you can add them back, if necessary.

- For information about the list of CAs that Cisco supports, see Cisco Trusted External Root Bundle in https://www.cisco.com/security/pki.
- For information about adding a certificate, follow the procedure mentioned from step 5 under *Obtain and Upload CA Certificate* section in *Cisco Unified Contact Center Express Admin and Operations Guide*.

Upgrade VMware Tools

Perform the below procedures to install and upgrade VMware tools for Unified CCX post Refresh Upgrade and prior to initiating Switch Version.

Upgrade VMware Tools using vSphere Client for Unified CCX

Step 1 Ensure you have powered on the virtual machine.

Step 2 Right-click the VM menu bar, choose **Guest** > **Install/Upgrade VMware tools**.

Step 3 Select the automatic tools update and click **OK**. It takes few minutes to complete. Once the update is complete, the tools are listed as Running (Current) on the VM's **Summary** tab in vSphere.

Note For more information about VMware ESXi's that are supported, refer to the *Virtualization for Cisco Unified Contact Center Express*.

Upgrade VMware Tools using CLI for Unified CCX

Step 1 Ensure you have powered on the virtual machine.

Step 2 Right-click the VM menu bar, choose **Guest** > **Install/Upgrade VMware tools**.

Step 3 Select the interactive tools update and click **OK**.

Step 4 Open the console and login at the command prompt.

Step 5 Enter the command **utils vmtools refresh** and confirm.
The server automatically reboots twice.

Step 6 After reboot, check the **Summary** tab for the VM to verify that the VMware tools version is current. If it is not current, reboot the VM and check the version again. It takes few minutes to complete. Once the process is complete, the tools are listed as Running (Current) on the VM's **Summary** tab in vSphere.

Upgrade VMware Tools using Windows guest OS for Unified CCX

Step 1 Ensure you have powered on the virtual machine.

Step 2 Right-click the VM menu bar, choose **Guest** > **Install/Upgrade VMware tools**. Click **OK** on the popup window.

Step 3 Login to the VM as a user with Administrative privileges.

Step 4 Run VMware tools from the DVD drive. The installation wizard starts.

Step 5 Follow the prompts in the wizard to complete the VMware Tools installation. Choose the Typical installation option.

Step 6 When the VM Tools installation finishes, restart the virtual machine for the changes to take effect. After the process is complete , the tools are listed as Running (Current) on the VM's **Summary** tab in vSphere.

Change NIC Adapter Type

Perform the below procedure post Refresh Upgrade and prior to initiating Switch Version.

Step 1 From **VMware VSphere**, select the **virtual machine** > **Edit Settings**. The Virtual Machine Properties window appears.

Step 2 To add the new Network Adapter, on the **Hardware** tab, click **Add**. The **Add Hardware** window appears.

Step 3 Select **Device Type** and **Ethernet Adapter**. Click **Next**. Choose the adapter type as **VXMNET3**. Click **Next** and **Finish**.

Step 4 To remove the existing Network Adapter 1, under the **Hardware** tab, select **Network Adapter 1**, click **Remove**, and select **OK**.

Step 5 Power on the virtual machine.

Check and Perform Switch Version

Caution **Never initiate switch version from the recovery CD.**

Note

- Perform switch version in the same maintenance window to avoid additional downtime.
- The time taken for switch version depends on the size of records in the database.
- Always ensure that all the third-party Wallboard server and WFM servers that query the Unified CCX database externally are powered off prior to the switch version process. These servers may cause conflict in database operations.
- Update the Unified CCX VM to latest OVA for 100 and 400 Agent profile for the switch version to be successful. This is mandatory as the vRAM required has been changed. For more information, see the Unified CCX Virtualization related information located at: https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-contact-center-express.html.
- Do not modify the Hostname or IP address of the Unified CCX server before performing switch version.

Step 1 To check and perform switch version using the web interface:

a) Log in to **Cisco Unified OS Administration** using administrator username and password.
b) Choose **Settings** > **Version** to check the versions.
c) Click **Switch Versions**, and click **OK** to initiate the switch version process.
d) Choose **Settings** > **Version** to check the active version.

Step 2 To check and perform switch version using the CLI:

a) Log in to Cisco Unified OS Platform CLI using administrator username and password.
b) Enter the command **show version active** to check the active version.
c) Enter the command **show version inactive** to check the inactive version.
d) Enter the command **utils system switch-version** to initiate the switch version process.
e) Enter the command **show version active** to check the active version.

