Help Desk Using Cisco UCCX

TECHNOLOGY DESIGN GUIDE

February 2014

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Preface

Cisco Validated Designs (CVDs) provide the foundation for systems design based on common use cases or current engineering system priorities. They incorporate a broad set of technologies, features, and applications to address customer needs. Cisco engineers have comprehensively tested and documented each CVD in order to ensure faster, more reliable, and fully predictable deployment.

CVDs include two guide types that provide tested and validated design and deployment details:

- **Technology design guides** provide deployment details, information about validated products and software, and best practices for specific types of technology.
- **Solution design guides** integrate or reference existing CVDs, but also include product features and functionality across Cisco products and may include information about third-party integration.

Both CVD types provide a tested starting point for Cisco partners or customers to begin designing and deploying systems using their own setup and configuration.

How to Read Commands

Many CVD guides tell you how to use a command-line interface (CLI) to configure network devices. This section describes the conventions used to specify commands that you must enter.

Commands to enter at a CLI appear as follows:

```
configure terminal
```

Commands that specify a value for a variable appear as follows:

```
ntp server 10.10.48.17
```

Commands with variables that you must define appear as follows:

```
class-map [highest class name]
```

Commands at a CLI or script prompt appear as follows:

```
Router# enable
```

Long commands that line wrap are underlined. Enter them as one command:

```
police rate 10000 pps burst 10000 packets conform-action set-discard-class-
transmit 48 exceed-action transmit
```

Noteworthy parts of system output or device configuration files appear highlighted, as follows:

```
interface Vlan64
  ip address 10.5.204.5 255.255.255.0
```

Comments and Questions

If you would like to comment on a guide or ask questions, please use the feedback form.

For the most recent CVD guides, see the following site:

http://www.cisco.com/go/cvd/collaboration

CVD Navigator

The CVD Navigator helps you determine the applicability of this guide by summarizing its key elements: the use cases, the scope or breadth of the technology covered, the proficiency or experience recommended, and CVDs related to this guide. This section is a quick reference only. For more details, see the Introduction.

Use Cases

This guide addresses the following technology use cases:

- **IP-based Help Desk**—Organizations need a simple method for their employees to contact their internal support departments and an easy way to manage their help desk from a central location, without replicating costly components at their remote sites.

For more information, see the "Use Cases" section in this guide.

Scope

This guide covers the following areas of technology and products:

- Unified communications applications, such as IP telephony and contact center
- Telephony call agent
- Contact center server
- Finesse application
- Cisco Unified Intelligence Center
- Virtualized servers
- IP telephones
- Integration of the above with LAN and data-center switching infrastructure

For more information, see the "Design Overview" section in this guide.

Proficiency

This guide is for people with the following technical proficiencies—or equivalent experience:

- **CCNA Voice**—3 to 5 years designing, installing, and troubleshooting voice and unified communications applications, devices, and networks
- **VCP VMware**—At least 6 months installing, deploying, scaling, and managing VMware vSphere environments

Related CVD Guides

Unified Communications Using BE6000 Technology Design Guide

To view the related CVD guides, click the titles or visit the following site: http://www.cisco.com/go/cvd/collaboration

Introduction

Historically, the ability to easily add functionality into the telephony environment for corporate help desks has been challenging. Traditional contact center solutions have been difficult to implement because of the additional hardware components required, and the complexity of the software needed to implement the business requirements of the contact center. In addition, it has been very difficult to integrate the contact center with the corporate data systems, due to the lack of availability of common interfaces.

This complexity has typically made the implementation of IP telephony functionality a long and involved process, and the expertise required to install and maintain the system is expensive.

Technology Use Case—IP-based Help Desk

Organizations need a simple method for their employees to contact their internal support departments, like Human Resources and Information Technology. Users expect timely responses to their questions and problems. However, it is easy for an issue to go unresolved, forgotten, or simply fall through the cracks if not handled promptly by an available resource. The information about the user and their particular issue should be collected in real-time so an expert in the functional area can help the caller as quickly as possible. Organizations need an easy way to manage their help desk from a central location without replicating costly components at their remote sites.

This design guide enables the following capabilities:

- Simplifies deployment and management through a centralized design, while saving on infrastructure components
- Routes calls over the internal IP network, avoiding the use of expensive dedicated PSTN trunks
- Establishes multiple queues for each department so that agents can be assigned to one or more available queues based on their skills as well as skill levels
- Allows agents to accept calls regardless of their physical location in the company because the phones and application are IP-based
- Saves historical data in easy-to-read reports in order to help improve the day-to-day workings of the help desk
- Strategically defines the agent and supervisor desktop layouts to match the needs of the teams and their contact center activities
- Creates customized, detailed reports on key contact center metrics

Design Overview

Cisco Unified Contact Center Express (Unified CCX) is an IP-based help desk solution offered by Cisco Systems. It addresses the small to mid-size contact center market, ranging from a few agents up to 400 concurrent agents. It is tightly integrated with other Cisco Unified Communications platforms. Design and testing is performed on the suite of Cisco Unified Communications products as part of a complete solution.

Cisco Unified CCX has the features of a large contact center packaged into a single- or dual-server deployment. The system scales up to 400 concurrent agents, 42 supervisors, 150 agent groups, and 150 skill groups. It includes email, chat, outbound calling, inbound calling, workforce optimization, and reporting.

Tech Tip

In a Cisco Business Edition 6000 (BE 6000) deployment, there is a limitation of 100 agents only. The design and deployment discussed here otherwise apply for a full-fledged Cisco Unified Call Manager deployment.

Solution Details

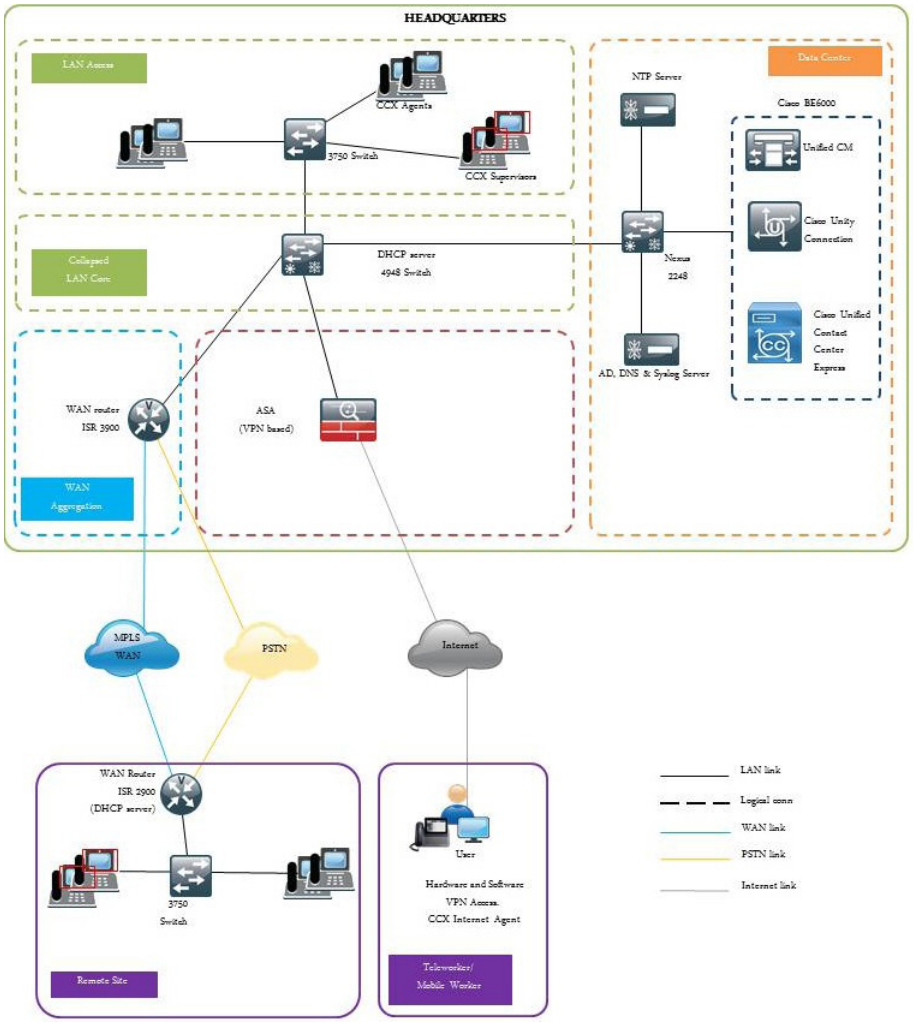
The IP help desk solution includes the following components (see Figure 1):

- Cisco Unified CCX for contact center software
- Cisco Unified CM for agent and supervisor phones
- Network Time Protocol (NTP) server for logging consistency
- Domain Name System (DNS) for name-to-IP resolution
- Syslog server for logging events (optional)

Configuration of Cisco Unified CCX is easier than traditional systems because the components talk to each other over the internal IP network, which helps streamline the procedures. For example, when a phone number is created on Unified CCX to reach a help desk application, no additional configuration is needed in the Cisco Unified Communications Manager (Unified CM). The configuration is sent over the network to Unified CM and the directory number is created. Unified CM is automatically configured to pass calls for the directory number to Unified CCX for further processing.

When a call is placed to the help desk, it is first processed by Cisco Unified CM, which recognizes that the number is destined for the Cisco Unified CCX application server. Unified CCX receives the incoming call and identifies which application script is needed to handle the request based on the extension number that was dialed. The script plays prompts and collects digits as dictated by the steps in the script and, if necessary, uses the information from the caller to select an appropriate agent. If an assigned agent is not available, the call is put into an appropriate queue and a recorded message or music is streamed to the caller. As soon as an agent is available, Unified CCX instructs Unified CM to ring the agent's phone. When the agent picks up, relative call context can be popped into the agent's desktop application as the call is delivered to the answering agent. This ensures that the agent has the proper information in front of them to support the customer.

Figure 1 - Help Desk using Cisco Unified CCX



Deployment Details

Cisco Unified CCX runs on the same Linux operating systems as several other Unified Communications platforms from Cisco. You install the operating system with the application by using the standard installation DVD or International Organization for Standardization (ISO) file.

PROCESS

Preparing the Platform for Cisco Unified CCX

1. Configure platform connectivity to the LAN
2. Prepare the server for Cisco Unified CCX

For a quick and easy installation experience, it is essential to know up front what information you will need. For Cisco Unified CCX, make sure you have completed the following steps before you start:

- Download the Open Virtualization Archive (OVA) file from the Cisco website, here:

  http://software.cisco.com/download/release.html?mdfid=285000761&flowid=49042&softwareid=283733053&release=2.5&relind=AVAILABLE&rellifecycle=&reltype=latest

- Determine if there is a patch for your version of Cisco Unified CCX by checking the Cisco website, here:

  http://software.cisco.com/download/release.html?mdfid=285000761&flowid=49042&softwareid=283733053&release=2.5&relind=AVAILABLE&rellifecycle=&reltype=latest

Procedure 1 Configure platform connectivity to the LAN

The Cisco Unified Contact Center Express server can be connected to a Cisco Nexus switch in the data center or a Cisco Catalyst switch in the server room. In both cases, quality-of-service (QoS) policies are added to the ports to maintain voice quality during the setup and completion of calls. Please choose the option that is appropriate for your environment.

Option 1: Connect Cisco Unified CCX to a Nexus 2248 Switch

Step 1: Log in to the Cisco Nexus switch with a user account that has the ability to make configuration changes.

Step 2: If there is a previous configuration on the switch port where Cisco Unified CCX is connected, remove the individual commands by issuing a **no** in front of each one to bring the port back to its default state.

Step 3: Configure the port as an access port, and then apply the QoS policy.

```
Interface Ethernet107/1/18
 description Unified Contact Center Express
 switchport access vlan 148
 spanning-tree port type edge
 service-policy type qos input DC-FCOE+1P4Q_INTERFACE-DSCP-QOS
```

Tech Tip

When deploying a dual-homed Cisco Nexus 2248 Switch, you must apply this configuration to both Nexus 2248 devices.

Option 2: Connect Cisco Unified CCX to a Catalyst 3X50 Switch

To ensure that signaling traffic is prioritized appropriately, you must configure the Cisco Catalyst access switch port where Cisco Unified CCX is connected to trust the Differentiated Services Code Point (DSCP) markings. The easiest way to do this is to clear the interface of any previous configuration, and then apply the egress QoS macro that was defined in the access-switch platform configuration. For more information, see the Campus Wired LAN Technology Design Guide.

Step 1: Log in to the Cisco Catalyst switch with a user account that has the ability to make configuration changes.

Step 2: Clear the interface's configuration on the switch port where Cisco Unified CCX is connected.

```
default interface GigabitEthernet1/0/18
```

Step 3: Configure the port as an access port, and then apply the Egress QoS policy.

```
interface GigabitEthernet1/0/18
 description Unified Contact Center Express
 switchport access vlan 148
 switchport host
 macro apply EgressQoS
```

Procedure 2 Prepare the server for Cisco Unified CCX

The following table describes the scaling options for Cisco Unified CCX.

Table 1 - Cisco Unified CCX virtual machine scaling options

	100 agents	300 agents	400 agents
Virtual CPUs	2	2	4
CPU speed	900 MHz	900 MHz	900 MHz
RAM	8 GB	8 GB	16 GB
Hard disk	146 GB (1)	146 GB (2)	146 GB (2)
VMware ESXi	4.1, 5.0, 5.1	4.1, 5.0, 5.1	4.1, 5.0, 5.1
OS support	RHE Linux 5 (32-bit)	RHE Linux 5 (32-bit)	RHE Linux 5 (32-bit)
Total agents	100 or fewer	100 to 300	300 to 400

Complete the following steps to deploy an OVA file to define the virtual machine requirements. You use the Open Virtualization Format (OVF) support of VMware to import and deploy the OVA file.

Step 1: In the VMware vSphere client, choose **File > Deploy OVF Template**.

Step 2: Click the **Browse** button next to the file or URL box, find the location of the OVA file that you downloaded from Cisco, and then click **Next**.

Step 3: Verify the information on the OVF Template Details page, and then click **Next**.

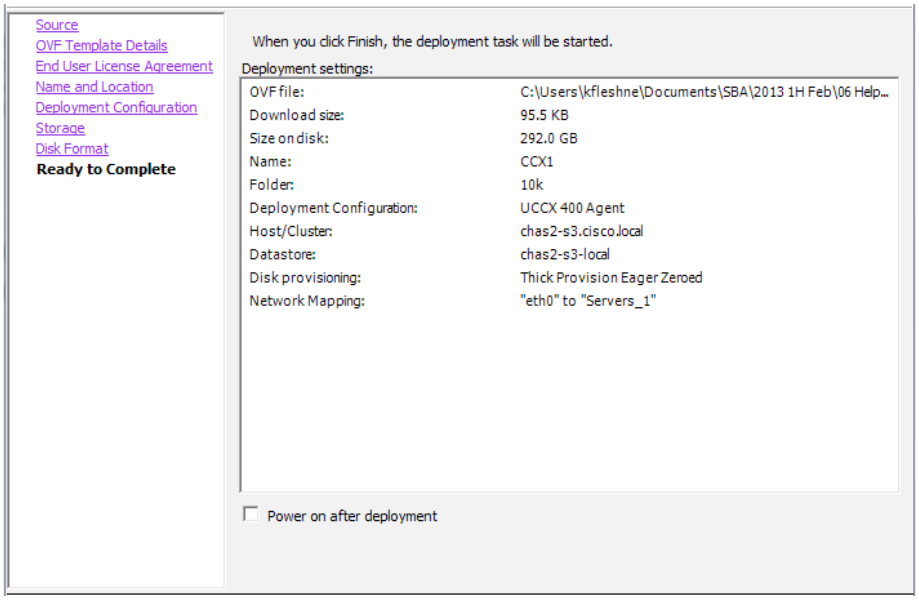
Step 4: Read the End User License Agreement, click **Accept**, and then click **Next.**

Step 5: Enter the following information in the Deploy OVF Template wizard, and then click **Finish**.

