Avaya Aura® Contact Center Installation

Release 6.4
44400-311
Issue 05.03
December 2014

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Chapter 1: New in this release

The following sections detail what is new in *Avaya Aura® Contact Center Installation* (44400-311) for Release 6.4.

Navigation

- Features on page 17

Features

See the following sections for information about feature changes:

- Agent Desktop client software installation on page 17
- Avaya Aura® Contact Center server types on page 17

Agent Desktop client software installation

In order to install prerequisites for Agent Desktop client software, you must have administrator privileges on the client computer.

After the prerequisites are installed, anyone can install the Agent Desktop client software on each client computer. For more information, see Installing the Agent Desktop software prerequisites on page 664 and Installing the Agent Desktop client software on page 664.

Avaya Aura® Contact Center server types

The Avaya Aura® Contact Center DVD Installer supports a range of server types. Each server type installs a combination of Avaya Aura® Contact Center applications suitable for a specific contact center function. Some Contact Center servers support only voice contacts, some Contact Center servers support only multimedia contacts, and some Contact Center servers support both voice and multimedia. Avaya Aura® Contact Center offers a range of servers for both Avaya Aura® Unified Communications platform and Avaya Communication Server 1000 based solutions. Avaya Aura®

Contact Center also provides multimedia only solutions, and a Multimedia Complement to Avaya Aura® Call Center Elite.

Avaya Aura® Contact Center Release 6.4 no longer supports the installation of individual Contact Center components or applications.

The Avaya Aura® Contact Center Release 6.4 DVD contains a Windows and a Linux version of Avaya Media Server. You can use the Avaya Aura® Contact Center Release 6.4 DVD Installer to install the Windows version of Avaya Media Server co-resident with other Contact Center applications on a Windows server. You can access the Linux version of Avaya Media Server directly from the DVD folder structure and install it standalone on a Linux server.

For more information about the supported range of server types, see Introduction on page 19.

Chapter 2: Introduction

This document describes how to install and un-install all server software for Avaya Aura® Contact Center Release 6.4. You can install Contact Center in various configurations to suit your contact center solution.

You can install the following Contact Center server types:

Voice and Multimedia Contact Server with Avaya Media Server — Install this server to provide context sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for email messages, web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. This server type has the following software components:

- Contact Center Manager Server (CCMS)
- Contact Center License Manager (LM)
- Contact Center Manager Server Utility (SU)
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)
- Avaya Media Server Microsoft Windows version

In a solution using this type of server, agents download and install Avaya Aura® Agent Desktop software from this server.

Voice and Multimedia Contact Server — Install this server to provide context sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for email messages, web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. Each SIP-enabled Voice and Multimedia Contact Server requires one or more Avaya Media Servers in the contact center solution. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. A Voice and Multimedia Contact Server has the following software components:

- Contact Center Manager Server (CCMS)
- Contact Center License Manager (LM)
- Contact Center Manager Server Utility (SU)
- Contact Center Manager Administration (CCMA)

- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

In a small to medium solution using a Voice and Multimedia Contact Server, agents download and install Avaya Aura® Agent Desktop software from the Voice and Multimedia Contact Server.

Voice Contact Server Only — Install this server to provide context sensitive and skill-based routing for customer voice contacts in a large contact center solution. Each SIP-enabled Voice Contact Server requires one or more Avaya Media Servers in the contact center solution. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. A Voice Contact Server has the following software components:

- Contact Center Manager Server
- Contact Center License Manager
- Contact Center Manager Server Utility
- Contact Center Manager Administration
- Communication Control Toolkit

In a solution where agents use Avaya Aura® Agent Desktop to log on and handle customer calls, each Voice Contact Server requires one Multimedia Contact Server. In a SIP-enabled voice contact center solution, agents must use Avaya Aura® Agent Desktop to log on and handle customer calls. Therefore each SIP-enabled voice solution using a Voice Contact Server also requires one Multimedia Contact Server. In an Avaya Communication Server 1000 AML-based voice-only solution, where agents use Avaya Aura® Agent Desktop to log on and handle customer calls, each Voice Contact Server requires one Multimedia Contact Server. In an Avaya Communication Server 1000 AML-based voice-only solution, where agents use their desk phones to log on and handle customer calls, and where the agents do not use Avaya Aura® Agent Desktop, a Multimedia Contact Server is not required.

Multimedia Contact Server Only — Install this server to increase the number of contact center agents in your enterprise solution. When installed, this server provides the multimedia contact processing capabilities, and the Voice Contact Server processes only voice contacts. In a solution using a Multimedia Contact Server, agents download and install Avaya Aura® Agent Desktop software from the Multimedia Contact Server. Administrators configure Agent Desktop features and functions using the CCMM Administration utility installed on the Multimedia Contact Server.

A Multimedia Contact Server has the following software components:

- Contact Center Multimedia (CCMM)

AACC Multimedia Complement for Elite — Install this server to add multimedia contact routing support to a new or existing Avaya Aura® Call Center Elite voice-based solution. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM). In an Elite Complement solution, agents download and install Avaya Aura® Agent Desktop software from the Multimedia Complement for Elite server. Administrators configure Agent Desktop features and functions using

the CCMM Administration utility installed on the Multimedia Complement for Elite server. A Multimedia Complement for Elite server has the following software components:

- Contact Center Manager Server
- Contact Center License Manager
- Contact Center Manager Server Utility
- Contact Center Manager Administration
- Communication Control Toolkit
- Contact Center Multimedia

No Switch Configured Multimedia Only — Install this server to provide multimedia contact routing. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM). Choose this server type when there is no existing voice-based call center, or when multimedia integration with a voice contact center is not required. In a multimedia only solution, agents download and install Avaya Aura® Agent Desktop software from the No Switch Configured Multimedia Only server. Administrators configure Agent Desktop features and functions using the CCMM Administration utility installed on the No Switch Configured Multimedia Only server. A No Switch Configured Multimedia Only server has the following software components:

- Contact Center Manager Server
- Contact Center License Manager
- Contact Center Manager Server Utility
- Contact Center Manager Administration
- Communication Control Toolkit
- Contact Center Multimedia
- Avaya Media Server Windows version

Network Control Center Server Only — Install this server to add networking, network skill-based routing, and consolidated reporting support for a number of Voice and Multimedia Contact Servers operating as a single distributed contact center. Use this server to configure contact routing between the Voice and Multimedia Contact Server nodes of a distributed contact center solution. A Network Control Center Server has the following software components:

- Contact Center Manager Server — Network Control Center
- Contact Center Manager Administration
- Contact Center License Manager

Knowledge Worker Server Only — Install a Knowledge Worker server to provide Computer-Telephony Integration (CTI) functionality and call data handling capabilities. A Knowledge Worker Server has the following software components:

- Communication Control Toolkit Knowledge Worker version

- Contact Center License Manager

Avaya Media Server on Linux — Install this server to provide additional media processing capabilities, and to support Avaya Media Server High Availability. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. Avaya Media Server High Availability is not supported on the Microsoft Windows operating system. Each SIP-enabled Contact Center requires one or more Avaya Media Servers. For small to medium contact centers without High Availability or VMware, choose a server type with co-resident Avaya Media Server for Microsoft Windows. For large contact centers, or contact centers requiring High Availability, install one or more standalone Avaya Media Server Linux-based servers.

You can install Contact Center software in the following environments:

- Avaya Aura® Unified Communications platform.
- AML-based Avaya Communication Server 1000. Application Module Link (AML) is an internal protocol used by Avaya Aura® Contact Center to communicate directly with Avaya Communication Server 1000 (CS1000).
- As a multimedia complement to an Avaya Aura® Call Center Elite voice-based call center.
- No Switch Configured. Select this option when installing Avaya Aura® Contact Center to support only multimedia contacts.

How to use this book

To install Avaya Aura® Contact Center software, first select your voice platform type, then install a combination of Contact Center server types for that voice platform. For more information, select your voice platform from this list:

- Avaya Aura® Contact Center software installation for Avaya Aura® Unified Communications platform on page 26
- Avaya Aura® Contact Center software installation for CS1000 on page 262
- Avaya Aura® Contact Center Multimedia Complement software installation for Avaya Aura® Call Center Elite on page 516
- Avaya Aura® Contact Center multimedia only on page 579

When you have installed and configured these core Avaya Aura® Contact Center servers, you can expand your solution to include the following optional server type:

- Network Control Center Server software installation on page 643

When the Avaya Aura® Contact Center servers are installed and commissioned, install the client applications on agent, supervisor, or administrator computers. For more information about Avaya Aura® Contact Center client software, see:

- Agent Desktop client software installation on page 659
- Agent Desktop Displays software installation on page 670
- Orchestration Designer client software installation on page 674
- Avaya Communication Server 1000 Data Extraction Tool installation on page 676

Server Operating Systems

The workflows in this book include installing the server Operating Systems(OS) required by Avaya Aura® Contact Center software applications. You must complete a fresh install of the OS for each Contact Center installation. Do not install Contact Center applications on an existing OS from which you uninstalled either Contact Center or other software applications.

Platform Vendor Independence checking utility

You can purchase your choice of server hardware as long as it complies with the Platform Vendor Independence (PVI) specification for Avaya Aura® Contact Center software. You have the flexibility to purchase a hardware specification that conforms with your corporate standard. For more information about the Avaya Aura® Contact Center PVI server specifications, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

To check whether a proposed server meets the basic requirements for Platform Vendor Independence, the Contact Center Installer runs a Platform Vendor Independence utility before the software is installed. The Platform Vendor Independence utility generates warnings and suggestions when the proposed server does not satisfy the minimum or suggested requirement.

If major problems are detected, the Platform Vendor Independence utility reports a Fail message. The installation cannot proceed until you fix the problems.

Use the Platform Vendor Independence utility in conjunction with the guidelines stated in this document.

The Platform Vendor Independence utility is included in the Contact Center product installation DVD. The utility runs automatically before the software is installed to verify the system.

Prerequisites

Procedure

- Read *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Complete the *Avaya Aura® Contact Center Installation Checklist* (44400-310).
- Understand the features you purchased with Contact Center.
- Determine your required network components and configuration based on the information in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have the Contact Center Release 6.4 DVD.
- Ensure that your servers, clients, and network meet the minimum system requirements based on the *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that your PABX is configured. For more information about configuring the PABX, see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform*

Integration (44400-521) or *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).

- Ensure that all software is installed on the servers using a common administration account.

Related resources

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

About this task

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

Procedure

- To find videos on the Avaya Support website, go to http://support.avaya.com and perform one of the following actions:
  - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
  - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:
  - Enter a key word or key words in the Search Channel to search for a specific product or topic.
  - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the website.

Note:

Videos are not available for all products.

Support

Go to the Avaya Support site at http://support.avaya.com for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with

live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Part 1: Avaya Aura® Unified Communications

Chapter 3: Avaya Aura® Contact Center software installation for Avaya Aura® Unified Communications platform

Avaya Aura® Contact Center Release 6.4 supports a range of server types for Avaya Aura® Unified Communications SIP-enabled solutions. Each server type installs a combination of Avaya Aura® Contact Center applications suitable for a specific contact center function. Some Contact Center servers support only voice contacts, some Contact Center servers support only multimedia contacts, and some Contact Center servers support both voice and multimedia.

A Contact Center solution can include one or more servers. The installation configuration you choose depends on the hardware resources and performance demands of your contact center. To implement the Avaya Aura® Contact Center High Availability feature, your solution requires additional standby servers to provide resiliency and redundancy.

Voice and Multimedia Contact Server with Avaya Media Server — Install this server to provide context sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for email messages, web communications, voice mail messages, instant messages (IMs) scanned documents, fax messages, and SMS text messages. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. This server type does not support VMware or Contact Center High Availability.

Voice and Multimedia Contact Server — Install this server to provide context sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for email messages, web communications, voice mail messages, instant messages (IMs) scanned documents, fax messages, and SMS text messages. Each SIP-enabled Voice and Multimedia Contact Server requires one or more Avaya Media Servers in the contact center solution. Avaya Media Server supports SIP-enabled voice contact routing, and it provides

conference and Agent Greeting capabilities in SIP-enabled contact centers. This server type does support VMware and Contact Center High Availability.

Voice Contact Server Only — Install this server to provide context sensitive and skill-based routing for customer voice contacts. Each SIP-enabled Voice Contact Server requires one or more Avaya Media Servers in the contact center solution. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers. Each SIP-enabled Voice Contact Server requires one Multimedia Contact Server in the contact center solution. This server type does support VMware and Contact Center High Availability.

Multimedia Contact Server Only — Install this server to increase the number of contact center agents in your enterprise solution. When installed, this server provides the multimedia contact processing capabilities, and the Voice Contact Server processes only voice contacts. This server type does support VMware and Contact Center High Availability.

Avaya Media Server on Linux — Each SIP-enabled Contact Center requires one or more Avaya Media Servers. Avaya Media Server supports SIP-enabled voice contact routing, and it provides conference and Agent Greeting capabilities in SIP-enabled contact centers.

Prerequisites for Contact Center installation workflow

Procedure

- Complete the *Avaya Aura® Contact Center Installation Checklist* (44400-310).
- Ensure all your server hardware meets the requirements described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Know the installation configuration you plan to use in your contact center. For more information see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that your PABX is configured. For more information about configuring the PABX, see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).

Contact Center server types and software installation for Avaya Aura® Unified Communications platform

About this task

This work flow shows the sequence of tasks you perform to install one or more Contact Center servers in a SIP-enabled Avaya Aura® Unified Communications platform based contact center solution.

The number of Avaya Media Server servers required depends on the number of agents in your solution. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Avaya Aura® Contact Center does not support the Voice and Multimedia Contact Server with Avaya Media Server software on a VMware guest.

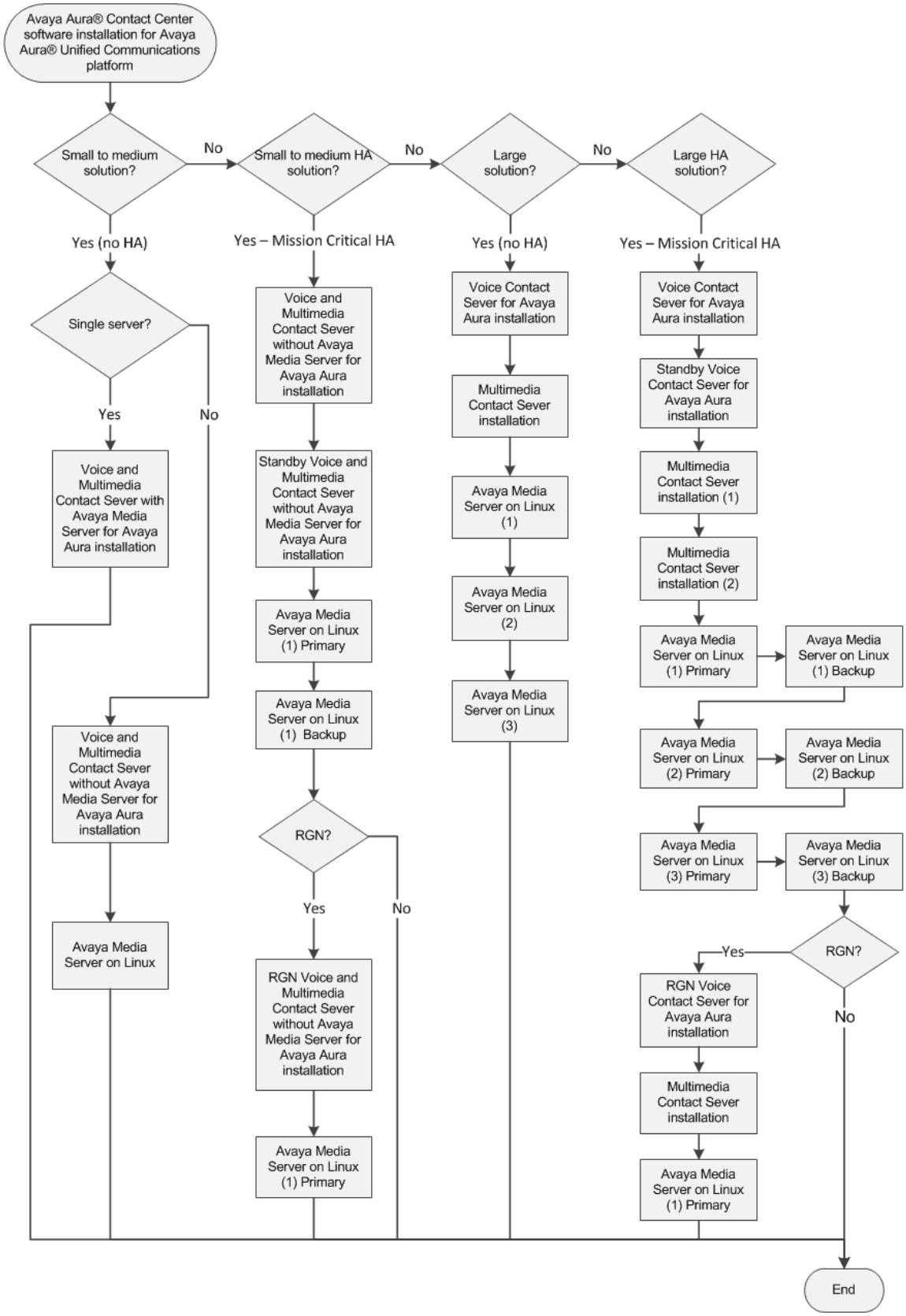


Figure 1: Contact Center software installation tasks for Avaya Aura® Unified Communications platform

based solutions

For more information about installing Avaya Aura® Contact Center servers for a SIP-enabled Avaya Aura® Unified Communications based contact center solution, see the following:

For small to medium solutions, that do not require virtualization or High Availability support, see:

- Voice and Multimedia Contact Server with Avaya Media Server for Avaya Aura® Installation on page 31

For small to medium solutions that support virtualization or High Availability, see:

- Voice and Multimedia Contact Server for Avaya Aura® platform installation on page 58
- Standby Voice and Multimedia Contact Server for Avaya Aura® platform installation on page 85
- RGN Voice and Multimedia Contact Server for Avaya Aura platform installation on page 125
- Avaya Media Server installation on Linux on page 252

For large solutions that support virtualization or High Availability, see:

- Voice Contact Server for Avaya Aura® platform installation on page 149
- Standby Voice Contact Server for Avaya Aura® platform installation on page 172
- RGN Voice Contact Server for Avaya Aura platform installation on page 210
- Multimedia Contact Server software installation on page 232
- Avaya Media Server installation on Linux on page 252

The following additional and optional server type is also supported in Avaya Aura® Unified Communications SIP-enabled contact center solutions:

- Network Control Center Server software installation on page 643

Chapter 4: Voice and Multimedia Contact Server with Avaya Media Server for Avaya Aura® platform installation

This chapter describes how to install a Voice and Multimedia Contact Server for a solution with an Avaya Aura® Unified Communications platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)
- Avaya Media Server Windows version

This server type does not support Contact Center High Availability or VMware.

Install this server to provide context-sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for voice calls, email messages, instant messages (IMs), Web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, networking, Open Interfaces Web Service and third-party application interfaces integration.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

You must complete the procedures in this chapter in sequential order.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Important:

Installing Contact Center Services For Avaya Media Server (CCSA) automatically enables Avaya Media Server debug tracing. Avaya Media Server is a software-based media processing platform. All media processing is performed in software on the host CPUs. Avaya Media Server therefore does not support debug tracing in production systems. When you have commissioned and tested your SIP-enabled contact center solution, you must disable trace debugging before placing the system in production. For more information about disabling Avaya Media Server debug tracing, see *Avaya Aura® Contact Center Commissioning* (44400-312).

High Availability note

Avaya Media Server High Availability is not supported on the Windows operating system. Avaya Media Server High Availability is supported only on Linux servers. If you plan to implement Avaya Aura® Contact Center High Availability, install a Voice and Multimedia Contact Server without Avaya Media Server. Then install the Voice and Multimedia Contact Server without Avaya Media Server software on a standby server. Next install two or more Avaya Media Servers to build a resilient contact center solution.

Voice and Multimedia Contact Server with Avaya Media Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

  Important:

  For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008

documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.

2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

Configuring the Network Adapter

Before you begin

- Ensure the network adapter supports Receive Side Scaling with a minimum of four queues.
- Ensure the network adapter uses the most recent driver.

About this task

Configure the network adapter to support Contact Center real-time network traffic. Enable Receive Side Scaling and configure four queues.

Procedure

1. On the Contact Center server, click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change adapter settings**.

2. Right-click on the contact center subnet Local Area Connection and select **Properties**.
3. Click **Configure**.
4. On the Properties window, click **Advanced**.
5. On the **Advanced** tab, from the **Property** list select **Receive Side Scaling**, and from the **Value** list select **Enabled**.
6. From the **Property** list select **Maximum Number of RSS Queues**, and from the **Value** list select **RSS 4 Queues**.
7. From the **Property** list select **Receive Buffers**, and from the **Value** list select **Maximum**.
8. Click **OK**.

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. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).

8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.

4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling Admin Approval Mode for Windows Server 2008 administrators

About this task

Windows Server 2008 implements a security feature known as User Account Control (UAC). By default, this feature causes applications run by local non built-in administrators to behave as if the applications had been run by standard users. Perform this procedure to ensure that local administrators get full privileges for running applications.

Procedure

1. Click **Start** > **Administrative Tools** > **Local Security Policy**.
2. Under **Security Settings**, expand **Local Policies**.
3. Select **Security Options**.
4. In the policy pane on the right, double-click on **User Account Control: Run all administrators in Admin Approval Mode**.
5. Click the **Local Security Setting** tab, and select **Disabled**.
6. Click **OK**.

   If prompted, restart the server.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and

network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice and Multimedia Contact Server with Avaya Media Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice and Multimedia Contact Server with Avaya Media Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice and Multimedia Contact Server with Avaya Media Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

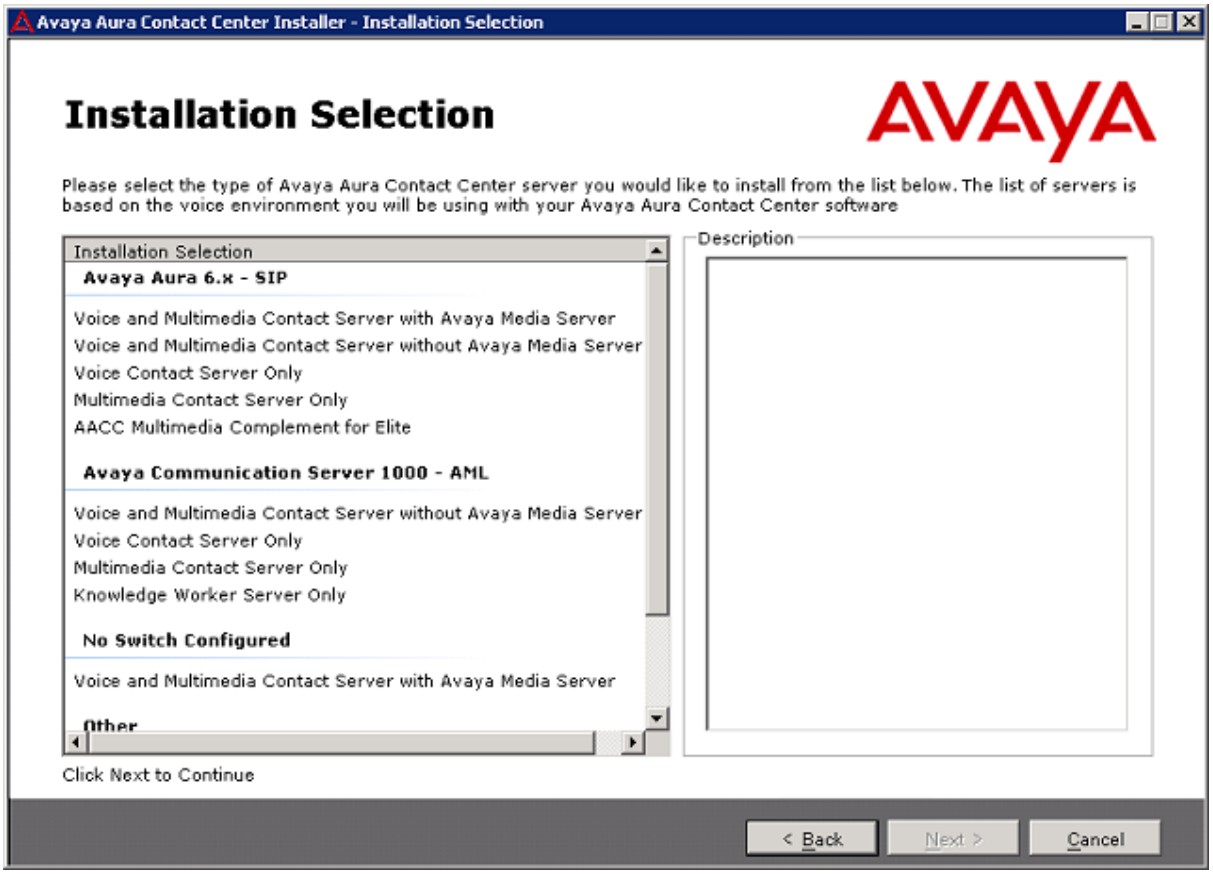
Note:

Read the Contact Center Release Notes for the most recent instructions.

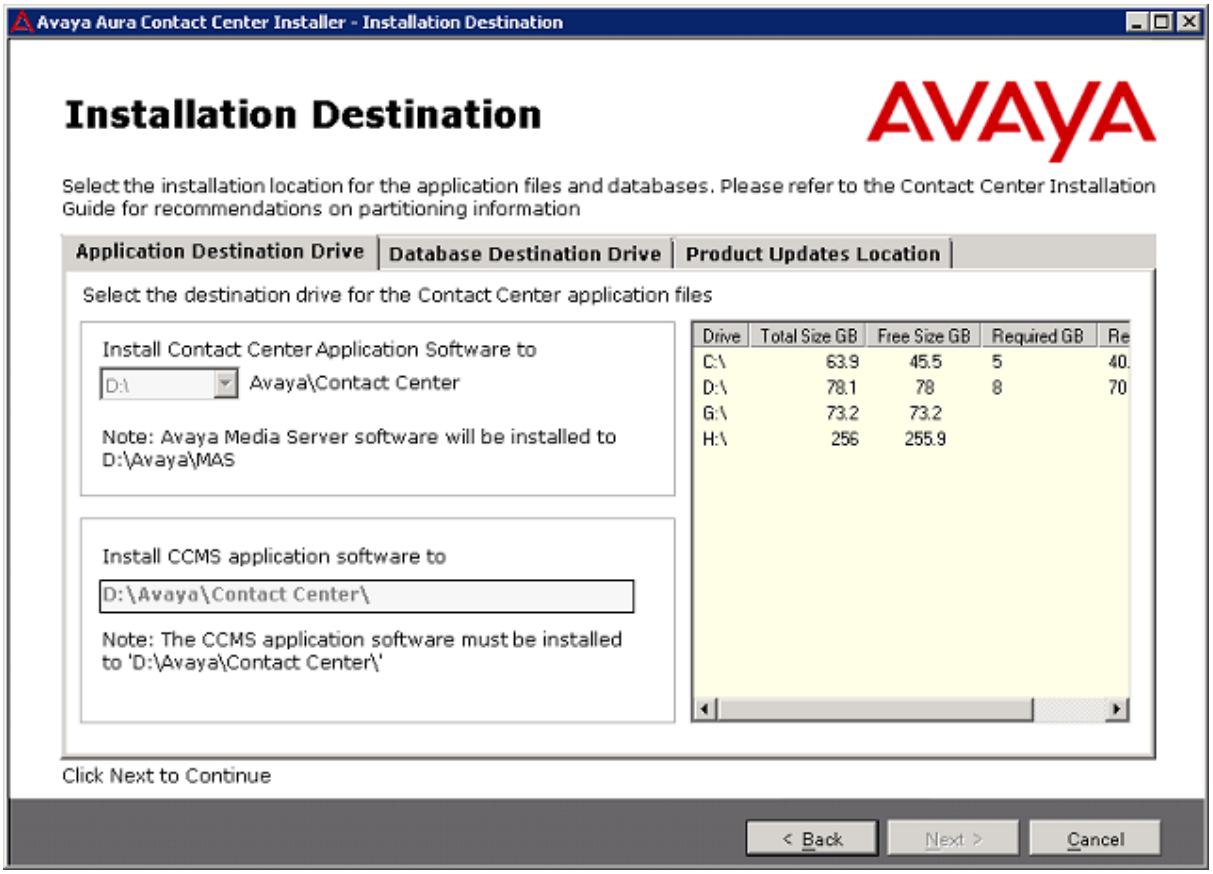
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

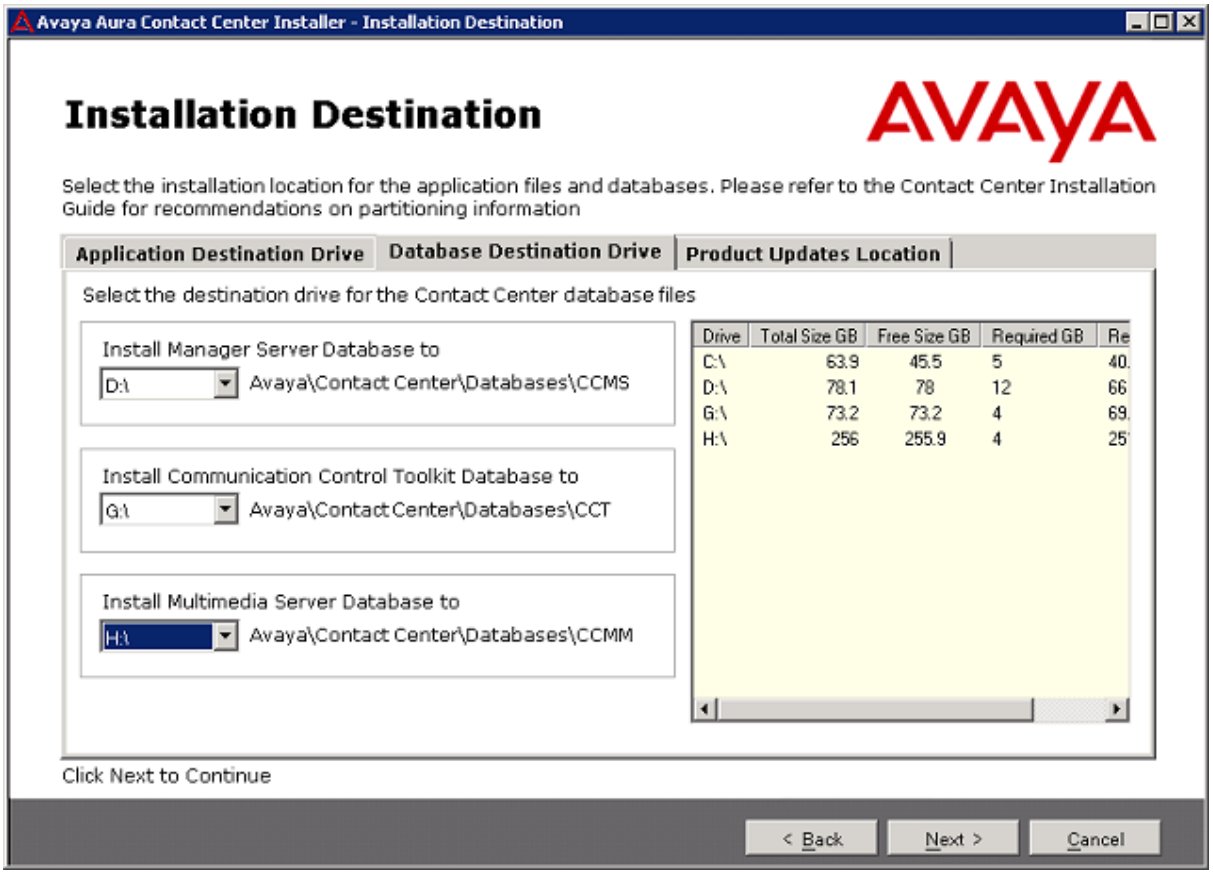
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



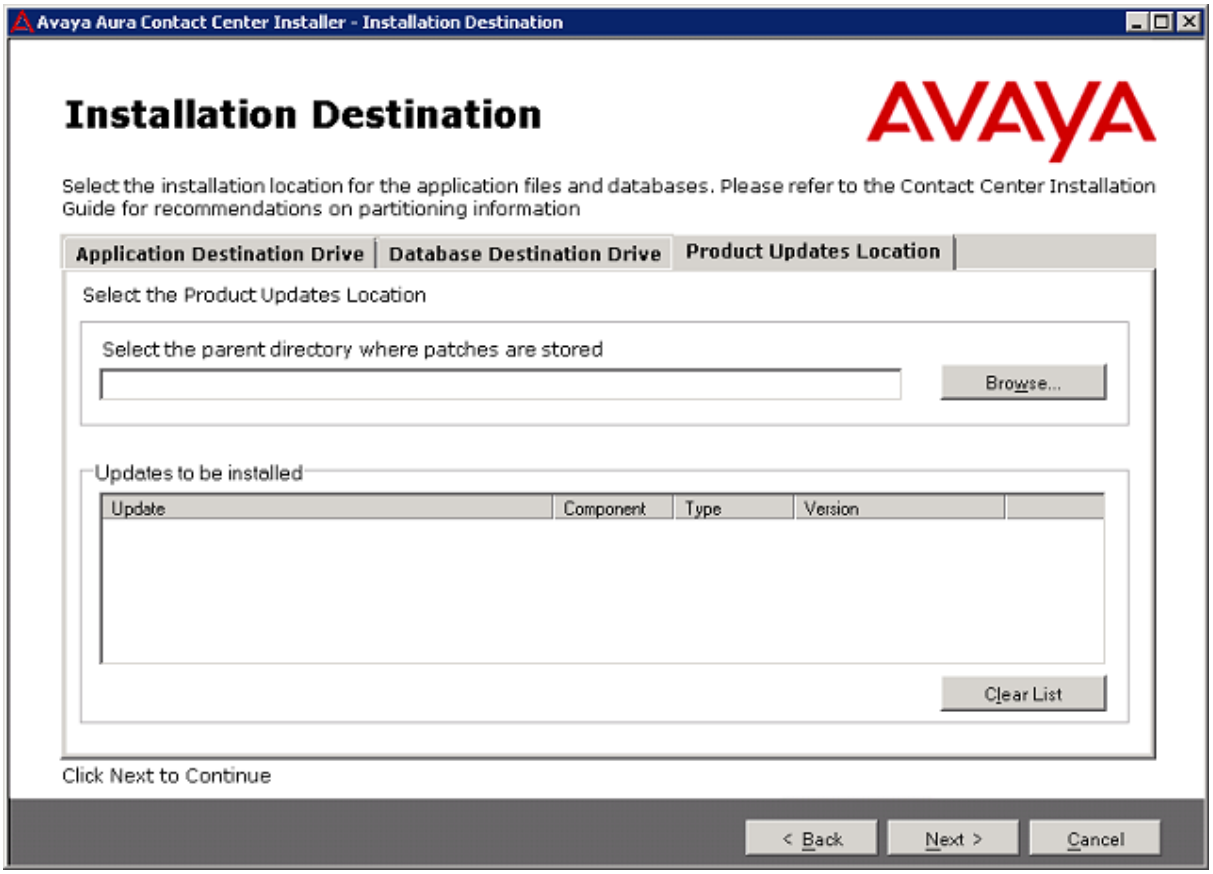
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice and Multimedia Contact Server with Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



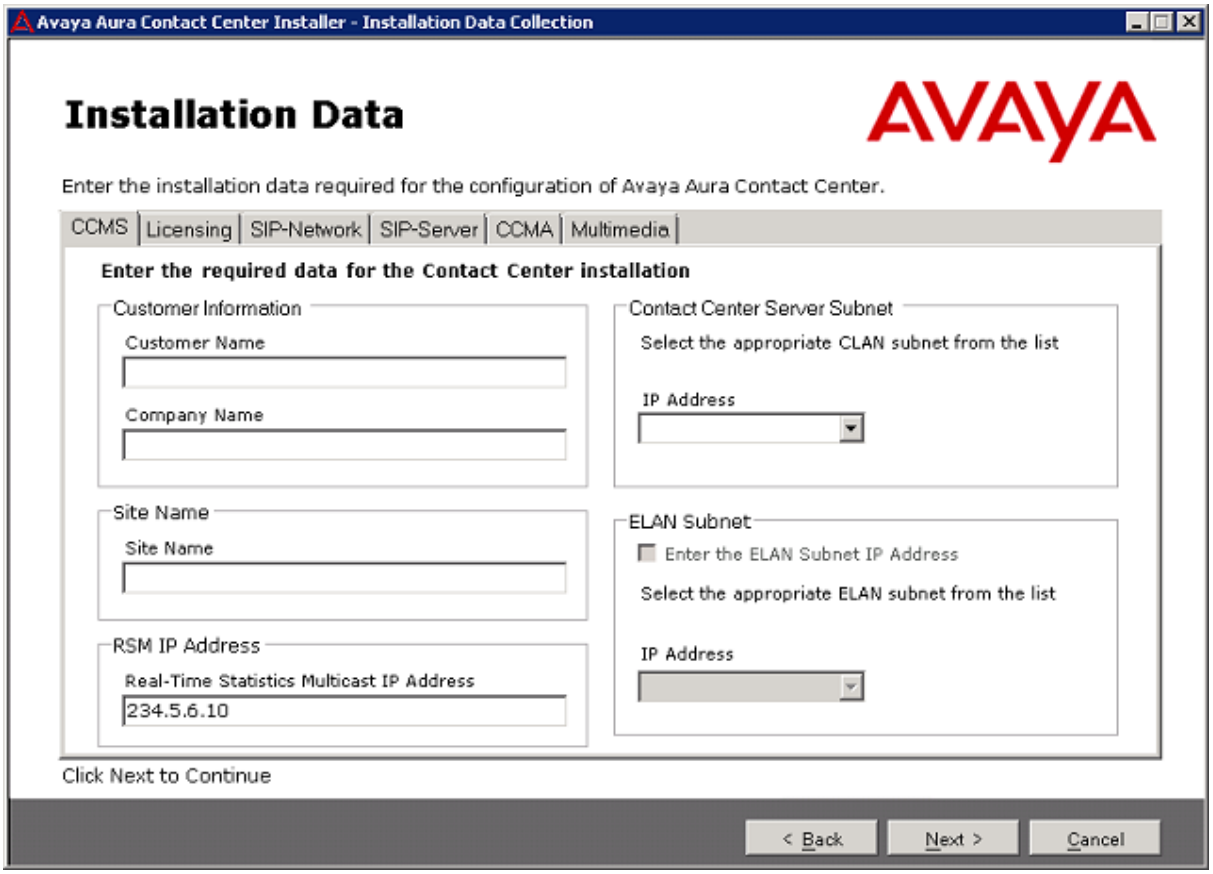
15. Click the **Product Updates Location** tab.



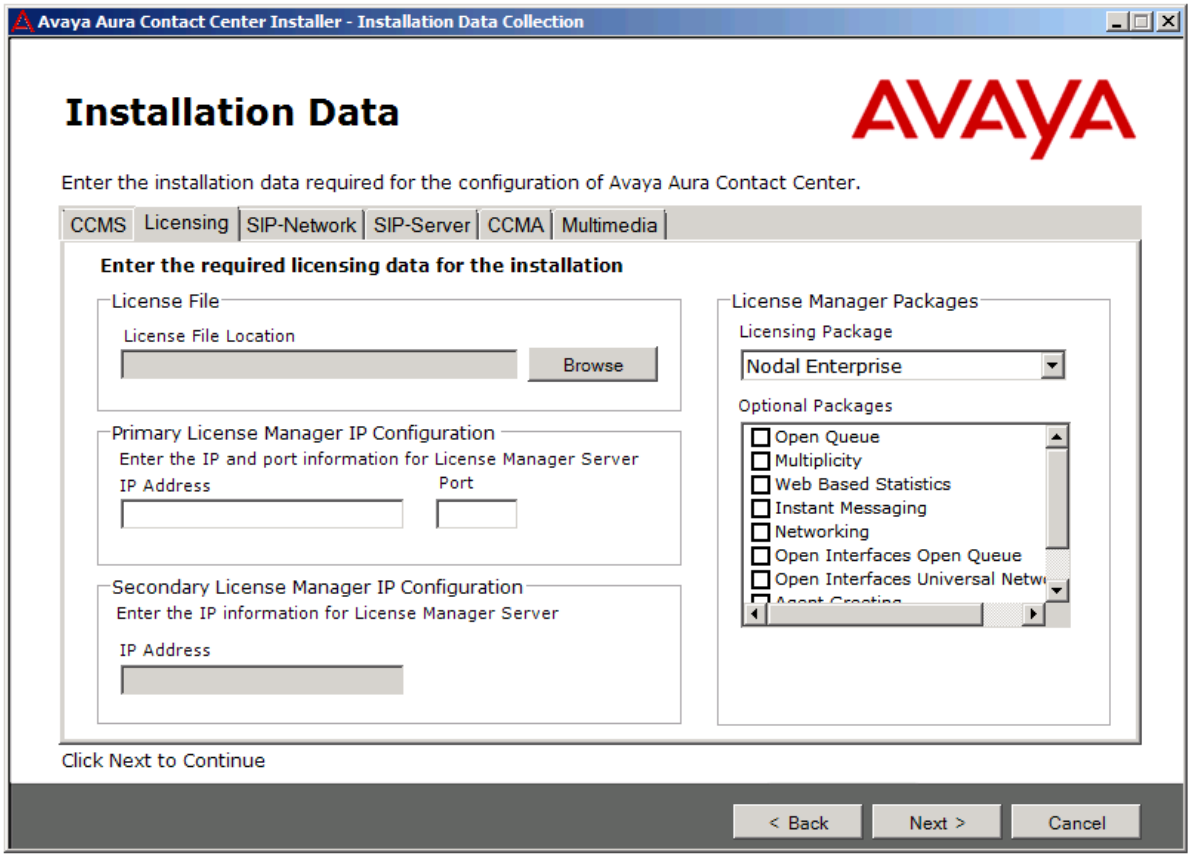
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

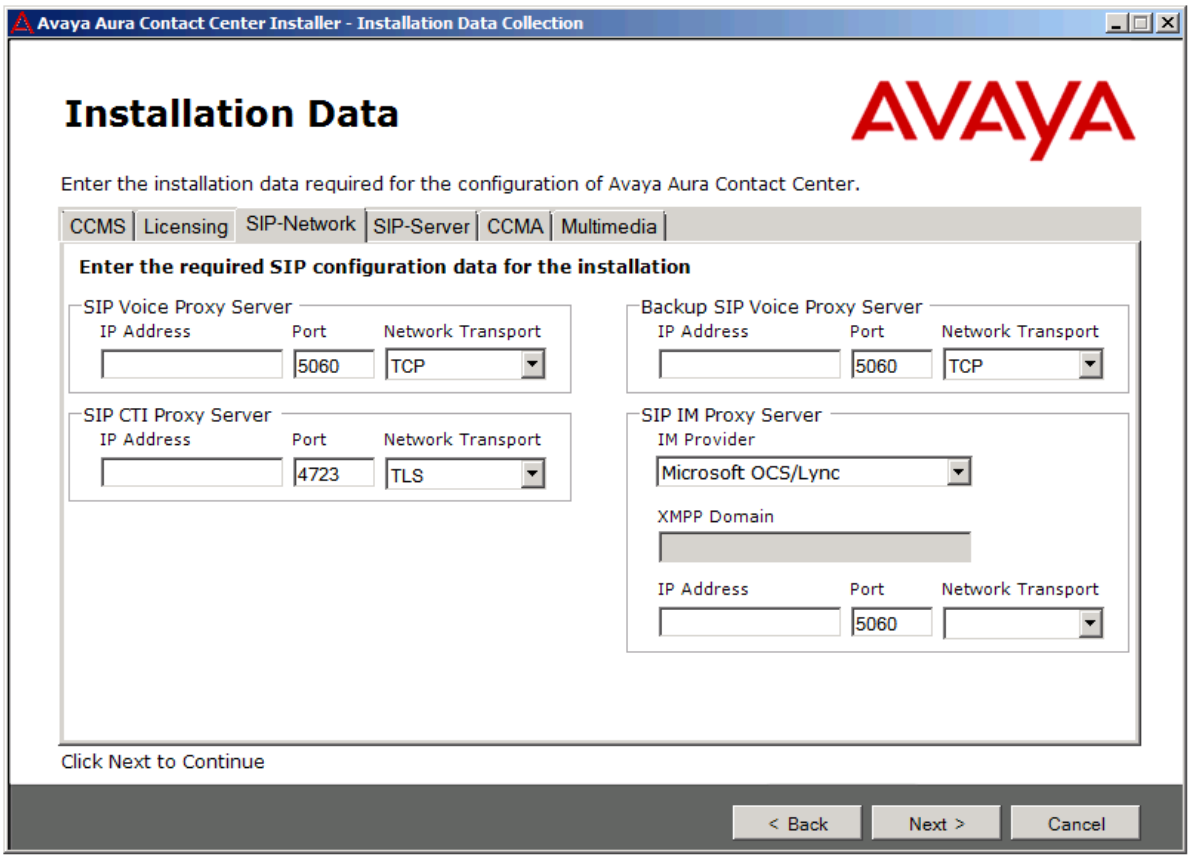
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **SIP-Network** tab, and configure the SIP proxy server details.

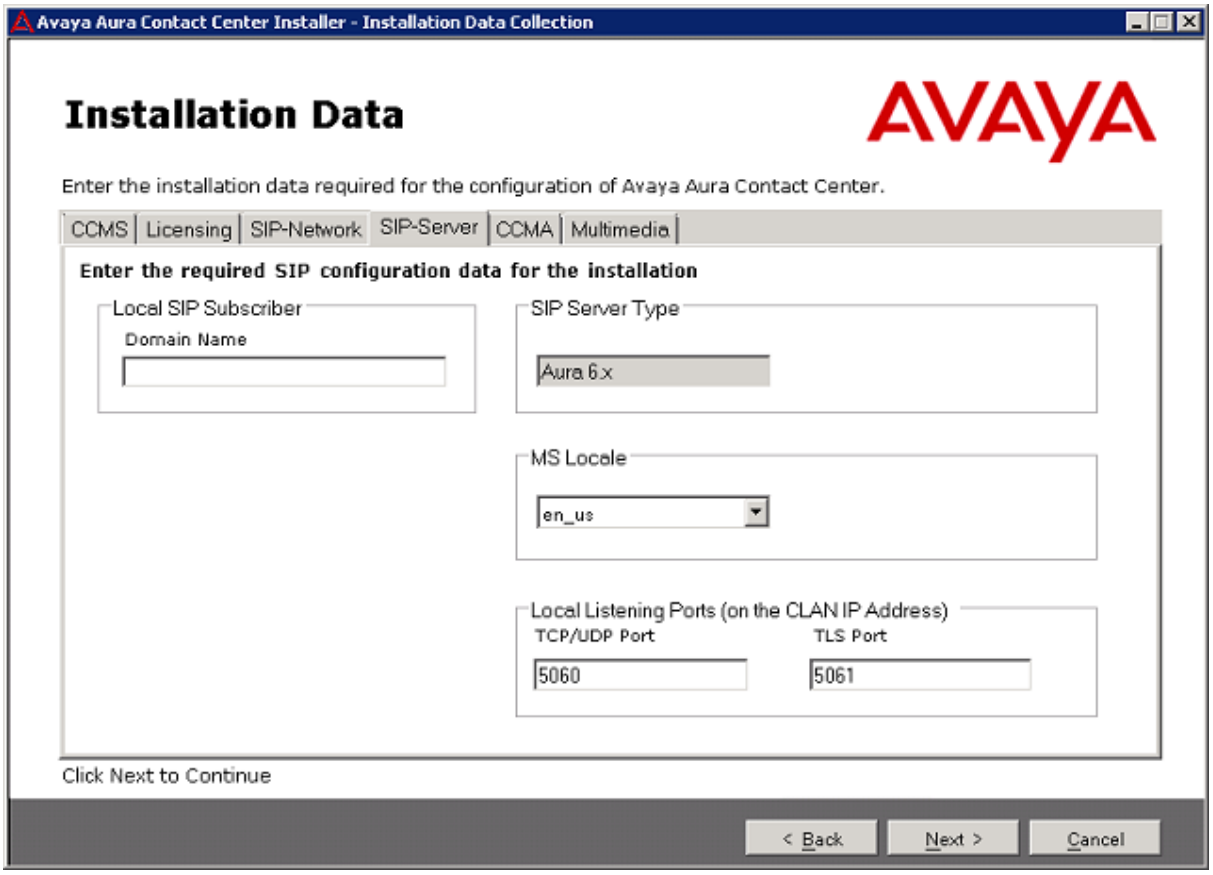


35. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the primary Avaya Aura® Session Manager.
36. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
37. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
38. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the Avaya Aura® Application Enablement Services server.
39. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
40. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.

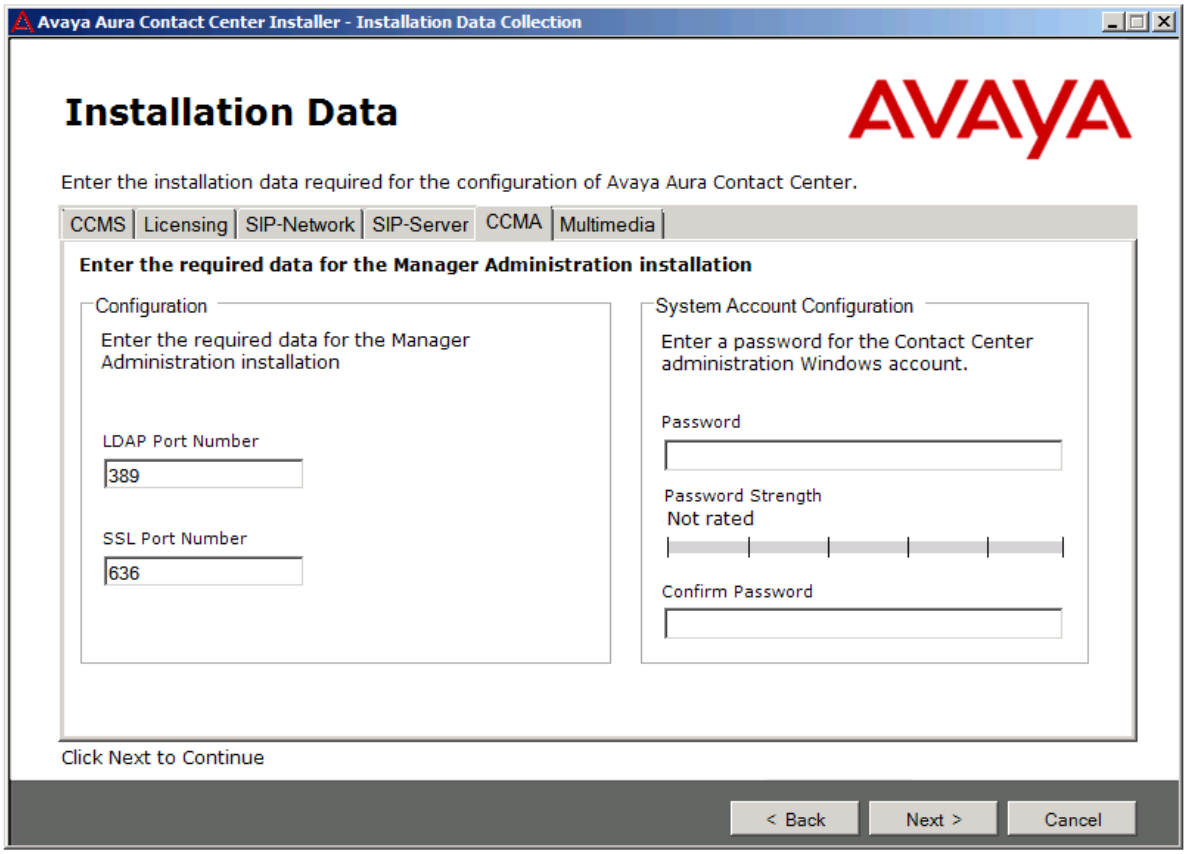
41. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
42. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
43. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
44. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
45. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
46. Select the **SIP-Server** tab, and configure the SIP server details.



47. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP

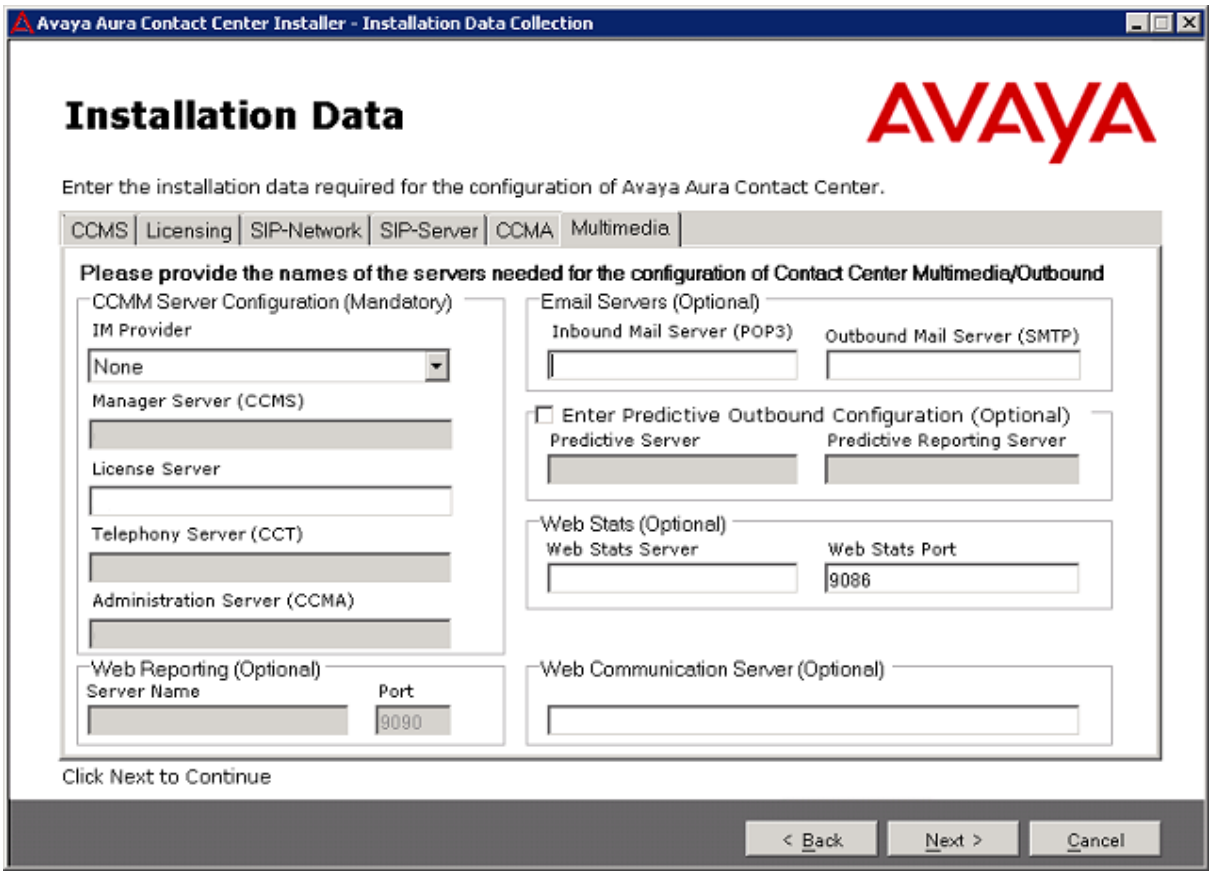
Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.

48. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
49. From the **MS Locale** list, select the locale (including language and dialects) of the solution environment.
50. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
51. Select the **CCMA** tab, and configure the CCMA details.



52. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.

53. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
54. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
55. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



56. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync, or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, and Microsoft Lync. Instant Messaging is supported only in SIP-enabled contact center solutions.
57. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
58. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.

59. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.
60. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
61. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
62. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
63. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
64. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
65. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
66. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
67. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
68. Click **Next**.
69. On the **Summary** window, review and verify the information.
70. Click **Install**.
71. After the installation is complete, click **Finish**.
72. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database
- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Installing the Instant Messaging chat server on the external Web server

Before you begin

- Install Contact Center Multimedia server software in a SIP-enabled Contact Center.
- Install the Instant Messaging license on the Contact Center License Manager.

About this task

The Instant Messaging chat server allows customers to have Instant Messaging chat sessions with the contact center. The Instant Messaging chat server uses Presence Services to gather presence information for the Agent, Supervisor and Expert.

The Avaya Aura® Contact Center sample Instant Message XMPP client application is compatible only with Avaya Aura® Presence Services Release 6.1 or earlier. The Avaya Aura® Contact Center sample application is not compatible with Avaya Aura® Presence Services Release 6.1.1 or later.

Procedure

1. Download the Avaya Aura® Contact Center Sample Instant Message XMPP client application from www.avaya.com/support to the external Web server.
2. Extract the contents of the sample application and read the AACCPresenceServices_IMChatServerInstall document for further instructions.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 5: Voice and Multimedia Contact Server without Avaya Media Server for Avaya Aura® platform installation

This chapter describes how to install a Voice and Multimedia Contact Server for a solution with an Avaya Aura® Unified Communications platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

This server type supports Contact Center High Availability and VMware.

You can use the procedures in this chapter to install the following:

- Standalone Voice and Multimedia Contact Server without Avaya Media Server (for solutions not using High Availability)
- Primary Voice and Multimedia Contact Server without Avaya Media Server (for solutions using High Availability)

Install this server to provide context-sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for voice calls, email messages, instant messages (IMs), Web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, networking, Open Interfaces Web Service and third-party application interfaces integration.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

You must complete the procedures in this chapter in sequential order.

Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

1. Log on to the Avaya Web site.
2. Compare the versions of the documentation on the site with the versions you have.
3. If the version number on www.avaya.com/support is higher than your version, download the latest version of the document.

4. Review the Avaya Web site for release notes and readme files.

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.

15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.

18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.

19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.

21. Select **Provide computer name and domain** and complete the information for your server name and network settings.

22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.

23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.

Name	Description
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.

10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.

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

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.

4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice and Multimedia Contact Server without Avaya Media Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice and Multimedia Contact Server without Avaya Media Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

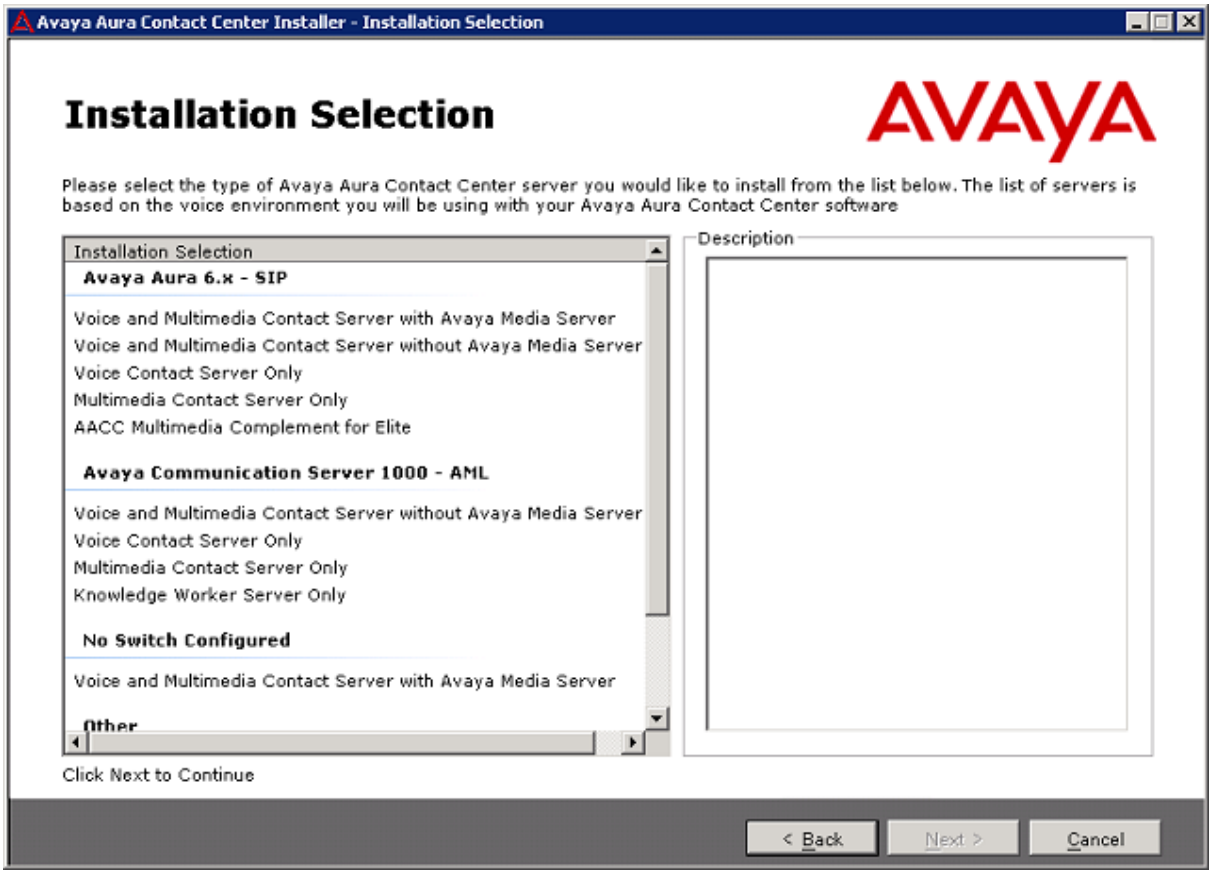
Note:

Read the Contact Center Release Notes for the most recent instructions.

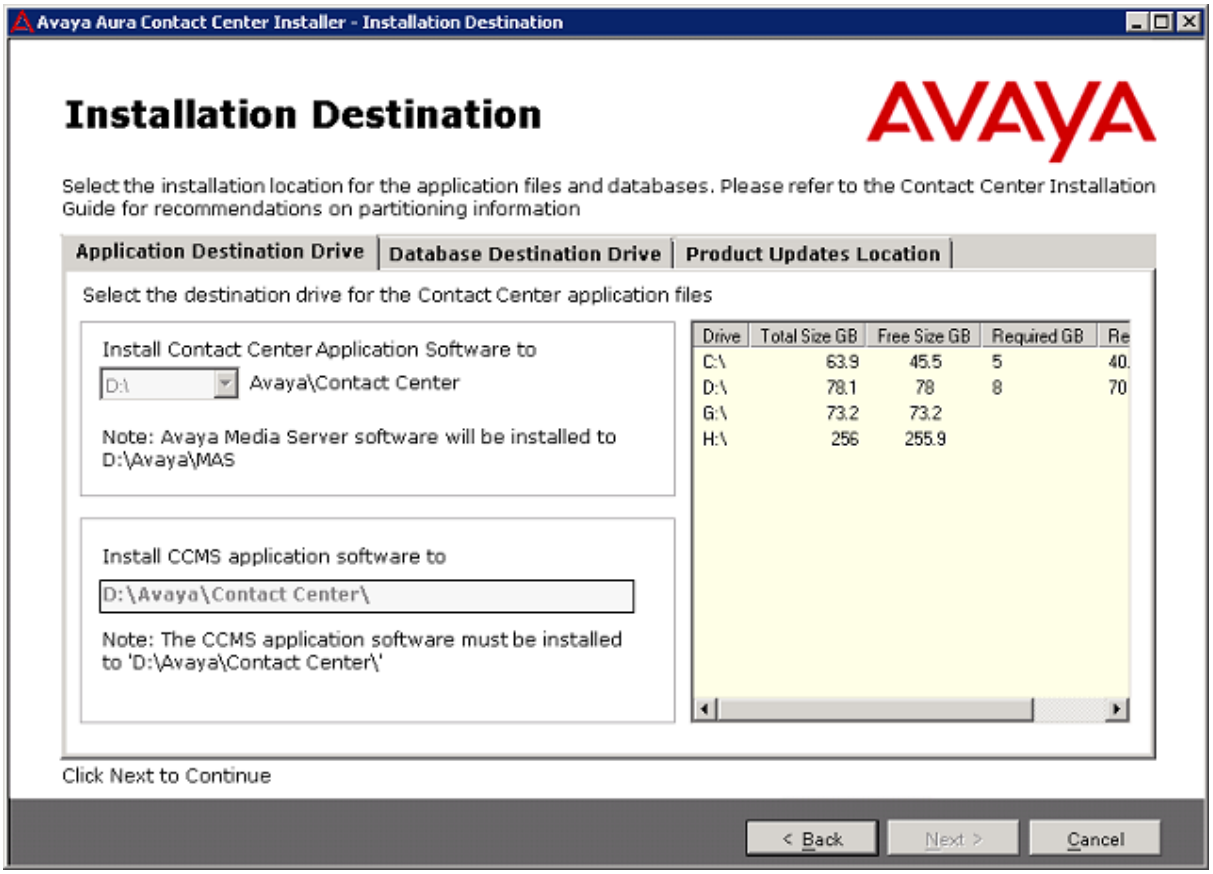
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

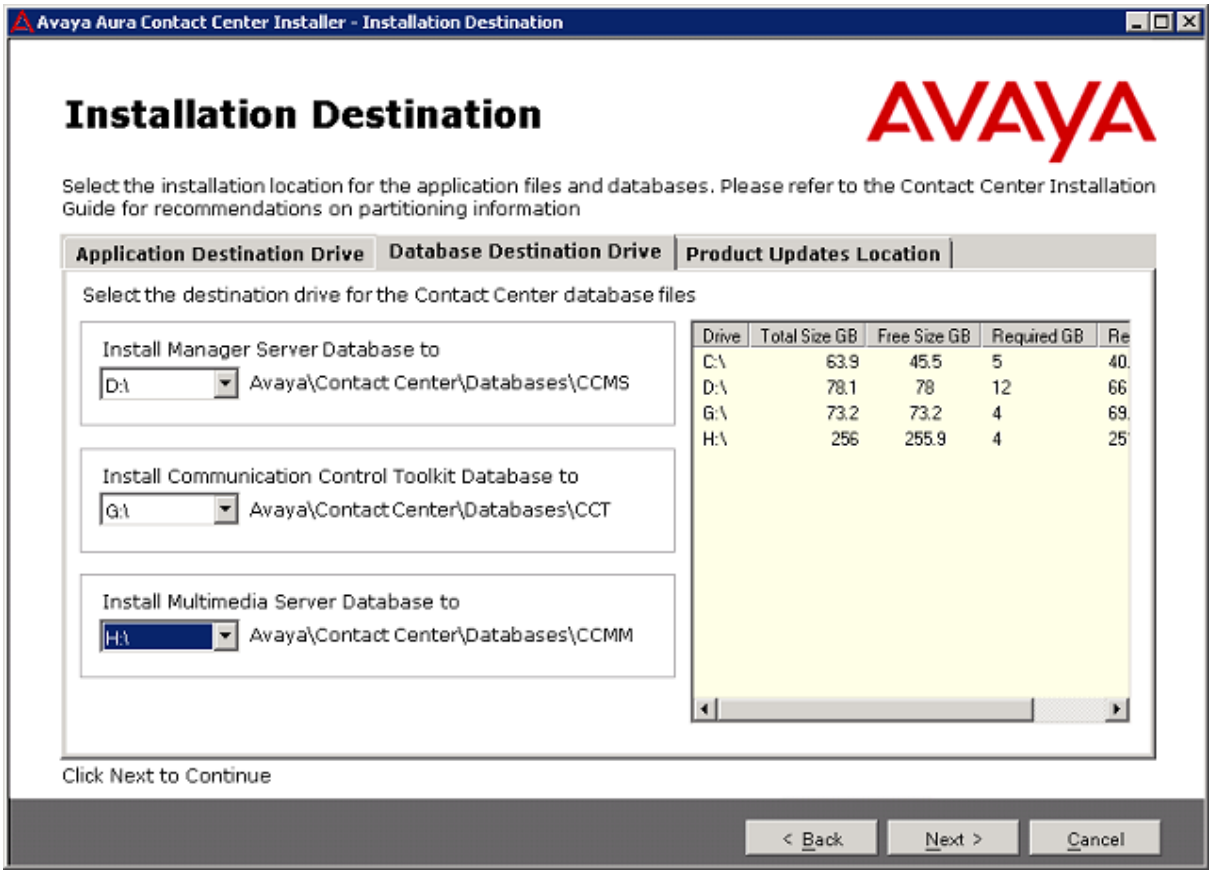
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



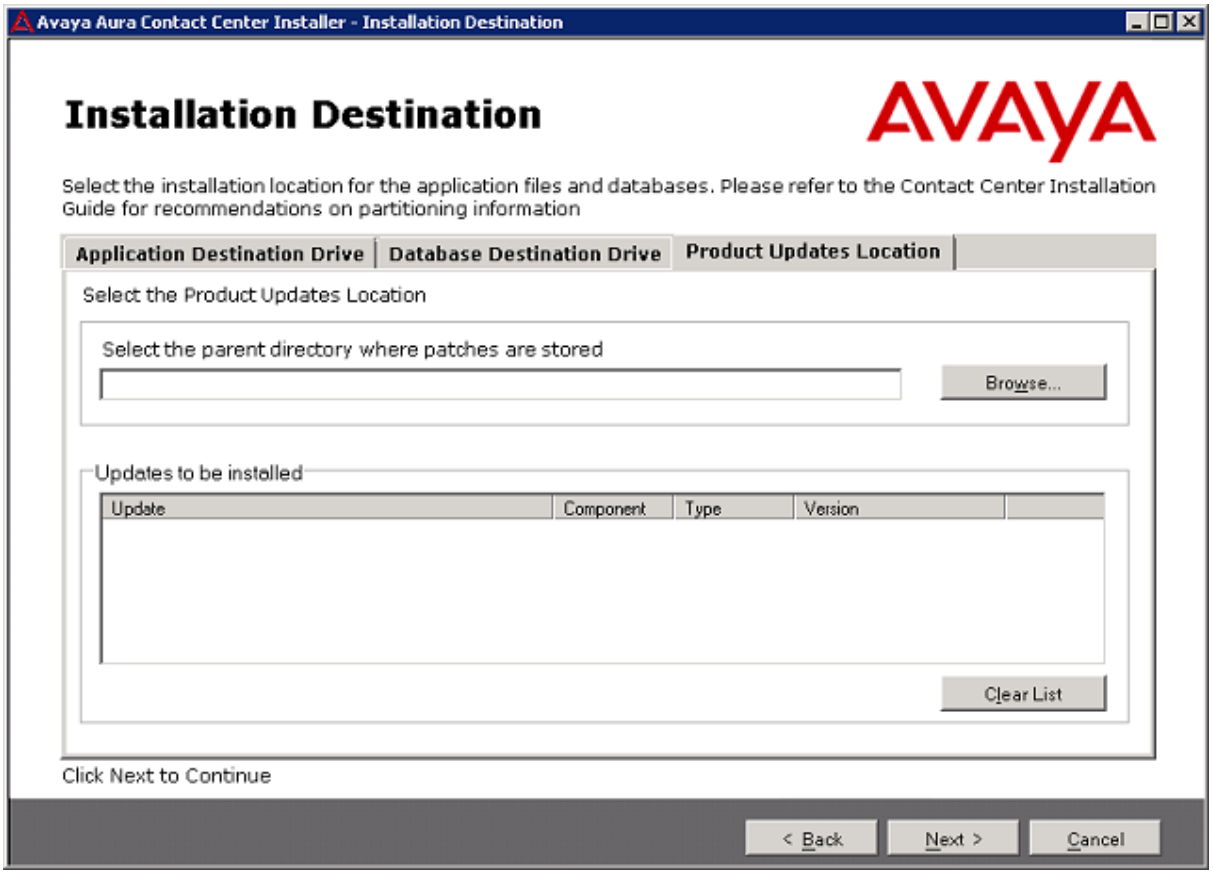
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



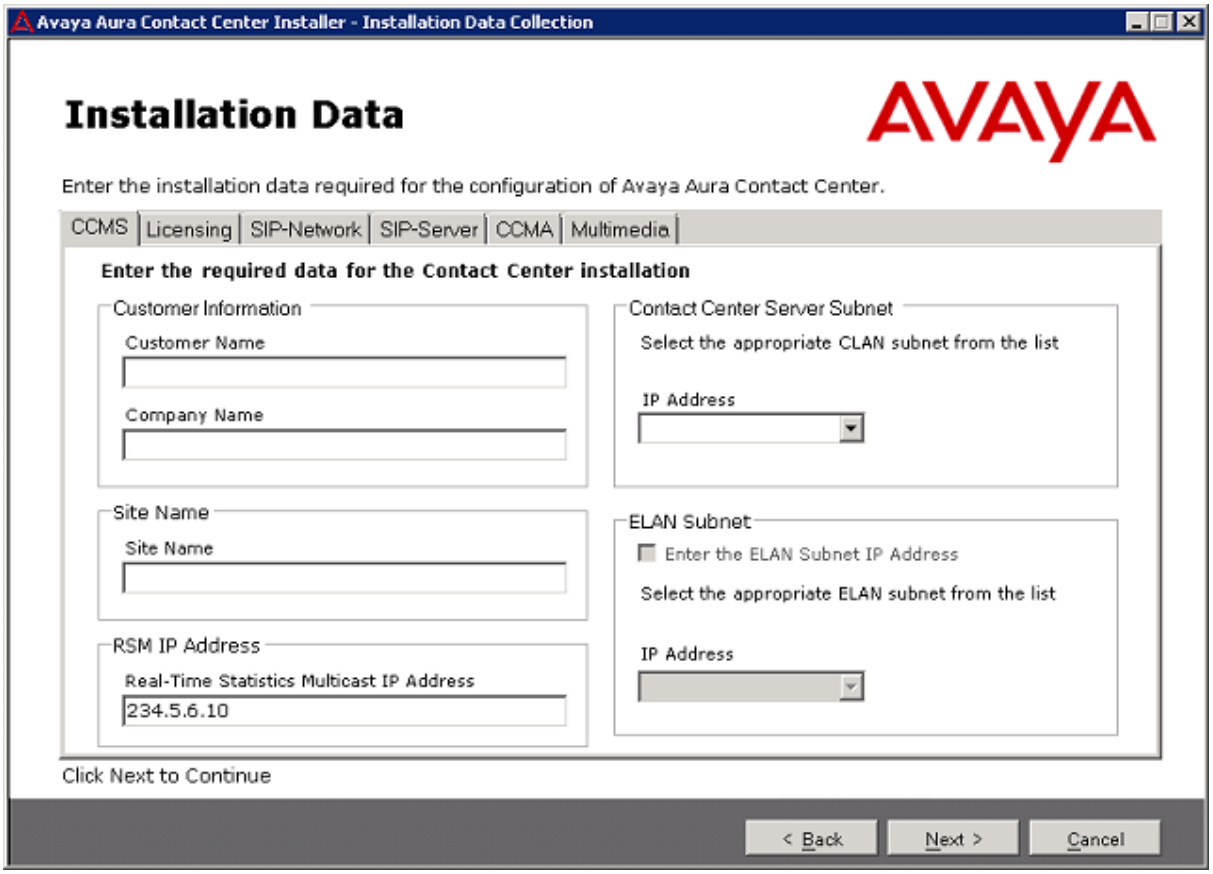
15. Click the **Product Updates Location** tab.



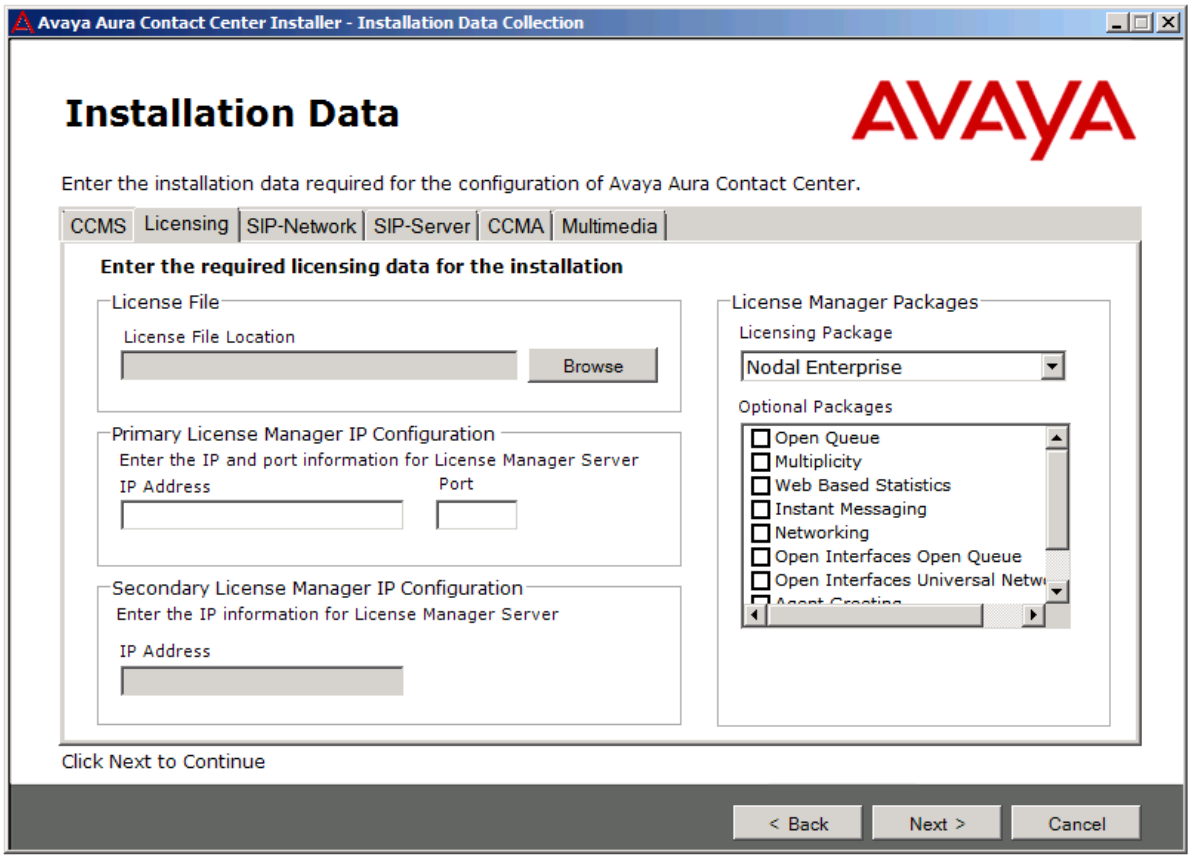
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

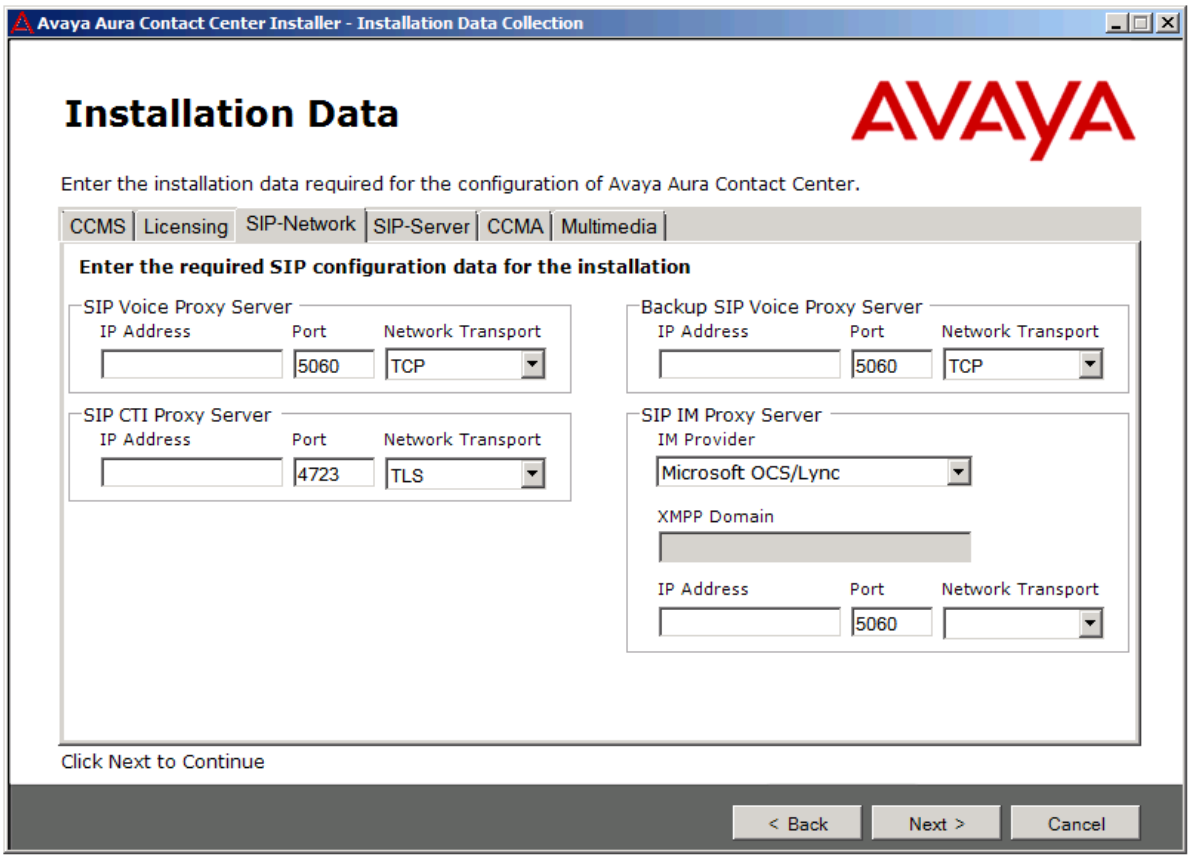
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **SIP-Network** tab, and configure the SIP proxy server details.



35. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the primary Avaya Aura® Session Manager.
36. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
37. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

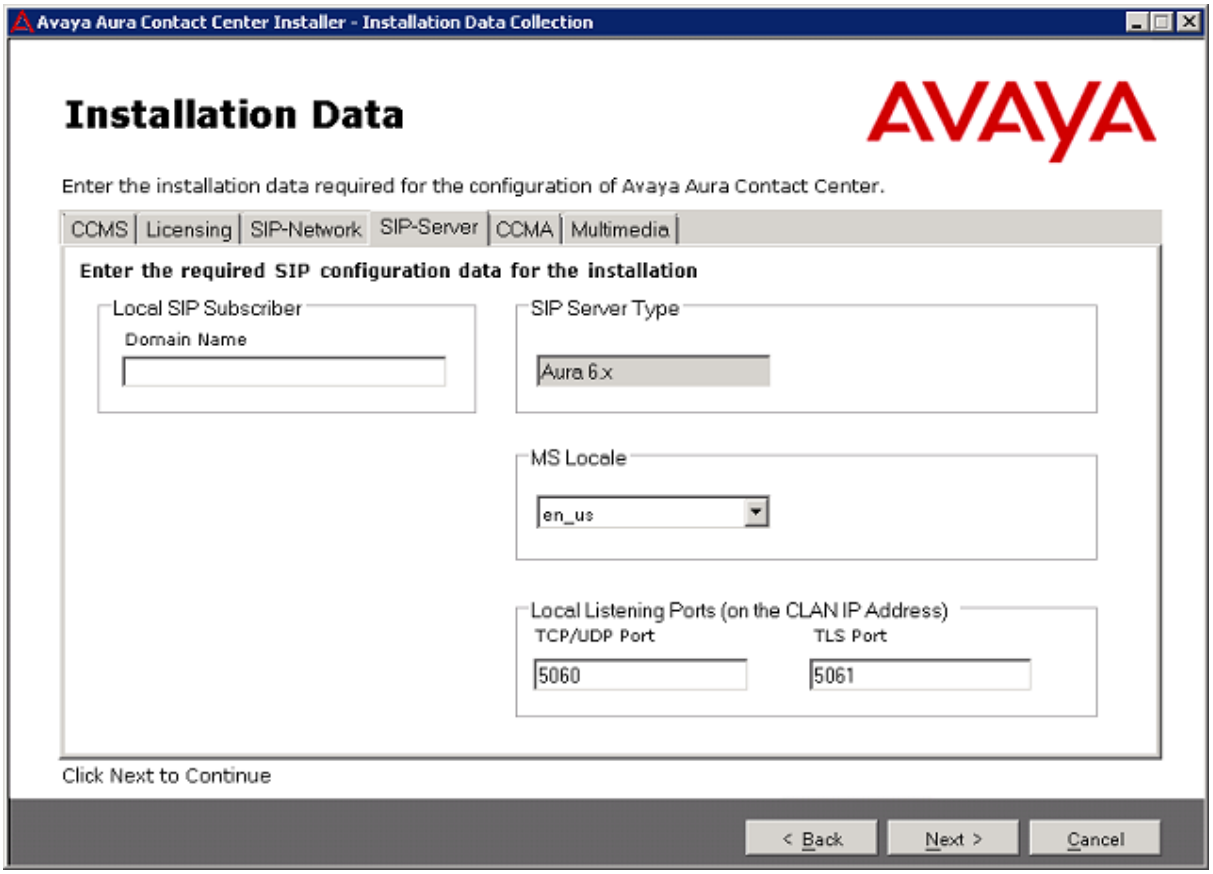
    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
38. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the Avaya Aura® Application Enablement Services server.
39. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
40. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.

