Deploying Avaya Contact Center Select Hardware Appliance

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Contents

Chapter 1: Introduction

This document describes how to deploy, commission, and test the Avaya Contact Center Select Release 7.1 hardware appliance. The Avaya Contact Center Select hardware appliance is a physical server with the operating system and contact center application software already loaded and partially preconfigured.

Purpose

This document describes how to install and commission Avaya Contact Center Select.

Intended audience

This document is intended for personnel who install Avaya Contact Center Select.

Related resources

The following are some additional Avaya Contact Center Select related resources.

Avaya Contact Center Select Documentation

The following table lists the documents related to Avaya Contact Center Select. Download the documents from the Avaya Support website at http://support.avaya.com.

Title	Use this document to:	Audience
Overview		

Table continues…

Title	Use this document to:	Audience
Avaya Contact Center Select Solution Description	This document provides a technical description of Avaya Contact Center Select. It describes the product features, specifications, licensing, and interoperability with other supported products.	Customers and sales, services, and support personnel
Avaya Contact Center Select Documentation Catalog	This document describes available Avaya Contact Center Select documentation resources and indicates the type of information in each document.	Customers and sales, services, and support personnel
Contact Center Performance Management Data Dictionary	This document contains reference tables that describe the statistics and data in the historical and real-time reports generated in Contact Center.	System administrators and contact center supervisors
Implementing		
Deploying Avaya Contact Center Select DVD	This document contains information about Avaya Contact Center Select DVD installation, initial configuration, and verification. This document contains information about maintaining and troubleshooting the Avaya Contact Center Select server.	Implementation personnel
Deploying Avaya Contact Center Select Software Appliance	This document contains information about Avaya Contact Center Select Software Appliance (VMware) preparation, deployment, initial configuration, and verification. This document contains information about maintaining and troubleshooting the software appliance.	Implementation personnel
Deploying Avaya Contact Center Select Hardware Appliance	This document contains information about Avaya Contact Center Select Hardware Appliance (physical server) installation, initial configuration, and verification. This document contains information about maintaining and troubleshooting the hardware appliance.	Implementation personnel
Deploying Avaya Contact Center Select on Microsoft Azure	This document contains information about deploying Avaya Contact Center Select using an ISO image on Microsoft Azure.	Implementation personnel
Avaya Contact Center Select Business Continuity	This document contains information about deploying Avaya Contact Center Select Business Continuity.	Implementation personnel

Table continues…

Title	Use this document to:	Audience
Upgrading and patching Avaya Contact Center Select	This document contains information about upgrading and patching Avaya Contact Center Select.	Implementation personnel and system administrators
Administering		
Administering Avaya Contact Center Select	This document contains information and procedures to configure the users, skillsets, and contact center configuration data. This document contains information about creating Avaya Contact Center Select real-time and historical reports.	System administrators and contact center supervisors
Avaya Contact Center Select Advanced Administration	This document contains information about managing the Avaya Contact Center Select server, licensing, and multimedia configuration.	System administrators
Using Contact Center Orchestration Designer	This document contains information and procedures to configure script and flow applications in Contact Center Orchestration Designer.	System administrators
Maintaining		
Contact Center Event Codes	This document contains a list of errors in the Contact Center suite and recommendations to resolve them. This document is a Microsoft Excel spreadsheet.	System administrators and support personnel
Using		
Using Agent Desktop for Avaya Contact Center Select	This document provides information and procedures for agents who use the Agent Desktop application to accept, manage, and close contacts of all media types in Contact Center.	Contact center agents and supervisors
Using the Contact Center Agent Browser application	This document provides information and procedures for agents who use the Agent Browser application to log on to Contact Center and perform basic tasks.	Contact center agents
Using Avaya Workspaces for AACC and ACCS	This document describes the tasks that Contact Center agents can perform using Avaya Workspaces.	Contact center agents and supervisors

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  - In **Search**, type the product name. On the Search Results page, click **Clear All** and select **Video** in the **Content Type**.

    The **Video** content type is displayed only when videos are available for that product.

  In the right pane, the page displays a list of available videos.
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  - Scroll down Playlists, and click a topic name to see the list of videos available for the topic. For example, Contact Centers.

Note:

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Chapter 2: Changes in this release

The following sections describe the new features and changes in the Avaya Contact Center Select Release 7.1 deployment process.

Features

See the following sections for information about feature changes.

New features in the Release 7.1 base build

See the following sections for information about new features in the Release 7.1 base build:

Avaya Contact Center Select Release 7.1 supports Microsoft Windows Server 2016 on page 16

Ignition Wizard enhancements on page 16

Support for Avaya Workspaces on page 17

New features in Release 7.1 Service Pack 1

There are no new features in Release 7.1 Service Pack 1.

New features in Release 7.1 Service Pack 2

There are no new features in Release 7.1 Service Pack 2.

New features in Release 7.1 Service Pack 3

See the following sections for information about new features in Release 7.1 Service Pack 3:

Avaya Workspaces Service Utility on page 16

New features in Release 7.1 Feature Pack 1

See the following sections for information about new features in Release 7.1 Feature Pack 1:

NTP configuration of the Avaya Workspaces nodes on page 17

New features in Release 7.1 Feature Pack 2

See the following sections for information about new features in Release 7.1 Feature Pack 2:

Ability to deploy Avaya Workspaces at any stage on page 15

Contact Center Manager Administration supported in Microsoft Edge with IE mode on page 16

Microsoft Edge support in Agent Desktop on page 16

Support of reverse proxy for Avaya Workspaces on page 17

New features in Release 7.1 Feature Pack 2 Post GA Patches

See the following sections for information about new features in Release 7.1 Feature Pack 2 Post GA Patches:

Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches supports Microsoft Windows 11 on page 15

Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches supports Microsoft Windows Server 2019 on page 15

Ability to deploy Avaya Workspaces at any stage

From Release 7.1 Feature Pack 2, you can deploy and configure the Avaya Workspaces cluster at any stage after you upgrade to the latest release. Using the Update Configurator, you can deploy the Avaya Workspaces cluster either during initial installation and configuration of the Contact Center release, or as a Day 2 operation.

Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches supports Microsoft Windows 11

From Release 7.1 Feature Pack 2 Post GA Patches, Avaya Contact Center Select supports Microsoft Windows 11 for Avaya Agent Desktop, Contact Center Manager Administration, Contact Center Multimedia Administration, and Communication Control Toolkit.

Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches supports Microsoft Windows Server 2019

Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches supports the Microsoft Windows Server 2019 operating system. Customers that upgrade to Avaya Contact Center Select Release 7.1 Feature Pack 2 Post GA Patches and want to use Windows Server 2019 must perform a fresh installation on a new Microsoft Windows Server 2019. For more information about restoring the database to the new server, see *Upgrading and patching Avaya Contact Center Select*.

Avaya Contact Center Select Release 7.1 supports Microsoft Windows Server 2016

Avaya Contact Center Select Release 7.1 is supported on both the Microsoft Windows Server 2012 R2 and Microsoft Windows Server 2016 operating system. Customers upgrading to Avaya Contact Center Select 7.1 on Windows Server 2016, must migrate to a new Microsoft Windows Server 2016 server.

Avaya Workspaces Service Utility

From Release 7.1, Service Pack 3, you can use Avaya Workspaces Service Utility — a new standalone .NET application to perform service functions for Workspaces cluster. You can use this tool to monitor the containers and collect logs.

Contact Center Manager Administration supported in Microsoft Edge with IE mode

From Release 7.1 Feature Pack 2, you can access Contact Center Manager Administration using Microsoft Edge with Internet Explorer (IE) mode.

Ignition Wizard enhancements

From Release 7.1 the following enhancements of Ignitions Wizard are implemented:

- Ignition Wizard now supports chained certificates
- Ignition Wizard now allows to remove the imported certificates
- Password complexity rules of Ignition Wizard are now aligned with Security Manager
- Ignition Wizard now has enhanced validation and reset options

Microsoft Edge support in Agent Desktop

From Release 7.1 Feature Pack 2, Agent Desktop uses the Microsoft Edge browser as a rendering engine to display web content. To display sites that are compatible only with Internet Explorer, you must enable IE mode for Agent Desktop using new functionality in Contact Center Multimedia Administration. This feature requires installation of Microsoft Edge WebView2 Runtime.

You can also install and start Agent Desktop using Microsoft Edge.

NTP configuration of the Avaya Workspaces nodes

From Release 7.1 Feature Pack 1, you can synchronize your Avaya Workspaces nodes with the Contact Center environment using Network Time Protocol (NTP) servers. Set up the NTP servers before deploying or upgrading your Contact Center Release 7.1. You can use from one to three NTP servers, however, Avaya recommends that you use three. You can configure time synchronization settings in the new Other settings tab while configuring Avaya Workspaces in Ignition Wizard (for fresh installs) or in the Update Configurator (for upgrades).

Support for Avaya Workspaces

From Release 7.1 Contact Center supports Avaya Workspaces — a client for voice, email and webchat contact types.

Support of reverse proxy for Avaya Workspaces

From Release 7.1 Feature Pack 2, Contact Center introduces support for reverse proxy, which allows agents to access Avaya Workspaces from outside the corporate network without VPN connection. You can configure reverse proxy for Avaya Workspaces using Avaya Session Border Controller for Enterprise.

Other changes

See the following sections for information about changes that are not feature-related:

Other changes in the Release 7.1 base build

See the following sections for information about changes that are not feature-related in the Release 7.1 base build:

Avaya Aura Media Server update on page 18

Other changes in Release 7.1 Service Pack 1

There are no other changes in Release 7.1 Service Pack 1.

Other changes in Release 7.1 Service Pack 2

There are no other changes in Release 7.1 Service Pack 2.

Other changes in Release 7.1 Service Pack 3

There are no other changes in Release 7.1 Service Pack 3.

Other changes in Release 7.1 Feature Pack 1

See the following sections for information about other changes in Release 7.1 Feature Pack 1:

Avaya Aura Media Server update on page 18

Support for the latest WebLM release on page 19

Updated third-party software for the Avaya Workspaces cluster on page 19

Other changes in Release 7.1 Feature Pack 2

See the following sections for information about other changes in Release 7.1 Feature Pack 2:

Avaya Aura Media Server update on page 18

Documentation update for Avaya Workspaces deployment on page 18

Support for Avaya WebLM on page 19

Updated third-party software for the Avaya Workspaces cluster on page 19

Avaya Aura® Media Server update

Contact Center Release 7.1 supports Avaya Aura® Media Server Release 8.0. Avaya Aura® Media Server Release 8.0 is supported on the Red Hat Enterprise Linux 7.x 64-bit operating system only.

Avaya Aura® Media Server update

From Release 7.1 Feature Pack 1, Contact Center supports Avaya Aura® Media Server Release 8.0.2 SP3 and SP4.

Avaya Aura® Media Server update

From Release 7.1 Feature Pack 2, Contact Center supports Avaya Aura® Media Server Release 8.0.2 SP7.

Documentation update for Avaya Workspaces deployment

From Release 7.1 Feature Pack 2, the Avaya Workspaces deployment chapter has been added to *Deploying Avaya Contact Center Select Hardware Appliance*. The new chapter provides more detailed information about installing Avaya Workspaces during the initial installation of Avaya Contact Center Select and adding Avaya Workspaces to an existing solution. See Deploying Avaya Workspaces on page 87.

Support for Avaya WebLM

From Release 7.1 Feature Pack 2, Contact Center supports Avaya WebLM 8.1.3.2 both Remote and Local.

Support for the latest WebLM release

From Release 7.1 Feature Pack 1, Contact Center supports WebLM 8.1.2.

Updated third-party software for the Avaya Workspaces cluster

Release 7.1 Feature Pack 1 upgrades a number of third-party components for the Avaya Workspaces cluster to recent versions, such as Kubernates, Docker, Istio, and Kafka.

Updated third-party software for the Avaya Workspaces cluster

Release 7.1 Feature Pack 2 upgrades a number of third-party components for the Avaya Workspaces cluster to recent versions, such as Kubernates, Docker, Istio, and Kafka.

Chapter 3: Overview

The Avaya Contact Center Select hardware appliance is a physical server with the operating system and contact center application software already loaded and partially preconfigured.

The Avaya Contact Center Select hardware appliance server delivers quick and simplified contact center deployment. After the basic telephony features are working, you can then configure multimedia contacts, multiplicity, custom prompts, and other enhanced features to improve your customer's experience.

The following diagram shows the topology of a typical Avaya Contact Center Select hardware appliance solution:

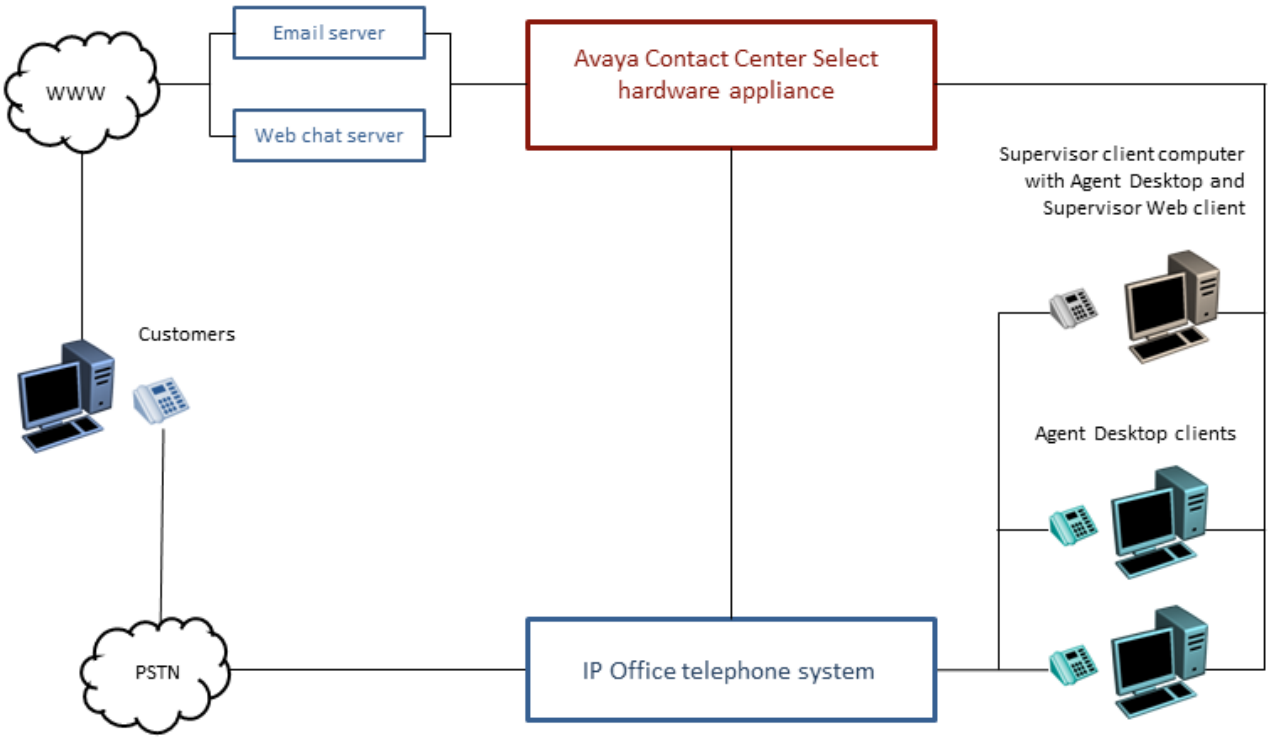


Figure 1: Diagram showing the topology of the Avaya Contact Center Select hardware appliance solution

To deploy the Avaya Contact Center Select hardware appliance you must connect the server to a power source and the network. You can then activate the Microsoft Windows operating system using the supplied Microsoft Windows license, configure the server network settings, and then use a

simple configuration utility to rapidly commission the solution. At install time, the Avaya Contact Center Select hardware appliance server automatically launches Ignition Wizard, a simple configuration utility, which rapidly deploys a functional contact center solution. The Avaya Contact Center Select hardware appliance server is preloaded with sample users, skillsets, and contact center parameters. You can use this sample data to rapidly commission the solution.

The supplied hardware appliance server supports Avaya Contact Center Select to its maximum supported capacity. The supplied hardware appliance (physical server) contains a Microsoft Windows 2012 Release 2 Standard Edition, Microsoft Windows 2016, or Microsoft Windows 2019 operating system, the Contact Center application software, a firewall policy, and sample default configuration data.

The Avaya Contact Center Select server is supported in a workgroup or in a Windows domain. After you deploy Avaya Contact Center Select, you can add the server to a Windows domain.

Hardware Appliance server specification

The Contact Center Hardware Appliance is a rack mount server preconfigured to support Contact Center.

Contact Center is a collection of real-time applications running on the Microsoft Windows Server 2012 R2, Microsoft Windows Server 2016, or Microsoft Windows Server 2019 operating system. Contact Center provides real-time call control, multimedia handling, and real-time statistical reporting.

Important:

The Contact Center Hardware Appliance server supplied by Avaya is optimized to provide the real-time computational, networking, and logging resources required by Contact Center. You must not modify the Hardware Appliance server, unless instructed to do so by Avaya:

- Do not add additional internal hardware devices to this server.
- Do not change or upgrade the server BIOS version or settings.
- Do not change the server hardware settings.
- Do not update the server firmware.
- Do not change or upgrade the device drivers.
- Do not modify the hard disk partitions.
- Do not change the *Windows Update* application settings on the server.
- Do not upgrade the Java Runtime Environment (JRE) supplied on the Hardware Appliance.

Due to the real-time processing that Contact Center applications perform, you must not install any other application class software on the server. You can install only the supported antivirus and remote support utility class software on this server.

Install only the Microsoft Windows Server 2012 R2, Microsoft Windows Server 2016, or Microsoft Windows Server 2019 operating system patches and hotfixes supported by Contact Center. For more information about the supported Operating System patches, see the *Contact Center Portfolio Service Packs Compatibility and Security Hotfixes Compatibility List* on http://support.avaya.com.

The following table lists the server specifications for the Contact Center Hardware Appliance server.

Specification	Quantity	Configuration	Comment
Form factor	1	Rack mount, 1U chassis	PowerEdge R630 rack mount server.
CPU	2	2.6 GHz E5-2640v3	—
RAM	12	4GB DDR4 RDIMM	—
Hard Disk	2	1.2 TB 10K Drives 2.5" SAS	—
RAID Controller	1	RAID1 PERC 730 1GB	—
Optical Drive	1	16X DVD +/-RW Drive SATA	—
Network Interface	2	Dual Port PCIe NIC 1GbE	Only Ethernet supported.
Power supply	2	750 Watt AC	—
Power cables	2	Power cables	Localized to region.
Additional interfaces		• 2 front USB ports • 2 back USB ports • Front video connector	—
Additional hardware	1	Rack mount kit	—
Weight	—	47.5 lbs approximately 21.5 kilograms approximately	—

Front view of Hardware Appliance server

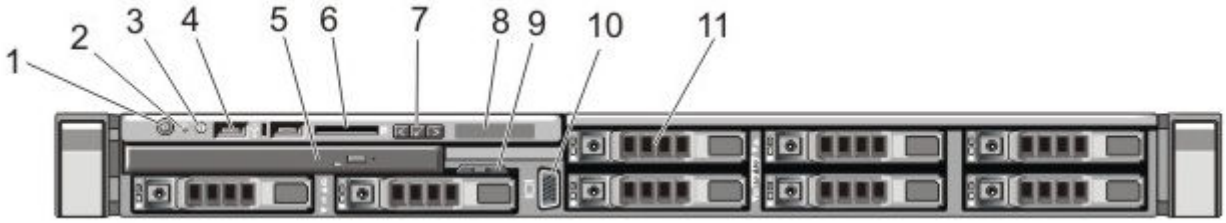


Figure 2: Image displaying the front panel layout of the Hardware Appliance server

The following table describes the front panel layout of the Hardware Appliance server.

No.	Item	Description
1	Power-On Indicator, Power Button	The power-on indicator lights when the system power is on. The power button controls the power supply output to the system.
2	NMI Button	Used to troubleshoot software and device driver errors when running certain operating systems. This button can be pressed using the end of a paper clip. Use this button only if directed to do so by qualified support personnel or by the operating system's documentation.
3	System Identification Button	The identification buttons on the front and back panels can be used to locate a particular system within a rack. When one of these buttons is pressed, the LCD panel on the front and the system status indicator on the back flashes blue until one of the buttons are pressed again. Press to toggle the system ID on and off. If the system stops responding during POST, press and hold the system ID button for more than five seconds to enter BIOS progress mode.
4	USB Connectors (2)	Allows you to insert USB devices to the system. The ports are USB 2.0 compliant.
5	Optical Drive	One optional DVD drive. DVD devices are data only.
6	vFlash Media Card Slot	Not populated for Avaya.
7	LCD Menu Buttons	Allows you to navigate the control panel LCD menu.
8	LCD Panel	Displays system ID, status information, and system error messages. The LCD lights blue during normal system operation. The LCD lights amber when the system needs attention, and the LCD panel displays an error code followed by descriptive text. **Note**: If the system is connected to AC power and an error is detected, the LCD lights amber regardless of whether the system is turned on or off.
9	Information Tag	A slide-out label panel, which allows you to record system information. The Hardware Appliance server networking MAC address is printed on the underside of this information tag.
10	Video Connector	Allows you to connect a VGA display to the system.
11	Hard Drives	-

Back view of Hardware Appliance server

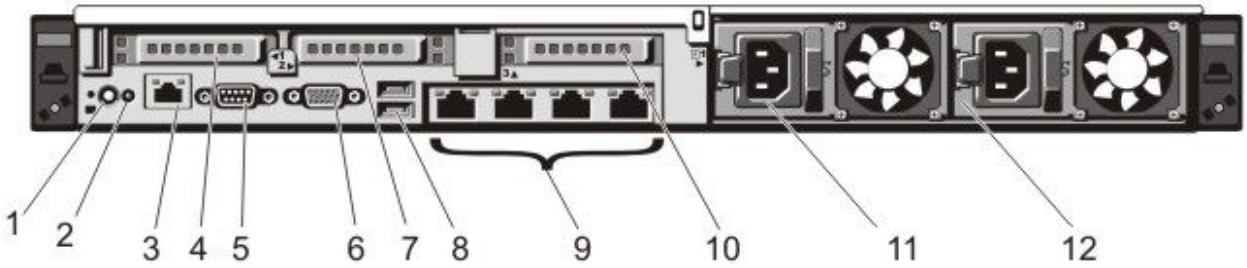


Figure 3: Image displaying the back panel layout of the Hardware Appliance server

The following table describes the back panel layout of the Hardware Appliance server.

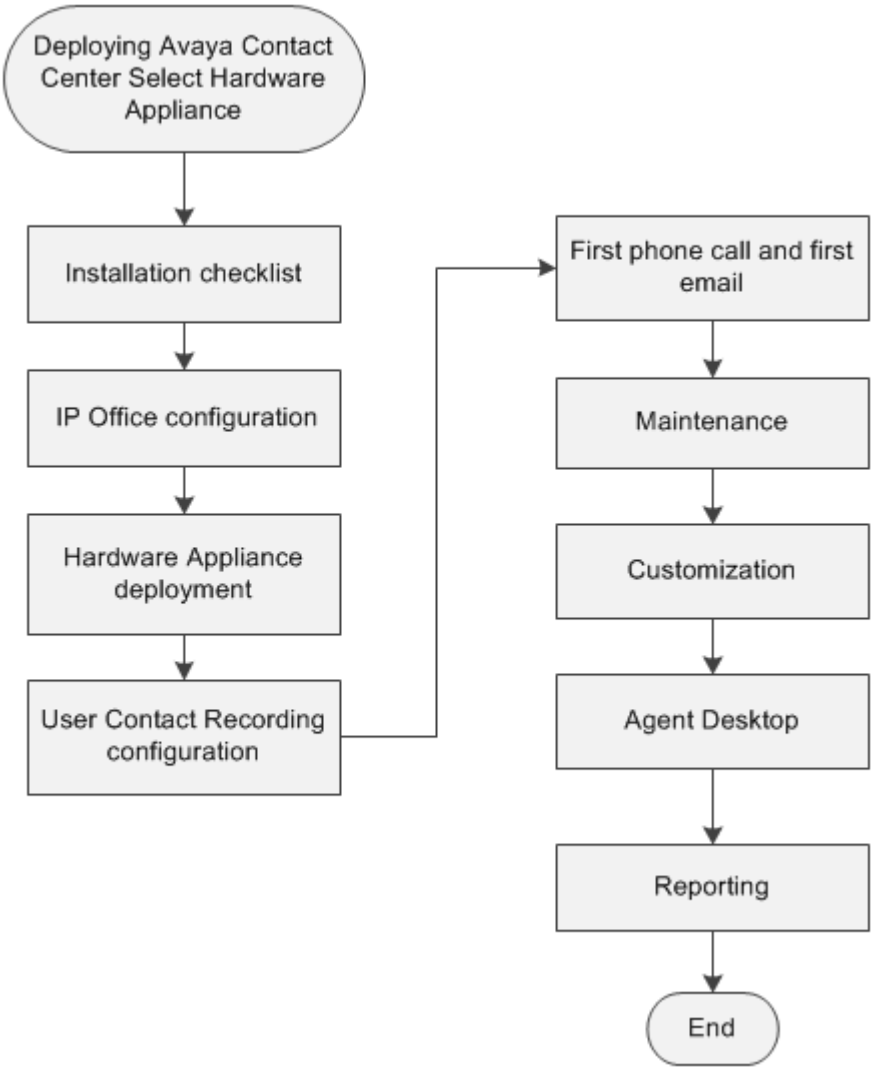
No.	Item	Description
1	System Identification Button	The identification buttons on the front and back panels can be used to locate a particular system within a rack. When one of these buttons is pressed, the LCD panel on the front and the system status indicator on the back blink until one of the buttons are pressed again. Press to toggle the system ID on and off. If the system stops responding during POST, press and hold the system ID button for more than five seconds to enter BIOS progress mode. To reset iDRAC (if not disabled in F2 iDRAC setup) press and hold for more than 15 seconds.
2	System Identification Connector	Allows you to connect the optional system status indicator assembly through the optional cable management arm.
3	iDRAC port	Dedicated iDRAC Express management port.
4	PCIe Expansion Card Slot 1	Allows you to connect a PCIe expansion card.
5	Serial Connector	Allows you to connect a serial device to the system.
6	Video Connector	Allows you to connect a VGA display to the system.
7	PCIe expansion card slot 2	Allows you to connect a PCIe expansion card.
8	USB Connectors (2)	Allows you to connect USB devices to the system. The ports are USB 2.0 compliant.

Table continues…

No.	Item	Description
9	Ethernet Connectors (4)	Four integrated 10/100/1000 Mbps NIC connectors. The NIC port numbers are read from left to right, starting with Port 1, then continuing 2, 3 and port 4.
10	PCIe expansion card slot 3	Allows you to connect a PCIe expansion card.
11	Power Supply (PSU1)	750W power supply connection.
12	Power Supply (PSU2)	750W power supply connection.

Chapter 4: Deployment process

This work flow diagram shows the sequence of tasks you perform to deploy Avaya Contact Center Select.



Chapter 5: Installation checklist

The following sections list the main Avaya IP Office and Avaya Contact Center Select configuration and deployment details. You must know these configuration details before you can deploy and commission an Avaya Contact Center Select solution.

Planning tasks

- Read *Avaya Contact Center Select Solution Description*.
- Ensure that the customer has the required rack space, power supply, and environmental conditions to install the server hardware.
- Ensure that the customer has a keyboard, video monitor, and mouse available for the initial installation and configuration of the Hardware Appliance server.
- Ensure the customer has a USB memory stick available to copy the license file to the Hardware Appliance server during configuration.

Complete these checklists before continuing.

Avaya IP Office configuration checklist

The following table lists and describes the configuration details required by IP Office.

Configuration Item	Your value	Description
IP Office Server type		Is the IP Office a Server Edition server.
Server release		The IP Office software release.
IP address		The IP address of the IP Office server.
IP Office System Password		In IP Office Manager, select *File* > *Advanced* > *Security Settings*. Select *System* and then select the *Unsecured Interfaces* tab. The IP Office *System Password* is configured here.
IP Office Manager IP address		The IP address of the client computer with IP Office Manager software.
IP Office Manager user name		The user name used to log on to IP Office Manager.

Table continues…

Configuration Item	Your value	Description
IP Office Manager password		The password used to log on to IP Office Manager.
Avaya Contact Center Select IP address		The IP address of the Avaya Contact Center Select server.
Avaya Contact Center Select username		The name of the Avaya Contact Center Select data synchronization user account. The default user name is accssync.
Avaya Contact Center Select password		The password of the Avaya Contact Center Select data synchronization user account. The default password is accssync.
SIP domain name		The name of the SIP domain used by IP Office.
SIP User Extension Number		The IP Office SIP User Extension Number used by Avaya Contact Center Select to register for CTI call control and SIP session messaging.
SIP User Extension Password		A password for the IP Office SIP User Extension Number. The password must be a number.
SIP User Login Code [User > Telephony > Supervisor Settings > Login Code]		The IP Office SIP User Telephony Supervisor Login Code used by Avaya Contact Center Select to register for CTI call control and SIP session messaging. The Login Code must be a number.
Short Code – Code number		A solution short code to map an IP Office telephone number to the Avaya Contact Center Select SIP User Extension Number.
Short Code - Telephone Number		A short code telephone number that outputs to an Avaya Contact Center Select CDN (Route Point).
Agent extensions		The IP Office Extensions to be used by Avaya Contact Center Select users.

Avaya Contact Center Select Hardware Appliance checklist

The following table lists and describes the configuration details required by the Avaya Contact Center Select Hardware Appliance. The email related configuration items are optional.

Configuration Item	Your value	Description
MAC address of Avaya Contact Center Select Hardware Appliance server		The Avaya Contact Center Select Hardware Appliance server has a slide-out information tag inserted in the front panel. The MAC address for NIC Port 1 is printed on a label on the underside of the information tag. You must use this unique MAC address to obtain a Contact Center WebLM license from the Avaya Product Licensing and Delivery System (PLDS).
License file		A license file for the Avaya Contact Center Select Hardware Appliance server.
Server hostname		The host name of the Avaya Contact Center Select server. Server names must adhere to RFC1123. For more information, see *Avaya Contact Center Select Solution Description*. Avaya recommends that you configure the server final production name when installing Avaya Contact Center Select.
Server IP address		The IP address of the Avaya Contact Center Select server.
Server mask		The network mask of the Avaya Contact Center Select server.
Server default gateway		The default gateway used by the Avaya Contact Center Select server.
DNS server IP address		The IP address of the DNS server used by Avaya Contact Center Select.
Country or region		The Microsoft Windows Server country or region server setting.
Time and currency		The Microsoft Windows Server time and currency server setting.
Keyboard layout		The Microsoft Windows Server keyboard layout server setting.
Microsoft Windows Server Standard Edition product key		The Microsoft Windows Server product key used to activate the Operating System. The Avaya Contact Center Select Hardware Appliance provides a Microsoft Windows Server Standard Edition product license key. The Microsoft Windows Server product license key is printed on a label attached to the top of the Avaya Contact Center Select Hardware Appliance server.
Administrator password		A password for the Avaya Contact Center Select Administrator account.

Table continues…

Configuration Item	Your value	Description
IP Office Server - IP Address		The IP address of the IP Office server.
IP Office Server - Voice Port		The number of the voice port used to communicate with IP Office. The default port number is 5060.
IP Office SIP Domain Name		The name of the SIP Domain used by IP Office.
IP Office SIP Extension - Extension Number		The IP Office SIP User Extension Number used by Avaya Contact Center Select to register for CTI call control and SIP session messaging.
IP Office SIP Extension - Password		The IP Office SIP User Telephony Supervisor Login Code used by Avaya Contact Center Select to register for CTI call control and SIP session messaging.
IP Office Service User - Username		The name of the IP Office data synchronization service user. Avaya Contact Center Select uses this IP Office service user for data synchronization with IP Office.
IP Office Service User - Password		The password for the IP Office data synchronization service user.
IP Office System Password		The System Password for the IP Office server. In IP Office Manager, select *File* > *Advanced* > *Security Settings*. Select *System* and then select the *Unsecured Interfaces* tab. The IP Office *System Password* is configured here.
Sample agent IDs		The phone number of the first IP Office sample user.
Sample CDN (Route Point)		The phone number of the IP Office short code Telephone Number.
Avaya Aura® Media Server Locale		The language and country locale used by Avaya Aura® Media Server.
System Account Configuration Password.		A password for the Avaya Contact Center Select administration account.
Mailbox Display Name		The display name of the Avaya Contact Center Select mailbox.
Mailbox email address		The email address of the Avaya Contact Center Select mailbox.
Mailbox email password		The password for the Avaya Contact Center Select mailbox.
Incoming Mail Server host name		The name of the server on which email messages are received in your network.

Table continues…

Configuration Item	Your value	Description
Incoming Mail Server protocol		The communication protocol for the inbound email server.
Incoming Mail Server encryption type		The encryption type used by the inbound email server.
Incoming Mail Server port number		The port number used by the inbound email server.
Outgoing Mail Server host name		The name of the server from which email messages are sent. Your inbound and outbound mail servers can have the same name.
Outgoing Mail Server protocol type		The communication protocol for the outbound email server.
Outgoing Mail Server encryption type		The encryption type used by the outbound email server.
Outgoing Mail Server port number		The port number used by the outbound email server.
Outgoing Mail Server SMTP Authentication type		The authentication type used by the outbound email server.

Avaya Workspaces checklist

The following table lists and describes the configuration details required by Avaya Workspaces.

Configuration item	Your value	Description
Workspaces IP Addresses – master node		The IP address for the Avaya Workspaces master node.
Workspaces IP Addresses – node 1		The IP address for the Avaya Workspaces node 1.
Workspaces IP Addresses – node 2		The IP address for the Avaya Workspaces node 2.
Workspaces Cluster IP Address		The IP address of the Avaya Workspaces three-node cluster. You must use the Cluster IP Address to access the Avaya Workspaces cluster.
Password		The root password to access the Avaya Workspaces nodes.
LDAP Server IP address		The IP address of your LDAP server.

The following table lists the main Network Time Protocol (NTP) servers questions.

Configuration Item	Your value	Description
NTP server IP address 1		The IP addresses of NTP servers. You must set up the NTP server(s) on site before installing or upgrading your Contact Center. You can use from one to three NTP servers, however, Avaya recommends that you use three NTP servers. The NTP servers must be trusted and return the same time. For resiliency, ensure that your NTP servers reside on more than one host.
NTP server IP address 2		
NTP server IP address 3		

Part 1: IP Office configuration

Chapter 6: IP Office configuration

Configure IP Office to integrate with Avaya Contact Center Select. This section does not describe IP Office basic configuration for system settings, licensing, or networking. This section describes only how to integrate a working IP Office server with Avaya Contact Center Select.

The procedures in this section use examples to describe how to configure IP Office to integrate with Avaya Contact Center Select. The IP Office configuration values used in the following procedures match the default values used by Avaya Contact Center Select. These values might not be suitable for your solution. If you use different IP Office configuration values, remember to enter the different values when installing and commissioning Avaya Contact Center Select.

Avaya recommends that you configure IP Office before installing Avaya Contact Center Select.

You must complete the procedures in this IP Office section in sequential order.

IP Office supported versions

Each Avaya Contact Center Select connects to a single IP Office Server Edition Primary server. Avaya Contact Center Select Business Continuity-enabled solutions support connecting to an IP Office Secondary server. A Small Community Network (SCN) is a system of networked IP Office telephone systems that can share extension numbers and user names. Each IP Office SCN supports a single connected Avaya Contact Center Select. The Avaya Contact Center Select server and the connected IP Office server must be located at the same campus location.

To support an IP Office SCN, Avaya Contact Center Select must connect to an IP Office Server Edition Primary server in that SCN network.

Avaya Contact Center Select supports only the following versions of IP Office:

- IP Office Server Edition Release 10.1, or 11.x
- IP Office 500V2, Release 10.1, or 11.x software, Standard Mode, Advanced Edition license

Avaya Contact Center Select does not support other versions of IP Office. For more information about the supported IP Office versions, refer to the Avaya Contact Center Select Release Notes.

Avaya Contact Center Select does not support IP Office 500V2 Basic mode.

Using IP Office Manager

Before you begin

- Install the IP Office Manager software on a client computer.
- Ensure the client computer can communicate with the IP Office server.

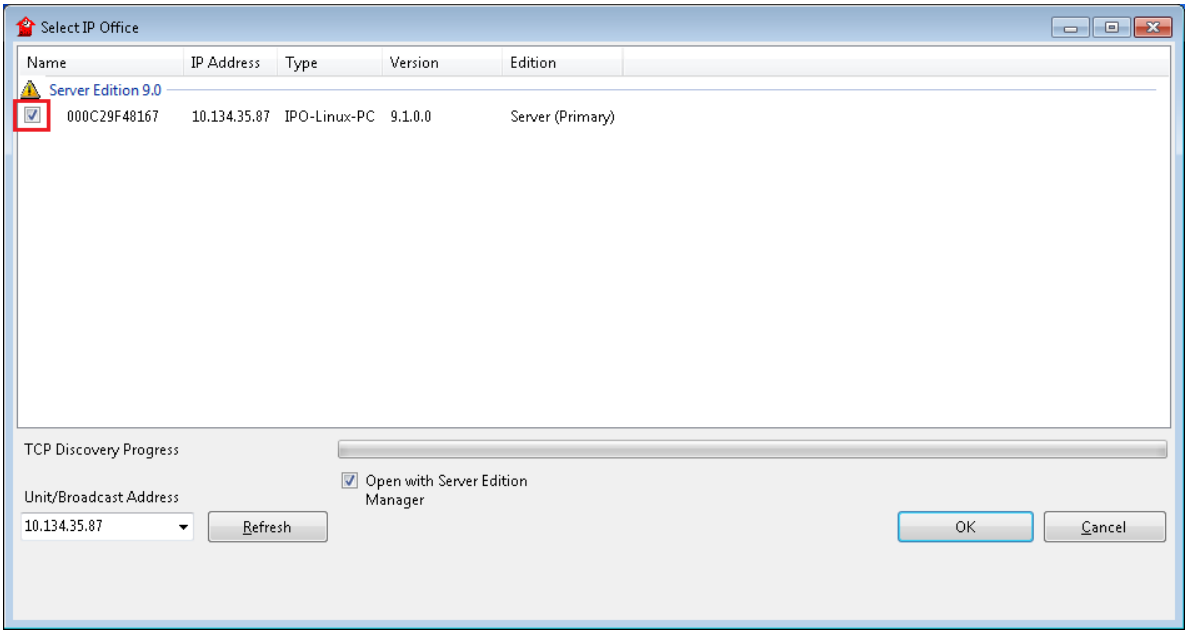
About this task

IP Office Manager is a component of the IP Office administration suite of applications. You use IP Office Manager to configure IP Office. IP Office Manager runs on a Windows computer and connects to the IP Office system using an Ethernet LAN connection.

IP Office Manager is an off-line editor. Use IP Office Manager to connect to your IP Office server and retrieve a local copy of the IP Office current configuration settings. You can then edit the local copy of the IP Office configuration and when you are ready, save your updated configuration data back to the IP Office server.

Procedure

1. On the client computer, select **Start** > **All Programs** > **IP Office** > **Manager**.
2. On the **Configuration Service User Login** message box, in the **Service User Name** box, type the user name. The default name is Administrator.
3. In the **Service User Password** box, type the user password. The default password is Administrator.
4. From the menu, select **File** > **Close Configuration**. This closes any open and potentially out-of-date configurations.
5. To retrieve the current (most recent) IP Office configuration settings, from the menu, select **File** > **Open Configuration**.
6. In the **Select IP Office** window:
   - If the required IP Office server is listed, use the check box to select your IP Office server from the list of available servers.
   - If the required IP Office server is not listed, in the **Unit/Broadcast Address** box type the IP address for your IP Office server. Click **Refresh** to perform a new search. The IP Office server then appears in the list of available servers. Use the check box to select your IP Office server from the list of available servers.



7. Click **OK**.
8. On the **Configuration Service User Login** message box, in the **Service User Name** box, type the user name. The default name is Administrator.
9. In the **Service User Password** box, type the user password. The default password is Administrator.
10. IP Office Manager opens and displays the current configuration data for your IP Office server.

Configuring the data synchronization user account

About this task

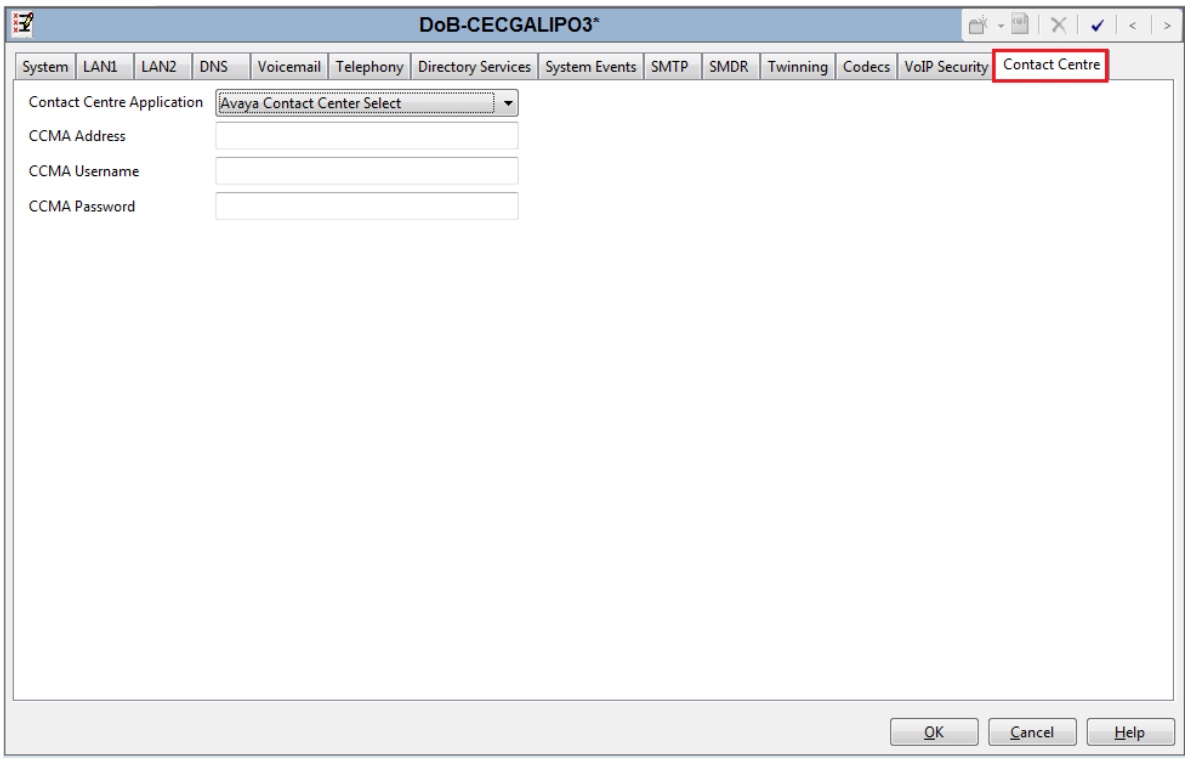
Configure the user account used by IP Office to maintain data synchronization with Avaya Contact Center Select.

For user data synchronization, IP Office connects to Avaya Contact Center Select using the Contact Center Manager Administration “accssync” user account details.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **System**.

3. Select the **Contact Center** tab.



4. From the **Contact Center Application** list, select Avaya Contact Center Select.
5. In the **CCMA Address** box, type the IP address of the Avaya Contact Center Select server. For example, type `http://1.2.3.4`

   Note:

   If security is enabled on the Avaya Contact Center Select server, use HTTPS.

6. In the **CCMA Username** box, type the name of the Avaya Contact Center Select data synchronization user account. The default user name is `accssync`.
7. In the **CCMA Password** box, type the password of the Avaya Contact Center Select data synchronization user account. The default user password is `accssync`.
8. Click **OK**.

Configuring an IP Office service user for data synchronization

About this task

Create and configure an IP Office service user to support data synchronization with Avaya Contact Center Select.

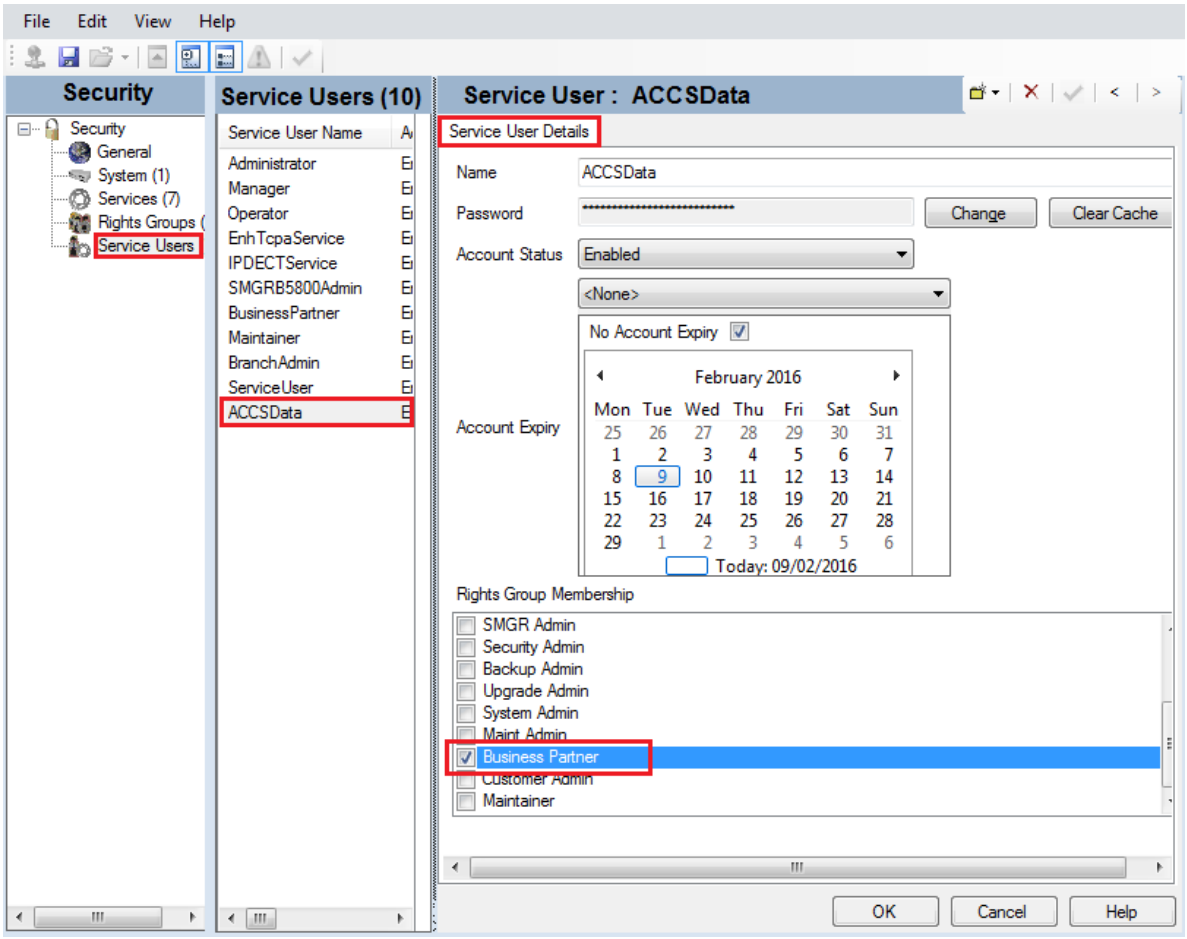
Avaya Contact Center Select uses this IP Office service user account to synchronize agent and supervisor data between Avaya Contact Center Select and the IP Office platform.

Procedure

1. Log in to IP Office Manager with Administrator privileges.
2. Select **File** > **Advanced** > **Security Settings**.
3. On the **Service Users** list pane, right-click and select **New**.
4. On the **New Service User Details** screen, in the **New User Name** box, type the name for the new service user.

   For example, `ACCSData`.
5. In the **New User Password** box, type the password for the new service user.
6. In the **Re-enter New User Password** box, re-type the password for the new service user.
7. Click **OK**.
8. On the **Service Users** list pane, select the new service user.

9. On the **Service User Details** pane, from the **Rights Group Membership** list, select **Business Partner**.



10. Click **OK**.
11. Select **File** > **Save Security Settings**.

Verifying the IP Route configuration

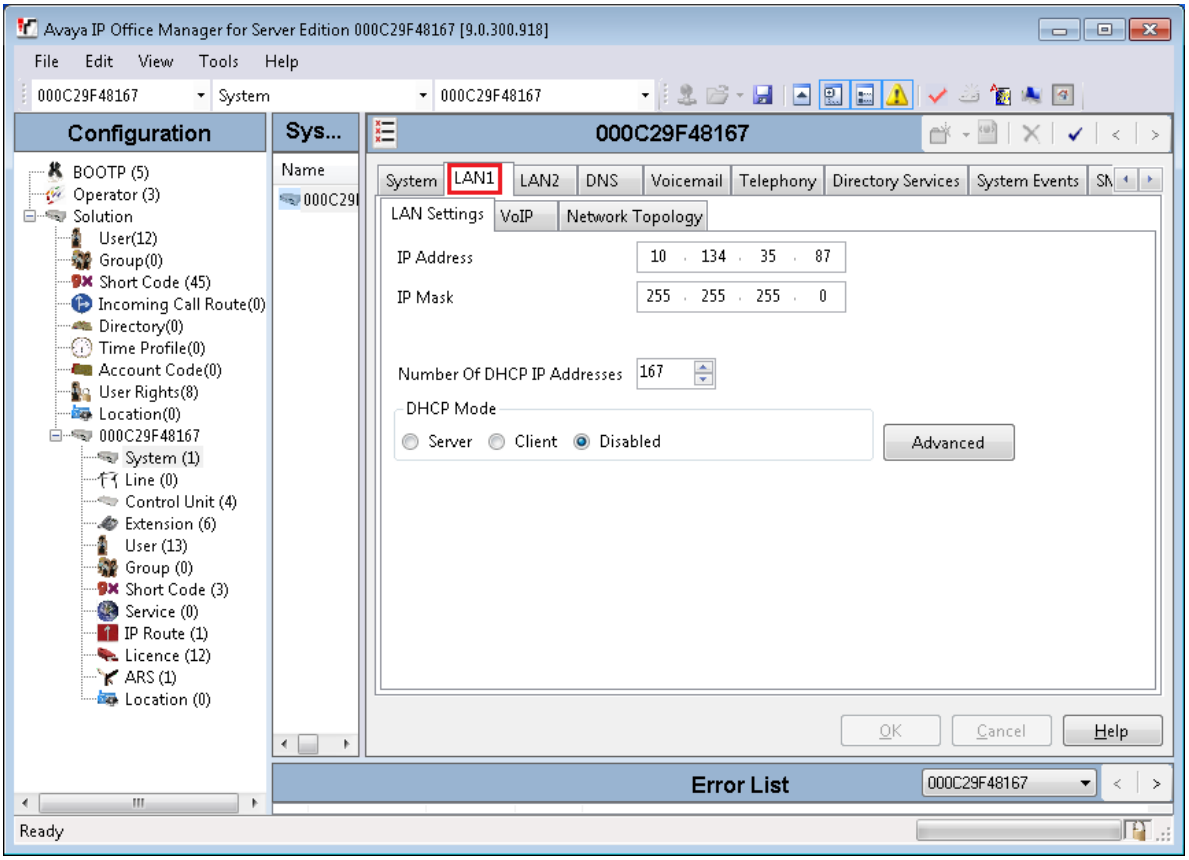
About this task

Verify the Local Area Network (LAN) Ethernet and IP Route configuration details to ensure IP Office can communicate with IP Office Manager, Avaya Contact Center Select, and agent telephones.

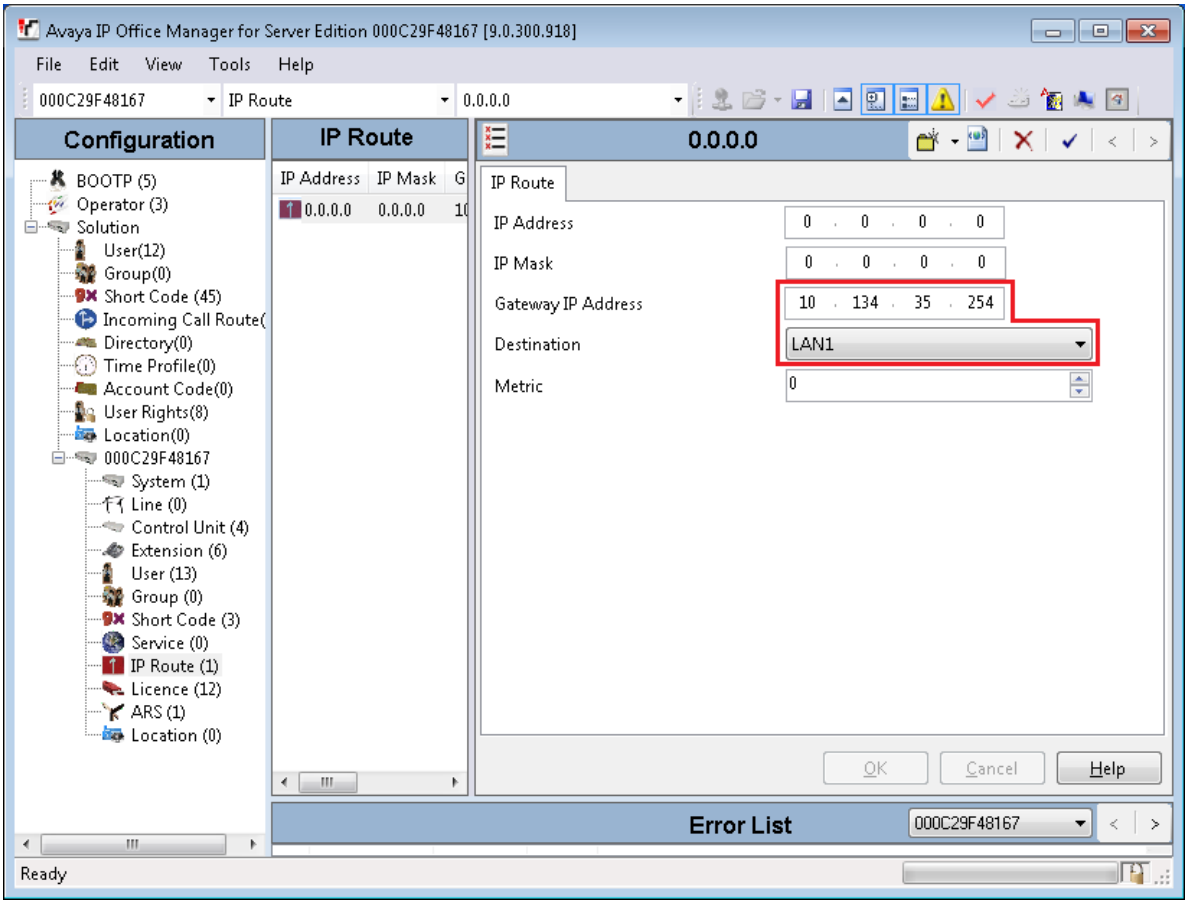
Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **System**.

3. Note the IP Office network settings. Note which network interface IP Office is using for local communications. For Avaya Contact Center Select deployments, IP Office must use LAN1 for local communications.



4. In the **Configuration** pane, under the IP Office server, select **IP Route**. If there are no existing IP Routes, right-click **IP Route** and select **New**.
5. On the **IP Route** tab, in the **IP Address** box, type `0.0.0.0`.
6. In the **IP Mask** box, type `0.0.0.0`.
7. In the **Gateway IP Address** box, type the IP address of your gateway.
8. From the **Destination** list, select the network interface that IP Office uses for local communication. For example, select LAN1.



9. Click **OK**.

Configuring the SIP domain name

About this task

Configure the IP Office SIP domain name. A SIP domain is a logical space where SIP-enabled devices exist, authenticate, register, and communicate.

In a SIP network a destination address consists of both a user and a domain. This is referred to as a Uniform Resource Identifier (URI). The user portion of the URI is the destination that is being communicated to and the domain portion is the logical grouping that the destination belongs to.

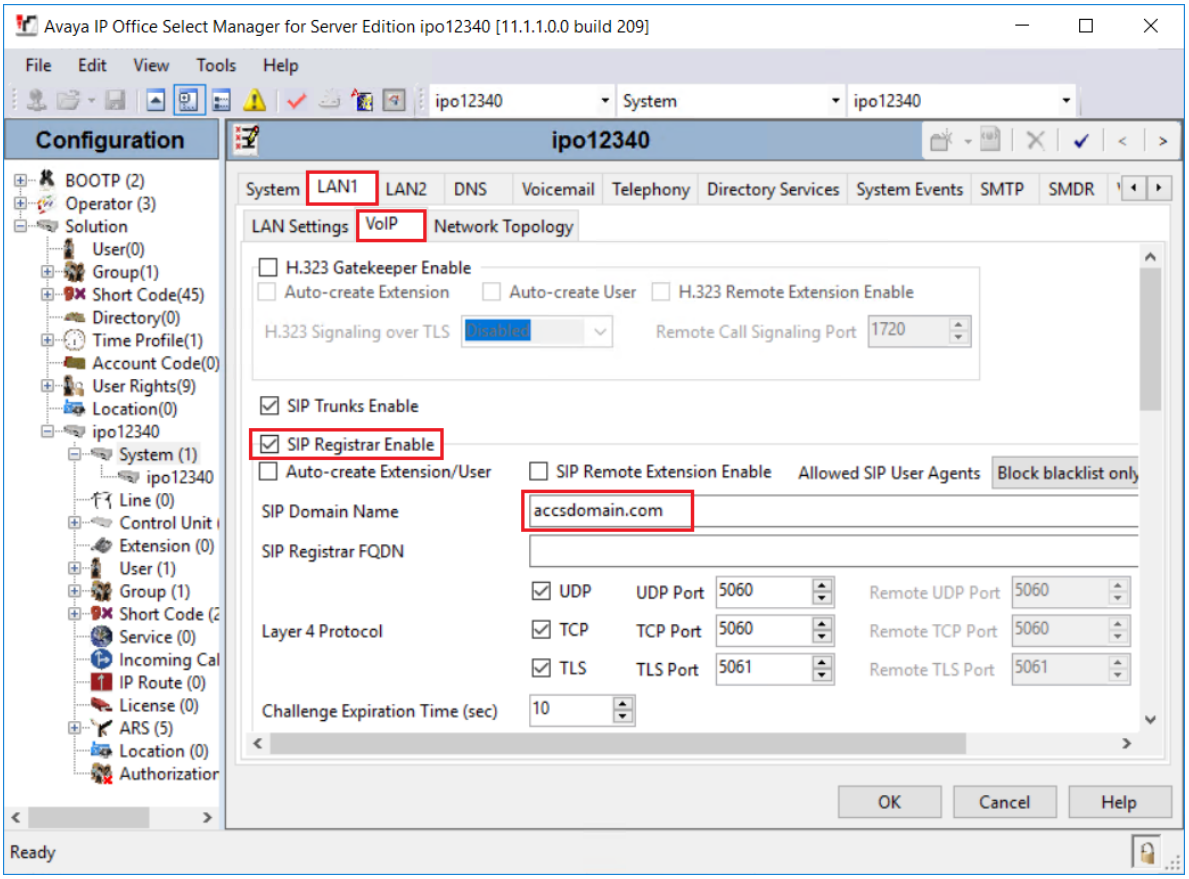
Important:

If you add or change the domain name of an active IP Office server, the IP Office server restarts.

The Avaya Contact Center Select SIP domain name must match the IP Office SIP domain name.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **System**.
3. In the right pane, select the **LAN1** tab.
4. Select the **VoIP** tab.
5. Enable **SIP Registrar Enable**.
6. In the **Domain Name** box, type the name of the SIP domain to be used with Avaya Contact Center Select.



7. Click **OK**.

Configuring the SIP User Extension number

About this task

Configure an IP Office SIP User Extension number for desk phones and softphones. Avaya Contact Center Select uses this SIP User Extension number and Telephony Supervisor *Login Code* password to register for CTI call control and SIP session messaging.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **User**.
3. Right-click on **User**, and select **New**.
4. In the right pane, select the new **User** tab.
5. In the **Name** box, type a descriptive name for the user.
6. In the **Password** box, type a password for the user.

   The password can be up to 31 alphanumeric characters long. Password complexity rules are set through the General security settings.
7. In the **Confirm Password** box, re-type a password for the user.
8. In the **Extension** box, type the extension number of the user. For example, type 6000.

   For desk phones, the Extension value must match the Base Extension value of a phone. For more information, see Configuring IP Office extensions on page 49.
9. Select the **Telephony** tab.
10. On the **Telephony** tab, on the **Supervisor Settings** sub-tab, in the **Login Code** box, type a password for Avaya Contact Center Select registration. For example, type 123456. This password must be a number.
11. Click **OK**.
12. On the **Would you like a new VoIP extension created with this number** message box, select **SIP Extension** and click **OK**.

Configuring a short code for Contact Center Route Points

About this task

Configure a solution short code to map an IP Office telephone number to the Avaya Contact Center Select SIP User Extension Number. A short code configures IP Office to perform an action if a specific number is dialed.

For example:

- 3000 is configured in Avaya Contact Center Select as a CDN (Route Point).

- 6000 is configured in IP Office as the Avaya Contact Center Select SIP User Extension Number.

Create a short code 6000|>>3000. All customer calls to telephone number 3000 are forwarded to extension 6000 and from there to Avaya Contact Center Select. Avaya Contact Center Select can then treat the customer call and route it to a contact center agent.

This task describes a basic IP Office short code used to route calls to Avaya Contact Center Select. For information about implementing production grade short codes, refer to your IP Office documentation.

A CDN (Route Point) is a logical address used by Contact Center to accept incoming contacts or as a point to which contacts are routed. A Route Point is an address that enables incoming voice contacts (phone calls) to be treated by Contact Center.