- On the Name and Location page, in the **Name** box, enter the virtual machine name **CCX1**, and then click **Next.**
- On the Deployment Configuration page, from the menu, choose the **Configuration** type, and then click **Next.**
- On the Storage page, choose the location to store the VM files, and then click **Next.**
- On the Disk Format page, choose **Thick Provision Eager Zeroed**, and then click **Next.**
- On the Ready to Complete page, verify the settings, and then click **Finish**. In the message window, click **Close**.

Reader Tip

In the Cisco BE 6000 deployment, select the 100 agent profile in the OVA template to be deployed.

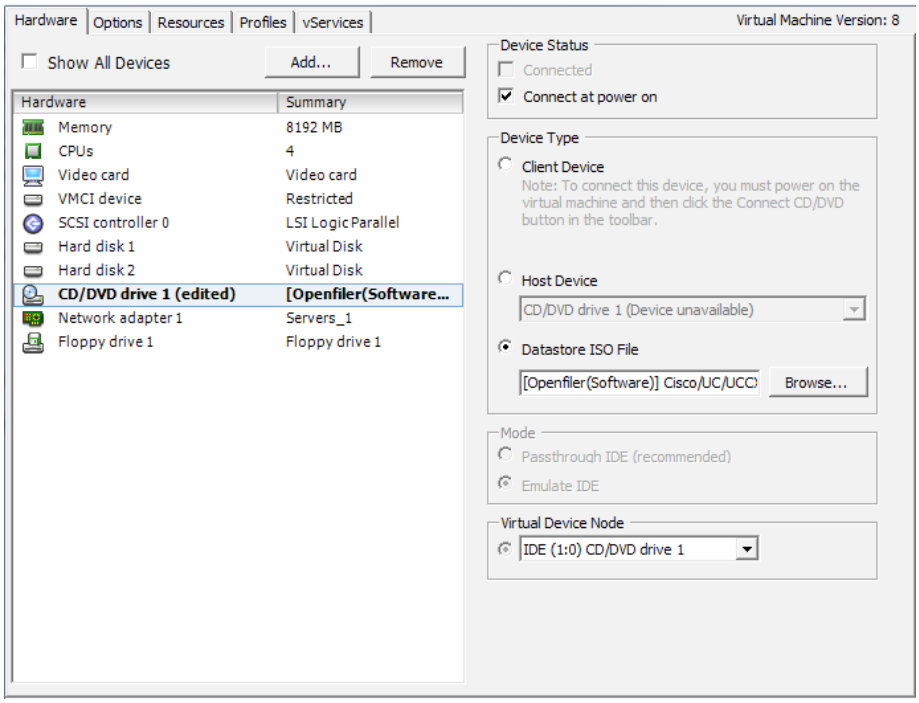


The virtual machine is created.

Step 6: Click the server name (In this example, **CCX1**), navigate to the Getting Started tab, and then choose **Edit virtual machine settings**.

Step 7: On the Hardware tab, click **CD/DVD Drive 1,** and then select the **Connect at power on** check box.

Step 8: Select **Datastore ISO File**, click **Browse**, and then navigate to the location of the Cisco Unified CCX bootable installation file. After selecting the correct ISO image, click **OK**.



Step 9: On the Getting Started tab, choose **Power on the virtual machine.**

Step 10: Click the **Console** tab, and then watch the server boot.

The virtual machine is prepared for installation.

PROCESS

Installing Cisco Unified CCX

1. Install the Cisco Unified CCX platform
2. Set up application administration

Make sure you have the following information:

- Time zone for the server
- Host name, IP address, network mask, and default gateway
- Domain Name System (DNS) server IP addresses
- Administrator ID and password
- Organization and unit
- Location, state, and country
- Network Time Protocol (NTP) server IP addresses
- Security password
- Application username and password

Complete the tasks listed below before you start the installation:

- In DNS, configure the Cisco Unified CCX host name: **CCX1**
- Obtain license files from the Cisco licensing system.

Procedure 1 Install the Cisco Unified CCX platform

After the ISO/DVD loads, continue the installation on the server console.

Step 1: On the DVD Found page, perform a media check by selecting **Yes**.

Step 2: If the media check is successful, choose **OK.**

If the media check does not pass, contact Cisco Technical Assistance Center or your local representative to replace the media, and then repeat this step.

Step 3: On the Product Deployment Selection page, verify the product is Cisco Unified Contact Center Express, and then choose **OK**.

Step 4: On the Proceed with Install page, verify that the version is correct, and then choose **Yes**.

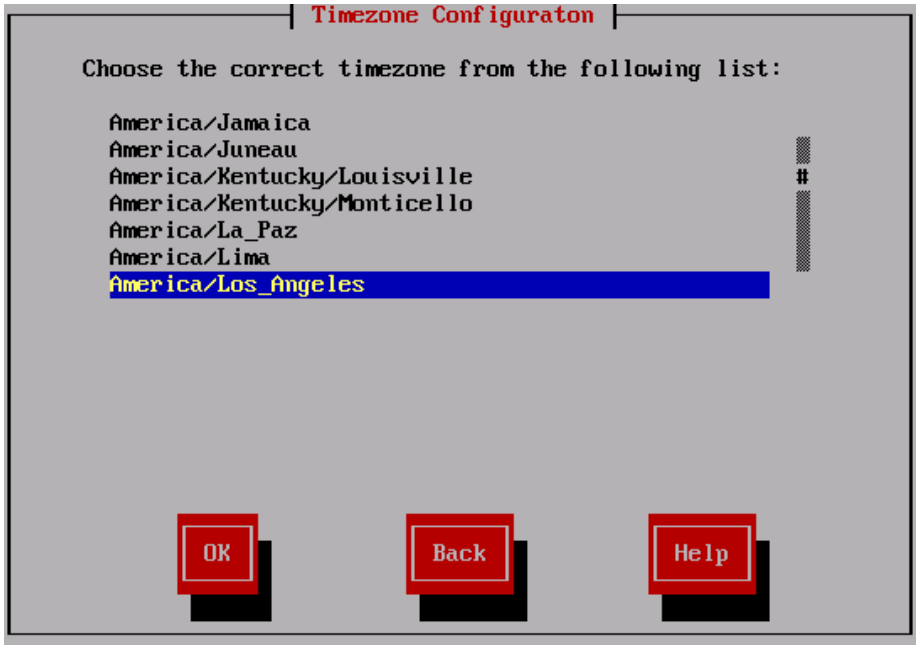
Step 5: On the Platform Installation Wizard page, choose **Proceed**.

Step 6: If no upgrade patch exists for the version you are installing, on the Apply Patch page, choose **No**.

If an upgrade patch does exist, on the Apply Patch page, choose **Yes**, and then follow the instructions to complete the process.

Step 7: On the Basic Install page, choose **Continue**.

Step 8: On the Timezone Configuration page, select the correct time zone for the server location, and then choose **OK**.

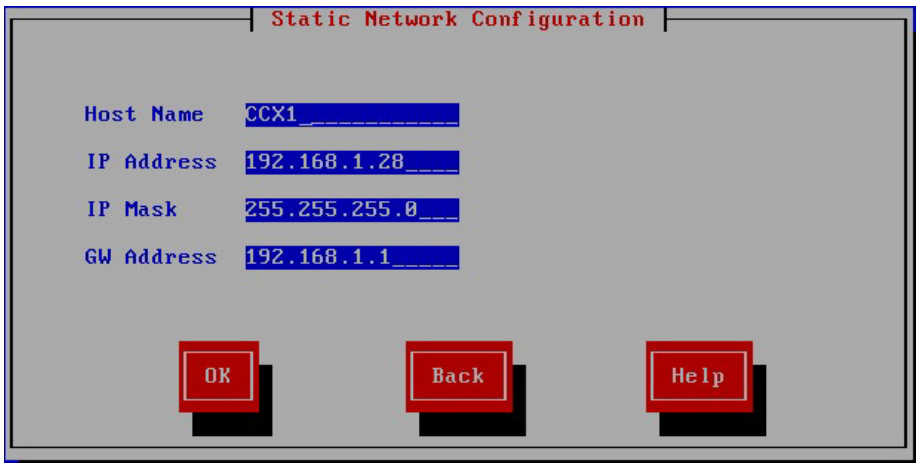


Step 9: On the Auto Negotiation Configuration page, choose **Continue**.

Step 10: On the MTU Configuration page, choose **No**.

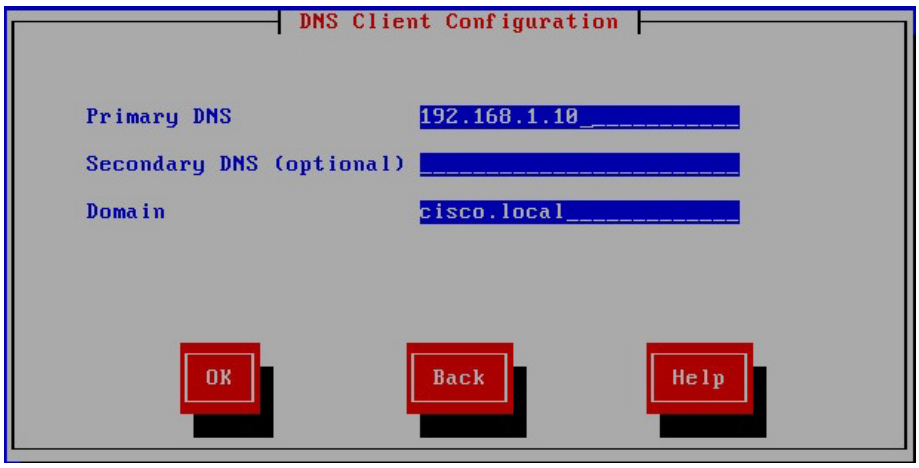
Step 11: On the Static Network Configuration page, enter the following information, and then choose **OK**.

- Host Name–**CCX1**
- IP Address–**192.168.1.28**
- IP Mask–**255.255.255.0**
- GW Address–**192.168.1.1**



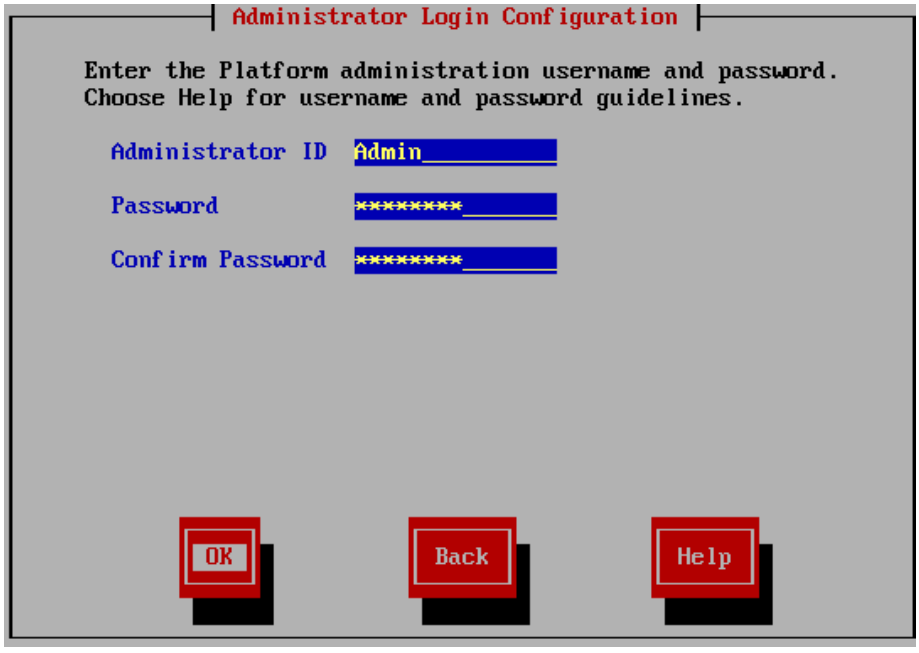
Step 12: On the DNS Client Configuration page, enter the following information, and then choose **OK**.

- Primary DNS—**192.168.1.10**
- Domain—**cisco.local**



Step 13: On the Administrator Login Configuration page, enter the following information, and then choose **OK**.

- Administrator ID—**Admin**
- Password—**[password]**
- Confirm Password—**[password]**

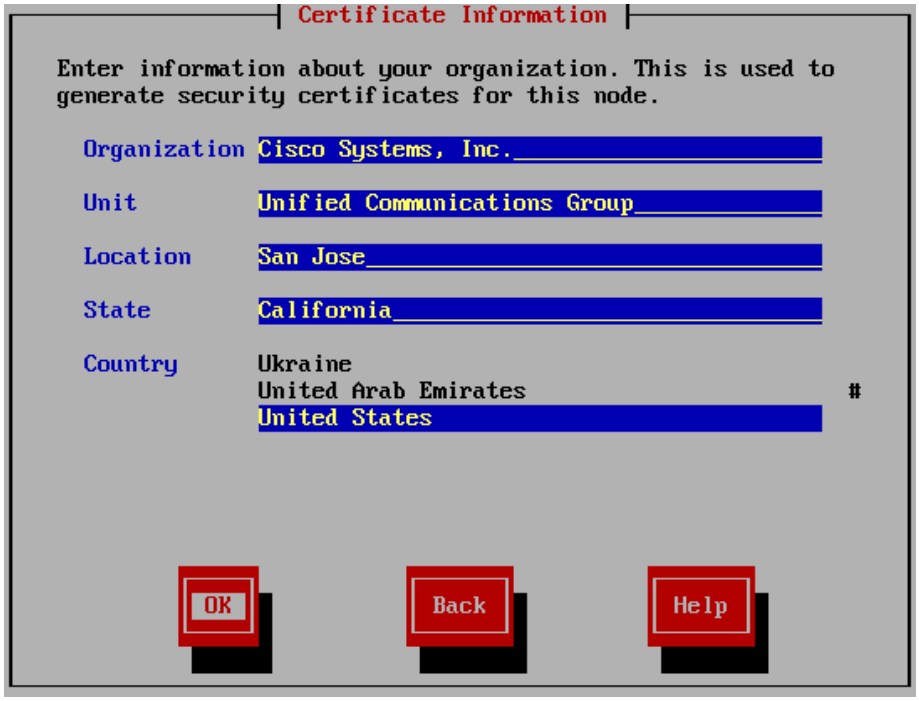


Step 14: On the Certificate Information page, enter the information that will be used to generate security certificates, and then choose **OK**.