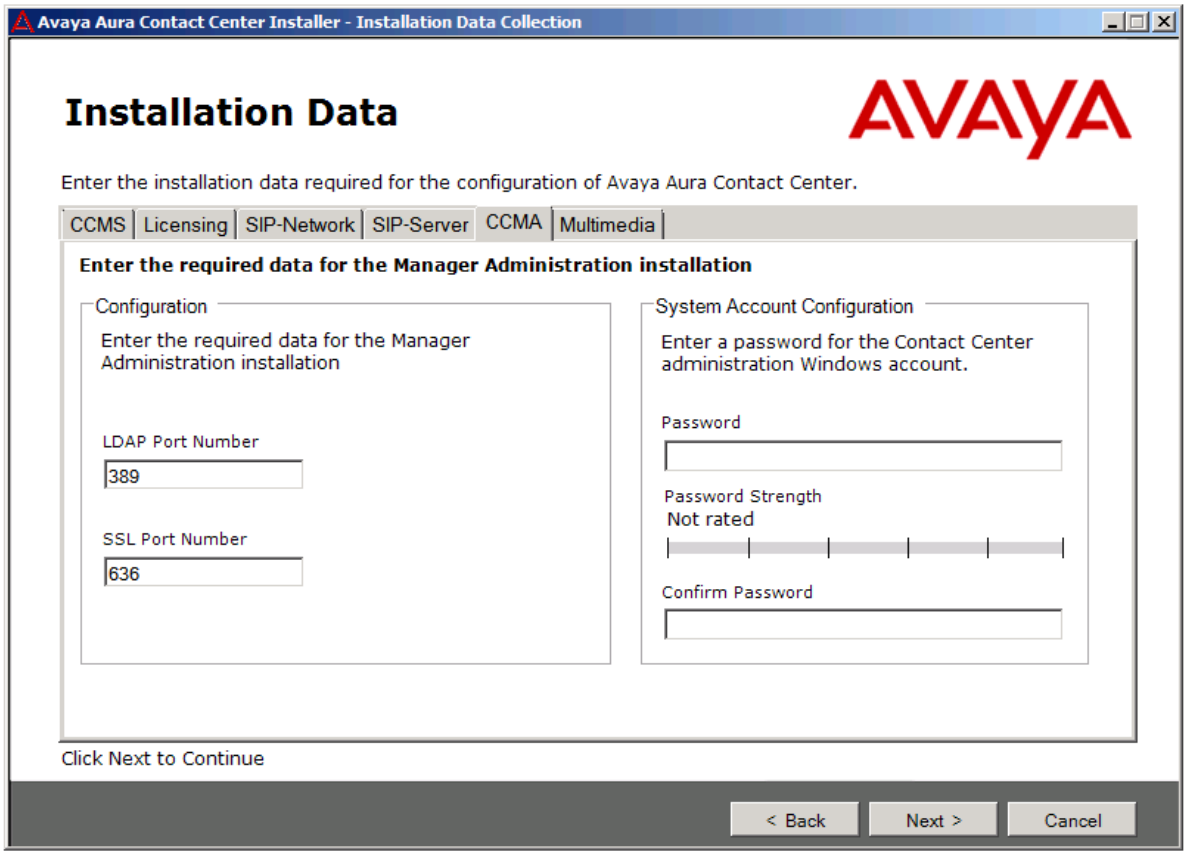
41. If your solution is going to support High Availability, in the **Backup SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the second Avaya Aura® Session Manager. You must have a High Availability Standby Server license to support a Backup SIP Voice Proxy Server.
42. In the **Backup SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
43. In the **Backup SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

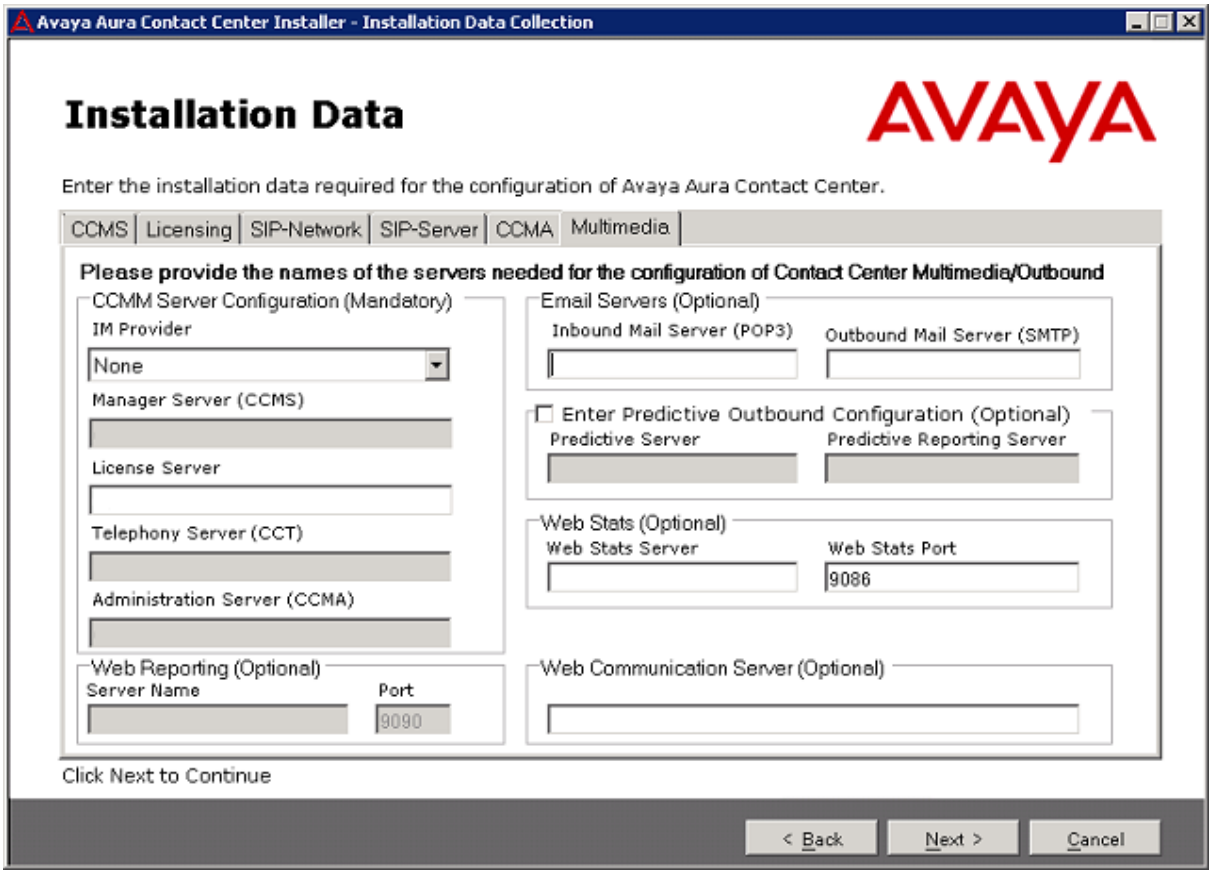
    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
44. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
45. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
46. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
47. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
48. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
49. Select the **SIP-Server** tab, and configure the SIP server details.



50. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.
51. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
52. From the **MS Locale** list, select the locale (including language and dialects) of the solution environment.
53. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
54. Select the **CCMA** tab, and configure the CCMA details.



55. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
56. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
57. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
58. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



59. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync, or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, and Microsoft Lync. Instant Messaging is supported only in SIP-enabled contact center solutions.
60. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
61. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.
62. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.
63. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
64. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
65. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.

66. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
67. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
68. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
69. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
70. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
71. Click **Next**.
72. On the **Summary** window, review and verify the information.
73. Click **Install**.
74. After the installation is complete, click **Finish**.
75. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Adding the domain AD-LDS replication account to the primary server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server.

Important:

If you are using High Availability, and if this server is to be the primary active server, perform this procedure. If you are not implementing High Availability, skip this procedure. Do not perform this procedure on the standby server or on the Remote Geographic Node server.

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.

13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database
- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts

- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Installing the Instant Messaging chat server on the external Web server

Before you begin

- Install Contact Center Multimedia server software in a SIP-enabled Contact Center.
- Install the Instant Messaging license on the Contact Center License Manager.

About this task

The Instant Messaging chat server allows customers to have Instant Messaging chat sessions with the contact center. The Instant Messaging chat server uses Presence Services to gather presence information for the Agent, Supervisor and Expert.

The Avaya Aura® Contact Center sample Instant Message XMPP client application is compatible only with Avaya Aura® Presence Services Release 6.1 or earlier. The Avaya Aura® Contact Center sample application is not compatible with Avaya Aura® Presence Services Release 6.1.1 or later.

Procedure

1. Download the Avaya Aura® Contact Center Sample Instant Message XMPP client application from www.avaya.com/support to the external Web server.
2. Extract the contents of the sample application and read the AACCPresenceServices_IMChatServerInstall document for further instructions.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 6: Standby Voice and Multimedia Contact Server without Avaya Media Server for Avaya Aura® platform installation

This chapter describes how to install a standby Voice and Multimedia Contact Server without Avaya Media Server for an Avaya Aura® Unified Communications platform. A standby Voice and Multimedia Contact Server without Avaya Media Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

You can install a standby Voice and Multimedia Contact Server and commission it to be the standby Voice and Multimedia Contact Server in a campus High Availability solution. The standby server takes over contact processing and becomes the active server if the existing active server fails. This standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

Install this server to provide context-sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for voice calls, email messages, instant messages (IMs), Web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

You must complete all the procedures in this section in sequential order.

Standby Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.

- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.

19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.

Name	Description
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.

2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.

10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.

2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.

6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.

14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.

6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Voice and Multimedia Contact Server for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Voice and Multimedia Contact Server for the Avaya Aura® Unified Communications platform must already be installed and configured.
- The primary active Voice and Multimedia Contact Server for the Avaya Aura® Unified Communications platform must already be configured to support AD-LDS replication.

About this task

Install the standby Contact Center Voice and Multimedia Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

Note:

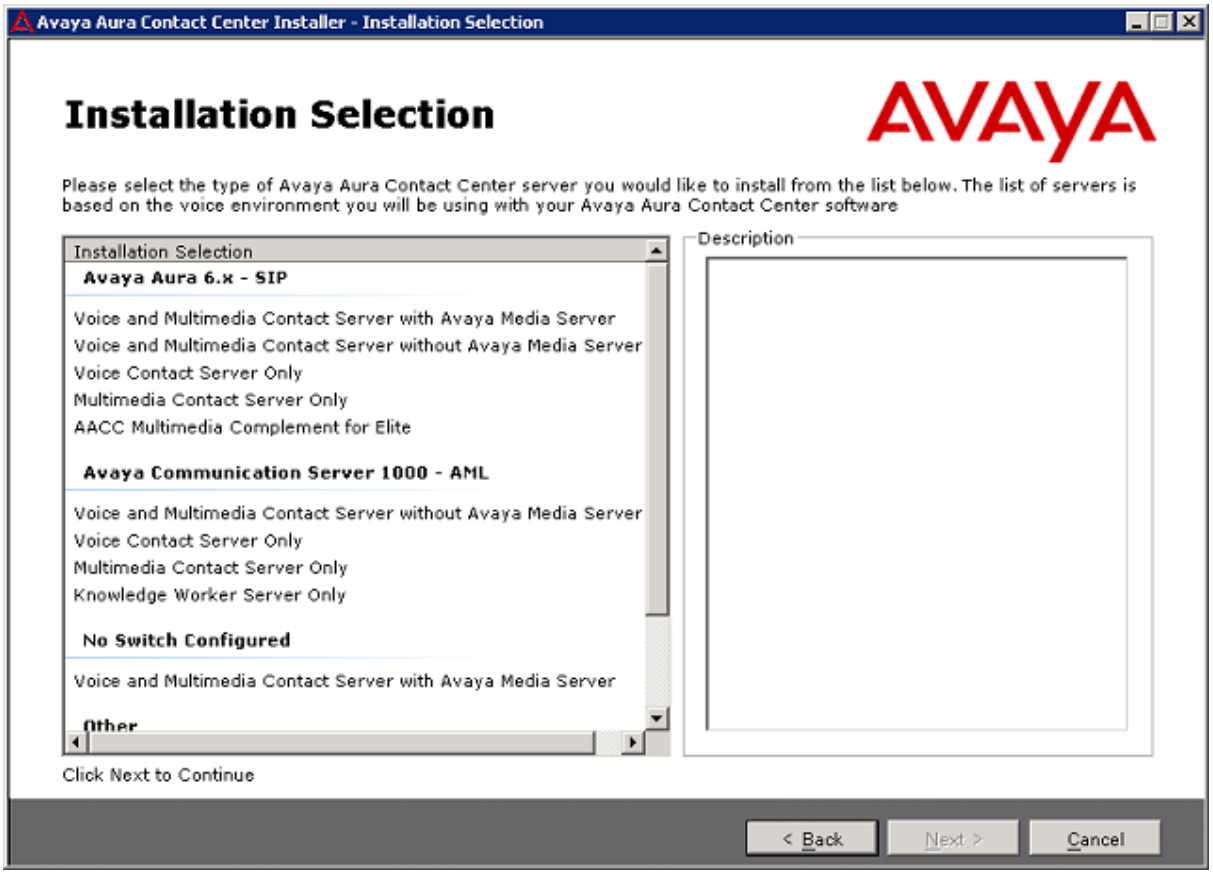
Read the Contact Center Release Notes for the most recent instructions.

Procedure

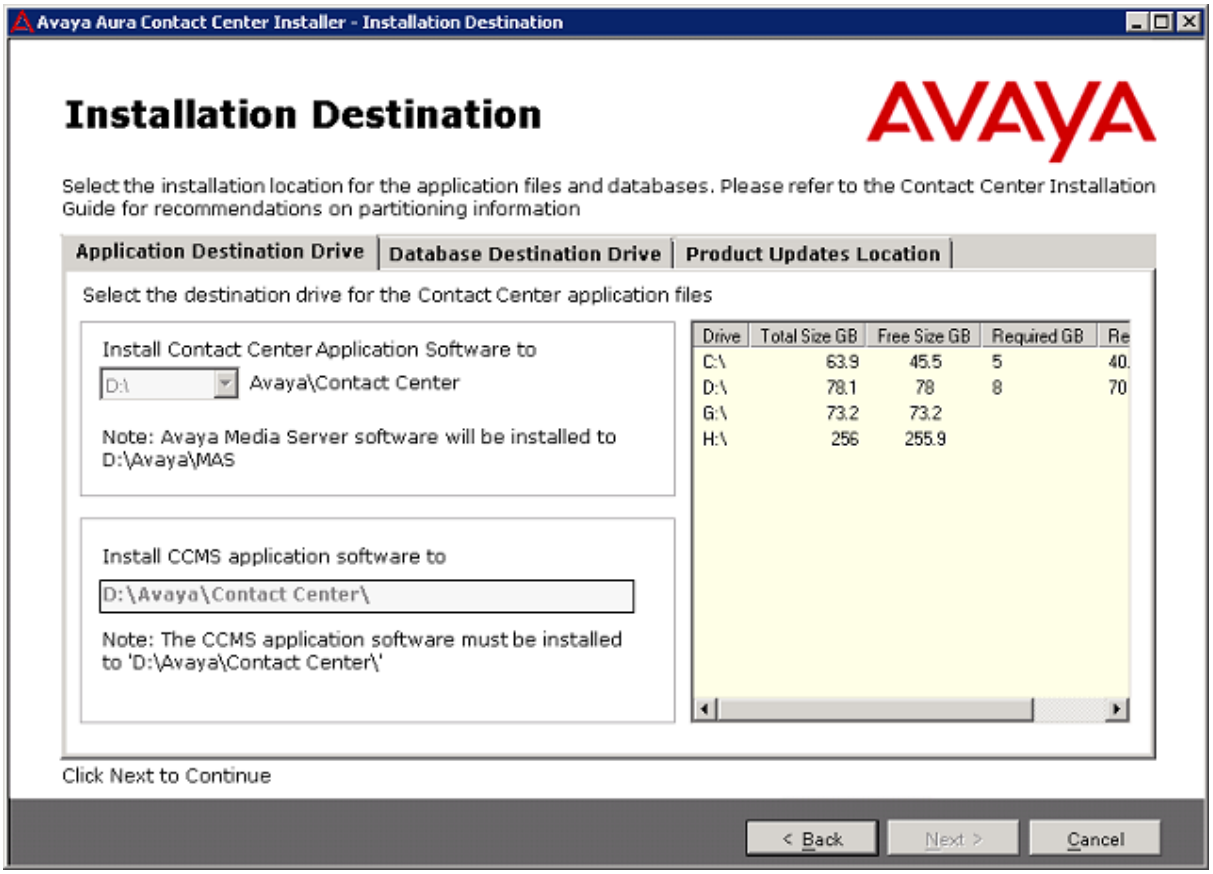
1. Insert the Contact Center DVD into the DVD drive of your server.

2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

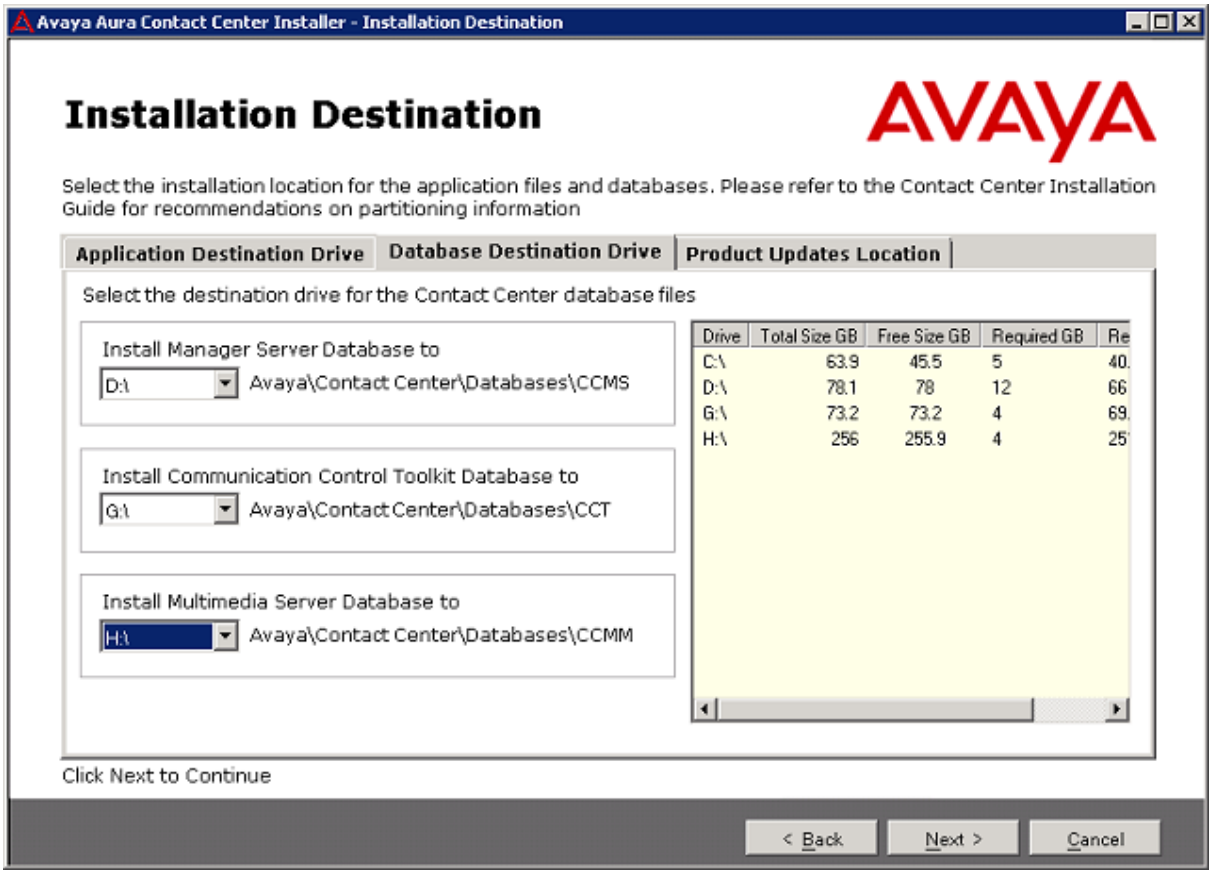
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



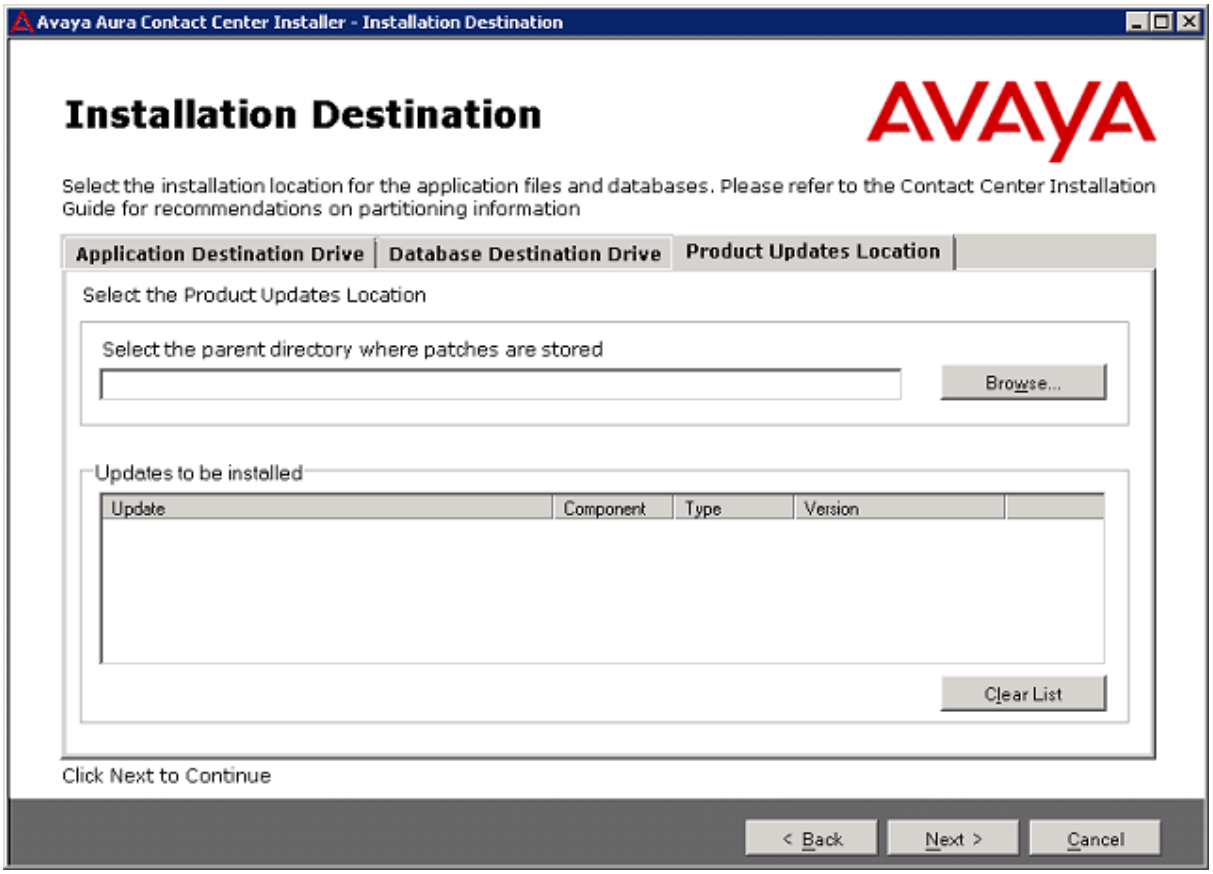
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



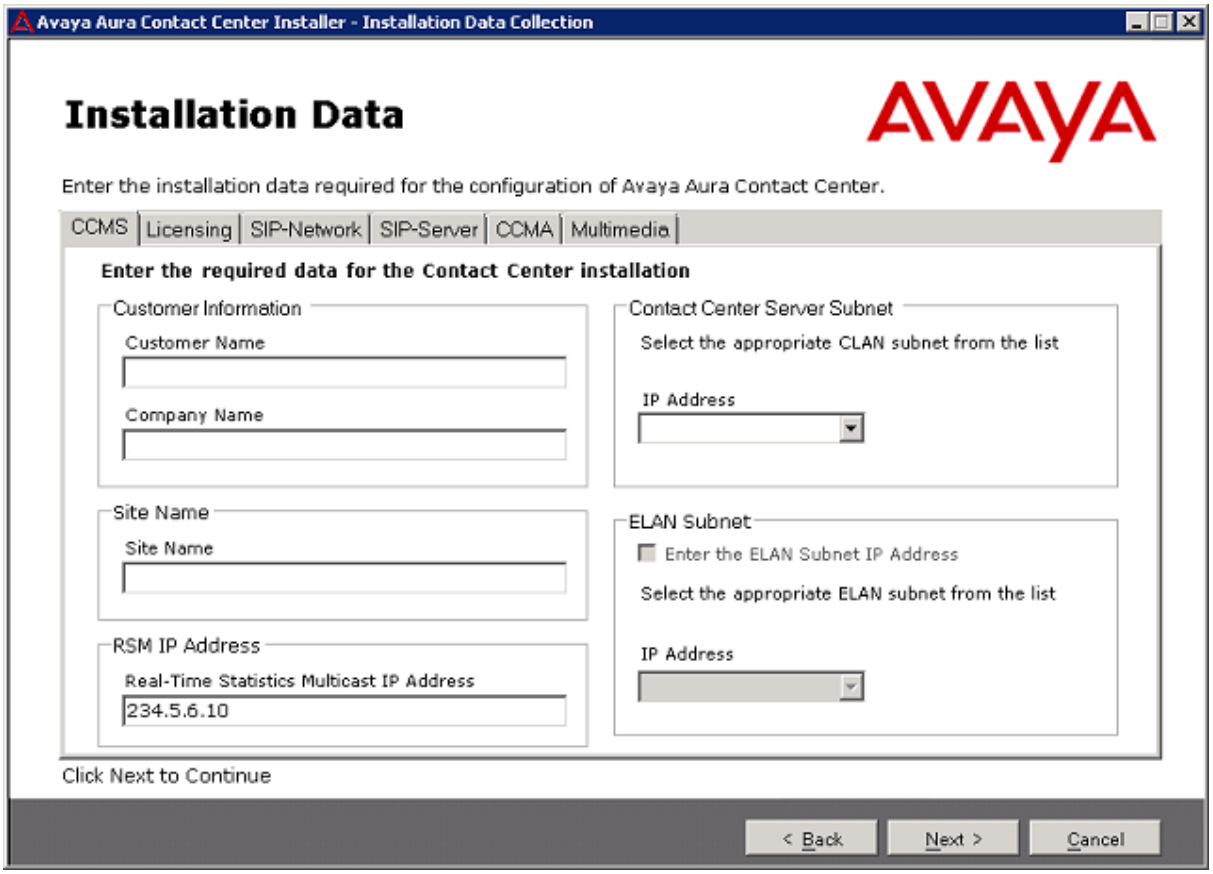
15. Click the **Product Updates Location** tab.



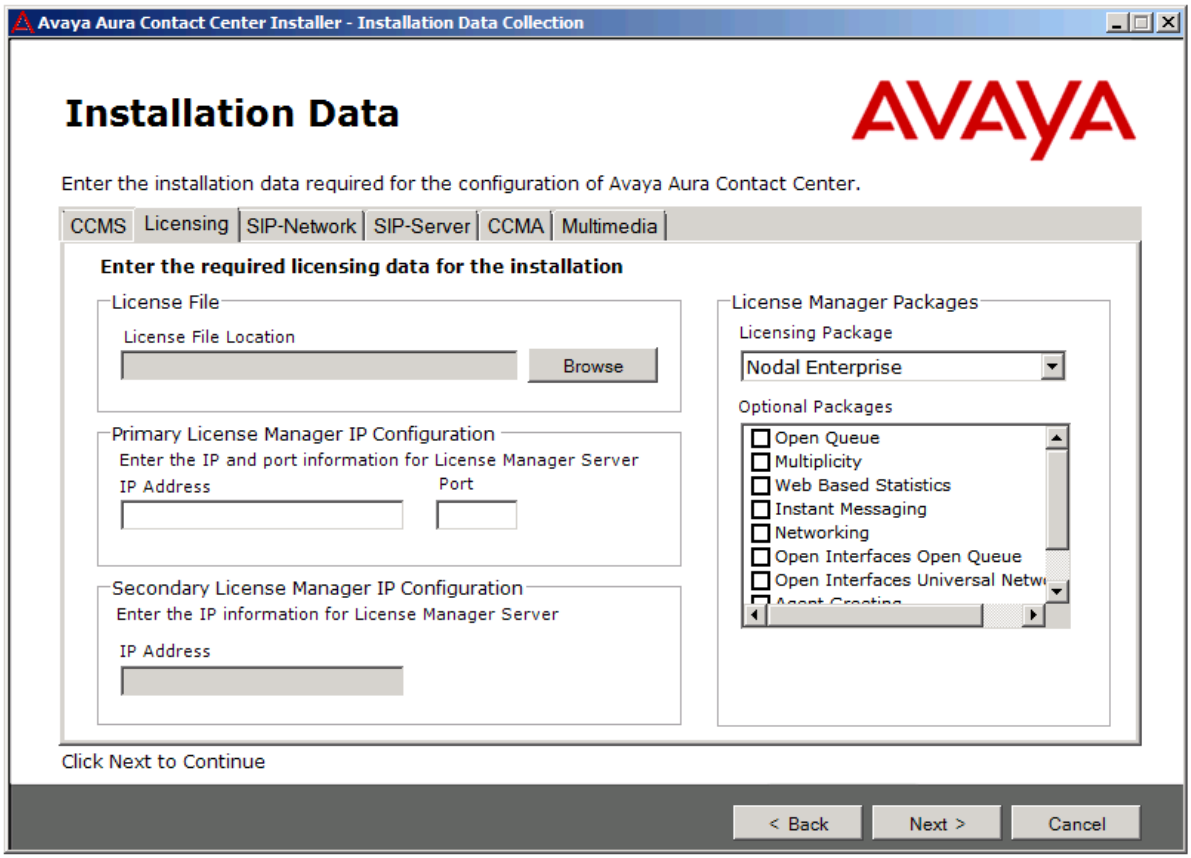
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

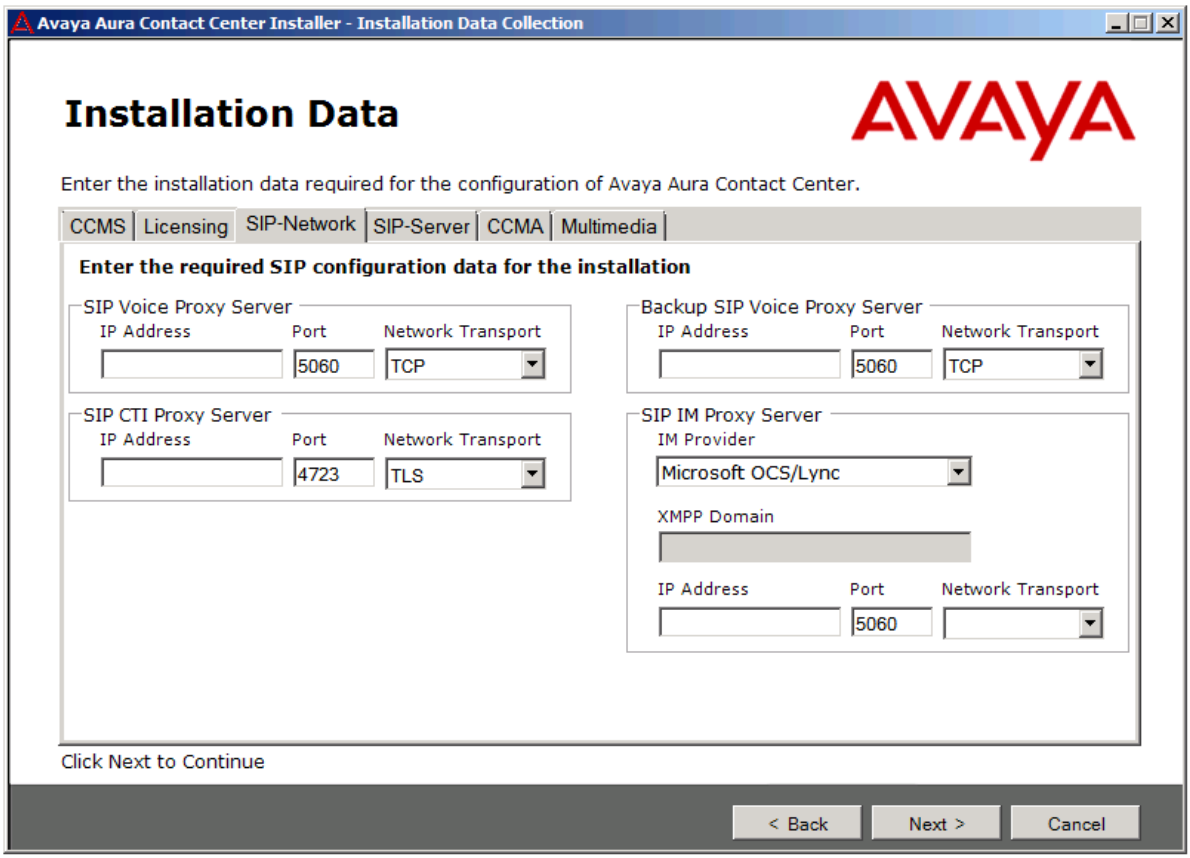
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the standby License Manager. Each Voice and Multimedia Contact Server contains a License Manager. Type the IP address of the standby Voice and Multimedia Contact Server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **SIP-Network** tab, and configure the SIP proxy server details.



35. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the primary Avaya Aura® Session Manager.
36. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
37. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

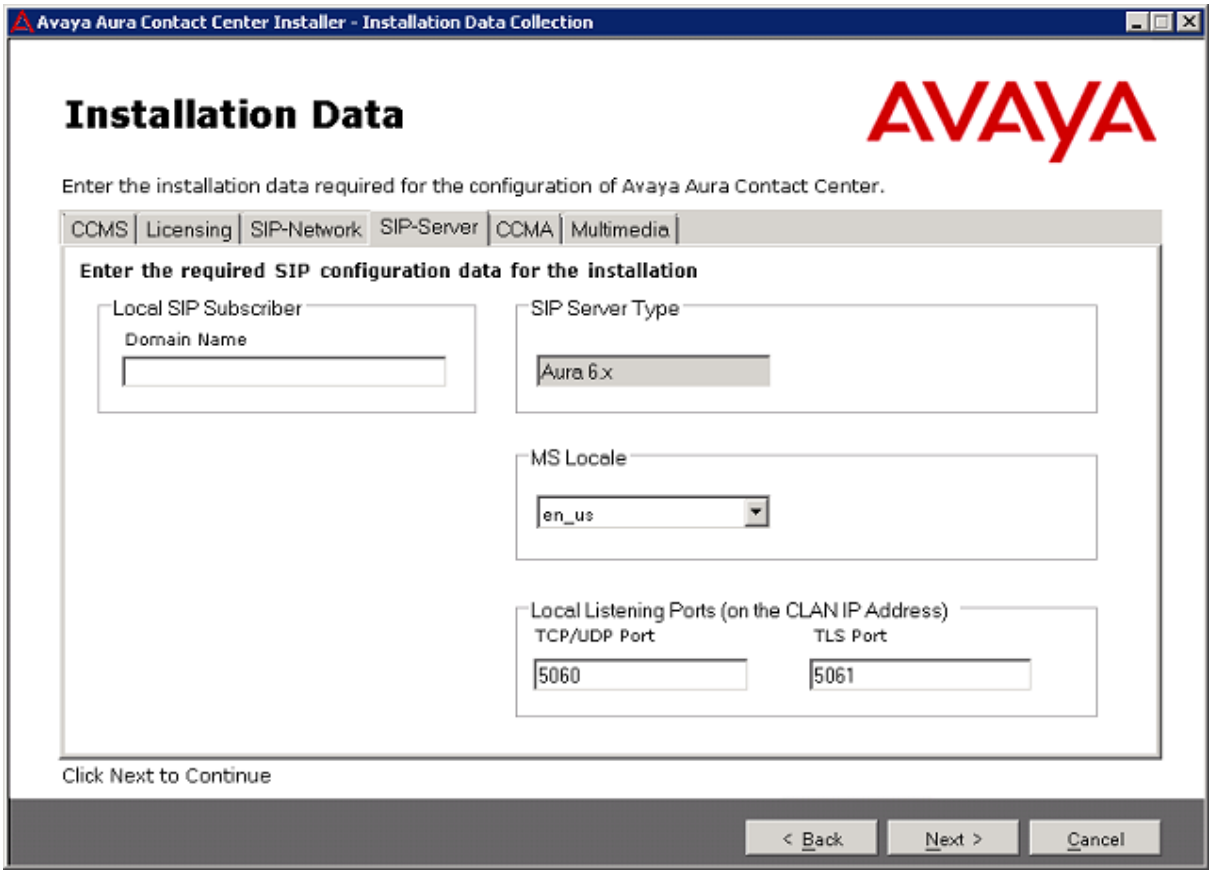
    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
38. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the Avaya Aura® Application Enablement Services server.
39. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
40. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.

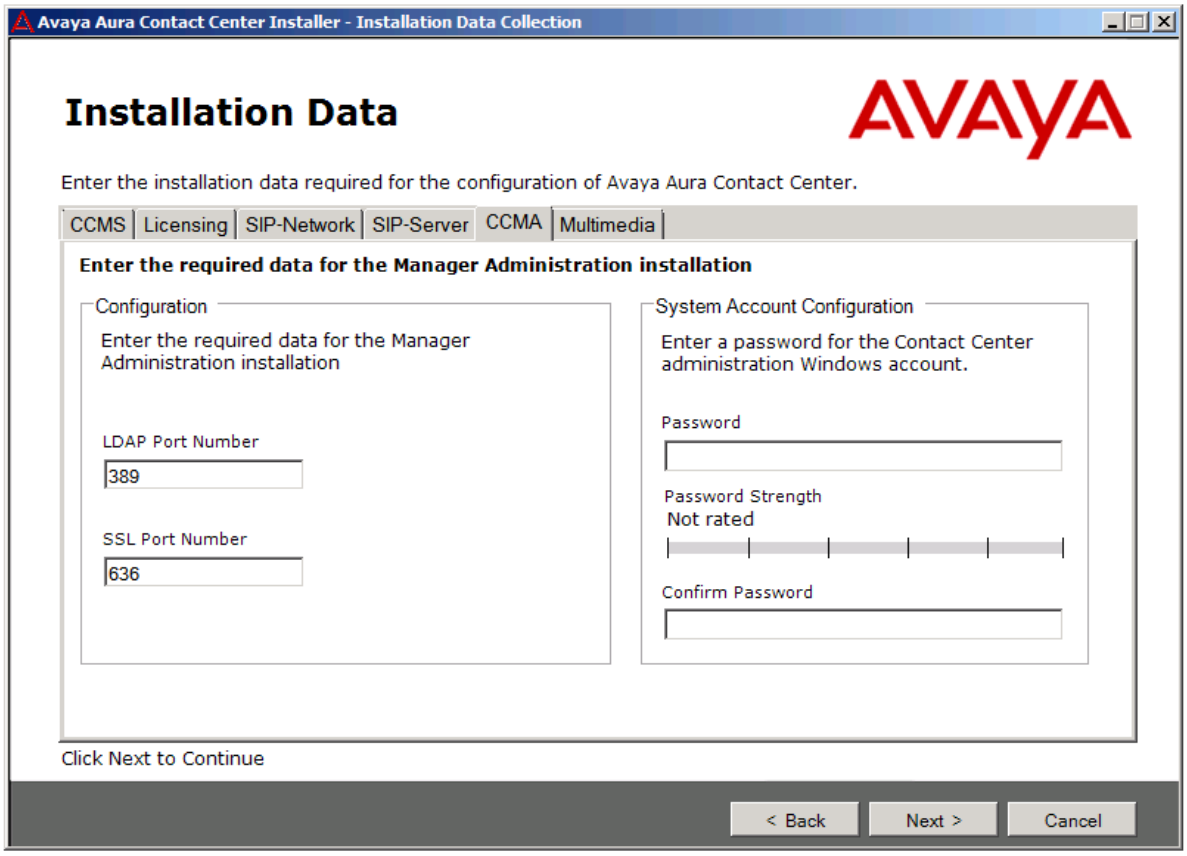
41. In the **Backup SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the backup Avaya Aura® Session Manager. You must have a High Availability Standby Server license to support a Backup SIP Voice Proxy Server.
42. In the **Backup SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
43. In the **Backup SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

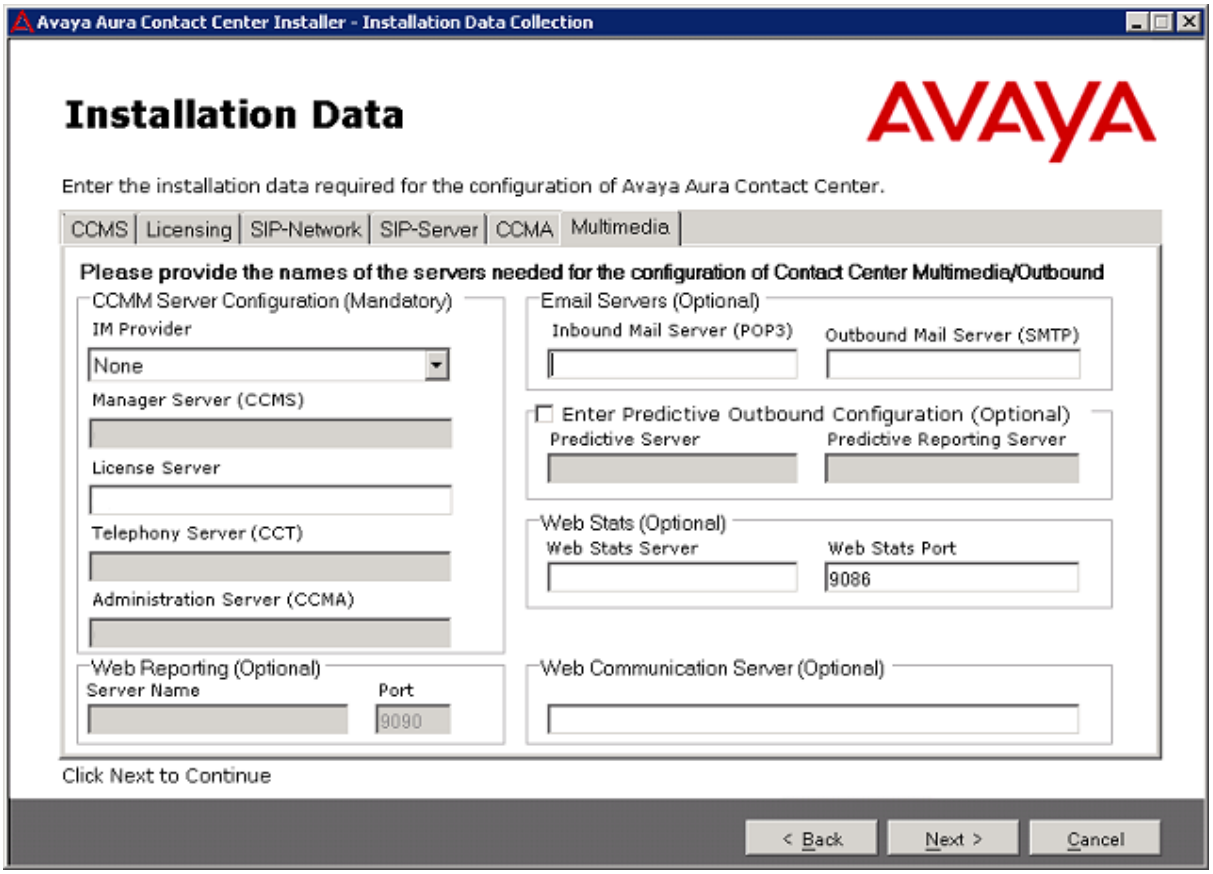
    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
44. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
45. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
46. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
47. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
48. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
49. Select the **SIP-Server** tab, and configure the SIP server details.



50. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.
51. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
52. From the **MS Locale** list, select the locale (including language and dialects) of the system environment.
53. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
54. Select the **CCMA** tab, and configure the CCMA details.



55. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
56. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
57. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
58. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



59. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, and Microsoft Lync. Instant Messaging is supported only in SIP-enabled contact center solutions.
60. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
61. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.
62. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.
63. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
64. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
65. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.

66. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
67. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
68. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
69. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
70. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
71. Click **Next**.
72. On the **Summary** window, review and verify the information.
73. After the installation is complete, click **Finish**.
74. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

Read the Contact Center Release Notes for the most recent instructions.

Procedure

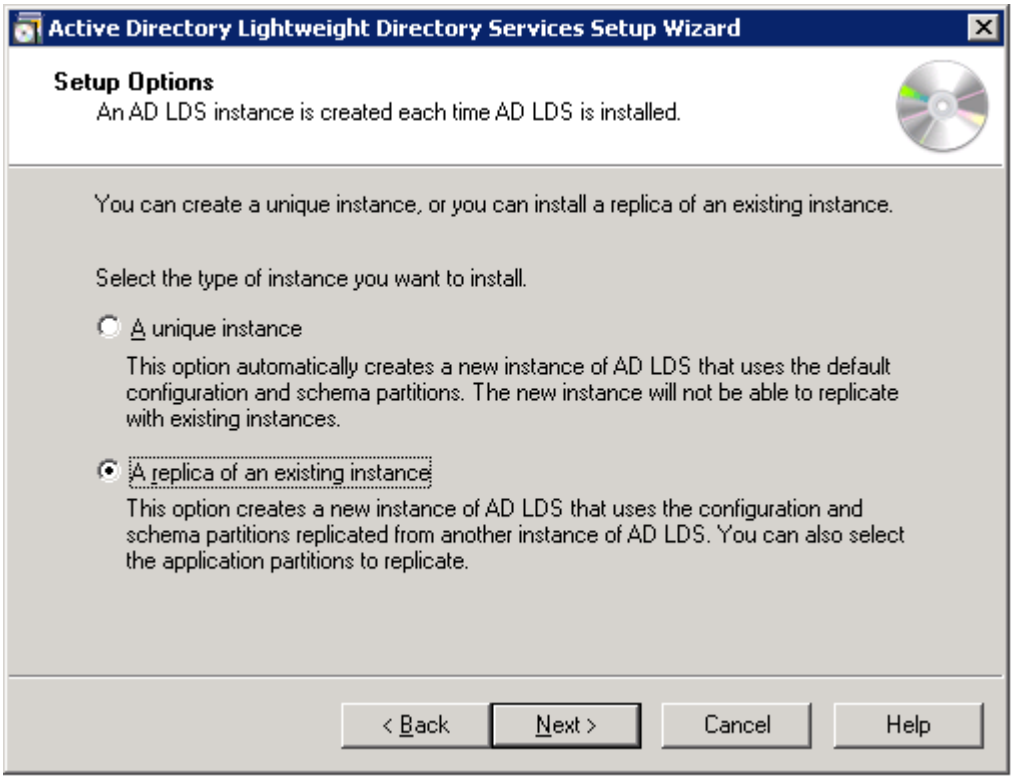
1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

   `D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\`
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

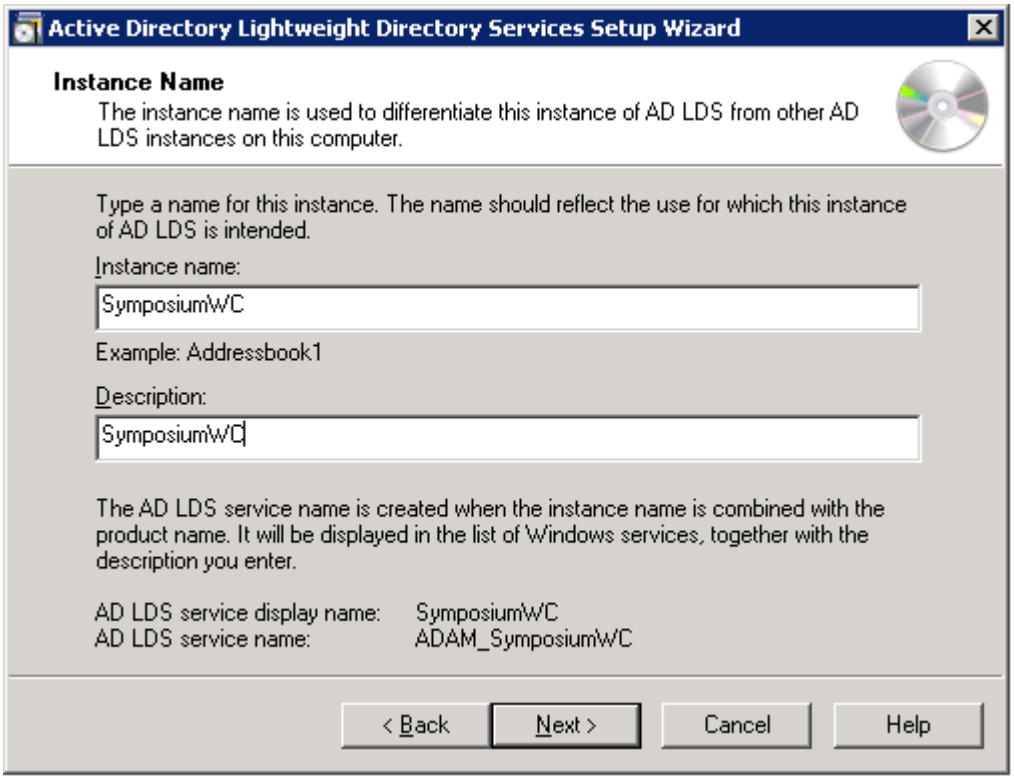
   `ConvertToStandbyCCMAServer.bat`
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



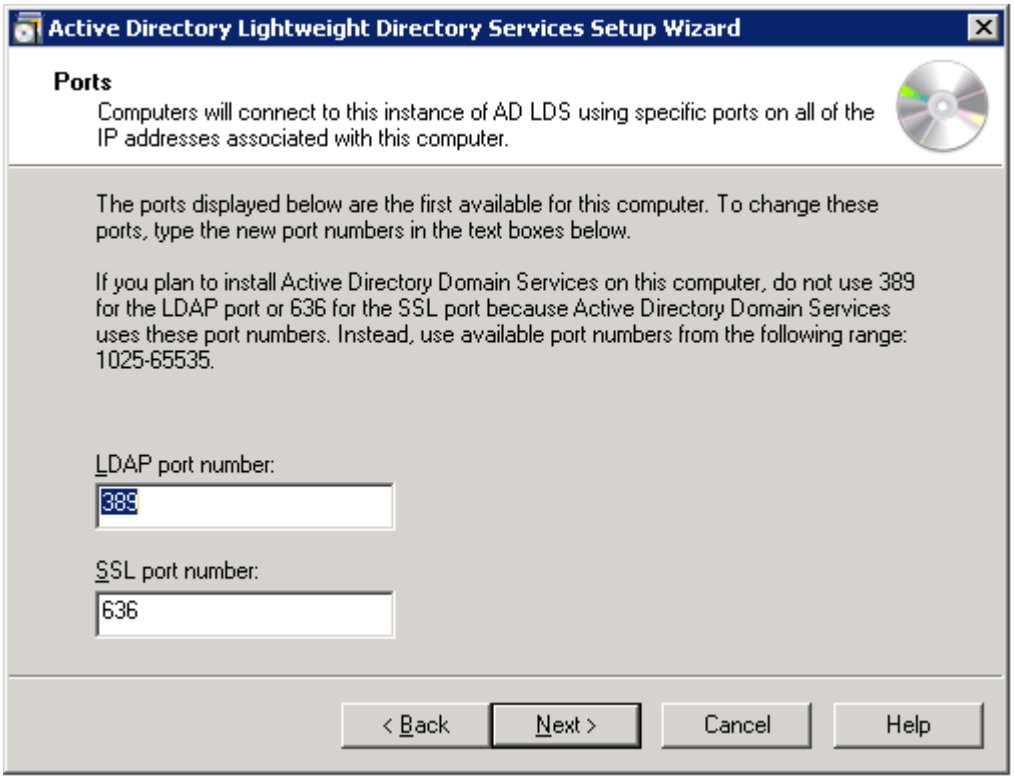
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

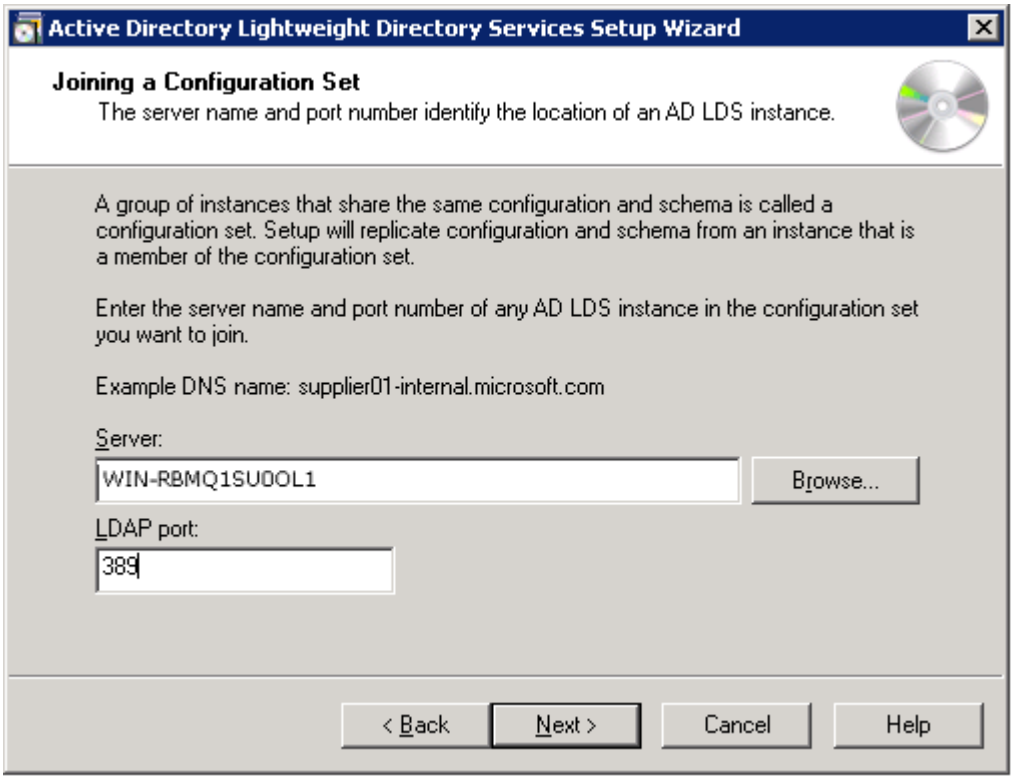


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



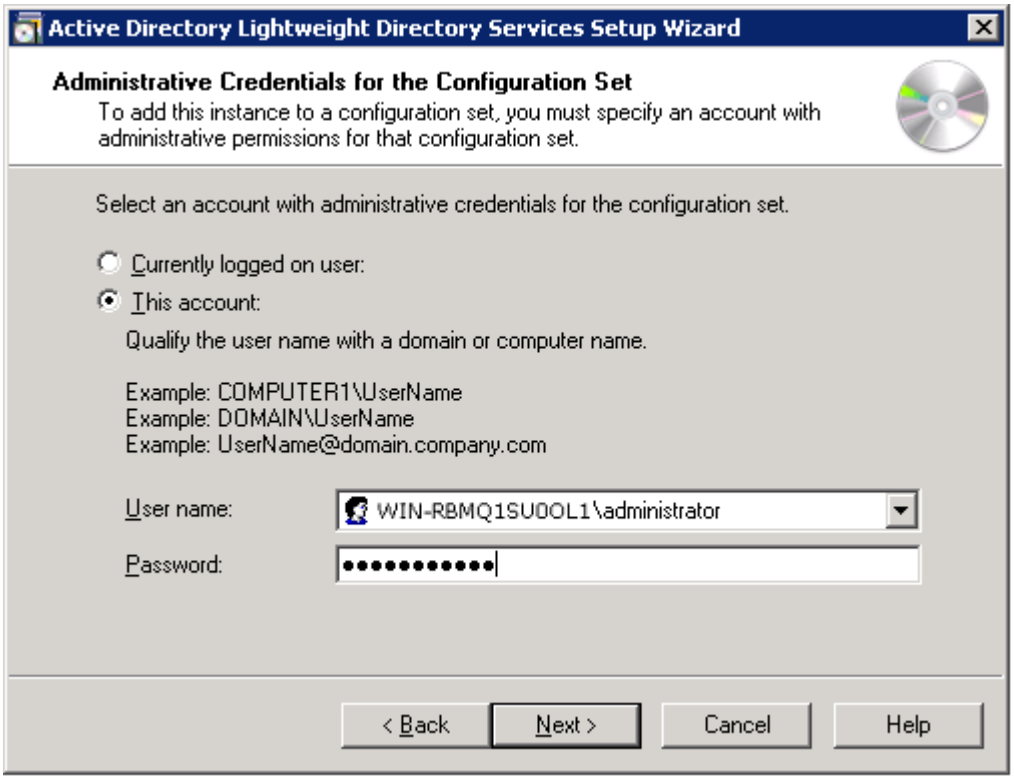
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

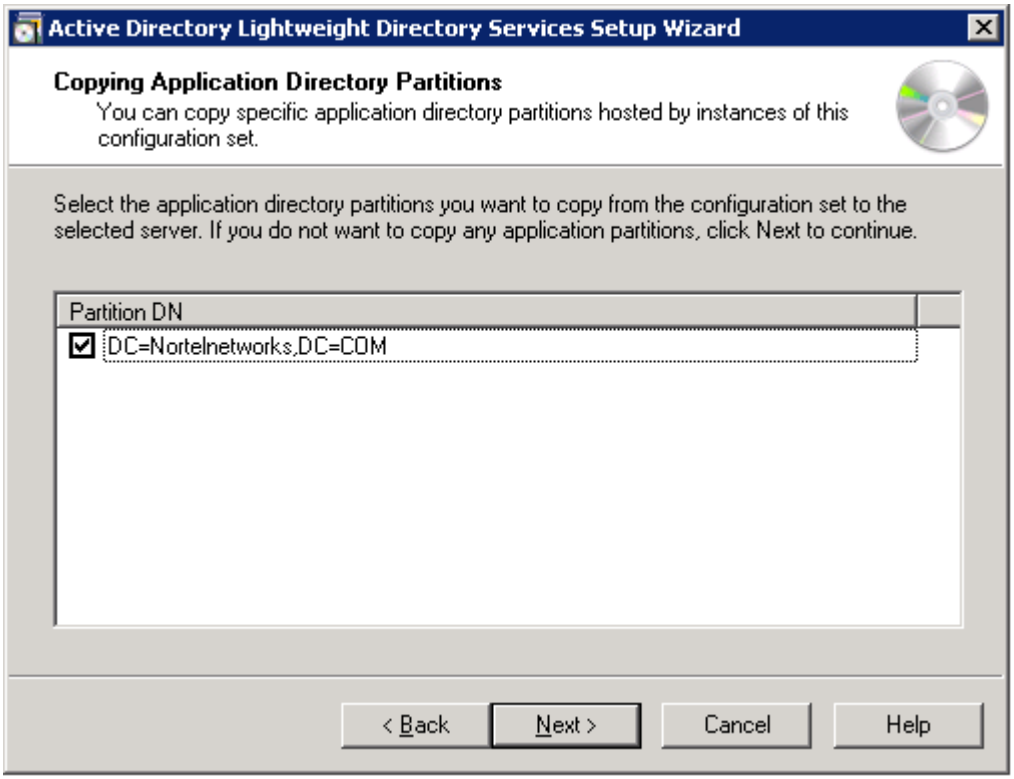


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

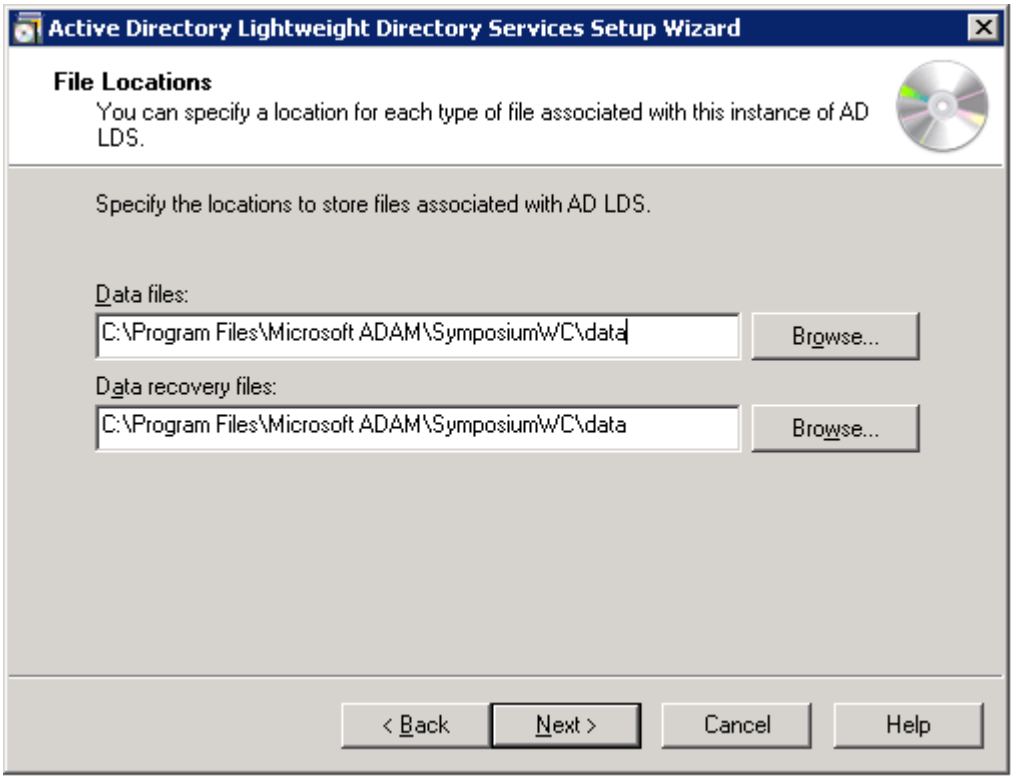
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

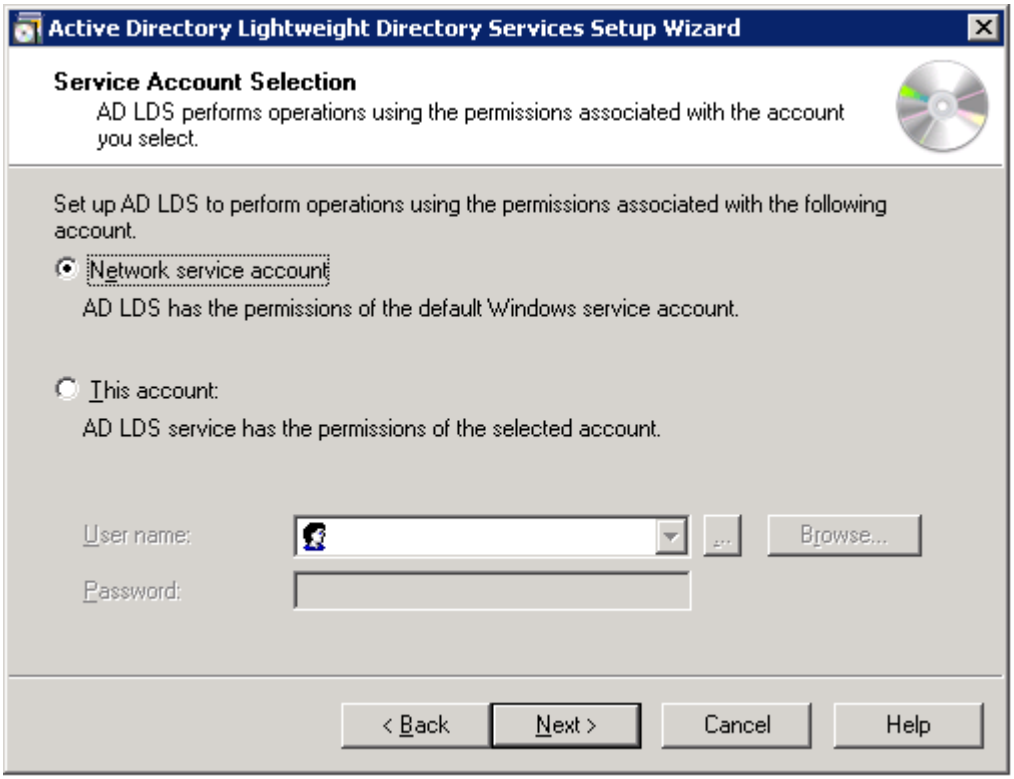


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

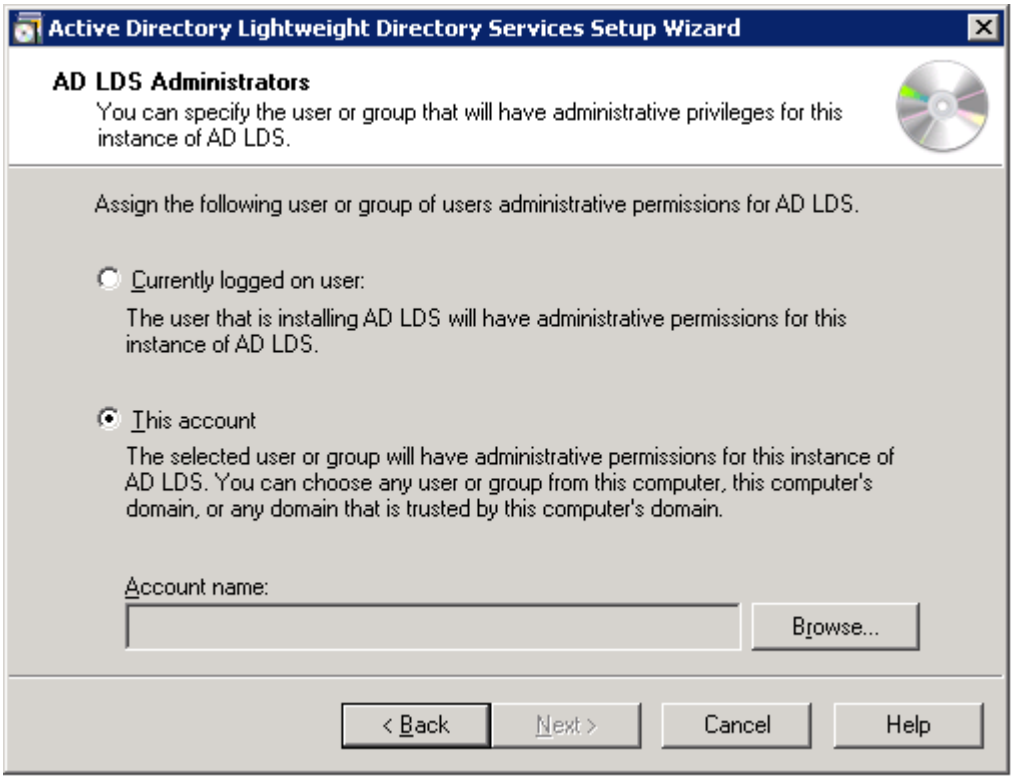


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

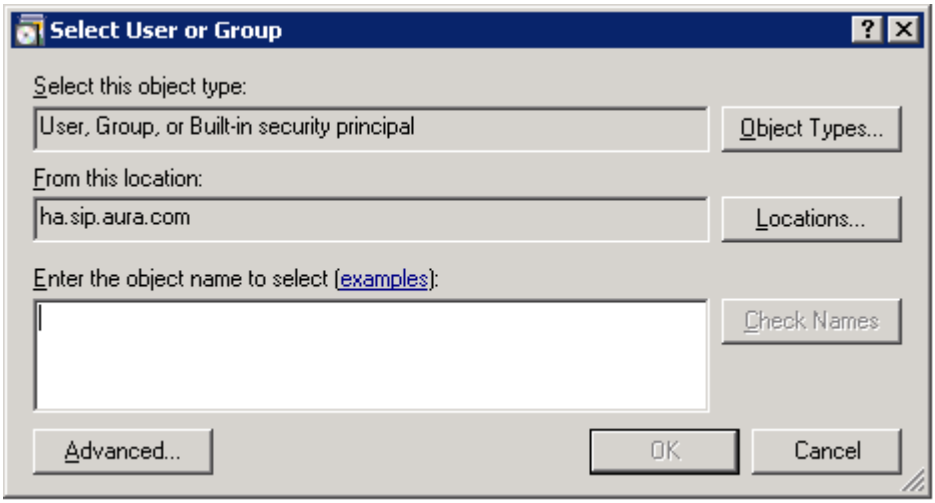


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

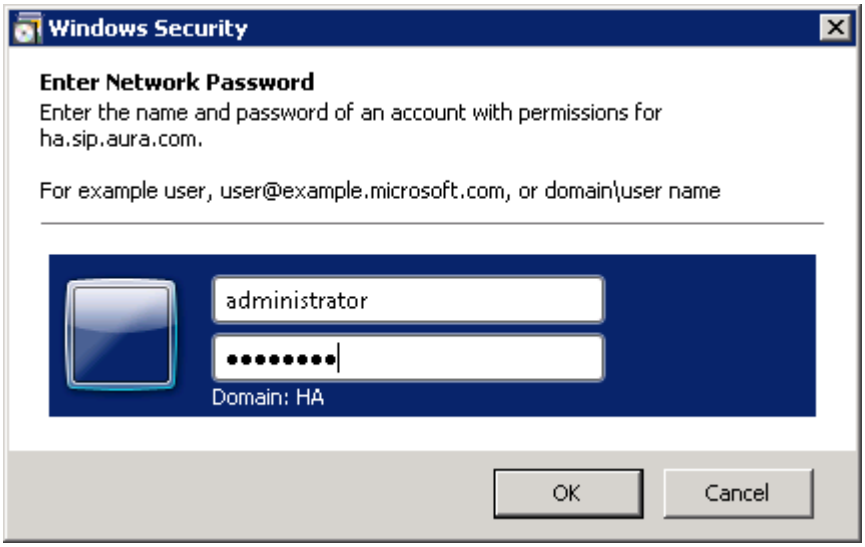


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

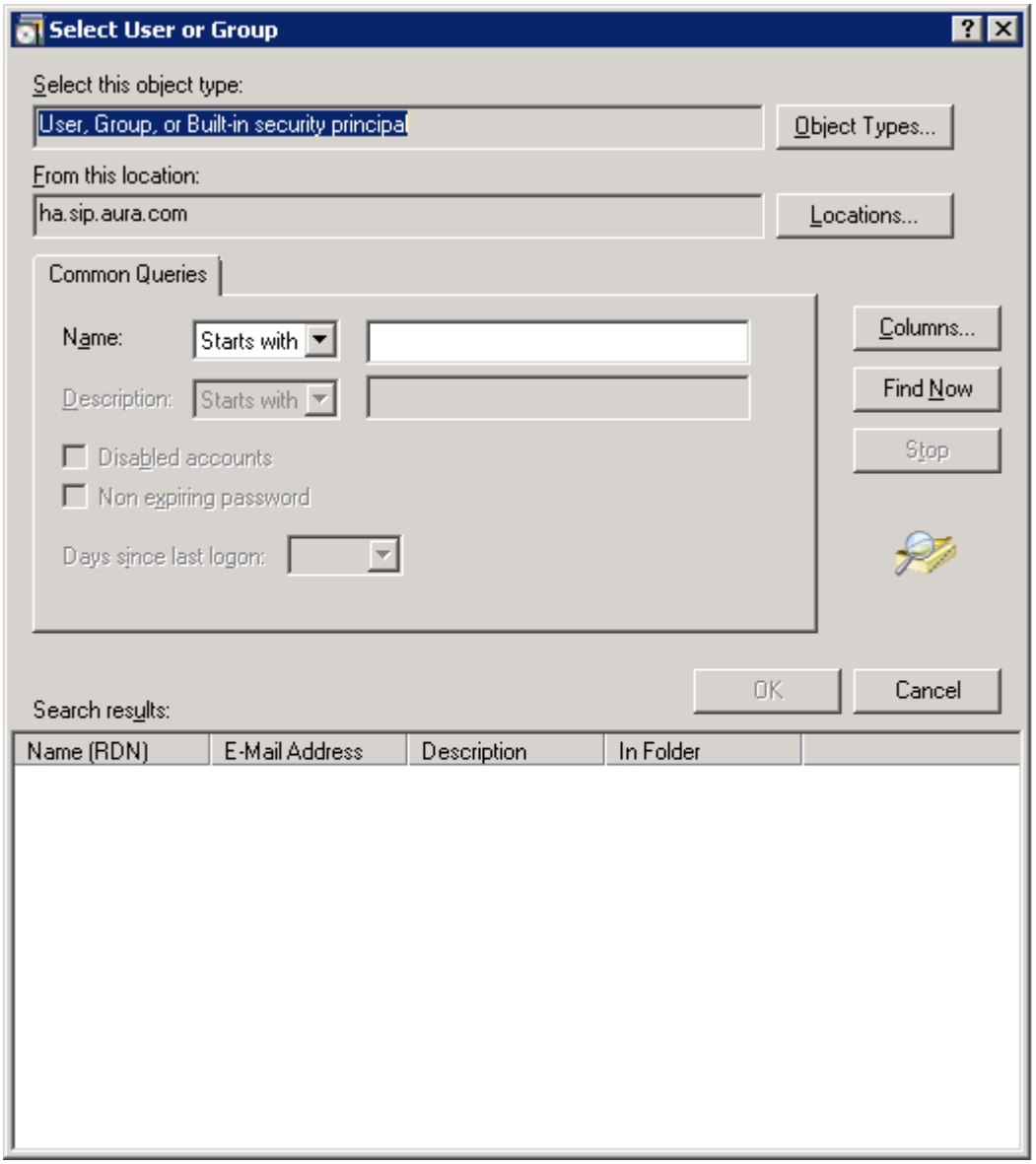


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



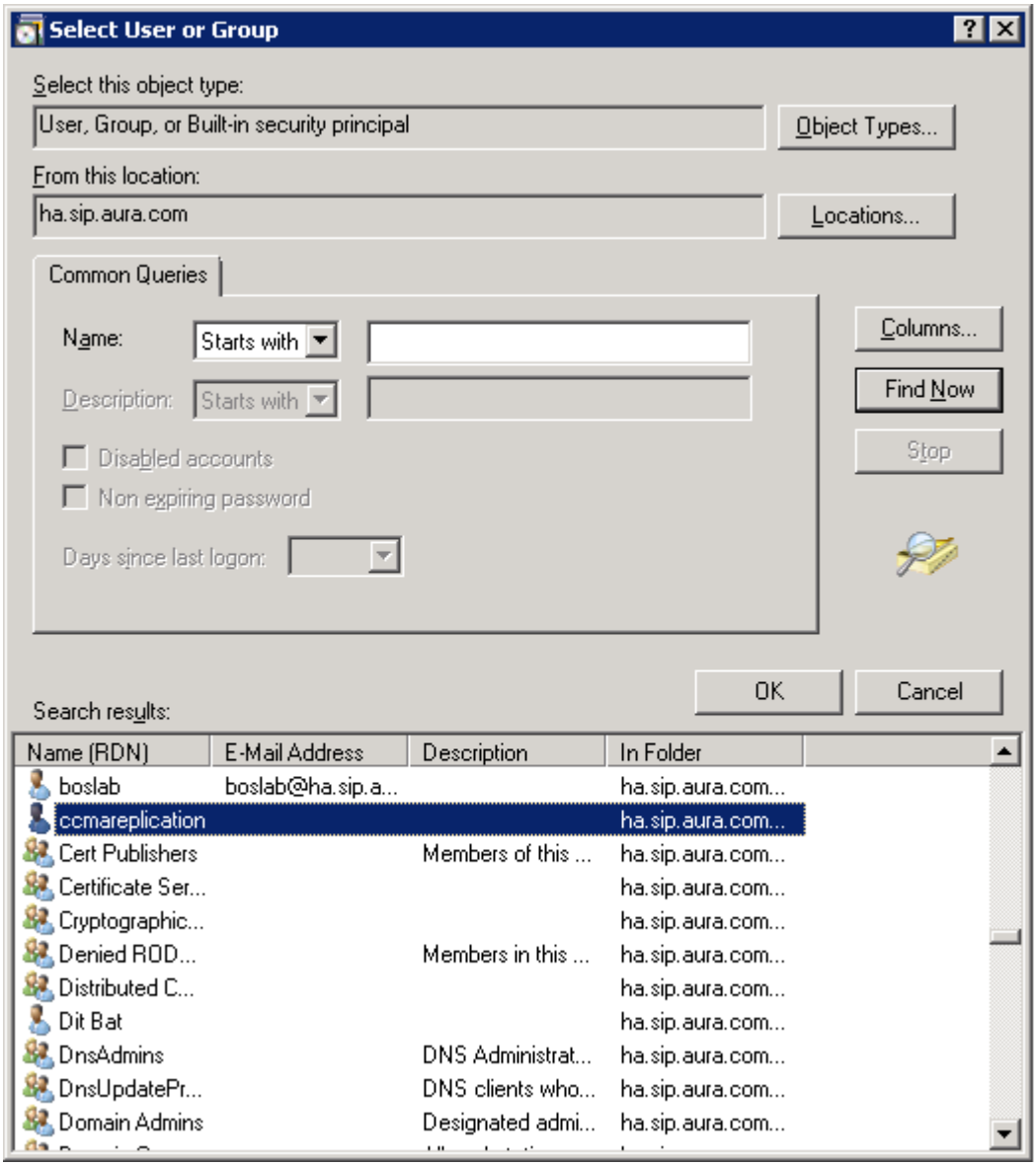
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



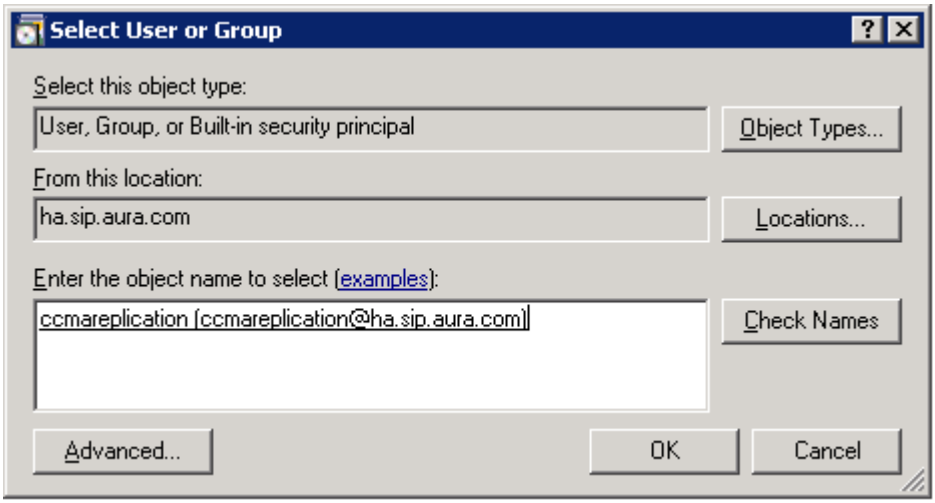
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

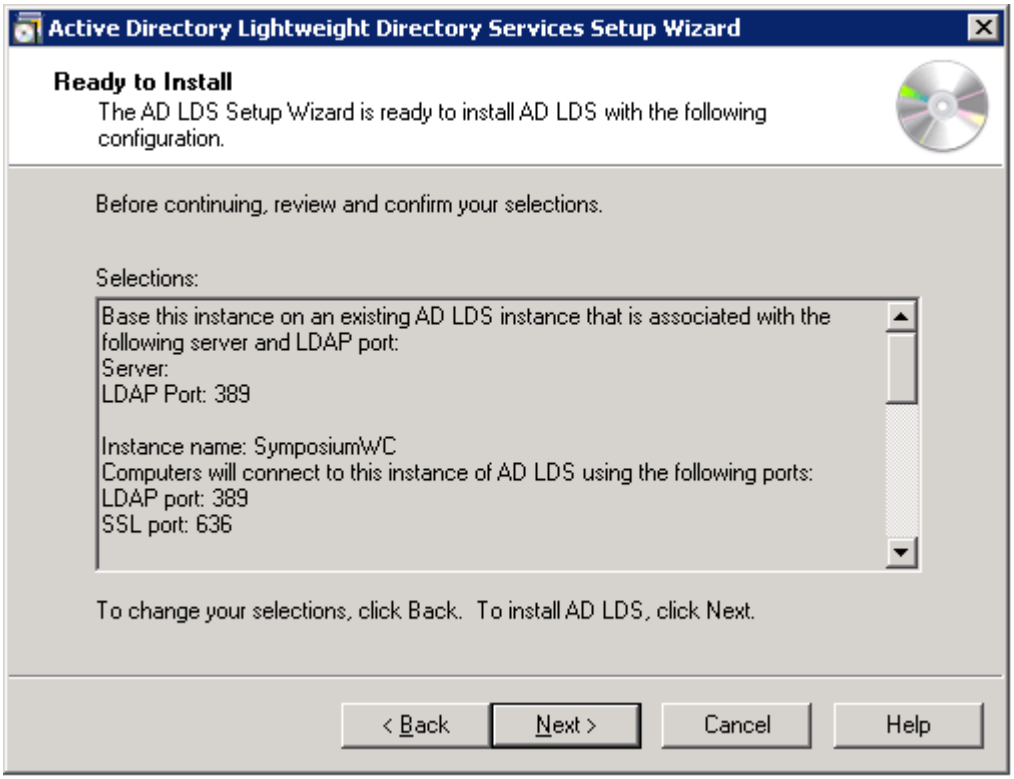


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 7: RGN Voice and Multimedia Contact Server without Avaya Media Server for Avaya Aura® platform installation

This chapter describes how to install a Remote Geographic Node (RGN) Voice and Multimedia Contact Server for a solution with an Avaya Aura® Unified Communications platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install Voice and Multimedia Contact Server software and commission it to be the Remote Geographic Node (RGN) Voice and Multimedia Contact Server in a solution with Disaster Recovery. The Remote Geographic Node server shadows the active server. Remote Geographic Node servers do not automatically take over if the active server fails. The standby server, Remote Geographic Node server, and active server must be at the same patch level and have the same hard disk drive partitions.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

You must complete the procedures in this chapter in sequential order.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using

this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

RGN Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center High Availability license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode.

Name	Description
	Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.

11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the geographic node network

About this task

Connect the Contact Center server to the geographic node network. The geographic node network is the network at the remote geographic site.

Procedure

1. Locate the slot assigned to the geographic node network interface card for the server. Make a note of the slot.
2. Connect the cable from the geographic node network to the geographic node network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the geographic node network.
4. Use the ping command to test connectivity with the campus network and servers.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.

7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.

3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the RGN server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the Remote Geographic Node (RGN) server.

Ask your Network or System Administrator to add this AD-LDS replication account to the domain. The primary and RGN replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the Remote Geographic Node (RGN) Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.

12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.