You can add multiple short codes and configure each one to map to an Avaya Contact Center Select CDN (Route Point) number. If you create additional short codes to map IP Office calls to Avaya Contact Center Select, you must add the corresponding CDN (Route Point) number in Contact Center Manager Administration on the Avaya Contact Center Select server.

Procedure

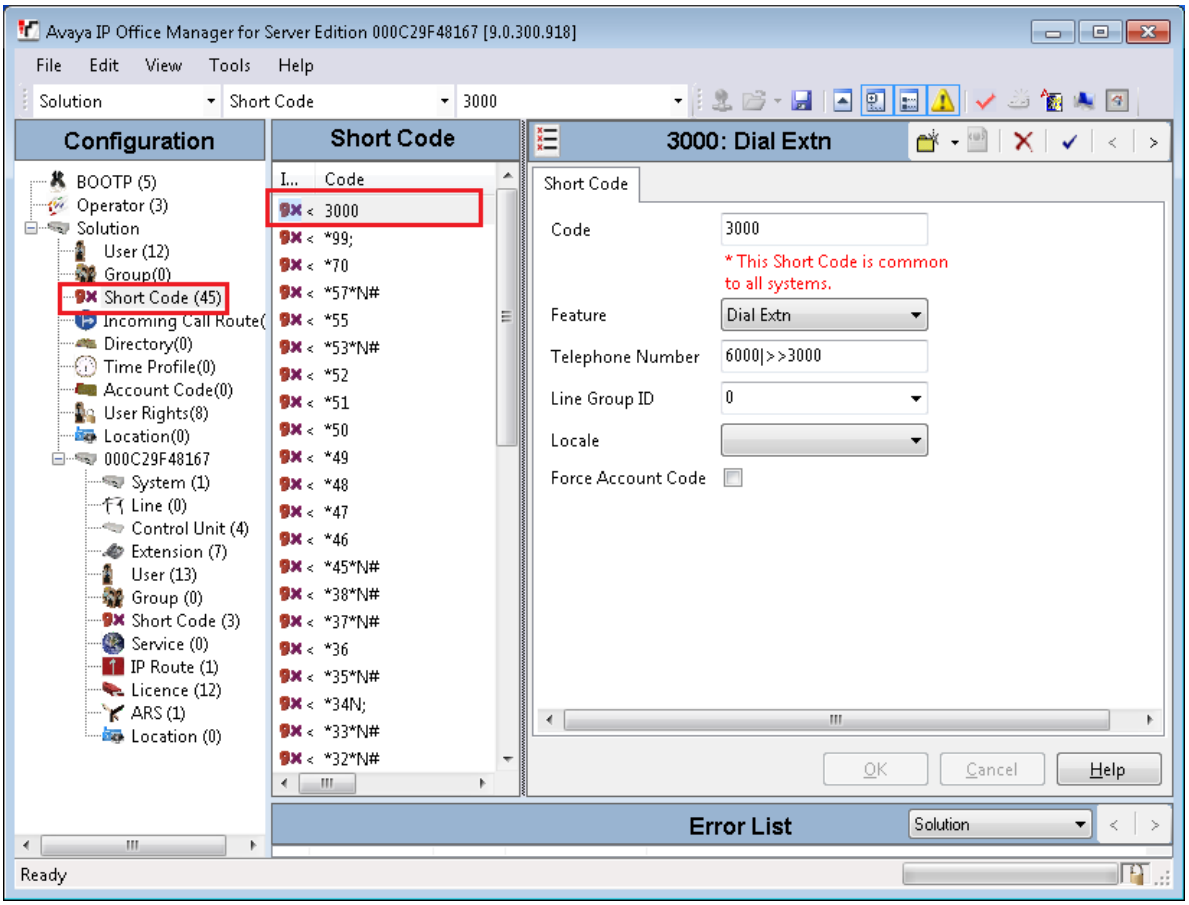
1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the **Solution** node, select **Short Code**, right-click and select **New**.
3. In the right pane, in the **Code** box, type a CDN (Route Point) number. When this number is matched, the other short code fields activate. For example, type 3000, where 3000 is an Avaya Contact Center Select CDN (Route Point).
4. From the **Feature** list, select **Dial Extn**. If you do not see the **Dial Extn** option, ensure that you have selected the **Short Code** menu item under **Solution**, and not the local **Short Code** menu item for your IP Office. The Solution Short Code is common to all systems.
5. In the **Telephone Number** box, type the number output by the short code. For example, type the following: `6000|>>3000`

   - Where 3000 is configured in Avaya Contact Center Select as a CDN (Route Point).
   - Where 6000 is the Avaya Contact Center Select SIP User Extension Number.

   Note: Ensure there are no spaces in the **Telephone Number** box.

   If a customer dials 3000, then 3000 is sent to telephone number 6000 and Avaya Contact Center Select.

6. Click **OK**.



Configuring Contact Recording

Before you begin

- Ensure the Media Manager application is installed, configured, and working on your IP Office.

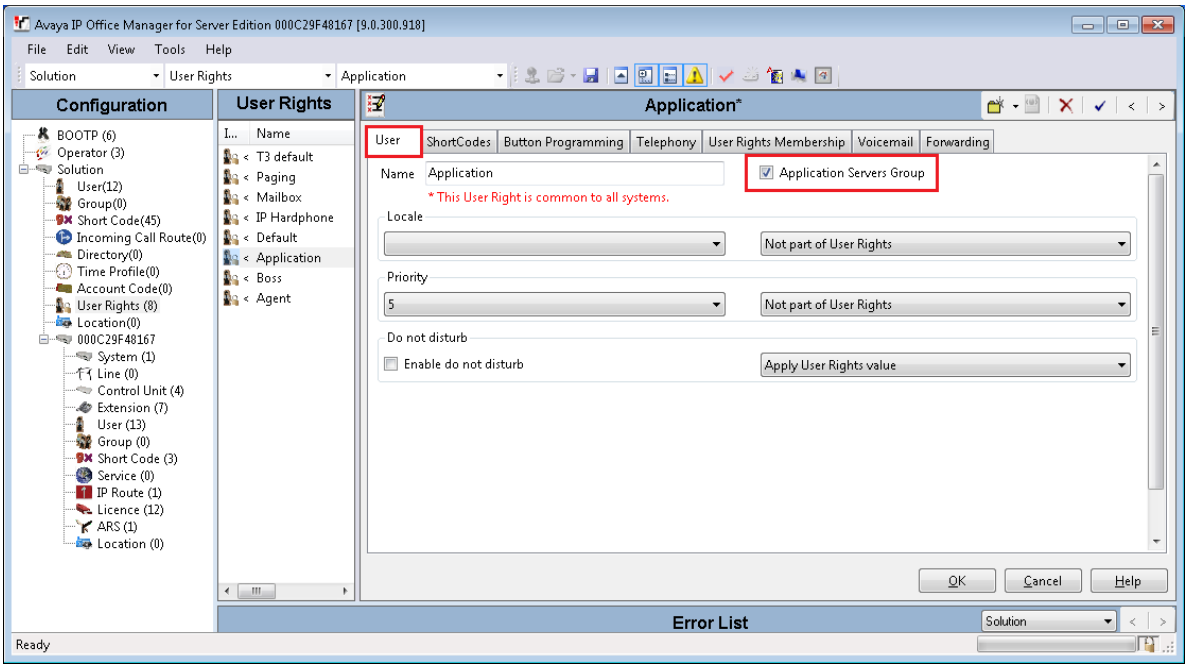
About this task

Configure the User and User Rights settings to enable Contact Recording for Avaya Contact Center Select agents and agent supervisors using IP Office.

Procedure

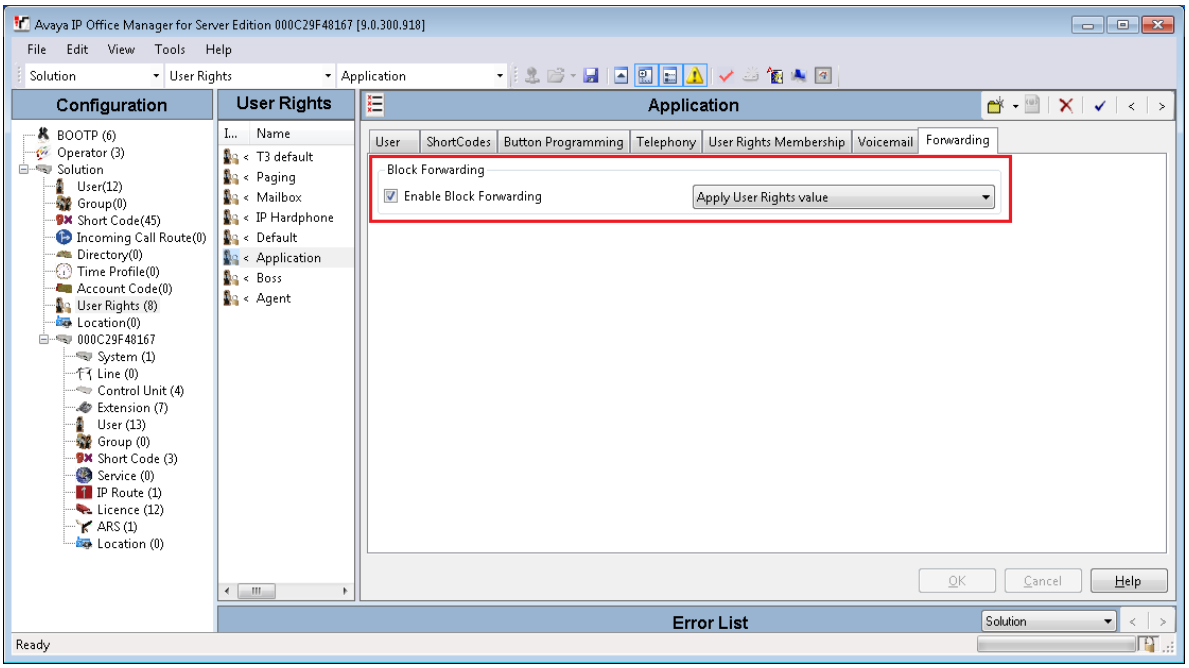
1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the **Solution** node, select **User Rights**.
3. In the middle pane, select **Application**.
4. In the right **Application** pane, select the **User** tab.

5. Select **Application Servers Group**.



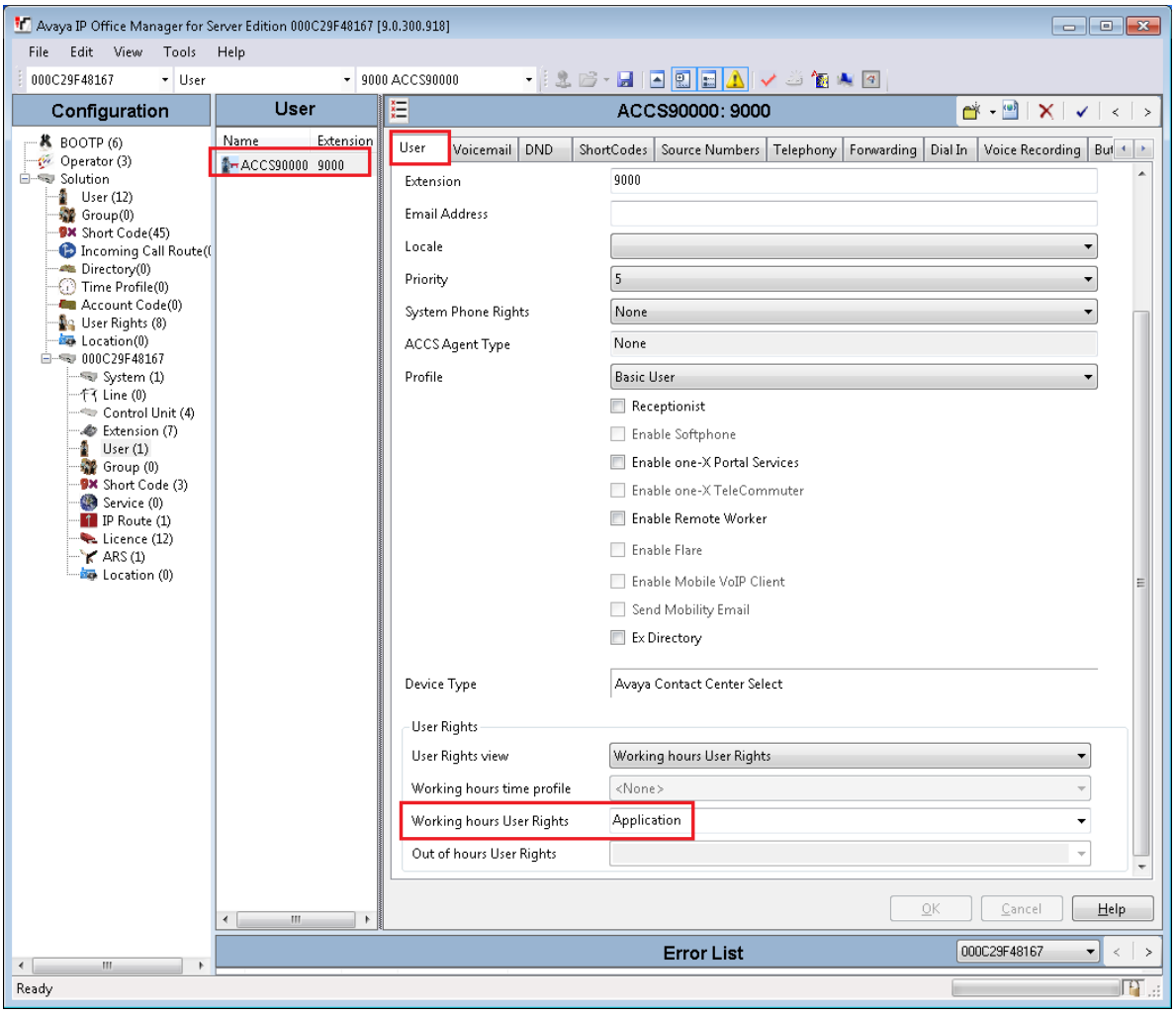
6. Click **OK**.
7. In the right **Application** pane, select the **Forwarding** tab.
8. Select **Enable Block Forward**.
9. From the list, select **Apply User Rights value**.

10. Click **OK**.



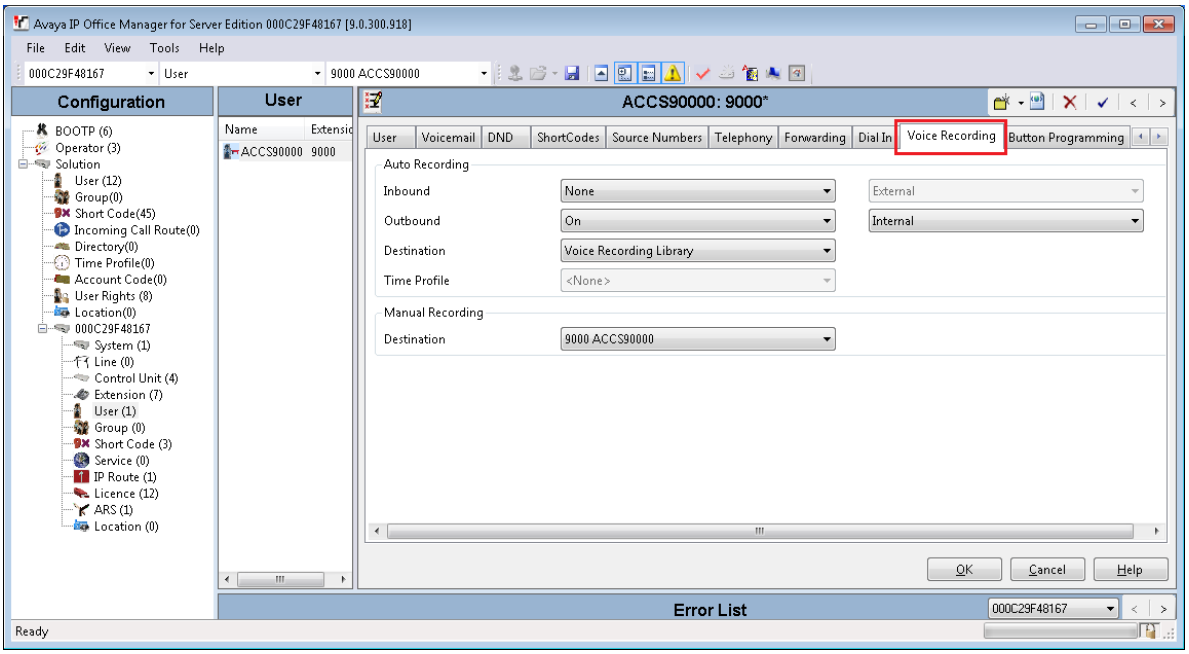
11. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
12. In the **Configuration** pane, under the IP Office server, select **User**.
13. In the middle pane, select the Avaya Contact Center Select SIP User Extension.
14. In the right pane, select the **User** tab.
15. From the **Working hours Users Rights** list, select **Application**.

16. Click **OK**.



17. On the Avaya Contact Center Select SIP User Extension user, select the **Voice Recording** tab.
18. From the **Inbound** list, select **None**.
19. From the **Outbound** list, select **On**, and **Internal**.

20. From the **Destination** list, select **Voice Recording Library**.



21. Click **OK**.

Configuring IP Office extensions

About this task

Use this procedure to configure an IP Office extension for Avaya Contact Center Select agents using SIP and H.323 physical desk phones.

Important:

Use this procedure for desk phones only. Ignore this procedure if your Avaya Contact Center Select agents use Avaya Communicator or Avaya Workplace Attendant softphones for Windows with IP Office. Avaya Contact Center Select prevents creating an IP Office extension for an extension used by a softphone and prohibits using the same extension for a physical desk phone and a softphone.

When you create an agent in Avaya Contact Center Select, data synchronization ensures that a corresponding user is created in IP Office. For Avaya Contact Center Select agents using SIP and H.323 physical desk phones, IP Office must have an extension for every IP Office user. You can reuse existing IP Office extensions for this purpose. Alternatively, you must create one new IP Office extension for each IP Office user that corresponds to an Avaya Contact Center Select agent. Avaya Contact Center Select agents can then use these IP Office users and extensions to handle customer calls when they log on.

There are many different ways of providing a H.323 or SIP IP Office extension for each Avaya Contact Center Select agent, the following procedure describes one method. Some IP Office

Extension settings cannot be merged. Changes to these settings might require a reboot of the IP Office system.

Important:

If your Avaya Contact Center Select agents are using Avaya Communicator for Windows with IP Office, do not create an extension for the corresponding IP Office users.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **Extension**.
3. Right-click and select **New** > **H323 Extension** or select **New** > **SIP Extension**.
4. On the **Extn** tab, in the **Extension Id** box, type an extension number.

   The Extension ID is the physical ID of the extension port. IP Office Manager prepopulates the default value.
5. On the **Extn** tab, in the **Base Extension** box, type a base extension number.

   The Base Extension is the extension number associated with the phone, that is the internal number you must dial to reach a user.

   The Base Extension value must match the Extension value of a user. For more information, see Configuring the SIP User Extension number on page 43.
6. In the **Phone Password** box, type a password.

   The password is only required for the H.323 extensions if you enable Media Security. For more information, refer to the IP Office documentation.
7. In the **Confirm Phone Password** box, retype the password.
8. Click **OK**.
9. Ensure the IP Office server has an extension, with a configured base extension number, for every IP Office user that corresponds to an Avaya Contact Center Select agent.

Saving the IP Office configuration data

Before you begin

- Install the IP Office Manager software on a client computer that can communicate with the IP Office server.

About this task

Use IP Office Manager to save your configuration changes to the IP Office server.

Procedure

1. In IP Office Manager, in the **Configuration** pane, select your IP Office server.

2. From the main IP Office Manager menu, select **File** > **Save Configuration**.
3. On the **Send Multiple Configurations** window, use the check box to select your IP Office server from the list.
4. Click **OK**.

   IP Office Manager saves the offline configuration file to your IP Office server.

Part 2: Avaya Contact Center Select Hardware Appliance deployment

Chapter 7: Hardware Appliance deployment

Deploy the Avaya Contact Center Select Hardware Appliance server. Unpack and check the Hardware Appliance server, before mounting it in a rack mount cabinet. Next power on the server, activate the Microsoft Windows operating system, and configure Avaya Contact Center Select using a simple configuration utility called the ignition wizard.

Unpacking the Hardware Appliance server

About this task

Unpack the Hardware Appliance server from the shipping box and identify the supplied components.

Caution:

Handle the Hardware Appliance server with care. The shipping package is heavy and requires two people to handle it.

The server is inspected before shipment. If any damage occurred during transportation or any items are missing, contact your customer service representative immediately.

Procedure

1. Locate and read the delivery note and equipment list attached to the shipping package. Compare the shipment you received to the equipment list and verify that you have all items.
2. Remove the Hardware Appliance server from the shipping box
3. Remove the power cables from the shipping box.
4. Remove the rack mount kit from the shipping box.
5. Check for damage and report any discrepancies or damage to your Avaya representative. If the server is damaged, do not contact Dell for service; contact your Avaya customer service representative.
6. Keep the shipping container and packing material.
7. The Contact Center Hardware Appliance provides a Microsoft Windows Server product license key. The Microsoft Windows Server product license key is printed on a label

attached to the top of the Contact Center Hardware Appliance server. Note and record this product license key for future reference.

Installing the server in a rack mount cabinet

Before you begin

- Ensure that the site air-conditioning meets the thermal requirements of the Hardware Appliance server.
- Ensure that the site meets the power requirements of the Hardware Appliance server.
- Ensure that there is adequate space around the rack mount cabinet to allow for servicing the server and for adequate airflow. The airflow in this server is from front to back.
- Unpack the Hardware Appliance server.
- Locate the *Rack Installation Instructions* leaflet in the rail kit in the shipping box.
- Determine if the supplied rack mount rail kit is suitable for your rack mount cabinet. If the supplied rail kit is not suitable for your rack mount cabinet, obtain a rail kit suitable for the supplied server and your rack mount cabinet.

About this task

Install the Hardware Appliance server in a rack mount cabinet.

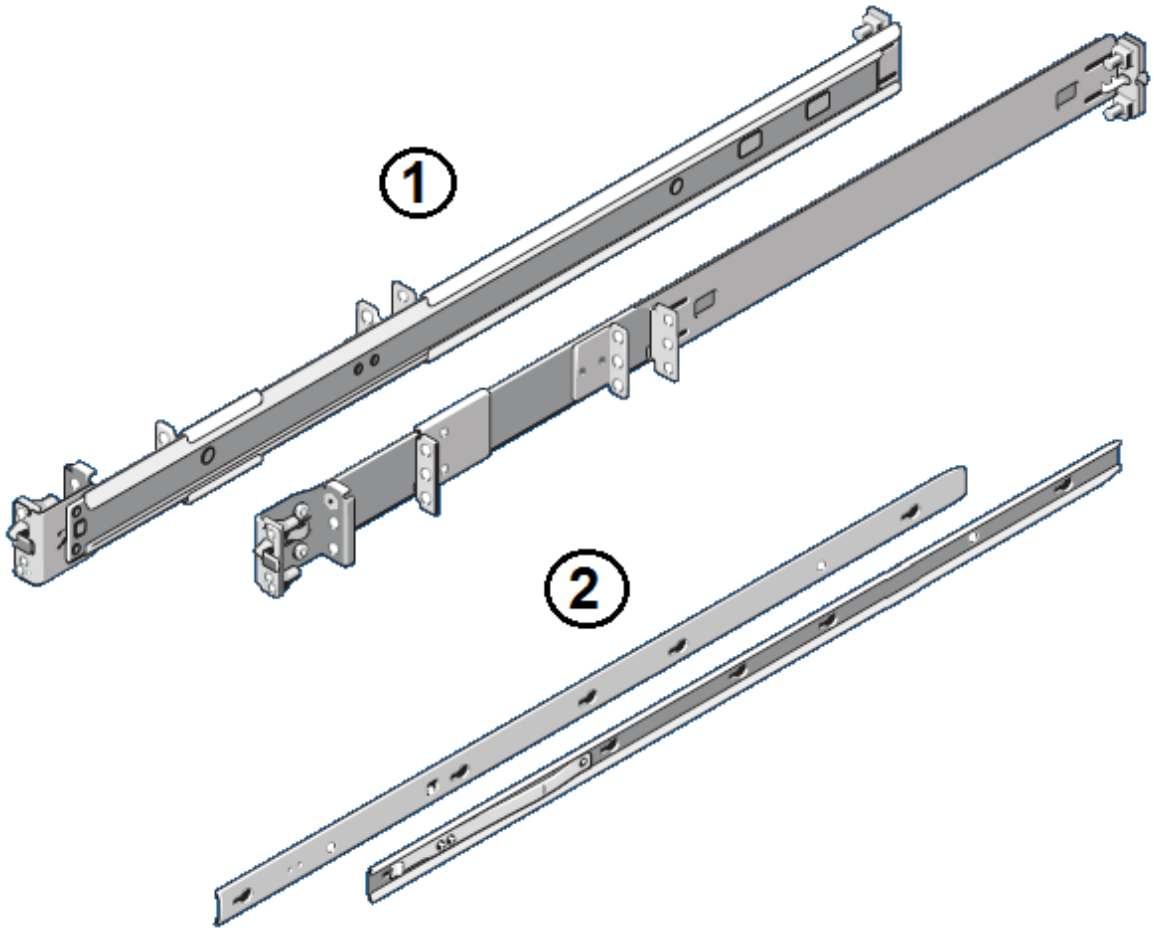
The Hardware Appliance server is shipped with rail kits and it must be rack-mounted. To ensure proper air flow, mount the server using the supplied rail kit. Alternatively, you can mount the Hardware Appliance server using a rail kit suitable for the server and your rack mount cabinet. Physically placing rack mount servers on top of one another without the use of the rail kits can result in overheating, higher fan speeds, higher power consumption, or server failure.

Caution:

This task requires two people to load the rack mount server into the extended cabinet rails.

Procedure

1. Read the *Rack Installation Instructions* leaflet provided in the rail kit in the shipping box. This leaflet contains the most recent information.
2. Verify that the rack is installed according to the manufacturer's instructions and in accordance with all local codes and laws. Verify that the rack is grounded in accordance with local electrical code.
3. Remove the front and back doors from the rack mount cabinet, if necessary.
4. Following the *Rack Installation Instructions*, attach both static rail assemblies to the rack mount cabinet brackets. Examples of static rail assemblies are shown as item 1 in the following diagram.



5. Following the *Rack Installation Instructions*, attach the chassis rail members to the sides of the Hardware Appliance server. Examples of chassis rail members are shown as item 2 in the above diagram.
6. If the Hardware Appliance server is the only unit in the rack, it must be mounted at the bottom of the rack. When mounting the Hardware Appliance server in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
7. Extend the static rail assemblies to the front of the cabinet.
8. Align the Hardware Appliance server chassis rail members with the static rail assemblies extending from the cabinet, and then place the Hardware Appliance server in the rails.
9. Slide the rails back in to the cabinet until the rails and server lock in place.

Connecting the server cables

Before you begin

- Mount the supplied Hardware Appliance server in the rack mount cabinet.
- Locate the supplied power cables.
- Obtain a USB keyboard, a USB mouse, and a video monitor with a VGA cable.
- Obtain a Category 5 (Cat 5) or better Ethernet network cable.

About this task

Connect the Hardware Appliance server to the network, monitor, mouse, keyboard, and power supply.

Procedure

1. Connect an Ethernet network cable from the Port 1 network port on the back of the server to your LAN physical infrastructure.
2. Connect a keyboard to one of the server USB ports. The Hardware Appliance server has USB ports on the front and back panels.
3. Connect a mouse to one of the server USB ports. The Hardware Appliance server has USB ports on the front and back panels.
4. Connect a video monitor to one of the server VGA connectors. The Hardware Appliance has a VGA video monitor connector on the front and back panels.
5. Connect power supply cables to both of the server power supply connections.

Starting the server for the first time

Before you begin

- Mount the server in a rack mount cabinet.
- Connect the server to a keyboard, a mouse, a monitor, and the Local Area Network (LAN).
- Connect the server to the power supply.

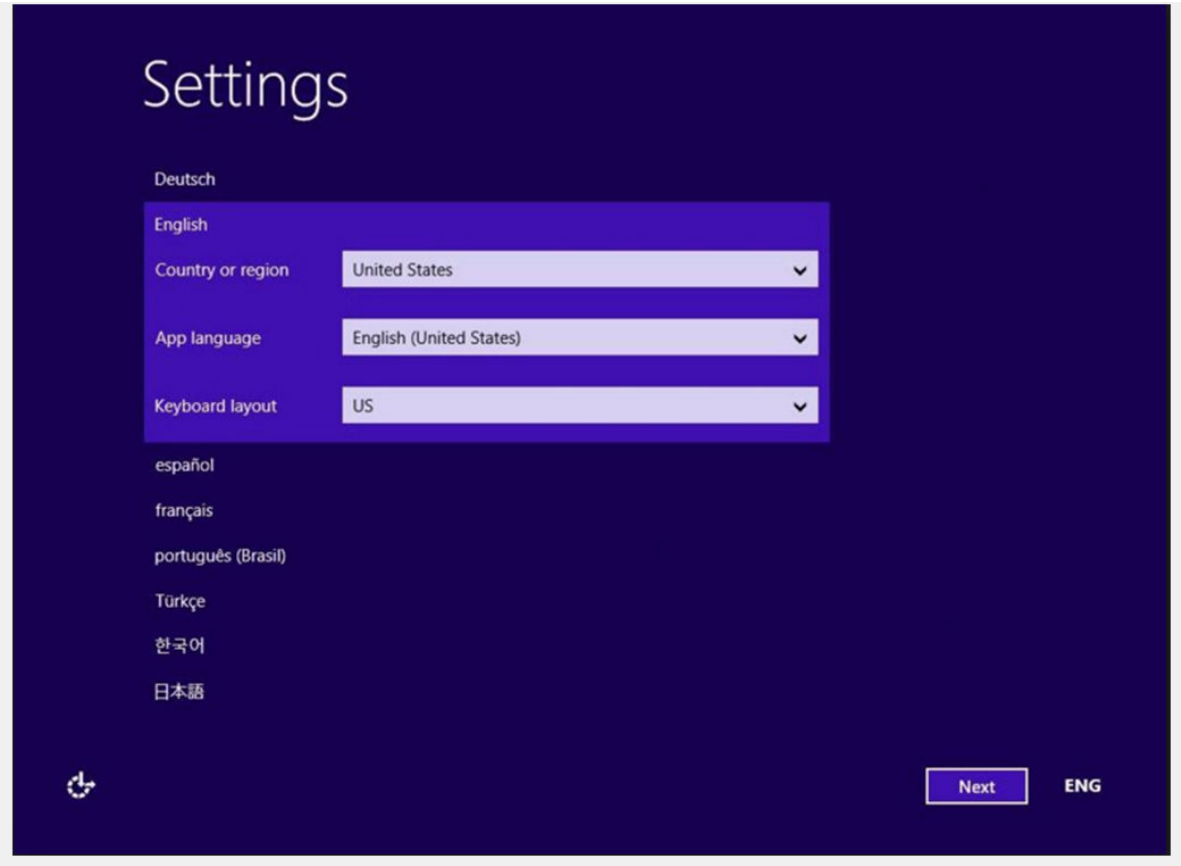
About this task

Start the server for the first time and configure the Microsoft Windows operating system of the Hardware Appliance server. Configure the locale settings, enter the license keys for the operating system, and configure the password for the Administrator account.

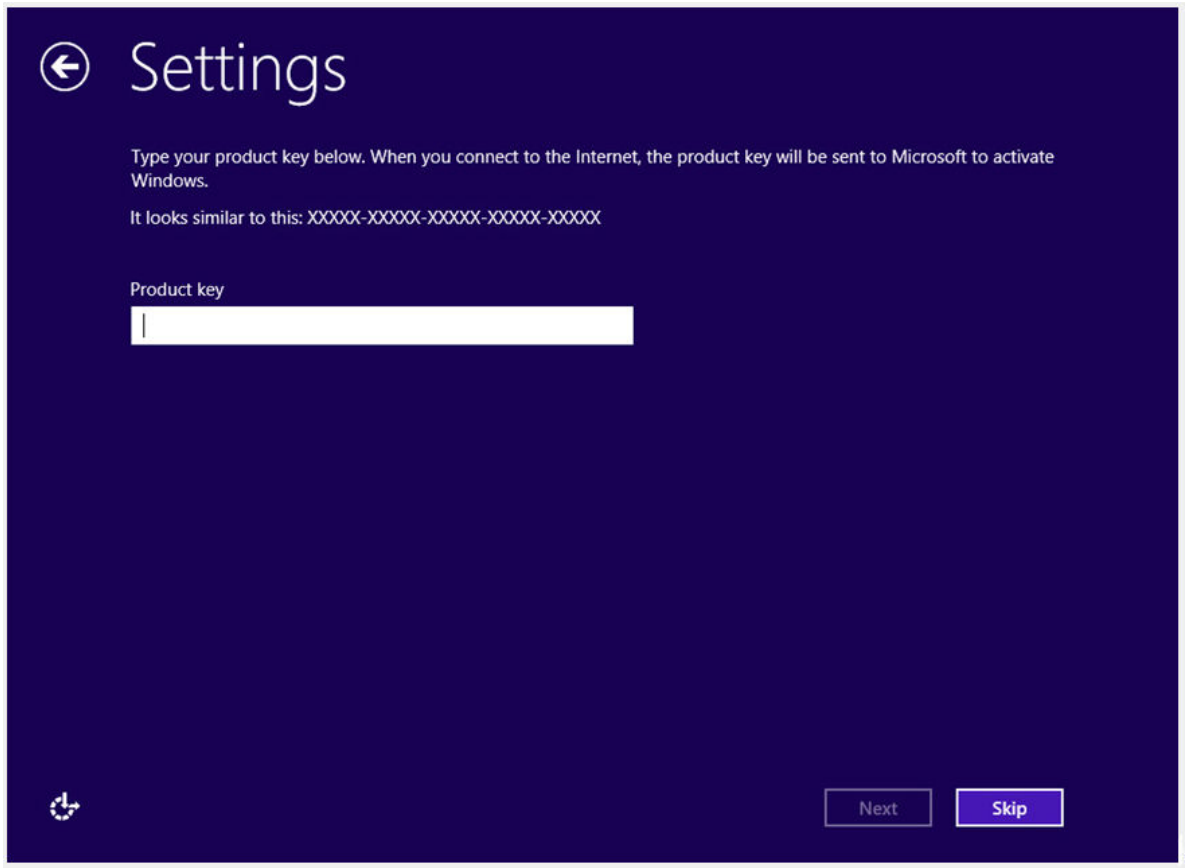
Procedure

1. On the front panel of the Hardware Appliance server, press the power button.

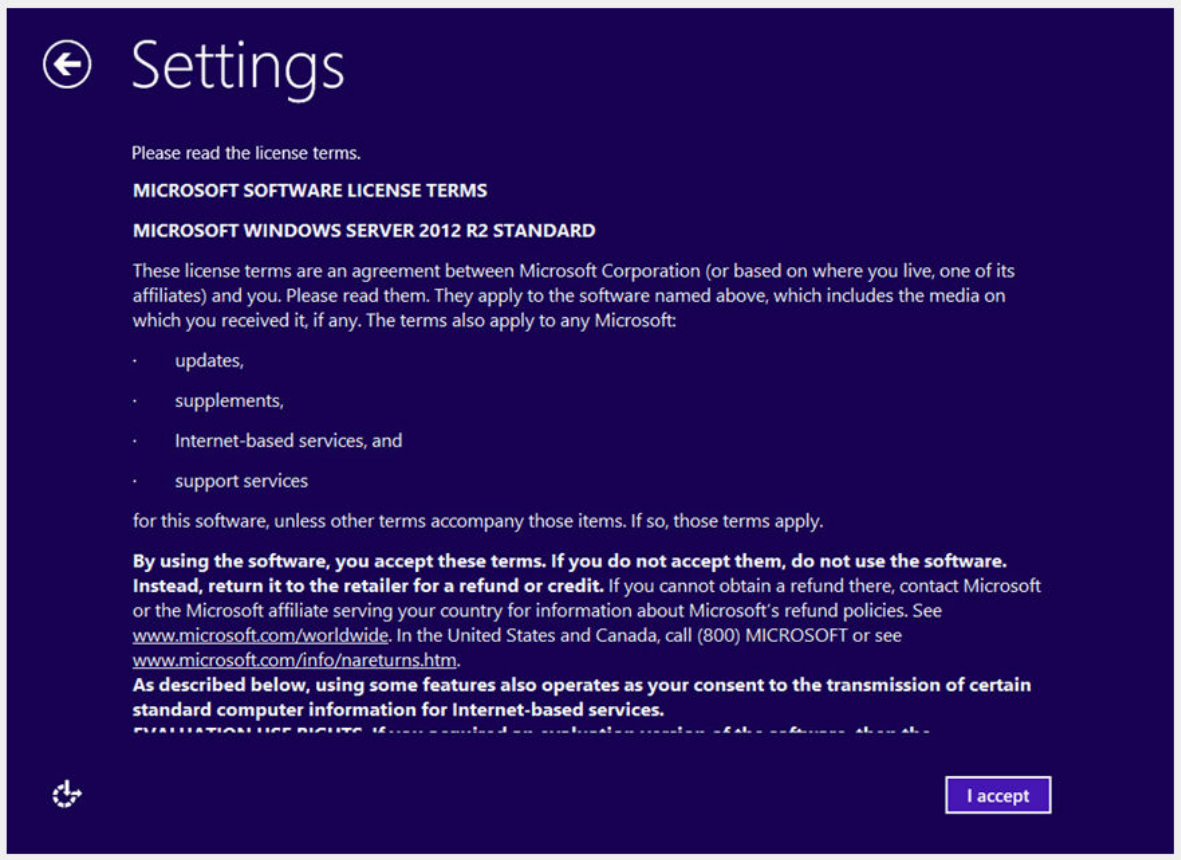
   The server starts up and after some time displays the **Settings** screen.



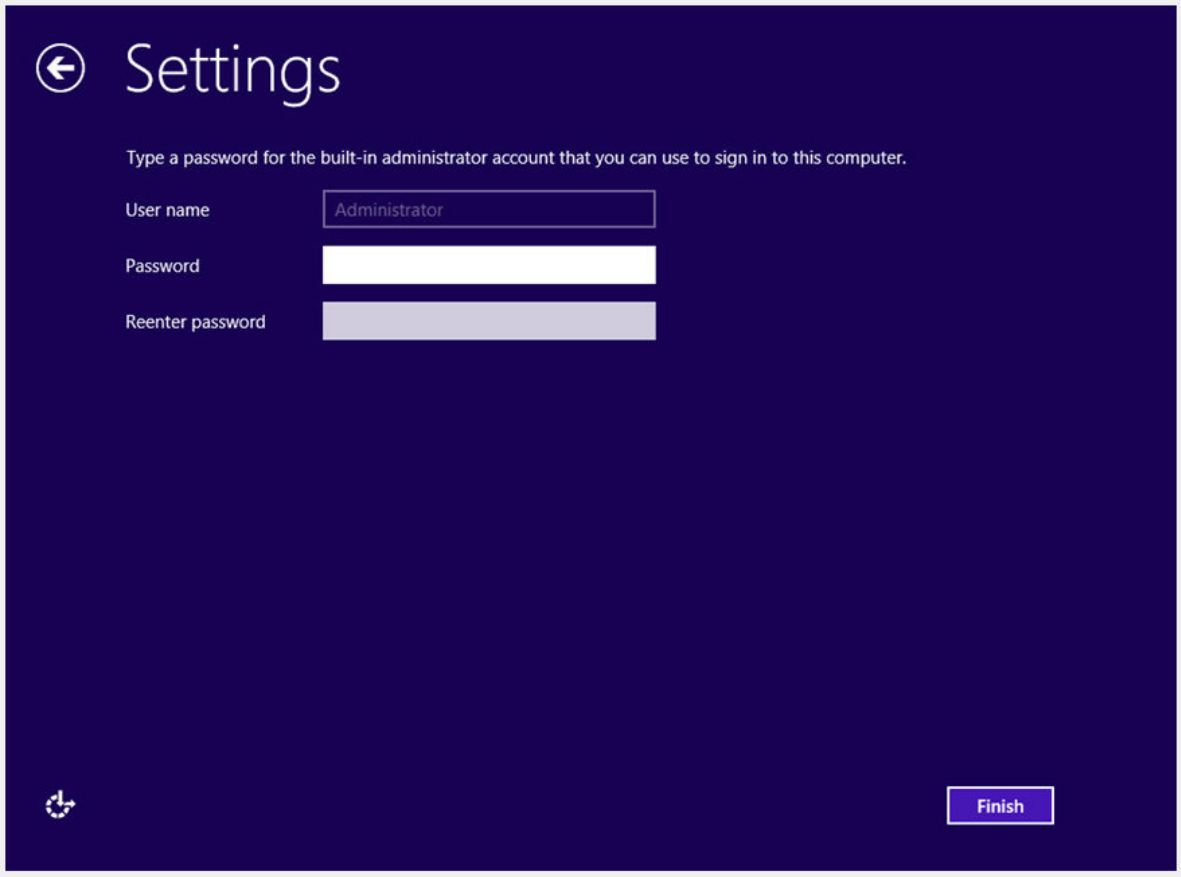
2. On the **Settings** screen, from the **Country or region** list, select the country or region of the server. For example, select **United States**.
3. From the **App language** list, select the language. For example, select **English (United States)**.
4. From the **Keyboard layout** list, select the keyboard layout. For example, select **US**.
5. Click **Next**.



6. In the **PRODUCT KEY** box, enter your license key for the Windows operating system. The Contact Center Hardware Appliance provides a Microsoft Windows Server product license key. The Microsoft Windows Server product license key is printed on a label attached to the top of the Contact Center Hardware Appliance server.
7. Click **Next**.



8. On the license agreement screen, read the license agreement, and if acceptable select **I accept**.
9. After the server starts, click **OK** to change the Administrator password.



10. In the **Password** box, enter a password for the Microsoft Windows Administrator account.
11. In the **Reenter Password** box, reenter the password for the Microsoft Windows Administrator account.
12. Press **Finish**, to apply the password.
13. Log on to the server and continue configuring the operating system.

Configuring the server network settings

Before you begin

- Deploy the Avaya Contact Center Select Hardware Appliance server.
- Configure and activate the Microsoft Windows operating system.
- Know the IP address and networking details for the Avaya Contact Center Select Hardware Appliance server.
- Ensure an Ethernet network cable is connected from NIC Port 1 at the back of the Hardware Appliance server to an active network port on your local area network (LAN).

About this task

Configure the Avaya Contact Center Select network settings using the Network Configuration utility.

The Contact Center Hardware Appliance server Network Interface Card (NIC) has four ports. You must connect an Ethernet network cable from NIC Port 1 at the back of the Hardware Appliance server to an active network port on your local area network (LAN). The LAN port on your data switch must be active.

The Contact Center Hardware Appliance server has a slide-out information tag inserted in the front panel. The MAC address for NIC Port 1 is printed on a label on the underside of the information tag. You must use this unique MAC address to obtain a Contact Center WebLM license from the Avaya Product Licensing and Delivery System (PLDS).

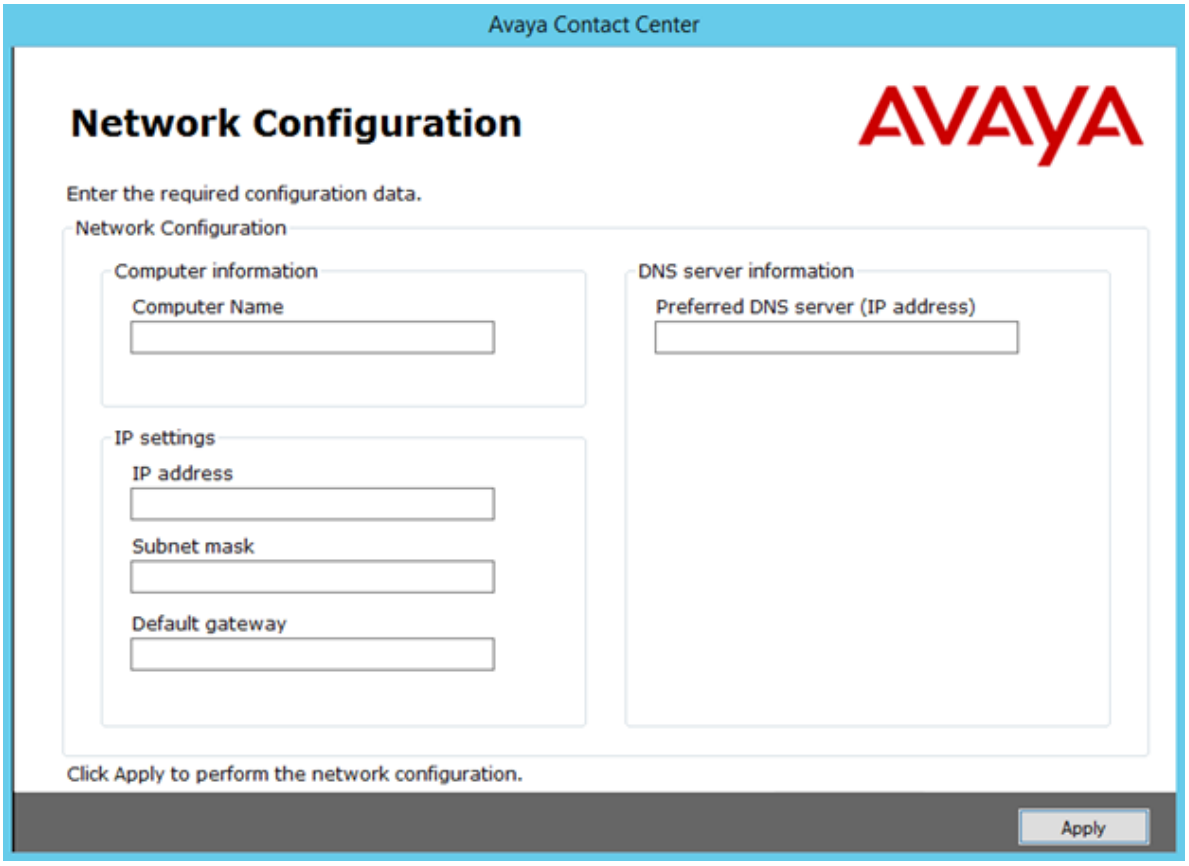
Using the Network Configuration utility, you must confirm that the MAC address for the *active* network interface matches the server MAC address as printed on the server information tag. This ensures that the Contact Center Hardware Appliance server is using the correct *physical* NIC port number and the corresponding *Operating System* Local Area Network Connection. This also ensures that the information tag networking MAC address relates to the *physical* NIC port being used. This is important because you use this unique MAC address number to license and run Contact Center software.

Note:

Avaya recommends that you configure the server final production name when installing Avaya Contact Center Select.

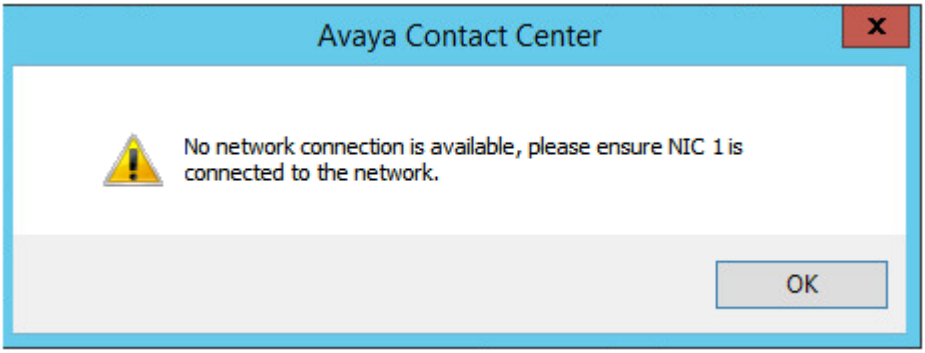
Procedure

1. When the Avaya Contact Center Select Hardware Appliance reboots after configuring the operating system, the Network Configuration utility automatically appears.

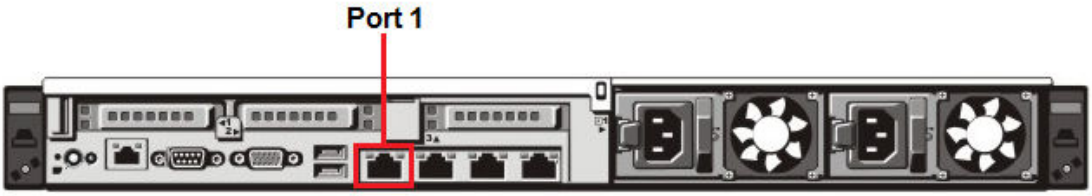


2. On the **Network Configuration** screen, in the **Computer Name** box, type the host name for the Avaya Contact Center Select server.
3. In the **IP address** box, type the IP address for the server.
4. In the **Subnet mask** box, type the subnet mask IP address for the server.
5. In the **Default gateway** box, type the default gateway IP address for the server.
6. In the **Preferred DNS server (IP address)** box, type the IP address for the server.
7. Click **Apply**.

8. The Network Configuration utility then examines the *Operating System* Local Area Network Connections.
   a. If the Network Configuration utility cannot detect an active network connection, the following message box appears.

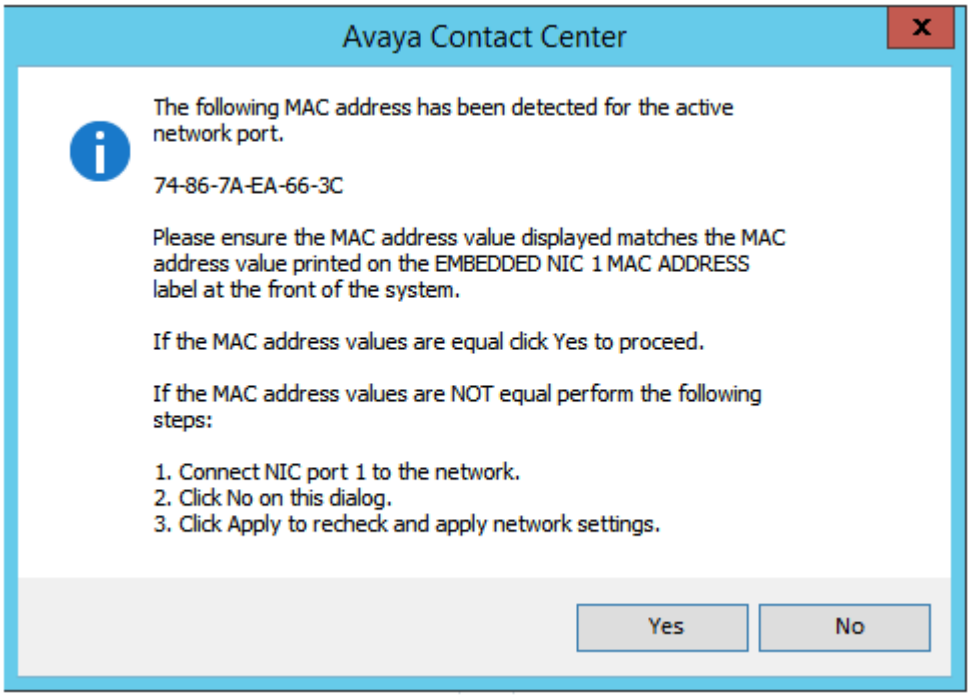


   b. Connect an Ethernet cable to Port 1 at the back of the Hardware Appliance server. Ensure the other end of the Ethernet cable is connected to an active LAN port.



   c. Click **OK**.

9. If the Network Configuration utility can detect an active network connection, the following message box appears.

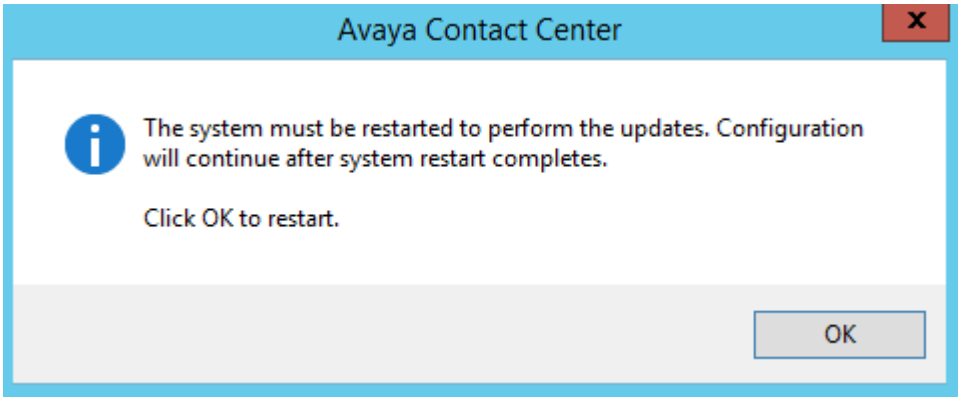


   a. Compare the MAC address on the message box to the networking MAC address printed on the underside of the Hardware Appliance server information tag.

   b. If the MAC address on the message box matches the MAC address printed on the Hardware Appliance server information tag, click **Yes**.

   c. If the MAC addresses do not match, ensure the Ethernet cable is connected to Port 1 at the back of the Hardware Appliance server. Next click **No**. Continue with this process until the two MAC addresses match each other. Click **Yes**.

10. When you click **Yes** to confirm that the MAC addresses match each other, the following message box appears.



11. Click **OK** to restart the server.

Configuring the server installation data

Before you begin

- Obtain an Avaya Contact Center Select license file for your server and load the license file onto a USB memory stick.
- Know the IP address of the IP Office primary call server.
- Know the IP Office Service User account name and password.
- Know the IP Office System Password. Ask your IP Office Administrator for the System Password.
- Configure an IP Office SIP User Extension Number to be used to register Avaya Contact Center Select.
- Configure an IP Office short code to forward customer calls to an Avaya Contact Center Select CDN (Route Point).
- If your Avaya Contact Center Select solution is going to support customers leaving voicemail messages for callback, know the mailbox number.
- If your Avaya Contact Center Select solution is going to support email contacts, know the IP address or name of your email host server.
- If your Avaya Contact Center Select solution is going to support email contacts, configure the mailbox details on your email server that you use to receive inbound email messages intended for the Avaya Contact Center Select. Know the name and password for this mailbox.
- You must configure the required language and locale of the Contact Center server operating system, if it is not a Latin-1 language, before configuring the Contact Center server using the Contact Center Ignition Wizard. For more information about configuring language and locale settings on the Contact Center server, see *Avaya Contact Center Select Advanced Administration*.

About this task

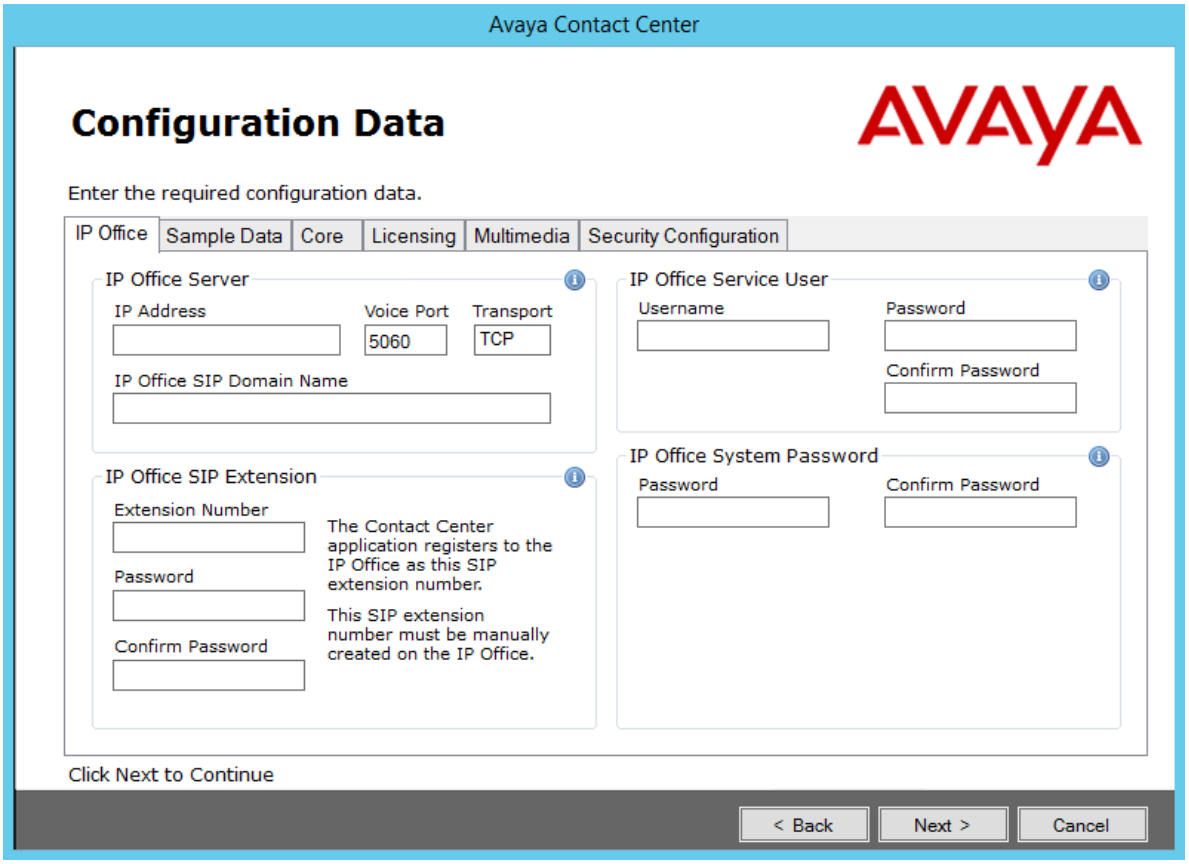
Configure the Avaya Contact Center Select installation data to enable communication with an IP Office primary call server.

Optionally, if your solution is to support routed email contacts, configure the mailbox details on your email server that you use to receive inbound email messages intended for the Avaya Contact Center Select. Avaya Contact Center Select logs on to this mailbox on your mail server and retrieves email at defined intervals. Email messages are then routed to agents. To route an email, Avaya Contact Center Select requires the mailbox name and password.

Procedure

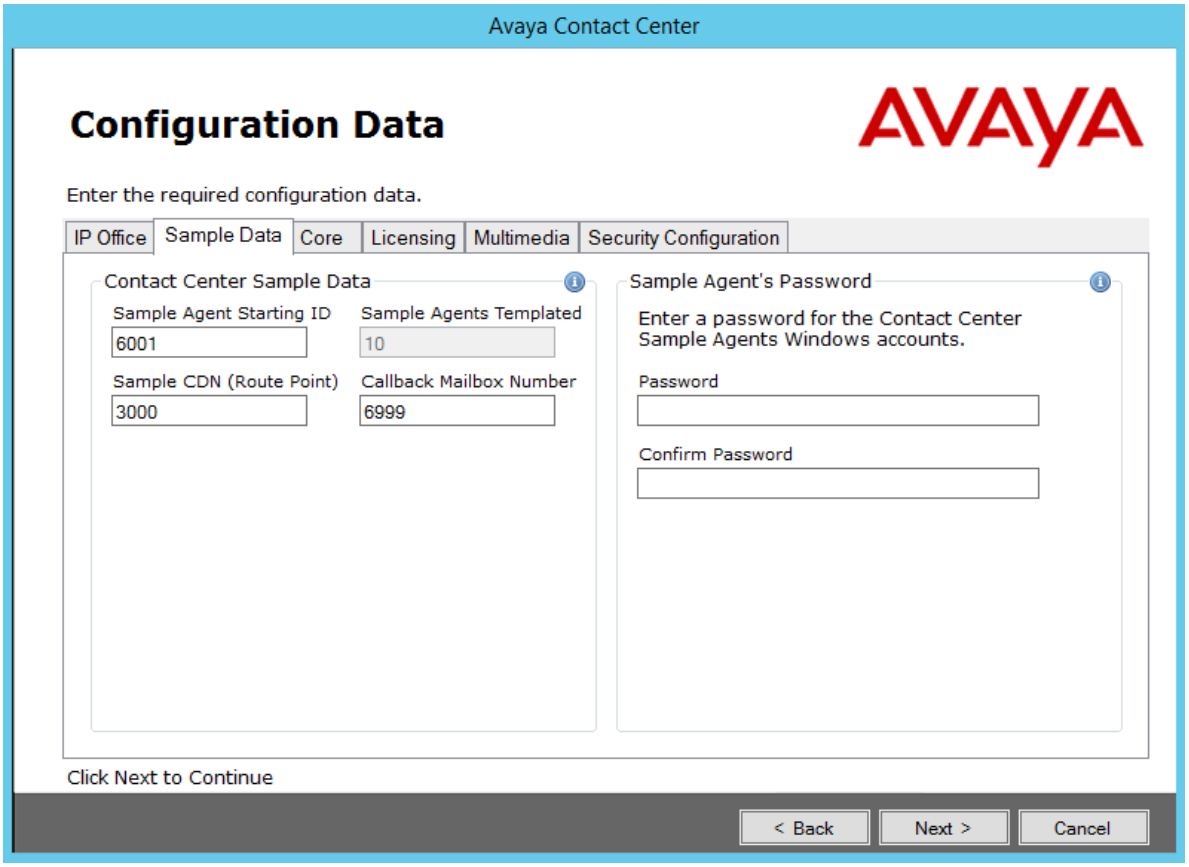
1. Log on to the Avaya Contact Center Select server using the Administrator account details.
2. The Avaya Contact Center Select **Welcome** screen appears.

3. Click **Next**.
4. On the license screen, select **I Accept the Terms of the End-User License Agreement**.
5. Click **Next**.



6. On the **Configuration Data** screen, select the **IP Office** tab.
7. In the **IP Office Server** section, in the **IP Address** box, type the IP address of the IP Office primary call server.
8. In the **Voice Port** box, type the port number of the IP Office primary call server. The default port number is 5060.
9. From the **Transport** list, select the network transport communication protocol for the IP Office primary call server. The default protocol is TCP.
10. In the **IP Office SIP Domain Name** box, type the SIP domain name of your IP Office primary call server. The Avaya Contact Center Select SIP domain name must match your IP Office SIP domain name.
11. In the **IP Office SIP Extension** section, in the **Extension Number** box, type the IP Office SIP User Extension Number used to register Avaya Contact Center Select. For more information, see Configuring the SIP User Extension Number on page 43.
12. In the **IP Office SIP Extension** section, in the **Password** box, type the password of the IP Office SIP User Extension Number used to register Avaya Contact Center Select. Enter the number that you configured for the Supervisor Settings - Login Code on the user's Telephony tab. For more information, see Configuring the SIP User Extension Number on page 43.