- Organization—**Cisco Systems, Inc.**
- Unit—**Unified Communications Group**
- Location—**San Jose**
- State—**California**
- Country—**United States**

Tech Tip

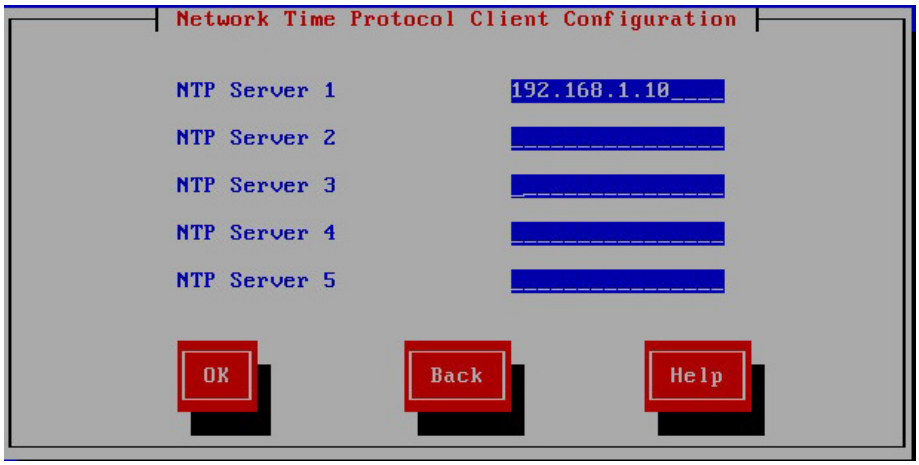
These fields must match the information submitted to Cisco or the licenses will not be valid.



Step 15: On the First Node Configuration page, choose **Yes**.

Step 16: On the Network Time Protocol Client Configuration page, enter the following information, and then choose **OK**.

- NTP server 1–**192.168.1.10**



Step 17: On the Security Configuration page, enter the password for server-to-server communication, and then choose **OK**.

> **Tech Tip**
>
> These passwords must match the information submitted to Cisco, or the licenses will not be valid.

Step 18: On the SMTP Host Configuration page, choose **No**.

Step 19: On the Application User Configuration page, enter the following information, and then choose **OK**.

- Application User Username–**CCXAdmin**
- Password–**[password]**
- Confirm Password–**[password]**

> **Tech Tip**
>
> These values are used to initially access the Cisco Unified CCX Administration page and must match the license information submitted to Cisco. When specific users are given administrative rights during the application setup procedure, the initial username and password entered above will no longer work.

Step 20: On the Platform Configuration Confirmation page, choose **OK**.

The system continues with the rest of the installation process without user input. The system will reboot a few times during installation. The process can take 60 minutes or more, depending on your hardware.

After the software has finished installing, the login prompt appears on the console.

Step 21: From the vSphere client, navigate to the virtual machine's Getting Started tab, and then choose **Edit virtual machine settings**.

Step 22: On the Hardware tab, choose **CD/DVD Drive 1**.

Step 23: Clear **Connect at power on**, and then click **OK**.

Procedure 2 Set up application administration

After the software is installed, you use the web interface in order to complete the rest of the procedures.

Step 1: With your web browser, access the IP address or hostname of the Cisco Unified CCX server and, in the center of the page, click **Cisco Unified Contact Center Express**.

Step 2: If you receive a warning about the website's security certificate, ignore it and continue to the page.

Step 3: Enter the name and password you entered on the Application User Configuration page in Step 19 of the "Install the Cisco Unified CCX platform" procedure, and then click **Login**.

Step 4: On the Cisco Unified CCX Administrator Setup page, choose **Fresh Install**, and then click **Next**.

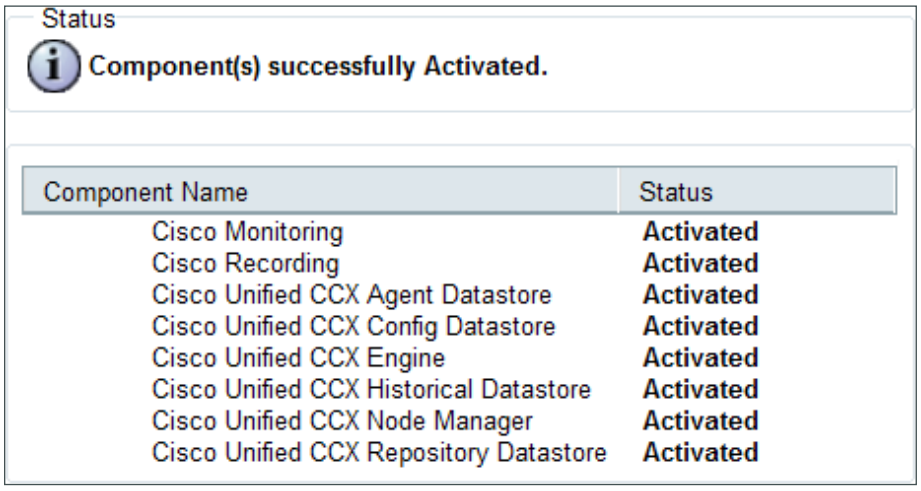
Step 5: On the Cisco Unified CM Configuration–Service Provider Configuration page, enter the following information, and then click **Next**.

- Unified CM server IP address– **192.168.1.16** (publisher)
- AXL Admin UserName–**CUCMAdmin**
- Password–**[password]** (must match the password on Cisco Unified CM).

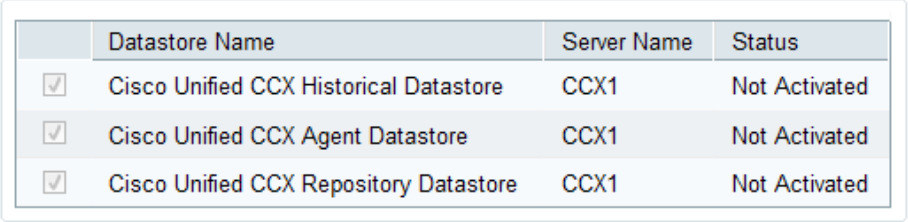
Step 6: On the License Information page, click Browse, locate the Unified CCX license file received from Cisco, click **Open**, and then click **Next**.

Step 7: After the license validation is completed, click **Next**.

Step 8: After all of the components are successfully activated, click **Next**.



Step 9: On the Publisher Activation page, click **Next**.

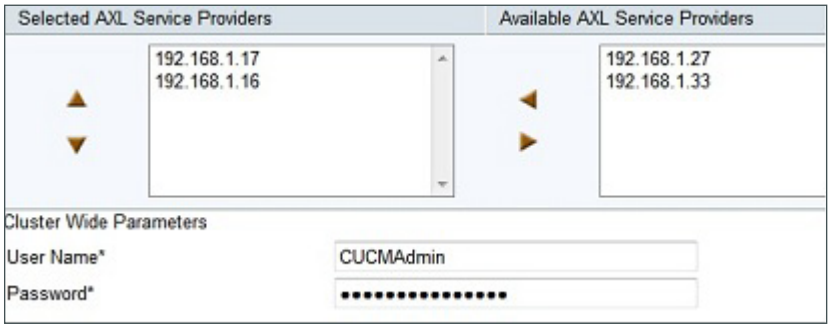


Step 10: On the Cisco Unified CM Configuration page, in the AXL Service Provider Configuration section, in the **Selected AXL Service Providers** list, choose the Unified CM server **192.168.1.16**(publisher), and then remove it from the list by clicking the right-facing arrow.

Step 11: Under Available AXL Service Providers, select the Unified CM servers **192.168.1.17**(subscriber), and then move them to the **Selected AXL Service Providers** list by clicking the left-facing arrow.

Step 12: In the Cluster Wide Parameters section, enter the following information:

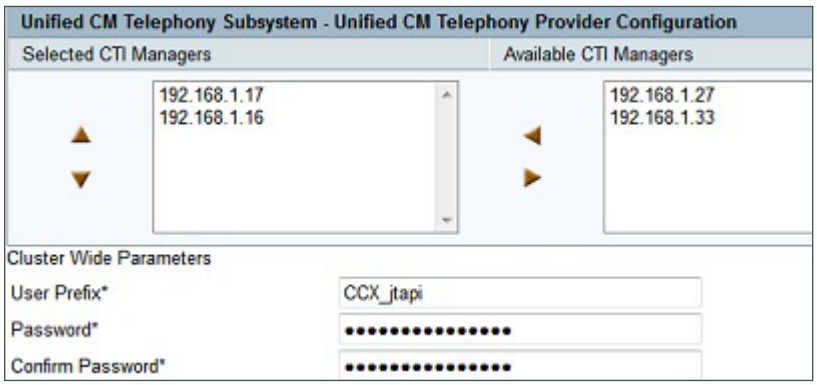
- User Name–**CUCMAdmin**
- Password–**[password]**



Step 13: In the Unified CM Telephony Subsystem–Unified CM Telephony Provider Configuration section, in the **Available CTI Managers** list, choose the Unified CM servers **192.168.1.17**(subscriber), and then move them to the **Selected CTI Managers** list by clicking the left-facing arrow.

Step 14: In the Cluster Wide Parameters section, enter the following information:

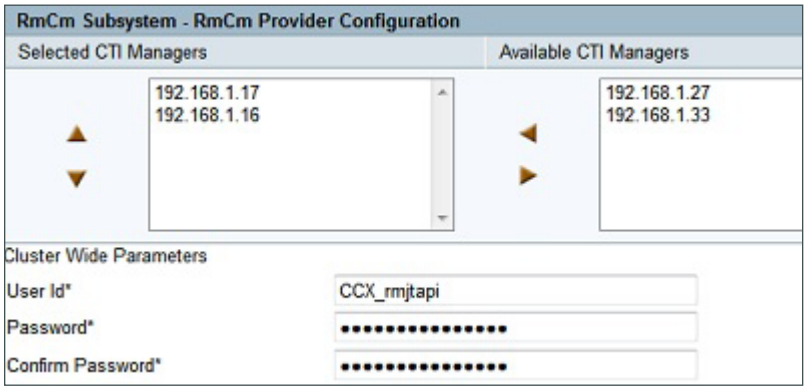
- User Prefix–**CCX_jtapi**
- Password–**[password]**
- Confirm Password–**[password]**



Step 15: In the RmCm Subsystem–RmCm Provider Configuration section, in the **Available CTI Managers** list, choose the Unified CM servers **192.168.1.17**(subscriber), and then move them to the **Selected CTI Managers** list by clicking the left-facing arrow.

Step 16: In the Cluster Wide Parameters section, enter the following information, and then click **Next**.

- User Id–**CCX_rmjtapi**
- Password–**[password]**
- Confirm Password–**[password]**



Cisco Unified CCX sends the user information to the Cisco Unified CM server, and the application users are created automatically.

For historical reporting of the number of HR sessions, use the maximum number of supervisors or administrators who will be running Cisco Unified CCX reports at the same time. For the Recording Count, enter the maximum number of concurrent ad-hoc recording sessions.

The G.711 codec choice requires one of the following choices for calls that do not originate from the same region and location as the Cisco Unified CCX server:

- Transcoders must be configured in Cisco Unified CM and added to the media resource group list at the Cisco Unified CCX site in order to allow contact center calls to and from the remote sites.
- The regions must allow 64 kbps as the maximum audio bit rate between their site and the Cisco Unified CCX site for the contact center calls.

If one of these two options is not completed, contact center calls from remote sites will experience a fast-busy tone when calling the main pilot number for Cisco Unified CCX.

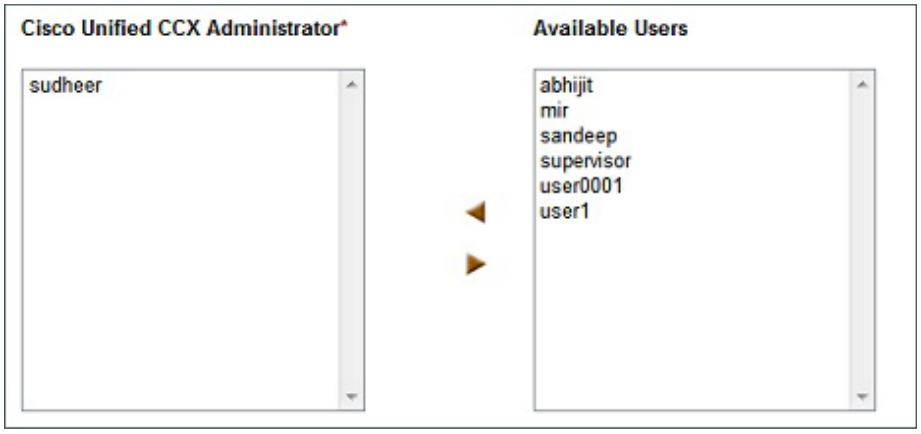
Step 17: On the System Parameters Configuration page, enter the following information, and then click **Next**:

- Number of HR sessions—**4**
- Recording Count—**25**
- Number of Outbound seats—**100**
- Codec—**G.711**

Step 18: On the Language Configuration page, enter the language that will be used for default Interactive Voice Response (IVR) prompts, the Cisco Agent Desktop, and the Cisco Supervisor Desktop, and then click **Next**.

Step 19: On the Desktop Client Configuration Tool message, click **OK**.

Step 20: On the User Configuration page, select the Cisco Unified CM users who need administrative rights, move them to the Cisco Unified CCX Administrator list by clicking the left-facing arrow, and then click **Finish**.



The initial application administration setup is now complete.

PROCESS

Configuring the Help Desk

1. Create the call control group
2. Create skills
3. Assign skills to contact service queues
4. Associate a phone to an agent user ID
5. Associate user ID to a phone or profile
6. Assign skills to resources
7. Create the supervisors and teams
8. Create scripts and applications
9. Add a trigger
10. Associate Cisco Unified CCX application user
11. Create and upload the prompts
12. Verify Cisco Unified CCX Engine status

After you configure the application administration for the first time, the next task is to configure the help desk to allow the system to begin taking calls from end users.

Procedure 1 Create the call control group

A call control group creates a group of computer telephony integration (CTI) ports on Cisco Unified CM that are used to send calls to Cisco Unified CCX for IVR treatment and queuing. The call stays on the CTI port until it is sent to an agent.

Step 1: Access the IP address or hostname of the Cisco Unified CCX server by using your web browser and then, in the center of the page, click **Cisco Unified Contact Center Express**.

Tech Tip

The account created during the installation of the server will no longer work for administering the application.

Step 2: Enter the username and password of one of the users you assigned administrative rights in Step 20 of the previous procedure, and then click **Login**.

Step 3: Navigate to **Subsystems > Cisco Unified CM Telephony > Call Control Group**, and then click **Add New**.

Step 4: Enter the following information, and then click **Add**.

- Description–**Unified CM Telephony Group**
- Number of CTI ports–**4**
- Media Termination Support–**No**
- Group Type–**Inbound**
- Device Name Prefix–**CTIP**
- Starting Directory Number–**8009950**
- Device Pool–**DP_HQ1_1** (default for headquarters location)
- DN Calling Search Space–**CSS_Base**
- Location–**Hub_None**
- Partition–**PAR_Base**

Leave the rest of the fields at their default settings.

