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 , 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 1: Types of Upgrade

Upgrade Type	Upgrade Path	Description
Linux to Linux Upgrade	10.5.x/10.5.xSUx/ 10.6.x/10.6.xSUx/ 11.0.x/11.0.xSUx to 11.5.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)	9.x.x to 11.5.x	There is service interruption during the upgrade and subsequent server restart.
	10.0.x to 11.5.x	There is service interruption during the upgrade and subsequent server restart.
COP file See Apply COP File, on page 9.	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://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unified-contact-center-express.html.

• 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.

- Always ensure to perform the backup on the first node before you start upgrading the second node.

- 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.

- Upgrade VMware tools and change the NIC adapter type for Unified CCX post Refresh Upgrade and prior to initiating Switch Version.

- 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

- The third-party CA certificates, packaged with Unified CCX, are not listed in the OS Administration when upgraded from Unified CCX 11.0(1). However the third-party CA certificates uploaded manually are retained.

- For all the Unified Intelligence Center Reports that are failing with a database exception error, install the following COP file, **ciscouccx.ReportFix.10.cop.sgn** from the location https://software.cisco.com/ download/ release.html?mdfid=286309734&flowid=80822&softwareid=28084057&&release=COPFILE&relind=AVAILABLE&rellifecycle=&reltype=latest to fix the encountered issue.

- In the Unified CCX 11.5(1) the Tomcat service is preconfigured with RSA and ECDSA certificates.

  After upgrade to Unified CCX 11.5(1), the live data gadgets may not load in Cisco Finesse agent desktop if the Tomcat's RSA certificate is CA signed and the new Tomcat-ECDSA certificate is self-signed. For the Live Data gadgets to load until the Tomcat-ECDSA certificate is CA signed, you should install the following COP, **ciscouccx.ecdsa-cert.cop.sgn** from the location: https://software.cisco.com/download/release.html?mdfid=286309734&flowid=80822&softwareid=28084057&&release=11.5(1)&relind=AVAILABLE&rellifecycle=&reltype=latest This COP should be installed after the Unified CCX is upgraded to 11.5(1) version. If you upload the CA Signed Tomact-ECDSA certificate in future, Unified CCX will automatically start using this certificate.

- After the upgrade of Unified CCX, agents and supervisors must clear the browser cache and cookies before logging in to Cisco Finesse Desktop and 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 Cisco Finesse desktop interface in a language other than English.

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.

Related Topics

Demo Licenses

Obtain License MAC Before Installation

Obtain License MAC After Installation

Use Command Line Interface

Using Administrator Web Interface

Upload Licenses

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 2: Upgrade Scenarios

Upgrade Scenario	Tasks

10.0.x to 11.5.x
 	
9.x.x to 11.5.x
	Single Node Setup:
	
	1. Apply COP File, on page 9, so that when you upgrade later, the system can detect whether the upgrade is an RU or not.
	
	   1. Go to URL: http://software.cisco.com/download/navigator.html
	
	   2. Enter your username and password and click **Log In**.
	
	   3. Choose from the list **Products** > **Customer Collaboration** > **Contact Center Solutions** > **Unified Contact Center Express** > **Unified Contact Center Express 11.5(1)**.
	
	   4. Click **Unified Contact Center Express Upgrade Utilities**.
	
	   5. Download the COP file.
	
	2. Upgrade Unified CCX Using Web Interface, on page 10 or Upgrade Unified CCX Using CLI, on page 10
	
	3. **Check and Perform Switch Version**.
	
	4. Verify Version of Unified CCX, on page 13
	
	5. Verify Status of Services, on page 14
	
	6. Upgrade Unified CCX Clients, on page 16

Upgrade Scenario	Tasks
	HA Setup:
	1. Apply COP File, on page 9, so that when you upgrade later, the system can detect whether the upgrade is an RU or an MR.
	1. Follow Steps 1a to 1e from the above *Single Node Setup* to apply COP file on the first node.
	2. 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, on page 10 or Upgrade Unified CCX Using CLI, on page 10
	1. 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.
	2. Upgrade the second node.
	3. Check and Perform Switch Version.
	1. Perform switch version on the first node.
	2. 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 13
	5. Verify Status of Services, on page 14
	6. Verify Unified CCX Database Replication, on page 14
	7. Verify Cisco Database Replication, on page 15
	8. Upgrade Unified CCX Clients, on page 16

Upgrade Scenario	Tasks

10.5.x/10.5.xSUx to 11.5.x
 	
10.6.x/10.6.xSUx to 11.5.x
 	
11.0.x/11.0.xSUx to 11.5.x
	Single Node Setup:
	
	1. Upgrade Unified CCX Using Web Interface, on page 10 or Upgrade Unified CCX Using CLI, on page 10.
	
	2. **Check and Perform Switch Version**.
	
	3. Verify Version of Unified CCX, on page 13
	
	4. Verify Status of Services, on page 14
	
	5. Upgrade Unified CCX Clients, on page 16
	
	HA Setup:
	
	1. Upgrade Unified CCX Using Web Interface, on page 10 or Upgrade Unified CCX Using CLI, on page 10
	
	   1. Upgrade the first node.
	
	   2. Upgrade the second node.
	
	2. **Check and Perform Switch Version**.
	
	   1. 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.
	
	   2. Perform switch version on the second node.
	
	3. Verify Status of Services, on page 14
	
	4. Verify Version of Unified CCX, on page 13
	
	5. Verify Unified CCX Database Replication, on page 14
	
	6. Verify Cisco Database Replication, on page 15
	
	7. Upgrade Unified CCX Clients, on page 16

Related Topics

Check and Perform Switch Version, on page 12

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

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

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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, on page 10.

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

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: https://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.

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.

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

Procedure

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 Use VMware ESXi6.0 update1 to install or upgrade using VOS for Unified CCX. It would fail for VMware ESXi5.5 and 6.0 versions.

Upgrade VMware Tools using CLI for Unified CCX

Procedure

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

Procedure

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.

Procedure

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

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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 300 Agent profile for the switch version to be successful. This is mandatory as the vRAM required has been changed from 8 to 10GB. 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.

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.