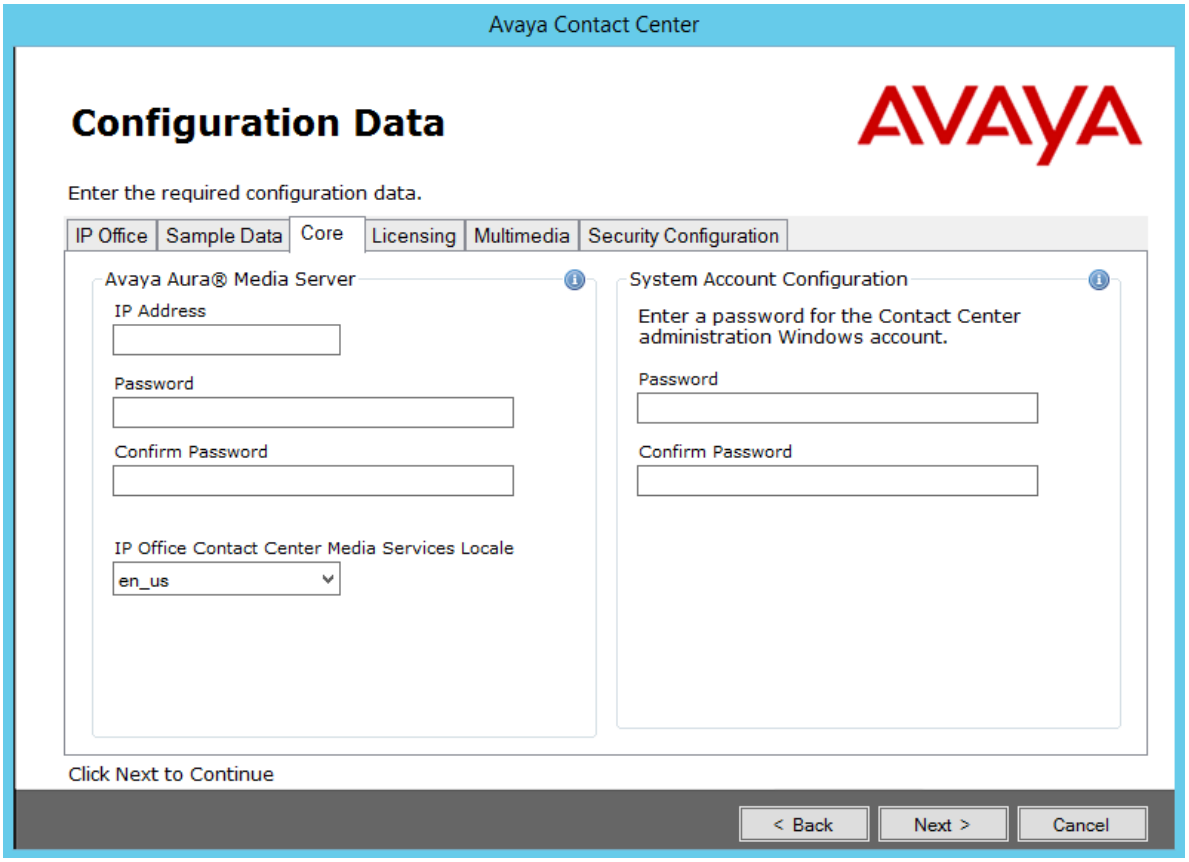
13. In the **IP Office SIP Extension** section, in the **Confirm Password** box, re-type the password.
14. In the **IP Office Service User** section, in the **Username** box, type the name of your IP Office data synchronization service user. For more information, see Configuring an IP Office service user for data synchronization on page 38.
15. In the **IP Office Service User** section, in the **Password** box, type the password of your IP Office data synchronization service user.
16. In the **IP Office Service User** section, in the **Confirm Password** box, re-type the password.
17. In the **IP Office System Password** section, in the **Password** box, type the *System Password* for your IP Office call server. Ask your IP Office Administrator for the System Password.
18. In the **IP Office System Password** section, in the **Confirm Password** box, re-type the *System Password* for your IP Office call server.
19. Select the **Sample Data** tab.



20. In the **Contact Center Sample Data** section, in the **Sample Agent Starting ID** box, type a phone number for the first sample Avaya Contact Center Select agent. Avaya Contact

Center Select automatically creates ten sample agents, using this number as the first of ten sequential agent numbers. The default number is 6001.

21. In the **Sample CDN (Route Point)** box, type a number for the Avaya Contact Center Select CDN (Route Point). This number must match an IP Office short code entry number. For more information, see Configuring a shortcode to Contact Center Route Points on page 43. The default number is 3000.
22. In the **Callback Mailbox Number** box, type the voice mail mailbox number. This voice mail number is used by the Customer Service sample application in Orchestration Designer. The default number is 6999.
23. In the **Sample Agent's Password** section, in the **Password** box, type a password for the Windows accounts of the sample agents. Avaya recommends that you enter a password that conforms to your corporate password policy.
24. In the **Confirm Password** box, re-type the password for the Windows accounts of the sample agents.
25. Select the **Core** tab.

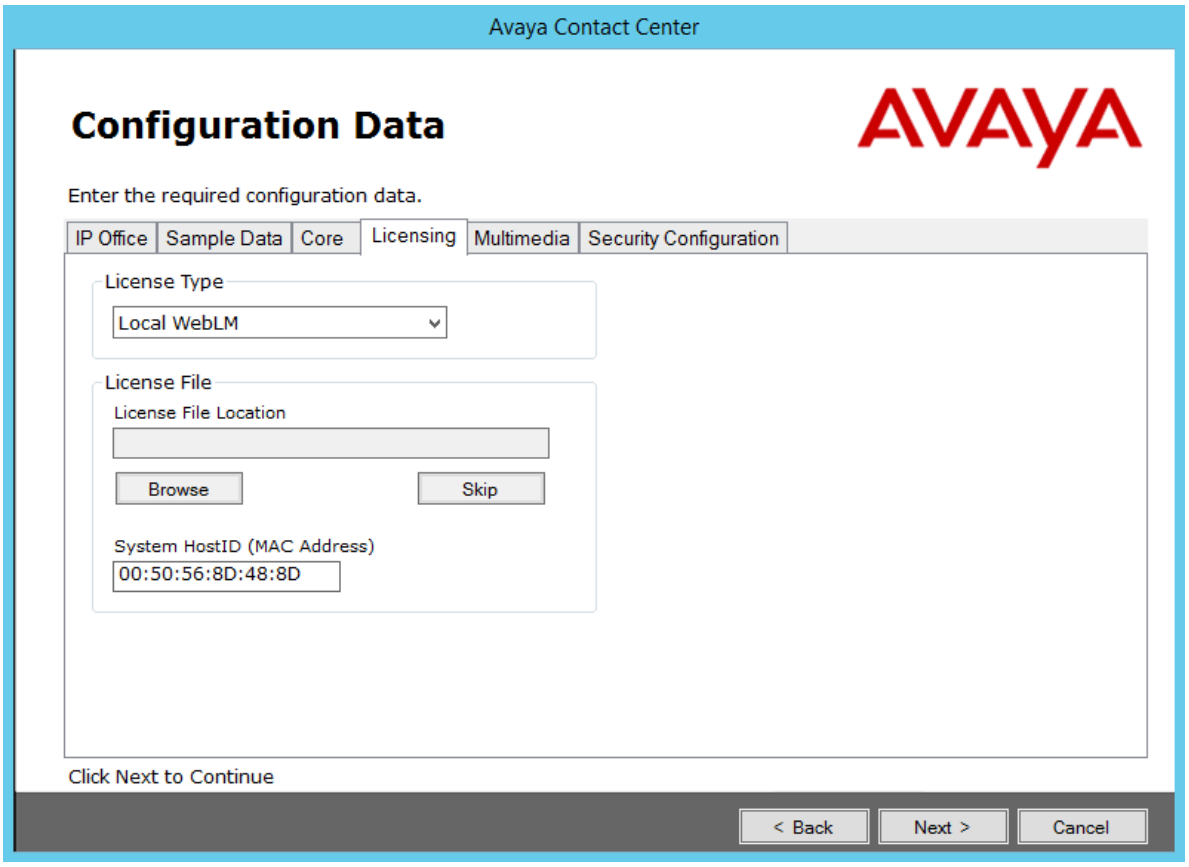


26. In the Avaya Aura® Media Server section, in the **IP Address** box, type the IP address of the Avaya Aura® Media Server.

Important:

You must ensure that this IP address is not in use, and must be in the same subnet as the Contact Center server.

27. In the **Password** box, type a password for the Avaya Aura® Media Server Admin account.
28. In the **Confirm Password** box, re-type the password.
29. From the **IP Office Contact Center Media Services Locale** list, select the locale (including language and dialects) of the solution environment.
30. In the **System Account Configuration** section, in the **Password** box, type a password for the Avaya Contact Center Select administration account. The password is not checked against the server security policy for minimum password requirements. Avaya recommends that you enter a password that conforms to your corporate password policy.
31. In the **Confirm Password** box, type the password.
32. Select the **Licensing** tab.



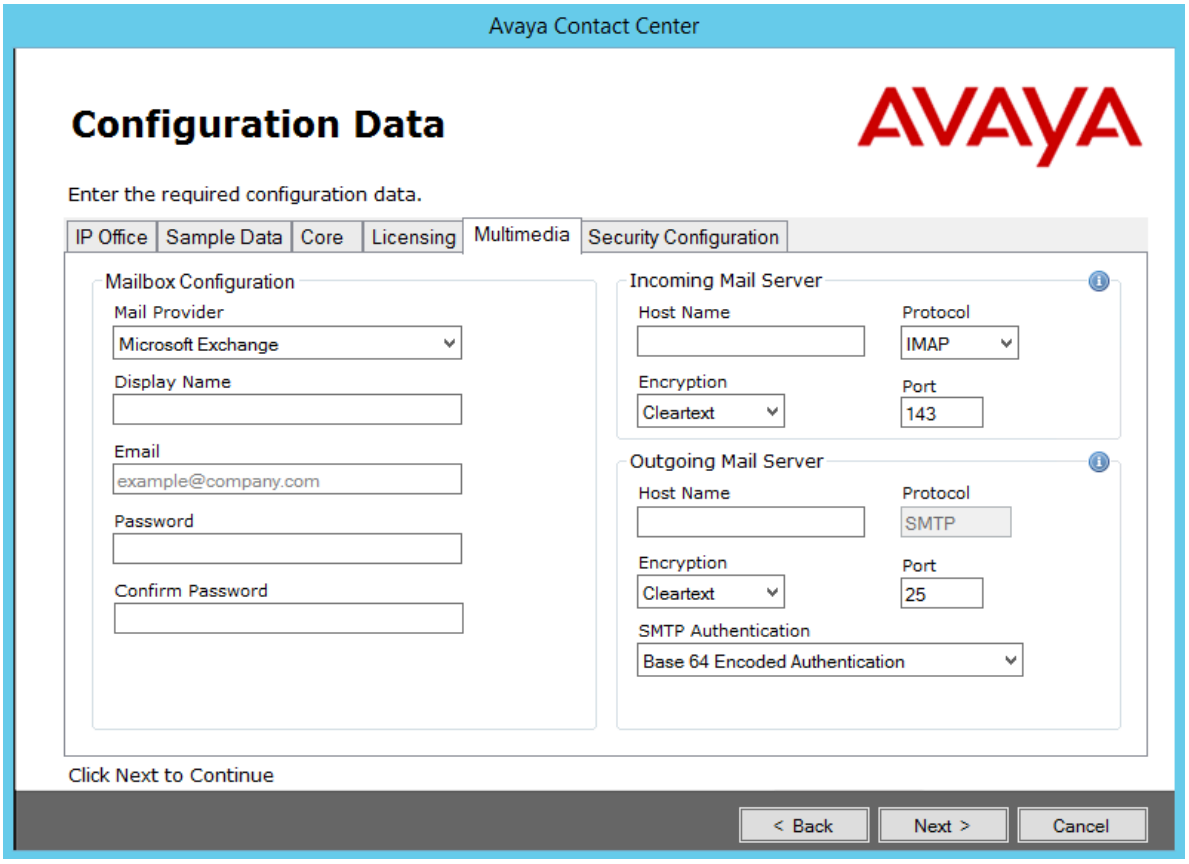
33. From the **License Type** list, select **Local WebLM**.
34. Click **Browse**, and navigate to folder or USB device containing your license file. Load the XML license file. If you do not have a USB memory stick or a license file, you can click **Skip** and load the license file later. If you defer licensing configuration, the deferred

configuration process is more complex and an additional server reboot is required. Avaya recommends that you configure Contact Center licensing here using this **Licensing** tab.

Important:

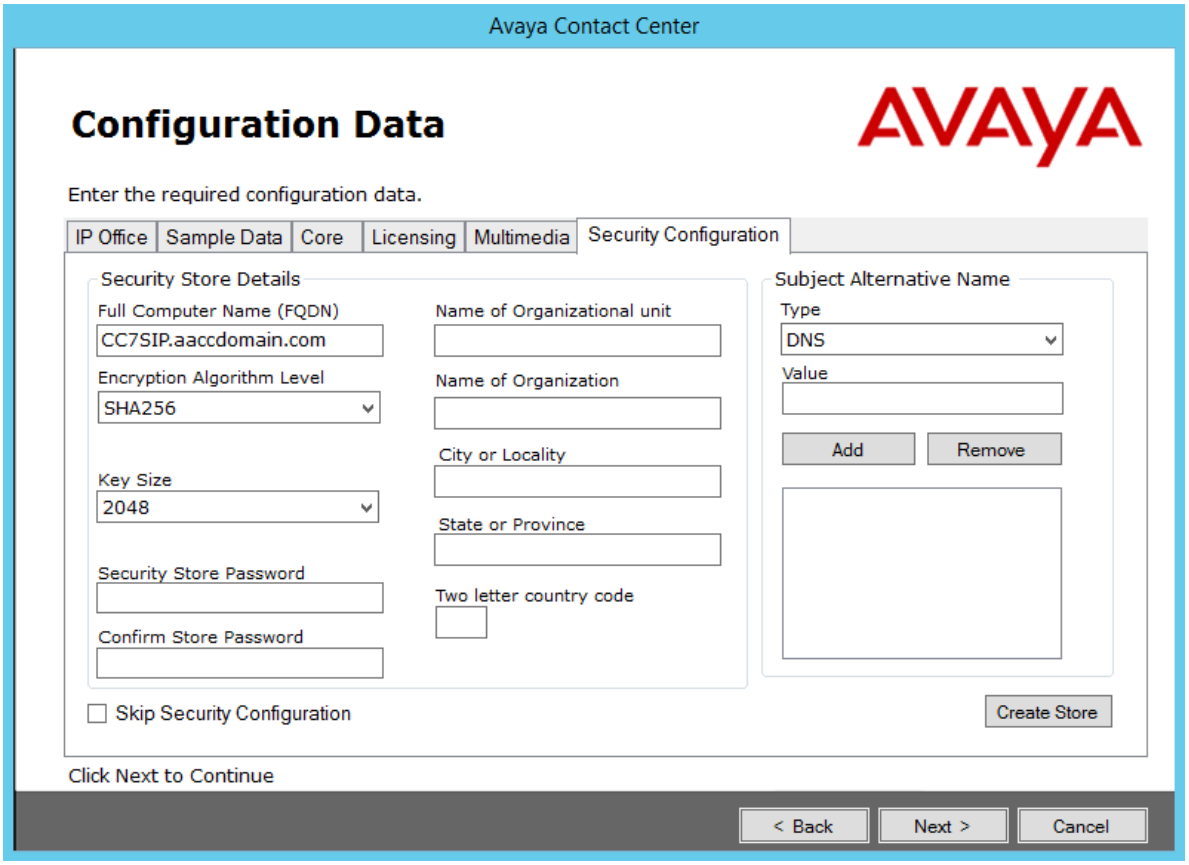
You cannot apply your Local WebLM license file until after you configure your contact center using the Ignition Wizard. You must apply your license file during the commissioning process.

35. Select the **Multimedia** tab.



36. In the **Mailbox Configuration** section, from the **Mail Provider** list, select None, Microsoft Exchange, Gmail, Outlook Hotmail, Yahoo, or Other (POP3/IMAP). The default is Microsoft Exchange. If Avaya Contact Center Select is not going to process email contacts, select **None**. If you select Gmail, Outlook Hotmail, or Yahoo, the Incoming Mail Server and Outgoing Mail Server sections are automatically populated for you.
37. In the **Mailbox Configuration** section, in the **Display Name** box, type a display name for the mailbox.
38. In the **Mailbox Configuration** section, in the **Email** box, type the email address for the mailbox. For example, sales@company.com.
39. In the **Mailbox Configuration** section, in the **Password** box, type the password for the mailbox.

40. In the **Mailbox Configuration** section, in the **Confirm Password** box, re-type the password for the mailbox.
41. In the **Incoming Mail Server** section, in the **Host Name** box, type the name of the server on which email messages are received in your network.
42. In the **Incoming Mail Server** section, from the **Protocol** list, select the communication protocol for the inbound email server. Select **POP3** or **IMAP**. The default protocol is POP3.
43. In the **Incoming Mail Server** section, from the **Encryption** list, select the encryption type to use. Select **Cleartext**, **TLS**, or **STARTTLS**.
44. In the **Incoming Mail Server** section, in the **Port** box, type the port number of the incoming email server. For the POP3 protocol, the default port number is 110. For the IMAP protocol, the default port number is 143.
45. In the **Outgoing Mail Server** section, in the **Host Name** box, type the name of the server from which email messages are sent. Your inbound and outbound mail servers can have the same name.
46. For outgoing email, the **Protocol** is SMTP.
47. In the **Outgoing Mail Server** section, from the **Encryption** list, select the encryption type to use. Select **Cleartext**, **TLS**, or **STARTTLS**.
48. In the **Outgoing Mail Server** section, in the **Port** box, type the port number of the outgoing email server. The default port number is 25.
49. In the **Outgoing Mail Server** section, from the **SMTP Authentication** list, select SMTP Authentication Disabled or Base 64 Encoded Authentication. The default authentication method is Base 64 Encoded Authentication.
50. **(Optional)** Select the **Workspaces** tab to configure optional Avaya Workspaces. See Configuring Avaya Workspaces during the initial installation on page 87 for the configuration details.
51. Select the **Security Configuration** tab, and configure the security details in the **Security Store Details** section.



52. If you do not want to enable security, select the **Skip Security Configuration** checkbox and skip to 68 on page 76.

    Important:

    A warning message appears. If you proceed without enabling security and IP Office is using TLS, you cannot test a first call quickly without additional configuration steps. The CTI link is disabled until you configure Contact Center TLS certificates to communicate securely with IP Office, or until you configure IP Office to allow an unsecured CTI connection. After the deployment, to complete your security configuration, follow the procedures in *Avaya Contact Center Select Advanced Administration*.

53. In the **Full Computer Name (FQDN)** box, type the full FQDN of the server on which you are creating the security store.

    Important:

    The FQDN must be the full machine name of the server that the Security Store resides on. The FQDN name is case-sensitive.

54. In the **Name of Organizational unit** box, type the name of the department or division within the company.

55. In the **Name of Organization** box, type the company name.

56. In the **City or Locality** box, type the name of the city or district in which the contact center is located.
57. In the **State or Province** box, type the state or province in which the contact center is located.
58. In the **Two Letter Country Code** box, type the country code in which the contact center is located.
59. In the **Security Store password** box, type a password for accessing the new security store.
60. In the **Confirm Store password** box, confirm the password for accessing the new security store.

    Important:

    Ensure you remember this password, because you need it when you log on to Security Manager after install. If you forget the password, you cannot access Security Manager.

61. If you are implementing Business Continuity in the contact center, generate the security store using Subject Alternative Names (SANs). In the **Subject Alternative Name** section, for each SAN you want to add:

    a. From the **Type** drop-down list, select DNS.

    b. In the **Value** field, type the FQDN for the server.

    c. Click **Add**.

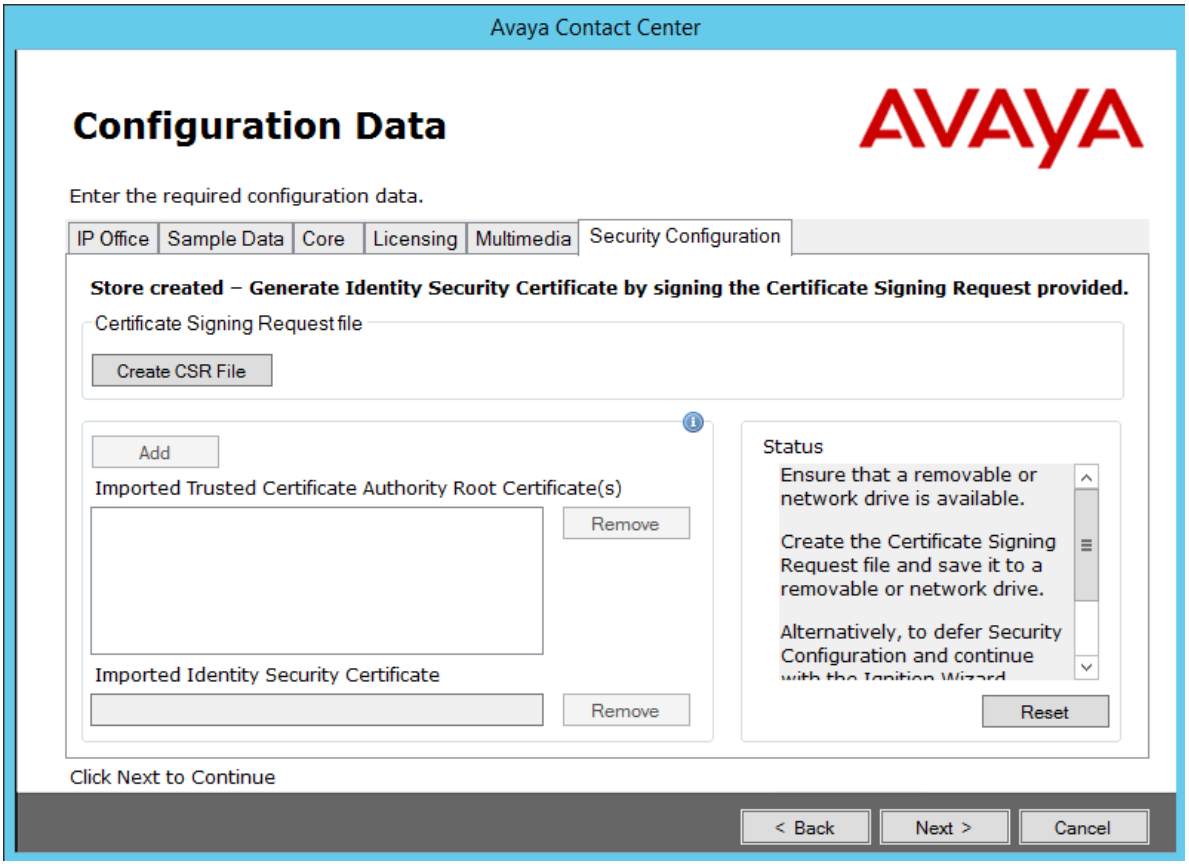
    For a Business Continuity system, add the current server FQDN and the Managed name for the HA pair.

62. If you want to change the encryption setting, select the required encryption settings from the **Encryption Algorithm Level** and **Key Size** drop-down lists.

    The default value for **Encryption Algorithm** is SHA256 and the default value for **Key Size** is 2048.

    Contact Center displays a warning message if you select SHA1 or 1024. Contact Center includes these values for backward-compatibility only, because these settings do not meet the industry-recommended level of encryption.

63. Click **Create Store**.
64. You can now use the **Security Configuration** tab to create and save a Certificate Signing Request (CSR) file.



65. Click **Create CSR File**.
66. From the **Save In** drop-down list, select a shared location in which to save the CSR file and click **Save**.

    You must now send the Certificate Signing Request file to a Certificate Authority and receive a signed certificate and root certificate to import to the security store.
67. Click **Add** to import certificates. In the **Open** dialog box, navigate to the location of a certificate and click **Open**. To remove the imported certificate, select the required certificate from the list and click **Remove**.

    You can import either a chained certificate, or separate root and signed certificates. Root certificates appear in the **Imported Trusted Certificate Authority Root Certificate(s)** section. A signed certificate appears in the **Imported Identity Security Certificate** section.

    If a chained certificate contains both root and signed certificates, you can add root certificates and signed certificate simultaneously by importing just one chained certificate.

    If a chained certificate contains root certificates only, you can use the chained certificate to add all root certificates at a time. To add a signed certificate, click **Add** and navigate to the required signed certificate.

If you have separate root and signed certificates, you must add them one by one by clicking the **Add** button. Always add a signed certificate last.

Important:

When adding a chained certificate, the system can ask you to enter the password you created for accessing the security store. See 59 on page 74.

68. Click **Next**.
69. Review and confirm your inputs, and click **Configure**.

    The configuration utility begins to configure the Avaya Contact Center Select components.
70. When the components are configured, the **Configuration Complete** screen appears.
71. Click **Finish**.
72. On the **Avaya Contact Center** message box, click **OK** to restart the Avaya Contact Center Select server.

    Avaya Contact Center Select software is now installed.

Using the Contact Center Dashboard

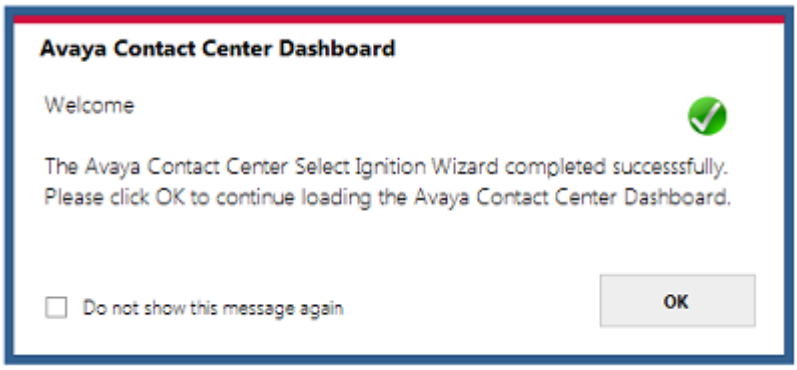
About this task

You can use the Contact Center Dashboard to access Contact Center system tools and diagnose system problems. The Contact Center Dashboard displays some Operating System and system details such as CPU type, network details, and Operating System activation status.

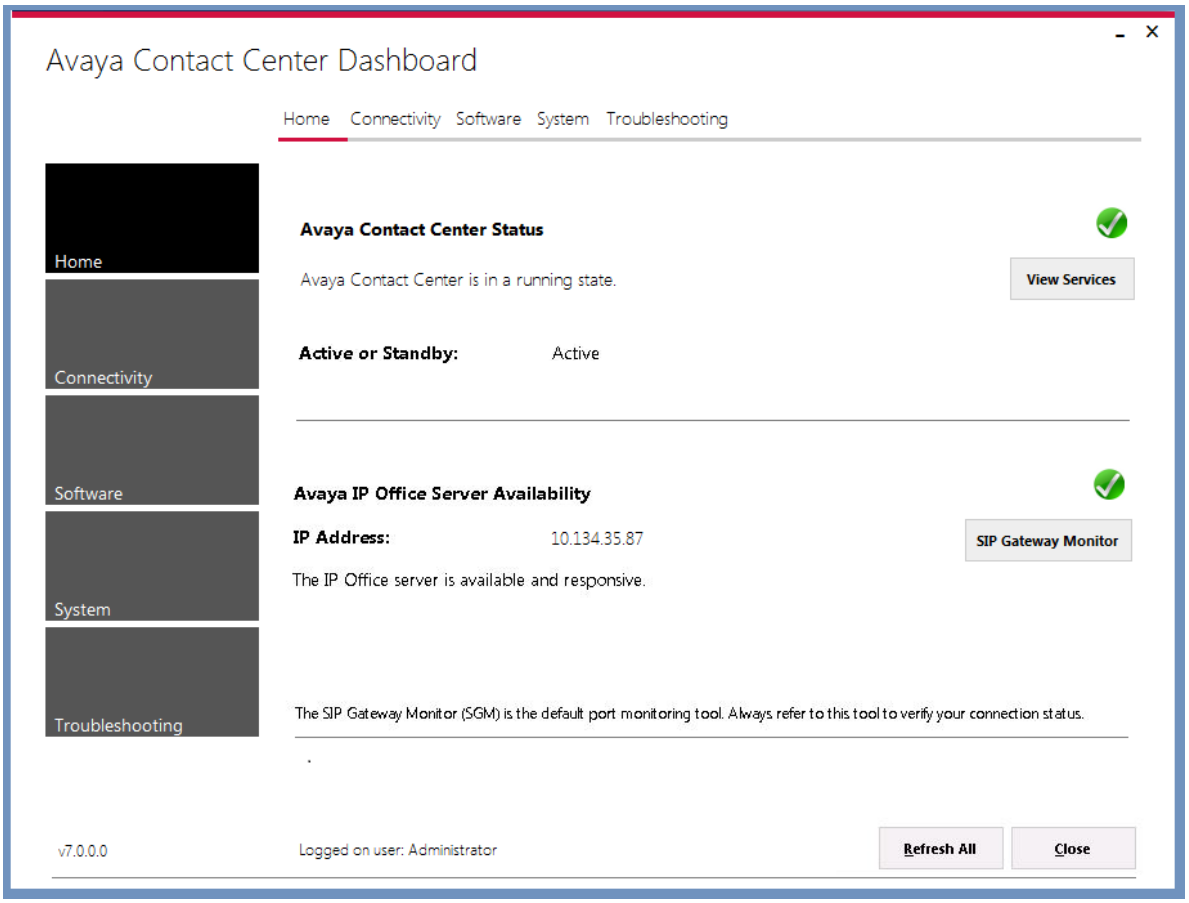
The Contact Center Dashboard launches automatically the first time the Contact Center server boots up.

Procedure

1. The Contact Center Dashboard Welcome message box automatically appears when the server starts up.

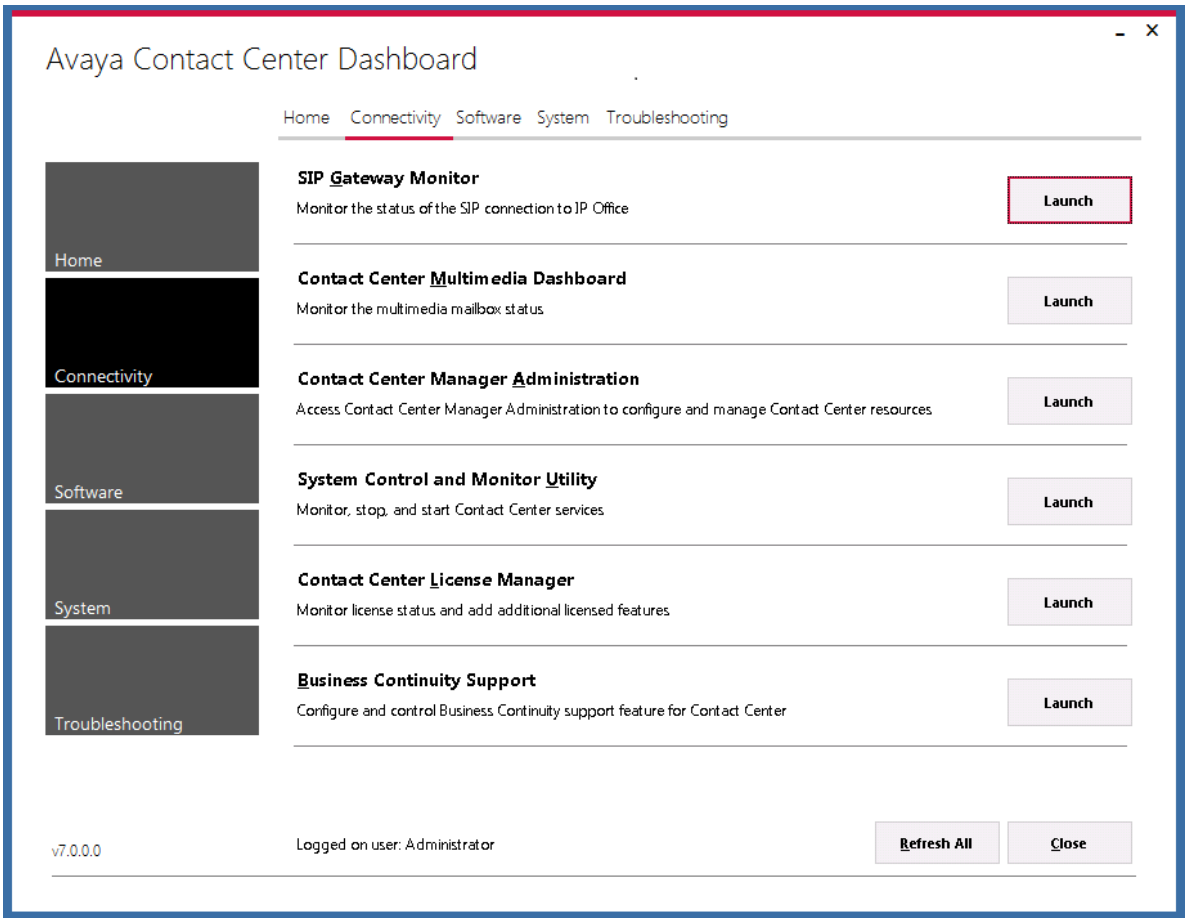


2. Click **OK**.
3. On the Contact Center Dashboard, select the **Home** tab.



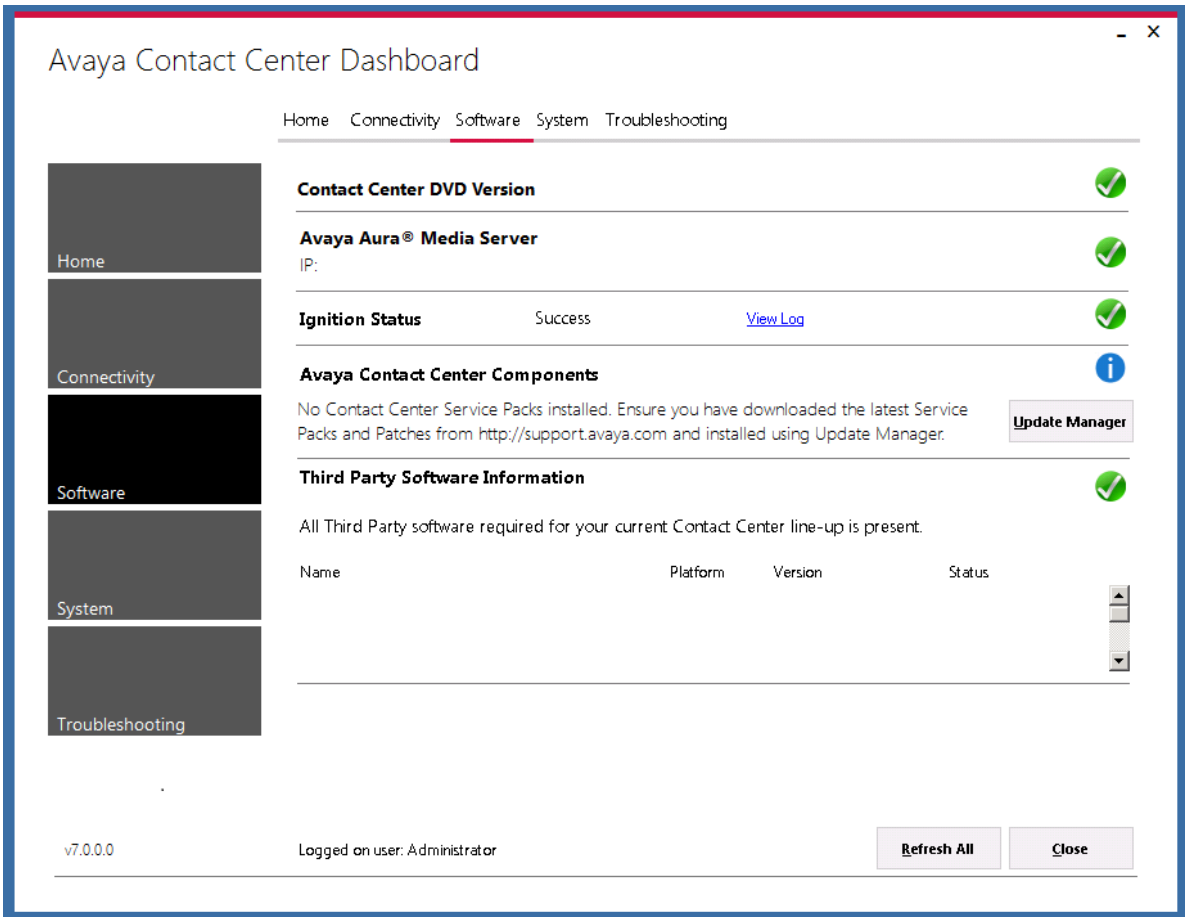
4. Click **Refresh All** to refresh the Contact Center Dashboard status reports.
5. In the **Avaya Contact Center Status** section, click **View Services** to monitor the state of the Contact Center Windows services.
6. In the **Avaya IP Office Server Availability** section, click **SIP Gateway Monitor** to determine if Contact Center is communicating with IP Office.

7. Select the **Connectivity** tab.



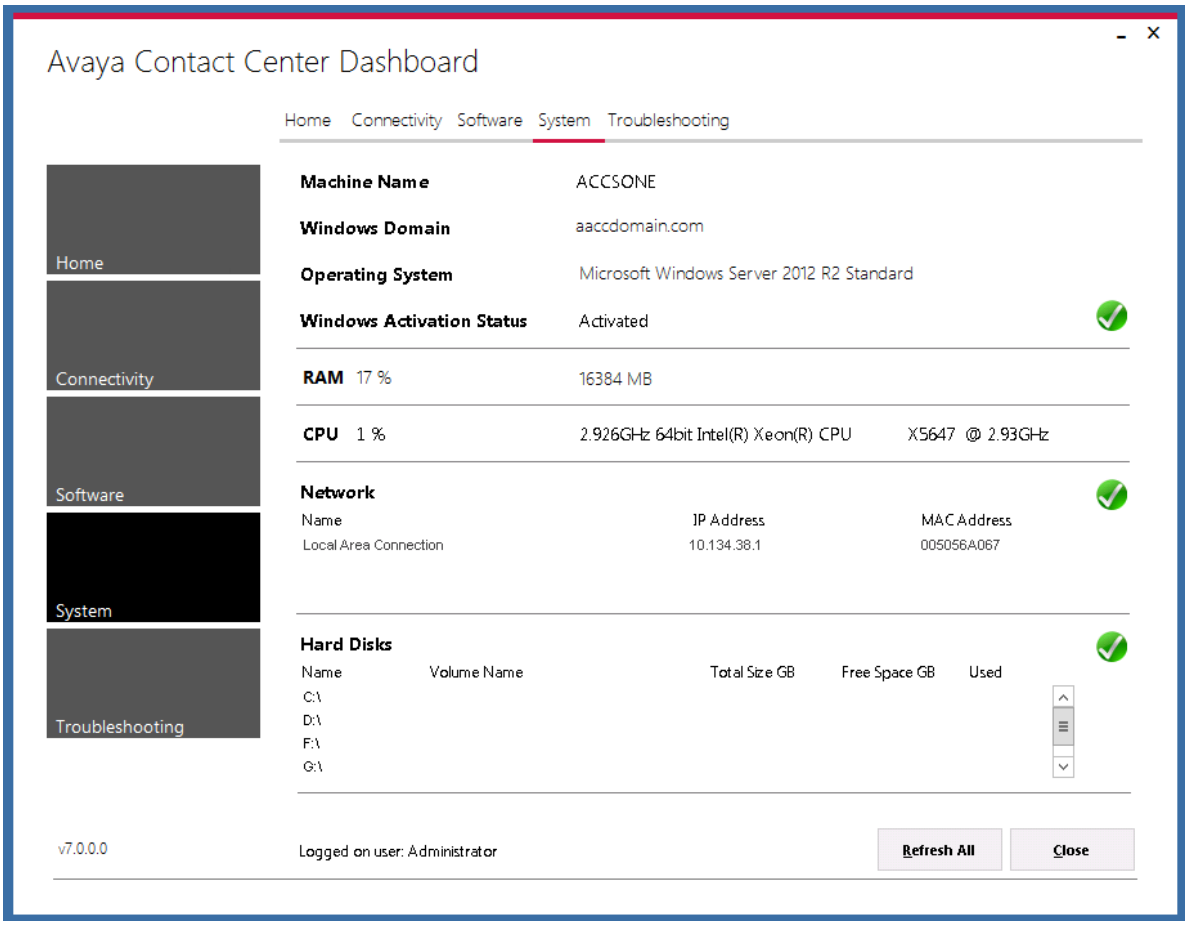
8. In the **SIP Gateway Monitor** section, click **Launch** to monitor the status of the SIP connection to IP Office.
9. In the **Contact Center Multimedia Dashboard** section, click **Launch** to monitor the multimedia mailbox status.
10. In the **Contact Center Manager Administration** section, click **Launch** to access Contact Center Manager Administration to configure and manage Contact Center resources.
11. In the **System Control and Monitoring Utility** section, click **Launch** to monitor, stop, and start Contact Center services.
12. In the **Contact Center License Manager** section, click **Launch** to monitor license status and add additional licensed features.
13. Select **Business Continuity Support** to configure the Business Continuity feature.

14. Select the **Software** tab.



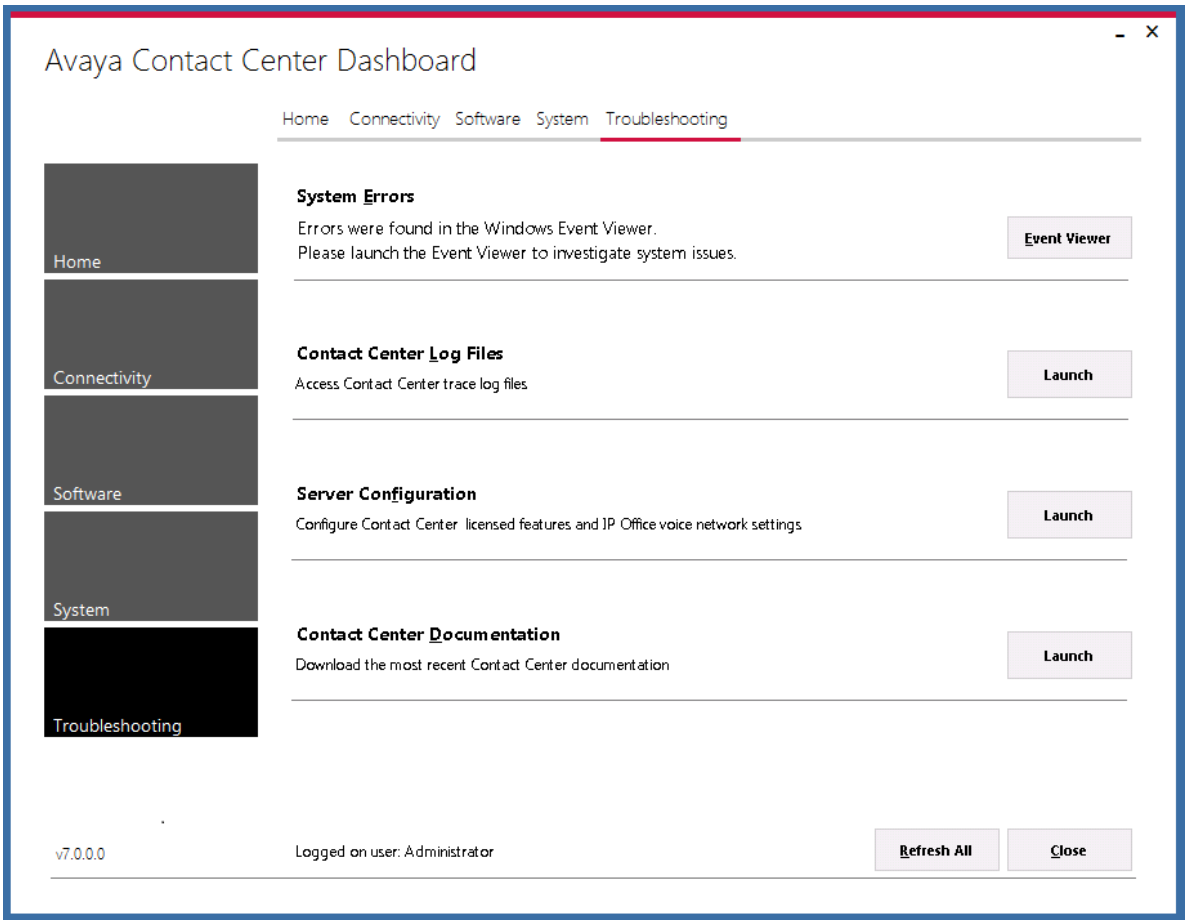
15. **Contact Center Version** displays the version of the Contact Center software installed on the server.
16. **Avaya Aura® Media Server** displays the version of Avaya Aura® Media Server software installed on the server.
17. **Ignition Status** displays the Contact Center software installation status.
18. **Avaya Contact Center Components** displays the Contact Center software and patch line-up installed on the server.
19. **Third Party Software Information** displays the versions of the third-party software components used by Contact Center that are installed on the server.

20. Select the **System** tab.



21. **Machine Name** displays the host name of the Contact Center server.
22. **Windows Domain** displays the name of the domain that the Contact Center server is in.
23. **Operating System** displays the Operating System version.
24. **Windows Activation Status** displays the Windows Operating System license and activation status.
25. **RAM** displays the amount of RAM memory in the server.
26. **CPU** displays the type of CPU in the server.
27. **Network** displays the networking details of the server: IP address and MAC address.
28. **Hard Disks** displays the number, size, and drive letter of the hard disk volumes in the server.

29. Select the **Troubleshooting** tab.



30. Select **System Errors** to access Contact Center events in the Microsoft Windows Event Viewer.
31. Select **Contact Center Log Files** to access Contact Center trace log files.
32. Select **Server Configuration** to configure Contact Center licensed features and IP Office voice network settings.
33. Select **Contact Center Documentation** to access and download the most recent Contact Center documentation from the Avaya support website.

Configuring IP Office for unsecured CTI connections

About this task

When you skip security configuration during Avaya Contact Center Select installation, by default Avaya Contact Center Select uses TCP for the CTI connection to IP Office. You cannot test a first call quickly until you configure IP Office to allow an unsecured CTI connection.

If Avaya Contact Center Select uses TLS to communicate with IP Office, you can skip this procedure.

Procedure

1. Using IP Office Manager, select **File** > **Advanced** > **Security Settings** > **System** > **Unsecured Interfaces**.
2. In the **Application Controls** section, select the **TAPI** check box.
3. Click **OK**.
4. Select **File** > **Save Security Settings**.

Next steps

Verify that the TCP connection between Avaya Contact Center Select and IP Office is connected. Open the **SIP Gateway Management Client** and verify that the **CTI Proxy** link **Transport** setting is **TCP** and that the link status is **CONNECTED**.

Navigating the Microsoft Windows Server 2012 R2 User Interface

This section describes how to navigate between the main user interface screens of the Windows Server 2012 R2 operating system.

The following table describes some of the main Microsoft Windows Server 2012 R2 user interface screens.

Screen name	Description
Start	The Start screen contains shortcuts to the main administration interfaces of the server. If you have an application that you access on a regular basis, you can add it to the Start screen so that it's more immediately accessible. The Start screen displays the currently logged on user and provides some basic server log out and locking functions. This is the operating system default screen.
Apps	The Apps screen contains shortcuts to the applications and utilities installed on the server. The server applications and utilities are grouped into categories. Third-party vendors and applications can also add custom, vendor or product specific, categories to the Apps screen.
Desktop	The Desktop screen contains the Windows start button, the Windows Taskbar, Recycle Bin, and shortcuts to the Windows Explorer utility, among others. The Taskbar displays the Windows Notification Area and System Tray. The notification area is located on the right portion of the Taskbar next to the time.

Navigation tips:

- Use the up  and down  arrow icons to navigate between the **Start** and **Apps** screens.
- To display the **Start** screen, on the **Desktop** screen, click the Windows start button.

- To display the **Desktop** screen, on the **Start** screen select the **Desktop** tile.
- To display the **Desktop** screen, on the **Apps** screen select the **Desktop** tile.
- To switch between the **Start** screen and the **Desktop** screen press the Windows start button on your keyboard.
- To access the Control Panel, on the **Apps** or **Start** screen click on the **Control Panel** tile.
- To access the Administration Tools, on the **Apps** or **Start** screen click on the **Administrative Tools** tile.

These screen navigation methods work when you are using the server's keyboard and mouse directly, or when you are using Remote Desktop to access the server.

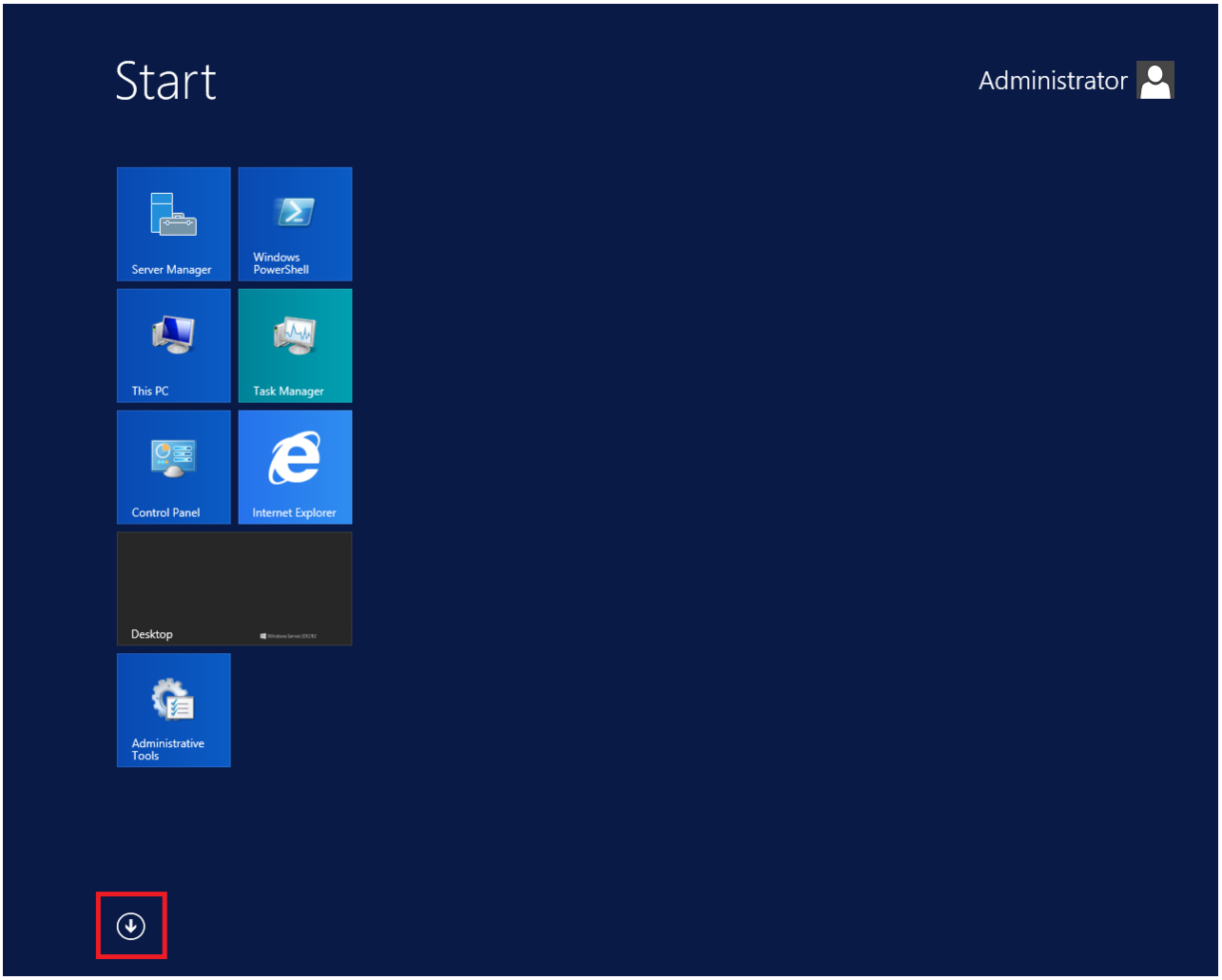


Figure 4: Example of the Start screen, with the down arrow icon highlighted in a red box.

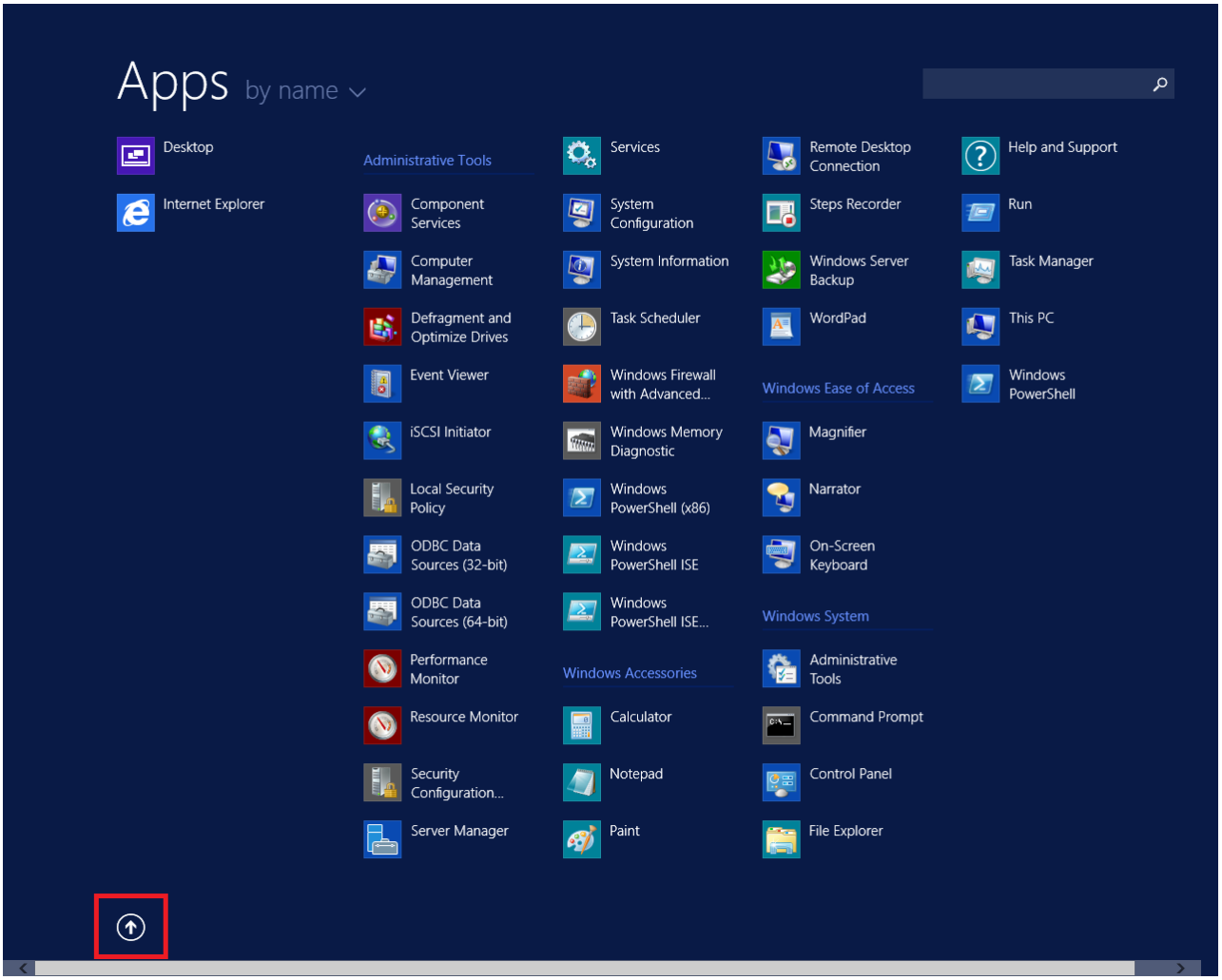


Figure 5: Example of the Apps screen, with the up arrow icon highlighted in a red box.

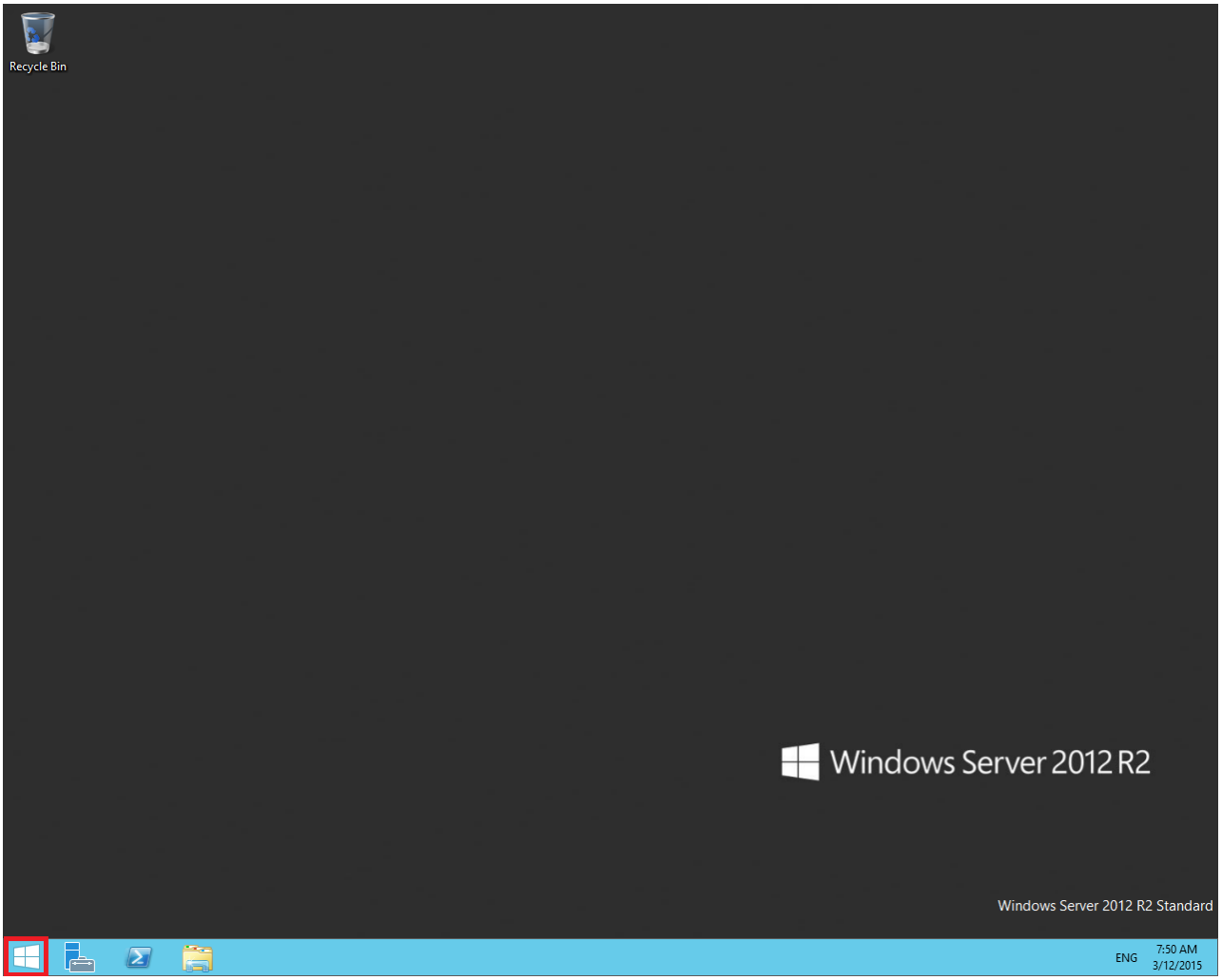


Figure 6: Example of the Desktop screen, with the Windows start button highlighted in a red box.

The following table describes some of the Taskbar sections of the **Desktop** screen.

Icon	Name	Description
	Windows start button	Use the Windows start button to navigate to the **Start** screen. Use this button to switch between the **Start** screen and the **Desktop** screen.
	Server Manager	Use this button to access the Server Manager to configure the roles and features to the server.
	PowerShell	Use the PowerShell button to start the Windows PowerShell console. Windows PowerShell is a command-line shell that provides cmdlets (pronounced command-lets) for server configuration and management. PowerShell also provides scripting functions for task automation.
	This PC	Use this button to start the This PC Windows Explorer. Use this to access and navigate the folders, files, and storage devices on the server.

The contents of your screens can vary depending on the roles, features, and applications installed on your server.

For more information about the Windows Server 2012 R2 operating system, refer to the Microsoft support website and Microsoft product documentation.

Navigating the Microsoft Windows Server 2016 or Windows Server 2019 User Interface

This section describes how to navigate the main user interface screens of the Windows Server 2016 and Windows Server 2019 operating system.

The following table describes some of the main Microsoft Windows Server 2016 and Windows Server 2019 user interface items, and compares them with the corresponding items on the Windows Server 2012 R2 user interface.

User interface item	Description
Start button	The Start button opens a list of shortcuts to the main administration interfaces of the server, including shortcuts to Contact Center applications. The Start button displays the currently logged on user and provides some basic server log out and locking functions. The Start button offers similar functionality as the Windows Server 2012 R2 Start screen and App screen.
Desktop screen	The Desktop screen contains the Windows start button, the Windows Taskbar, Recycle Bin, and shortcuts to the Windows Explorer utility, among others. The Taskbar displays the Windows Notification Area and System Tray. The notification area is located on the right portion of the Taskbar next to the time. The Desktop screen is the same on Windows Server 2019, Windows Server 2016, and Windows Server 2012 R2.

