Cisco Unified Contact Center Express Install and Upgrade Guide, Release 11.0(1)

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Preface

This document explains how to install Cisco Unified Contact Center Express (Unified CCX) on a single node deployment or two node high availability deployment in a cluster environment. Review all installation instructions carefully before you install or upgrade Unified CCX.

Change History

Change	See	Date
Removal of Cisco Agent Desktop	The following Cisco Agent Desktop related sections have been removed from this version: • Install Desktop Client • Upgrade Desktop Clients • Roll Back Desktop Client	Initial release of document for 11.0(1)

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

This guide is intended for Cisco Unified Communications system administrators.

Related Documents

Documentation and Support

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

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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:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-

Table 1: Installation Scenarios

Installation Scenario	Tasks
Standalone (Single Node) Setup	Standard Installation: • Install Unified CCX from Installation DVD, on page 5 • Configure First Node, on page 11 Unattended Installation: • Perform Unattended Installation Using Answer File Generator, on page 7 • Configure First Node, on page 11
High Availability (Two Node) Setup	Standard Installation: • Install Unified CCX from Installation DVD, on page 5 • Configure First Node, on page 11 • Add Second Node, on page 6 • Install Unified CCX on Second Node, on page 6 • Configure Second Node, on page 12 Unattended Installation: • Perform Unattended Installation Using Answer File Generator, on page 7 • Configure First Node, on page 11 • Add Second Node, on page 6 • Perform Unattended Installation Using Answer File Generator, on page 7 • Configure Second Node, on page 12

System Requirements

For information about system requirements, see the *Compatibility Matrix for Cisco Unified CCX* at http://docwiki.cisco.com/wiki/Compatibility_Matrix_for_Unified_CCX.

Important Considerations before Installation

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

• Unified CCX can only be installed on virtual machines. Unified CCX will not install 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 uninterruptible power supply (UPS) to protect 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.

• 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.

• 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.

Preinstallation Tasks

Procedure

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 Obtain a license file. For more information, see **Obtain License MAC Before Installation**.

Step 6 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 section "System Requirements" in *Cisco Unified Contact Center Express Disaster Recovery System Administration Guide* at http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html.

C H A P T E R **2**

Unified CCX Installation

Install Unified CCX from Installation DVD

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

Procedure

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, obtain another DVD from Cisco.

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 that is required during installation.

What to Do Next

✎

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

Add Second Node

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

Procedure

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.

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

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

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

Procedure

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

2   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.

What to Do Next

Unattended Installation

Unified Communications Answer File Generator generates answer files for unattended installations of Unified CCX 9.0(1) or later. Go to http://www.cisco.com/web/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

Procedure

Step 1   Go to http://www.cisco.com/web/cuc_afg/index.html (Cisco Unified Communications Answer File Generator web page).

Step 2   Enter the required fields.
Make a note of the license MAC that is displayed.
Caution   License MAC is generated based on the basic configuration information that you provided in the Answer file generator page. If you change these values on the server, the Licence MAC will be invalid and you will need to request a new licence.

Step 3 Save the `platformConfig.xml` file to a Linux-compatible USB drive.

Step 4 Plug in the USB drive to the server on which you will install Unified CCX.

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

Service Update During Installation

During the installation process, you can upgrade the version that is contained on the installation disc with a later Service Update (SU). If you click **Yes** in the **Apply Patch** window, the installation wizard installs from the DVD, restarts the system, and then applies the patch. You can access the SU patch from the following sources:

- **LOCAL**—Retrieves the upgrade file from a local DVD.

- **SFTP**—Retrieves the upgrade file from a remote server by using Secure File Transfer Protocol (SFTP).

- **FTP**—Retrieves the upgrade file from a remote server by using File Transfer Protocol (FTP).

Apply Service Update

Note For an HA setup, repeat this procedure on node 2.

Before You Begin

To upgrade from a DVD:

1 Download the appropriate upgrade file from www.cisco.com.

2 Create an ISO image of the upgrade file on the DVD. Do not copy the ISO file to a DVD.

To upgrade from an FTP/SFTP server:

1 Download the appropriate upgrade file from www.cisco.com.

2 Place the upgrade file on a supported FTP/SFTP server to which your server has access.

Procedure

Step 1 During the installation procedure, when asked whether to apply a patch, choose **Yes** in the **Apply Patch** window. For more information about UCCX installation, see **Install Unified CCX from Installation DVD**.