Step 3 If switch version is unsuccessful:

a) Log in to Cisco Unified OS Platform CLI using administrator username and password.
b) Enter the command **utils uccx switch-version db-check** to check if the database is corrupt.
c) Enter the command **utils uccx switch-version db-recover** to restore the database.

Verify Version of Unified CCX

You can verify the current active and inactive versions of Unified CCX either by using the web interface or using CLI.

Note For an HA setup, verify the versions on both the nodes.

Step 1 To verify the active and inactive versions of Unified CCX using the web interface:
a) Log in to **Cisco Unified OS Administration** using administrator username and password.
b) Choose **Settings** > **Version** to check the current active and inactive versions.

Step 2 To verify the active and inactive versions of Unified CCX using the CLI:
a) Log in to Cisco Unified OS Platform CLI using administrator username and password.
b) Enter the command **show version active** to check the active version.
c) Enter the command **show version inactive** to check the inactive version.

Verify Status of Services

Note For HA setup, verify the services on both the nodes.

Step 1 To verify the status of Customer Collaboration Platform:
a) After Unified CCX upgrade, log in to **Cisco Unified CCX Administration** using administrator username and password.
b) Choose **Subsystems** > **Chat and Email CCP Configuration**.
c) Click **Save** and verify that the **CCP Status** displays green for all the components.

Step 2 To verify the status of services using the web interface:
a) Log in to **Cisco Unified CCX Serviceability** using administrator username and password.
b) Choose **Tools** > **Control Center - Network Services** and verify that all the services are running.

Step 3 To verify the status of services using the CLI:
a) Log in to Cisco Unified OS Platform CLI using administrator username and password.

b) Enter the command **utils service list** to verify that all the services are running.

Verify Unified CCX Database Replication

Note For Cisco Finesse Desktop Failover to succeed, ensure the status of Cisco Database Replication is 'Good replication'.

Step 1 Log in to **Cisco Unified CCX Serviceability** using administrator username and password.

Step 2 Choose **Tools** > **Datastore Control Center** > **Replication Servers**.

Step 3 Ensure the servers are in ACTIVE/CONNECTED state and database replication of the operating system is functioning between the first node and the second node.

Step 4 If there is a problem with the replication continue; otherwise, skip to **Step 5**.

a) Log in to Unified CCX CLI using Unified CCX username and password.
b) Enter the command **utils uccx dbreplication status** and determine the location and cause of failure.
c) Enter the command **utils uccx dbreplication repair {all|database_name}** on the node or nodes to remove data discrepancy between the nodes.
d) Enter the command **utils uccx dbreplication status** to ensure the status is 'Good replication'. If failure persists, continue; otherwise, skip to **Step 5**.
e) Enter the command **utils uccx dbreplication teardown** to remove database replication.
f) Enter the command **utils uccx dbreplication setup** to setup database replication.
g) Enter the command **utils uccx dbreplication status** to ensure the status is 'Good replication'.

Step 5 Log in to **Unified CCX Administration** using Unified CCX username and password.

Step 6 Verify that your configuration data exists on both the nodes.

Verify Cisco Database Replication

Step 1 Run the Cisco Unified Real-Time Monitoring Tool (RTMT).

Step 2 Choose **System** > **Performance** > **Open Performance Monitoring**.

Step 3 Click the **Node1** or **Node2** radio button as required.

Step 4 Click the **Number of Replicates Created and State of Replication** radio button.

Step 5 Double-click **Replicate_State**.

Step 6 Choose **ReplicateCount**, and click **Add**.

The “Performance Counter” graph is displayed in the right window.

Step 7 Use the following list to monitor the status of database replication.

- 0—Initializing
- 1—Replication setup script fired from this node
- 2—Good replication
- 3—Bad replication
- 4—Replication setup did not succeed

Step 8 If there is a problem with the replication:

a) Log in to Cisco Unified OS Platform CLI using administrator username and password.
b) Enter the command **utils dbreplication status{all|node|replicate}** and determine the location and cause of failure.
c) Enter the command **utils dbreplication repair{nodename|all}** on the node or nodes to remove data discrepancy between the nodes.
d) Enter the command **utils dbreplication status** to ensure the status is 'Good replication'.

Upgrade Unified CCX Editor

Step 1 Uninstall the Unified CCX Editor.
Step 2 Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.
Step 3 Choose **Tools** > **Plug-ins**.
Step 4 Click the **Cisco Unified CCX Editor Web Launcher** hyperlink.
Step 5 Download the Unified CCX Editor (.jnlp) file.