Navigation tips:

- To display the **Start** menu, on the **Desktop** screen, click the Windows start button.
- To access the Control Panel, on the **Start** menu click on the **Control Panel** tile.
- To access the Administration Tools, on the **Start** menu click on the **Windows Administrative Tools** tile.

The contents of your screens can vary depending on the roles, features, and applications installed on your server.

For more information about the Windows Server 2016 or Windows Server 2019 operating system, refer to the Microsoft support website and Microsoft product documentation.

Important:

Contact Center documentation describes how to perform all procedures using Windows Server 2012 R2 only. Use this section to determine how to perform the same procedures on a Windows Server 2016 or Windows Server 2019 operating system.

Chapter 8: Deploying Avaya Workspaces

Avaya Workspaces is an optional browser-based application for agents. Avaya Workspaces is already pre-installed on the Avaya Contact Center Select Hardware Appliance server. When you power on the server and finish the Microsoft Windows operating system activation, configure Avaya Workspaces using the Ignition Wizard utility.

You can also add Avaya Workspaces to your solution at a later stage using the Update Configurator.

The following steps describe the sequence of tasks you perform to configure Avaya Workspaces during the initial installation:

1. Complete the Installation checklist details related to Avaya Workspaces and NTP servers. See Avaya Workspaces checklist on page 31.
2. In the Ignition Wizard, configure Avaya Workspaces and NTP servers. You must enter three IP addresses, one per each Avaya Workspaces node. You must also enter the Cluster IP address. See Configuring Avaya Workspaces during the initial installation on page 87.

The following steps describe the sequence of tasks you perform to add Avaya Workspaces to an existing solution:

1. Complete the Installation checklist details related to Avaya Workspaces and NTP servers. See Avaya Workspaces checklist on page 31.
2. In the Update Configurator, configure the details for the Avaya Workspaces cluster and NTP servers. See Adding Avaya Workspaces to an existing solution on page 90.

Configuring Avaya Workspaces during the initial installation

About this task

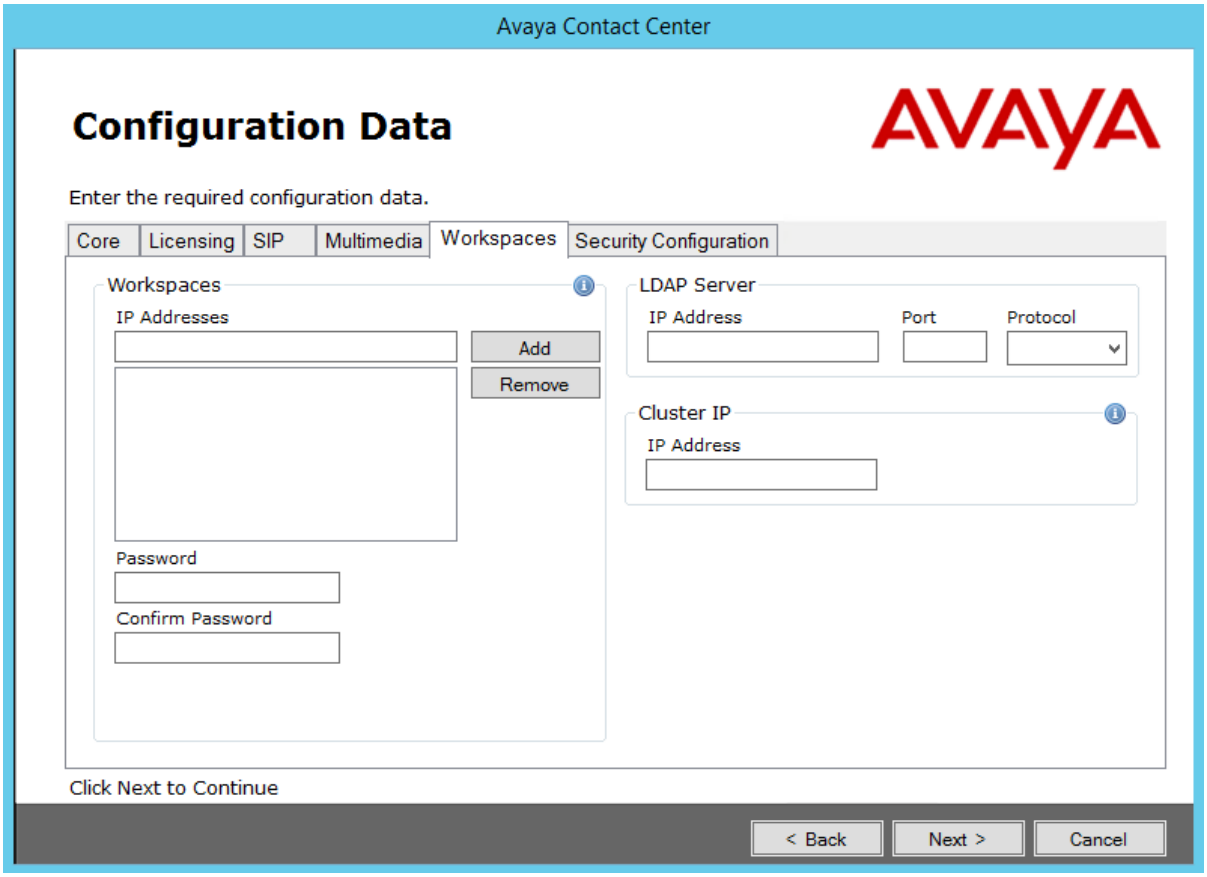
Use this procedure to configure Avaya Workspaces during the initial installation of Avaya Contact Center Select.

Note:

Ensure that you enter the Cluster IP Address for the Avaya Workspaces cluster. This is a single IP address that you use to access Avaya Workspaces.

Procedure

1. On the Contact Center Ignition Wizard screen, select the **Workspaces** tab and configure the details.



2. In the **Workspaces** section, click **Add** next to the IP Address box to add IP addresses of the Avaya Workspaces nodes. Click **Remove** if you want to remove an IP address.

   You must add three IP addresses. Enter IP addresses that are not in use.

3. In the **Workspaces** section, in the **Password** box, enter the root password for the Avaya Workspaces nodes.

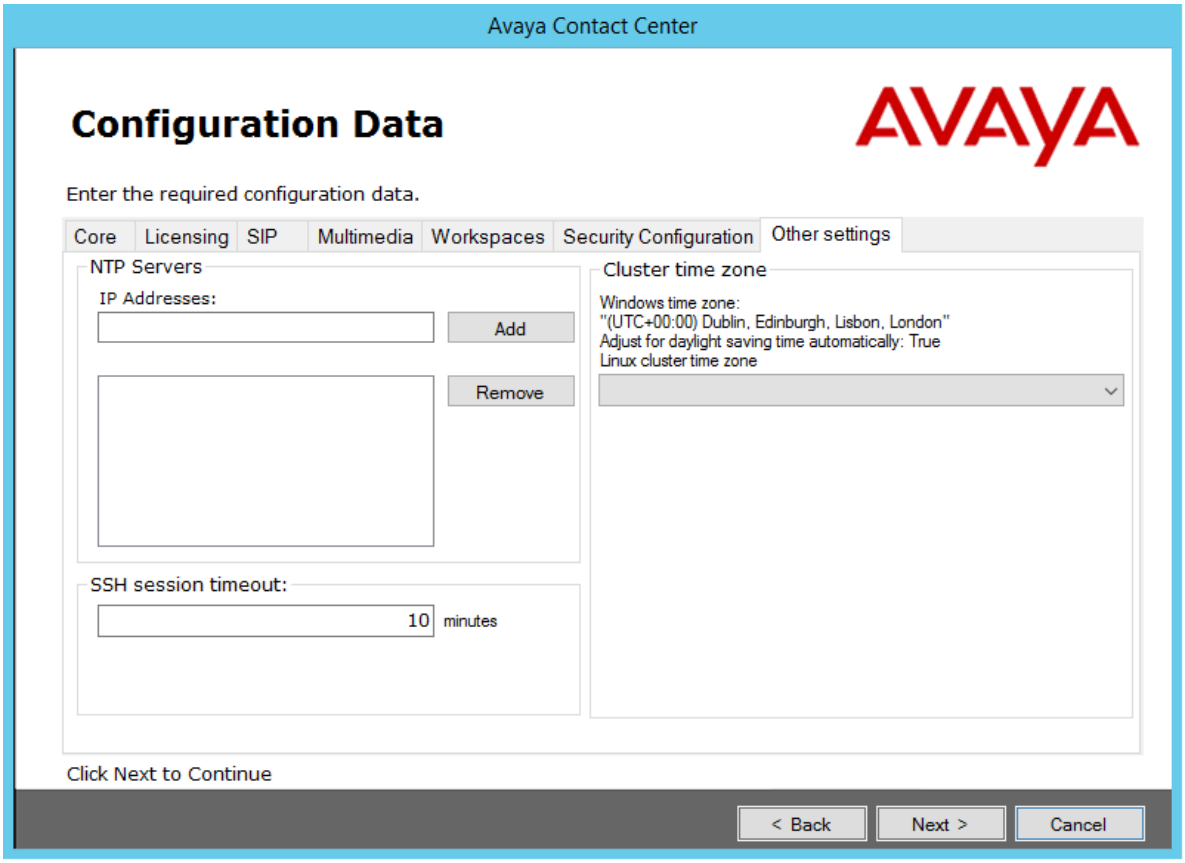
   The password is checked against the server security policy for minimum password requirements. Avaya recommends that you enter a password that conforms to your corporate password policy.

   Note:

   Do not use special symbols: @ # £ & ^.

4. In the **Confirm Password**, enter the password again.
5. In the **LDAP Server** section, in the **IP Address** box, enter the IP address of the LDAP Server.

6. In the **Port** field, enter the port number of the LDAP protocol.
7. From the **Protocol** drop-down list, select a type of encryption you want to use:
   - TCP
   - TLS
8. In the **Cluster IP** field, enter the IP address of the Avaya Workspaces cluster.
9. Select the **Other settings** tab to configure NTP servers for time synchronization.



10. In the **NTP Servers** section, click **Add** to add an IP address of an NTP server.

    You can add up to three IP addresses. To remove the IP address, select the required IP address and click **Remove**.
11. In the **SSH session timeout** box, type the timeout value in minutes.

    The default value is 10 minutes. You can enter the value from 5 to 60 minutes.
12. In the **Cluster time zone** section, from the drop-down list, select the time zone of the Linux cluster.

    Avaya recommends that you use the appropriate time zone of the Windows system. You can view the current Windows time zone on the same screen.
13. Click **Next**.

Adding Avaya Workspaces to an existing solution

About this task

You can add the Avaya Workspaces cluster to your current solution at any stage using the Contact Center Update Configurator.

Before you begin

- Ensure that your Contact Center is licensed for Avaya Workspaces.
- Update your Contact Center to Release 7.1 Feature Pack 2 or later.
- Complete the Installation checklist details related to Avaya Workspaces and NTP servers. See Avaya Workspaces checklist on page 31.

Procedure

1. Log on to the Contact Center server.
2. On the **Apps** screen, in the **Avaya** section, select **Update Configurator**.

   The Contact Center Update Configurator opens.
3. On the **Configure Workspaces** tab, next to the **IP Address** box, click **Add**.

   You must add three IP addresses. Enter IP addresses that are not in use.

   To remove an IP address, select an address and click **Remove**.
4. In the **Cluster IP** field, enter the IP address of the Avaya Workspaces cluster.
5. In the **Password** box, type the root password for the Avaya Workspaces cluster.

   The password is checked against the server security policy for minimum password requirements. Avaya recommends that you enter a password that conforms to your corporate password policy.

   Note:

   Do not use special symbols: @ # £ & ^.
6. In the **Confirm Password** box, retype the password.
7. **(Optional)** To ensure that passwords match, select the **Show password** check box.
8. In the **LDAP IP Address** box, type the IP address of the LDAP server.
9. In the **Port** field, enter the port number of the LDAP protocol.
10. From the **Protocol** list, select one of the following encryption types:
    - TCP
    - TLS
11. To configure NTP servers for time synchronization, select the **Other settings** tab.
12. To add an IP address of an NTP server, next to the **IP Address** box, click **Add**.

    You can add up to three IP addresses.

To remove an IP address, select an address and click **Remove**.

13. In the **SSH session timeout** box, type the timeout value in minutes.

    The default value is 10 minutes. You can enter the value from 5 to 60 minutes.

14. From the **Linux cluster time zone** list, select the time zone of the Linux cluster.

    Avaya recommends that you use the appropriate time zone of the Windows system. You can view the current Windows time zone on the same screen.

15. Click **Configure**.

16. When the Contact Center Update Configurator completes the configuration process, click **Yes** to restart the server.

Part 3: User Contact Recording configuration

Chapter 9: User Contact Recording Pause and Resume configuration

Avaya Contact Center Select supports IP Office Call Recording. IP Office Call Recording provides regulatory type recording, including the option to pause automatic recording for Payment Card Industry (PCI) security compliance. Avaya Contact Center Select supports the Call Recording pause and resume feature when it is initiated from a physical phone set. The Agent Desktop user interface does not have a pause button. Agents and agent supervisors must use their physical phone to pause and resume voice contact recording.

If your Avaya Contact Center Select agents and agent supervisors must be able to pause contact recording, add a Pause Recording button to each of their associated IP Office users.

Using IP Office Manager

Before you begin

- Install the IP Office Manager software on a client computer.
- Ensure the client computer can communicate with the IP Office server.

About this task

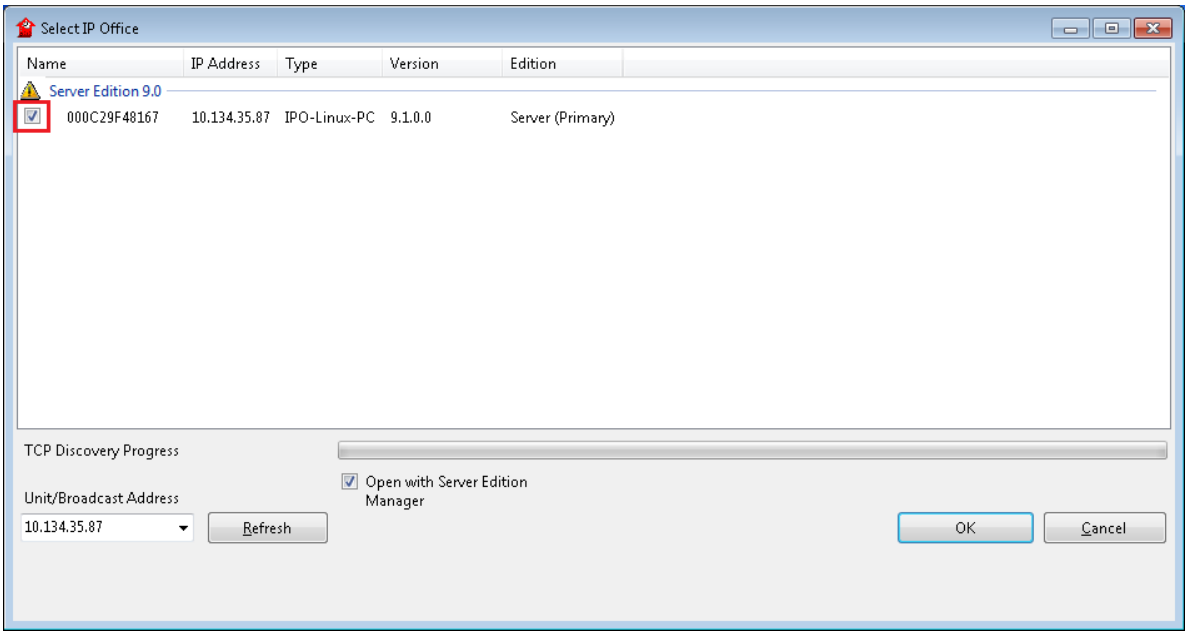
IP Office Manager is a component of the IP Office administration suite of applications. You use IP Office Manager to configure IP Office. IP Office Manager runs on a Windows computer and connects to the IP Office system using an Ethernet LAN connection.

IP Office Manager is an off-line editor. Use IP Office Manager to connect to your IP Office server and retrieve a local copy of the IP Office current configuration settings. You can then edit the local copy of the IP Office configuration and when you are ready, save your updated configuration data back to the IP Office server.

Procedure

1. On the client computer, select **Start** > **All Programs** > **IP Office** > **Manager**.
2. On the **Configuration Service User Login** message box, in the **Service User Name** box, type the user name. The default name is Administrator.
3. In the **Service User Password** box, type the user password. The default password is Administrator.

4. From the menu, select **File** > **Close Configuration**. This closes any open and potentially out-of-date configurations.
5. To retrieve the current (most recent) IP Office configuration settings, from the menu, select **File** > **Open Configuration**.
6. In the **Select IP Office** window:
   - If the required IP Office server is listed, use the check box to select your IP Office server from the list of available servers.
   - If the required IP Office server is not listed, in the **Unit/Broadcast Address** box type the IP address for your IP Office server. Click **Refresh** to perform a new search. The IP Office server then appears in the list of available servers. Use the check box to select your IP Office server from the list of available servers.



7. Click **OK**.
8. On the **Configuration Service User Login** message box, in the **Service User Name** box, type the user name. The default name is Administrator.
9. In the **Service User Password** box, type the user password. The default password is Administrator.
10. IP Office Manager opens and displays the current configuration data for your IP Office server.

Configuring a Pause Recording button for users

Before you begin

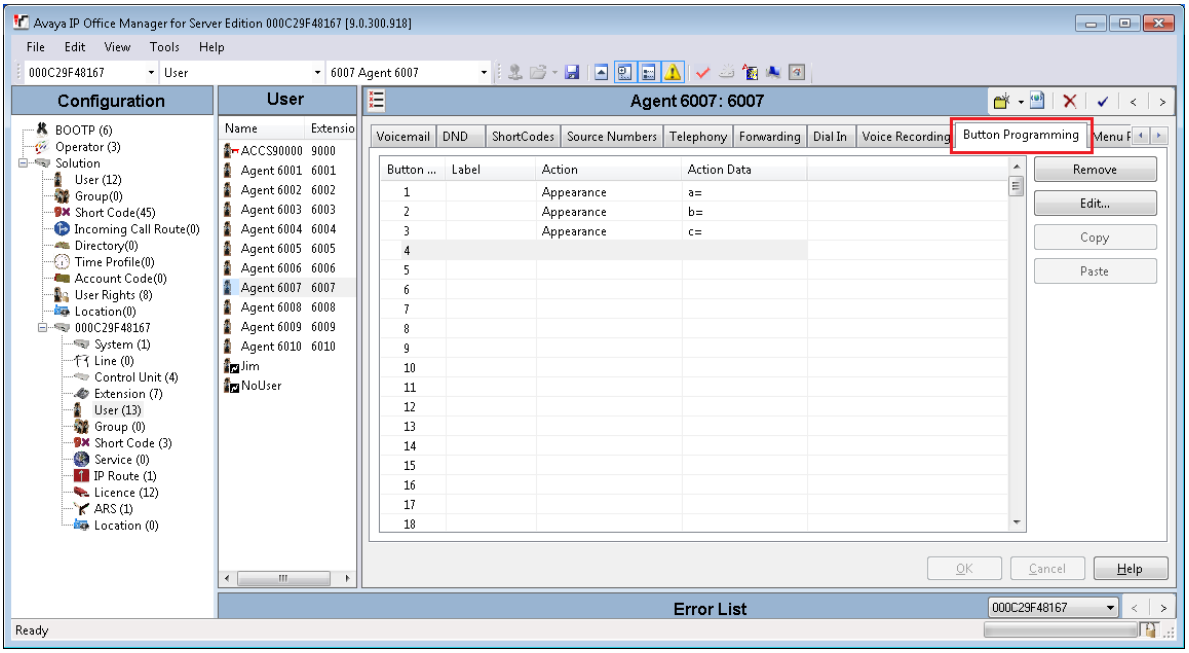
- Ensure the Contact Recorder application is installed, configured, and working on your IP Office. For more information about Contact Recorder, see *Installing Contact Recorder for IP Office* on the Avaya Support website at http://support.avaya.com.

About this task

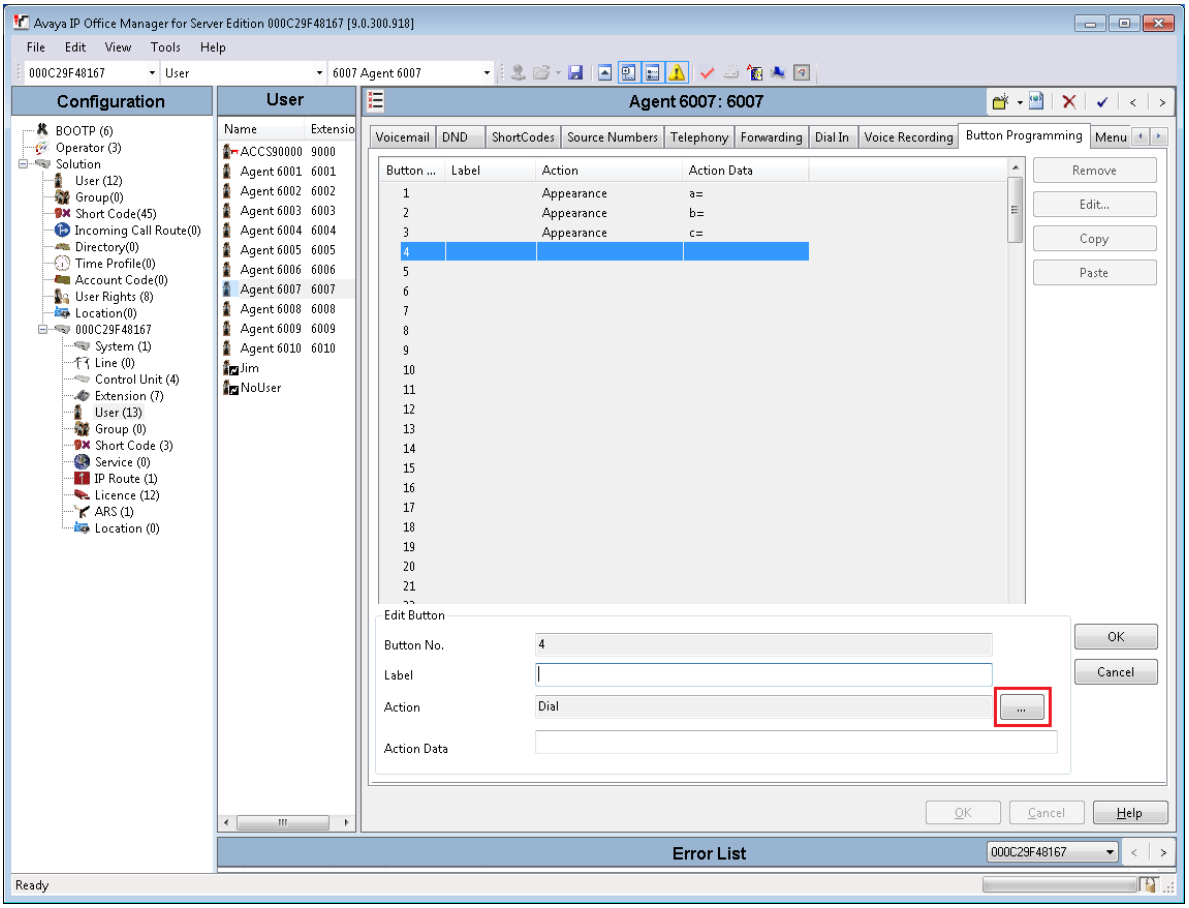
Configure a Pause Recording button for each Avaya Contact Center Select (agent and agent supervisor) user. The button status indicates when call recording is paused. Pressing the button again restarts call recording. The IP Office system can also automatically restart recording after a set delay.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, select your IP Office server.
3. In the left pane, select **User** and select the individual user.
4. In the right pane, select the **Button Programming** tab.

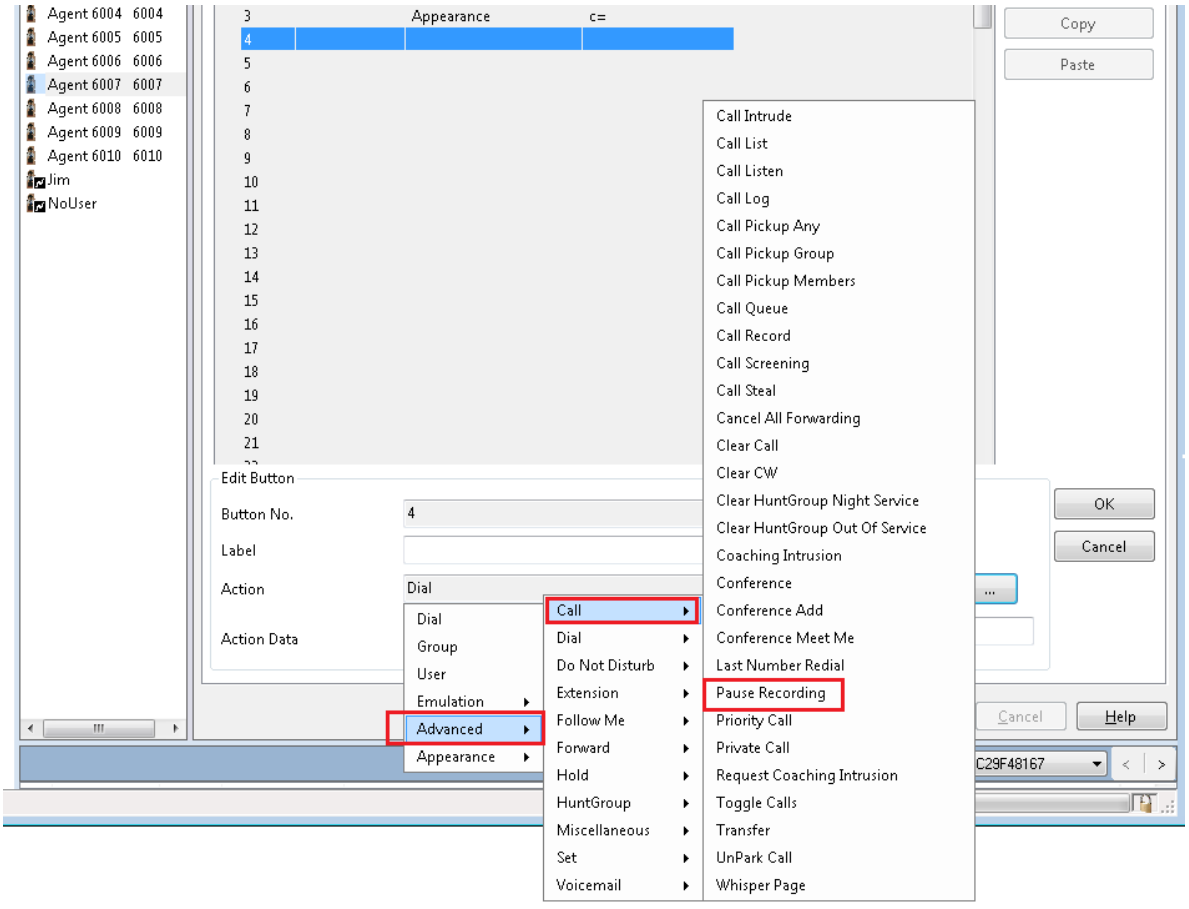


5. From the user **Button** list, select the number of the button on which you want to program Pause Recording and click **Edit**.

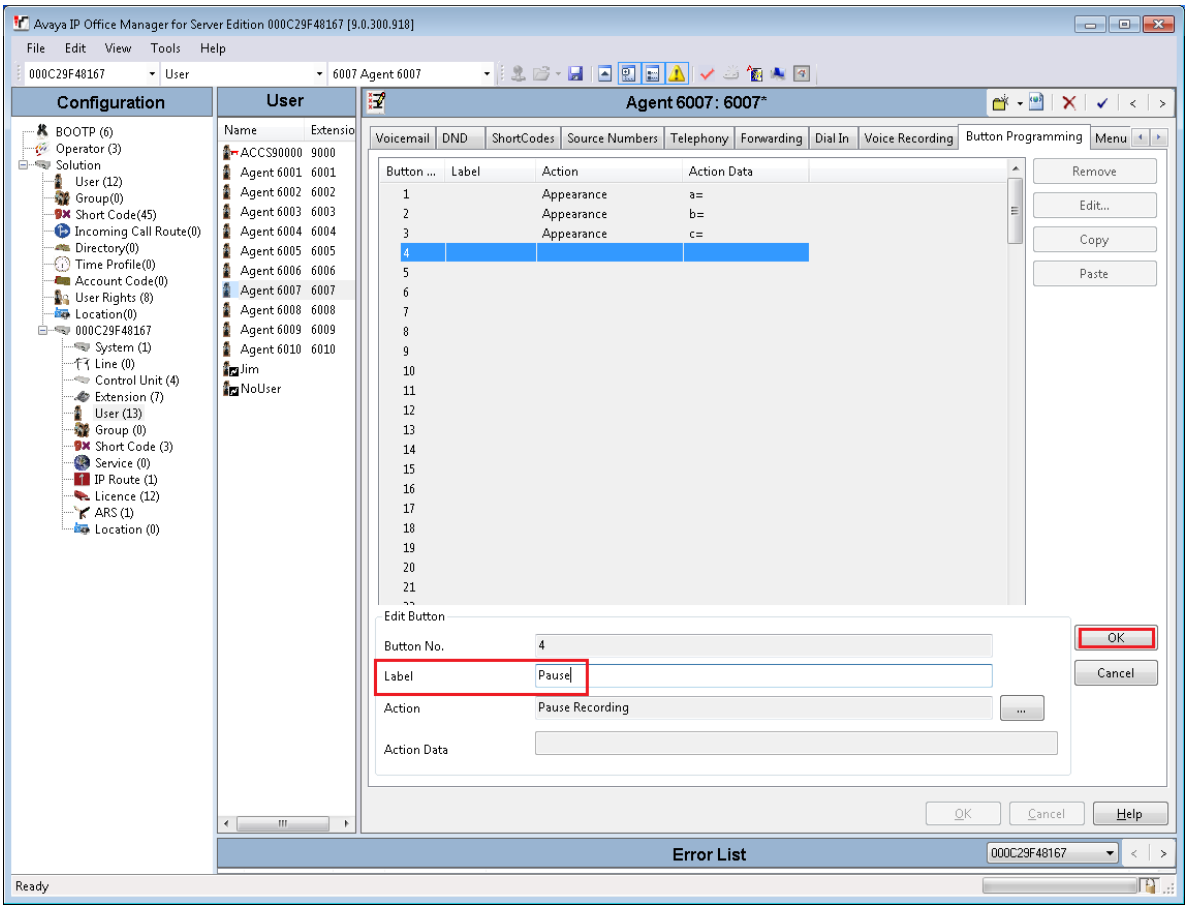


6. In the **Edit Button** section, click the **Action** browse "…" button.

7. Select **Advanced** > **Call** > **Pause Recording**.

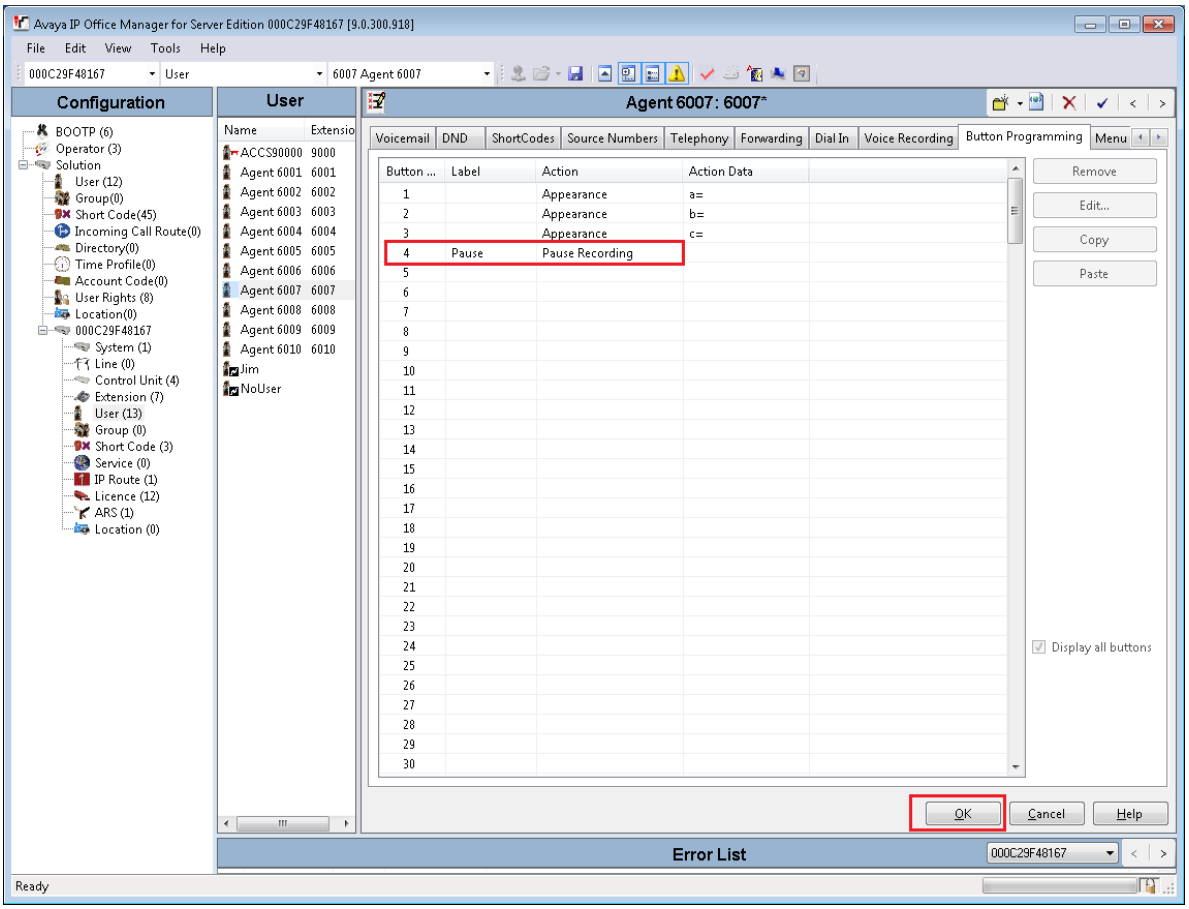


8. In the **Label** box, type a description to appear on the telephone display.



9. Click **OK**.

10. On the **Button Programming** tab, click **OK**.



11. Repeat this procedure for each IP Office user that represents an Avaya Contact Center Select agent or agent supervisor. Avaya recommends that you configure Pause Recording on the same button number for all users. Avaya recommends that you label each Pause Recording button with the same description.
12. Continue to add a Pause Recording button to each new IP Office user that represents a new Avaya Contact Center Select agent or agent supervisor.

Configuring the Contact Recording Auto Restart Delay

Before you begin

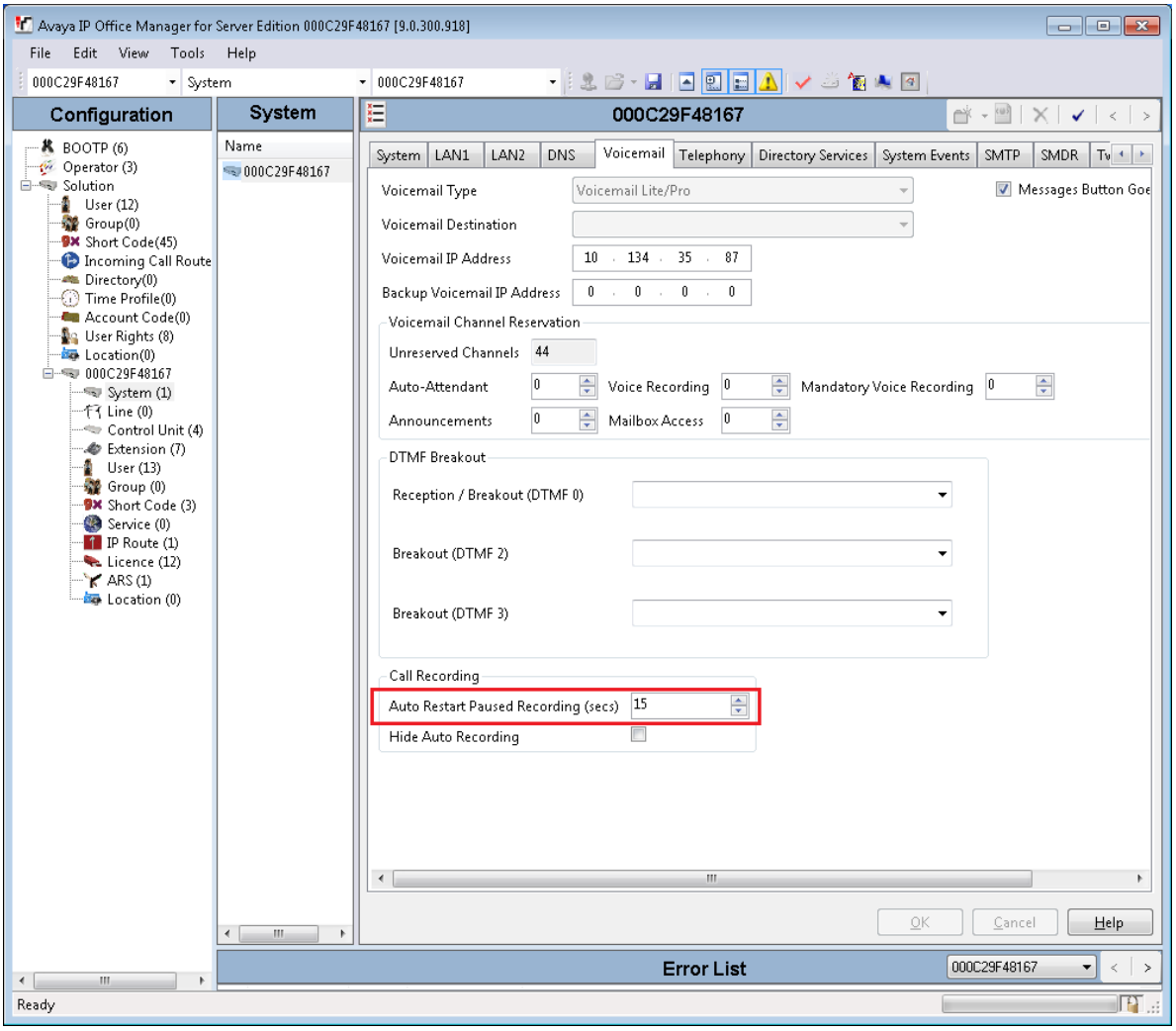
- Ensure the Contact Recorder application is installed, configured, and working on your IP Office. For more information about Contact Recorder, see *Installing Contact Recorder for IP Office* on the Avaya Support website at http://support.avaya.com.

About this task

By default, Contact Recording automatically restarts a paused recording after 15 seconds. Configure the Auto Restart Paused Recording setting for your solution.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, select your IP Office server.
3. In the left pane, click **System**.
4. Click the **Voicemail** tab.
5. Set **Auto Restart Paused Recording** to the required time in seconds.



6. Click **OK**.

Saving the IP Office configuration data

Before you begin

- Install the IP Office Manager software on a client computer that can communicate with the IP Office server.

About this task

Use IP Office Manager to save your configuration changes to the IP Office server.

Procedure

1. In IP Office Manager, in the **Configuration** pane, select your IP Office server.
2. From the main IP Office Manager menu, select **File** > **Save Configuration**.
3. On the **Send Multiple Configurations** window, use the check box to select your IP Office server from the list.
4. Click **OK**.

   IP Office Manager saves the offline configuration file to your IP Office server.

Part 4: Reverse proxy for Avaya Workspaces

Chapter 10: Solution overview

You can configure the reverse proxy functionality for Avaya Workspaces. With this functionality, remote agents and supervisors located outside the contact center infrastructure can access Avaya Workspaces and perform their tasks without VPN connection.

Important:

Avaya Workspaces for Avaya Contact Center Select does not support WebRTC-enabled agents. To handle voice calls, Avaya Workspaces remote agents must use Avaya softphones or hardphones being logged in as remote workers.

This chapter describes how to configure the remote access to Avaya Workspaces using the Avaya Session Border Controller for Enterprise reverse proxy feature.

A reverse proxy is a web server that terminates connections with clients and makes new connections to back-end servers on their behalf. When you enable the reverse proxy for Avaya Workspaces using Avaya Session Border Controller for Enterprise, remote agents and supervisors can access Avaya Workspaces without VPN connection.

This part does not include information about deployment and configuration of the following products:

- Avaya Contact Center Select with Avaya Workspaces
- Avaya Aura® Media Server
- Avaya Session Border Controller for Enterprise
- Softphones or hardphones for remote workers

For more information about deployment and configuration of the above-mentioned products, see the corresponding product documentation at https://support.avaya.com.

Supported contact types

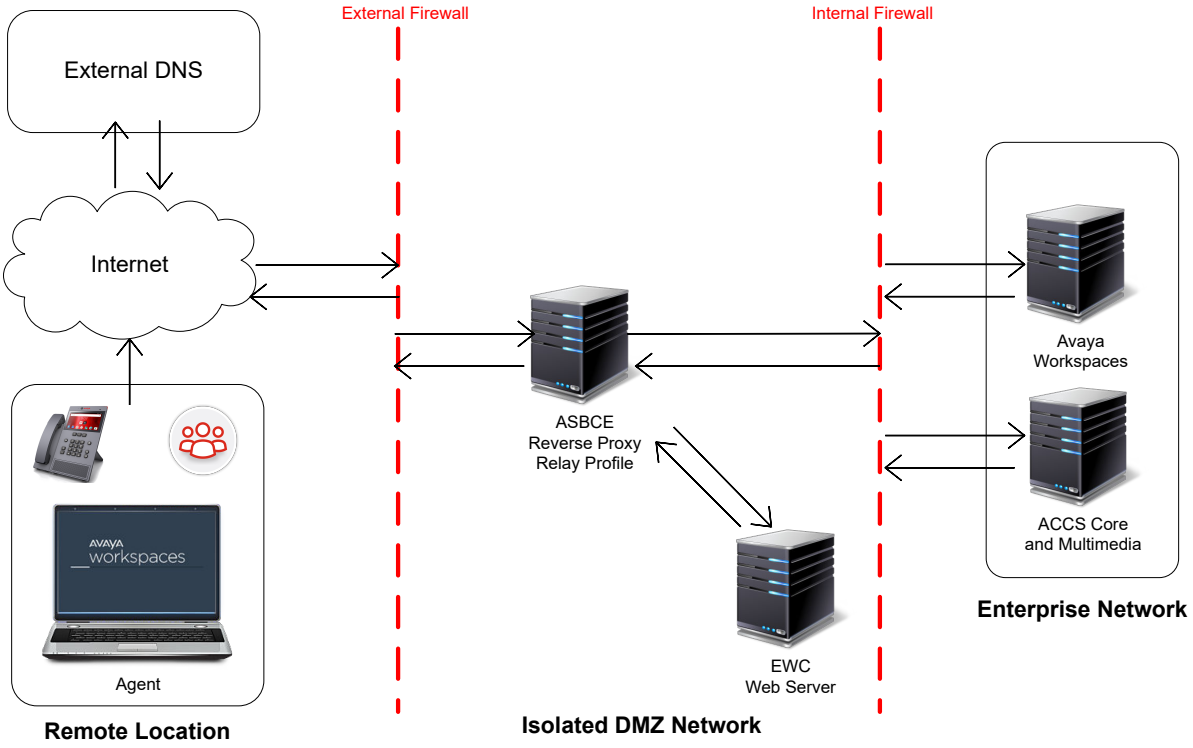
Avaya Workspaces supports the remote worker functionality for the following contact types:

- Web Chat
- Email
- Voice (using remote worker hard- or softphone)
- Outbound
- Generic Channel (contacts created inside the enterprise network)

Architecture overview

You can configure reverse proxy on Avaya Session Border Controller for Enterprise to allow external agents to access Avaya Workspaces from a remote location.

The following diagram shows an example of the remote agent solution architecture:



The following are the considerations for the reverse proxy for Avaya Workspaces:

- The implementation requires a split-horizon DNS where both external and internal agents use the same FQDNs to access Avaya Workspaces. The FQDNs resolve to different IPs depending on whether the agent is remote or on-premise.
- Only one external (internet-facing) IP address is required. Externally, all required FQDNs resolve to the single IP and are routed internally to the correct Avaya Workspaces server/ cluster based on an URL.
- Configure an external firewall with the following items:
  - One external IP address on the external (WAN) side.
  - One internal IP address on the internal (LAN) side.
- Avaya Session Border Controller for Enterprise requires the following available items:
  - One IP on the external (B1) side.
  - One IP on the internal (A1) side.

- Configure an internal firewall with the following items:
  - One externally facing IP address on the external (WAN) side.
  - One internally facing IP address on the internal (LAN) side.

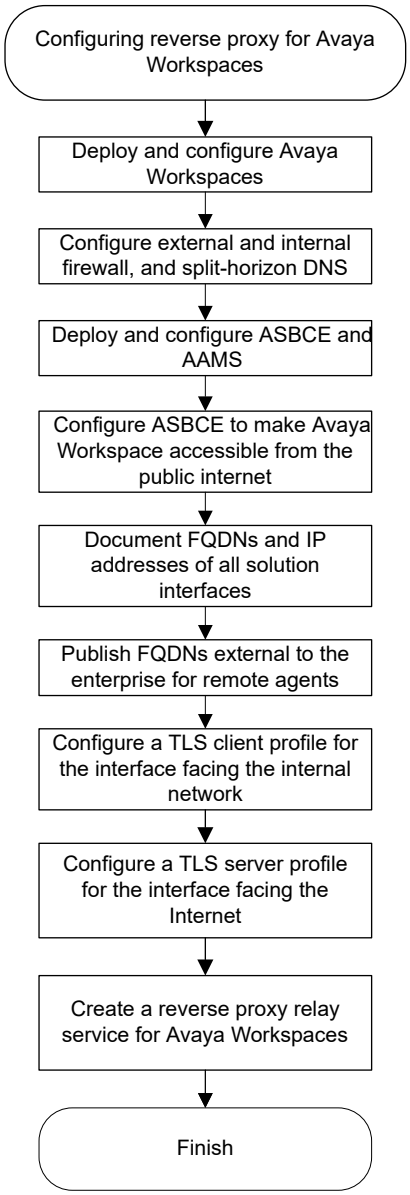
Prerequisites

Before you configure the remote access through reverse proxy, do the following:

- Deploy and configure Avaya Workspaces for all required channels.
- Ensure that internal agents can log in to Avaya Workspaces and process contacts.
- Deploy the following applications:
  - Avaya Aura® Media Server
  - Avaya Session Border Controller for Enterprise
- Configure split-horizon DNS for your solution so that both internal and remote agents can use the same FQDNs to access Avaya Workspaces. However, the FQDNs resolve to different IP addresses depending on whether the agent is remote or on-premise.
- Configure the external firewall to NAT requests on all required ports through to the Avaya Session Border Controller for Enterprise.
- Configure the internal firewall to route requests through to Avaya Workspaces using the NAT functionality.

Reverse proxy configuration process flow

The following workflow shows the sequence of tasks that you must perform to deploy the reverse proxy for remote access to Avaya Workspaces:



Configuration and deployment details

To enable remote access to Avaya Workspaces for agents outside your enterprise network, you must gather all configuration and deployment details.

Documentation of FQDNs and IP addresses of solution interfaces

To configure remote access to Avaya Workspaces, you must document FQDNs and IP addresses of Avaya Workspaces interfaces that remote agents access during normal operation.

Publishing of FQDNs external to the enterprise for remote agents

Avaya Workspaces users use FQDNs to access the functionality in the solution. In the enterprise network, FQDNs are resolved to the IP addresses through the internal Domain Name Server (DNS). For example, Avaya Workspaces users access Avaya Workspaces cluster FQDN to log in and receive basic user functionality depending on the agent footprint size.

Similar to on-premise workers, remote agents must also be able to utilize the same URLs and client requests, even though they are outside of the enterprise. To allow external users to access Avaya Workspaces, the Avaya Workspaces FQDN must resolve to the Listen IP on the external firewall. Therefore, on the external-facing DNS server, a customer must publish an entry for each required Avaya Workspaces FQDN that remote agents use. The number of FQDNs for publishing depends on customer configuration.

When a remote agent accesses or requests a URL containing the Avaya Workspaces FQDNs, the FQDNs are resolved to a single IP, which is the external firewall Listen IP address.

Function and role of the external firewall for remote agents

All remote agent requests terminate on a single IP address on the external firewall. With the configuration rule on the firewall, the requests are translated into internal addresses and ports by using Network Address Translation (NAT). Customers must configure their external firewall to translate requests coming in on different ports towards the next application in the chain, which is the reverse proxy. The external firewall allows the requests to go to the reverse proxy.

The reverse proxy forwards the requests to the unique IP address and port to the internal firewall based on the path in the request URL.

Configure the external firewall to NAT requests on all required ports through to the Avaya Session Border Controller for Enterprise.

Instead of port 443, Avaya Workspaces uses non-standard ports, so the external firewall must use either HTTP or HTTPS depending on the Avaya Workspaces configuration:

- port 31390 and HTTPS if Avaya Workspaces security is enabled
- port 31380 and HTTP if Avaya Workspaces security is disabled

Function and role the reverse proxy for remote agents

The reverse proxy determines which URL requests must be allowed and how the requests must flow into the enterprise applications. It also relays the reverse communications to remote agents.

The reverse proxy is configured with a set of rules that analyze the request URLs and allow the requests to go to the backend servers.

Reverse proxy policies, TLS profiles, and relay services

Avaya Session Border Controller for Enterprise and reverse proxy perform many essential functions that must be appropriately configured on each deployment:

- Many whitelist relays require a WebSocket connection. Therefore, on Avaya Session Border Controller for Enterprise, you must create a reverse proxy policy with WebSockets enabled.
- Session Border Controller reverse proxy relay requires the following:
  - A TLS client profile for the interface facing the internal Intranet Avaya Workspaces servers/clusters
  - A TLS server profile for the interface facing the Internet
- For each server/cluster:port combination, you must configure a reverse proxy relay service. For multiple servers using the same port, such as 443, Avaya Session Border Controller for Enterprise directs the requests to the appropriate back-end server/cluster based on the URL in the request.

  Instead of port 443, Avaya Workspaces uses non-standard ports, so the server profile must use either HTTP or HTTPS depending on the Avaya Workspaces configuration:
  - port 31390 and HTTPS if Avaya Workspaces security is enabled
  - port 31380 and HTTP is Avaya Workspaces security is disabled

Function and role of the internal firewall

An internal firewall is the final application before the enterprise applications. On its external (WAN) side, the internal firewall communicates with various IP addresses and ports allocated to Avaya Workspaces servers/clusters. Using the NAT functionality and preconfigured rules, it routes all allowed requests through to the servers on the internal network.

Configure your internal firewall to route requests through to Avaya Workspaces using the NAT functionality.

Connectivity details of remote agents

Remote agents connect to Avaya Workspaces similar to how they connect within the enterprise.

Remote agents do not need to log in to an Enterprise VPN to access the Avaya Workspaces application.

Similar to on-site agents, remote agents must use Avaya softphones or hardphones to handle voice and video contacts.

Example of remote agents accessing Avaya Workspaces

A remote agent opens a supported browser and accesses the URL for Avaya Workspaces.

For example, https://<*Avaya Workspaces Cluster FQDN*>/services/UnifiedAgentController/workspaces/.

Based on the externally published FQDNs, the FQDN is resolved to the external firewall IP address and the request is directed to the external firewall. Functions of the external firewall are:

- External firewall allows the requests from remote agents through to the reverse proxy.
- Reverse proxy already has the configuration information set up to allow the requests to be processed securely. After checking the validity of the requests, the requests are forwarded to an internal IP address and port destination on the internal firewall.

Remote worker phone set configuration

Remote Avaya Workspaces agents can handle voice calls using Avaya softphones or hardphones and being logged in as remote workers.

To configure remote worker softphones or hardphones for your Avaya Workspaces agents, follow the instructions in the latest release of *Administering Avaya Session Border Controller for Enterprise* at https://support.avaya.com.

Chapter 11: Avaya Session Border Controller for Enterprise configuration

To enable reverse proxy for Avaya Workspaces, you must first configure Avaya Session Border Controller for Enterprise (Avaya SBCE) to enable calls from the public internet. Therefore, you must install Avaya SBCE as part of your solution. For information about how to install Avaya SBCE, see the Avaya SBCE deployment guide applicable for your solution at https://support.avaya.com/.

For information about how to configure Avaya SBCE to enable calls from the public internet, complete the tasks described in this section.

Configuring Avaya SBCE networks

About this task

Use this procedure to configure Avaya SBCE networks settings.

Procedure

1. Log on to the EMS web interface with administrator credentials.
2. In the navigation pane, click **Networks & Flows** > **Network Management** > **Interfaces**.
3. On the Interfaces page, enable the following interfaces:
   - A1 internal interface
   - B1 external interface
4. On the Networks tab, configure the following networks:
   - A1 internal network
   - B1 external network

Creating a reverse proxy policy

Procedure

1. Log on to the EMS web interface with administrator credentials.
2. In the navigation pane, click **Configuration Profiles** > **Reverse Proxy Policy**.
3. Click **Add**.
4. In the **Rule Name** field, type the name of the reverse proxy policy and click **Next**.
5. In the General area, select the **Allow Web Socket** check box.
6. Keep the default values in the other fields.
7. Click **Finish**.

Deploying Identity Certificate on Avaya SBCE

Creating the common client certificate

About this task

Use this procedure to create the common client certificate that you require while creating a client profile for Avaya Workspaces.

Procedure

1. Create an end entity by performing the following steps:
   a. On the System Manager web console, click **Services** > **Security** > **Certificates** > **Authority**.
   b. In the navigation pane, in the RA Functions section, click **Add End Entity**.
   c. In the **End Entity Profile** field, select `INBOUND_OUTBOUND_TLS`.
   d. In the **Username** field, enter a user name.

      For example, SBCINT.
   e. In the **Password (or Enrollment Code)** field, enter a password.

      Ensure that you make a note of the user name and password. The user name and password are required when creating a certificate for this server.
   f. In the **Confirm Password** field, re-enter the password.
   g. In the **CN, Common name** field, enter the FQDN of Session Border Controller.

      For example, Subject: CN=workspaces.acc.avaya.com, OU=SDP, O=AVAYA, C=US

h. In the **IP Address** field, enter the IP address of the Session Border Controller internal interface.

i. In the **Token** field, select `P12 file`.

j. Click **Add**.

2. Create a keystore by performing the following steps:

a. On the System Manager web console, click **Services** > **Security** > **Certificates** > **Authority**.

b. In the navigation pane, click **Public Web**.

c. On the EJBCA welcome page, in the navigation pane, click **Create Keystore**.

d. On the Keystore Enrollment page, enter the user name and password that you specified while creating the end entity.

e. Click **OK**.

f. Select the **Key Length** as 2048 bits.

g. Click **Enroll**.

h. Save the certificate file.

Creating the common server certificate

About this task

Typically, a public Certificate Authority is used to generate a common server certificate. However, if you cannot use a public CA, you can use System Manager to create a certificate. When using a common server certificate created in System Manager, ensure that you add System Manager as a trusted certificate authority on every agent's PC.

Use this procedure to create the common server certificate that you require while creating a server profile for Avaya SBCE.

Procedure

1. Create an end entity by performing the following steps:

a. On the System Manager web console, click **Services** > **Security** > **Certificates** > **Authority**.

b. In the navigation pane, in the RA Functions section, click **Add End Entity**.

c. In the **End Entity Profile** field, select `INBOUND_OUTBOUND_TLS`.

d. In the **Username** field, enter a user name.

For example, SBCEXT.

e. In the **Password (or Enrollment Code)** field, enter a password.

Ensure that you make a note of the user name and password. The user name and password are required when creating a certificate for this server.

f. In the **Confirm Password** field, re-enter the password.

g. In the **CN, Common name** field, enter the FQDN of Session Border Controller.

For example, Subject: CN=primary_sbc.acc.avaya.com, CN=workspaces.acc.avaya.com, OU=SDP, O=AVAYA, C=US

h. In the first **DNS Name** field, enter the enter the FQDN for the Avaya Workspaces cluster.

For example, DNS1: workspaces.acc.avaya.com.

i. In the **Token** field, select `P12 file`.

j. Click **Add**.

2. Create a keystore by performing the following steps:

a. On the System Manager web console, click **Services** > **Security** > **Certificates** > **Authority**.

b. In the navigation pane, click **Public Web**.

c. On the EJBCA welcome page, in the navigation pane, click **Create Keystore**.

d. On the Keystore Enrollment page, enter the user name and password that you specified while creating the end entity.

e. Click **OK**.

f. Select the **Key Length** as 2048 bits.

g. Click **Enroll**.

h. Save the certificate file.

Creating a client profile for the Avaya Workspaces reverse proxy

Procedure

1. Log on to the EMS web interface with administrator credentials.
2. In the navigation pane, click **TLS Management** > **Client Profiles**.
3. On the Client Profiles page, click **Add**.
4. In the **Profile Name** field, type the name of the profile.
5. In the **Certificate** field, select the common client certificate that you created.

   The certificate must include the internal interface IP that you need to specify in the **Connect IP** field while creating a reverse proxy service for Avaya Workspaces.
6. In the **Peer Verification** field, click **Required**.
7. In the **Peer Certificate Authority** field, use the CA that is used to sign your certificates.
8. In the **Verification Depth** field, type `1`.

9. Keep the default values in the other fields.
10. Click **Finish**.

Creating a server profile for the Avaya Workspaces reverse proxy

Procedure

1. Log on to the EMS web interface with administrator credentials.
2. In the navigation pane, click **TLS Management** > **Server Profiles**.
3. On the Server Profiles page, click **Add**.
4. In the **Profile Name** field, type the name of the profile.
5. In the **Certificate** field, select the common server certificate that you created.

   The certificate must include the Avaya Workspaces cluster FQDN, because external clients use this FQDN to access Avaya Workspaces.
6. In the **Peer Verification** field, click **None**.
7. Keep the default values in the other fields.
8. Click **Finish**.

Extracting the certificate and private key in Session Border Controller

About this task

Use this procedure to extract the certificate and private key from the P12 file in Session Border Controller.

Procedure

1. Log in to Session Border Controller as root user by using an SSH client application, such as PuTTy.
2. Run the following command to extract the certificate from the P12 file:

   ```
   openssl pkcs12 –in <filename>.p12 -out <filename>.pem -nokeys –clcerts
   ```
3. Run the following command to extract the private key from the P12 file:

   ```
   openssl pkcs12 –in <filename>.p12 -out <filename>.key –nocerts
   ```

Installing the client and server certificates on Session Border Controller

About this task

Use this procedure to install the client and server certificates on Session Border Controller.

Procedure

1. Log on to the EMS web interface with administrator credentials.
2. In the navigation pane, click **TLS Management** > **Certificates**.
3. On the Certificates page, click **Install**.
4. In the **Type** field, select `Certificate`.
5. In the **Name** field, type the name of the profile.

   For example, sbc_cert.
6. In the **Certificate File** field, select the certificate that you extracted in Session Border Controller.

   For example, cert.pem.
7. In the **Key** field, select **Upload Key File**.
8. Select the private key that you extracted in Session Border Controller.
9. In the **Key Passphrase** field, enter the password that you provided during private key generation.
10. Click **Upload File**.
11. Check the certificate to verify all details that you provided when creating the p12 file.
12. Click **Install**.

Chapter 12: Configuring reverse proxy for Avaya Workspaces

To enable remote access to Avaya Workspaces, you must first configure Avaya SBCE to allow calls from the public internet and then create a reverse proxy relay service for Avaya Workspaces.

To handle voice and video calls, Avaya Workspaces remote agents must use Avaya softphones or hardphones being logged in as remote workers. For more information about how to configure the remote worker feature, see *Administering Avaya Session Border Controller for Enterprise*.

Follow the instructions in this chapter for details.

Checklist for configuring reverse proxy for Avaya Workspaces

Use the following checklist to configure remote access to Avaya Workspaces:

No.	Task	Description	✔
1	Perform all the required prerequisite procedures.	See Prerequisites on page 105.	
2	Install and configure Avaya SBCE to enable calls from the public internet.	See Avaya Session Border Controller for Enterprise configuration on page 110.	
3	Document the Avaya Workspaces URLs that remote agents must have access to.	See the following procedures: • Documentation of Avaya Workspaces configuration details on page 117	
4	Configure TLS client and server profiles.	See the following procedures: • Configuring a TLS client profile on page 119 • Configuring a TLS server profile on page 118	

Table continues…

No.	Task	Description	✔
5	Create a reverse proxy relay service for Avaya Workspaces.	See the following procedures: • Creating a reverse proxy relay service for Avaya Workspaces on page 120	

Documentation of Avaya Workspaces configuration details

The reverse proxy determines which URL requests must be allowed and how the requests must flow into enterprise applications.

The reverse proxy is configured with a whitelist. Customers configure the whitelist for their deployment and it has all internal Avaya Workspaces URLs that all workers require to access the Avaya Workspaces functionality.

Consider the following:

- The EXT FW WAN IP value must be the same for all external server/cluster FQDNs, as externally, FQDNs for all back-end servers/clusters resolve to a single IP address on the external firewall.
- The SBC-EXT B1 IP must be the same for all servers/clusters, as the external firewall listens to incoming requests on ports 31380/31390 and routes these requests to the assigned B1 (external) interface on the Avaya SBCE using the NAT functionality.
- Based on the URL in the request, Avaya SBCE proxies the request through to an IP on the external (WAN) side of the internal firewall. Therefore, each back-end server/cluster is allocated to a unique IP:port combination on the external (WAN) side of the internal firewall.
- The internal firewall listens to incoming requests on all IP:port combinations on the external (WAN) side and routes these requests to the corresponding back-end Avaya Workspaces server/cluster using the NAT functionality.

Use the table below to document the required IP addresses used to configure the reverse proxy relay services for Avaya Workspaces.

Component	Your value	Description
External FQDN		External FQDN of the Avaya Workspaces cluster.
Internal Cluster IP		IP address of the Avaya Workspaces cluster.
Internal FW WAN IP		External IP address of the internal (WAN) firewall.