Step 2 Choose source as **SFTP** or **FTP** or **LOCAL**, and click **OK**.

Step 3 Enter the patch directory and patch name, and click **OK**.

Option	Description
Linux or UNIX Server	Enter a period (.) followed by a forward slash (/) at the beginning of the directory path. **Example:** ./patches
Windows Server	• Begin the path with a forward slash and use forward slashes throughout the path. • Start the path from the FTP or SFTP root directory on the server. Do not enter a Windows absolute path, which starts with a drive letter; for example, "C:". **Example:** /patches

Step 4 Click **Continue** to apply the patch.
The system installs the patch and restarts the server.

Step 5 Once the server has rebooted after patch installation, choose **Proceed** to continue the installation or **Cancel** to stop the installation.

PostInstallation Tasks

Access Unified CCX Administration web interface to perform initial system configurations after you install Unified CCX.

Configure First Node

Before You Begin

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

- Unified CM Users - These are end users in Unified Communications Manager that 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

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:

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

Procedure

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.

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

Configure Second Node

Procedure

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.

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 instructions on the screen to complete the configurations.

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:

Procedure

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 of the *Cisco Unified Contact Center Express Administration Guide*, available here:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html

Install Unified CCX Clients

Before You Begin

You must configure the DNS client on your local machine to access Unified CCX Editor.

If your local machine is not in the domain where Unified CCX resides, enter the hostnames in the local host file for the machines that house Unified CCX nodes.

Procedure

Step 1 Select **Tools** > **Plug-ins**.

Step 2 Select **Cisco Unified CCX Editor** to install Unified CCX Editor.

Step 3 Select **Cisco Unified Real-Time Monitoring Tool for Windows** or **Cisco Unified Real-Time Monitoring Tool for Linux** as required to install Unified RTMT.

What to Do Next

for high availability.

Unified CCX Upgrade

This chapter explains how to upgrade Unified CCX.

Unified CCX Upgrade Types

Upgrade files are available as Cisco Options Package (COP) files or ISO images.

You can upgrade Unified CCX using COP files from the Command Line Interface (CLI) or through Cisco Unified OS Administration web interface. You can apply the COP files from the FTP/SFTP server.

You can upgrade Unified CCX using ISO images from:

- Cisco Unified OS Administration web interface
- Command Line Interface (CLI)

You can apply the ISO images from:

- Local DVD

> **Note** The local DVD may be a bootable ISO image or a non-bootable ISO image.

- FTP/SFTP server

> **Note** For information about supported upgrades, see *Compatibility Matrix for Cisco Unified CCX*, available here: http://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html

Unified CCX provides the following upgrade options:

Table 2: Types of Upgrade

Upgrade Type	Upgrade Path	Description
Linux to Linux Upgrade	10.5.x/10.5.xSUx/ 10.6.x/10.6.xSUx to 11.0.x	- There is no service interruption during the upgrade and no subsequent server restart. - The new version is installed on the inactive partition.
Refresh Upgrade (RU)	10.0.x to 11.0.x	There is service interruption during the upgrade and subsequent server restart.
	9.x.x to 11.0.x	There is service interruption during the upgrade and subsequent server restart.
COP file See Apply COP File, on page 22.	Fix for the same version	- There is service interruption during the upgrade and subsequent server restart. - COP files are installed on the active partition and you cannot uninstall them. If you want to uninstall, contact Cisco.

Important Considerations for Upgrade

- Install Unified CCX only on virtual machines. Unified CCX will not run on bare metal.

- DNS is mandatory. Before you upgrade, ensure that the domain name and DNS server IPs are configured and verify the forward and reverse lookups on the DNS server are correct.

- The memory requirements have changed for Unified CCX 10.0(1) or later. For more information about RAM requirements, see http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_Unified_Contact_Center_Express#Version_10.0.28x.29 .