Procedure 2 Create skills

Create skills for each different type of call you expect to receive in the call center.

Step 1: Navigate to **Subsystems > RmCm > Skills**, and then click **Add New**.

Step 2: On the Skill Configuration page, enter **IT**, and then click **Save**.

Step 3: On the Skills search page, click **Add New**.

Step 4: On the Skill Configuration page, enter **HR (For Human Resources)**, and then click **Save**.

Step 5: Create additional skills, by repeating Step 3 through Step 4.

Procedure 3 Assign skills to contact service queues

Create Contact Service Queues (CSQ) for each skill entered in the previous procedure.

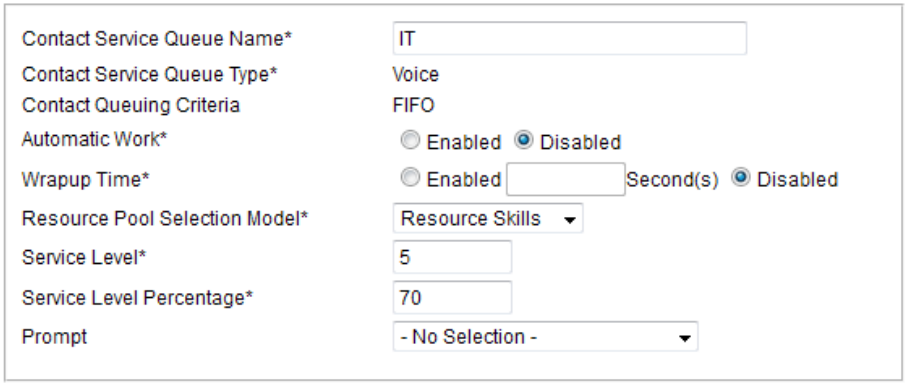
Tech Tip

The CSQ names created here must exactly match the queue names referenced in the application scripts that are described later in this guide. The example script uses the CSQ names of **IT** and **HR**. Be sure to add these queues to the server.

Step 1: Navigate to **Subsystems > RmCm > Contact Service Queues**, and then click **Add New**.

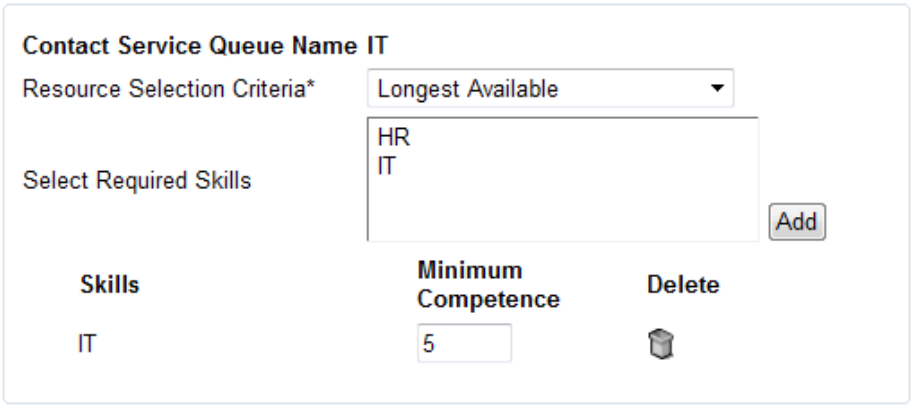
Step 2: On the first Contact Service Queue Configuration page, enter the following information, and then click **Next**:

- Contact Service Queue Name–**IT**
- Contact Service Queue Type–**Voice**
- Automatic Work–**Disabled**
- Wrapup Time–**Disabled**
- Resource Pool Selection Model–**Resource Skills**
- Service Level–**5** (seconds)
- Service Level Percentage–**70**
- Prompt–**No Selection**



Step 3: On the second Contact Service Queue Configuration page, enter the following information, and then click **Add**:

- Resource Selection Criteria–**Longest Available**
- Select Required Skills–**IT**
- Minimum Competence–**5**



Step 4: For each additional skill (such as HR), click **Add New**, and then repeat Step 2 through Step 3 using the appropriate information.

Procedure 4 Associate a phone to an agent user ID

There are two ways to associate agents and supervisors with a phone. You can use extension mobility to allow agents to log in to a Cisco IP phone or you can associate an agent's Cisco Unified CM user ID directly with a phone. Both options can be used for the same Cisco Unified CCX installation. Choose extension mobility if your agents move around from day to day or if you have more than one shift and the same phone will be used by multiple agents. Choose the phone association method if the agents work from the same phone every day.

Step 1: Use your web browser to access the IP address or hostname of the Cisco Unified CM publisher and then, in the center of the page, click **Cisco Unified CM Administration**.

Step 2: Enter the application administrator username and password for Cisco Unified CM, and then click **Login**.

Perform the next several steps only if you are planning to associate agents directly to a phone. If you will use extension mobility exclusively with your agents, you can skip to the next procedure.

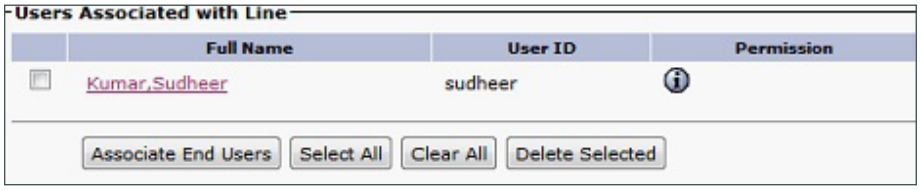
Step 3: Navigate to **Device > Phone,** click **Find**, and then click the name of the agent's phone.

Step 4: On the Phone Configuration page, click **line [1]**. This adds the Cisco Unified CCX information for the specific line on the phone.

Step 5: Scroll down to the bottom of the page, and then click **Associate End Users**.

Step 6: On the Find and List Users page, click **Find**, and then choose the agent for this line by selecting the check box next to their name.

Step 7: Click **Add Selected**. You return to the previous page.



Step 8: Repeat Step 3 through Step 7 for each additional agent and supervisor phone, using each agent's and supervisor's specific information.

Procedure 5 Associate user ID to a phone or profile

In this procedure, you associate the agent and supervisor user ID to a phone or extension mobility profile. Please choose one or both of the following options:

- If you are associating agents with phones, follow the steps in Option 1, "Phone association."
- If your agents will use extension mobility to log in to their phones, follow the steps in Option 2, "Extension mobility association."

Option 1: Phone association

Step 1: Navigate to **User Management > End User**, and then click **Find**.

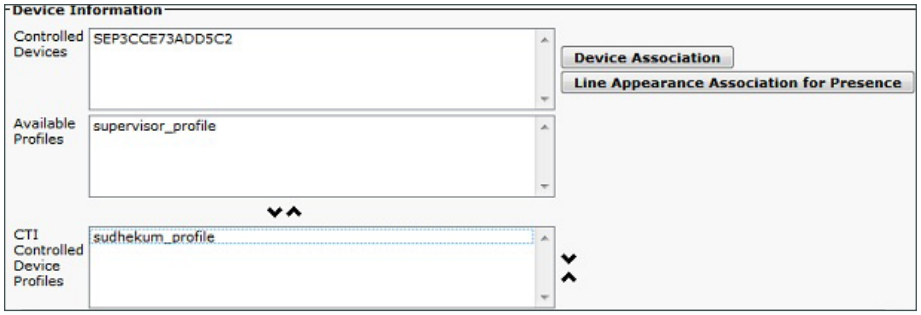
Step 2: Select the agent or supervisor from the previous procedure, and then click the user ID.

Step 3: On the End User Configuration page, scroll down to the Device Information section, and then click **Device Association**.

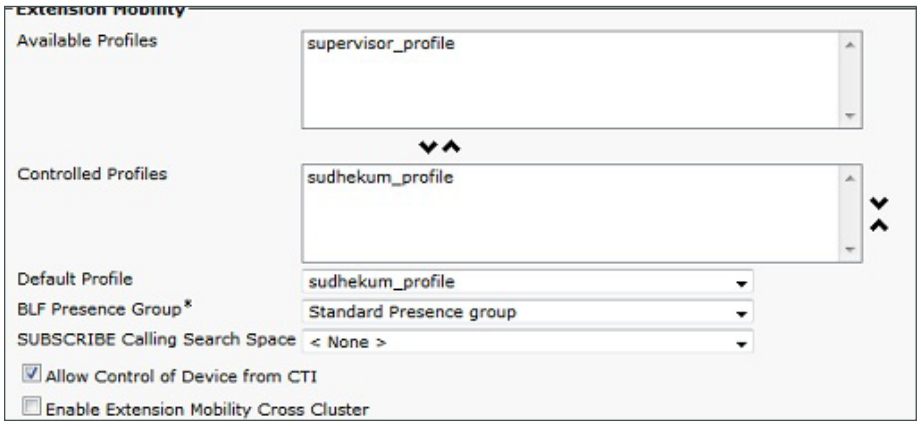
Step 4: On the User Device Association page, click **Find**.

Step 5: Select the check box next to the agent's phone, and then click **Save Selected/Changes**.

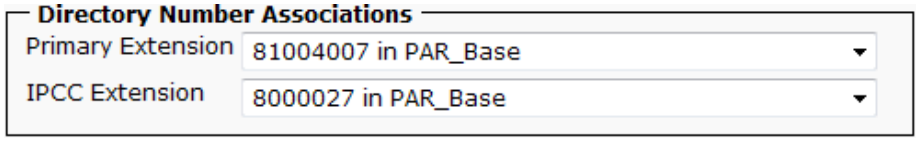
Step 6: In the upper-right corner of the page, in the **Related Links** list, choose **Back to User**, and then click **Go**.



Step 7: On the End User Configuration page, scroll down to the Extension Mobility section, and then confirm that the **Allow Control of Device from CTI** check box is selected.



Step 8: Scroll down to the Directory Number Associations section, set the IP Contact Center (IPCC) Extension to the phone's directory number from the previous procedure, and then click **Save**.



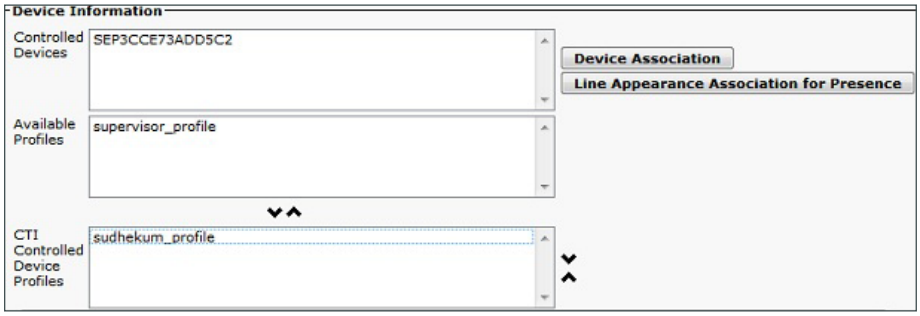
Step 9: For each additional agent or supervisor using phone association, repeat Step 1 through Step 8 using their specific information.

Option 2: Extension mobility association

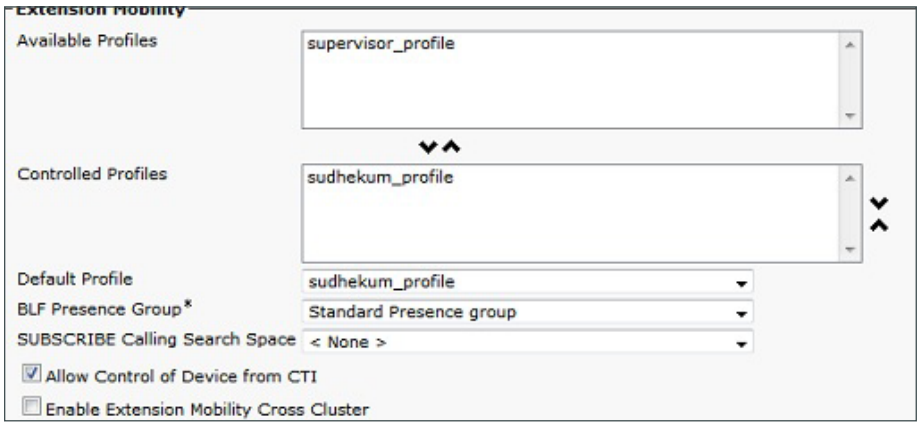
Step 1: Navigate to **User Management > End User**, and then click **Find**.

Step 2: Select the agent or supervisor, and then click the user ID.

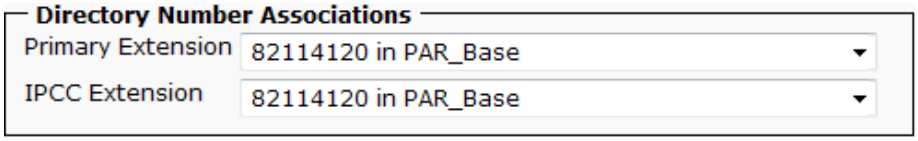
Step 3: On the End User Configuration page, scroll down to the Device Information section, select the agents profile from the Available Profiles: **sudhekum_profile**, and then click the **Down-Arrow** icon to move it into the CTI Controlled Device Profiles.



Step 4: Scroll down to the Extension Mobility section, and then confirm the **Allow Control of Device from CTI** check box is selected.



Step 5: Scroll down to the Directory Number Associations section, set the IPCC Extension to the agent's extension mobility number, and then click **Save**.



Step 6: For each additional agent or supervisor using extension mobility association, repeat Step 1 through Step 5, using their specific information.

Procedure 6 Assign skills to resources

Cisco Unified CM users associated with IPCC extensions show up automatically as *resources* in Cisco Unified CCX. Using the resource list on the Cisco Unified CCX Administration page, you assign skills to resources, making them available to answer calls in particular Contact Service Queues (CSQs).

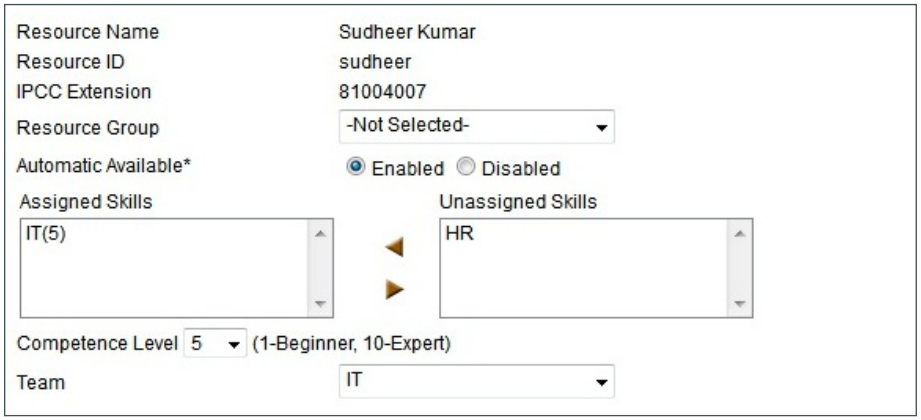
Step 1: Use your web browser to access the IP address or hostname of the Cisco Unified CCX server and then, in the center of the page, click **Cisco Unified Contact Center Express**.