3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the RGN Voice and Multimedia Contact Server without Avaya Media Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the local RGN Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Remote Geographic Node (RGN) Contact Center Voice and Multimedia Contact Server without Avaya Media Server software to provide data resiliency and Disaster Recovery.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

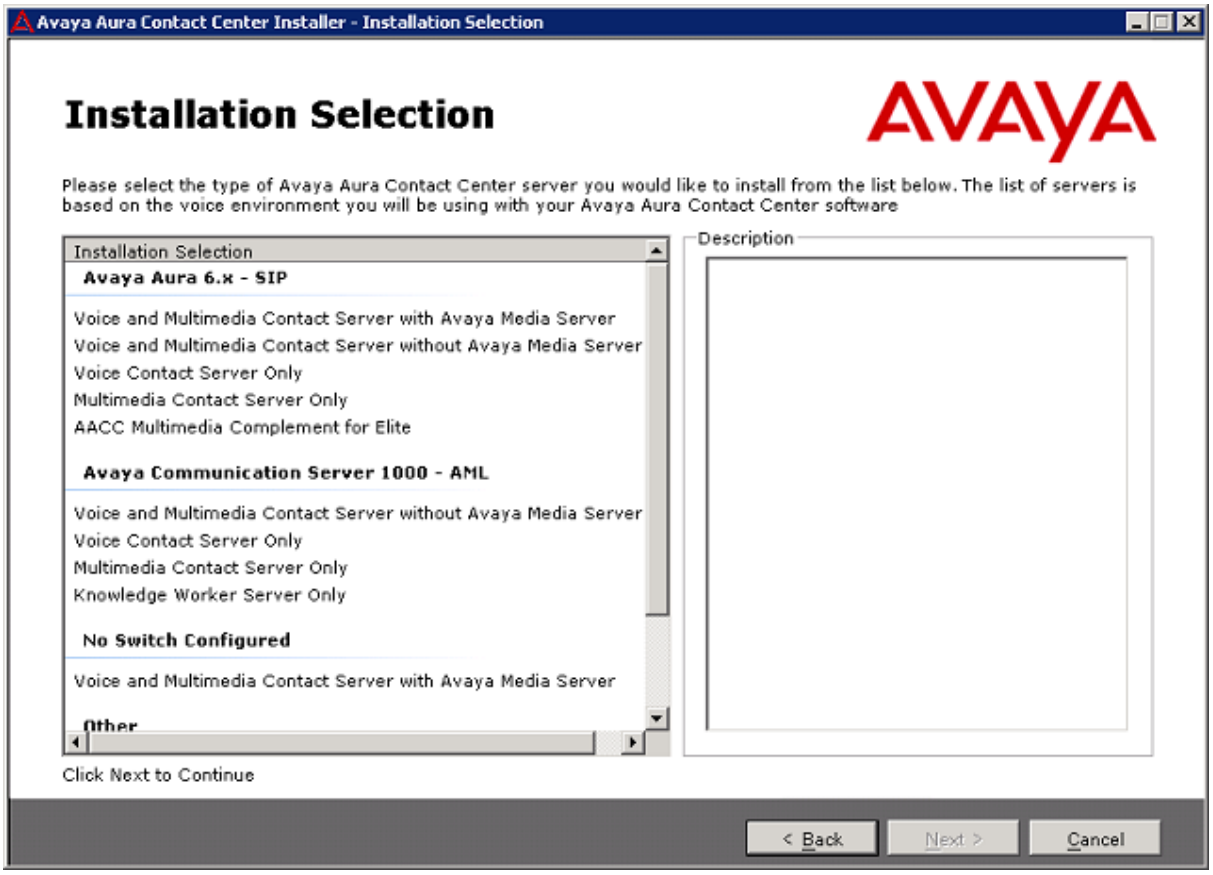
Note:

Read the Contact Center Release Notes for the most recent instructions.

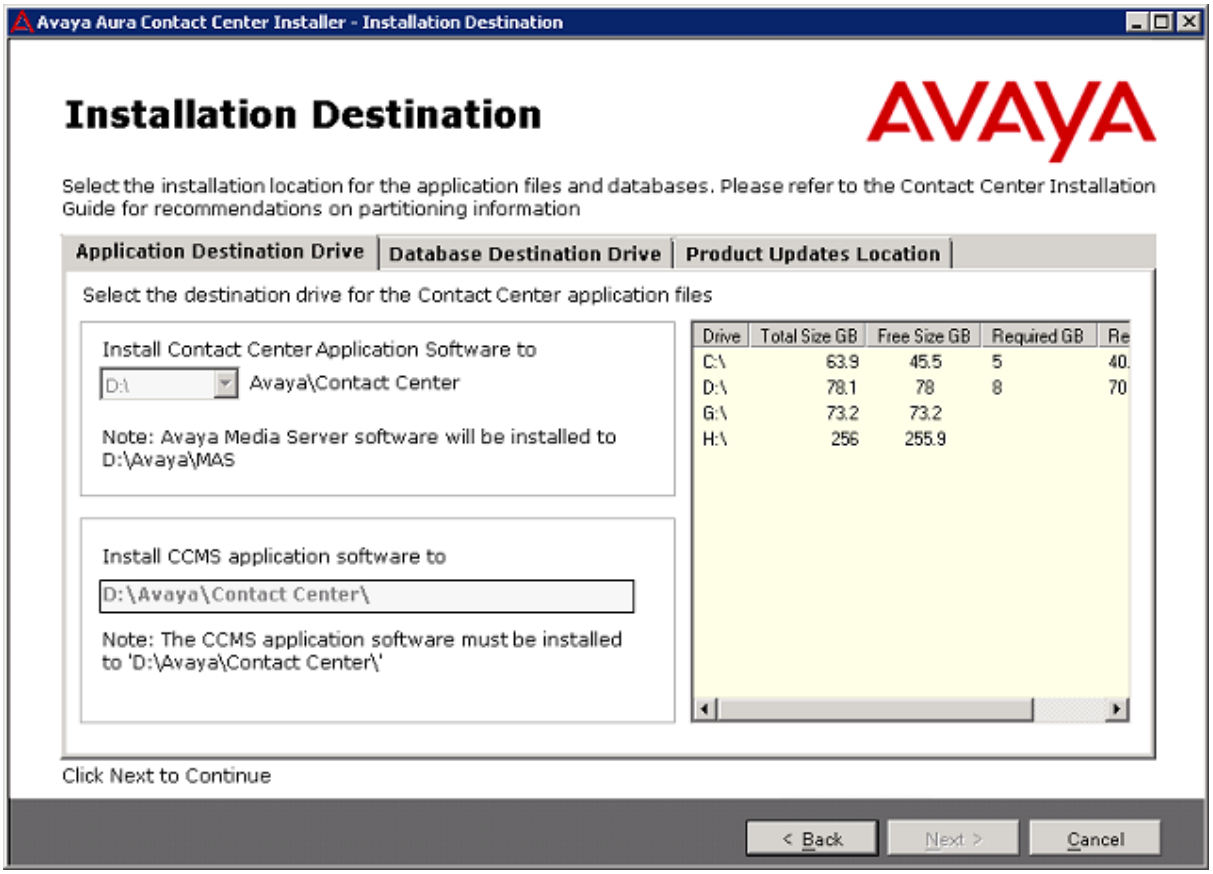
Procedure

1. Insert the Contact Center DVD into the DVD drive of your RGN server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

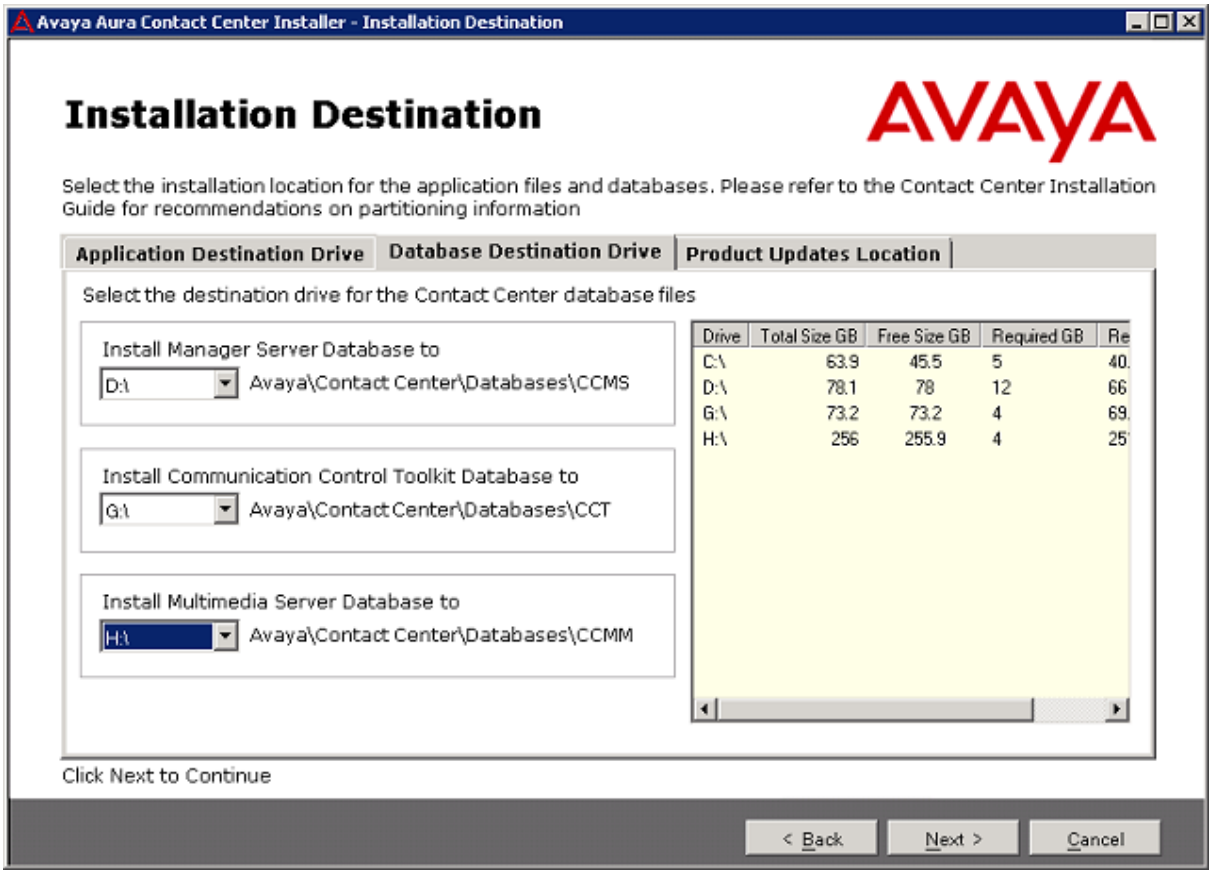
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



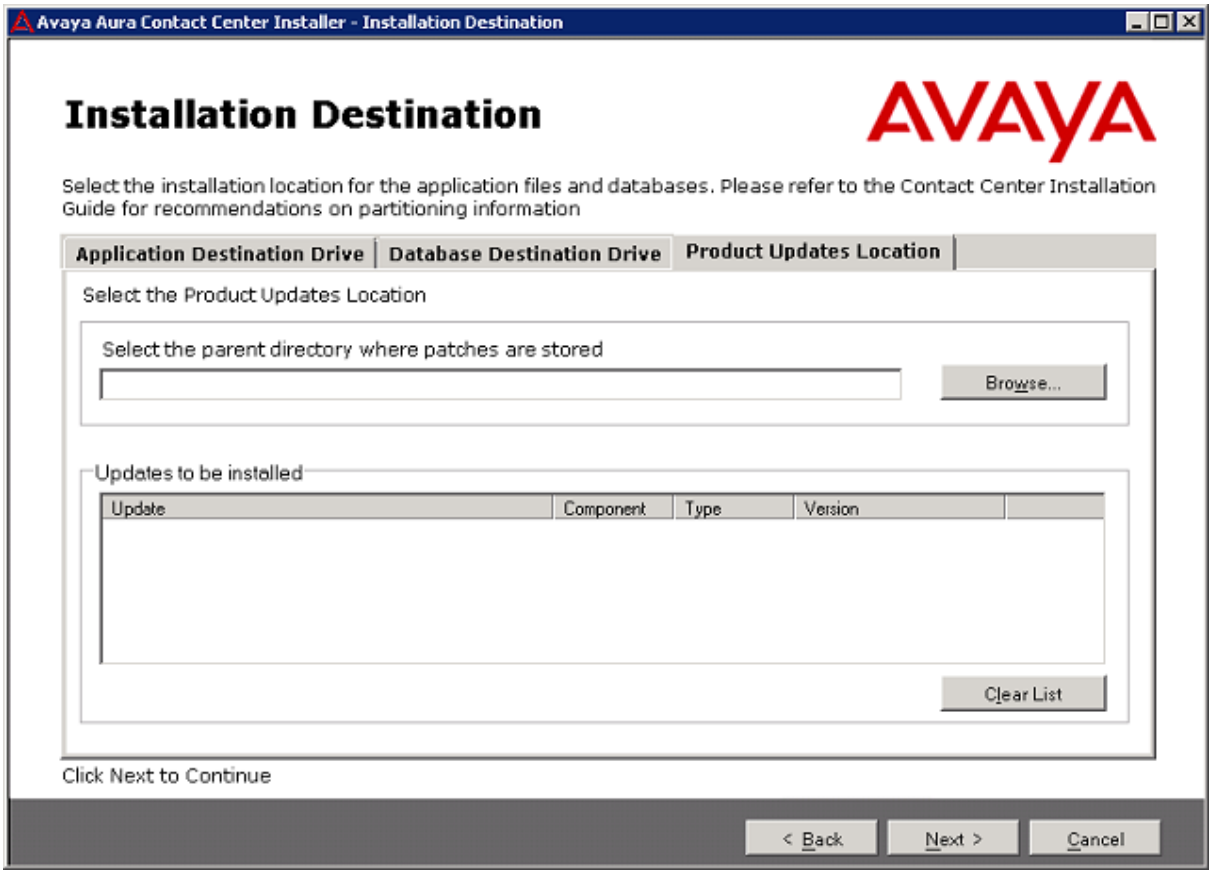
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



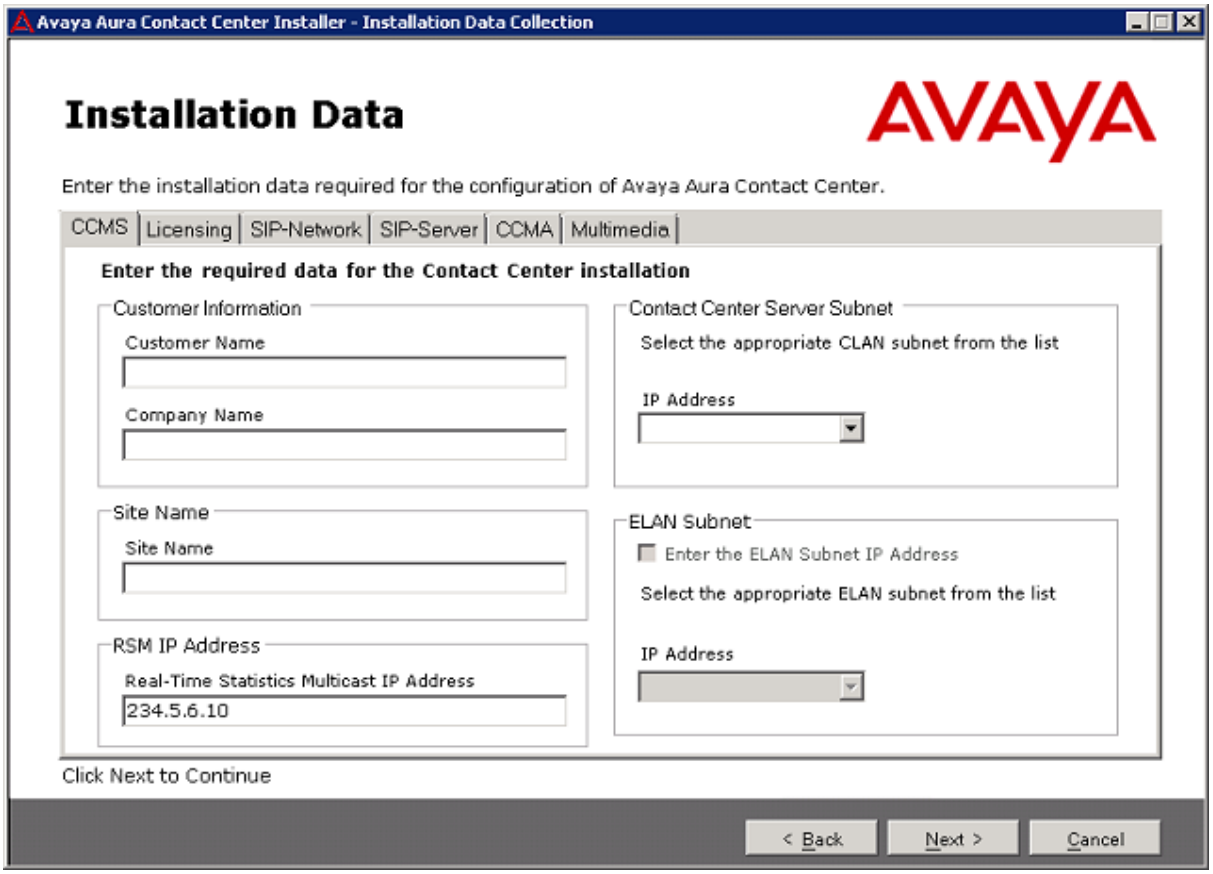
15. Click the **Product Updates Location** tab.



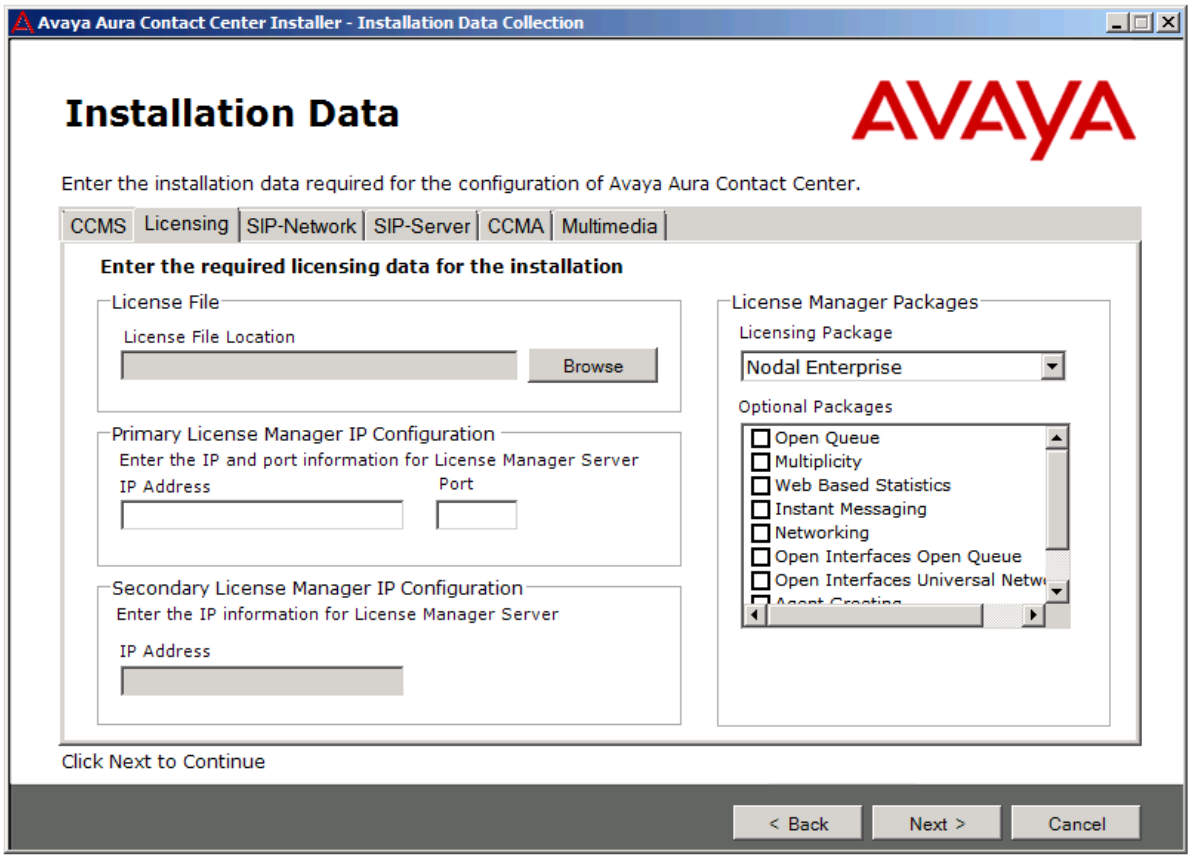
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

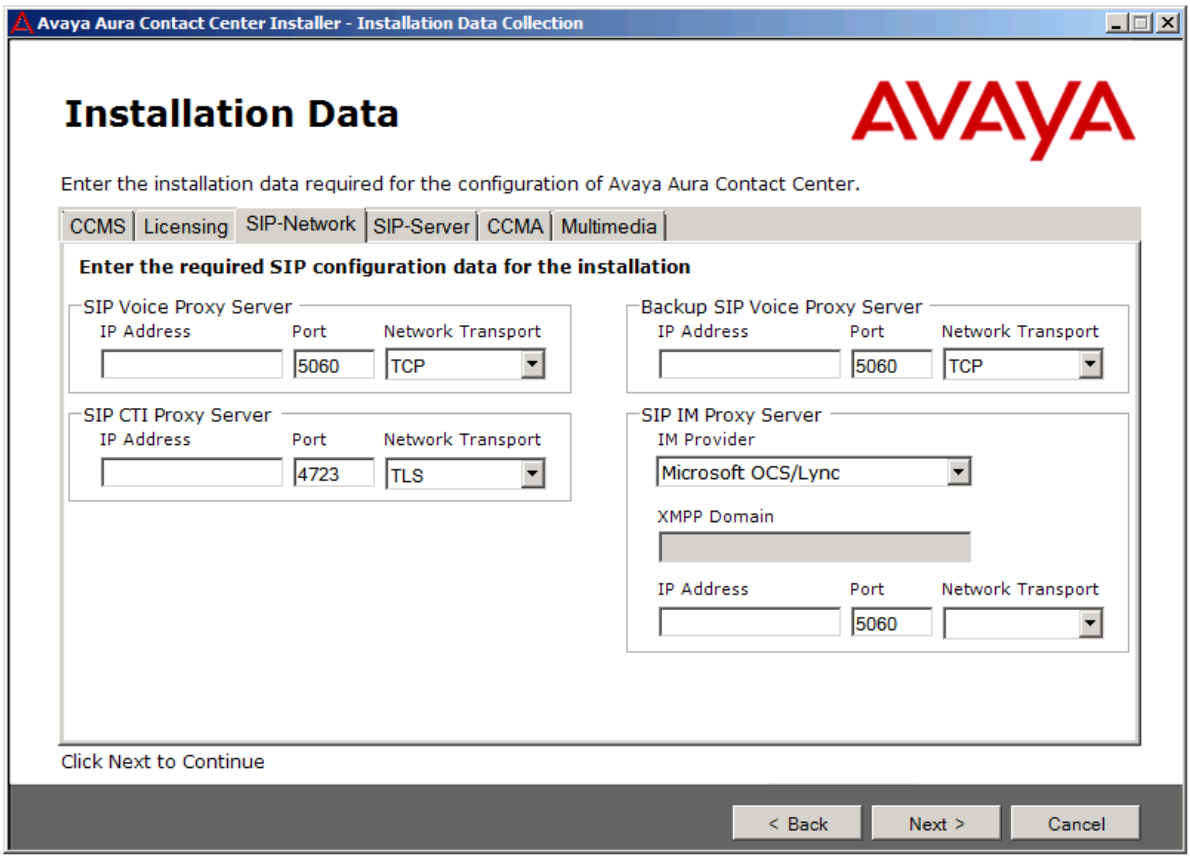
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the RGN License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **SIP-Network** tab, and configure the SIP proxy server details.

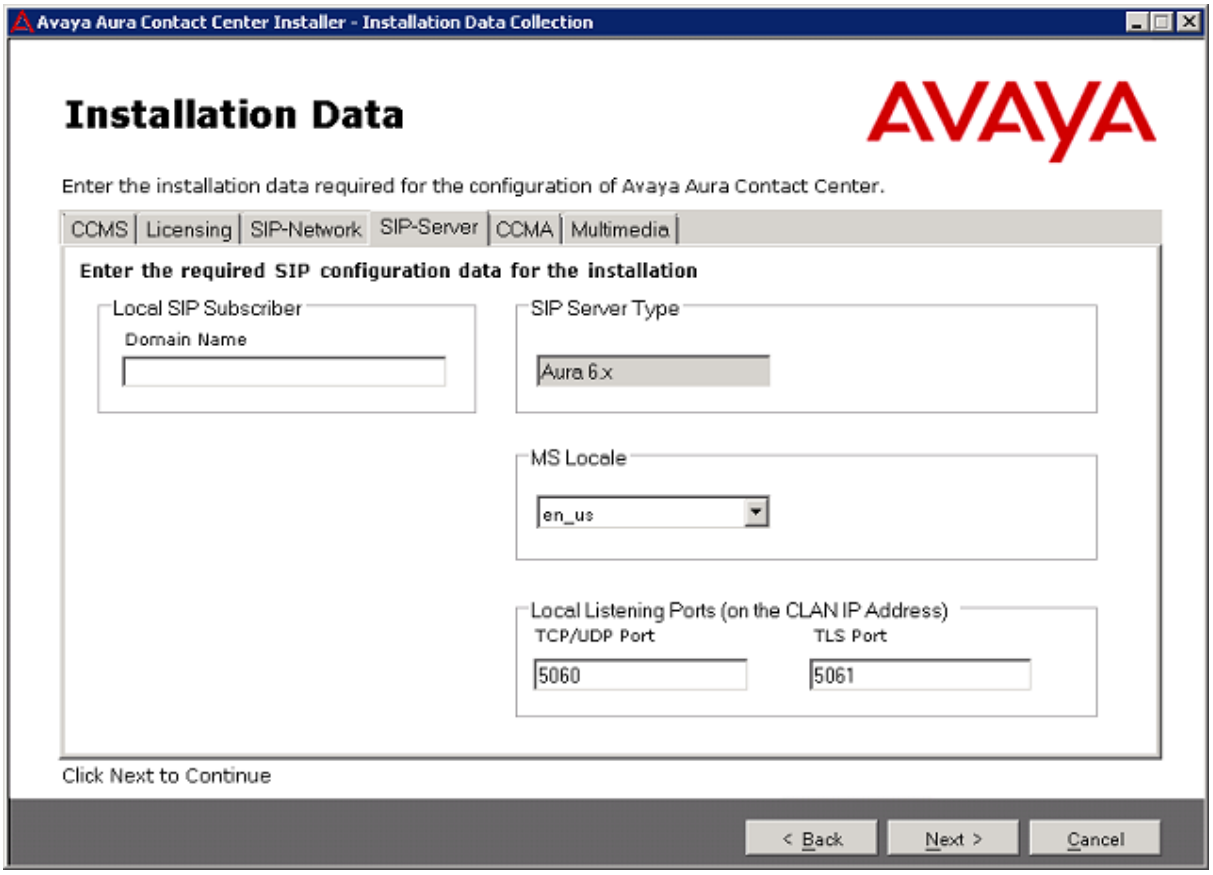


35. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the local RGN Avaya Aura® Session Manager.
36. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
37. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
38. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the local RGN Avaya Aura® Application Enablement Services server.
39. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
40. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.
41. Skip the **Backup SIP Voice Proxy Server** section. Leave the **IP Address** box empty.

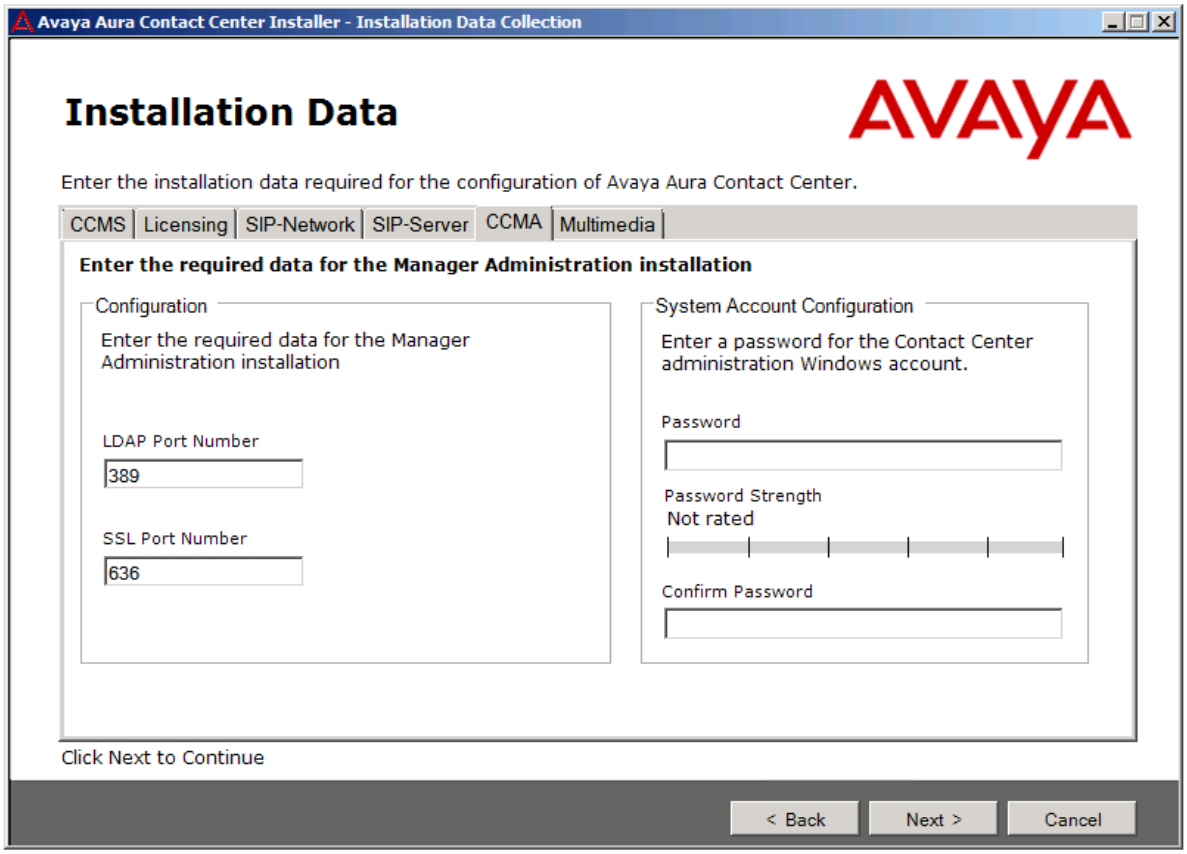
42. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select either Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
43. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
44. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
45. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
46. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
47. Select the **SIP-Server** tab, and configure the SIP server details.



48. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP

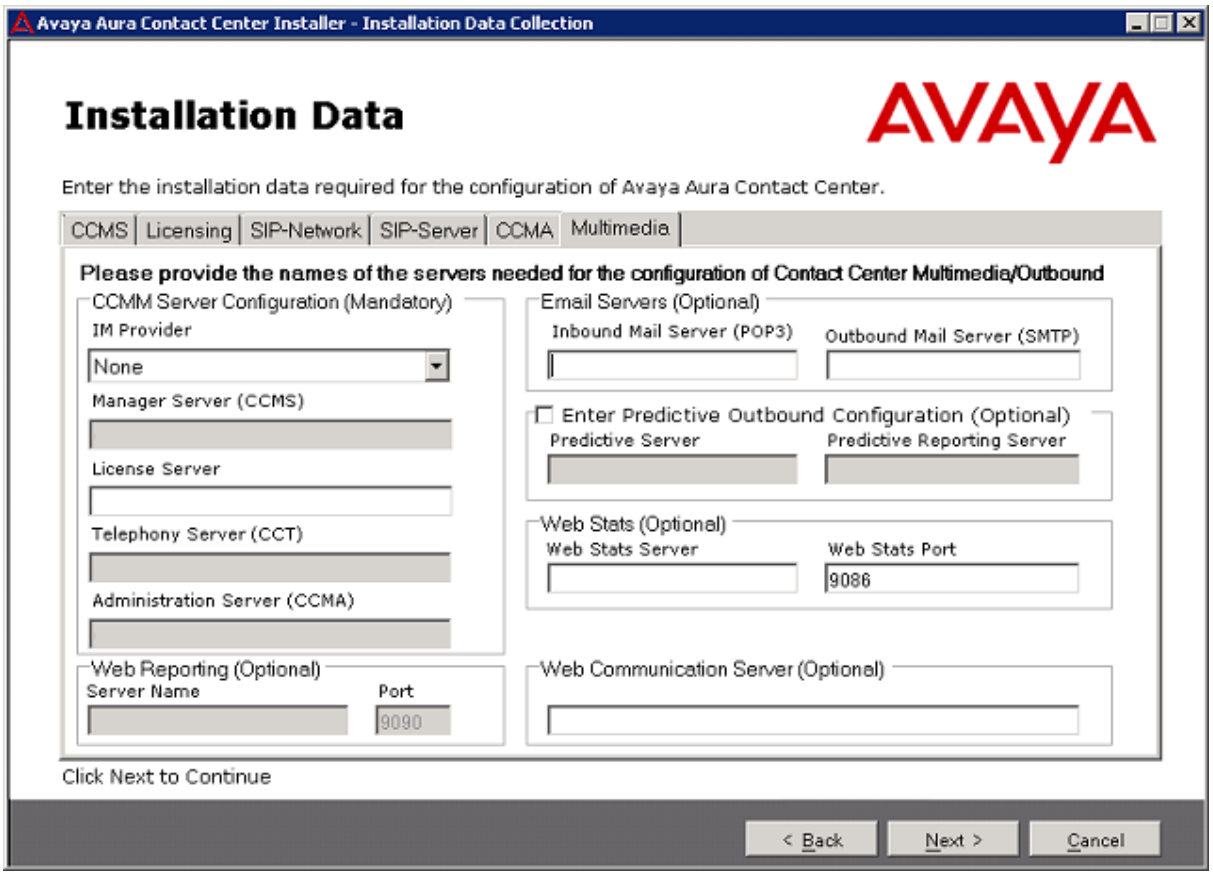
Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.

49. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
50. From the **MS Locale** list, select the locale (including language and dialects) of the solution environment.
51. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
52. Select the **CCMA** tab, and configure the CCMA details.



53. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.

54. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
55. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
56. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



57. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync, or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, and Microsoft Lync. Instant Messaging is supported only in SIP-enabled contact center solutions.
58. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
59. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.

60. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.
61. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
62. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
63. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
64. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
65. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
66. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
67. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
68. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
69. Click **Next**.
70. On the **Summary** window, review and verify the information.
71. Click **Install**.
72. After the installation is complete, click **Finish**.
73. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 8: Voice Contact Server for Avaya Aura® platform installation

This chapter describes how to install a Voice Contact Server for a solution with an Avaya Aura® Unified Communications platform. A Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

This server type supports Contact Center High Availability and VMware.

Install this server to provide context-sensitive and skill-based routing for customer voice contacts. This server provides routed contact support for voice calls. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

You can use the procedures in this chapter to install the following:

- Standalone Voice Contact Server (for solutions not using High Availability)
- Primary Voice Contact Server (for solutions using High Availability)

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

You must complete all the procedures in this section in sequential order.

Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.

21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.

- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Comments? infodev@avaya.com

Installing the Voice Contact Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

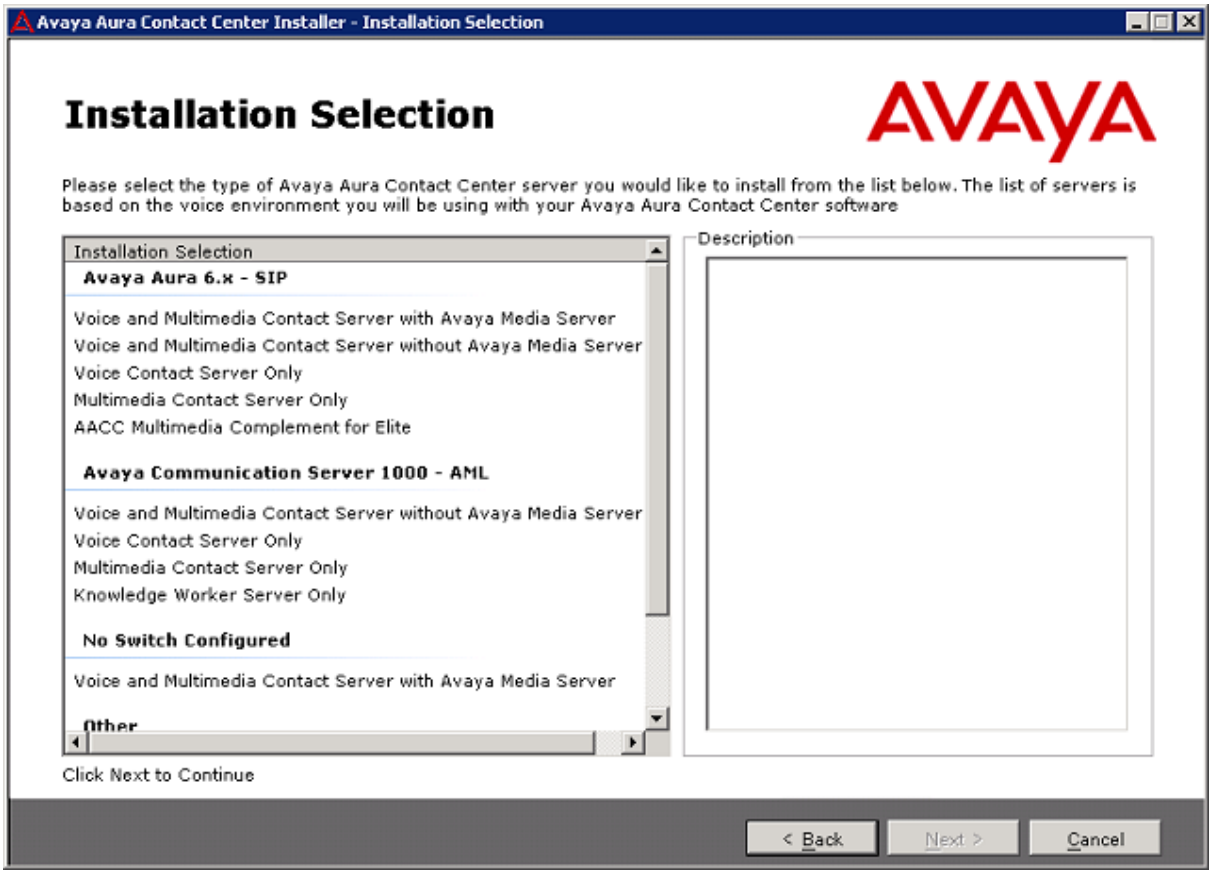
Note:

Read the Contact Center Release Notes for the most recent instructions.

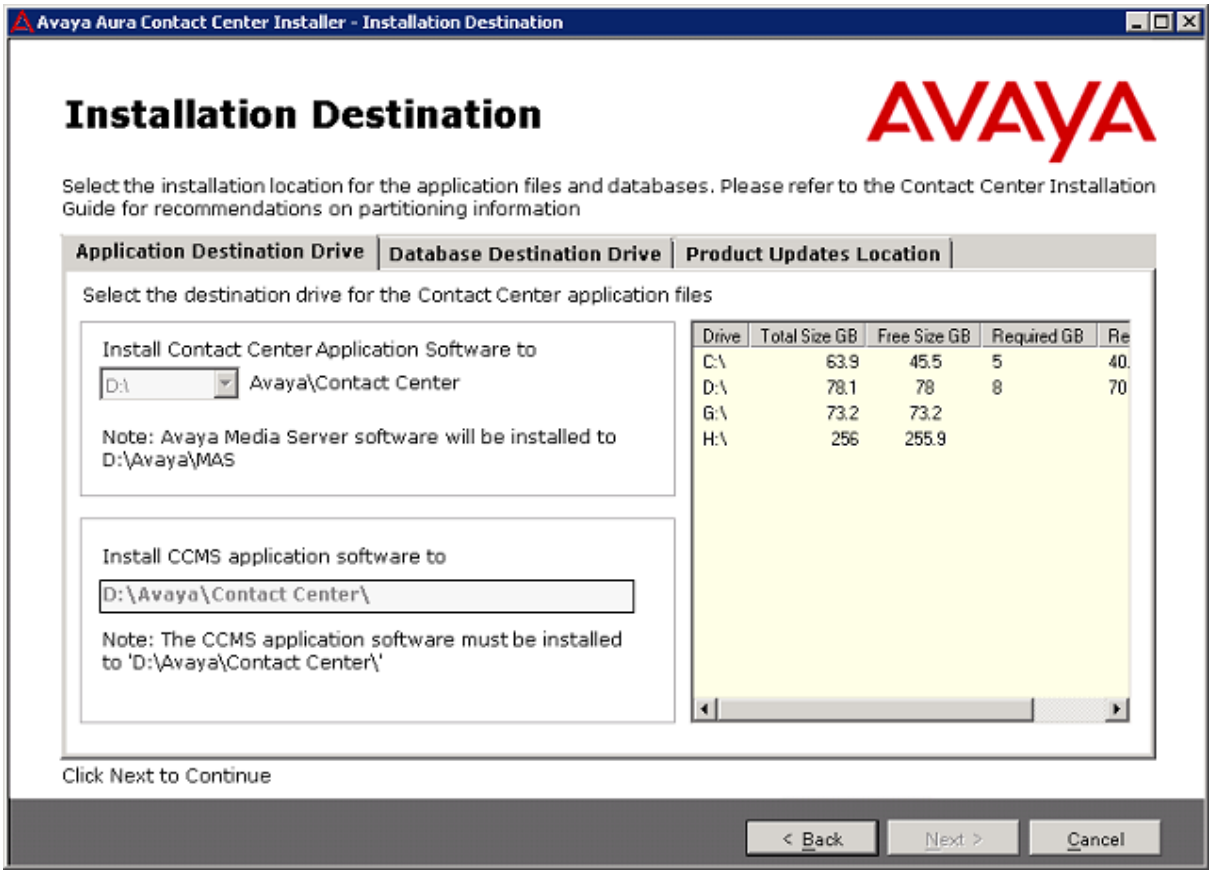
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

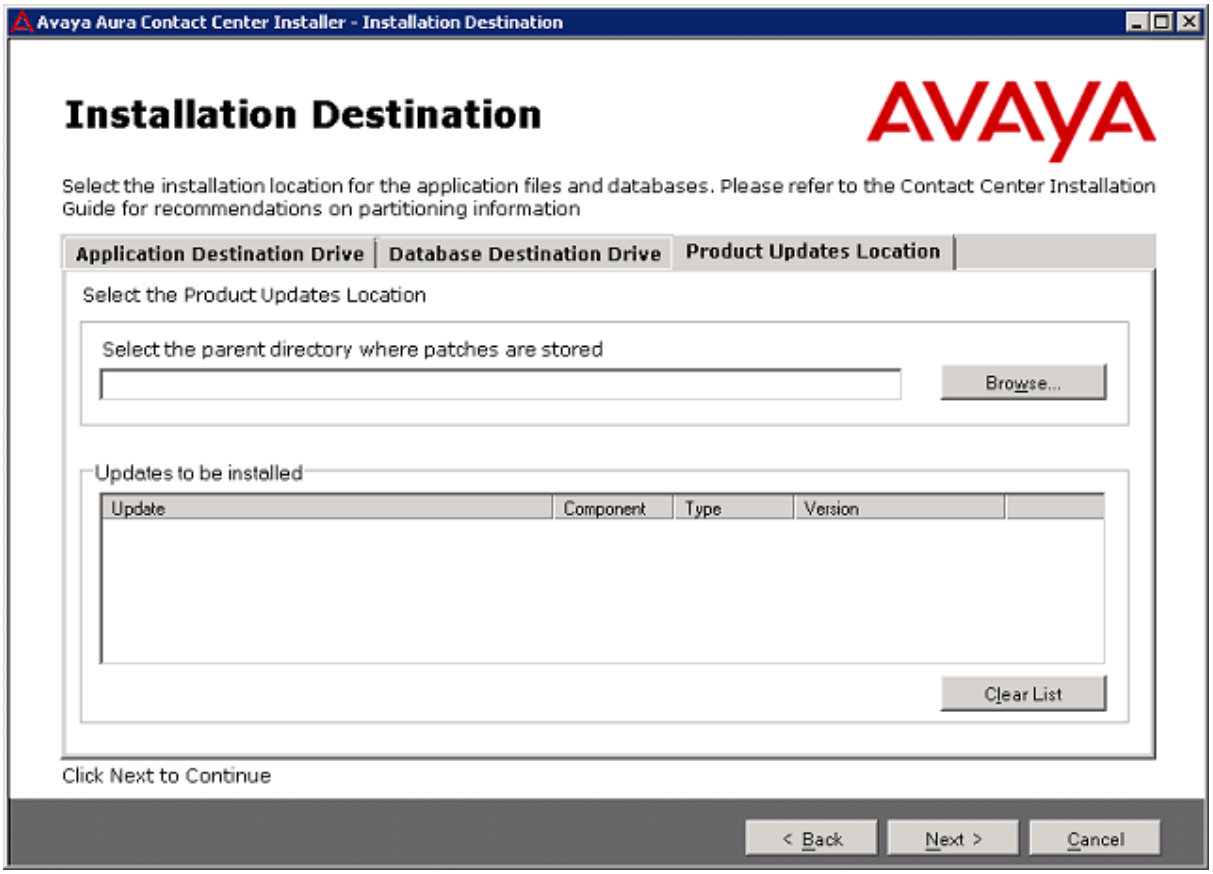
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice Contact Server Only**.
9. Click **Next**.



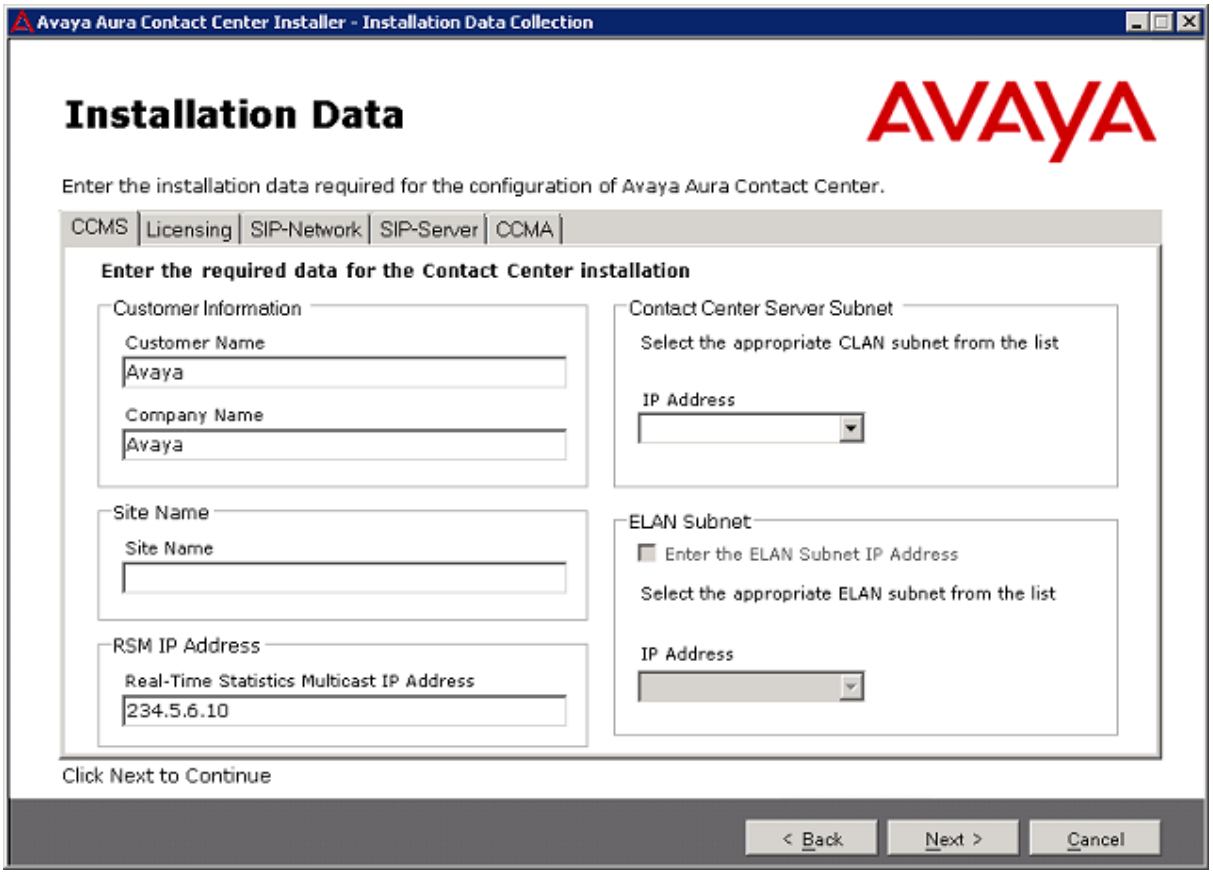
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



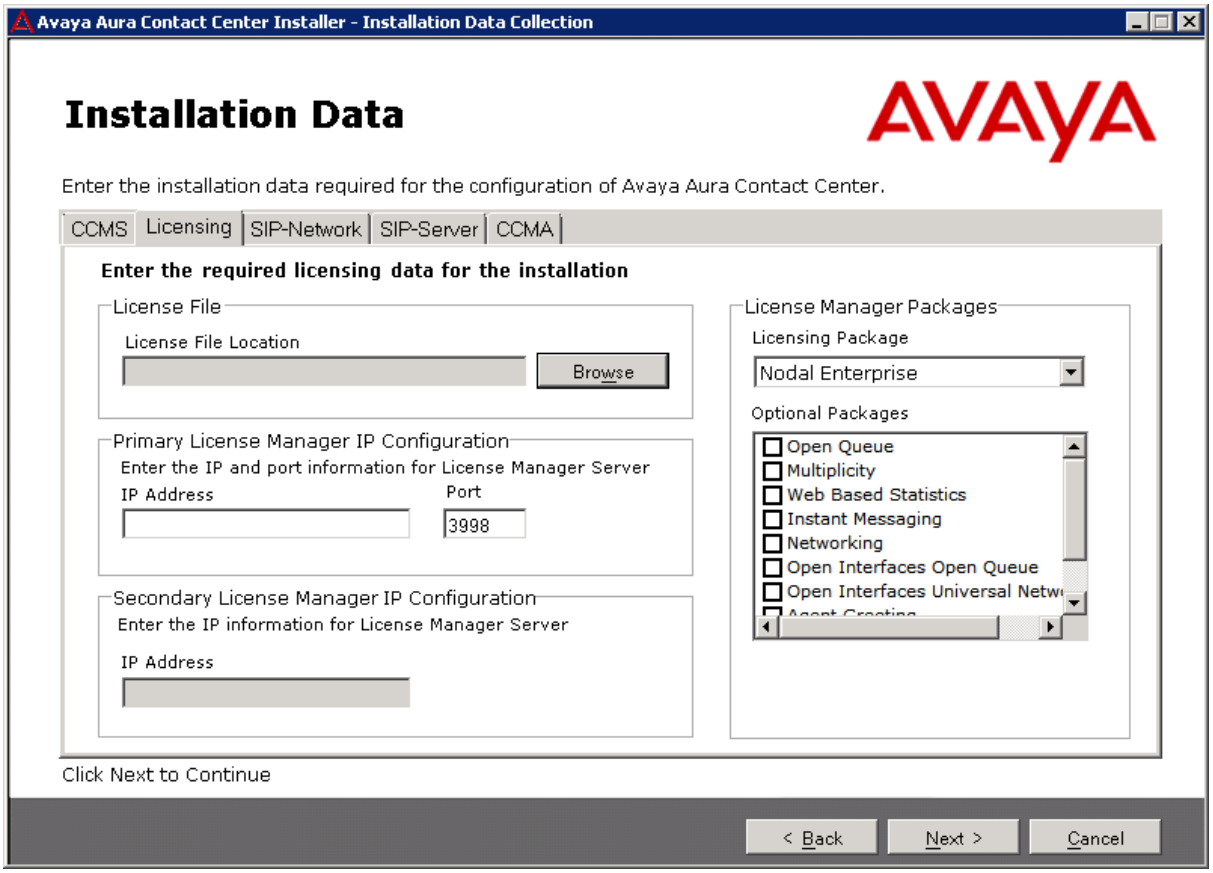
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

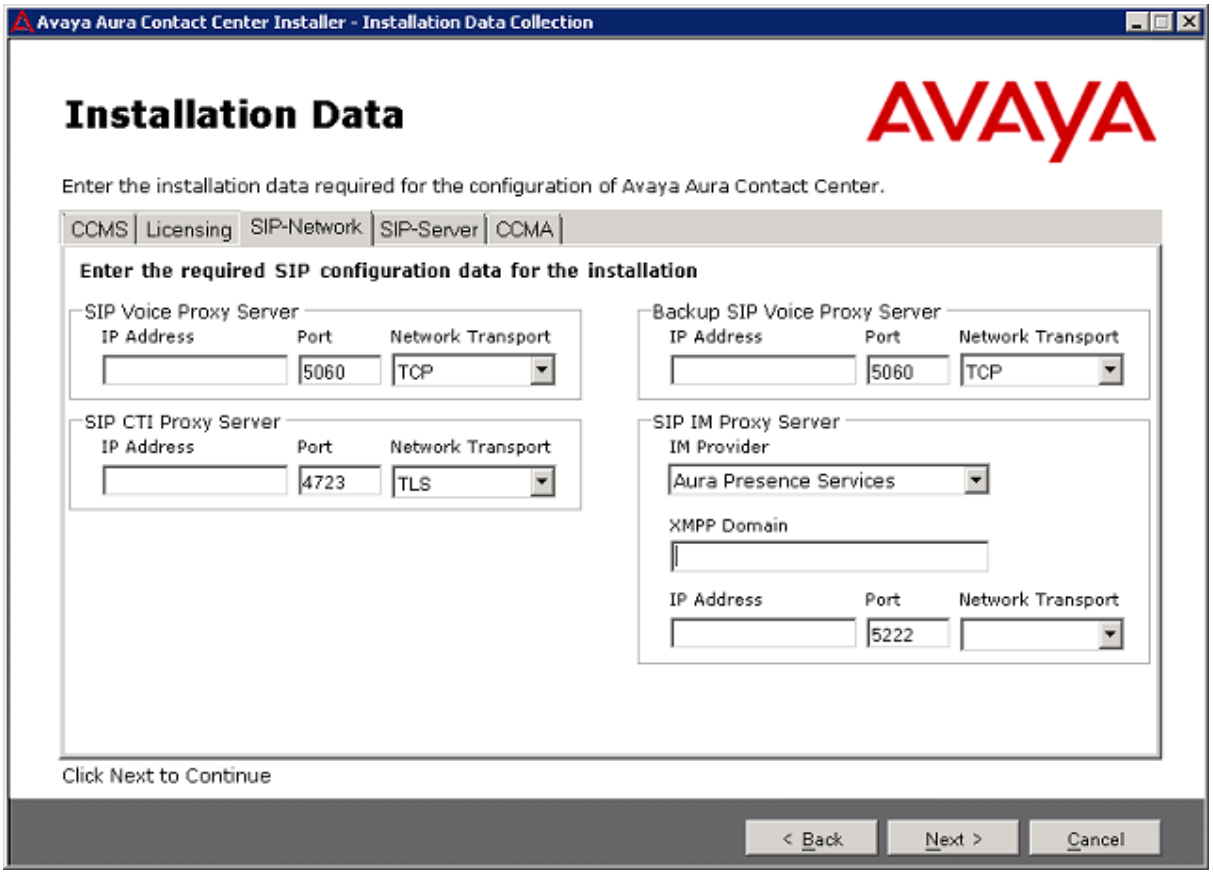
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.



21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. Select the **Licensing** tab, and configure the licensing details.



27. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
28. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
29. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
30. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
31. From the list of **Optional Packages**, enable the licensed features that you have purchased.
32. Select the **Open Queue** check box.
33. Select the **SIP-Network** tab, and configure the SIP proxy server details.



34. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the primary Avaya Aura® Session Manager.
35. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
36. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

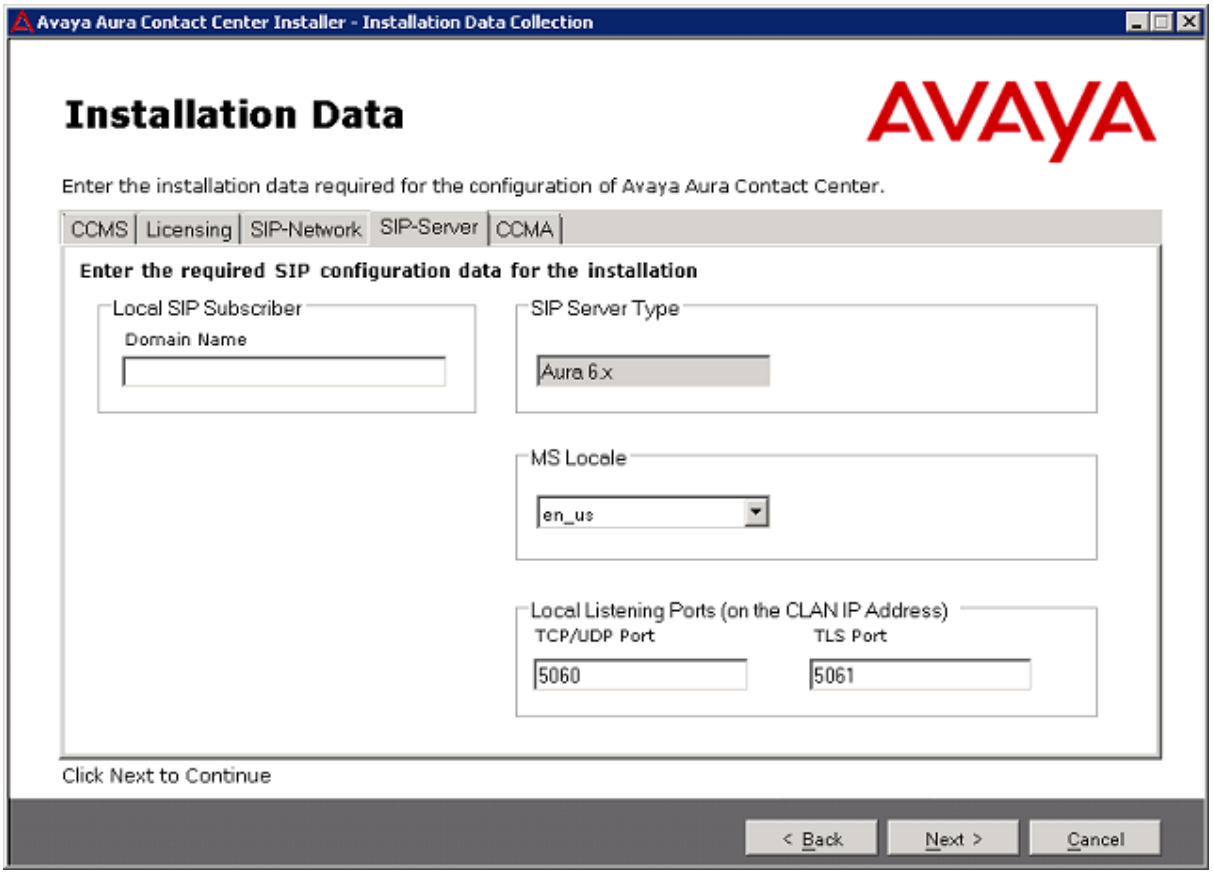
    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
37. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the Avaya Aura® Application Enablement Services server.
38. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
39. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.

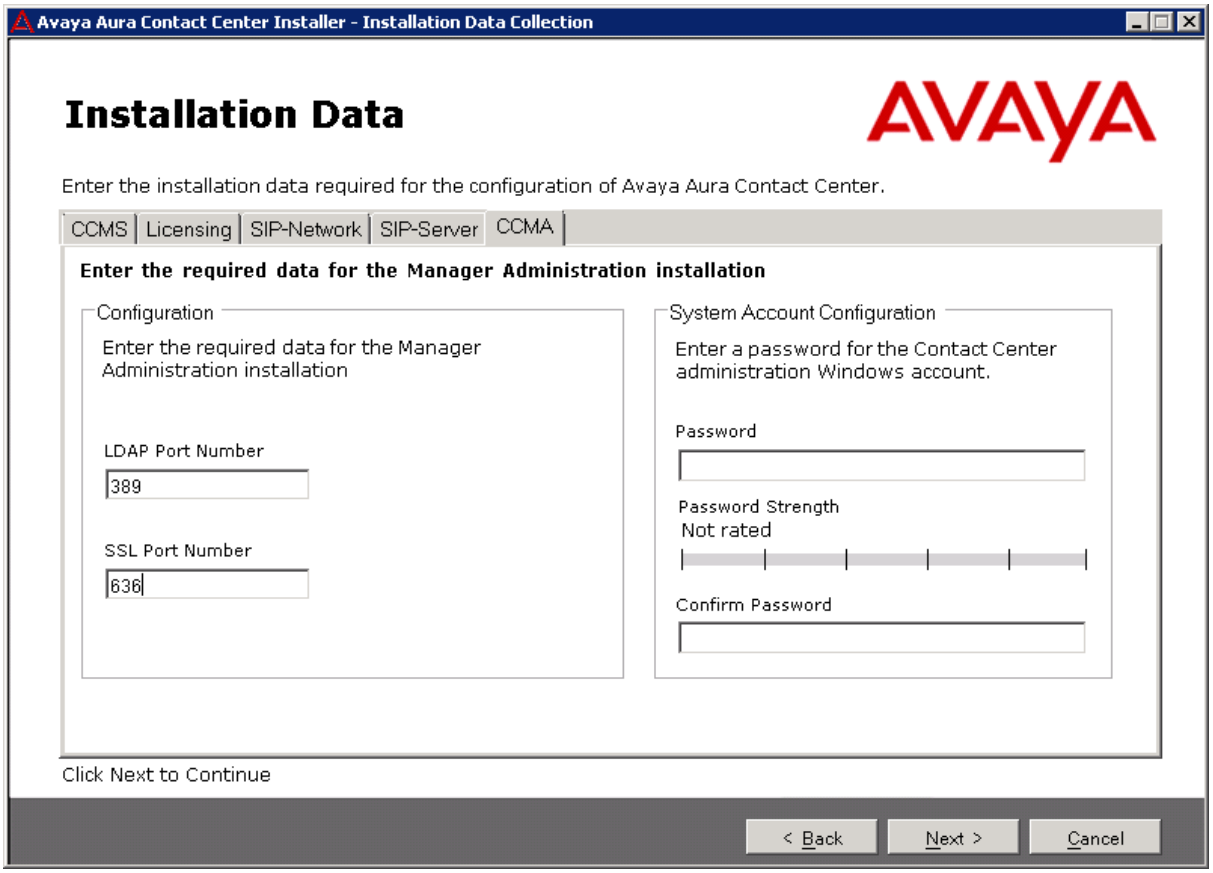
40. If your solution is going to support High Availability, in the **Backup SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the backup Avaya Aura® Session Manager. You must have a High Availability Standby Server license to support a Backup SIP Voice Proxy Server.
41. In the **Backup SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
42. In the **Backup SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
43. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
44. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
45. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
46. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
47. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
48. Select the **SIP-Server** tab, and configure the SIP server details.



49. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.
50. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
51. From the **MS Locale** list, select the locale (including language and dialects) of the system environment.
52. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
53. Select the **CCMA** tab, and configure the CCMA details.



54. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
55. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
56. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
57. Click **Next**.
58. On the **Summary** window, review and verify the information.
59. Click **Install**.
60. After the installation is complete, click **Finish**.
61. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Adding the domain AD-LDS replication account to the primary server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server.

Important:

If you are using High Availability, and if this server is to be the primary active server, perform this procedure. If you are not implementing High Availability, skip this procedure. Do not perform this procedure on the standby server or on the Remote Geographic Node server.

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.

2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 9: Standby Voice Contact Server for Avaya Aura® platform installation

This chapter describes how to install a standby Voice Contact Server for an Avaya Aura® Unified Communications platform. A standby Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

You can install a standby Voice Contact Server and commission it to be the standby Voice Contact Server in a campus High Availability solution. The standby server takes over contact processing and becomes the active server if the existing active server fails. The standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

Install this server to provide context-sensitive and skill-based routing for customer voice contacts. This server provides routed contact support for voice calls. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

You must complete all the procedures in this section in sequential order.

Standby Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008

documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.

2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.

22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.

12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Voice Contact Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Voice Contact Server for the Avaya Aura® Unified Communications platform must already be installed and configured.
- The primary active Voice Contact Server for the Avaya Aura® Unified Communications platform must already be configured to support AD-LDS replication.

About this task

Install the standby Contact Center Voice Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

Note:

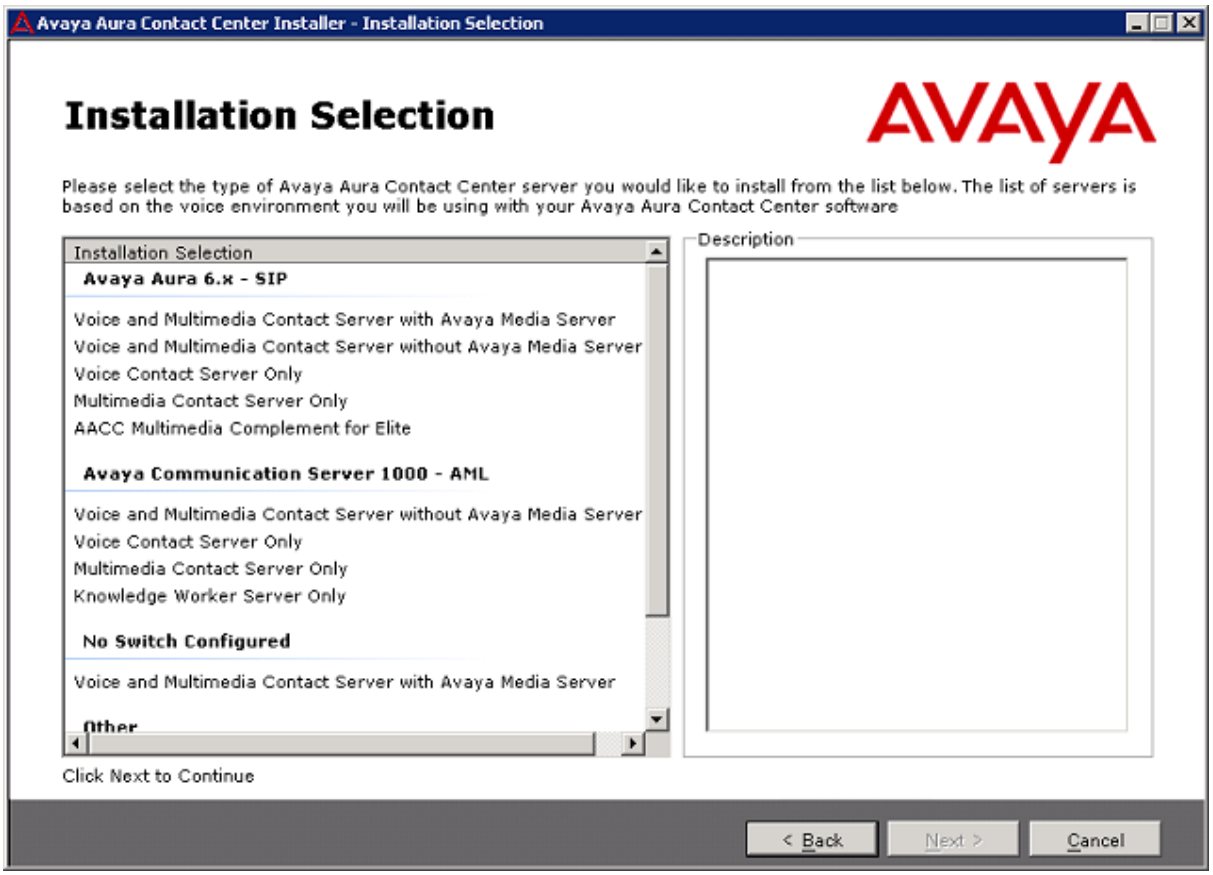
Read the Contact Center Release Notes for the most recent instructions.

Procedure

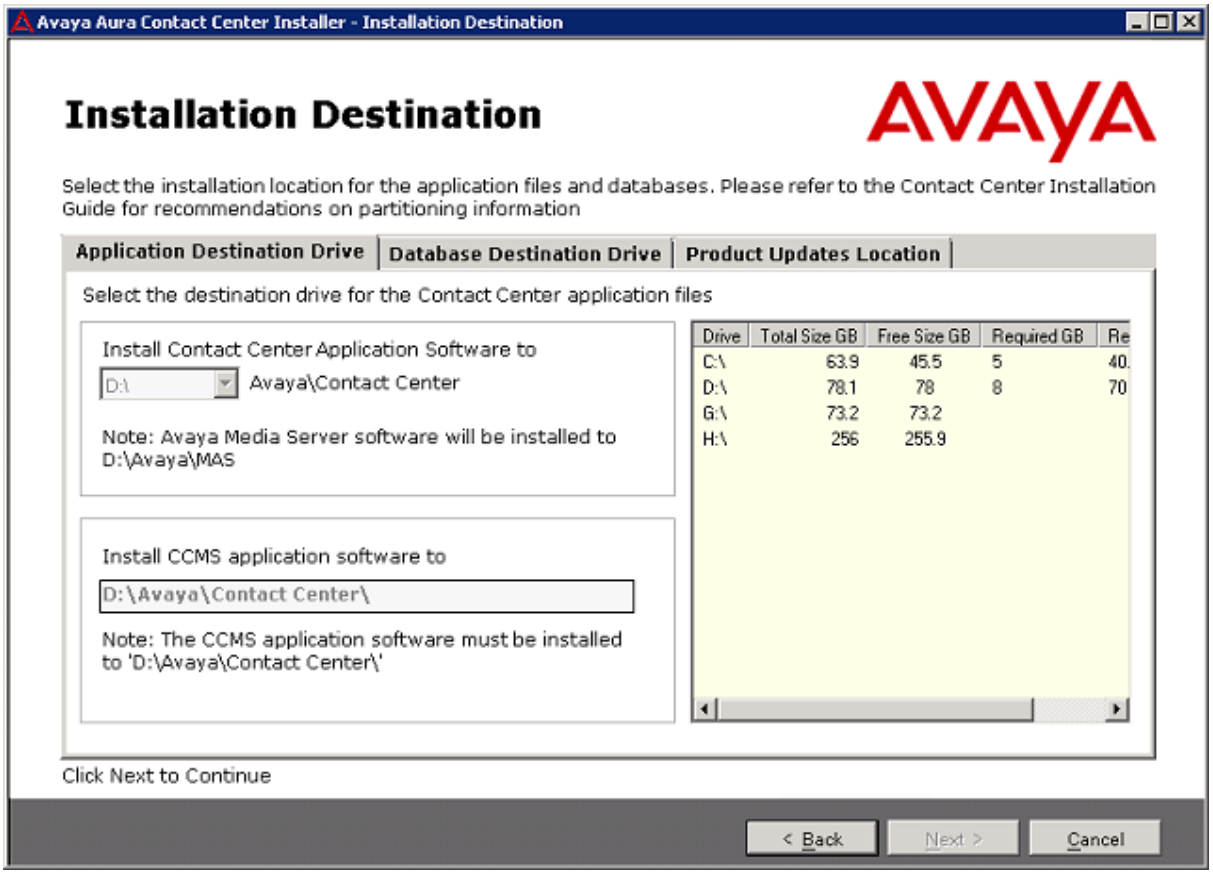
1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.

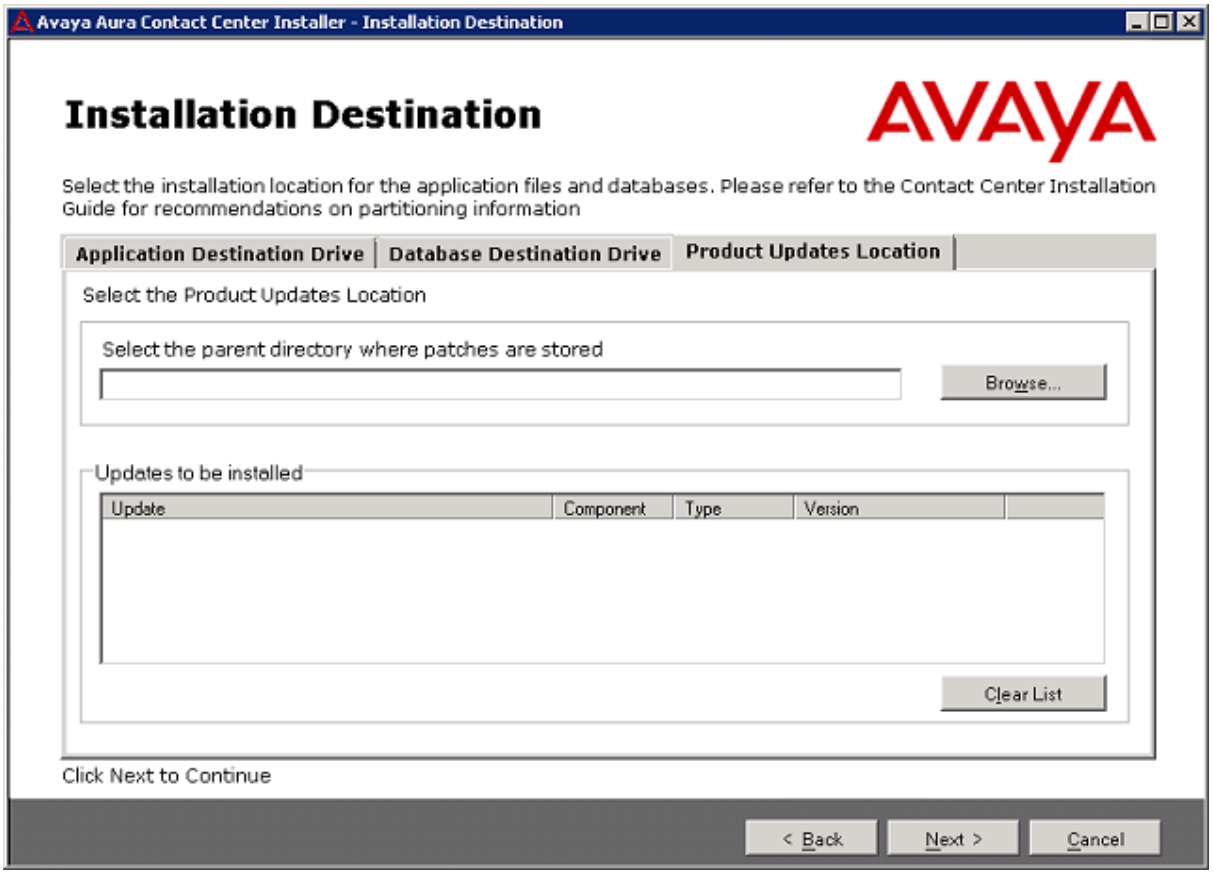
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice Contact Server Only**.
9. Click **Next**.



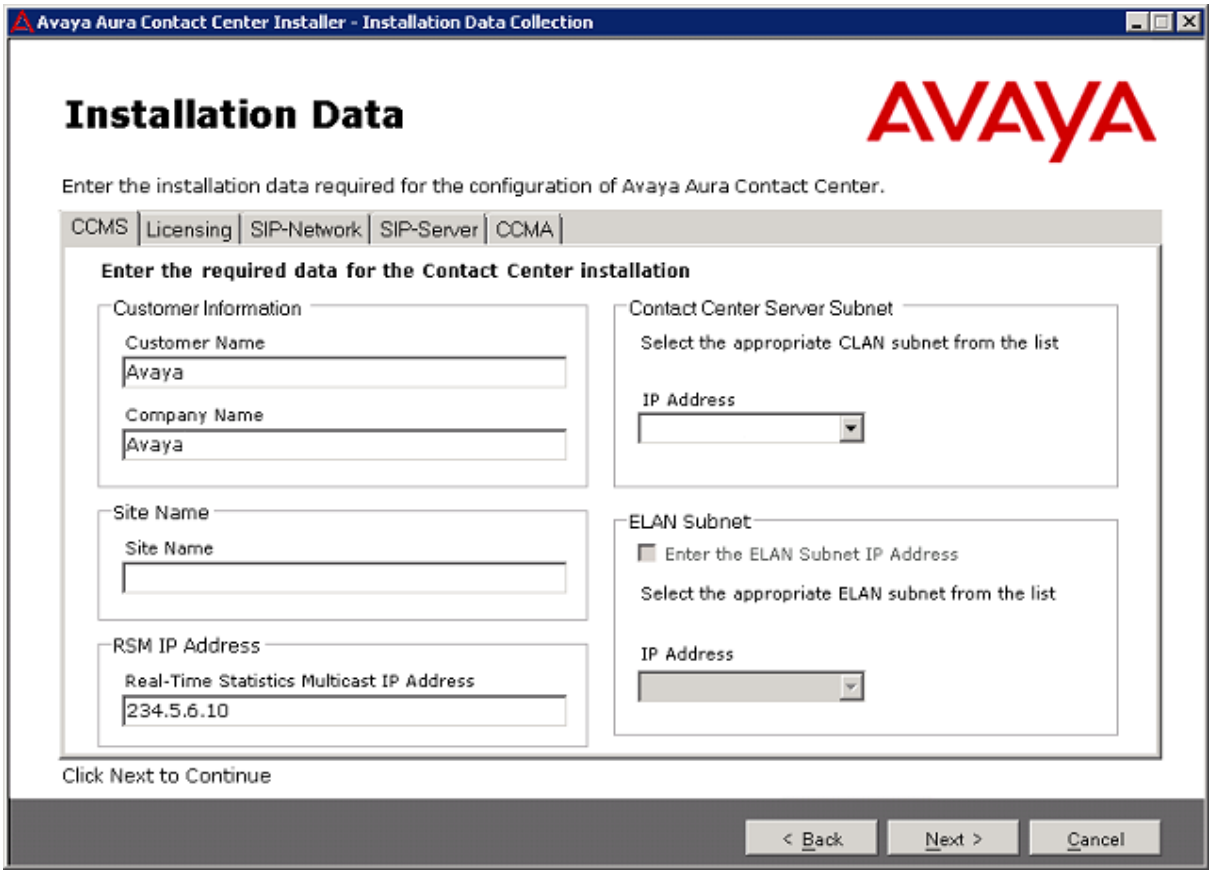
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



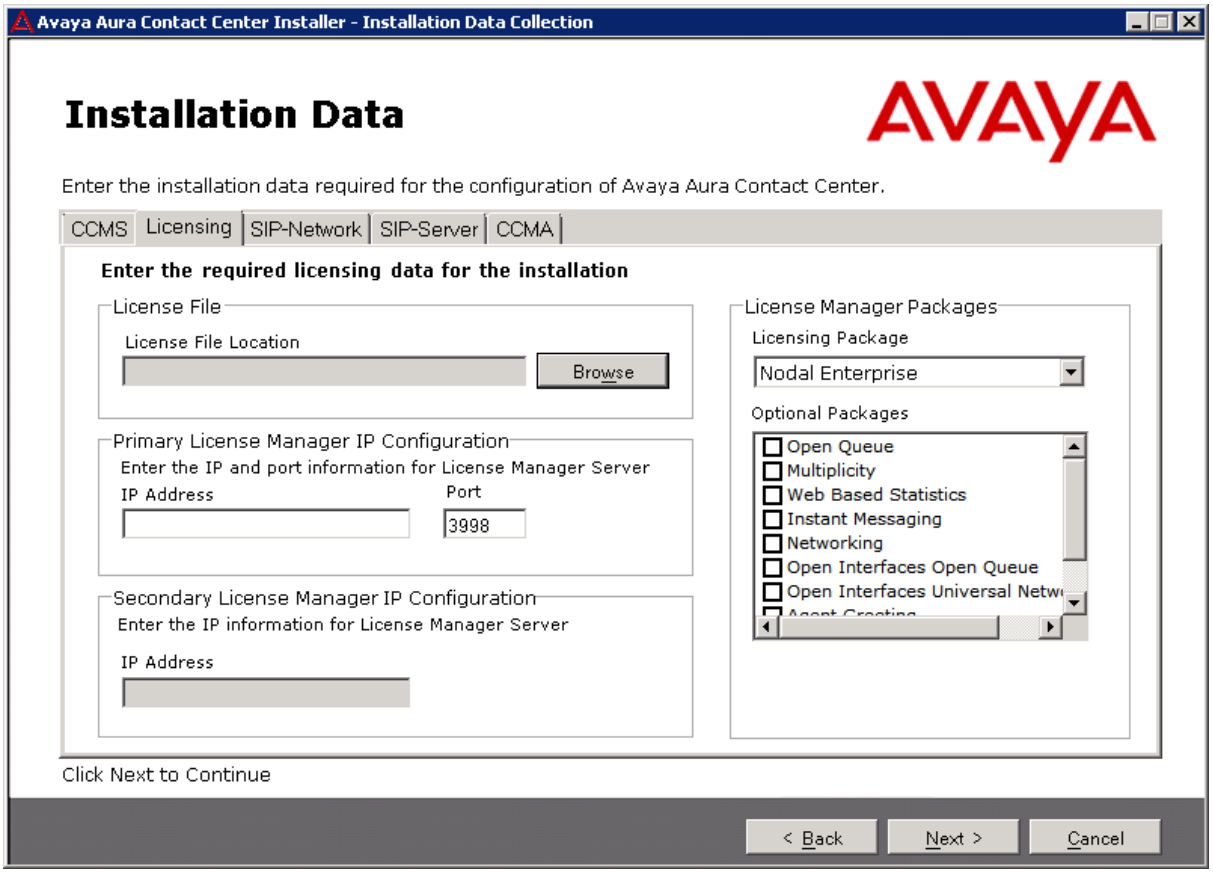
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

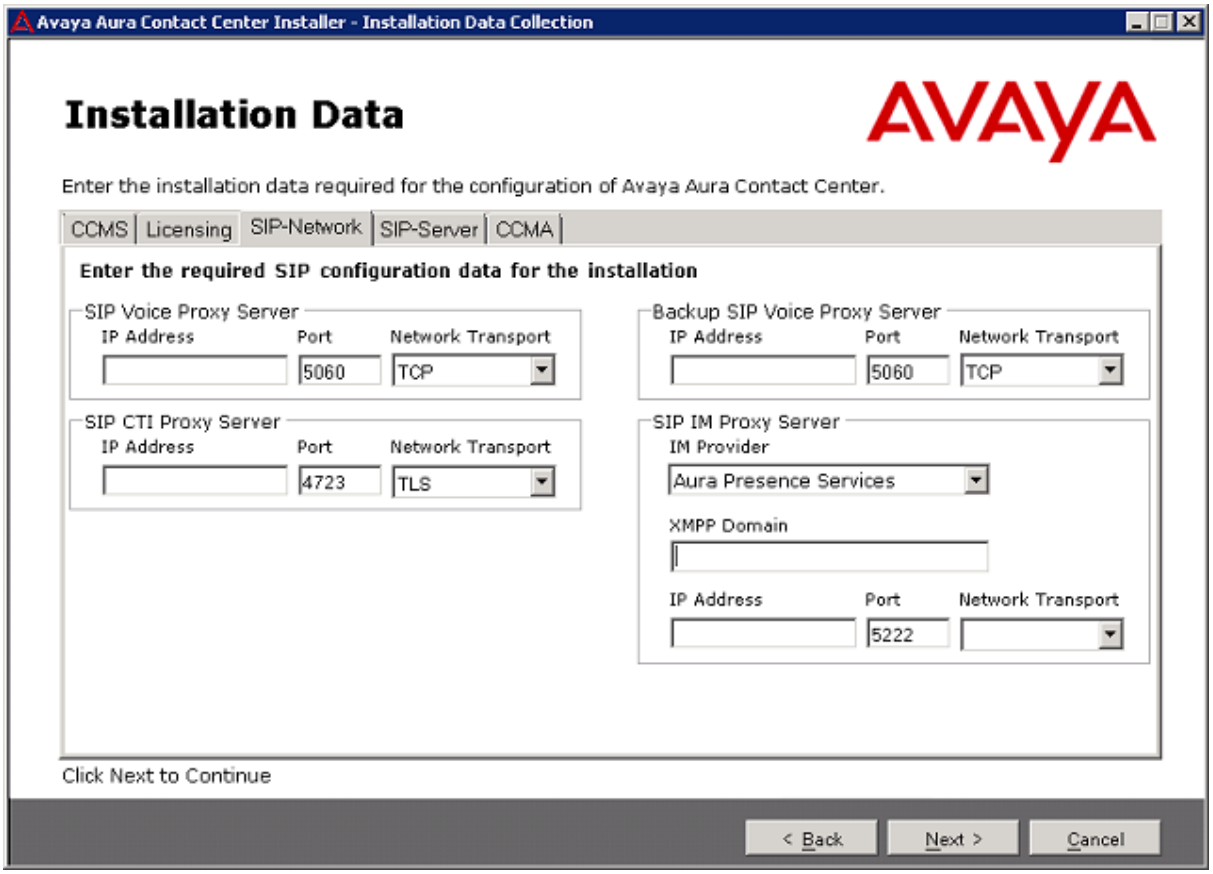
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.



21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. Select the **Licensing** tab, and configure the licensing details.



27. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
28. In the **Primary License Manager IP Address** box, type the IP address of the License Manager. Each Voice Contact Server contains a License Manager. Type the IP address of the standby Voice Contact Server.
29. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
30. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
31. From the list of **Optional Packages**, enable the licensed features that you have purchased.
32. Select the **Open Queue** check box.
33. Select the **SIP-Network** tab, and configure the SIP proxy server details.



34. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the primary Avaya Aura® Session Manager.
35. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
36. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

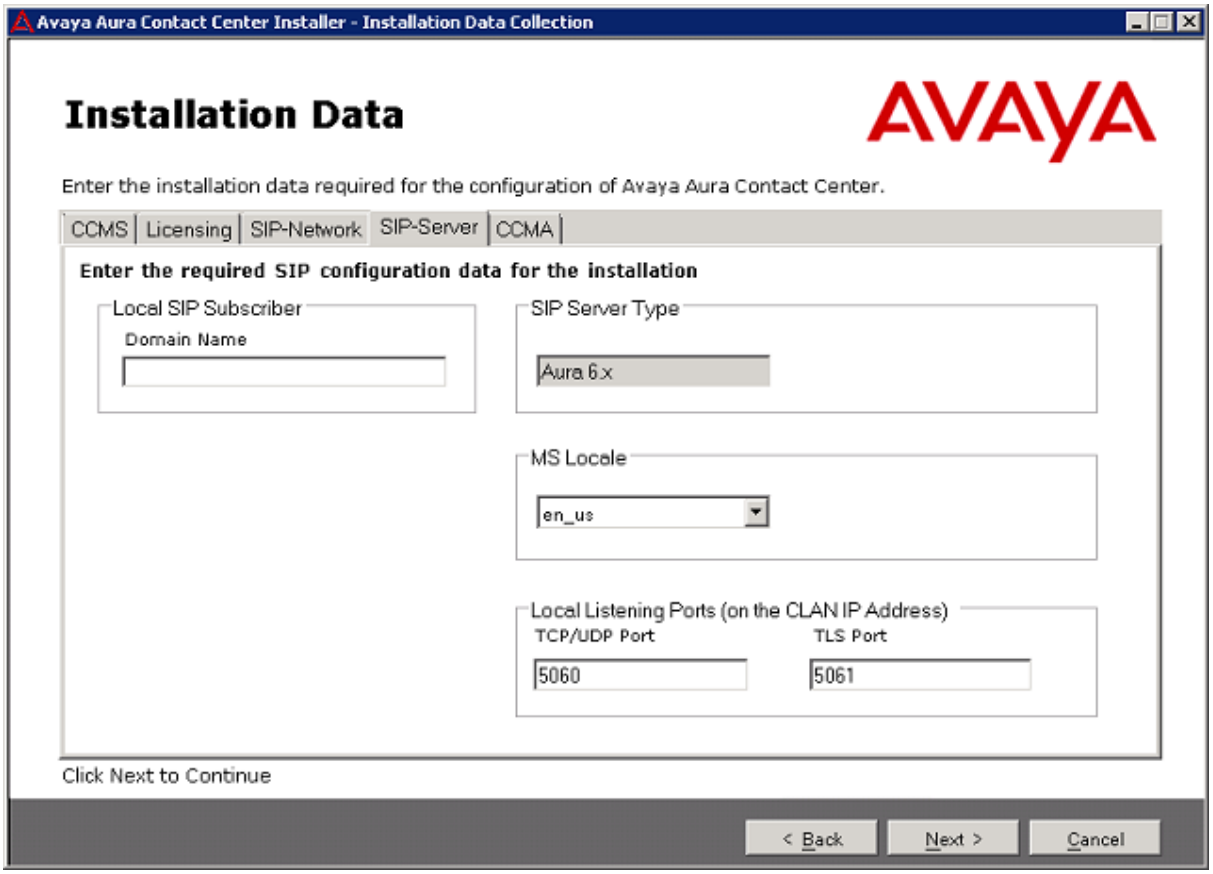
    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
37. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the Avaya Aura® Application Enablement Services server.
38. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
39. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.

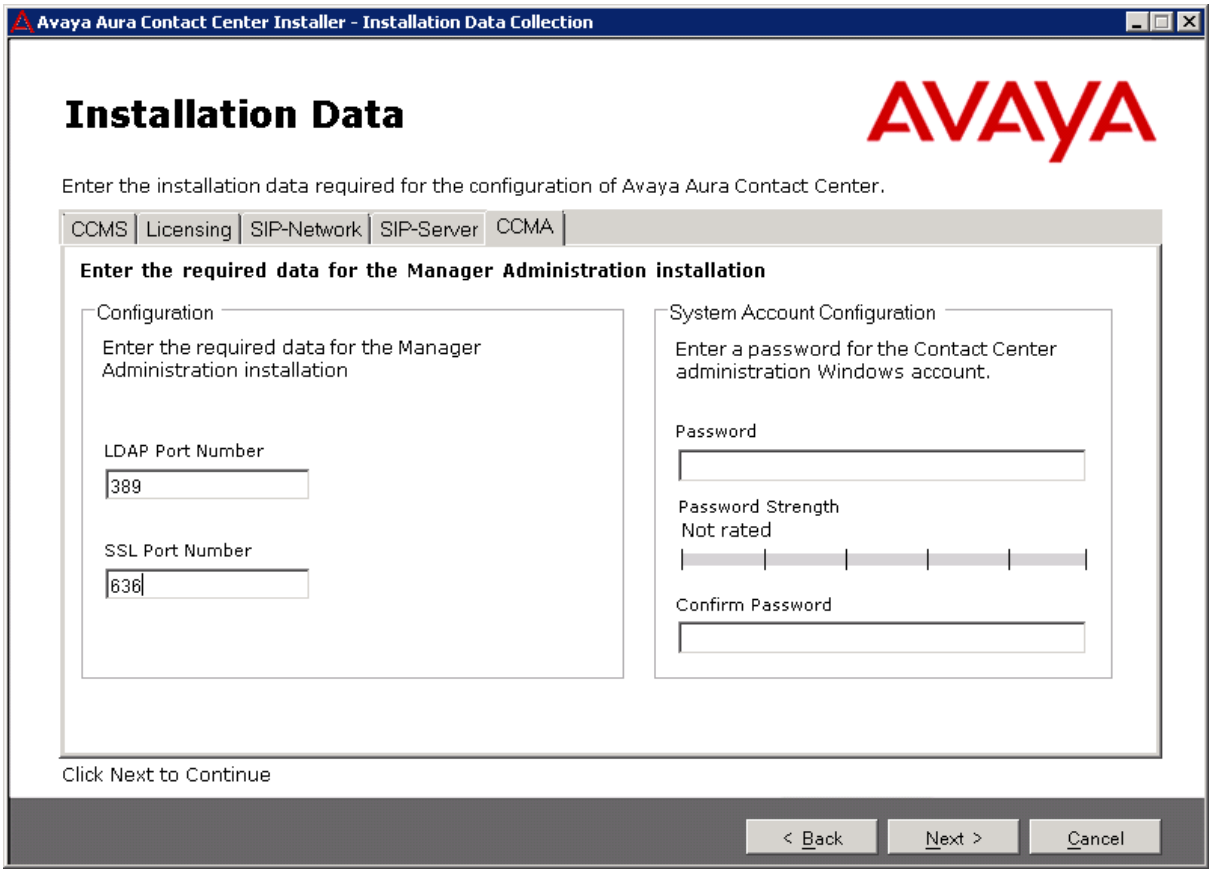
40. In the **Backup SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the backup Avaya Aura® Session Manager. You must have a High Availability Standby Server license to support a Backup SIP Voice Proxy Server.
41. In the **Backup SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
42. In the **Backup SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
43. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
44. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
45. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
46. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
47. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
48. Select the **SIP-Server** tab, and configure the SIP server details.



49. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.
50. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
51. From the **MS Locale** list, select the locale (including language and dialects) of the system environment.
52. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
53. Select the **CCMA** tab, and configure the CCMA details.



54. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
55. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
56. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
57. Click **Next**.
58. On the **Summary** window, review and verify the information.
59. Select **Install**.
60. After the installation is complete, click **Finish**.
61. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

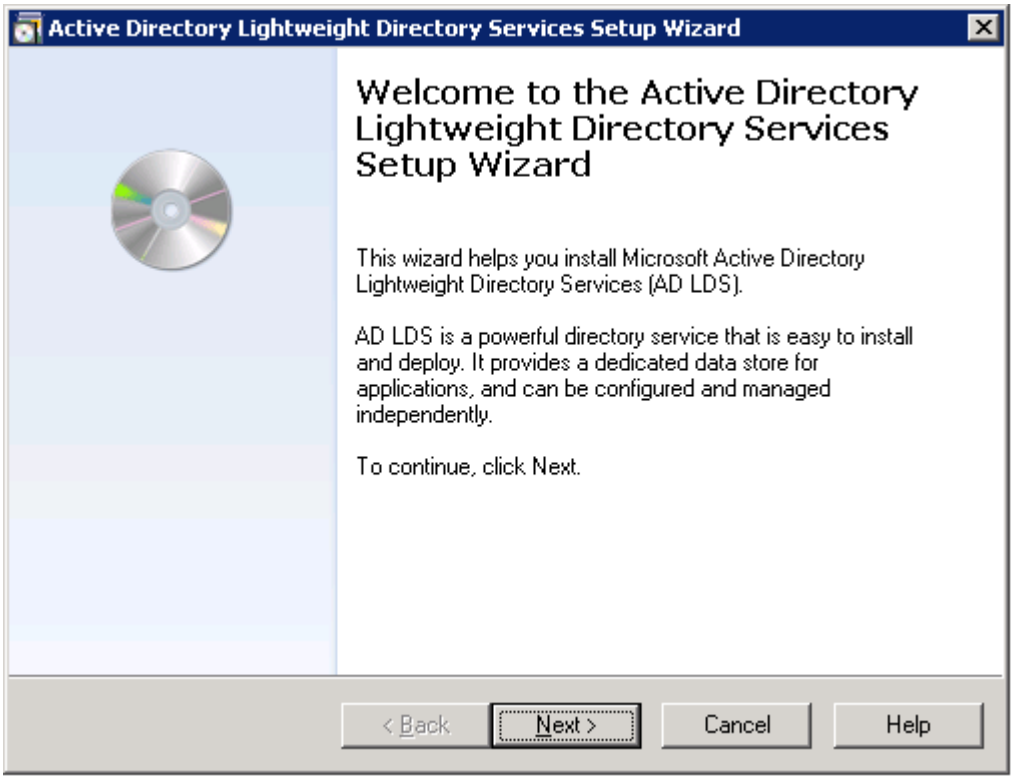
Read the Contact Center Release Notes for the most recent instructions.

Procedure

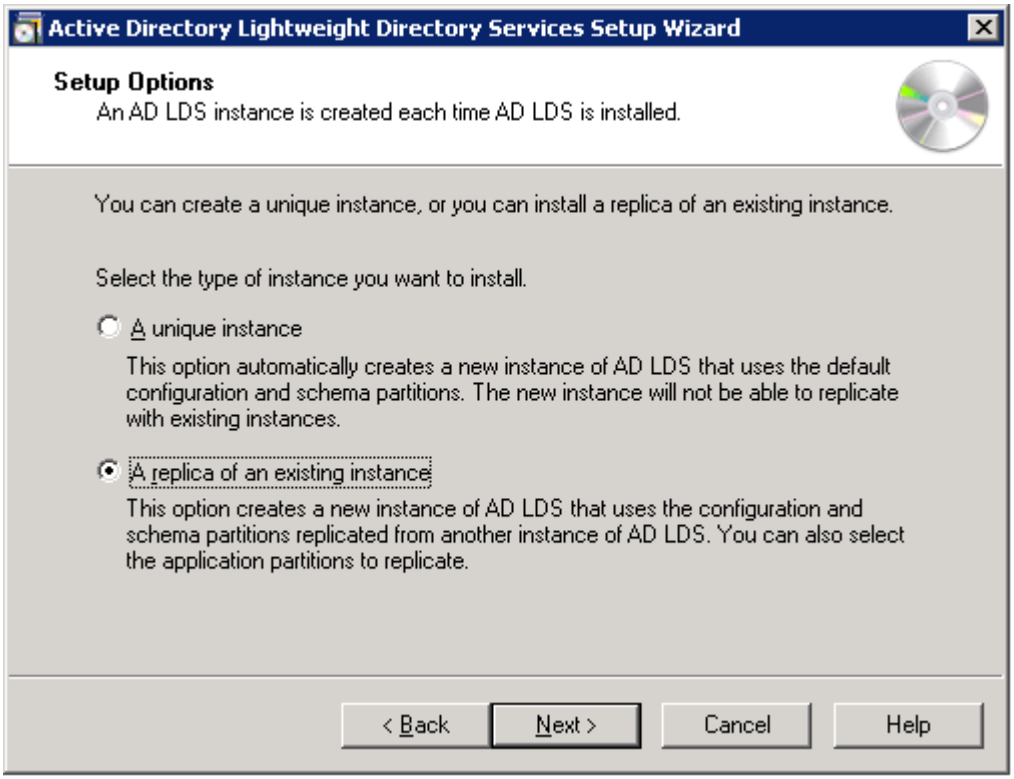
1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

   `D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\`
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

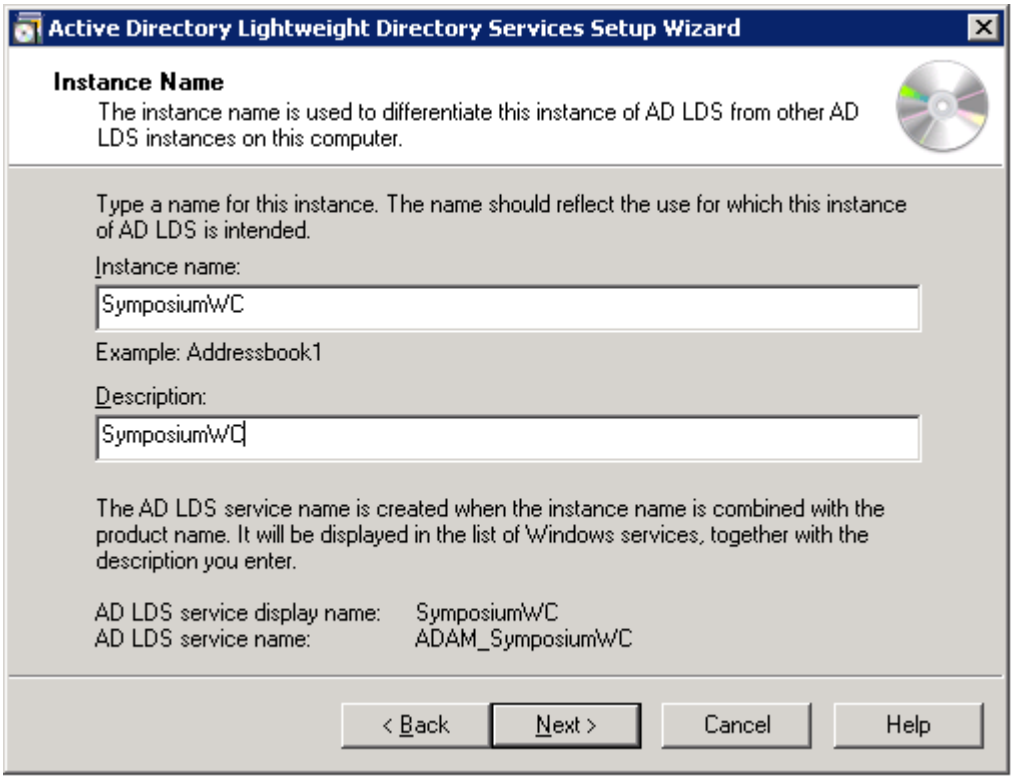
   `ConvertToStandbyCCMAServer.bat`
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



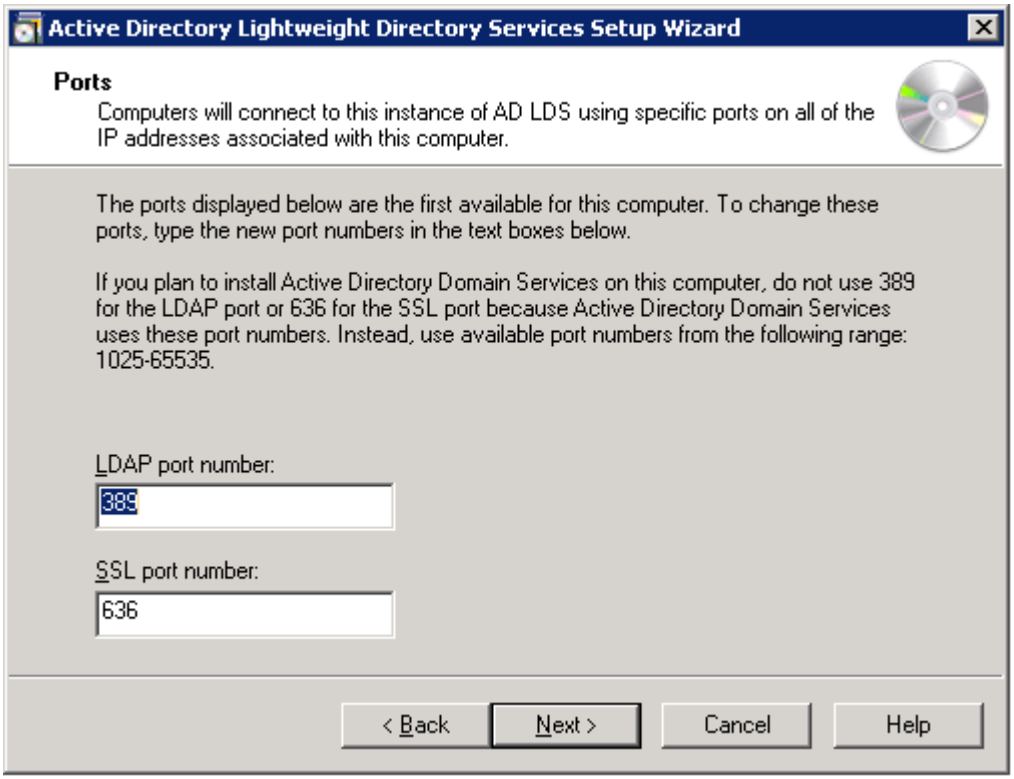
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

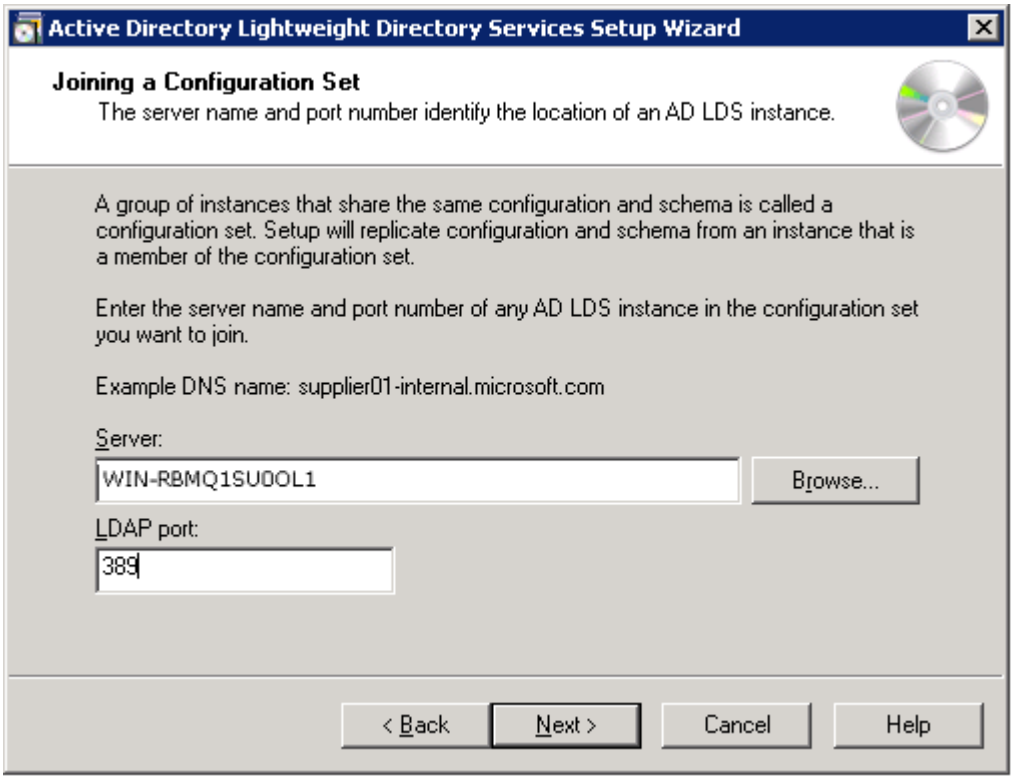


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



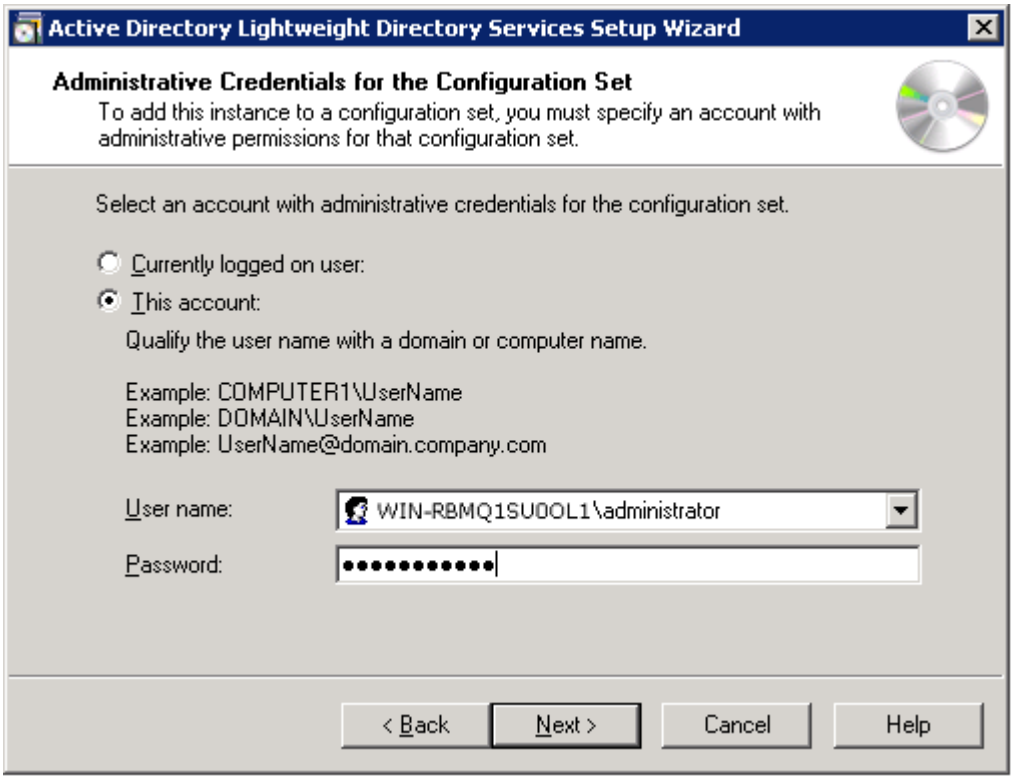
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

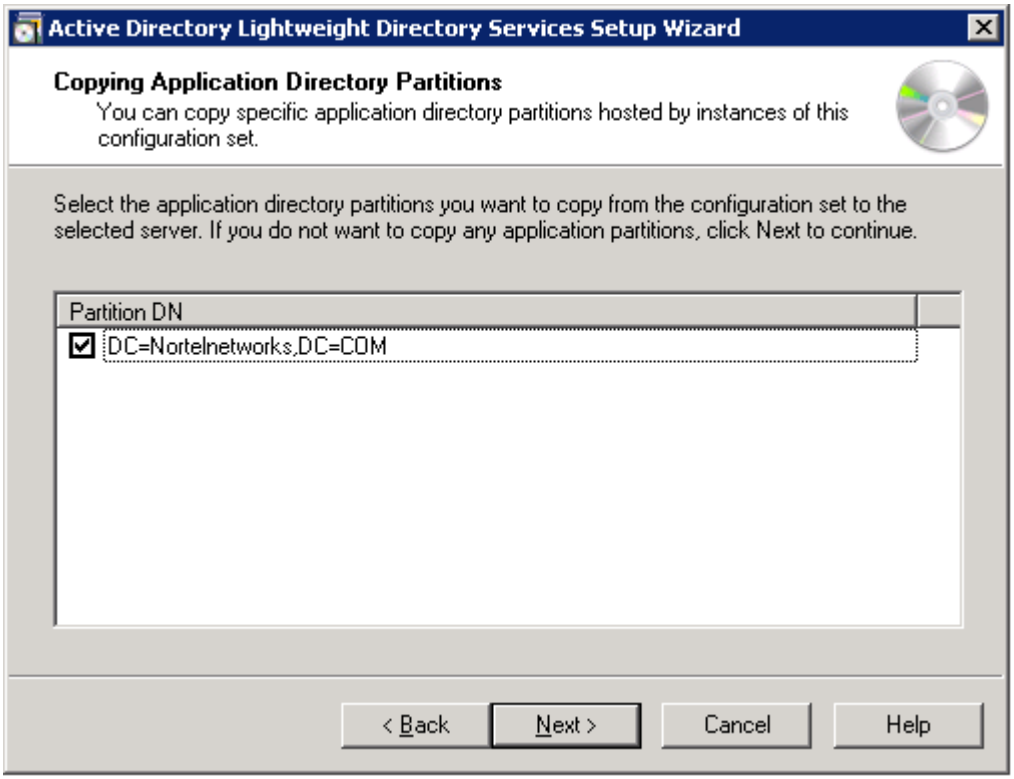


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

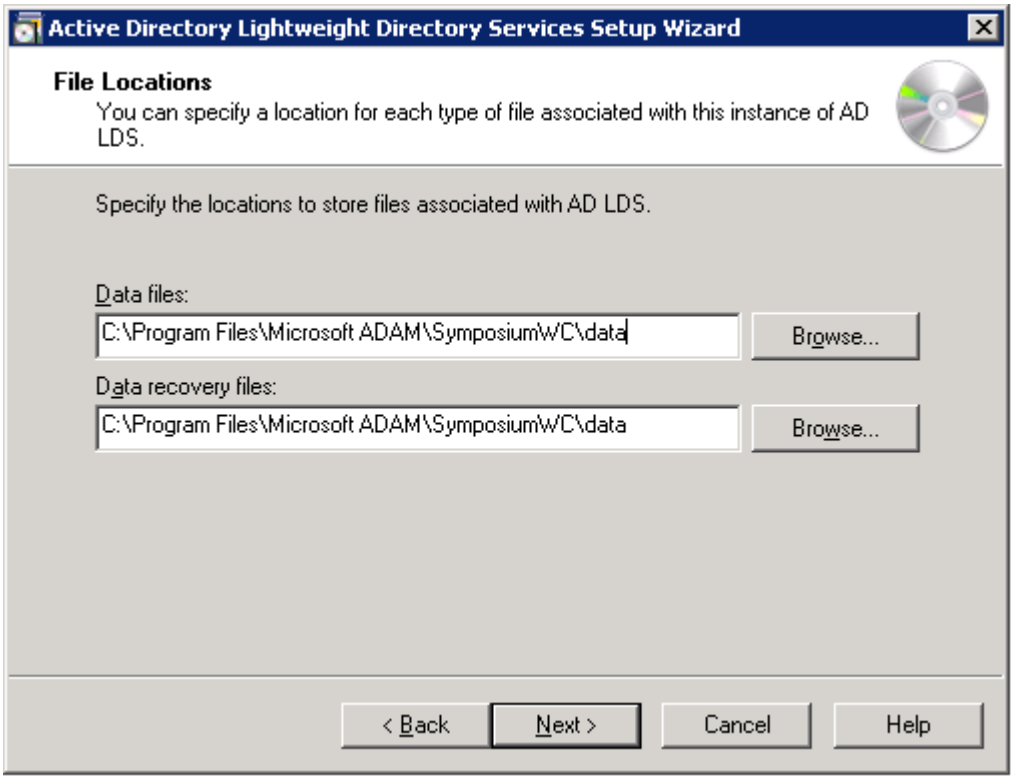
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

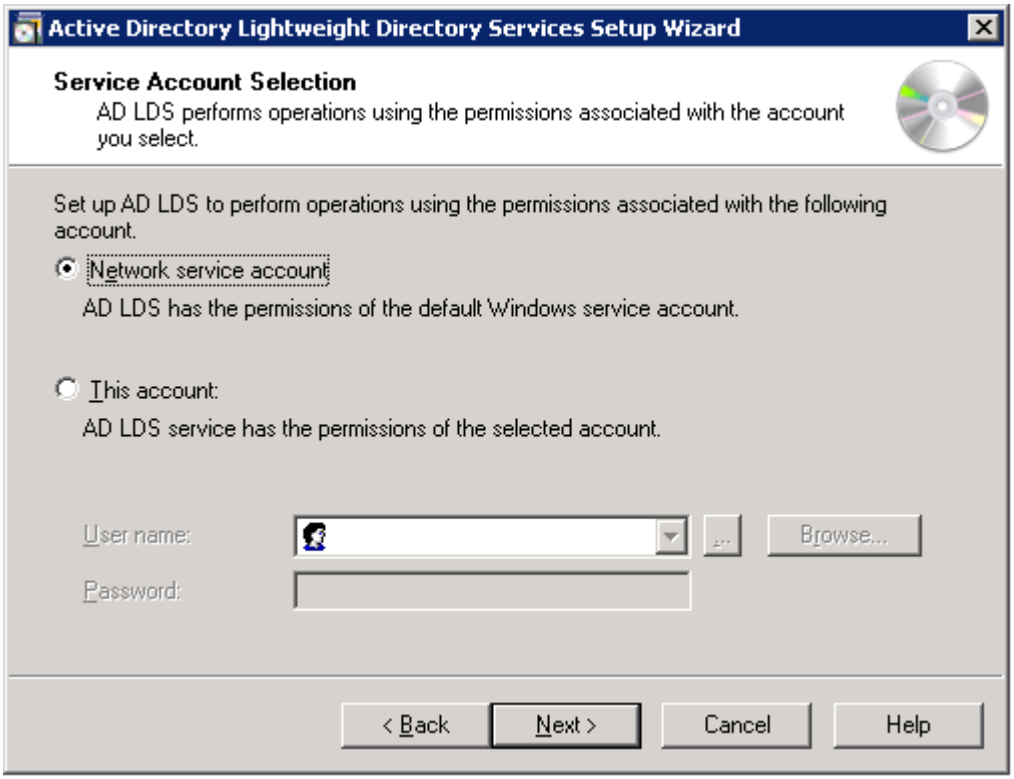


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

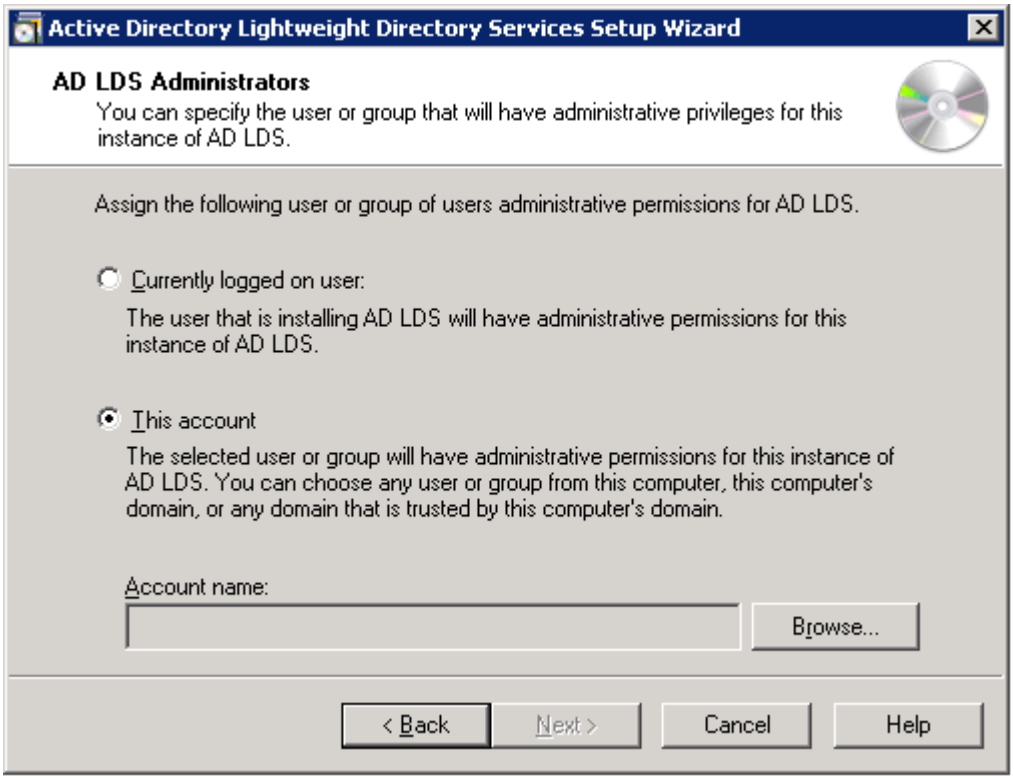


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

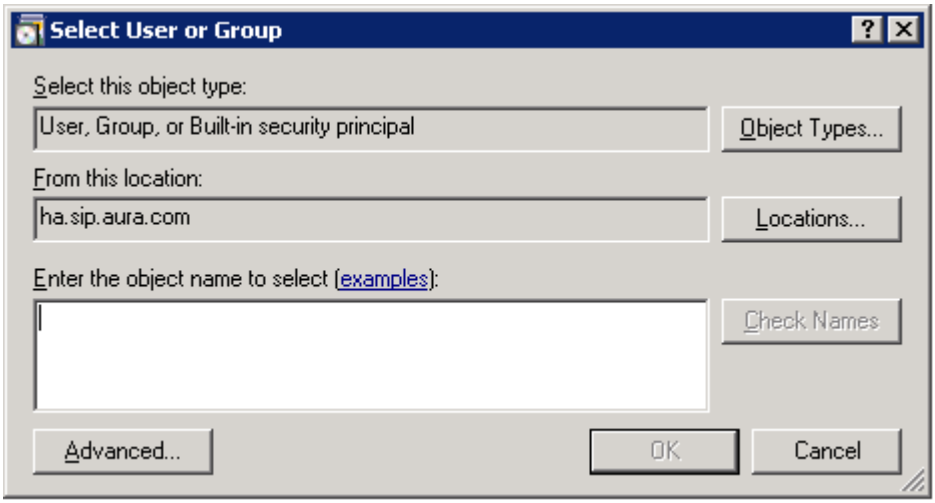


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

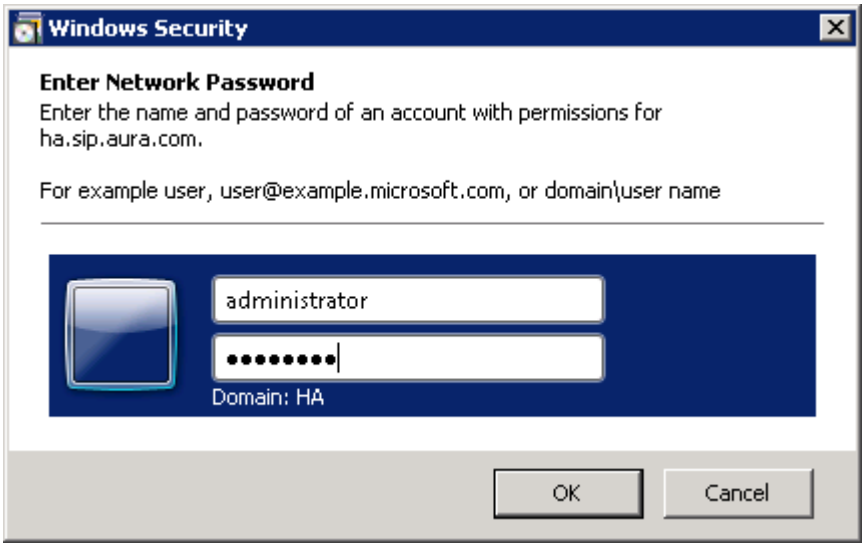


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

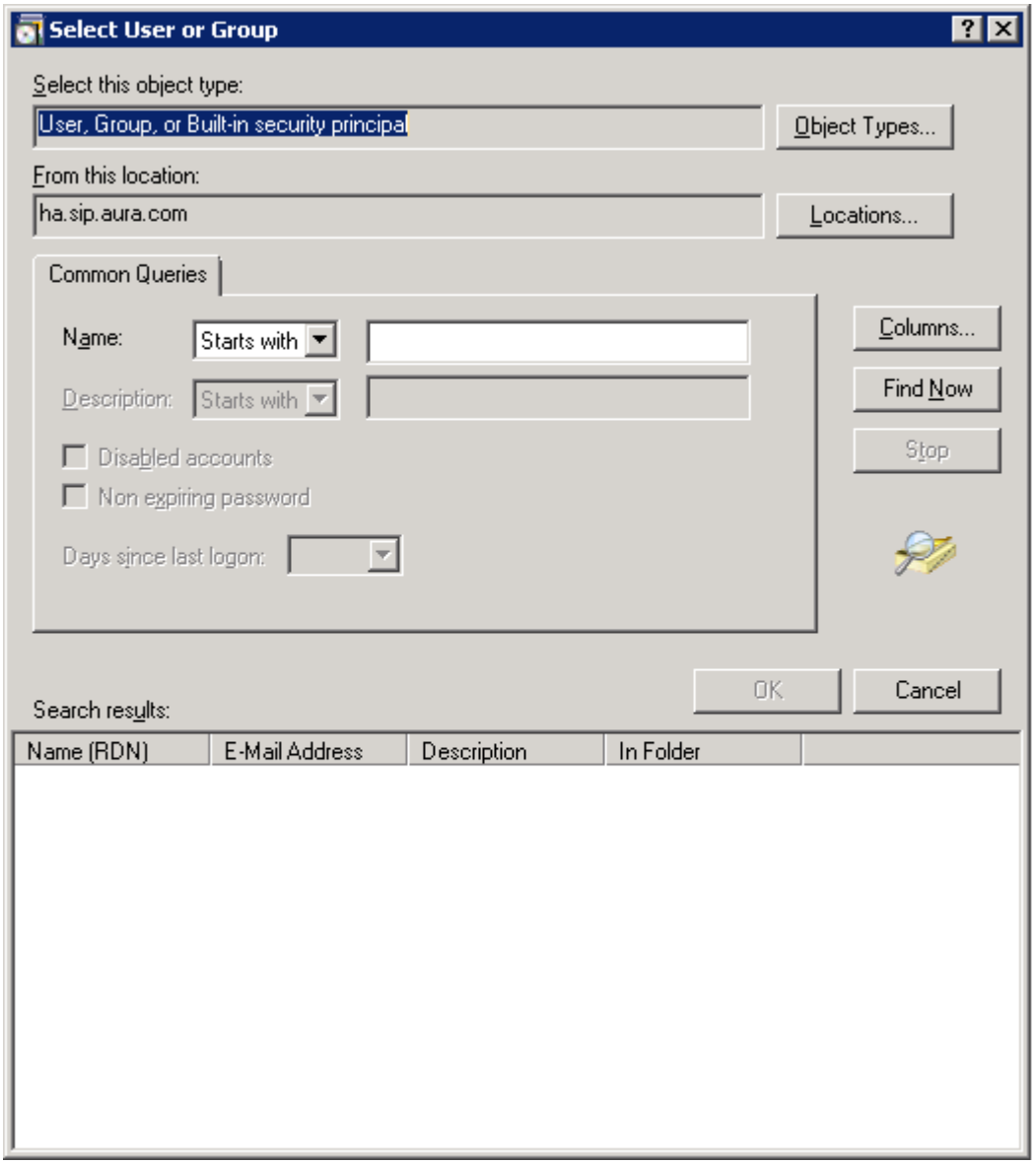


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



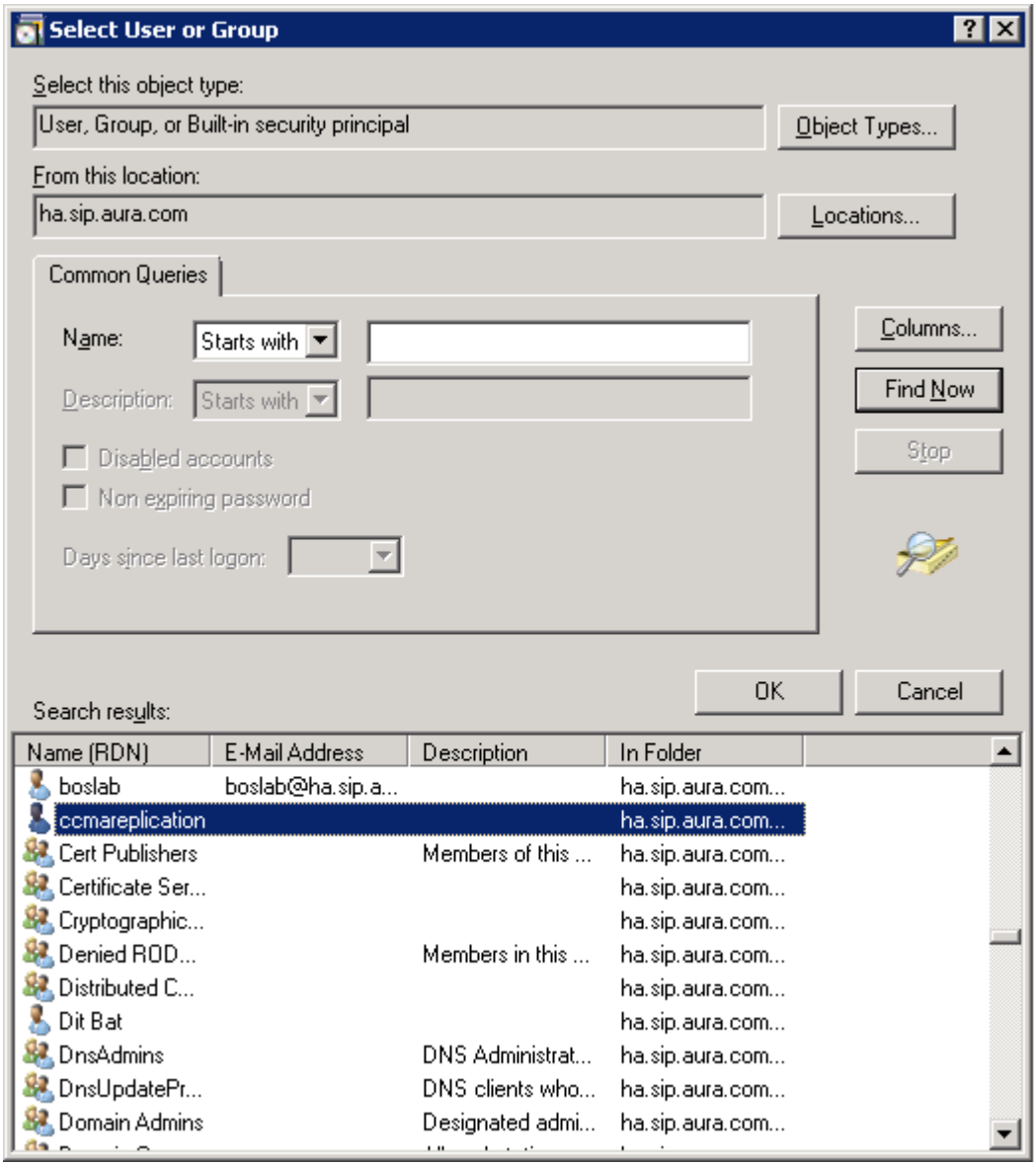
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



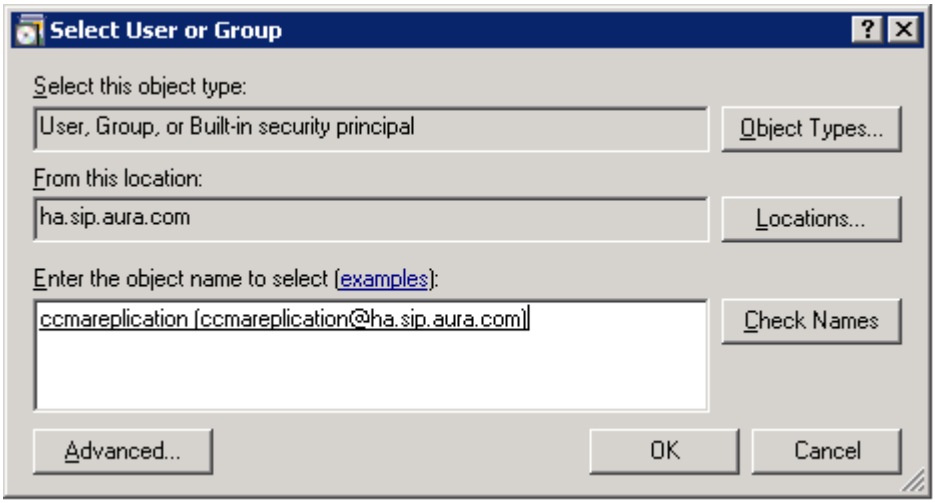
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

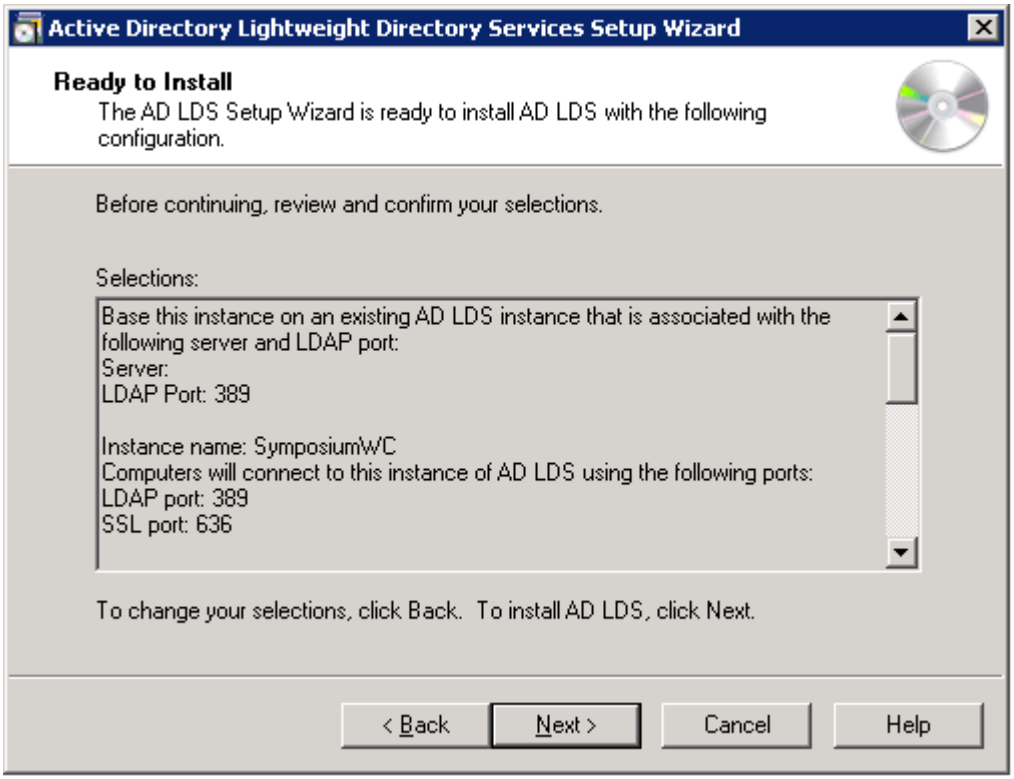


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 10: RGN Voice Contact Server for Avaya Aura® platform installation

This chapter describes how to install a Remote Geographic Node (RGN) Voice Contact Server for a solution with an Avaya Aura® Unified Communications platform. A Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

Install a Voice Contact Server and commission it to be the Remote Geographic Node (RGN) Voice Contact Server in a solution with Disaster Recovery. The Remote Geographic Node server shadows the active server. Remote Geographic Node servers do not automatically take over if the active server fails. The active server, standby server, and Remote Geographic Node server must be at the same patch level and have the same hard disk drive partitions.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

You must complete all the procedures in this section in sequential order.

RGN Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability license is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.

21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the geographic node network

About this task

Connect the Contact Center server to the geographic node network. The geographic node network is the network at the remote geographic site.

Procedure

1. Locate the slot assigned to the geographic node network interface card for the server. Make a note of the slot.
2. Connect the cable from the geographic node network to the geographic node network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the geographic node network.
4. Use the ping command to test connectivity with the campus network and servers.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.

- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the RGN server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the Remote Geographic Node (RGN) server.

Ask your Network or System Administrator to add this AD-LDS replication account to the domain. The primary and RGN replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the Remote Geographic Node (RGN) Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.

23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.

13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the RGN Voice Contact Server software for Avaya Aura® Unified Communications platform

Before you begin

- Ensure the local RGN Avaya Aura® Unified Communications platform is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Remote Geographic Node (RGN) Voice Contact Server software to provide data resiliency and Disaster Recovery.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

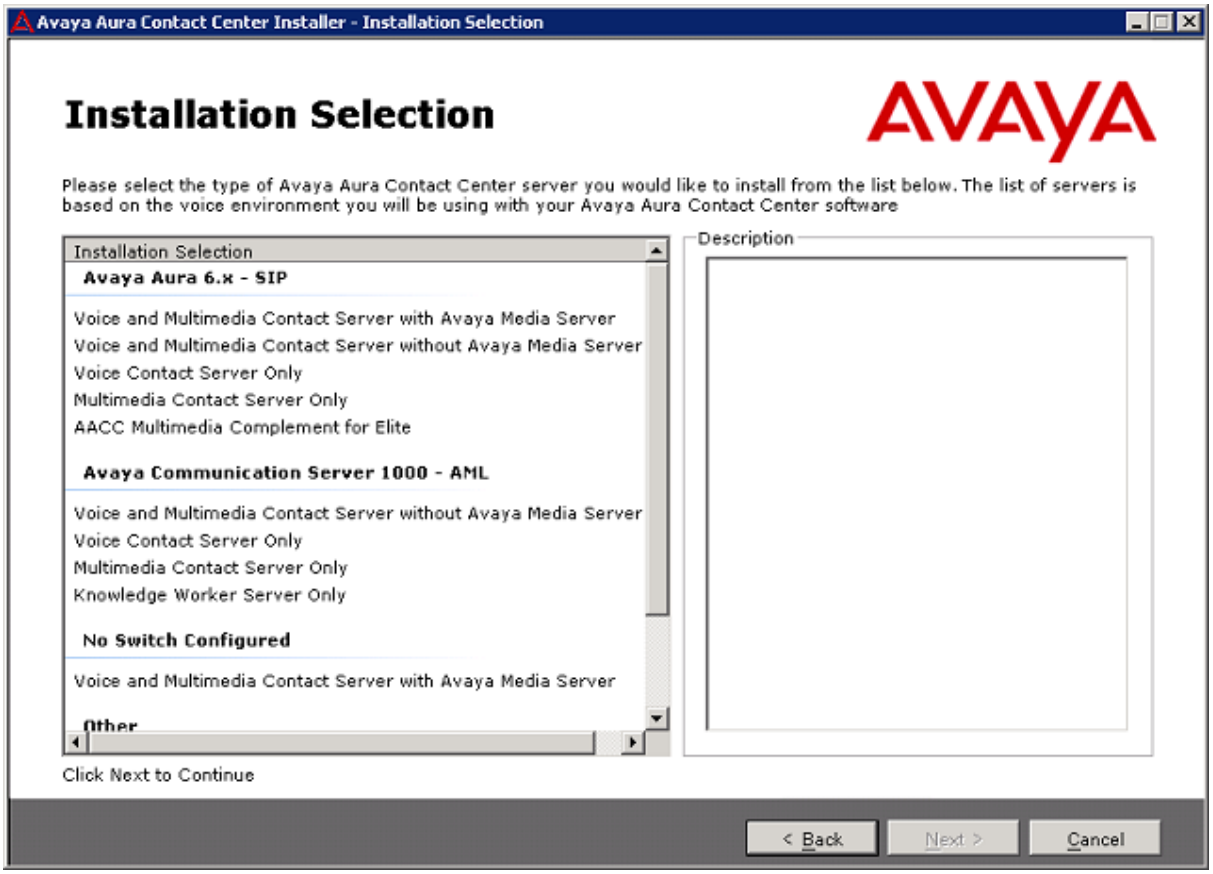
Note:

Read the Contact Center Release Notes for the most recent instructions.

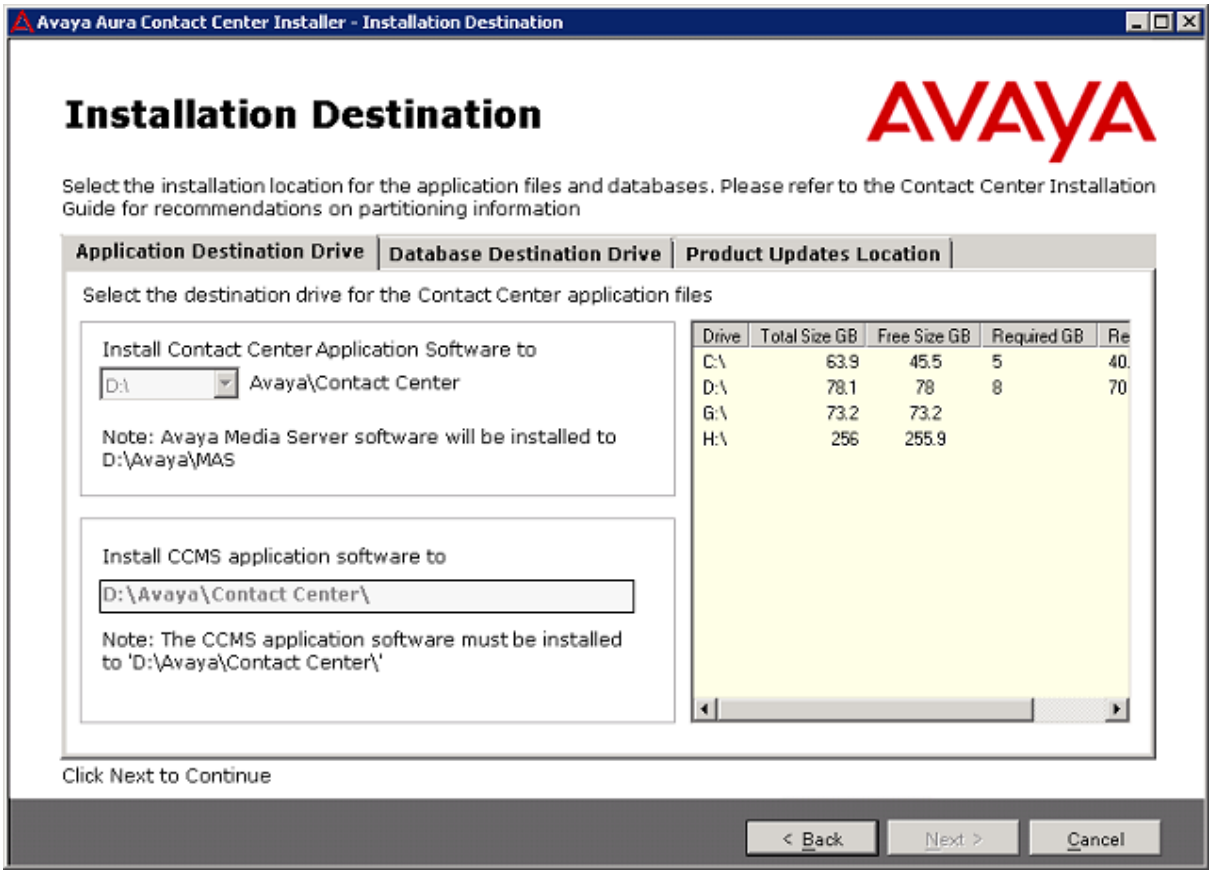
Procedure

1. Insert the Contact Center DVD into the DVD drive of your RGN server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

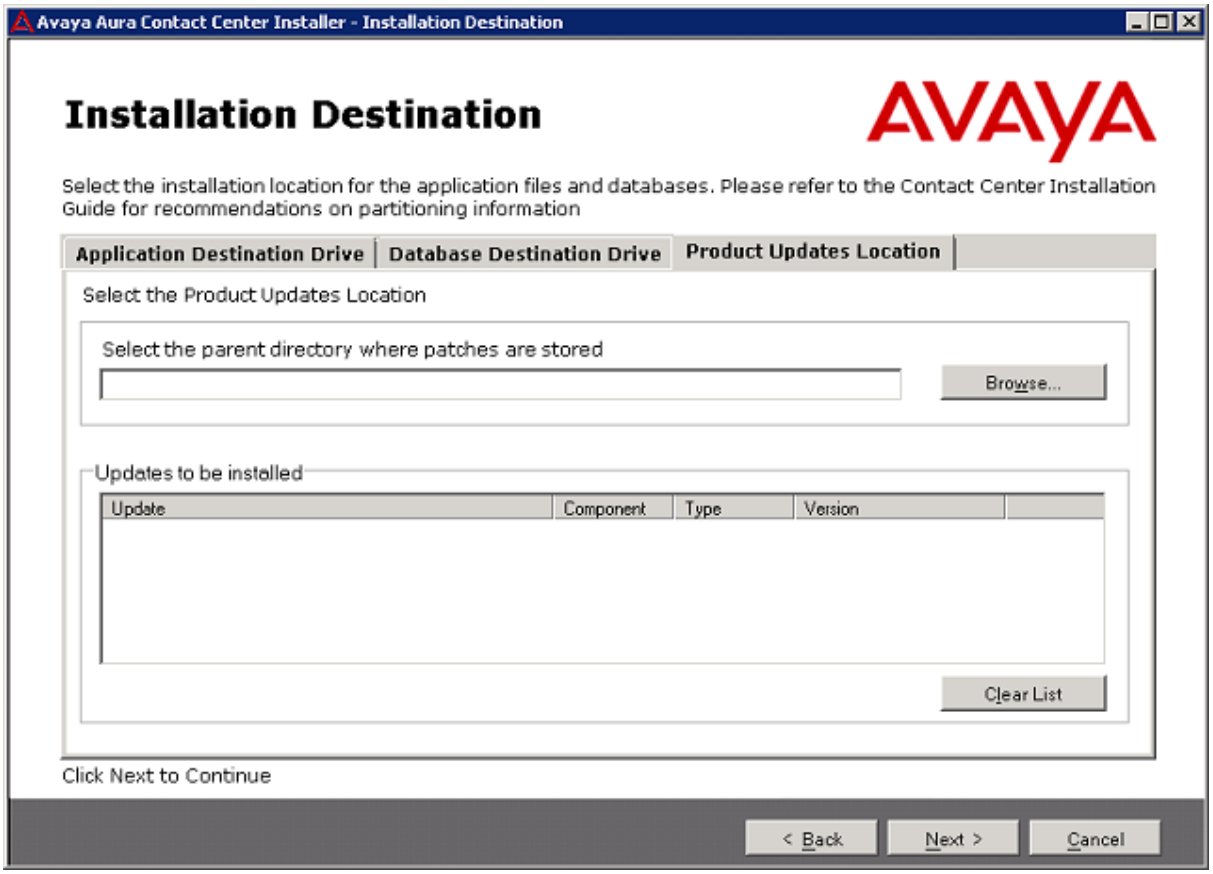
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Voice Contact Server Only**.
9. Click **Next**.



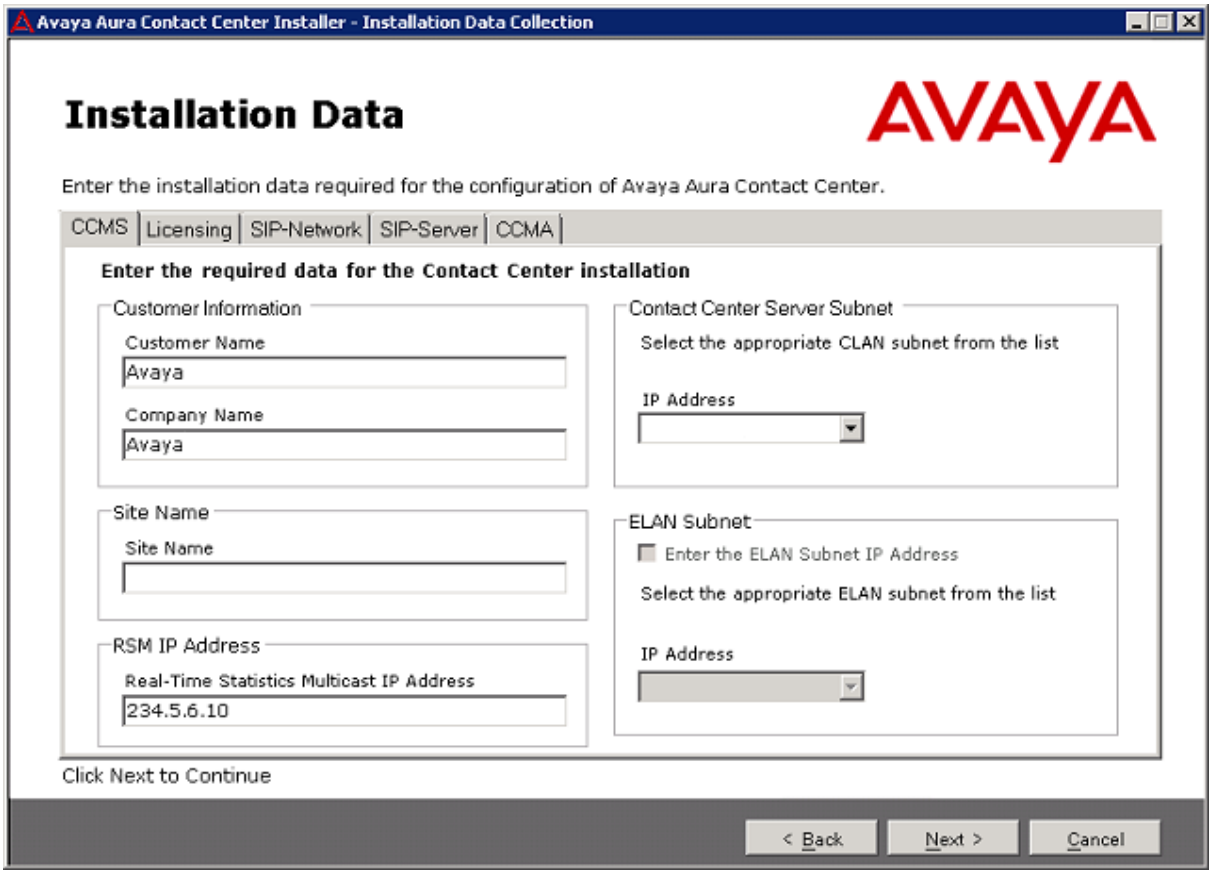
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



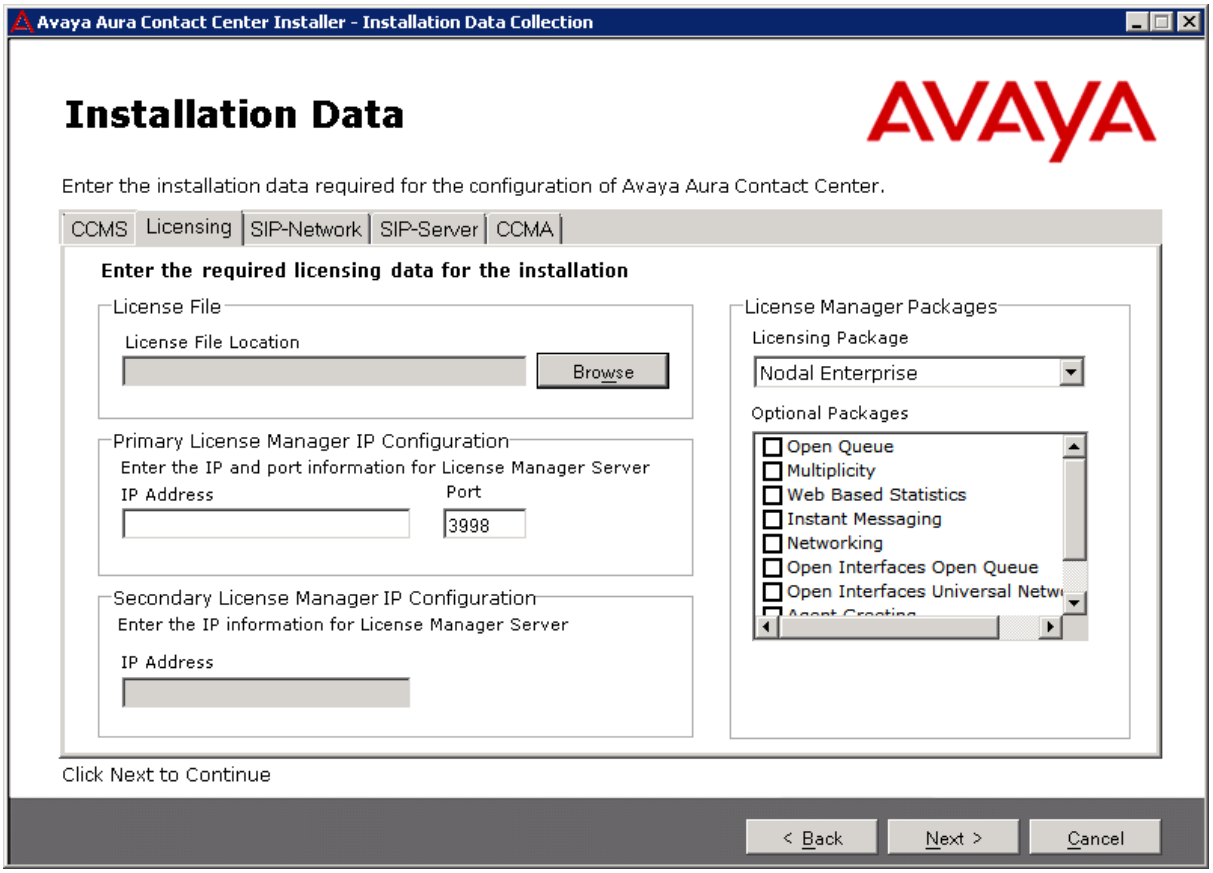
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

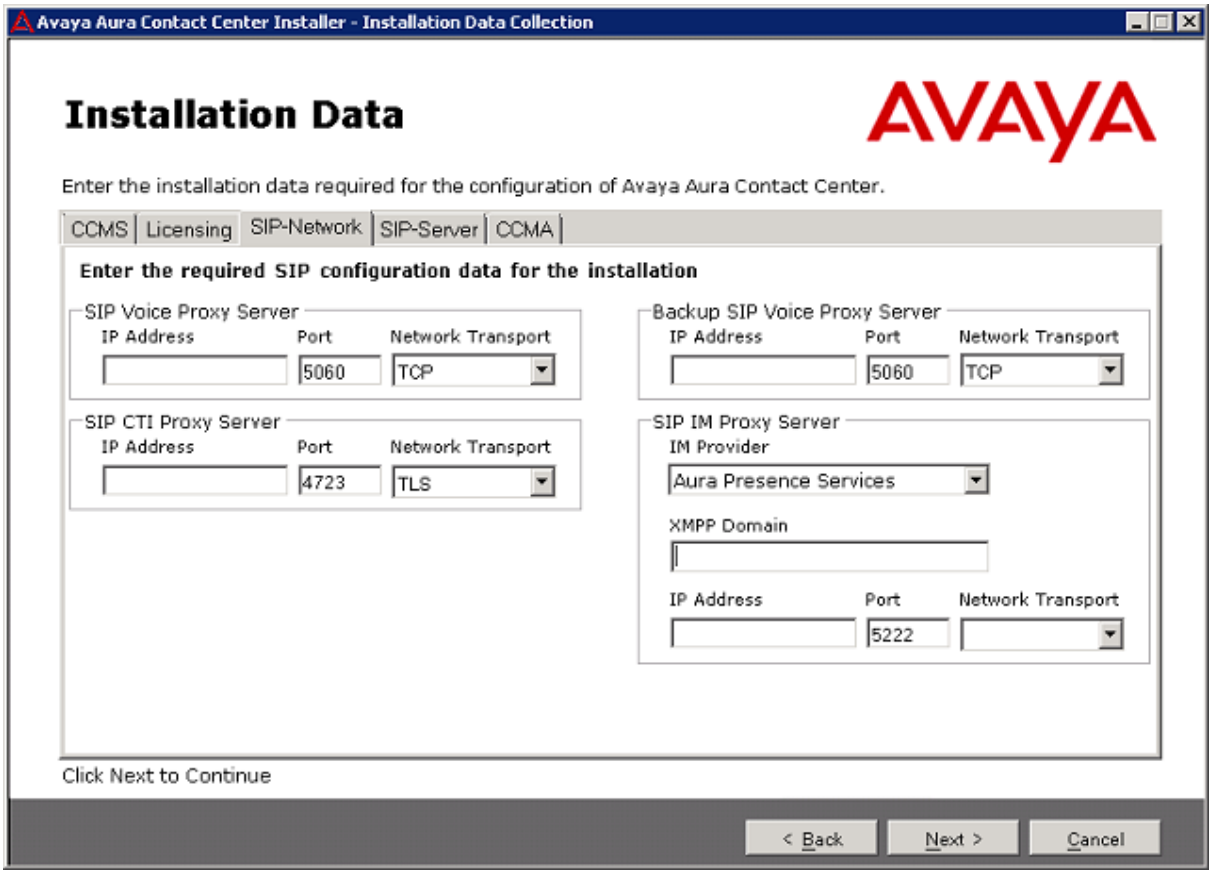
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.



21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. Select the **Licensing** tab, and configure the licensing details.



27. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
28. In the **Primary License Manager IP Address** box, type the IP address of the RGN License Manager server. Each Voice Contact Server contains a License Manager server.
29. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
30. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
31. From the list of **Optional Packages**, enable the licensed features that you have purchased.
32. Select the **Open Queue** check box.
33. Select the **SIP-Network** tab, and configure the SIP proxy server details.

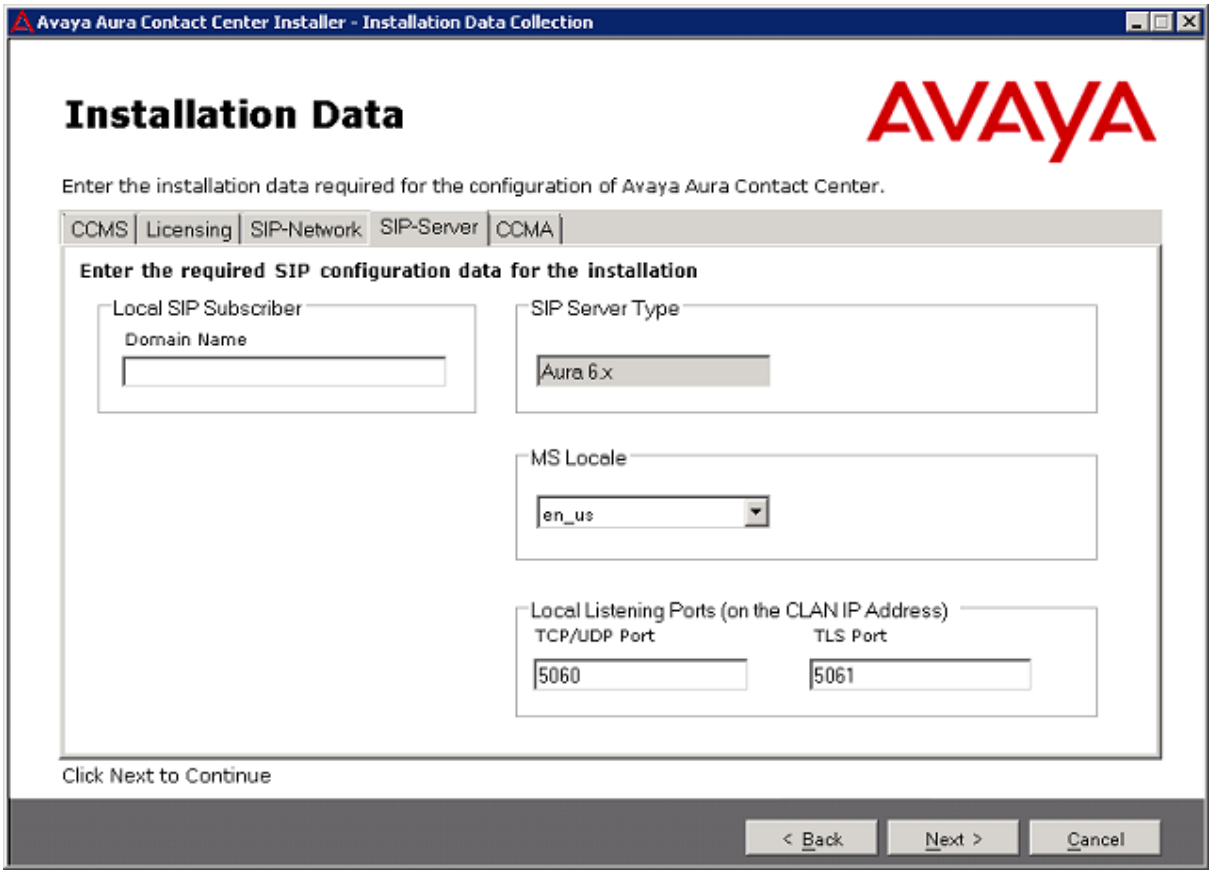


34. In the **SIP Voice Proxy Server** section, in the **IP Address** box, type the IP address for the local RGN Avaya Aura® Session Manager.
35. In the **SIP Voice Proxy Server** section, in the **Port** box, type the server listening port number. The default port is 5060.
36. In the **SIP Voice Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport communication protocol. The default is TCP.

    Note:

    If there are Contact Center agents using SIP deskphones, you must ensure that the SIP Network Transport communication protocol is set to TLS.
37. In the **SIP CTI Proxy Server** section, in the **IP Address** box, type the IP address for the local RGN Avaya Aura® Application Enablement Services server.
38. In the **SIP CTI Proxy Server** section, in the **Port** box, type the SIP CTI Proxy Server port number. The default SIP CTI Proxy Server port is 4723.
39. In the **SIP CTI Proxy Server** section, from the **Network Transport** list, select the SIP Network Transport CTI communication protocol. The default Avaya Aura® Application Enablement Services communication protocol is TLS.
40. Skip the **Backup SIP Voice Proxy Server** section. Leave the **IP Address** box empty.

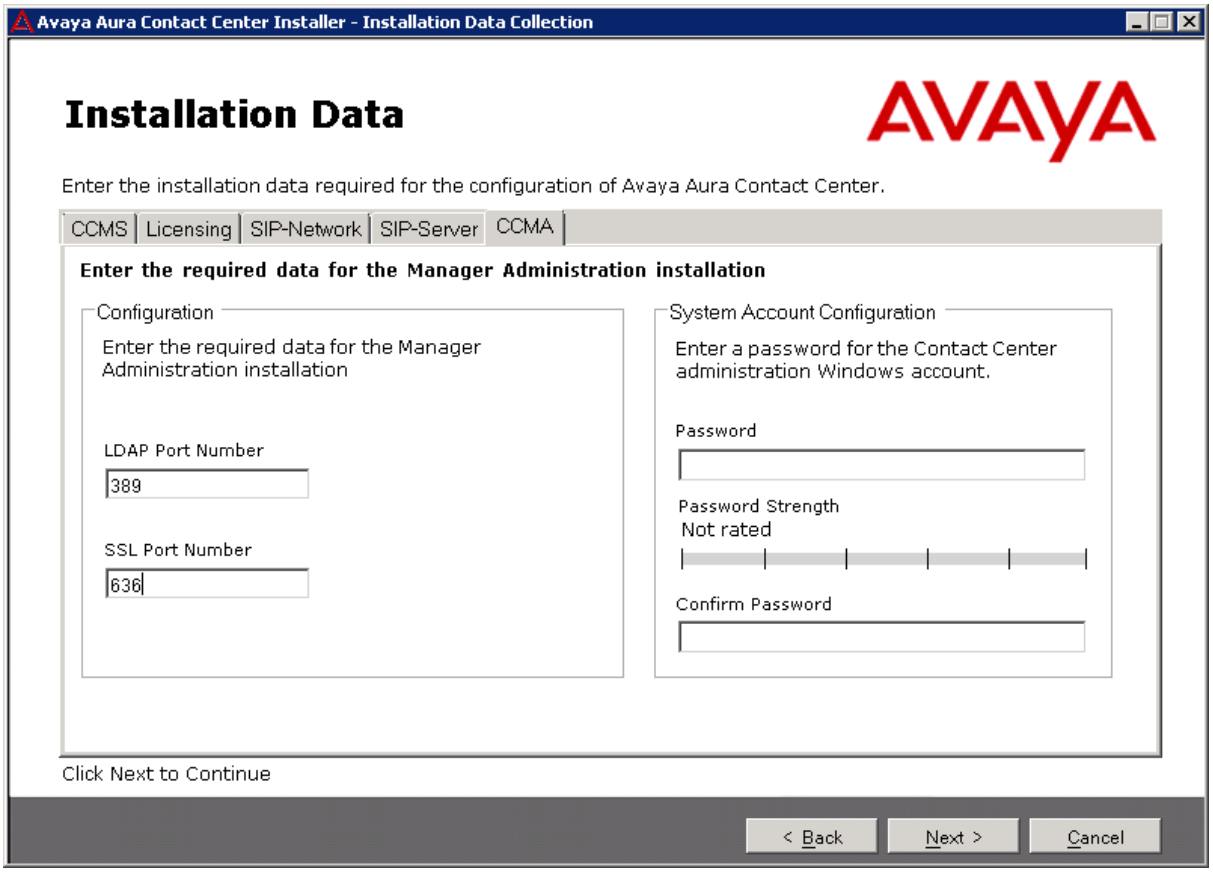
41. In the **SIP IM Proxy Server** section, from the **IM Provider** list, select the Instant Messaging provider. Select Aura Presence Services, Microsoft OCS, or Microsoft Lync. The **IM Provider** question is enabled if you select the **Instant Messaging** optional license package on the **Licensing** tab.
42. In the **SIP IM Proxy Server** section, if using an Avaya Aura® Presence Services server, in the **XMPP Domain** box, type the domain name of the Extensible Messaging and Presence Protocol (XMPP) server. The XMPP Domain name must be different to the Local SIP Subscriber Domain Name.
43. In the **SIP IM Proxy Server** section, in the **IP Address** box, type the IP address of the SIP IM Proxy Server.
44. In the **SIP IM Proxy Server** section, in the **Port** box, type the port number for the IM Proxy Server. The default port number for Avaya Aura® Presence Services is 5222. The default port number for Microsoft OCS and Microsoft Lync is 5060.
45. In the **SIP IM Proxy Server** section, from the **Network Transport** list, select the SIP IM Proxy Server transport protocol.
46. Select the **SIP-Server** tab, and configure the SIP server details.



47. In the **Local SIP Subscriber** section, in the **Domain Name** box, type the SIP domain name for the SIP-enabled contact center. Typically the Avaya Aura® Contact Center SIP Domain Name matches your Active Directory domain name. If the Avaya Aura® Contact Center SIP

Domain Name does not match the Active Directory domain name then it must match the Session Manager contact center SIP domain name. The Local SIP Subscriber Domain Name must be different to the XMPP Domain name.

48. The **Web Service Ports** group box appears only if you select Avaya Aura® Presence Services as the IM Provider. The default **Server Port** number is 9100. The default **Client Port** number is 9120. Use the default port numbers unless you are directed to change them by Avaya Technical Support.
49. From the **MS Locale** list, select the locale (including language and dialects) of the system environment.
50. In the **Local Listening Ports** section, use the default port numbers unless you are directed to change them by Avaya Technical Support. The default **TCP/UDP Port** number is 5060. The default **TLS Port** number is 5061.
51. Select the **CCMA** tab, and configure the CCMA details.



52. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
53. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port

is 636. Check with the system administrator to ensure that the port number is not already in use.

54. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
55. Click **Next**.
56. On the **Summary** window, review and verify the information.
57. Click **Install**.
58. After the installation is complete, click **Finish**.
59. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 11: Multimedia Contact Server software installation

This chapter describes how to install the Multimedia Contact Server software that enables your contact center to handle multimedia contacts. Contact Center Multimedia (CCMM) software enables routing of email (including voice mail, SMS, faxes, and scanned documents), outbound, Instant Messaging (IM) and Web communication contacts to appropriate agents based on subject, contact type, or the time that the contact arrives.

This section describes how to install Multimedia Contact Server software in Avaya Aura® Unified Communications based solutions.

In some small contact center environments, you can install a Voice and Multimedia Contact Server to process both voice and multimedia contacts. But in large contact center environments, you must install the Multimedia Contact Server software on a standalone server. Separate servers are also required for email (Microsoft Exchange for example), Web communication, and some outbound call processing.

You must complete all the procedures in this section in sequential order.

Standby Multimedia Contact Server - High Availability note

Avaya Aura® Contact Center Multimedia Contact Server supports High Availability. To install a standby Multimedia Contact Server, first use the procedures in this chapter to install a primary active Multimedia Contact Server, then repeat the procedures in this chapter to install a standby Multimedia Contact Server and an optional Remote Geographic Node Multimedia Contact Server.

You can use the procedures in this chapter to install the following:

- Primary active Multimedia Contact Server
- Optional Standby Multimedia Contact Server
- Optional Remote Geographic Node (RGN) Multimedia Contact Server

You can install a standby Multimedia Contact Server and commission it to be the standby Multimedia Contact Server in a campus High Availability solution. The standby server takes over multimedia contact processing and becomes the active server if the existing active Multimedia Contact Server fails. The standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

You can install another standby Multimedia Contact Server and commission it to be the Remote Geographic Node Multimedia Contact Server in a solution with Disaster Recovery. The Remote Geographic Node server shadows the active server. The Remote Geographic Node (RGN) server does not automatically take over if the active server fails. The standby server, Remote Geographic

Node server, and active server must be at the same patch level and have the same hard disk drive partitions.

The roles and responsibilities of the active, standby, and Remote Geographic Node Multimedia Contact Servers are defined later during High Availability commissioning.

Multimedia Contact Server installation prerequisites

Procedure

- Install a Voice Contact Server to provide the core functionality for this Multimedia Contact Server.
- If you use email in your contact center, install and configure an inbound email server and an outbound email server in your network.
- If you use Web communications in your contact center, install and configure a Web server in your network.
- If you use predictive outbound in your contact center, ensure that the predictive outbound hardware and software is configured for your network.
- Ensure that your new Contact Center license file is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode.

Name	Description
	Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.

11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.

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

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.

4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Multimedia Contact Server software

Before you begin

- Download the most recent Contact Center Multimedia and common component patches to the server.
- Empty all temporary folders on the server. To determine the specific temporary folders for a server, access the DOS prompt and type set. Note the values listed for TEMP and TMP, and delete all files in those locations.

About this task

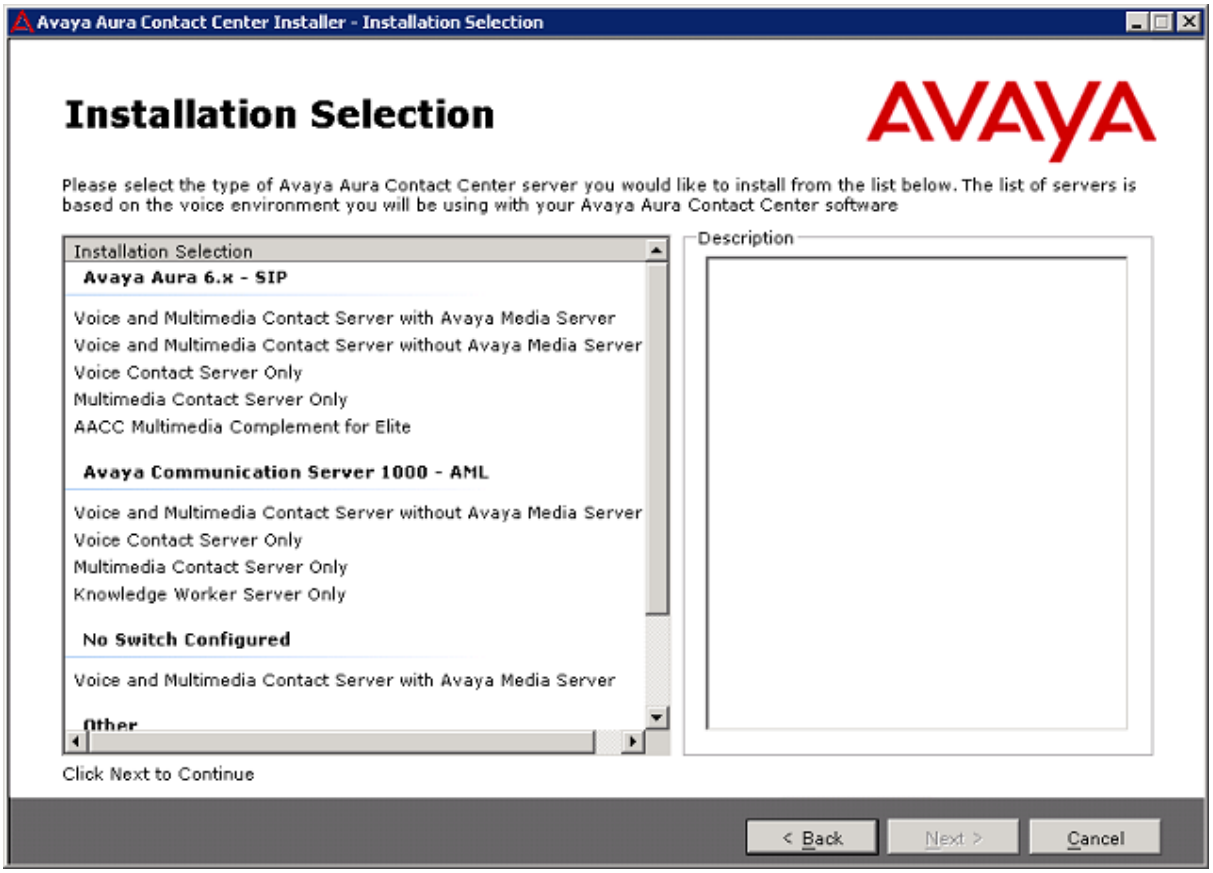
Install the Multimedia Contact Server software to provide inbound and outbound voice, email (including voice mail, SMS, faxes and scanned documents), and Web communications contact types in your contact center. Multimedia Contact Server also supports Instant Messaging in SIP-enabled contact centers.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.