- After you upgrade to Unified CCX 10.0(1) or later, it ignores Agent IDs and Supervisor IDs with special characters, such as dollar ($), ampersand (&), single quotes (` '), colon (:), angle brackets (< >), square brackets ([ ]), parenthesis ({ }), double quotes (" "), hash (#), percent (%), semicolon (;), comma (,), tilde (~), pipe (|), forward slash (/), question mark (?), backward slash (\). If you try to change these user IDs in Cisco Unified Communications Manager, Unified CCX 10.0(1) considers them as new IDs and you will not be able to recover these user IDs.

- Unified Intelligence Center is the only reporting client available.

- Do not make any configuration changes during the upgrade, because the changes are lost after the upgrade.

- 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 switch versions on the first node. Otherwise, the upgrade might fail or there might be discrepancy in data.

- Upgrade Unified CCX during off-peak hours or during a maintenance window to avoid service interruptions.

- Upgrade Unified CCX and Cisco SocialMiner in the same maintenance window and perform the upgrade on Cisco SocialMiner first, followed by Unified CCX.

- 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.

- When you upgrade Unified CCX in an HA deployment ensure that the following conditions are met before Switch version is initiated on Node 2:

  - 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   Switch version of Node 1 automatically initiates a node restart and there is no need to manually restart Node 1.

  - The following services are started on Node 1 after it was restarted (post Switch version):

    - A Cisco DB

    - Cisco Unified Intelligence Center

    - Cisco Finesse

    - Cisco Unified CCX Administration

    - Cisco Unified Cluster View Daemon

    - Cisco Unified CCX Engine

  - Ensure that you are able to log in successfully to Cisco Unified Intelligence Center, on Node 1, using 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 post the switch version. This is due to the application of Security policies post upgrade. This delay will not appear in subsequent restarts.

- It takes approximately 90 minutes to upgrade a node.

• Do not modify the Hostname or IP address of the Unified CCX server during the upgrade process.

• For more information on Certificates, see *Cisco Unified Contact Center Certificate Management Guide* available at: http://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 whether the disk partitions are aligned. If the disk partitions are aligned, the VMware installation information line will indicate "Partitions aligned". After upgrading, if the VMware installation information line indicates "ERROR-UNSUPPORTED: Partitions unaligned.", it means that Cisco cannot provide support for performance issues. To correct a virtual machine with unaligned partitions you must perform the applicable restore (with rebuild) scenario procedure in *Cisco Unified Contact Center Express Operations Guide* available at: http://www.cisco.com/en/US/products/sw/custcosw/ps1846/prod_maintenance_guides_list.html

Preupgrade Tasks

Procedure

Step 1 Ensure you have the Secure File Transfer Protocol (SFTP) server product.

Step 2 Obtain the appropriate ISO file from `http://www.cisco.com` if you do not have the upgrade DVD from Cisco.

Step 3 Create an ISO image of the upgrade file and place it on a DVD or FTP/SFTP server as required.

a) Create an ISO image of the upgrade file on the DVD. Do not copy the ISO file to a DVD.

b) Place the ISO image on an FTP/SFTP server to which your server has access.

Step 4 Obtain the license file. See **Unified CCX Licenses**.

Step 5 Back up all the existing data. See the documentation available here: http://www.cisco.com/en/US/partner/ products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html.

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 You must be on the latest SU version before upgrading to a version on a higher major version.

Table 3: Upgrade Scenarios

Upgrade Scenario	Tasks

10.0.x to 11.0.x
 	
9.x.x to 11.0.x
	Single Node Setup:
	
	1 Apply COP File, on page 22, so that when you upgrade later, the system can detect whether the upgrade is an RU or not.
	
	    a Go to URL: http://software.cisco.com/download/navigator.html
	
	    b Enter your username and password and click **Log In**.
	
	    c Choose from the list **Products** > **Customer Collaboration** > **Contact Center Solutions** > **Unified Contact Center Express** > **Unified Contact Center Express 11.0(1)**.
	
	    d Click **Unified Contact Center Express Upgrade Utilities**.
	
	    e Download the COP file.
	
	2 Upgrade Unified CCX Using Web Interface or Upgrade Unified CCX Using CLI
	
	3 **Check and Perform Switch Version**.
	