Step 2: Enter the name and password of a user with administrative rights to Cisco Unified CCX, and then click **Login**.

Step 3: Navigate to **Subsystems > RmCm > Resources**. On the Resources search page, under the **Resource Name**, click a user.

Step 4: On the Resource Configuration page, in the **Unassigned Skills** list, choose the skill(s) that you want to assign, and then move the skill(s) to the **Assigned Skills** list by clicking the left-facing arrow.

Step 5: Select the Competence Level for the resource, and then click **Update**.



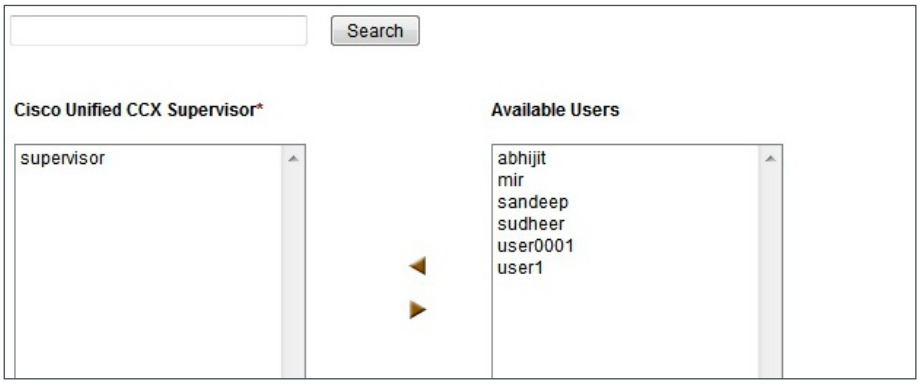
Step 6: For each additional resource, repeat Step 3 through Step 5, using the appropriate information for each agent.

Procedure 7 Create the supervisors and teams

The first step in building a team is to create a *supervisor*. A supervisor has a full view of a team's performance and can monitor the agents by using the Cisco Supervisor Desktop.

Step 1: Navigate to **Tools > User Management > Supervisor Capability View**.

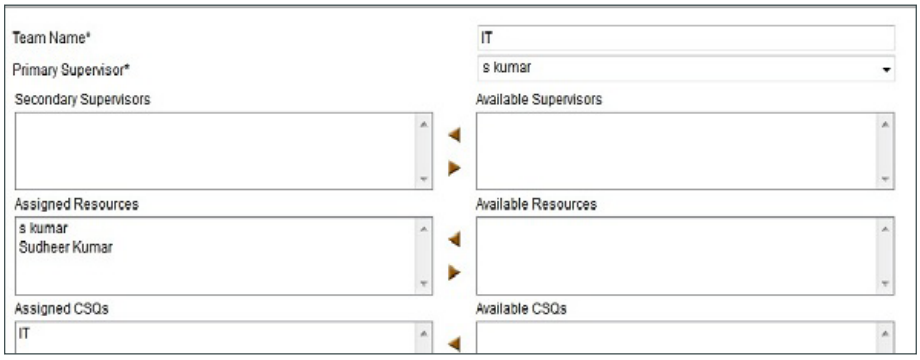
Step 2: On the User Configuration page, in the **Available Users** list, choose the users you want to designate as supervisors, move them to the **Cisco Unified CCX Supervisor** list by clicking the left-facing arrow, and then click **Update**.



Step 3: Navigate to **Subsystems > RmCm > Teams**, and click **Add New**.

Step 4: On the Team Configuration page, enter the following information, and then click **Save**.

- Team Name—**IT**
- Primary Supervisor—**[Supervisor]**
- Assigned Resources—**[Agent or supervisor]**
- Assigned CSQs—**IT**



Step 5: For each additional team, repeat Step 3 through Step 4, using the appropriate information.

Procedure 8 Create scripts and applications

In this procedure, an externally created script is uploaded to the server to demonstrate how to upload your script and create your site-specific application.

Reader Tip

This guide uses the example script and prompts from a zip file that is included with the document. The script can be used as a template for your help desk application. The zip file can be downloaded from the following URL:
http://www.cisco.com/go/cvd/collaboration/

Please use the example script as a template for your scripts.

Step 1: Navigate to **Applications > Script Management**, select the script to upload, and then click **Upload Scripts**.

Step 2: Click **Browse**, find the location of the script (scripts have the file extension .aef), and then click **Upload**.

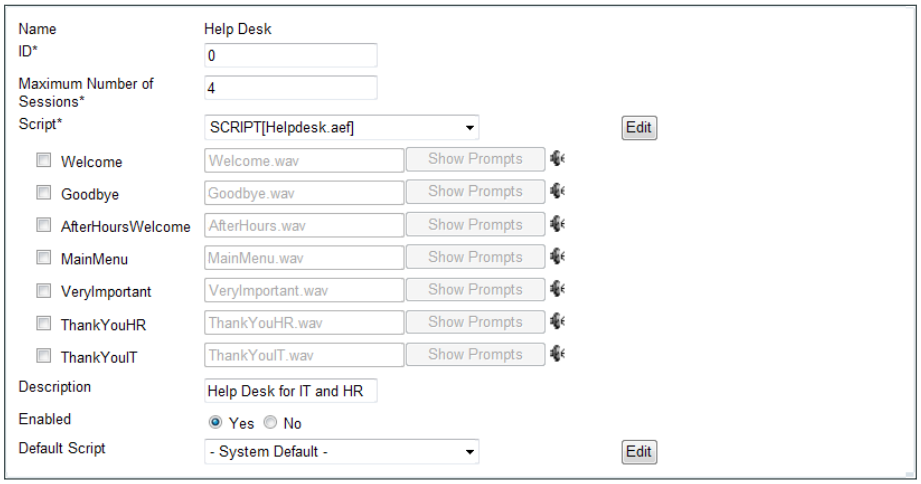
Step 3: After the script is successfully uploaded, click **Return to Script Management**.

Step 4: Navigate to **Applications > Application Management**, and then click **Add New**.

Step 5: On the Add A New Application page, select **Cisco Script Application**, and then click **Next**.

Step 6: On the Cisco Script Application page, enter the following information, and then click **Add**.

- Name–**Help Desk**
- ID–**[automatic setting]** (do not change this value)
- Maximum Number of Sessions–**4**
- Script–**SCRIPT[Helpdesk.aef]**
- Description–**Help desk for IT and HR**
- Enabled–**Yes**
- Default Script–**System Default**



Procedure 9 Add a trigger

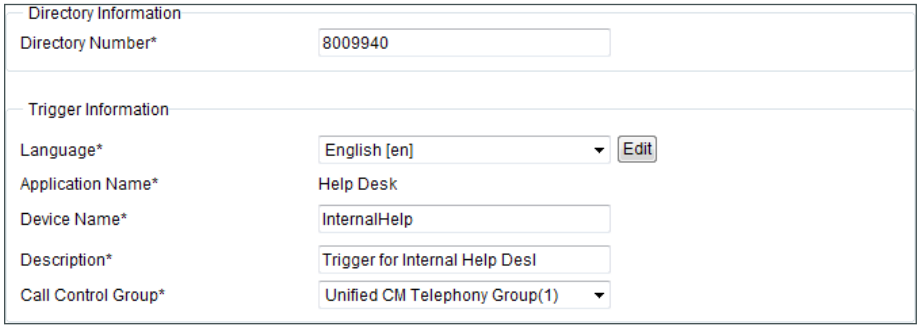
The trigger for an application is the phone number the users will dial when they want to speak with someone in the help desk.

Step 1: In the upper-left of the Cisco Script Application page, click **Add New Trigger**.

Step 2: In the **Trigger Type** list, choose **Unified CM Telephony Trigger**, and then click **Next**.

Step 3: On the Cisco Unified CM Telephony Trigger Configuration page, enter the following information:

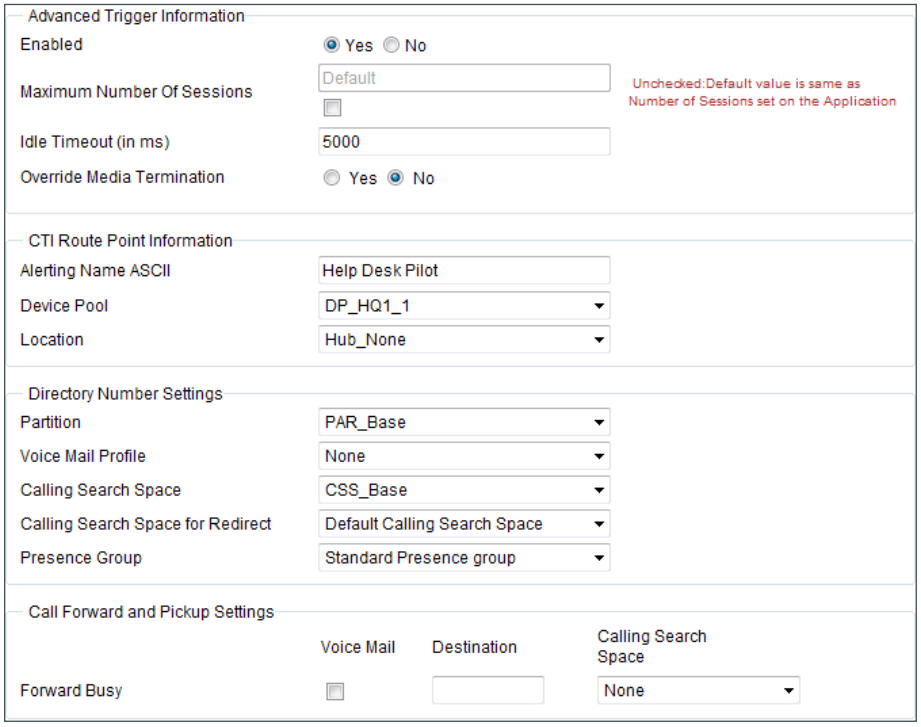
- Directory Number–**8009940** (CTI Route Point that will be automatically created in Cisco Unified CM to direct calls to this application)
- Language–**English (United States) [en_US]**
- Device Name–**InternalHelp**
- Description–**Trigger for Internal Help Desk**
- Call Control Group–**Unified CM Telephony Group(1)**



Step 4: Click **Show More**, enter the following information, and then click **Add**:

- Enabled—**Yes**
- Maximum Number of Sessions—**Default**
- Idle Timeout (in ms)—**5000**
- Override Media Termination—**No**
- Alerting Name ASCII—**Help Desk Pilot**
- Device Pool—**DP_HQ1_1** (headquarters default)
- Location—**Hub_None** (headquarters default)
- Partition—**PAR_Base** (phone default)
- Voice Mail Profile—**None**
- Calling Search Space—**CSS_Base**

Leave the rest of the fields at their default settings.



Procedure 10 Associate Cisco Unified CCX application user

The next set of steps associates the Cisco Unified CCX application user with the phones, extension mobility profiles, CTI Route Point, and CTI Ports in Cisco Unified CM. Please choose one or both of the following options:

- If you are associating agents and supervisors directly to phones, follow the steps in Option 1, "Phone association."
- If your agents and supervisors are using extension mobility on their phones, follow the steps in Option 2, "Extension mobility association."

Step 1: From a new browser window, access the IP address or hostname of the Cisco Unified CM publisher and then, in the center of the page, click **Cisco Unified CM Administration**.

Step 2: Enter the administrator username and password for Cisco Unified CM, and then click **Login**.

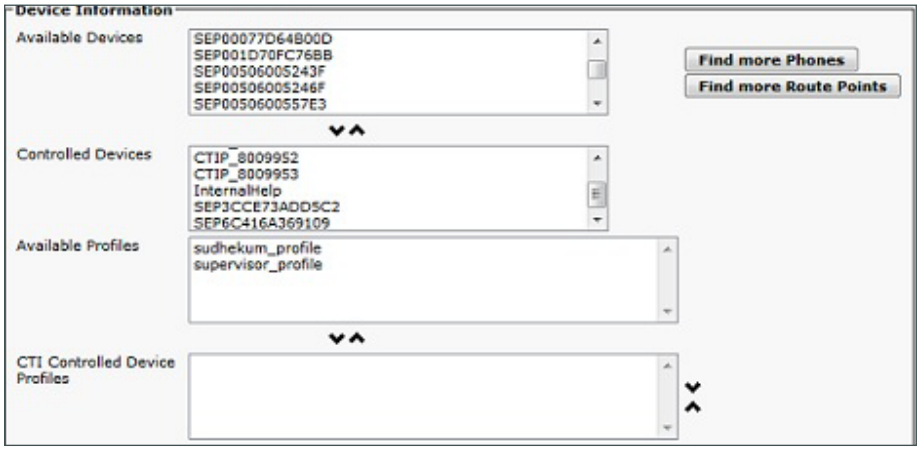
Step 3: Navigate to **User Management > Application User**.

Step 4: On the Application User search page, click **Find,** and then click **CCX_rmjtapi.**

Step 5: On the Application User Configuration page, in the Device Information section, the **Available Devices** list, choose the Unified CCX CTI ports and the Unified CCX CTI route point, and then click the **down-facing arrow.**

Option 1: Phone association

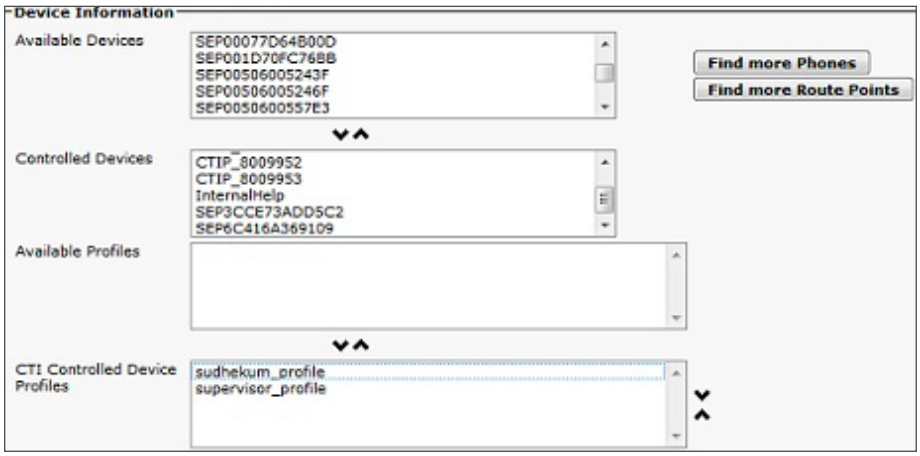
Step 1: On the Application User Configuration page, under Device Information, in the **Available Devices** list, choose the agent and supervisor phones, and then move them to the **Controlled Devices** list by clicking the **down-facing arrow.**



Step 2: Click **Save.**

Option 2: Extension mobility association

Step 1: On the Application User Configuration page, under Device Information, in the **Available Profiles** list, choose the agent and supervisor profiles, and then move them to the **CTI Controlled Device Profiles** list by clicking the **down-facing arrow**.



Step 2: Click **Save.**

Procedure 11 Create and upload the prompts

In this procedure, externally created prompts are uploaded to the server to demonstrate how to upload your prompts.