Table continues…

Component	Your value	Description
SBC-EXT B1 IP		IP address of the Avaya SBCE external (B1) interface.
Whitelisted URLs in request		All Avaya Workspaces URLs that remote agents must have access to. For example: /Login /GetNewToken /proxy /phonebookquery /attachment /services/OCPDataServices /services/CustomerManagement /services/CustomerJourneyService /services/UnifiedAgentController /services/Broadcast-UnifiedAgentController
EXT FW WAN IP		External IP address of the external (WAN) firewall.

Configuring a TLS server profile

About this task

The Avaya SBCE reverse proxy relay requires a TLS client profile and a TLS server profile. The server profile is for the interface facing the Internet.

Procedure

1. Log on to EMS web interface with administrator credentials.
2. From the Device list, select the SBCE.
3. In the navigation pane, click **TLS Management** > **Server Profiles**.
4. Click **Add**.

   The EMS server display the New Profile window.
5. In the **Profile Name** field, type the name of the profile.

   For example, `CC_Relay_Server`.
6. In the **Certificate** field, select the certificate for external communication.

The certificate must correspond to the external B1 interface used as the Listen IP for a reverse proxy relay.

7. In the **SNI Options** field, select **None**.
8. In the **Peer Certificate Authorities** field, select **None**.
9. Leave other settings as default.
10. Click **Next**.
11. Click **Finish**.

Configuring a TLS client profile

About this task

The Avaya SBCE reverse proxy relay requires a TLS client profile and a TLS server profile. The client profile is for the interface facing the internal Avaya Workspaces cluster.

Procedure

1. Log on to EMS web interface with administrator credentials.
2. From the Device list, select the SBCE.
3. In the navigation pane, click **TLS Management** > **Client Profiles**.
4. Click **Add**.

   The EMS server display the New Profile window.
5. In the **Profile Name** field, type the name of the profile.

   The profile name is `CC_Relay_Client`.
6. In the **Certificate** field, select the certificate for internal communication.

   The certificate must correspond to the internal A1 interface used as the Connect IP for a reverse proxy relay.
7. In the **Peer Certificate Authorities** field, select the certificate for CA.

   CA that signed the identity certs for the internal Avaya Workspaces cluster.
8. In the **Verification Depth** field, set the value to 1.
9. Leave other settings as default.
10. Click **Next**.
11. Click **Finish**.

Creating a reverse proxy relay service for Avaya Workspaces

About this task

A reverse proxy relay service is required for each server/cluster:port combination. Configure a relay for Avaya Workspaces.

Before you begin

Procedure

1. Log on to EMS web interface with administrator credentials.
2. On the **Device** menu, click **SBCE**.
3. Navigate to **DMZ Services** > **Relay**.

   The EMS server displays the Relay Services page.
4. On the Reverse Proxy tab, click **Add**.

   EMS displays the Add Reverse Proxy Profile page.
5. In the **Service Name** field, type the reverse proxy profile name.

   For example, `CC_Relay`.
6. Select the **Enabled** check box.
7. In the **Listen IP** field, select the B1 external network and then select the B1 IP address that is used for the relay.
8. In the **Listen Protocol** field, select **HTTP** or **HTTPS**.
9. In the **Listen Port** field, type `31380` for HTTP or `31390` for HTTPS.
10. In the **Listen TLS Profile** field, select the server TLS profile you created for the external B1 interface.

    If the **Listen Protocol** is set to **HTTP** then this filed is set to **None** automatically.
11. In the **Connect IP** field, select the A1 internal network and then select the A1 IP address that is used for the relay.
12. In the **Server Protocol** field, select **HTTP** or **HTTPS**.
13. In the **Server TLS Profile** field, select the client profile you created for the internal A1 interface.

    If the **Server Protocol** is set to **HTTP** then this filed is set to **None** automatically.
14. In the **Reverse Proxy Policy Profile**, select the reverse proxy policy that you created.
15. In **Server Addresses**, type the internal firewall IP address assigned to the Avaya Workspaces cluster and a corresponding port number.

    Use port number 31390 if security is enabled and port number 31380 if security is disabled.

16. In **Whitelisted URL**, type all internal Avaya Workspaces URLs that remote agents must have access to.
17. Click **Finish**.

Part 5: First phone call and first email

Chapter 13: Agent Desktop

Agent Desktop is a single-interface client application used to interact with customers. You can use it to respond to customer contacts through a variety of media, including phone, outbound contacts, email, Web communication, fax, scanned documents, and Short Message Service (SMS) text messages.

Agent Desktop provides automation for customer responses to eliminate repetitive actions, such as typing a common response in an email message.

Note:

Agents must use Agent Desktop to handle voice and multimedia contacts. Avaya Contact Center Select does not support telephone-only operations for voice agents.

Agent Desktop User Interface

Use Agent Desktop to handle voice, email, Web communications, SMS text message, voice mail, fax, and scanned documents contacts. Use Agent Desktop in the following situations:

- to handle voice contacts in a voice-only contact solution
- to handle voice contacts, email messages, or Web communications contacts in a voice and multimedia contact solution

This chapter describes the main user interface of the Agent Desktop application. There are three main sections to the Agent Desktop user interface:

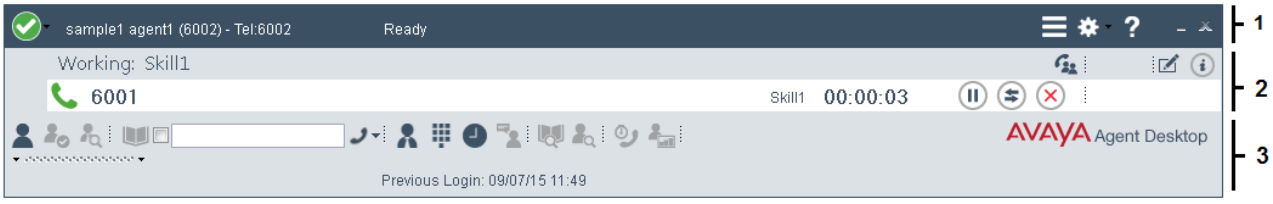


Figure 7: Example of Agent Desktop layout

1	Top bar on page 124
2	Work list window on page 125
3	Action bar on page 126

Agent Desktop also provides other controls and menus that are explained in the following chapters.

Work Item paradigm

The main Agent Desktop user interface is based on a work item paradigm. Each agent-to-customer interaction is a work item. Work items appear on the Agent Desktop work list.

The work list consists of work items and control buttons corresponding to the work item. The controls and functions change depending on the work list window behavior. When a new contact arrives, Agent Desktop adds the new contact as a work item to the work list.

Top bar

The Top bar appears at the top of the Agent Desktop window. The Top bar provides the system status and main controls to operate the Agent Desktop.

Figure 8: Example of Top bar layout

The agent status icon appears on the top left corner of the Agent Desktop Top bar. The Top bar also displays the agent status, agent name, agent login ID, and dialable number of the agent.

The Top bar has the following icons:

Table 1: Top bar icons

Icon	Name	Description
	Agent status	Select agent status.
	Terminal Actions	Access Emergency.
	User preferences	Access user preferences, open the Dashboard, and change work item display settings.
	Help	Access help information.

Use the Terminal Action menu to perform the following tasks:

Table 2: Terminal Action Menu

Command	Description
Emergency	Immediately connect with your supervisor in case of emergency.

Work list window

The work list window contains work items and control buttons corresponding to the work item. The controls and functions change depending on the information in the work list window. The top-right corner of the work list window has work item controls. These controls are common to all work items on the work list. When a new contact arrives, Agent Desktop adds the new contact as a work item to the work list.

The following figure shows the work list windows and controls.

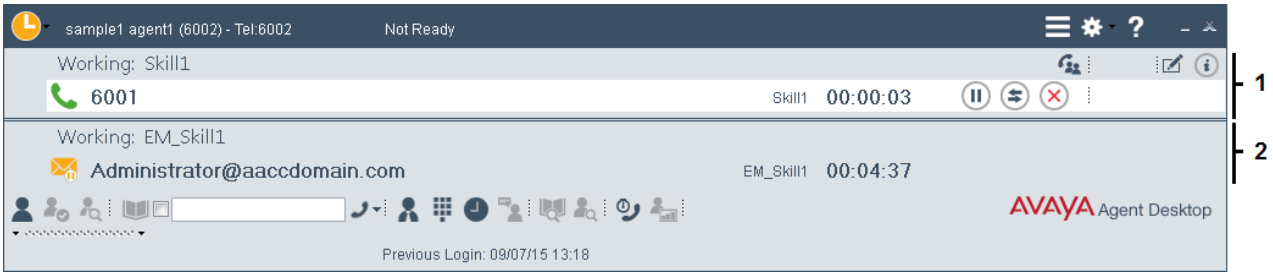


Figure 9: Example of work list layout

The illustrated work list shows two work items:

1	A voice call work item, at the top of the work list.
2	An email work item, at the bottom of the work list.

- A work item is a collection of interactions with a customer, another agent, a supervisor, or an expert.
- A work list is a collection of work items. When you receive a new contact, it is added to the work list so that you can monitor your current contacts. When you finish with the contact, or reject the contact, the work item is removed from the list.

Work item controls:

Each work item has a number of contact-related controls. These controls change depending on the work list window behavior and contact type.

Table 3: Examples of work item controls

Voice	Email	WC	SMS	Voice mail	Fax	Name	Description
						Accept	Accept the work item.
						Release	Release or reject the work item.
						Hold	Place the work item on hold.

Table continues…

Voice	Email	WC	SMS	Voice mail	Fax	Name	Description
						Transfer	Transfer the work item contact.
						Conference/ Join	Conference the work item. Or join two work items.
						Activity code	Set the work item activity code.
						Work item details	Read work items details.

Only appropriate controls are displayed on work items. Voice-related controls are displayed on voice work items. Email-related controls are displayed on email work items.

Action bar

The Action bar contains global controls to create a new work item, to search contacts, and to open secondary windows. The Action bar is located at the bottom of the Agent Desktop window.

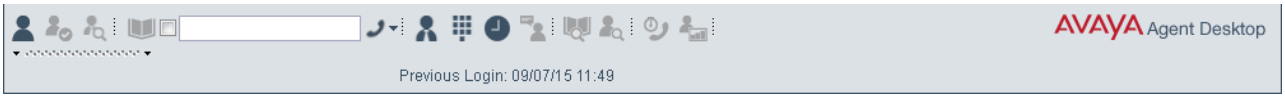


Figure 10: Example of Action bar layout

Use the Action bar at the bottom of the main interface to make new contacts. New voice or email contacts are collectively called new work in the Work Item Paradigm.

Table 4: Action bar commands

Icon	Name	Description
	Customer Details	View customer details.
	Contacts Presence	Contact presence.
	Observe	Listen in or participate in agent-customer calls or chat sessions. (Used by agent-supervisors only)
	Phonebook	Contact agents through the LDAP agent contact directory.
	Originate Call	Start a new work item.
	Supervisor	Call your supervisor.

Table continues…

Icon	Name	Description
	DTMF	Generate Dual-tone Multi-frequency (DTMF) tones.
	Contact Search	Search for contacts.
	Customer Search	Search for customers.
	Schedule Callback	Schedule a callback.
	Agent Statistics	Display the agent statistics scroll bar.

Email User Interface

Use Agent Desktop to handle incoming email messages. You can also use Agent Desktop to create a new email message.

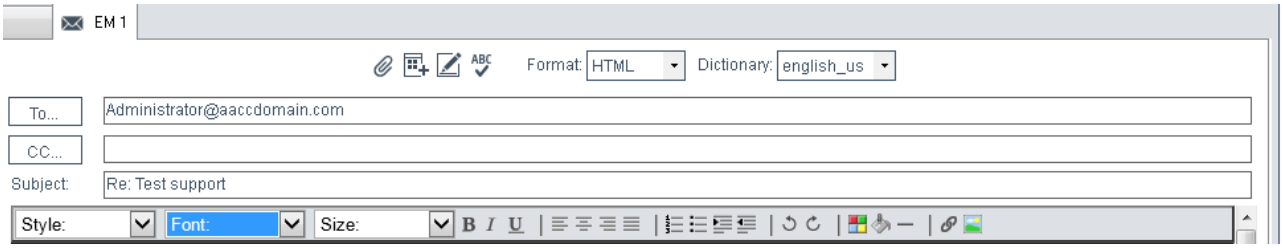


Figure 11: Example of email toolbar

The Agent Desktop email editor offers improved email editing, formatting feature buttons, and management in HTML format email messages.

The following table describes the email feature buttons:

Table 5: Email editing and formatting controls

Control	Name of the Control	Function
B	Bold	Bold the selected text
I	Italic	Italicize the selected text
U	Underline	Underline the selected text
	Left	Align text with left margin
	Center	Center text

Table continues…

Control	Name of the Control	Function
	Right	Align text with right margin
	Justify	Justify text
	Numbers	Numbered list items
	Bullets	Bulleted list items
	Indent	Indent selected text
	Outdent	Outdent selected text
	Undo	Undo last change
	Redo	Redo the last change
	Color	Change color of selected text
	Link	Insert a hyperlink
	Image	Insert an inline image
	Insert a file	Insert an email attachment
	SpellCheck	Spell check the email message
	Insert Signature	Insert a signature to the email message
	Insert a Template	Email templates
	Rule	Adds a continuous line under the selected location
	Highlight	Highlights selected text with a color chosen from the color palette

Installing Agent Desktop software using ClickOnce

Before you begin

- Ensure the client computer meets the hardware and networking requirements for Agent Desktop software. For more information about Agent Desktop requirements, see *Avaya Contact Center Select Solution Description*.
- Ensure the client computer meets the Operating System requirements for Agent Desktop software. For more information about Agent Desktop requirements, see *Avaya Contact Center Select Solution Description*.

About this task

Install Agent Desktop software to handle Avaya Contact Center Select customer contacts.

Procedure

1. In Windows Explorer, Internet Explorer or Microsoft Edge, type the HTTP address (URL) provided by your system administrator.

   The URL format is:

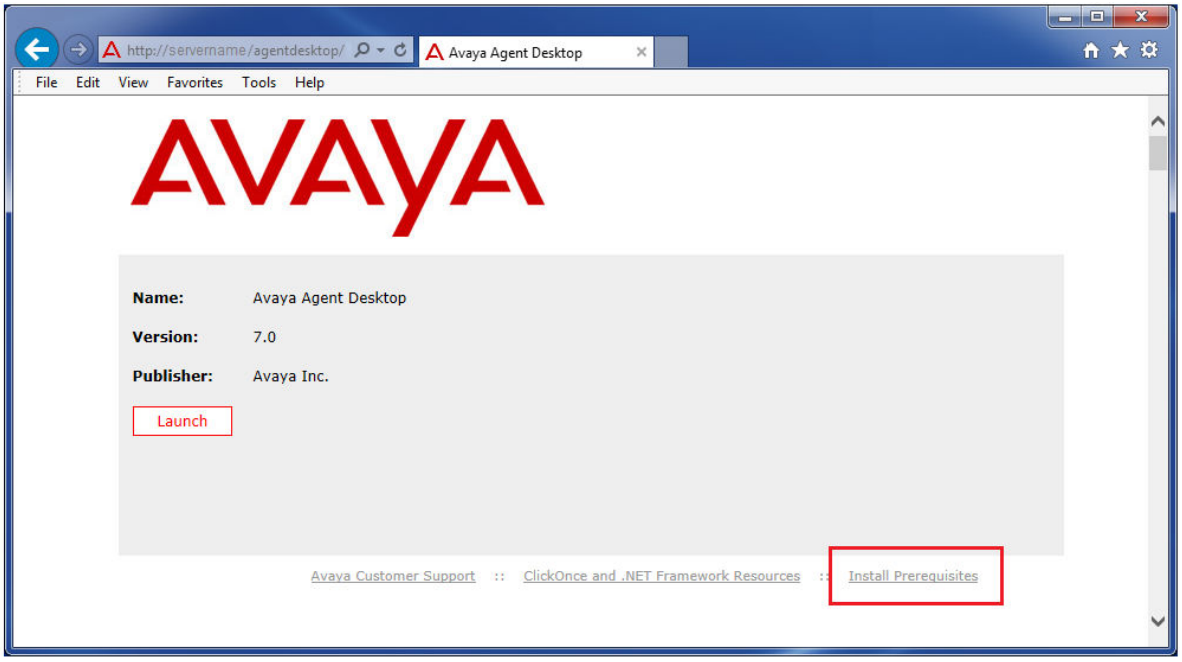
   `http://<ContactCenterServerName>/agentdesktop`

   Where <ContactCenterServerName> is the Avaya Contact Center Select server name.

   Note:

   The Agent Desktop installer does not use a secure HTTPS connection, even if Web Services security is turned on.

2. Click **Install Prerequisites** and follow the on screen instructions to install the .NET and operating system components required to run Agent Desktop software.



3. Click **Launch** to download and install the most recent version of Agent Desktop software.

Logging on to Agent Desktop

About this task

Log on to Agent Desktop and change into the ready state to handle customer contacts.

To support rapid and easy deployment, Avaya Contact Center Select provides some default users and supervisors.

The default sample supervisor “6001” can handle both voice contacts and email messages. To test both voice contacts and email messages, log on as supervisor “6001” and use the default password.

The default sample user “6002” can handle only voice contacts. To test voice contacts, log on as user “6002” and use the default password.

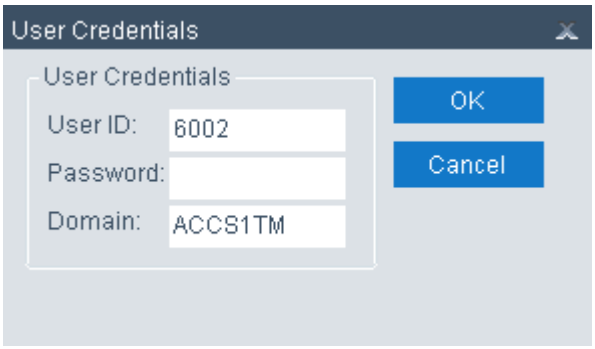
The default users and supervisors all have the same default password. This default password is configured on the *Sample Data* tab of the Avaya Contact Center Select Ignition Wizard during deployment.

Note:

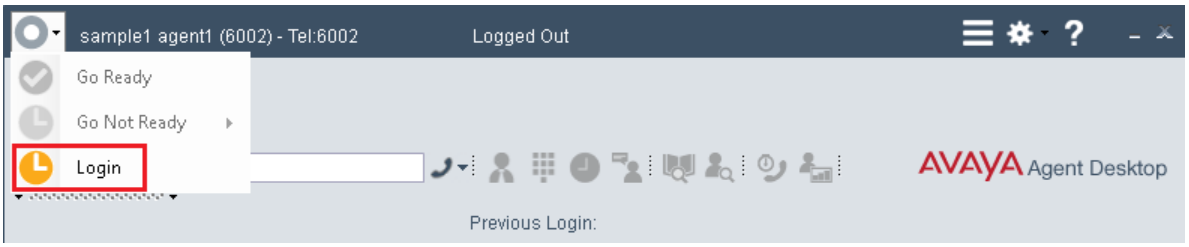
You must be logged on to the desktop phone before you log on to Agent Desktop.

Procedure

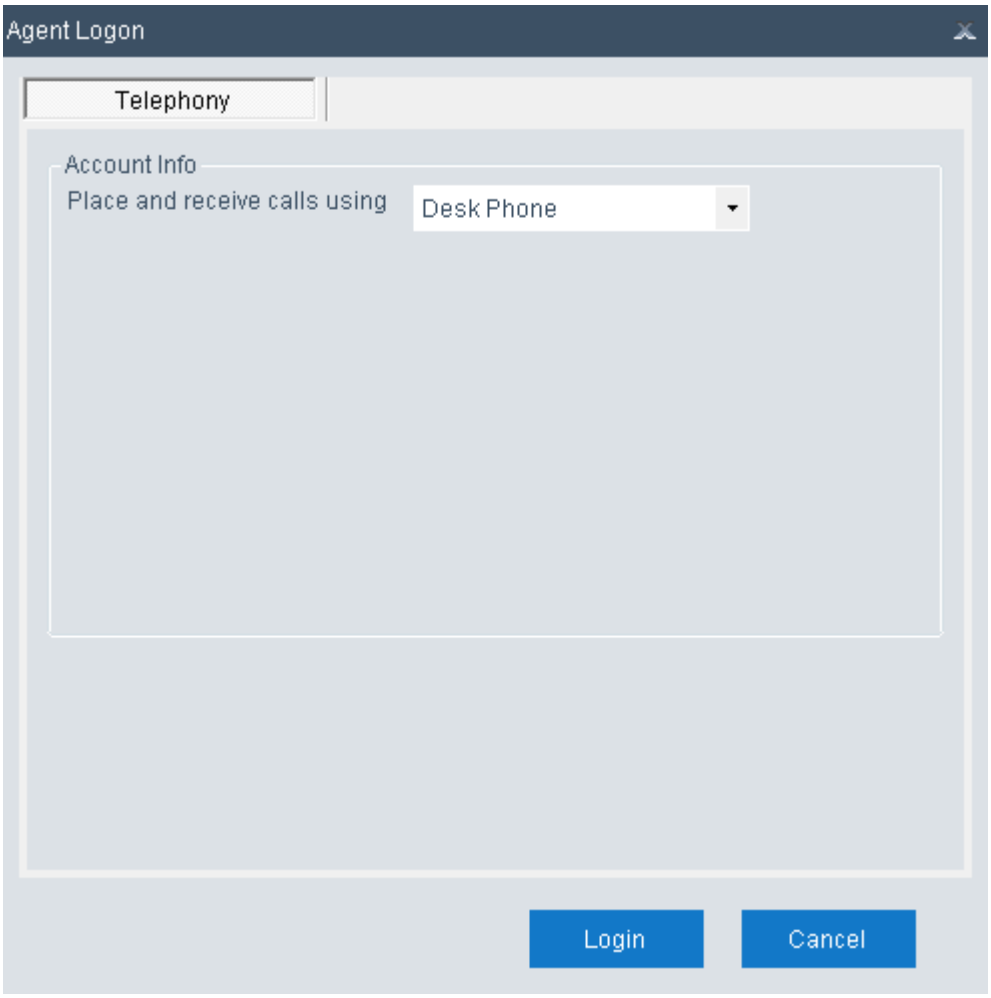
1. On the Agent Desktop client computer, click **Start** > **All Programs** > **Avaya** > **Avaya Agent Desktop**.
2. On the **User Credentials** window, in the **User ID** box, type the agent user ID. For example, type 6002.



3. In the **Password** box, type the password for the agent.
4. In the **Domain** box, type the host name of the Avaya Contact Center Select server.
5. Click **OK**.
6. On the Agent Desktop Top bar, from the **Status** list, select **Login**.

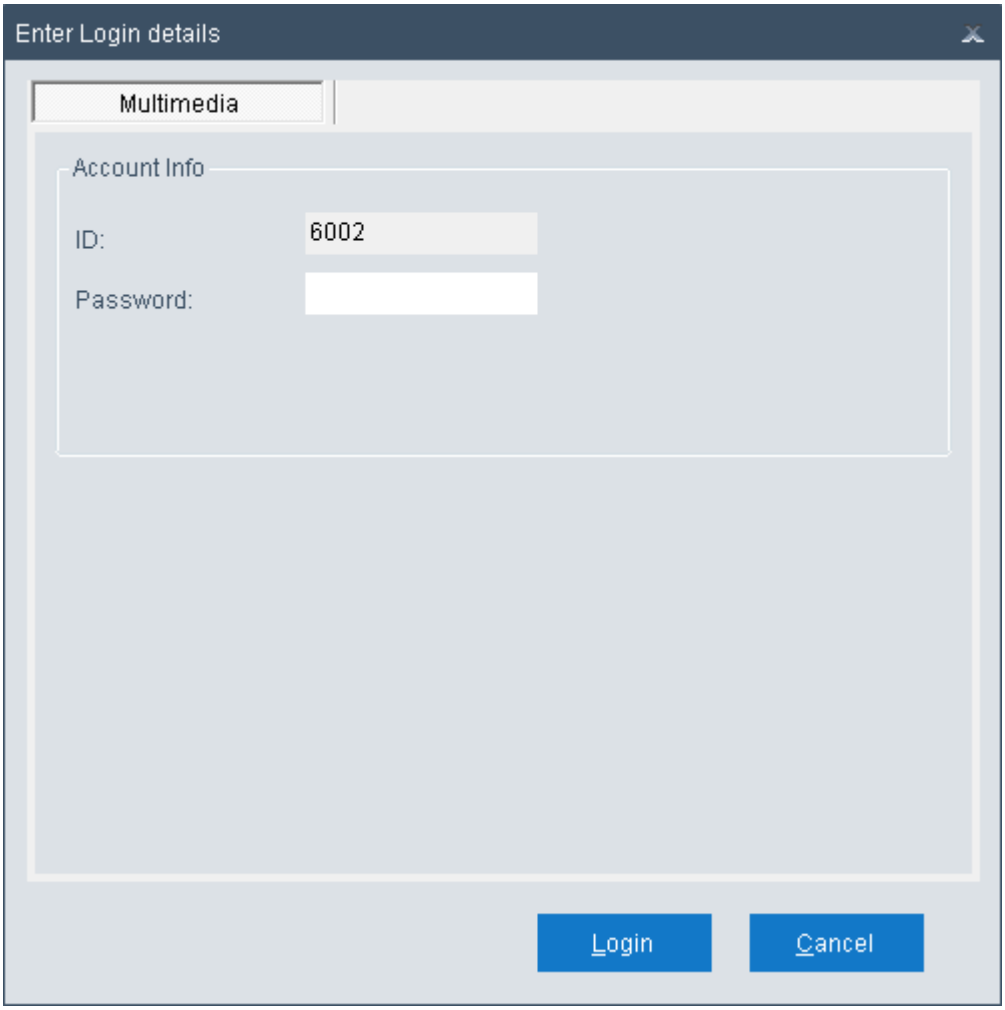


7. On the **Agent Logon** window, click **Login**.



8. If the user is configured to handle multimedia contacts (such as email), on the **Multimedia** tab, type the user **ID** and **Password** and click **Login**. Use the same user ID and password as above.

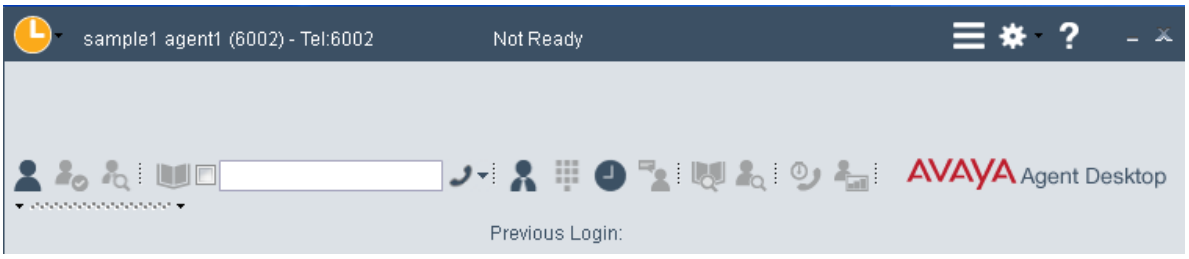
   For example:



9. If you logged on with an account configured for multimedia, Agent Desktop prompts you to change the multimedia password.

   You must change the Multimedia password to continue.

   Agent Desktop completes the logon and the status icon changes to Not Ready.



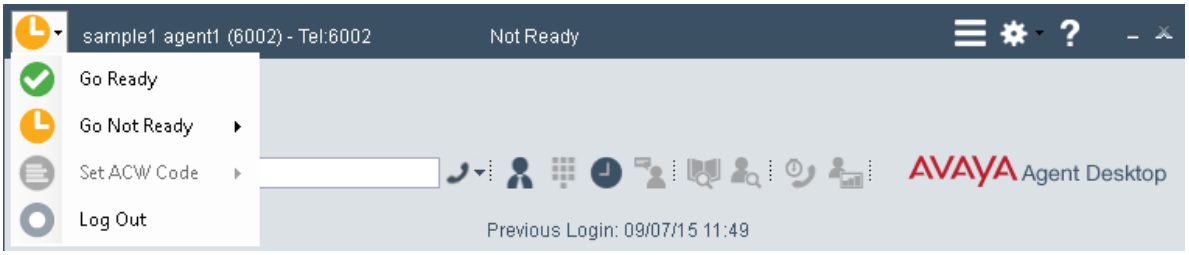
Changing your status to Ready

About this task

Change your status to Ready when you are available to create and receive contacts.

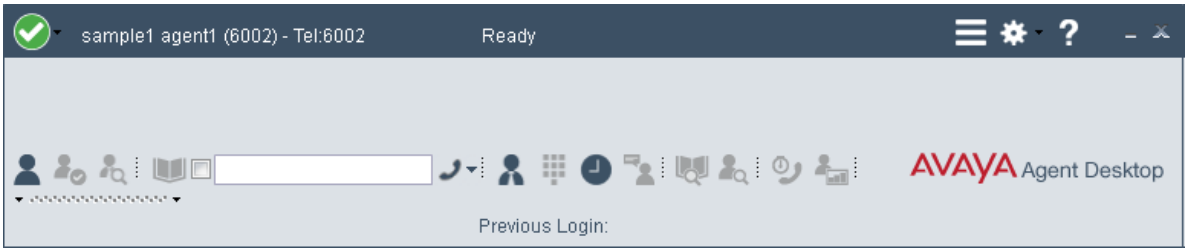
Procedure

1. On the Agent Desktop Top bar menu, click the **Status** icon.



2. Select **Go Ready** to create or receive both voice and multimedia contacts.

   The status icon changes to green.



Making a test phone call to the contact center

Before you begin

- Ensure an Avaya Contact Center Select agent is logged on to Agent Desktop and is in the ready state.

About this task

Make a test phone call to the Avaya Contact Center Select CDN (Route Point).

Procedure

1. Using an IP Office phone, dial the Avaya Contact Center Select CDN (Route Point) phone number. For example, dial 3000.
2. Listen for a ringback tone.
3. Listen for the “Welcome to the Contact Center” announcement.

4. Listen for the following voice prompt menu:
   - “Press 1 to speak to an agent at the help desk.”
   - “Press 2 to speak to an agent in the support center.”
   - “Press 3 to Enter your pin number or any eight digits of your choosing.“
   - “Press 4 to leave a voice mail.”
   - “Press * to repeat this menu.”
5. To make a test phone call and speak with an agent, press button 1 on your phone.
6. Listen for another ringback tone as your call is routed to an available Avaya Contact Center Select agent.
7. Wait for the call to be answered by an agent.

Accepting a call

Before you begin

- Ensure that you have set your status to **Go Ready**.
- Ensure that you are assigned to a skillset for handling telephone calls.

About this task

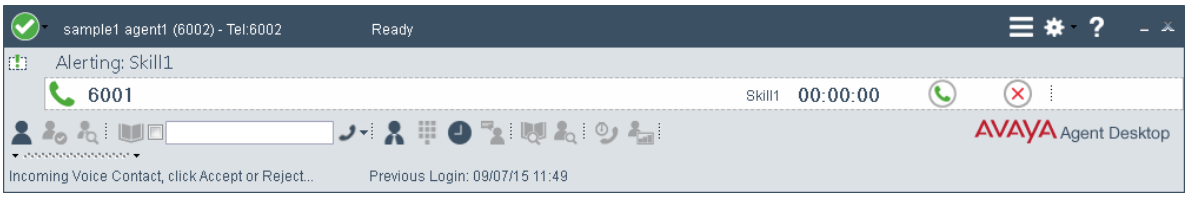
Accept and work with telephone calls. The relevant work item controls become active and the call timer appears on the work item.

If your administrator has configured your Contact Center to run in the Call Force Delay mode, you must handle all contacts presented to you.

Procedure

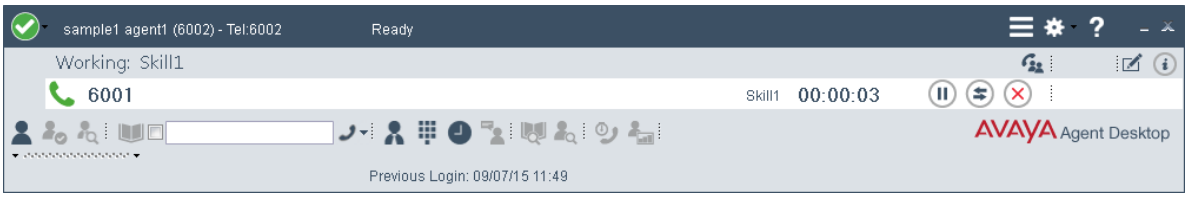
1. On Agent Desktop, select the new **Alerting** work item.

   Example of an alerting contact center Route Point call:



2. Click the **Accept** work item control.

   Example of an answered contact center Route Point call:



The agent can now speak with the customer.

Entering an Activity code

About this task

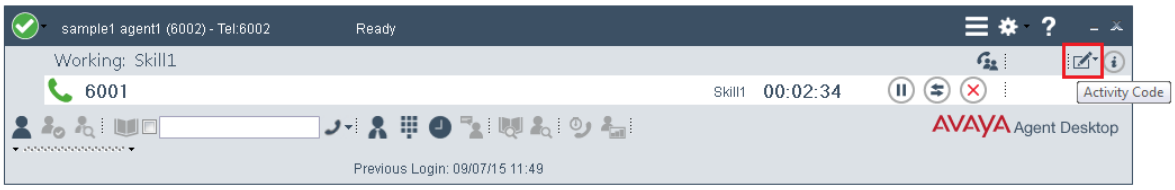
You can enter one or more Activity codes during calls by using the Agent Desktop Top bar activity inline command. Activity codes provide a method to track the time that agents spend on various types of calls. For example, you can enter a Sales activity code in Agent Desktop during a sales-related call.

Your supervisor or system administrator configures Activity codes. Administrators define Activity codes in Contact Center Manager Server. Activity codes can be alphanumeric. Agent Desktop displays the Activity codes list.

Agent Desktop displays the **Activity Code** box on the work item based on your Contact Center configuration. Administrators can configure activity codes that correspond to a contact type and a skillset. Therefore, Activity codes are filtered on a contact type and skillset basis. For example, if you are handling email contacts, Agent Desktop populates the **Activity Code** list with activity codes that correspond to the email contact type and skillset.

Procedure

1. Select the work item.
2. Click the **Activity Code** work item inline command.
3. From the **Select or type an Activity Code** drop-down list, select or type the activity code.



Ending a call

About this task

End a call when a call is completed. If your status was Ready before the call, your status is automatically set to Ready, when you terminate the call. If you require time to perform call wrap-up tasks, before you accept another call, select **Set ACW Code** and enter the After Call Work Item (ACW) code in the **Code** field of the Top bar. If you require to change your status to Not Ready and enter a Not Ready Reason Code in the **Code** field of the Top bar. The administrator defines Not Ready Reason and ACW codes.

Procedure

On the work item, click **Release**.

Making a call

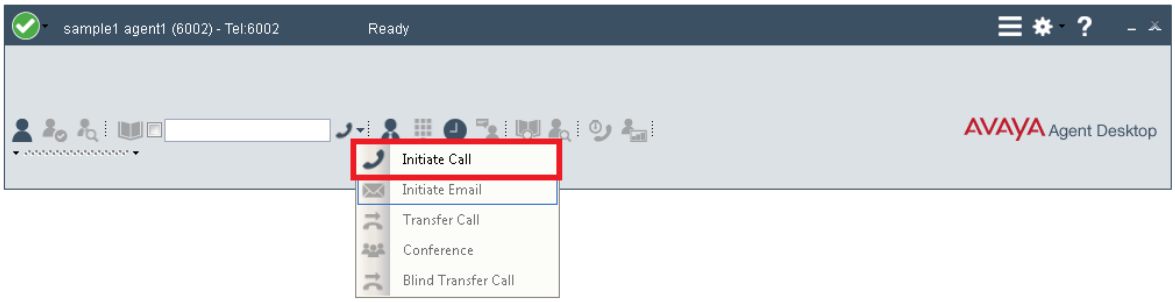
About this task

Make a call using Agent Desktop. Ensure that you follow the steps based on the type of phone number you want to call:

- the default phone number
- a new external phone number
- a new internal phone number

Procedure

1. On the Agent Desktop Action bar menu, click **Initiate Call**.



2. In the **Initiate Call** text box, enter the phone number to dial.
3. Click **Initiate Call** again.

   The phone number is dialed. A new work item is added to the work list and the call timer on the work item starts to increment.
4. Click **Release** when you complete the call.

Sending a test email message to the contact center

Before you begin

- Know the name of a mailbox monitored by Avaya Contact Center Select.

About this task

Send a test email message to Avaya Contact Center Select.

Procedure

1. Create an email message.
2. Send the email message to the mailbox monitored by Avaya Contact Center Select.
3. Avaya Contact Center Select processes the email. You might receive an automated acknowledgement of your email before an Avaya Contact Center Select agent responds.

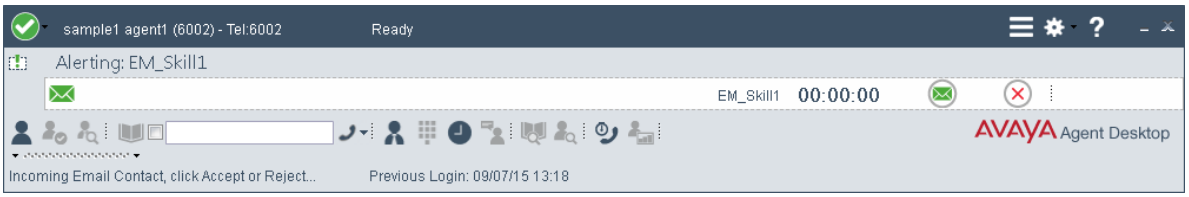
Accepting an incoming email message

About this task

Accept an incoming email message, when you are ready to receive the customer's email, display customer details and begin contact with a customer. The Agent Desktop displays the customer details and the call timer appears on the work item. The new incoming email message is presented as a new work item in the Work List window.

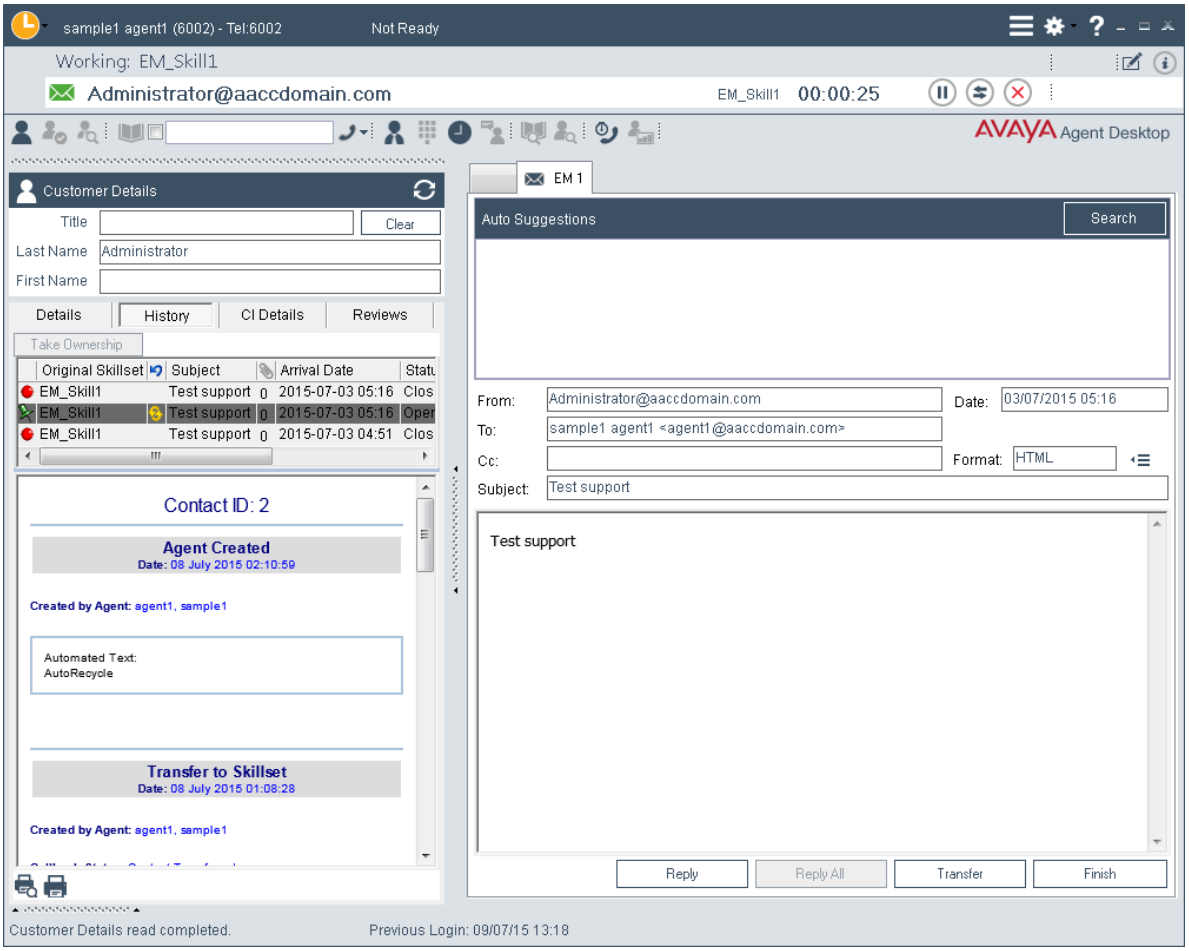
Procedure

1. The incoming email message appears on the Agent Desktop Work List window.



2. On the Agent Desktop, click **Accept**.

   The email message opens in the E-mail Display panel.



The customer details associated with the email message appears in the bottom left-hand corner of the Customer Details panel.

Replying to an email message

Before you begin

- Accept an email contact.

About this task

Reply to an email message when a customer sends an email message to the Contact Center requesting a response. Create a response to a customer in the same format as the original request.

You can use several features (present in the following list) in the Agent Desktop interface to create your email response in HTML or plain text:

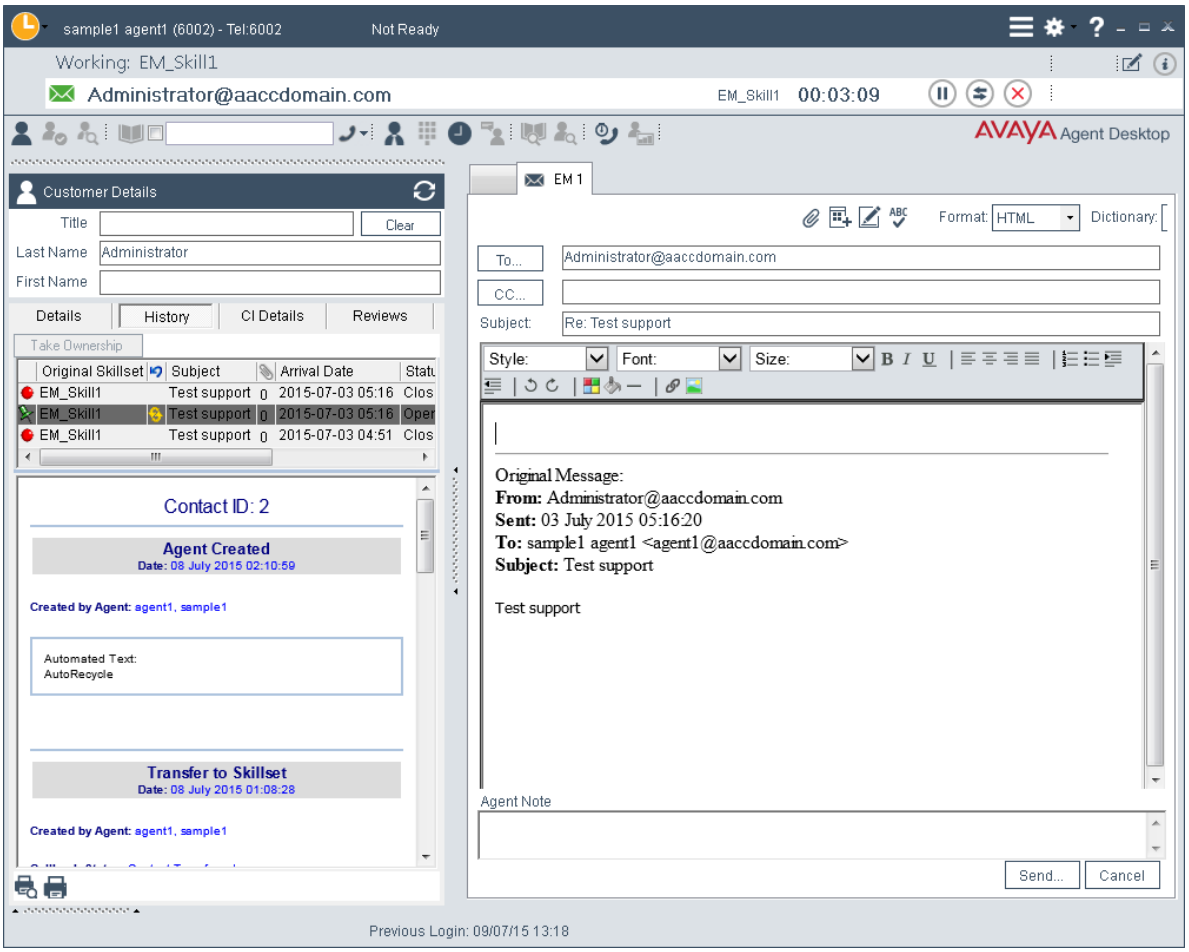
- Auto suggestions

- the address book
- one or more response templates
- an automatic signature
- an attached file
- the spelling checker

You can also add a comment to an email message in the **Agent Note** box as a reference for later communications with the customer. The customer does not see the information present in the **Agent Note** box.

Procedure

1. On the Agent Desktop, in the Email window, click **Reply**.



2. In the E-mail Response window, accept the default **To** email address. The default email address is the address from which the message was sent.

   Or

   Click **To** to add an email address of the customer, which is other than the default email address.

Or

Click **Cc** to add other email addresses from the corporate address book or multimedia database.

3. In the **Subject** box, either accept the subject currently displayed or edit the subject.
4. Add text to the reply using one or both of the following methods:
   - Type the message text.
   - Add a template response.
5. If you use the HTML format for creating the email message, and you want to make the text bold, underline, or italics, select the text, and click the appropriate button to apply formatting.

   You cannot format a plain text email message.
6. To change the text size, select the text and click the up arrow to increase the font size, or click the down arrow to decrease the font size.
7. To perform a spell check, click the **SpellCheck** icon.
8. To insert an automatic signature to the email message, click the **Insert Signature** icon.
9. To add an attachment to the email response, click **Insert a file**.
10. In the **Agent Note** box, type additional information about the contact or the customer, if required.

    Only agents and supervisors can view the information in the **Agent Note** box.
11. Click **Send**.
12. Close the contact.

    If required, select a reason for closing the contact.

Logging off from Agent Desktop

Before you begin

- Ensure that you do not have a contact open. If a contact is open, you must close the contacts before you log off of the application.

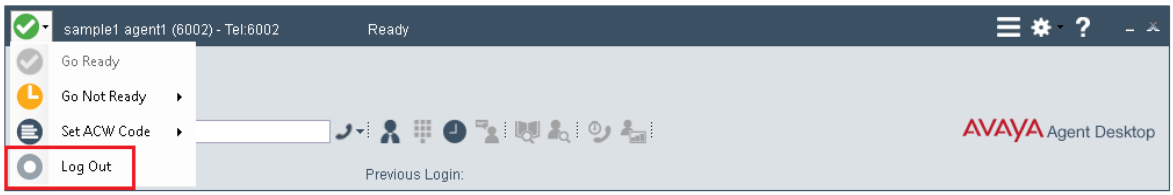
About this task

Log off from Agent Desktop when you are ready to exit the application.

Procedure

1. On the Agent Desktop Top bar menu, click the **Status** icon.

2. Click **Log Out**.



Agent Desktop logs you off. The status icon changes color and the Top bar displays the Logged Out status.

Part 6: Maintenance

Chapter 14: Maintenance procedures

This section describes how to maintain the Avaya Contact Center Select software and server. You must maintain Avaya Contact Center Select to protect against data loss and to ensure that you are using the most recent software.

Database maintenance

Perform an immediate backup of the Avaya Contact Center Select databases to save the current data. It is important to complete this procedure after you complete your installation or when any significant change occurs in the database, so that you can restore the database easily. Perform backups during low traffic periods. Avaya Contact Center Select services are not shut down during backups. Back up the databases to a secure network location. Schedule regular backups of the Avaya Contact Center Select databases to ensure resiliency against media failure or data loss.

Contact Center Software patches

Apply the most recent Avaya Contact Center Select patches to ensure that you have the most recent version of the application software and to resolve software issues.

Install the latest operating system service packs that are supported for Avaya Contact Center Select. You must download the latest supported operating system service pack from the Avaya hotfixes list to ensure your Avaya Contact Center Select server software functions correctly with the supported operating system patches.

Adding a server to a domain

Before you begin

- Ensure that you have domain administrator privileges, or ask the Domain Administrator to assign you a domain user account for remote access.
- On the server, configure a preferred Domain Name System (DNS) server on the Network Interface Card (NIC).

About this task

Add the server to an existing domain.

Note:

Add the server to a Windows domain before installing Contact Center software. When joining the domain, ensure the server time and domain controller time are synchronized to the same time.

Ask your System Administrator to add a Domain Name System (DNS) static entry for this server. Each Contact Center server in a domain requires a DNS static entry.

Procedure

1. Log on to the server.
2. On the **Start** screen, select **Administrative Tools** > **Server Manager**.
3. In the left pane, select **Local Server**.
4. In the right pane, in the **Properties** section, double-click on the **Domain** value.

   The **System Properties** dialog box appears.
5. In the **System Properties** dialog box, click the **Computer Name** tab.
6. Click **Change**.
7. In the **Member of** section, click the **Domain** option.
8. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
9. Click **OK**.
10. Type the domain administrator **User name** and **Password**.
11. Click **OK**.
12. Restart the server when you are prompted to do so.

Backing up the Contact Center databases

About this task

Perform an immediate backup of the Contact Center server databases to save the current data. Perform a scheduled backup to maintain snapshots of data for emergency purposes. For more information about scheduled backups, see Scheduling a backup of the Contact Center server databases on page 147.

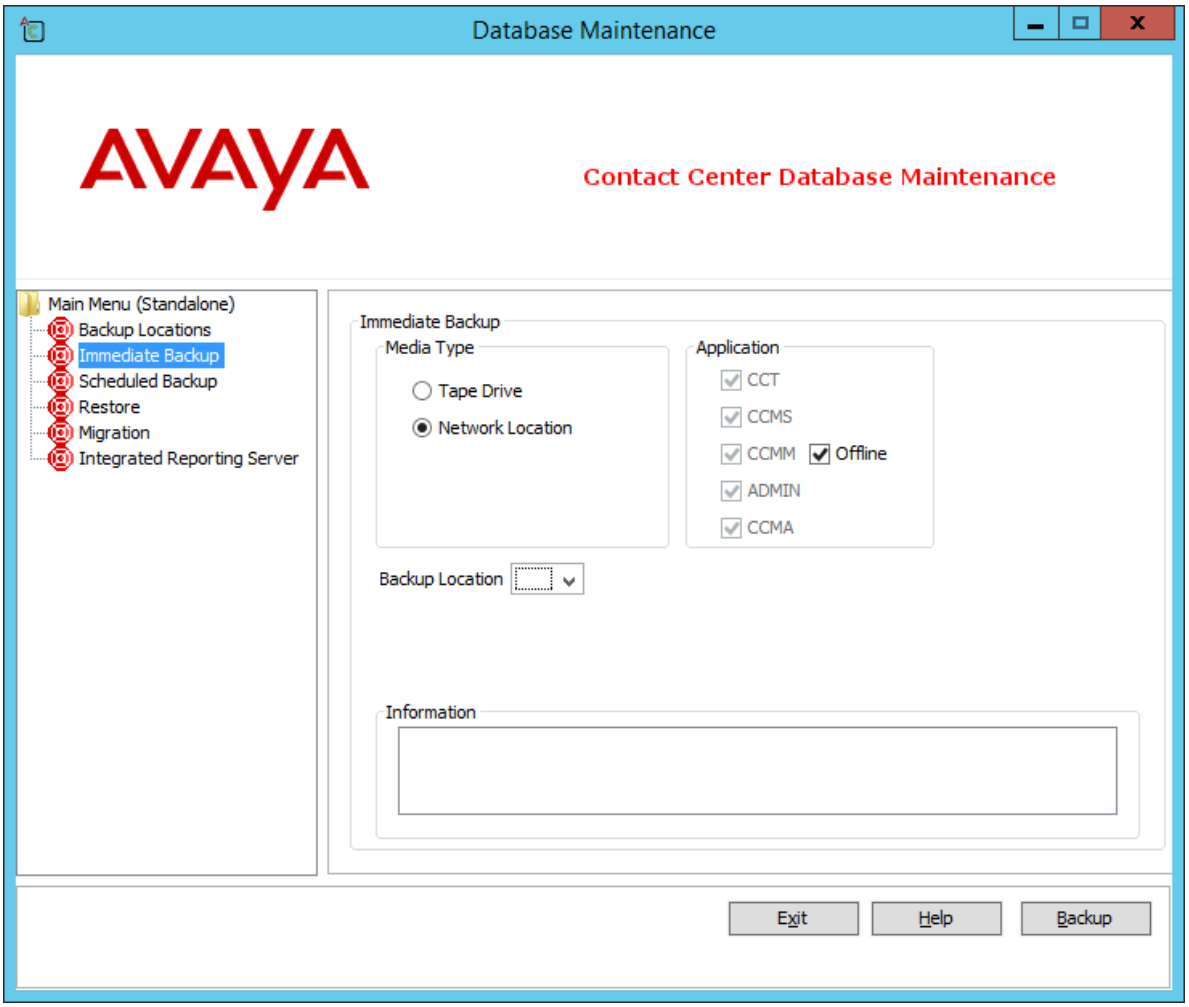
It is important to complete this procedure after you complete your installation or when any significant change occurs in the database, so that you can restore the database easily if required.

Perform backups during low traffic volume periods.

Procedure

1. On the **Apps** screen, in the **Avaya** section, select **Database Maintenance**.
2. In the Contact Center Database Maintenance window, in the Main Menu pane, click **Backup Locations**.
3. In the right pane, click **Create**.

4. From the **Drive Letter** list, select the network drive on which to store the Contact Center database.
5. In the **UNC Path** box, type the location to store the backup, in the format \\Computer Name \Folder\Backup Location.
6. In the **Username** box, type the user name used to log on to the computer specified in the UNC Path box. The user name is in the format Computer Name\Account Name.
7. In the **Password** box, type the user password.
8. Click **Save**.
9. In the Contact Center Database Maintenance window, in the Main Menu pane, click **Immediate Backup**.



10. In the **Media Type** section, select **Network Location**.
11. From the **Backup Location** list, select the network drive on which to store the backup.
12. Click **Backup**.

13. Click **Yes**, to continue with the backup.

    The database is backed-up.

14. Click **Exit**.

Creating a backup location for scheduled backups

Before you begin

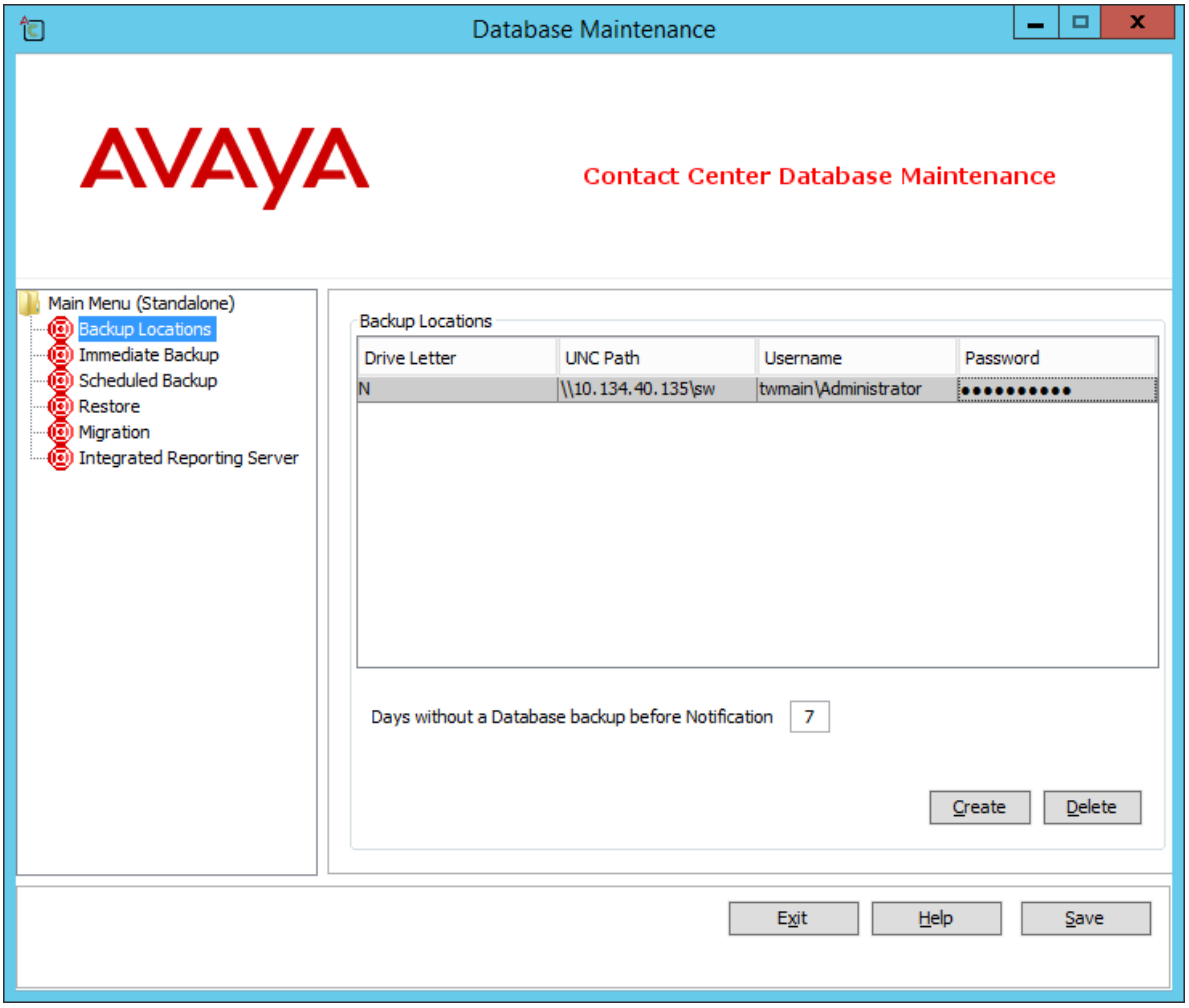
- Ensure that you log on with a user account with full permissions to access the location where you store the database backups.

About this task

Create a backup location on your network with the correct access permissions to ensure that you have a designated location for the scheduled backups.

Procedure

1. On the **Apps** screen, in the **Avaya** section, select **Database Maintenance**.
2. In the Database Maintenance dialog box, click **Backup Locations**.
3. In the right pane, click **Create**.
4. From the **Drive Letter** list, select a drive letter.
5. In the **UNC Path** text box, type the location to which to back up the database.
6. In the **Username** box, type the user name used to log on to the server specified in the UNC Path box in the format Computer Name\Account Name.
7. In the **Password** box, type the Windows password.
8. Click **Save**.



Scheduling a backup of the Contact Center server databases

Before you begin

- Create a backup location. For more information, see Creating a backup location for scheduled backups on page 146.

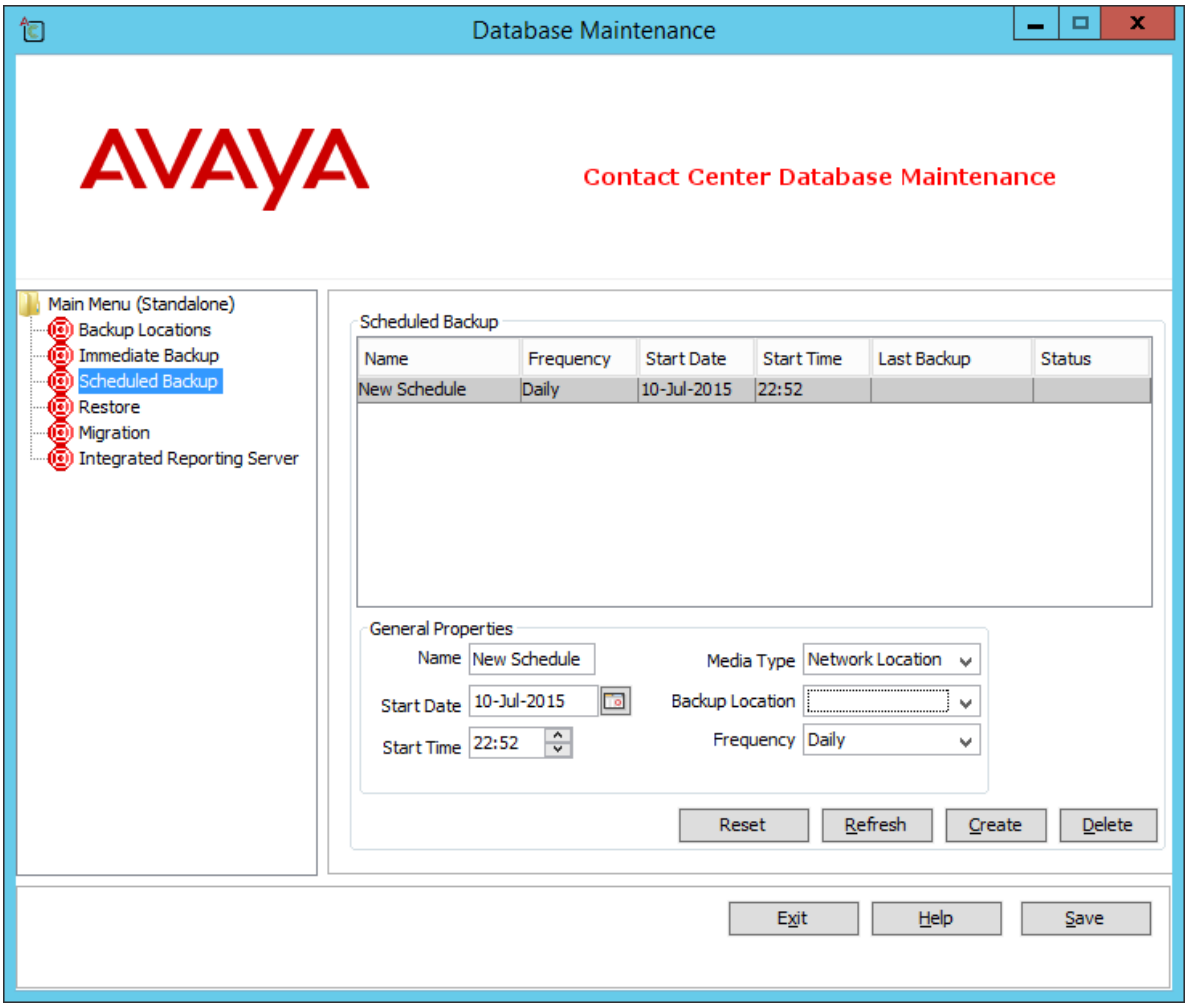
About this task

Schedule a backup of the Contact Center server databases to save the data regularly. Perform a scheduled backup to maintain snapshots of data for emergency purposes.