	4 Verify Version of Unified CCX, on page 25
	
	5 Verify Status of Services, on page 25
	
	6 Upgrade Unified CCX Clients, on page 27

Upgrade Scenario	Tasks

	HA Setup:
	
	1 Apply COP File, on page 22, so that when you upgrade later, the system can detect whether the upgrade is an RU or an MR.
	
	  a Follow Steps 1a to 1e from the above *Single Node Setup* to apply COP file on the first node.
	
	  b Follow Steps 1a to 1e from the above *Single Node Setup* to apply COP file on the second node.
	
	2 Upgrade Unified CCX Using Web Interface or Upgrade Unified CCX Using CLI
	
	  a Upgrade the first node.
	    Check all the services in the first Node from CLI and GUI. If all the services are in Good/In_Service state then proceed with switch version on the second node.
	
	  b Upgrade the second node.
	
	3 **Check and Perform Switch Version**
	
	  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.
	4 Verify Version of Unified CCX, on page 25
	5 Verify Status of Services, on page 25
	6 Verify Unified CCX Database Replication, on page 26
	7 Verify Cisco Database Replication, on page 27
	8 Upgrade Unified CCX Clients, on page 27

Upgrade Scenario	Tasks

10.5.x/10.5.xSUx to 11.0.x
 	
10.6.x/10.6.xSUx to 11.0.x
	Single Node Setup:
	
	1 Upgrade Unified CCX Using Web Interface or Upgrade Unified CCX Using CLI.
	
	2 **Check and Perform Switch Version**.
	
	3 Verify Version of Unified CCX, on page 25
	
	4 Verify Status of Services, on page 25
	
	5 Upgrade Unified CCX Clients, on page 27
	
	HA Setup:
	
	1 Upgrade Unified CCX Using Web Interface or Upgrade Unified CCX Using CLI
	
	   a Upgrade the first node.
	
	   b Upgrade the second node.
	
	2 **Check and Perform Switch Version**
	
	   a Perform switch version on the first node.
	
	      Check all the services in the first Node from CLI and GUI. If all the services are in Good/In_Service state then proceed with switch version on the second node.
	
	   b Perform switch version on the second node.
	
	3 Verify Status of Services, on page 25
	
	4 Verify Version of Unified CCX, on page 25
	
	5 Verify Unified CCX Database Replication, on page 26
	
	6 Verify Cisco Database Replication, on page 27
	
	7 Upgrade Unified CCX Clients, on page 27

Related Topics

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**).

If you want to use the Cisco Finesse desktop interface in a language other than English, download and install the language COP file.

> **Note** Reinstall the Language COP file post upgrading your UCCX to a SU version as they are not automatically migrated.

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.

Procedure

Step 1 Follow Steps 1 to 8 from Upgrade Unified CCX Using CLI.

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

Related Topics

Upgrade Unified CCX Using Web Interface

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

Procedure

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.

Upgrade Unified CCX Using CLI

Procedure

Step 1	Log in to Cisco Unified Communications 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	Select the ISO image/COP file you want to apply from the available list, and confirm the installation when you are prompted.
Step 8	Enter the command **show version active** and check the upgrade version.

Virtual Machine Parameters to Support Refresh Upgrade

Before you perform a refresh upgrade to 11.x, you must modify the following virtual machine parameters : Red Hat Enterprise Linux version, Memory, RAM and Disk.

Procedure

Step 1   After a successful installation of the upgrade COP, power off the virtual machine.

Step 2   From **VMWare VSphere**, select the virtual machine > **Edit Settings**.
The Virtual Machine Properties window appears.

Step 3   In the **Options** tab, select **General Options** and update the **Guest Operating System** to Red Hat Enterprise Linux 6(64-bit). Click **OK**.

Step 4   Again select the virtual machine > **Edit Settings**. In the **Hardware** tab, update the **Memory Size**, **RAM**, and **DISK** space required. See the Unified CCX Virtualization related information located at:
http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-contact-center-express.html
to choose the parameters.

> **Note**   If you do not choose the appropriate memory size, this message **Warning! Old OVA detected. Update your OVA** displays post an upgrade in the **Cisco Unified Contact Center Administration** and **Command Line Interface** page.

Step 5   Power on the virtual machine and continue with the refresh upgrade.