Reader Tip

This guide uses the example script and prompts from a zip file that is included with the document. The prompts can be used as examples for your help desk application. The zip file can be downloaded from the following URL:
http://www.cisco.com/go/cvd/collaboration/

Please use the example prompts as templates for your recordings.

Prompts are played to the callers when they are in the application. You must record the prompts as .wav files and save them in a location reachable by the PC accessing the Cisco Unified CCX Administration page.

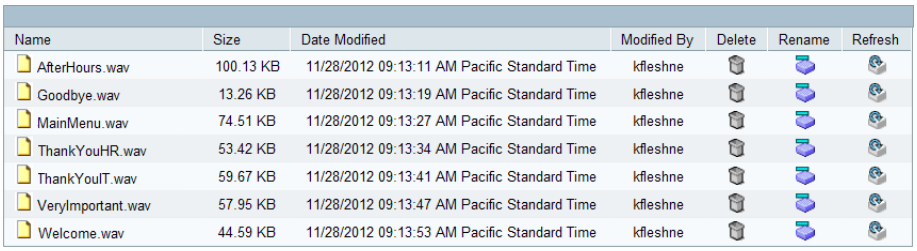
Step 1: Navigate to the Cisco Unified CCX Administration main page.

Step 2: Navigate to **Applications > Prompt Management**, and then click the **en_US** folder.

Step 3: After the folder opens, click **Upload Prompts**.

Step 4: From the Upload Prompt page, click **Browse**, locate the prompt WAV file, select it, and then click **Upload**.

Step 5: For each of the prompts, repeat Step 4, and then click **Return to Prompt Management**.



Name	Size	Date Modified	Modified By	Delete	Rename	Refresh
AfterHours.wav	100.13 KB	11/28/2012 09:13:11 AM Pacific Standard Time	kfleshne			
Goodbye.wav	13.26 KB	11/28/2012 09:13:19 AM Pacific Standard Time	kfleshne			
MainMenu.wav	74.51 KB	11/28/2012 09:13:27 AM Pacific Standard Time	kfleshne			
ThankYouHR.wav	53.42 KB	11/28/2012 09:13:34 AM Pacific Standard Time	kfleshne			
ThankYouIT.wav	59.67 KB	11/28/2012 09:13:41 AM Pacific Standard Time	kfleshne			
VeryImportant.wav	57.95 KB	11/28/2012 09:13:47 AM Pacific Standard Time	kfleshne			
Welcome.wav	44.59 KB	11/28/2012 09:13:53 AM Pacific Standard Time	kfleshne			

Step 6: Navigate to **Applications > Application Management**, and then click the application that you created in Procedure 8, "Create scripts and applications."

Step 7: Change the default prompts by selecting the check box next to each one, clicking **Show Prompts**, and then choosing the appropriate file from the list of your own uploaded prompts. After they are all chosen, click **Update**.

Tech Tip

Custom prompts must have the following WAV format when uploading them to the server.

Bit rate: 64 kbps

Audio sample size: 8 bit

Channels: 1 (mono)

Audio sample rate: 8 kHz

Audio format: CCITT u-Law

Note that the new prompt names must match the variable values listed in the script application or they will not play.

Procedure 12 Verify Cisco Unified CCX Engine status

Check the status of the Cisco Unified CCX engine in order to ensure the integration with Cisco Unified CM is working properly and is ready to receive calls.

Step 1: From the **Navigation** menu in the top right, choose **Cisco Unified CCX Serviceability,** and then click **Go**.

Step 2: Navigate to **Tools > Control Center-Network Services**, and then check the status of the Cisco Unified CCX Engine.

On the Cisco Unified CCX Engine line, the Status should read **In Service**; if this is the case, the configuration of the server is complete and you can skip ahead to Configuring the Cisco Finesse Application. If the Status is **Partial Service,** continue to the next step to attempt to fix the problem.

Step 3: From the **Navigation** menu in the top right, choose **Cisco Unified CCX Administration**, and then click **Go**.

Step 4: Navigate to **Subsystems > Cisco Unified CM Telephony > Data Synchronization**.

Step 5: Select **Call Control Group(s)**, **Trigger(s)**, and **CM Telephony User(s)**, and then click **Data Resync**.

Step 6: Repeat Step 1 through Step 2 to recheck if Unified CCX Engine has come into service.

PROCESS

Configuring the Cisco Finesse Application

1. Enable the Finesse application on Cisco UCCX
2. Access the Finesse administration
3. Configure Reasons
4. Configure desktop layout
5. Create phonebooks
6. Configure team resources
7. Access the Finesse agent desktop
8. Change agent state from Not Ready to Ready after log in
9. Access the Cisco Finesse Supervisor desktop
10. Silently monitor and barge-in to existing agent call by supervisor

Out-of-box, feature-rich Web 2.0 Finesse desktop is browser-based and offers ease of deployment and lower total cost of ownership (TCO). Open social technology offers flexibility of customized gadget insertion for other browser-based applications. The REST API of Finesse also makes it easy to develop customized applications and CRM integrations to meet business requirements. Cisco Unified CCX 10.0(1) provides inbound contact center call control functionality for agents, key supervisor functionality, and statistics for agent and supervisor for real-time updates. Core features of Cisco Finesse include the following:

- Call Control/Agent State
- Cisco Unified CM Silent Monitoring
- HTTP & REST API workflows
- Login via username
- Phonebook
- Recording and playback via MediaSense
- Historical and real-time reports via Unified Intelligence Center

Procedure 1 Enable the Finesse application on Cisco UCCX

Step 1: Telnet to the Cisco UCCX server.

```
telnet 192.168.1.28
```

Step 2: Access the CLI interface by entering admin credentials.

- User name: **sudheer**
- Password: [**password**]

Step 3: Activate Finesse application.

```
Utils UCCX Finesse Activate
```

Procedure 2 Access the Finesse administration

Step 1: Open a supported browser for instance **Mozilla** or **Internet Explorer** (Recommended).

Step 2: Access the Cisco Finesse administration log in page by entering the following URL.

https://192.168.1.28:8445/cfadmin

Step 3: The login screen appears. Enter the following details.

- User name: **Sudheer**
- Password: [**Password**]

Procedure 3 Configure Reasons

Step 1: On the Cisco finesse administration home page, click the **Reasons** tab.

Step 2: In **Manage Reason codes** (Not Ready gadget), click **New.** A new reason code is created.

Step 3: Create reason codes for other states by repeating Step 1 through Step 2.

Procedure 4 Configure desktop layout

Step 1: On the Cisco Finesse home page, click the **Manage Desktops** tab.

Step 2: In the Finesse Layout XML gadget, specify the required desktop layout to be used by agents as shown below.

Finesse Layout XML

```
<finesseLayout xmlns="http://www.cisco.com/vtg/finesse">

<layout><role>Agent</role>
<page>
        <gadget>/desktop/gadgets/CallControl.jsp</gadget>
</page>

<tabs>
<tab>
 <id>home</id>
   <label>finesse.container.tabs.agent.homeLabel</label>
</tab>

<tab>
 <id>manageCall</id>
  <label>finesse.container.tabs.agent.manageCallLabel</label>
</tab>

</tabs>
</layout>

<layout>
 <role>Supervisor</role>
  <page>
   <gadget>/desktop/gadgets/CallControl.jsp</gadget>
  </page>

<tabs>
  <tab>
    <id>home</id>
```

Procedure 5 Create phonebooks

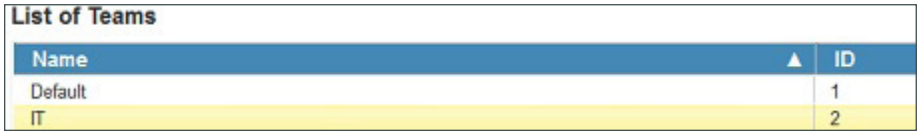
Step 1: Click the **Phonebooks** tab.

Step 2: In the Manage phonebooks gadget, create new phonebooks by clicking **New**. The phonebook can be assigned to all users or at team level via the **Assign To** list box.

Procedure 6 Configure team resources

Step 1: Click the **Team Resources** tab.

Step 2: In Manage Team Resources gadget, select the **IT** team for which you want to associate the resources from the list of teams available.



Step 3: In **Resources for IT**, click the **Desktop Layout** tab, and then associate desktop layout to this team created above. Likewise, click other available tabs, to associate the Phonebooks, Reason Codes and workflows created in above steps.

Procedure 7 Access the Finesse agent desktop

Step 1: Open a supported browser and enter the following URL.

http://192.168.1.28:8082

Step 2 Enter the following details at the log in screen:

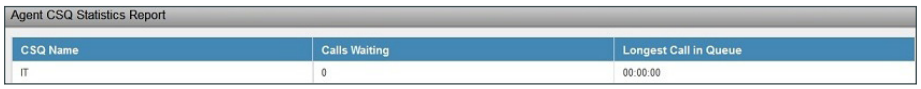
- User name: **Sudheer**
- Password: [**password**]
- Extension: **8140007**

Procedure 8 Change agent state from Not Ready to Ready after log in

Step 1: Under the agent name, click the down arrow, and then choose **Ready** for the state.

By the default, the agent desktop consists of the Home, My Statistics, and the Manage Call tabs.

- The Home tab includes the following gadgets by default:
  - **Agent CSQ Statistics report**–This gadget typically updates the live data with the queue statistics.



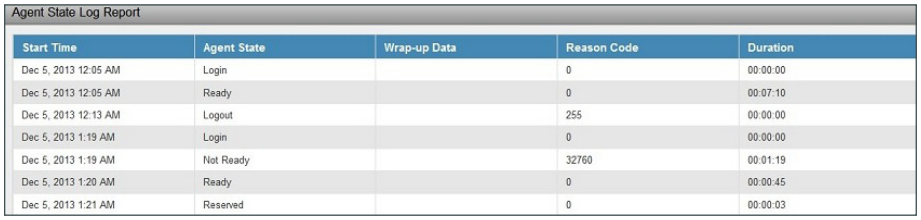
  - **Agent Team Summary Report**–This gadget displays the live status for the agents who are part of the same team.

- The My Statistics tab includes the following gadgets by default:
  - **Agent Statistics Report**–This gadget displays detailed information for an agent such as the talk time, hold time, ready, not ready status, and after call work.


Agent Statistics Report

Calls Offered	Calls Handled	Talk Time			Hold Time			Ready			Not Ready			After Call Work		
		Avg	Max	Total	Avg	Max	Total	Avg	Max	Total	Avg	Max	Total	Avg	Max	Total
1	1	00:00:00	00:00:00	00:02:14	00:00:00	00:00:00	00:00:00	00:03:57	00:07:09	00:07:55	00:00:40	00:01:19	00:01:21	00:00:00	00:00:00	00:00:00

  - **Agent State Log Report**–This gadget provides detailed information about the different states through which agents transform during the lifecycle.


Agent State Log Report

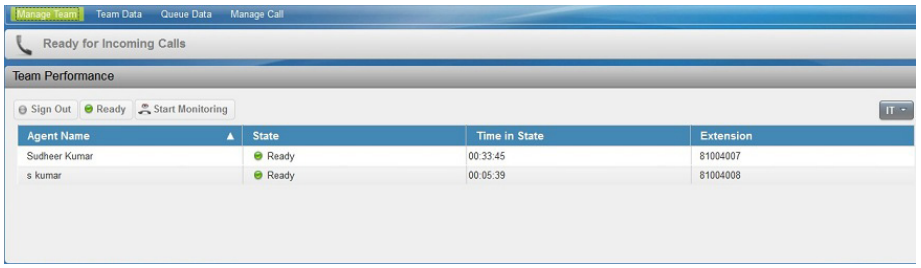
Start Time	Agent State	Wrap-up Data	Reason Code	Duration
Dec 5, 2013 12:05 AM	Login		0	00:00:00
Dec 5, 2013 12:05 AM	Ready		0	00:07:10
Dec 5, 2013 12:13 AM	Logout		255	00:00:00
Dec 5, 2013 1:19 AM	Login		0	00:00:00
Dec 5, 2013 1:19 AM	Not Ready		32760	00:01:19
Dec 5, 2013 1:20 AM	Ready		0	00:00:45
Dec 5, 2013 1:21 AM	Reserved		0	00:00:03

Procedure 9 Access the Cisco Finesse Supervisor desktop

Step 1: Enter the following URL in a supported browser:

http://192.168.1.28:8082

Step 2: Log in as a supervisor by entering the supervisor **username**, **password**, and **extension**. The Finesse supervisor desktop is displayed.



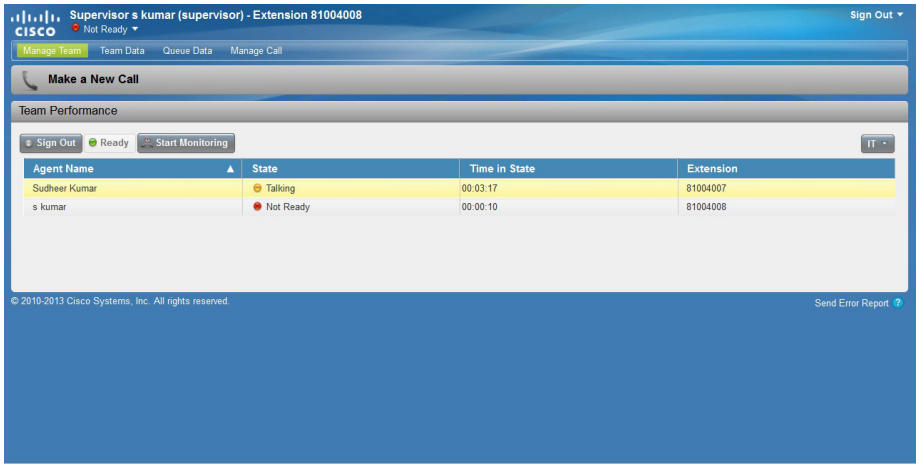
Reader Tip

By default, the supervisor desktop consists of the Manage Team, Team Data, Queue Data, and Manage Call tabs. Each of these individual pages contains default gadgets that provide relevant statistical information using the CUIC.

Step 3: Click the **Manage Team** tab.

Step 4: Choose the **IT** from the available team list to view **IT Team's Performance gadget** capturing the agent's status.

Step 5: Next, select an agent belonging to the IT team from the Team performance gadget to perform either a sign-out, forced ready or silent recording on behalf of the agents.



Step 6: Likewise click on other tabs to view them.

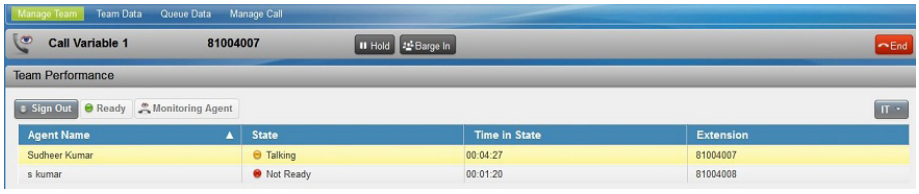
Procedure 10 Silently monitor and barge-in to existing agent call by supervisor

Step 1: In the Team Performance gadget on the supervisor desktop, click **Start Monitoring**. Now the supervisor can listen to the agent's conversation.