5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.

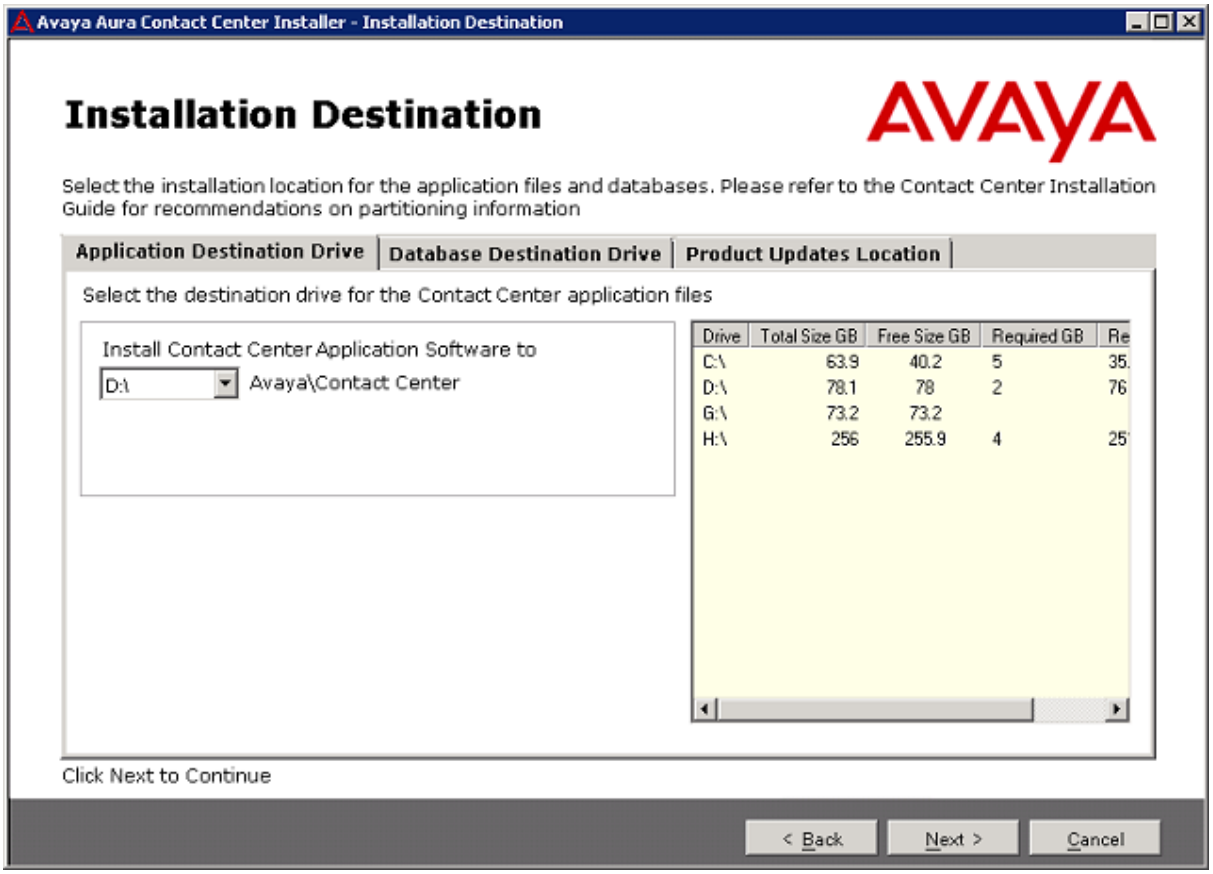


8. Select the type of multimedia server to install:

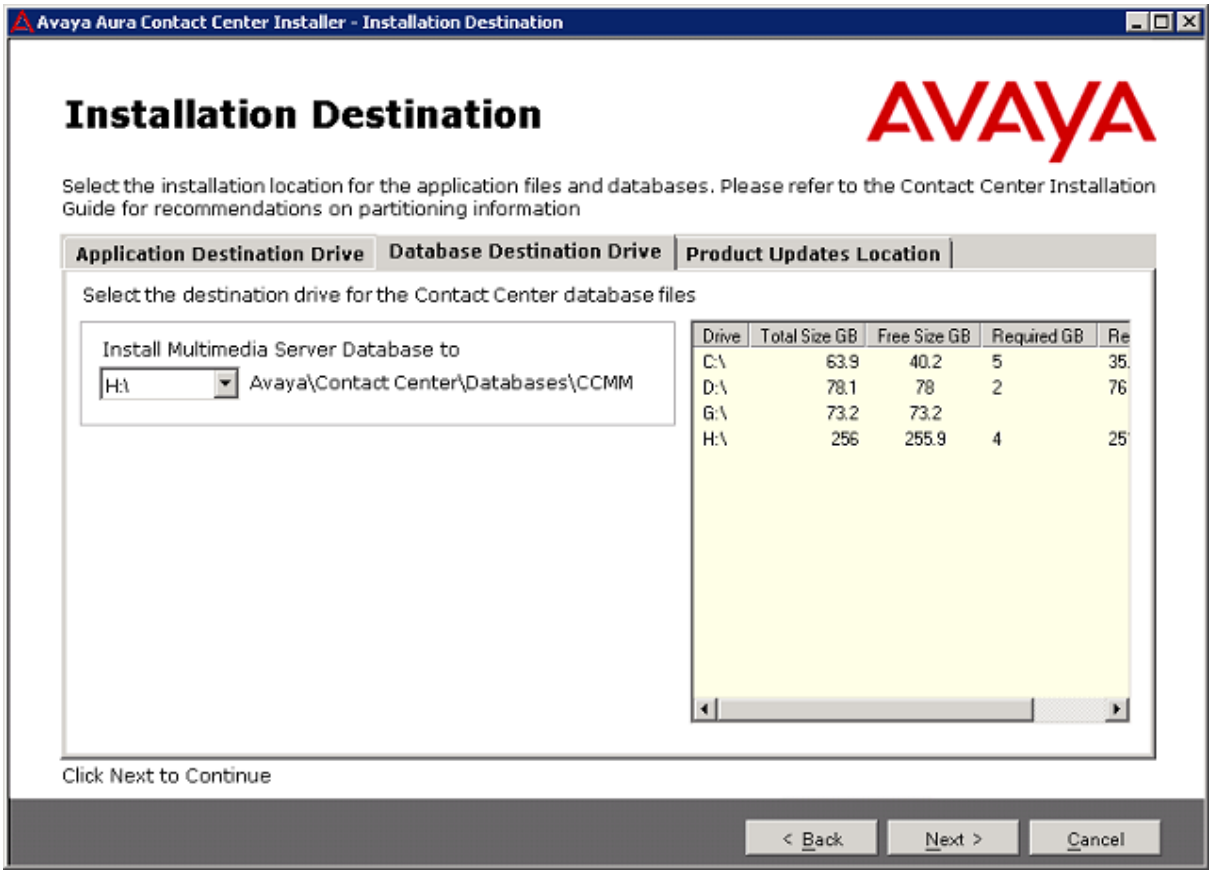
   In an Avaya Communication Server 1000 (CS1000) based solution, on the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Multimedia Contact Server Only**.

   In a SIP-enabled solution, on the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Multimedia Contact Server Only**.

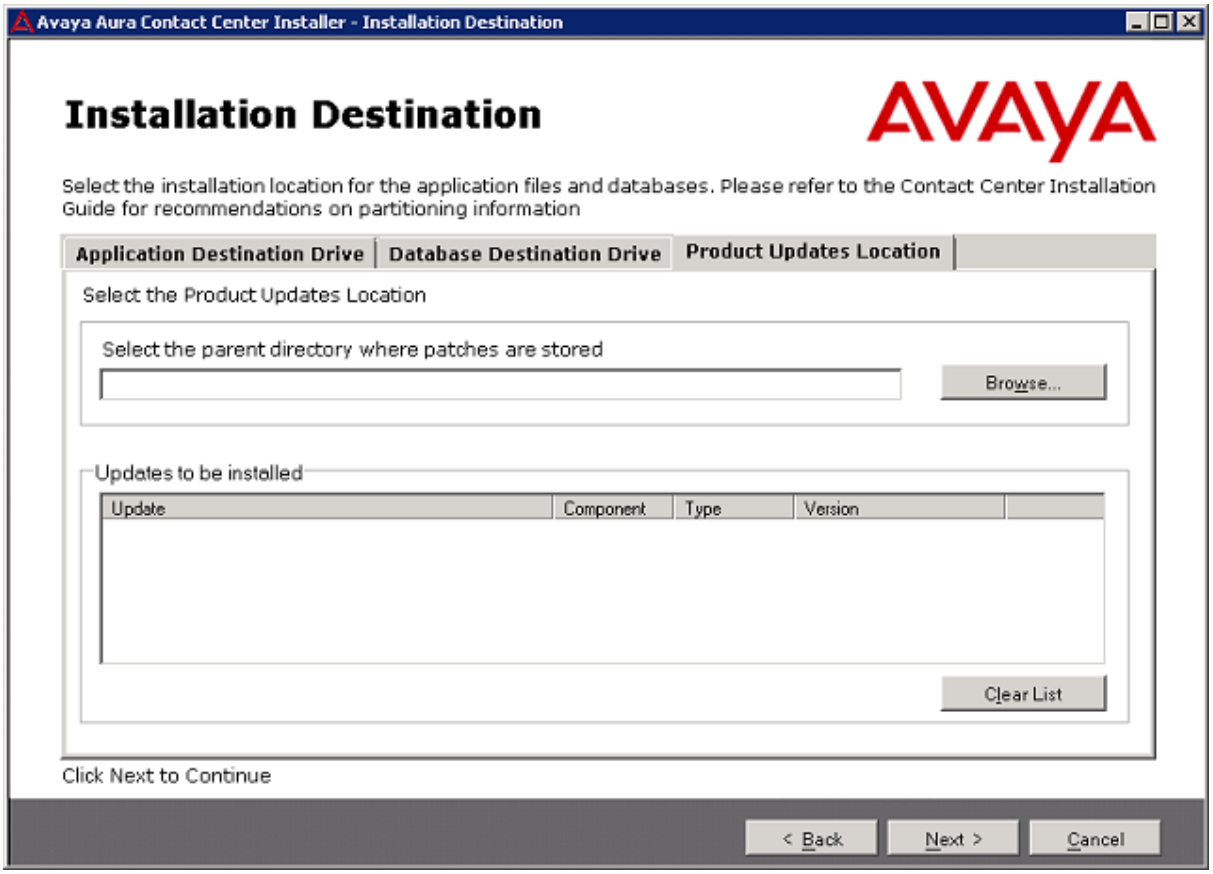
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select the drive for the contact center software applications.
11. Click the **Database Destination Drive** tab.



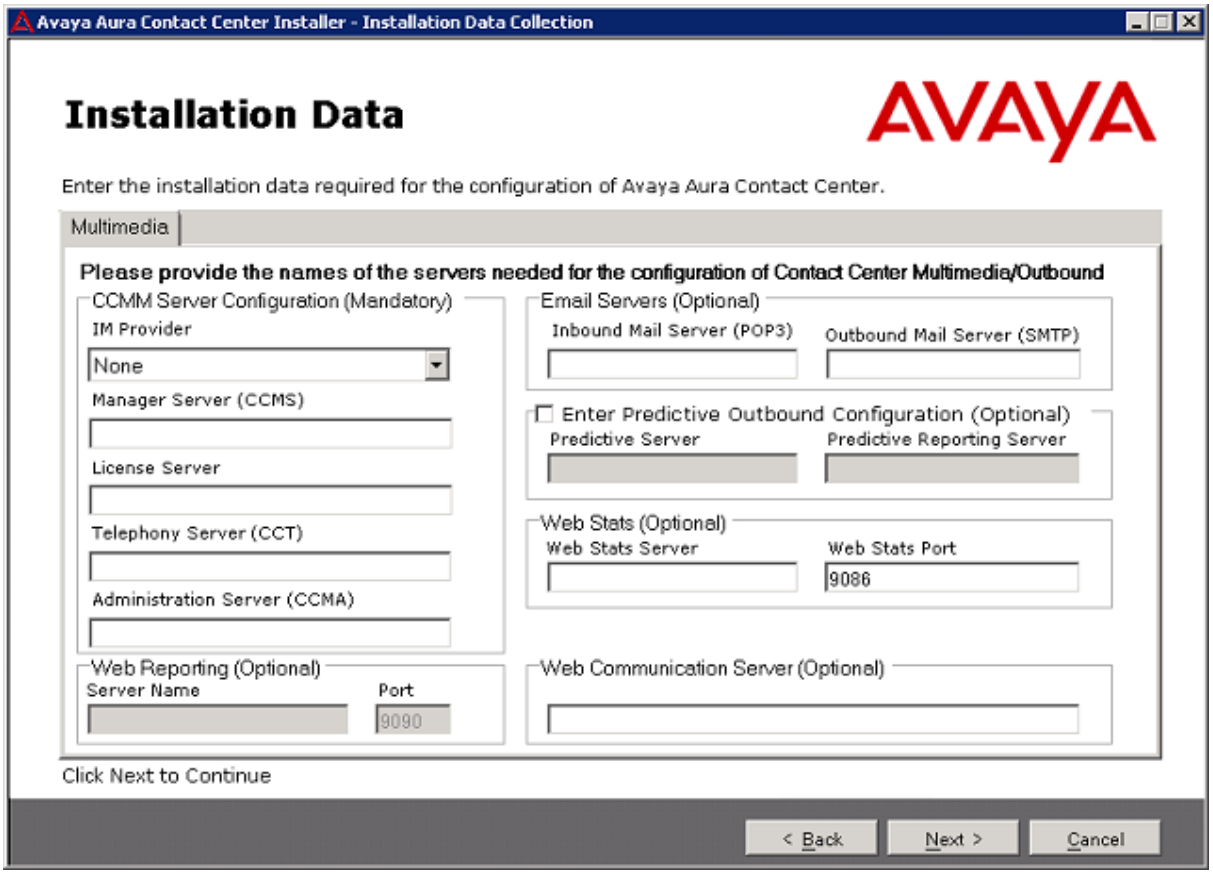
12. Under **Install Multimedia Server Database to**, select the drive for the multimedia server database.
13. Click the **Product Updates Location** tab.



14. Under **Select the parent directory where patches are stored**, select the drive on which you stored the patches. Click **Browse** to locate the folder.
15. Click **Next**.

    The System Readiness Check utility runs on the server.
16. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
17. Click **Next**.
18. On the **Installation Data** window, type the installation details for the **Multimedia** tab.



19. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync, or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, Microsoft Lync. Instant Messaging contacts are supported only in SIP-enabled contact center solutions. Avaya Communication Server 1000 (CS1000) based solutions do not support Instant Messaging contact routing.
20. In the **Manager Server (CCMS)** box, type the name of the server on which the Contact Center Manager Server software is installed.
21. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
22. In the **Telephony Server (CCT)** box, type the name of the server on which the Communication Control Toolkit software is installed.
23. In the **Administration Server (CCMA)** box, type the name of the server on which the Contact Center Manager Administration software is installed.
24. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.
25. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.

26. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
27. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
28. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
29. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
30. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
31. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
32. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
33. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
34. Click **Next**.
35. On the **Summary** window, review and verify the information.
36. Click **Install**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database
- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Installing the Instant Messaging chat server on the external Web server

Before you begin

- Install Contact Center Multimedia server software in a SIP-enabled Contact Center.
- Install the Instant Messaging license on the Contact Center License Manager.

About this task

The Instant Messaging chat server allows customers to have Instant Messaging chat sessions with the contact center. The Instant Messaging chat server uses Presence Services to gather presence information for the Agent, Supervisor and Expert.

The Avaya Aura® Contact Center sample Instant Message XMPP client application is compatible only with Avaya Aura® Presence Services Release 6.1 or earlier. The Avaya Aura® Contact Center sample application is not compatible with Avaya Aura® Presence Services Release 6.1.1 or later.

Procedure

1. Download the Avaya Aura® Contact Center Sample Instant Message XMPP client application from www.avaya.com/support to the external Web server.
2. Extract the contents of the sample application and read the AACCPresenceServices_IMChatServerInstall document for further instructions.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 12: Avaya Media Server installation on Linux

This chapter describes how to install Avaya Media Server software on a Linux server in your SIP-enabled Avaya Aura® Contact Center.

New installations of standalone Avaya Media Server are supported only on the Red Hat Enterprise Linux 6.x 64-bit operating system.

Avaya Media Server is a software based media processing platform. The Avaya Aura® Contact Center DVD contains an enhanced version of Avaya Media Server which contains an additional component—Contact Center Services for Avaya Media Server. The Contact Center Services packaged application provides the conference services required by SIP-enabled Contact Center.

Important:

Installing Contact Center Services For Avaya Media Server (CCSA) automatically enables Avaya Media Server debug tracing. Avaya Media Server is a software-based media processing platform. All media processing is performed in software on the host CPUs. Avaya Media Server therefore does not support debug tracing in production systems. When you have commissioned and tested your SIP-enabled contact center solution, you must disable trace debugging before placing the system in production. For more information about disabling Avaya Media Server debug tracing, see *Avaya Aura® Contact Center Commissioning* (44400-312).

You can use the procedures in this section to install the following:

- Primary Avaya Media Server on Linux.
- (Optional) Secondary Avaya Media Server on Linux. This server type is used in an Avaya Media Server cluster.
- (Optional) Standard Avaya Media Server on Linux. This server type is used in an Avaya Media Server cluster.
- (Optional) Backup Avaya Media Server on Linux. This server type is used with Avaya Media Server High Availability.
- (Optional) Remote Geographic Node Avaya Media Server on Linux. This server type is used with Avaya Media Server High Availability.

The roles and responsibilities of the Avaya Media Servers are defined later during High Availability, Cluster, or Remote Geographic Node commissioning.

You must complete all the procedures in this section in sequential order.

Avaya Media Server installation on Linux perequisites

Procedure

- Install Contact Center Manager Server, Contact Center License Manager, Server Utility, and Contact Center Manager Administration software in your network.
- If you are using KRS licensing for your contact center solution, ensure that your Avaya Aura® Contact Center PLIC license file is available.
- The Avaya Aura® Contact Center version of Avaya Media Server is supported only in a SIP-enabled contact center.

Installing the Linux server

Before you begin

- Ensure your new server hardware meets all the requirements described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

About this task

Install the Linux server operating system so that you can install the Avaya Media Server software.

For new installations of standalone Avaya Media Server, Avaya Aura® Contact Center supports only Red Hat Enterprise Linux (RHEL) Release 6.x (64–bit version).

Always select the installation defaults except where this procedure specifies otherwise.

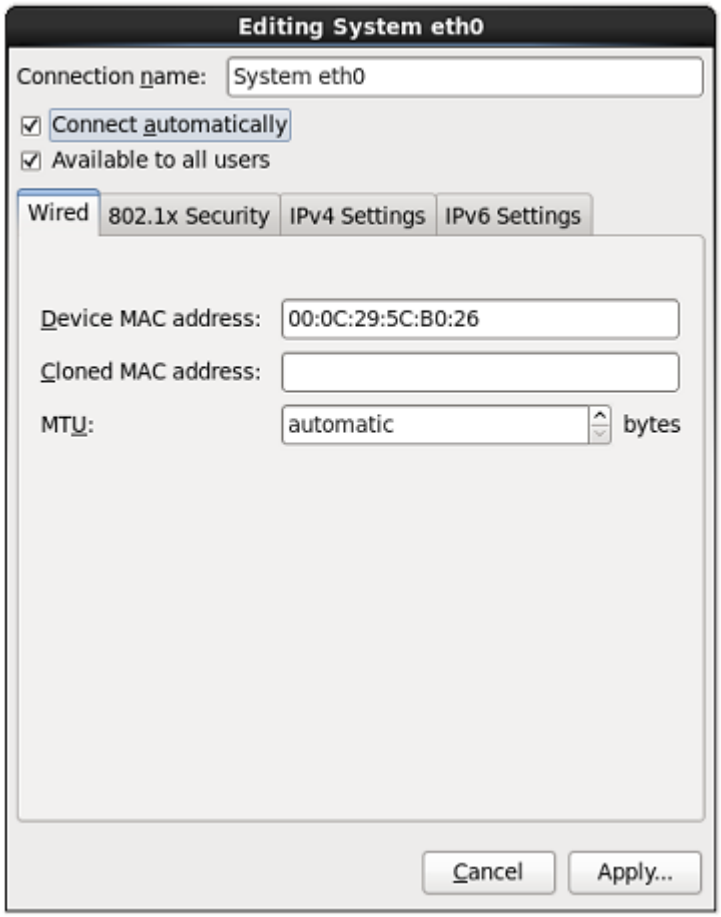
Procedure

1. Place the Linux installation disk in the DVD drive of the server.
2. Restart the server by powering it off, then powering it on again.
3. On the **Welcome to Red Hat Enterprise Linux 6.4!** screen, select **Install or upgrade an existing system**.
4. On the **Disc Found** screen, select **OK** if you want to test your installation media (DVD), or select **Skip** to continue.

   Testing the media can take a long time, but it helps prevent installation problems that can occur due to bad media.
5. On the **Red Hat Enterprise Linux 6** splash screen, select **Next**.
6. On the **What language would you like to use during the installation process** screen, select **English (English)**.

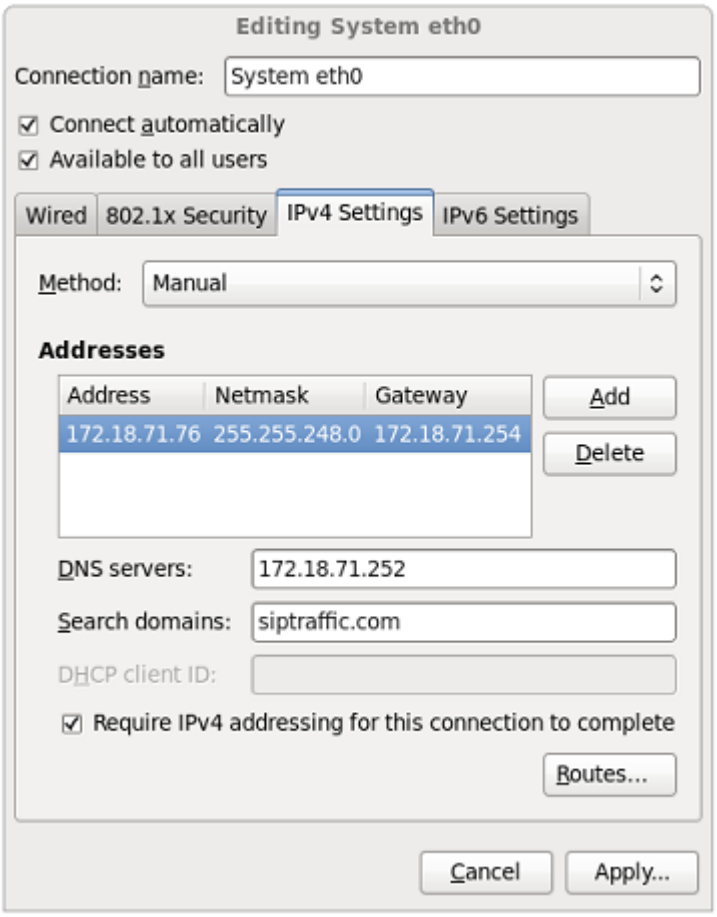
   Avaya Media Server supports only the English operating system.
7. Click **Next**.
8. On the **Select an appropriate keyboard for the system** screen, select the keyboard type for your server, and click **Next**.

9. On the **What type of devices will your installation involve** screen, select **Basic Storage Devices**, and click **Next**.
10. If the installer displays the **Storage Device Warning** screen, click **Yes, discard any data**.
11. If the installer displays the **At least one existing installation has been detected on your system screen**, select **Fresh Installation**.
12. On the **Please name this computer** screen, in the **Hostname** box, enter the Fully Qualified Domain Name (FQDN) for this server.
13. Click **Configure Network**.
14. From the list of **Network Connections**, select the Ethernet interface that you are going to connect to your physical network, and click **Edit**.
15. On the **Editing** screen for the interface you selected, select **Connect automatically**.



16. On the **Editing** screen for the interface you selected, select the **IPv4 Settings** tab.
17. From the **Method** list, select **Manual**.
18. Click **Add**.
19. Enter the IP **Address**, **Netmask**, and **Gateway** for this server.

20. In the **DNS servers** box, type the IP address of the DNS server for your network.
21. In the **Search domains** box, type the domain for this server.



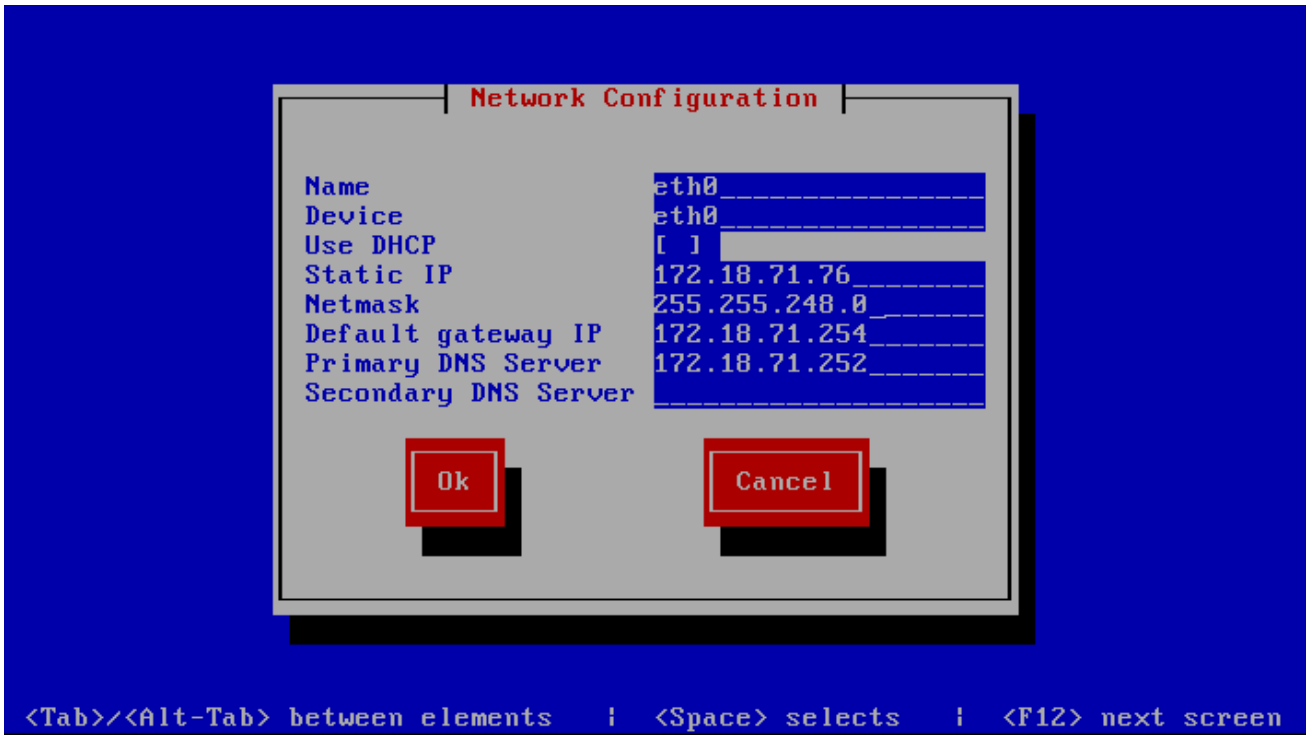
22. Click **Apply**.
23. On the **Network Connections** screen, click **Close**.
24. Click **Next**.
25. On the **Please select the nearest city in your time zone** screen, select the nearest city to your server's location.
26. Select **System clock uses UTC**, and click **Next**.
27. Enter and confirm the root password for this server, and click **Next**.
28. On the **Which type of installation would you like** screen, select **Use All Space**, and click **Next**.
29. On the **Writing storage configuration to disk** screen, select **Write changes to disk**.
30. On the **default installation of Red Hat Enterprise Linux** screen, select **Basic Server**.
31. Click **Next**.

32. Complete the installation and reboot the server.

Next steps

Log on to the server and verify that the Ethernet connection is operating correctly. You can use the `ifconfig`, `ping`, and `ifup` commands to check and start the connection. You can use the `system-config-network-tui` command to verify your network configuration details. If the connection does not work, refer to your Red Hat documentation for troubleshooting guidance.

The following is an example of using the **`system-config-network-tui`** command:



Installing the required packages on the Linux server

Before you begin

Log on to the Linux server.

About this task

Avaya Media Server (Avaya MS) requires specific 32–bit Linux packages to operate correctly. Use the YUM package manager to install the packages required by Avaya Media Server.

Procedure

1. Put the Red Hat Enterprise Linux (RHEL) DVD in the server DVD drive.
2. Change to the root user by running the following command:

```
su –
```

3. Mount the RHEL DVD by running the following commands:

   ```
   mkdir /mnt/cdrom
   ```

   ```
   mount -t auto /dev/cdrom /mnt/cdrom
   ```

4. Set up the YUM repository by copying the yum .repo file from the RHEL DVD, using the following command:

   ```
   cp /mnt/cdrom/media.repo /etc/yum.repos.d/
   ```

5. Set up the YUM repository .repo file permissions. For example:

   ```
   chmod +rw /etc/yum.repos.d/media.repo
   ```

6. Configure YUM to point to the mounted DVD image. For example, enter:

   ```
   echo -e "baseurl=file:///mnt/cdrom\nenabled=1" >> /etc/yum.repos.d/
   media.repo
   ```

7. Use the YUM command to install all the packages required by Avaya Media Server. For example:

   ```
   yum install e2fsprogs-libs.i686 glibc.i686 keyutils-libs.i686 krb5-
   libs.i686 libgcc.i686 libstdc++.i686 zlib.i686 libaio.i686 ncurses-
   libs.i686
   ```

   For the list of required packages, see Linux packages required for Avaya MS on page 257.

Linux packages required for Avaya MS

Avaya Media Server requires 32–bit versions of the RHEL 6.x packages listed in the following table:

Linux packages required for Avaya MS
e2fsprogs-libs.i686
glibc.i686
keyutils-libs.i686
krb5-libs.i686
libaio.i686
libgcc.i686
libstdc++.i686
ncurses-libs.i686
zlib.i686

Installing Avaya Media Server software on Linux

Before you begin

- Download and review the Avaya Aura® Contact Center Release Notes. The Release Notes contain the known issues, patches, and workarounds specific to a release and patch line-up of Avaya Aura® Contact Center.
- Obtain the Avaya Aura® Contact Center Release 6.4 DVD. Read the Avaya Aura® Contact Center Release Notes to ensure that you are using the most recent version of Avaya Media Server software.
- Log on to the Linux server.

About this task

Install the Avaya Media Server software to provide media processing for contacts in a SIP-enabled contact center environment. The Contact Center Services for Avaya Media Server installer automatically creates the following Linux user account group and user accounts:

- amsusers group - the group assigned for Avaya Media Server Element Manager access - any user added to this group can log into Element Manager. Note: The 'root' and 'sroot' users are not members of this group by default, but they can be added.
- amsuser - default administration user for accessing Element Manager - assigned to the above group.
- sroot - user with full Operating System (OS) administrative privileges (equivalent to 'root') for use by Access Security Gateway (ASG).
- init - non-root administrative account for Avaya services personnel, with privileges to access Element Manager. This account is also used by use by ASG.
- craft - non-root administrative account for Avaya services personnel, with privileges to access Element Manager. This account is used by use by ASG.

If you are installing a primary instance of Avaya Media Server, you can configure the following settings at install time:

- Trusted IP addresses
- The SIP domain name
- Locale language and country
- Network Time Protocol (NTP) server. This option is not displayed if NTP is already configured on this server.
- Root SSH access. This option is not displayed if it is already disabled on the server.
- Set the password for the amsuser account, if the account does not already exist.

If you are installing a Secondary, Backup, or Standard instance of Avaya Media Server, you can configure the following settings at install time:

- Network Time Protocol (NTP) server
- Root SSH access

When commissioned, the Secondary, Backup, or Standard Avaya Media Servers replicate (shadow) the trusted IP addresses, SIP domain name, and locale settings from the primary instance of Avaya Media Server.

Note:

Read the Contact Center Release Notes for the most recent instructions.

Procedure

1. Read the Avaya Aura® Contact Center and Avaya Media Server release notes to determine the most recent version of the Avaya Media Server software to install.
2. On your Linux server, use the su command to change to the root user account. For example:

   ```
   su -
   ```

3. On the Avaya Aura® Contact Center Release 6.4 DVD, find the folder /Install Software/AMS/linux. Mount the Avaya Aura® Contact Center 6.4 DVD, for example type the following:

   ```
   mkdir /mnt/cdrom
   ```

   ```
   mount /dev/cdrom /mnt/cdrom
   ```

4. Navigate to the Avaya Media Server Linux folder on the DVD. For example:

   ```
   cd "/mnt/cdrom/Install Software/AMS/Linux/"
   ```

5. Start the Contact Center Services for Avaya Media Server installer by running the installation file. For example,

   ```
   ./ContactCenterServicesForAMS_6.4.0.91.bin
   ```

   Running the Contact Center Services For Avaya Media Server installer automatically installs the Avaya Media Server software and then it installs the Contact Center Services For Avaya Media Server software. The Avaya Media Server and Contact Center Services For Avaya Media Server installation files must both be in the same folder.
6. The installer displays the Install Overview. Press **Enter** to continue.
7. The installer displays the Install Overview. Press **Enter** to continue to page through the license agreement.
8. To accept the license agreement and continue with the install, enter `Y`.
9. At the **Primary server** prompt, if this server is to be a primary Avaya Media Server enter `y`. Otherwise enter `n`.
10. At the **Upgrading** prompt, enter `n`. This is a new installation.
11. At the **Trusted IP Addresses** section, enter the following IP addresses if you know them. If you do not know them, you can add these trusted IP addresses later using Element Manager.
    a. At the **First trusted IP address** prompt, enter the IP Address of the Contact Center Manager Server server.
    b. At the **Next trusted IP address (Optional)** prompt, if your solution is going to have a Remote Geographic Node site that is going to use this Avaya Media Server instance, enter the IP Address of the Remote Geographic Node Contact Center Manager Server server.

c. At the **Next trusted IP address (Optional)** prompt, if your solution is going to use Agent Greeting, enter the SIP Entity IP Address of the Avaya Aura® Session Manager. If you are using Avaya Aura® Contact Center High Availability, also enter a trusted IP address for the SIP Entity IP Address of the second Avaya Aura® Session Manager.

d. The Contact Center Services For Avaya Media Server installation software continues to prompt for another trusted IP Address until you enter none, and simply press **Enter**.

12. At the **AACC SIP Domain Name (Optional)** prompt, enter the name of the SIP domain used by Avaya Aura® Contact Center. If you do not know it, you can add the SIP domain name later using Element Manager.
13. At the **Default Locale** prompt, select the locale for your solution. For example, enter 1 to select en_us. If you do not know it, you can add the locale later using Element Manager.
14. At the **NTP Server address (Optional)** question, enter the IP address, host name, or FQDN of a Network Time Protocol server. If you do not know it, you can add a NTP server later by editing the ntp.conf file. Avaya Media Server must be synchronized in time with the Contact Center Manager Server server, and any other Avaya Media Server in this solution.
15. At the **Disable root SSH access on completion of installation** prompt, enter y for increased security in the final solution.
16. At the **Configuration Summary** section, enter `1` to continue with the installation. Enter `2` to change your installation options.

    The software begins to install. When the installation is complete, the installer prompts for a default administration account (amsuser) password.
17. At the **Changing password for user amsuser** - **New password** prompt, enter the password for the amsuser account.
18. At the **Retype new password** prompt, enter the password for the amsuser account.
19. Log off and on again to set up the shell environment settings for Avaya Media Server.

Securing your Avaya Media Server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, ensure that you exclude the following directories from the scans. The following are the default install locations. If you installed Avaya Media Server in a different location, navigate to the necessary directories and exclude them from antivirus scans.
   - /opt/avaya/ma/MAS/platdata
   - /opt/avaya/ma/MAS/common/log

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Part 2: Avaya Communication Server 1000

Chapter 13: Avaya Aura® Contact Center software installation for CS1000

Avaya Aura® Contact Center Release 6.4 supports a range of server types for Avaya Communication Server 1000 AML-based solutions. Each server type installs a combination of Avaya Aura® Contact Center applications suitable for a specific contact center function. Some Contact Center servers support only voice contacts, some Contact Center servers support only multimedia contacts, and some Contact Center servers support both voice and multimedia.

The Contact Center solution can include one or more servers. The installation configuration you choose depends on the hardware resources and performance demands of your contact center. To implement the Avaya Aura® Contact Center High Availability feature, your solution requires additional standby servers to provide resiliency and redundancy.

Voice and Multimedia Contact Server — Install this server to provide context sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for email messages, web communications, voice mail messages, scanned documents, fax messages, and SMS text messages.

Voice Contact Server Only — Install this server to provide context sensitive and skill-based routing for customer voice contacts.

Multimedia Contact Server Only — Install this server to increase the number of contact center agents in your enterprise solution. When installed, this server provides the multimedia contact processing capabilities, and the Voice Contact Server processes only voice contacts.

Knowledge Worker Server Only — Install a Knowledge Worker server to provide Computer-Telephony Integration (CTI) functionality and call data handling capabilities. The contact center has

no Contact Center Manager Server and, therefore, no skill-based routing capability. Knowledge Worker Server does not support High Availability.

Prerequisites for Contact Center installation workflow

Procedure

- Complete the *Avaya Aura® Contact Center Installation Checklist* (44400-310).
- Ensure all your server hardware meets the requirements described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Know the installation configuration you plan to use in your contact center. For more information see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that your PABX is configured. For more information about configuring the PABX, see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).

Contact Center server types and software installation for CS1000

About this task

This work flow shows the sequence of tasks you perform to install one or more Contact Center servers in an AML-based Avaya Communication Server 1000 contact center solution.

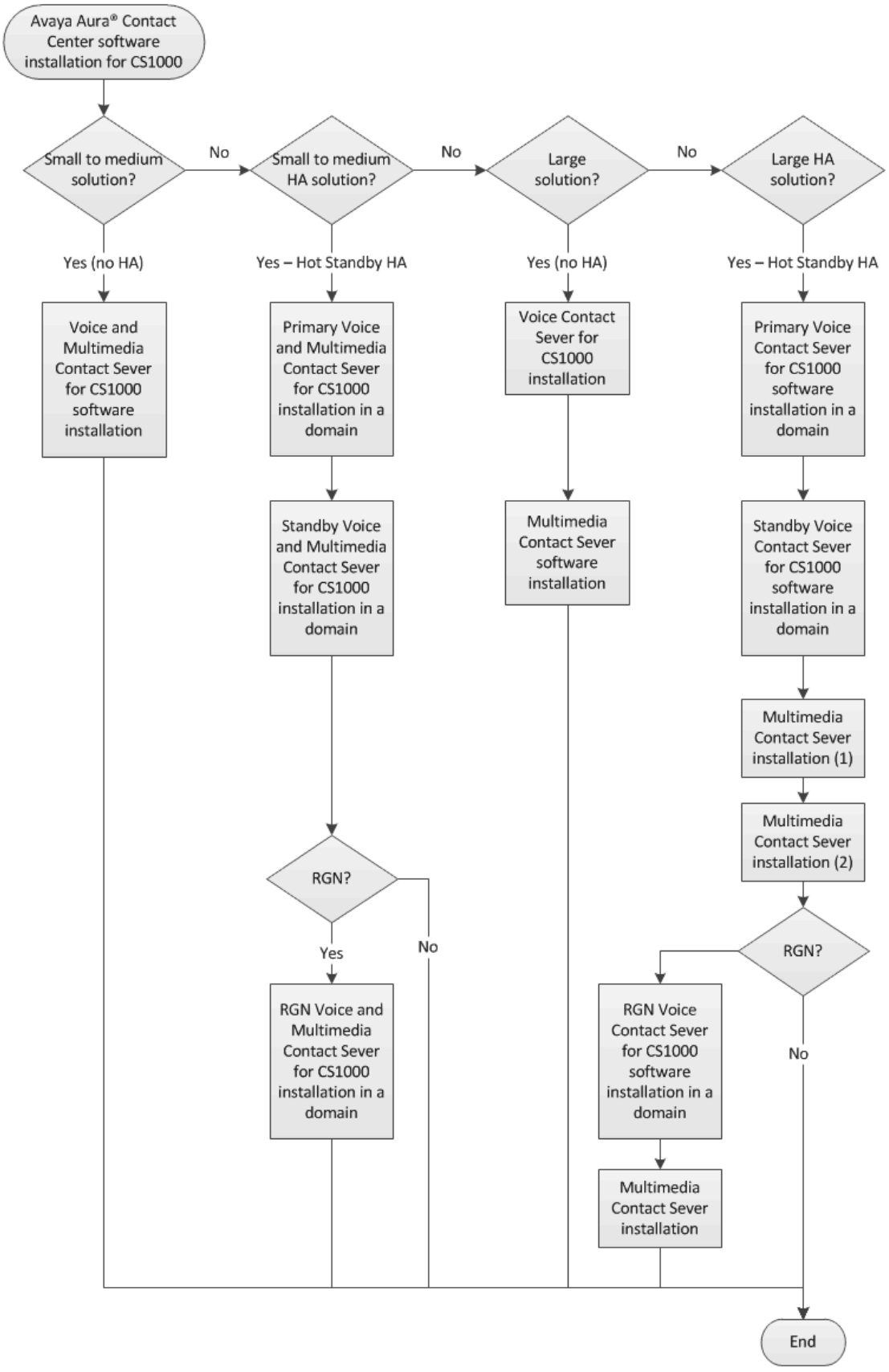


Figure 2: Contact Center software installation tasks for Avaya Communication Server 1000 based

solutions

For more information about installing Avaya Aura® Contact Center servers for an Avaya Communication Server 1000 AML-based contact center solution, see the following:

- Voice and Multimedia Contact Server for CS1000 installation on page 266
- Primary Voice and Multimedia Contact Server for CS1000 software installation in a domain on page 291
- Standby Voice and Multimedia Contact Server for CS1000 software installation in a domain on page 316
- RGN Voice and Multimedia Contact Server for CS1000 installation in a domain on page 355
- Voice Contact Server for CS1000 installation on page 380
- Primary Voice Contact Server for CS1000 installation in a domain on page 400
- Standby Voice Contact Server for CS1000 installation in a domain on page 423
- RGN Voice Contact Server for CS1000 installation in a domain on page 461
- Multimedia Contact Server software installation on page 483
- Knowledge Worker Server software installation on page 502

The following additional and optional server type is also supported in Avaya Communication Server 1000 AML-based contact center solutions:

- Network Control Center Server software installation on page 643

Chapter 14: Voice and Multimedia Contact Server for CS1000 installation

This chapter describes how to install a Voice and Multimedia Contact Server in a solution with an Avaya Communication Server 1000 (CS1000) platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install this server to provide context-sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for voice calls, email messages, Web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

If the server is to be used in a domain, Avaya recommends that you add the server to the domain before installing Contact Center software.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Voice and Multimedia Contact Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Voice and Multimedia Contact Server ELAN NIC and ELAN subnet are optional.

You must complete all the procedures in this section in sequential order.

Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site.

Name	Description
	You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.

8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

Adding the server to a domain or workgroup

About this task

Add the server to a domain or workgroup. Avaya recommends that you add the server to the domain or workgroup before installing Contact Center software.

If you are using a domain:

- 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.
- On the server, configure a preferred Domain Name System (DNS) server on the Network Interface Card (NIC).
- 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. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. To add the server to a workgroup, skip to step 8.

7. To add the server to a domain, in the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
    a. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
    b. Click **OK**.
    c. Type the domain administrator **User name** and **Password**.
    d. Click **OK**.
    e. Skip to step 9.
8. To add the server to a workgroup, in the **Computer Name/Domain Changes** dialog box, click the **Workgroup** option.
    a. Type the workgroup name.
    b. Click **OK**.
    c. Type the workgroup administrator **User name** and **Password**.
    d. Click **OK**.
9. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.

4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.

7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.

10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice and Multimedia Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice and Multimedia Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

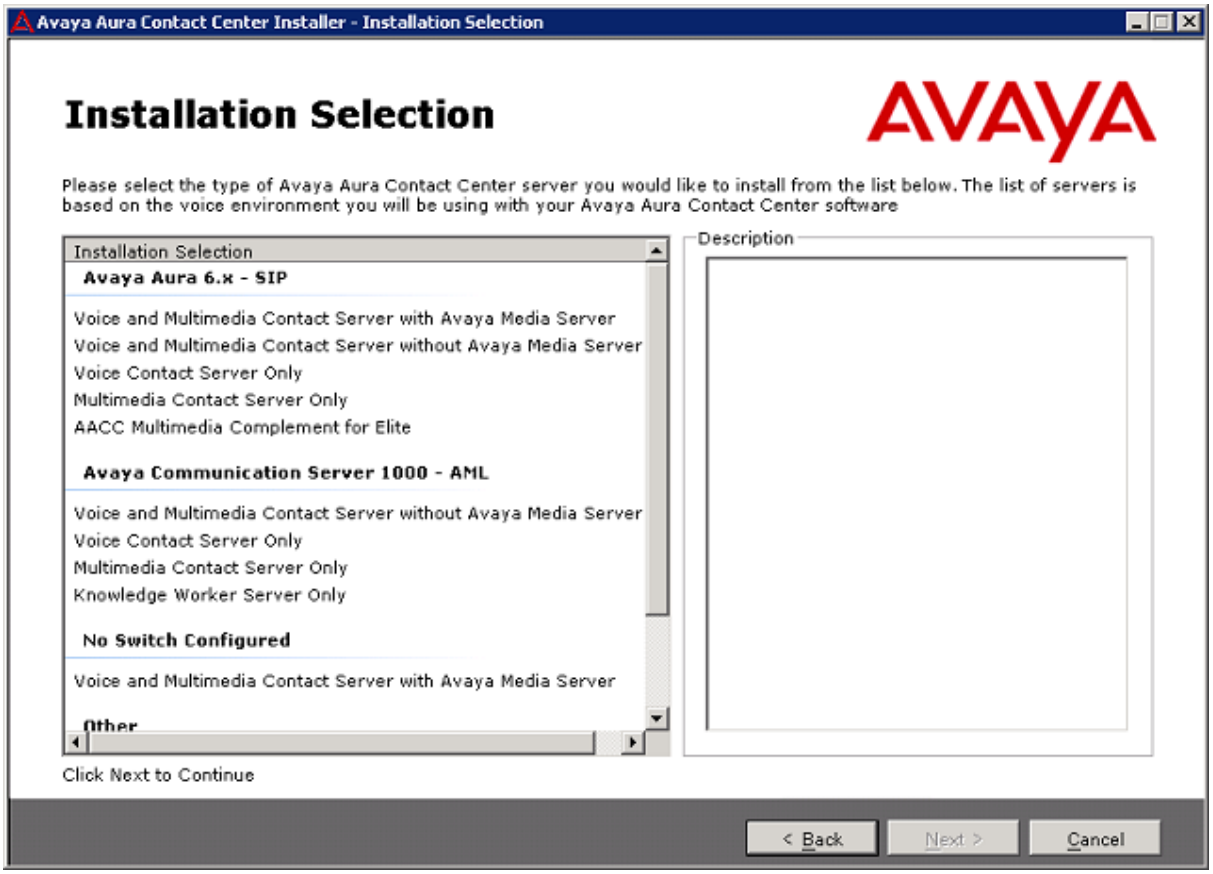
Note:

Read the Contact Center Release Notes for the most recent instructions.

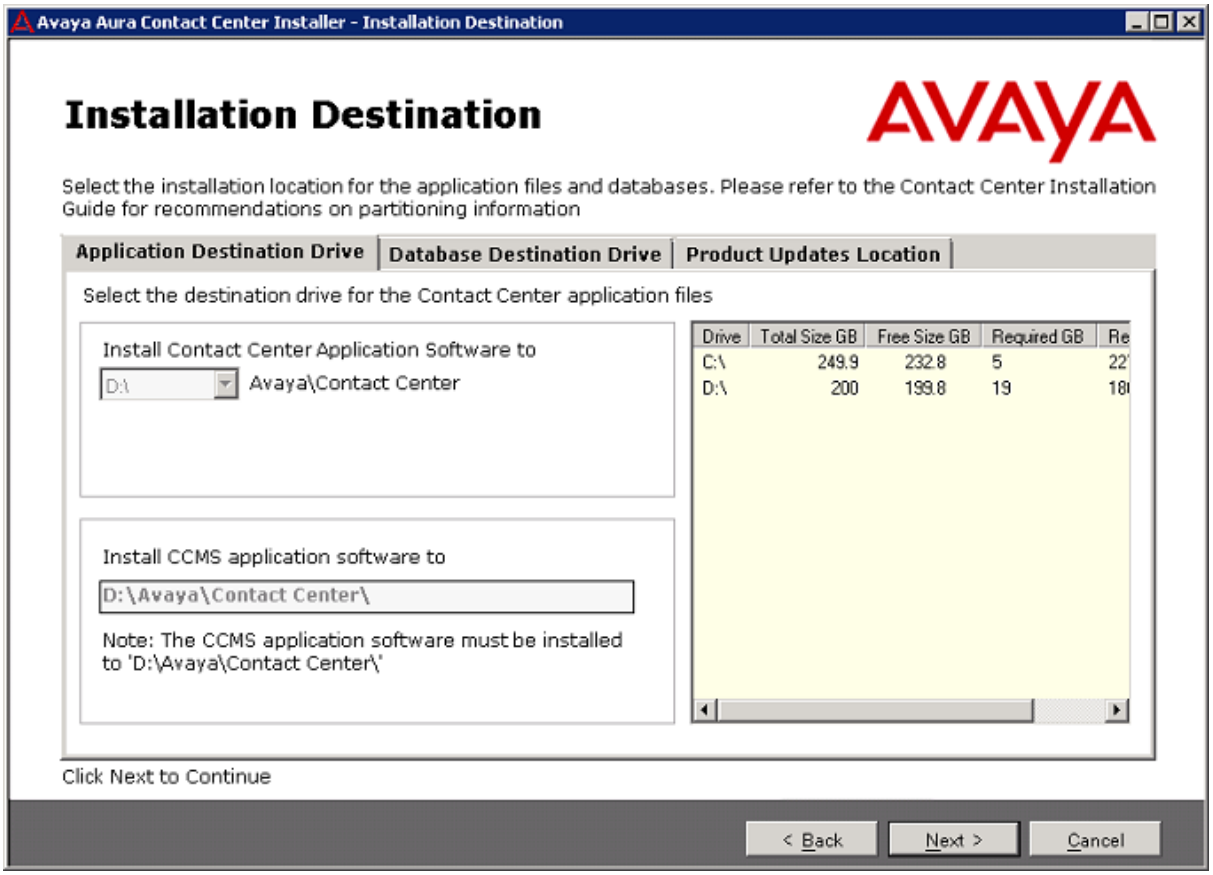
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

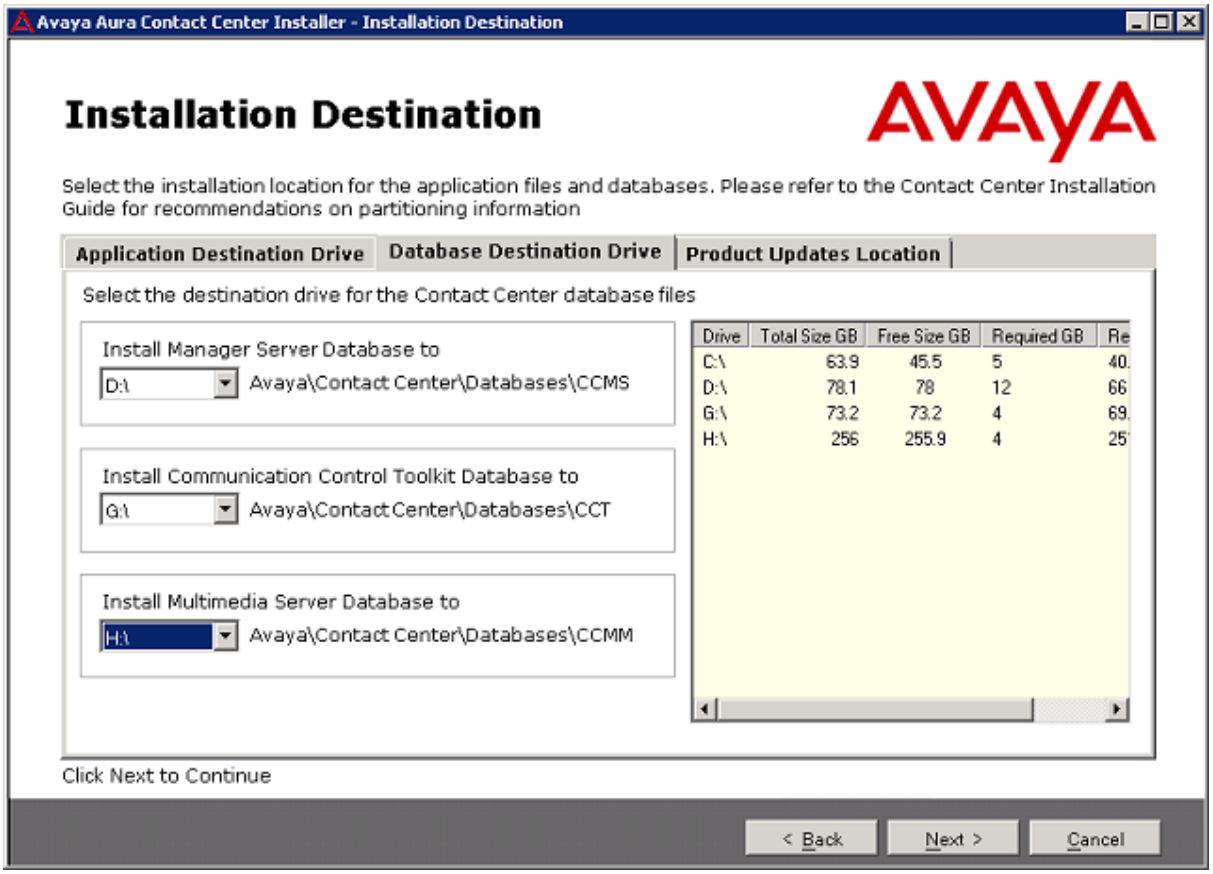
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



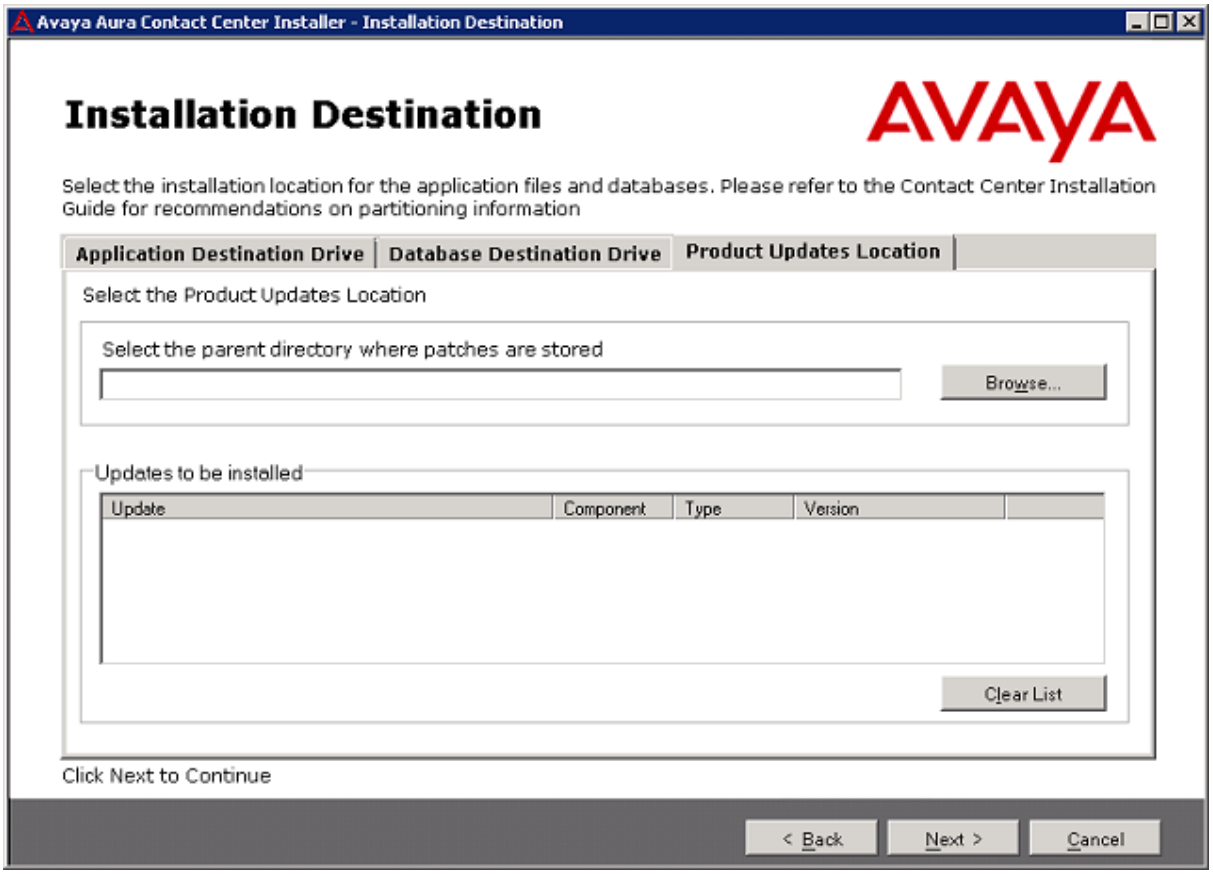
8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



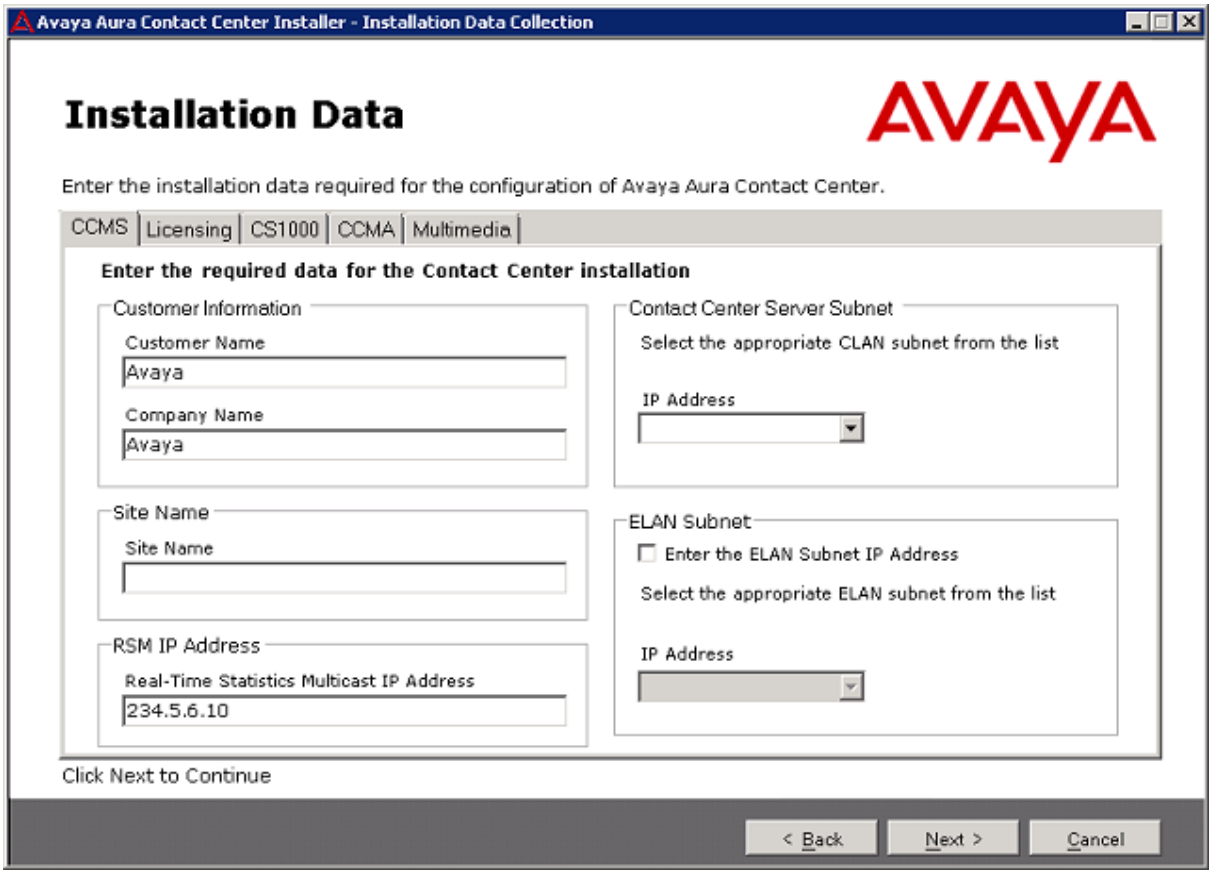
15. Click the **Product Updates Location** tab.



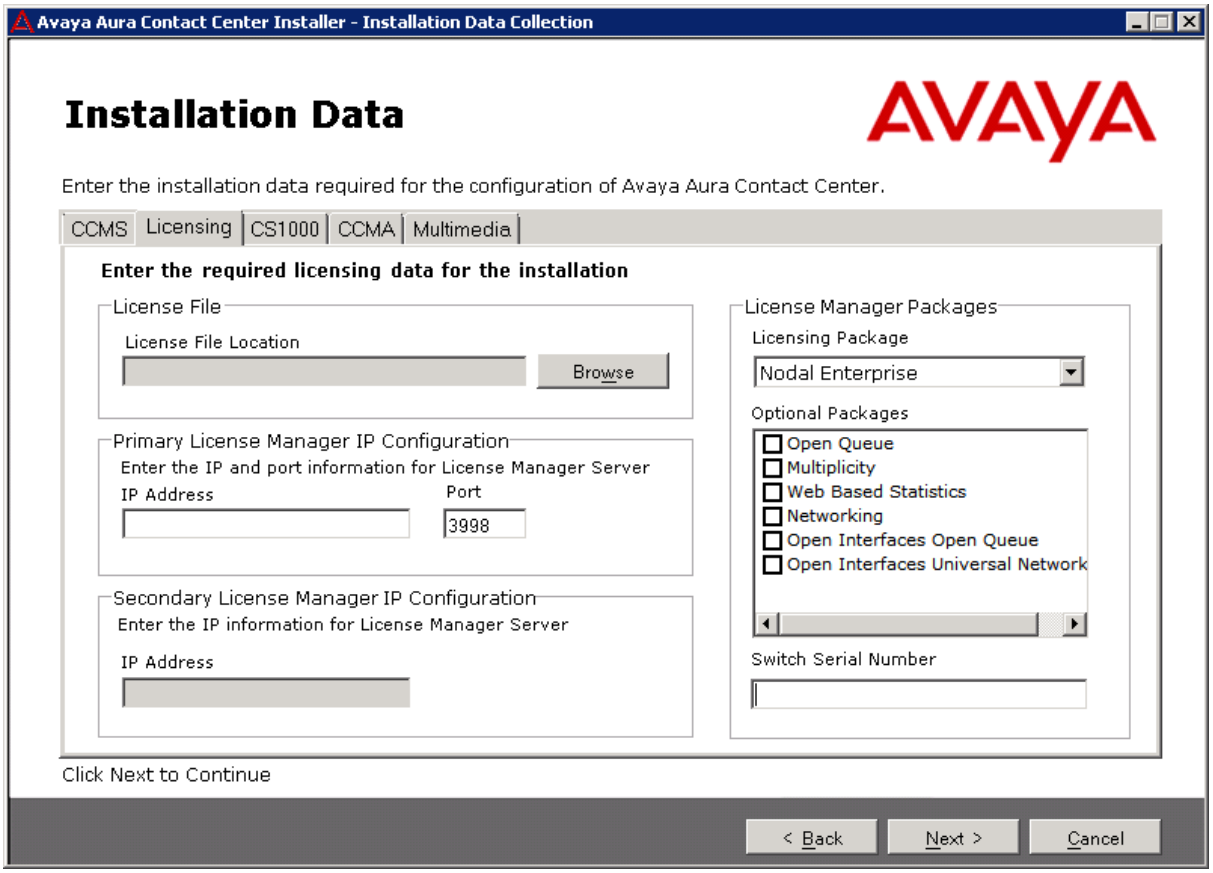
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.

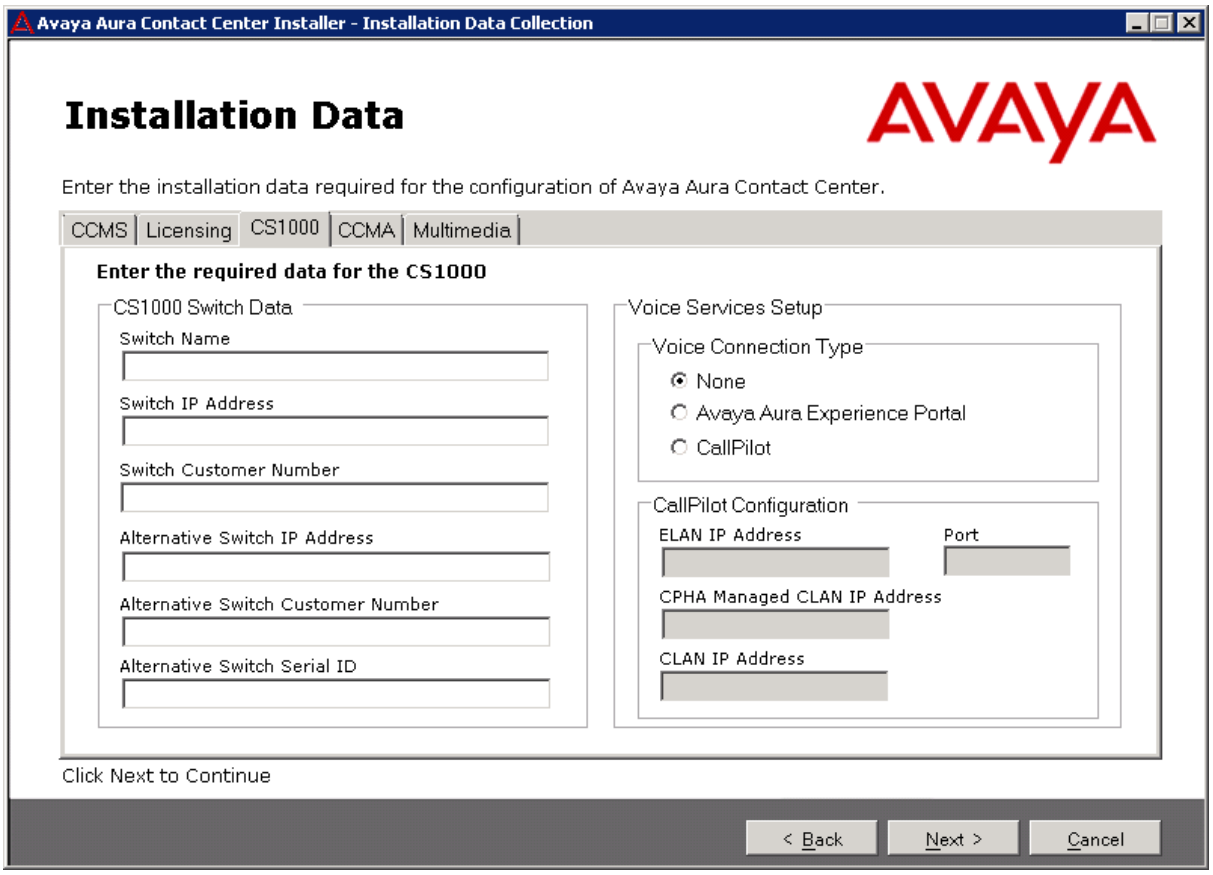


22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
28. Select the **Licensing** tab, and configure the licensing details.



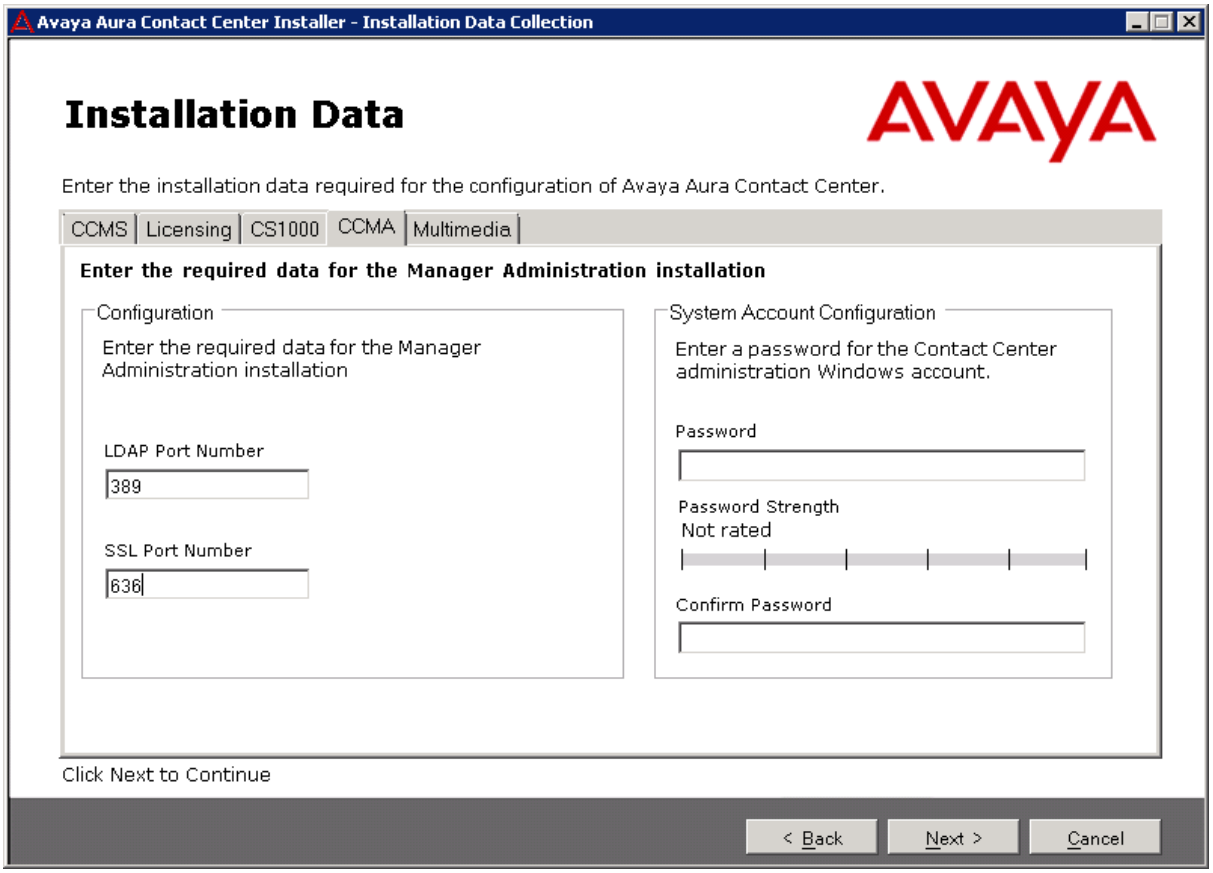
29. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
30. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
31. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
32. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
33. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
34. From the list of **Optional Packages**, enable the licensed features that you have purchased.
35. Select the **Open Queue** check box.
36. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

37. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



38. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
39. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
40. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
41. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
44. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

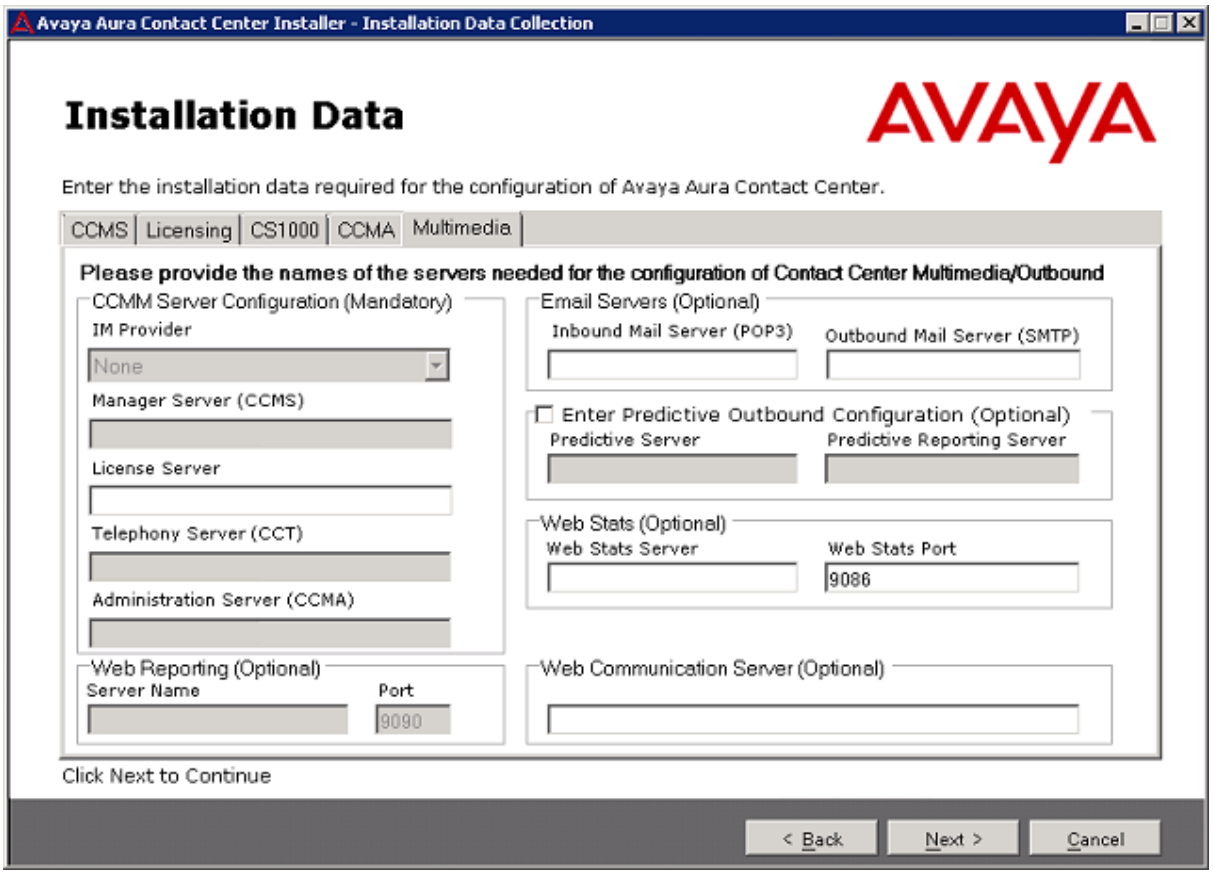
45. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
46. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
47. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
48. Select the **CCMA** tab, and configure the CCMA details.



49. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
50. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
51. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

52. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



53. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
54. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
55. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
56. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
57. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
58. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

Important:

If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.

59. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
60. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
61. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
62. Click **Next**.
63. On the **Summary** window, review and verify the information.
64. Click **Install**.
65. After the installation is complete, click **Finish**.
66. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database
- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 15: Primary Voice and Multimedia Contact Server for CS1000 software installation in a domain

This chapter describes how to install a primary Voice and Multimedia Contact Server in a solution that supports High Availability and has an Avaya Communication Server 1000 (CS1000) platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install this server to provide context-sensitive and skill-based routing for customer voice and multimedia contacts. This server provides routed contact support for voice calls, email messages, Web communications, voice mail messages, scanned documents, fax messages, and SMS text messages. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact

Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Voice and Multimedia Contact Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Voice and Multimedia Contact Server ELAN NIC and ELAN subnet are optional.

You must complete all the procedures in this section in sequential order.

Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site.

Name	Description
	You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.

8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.

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

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.

7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.

10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice and Multimedia Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice and Multimedia Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

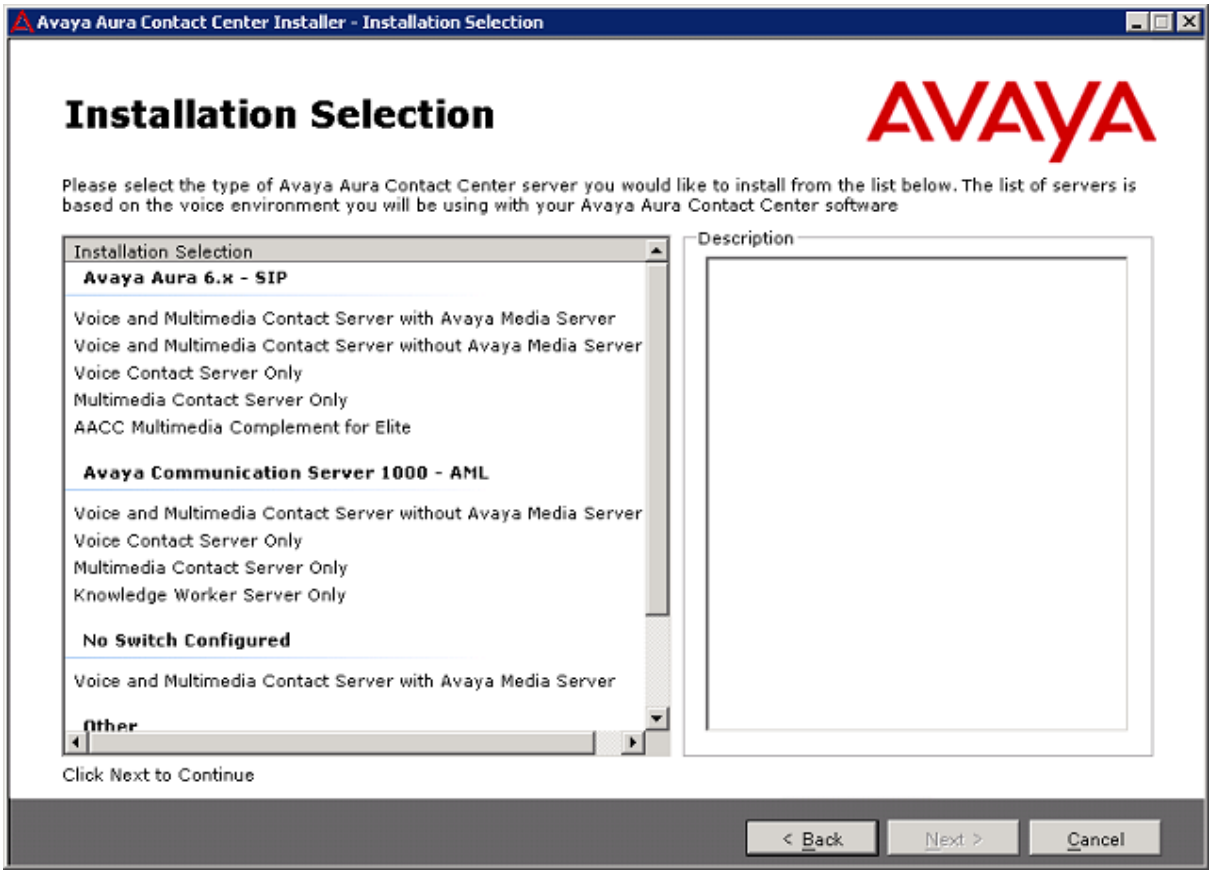
Note:

Read the Contact Center Release Notes for the most recent instructions.