Launch Unified CCX Editor

Step 1 Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.
Step 2 Choose **Tools** > **Plug-ins**.
Step 3 Click the **Cisco Unified CCX Editor Web Launcher** hyperlink to download and launch the Unified CCX Editor (.jnlp) file.

Install Unified CCX Real-Time Monitoring Tool

Step 1 Uninstall the previous version of Unified CCX Real-Time Monitoring Tool.
Step 2 Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.

Step 3 Choose **Tools** > **Plug-ins**.

Step 4 Click **Cisco Unified Real-Time Monitoring Tool for Windows** or **Cisco Unified Real-Time Monitoring Tool for Linux** to download and install Unified Real-time Monitoring Tool.

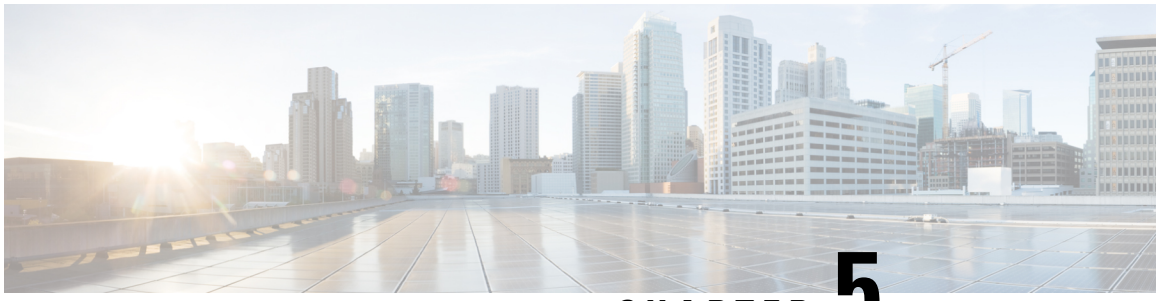
Note
- The current Unified RTMT requires JRE to run. Verify that the system has JRE installed (Java 1.8).
- On a Linux workstation, run RTMT with root access. Otherwise, when you initially install RTMT, the application will not start.

Launch Unified CCX Real-Time Reporting Tool

Step 1 Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.

Step 2 Choose **Tools** > **Plug-ins**.

Step 3 Click the **Cisco Unified CCX Real-Time Reporting Tool** hyperlink to download and launch the RTR (.jnlp) file.



CHAPTER 5

Unified CCX Rollback

Important Considerations for Rollback

Caution Configuration/reporting updates that are made after the upgrade are not be preserved when you roll back.

- Do not make any configuration changes during the rollback, because the changes are lost after the rollback.
- In an HA setup, do not switch versions on both the first and second nodes at the same time. Perform switch version on the second node only after you have switched versions on the first node.

Roll Back Upgrade for Single Node Setup

Step 1 **Check and Perform Switch Version**

Step 2 Verify Version of Unified CCX, on page 26

Step 3 **Verify Status of Services**

Step 4 Roll Back Unified CCX Clients, on page 32

Roll Back Upgrade for HA Setup

Step 1 **Check and Perform Switch Version**. Perform switch version on the first node.

Step 2 **Check and Perform Switch Version**. Perform switch version on the second node.

Step 3 Verify Version of Unified CCX, on page 26

Step 4 **Verify Status of Services**

Step 5 Roll Back Unified CCX Clients, on page 32

Step 6 Reset Database Replication after Rollback, on page 32

Step 7 Verify Unified CCX Database Replication, on page 27

Step 8 Verify Cisco Database Replication, on page 27

Reset Database Replication after Rollback

If you roll back to an older version of Unified CCX, you must manually reset database replication within the cluster for an HA setup.

Step 1 Log in to Cisco Unified OS Platform CLI using administrator username and password.

Step 2 Enter the command **utils uccx dbreplication reset all** to reset database replication.

Roll Back Unified CCX Clients

Step 1 Remove the Editor. For more information, refer to the "Removal of the Unified CCX Editor" section in *Cisco Unified Contact Center Express Getting Started with Scripts Guide* **.**

Step 2 Uninstall the Cisco Unified Real-Time Monitoring Tool.

Step 3 Remove the Cisco Unified Real-Time Reporting Tool.

Step 4 Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.

Step 5 Choose **Tools** > **Plug-ins**.