Tech Tip

The agent should be in Talking state for the Monitoring Agent button to be enabled.
The supervisor should be in Not Ready state to start the Monitoring Agent.

Step 2: Next, barge-in to an existing agent call, by clicking **Barge-In** in the call control area of the supervisor desktop.



Tech Tip

Customers can choose to have either Finesse agents or CAD agents. Mixing the two types of agents is not supported.

PROCESS

Cisco Unified Intelligence Center (CUIC)

1. Start using Cisco Unified Intelligence Center

Cisco Unified CCX users can access reports by using Cisco Unified Intelligence Center and Cisco Finesse. Unified Intelligence Center is a comprehensive, end-to-end reporting solution for Unified CCX. You can access Historical and Live Data reports.

With Unified Intelligence Center, you can complete the following tasks:

- Generate and view reports.
- Filter data in the reports by setting parameters.
- View help for a report.
- View the report in a new browser.
- Create and view dashboards.
- View permalinks for reports and dashboards, as well as copy this permalink URI and post it onto a webpage for public viewing of reports or dashboards without needing to log into CUIC or have a Finesse desktop.
- Configure thresholds for grid data cells.

Procedure 1 Start using Cisco Unified Intelligence Center

Step 1: Open a supported web browser.

Step 2: Access the CUIC by using one of the following methods:

- Open http://192.168.1.28, and then click **Cisco Unified Contact Center Express Reporting**.

  or

- Open http://192.168.1.28:8081/cuic.

Log in by entering your **Username** and **Password**.

PROCESS

Configuring the Dashboard

1. Create a dashboard
2. Add an item to the dashboard

A *dashboard* is mix of multiple items that you would like shown on a single web page. You can create multiple dashboards, and you can decide if each one is private to certain viewers, or if you want to allow the dashboards to be viewed by others via permission settings.

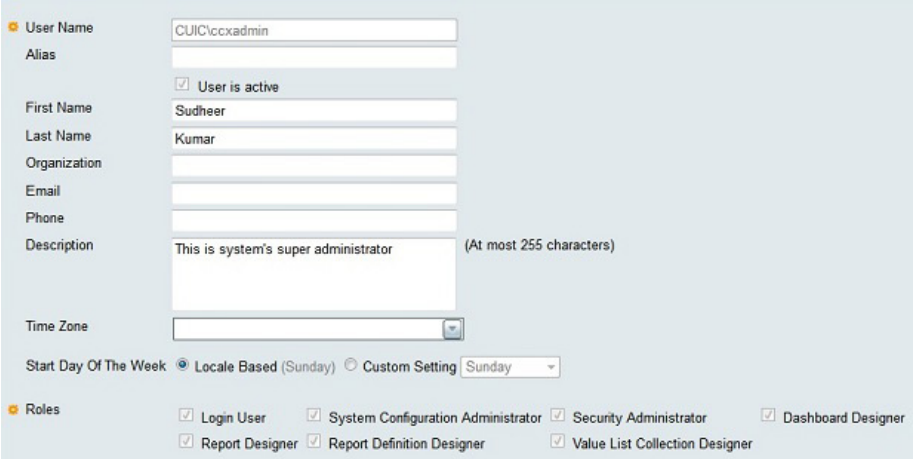
The following items can be added to any dashboard, and then moved and resized within the dashboard to create the look you want to see within each dashboard:

- Existing reports
- Scheduled reports
- Web page URLs
- Sticky notes
- Custom Widgets

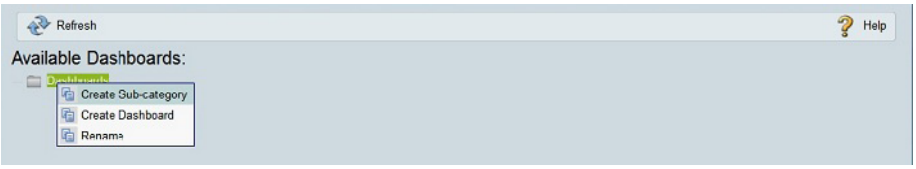
Procedure 1 Create a dashboard

To be able to create a dashboard, you must have the following option enabled for the user under the **Security->UserList** tab:

- Dashboard Designer

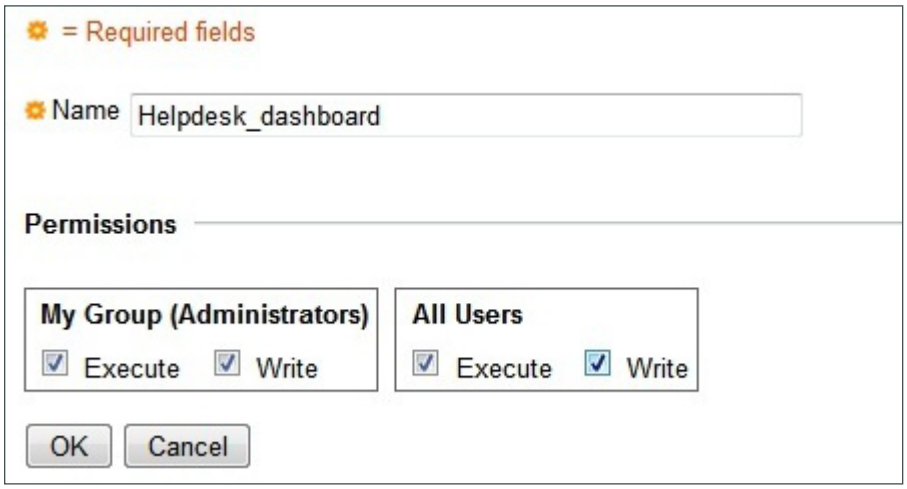


Step 1: Move the dashboard drawer to the editing and viewing pallet on the right side of the CUIC display by clicking **Dashboard drawer**, right-click the dashboard folder, and then click **Create Sub-category**.



Step 2: In Create Dashboard window, enter the following detail and click **OK**.

- Name: **Helpdesk_dashboard**

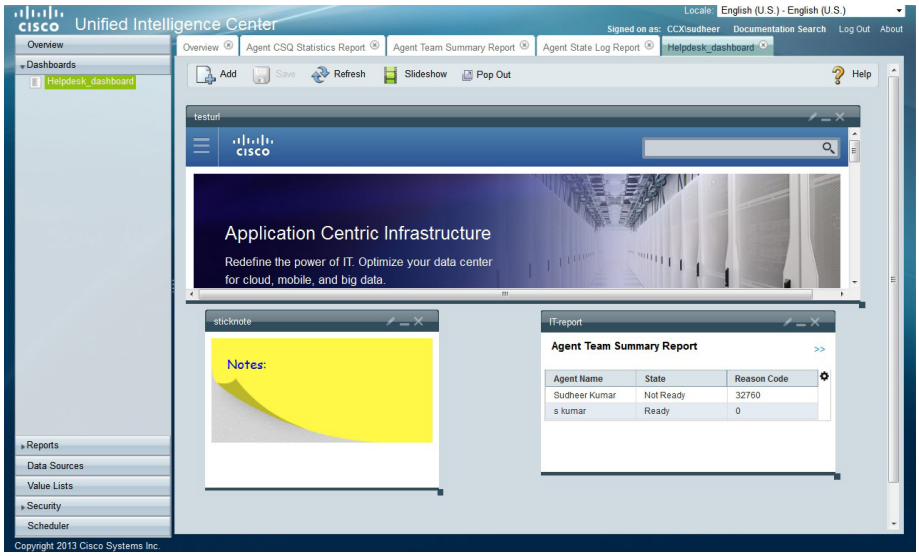


Step 3: Assign Permission to the users, and then click **OK**. This example gives all permissions to All Users.

Step 4: For each additional dashboard you want to create, repeat Step 1 through Step 3.

Procedure 2 Add an item to the dashboard

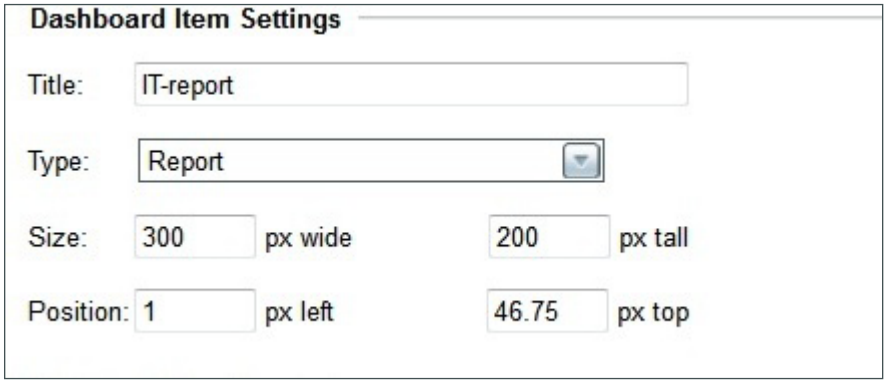
Step 1: Click **Dashboards**, and then select the dashboard you just created so you can add new items to it.



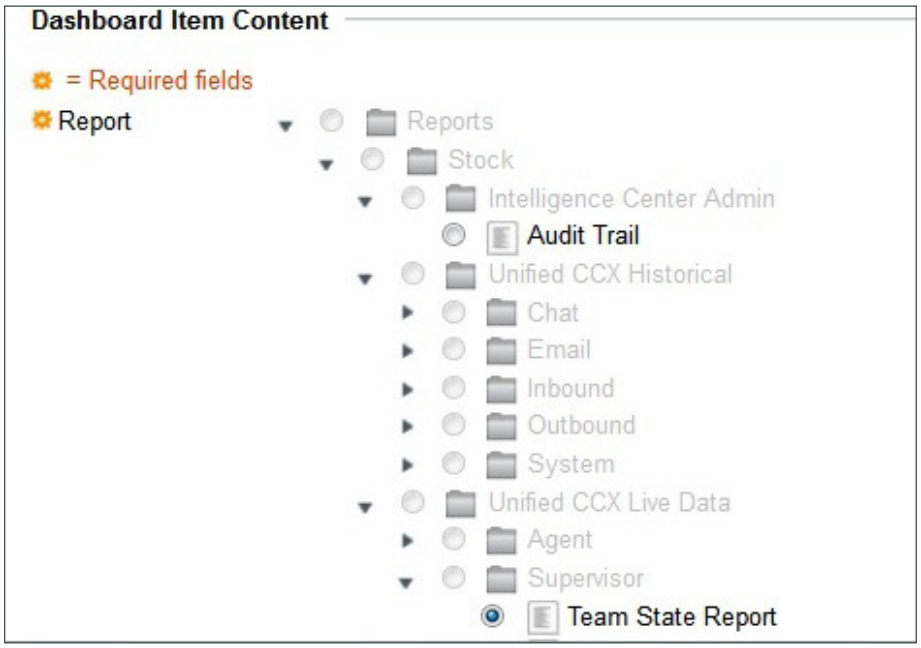
Step 2: Add a new item onto the dashboard by clicking **Add**.

Step 3: In the Dashboard Item Settings pane, enter the following details and click **OK**.

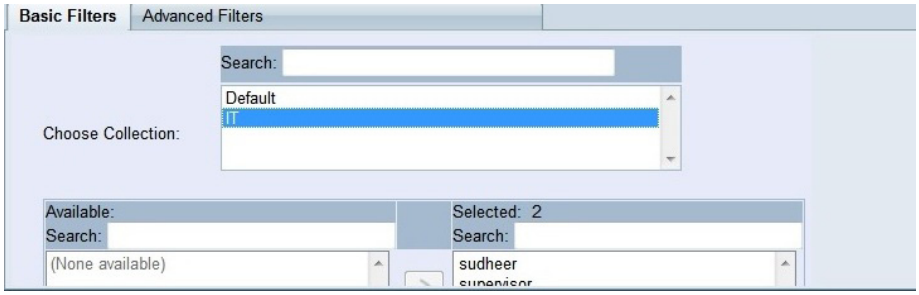
- Title: **IT-report**
- Type: **Report**



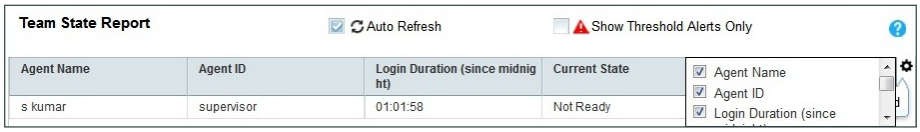
Step 4: In **Dashboard Item Content**, select the **Team State Report** to be generated.



Step 5: Select the resource(s) in this example **IT** for which the report needs to be generated, and then click **Run**.



The Report widget is placed into the dashboard, as shown in the following.



Step 6: For each additional item, repeat Step 1 through Step 5

PROCESS

Creating and Editing Reports

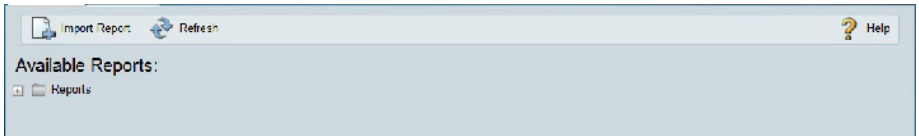
1. Creating sub-folder to store customized reports
2. Create and view permalinks
3. Generate and view reports

Procedure 1 Creating sub-folder to store customized reports

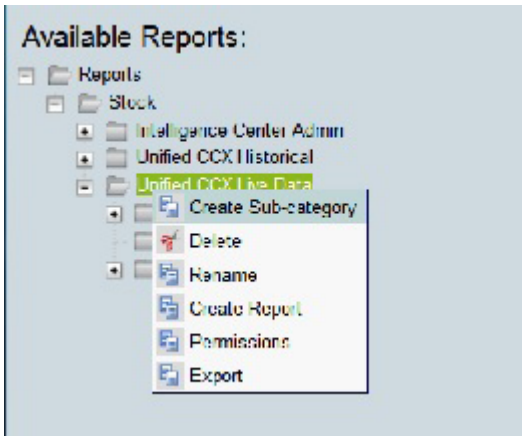
Tech Tip

To be able to create a folder, the user should be logged in as an App user.

Step 1: In the left pane, click the **Report** drawer. The available folders are displayed.

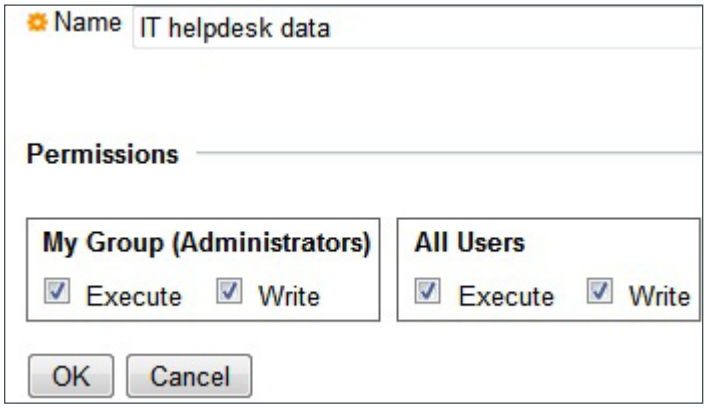


Step 2: Navigate to UCCX live data folder, and then right-click **Create Sub-category**. A sub-folder is created.