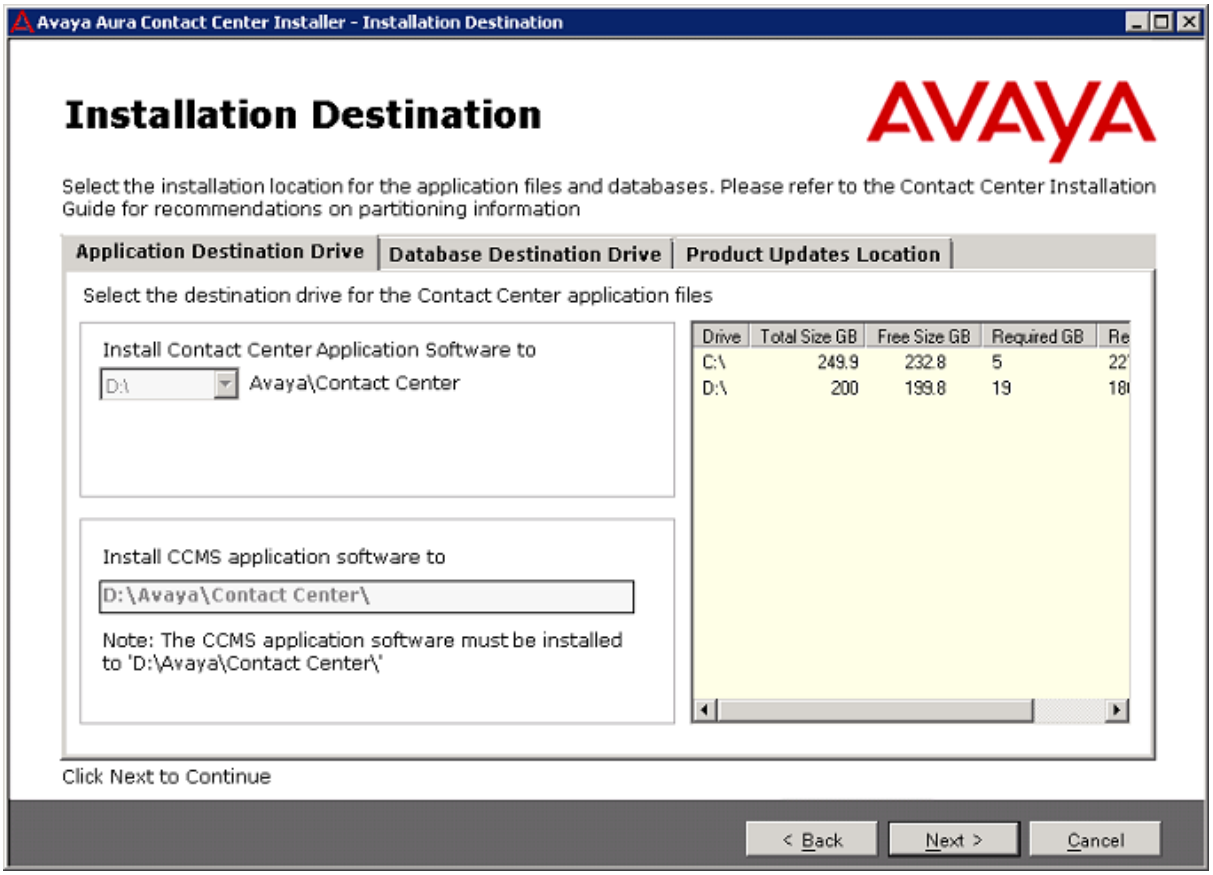
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

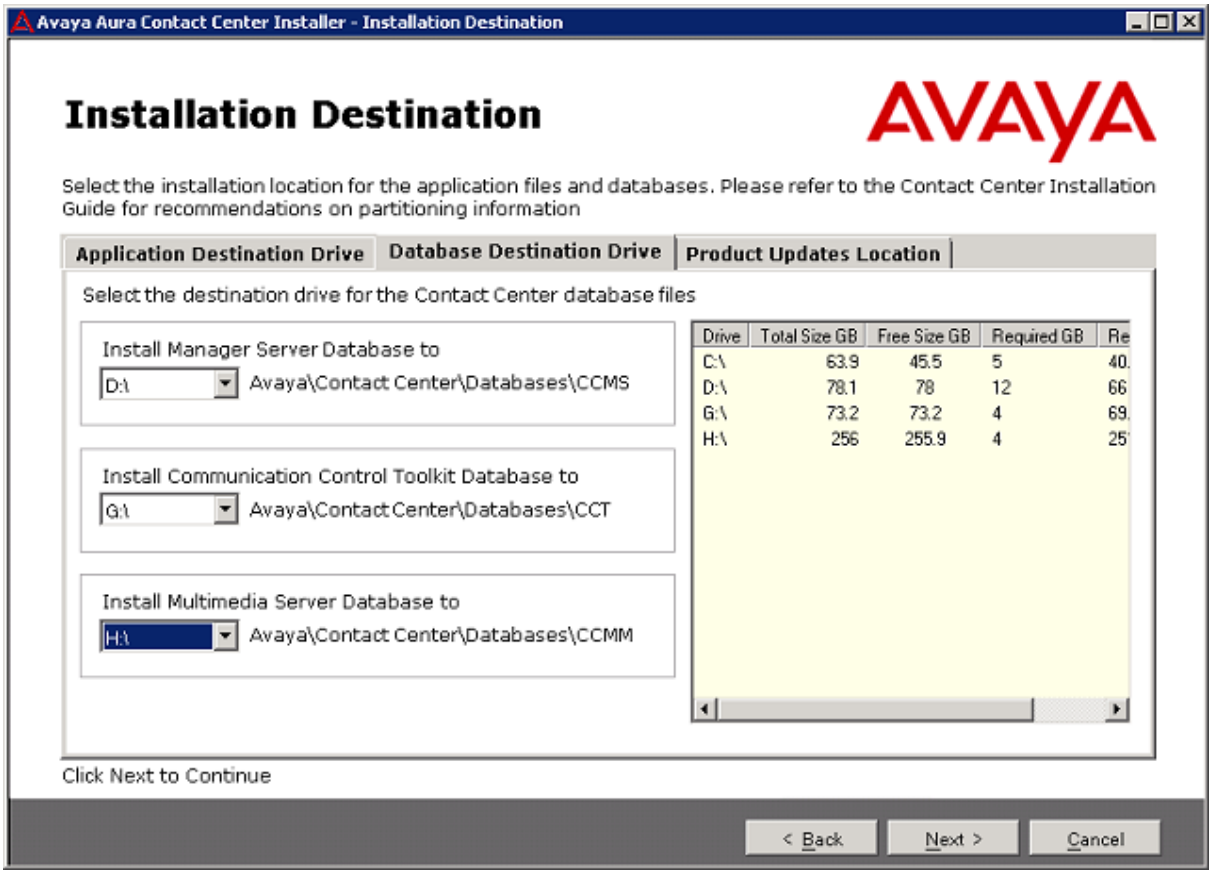
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



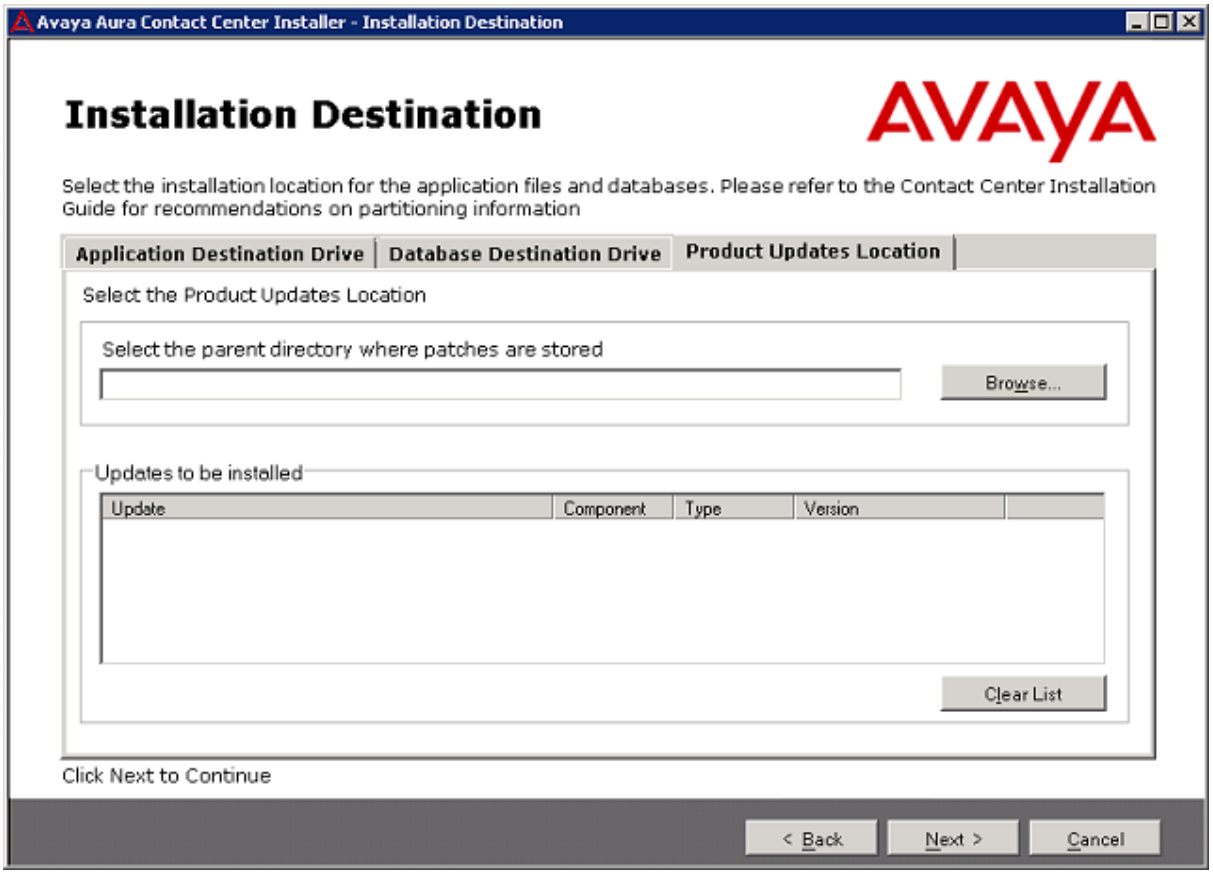
8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



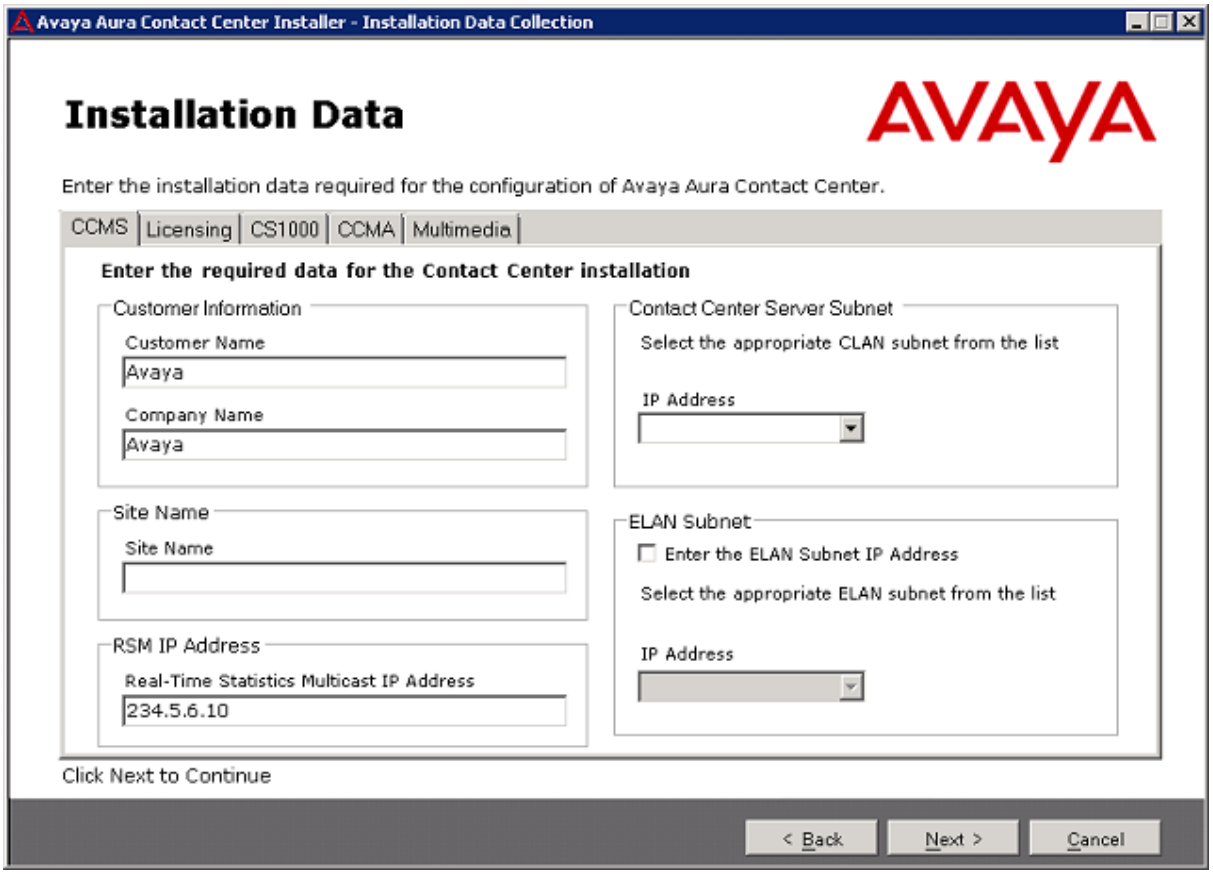
15. Click the **Product Updates Location** tab.



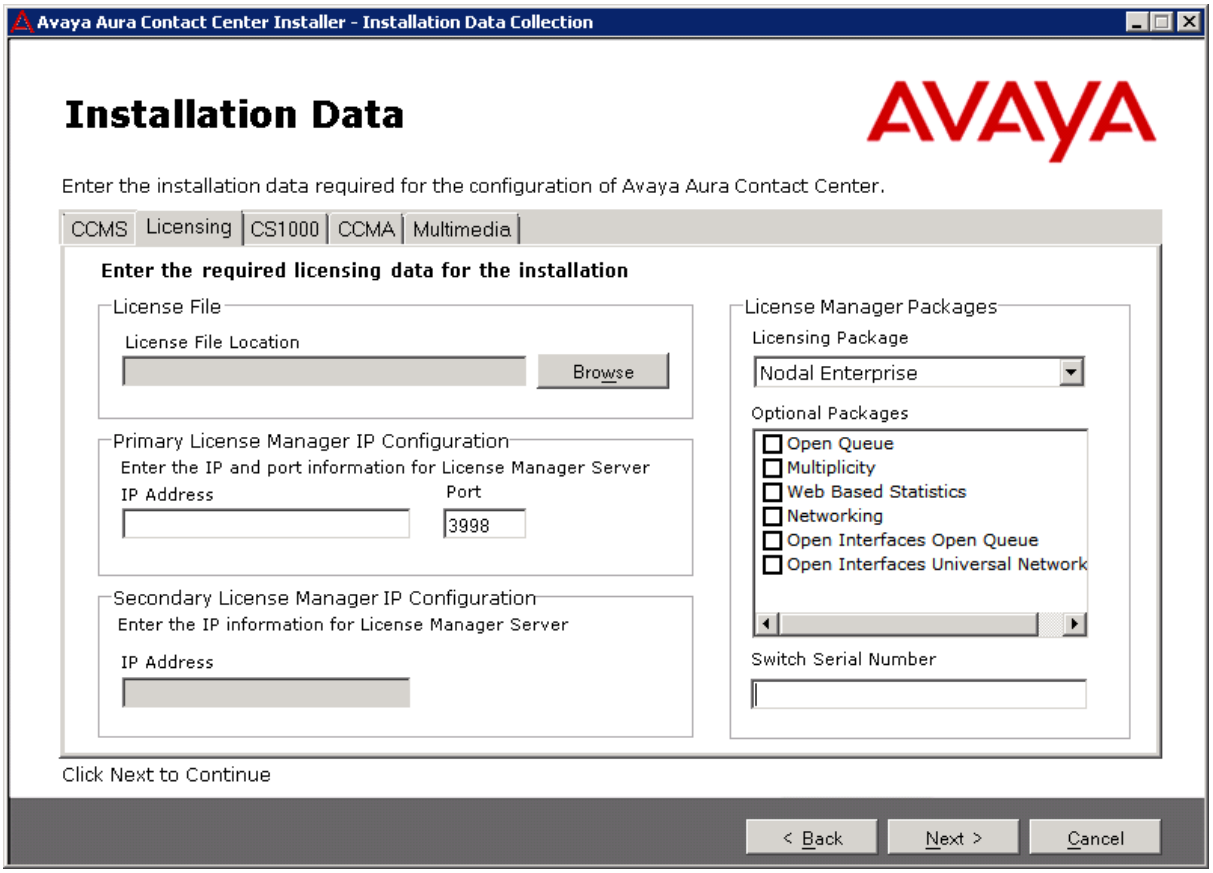
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.

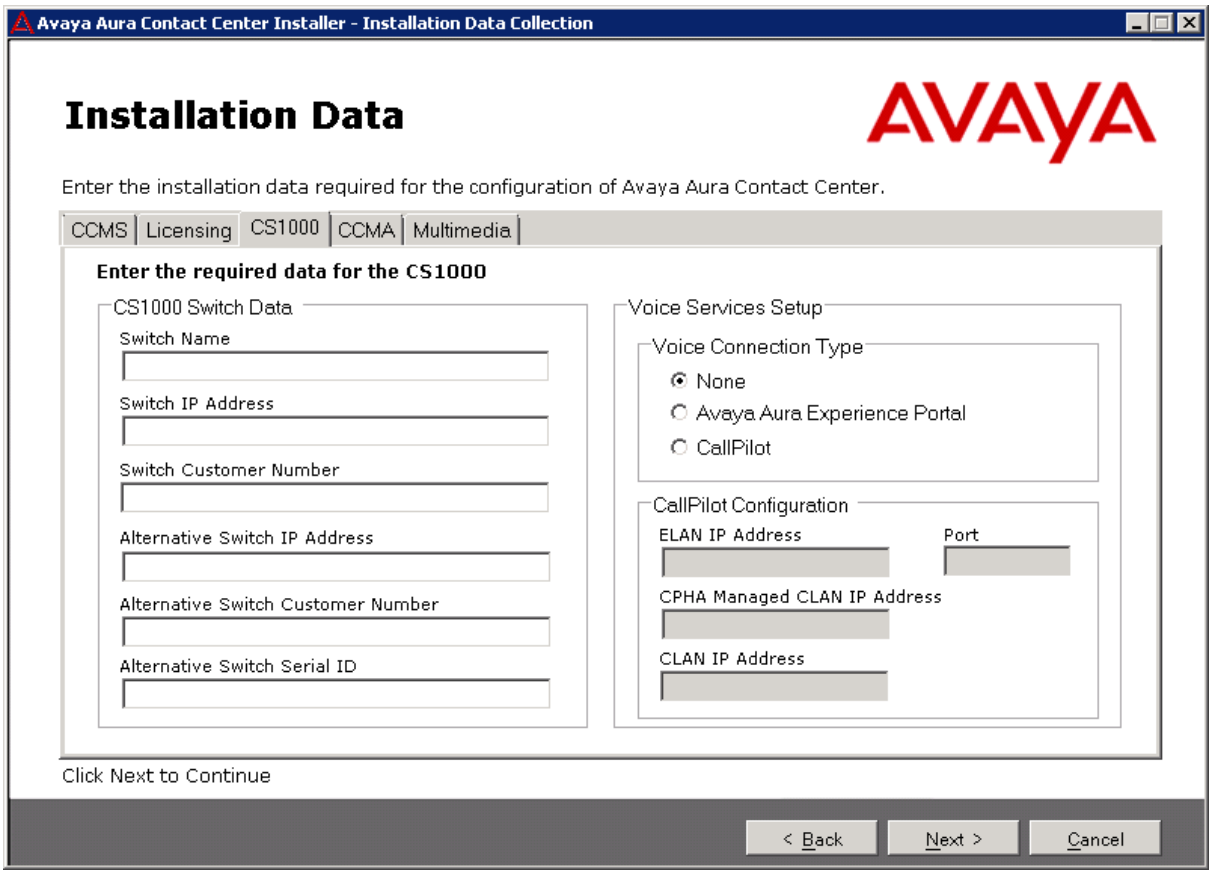


22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
28. Select the **Licensing** tab, and configure the licensing details.



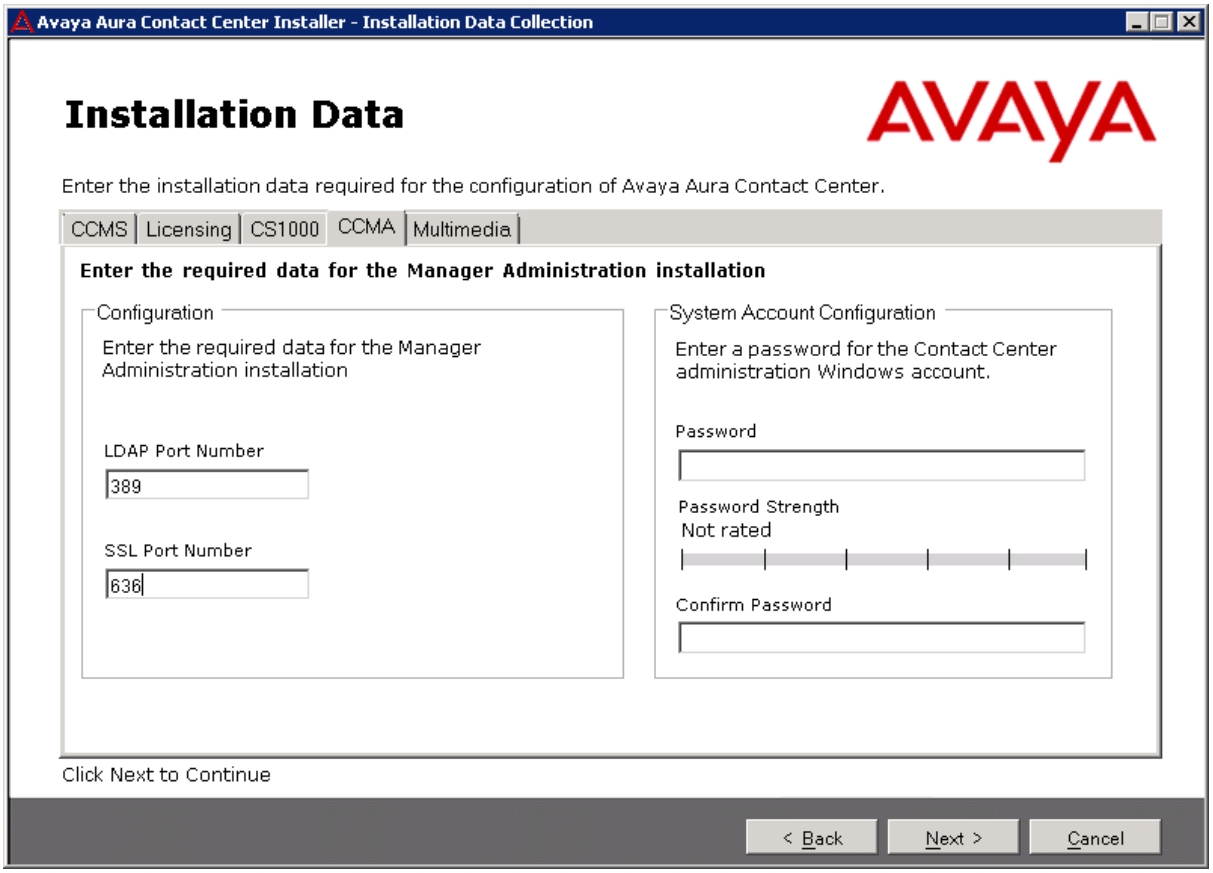
29. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
30. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
31. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
32. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
33. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
34. From the list of **Optional Packages**, enable the licensed features that you have purchased.
35. Select the **Open Queue** check box.
36. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

37. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



38. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
39. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
40. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
41. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
44. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

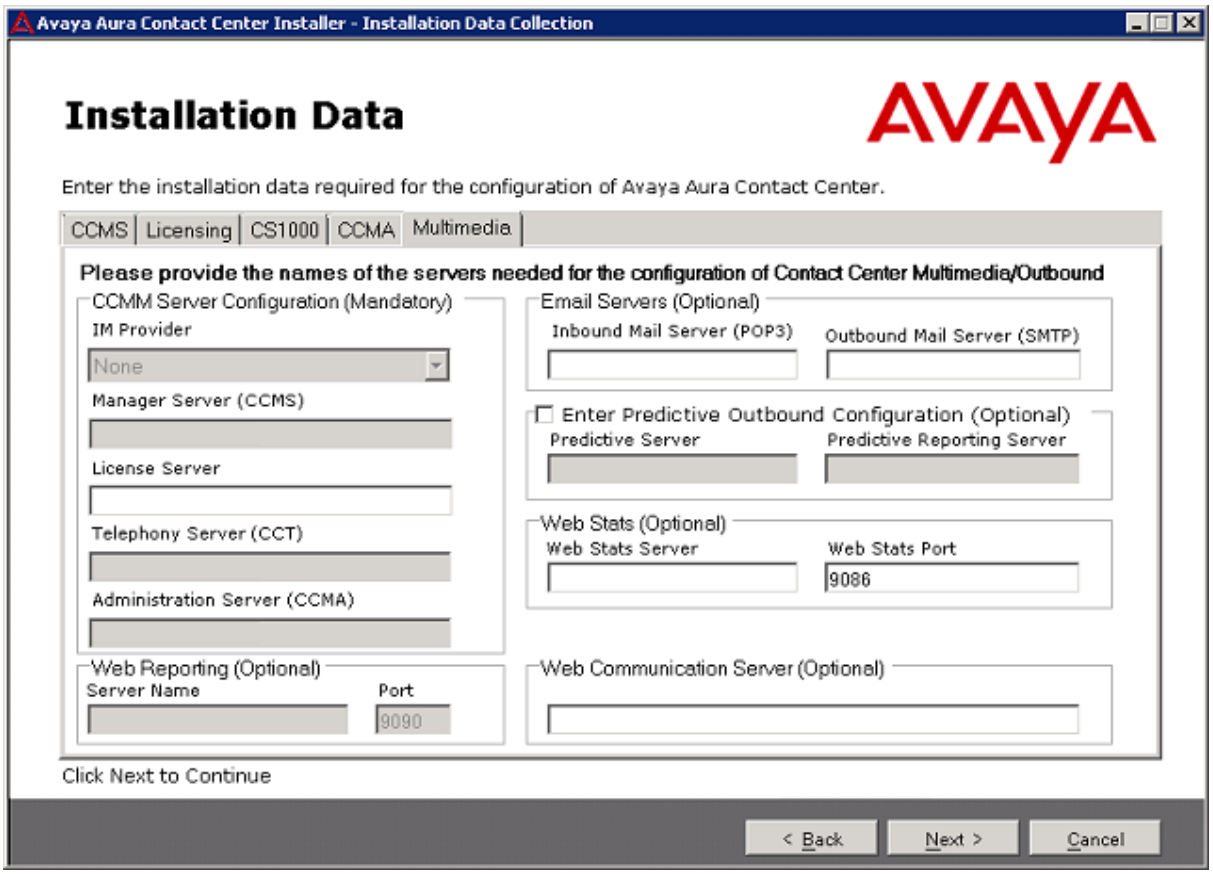
45. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
46. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
47. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
48. Select the **CCMA** tab, and configure the CCMA details.



49. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
50. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
51. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

52. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



53. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
54. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
55. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
56. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
57. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
58. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

Important:

If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.

59. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
60. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
61. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
62. Click **Next**.
63. On the **Summary** window, review and verify the information.
64. Click **Install**.
65. After the installation is complete, click **Finish**.
66. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Adding the domain AD-LDS replication account to the primary administrators and replicator group

About this task

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.

23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 16: Standby Voice and Multimedia Contact Server for CS1000 software installation in a domain

This chapter describes how to install a standby Voice and Multimedia Contact Server for Avaya Communication Server 1000 (CS1000). This chapter describes how to install a Voice and Multimedia Contact Server in a solution using a Windows domain. A standby Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Contact Center Manager Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center Manager Server ELAN NIC and ELAN subnet are optional.

You can install a standby Voice and Multimedia Contact Server and commission it to be the standby Voice and Multimedia Contact Server in a campus High Availability solution. The standby server takes over contact processing and becomes the active server if the existing active server fails. The standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

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

Standby Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.

- Ensure that your new Contact Center license file with a High Availability standby server license is available.

  Important:

  For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.

Name	Description
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.

- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.

7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.

11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.

2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Voice and Multimedia Contact Server software for CS1000 in a domain

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Voice and Multimedia Contact Server for Avaya Communication Server 1000 must already be installed and configured.
- The primary active Voice and Multimedia Contact Server for Avaya Communication Server 1000 must already be configured to support AD-LDS replication.

About this task

Install the Contact Center standby Voice and Multimedia Contact Server software to provide a resilient solution.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

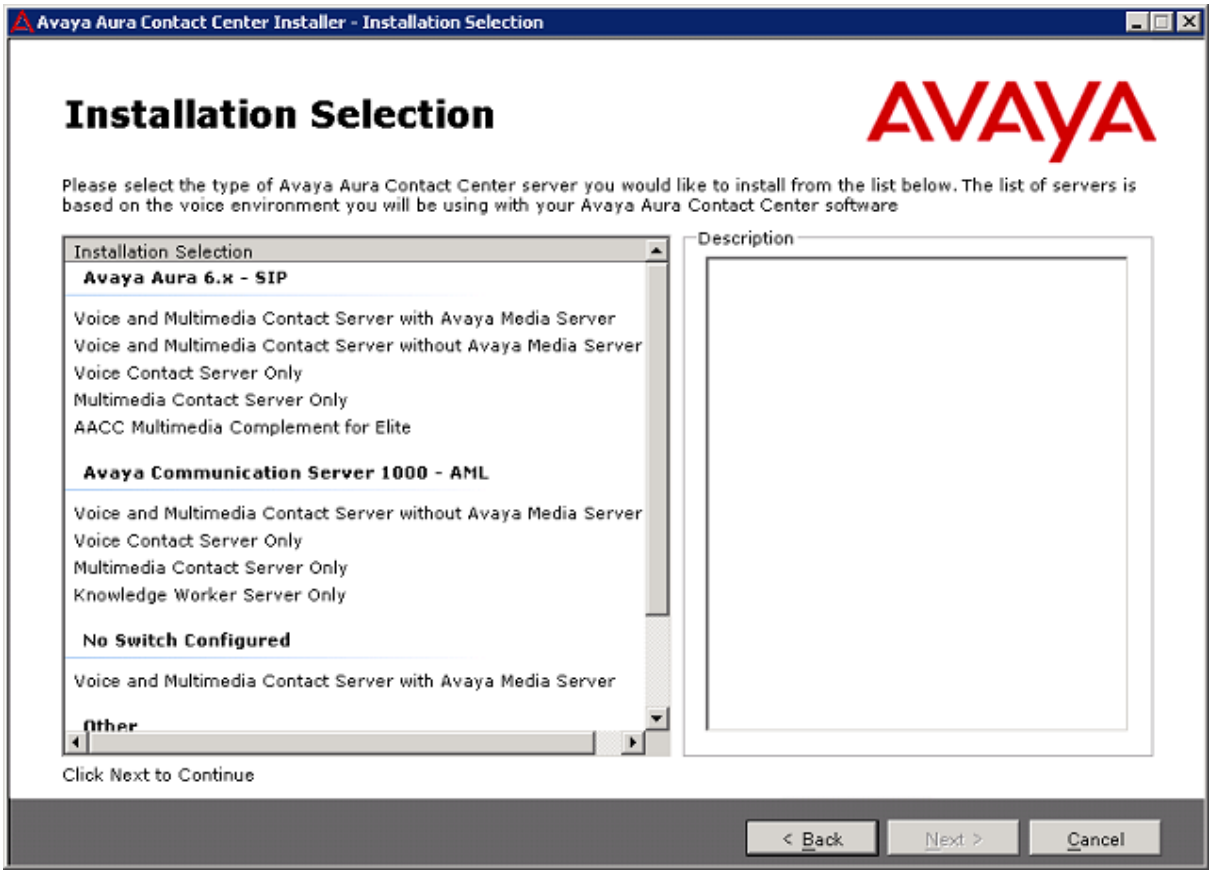
Note:

Read the Contact Center Release Notes for the most recent instructions.

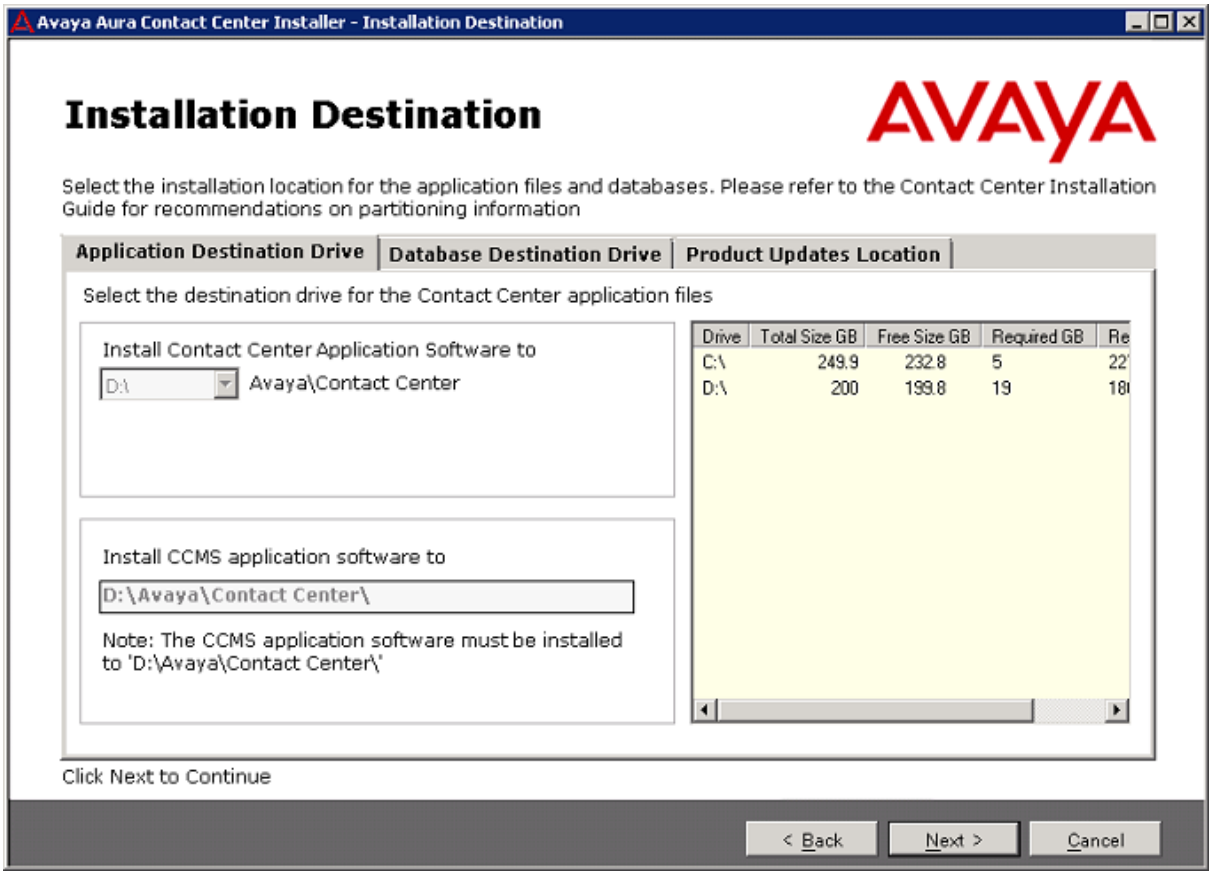
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

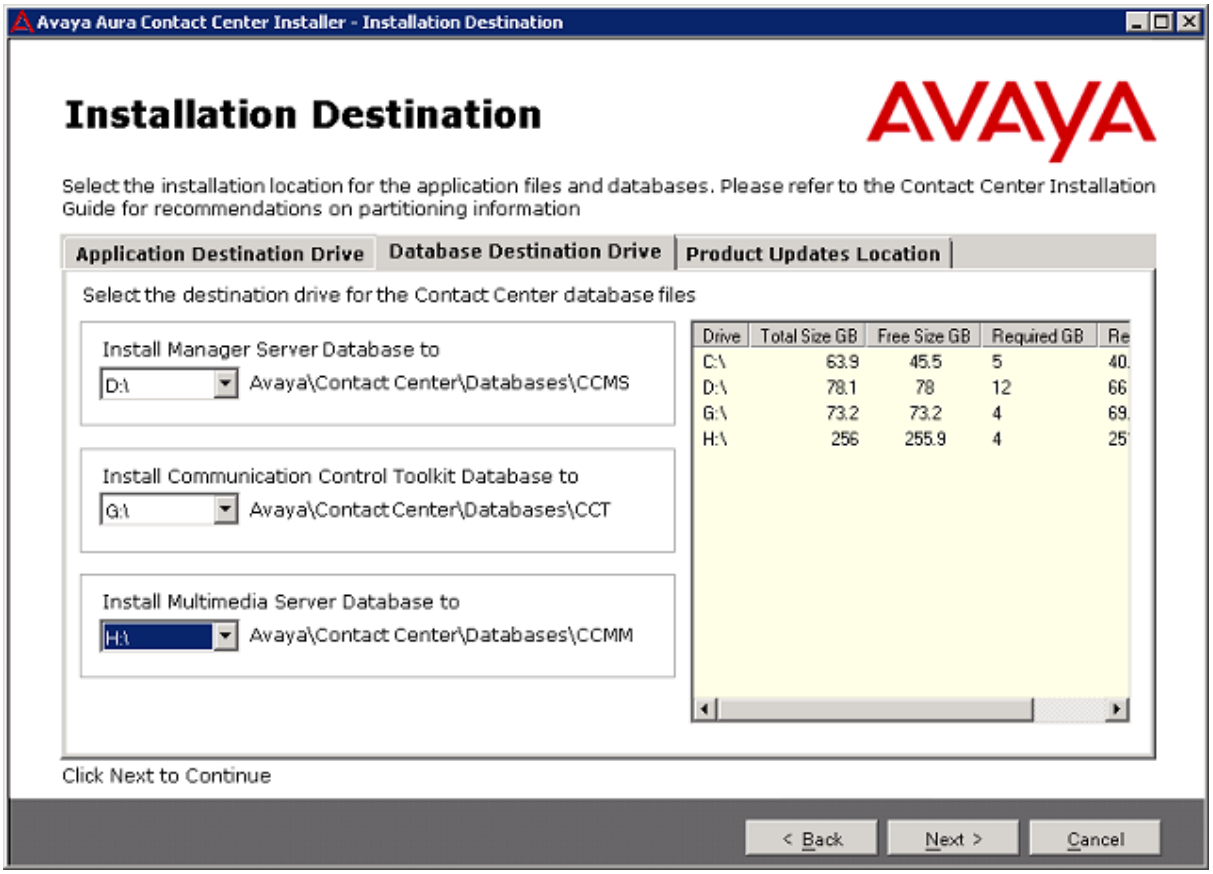
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



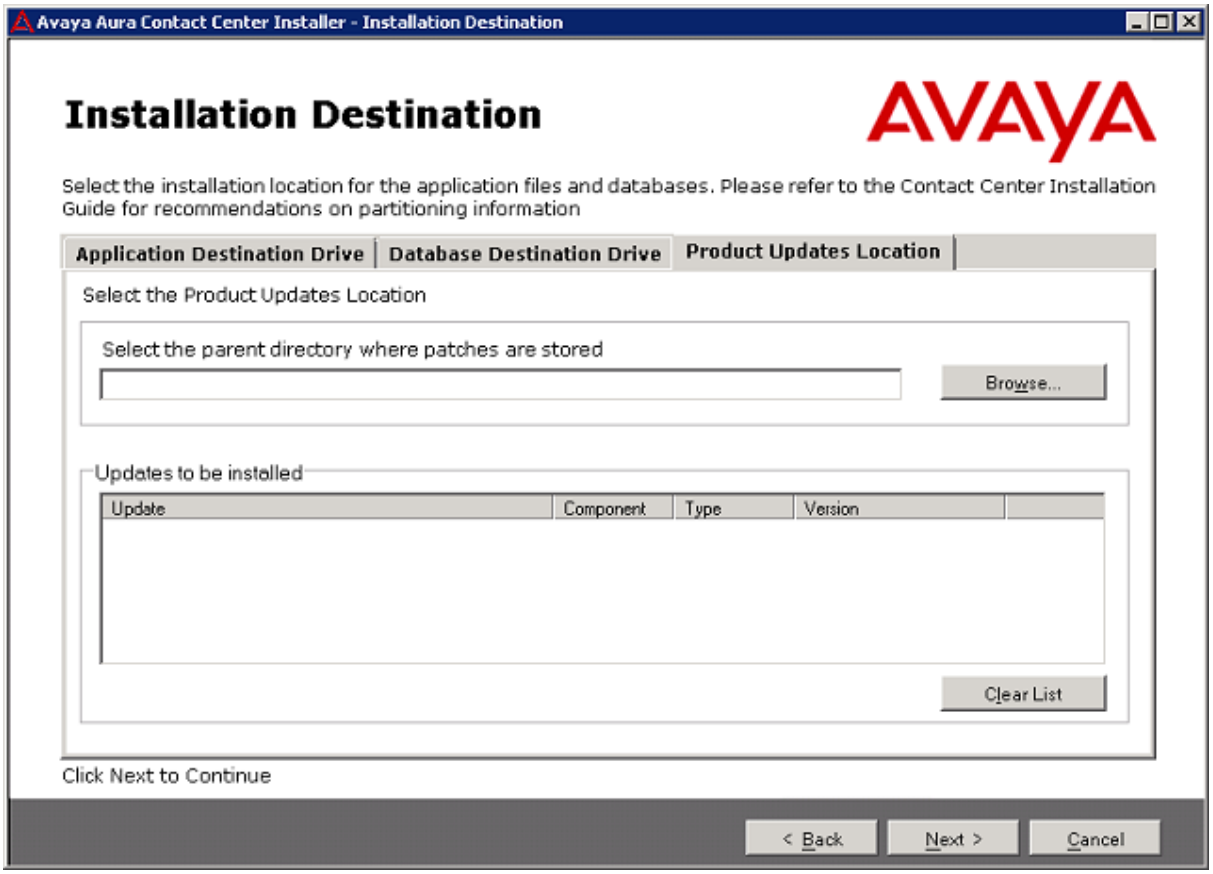
8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



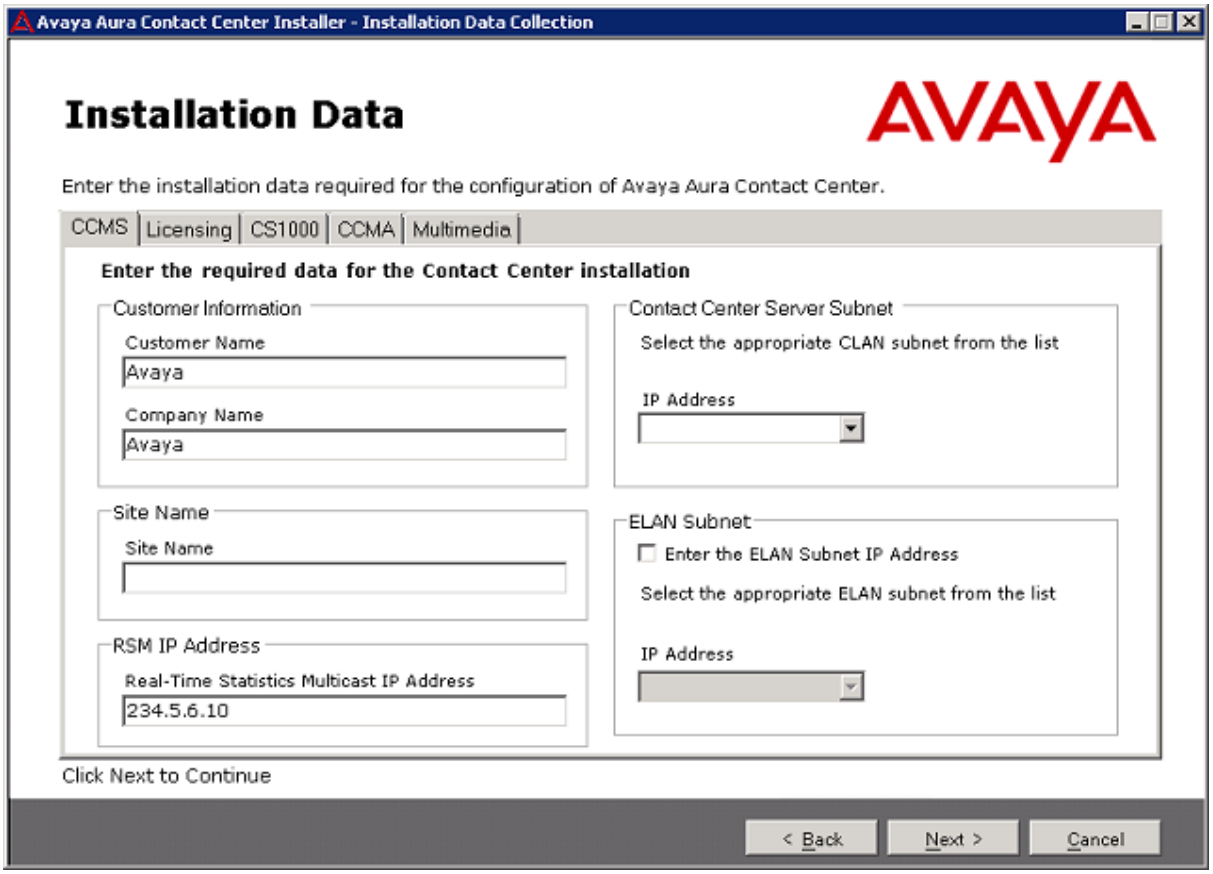
15. Click the **Product Updates Location** tab.



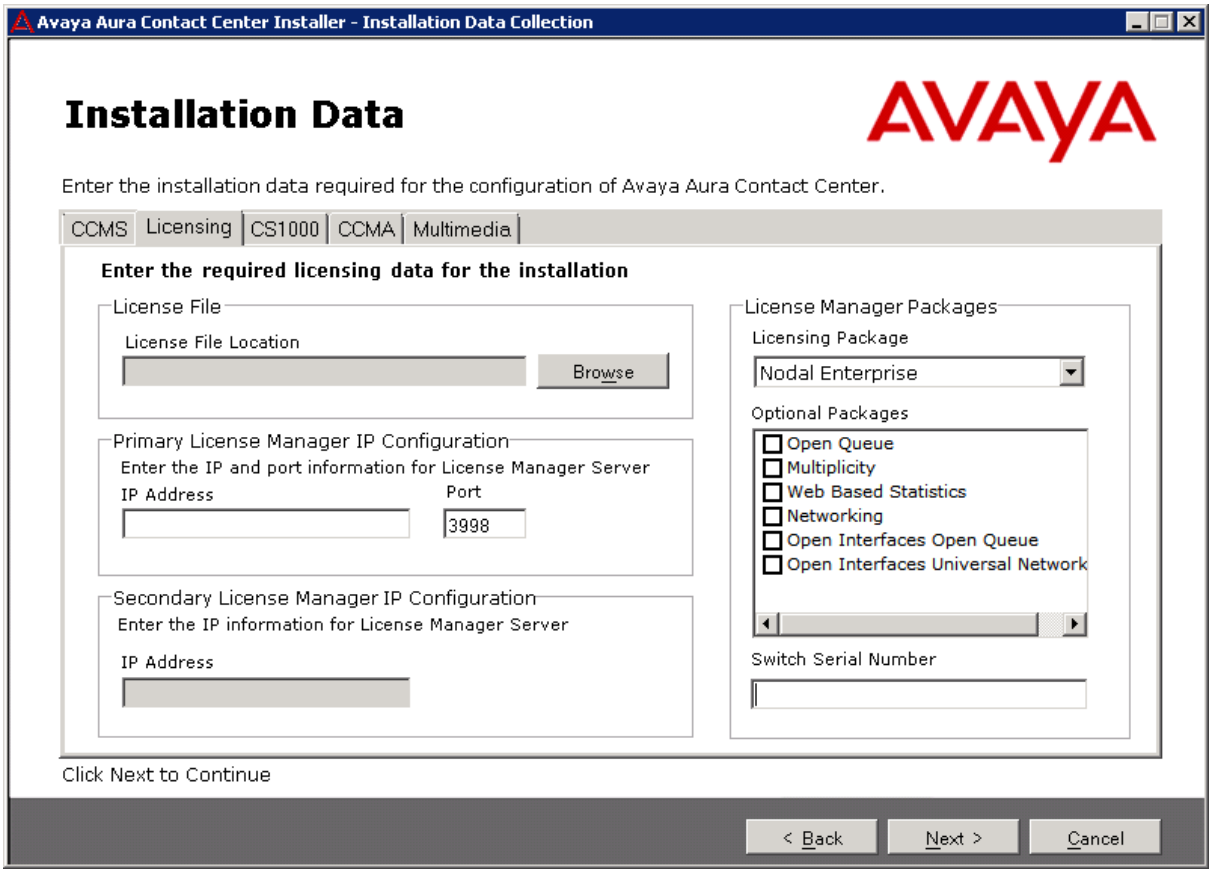
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.

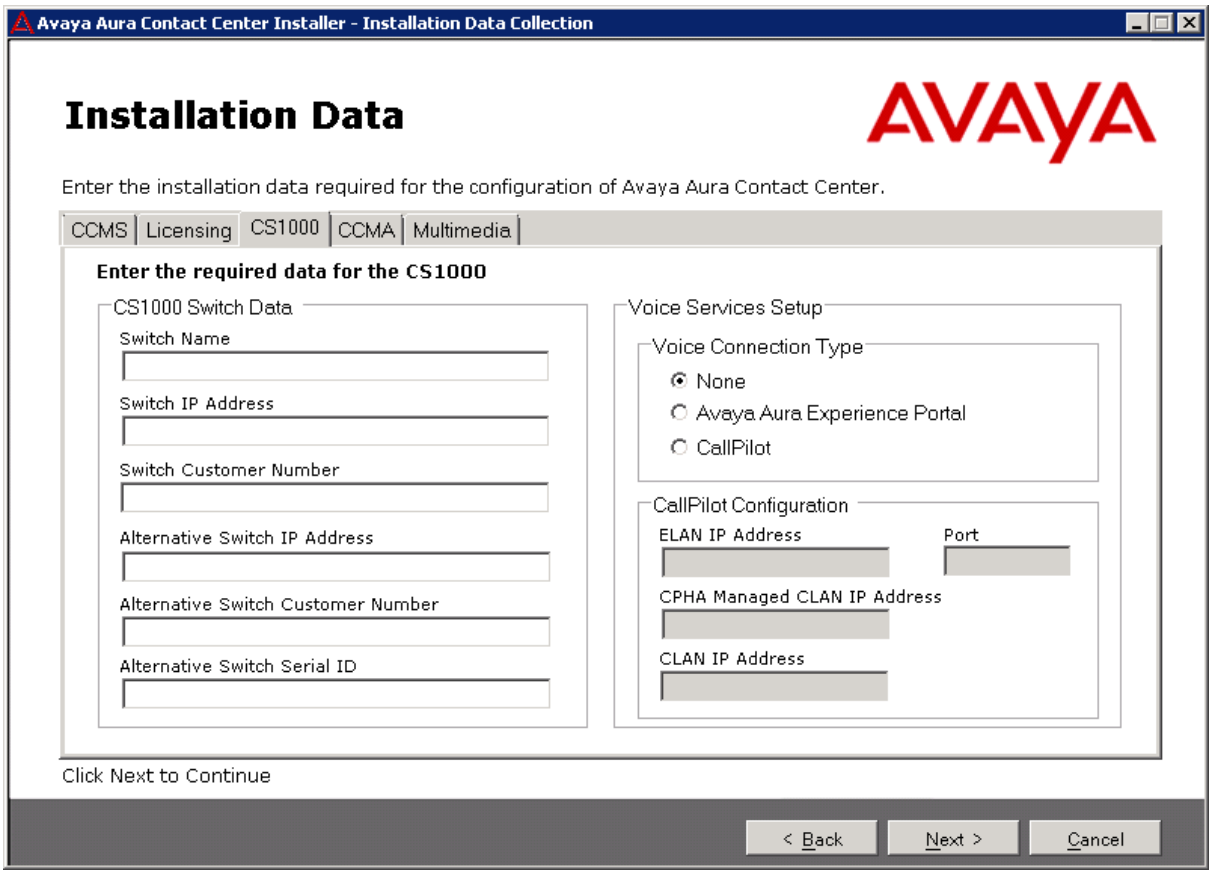


22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
28. Select the **Licensing** tab, and configure the licensing details.



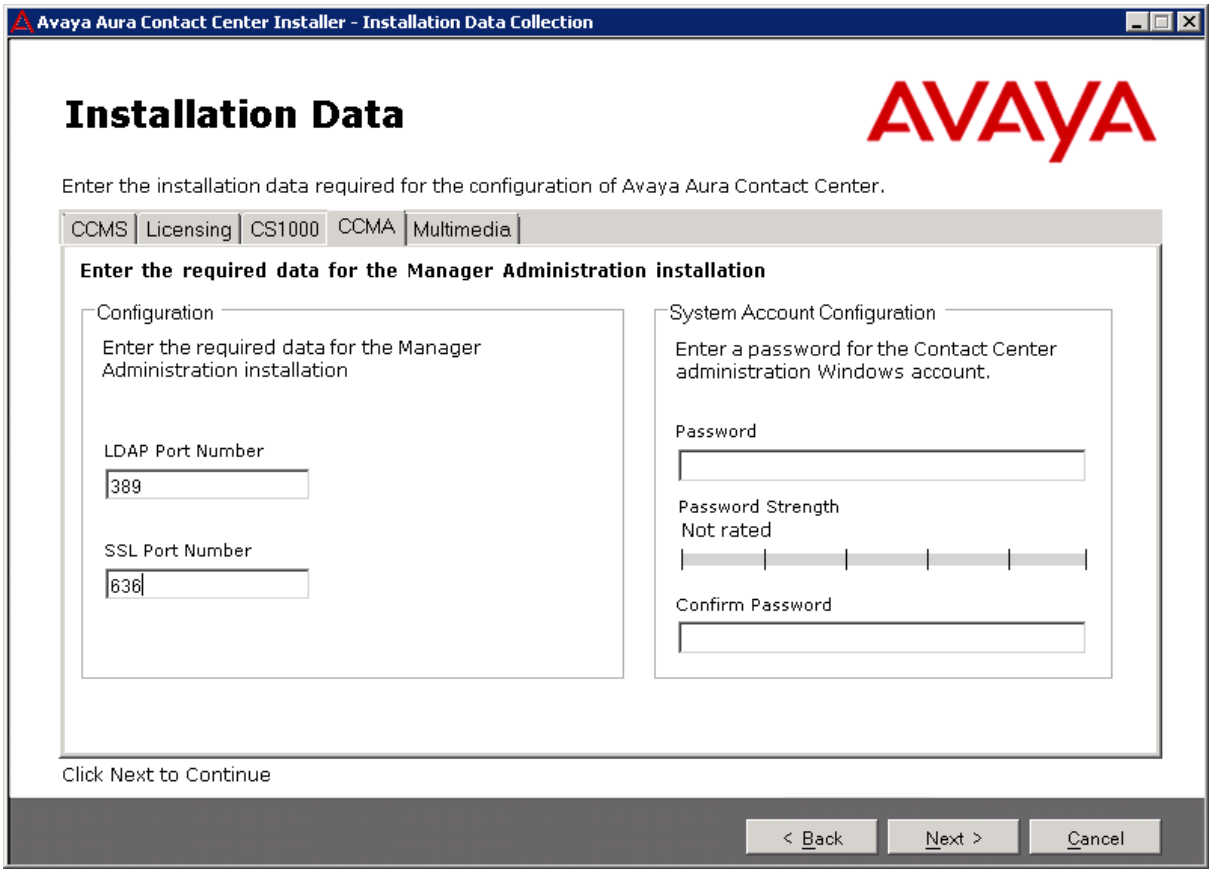
29. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
30. In the **Primary License Manager IP Address** box, type the IP address of the standby License Manager. Each Voice and Multimedia Contact Server contains a License Manager. Type the IP address of the standby Voice and Multimedia Contact Server.
31. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
32. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
33. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
34. From the list of **Optional Packages**, enable the licensed features that you have purchased.
35. Select the **Open Queue** check box.
36. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

37. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



38. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
39. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
40. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
41. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
44. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

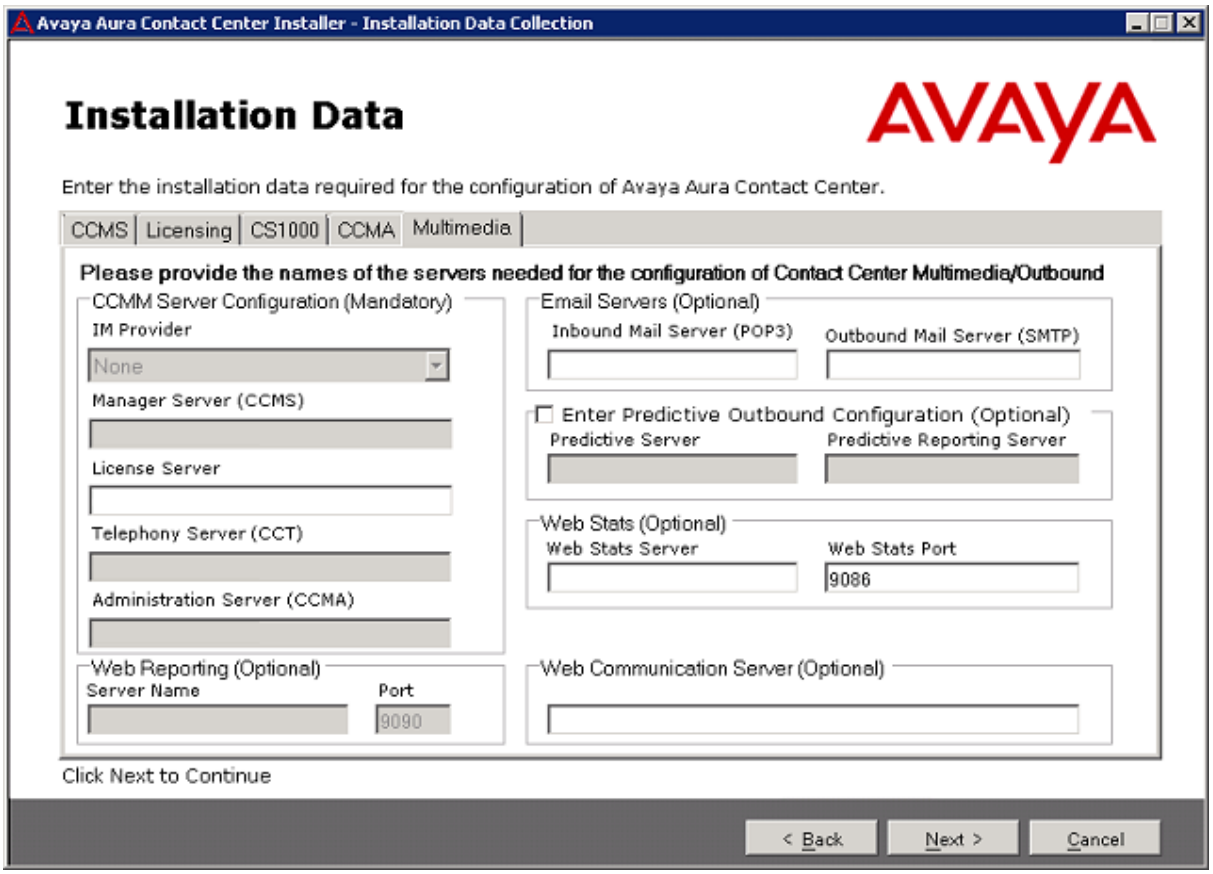
45. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
46. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
47. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
48. Select the **CCMA** tab, and configure the CCMA details.



49. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
50. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
51. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

52. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



53. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
54. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
55. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
56. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
57. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
58. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

Important:

If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.

59. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
60. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
61. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
62. Click **Next**.
63. On the **Summary** window, review and verify the information.
64. Select **Install**.
65. After the installation is complete, click **Finish**.
66. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

Read the Contact Center Release Notes for the most recent instructions.

Procedure

1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

```
D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\
```

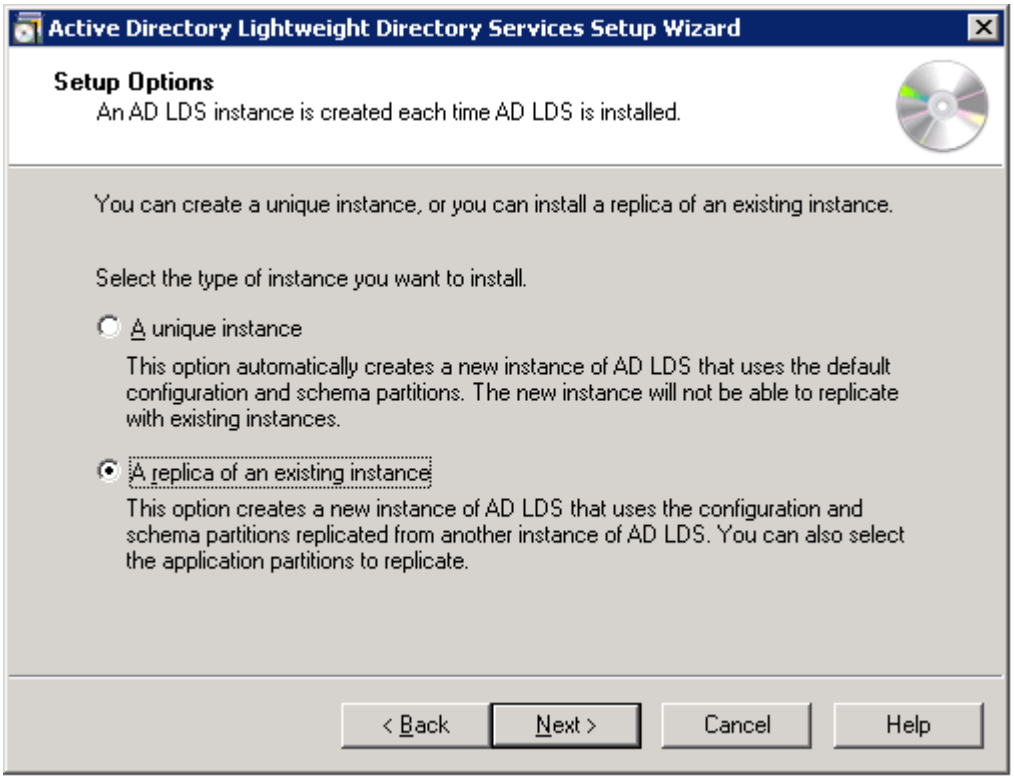
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

   ```
   ConvertToStandbyCCMAServer.bat
   ```

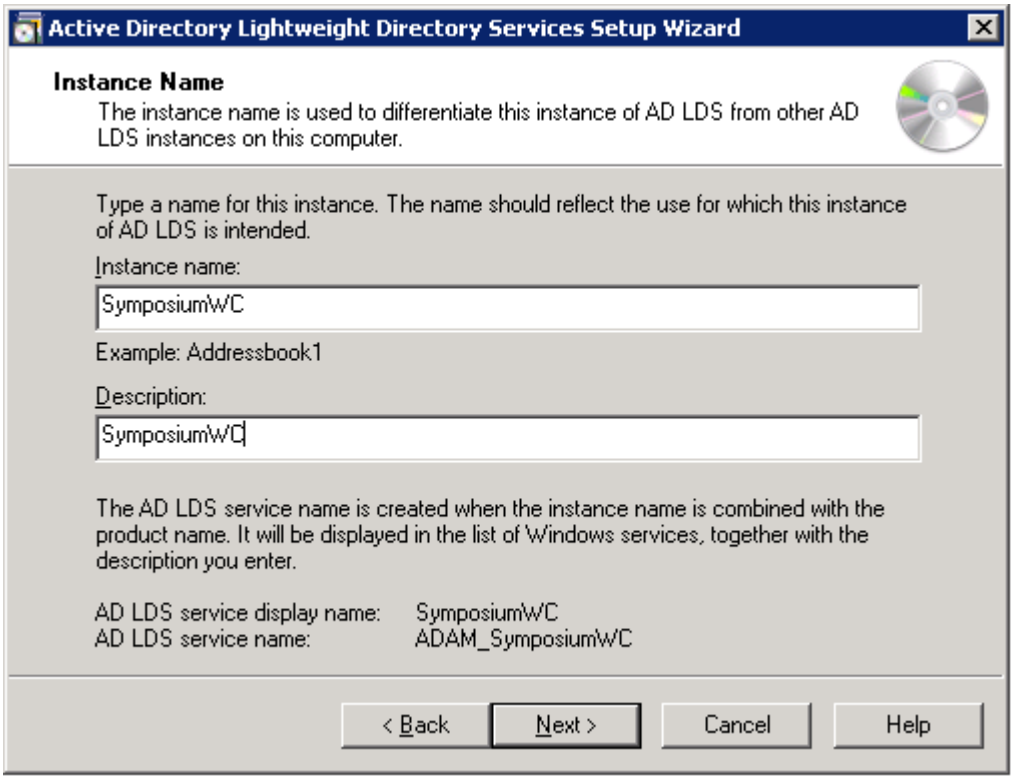
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



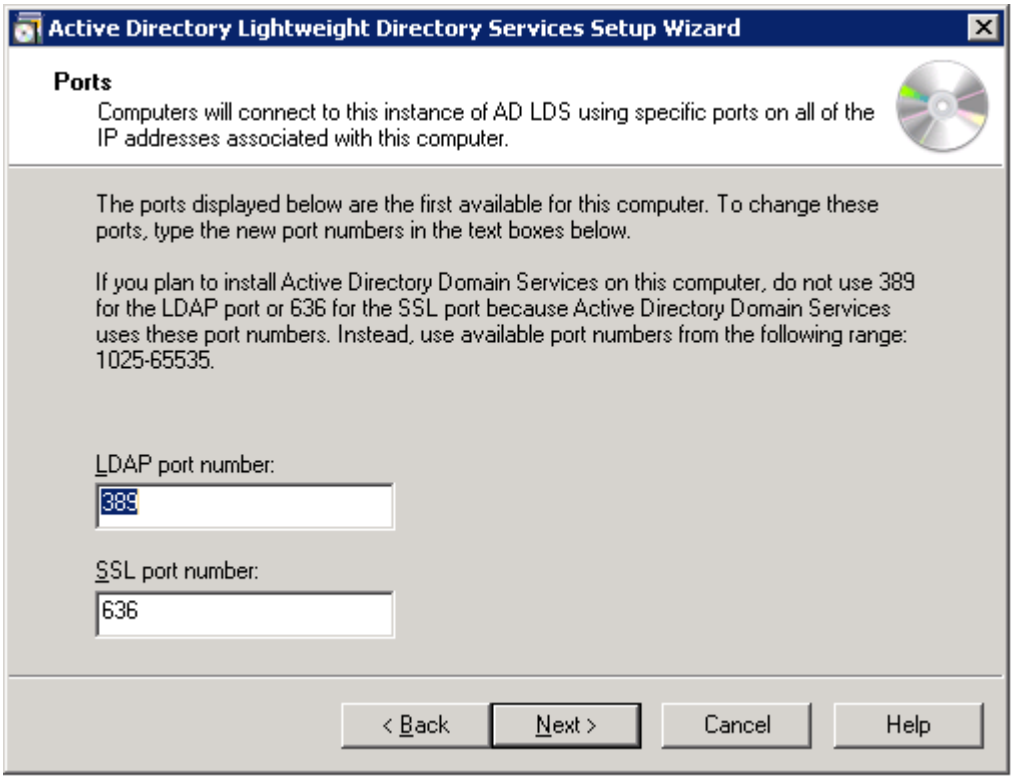
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

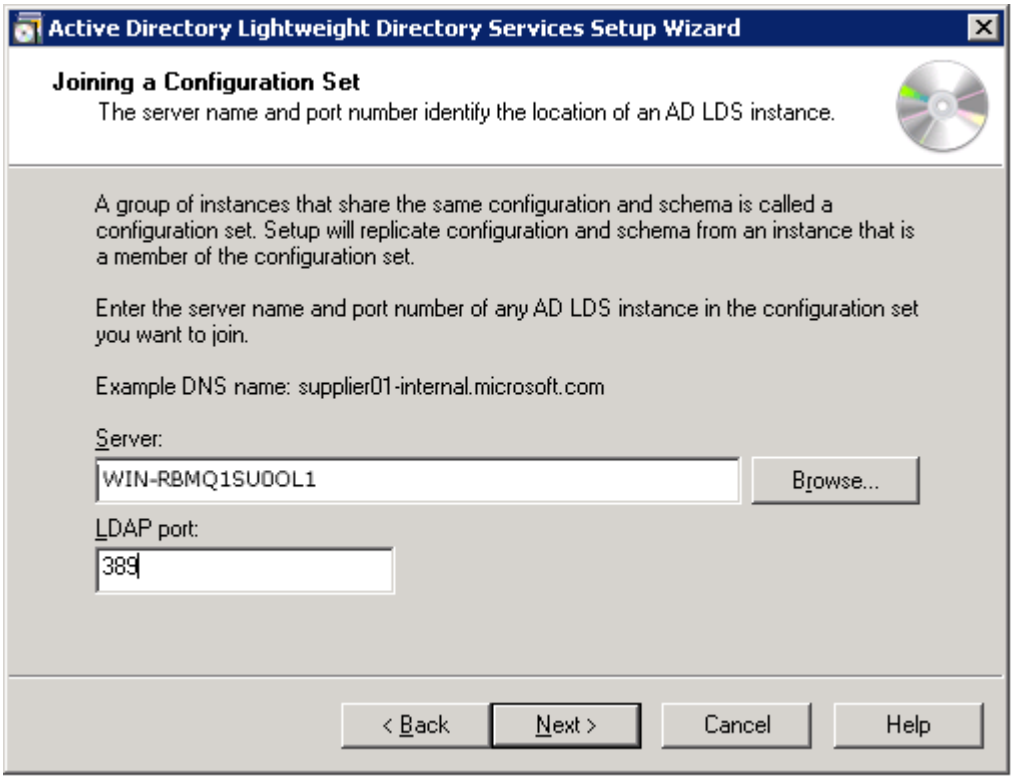


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



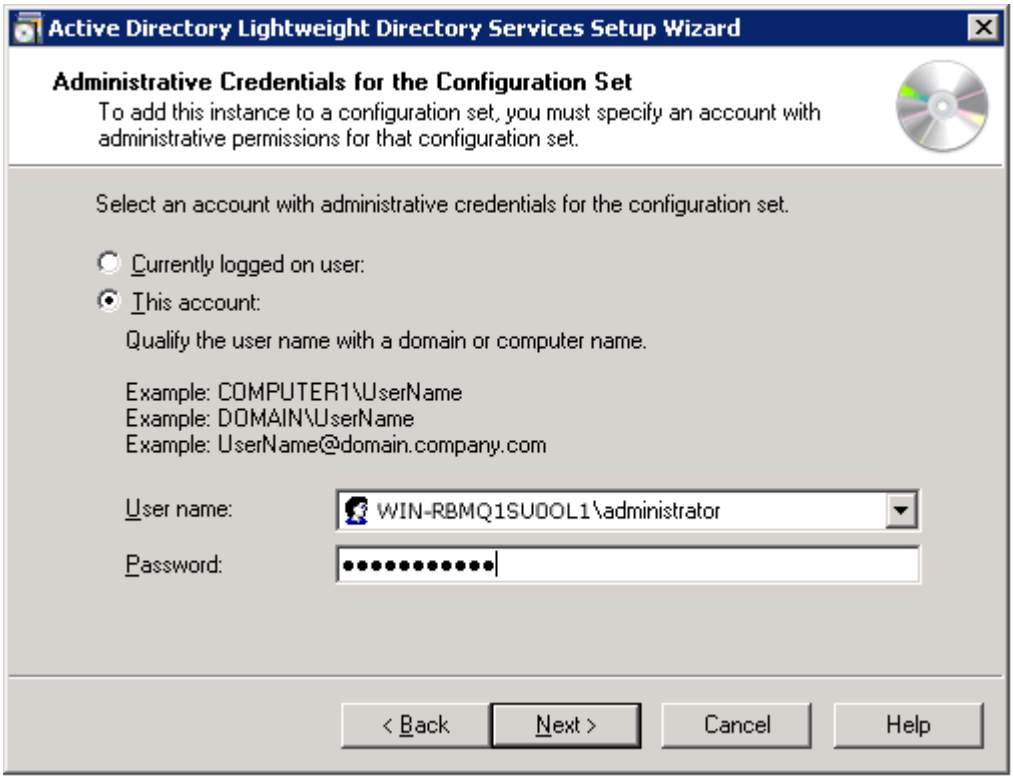
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

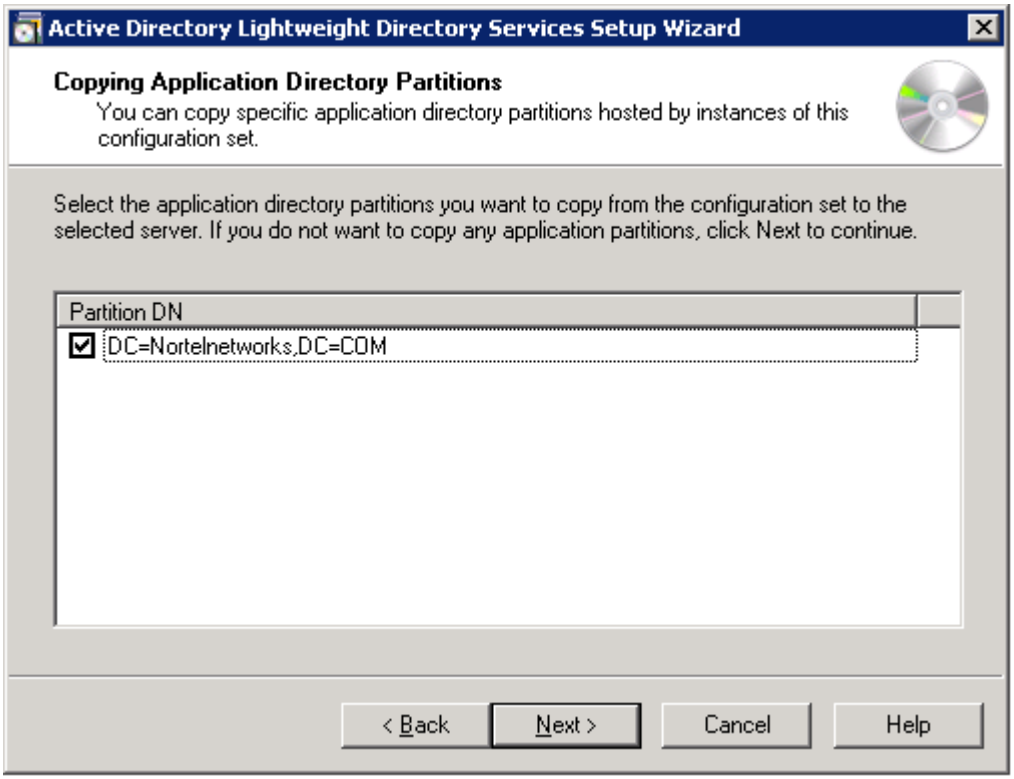


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

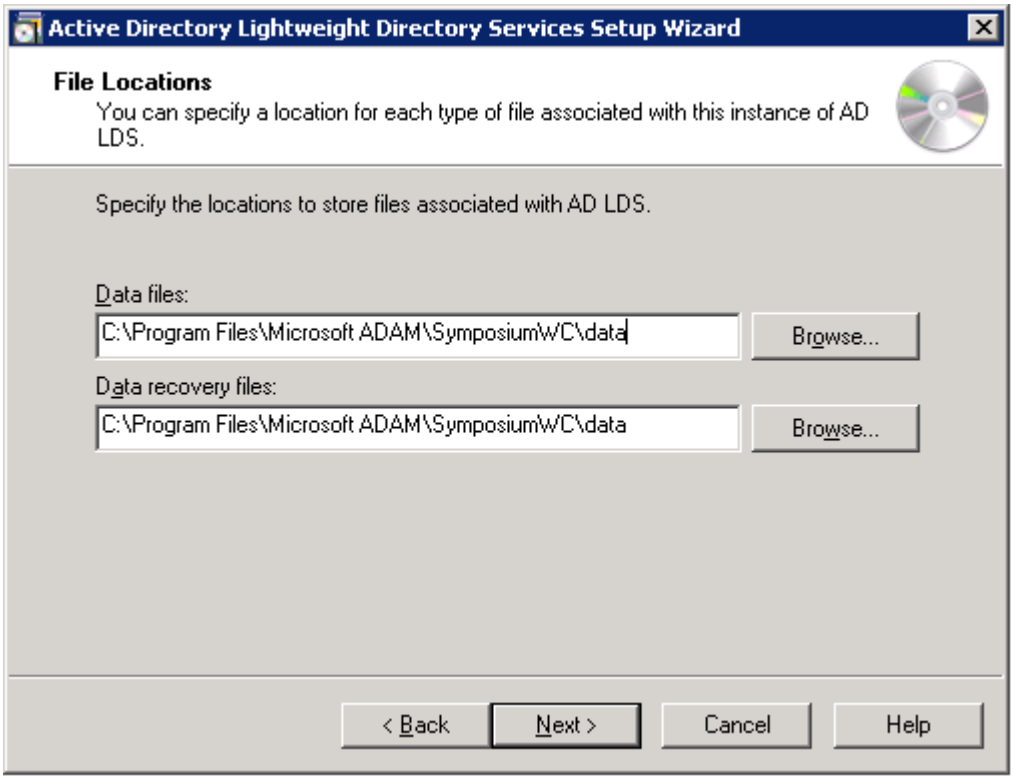
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

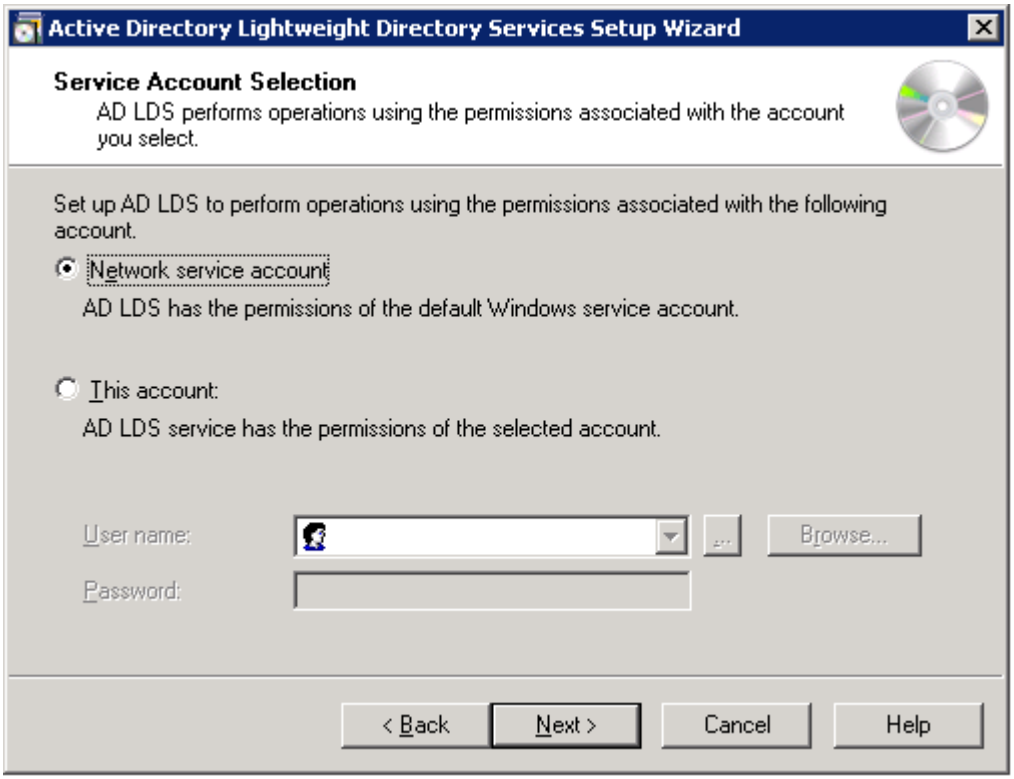


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

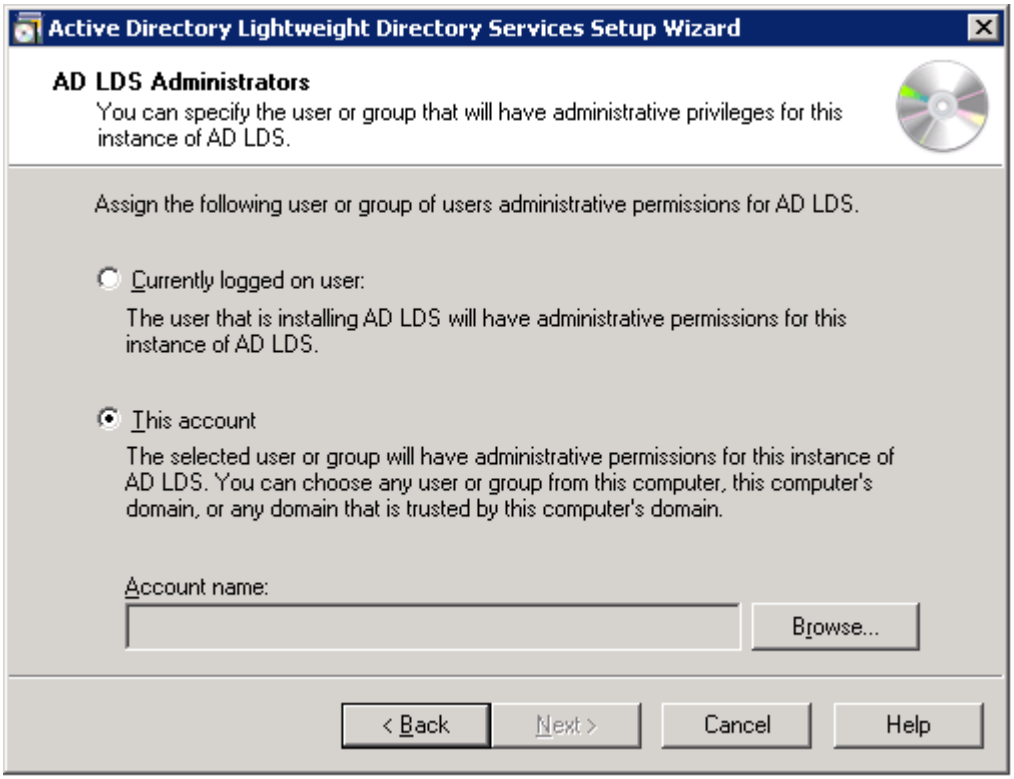


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

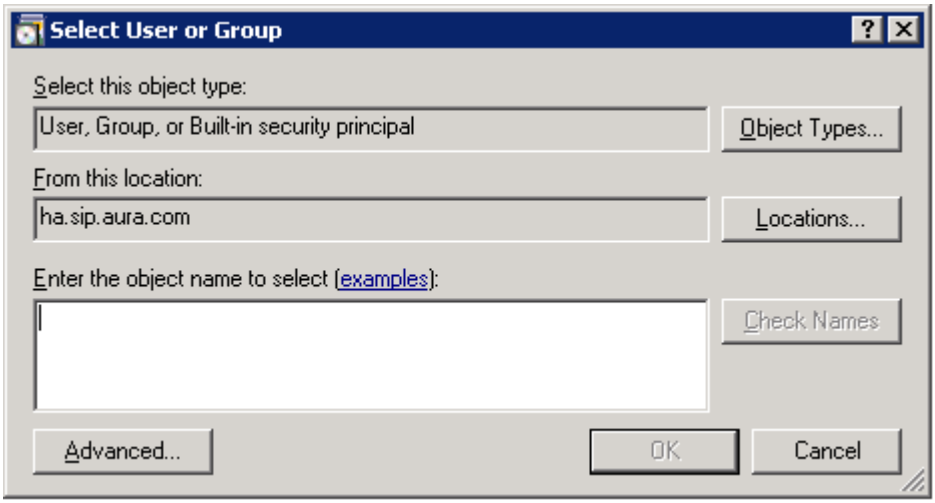


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

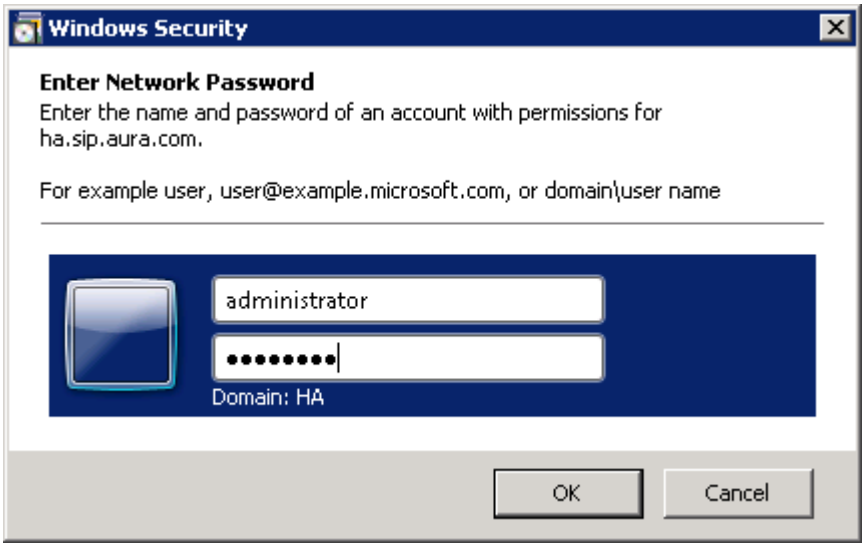


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

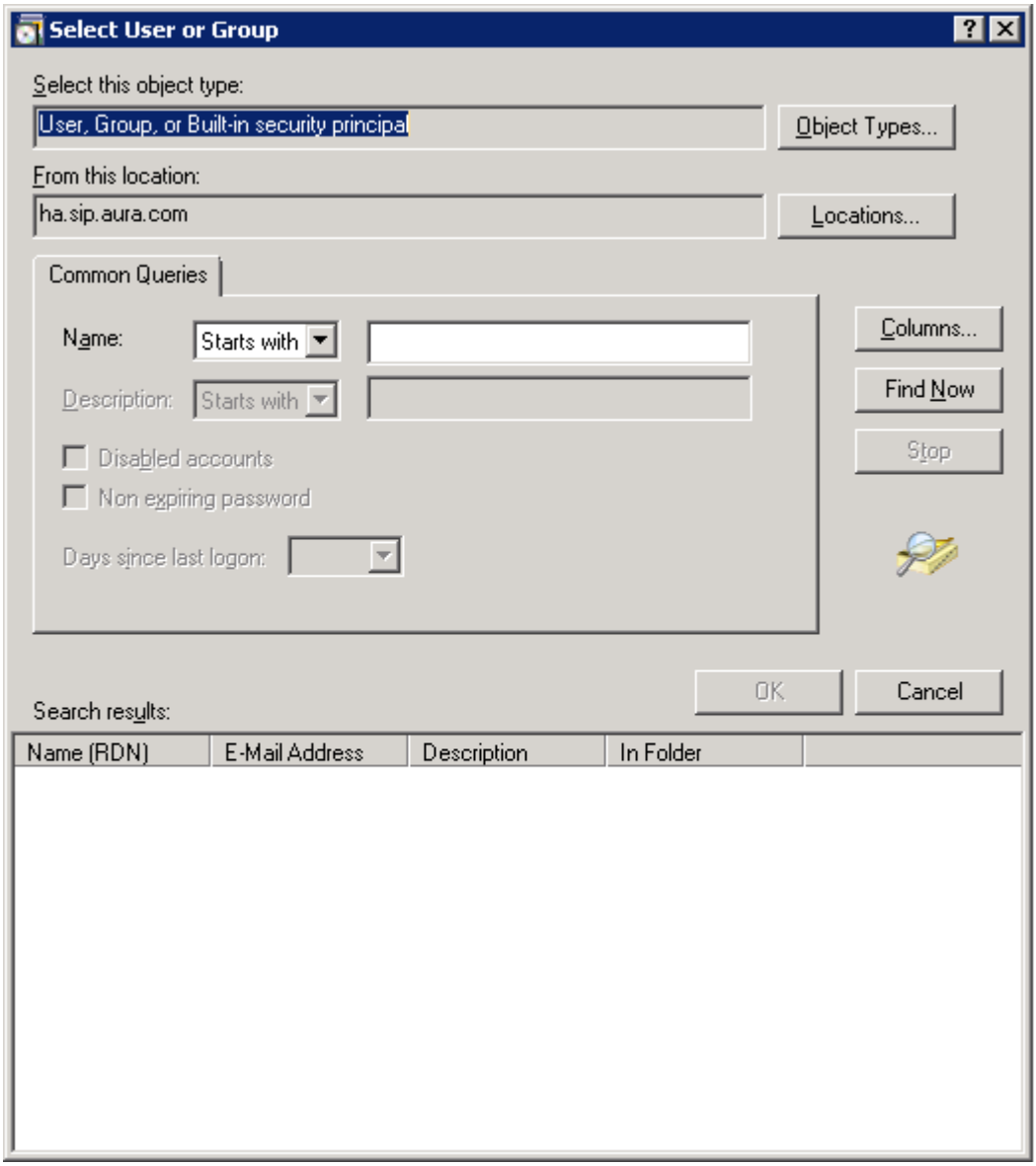


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



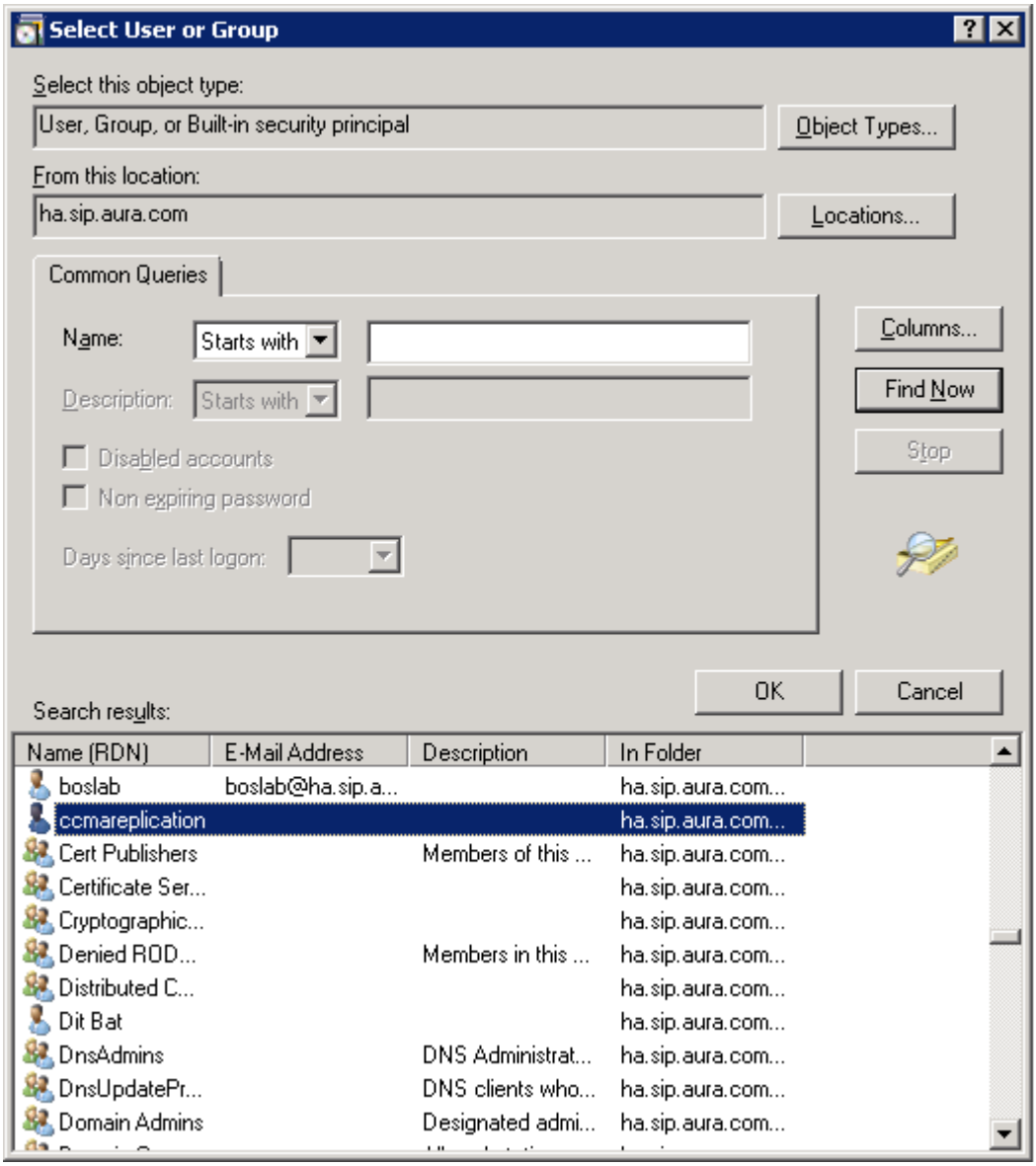
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



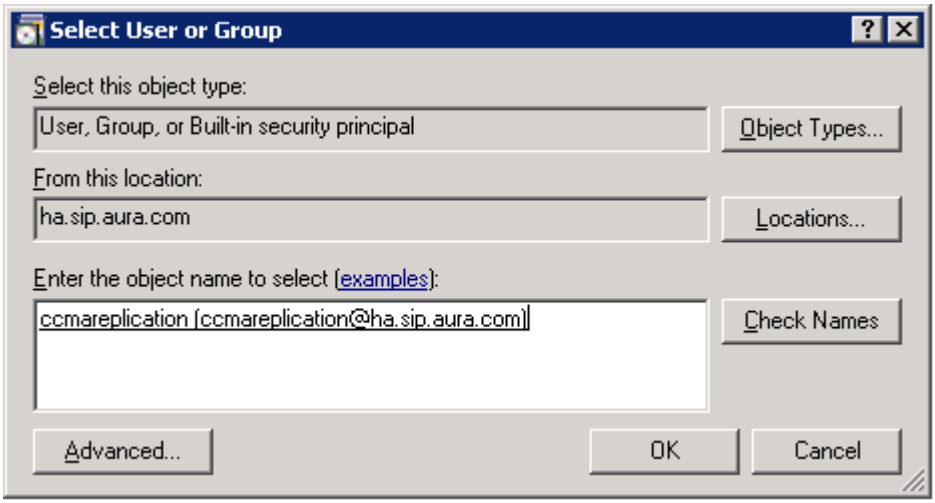
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

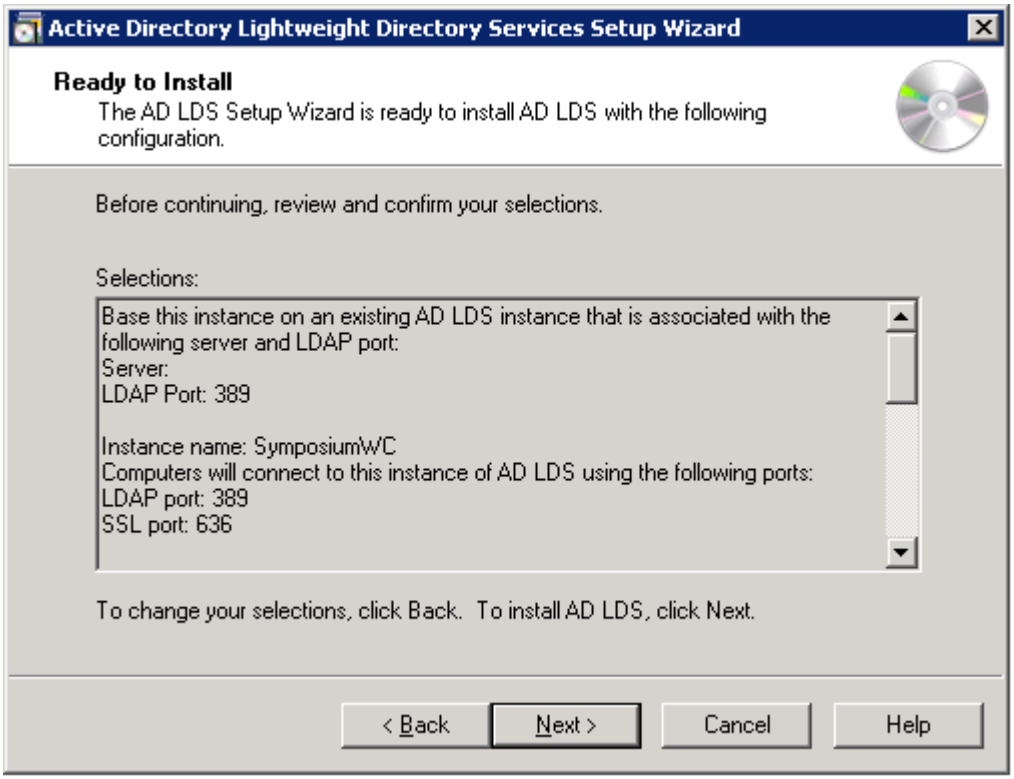


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 17: RGN Voice and Multimedia Contact Server for CS1000 installation

This chapter describes how to install a Remote Geographic Node (RGN) Voice and Multimedia Contact Server in a solution with an Avaya Communication Server 1000 (CS1000) platform. A Voice and Multimedia Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install a Voice and Multimedia Contact Server and commission it to be the Remote Geographic Node (RGN) Voice and Multimedia Contact Server in a solution with Disaster Recovery. The Remote Geographic Node server shadows the active server. Remote Geographic Node servers do not automatically take over if the active server fails. The standby server, Remote Geographic Node server, and active server must be at the same patch level and have the same hard disk drive partitions.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Voice and Multimedia Contact Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Voice and Multimedia Contact Server ELAN NIC and ELAN subnet are optional.