Perform backups during low traffic volume periods.

Procedure

1. On the **Apps** screen, in the **Avaya** section, select **Database Maintenance**.
2. In the Database Maintenance dialog box, in the left pane, click **Scheduled Backup**.



3. In the right pane, click **Create**.
4. Under **General Properties**, in the **Name** box, type a name for the scheduled backup.
5. From the **Media Type** list, select **Network Location**.
6. In the **Start Date** box, type the date on which to begin scheduled backups.

   OR

   Click the calendar icon and select a date on which to begin scheduled backups.
7. In the **Start Time** box, select the time to start the backup.
8. From the **Backup Location** list, select a drive to store the backup.
9. From the **Frequency** list, select the frequency of the backup.

10. Click **Save**.
11. In the confirm dialog, click **OK**.
12. Click **Exit** to close the Database Maintenance utility.

Downloading the latest product documentation

About this task

Download the latest product documentation to ensure that you have the most recent updates. Updates in the documentation accurately reflect the latest software changes.

Procedure

1. Log on to the Avaya website at http://support.avaya.com.
2. Compare the versions of the product documentation on the site with the versions you have.
3. If the version number on www.avaya.com is higher than the version number on the documentation you have, download the latest version of the document.
4. Review the Avaya website for release notes and readme files.

Installing the most recent supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the website http://support.avaya.com.
- Review the specifications on operating system service updates in *Avaya Contact Center Select Solution Description*.

About this task

Avaya recommends that you install the most recent supported operating system service packs. You must download the supported operating system service pack from the Avaya hotfixes list to ensure your Contact Center server software functions correctly with the supported operating system patches.

Procedure

1. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Contact Center supported patches or service packs.
2. Download the appropriate Microsoft Windows Server patches for the Contact Center software installed on this server.

3. Install the most recent Microsoft Windows Server service pack that is validated with Contact Center by following the Microsoft Installation instructions.

Verifying if installed patches are up-to-date

Before you begin

- Look up the latest patches and upgrades for your Contact Center server at http://support.avaya.com.

About this task

Verify if installed patches are up-to-date by using the Contact Center Update Manager to view available patches and to verify the patches that are already installed on the server. Use the Update Manager to view the readme files associated with each patch.

Procedure

1. Log on to the Contact Center server where you want to view available patches,
2. On the **Apps** screen, in the **Avaya** section, select **Update Manager**.
3. Compare the most recent update name in the Update Manager with the latest patches listed on the Avaya website.

Downloading the most recent Contact Center patches to the server

Before you begin

- Ensure that you use an account with administrator privileges on your server.

About this task

Download the most recent Contact Center patches to the server from http://support.avaya.com to ensure that you have the most current software.

You can also download the most recent Avaya Workspaces patches to the server. For more information about downloading the most recent Avaya Workspaces patches to the server, read the *Using Avaya Workspaces for AACC and ACCS* guide.

Procedure

1. Log on to the server using an account with administrator privileges.
2. If a new service pack .msi file exists on http://support.avaya.com, download it and save it on the Contact Center server.

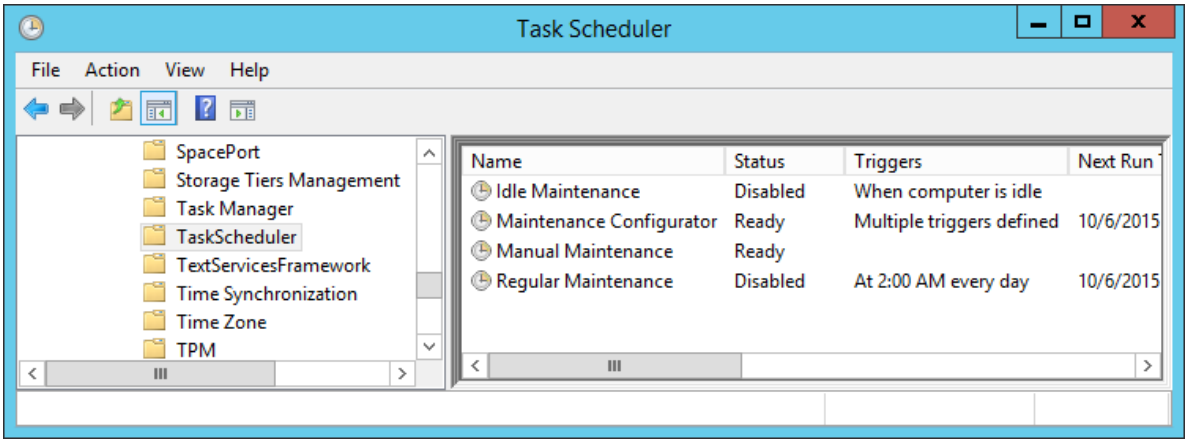
Disabling Windows Server Automatic Maintenance

About this task

Disable Windows Server Automatic Maintenance while updating Contact Center software. Windows Server Automatic Maintenance can occasionally interfere with the real-time requirements for Contact Center. You must therefore temporarily disable Automatic Maintenance to update Contact Center software. You re-enable Automatic Maintenance after updating Contact Center.

Procedure

1. Log on to the Contact Center server as Administrator.
2. On the **Desktop** screen, right-click **Start** and select **Run**.
3. In the **Run** text box, type `Taskschd.msc`.
4. Click **OK**.
5. On the **Task Scheduler** window, in the left pane, select **Task Scheduler Library** > **Microsoft** > **Windows** > **TaskScheduler**.
6. In the **Name** column, right-click **Idle Maintenance** and select **Disable**.
7. In the **Name** column, right-click **Regular Maintenance** and select **Disable**.



8. From the **File** menu, select **Exit**.

Installing Contact Center patches

Before you begin

- Download the latest documentation. See Downloading the most recent product documentation on page 149.

- Download the latest appropriate patch bundles. See Downloading the most recent patches to the server on page 150.
- Ensure that you use an account with administrator privileges on your server.
- Temporarily stop Microsoft Windows Server Automatic Maintenance while you update Contact Center software.

About this task

Install the latest Contact Center patch bundles to ensure that you have the most current development updates, or when you are upgrading your system.

The Contact Center Update Manager displays patches for installed Contact Center applications.

Procedure

1. On the **Apps** screen, in the **Avaya** section, select **Update Manager**.
2. Click **Install**.
3. Click **Browse** and navigate to the folder where you downloaded the patch bundles.
4. Click **Scan for Patches**.

   The Contact Center Updates section displays the available patches.
5. Select the appropriate patches.
6. Click **Install Patch(es)**.
7. On the **License Agreement** window, read the End User License Agreement and if acceptable, click **I accept the terms in the license agreement**.
8. Click **Continue**.

   The Update Manager installs the patches and displays a confirmation message.
9. Click **Close**.
10. Verify that the newly installed patches appear under Installed Updates.

Next steps

Re-enable Microsoft Windows Server Automatic Maintenance.

Downloading Contact Center Workspaces Patch Installer

About this task

The Contact Center Workspaces Patch Installer application is a .net application used for upgrading the deployed Avaya Workspaces. This application must be launched from the Contact Center server used for the original deployment of the Avaya Workspaces cluster. The application is not installed on Contact Center systems, instead it is embedded within each Avaya Workspaces Patch Bundle.

When launched on the Contact Center system, the application displays:

- the deployment type and version of the current Contact Center software installation
- the name and version of any Avaya Workspaces Patch installed on the system
- the name and version of the Avaya Workspaces Patch that will be installed
- the name and version of the services already installed on the Avaya Workspaces cluster
- the target version of the service which will be updated during Avaya Workspaces Patch installation

The Contact Center Workspaces Patch Installer generates two log files during the patch installation process. One log is for the Contact Center Workspaces Patch Installer application called WorkspacesPatchInstaller.log. The other log file is for the patch itself called Install_WorkspacesPatch_7.x.x.x_x86, where 7.x.x.x is the release number, for example Install_WorkspacesPatch_7.1.0.2_x86. Both logs are located in folder: C:\Avaya\Logs\Sysops \WorkspacesPatchInstaller.

Use this procedure to download and launch the Contact Center Workspaces Patch Installer application.

Procedure

1. Download the most recent Avaya Workspaces Patch Bundle and the accompanying checksum text file from http://support.avaya.com.
2. Using MD5 checksum software, generate a checksum of the downloaded Avaya Workspaces Patch Bundle and verify it matches with the content of the downloaded checksum text file.
3. Log on to the Contact Center server as Administrator.
4. Extract the downloaded Avaya Workspaces Patch Bundle to a local folder.

   The **WorkspacesPatchInstaller.exe** file is located in the **WorkspacesPatchInstaller** folder.

Next steps

Launch the Contact Center Workspaces Patch Installer and start installing the Avaya Workspaces patches.

Installing Avaya Workspaces patches

About this task

Use this procedure to install the Avaya Workspaces Patch Bundle.

You must patch Avaya Workspaces during a maintenance window. You can deploy the Avaya Workspaces Patch Bundle in the same maintenance window as used for updating and patching Contact Center. Note that Avaya Workspaces is not operational during the maintenance window.

Note:

Contact Center services that reside on the Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019 systems are not shutdown during the Avaya Workspaces patching process. You don't need to restart Contact Center services after the end of the Avaya Workspaces patching process.

Before you begin

- Download the most recent Avaya Workspaces Patch Bundle and the accompanying checksum text file from http://support.avaya.com.
- Using MD5 checksum software, generate a checksum of the downloaded Avaya Workspaces Patch Bundle and verify it matches with the content of the downloaded checksum text file.
- The Avaya Workspaces patching process requires a functional Avaya Workspaces cluster to be available. If Avaya Workspaces deployment is not detected on the Contact Center server, the Contact Center Workspaces Patch Installer application blocks the installation.

Procedure

1. Log on to the Contact Center server as Administrator.
2. Run the `kubectl get nodes` command to verify that the Avaya Workspaces cluster is available.

   A list of the available Avaya Workspaces nodes displays.
3. Extract the downloaded Avaya Workspaces Patch Bundle to a local folder.
4. From the **WorkspacesPatchInstaller** folder, launch the **WorkspacesPatchInstaller.exe** file.
5. When prompted, enter the user name and password of the Avaya Workspaces cluster.
6. Click **OK**.
7. Click **Install**.

   The installation process starts. When the installation finishes, the `Installed successfully` message appears.
8. Click **Close**.

Enabling Windows Server Automatic Maintenance

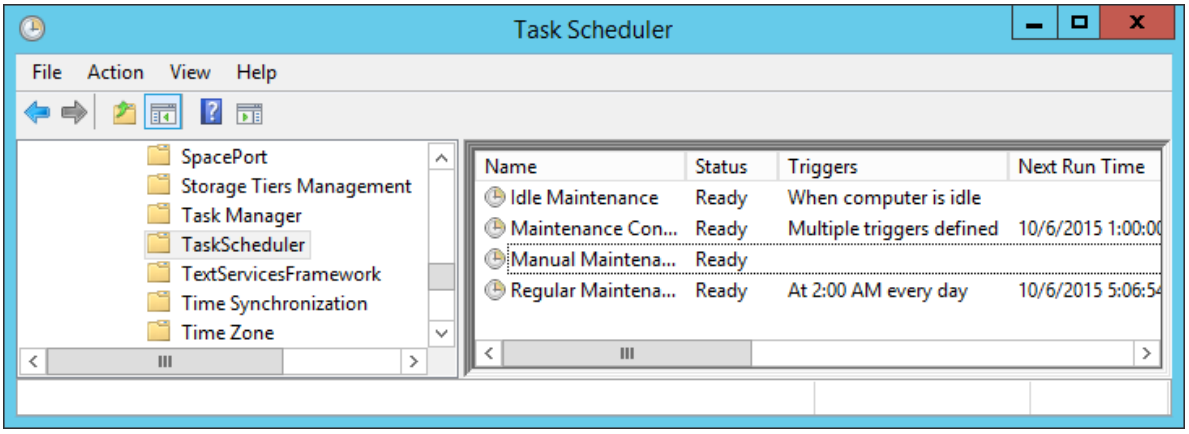
About this task

Enable Windows Server Automatic Maintenance after updating Contact Center software.

Procedure

1. Log on to the Contact Center server as Administrator.
2. On the **Desktop** screen, right-click **Start** and select **Run**.

3. In the **Run** text box, type `Taskschd.msc`.
4. Click **OK**.
5. On the **Task Scheduler** window, in the left pane, select **Task Scheduler Library** > **Microsoft** > **Windows** > **TaskScheduler**.
6. In the **Name** column, right-click **Idle Maintenance** and select **Enable**.
7. In the **Name** column, right-click **Regular Maintenance** and select **Enable**.



8. From the **File** menu, select **Exit**.

Logging on to Avaya Aura® Media Server Element Manager

Before you begin

- Obtain a valid user name and password to access Avaya Aura® Media Server Element Manager.

About this task

Log on to the Avaya Aura® Media Server Element Manager to configure Avaya Aura® Media Server for Avaya Contact Center Select.

Element Manager (EM) is a web-based administration tool that facilitates the Operation, Administration, and Maintenance (OAM) of Avaya Aura® Media Server.

Note:

You must have more than one Avaya Aura® Media Server account managed by separate users. If one account is disabled or lost, another account can perform critical tasks, backups or recovery. For more information, see *Implementing and Administering Avaya Aura® Media Server*.

Procedure

1. Start a Web browser.

2. In the address box, type the following URL:

   `https://SERVER_IP_ADDRESS:8443/em`

   Where SERVER_IP_ADDRESS is the IP address of the Avaya Aura® Media Server.
3. In the **User ID** box, type the Avaya Aura® Media Server User ID log on account name. The default Element Manager user account name is `Admin`.
4. In the **Password** box, type the Element Manager password. Use the `Admin` account password. The default password is `Admin123$`.
5. Click **Sign In**.

Creating a backup destination for Avaya Aura® Media Server

Before you begin

- Configure the destination FTP server and check that it is operational.
- Ensure that you have the address or host name, FTP account details, and path for the backup server.

About this task

Create a location to store backups. You can specify an FTP server to which you can send backups from Avaya Aura® Media Server Element Manager.

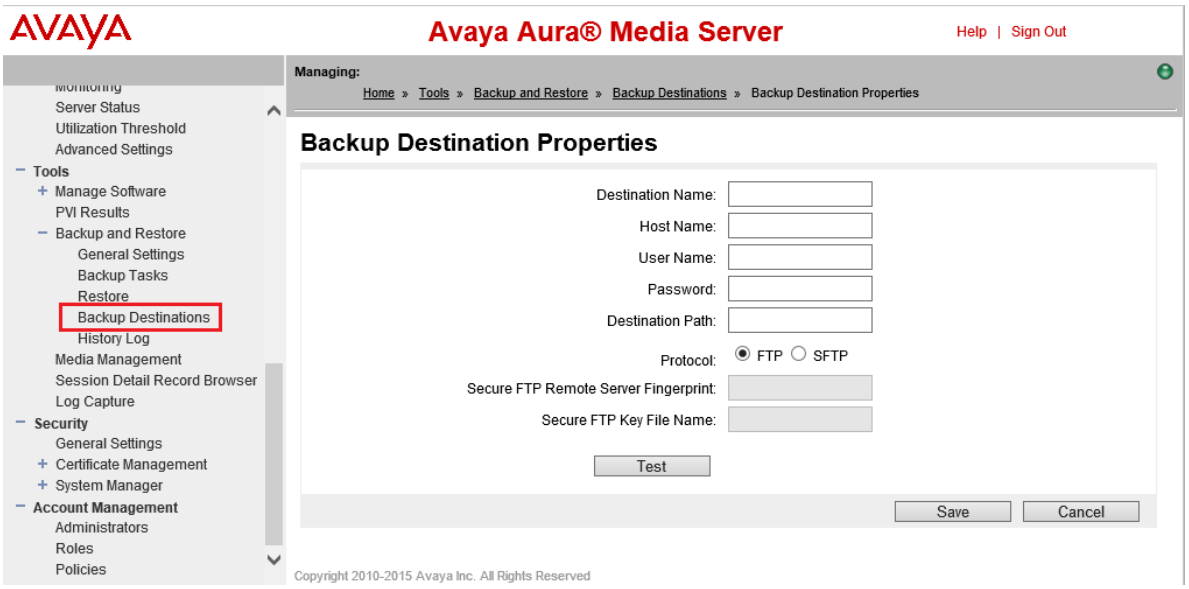
You can configure any number of remote backup destinations. When performing remote backups, Element Manager (EM) uploads the backup files to the specified File Transfer Protocol (FTP) server and then deletes the duplicate backup files from the Avaya Aura® Media Server server. To perform a backup and restore, you must have permission to upload files to the remote backup destination.

You can accept the default backup location to save the Avaya Aura® Media Server backup on the local server.

Procedure

1. Access the Element Manager with Administrator privileges.
2. Expand **Tools**.
3. Expand **Backup and Restore**.

4. Select **Backup Destinations**.



5. On the Backup Destinations page, click **Add**.
6. In the **Destination Name** field, type a unique name for the backup destination.
7. In the **Host Name** field, type the host name of the destination server.
8. In the **User Name** field, type the FTP user name.
9. In the **Password** field, type the FTP password.
10. In the **Destination Path** field, type the path on the backup location to specify where the backup function writes the backup files.
11. Optionally, click **Test** to test your connection.
12. Click **Save**.

Backing up the Avaya Aura® Media Server database

Before you begin

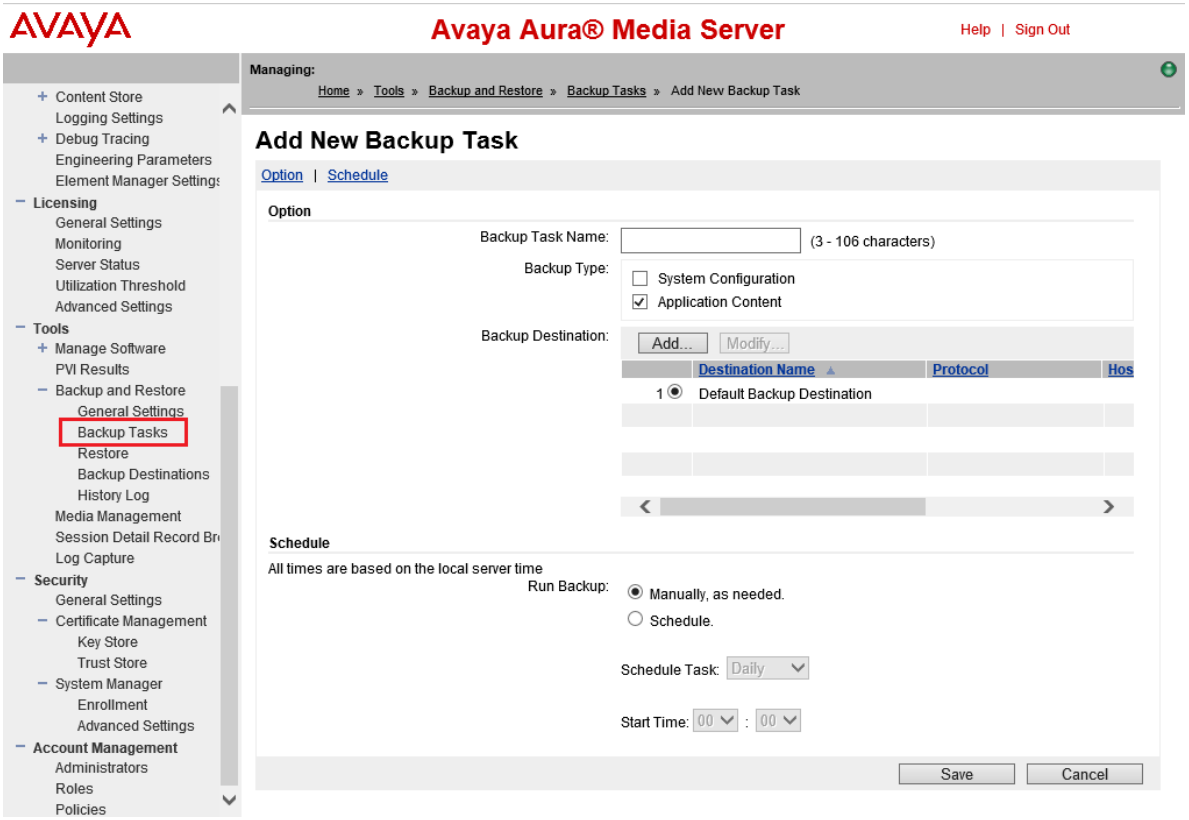
- Configure the destination FTP server and check that it is operational.
- Ensure that you have the address or host name, FTP account details, and path for the backup server.

About this task

Create a location to store backups. You can specify the FTP server to which you can send Avaya Aura® Media Server Element Manager backups. Backup the Avaya Aura® Media Server data so you can restore it on the new server.

Procedure

1. Log on to the existing Avaya Aura® Media Server.
2. Access the Element Manager with administrator privileges.
3. Expand **Tools**.
4. Expand **Backup and Restore**.
5. Select **Backup Tasks**.
6. On the Backup Tasks window, click **Add**.



7. On the **Add New Backup Task** window, in the **Backup Task Name** box, type a name for this backup.
8. Select **System Configuration**.
9. Select **Application Content**.
10. Choose the backup destination that you created for the migration.
11. Select **Manually, as needed**.
12. Click **Save**.
13. In the Backup Tasks window, select the backup task you created.
14. Click **Run Now**.

The Confirm Backup window appears, showing the backup task name details about the backup.

15. Click **Confirm**.

    The History Log Window appears. When the backup is complete, the backup details appear in the list.

Installing Avaya Aura® Media Server patches

Before you begin

- Read the QFE Readme files for the most recent information and instructions.
- Download the most recent Avaya Aura® Media Server Quick Fix Engineering patches and store them in the QFE subdirectory on the Avaya Aura® Media Server. QFE patches are ZIP files, do not un-zip QFE patches. The Avaya Aura® Media Server patching utility uses the QFE ZIP files. The default QFE folder location is /opt/avaya/ma/MAS/qfe.
- Back up the Avaya Aura® Media Server data before applying patches.

About this task

Install a new Quick Fix Engineering patch to apply a change to the Avaya Aura® Media Server system. You must lock Avaya Aura® Media Server before applying patches and unlock it after you install the patches.

Note:

Follow the instructions in the Avaya Contact Center Select Release Notes and in each Avaya Aura® Media Server patch Readme file.

Procedure

1. On the Avaya Contact Center Select server, start a Web browser.
2. In the address box, type https://<SERVER_IP_ADDRESS>:8443/em, where SERVER_IP_ADDRESS is the IP address of the Avaya Aura® Media Server.
3. In the **User ID** box, type the Avaya Aura® Media Server Element Manager user name.
4. In the **Password** box, type the Avaya Aura® Media Server Element Manager password.
5. Click **Log In**.
6. In the navigation pane, click **System Status** > **Element Status**.
7. From the **More Actions** list, select **Pending Lock** to lock the Avaya Aura® Media Server after all processes finish.
8. Wait for existing active sessions to end.
9. In the **More Actions** menu, select **Lock**.
10. Click **Stop** and confirm the operation on the following page.

11. Close Element Manager.
12. On your Avaya Aura® Media Server, open a Linux terminal.
13. Change to the root user by running the `su –` command.
14. Obtain the correct name of the new QFE patch by entering the following command:

    ```
    amspatch list all
    ```

    The name of the file is not necessarily the same as the name of the patch name.
15. Under the **QFE Name** column, note the name of the patch (patchname).
16. Install all of the patches in numerical order. To install a new patch on the system, enter the following command:

    ```
    amspatch apply <patchname>
    ```
17. To install all downloaded QFE patches on the system, enter the following command:

    ```
    amspatch apply all
    ```
18. When the patch application is complete, open the Element Manager navigation pane, and click **Tools** > **Software Inventory**.
19. Verify the patch version listed in the **Patch Level** column is correct.
20. Select **System Status** > **Element Status**, and click **Start**. Confirm the operation.
21. From the **More Actions** list, select **Unlock** to unlock the Avaya Aura® Media Server.
22. Select **System Status** > **Alarms** and check for service-impacting alarms.

Starting or stopping Contact Center server services

Before you begin

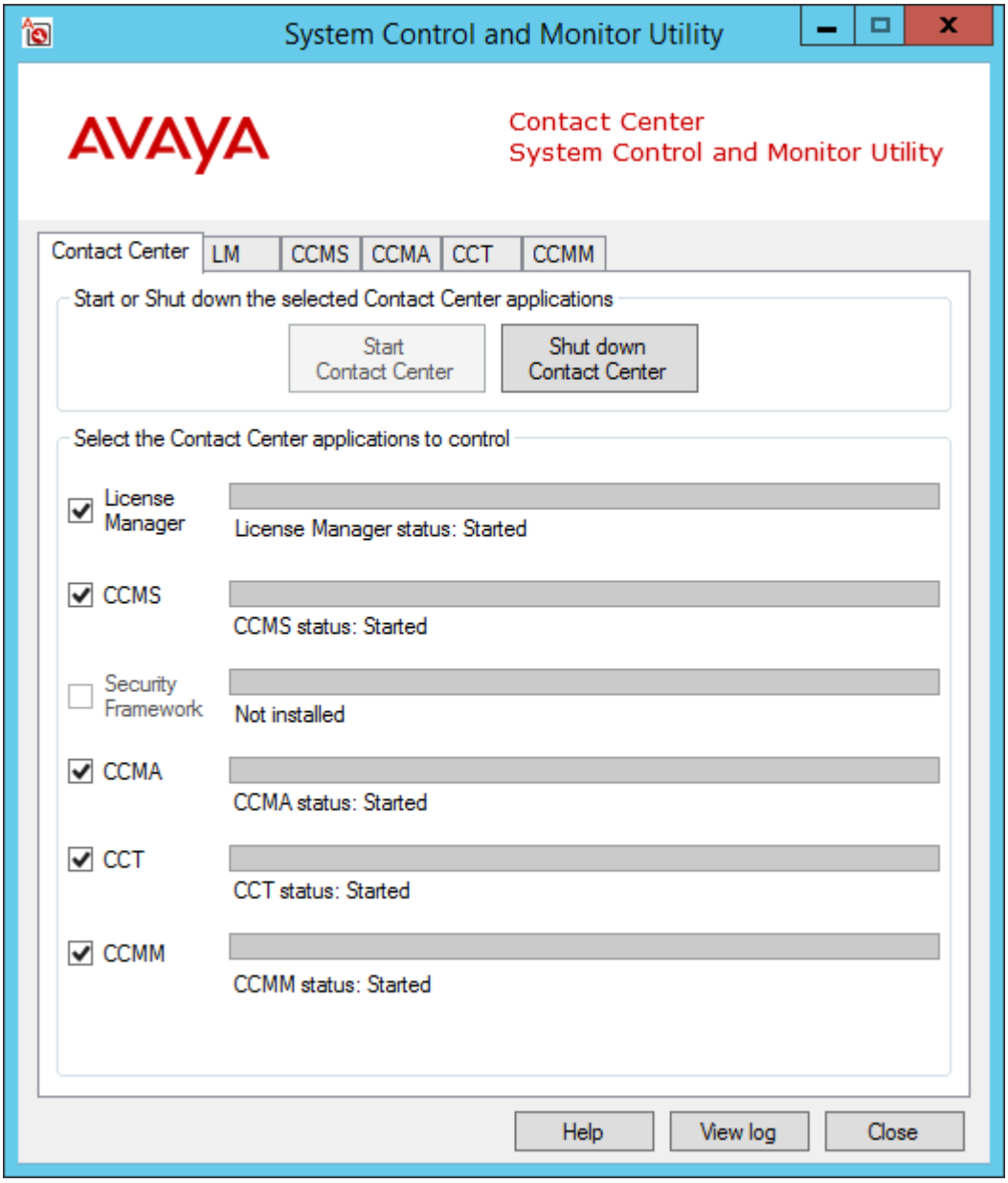
- Ensure there are no active calls before stopping the Avaya Contact Center Select services.

About this task

Use the System Control and Monitor Utility to start or stop all Avaya Contact Center Select services.

Procedure

1. Log on to the Avaya Contact Center Select server.
2. On the **Apps** screen, in the **Avaya** section, select **System Control and Monitor Utility**.
3. Click the **Contact Center** tab.



4. To start the Avaya Contact Center Select services, click **Start Contact Center**.
5. To stop the Avaya Contact Center Select services, click **Shut down Contact Center**.

Part 7: Customization

Chapter 15: Customizing the solution

This section describes how to customize the working contact center for your solution. The default configuration is an example of a generic contact center solution. You can now customize Avaya Contact Center Select to meet your requirements.

Avaya Contact Center Select provides sample data to minimize the time and effort needed to validate basic contact center operation. You can also use the sample data provided as the initial configuration for your solution. When you log on to Contact Center Manager Administration for the first time, the following sample data is visible in the Management and Configuration components:

- Two sample supervisors, each created as a Supervisor/Agent. Contact Center creates a local Windows user account on the server linked to each of these supervisor agents.
- Eight sample agents, each assigned to one of the two sample supervisor/agents. Contact Center creates a local Windows user account on the server linked to each of these agents
- Two sample voice skillsets.
- One sample Agent Skillset Assignment and one sample Agent Supervisor Assignment.
- A sample skillset for each of the supported contact types. Each sample agent is assigned to the voice skillset.
- Sample Activity codes, After Call Work Item codes, and Not Ready Reason codes.
- A sample CDN (Route Point) number for voice calls.
- A sample Open Queue Route Point for multimedia contacts.
- Two sample Multiplicity Presentation Classes. A Multiplicity Presentation Class enables an agent to handle more than one contact type concurrently.
- One sample Route to provide music on a customer call.
- Three sample Threshold Classes with preconfigured values. Threshold classes determine how statistics are presented on real-time and historical reports.

Avaya Contact Center Select Prompt Management allows the administrator to manage prompts on the Avaya Aura® Media Server (Avaya Aura® MS). Contact Center provides a number of sample prompts and sample music that you can use in your Orchestration Designer flow applications to treat Contact Center calls. Contact Center also provides sample Orchestration Designer flow applications that use the sample prompts and music provided, in addition to the standard Orchestration Designer flows available previously. All of the sample prompts have an associated variable that exists in Orchestration Designer. This allows the administrator to modify the prompts within the flow applications without opening Orchestration Designer.

Contact Center uses the sample CDN (Route Point) number to deliver calls to the sample Customer_Service flow application. The Customer_Service flow application provides sample treatments and routes the call to a sample agent.

The sample data provided allows you to make a first routed call in your contact center. It also serves as your initial configuration and allows you to rapidly commission your Avaya Contact Center Select solution.

Default user accounts

Account name	Password	Description
Administrator	Administrator	Default Contact Center Manager Administration administrator user.
reporting1	reporting1	A default Contact Center Manager Administration supervisor user.
reporting2	reporting2	A default Contact Center Manager Administration supervisor user.

Configuring Internet Explorer

About this task

Configure Internet Explorer to access Contact Center Manager Administration.

Install Microsoft Internet Explorer 10.0 or 11.0 (32 bit or 64 bit versions). Contact Center Manager Administration supports both the 32 bit and 64 bit versions of Microsoft Internet Explorer.

Note:

You must run Internet Explorer in compatibility mode for Contact Center Manager Administration.

Procedure

1. Start Internet Explorer.
2. From the menu, select **Tools** > **Internet Options**.
3. In the **Internet Options** dialog box, click the **Security** tab.
4. Click the **Trusted Sites** icon.
5. Click **Custom Level**.
6. In the **Security Settings** dialog box for trusted sites, under the **.NET Framework-reliant components** heading, select **Enable** for the following:
   - **Run components not signed with Authenticode**
   - **Run components signed with Authenticode**
7. Under the **ActiveX controls and plug-ins** heading, select **Enable** for the following:
   - **Download signed ActiveX controls**
   - **Run ActiveX Controls and plug-ins**

- **Script ActiveX Controls marked safe for scripting**

8. Under the **Downloads** heading, select **Enable** for the following:
   - **Automatic prompting for file downloads**
   - **File download**
9. Under the **Miscellaneous** heading, for **Allow script-initiated windows without size or position constraints**, select **Enable**.
10. Under the **Miscellaneous** heading, for **Allow websites to open windows without address or status bars**, select **Enable**.
11. Under **Reset custom settings**, from the **Reset to:** list select **Medium-low**.
12. Click **Reset**.
13. On the Warning dialog box, click **Yes**.
14. Click **OK**.
15. If you enabled ActiveX options, when a message appears asking you to confirm your choice, click **Yes**.
16. Click the **Trusted Sites** icon.
17. Click **Sites**.
18. In the **Trusted sites** dialog box, clear the **Require server verification {https:} for all sites in this zone** check box.
19. In the **Add this Web site to the zone** box, type the server name (not the IP address) for your Avaya Contact Center Select server.
20. Click **Add**.
21. Click **Close** to return to the **Internet Options** dialog box.
22. Click the **Privacy** tab.
23. In the **Pop-up Blocker** section, select the **Block pop-ups** check box.
24. Click **Settings**.
25. In the **Pop-up Blocker Settings** dialog box, in the **Address of website to allow** box, type the Avaya Contact Center Select server URL, http://<server name>/, where <server name> is the name of the Avaya Contact Center Select server.
26. Click **Add**.
27. Click **Close**.
28. In the **Internet Options** dialog box, click the **Advanced** tab.
29. Under **Browsing**, clear the **Reuse windows for launching shortcuts** check box.
30. Click **OK** to exit the **Internet Options** dialog box.
31. Restart Internet Explorer to activate your changes.

Accessing CCMA using Microsoft Edge with Internet Explorer mode

You can access CCMA in the Microsoft Edge browser using Internet Explorer (IE) mode. To enable IE mode in Microsoft Edge, you must perform the following procedures:

1. Adding the Microsoft Edge administrative templates on page 166.
2. Configuring Internet Explorer integration on page 167.
3. Configuring the Enterprise Mode Site List on page 168.

Before enabling IE mode in Microsoft Edge, ensure that you install all recent Windows updates and use Microsoft Edge version 77 or later.

Ensure that you install Microsoft Edge at the system level. You can check it by typing `edge://version` in the Microsoft Edge address bar. The executable path must start with `C:\Program Files`, which indicates a system install.

For more information about IE mode in Microsoft Edge, refer to the Microsoft documentation.

Important:

- You must not delete the Internet Explorer 11 browser from your computer, otherwise Microsoft Edge cannot launch CCMA.
- Always launch CCMA in a new tab of Microsoft Edge.
- If you enable single sign-on (SSO) on your Contact Center, you must add the System Manager (SMGR) server FQDN to the Enterprise Mode Site List.
- For solutions with geographic redundancy, you must add the RGN server short name and FQDN to the Enterprise Mode Site List.
- For Business Continuity solutions, you must add only the Managed Name and Managed FQDN of the BC pair to the Enterprise Mode Site List. Do not add short names and FQDNs of your active and standby servers.

Adding the Microsoft Edge administrative templates

About this task

Use this procedure to add the Microsoft Edge administrative templates to your computer.

Before you begin

Download and install Microsoft Edge version 77 or later.

Procedure

1. On the Microsoft website, go to the **Edge for Business** download page: https://www.microsoft.com/en-us/edge/business/download.
2. From the lists, select your current browser version, build, and platform.
3. Click the **GET POLICY FILES** button.

4. Click **Accept and download** to download the `MicrosoftEdgePolicyTemplates` file.

   The `MicrosoftEdgePolicyTemplates` archive is downloaded to the default folder on your computer.
5. Unzip the `MicrosoftEdgePolicyTemplates` archive.
6. Open the `MicrosoftEdgePolicyTemplates` folder and navigate to `windows\admx`.
7. From the `admx` folder, copy the `msedge.admx` file.
8. Navigate to `C:\Windows\PolicyDefinitions` and paste the `msedge.admx` file to the `PolicyDefinitions` folder.
9. In the `admx` folder, open the required language folder.

   For example, for the United States, open the `en-Us` folder.
10. From the language folder, copy the `msedge.adml` file.
11. Navigate to `C:\Windows\PolicyDefinitions` and paste the `msedge.adml` file to the matching language folder in the `PolicyDefinitions` folder.
12. **(Optional)** Verify that you have added the Microsoft Edge administrative template correctly by doing the following:
    a. Press `Win+R` and run `gpedit.msc` to open the Local Group Policy Editor.
    b. Click **Computer Configuration** > **Administrative Templates**.

    The `Administrative Templates` folder contains folders with the Microsoft Edge administrative templates.

Next steps

Configure Internet Explorer integration using Local Group Policy Editor.

Configuring Internet Explorer integration

About this task

Use this procedure to configure Internet Explorer integration using Local Group Policy Editor.

Before you begin

Add the Microsoft Edge administrative templates to your computer.

Procedure

1. Press `Win+R` and run `gpedit.msc` to open the Local Group Policy Editor.
2. Click **Computer Configuration** > **Administrative Templates** > **Microsoft Edge**.

   Local Group Policy Editor displays the Microsoft Edge pane.
3. In the Microsoft Edge pane, double-click **Configure Internet Explorer integration**.

   The system displays the Configure Internet Explorer integration window.

4. In the Configure Internet Explorer integration window, select **Enabled**.
5. From the **Configure Internet Explorer integration** list, select **Internet Explorer mode**.

   This is a default option for accessing CCMA in Microsoft Edge.
6. Click **OK**.

Result

IE mode in Microsoft Edge is now enabled.

Next steps

Configure the site list that you want to access using IE mode in Microsoft Edge.

Configuring the Enterprise Mode Site List

About this task

Use this procedure to configure the Enterprise Mode Site List.

On your computer, create an XML file with the list of sites that you want to access using Microsoft Edge with IE mode.

The XML file must contain the following elements:

- **site-list version** number: Internet Explorer uses this number to verify whether the site list is new. Approximately 65 seconds after Internet Explorer 11 starts, it compares your site list version to the stored version number. You must increase the site-list version number every time you update the version of the Enterprise Mode Site List.
- **<compat-mode>** tag: This tag specifies the compatibility settings for a specific site or domain. Use the `default` value.
- **<open-in>** tag: This tag specifies which Internet Explorer version opens for a specific site or domain. Use the `IE11` version.

Before you begin

- Add the Microsoft Edge Policy templates to your computer.
- Configure Internet Explorer integration.
- Ensure that you have your Contact Center server short name and FQDN.
- If you enable SSO on your Contact Center, ensure that you have your SMGR server FQDN.
- For a solution with geographic redundancy, ensure that you know your RGN server short name and FQDN.
- For a BC solution, ensure that your have your BC pair Managed Name and Managed FQDN.

Procedure

1. On your computer, create the `sites.xml` file using the following template:

```
<site-list version="1">
    <!-- File creation header -->
    <created-by>
        <tool>EnterpriseSitelistManager</tool>
```

```
        <version>10240</version>
        <date-created>20200717.142200</date-created>
    </created-by>
    <!-- Begin Site List -->
    <site url="server short name">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
    </site>
    <site url="server FQDN">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
    </site>
</site-list>
```

2. In the first `<site>` element, for the `url` attribute, type the Contact Center server short name.

   For example, if your Contact Center server short name is `auracc12680`, the code must look as follows: `<site url="auracc12680">`.

   For a BC solution, you must use your BC pair Managed Name instead of the server short name.

3. In the second `<site>` element, for the `url` attribute. type the Contact Center server FQDN.

   For example, if your Contact Center server FQDN is `auracc12680.aacc7dc2012.com`, the code must look as follows: `<site url="auracc12680.aacc7dc2012.com">`.

   For a BC solution, you must use your BC pair Managed FQDN instead of the server FQDN.

4. **(Optional)** Add your SMGR server to the site list using the following template:

```
<site url="SMGR server FQDN">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
</site>
```

   For example, if your SMGR server FQDN is `smgr80176.aacc7dc2012.com`, the code must look as follows: `<site url="smgr80176.aacc7dc2012.com">`.

5. **(Optional)** Add your RGN server to the site list using the following template:

```
<site url="RGN server short name">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
</site>
<site url="RGN server FQDN">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
</site>
```

6. Press `Win+R` and run `gpedit.msc` to open the Local Group Policy Editor.
7. Click **Computer Configuration** > **Administrative Templates** > **Microsoft Edge**.

   Local Group Policy Editor displays the Microsoft Edge pane.

8. In the Microsoft Edge pane, double-click **Configure the Enterprise Mode Site List**.

Local Group Policy Editor displays the Configure the Enterprise Mode Site List window.

9. In the Configure the Enterprise Mode Site List window, select **Enabled**.
10. In the Options field, type the `sites.xml` location.

    For example: `file:///c:/Users/user_name/Documents/sites.xml`.
11. Click **OK**.
12. **(Optional)** In the Microsoft Edge address bar, type `edge://compat/enterprise` and press `Enter`.

    Microsoft Edge displays the Enterprise Mode Site List page, where you can view the current list of sites that Microsoft Edge opens in IE mode. Microsoft Edge automatically checks if there is a newer site list version and updates it approximately 65 seconds after launch, however, you can also manually configure Microsoft Edge to use the latest site list version by clicking the **Force update** button.

Next steps

Launch Microsoft Edge and wait for approximately 65 seconds. You can now access CCMA using Microsoft Edge with IE mode.

Internet Explorer mode and Compatibility View configuration on the domain server

If you cannot configure Internet Explorer (IE) mode or Compatibility View from a local computer, you can configure these settings on the domain server. For example, if you cannot use Internet Explorer according to your enterprise security policies, you can only configure Compatibility View settings on the domain server.

To enable IE mode for Microsoft Edge on the domain server, perform the following procedures:

1. Adding the Microsoft Edge administrative templates to the domain server on page 171.
2. Creating a configuration file for IE mode on page 172.
3. Enabling IE mode on the domain server on page 175.
4. Completing IE mode configuration on a local computer on page 176.

To enable Compatibility View on the domain server, perform procedure Configuring Compatibility View settings on the domain server on page 177.

If required, you can disable Internet Explorer from the domain server as described in Disabling Internet Explorer 11 as a standalone browser on page 178.

For more information about IE mode in Microsoft Edge and Compatibility View, refer to the Microsoft documentation.

Important:

- You must not delete the Internet Explorer 11 browser from your computer, otherwise Microsoft Edge cannot launch CCMA.
- Always launch CCMA in a new tab of Microsoft Edge.
- If you enable single sign-on (SSO) on your Contact Center, you must also add the System Manager (SMGR) server FQDN to the Enterprise Mode Site List.
- For solutions with geographic redundancy, you must add the RGN server short name and FQDN to the Enterprise Mode Site List.
- For Business Continuity solutions, you must add only the Managed Name and Managed FQDN of the BC pair to the Enterprise Mode Site List. Do not add short names and FQDNs of your active and standby servers.
- If you use Windows 11, ensure that you use Contact Center Release 7.1.2 and the latest post GA path bundle.

Adding the Microsoft Edge administrative templates to the domain server

About this task

Use this procedure to add the Microsoft Edge administrative templates to the domain server.

Procedure

1. On the Microsoft website, go to the **Edge for Business** download page: https://www.microsoft.com/en-us/edge/business/download.
2. Click the **GET POLICY FILES** button.
3. Click **Accept and download** to download the `MicrosoftEdgePolicyTemplates` file.

   The `MicrosoftEdgePolicyTemplates` archive is downloaded to the default folder on your computer.
4. Unzip the `MicrosoftEdgePolicyTemplates` archive.
5. Open the `MicrosoftEdgePolicyTemplates` folder and navigate to `windows\admx`.
6. From the `admx` folder, copy the `msedge.admx` file.
7. Upload the `msedge.admx` file to the domain server to the `C:\Windows\PolicyDefinitions` folder.

   Use a file transfer program of your choice, such as SFTP, SCP, or WinSCP.
8. On your local computer, re-open the `MicrosoftEdgePolicyTemplates` folder and navigate to the `windows\admx\` folder.
9. In the `admx` folder, open a folder corresponding to the language and locale you use on Contact Center.

For example, for the United States, open the `en-US` folder.

10. From the language folder, copy the `msedge.adml` file.
11. Upload the `msedge.adml` file to the domain server to the `C:\Windows\PolicyDefinitions\<LANGUAGE_FOLDER>` folder.

    In this file path, `<LANGUAGE_FOLDER>` is the language folder with the same name that you selected in step 9. For example, for the United States, copy `msedge.adml` to the `C:\Windows\PolicyDefinitions\en-US` folder.

Next steps

Create a configuration file for IE mode.

Creating a configuration file for IE mode

About this task

You must create an XML file that contains a list of sites you need to access from Microsoft Edge using IE mode. You will use this file to configure the Enterprise Mode Site List on the domain server.

The XML file must contain the following elements:

- **site-list version** number: Internet Explorer uses this number to verify whether the site list is new. Approximately 65 seconds after Internet Explorer 11 starts, it compares your site list version to the stored version number. You must increase the site-list version number every time you update the version of the Enterprise Mode Site List.
- **<compat-mode>** tag: This tag specifies the compatibility settings for a specific site or domain. Use the `default` value.
- **<open-in>** tag: This tag specifies which Internet Explorer version opens for a specific site or domain. Use the `IE11` version.

Before you begin

- Add the Microsoft Edge Policy templates to the domain server.
- Ensure that you have your Contact Center server short name and FQDN.
- If you enable SSO on your Contact Center, ensure that you have your SMGR server FQDN.
- For a solution with geographic redundancy, ensure that you know your RGN server short name and FQDN.
- For a BC solution, ensure that your have your BC pair Managed Name and Managed FQDN.

Procedure

1. Create an XML file using the following template:

```
<site-list version="1">
    <!-- File creation header -->
    <created-by>
        <tool>EnterpriseSitelistManager</tool>
        <version>10240</version>
        <date-created>20200717.142200</date-created>
```

```
    </created-by>
    <!-- Begin Site List -->
    <site url="<SERVER SHORT NAME>">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
    </site>
    <site url="<SERVER FQDN>">
        <compat-mode>default</compat-mode>
        <open-in>IE11</open-in>
    </site>
</site-list>
```

2. In the first `<site>` element, for the `url` attribute, type the short name of your Contact Center server.

   For example, if the short name of your Contact Center server is `auracc12680`, the code must look as follows:

   ```
   <site url="auracc12680">
   ```

   For a BC solution, you must use your BC pair Managed Name instead of the server short name.

3. In the second `<site>` element, for the `url` attribute, type the Contact Center server FQDN.

   For example, if your Contact Center server FQDN is `auracc12680.aacc7dc2012.com`, the code must look as follows:

   ```
   <site url="auracc12680.aacc7dc2012.com">
   ```

   For a BC solution, you must use your BC pair Managed FQDN instead of the server FQDN.

4. **(Optional)** If you use SSO on your Contact Center, add a new `<site>` element for your System Manager to the file using the following template:

   ```
   <site url="SMGR server FQDN">
           <compat-mode>default</compat-mode>
           <open-in>IE11</open-in>
   </site>
   ```

   For example, if your System Manager FQDN is `smgr80176.aacc7dc2012.com`, the code must look as follows:

   ```
   <site url="smgr80176.aacc7dc2012.com">
           <compat-mode>default</compat-mode>
           <open-in>IE11</open-in>
   </site>
   ```

5. **(Optional)** For a solution with geographic redundancy, add a new `<site>` element for your RGN server to the site list using the following template:

   ```
   <site url="RGN server short name">
           <compat-mode>default</compat-mode>
           <open-in>IE11</open-in>
   </site>
   <site url="RGN server FQDN">
           <compat-mode>default</compat-mode>
           <open-in>IE11</open-in>
   </site>
   ```

6. Save the file using the `sites.xml` name.

Next steps

- Upload the configuration file to one of the following locations:
  - To the CCMA server. For more information about uploading the file to the CCMA server, see Uploading the configuration file for IE mode to the CCMA server on page 174.
  - To a shared folder on the domain server.
- Enable IE mode on the domain server.

Uploading the configuration file for IE mode to the CCMA server

About this task

You can store the configuration file `sites.xml` for IE mode on the CCMA server.

Before you begin

Create the configuration file `sites.xml` for IE mode.

Procedure

1. Copy the `sites.xml` file to the CCMA server to the `D:\Avaya\Contact Center\Manager Administration\Apps` folder.

   Use a file transfer program of your choice, such as SFTP, SCP, or WinSCP.

2. If you use SSO, do the following:
   a. Add the following entry to the `AgentPromValues.xml` file, which is located in the `D:\Avaya\Contact Center\Manager Administration\Server\Data` folder:

      ```
      <NOT_ENFORCED value="sites.xml*" />
      ```

   b. On the Contact Center, disable SSO.
   c. Re-enable SSO.
3. In Microsoft Edge or Internet Explorer, type the following URL:

   `https://<CCMA_FQDN>/sites.xml`

   In this URL, `<CCMA_FQDN>` is the FQDN of the CCMA server.
4. Ensure that you can view the `sites.xml` file contents in the browser.

Next steps

Enable IE mode on the domain server.

Enabling IE mode on the domain server

About this task

Enable IE mode on the domain server to access CCMA from Microsoft Edge.

Before you begin

- Add the Microsoft Edge Policy templates to your computer.
- Create the configuration file `sites.xml` for IE mode.
- Upload the configuration file to one of the following locations:
  - To the CCMA server. For more information about uploading the file to the CCMA server, see Uploading the configuration file for IE mode to the CCMA server on page 174.
  - To a shared folder on the domain server.

Procedure

1. On the domain server, navigate to **Control Panel** > **Administrative tools** > **Group Policy Management**.
2. Go to your domain.
3. Right-click the domain group policy and click **Edit**.
4. In the Group Policy Management Editor, go to **Computer Configuration** > **Policies** > **Administrative Templates** > **Microsoft Edge**.

   The Group Policy Management Editor displays the Microsoft Edge pane.
5. In the Microsoft Edge pane, double-click **Configure Internet Explorer integration**.
6. In the Configure Internet Explorer Integration window, select **Enabled**.
7. In the Options area, from **Configure Internet Explorer integration**, select one of the following:
   - **Internet Explorer mode**: To open sites in Microsoft Edge in IE mode.
   - **Internet Explorer 11**: To open sites in a standalone Internet Explorer window.
   - **None**: To prevent users from configuring IE mode using `edge://flags` or CLI.
8. Click **OK**.
9. In the Group Policy Management Editor, go to **Computer Configuration** > **Policies** > **Administrative Templates** > **Microsoft Edge**.
10. In the Microsoft Edge pane, double-click **Configure the Enterprise Mode Site List**.
11. In the Configure the Enterprise Mode Site List window, select **Enabled**.
12. In the Options area, from **Configure the Enterprise Mode Site List**, specify the location of the `sites.xml` configuration file as follows:
    - If the `sites.xml` file is on the CCMA server, use the following format:

      `https://<CCMA FQDN>/sites.xml`

In this entry, `<CCMA_FQDN>` is the FQDN of the CCMA server. For example:

`https://192.0.2.1/sites.xml`

- If the `sites.xml` file is in a shared folder on the domain server, use the following format:

  `\\<NETWORK_PATH>\sites.xml`

  In this entry, `<NETWORK_PATH>` is the full path to the `sites.xml` on the domain server. For example:

  `\\198.51.100.1\Shared\sites.xml`

13. Click **OK** to save the policy settings.

Next steps

Complete IE mode configuration on a client computer.

Completing IE mode configuration on a local computer

About this task

After configuring IE mode on the domain server, update group policies on the local computer you use to access CCMA and ensure you can access CCMA using Microsoft Edge.

Before you begin

- Configure IE mode on the domain server.
- Ensure that the operating system and Microsoft Edge browser installed on your local computer comply with the system requirements for IE mode listed at https://docs.microsoft.com/en-us/deployedge/edge-ie-mode.

Procedure

1. On your local computer, run the following command:

   `gpupdate /force`

2. To check if Group Policy Objects are applied, run the following command:

   `gpresult /r`

   In the command output, the Applied Group Policy Objects section must contain the domain group policy name that you configured on the domain server.

3. In the Microsoft Edge address bar, type `edge://compat/enterprise` and ensure that the Enterprise Mode Site List tab contains the `sites.xml` file you added to the domain server.

4. In Microsoft Edge, open the CCMA site.

Next steps

Configure the Compatibility View List on the domain server.

Configuring Compatibility View settings on the domain server

About this task

Compatibility View is a feature that enables Internet Explorer to open websites that are incompatible with the latest Internet Explorer versions. If Microsoft Edge cannot display the CCMA site even in IE mode, you can configure Compatibility View settings for the CCMA site. If you cannot configure the Compatibility View settings on your local computer, you can configure them on the domain server.

Windows 11 does not support Internet Explorer. Therefore, if you use Windows 11, you do not need to enable Compatibility View.

Important:

If you change Compatibility View settings, you must delete a registry key that you add to Group Policy Objects in this procedure and add it again.

Procedure

1. On the domain server, start the Internet Explorer.
2. Click the **Tools** icon and then click **Compatibility View Settings**.

   Internet Explorer displays the Compatibility View Settings window.
3. In **Add this website**, type your domain name and then click **Add**.
4. On the domain server, go to **Control Panel** > **Administrative tools** > **Group Policy Management**.
5. Select your domain.
6. Right-click the domain group policy and click **Edit**.

   You can also create a new domain group policy and link it to the domain.
7. In the Group Policy Management Editor, go to **User Configuration** > **Preferences** > **Windows Settings** > **Registry**.
8. Right-click **Registry** and click **New** > **Registry Wizard**.
9. In the Registry Wizard, select the local machine and then navigate to **HKEY_CURRENT_USER** > **Software** > **Microsoft** > **Internet Explorer** > **BrowserEmulation** > **ClearableListData**.
10. Select the check box for the **UserFilter** parameter.
11. Click **Finish**.
12. On your local computer, to update the group policy settings, run the following command:

    ```
    gpupdate /force
    ```
13. To check if Group Policy Objects are applied, run the following command:

    ```
    gpresult /r
    ```

In the command output, the Applied Group Policy Objects section must contain the domain group policy name that you configured on the domain server.

14. **(Optional)** Verify that the registry key `HKEY_CURRENT_USER\Software\Microsoft\Internet Explorer\BrowserEmulation\ClearableListData\UserFilter` contains the same value that is configured on the domain server.
15. Restart Internet Explorer to apply changes in the Compatibility View settings.

Disabling Internet Explorer 11 as a standalone browser

About this task

Disable Internet Explorer 11 as a standalone browser to force users in your domain to use Microsoft Edge. When users try to open shortcuts or files associated with Internet Explorer 11, they open URLs in Microsoft Edge instead.

Before you begin

Ensure that the operating system and Microsoft Edge browser installed on your local computer comply with the system requirements for IE mode listed at https://docs.microsoft.com/en-us/deployedge/edge-ie-disable-ie11.

Procedure

1. On the domain server, navigate to **Control Panel** > **Administrative Tools** > **Group Policy Management**.
2. Go to your domain.
3. Right-click the domain policy and click **Edit**.

   You can also create a new domain policy and link it to the domain.
4. In the Group Policy Management Editor, go to **Computer Configuration** > **Policies** > **Administrative Templates** > **Windows components** > **Internet Explorer**.
5. In the Microsoft Edge pane, double-click **Disable Internet Explorer 11 as a standalone browser** and select **Enabled**.
6. In the Options area, select one of the following:
   - **Never**: To notify the users that Internet Explorer 11 is disabled.
   - **Always**: To notify the users every time they are redirected from Internet Explorer 11.
   - **Once per user**: To notify the users only the first time they are redirected.
7. Click **OK**.
8. Log in to a computer in the domain and run the `gpupdate /force` command.
9. **(Optional)** To check if Group Policy Objects are applied, run the `gpresult /r` command.
10. Open Internet Explorer.

You can see the following message: `This action is restricted. For more information, please contact your system administrator.`

Starting the Script Variables tool in Contact Center Manager Administration

Before you begin

- Ensure the client computer meets the administration client computer requirements. For more information, see *Avaya Contact Center Select Solution Description*.
- Configure Internet Explorer. For more information, see Configuring Internet Explorer on page 164.

About this task

Start the Script Variables tool to list the application variables on your system. You can also use this window to create, update, or delete an application variable.

You can log on to CCMA for the first time as an administrator or a supervisor. For security reasons, Avaya recommends that you change the default password when you first log on to the application. CCMA user passwords can contain only English characters and special characters.

Procedure

1. Start Internet Explorer.
2. In the **Address** box, type the URL of the Avaya Contact Center Select server. The default URL is `http://<server name>`, where <*server name*> is the host name of the Avaya Contact Center Select server.
3. Press **Enter**.
4. In the main logon window, in the **User ID** box, type the user name. The default user ID is Administrator.
5. In the **Password** box, type the password. The default user password is Administrator.
6. Click **Log In**.
7. From the **Launchpad**, select **Scripting**.
8. In the Scripting window, expand the system tree.
9. In the left pane, in the system tree, click your Contact Center Manager Server.
10. Click **Script Variables**.

Checking variables for referencing applications

Before you begin

- Start the Script Variables tool. See Starting the Script Variables tool in CCMA on page 179.

About this task

Check a variable to see if it is referenced by an active application. If it is referenced by an active application, you can change the value of the variable or the comment.

If you want to change the properties of a variable and how the variable appears in an application, you can deactivate the application or remove the reference to the variable from the referencing application.

Procedure

1. In the Scripting window, expand the system tree.
2. In the system tree, click **CC**.
3. Click **Script Variables**.

   The system tree in the left pane expands to show all types of variables. The right pane shows an alphabetical list of all variables. In the Script Variables grid, you can sort all columns by clicking on the column header.
4. In the left pane of the Script Variables window, select the script variable that you want to check.
5. In the right pane, click **Script Variable Properties**.
6. Under **Referencing Scripts**, determine which scripts use the variable.
7. View the **Script Variable Properties** to change the variable value or comment.
8. Click **Submit**.

Configuring business and public holiday dates

Before you begin

- Start the Contact Center Manager Administration Script Variables tool. See Starting the Script Variables tool in CCMA on page 179.
- Ensure that the variable is not referenced by an active application. See Checking variables for referencing applications on page 180.

About this task

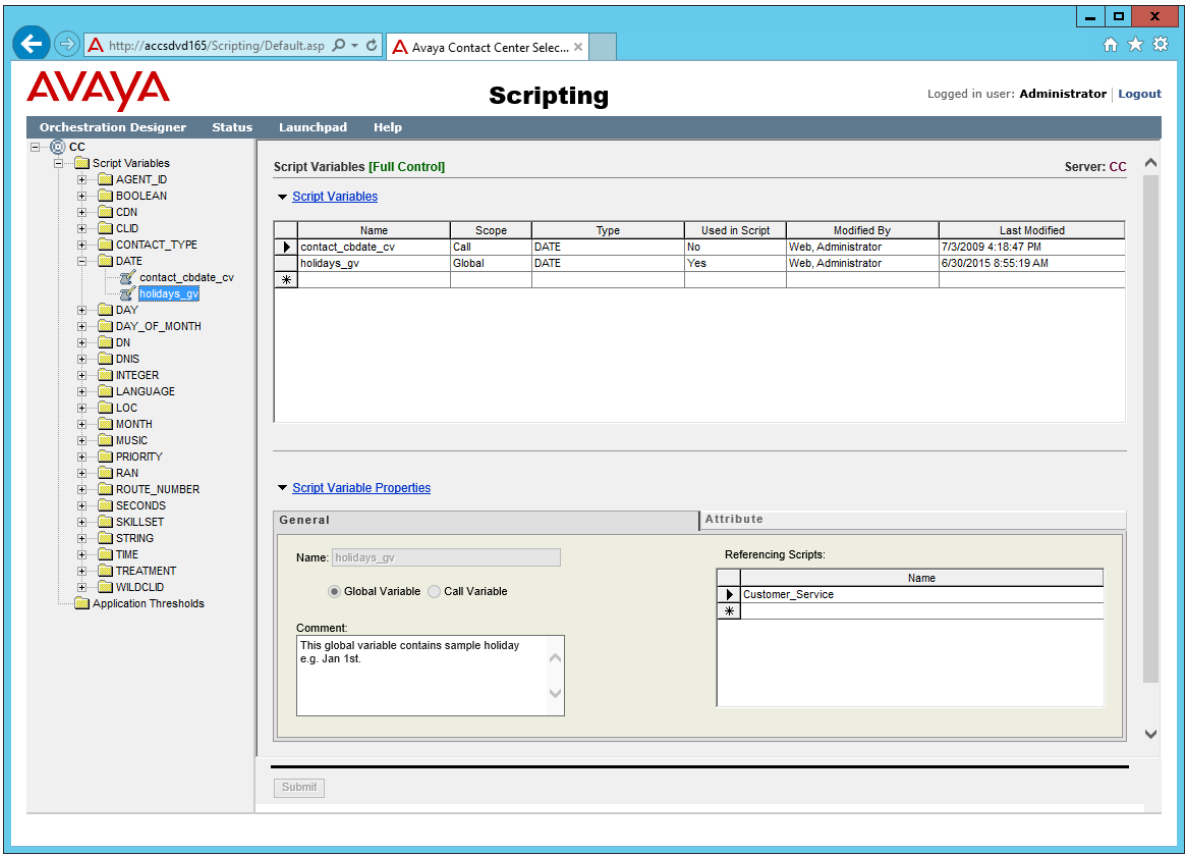
Configure the dates on which the contact center is closed. For example, add the local business and public holidays to the list of contact center holidays.