Step 3: In the Create Sub-category pane, specify:

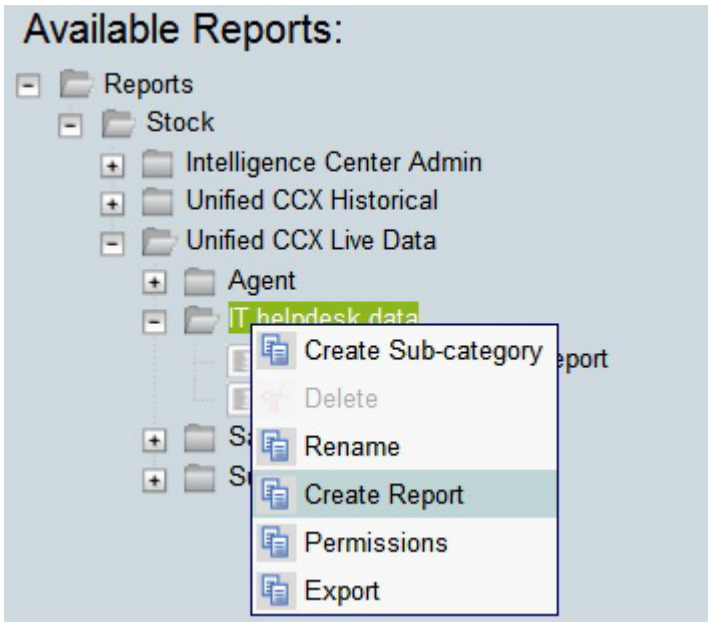
- Name: **IT helpdesk data**
- Permissions: **Select all check boxes**



Tech Tip

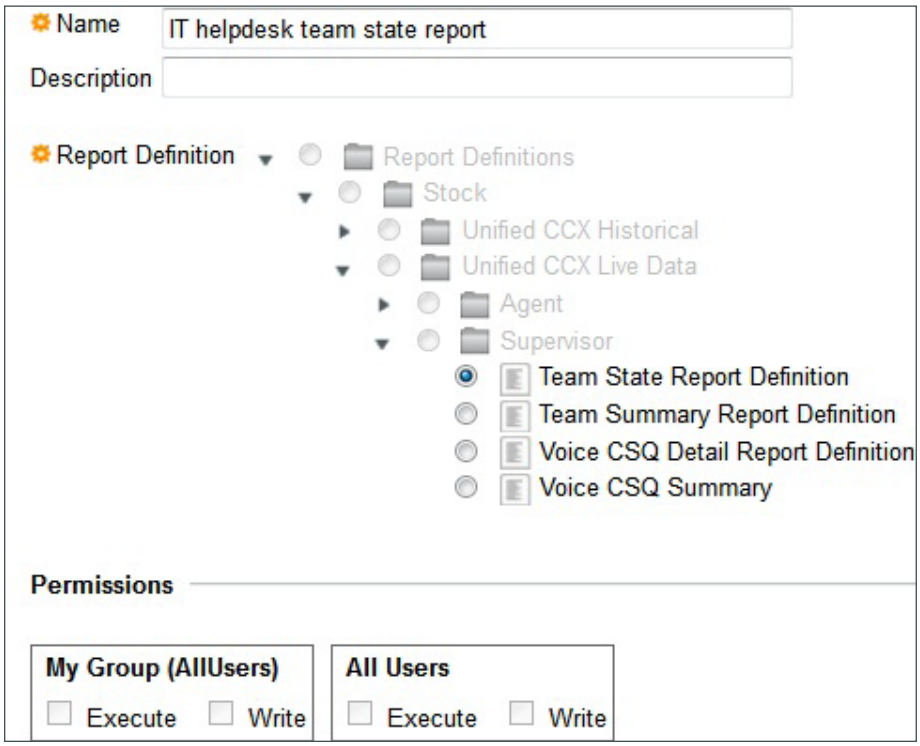
To be able to create report, the user should be logged in as a user with report designer and report definition designer access privileges.

Step 4: Right-click the newly created folder, and then choose **Create Report**.



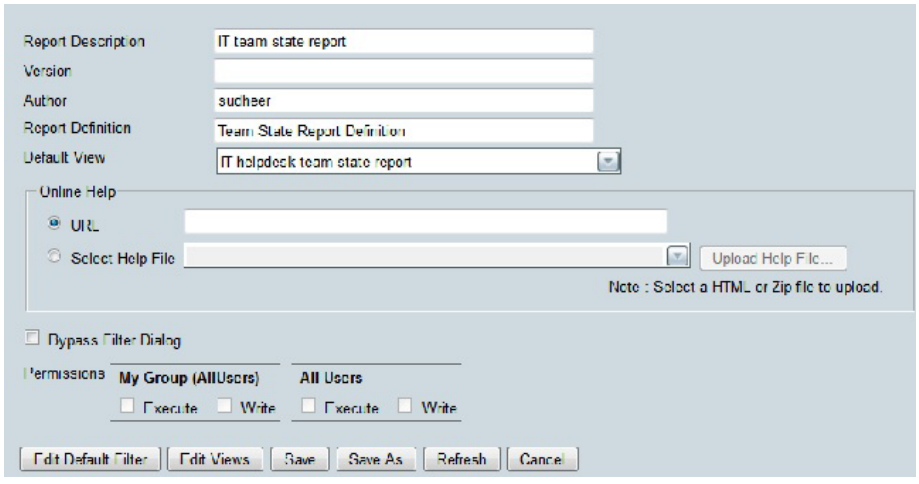
Step 5: In the **Create Report** pane, enter the following details and click **Save**.

- Name: **IT helpdesk team state report**
- Description: **IT team state stats**
- Report Description: **Team State Report Definition**

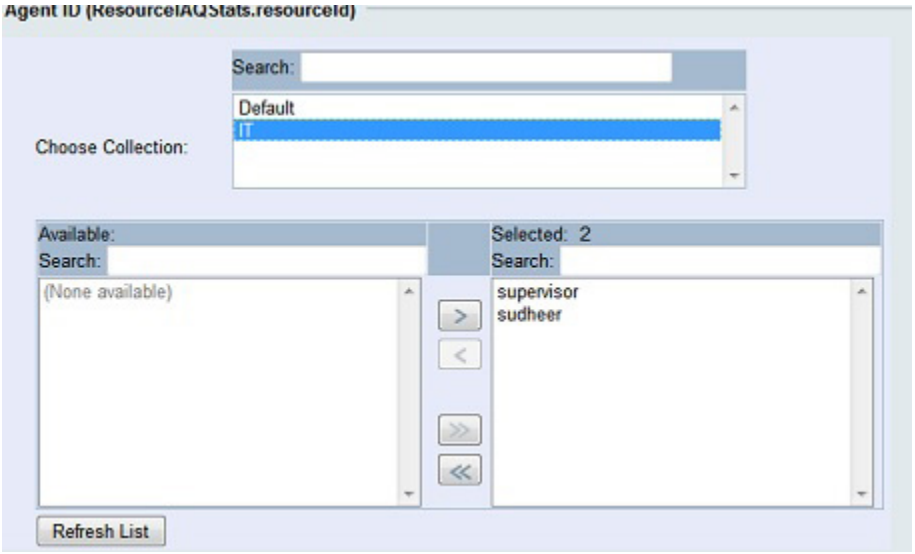


Step 6: Right-click on the **IT Helpdesk team state report created above**, and then click on the Edit option to get to edit window.

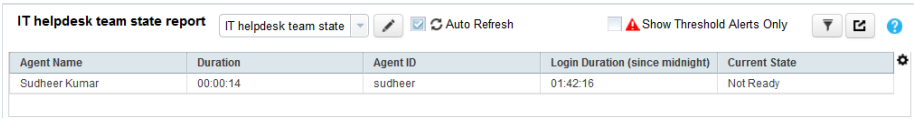
Step 7: Select **Bypass filter** check box in the edit window and **Next** click on the **Edit Default Filte**r button.



Step 8: On the **Edit default filter** page, from **Choose collections** list, and select **IT** and then save the filter.



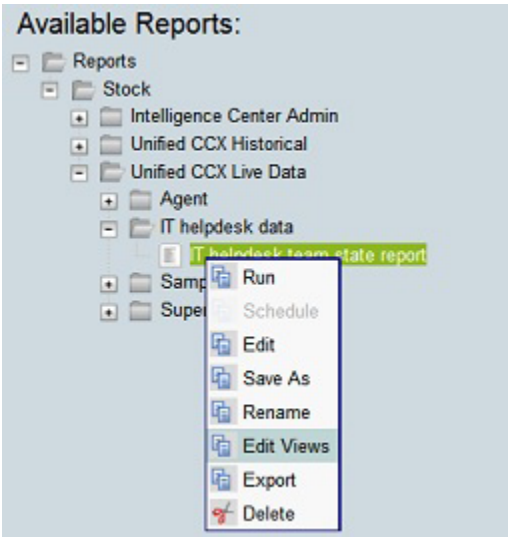
Step 9: Go back to the Reports tab and then click the newly created report. The Teams agent state report is displayed.



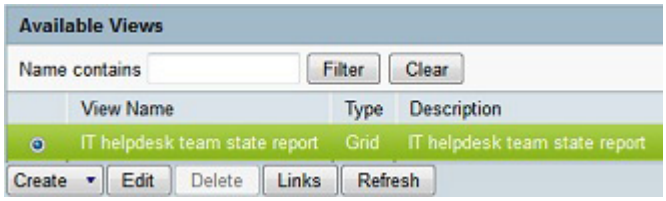
Step 10: Create other report definitions by repeating Step 1 through Step 9.

Procedure 2 Create and view permalinks

Step 1: Navigate to the Reports tab, right-click the IT helpdesk team state report created in the previous procedure, and then choose **Edit Views**.



Step 2: Select the IT helpdesk team state report to edit, and then click **Links**. A link to this report is generated that can be used to access the reports directly.



Tech Tip

To restrict access to a permalink, uncheck the **Enable Unauthenticated Access** check box just above the HTML link.

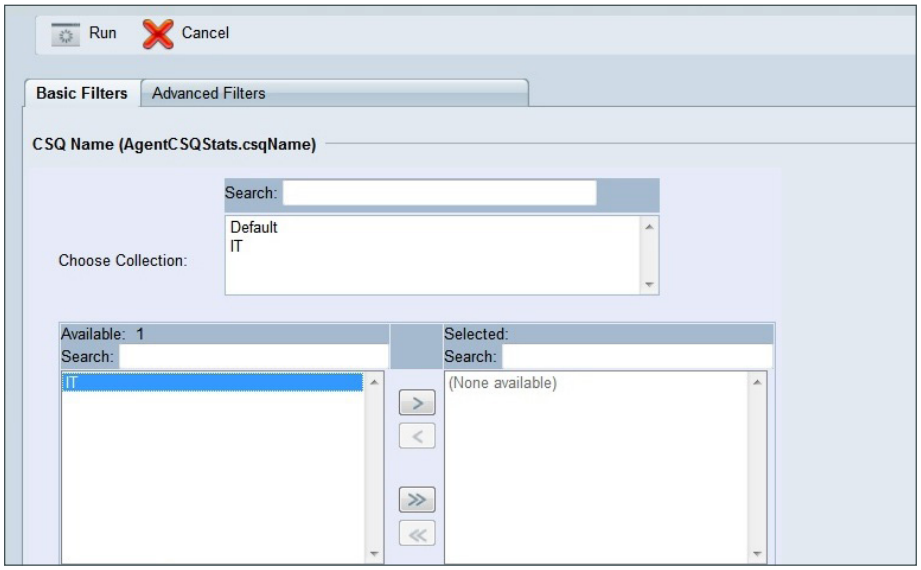
Procedure 3 Generate and view reports

Step 1: In the left pane, click the **Reports** drawer.

Step 2: Navigate to **Stock Options->Agent->Agent CSQ Statistics**. The filters for choosing report generation are displayed.

Step 3: From the **Choose Collection** list, choose the IT resource.

Step 4: Click **Run** to generate Report.



Step 5: If you want, you can use the Live Data Report Viewer, to do the following:

- View multiple grid views of the same report.
- Add or delete the column to the grid view by using the Gear icon.
- Choose if you would like the report to auto-refresh the live data. If you do not choose to auto-refresh, CUIC provides alerts about updates on the report.
- Decide whether or not to display only report items that have threshold events defined for the report items. When enabled, only data configured with threshold values are displayed.
- Display a report by opening it in a new browser.
- Display Help, which provides more information about the fields in the template or general help.

Step 6: If you want to generate or view reports in other report viewers, repeat Step 1 through Step 5.

Reader Tip

For more information about using CUIC, see the Reporting user guide and the online help available in the CUIC.

Appendix A: Product List

Data Center or Server Room

Component	Product Description	Part Numbers	Software
Call Control	Cisco Business Edition 6000 with up to 1000 users	BE6K-ST-BDL-K9	10.0
Contact Center Solution	Cisco Unified Contact Center Express	CCX-10-EHA-L-K9	10.0

Headquarters Voice

Functional Area	Product Description	Part Numbers	Software
Headquarters Voice Router	Cisco 3945 Voice Sec. Bundle, PVDM3-64, UC and SEC License PAK	C3945-VSEC/K9	15.2(4)M5 securityk9 license ipbasek9 license uck9 license
	Security Paper PAK for Cisco 3900 Series	SL-39-SEC-K9	
	IP Base Paper PAK for Cisco 3900 series	SL-39-IPB-K9	
	Unified Communications Paper PAK for Cisco 3900 Series	SL-39-UC-K9	
	2 Port Channelized T1/E1 and ISDN PRI High Speed WAN Interface Card (data only)	HWIC-2CE1T1-PRI	
	2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card-T1/E1	VWIC2-2MFT-T1/E1	

Remote Site Voice

Functional Area	Product Description	Part Numbers	Software
Remote Site Voice Routers	Cisco 2921 Voice Sec. Bundle, PVDM3-32, UC and SEC License PAK	C2921-VSEC/K9	15.2(4)M5 securityk9 license ipbasek9 license uck9 license
	Security Paper PAK for Cisco 2900 Series	SL-29-SEC-K9	
	IP Base Paper PAK for Cisco 2900 series	SL-29-IPB-K9	
	Unified Communications Paper PAK for Cisco 2900 Series	SL-29-UC-K9	
	2 Port Channelized T1/E1 and ISDN PRI High Speed WAN Interface Card (data only)	HWIC-2CE1T1-PRI	
	2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card-T1/E1	VWIC2-2MFT-T1/E1	
	SRST For 50 phones	FL-SRST-50	15.2(4)M5

Endpoints

Functional Area	Product Description	Part Numbers	Software
Phones	Unified IP Phone 8900 Series	CP-8961-C-K9	SIP8961.9-4-1-9
	Unified IP Phone 7800 series	CP-7821-K9 CP-7841-K9 CP-7841-K9	SIP78xx.10-1-1-9
	Unified IP Phone 7975	CP-7975G	SCCP75.9-3-1SR3-1S

Feedback

Please use the feedback form to send comments and suggestions about this guide.

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