Step 6 Click the **Cisco Unified CCX Editor Web Launcher** hyperlink to download and launch the Unified CCX Editor (.jnlp) file. No installation required.

Before launching the downloaded JNLP file, copy the file to a different location for future use. Ensure to clear the Java cache before launching the JNLP file.

Step 7 Click **Cisco Unified Real-Time Monitoring Tool for Windows** or **Cisco Unified Real-Time Monitoring Tool for Linux** as required to install Unified RTMT.

Step 8 Click **Cisco Unified Real-Time Reporting Tool** to launch Unified Real-Time Reporting Tool.

Impact on Historical Reporting Users After Roll Back

Rolling back versions from a later version of Unified CCX to an earlier version does not retain the privileges of Historical Report Users that were created in later version. These users will not have access to Historical Reports. After reverting to the earlier version, update the reporting capability for them.

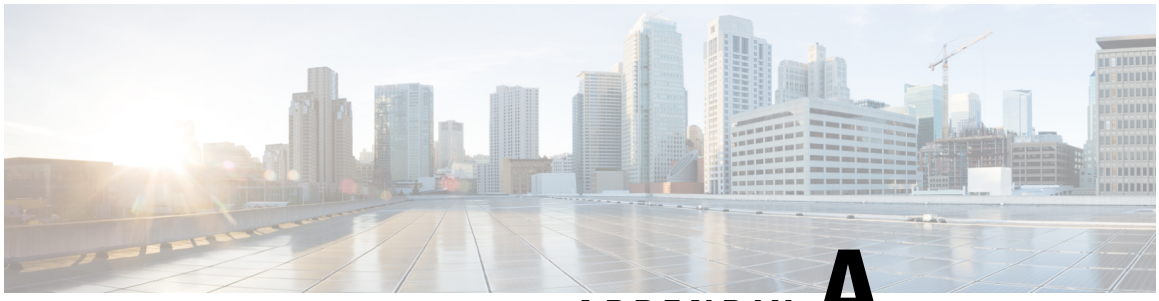
To update the reporting capability:

Step 1 Log in to Cisco Unified CCX Administration using Unified CCX username and password.

Step 2 Choose **Tools** > **User Management** > **Reporting Capability**.

Step 3 Select the users that you want to update.

Step 4 Click **Update**.



APPENDIX A

Server Configuration Table

Server Configuration Information for Installation

Note

- You can use the configuration table for saving your entries either on a printed paper or in the PDF document.
- Be aware that the field values (namely hostname and passwords) that you enter while you are running the installation program are case-sensitive. Hostname must be in lower case and the character limit is 24 characters.
- All the fields may not be applicable to your system and network configuration. Unless mentioned otherwise, you can change the values of most fields after the installation using CLI commands.

Attention Changes to some of the configuration parameters may result in changes to the licence MAC, and you may have to rehost the Unified CCX license. For information about the configuration parameters, see **Unified CCX Licenses**.

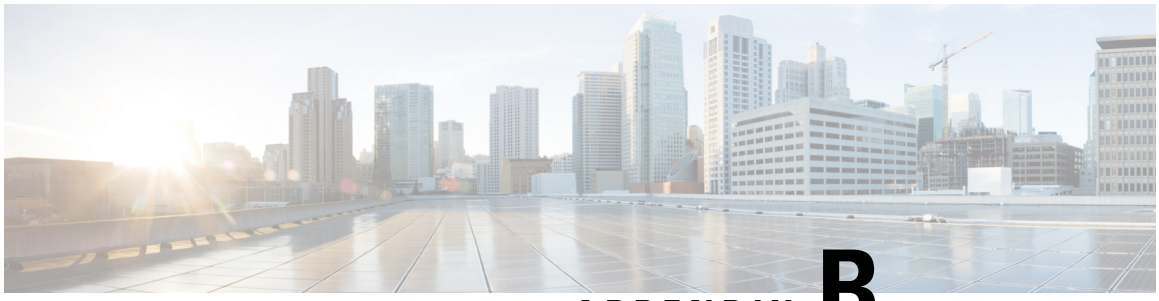
Table 6: Node Configuration Table

Parameter	Your Entry
Administrator ID **Attention** You *cannot* change the original administrator account user ID; you can create additional administrator accounts. **Caution** Do not create administrator IDs (for CLI access or Operating System administration) that start with "uccx" or "UCCX" because such IDs conflict with system account names that are used internally within the Unified CCX server.	