You must complete all the procedures in this section in sequential order.

Voice and Multimedia Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site.

Name	Description
	You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.

8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the geographic node network

About this task

Connect the Contact Center server to the geographic node network. The geographic node network is the network at the remote geographic site.

Procedure

1. Locate the slot assigned to the geographic node network interface card for the server. Make a note of the slot.
2. Connect the cable from the geographic node network to the geographic node network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the geographic node network.
4. Use the ping command to test connectivity with the campus network and servers.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.

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

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.

7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Adding the domain AD-LDS replication account to the RGN server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the Remote Geographic Node (RGN) server.

Ask your Network or System Administrator to add this AD-LDS replication account to the domain. The primary and RGN replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the Remote Geographic Node (RGN) Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.

11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.

2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the RGN Voice and Multimedia Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Remote Geographic Node (RGN) Contact Center Voice and Multimedia Contact Server software to provide data resiliency and Disaster Recovery.

Note:

Installing Voice and Multimedia Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

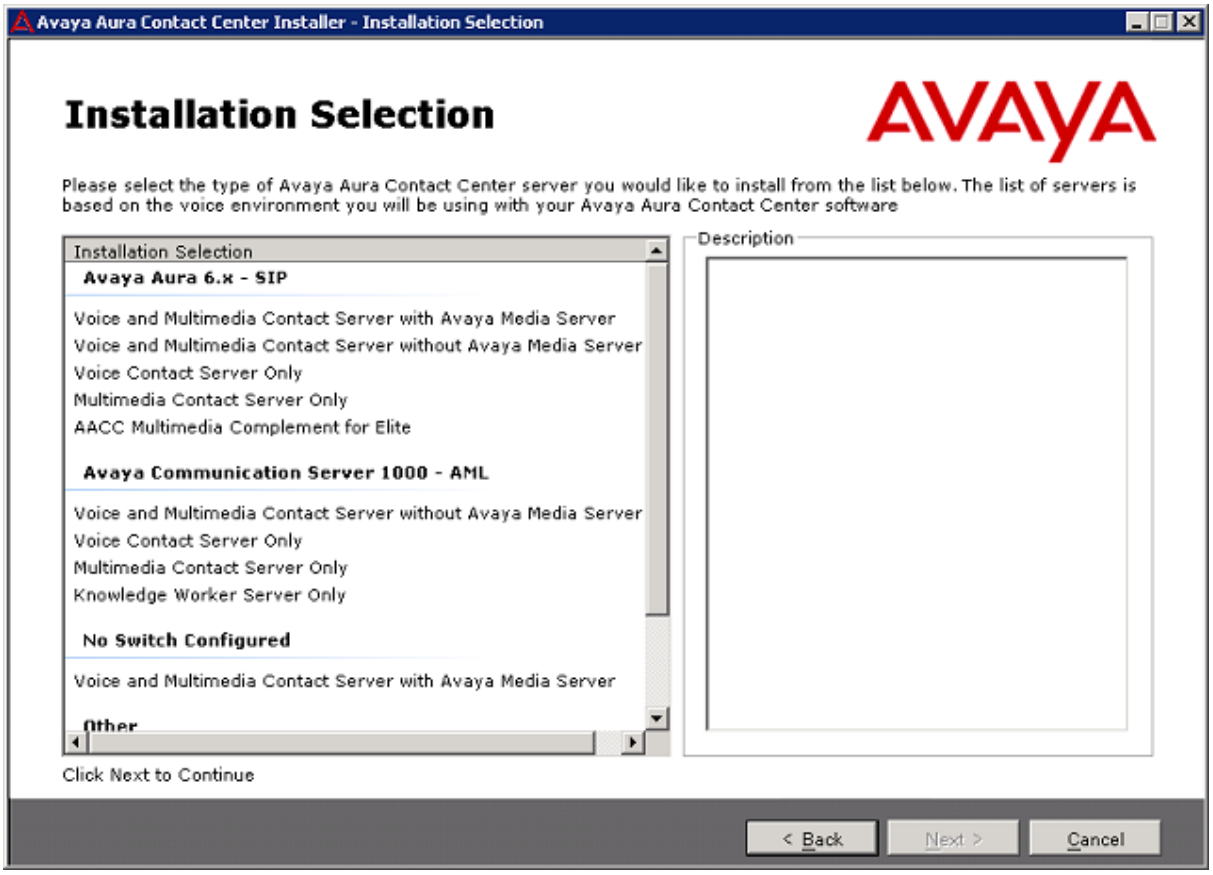
Note:

Read the Contact Center Release Notes for the most recent instructions.

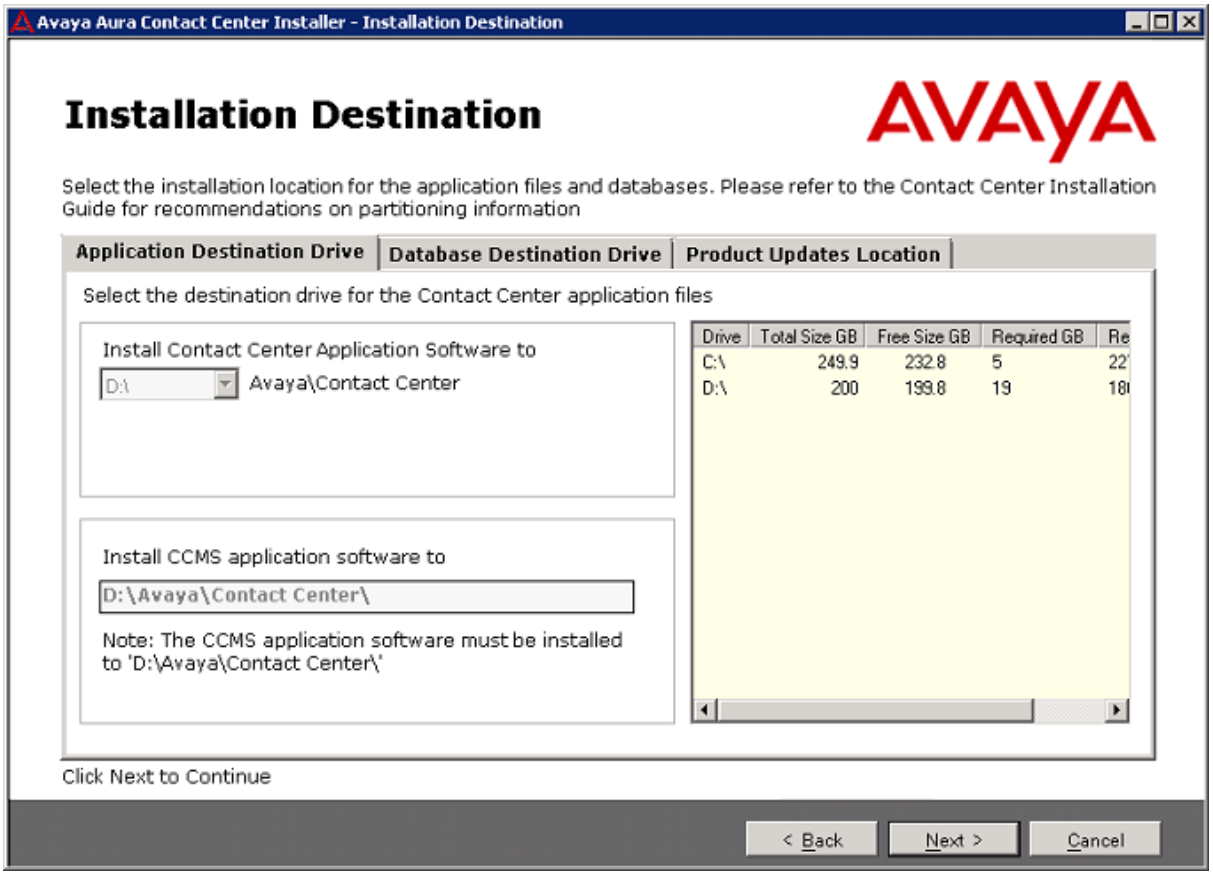
Procedure

1. Insert the Contact Center DVD into the DVD drive of your RGN server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

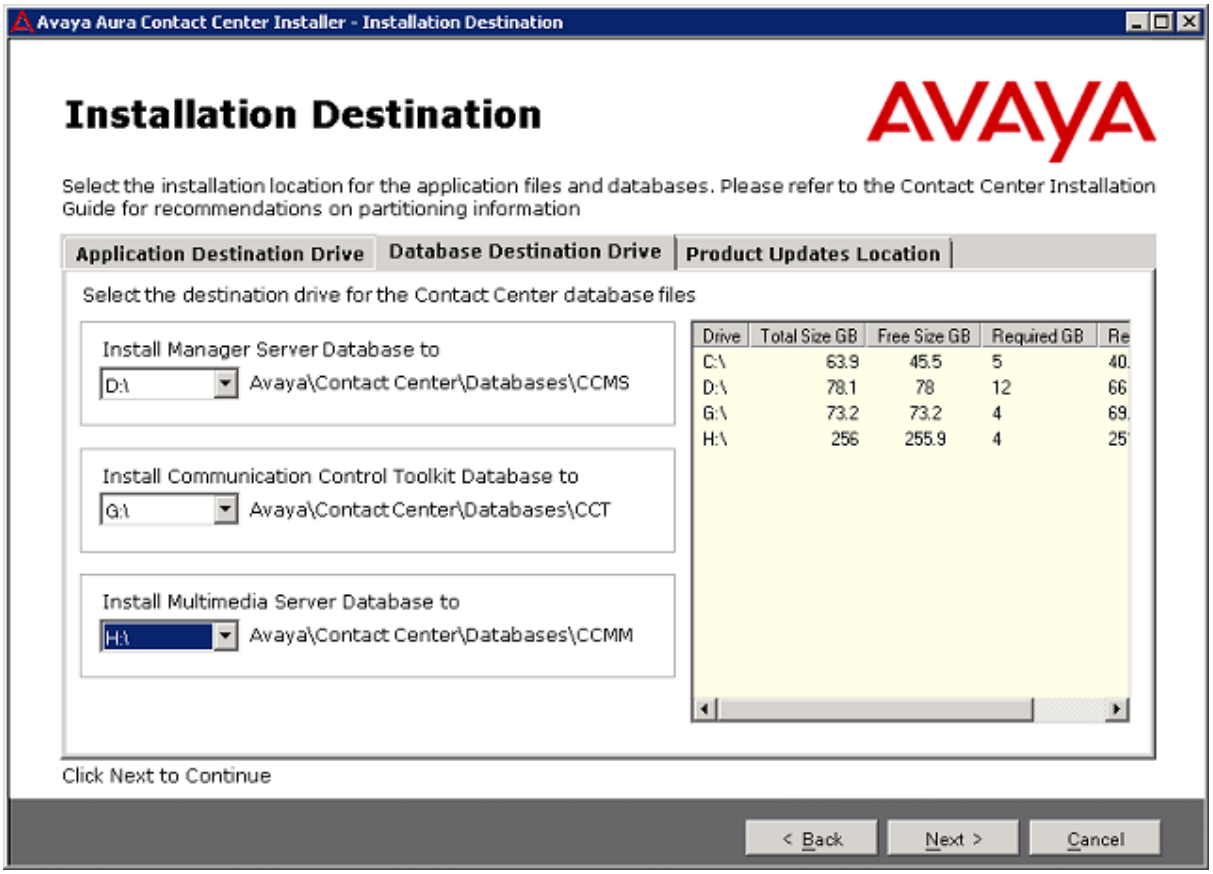
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



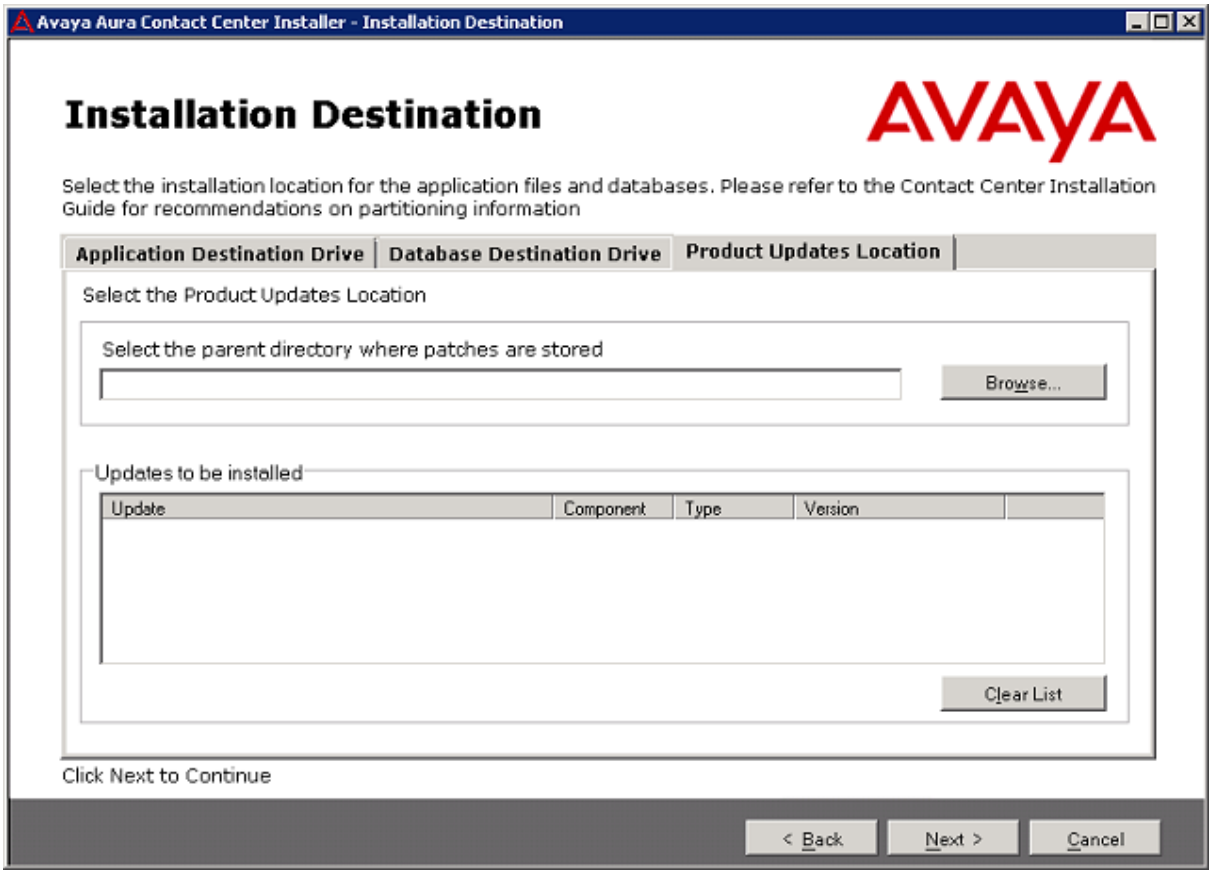
8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice and Multimedia Contact Server without Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



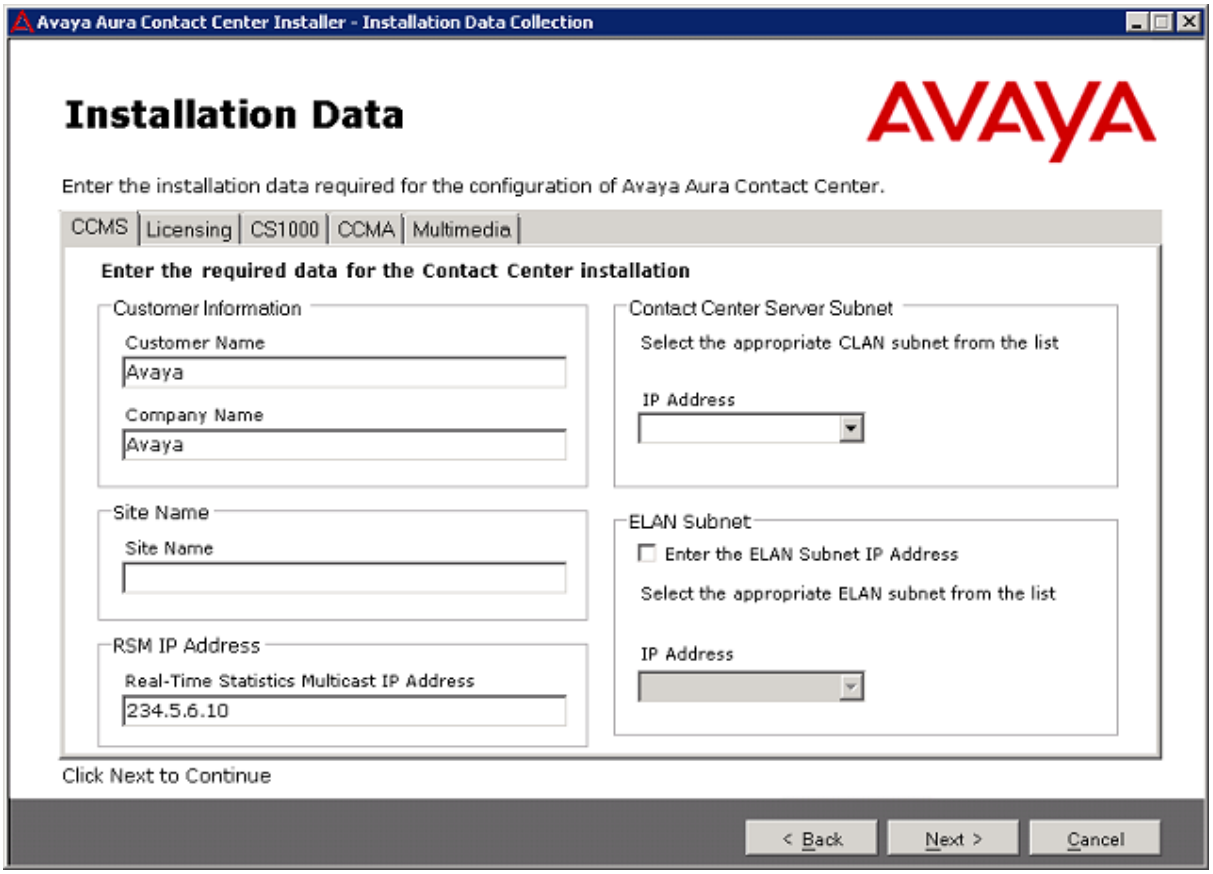
15. Click the **Product Updates Location** tab.



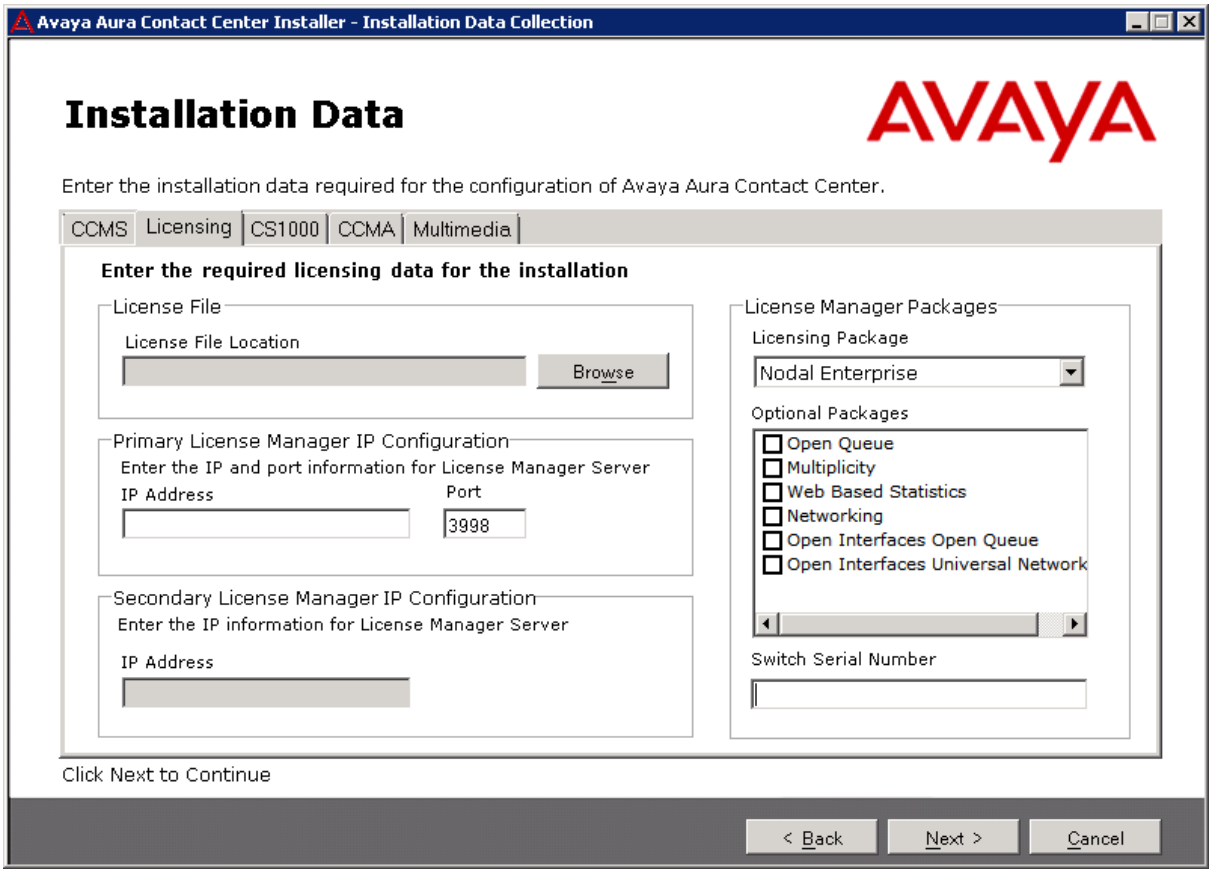
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.

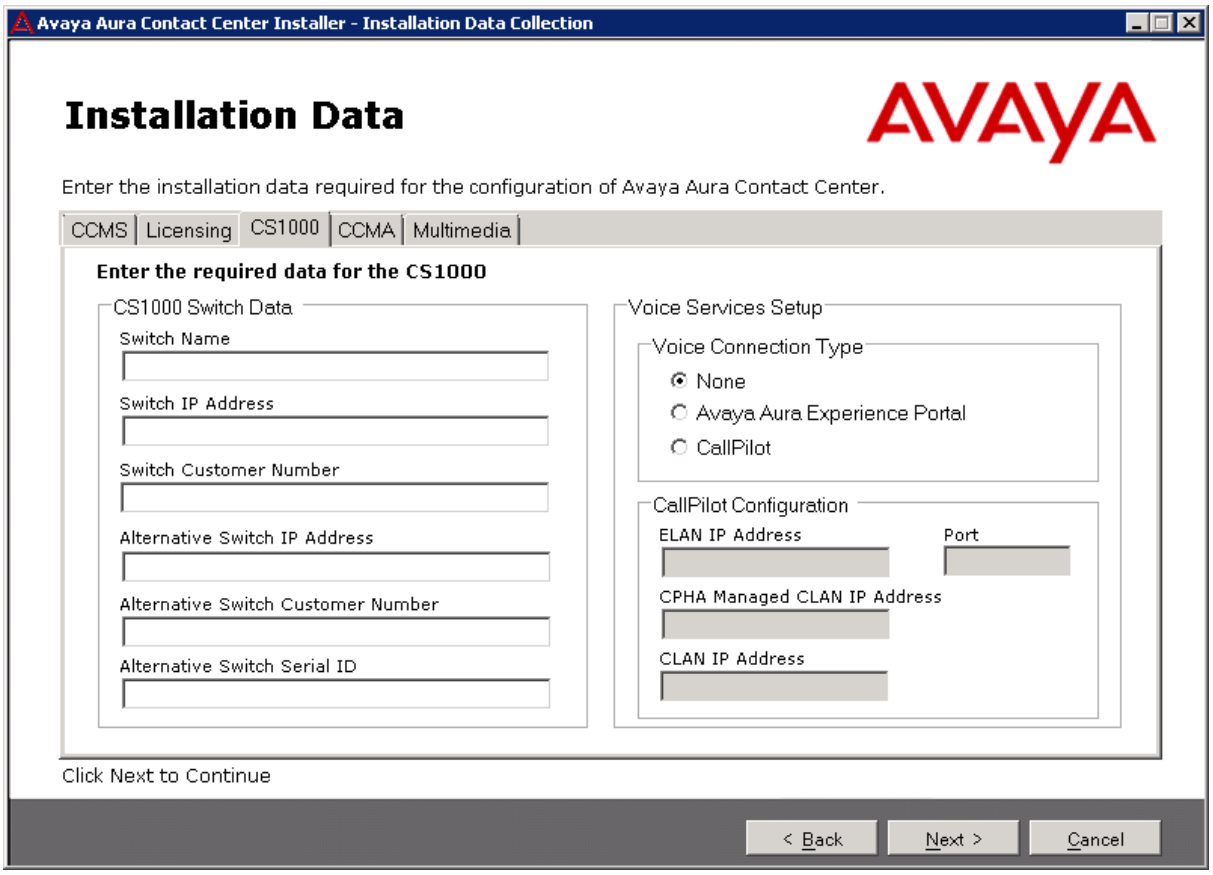


22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
28. Select the **Licensing** tab, and configure the licensing details.



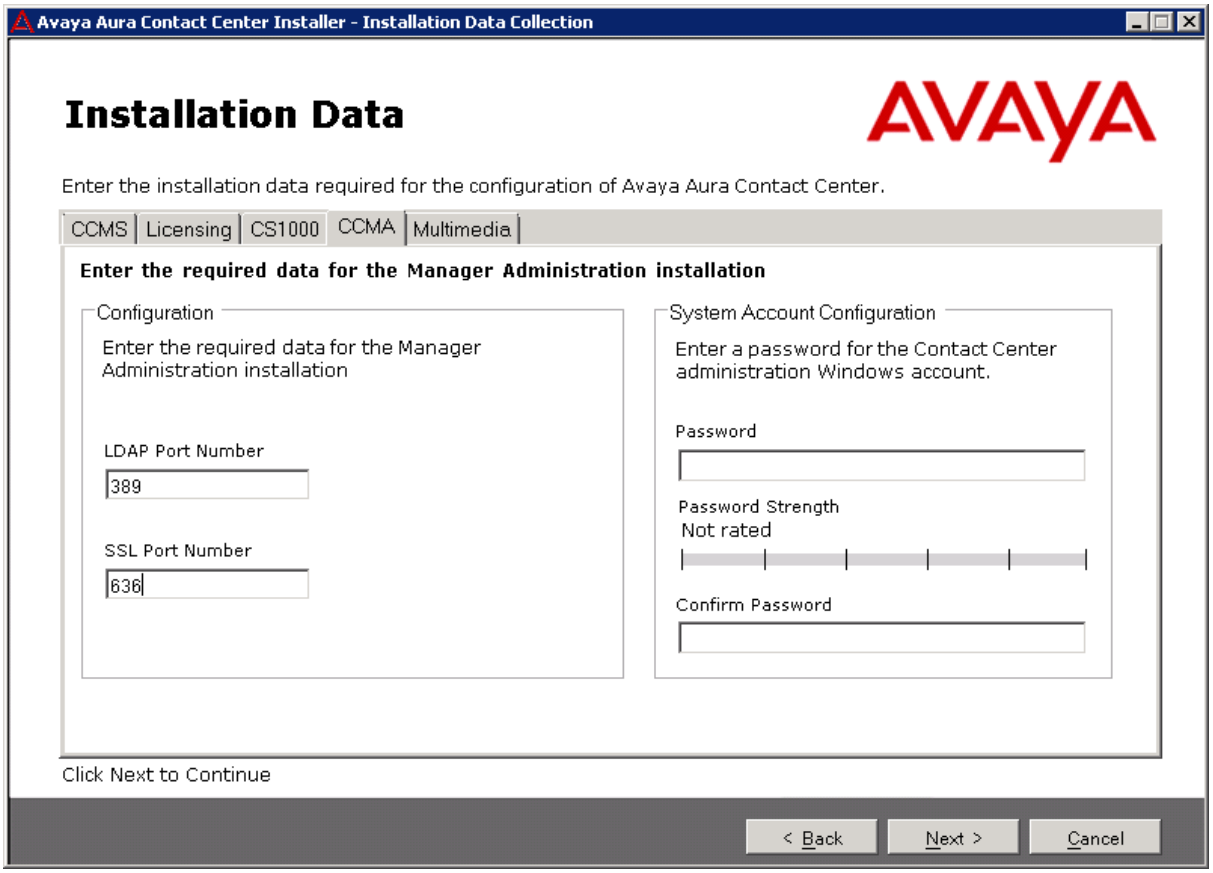
29. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
30. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice and Multimedia Contact Server contains a License Manager server.
31. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
32. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
33. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
34. From the list of **Optional Packages**, enable the licensed features that you have purchased.
35. Select the **Open Queue** check box.
36. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

37. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



38. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
39. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
40. In the **Switch Customer Number** box, type the customer number for th Avaya Communication Server 1000.
41. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
44. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

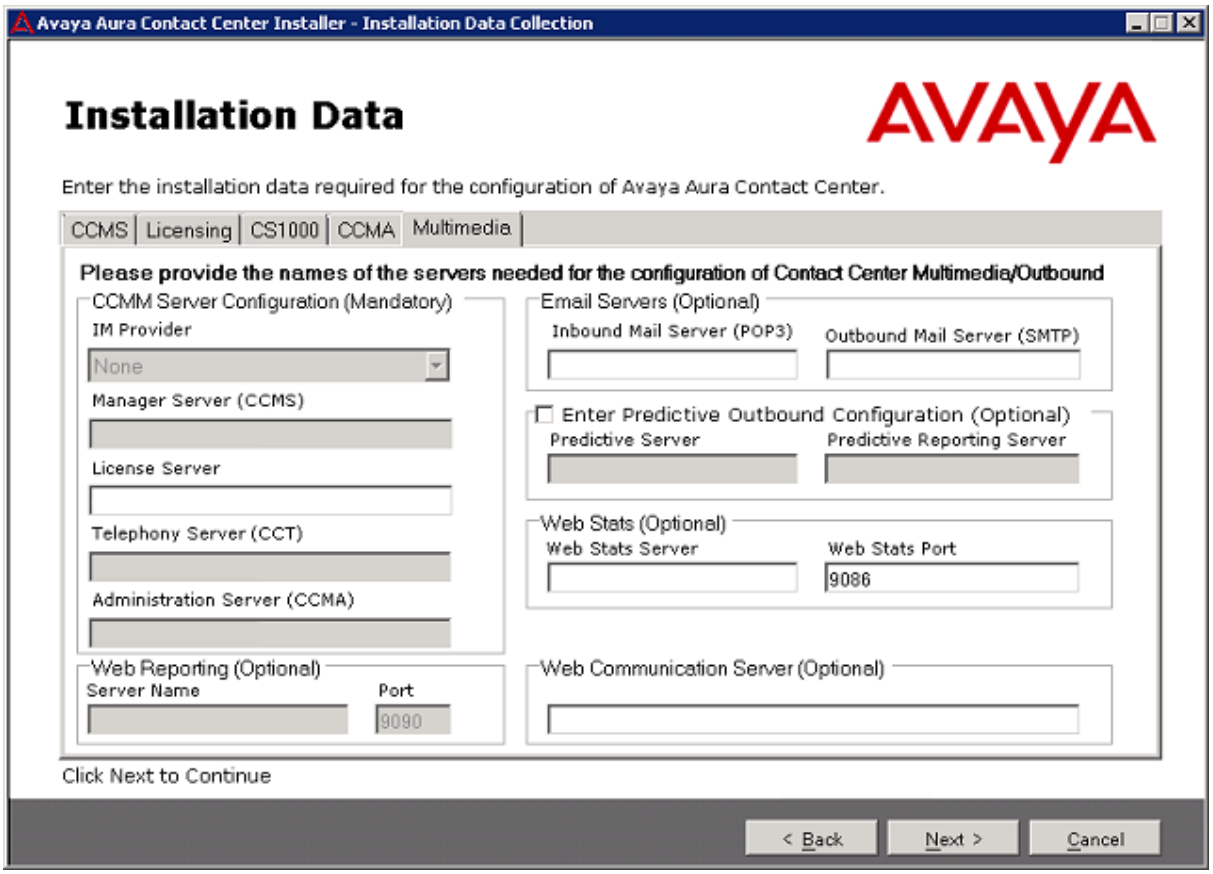
45. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
46. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
47. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
48. Select the **CCMA** tab, and configure the CCMA details.



49. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
50. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
51. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

52. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



53. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
54. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
55. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
56. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
57. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
58. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

Important:

If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.

59. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
60. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
61. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
62. Click **Next**.
63. On the **Summary** window, review and verify the information.
64. Click **Install**.
65. After the installation is complete, click **Finish**.
66. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 18: Voice Contact Server for CS1000 installation

This chapter describes how to install a Voice Contact Server in a solution with an Avaya Communication Server 1000 (CS1000) platform. A Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

Install this server to provide context-sensitive and skill-based routing for customer voice contacts. This server provides routed contact support for voice calls. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

If the server is to be used in a domain, Avaya recommends that you add the server to the domain before installing Contact Center software.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Contact Center Manager Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center Manager Server ELAN NIC and ELAN subnet are optional.

You must complete all the procedures in this section in sequential order.

All active and standby applications must be on the same patch level.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.

22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

Adding the server to a domain or workgroup

About this task

Add the server to a domain or workgroup. Avaya recommends that you add the server to the domain or workgroup before installing Contact Center software.

If you are using a domain:

- 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.
- On the server, configure a preferred Domain Name System (DNS) server on the Network Interface Card (NIC).
- 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. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. To add the server to a workgroup, skip to step 8.
7. To add the server to a domain, in the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
    a. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
    b. Click **OK**.
    c. Type the domain administrator **User name** and **Password**.
    d. Click **OK**.
    e. Skip to step 9.
8. To add the server to a workgroup, in the **Computer Name/Domain Changes** dialog box, click the **Workgroup** option.
    a. Type the workgroup name.
    b. Click **OK**.
    c. Type the workgroup administrator **User name** and **Password**.
    d. Click **OK**.
9. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.

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

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.
7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and

network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

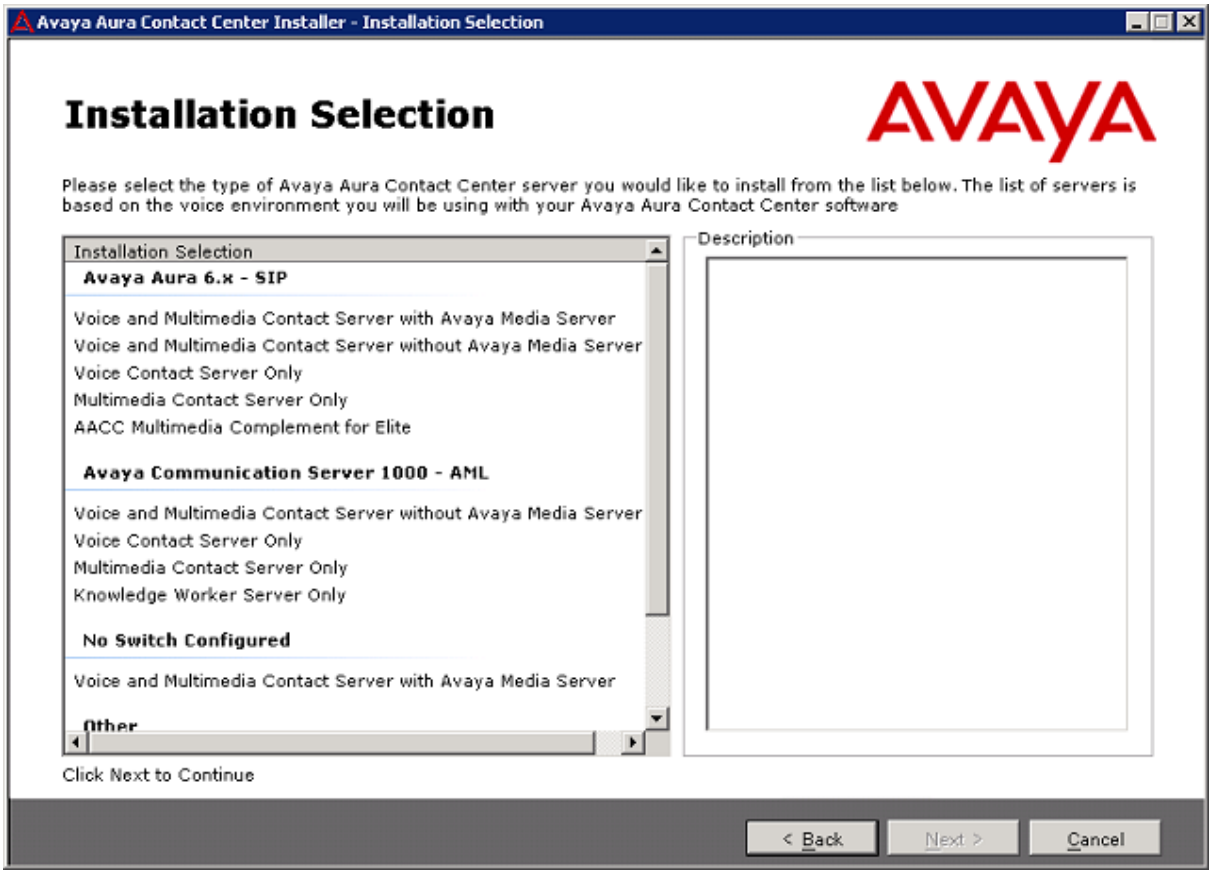
Note:

Read the Contact Center Release Notes for the most recent instructions.

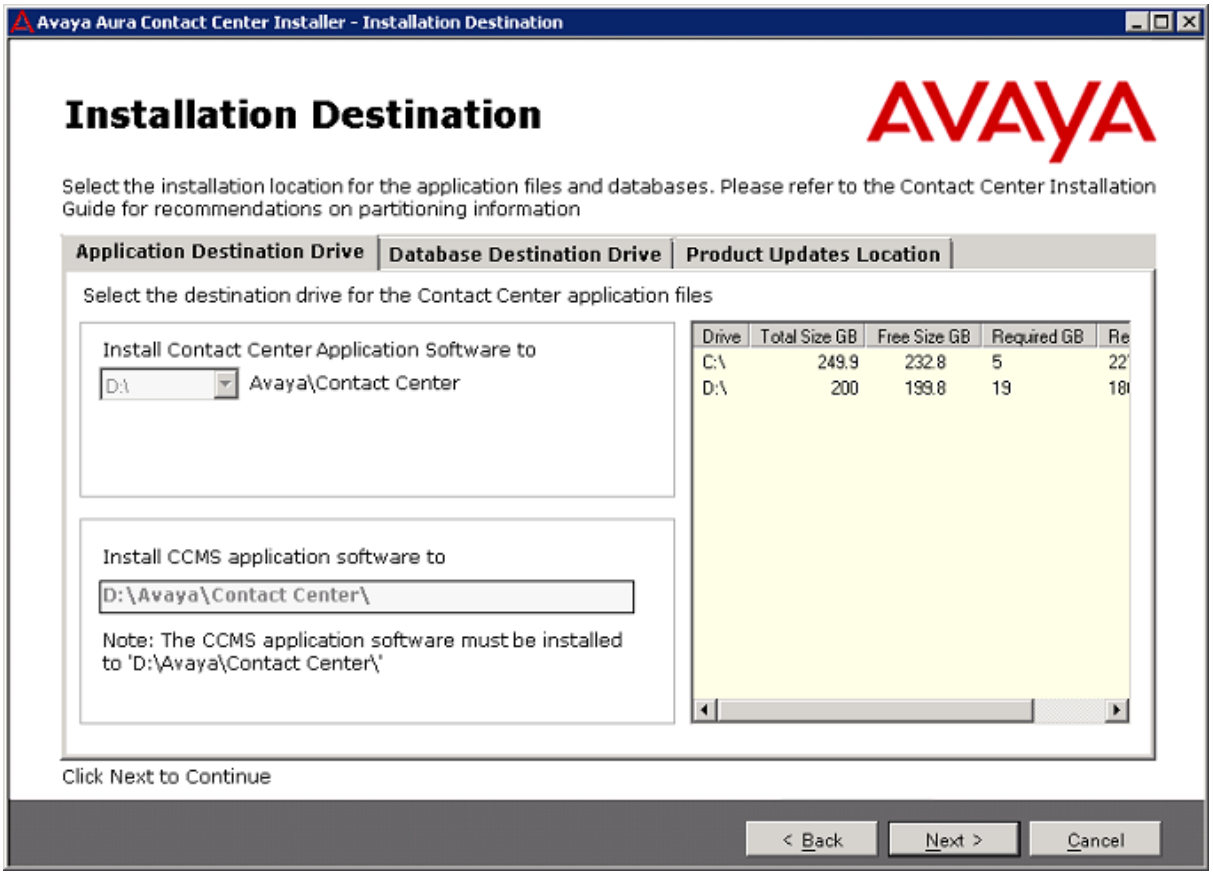
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

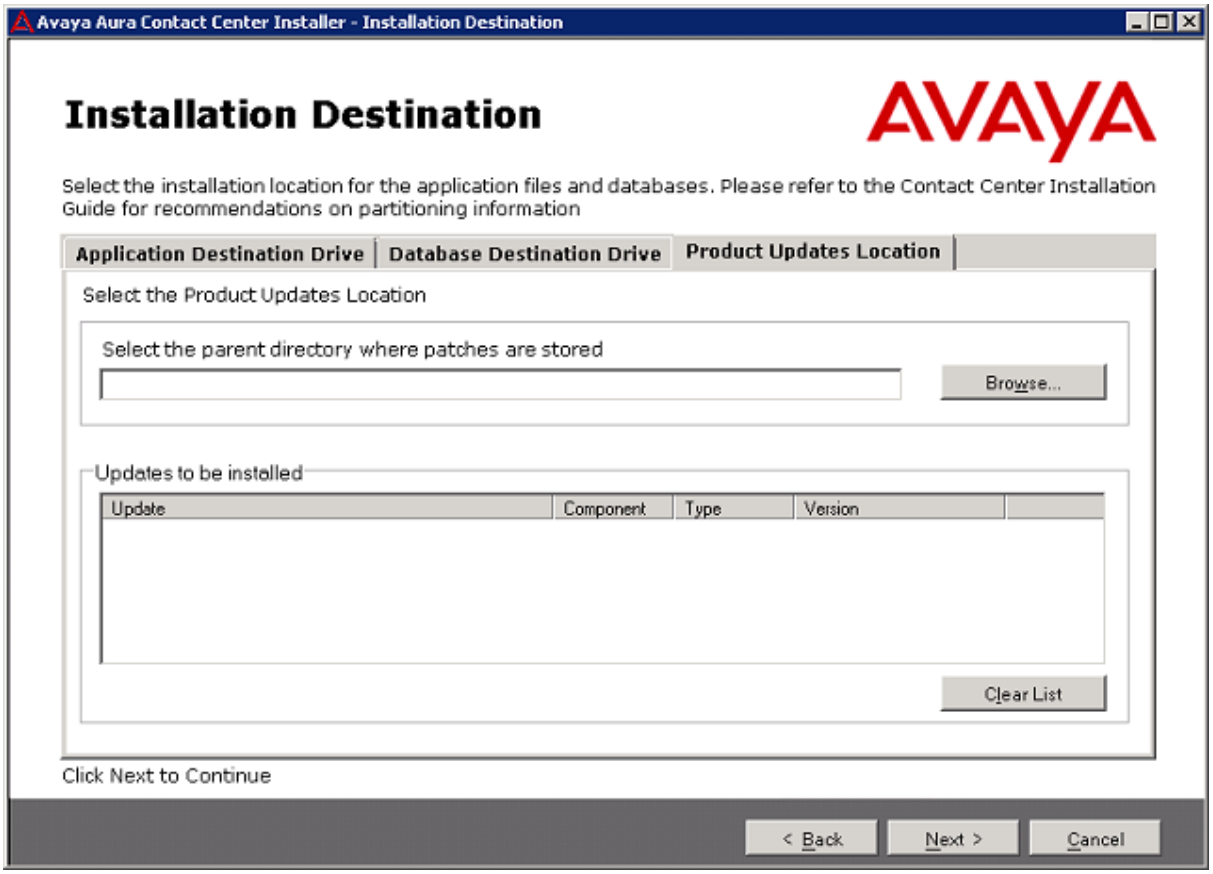
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice Contact Server Only**.
9. Click **Next**.



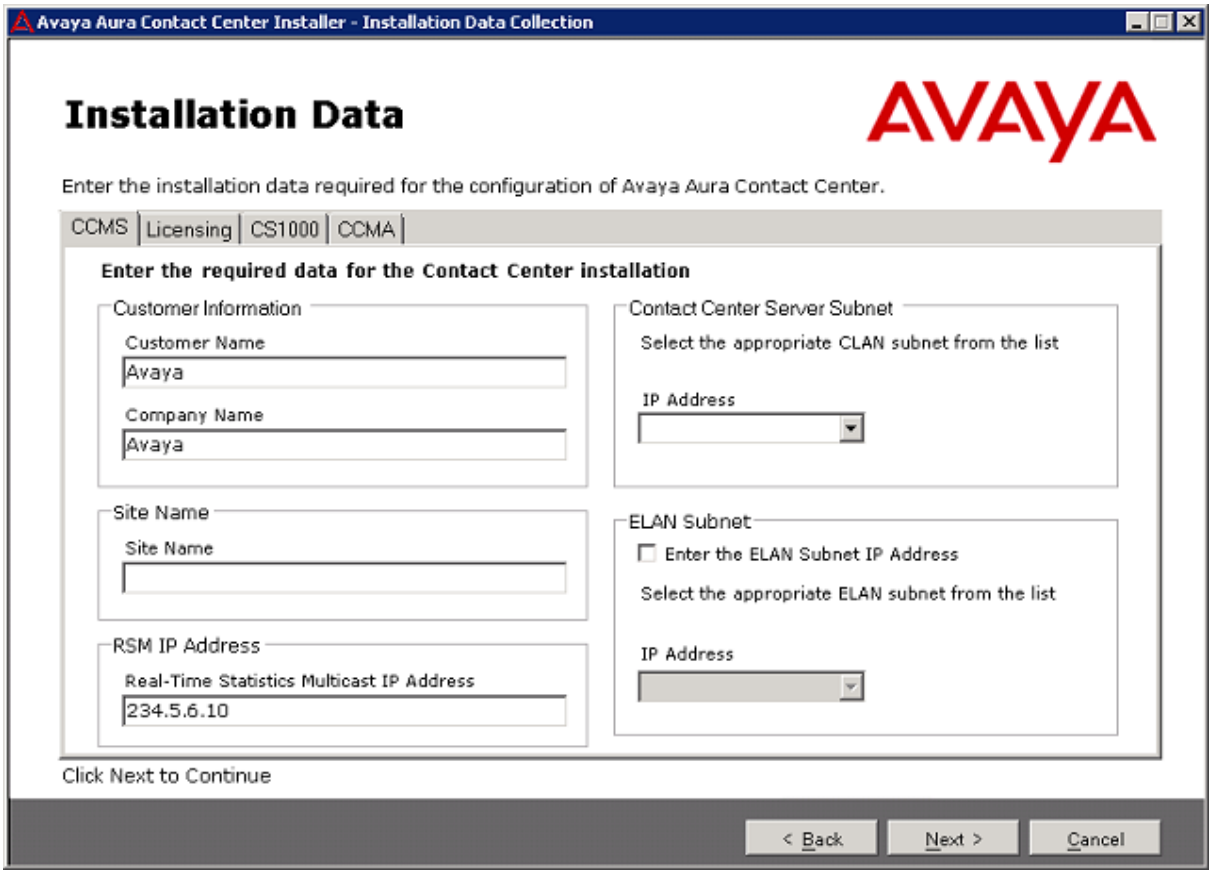
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



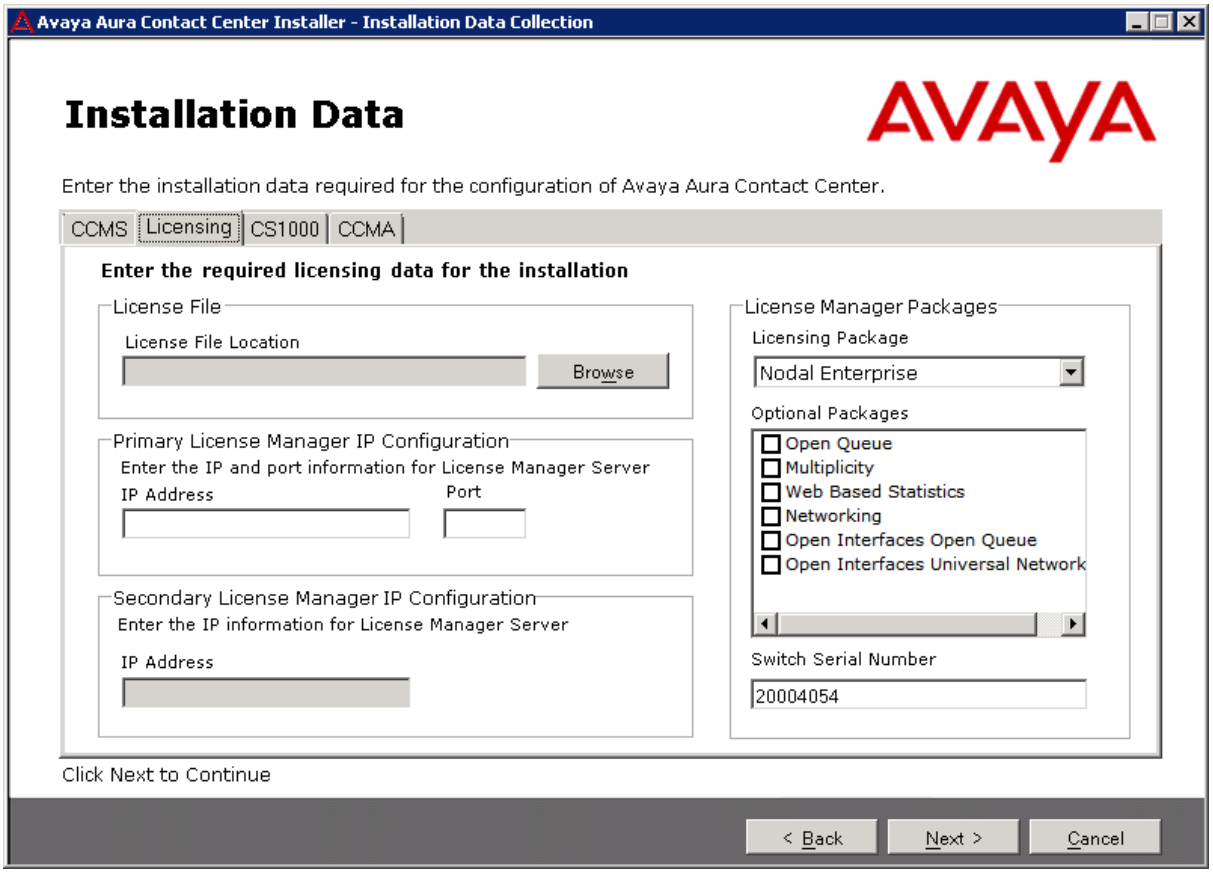
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.

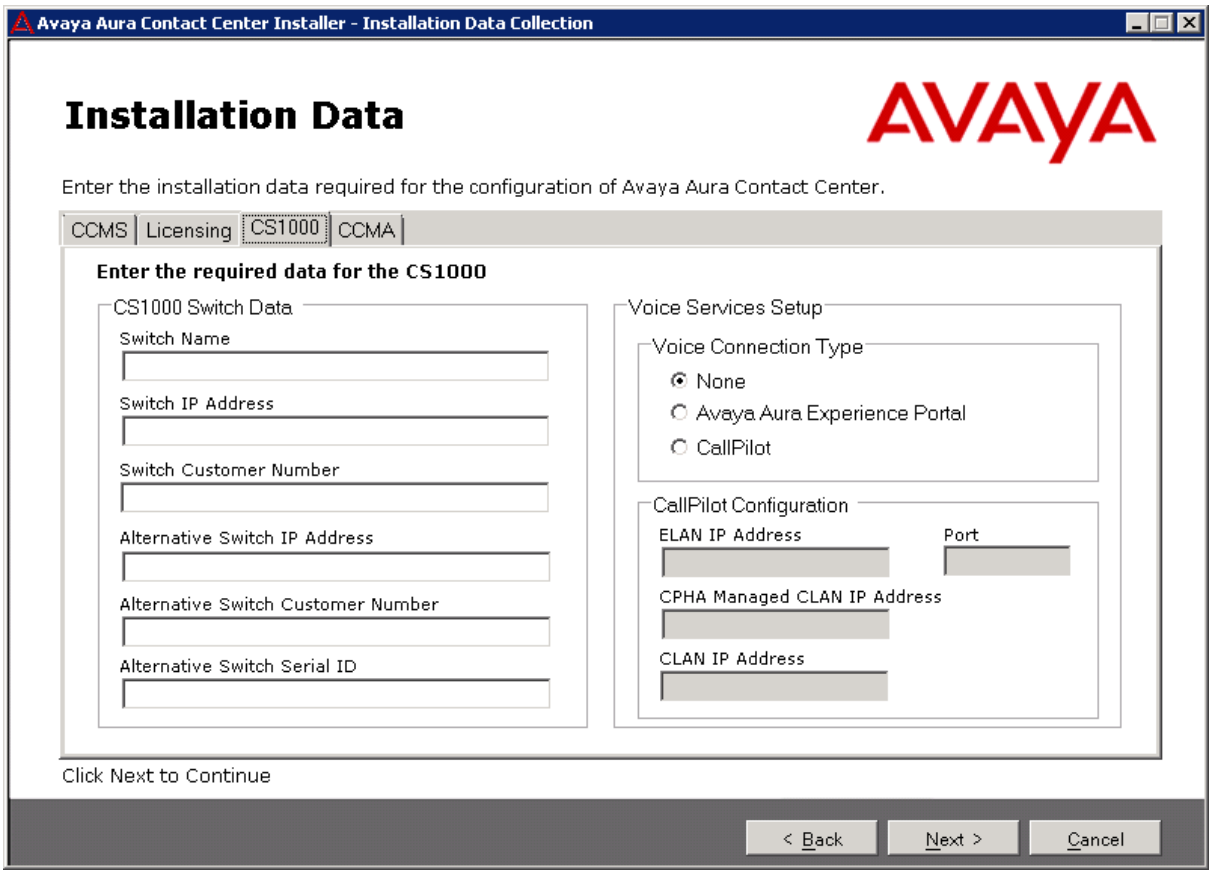


21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
27. Select the **Licensing** tab, and configure the licensing details.



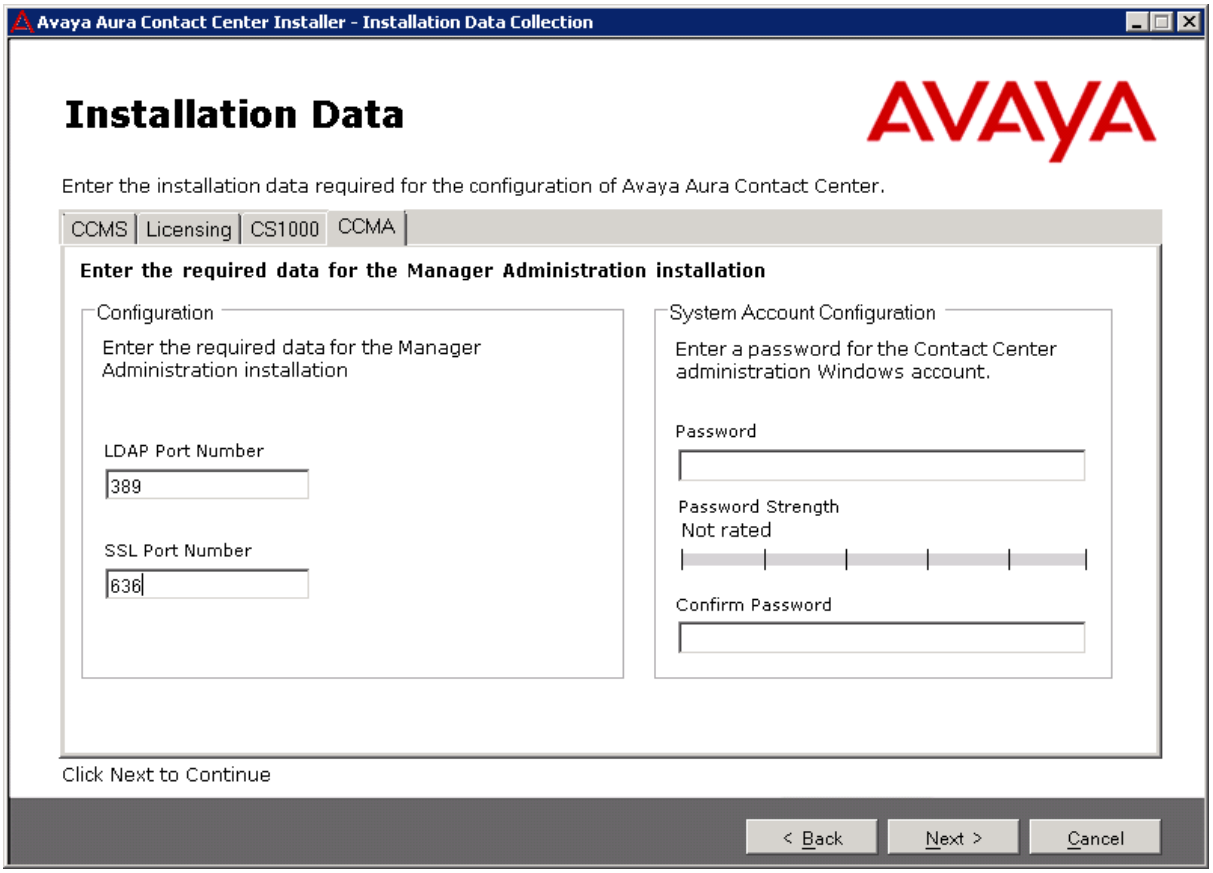
28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
32. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
33. From the list of **Optional Packages**, enable the licensed features that you have purchased.
34. Select the **Open Queue** check box.
35. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

36. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



37. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
38. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
39. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
40. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
41. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

44. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
45. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
46. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
47. Select the **CCMA** tab, and configure the CCMA details.



48. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
49. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
50. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

51. Click **Next**.
52. On the **Summary** window, review and verify the information.
53. Click **Install**.
54. After the installation is complete, click **Finish**.
55. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 19: Primary Voice Contact Server for CS1000 installation in a domain

This chapter describes how to install a Voice Contact Server in a solution with an Avaya Communication Server 1000 (CS1000) platform. This chapter describes how to install a Voice Contact Server in a domain. A Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

Install this server to provide context-sensitive and skill-based routing for customer voice contacts. This server provides routed contact support for voice calls. This server provides extensive tools for agent management, real-time and historical reporting, and graphical tools to create contact flows and treatment rules. Use this server for license management, High Availability configuration, networking, Open Interfaces Web Service and third-party application interfaces integration.

You can change the name of a Contact Center server, but because this is time consuming, Avaya recommends that you configure the server final production name before installing Contact Center software.

If you plan to follow the Microsoft server hardening guidelines, complete those procedures before installing Avaya Aura® Contact Center.

Important:

You can create an administration account on the server and then install Avaya Aura® Contact Center using the account. This Avaya Aura® Contact Center administration account must have full administrative privileges. You must upgrade and patch Avaya Aura® Contact Center using this administration account. You can rename this account after installing Avaya Aura® Contact Center, but you must not delete the account. If you delete the account used to install Avaya Aura® Contact Center, Avaya Aura® Contact Center stops working.

Contact Center Manager Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center Manager Server ELAN NIC and ELAN subnet are optional.

All active and standby applications must be on the same patch level.

Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.

- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.

18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.

Name	Description
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.

2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.

10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.

2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.

6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.
7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.

- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Voice Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).

- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Contact Center Voice Contact Server software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

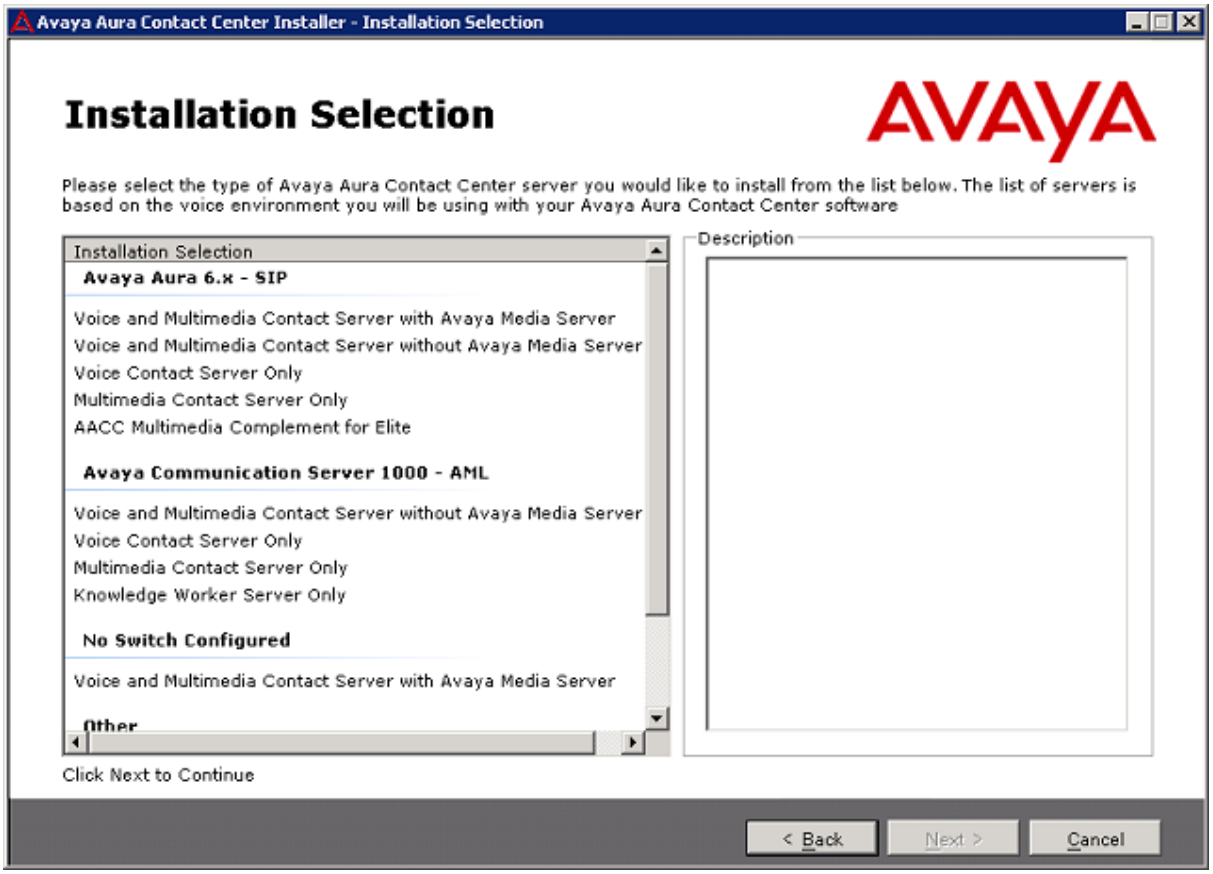
Note:

Read the Contact Center Release Notes for the most recent instructions.

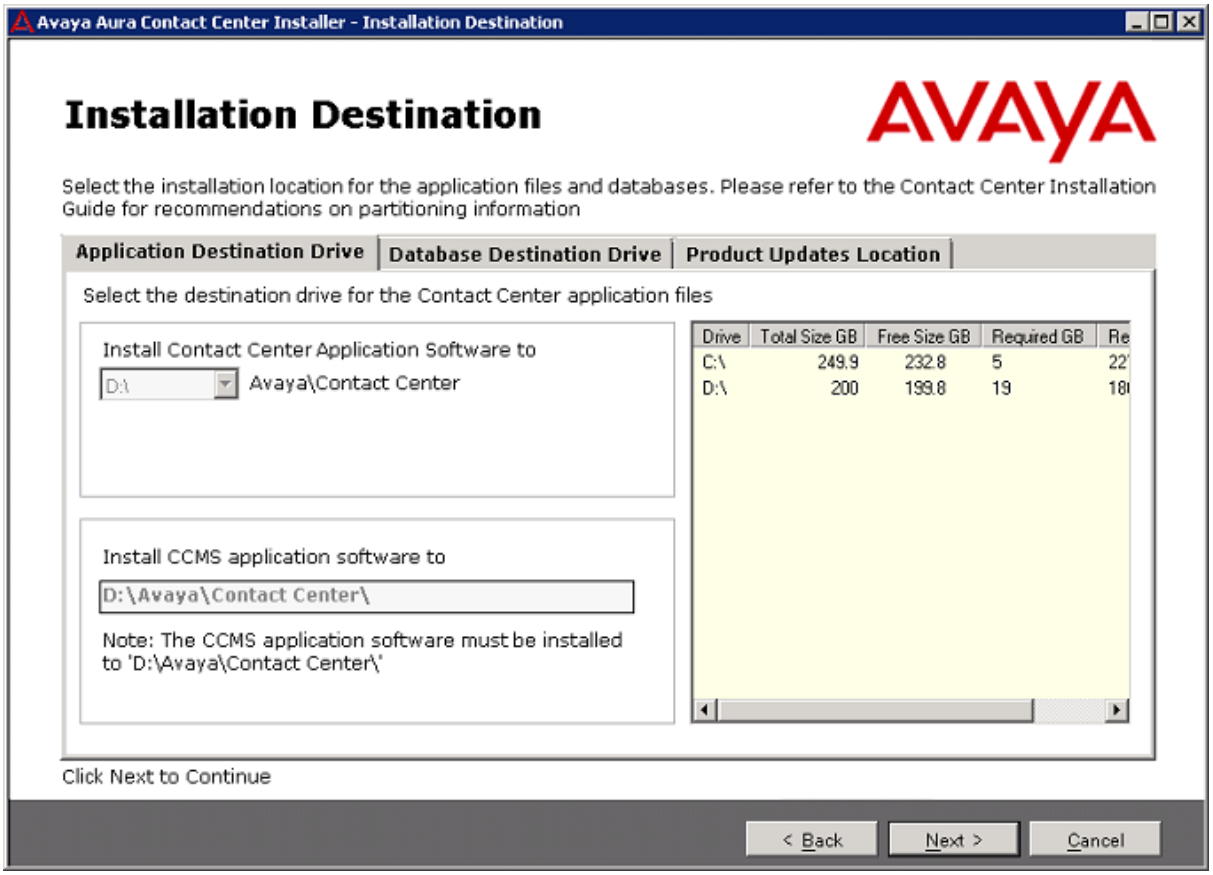
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

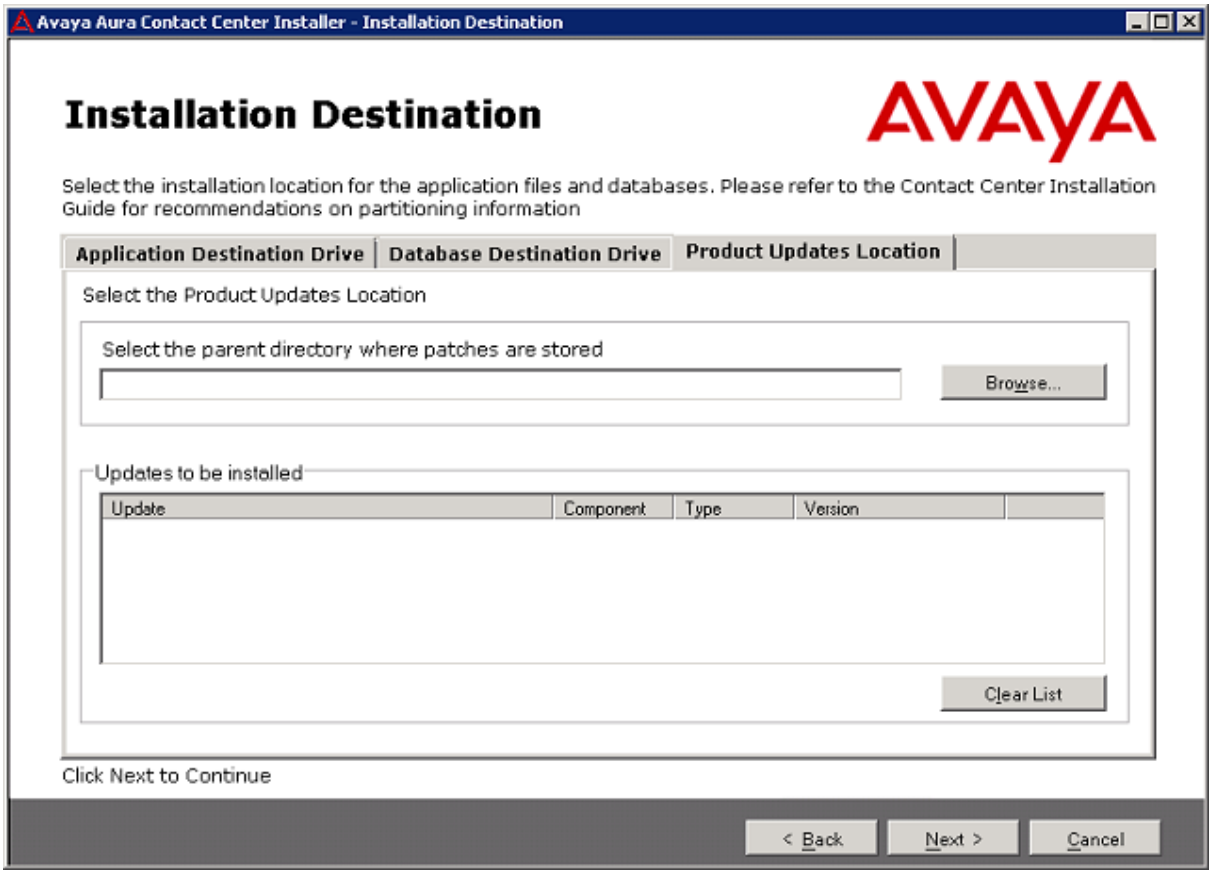
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice Contact Server Only**.
9. Click **Next**.



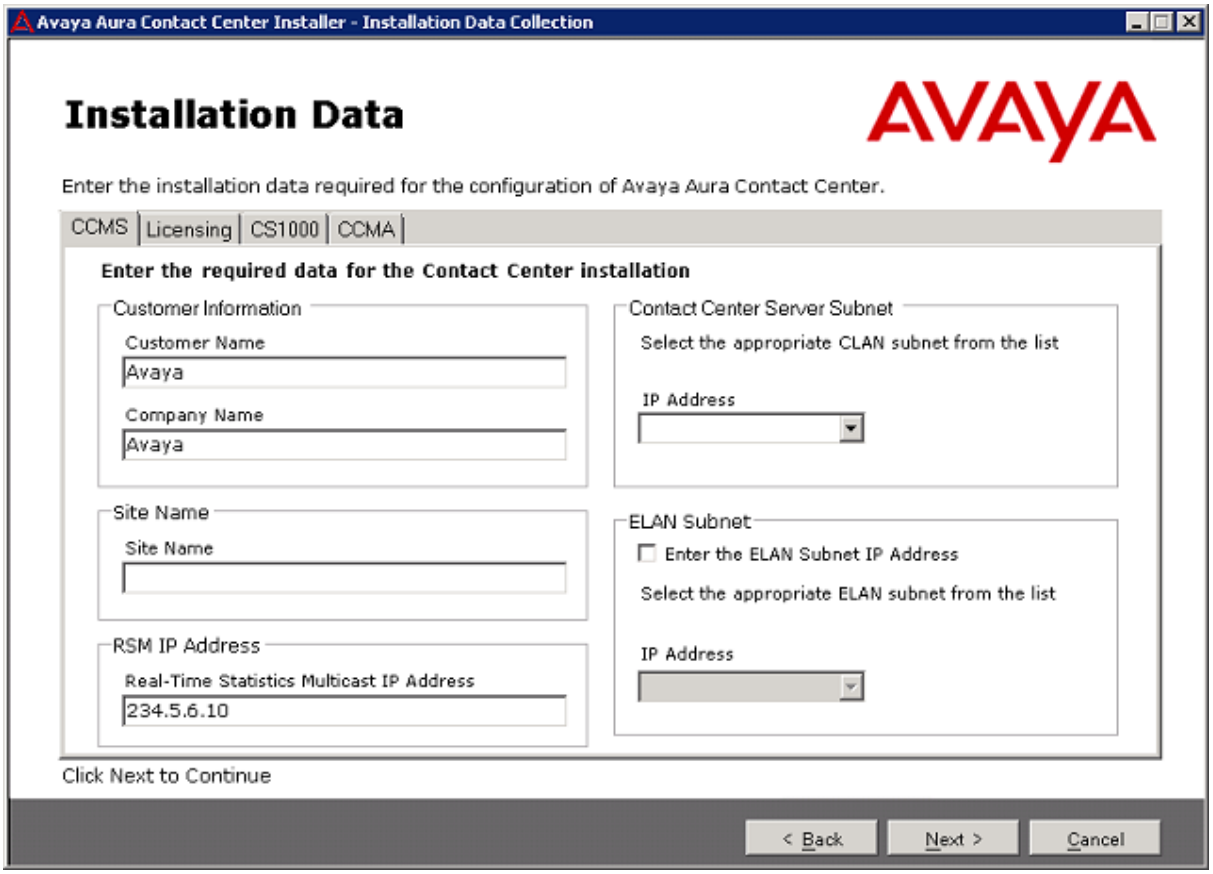
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



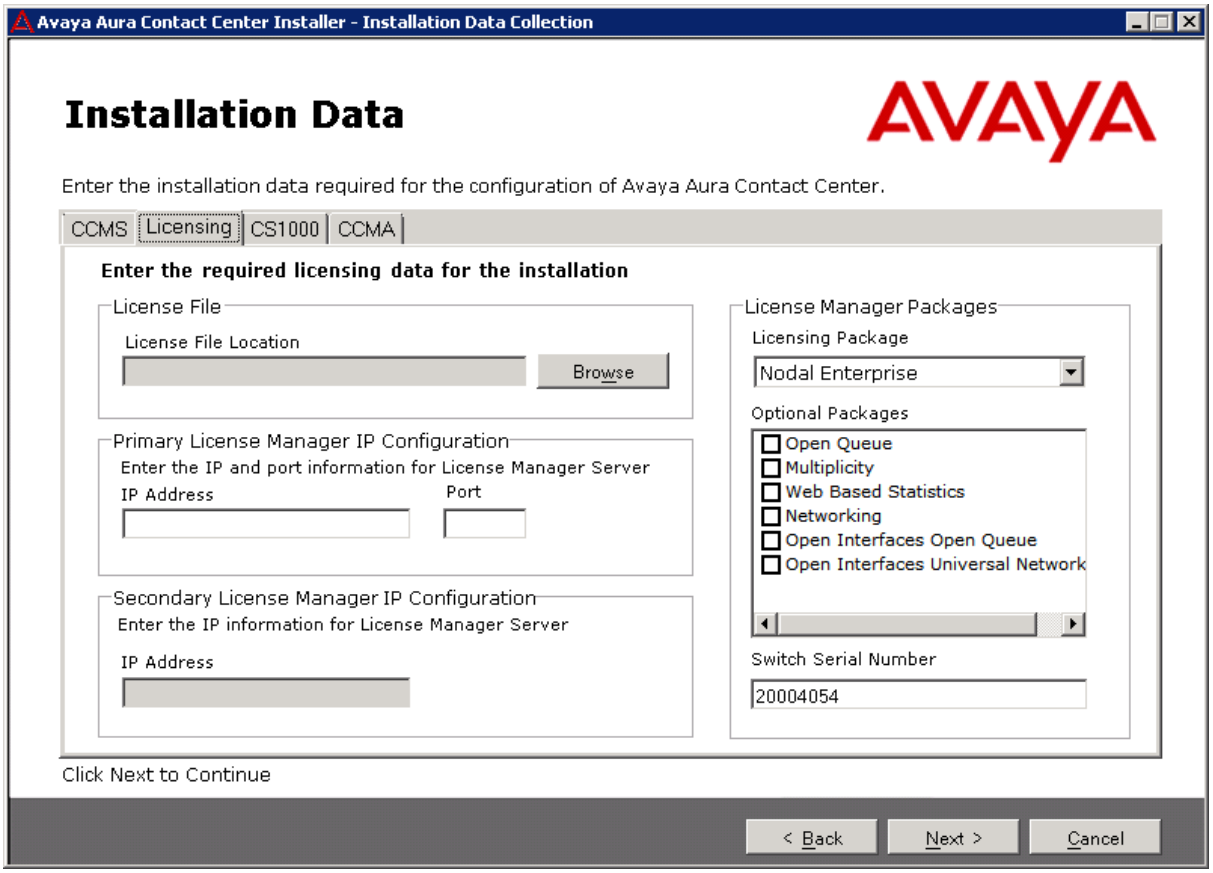
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.