Avaya recommends that you add your local business and public holidays and remove the sample dates.

Procedure

1. From the Contact Center Manager Administration **Launchpad**, select **Scripting**.
2. In the Scripting window, expand the system tree.
3. In the system tree, click your Avaya Contact Center Select server.
4. Click **Script Variables**.

   The system tree in the left pane expands to show all types of variables. The right pane shows an alphabetical list of all variables. In the Script Variables grid, you can sort all columns by clicking on the column header.
5. In the Script Variables window, select the script variable that you want to change. Expand **Date** and select **holidays_gv**.
6. Click **Script Variable Properties**.
7. In the **Script Variable Properties** property sheet, select the **Attribute** tab.



8. In the **List of Values** table, add your local business and public holidays.
9. If any of the existing dates are not suitable for your solution, use the **Remove** button to delete the dates.
10. Click any other row in the table to save the dates.

11. Click **Submit**.

Configuring the office hours

Before you begin

- Start the Contact Center Manager Administration Script Variables tool. See Starting the Script Variables tool in CCMA on page 179.
- Ensure that the variable is not referenced by an active application. See Checking variables for referencing applications on page 180.

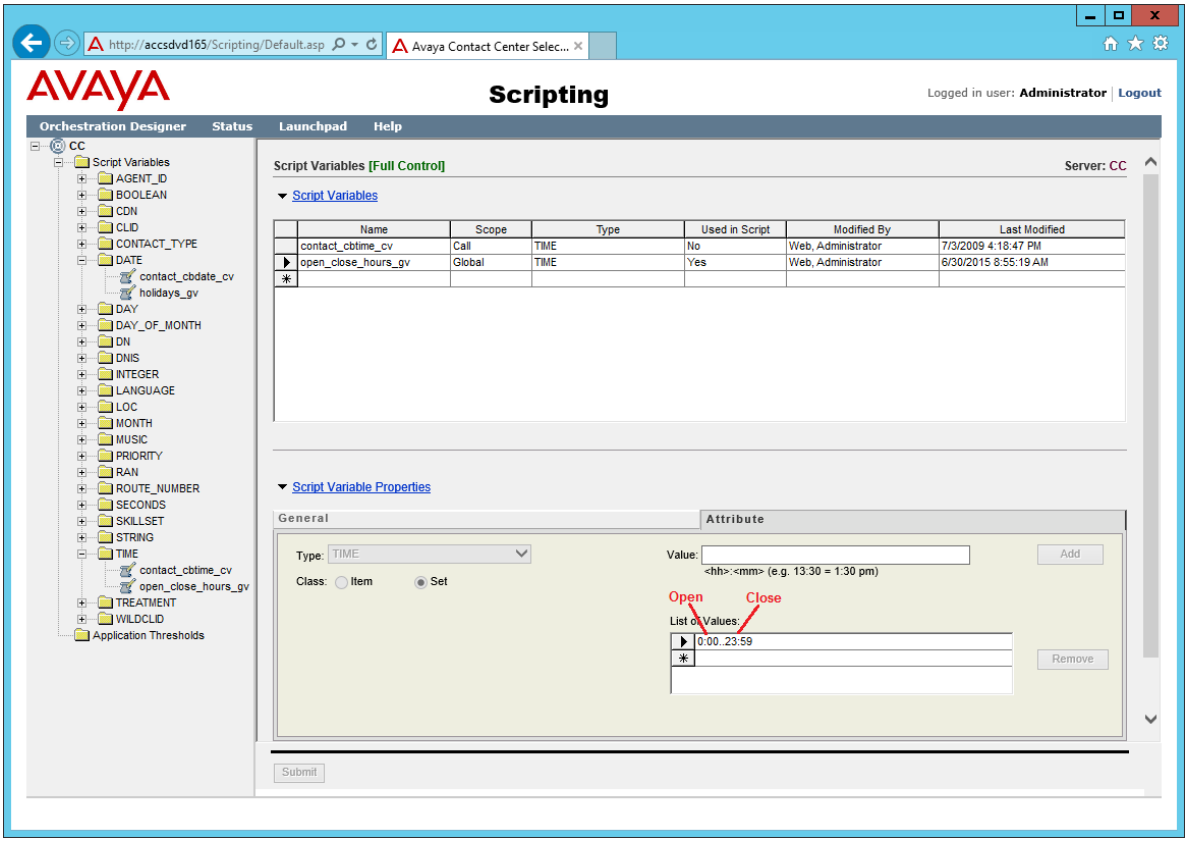
About this task

Configure the time of day that your solution is open for business.

Procedure

1. From the Contact Center Manager Administration **Launchpad**, select **Scripting**.
2. In the Scripting window, expand the system tree.
3. In the system tree, click your Avaya Contact Center Select server.
4. Click **Script Variables**.

   The system tree in the left pane expands to show all types of variables. The right pane shows an alphabetical list of all variables. In the Script Variables grid, you can sort all columns by clicking on the column header.
5. In the Script Variables window, select the script variable that you want to change. Expand **TIME** and select **open_close_hours_gv**.
6. Click **Script Variable Properties**.
7. In the **Script Variable Properties** property sheet, select the **Attribute** tab.



8. In the **List of Values** table, edit the time of day that your contact center opens. This is the first time in the list. The default is 00:00.
9. In the **List of Values** table, edit the time of day your contact center closes. This is the second time in the list. The default is 23:59.
10. Click **Submit**.

Changing the default voice mail number

Before you begin

- Start the Contact Center Manager Administration Script Variables tool. See Starting the Script Variables tool in CCMA on page 179.
- Ensure that the variable is not referenced by an active application. See Checking variables for referencing applications on page 180.

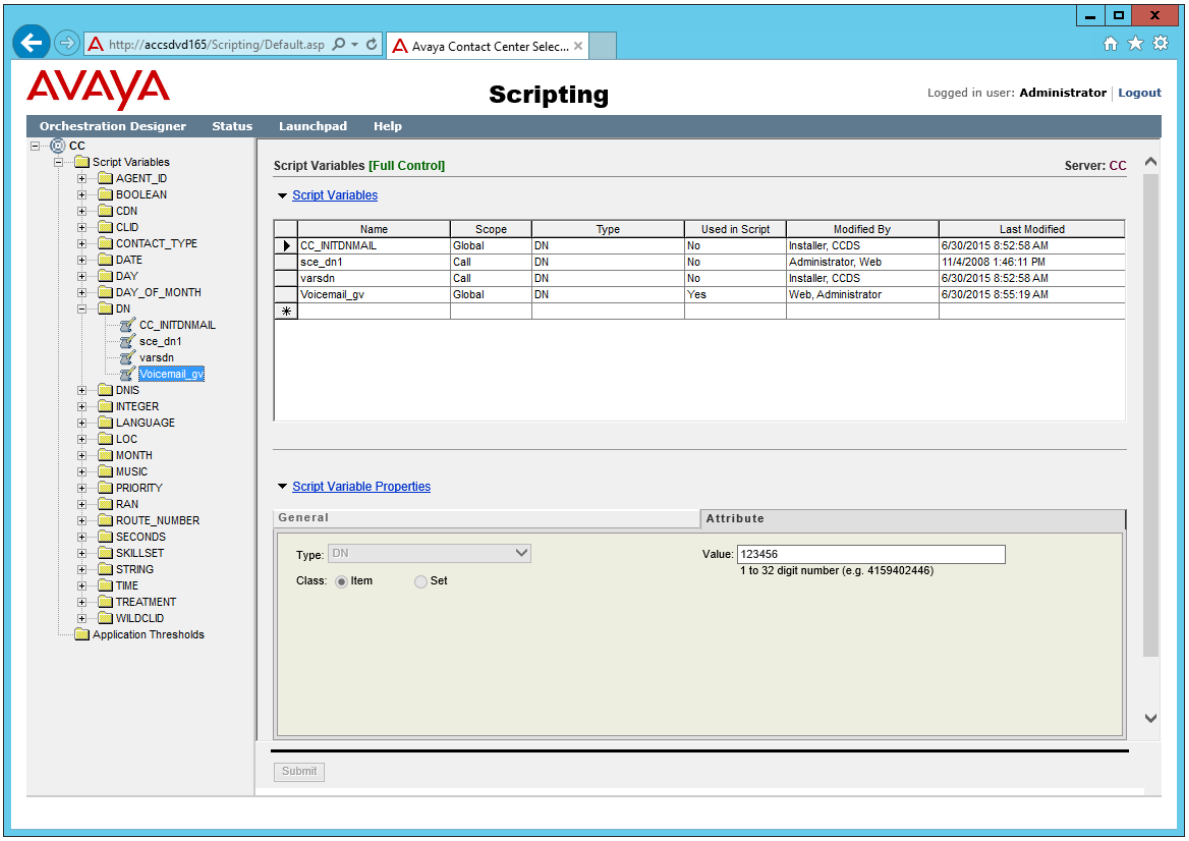
About this task

Change the default voice mail number to match your solution. This voice mail number is used by “Option 4” in the Customer Service sample Orchestration Designer flow application.

Procedure

1. From the Contact Center Manager Administration **Launchpad**, select **Scripting**.
2. In the Scripting window, expand the system tree.
3. In the system tree, click your Avaya Contact Center Select server.
4. Click **Script Variables**.

   The system tree in the left pane expands to show all types of variables. The right pane shows an alphabetical list of all variables. In the Script Variables grid, you can sort all columns by clicking on the column header.
5. In the Script Variables window, select the script variable that you want to change. Expand **DN** and select **Voicemail_gv**.
6. Click **Script Variable Properties**.
7. In the **Script Variable Properties** property sheet, on the **Attribute** tab, change the **Value** field as required. Enter the voice mail number for your solution. The default voice mail number is 6999.



8. Click **Submit**.

Changing the voice prompt audio files

Before you begin

- Record your own media files. Avaya Contact Center Select provides optimum playback performance with .WAV files encoded as Linear 16-bit PCM, 8KHz Mono with a bit rate of 128kbits/sec.
- Copy the media files onto the Avaya Contact Center Select server.

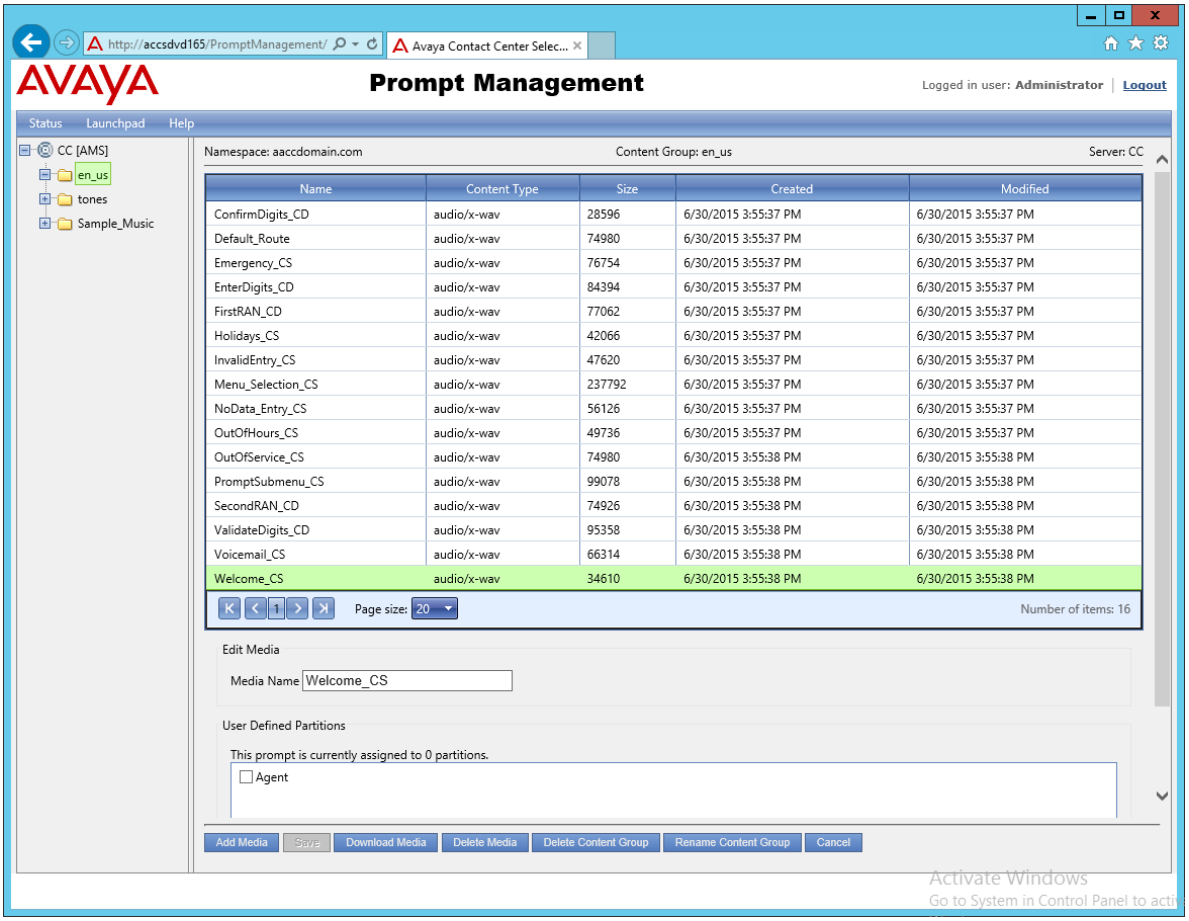
About this task

Avaya Contact Center Select provides a number of default media files. You can replace these default media files with your own recordings.

For example, to replace the Welcome_CS media file, record your own main welcome audio media file, and add the media file to the Avaya Contact Center Select Content Group, giving it a *Media Name* of Welcome_CS.

Procedure

1. Start Internet Explorer.
2. In the **Address** box, type the URL of the Avaya Contact Center Select server. The default URL is `http://<server name>`, where <*server name*> is the computer name of the Avaya Contact Center Select server.
3. Press **Enter**.
4. In the main logon window, in the **User ID** box, type the user name.
5. In the **Password** box, type the password.
6. Click **Log In**.
7. From the **Launchpad**, select **Prompt Management**.
8. In the Prompt Management window, in the left pane, expand the system tree.
9. In the left pane, expand the locale-specific Content Group for your solution. For example, expand **en_us**.



10. In the right pane, select the audio media file to update. Note the Name of the media. For example, note “Welcome_CS”.
11. Click **Add Media**.
12. Click **Select** and browse to the location of your custom audio media file.
13. Click **Open**.
14. In the **Media Name** box, type the name of the existing media that you want to replace. For example, type Welcome_CS.
15. Click **Save**.
16. On the message box, click **OK** to overwrite the existing media file.

Chapter 16: Avaya Contact Center Select users

Avaya Contact Center Select includes two types of users in Contact Center Manager Administration — an administrator user and a supervisor user. By default, Contact Center creates one administrator user and two supervisor users. Contact Center assigns the appropriate access classes and partitions to the created accounts.

A supervisor user can perform only a subset of the tasks an administrator can perform. This includes, but is not limited to:

- assigning agents to skillsets
- changing an agent's supervisor
- creating and editing activity codes
- viewing existing real-time reports
- making private copies of real-time reports
- launching Emergency Help
- running historical reports
- using the Audit Trail

The Launchpad options available to a supervisor user in Contact Center Manager Administration are limited. The administrator can choose to edit the access classes and partitions assigned to a supervisor user.

The administrator performs advanced configuration tasks in Contact Center Manager Administration, in addition to the tasks listed above.

The *Sample Agent Starting ID* default value is 6001. The default *Number of sample agents to create* is 10.

The default users and supervisors all have the same default password. This default password is configured on the *Sample Data* tab of the Avaya Contact Center Select Ignition Wizard during deployment.

Logging on to Contact Center Manager Administration

Before you begin

- Ensure the client computer meets the administration client computer requirements. For more information, see *Avaya Contact Center Select Solution Description*.
- Configure Internet Explorer. For more information, see Configuring Internet Explorer on page 164.

About this task

Log on to Contact Center Manager Administration (CCMA) to configure and administer your contact center resources.

You can log on to CCMA for the first time as an administrator or a supervisor. For security reasons, Avaya recommends that you change the default password when you first log on to the application. CCMA user passwords can contain only English characters and special characters.

Procedure

1. Start Internet Explorer.
2. In the **Address** box, type the URL of the Avaya Contact Center Select server. The default URL is `http://<server name>`, where <*server name*> is the host name of the Avaya Contact Center Select server.
3. Press **Enter**.
4. In the main logon window, in the **User ID** box, type the user name. The default user ID is Administrator.
5. In the **Password** box, type the password. The default user password is Administrator.
6. Click **Log In**.

   Contact Center Manager Administration (CCMA) displays your previous CCMA login information and also the number of failed login attempts before a successful login.

Creating a new agent

Before you begin

- Log on to Contact Center Manager Administration (CCMA).
- If you want to associate an agent with a domain account, you must first add the server to the domain.

About this task

Complete this procedure to use Contact Center Manager Administration to create a new Avaya Contact Center Select agent. Contact Center Manager Administration also uses the agent's name and password to create a local Windows account on the Avaya Contact Center Select server.

Procedure

1. On the Contact Center Manager Administration **Launchpad**, select **Contact Center Management**.
2. In the left pane, click the Contact Center Manager Server under which to add the agent.
3. From the **Add** menu, select **Agent**.
4. In the New Agent Details window, enter the following mandatory information about the agent:
   - First name
   - Last name
   - Login ID
   - Primary supervisor
   - Password
   - Confirm Password
5. Enter any optional information about the agent (for example, Call Presentation Class, Threshold, Title, Department, or Comments).
6. Under **Windows User Account Details**, select **Workgroup** or **Domain**. If your solution implements the Business Continuity feature, the **Domain** option is available.
7. If you select **Workgroup**:
   a. In the **Password** box, type the password for the new local Windows user account associated with this agent.
   b. In the **Confirm Password** box, retype the password.
8. If you select **Domain**:

   In the **User name** box, type the name of the agent's domain user account in the format DomainName\UserAccountName. This domain account is associated with the agent.

   Important:

   You must ensure that you associate the agent with a correct and valid domain user account.
9. If this agent uses the multiplicity feature on Agent Desktop, select a multiplicity presentation class from the **Multiplicity Presentation Class** list.

   If multiplicity is not enabled, the Multiplicity Presentation Class list does not appear.
10. Click the **Contact Types** heading.
11. Select the check box beside each **Contact Type** to assign that contact type to the agent.
12. Click the **Skillsets** heading.
13. Click **Assign Skillsets**.

14. Click **List All** to list all skillsets configured on the server.
15. From the **Priority** list for each skillset to assign to the agent, select the priority level or select **Standby** to put the agent in standby mode for this skillset.

    Priority levels range from 1 to 48, with 1 being the highest priority for the skillset.
16. Select the check boxes beside the partitions to which to add the new agent.
17. Click **Submit** to save your changes.

Agent variable definitions

Name	Description
First Name	The first name of the user. The first name is mandatory for all users and can be a maximum of 30 characters long.
Last Name	The last name of the user. The last name is mandatory for all users and can be a maximum of 30 characters long.
Title	The title for the user. The title is optional and can be up to 40 characters long.
Department	The user's department. The department is optional and can be up to 40 characters long.
Language	Select the language preference for the user. Language selection is mandatory for all users.
Comment	Comments you have about the user. Comments are optional and can be up to 127 characters in length.
User Type	Select the user type. This value is mandatory. Select the agent user type. Agents are users who are assigned skillsets and who answer contacts in the Contact Center. All agents must be assigned to a supervisor.
Login ID	The number that the user enters to log on to the phone. This value is mandatory for all users.
Windows User Account Details — Password (Workgroup only)	Contact Center Manager Administration uses the agent name and password to create a local Microsoft Windows user account on the Avaya Contact Center Select server. Enter a suitably complex password for the agent's Microsoft Windows user account.

Table continues…

Name	Description
Windows User Account Details — User name (Domain only)	The existing domain user account to associate with the agent, in the format DomainName \UserAccountName. The account details must be correct. Agents cannot log on to Agent Desktop if you type the account details incorrectly.
Primary Supervisor	The agent's supervisor. You can choose from all supervisors configured on the server to which you are currently logged on.
Call Presentation	The call presentation class to assign to this agent. The call presentation class determines whether the agent can take a break between calls, whether the agent can put DN calls on hold for incoming ACD calls, and whether the agent phone shows that the agent is reserved for a network call. Call Presentation is mandatory for all users with agent and supervisor/agent capability.
Multiplicity Presentation Class	The multiplicity presentation class to assign to this agent. The multiplicity presentation class determines the type and number of Multimedia contacts an agent can have open simultaneously on Agent Desktop. If multiplicity is not enabled, the Multiplicity Presentation Class list does not appear.
Threshold	The threshold class to assign to this user. The threshold class is mandatory for all users with agent and supervisor/agent capability.

Updating agent details

Before you begin

- Log on to Contact Center Manager Administration (CCMA). For more information, see Logging on to Contact Center Manager Administration on page 188.

About this task

Complete this procedure to edit the details of an agent or supervisor/agent.

Procedure

1. On the Contact Center Manager Administration **Launchpad**, select **Contact Center Management**.
2. From the **View/Edit** menu, select **Supervisors**.

3. In the left pane, click the server on which to work with the supervisor/agent profile.

   The list of supervisors configured on the server appears.

4. Click the supervisor to whom the agent is assigned.

   The tree expands to show the list of agents assigned to this supervisor.

5. Right-click the agent whose profile you want to edit, and then select **View Agent Details**.
6. On the Supervisor/Agent Details window, in the **User Details** and **Agent Information** sections, you can change agent details, such as first name, last name, user type, phone login ID, primary supervisor, call presentation, threshold, title, department, or comments.
7. To change the current skillset assignment or assign the agent to new skillsets, click the **Skillsets** heading.

   The list of currently assigned skillsets appears.

8. To change the priority level for a skillset, in the table of assigned skillsets, from the **Priority** list, select a new priority level.
9. To assign the agent to new skillsets, click **List All** to list all skillsets configured on the server.
10. In the table listing all skillsets, from the **Priority** list, select the priority level for each skillsets to which you want to assign the agent.

    OR

    Select Standby to put the agent in standby mode for this skillset.

    Skillset priority levels range from 1 to 48, with 1 being the highest priority for this skillset.

11. Select the check box for each partition to which you want to add the agent.
12. Click **Submit** to save your changes.

Copying agent properties

Before you begin

- Log on to Contact Center Manager Administration (CCMA). For more information, see Logging on to Contact Center Manager Administration on page 188.

About this task

There are several ways to copy an agent's properties. This procedure lists one possible way. You can also click Copy Agent Properties on the Functions menu in the Agents List window, or you can right-click an agent name in the system tree, and then click Create Copy from the resulting pop-up menu.

You can create new agents quickly by copying the properties of existing agents. New agents assume the following properties from the existing agent:

- Skillset assignment
- Department
- User type
- Language
- Comment
- Supervisor
- Call presentation
- Threshold
- Contact type

When you copy an agent's properties, you must type in the new agent's name, login ID, and password.

Procedure

1. On the Contact Center Manager Administration **Launchpad**, select **Contact Center Management**.
2. From the **View/Edit** menu, select **Supervisors**.
3. In the left pane, click the server containing the agent to copy.
4. In the left pane, click the agent's supervisor.

   The Supervisor window appears in the right pane, listing the assigned agents in a table.
5. In the table, right-click on the agent to copy, and then select **Copy Agent Properties**.

   The agent's properties appear in the New Agent Details window.
6. In the **User Details** section, type the new agent's name and phone login ID.
7. Optionally, can also change any of the copied properties. For example, you can assign the agent to new skillsets or partitions in the appropriate areas of this window.
8. After you configure the new agent, click **Submit** to save the agent under the specified supervisor.

   The agent's icon appears in the system tree.

Part 8: Agent Desktop

Chapter 17: Agent Desktop software installation

This section describes how to install Agent Desktop software using the ClickOnce deployment method or using an MSI file.

Avaya Contact Center Select agents can use the ClickOnce deployment method to download and install Agent Desktop client software from the Avaya Contact Center Select server.

Avaya Contact Center Select administrators can use the MSI file deployment method to push Agent Desktop software to agent client computers using a silent install.

If your solution uses the Avaya Contact Center Select Business Continuity feature, verify that the solution is functional and resilient before installing Agent Desktop software on all of the client computers.

Contact Center supports backwards compatibility with the previous Feature Pack or Service Pack version of Agent Desktop. This allows you to upgrade the Contact Center server without the requirement to upgrade Agent Desktop in a single maintenance window. For example, if you upgrade to Release 7.0 Feature Pack 3, you can use the Release 7.0 Feature Pack 2 version of Agent Desktop. New Agent Desktop features added in the latest Contact Center release are not available until you upgrade Agent Desktop to that release.

Backwards compatibility is not supported for major or minor releases. For example, if you upgrade to Release 7.1, you cannot use the Release 7.0 version of Agent Desktop.

Installing Agent Desktop software using ClickOnce

Before you begin

- Ensure the client computer meets the hardware and networking requirements for Agent Desktop software. For more information about Agent Desktop requirements, see *Avaya Contact Center Select Solution Description*.
- Ensure the client computer meets the Operating System requirements for Agent Desktop software. For more information about Agent Desktop requirements, see *Avaya Contact Center Select Solution Description*.

About this task

Install Agent Desktop software to handle Avaya Contact Center Select customer contacts.

Procedure

1. In Windows Explorer, Internet Explorer or Microsoft Edge, type the HTTP address (URL) provided by your system administrator.

   The URL format is:

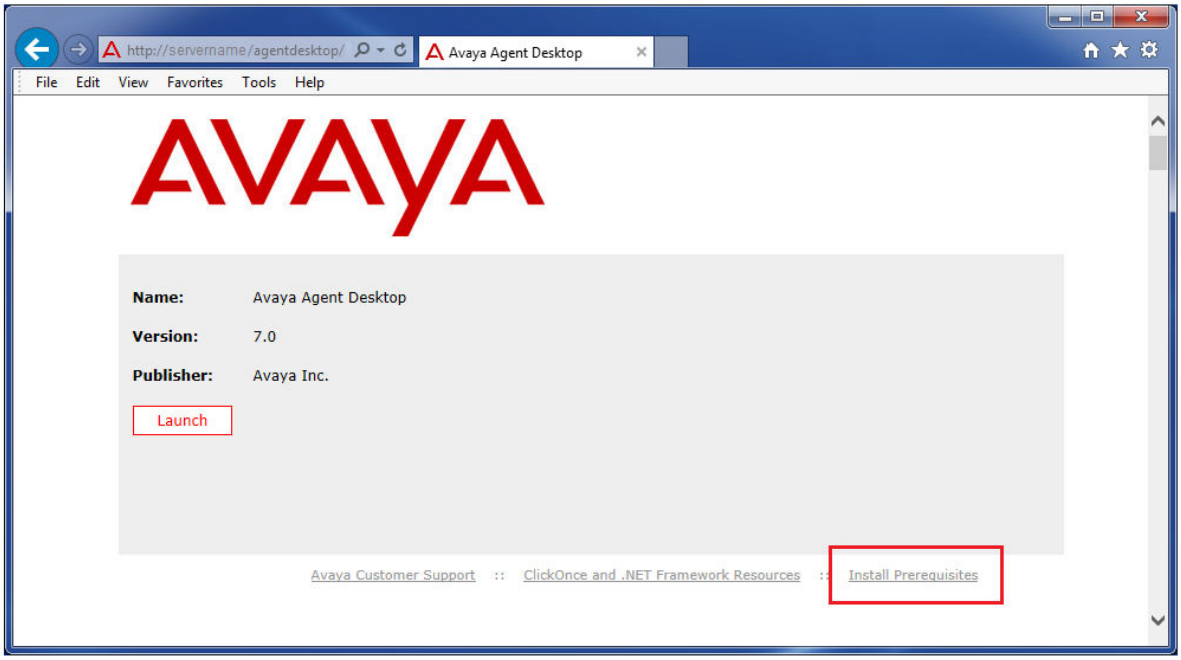
   `http://<ContactCenterServerName>/agentdesktop`

   Where <ContactCenterServerName> is the Avaya Contact Center Select server name.

   Note:

   The Agent Desktop installer does not use a secure HTTPS connection, even if Web Services security is turned on.

2. Click **Install Prerequisites** and follow the on screen instructions to install the .NET and operating system components required to run Agent Desktop software.



3. Click **Launch** to download and install the most recent version of Agent Desktop software.

Agent Desktop client software silent installation

This section describes how to install the Agent Desktop client software silently, using an MSI file, on each client computer in your contact center. Avaya Contact Center Select agents use Agent Desktop software to handle customer voice and multimedia contacts.

Important:

Avaya Contact Center Select does not support the softphone integrated in the Avaya Agent Desktop MSI installation package. When installing Avaya Agent Desktop using the MSI file, disable this softphone option.

Installing software prerequisites for an Agent Desktop silent install

Before you begin

- Download the most recent Service Pack and patches from the Avaya support website, http://support.avaya.com.

About this task

Install the software prerequisites for Agent Desktop, so that you can install Agent Desktop silently.

You can use the Windows Add\Remove programs utility to uninstall the Agent Desktop software prerequisites.

Procedure

1. Log on to the Avaya Contact Center Select server using administrator privileges.
2. Browse to `<Drive>:\Avaya-ProductUpdates\Install Software\CCMM \AvayaCC_CCMM_<XXX>\AAAD Prerequisites`, where <Drive> is the drive containing the most recent Service Pack, and <XXX> is the version number of the latest Service Pack.
3. Copy the prerequisites folder to a location from which you can copy it to the client computer.

   For example, copy the `AAAD Prerequisites` folder to a USB memory stick or network location.
4. Log on to the client computer using administrator privileges.
5. Copy the prerequisites folder to the client computer.
6. Install Microsoft .NET Framework 4.6.2. When you install Microsoft .NET Framework 4.6.2, you also get .NET Framework 4.0 and 4.5.

Installing Agent Desktop client software silently

Before you begin

- Download the most recent Service Pack and patches from the Avaya support website.

About this task

Install Agent Desktop client software silently to install the software as a desktop application with an All Users profile. This allows all agents that can log on to the client computer to run Agent Desktop software. By default, the Agent Desktop software installs in the Program Files folder.

Important:

Avaya Contact Center Select does not support the softphone integrated in the Avaya Agent Desktop MSI installation package. When installing Avaya Agent Desktop using the MSI file, disable this softphone option.

You can use the Windows Add\Remove programs utility to uninstall the Agent Desktop software.

Procedure

1. Log on to the Avaya Contact Center Select server using administrator privileges.
2. Browse to `<Application Drive>:\Avaya\Contact Center\Multimedia Server \Agent Desktop\Client\`, where <Application Drive> is the drive on which you installed Avaya Contact Center Select software. By default, this is the D: drive.
3. Copy the `AvayaAgentDesktopClient.msi` installation file to a USB memory stick or network location.
4. Log on to the client computer using administrator privileges.
5. Copy the `AvayaAgentDesktopClient.msi` installation file to the client computer.
6. Open a command prompt by clicking **Start** > **All Programs** > **Run**. Type **cmd** and press Enter.
7. Use the Microsoft Windows Installer program (msiexec.exe) to install the software. For example:

   ```
   C:\AAAD>msiexec.exe /package AvayaAgentDesktopClient.msi /
   quiet /log "products.log”  AAADSOFTPHONE=0
   MMSERVERNAME=MyCCMMServer AAADUSEHTTPS=FALSE
   ```

   Where:

   - AAADSOFTPHONE — Avaya Contact Center Select does not support the Agent Desktop integrated softphone. Set this parameter to `0`.
   - MMSERVERNAME — This parameter configures the name of the Avaya Contact Center Select server that the Agent Desktop application communicates with. This parameter can be an IP Address or a server name.
   - AAADUSEHTTPS — This binary parameter (TRUE or FALSE) configures Agent Desktop to communicate with the Avaya Contact Center Select server using Hypertext Transfer Protocol Secure (HTTPS). The default value is FALSE, do not use HTTPS.

   The Agent Desktop software installs silently.
8. Close the command prompt window.

Part 9: Reporting

Chapter 18: Real Time Reporting

The Contact Center Manager Administration (CCMA) Real-Time Reporting displays provide up-to-date statistics for your contact center and resources. With access to statistics that update in real-time, such as the number of contacts waiting to be answered, the number of agents assigned to each skillset, and the number of abandoned calls, you can view changes in contact activity as they occur.

Real-time data is presented in the best format to help you react immediately to changing circumstances, adjust skillsets and staffing levels, or reroute calls to other resources. Real-Time Reporting displays make it easy to monitor peak periods and then adjust staffing levels as appropriate - all to maintain the highest levels of customer service.

Using the Contact Center Status real-time display

About this task

Use the Avaya Contact Center Select Real-Time Reporting displays to monitor the performance of the contact center in near real-time.

Avaya Contact Center Select offers a number of default public real-time displays. Create a private copy of these displays and experiment with them to create displays that meet the day-to-day requirements of your business.

For example, the CC Status public graphical display has the following panels:

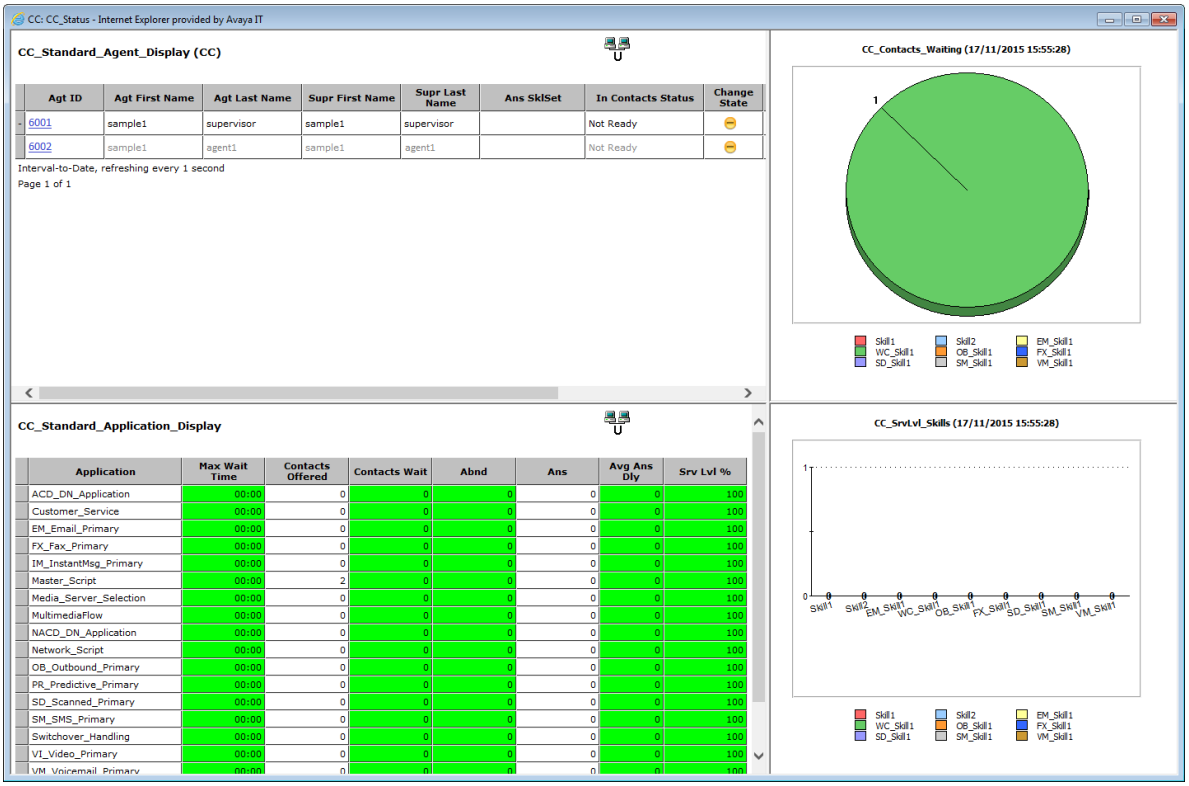
Panel	Type	Description
CC_Standard_Agent_Display (CC)	Tabular	This tabular panel displays the agent status and time in current state. Use this panel to monitor individual agent activity.
CC_Contacts_Wait	Chart	This pie chart displays the number of contact waiting for each skillset.
CC_Standard_Application_Display	Tabular	This tabular panel displays the maximum wait times, and the number of contacts offered, waiting, answered, or abandoned.
CC_Sample_Skills	Chart	This panel displays the service level for each skillset.

This combined display provides a real-time status report about important Avaya Contact Center Select performance parameters.

Procedure

1. Start Internet Explorer.
2. In the **Address** box, type the URL of the Avaya Contact Center Select server. The default URL is `http://<server name>`, where <*server name*> is the computer name of the Avaya Contact Center Select server.
3. Press **Enter**.
4. In the main logon window, in the **User ID** box, type the user name. The default user ID is Administrator.
5. In the **Password** box, type the password. The default user password is Administrator.
6. Click **Log In**.
7. On the Contact Center Manager Administration **Launchpad**, click **Real-Time Reporting**.
8. In the left pane, select the **Public Graphical Displays** folder.
9. In the left pane, from the list of displays, select **CC_Status**.
10. On the **Public Collection properties** tab, select the default display options for CC Status. These standard displays combine to form an effective Real-Time Reporting graphical display.
11. On the **Public Collection properties** tab, click **Launch**.

    The Contact Center Status real-time display appears. The values you see on your display depend on the number of active agents and contacts in your solution.



12. Use the display to monitor contact center performance in near real-time. Use this information to tune the contact center to changing circumstances, adjust skillsets and staffing levels, or reroute calls to other resources.
13. For more information about creating a private and modifiable copy of this real-time display, see *Administering Avaya Contact Center Select*.
14. Experiment with Real-Time Reporting to find, copy, or create a set of displays that meet the day-to-day requirements of your solution.

Part 10: Troubleshooting

Chapter 19: Troubleshooting tips

This section describes how to troubleshoot Avaya Contact Center Select. To avoid the frustration of troubleshooting; plan your solution in advance. You can troubleshoot problems better by planning for events in advance and having up-to-date information if troubleshooting is required. For example, ensure that you know the correct user accounts, passwords, solution resources, and network details. Plan ahead and ensure that you are using the correct information to install and commission the Avaya Contact Center Select solution.

The main stages of the troubleshooting process are:

1. Identify the problem. Describe the symptoms of the problem. Is the problem intermittent or reproducible? Has the problem always existed, or was it introduced after a recent configuration change?
2. Determine the cause of the problem. Determining the most likely cause is a process of elimination - eliminating potential causes of a problem. The most likely cause of a problem is misconfiguration. Begin your investigation by double-checking the solution configuration data.
3. Solve the problem. Identify and test the solution to the problem. Intermittent problems require additional and prolonged soak testing.

Begin your troubleshooting by double-checking the solution configuration details, and then verify that the individual components are working. If you are not able to solve the problem, collect all the relevant information and have it available before contacting Avaya Technical Support.

Misconfiguration

In an integrated Avaya Contact Center Select and IP Office solution, the most likely cause of a malfunction is misconfiguration. Avaya Contact Center Select and IP Office must be configured correctly to work with each other. An apparently minor configuration error can be time-consuming and frustrating to resolve. When configuring a solution, plan ahead and proceed with care.

If you encounter an issue with your solution, begin your investigation by double-checking the solution configuration, focusing your investigation on the points of integration between Avaya Contact Center Select and IP Office. Look for mismatched configuration data between Avaya Contact Center Select and IP Office. For example, if IP Office is configured to use CDN (Route Point) 7000, when Avaya Contact Center Select is configured to use CDN (Route Point) 3000. Both must be configured to use the same CDN (Route Point) number. Ensure Avaya Contact Center Select and IP Office both use the same SIP domain name.

Solution components

Ensure that the Avaya Contact Center Select server part of the solution is working as intended. Use the procedures in this section to verify that the Avaya Contact Center Select components are running:

- Ensure the Avaya Contact Center Select application services are running.
- Ensure Avaya Contact Center Select can communicate with IP Office.
- Ensure Avaya Contact Center Select is registered with IP Office.
- Ensure Avaya Contact Center Select is licensed.
- If your solution supports the email contact type, ensure Avaya Contact Center Select can communicate with the email server and mailbox.

Verify that Avaya Contact Center Select is running. If a component is stopped, start it. If the licenses are all used up, obtain more. If email is not working, double-check your email server and mailbox.

Troubleshooting more complex issues

If you are not able to solve the problem, collect all relevant information and have it available before contacting Avaya Technical Support. For all errors, record the error messages, the system configuration, and actions taken before and after the error occurred.

- Review the Avaya Contact Center Select trace log files to diagnose the cause of the errors.
- Review the Avaya Contact Center Select application event logs to diagnose the cause of the errors.

Work with Avaya Technical Support to clearly identify the problem. The Avaya customer support representative might require remote access to Avaya Contact Center Select to complete the investigation.

Troubleshooting by symptom

The following table lists a number of Avaya Contact Center Select issues and suggests a fix for each issue.

Symptom	How to fix
Avaya Contact Center Select services not started	• Use the System Control and Monitor Utility to start the services. Click *Start Contact Center*. • Verify that the most recent Avaya Contact Center Select patches are installed. For more information, see Installing contact center patches on page 151. • Verify the Avaya Contact Center Select server settings are correct using Server Manager > Server Configuration.

Table continues…

Symptom	How to fix
Agents cannot log on to Agent Desktop	• Verify that you are using the correct user name and password. The default domain name is the host name of the Avaya Contact Center Select server. • Ensure that there is an available IP Office extension for each Avaya Contact Center Select agent. Ensure the extension is of type H.323. For more information, see Configuring the agent extensions on page 49. • Verify that there are sufficient agent licenses available. For more information, see Checking the Contact Center License Manager real time usage on page 221.
No CTI call control. Agent Desktop is not controlling the agent desk phone.	• Verify that Avaya Contact Center Select is communicating with IP Office. For more information, see Checking the Contact Center connection to IP Office on page 220. • Verify that Avaya Contact Center Select is registered with IP Office. For more information, see Checking that the SIP User Extension Number is acquired on IP Office on page 218.
CDN (Route Point) calls not arriving at Avaya Contact Center Select	• Verify the IP Office short code number matches the Avaya Contact Center Select CDN (Route Point) number. For more information, see Configuring a shortcode to Contact Center Route Points on page 43. • Verify that there are no space characters in the IP Office short code. • Verify the IP Office short code is configured under the solution node, and not under the IP Office server node. • Verify that the Avaya Contact Center Select CDN (Route Point) number is acquired in Contact Center Manager Administration.
Avaya Contact Center Select not registered in IP Office.	• Verify that Avaya Contact Center Select is registered with IP Office as a SIP extension. For more information, see Checking that the SIP User Extension Number is acquired on IP Office on page 218. • Verify that Avaya Contact Center Select is registered as a SIP extension, ensure it is not registered as a H.323 extension.
IP Office calls are routing to the Avaya Contact Center Select CDN (Route Point), but the customer caller cannot hear the welcome announcement.	• The IP Office SIP domain name does not match the Avaya Contact Center Select SIP domain name. For more information, see Configuring the SIP domain name on page 41. • The Avaya Aura® Media Server locale setting does not match the Avaya Contact Center Select server locale (country and language) setting.
The Contact Center Manager Administration Web interface menus are not visible in the left pane	• Ensure Internet Explorer is using Compatibility mode. • Ensure the Contact Center Manager Administration Web interface client computer display has a resolution of at least 1024 x 768 pixels.
The Contact Center Manager Administration Web interface looks distorted	• Ensure the Contact Center Manager Administration Web interface client computer display has a resolution of at least 1024 x 768 pixels. • Ensure Internet Explorer is using Compatibility mode. • Temporarily disable the Internet Explorer pop-up blocker to allow Contact Center Manager Administration Active X controls and libraries to install.

Table continues…

Symptom	How to fix
The Avaya Contact Center Select users visible in Contact Center Manager Administration are not visible in IP Office.	• Verify the Contact Center Manager Administration synchronization account details used by IP Office. For more information, see Configuring the synchronization user account on page 36. • In Contact Center Manager Administration, on the IP Office server configuration window, click *Synchronize*.

Starting the Contact Center Dashboard

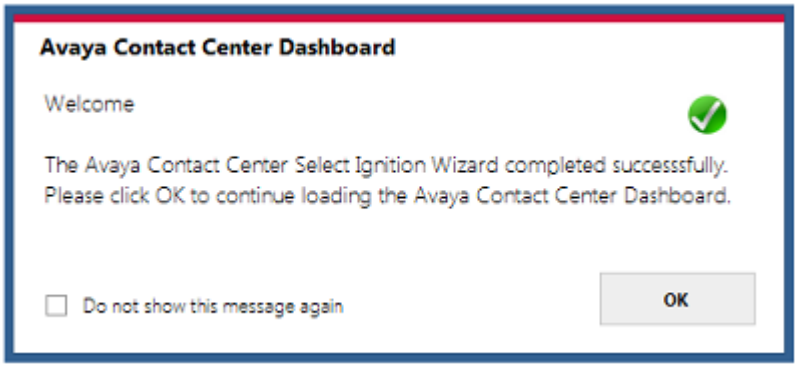
About this task

You can use the Contact Center Dashboard to access Contact Center system tools and diagnose system problems. The Contact Center Dashboard displays some Operating System and system details such as CPU type, network details, and Operating System activation status.

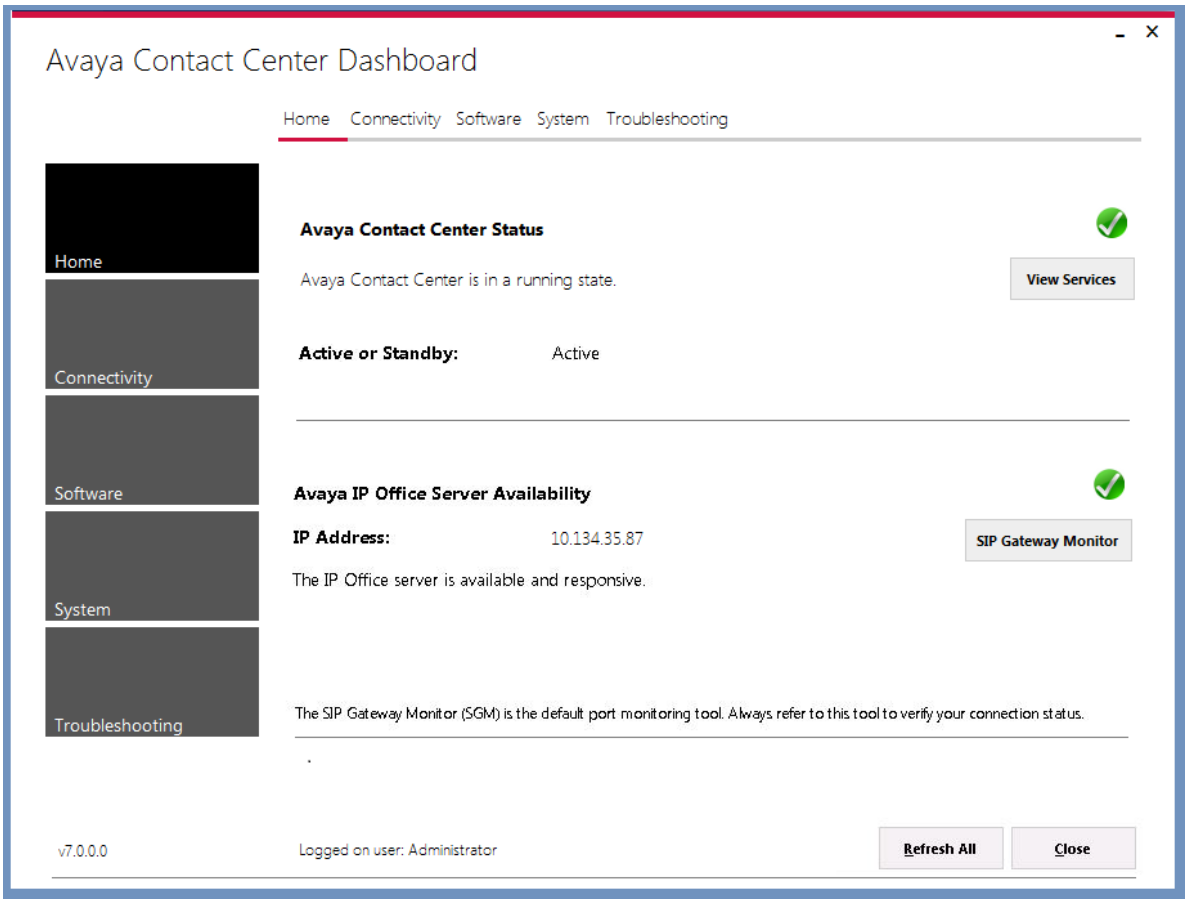
The Contact Center Dashboard launches automatically the first time the Contact Center server boots up.

Procedure

1. On the **Apps** screen, in the **Avaya** section, select **Contact Center Dashboard**.
2. If the Contact Center Dashboard Welcome message box appears, click **OK**.

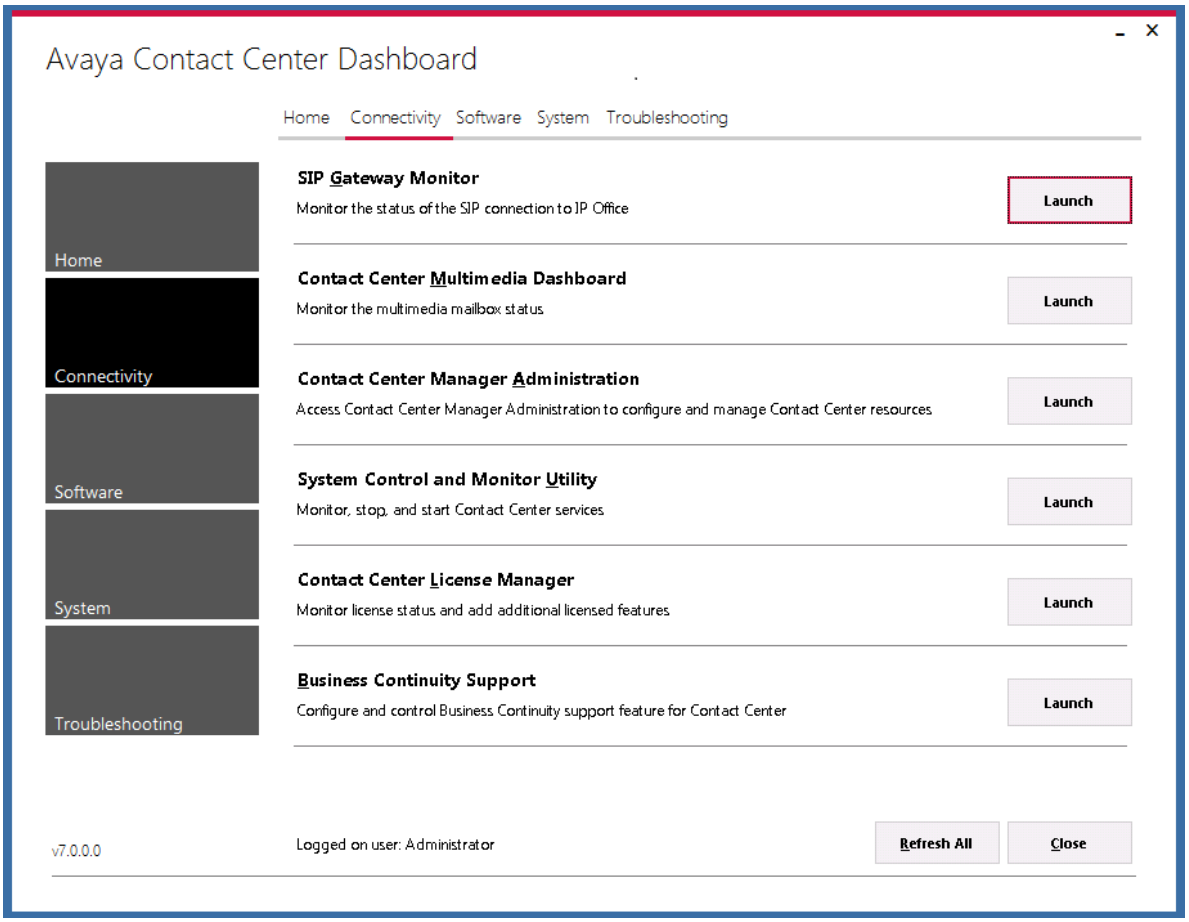


3. After a few moments the Contact Center Dashboard appears. Select the **Home** tab.



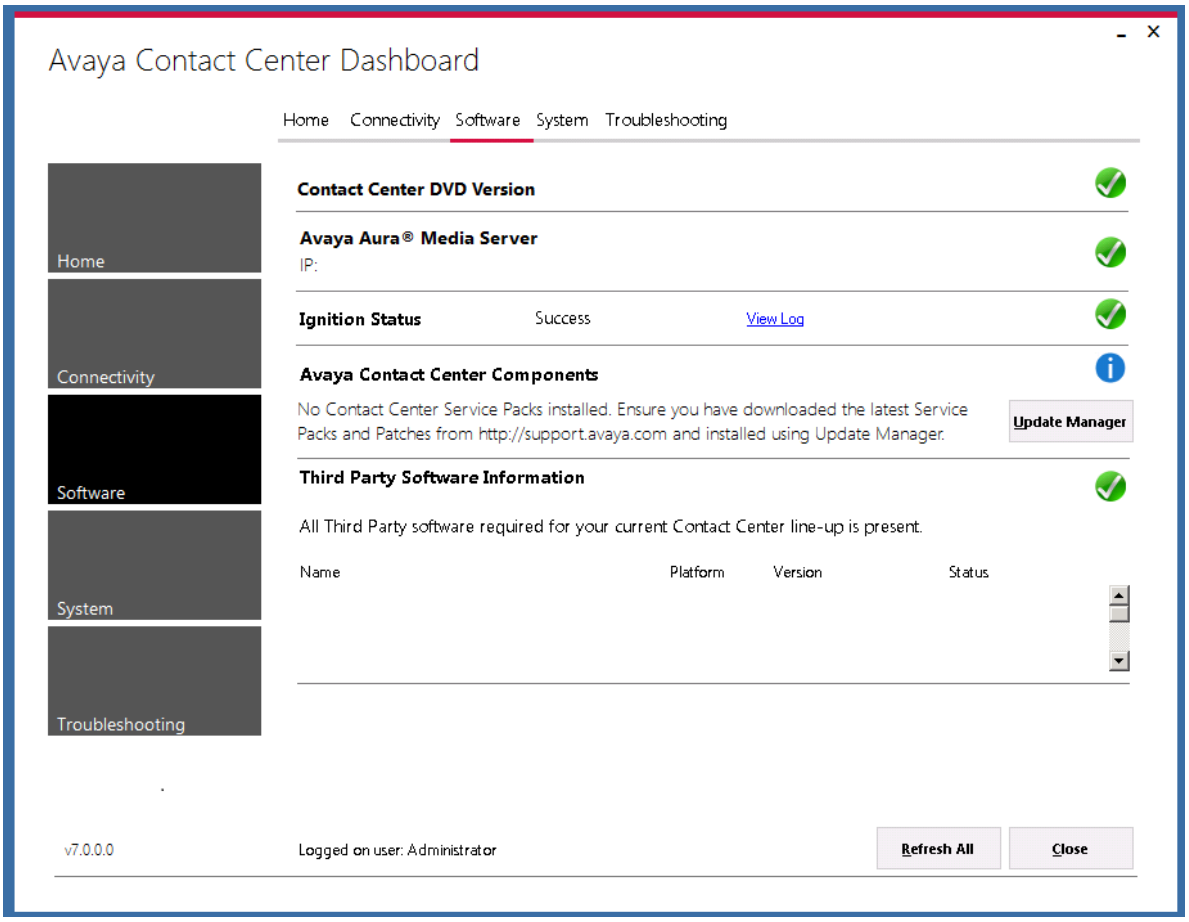
4. Click **Refresh All** to refresh the Contact Center Dashboard status reports.
5. In the **Avaya Contact Center Status** section, click **View Services** to monitor the state of the Contact Center Windows services.
6. In the **Avaya IP Office Server Availability** section, click **SIP Gateway Monitor** to determine if Contact Center is communicating with IP Office.

7. Select the **Connectivity** tab.



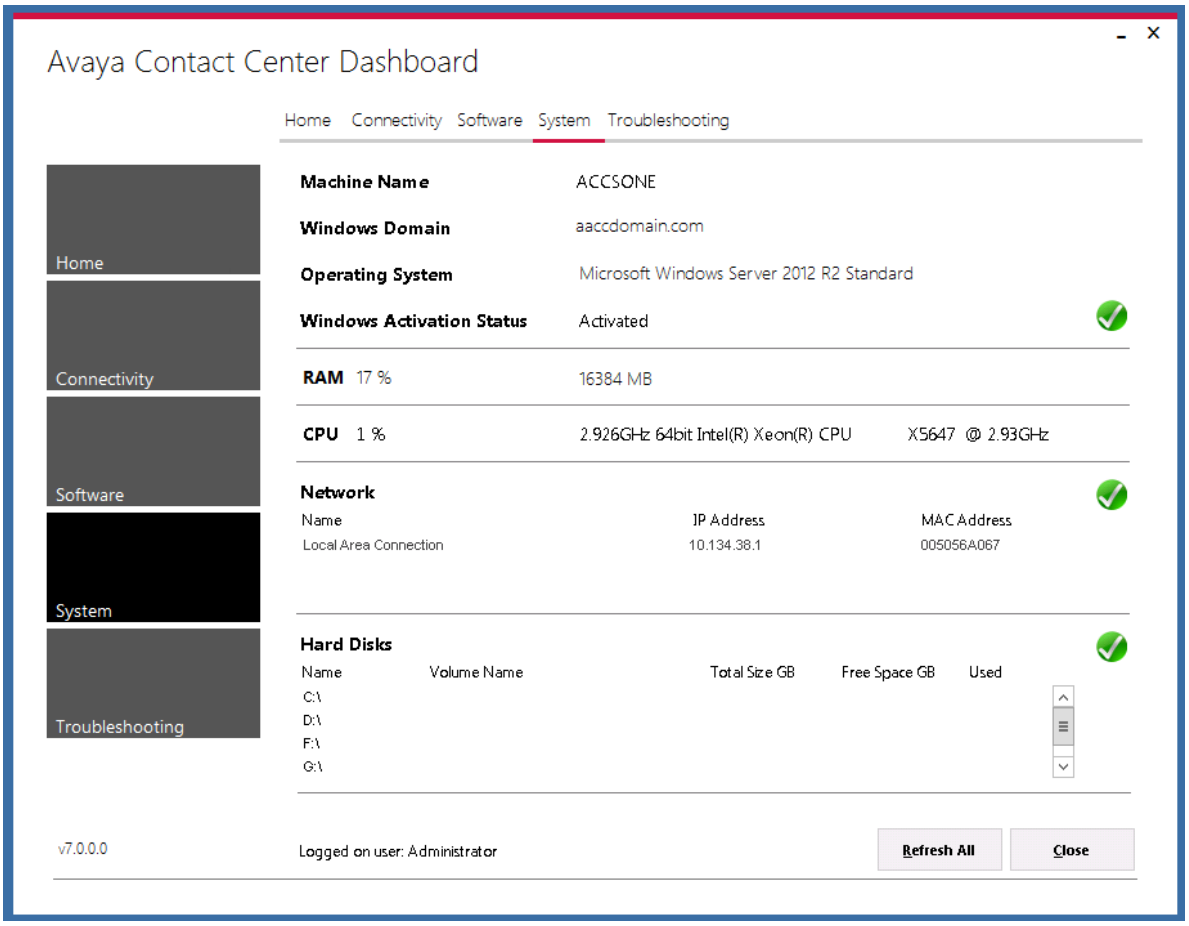
8. Select **SIP Gateway Monitor** to monitor the status of the SIP connection to IP Office.
9. Select **Contact Center Multimedia Dashboard** to monitor the multimedia mailbox status.
10. Select **Contact Center Manager Administration** to access Contact Center Manager Administration to configure and manage Contact Center resources.
11. Select **System Control and Monitoring Utility** to monitor, stop, and start Contact Center services.
12. Select **Contact Center License Manager** to monitor license status and add additional licensed features.
13. Select **Business Continuity Support** to configure the Business Continuity feature.