Parameter	Your Entry
Administrator Password **Attention** This field specifies the password for the administrator account, which you use for secure shell access to the CLI, for logging in to Cisco Unified Operating System Administration, and for logging in to the Disaster Recovery System. Ensure that the password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscores. You can change the password after installation.	
Application User Name	
Application User Password **Attention** Use the Application User password as the default password for applications that are installed on the system, including Unified CCX and Unified Communications Manager. Ensure that the password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscores. You can change the password after installation.	
DNS Primary	
DNS Secondary (optional)	
Domain	
Gateway Address	
Hostname	
IP Address	
IP Mask	
MTU Size **Note** Use the same Maximum Transmission Unit (MTU) value for all servers in the cluster.	
NIC Duplex **Note** This parameter is not displayed if automatic negotiation is used.	

Parameter	Your Entry
NIC Speed **Note** This parameter is not displayed if automatic negotiation is used.	
NTP Server **Attention** Enter the hostname or IP address of one or more Network Time Protocol (NTP) servers with which you want to synchronize. You can enter up to five NTP servers. You can change the NTP server after installation.	
Security Password **Attention** 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. Save this password. You will be asked to enter the same Security password when you install the second node to form a cluster. You can change the password after installation by using the following CLI command: **CLI > set password user security** To avoid losing communications between nodes, you must change the Security password on both nodes in a cluster and reboot both the nodes. For more information, see the description of this command in the *Cisco Unified Operating System Administration Guide* at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-maintenance-guides-list.html.	
SMTP Location **Note** You must populate this field if you plan to use electronic notification.	
Organization **Note** The value you enter is used to generate a CSR.	
Unit **Note** The value you enter is used to generate a CSR.	

Parameter	Your Entry
Location	
State **Note** The value you enter is used to generate a CSR.	
Country **Note** The value you enter is used to generate a CSR and self-signed certificates.	
Time Zone **Note** Use the same Timezone for all nodes.	



APPENDIX B

Unified CCX Licenses

From Unified CCX release 12.5(1), fresh install of Unified CCX supports only Smart Licensing. For more information on migrating to smart Licensing, see *Cisco Unified Contact Center Express Features Guide*. If you are upgrading from releases prior to Unified CCX 12.5(1) and want to continue using Classic Licensing, see the following sections in the document.

The Unified CCX licenses are based on a string called the license MAC, which is different from the physical MAC address of a system. License MAC is dependent on the system parameters. A modification to any of the parameters can change license MAC, thereby invalidating current License files. The following are the parameters on which the validity of a license MAC depends:

- Time zone
- NTP server 1 (or none)
- NIC speed (or auto)
- Hostname
- IP Address
- IP Mask
- Gateway Address
- Primary DNS
- SMTP server
- Certificate Information (Organization, Unit, Location, State, Country)

Note The Unified CCX Warm Standby license and all other licenses are node-locked to the License MAC address of the first node (typically the Database Publisher node) of a Unified CCX cluster. When a second node is added, the verification of a valid add-on Warm Standby license on the first node is performed. After the cluster is set up, the licenses are valid on both the nodes in a cluster.

- Obtain License MAC, on page 40
- Upload Licenses, on page 40

Obtain License MAC

License MAC can be obtained in two ways—by using either the Command Line Interface or the Administrator Web interface.

Upload Licenses

Software for all of the Unified CCX feature components are loaded on the system during installation. However, no feature is available for use unless a license for that feature is added and activated.

You can upload and display licenses using the License Information page. To upload a license, complete the following steps.

Step 1 From the Unified CCX Administration menu bar, choose **System** > **License Information** > **Add License(s)**.

The License Information web page opens.

Step 2 Specify a License file or click **Browse** to locate a file.

You can either specify a single file with a .lic extension or a .zip file containing multiple .lic files.

Note While you are upgrading from a previous release, if there are multiple licenses, zip all the .lic files into a single .zip file and then upload the zip file. If specifying a .zip file, ensure that all .lic files that need to be added are in the root of the .zip file and are not in subfolders in the .zip file.

Step 3 Click **Upload**.

On successful upload of the license, you will see the following confirmation message in the status bar at the top of this web page : `License has been uploaded successfully`

If you upload an Add-on license to increase the existing licensed Outbound IVR ports, the following message will be displayed :

`As the number of licensed Outbound IVR Ports have increased, please increase the number of ports in the Outbound Call Control Group to utilize all the licensed ports.`

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