> **Note**   If you perform a switch-back, you need not modify the virtual machine parameters.

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.
- Do not modify the Hostname or IP address of the Unified CCX server before performing switch version.

Procedure

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 Communications 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 Communications 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.

Procedure

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 Communications 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.

Procedure

Step 1 To verify the status of SocialMiner:

      a) After Unified CCX upgrade, log in to **Cisco Unified CCX Administration** using administrator username and password.

      b) Choose **Subsystems** > **Chat and Email** > **SocialMiner Configuration**.

      c) Click **Save** and verify that the **SocialMiner 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 Communications 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'.

Procedure

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

Procedure

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 Communications 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 Clients

You must upgrade Unified CCX Editor after you upgrade Unified CCX. The Cisco Unified Real-Time Monitoring Tool (RTMT) is automatically upgraded during the upgrade process.

Procedure

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 **Cisco Unified CCX Editor** to download and install Unified CCX Editor.

Unified CCX Rollback

This chapter explains how to roll back an upgrade.

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

Procedure

Step 1   **Check and Perform Switch Version**

Step 2   Verify Version of Unified CCX, on page 25

Step 3   **Verify Status of Services**

Step 4   Roll Back Unified CCX Clients, on page 31

Roll Back Upgrade for HA Setup

Procedure

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 25

Step 4   **Verify Status of Services**

Step 5   Roll Back Unified CCX Clients, on page 31

Step 6   Reset Database Replication after Rollback, on page 30

Step 7   Verify Unified CCX Database Replication, on page 26

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.

Procedure

Step 1   Log in to Cisco Unified Communications 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

Procedure

Step 1   Uninstall the Unified CCX Editor.

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

Step 3   Log in to **Cisco Unified CCX Administration** using Unified CCX username and password.

Step 4   Choose **Tools** > **Plug-ins**.

Step 5   Click **Cisco Unified CCX Editor** to install Unified CCX Editor.

Step 6   Click **Cisco Unified Real-Time Monitoring Tool for Windows** or **Cisco Unified Real-Time Monitoring Tool for Linux** as required to install Unified RTMT.

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:

Procedure

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**.

Server Configuration Table

- Server Configuration Information for Installation, page 33

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 4: 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.	
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 Communications 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	

Parameter	Your Entry
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.	
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 http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_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.	

Parameter	Your Entry
Unit **Note** The value you enter is used to generate a CSR.	
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	

Unified CCX Licenses

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.

Demo Licenses

The Unified CCX Installation DVD is bundled with a 25 seat premium demo license, which is valid for 60 days and includes all the features.

Obtain License MAC Before Installation

To obtain license MAC before you install Unified CCX, perform the following steps:

Procedure

Step 1 Open the answer file generation page: http://www.cisco.com/web/cuc_afg/index.html.

Step 2 Fill in the fields with your product information and click **Generate Answer Files & License MAC** button to obtain the license MAC.

Step 3 On the License Registration page at http://www.cisco.com/go/license enter the Product Authorization Key (PAK) that came with the Unified CCX product or that you received when you placed your order by phone.

Step 4 Click **Submit** and follow instructions on the screen.

Step 5 Enter the license MAC of the first node of the Unified CCX cluster.

Step 6 Enter a valid email address and the number of nodes for which you need licenses.

      Note   Unified CCX supports only node-locked licenses. However, Unified CCX continues to recognize the existing licenses that are used for Unified CCX versions earlier than 9.0(1) on an upgraded system only if an upgrade license is also present.

Step 7 Upload the license file to the server.
For more information on how to upload a license file and view license information, see the *Cisco Unified Contact Center Express Administration Guide*, available here:

http://www.cisco.com/en/US/products/sw/custcosw/ps1846/products_installation_and_configuration_guides_list.html.

Obtain License MAC After Installation

Use Command Line Interface

Procedure

Step 1 Log in to the Unified CCX system CLI using Unified CCX Administrator credentials.

Step 2 Run **show status** command.
Output of this command contains the license MAC.

Using Administrator Web Interface

Procedure

Step 1 Login to the Unified CCX Administrator web interface using Unified CCX Administrator credentials.

Step 2 Click **System > License Information > Display License(s)** and obtain the license MAC.

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.

Procedure

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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