14. Select the **Software** tab.



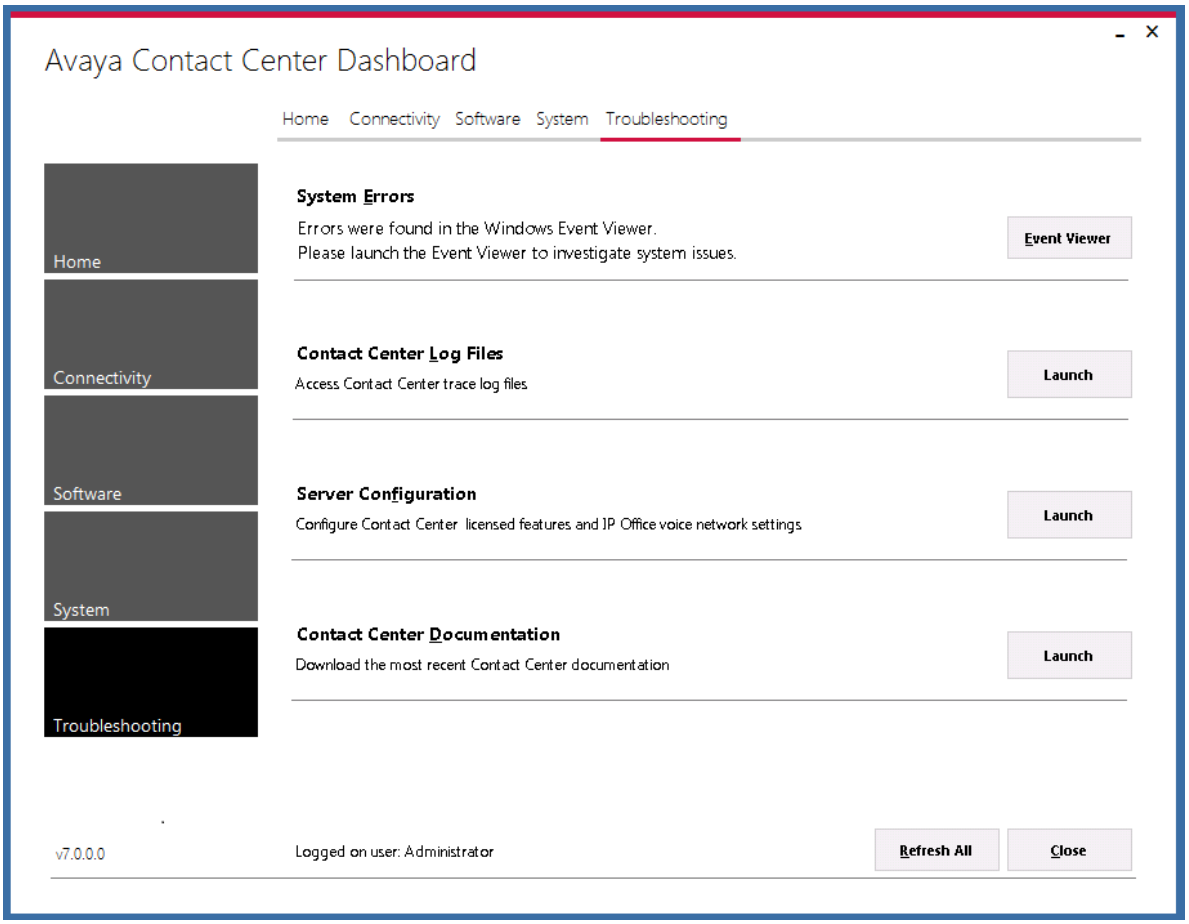
15. **Contact Center Version** displays the version of the Contact Center software installed on the server.
16. **Avaya Aura® Media Server** displays the version of Avaya Aura® Media Server software installed on the server.
17. **Ignition Status** displays the Contact Center software installation status.
18. **Avaya Contact Center Components** displays the Contact Center software and patch line-up installed on the server.
19. **Third Party Software Information** displays the versions of the third-party software components used by Contact Center that are installed on the server.

20. Select the **System** tab.



21. **Machine Name** displays the host name of the Contact Center server.
22. **Windows Domain** displays the name of the domain that the Contact Center server is in.
23. **Operating System** displays the Operating System version.
24. **Windows Activation Status** displays the Windows Operating System license and activation status.
25. **RAM** displays the amount of RAM memory in the server.
26. **CPU** displays the type of CPU in the server.
27. **Network** displays the networking details of the server: IP address and MAC address.
28. **Hard Disks** displays the number, size, and drive letter of the hard disk volumes in the server.

29. Select the **Troubleshooting** tab.



30. Select **System Errors** to access Contact Center events in the Microsoft Windows Event Viewer.
31. Select **Contact Center Log Files** to access Contact Center trace log files.
32. Select **Server Configuration** to configure Contact Center licensed features and IP Office voice network settings.
33. Select **Contact Center Documentation** to access and download the most recent Contact Center documentation from the Avaya support website.

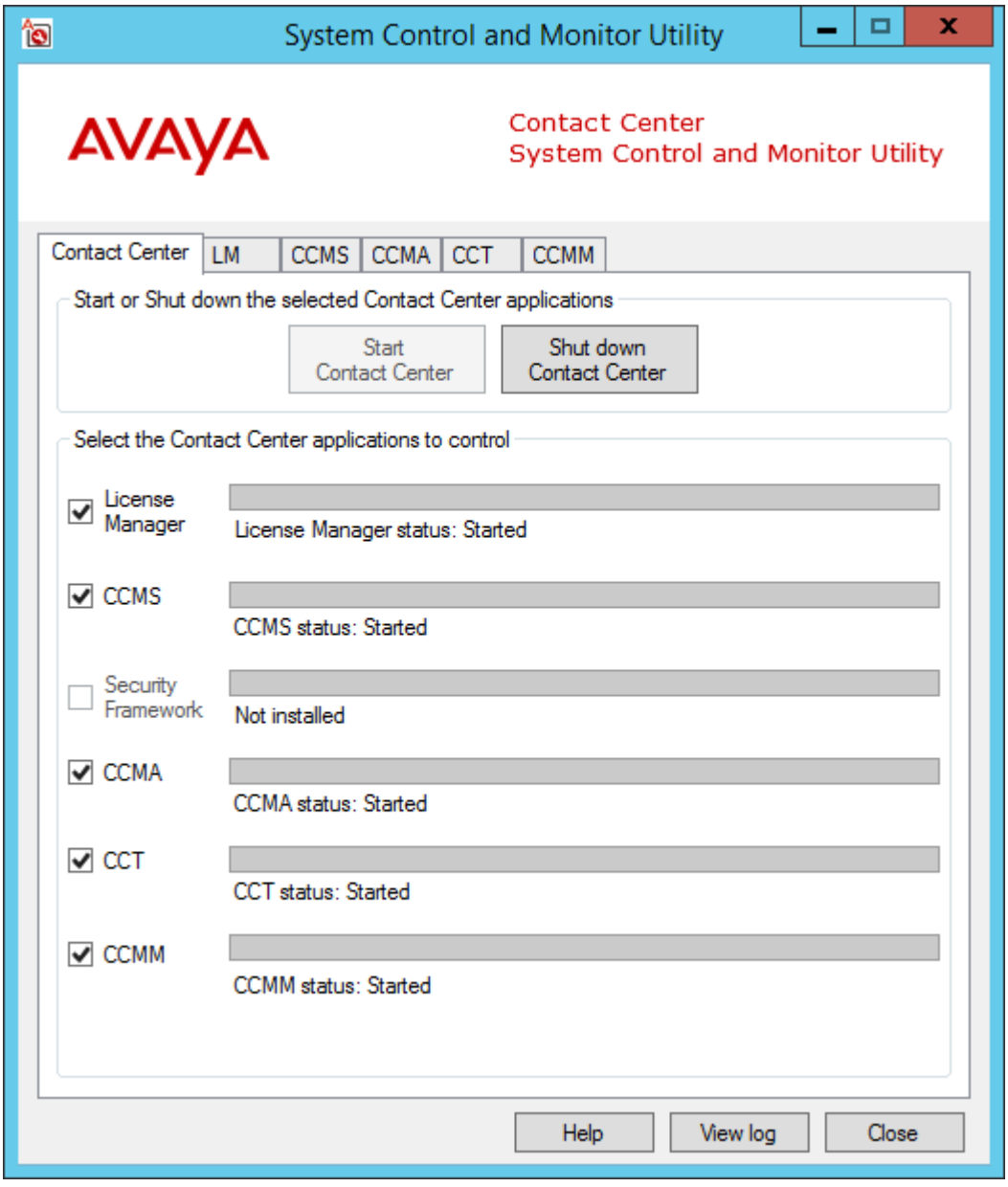
Verifying the Contact Center services are started

About this task

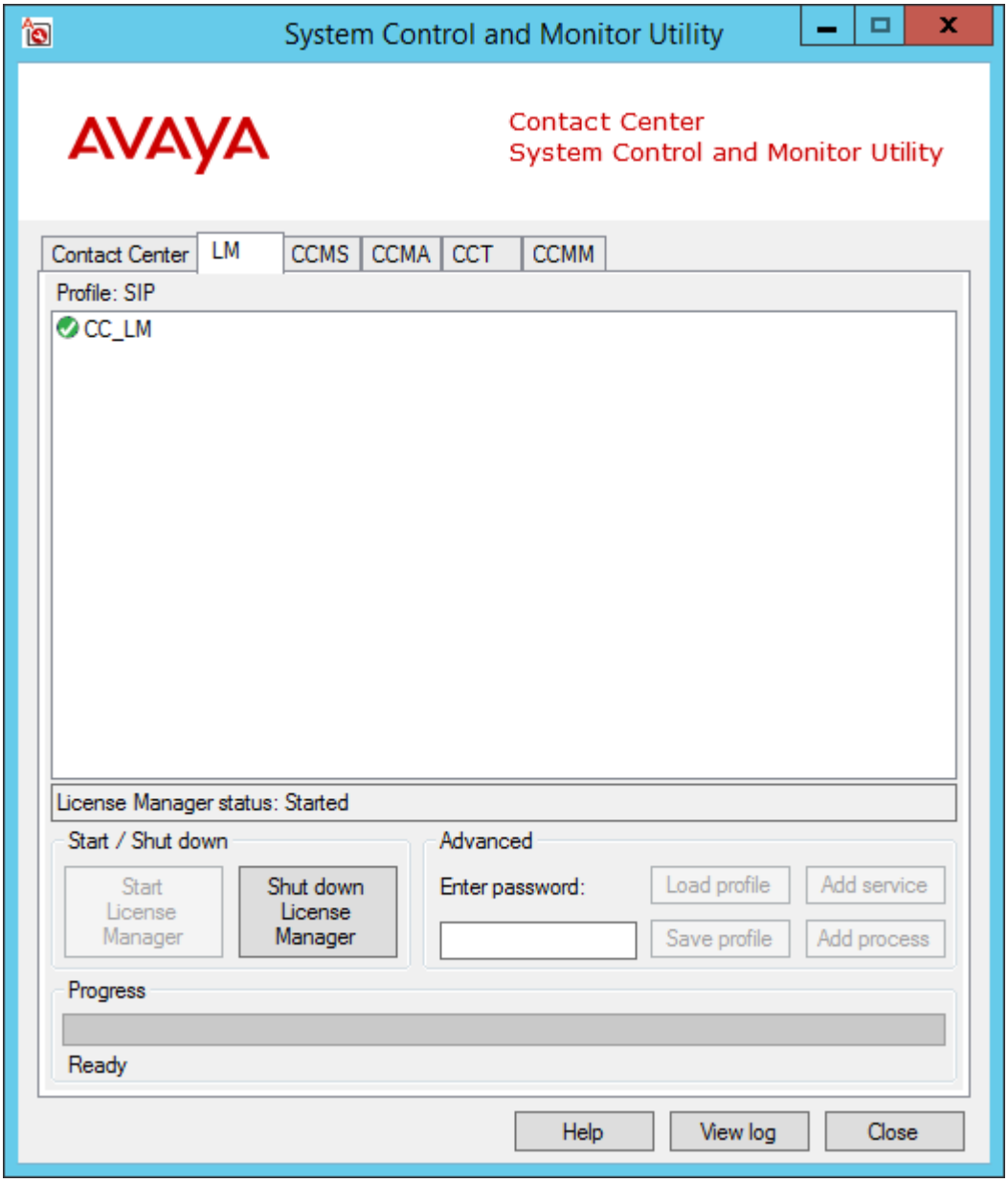
Verify that the Contact Center services are started. Use the System Control and Monitor Utility to verify that all necessary Avaya Contact Center Select services are running.

Procedure

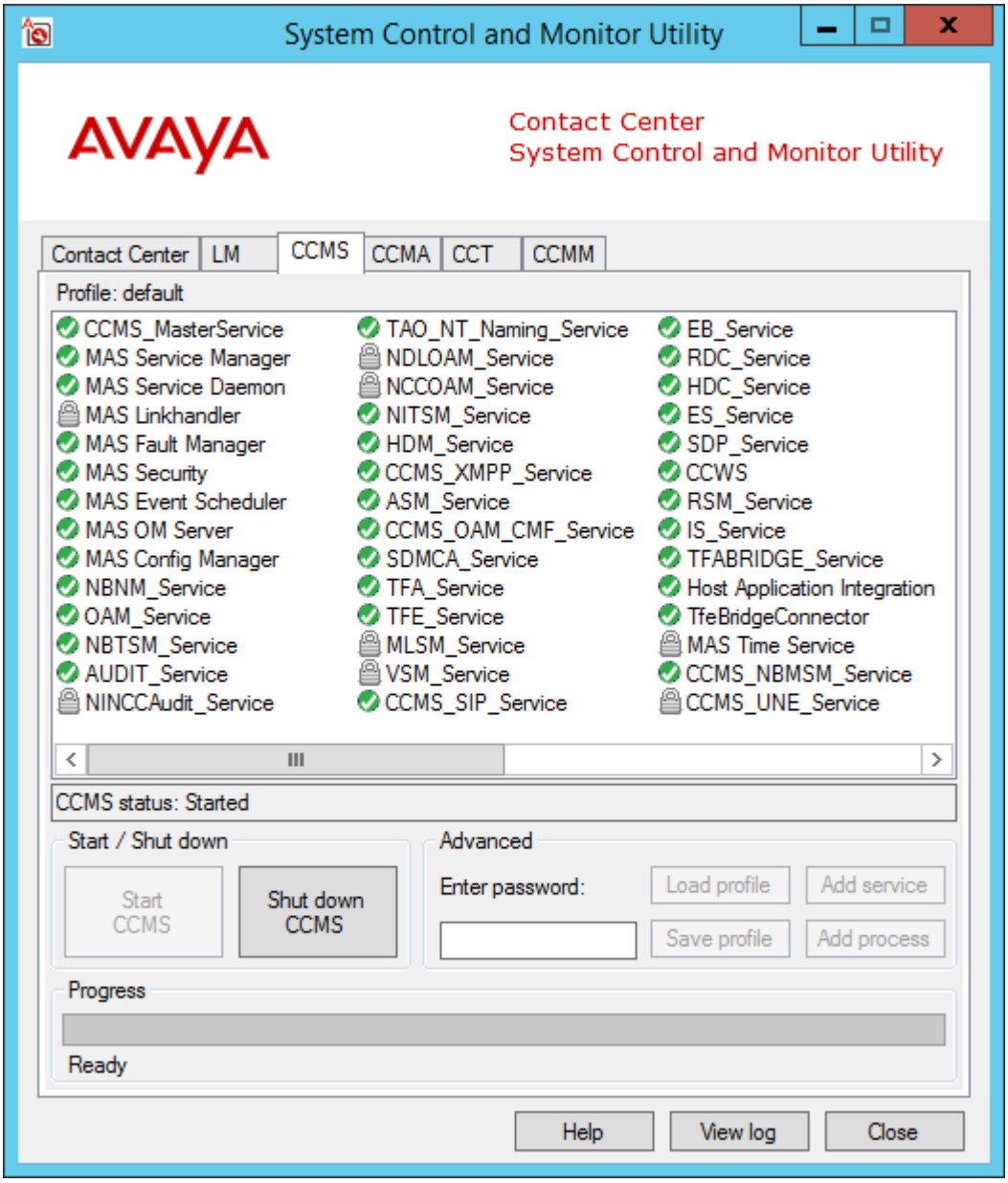
1. Log on to the Avaya Contact Center Select server.
2. On the **Apps** screen, in the **Avaya** section, select **System Control and Monitor Utility**.
3. Click the **Contact Center** tab.



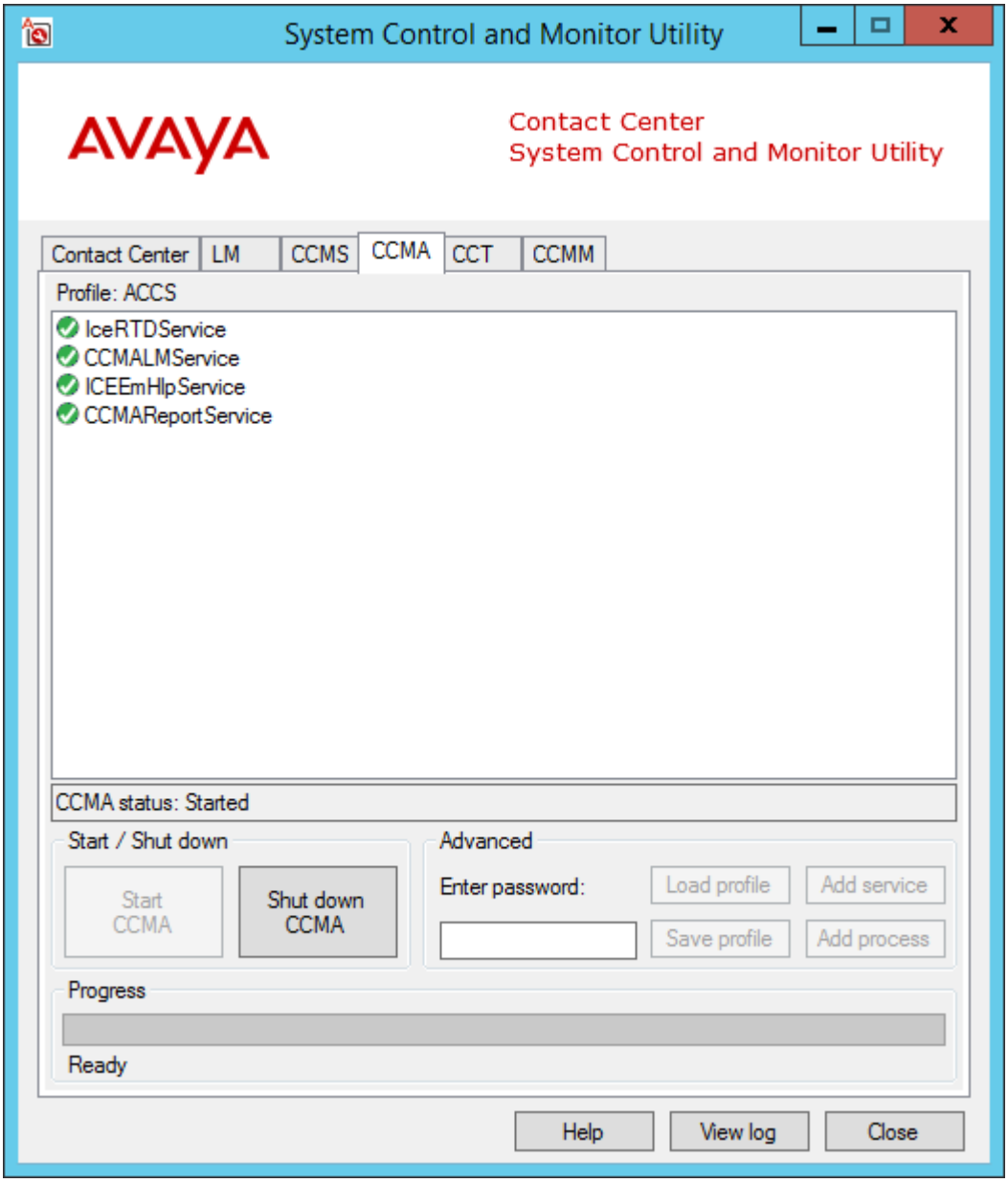
4. Select the **LM** tab, and verify that the Contact Center License Manager service is running.



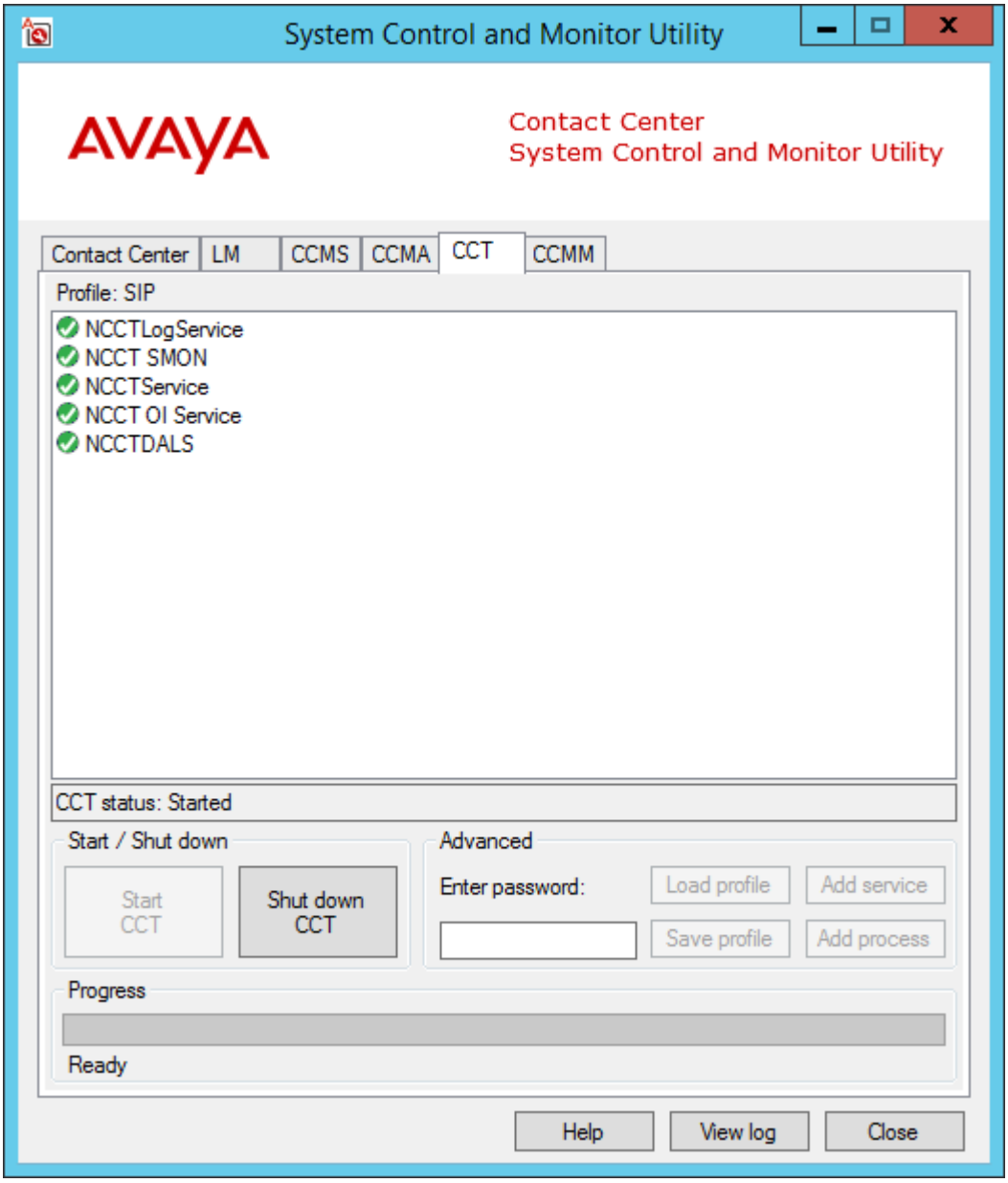
5. Select the **CCMS** tab, and verify that the Contact Center Manager Server services are running.



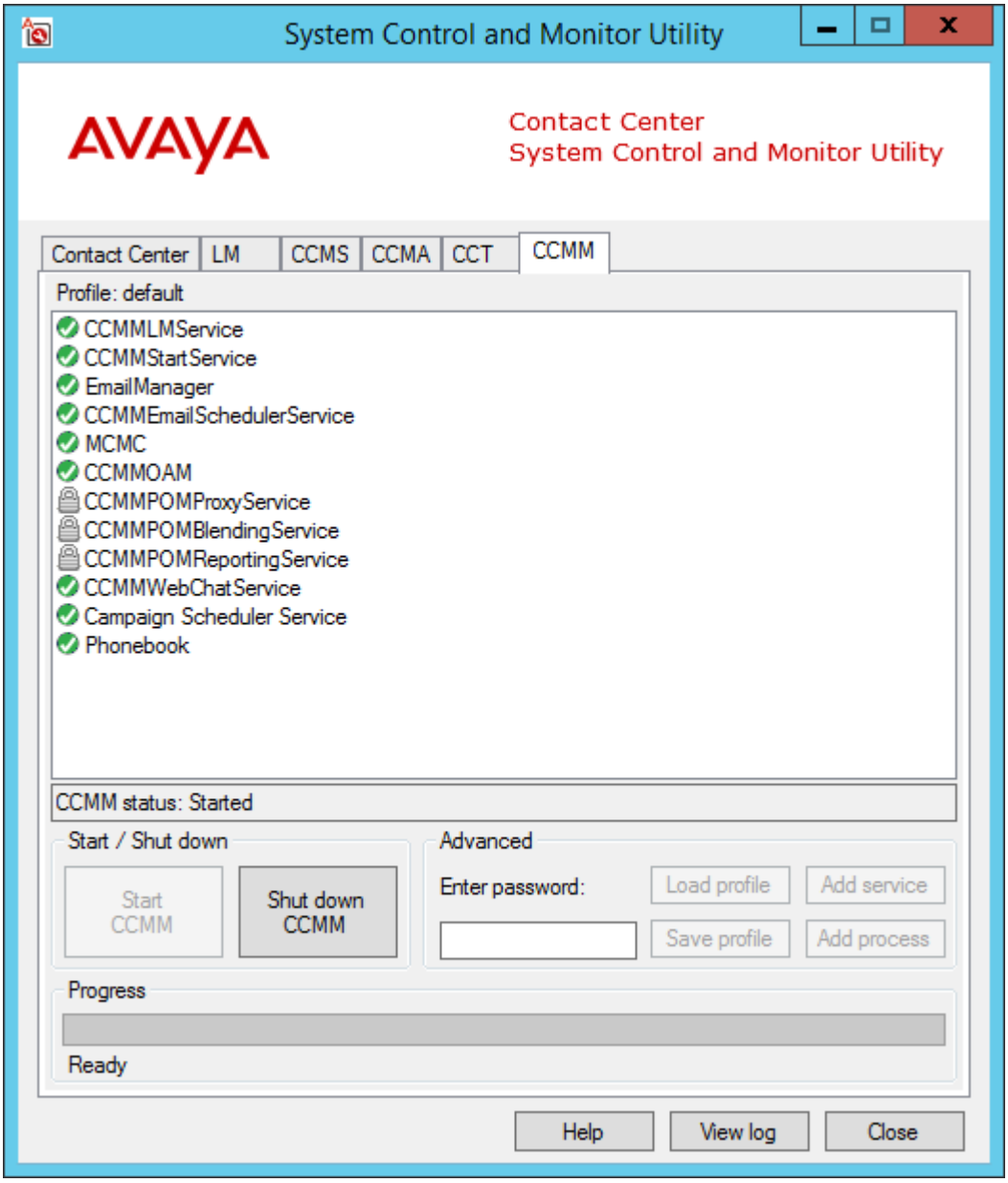
6. Select the **CCMA** tab, and verify that the Contact Center Manager Administration services are running.



7. Select the **CCT** tab, and verify that the Communication Control Toolkit services are running.



8. Select the **CCMM** tab, and verify that the Contact Center Multimedia services are running.



9. Click **Start Contact Center** to start any stopped services.

Checking that the SIP User Extension Number is acquired on IP Office

Before you begin

- Know the IP Office Manager log on details.

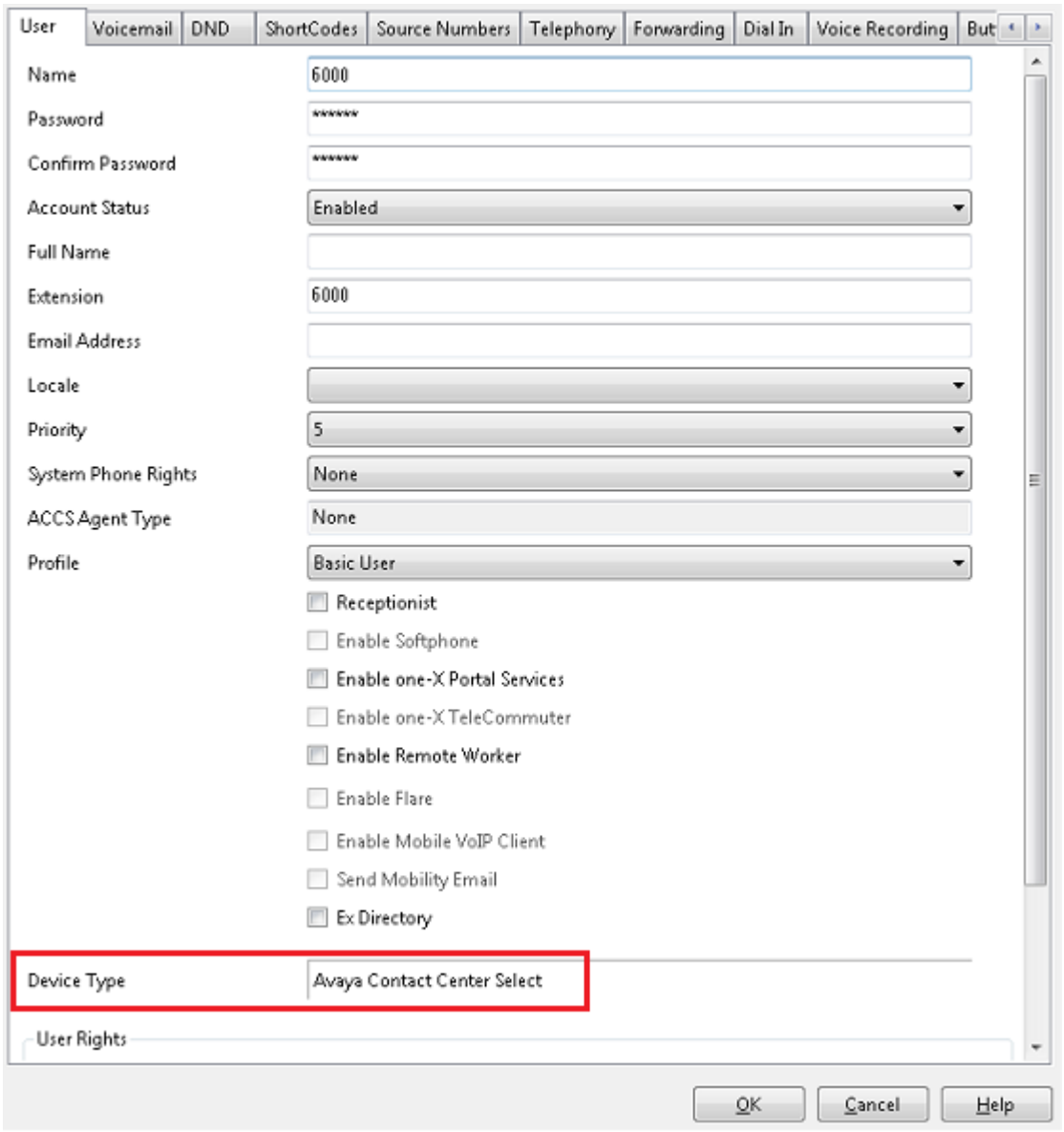
- Know how to use IP Office Manager.

About this task

Check that the SIP User Extension Number is acquired on IP Office. Avaya Contact Center Select uses this SIP User Extension Number to register with IP Office for CTI call control and SIP session messaging.

Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the **Configuration** pane, under the IP Office server, select **User**.
3. Locate the SIP User Extension Number used to register Avaya Contact Center Select.



4. If Avaya Contact Center Select is registered with IP Office, the **Device Type** for the SIP User is configured as **Avaya Contact Center Select**.
5. If Avaya Contact Center Select is not registered with IP Office, ensure the SIP User Extension Number and password details in IP Office match the details entered when installing Avaya Contact Center Select.

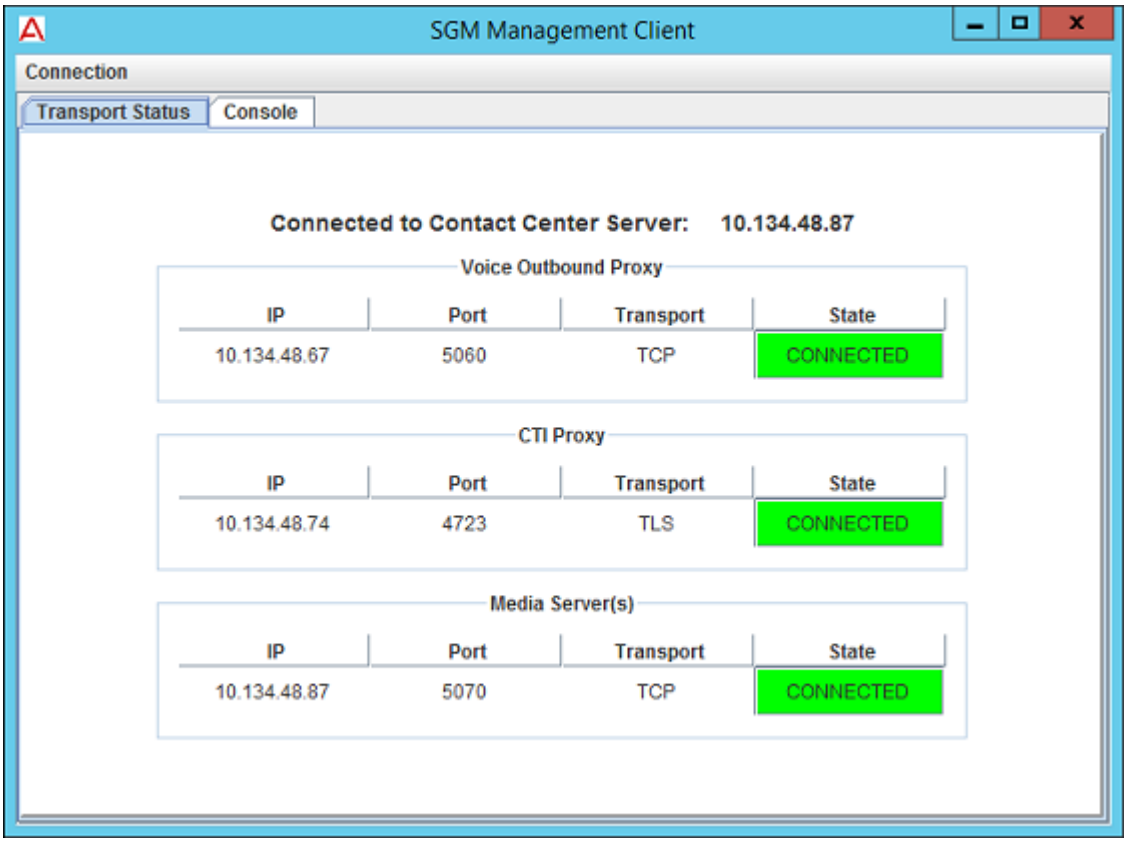
Checking the Contact Center connection to IP Office

About this task

Check the CTI call control and SIP session management connection from Avaya Contact Center Select (ACCS) to IP Office.

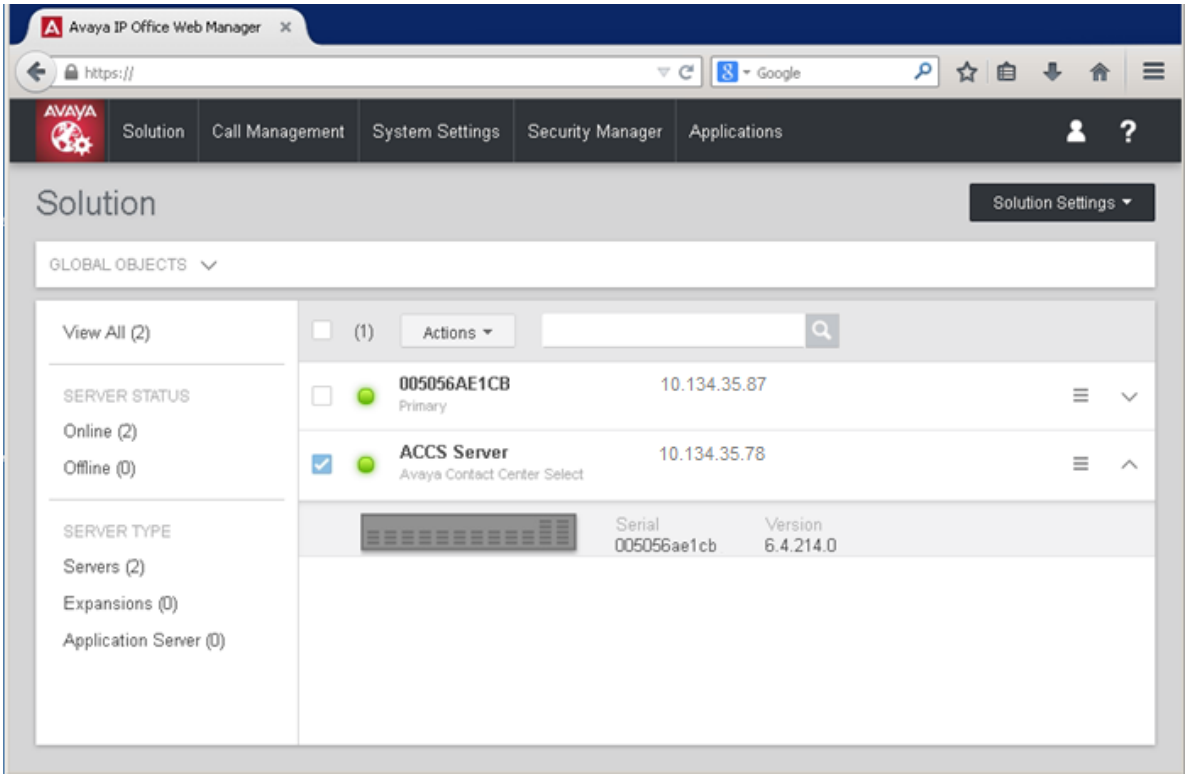
Procedure

1. On the **Apps** screen, in the **Avaya** section, select **SIP Gateway Management Client**.
2. In the **New Connection** window, click **Connect**.



3. Ensure the Voice Outbound Proxy State is **CONNECTED**.
4. Ensure the CTI Proxy State is **CONNECTED**.

5. Log on to IP Office Web Manager and locate the ACCS server in the **Solution** pane. If IP Office is communicating with ACCS, the ACCS server is listed on the **Solution** pane.



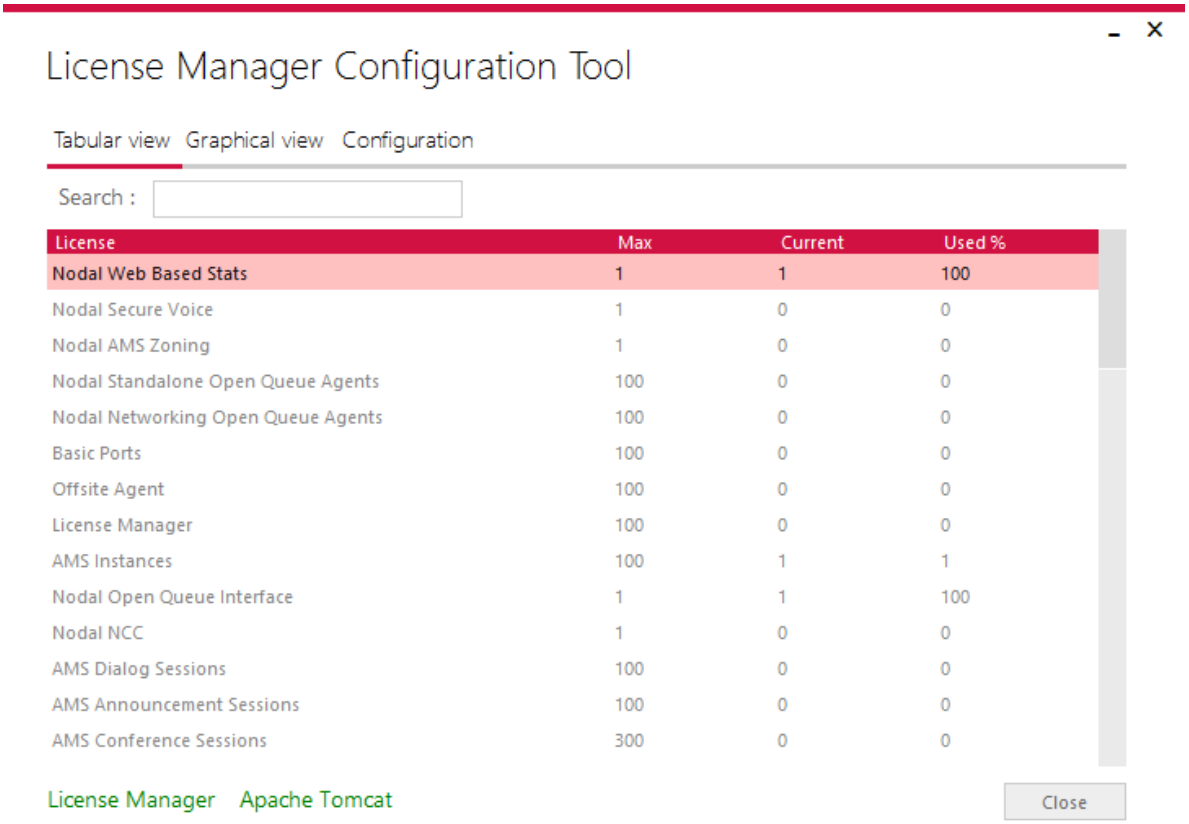
Checking the Contact Center License Manager real time usage

About this task

Check the real time usage of your contact center licenses to determine whether the necessary licenses for your Avaya Contact Center Select features are present.

Procedure

1. Log on to the Avaya Contact Center Select server.
2. On the **Apps** screen, in the **Avaya** section, select **License Manager Configuration**.
3. In the Contact Center Licensing window, click **Tabular view**.



4. Ensure the license types necessary for your Avaya Contact Center Select features are present.

Using the CCMM dashboard

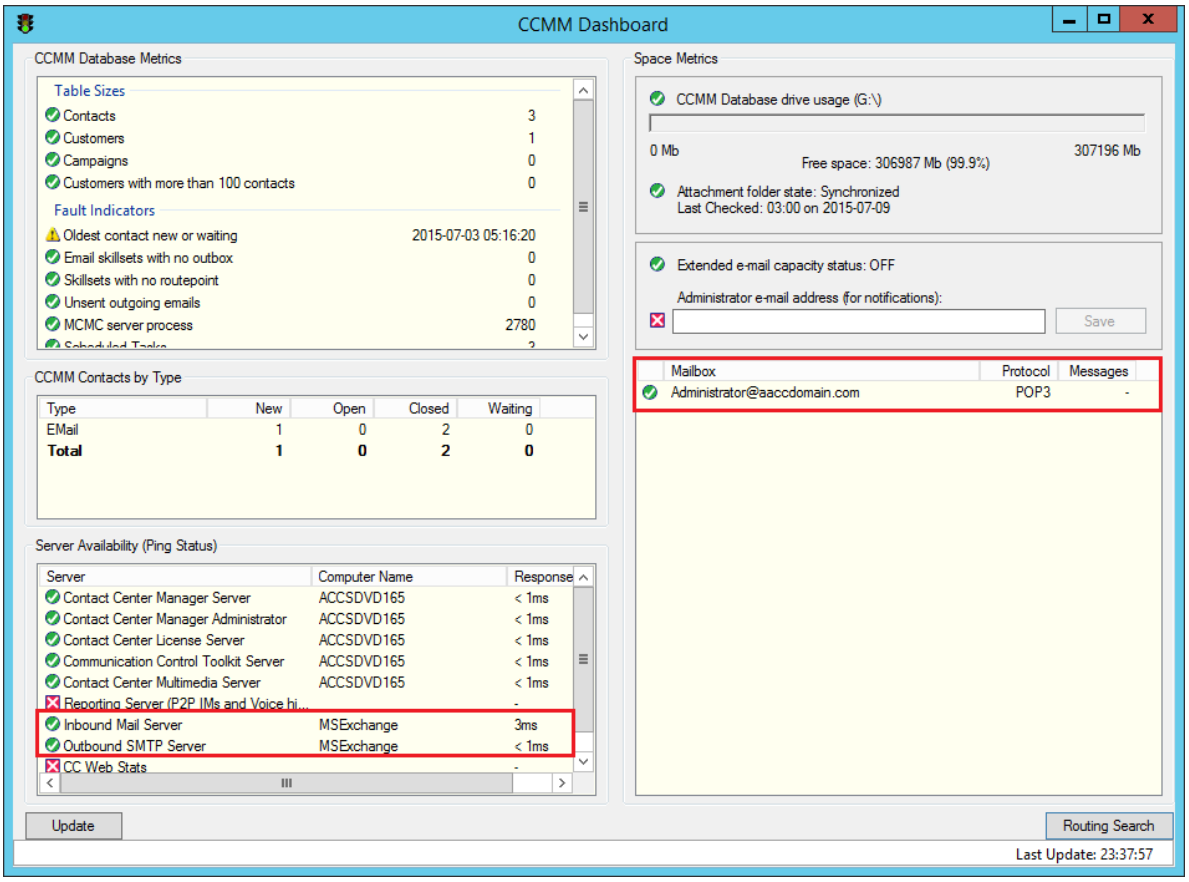
About this task

Use the CCMM dashboard to verify that Avaya Contact Center Select is communicating with the email server and is monitoring the recipient mailbox.

Procedure

1. Log on to the Avaya Contact Center Select server.
2. On the **Apps** screen, in the **Avaya** section, select **Multimedia Dashboard**.

3. Ensure Avaya Contact Center Select is communicating with the inbound email server.



4. Ensure Avaya Contact Center Select is monitoring the recipient mailbox.

Troubleshooting Contact Recording

About this task

Avaya Contact Center Select (ACCS) supports IP Office Contact Recording. IP Office uses User Rights to configure and restrict how the ACCS users access and use Contact Recording. User Rights act as templates for users, locking selected user settings to the template value. Some settings are grouped and are set and locked as a group.

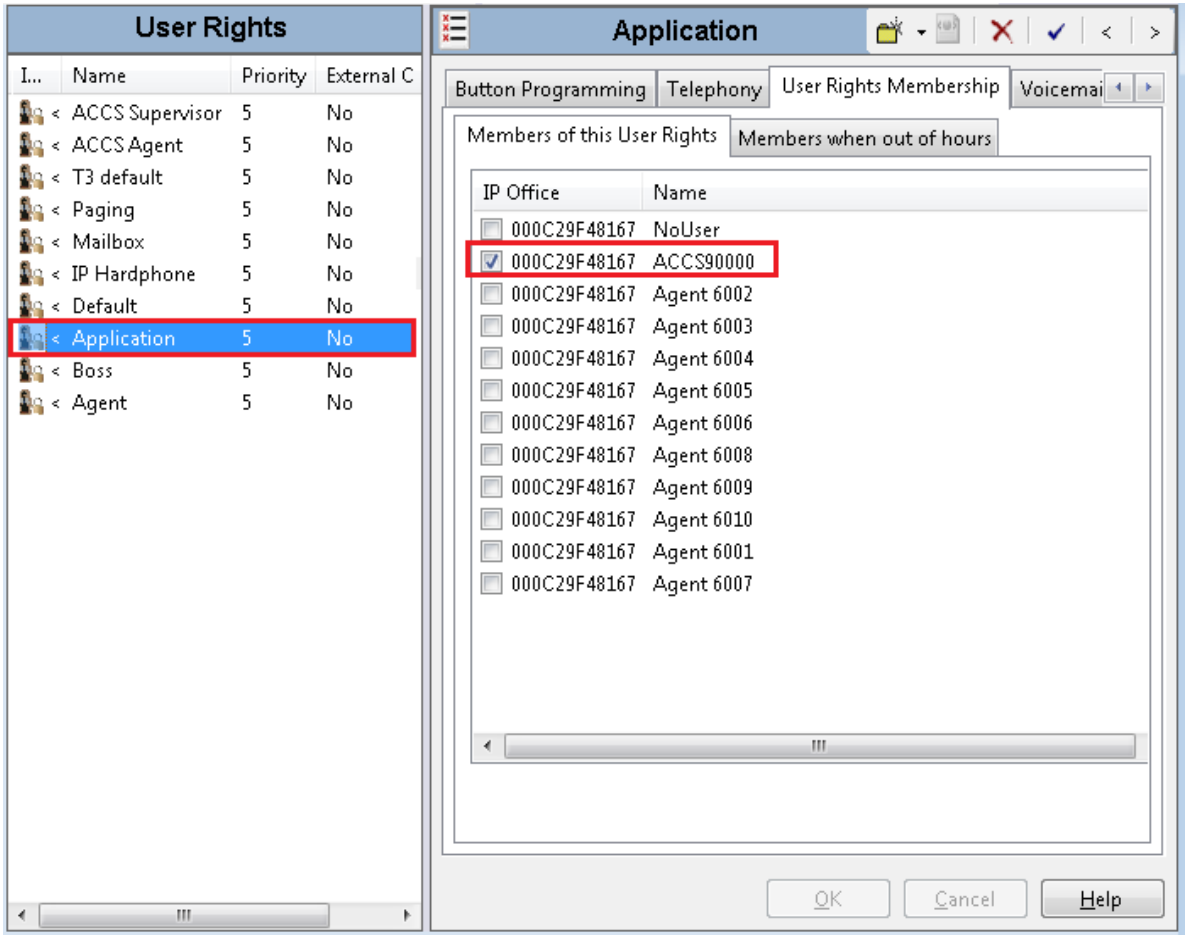
The following table shows the default IP Office User Rights for Avaya Contact Center Select (ACCS):

ACCS Resource	IP Office User Rights
ACCS SIP User Extension	Application
Agent	ACCS Agent
Supervisor agent	ACCS Supervisor

Verify that the IP Office User Rights for ACCS are configured correctly.

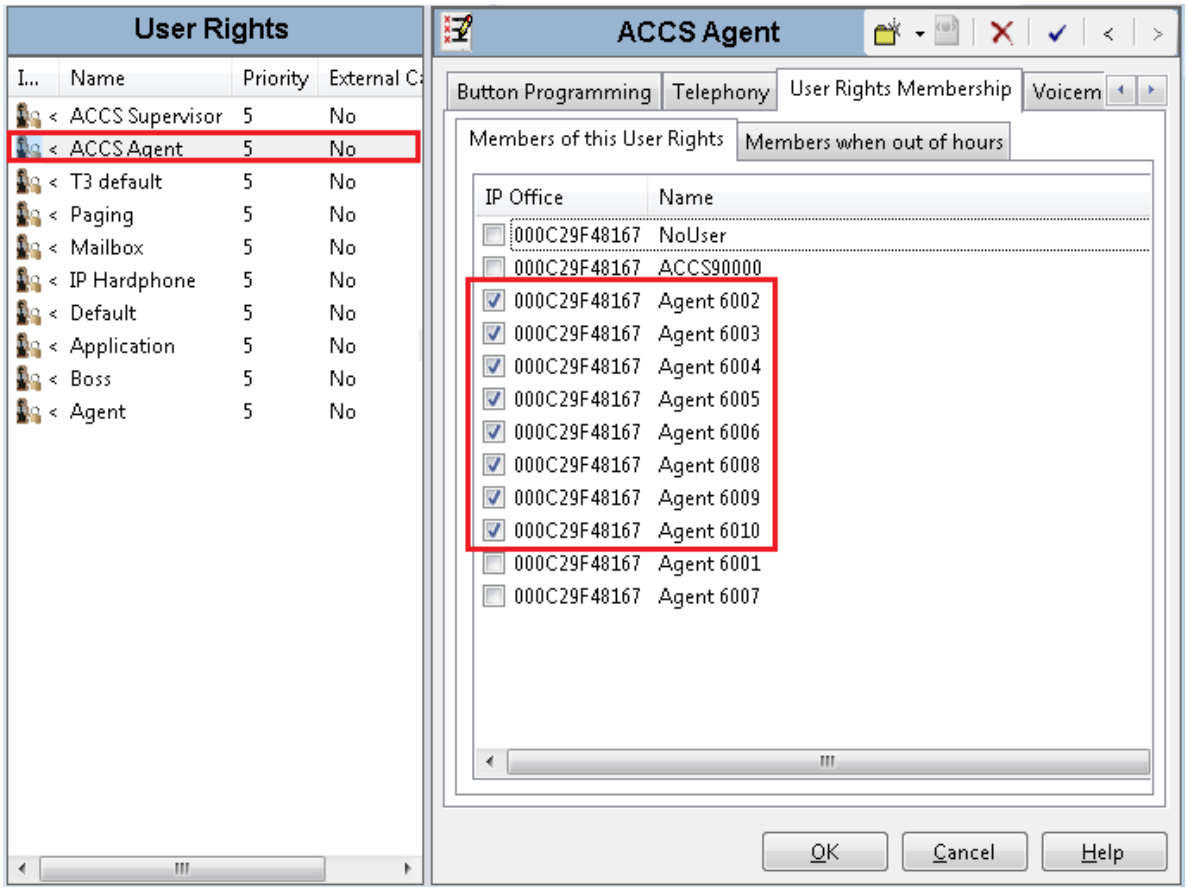
Procedure

1. Using IP Office Manager, select the IP Office server in the **Configuration** pane.
2. In the Configuration pane, under the **Solution** node, select **User Rights**.
3. In the middle pane, select **Application**.
4. Ensure the Avaya Contact Center Select SIP User Extension is assigned to the **Application** — **User Rights**.



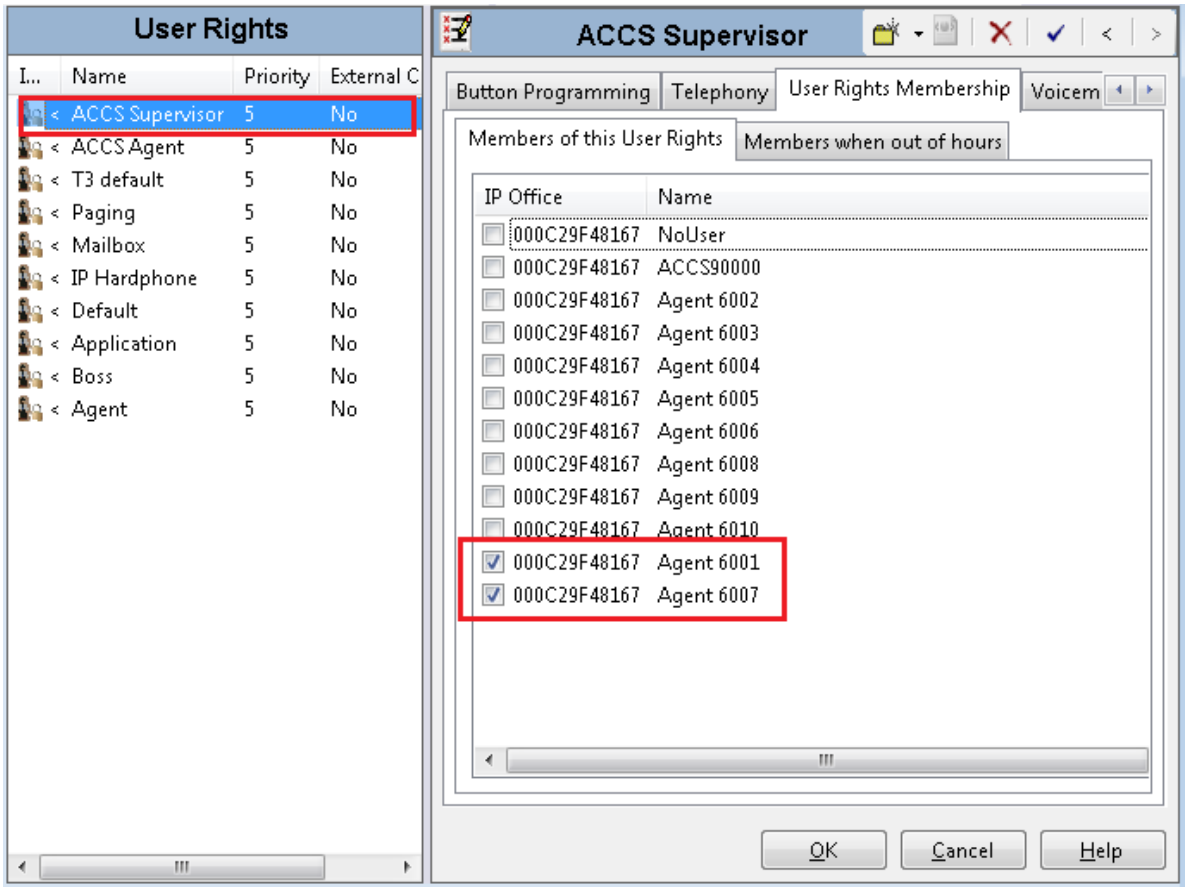
5. In the middle pane, select **ACCS Agent**.

6. Ensure the Avaya Contact Center Select agents are assigned to the **ACCS Agent** — **User Rights**.



7. In the middle pane, select **ACCS Supervisor**.

8. Ensure the Avaya Contact Center Select agents are assigned to the **ACCS Supervisor** — **User Rights**.



Chapter 20: Avaya Workspaces troubleshooting

This section describes the troubleshooting procedures that you perform when dealing with the Avaya Workspaces server.

Prerequisites for Avaya Workspaces troubleshooting

- Read the *Avaya Contact Center Select Advanced Administration* guide.
- Read the *Using Avaya Workspaces for AACC and ACCS* guide.

Logging on to the Avaya Workspaces nodes after deployment

About this task

SSH connection provides secured access to the Avaya Workspaces cluster. When logging on to any of the Avaya Workspaces nodes or master node after deployment, you must first log on as the *cust* user and then switch to the *root* user.

Use this procedure to log on to the Avaya Workspaces master node or nodes after deployment.

Procedure

1. When logging on to the Avaya Workspaces node, enter `cust` as user.
2. Enter the Avaya Workspaces cluster password.
3. Run the **`su – root`** command.
4. When prompted, enter the Avaya Workspaces cluster password.

Result

You are now logged on to the Avaya Workspaces node.

Troubleshooting agent login failures

About this task

Use the following steps to troubleshoot the Avaya Workspaces authentication failures.

Procedure

1. Verify the user exists in the domain and verify the user credentials.
2. If the user is not found, verify the cluster details in the CCMM Administration tool.
3. In the CCMM Administration tool, verify that the user is synchronized in the Admin Adaptor logs.
4. In the CCMM Administration tool, verify the user details and if the domain is entered correctly.
5. Verify that the user is a domain user.

   Workgroup users can not be logged in to Avaya Workspaces.
6. Debug the authentication failures by viewing the following log files:
   - cc-auth-service
   - cc-admin-adapter
   - cc-ccs-adapter

Restarting the Avaya Workspaces cluster on physical solutions

About this task

Use this procedure to restart the Avaya Workspaces cluster on physical solutions.

Procedure

1. Log in to your **Hyper-V Manager**.
2. Turn off the three nodes of the Avaya Workspaces cluster.
3. Turn on the **master node**.
4. Log in to the **master node** and run the `kubectl get nodes` command.
5. Verify the master node is in a `ready` state.
6. Turn on the **node1** and **node2**.
7. From the master node, run the `kubectl get nodes` command.
8. Verify all nodes are in a `ready` state.

Troubleshooting “helm ls” health check command

About this task

If you see the “Could not find tiller” error after entering the `helm ls` health check command, the reason is that the date/time of the node(s) does not match to the Contact Center host. Use this procedure to troubleshoot this issue.

Procedure

Re-deploy the Contact Center software.

For more information, see the Deploying documentation appropriate for your solution.

Troubleshooting “kubectl get pods --all-namespaces” health check command

About this task

If after running the `kubectl get pods --all-namespaces` command the ADF or Contact Center pods are in the state other than Running or Completed (for example, CrashLoopBackOff), this indicates a failure to start the ADF or Contact Center pods. Use this procedure to troubleshoot this issue.

Procedure

1. Navigate to `D:\Avaya\Contact Center\Workspaces\Scripts` on the Contact Center server.
2. Run the **repairworkspaces_services.bat** script on the Contact Center server.

Troubleshooting Avaya Workspaces using the Avaya Workspaces Service Utility

The Avaya Workspaces Service Utility is a standalone .NET application to perform service functions for Workspaces cluster. You can use this tool to monitor the containers and collect logs.

You can use the following tools to work with containers and logs:

Tool	Description
	**Browse**. Use this button to search for the config file.
	**Apply**. Use this button to apply the selected config file.

Table continues…

Tool	Description
	**Open**. Use this button to open and view the log of the selected container.
	**Save**. Use this button to collect logs of one or several selected containers.
	**Save all**. Use this button to collect all logs.
	**Start**. Use this button to start collecting logs.
	**Stop**. Use this button to stop collecting logs.
	**Open folder.** Use this button to open the container logs directory.
Logging interval	Select the logging interval for collecting logs.

Viewing containers

About this task

Use this procedure to view the containers on your Workspaces cluster using the Avaya Workspaces Service Utility.

Procedure

1. From the Avaya folder, click the **WorkspacesServiceUtility** shortcut to launch the Avaya Workspaces Service Utility application.

   The Avaya Workspaces Service Utility application displays a list of containers stored in the default config file location.

2. (Optional) You can change the path by clicking the **Browse** button and navigating to the required location.
3. (Optional) Click the **Apply** button to display the list of containers.
4. View the containers' data:
   - Container's name
   - Node's name
   - Version
   - State

Viewing logs

About this task

Use this procedure to view the container logs using the Avaya Workspaces Service Utility.

Note:

The limit for log viewing is 100 Mb. To view larger log files, use WinSCP.

Procedure

1. From the Avaya folder, click the **WorkspacesServiceUtility** shortcut to launch the Avaya Workspaces Service Utility application.

   The Avaya Workspaces Service Utility application displays a list of containers.

2. To view the logs of the selected container, do one of the following:

   - Double-click a container you want to view logs of.
   - Click the **Open** button.

   The logs open in the default log file editor, for example, Notepad.

3. View the logs opened.

Collecting logs

About this task

You can use the Avaya Workspaces Service Utility to collect log files. The Avaya Workspaces Service Utility provides several options for log collection:

- Collect logs of one or several containers.
- Collect all logs.
- Collect logs for a given period of time.

  Use this option in a situation when you can reproduce an issue.

Note:

The limit for log collection is 100 Mb. To collect larger log files, use WinSCP.

Procedure

1. Launch the Avaya Workspaces Service Utility.
2. To collect logs for one or several containers, select one or several containers and click the **Save** button.
3. To collect all logs, click the **Save all** button.
4. To collect logs for a given period of time:
   a. Click the **Start** button.
   b. Reproduce an issue.
   c. Click the **Stop** button.

   The Avaya Workspaces Service Utility adds the collected logs to a .zip file and displays a message once complete.

5. If you want to open the container logs directory, click the **Open folder** button.

Index

H

I

K

L

M

N

O

P

R

S

T

U

V

W