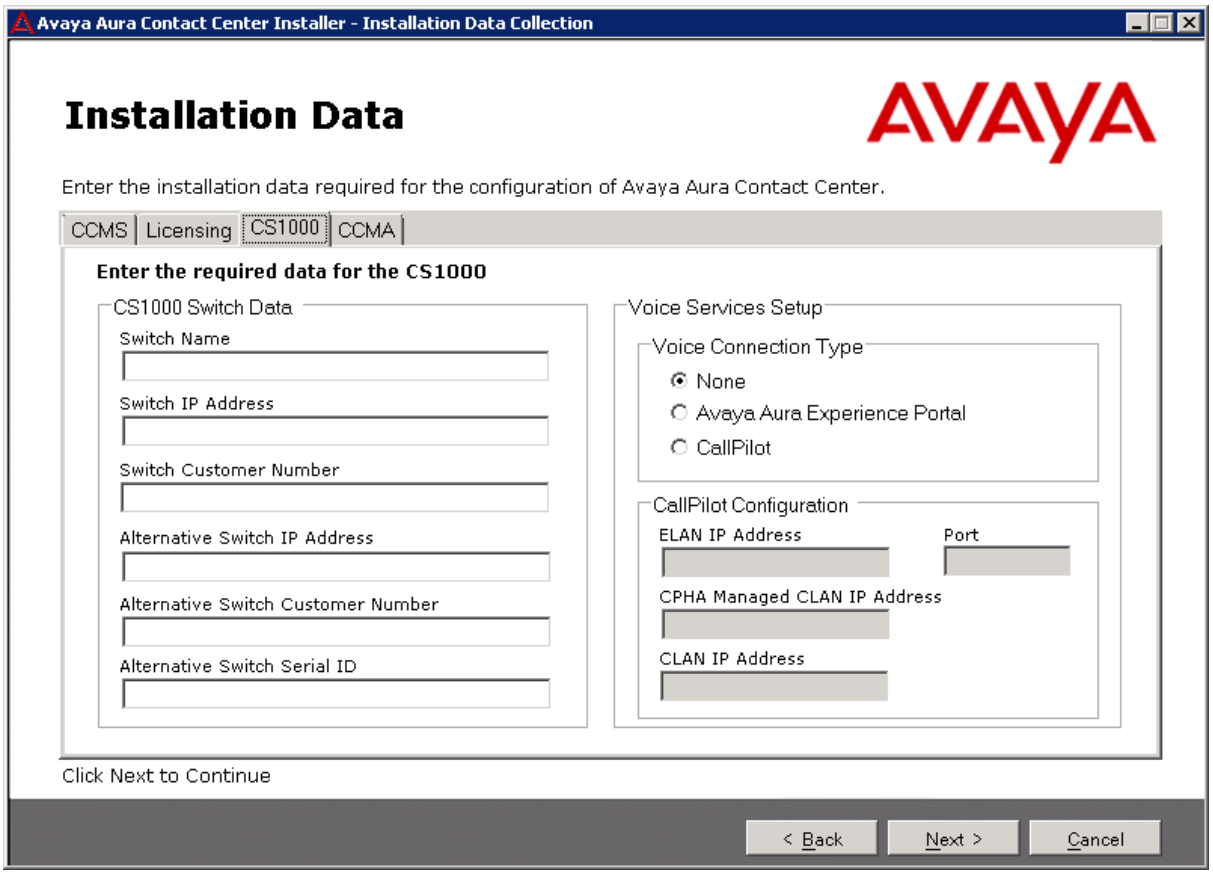


21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
27. Select the **Licensing** tab, and configure the licensing details.



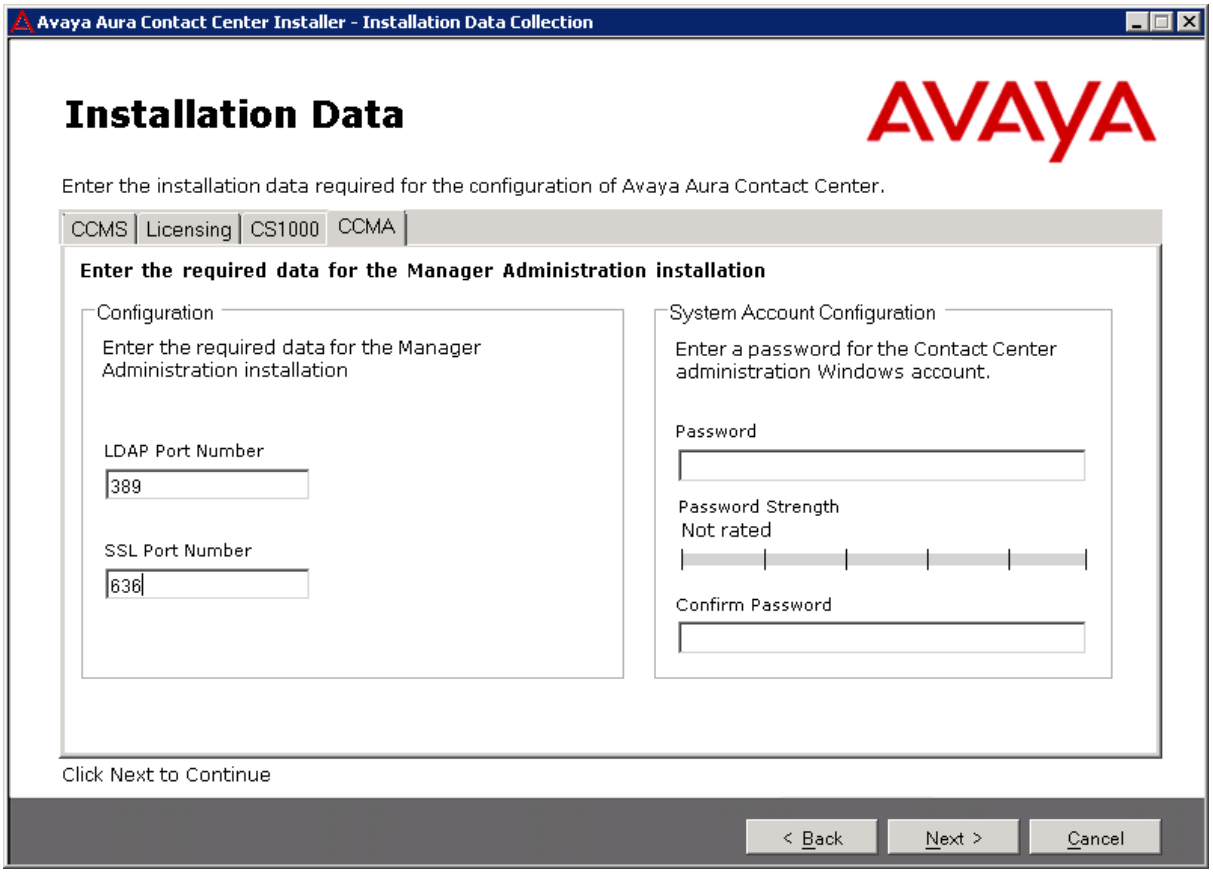
28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice Contact Server contains a License Manager server. This License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
32. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
33. From the list of **Optional Packages**, enable the licensed features that you have purchased.
34. Select the **Open Queue** check box.
35. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

36. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



37. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
38. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
39. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
40. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
41. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

44. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
45. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
46. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
47. Select the **CCMA** tab, and configure the CCMA details.



48. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
49. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
50. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

51. Click **Next**.
52. On the **Summary** window, review and verify the information.
53. Click **Install**.
54. After the installation is complete, click **Finish**.
55. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Adding the domain AD-LDS replication account to the primary administrators and replicator group

About this task

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 20: Standby Voice Contact Server for CS1000 installation in a domain

This chapter describes how to install a standby Voice Contact Server for Avaya Communication Server 1000 (CS1000). A standby Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

Voice Contact Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Voice Contact Server ELAN NIC and ELAN subnet are optional.

You can install a standby Voice Contact Server and commission it to be the standby Voice Contact Server in a campus High Availability solution. The standby server takes over contact processing and becomes the active server if the existing active server fails. The standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

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

Standby Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.

23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.

- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.
7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.

3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Voice Contact Server software for CS1000 in a domain

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Voice Contact Server for Avaya Communication Server 1000 must already be installed and configured.
- The primary active Voice Contact Server for Avaya Communication Server 1000 must already be configured to support AD-LDS replication.

About this task

Install the Contact Center standby Voice Contact Server software to provide a resilient solution.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

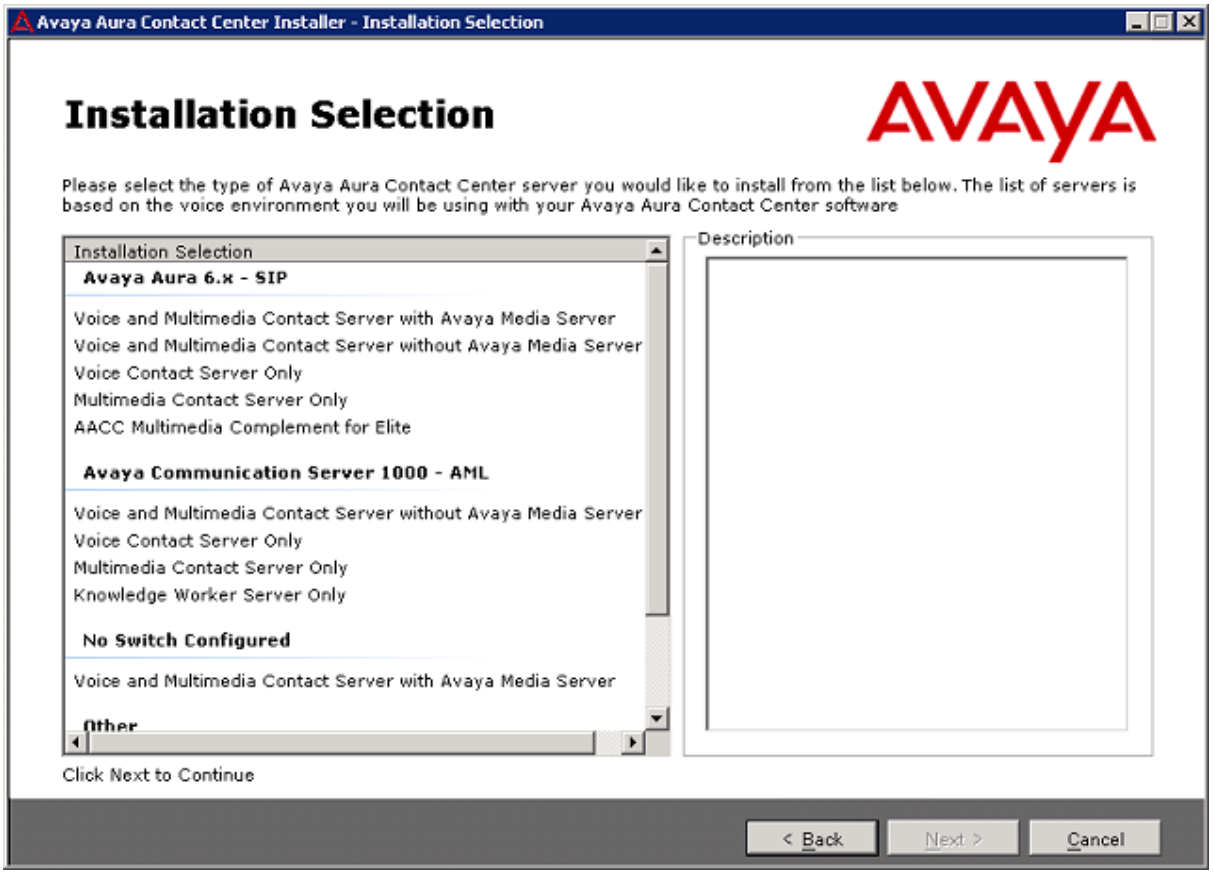
Note:

Read the Contact Center Release Notes for the most recent instructions.

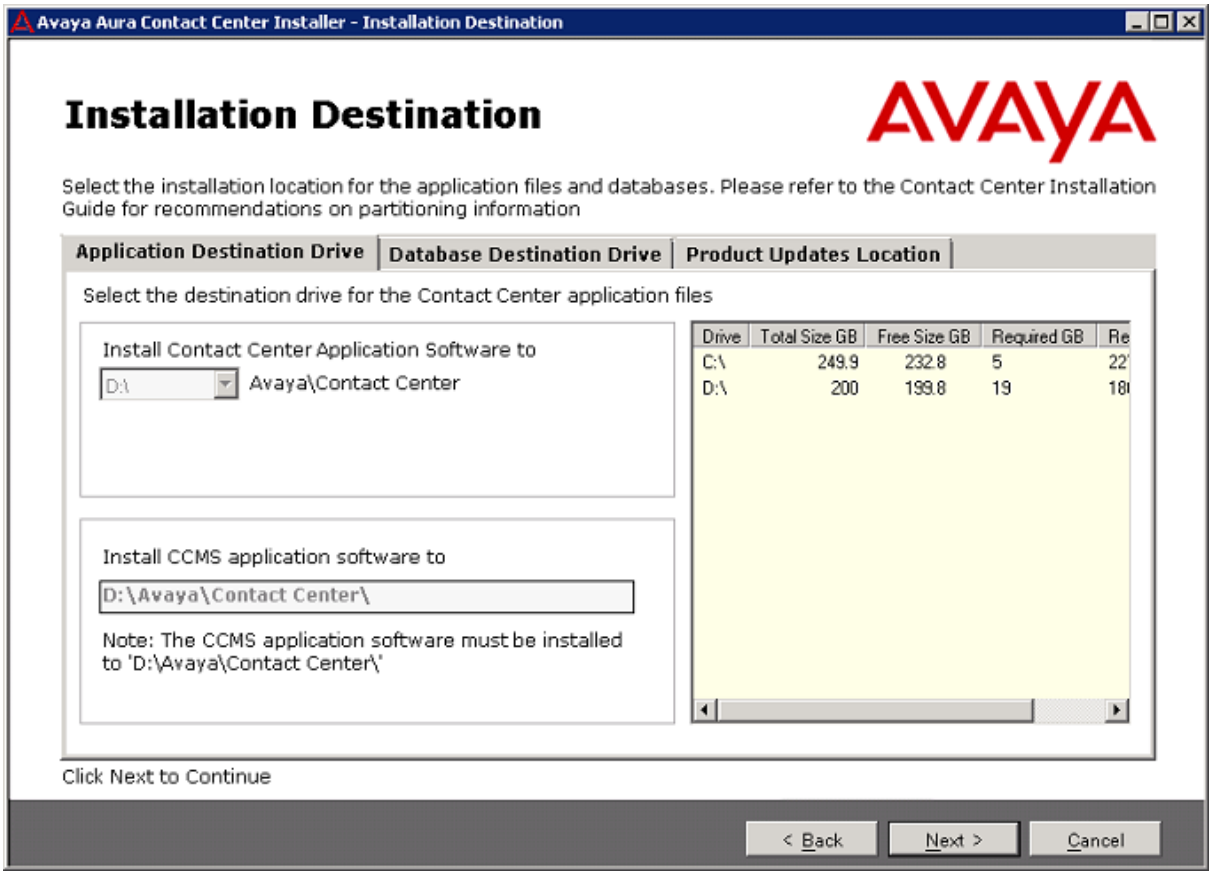
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

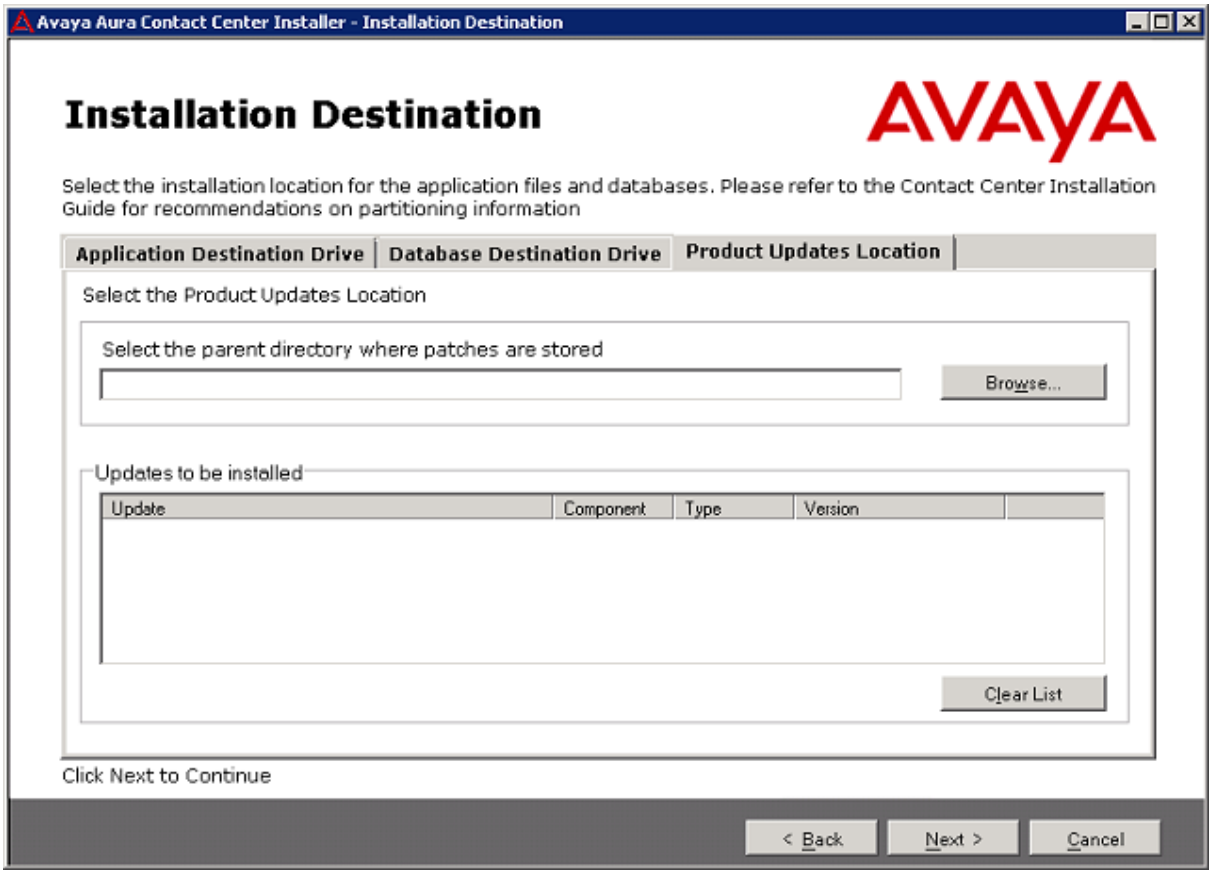
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice Contact Server Only**.
9. Click **Next**.



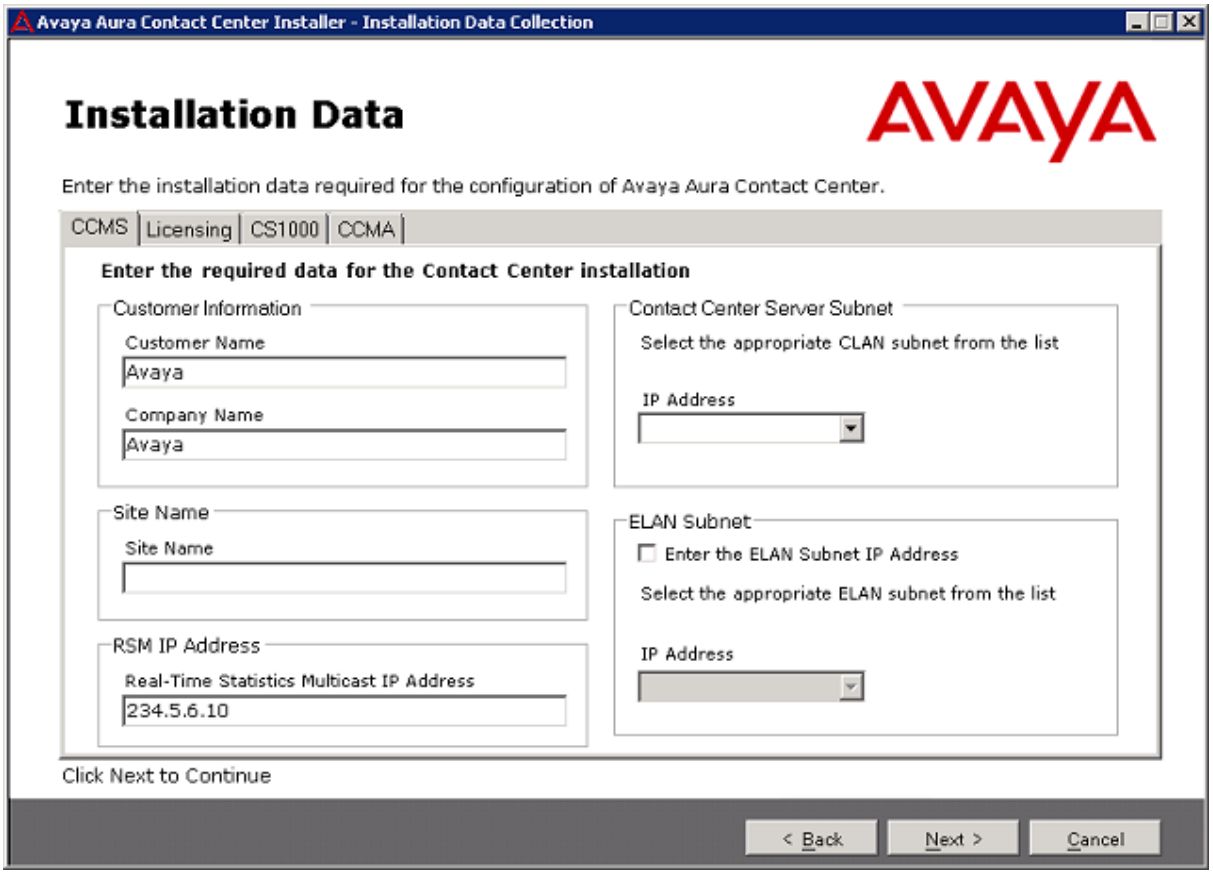
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



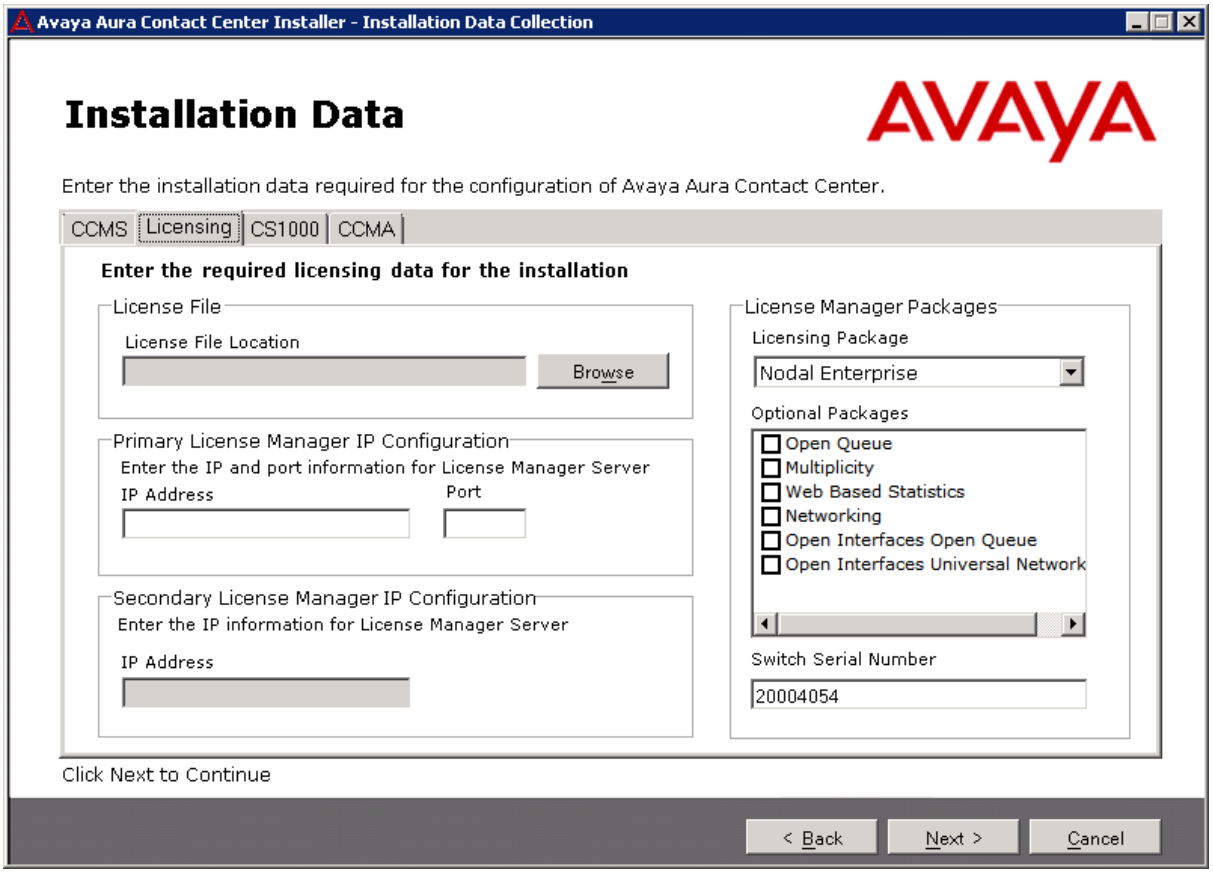
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.

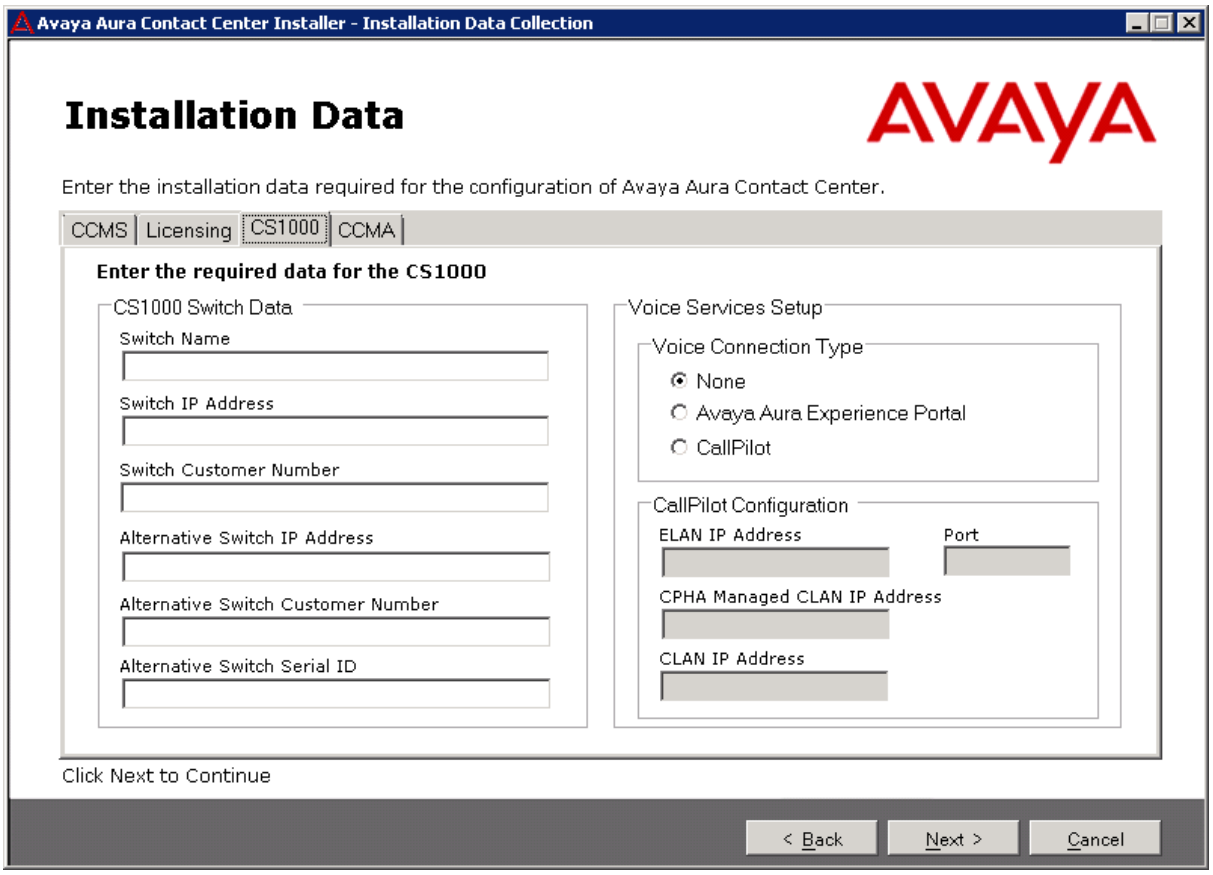


21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
27. Select the **Licensing** tab, and configure the licensing details.



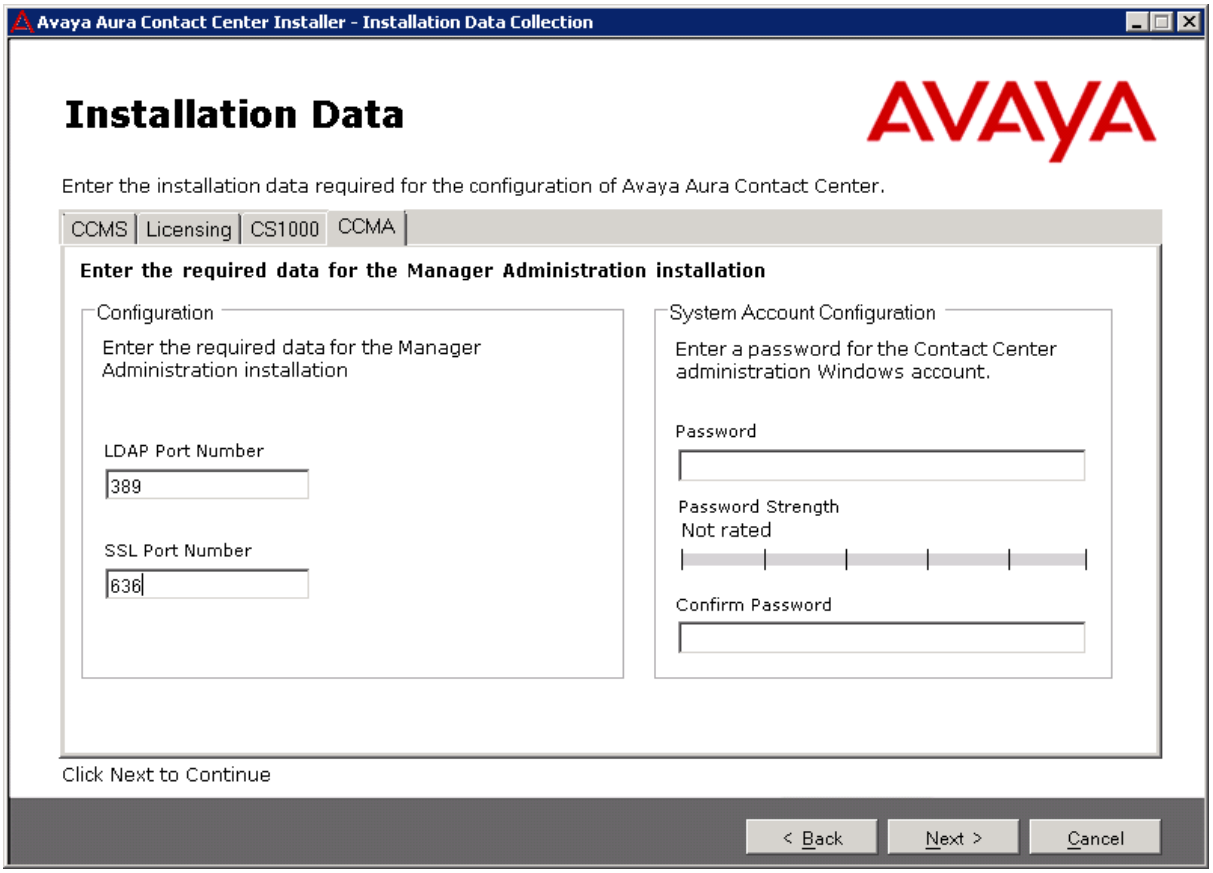
28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the License Manager. Each Voice Contact Server contains a License Manager. Type the IP address of the standby Voice Contact Server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
32. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
33. From the list of **Optional Packages**, enable the licensed features that you have purchased.
34. Select the **Open Queue** check box.
35. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.

36. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



37. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
38. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
39. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
40. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
41. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

44. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
45. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
46. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
47. Select the **CCMA** tab, and configure the CCMA details.



48. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
49. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
50. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

51. Click **Next**.
52. On the **Summary** window, review and verify the information.
53. Select **Install**.
54. After the installation is complete, click **Finish**.
55. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

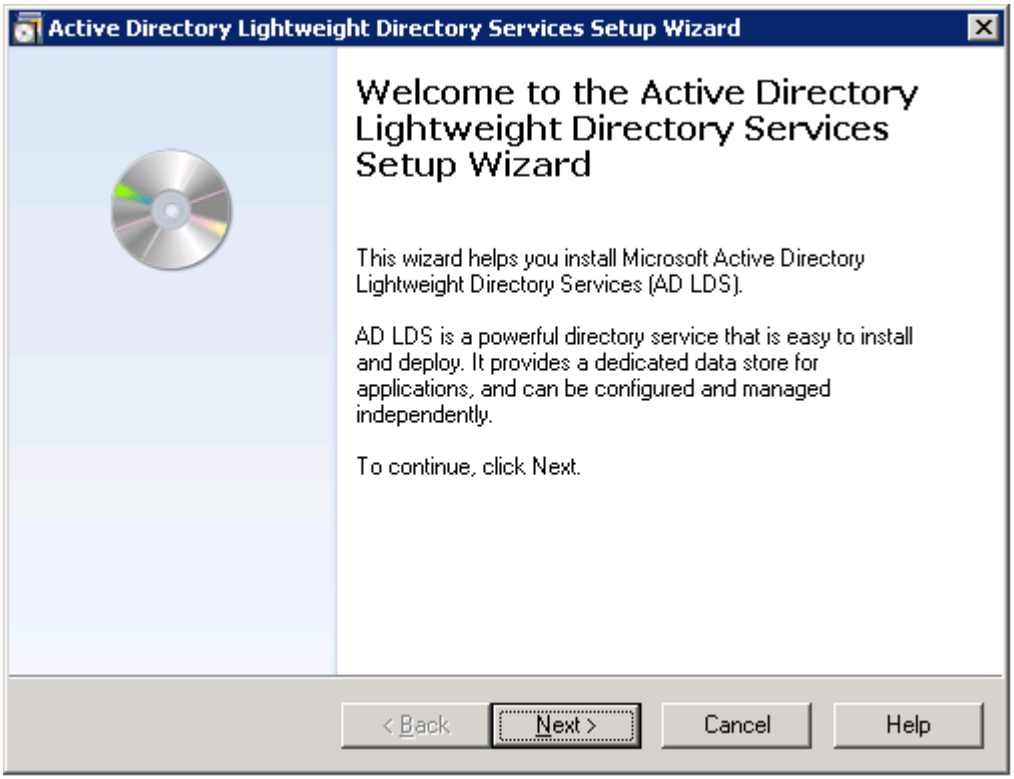
Read the Contact Center Release Notes for the most recent instructions.

Procedure

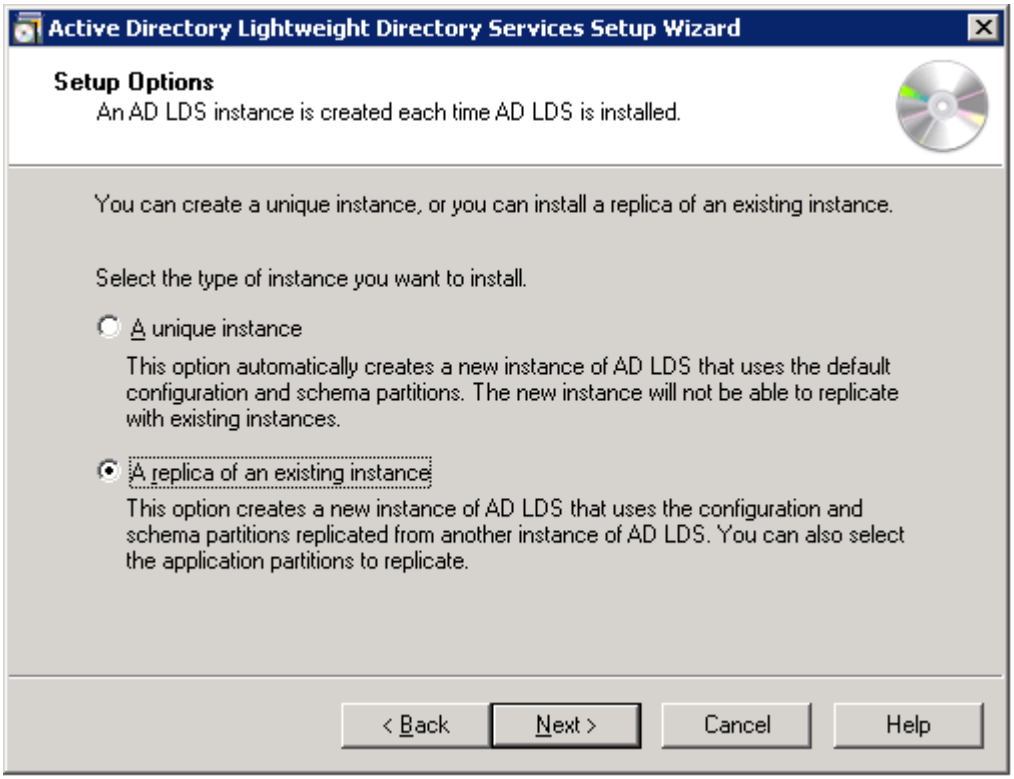
1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

   `D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\`
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

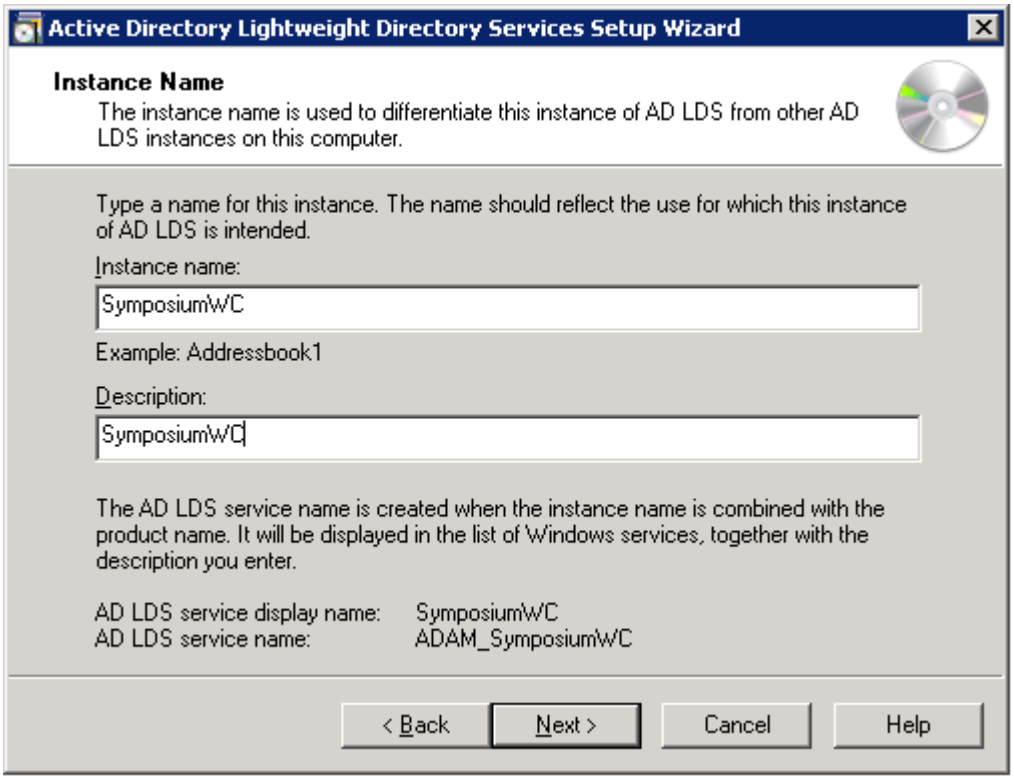
   `ConvertToStandbyCCMAServer.bat`
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



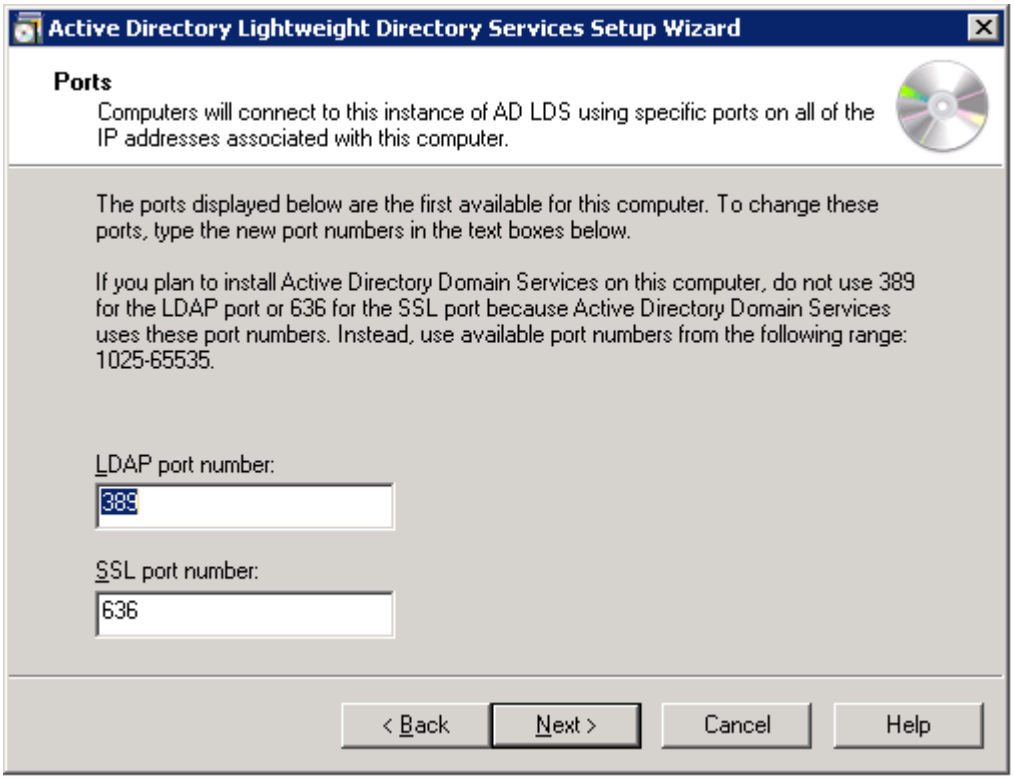
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

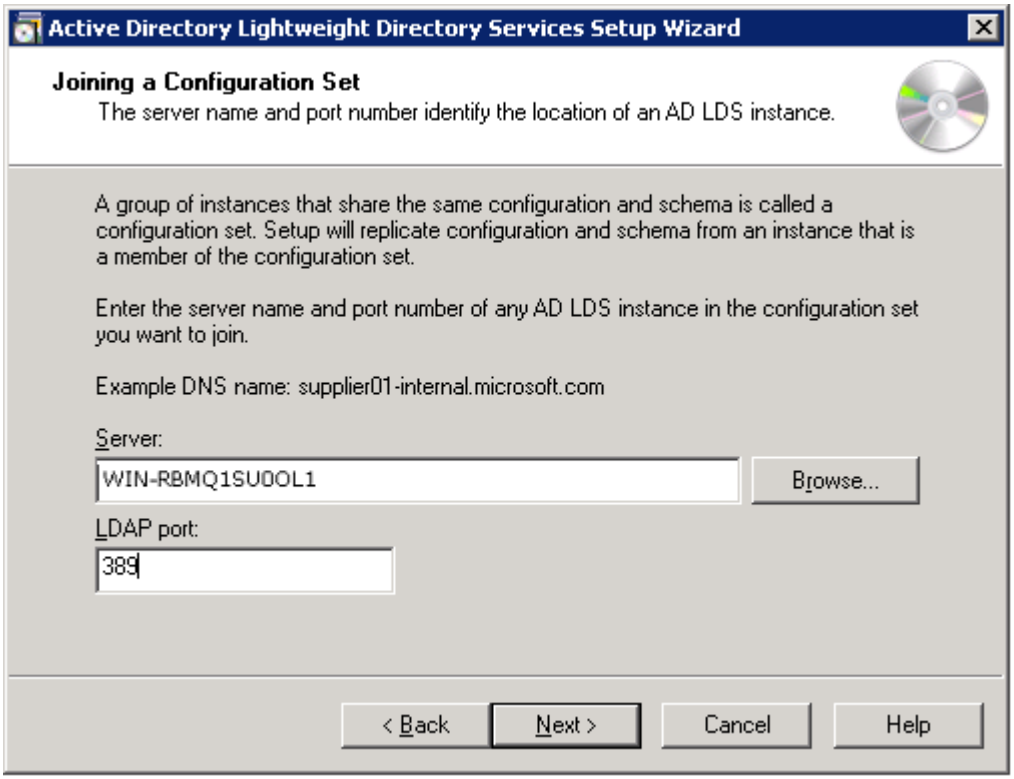


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



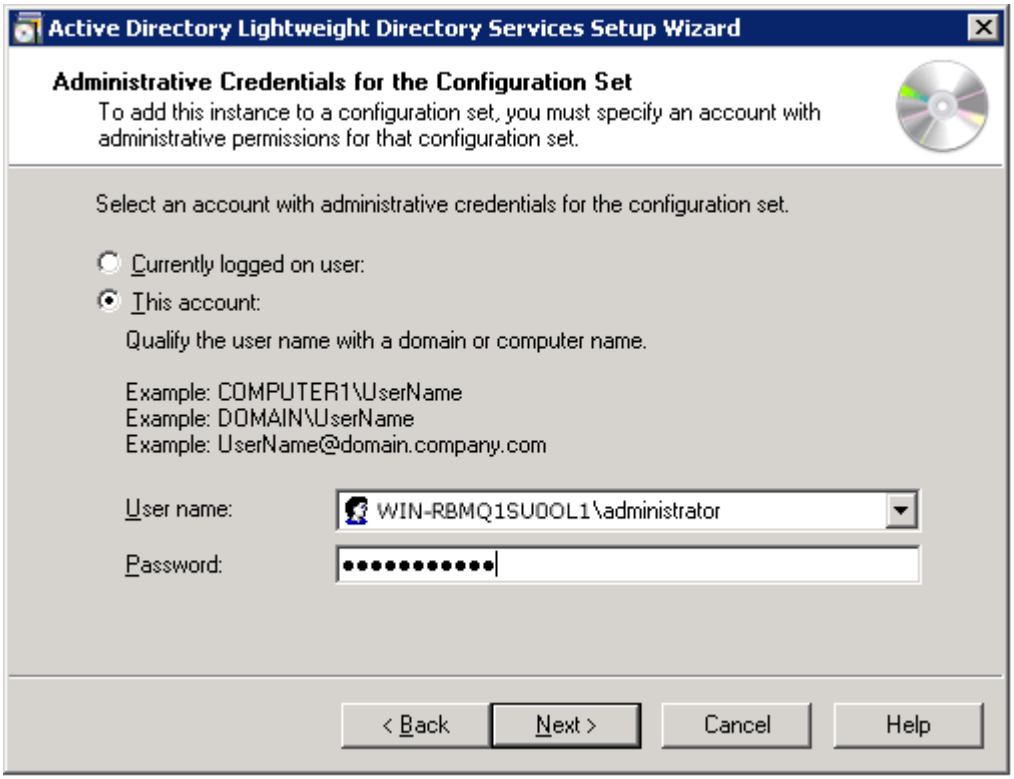
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

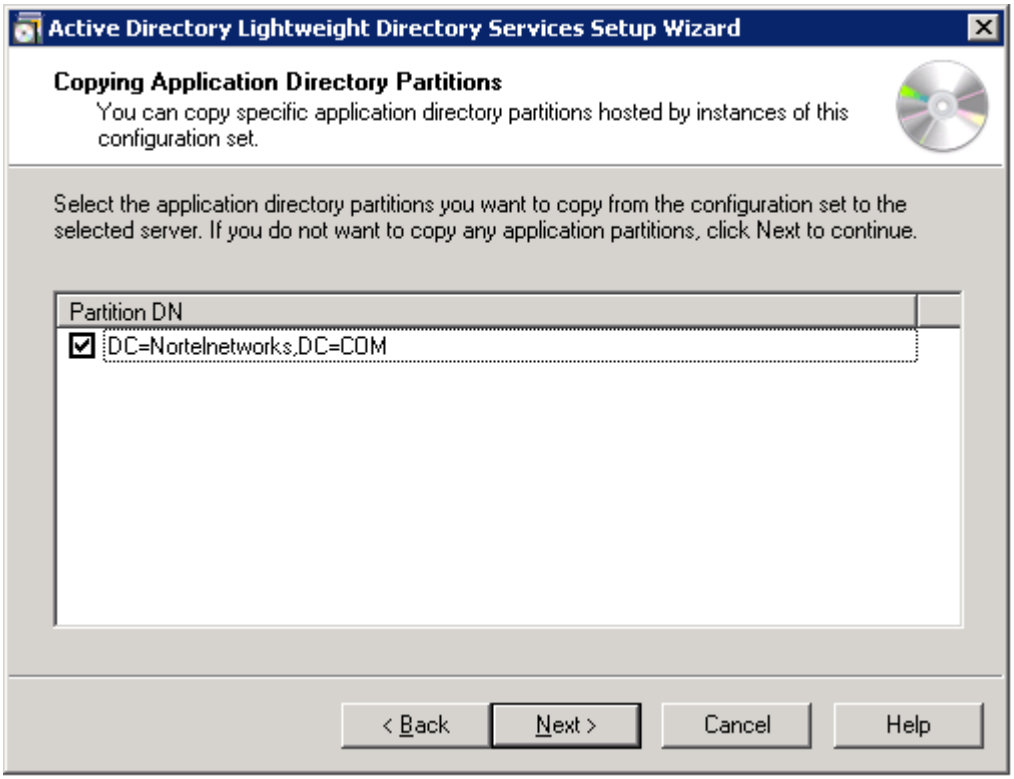


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

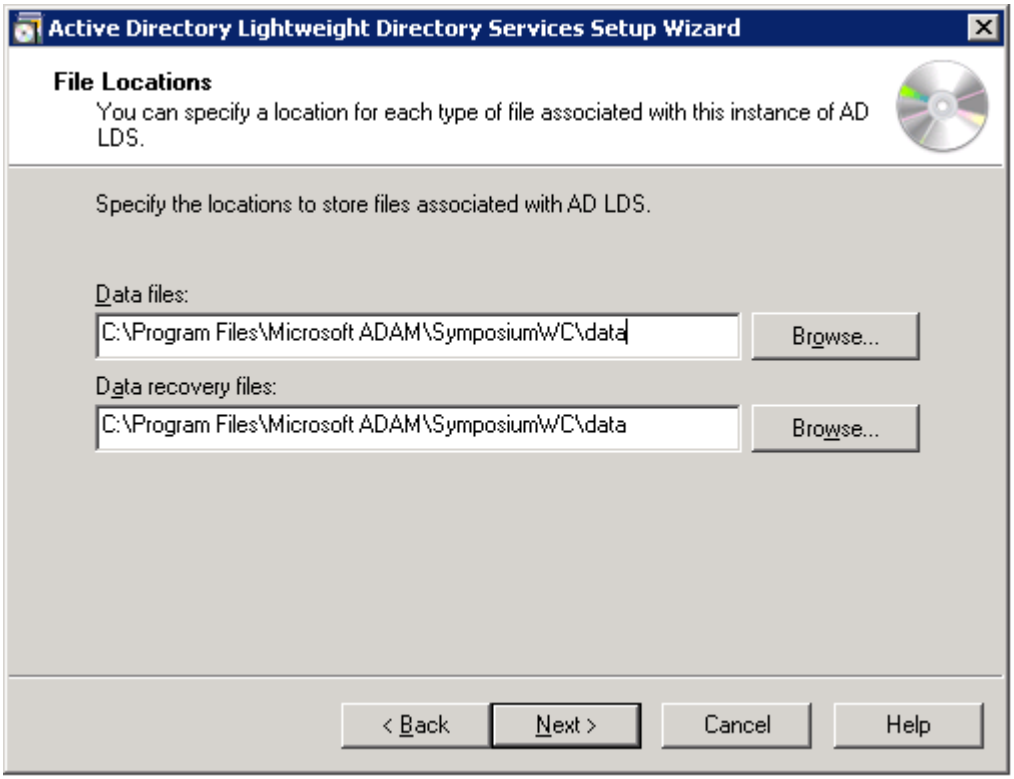
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

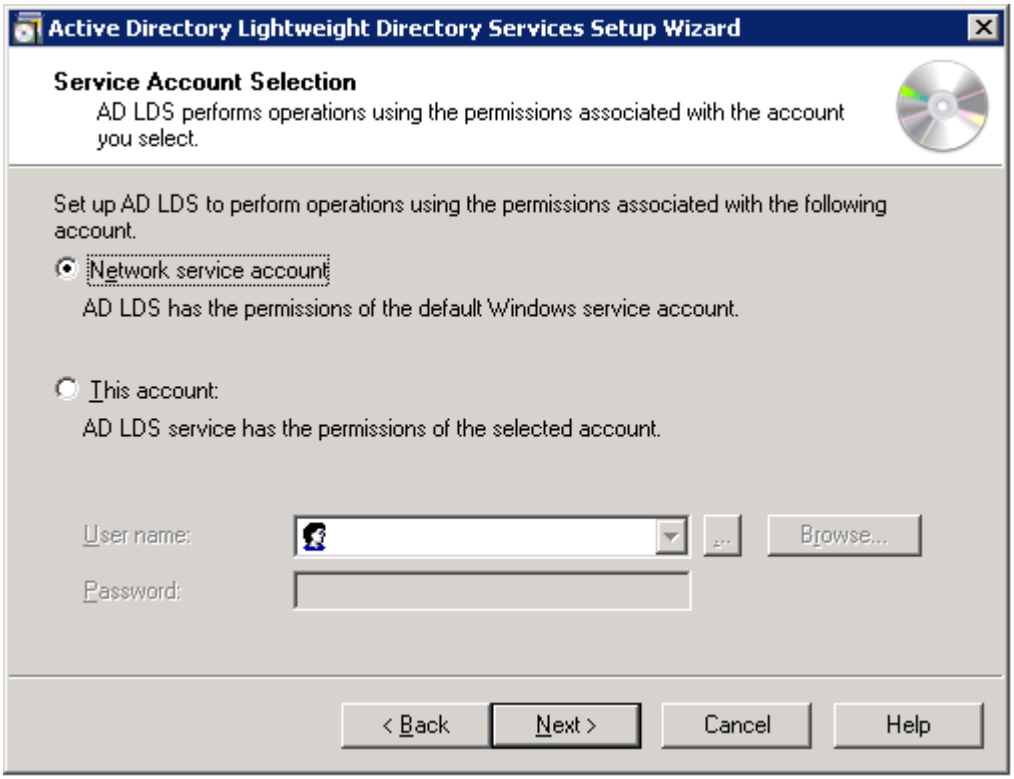


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

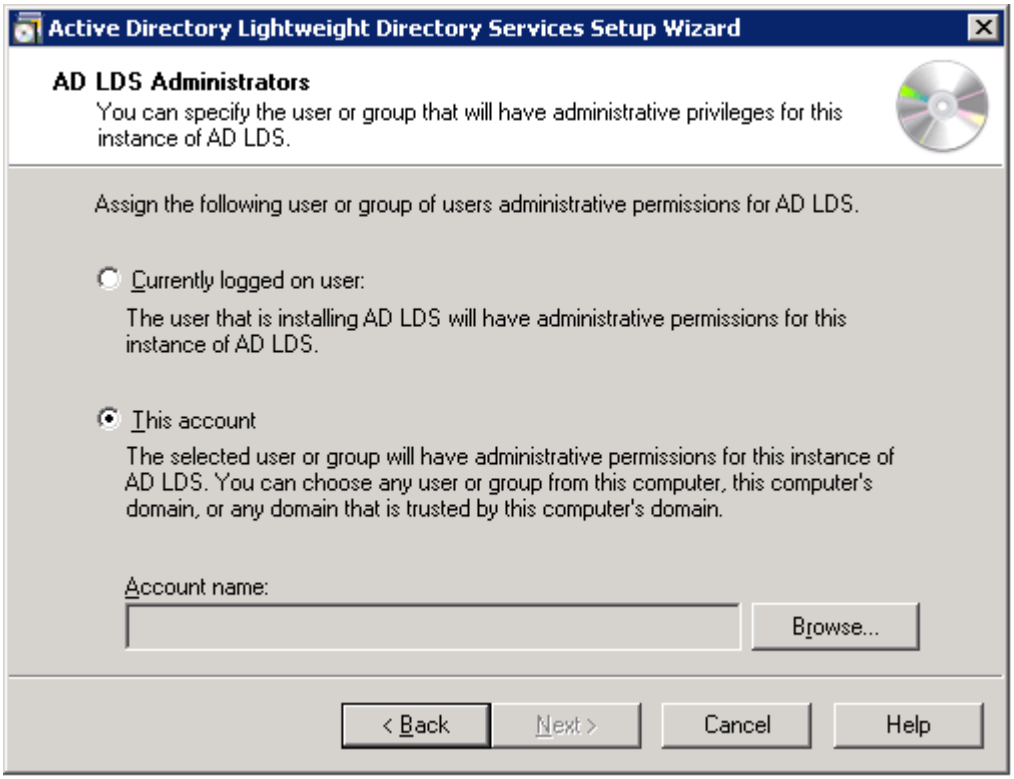


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

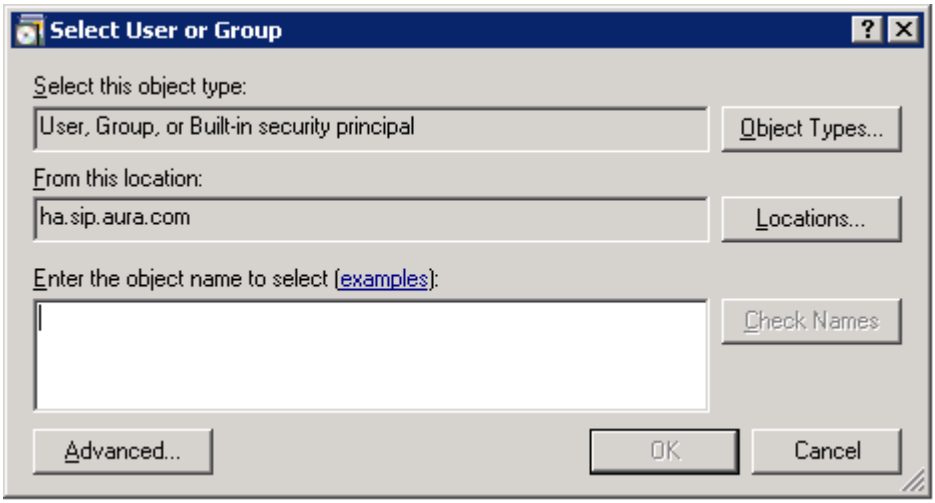


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

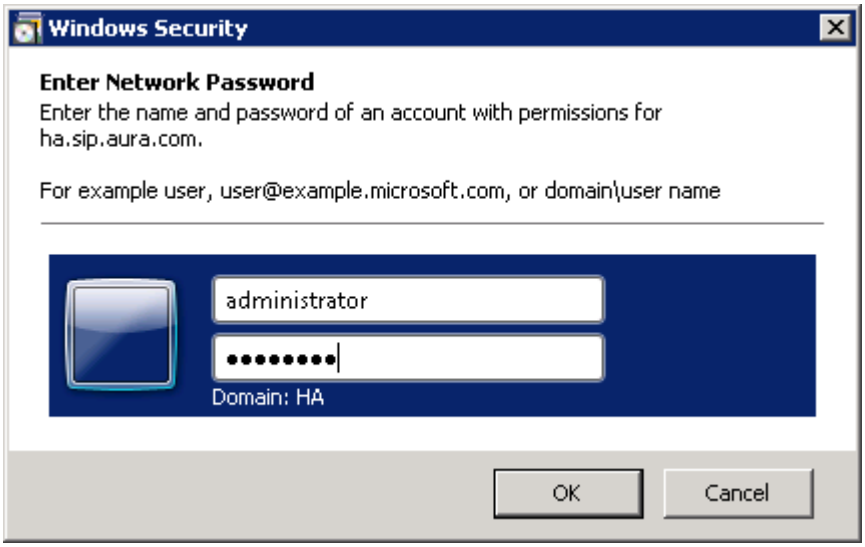


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

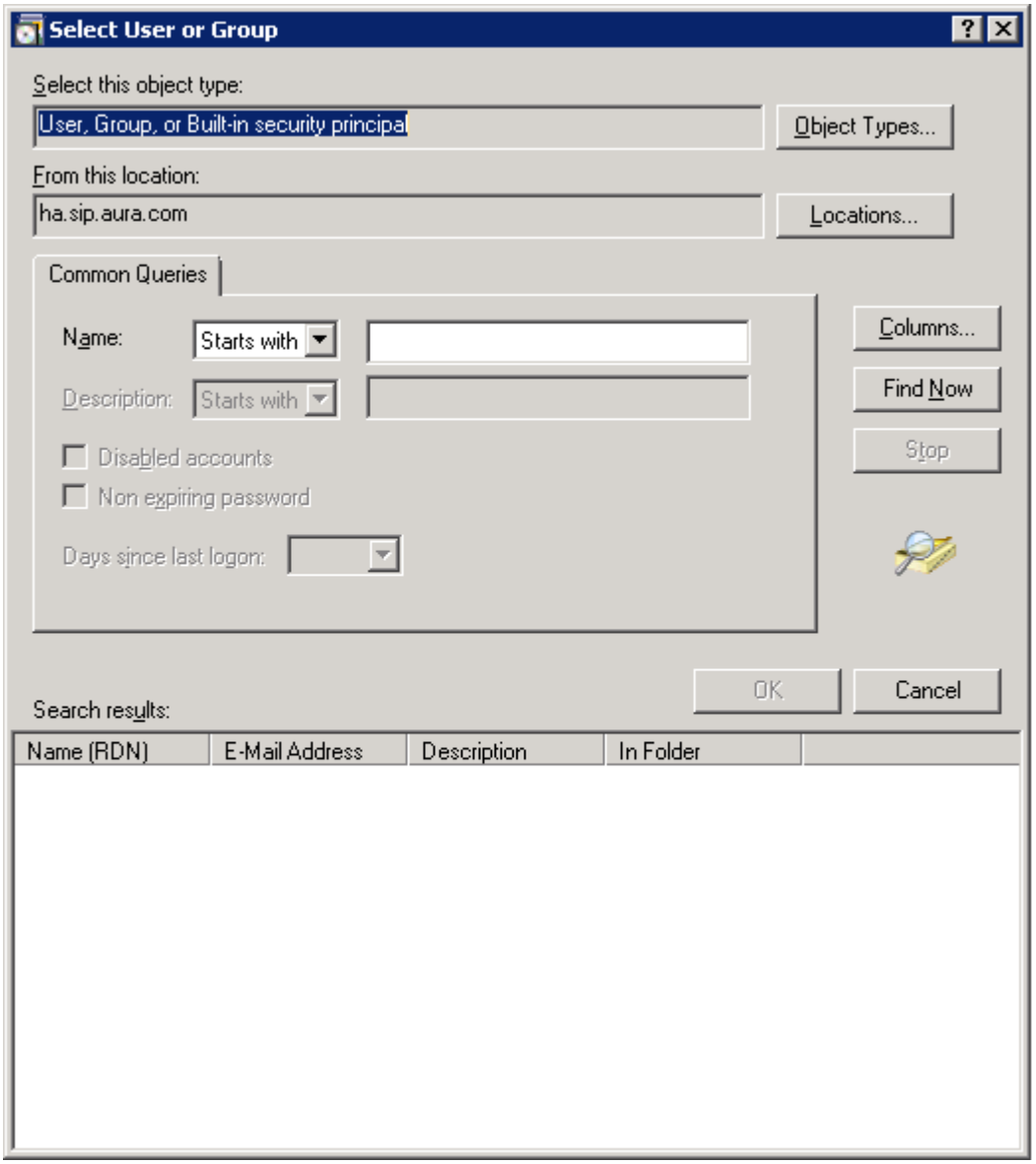


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



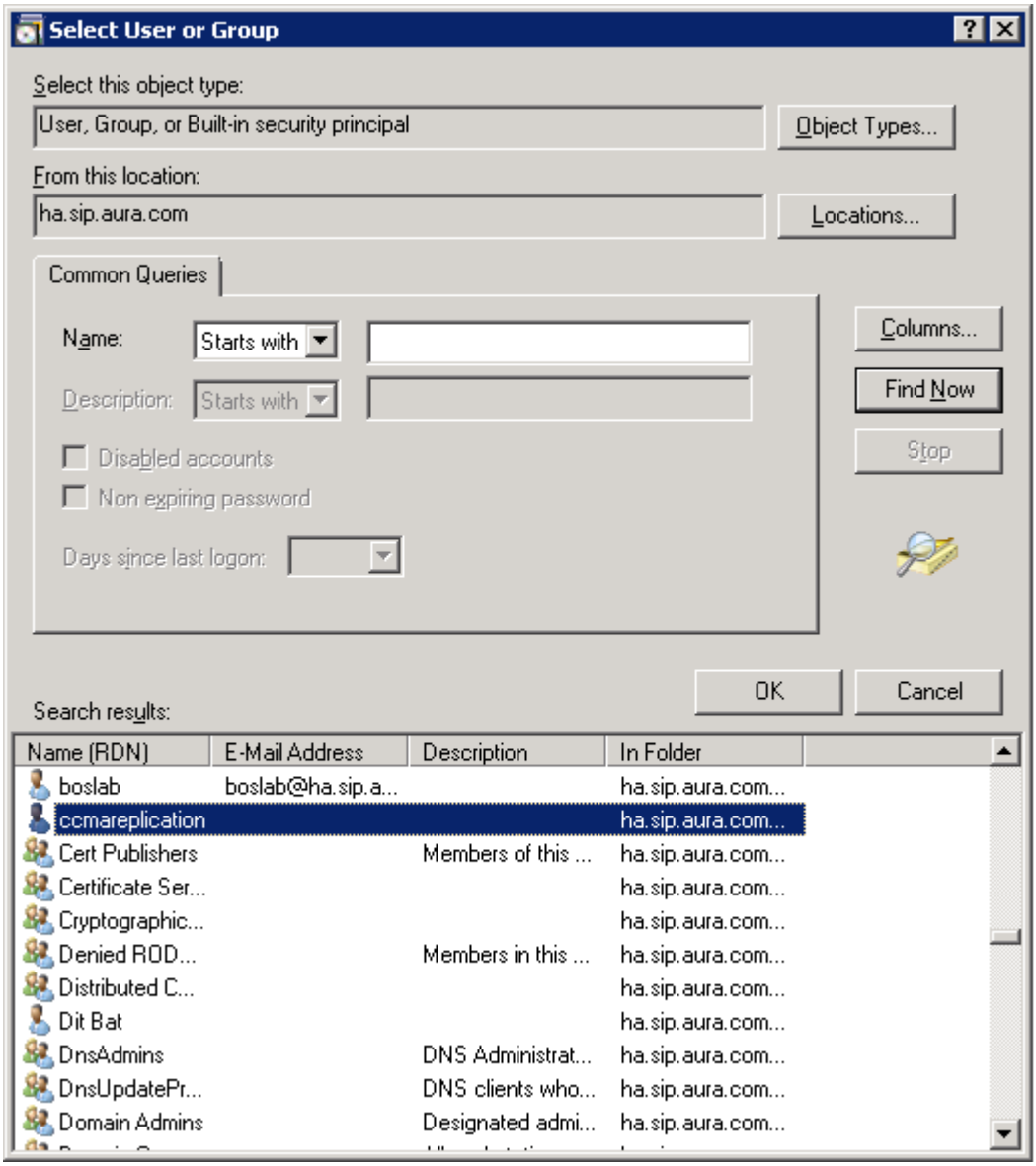
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



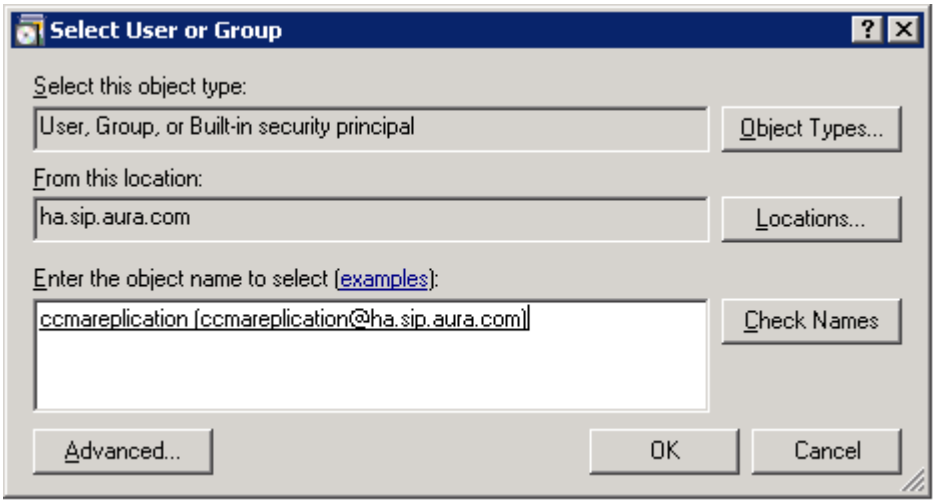
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

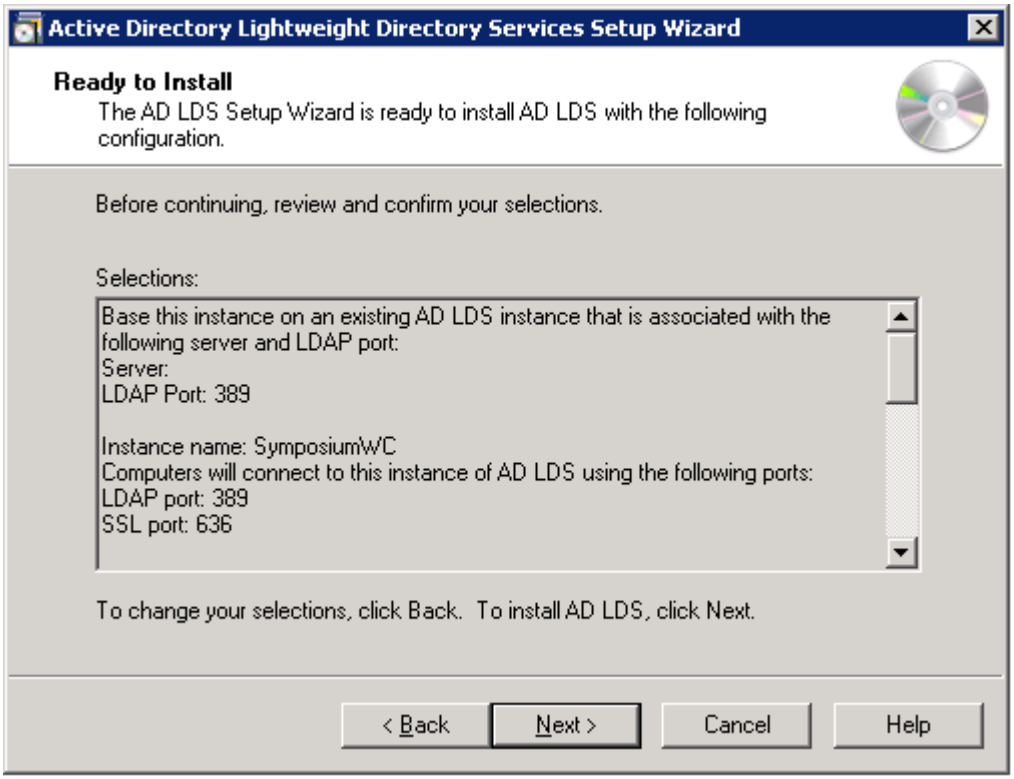


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 21: RGN Voice Contact Server for CS1000 installation

This chapter describes how to install a Remote Geographic Node (RGN) Voice Contact Server for Avaya Communication Server 1000 (CS1000). A standby Voice Contact Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)

You can install a Voice Contact Server and commission it to be the Remote Geographic Node Voice Contact Server in a solution with Disaster Recovery. The Remote Geographic Node (RGN) server shadows the active server. Remote Geographic Node servers do not automatically take over if the active server fails. The standby server, Remote Geographic Node server, and active server must be at the same patch level and have the same hard disk drive partitions.

Voice Contact Server supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Voice Contact Server ELAN NIC and ELAN subnet are optional.

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

Voice Contact Server installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.

23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the geographic node network

About this task

Connect the Contact Center server to the geographic node network. The geographic node network is the network at the remote geographic site.

Procedure

1. Locate the slot assigned to the geographic node network interface card for the server. Make a note of the slot.
2. Connect the cable from the geographic node network to the geographic node network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the geographic node network.
4. Use the ping command to test connectivity with the campus network and servers.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.

- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Disabling NetBIOS

About this task

If the Contact Center server uses two Network Interface Cards (NICs), disable NetBIOS on the Embedded LAN (ELAN) network interface card (NIC) to avoid NetBIOS conflicts.

Contact Center supports two Network Interface Cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet**.
2. Click **Network and Sharing Center**.
3. Click **Change adapter settings**.
4. Right-click the ELAN Network Interface Card (NIC).
5. Click **Properties**.
6. Select **Internet Protocol Version 4 (TCP/IPv4)**.
7. Click **Properties**.
8. Click **Advanced**.
9. Click the **WINS** tab.
10. Select the **Disable NetBIOS over TCP/IP** check box.
11. Click **OK**.

Connecting the Embedded LAN subnet

Before you begin

- Install two network cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the contact center subnet network interface card.

About this task

If your server uses two NICs, connect the Embedded LAN (ELAN) NIC to the ELAN subnet. Contact Center supports two network interface cards (NICs) and two subnets (one contact center subnet and one ELAN subnet). The Contact Center ELAN NIC and ELAN subnet are optional.

Procedure

1. Locate the slot assigned to the ELAN network interface card for the server.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.

3. Connect the ELAN subnet from the Avaya equipment to the Ethernet hub.
4. Connect the network cable from the ELAN network interface card in the server to the hub.
5. Plug in the power cord for the hub.
6. If you have an ELAN subnet network connection, use the ping command to test it.

Configuring the binding order

Before you begin

- Install two network interface cards on the Contact Center server.
- Disable the NetBIOS on the ELAN network interface card.
- Connect the Contact Center server network interface card to the contact center subnet.
- Connect the Contact Center server ELAN network interface card to the ELAN subnet.

About this task

Configure the binding order of the network cards. The contact center subnet network interface card must be bound first and then the ELAN network interface card.

Procedure

1. Choose **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center**.
2. Click **Change adapter settings**.
3. In the **Network Connections** window, press the **ALT** key.

   A hidden menu appears.
4. Choose **Advanced** > **Advanced Settings**.
5. In the **Connections** box, ensure that the contact center subnet connection is listed first. If it is not listed first, adjust the order.

Adding the domain AD-LDS replication account to the RGN server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the Remote Geographic Node (RGN) server.

Ask your Network or System Administrator to add this AD-LDS replication account to the domain. The primary and RGN replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the Remote Geographic Node (RGN) Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the RGN Voice Contact Server software for CS1000

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Remote Geographic Node (RGN) Contact Center Voice Contact Server software to provide data resiliency and disaster recovery.

Note:

Installing Voice Contact Server software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

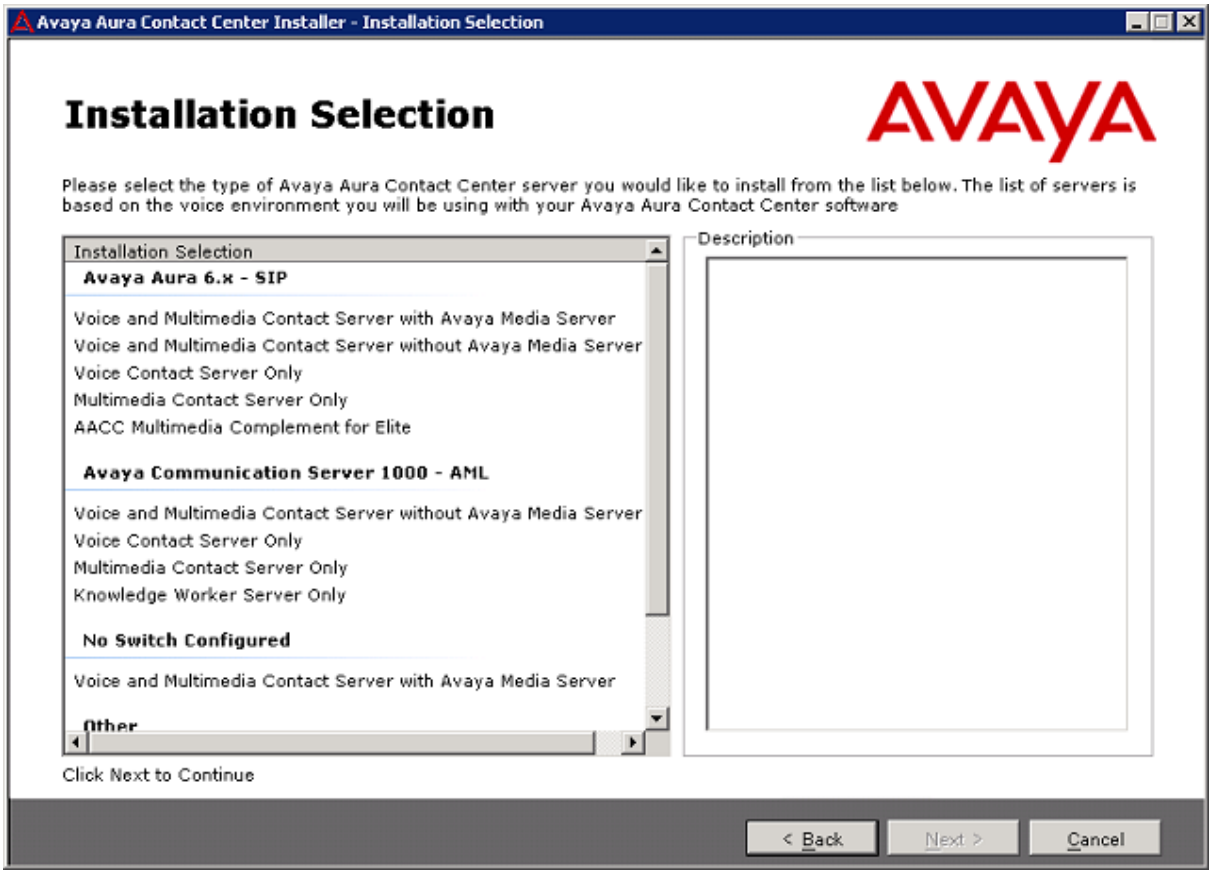
Note:

Read the Contact Center Release Notes for the most recent instructions.

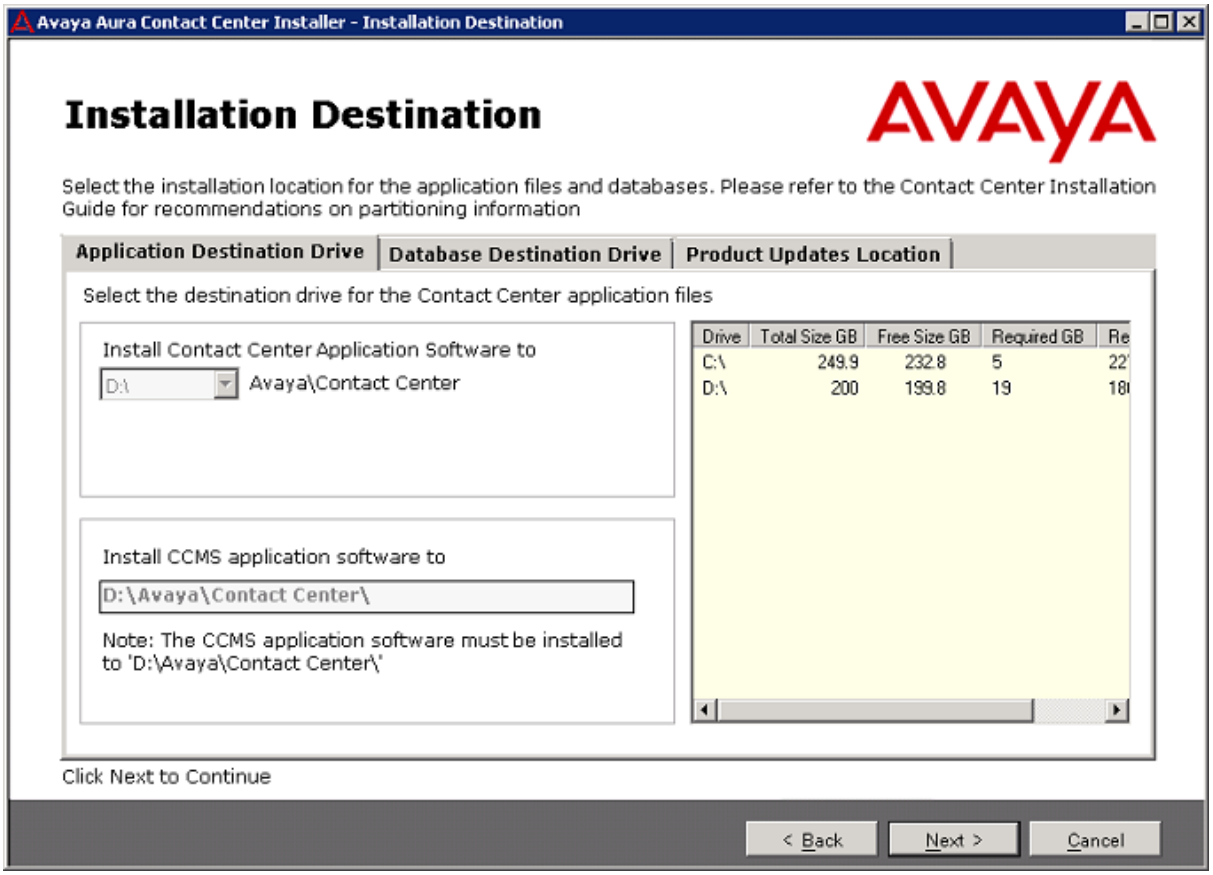
Procedure

1. Insert the Contact Center DVD into the DVD drive of your RGN server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

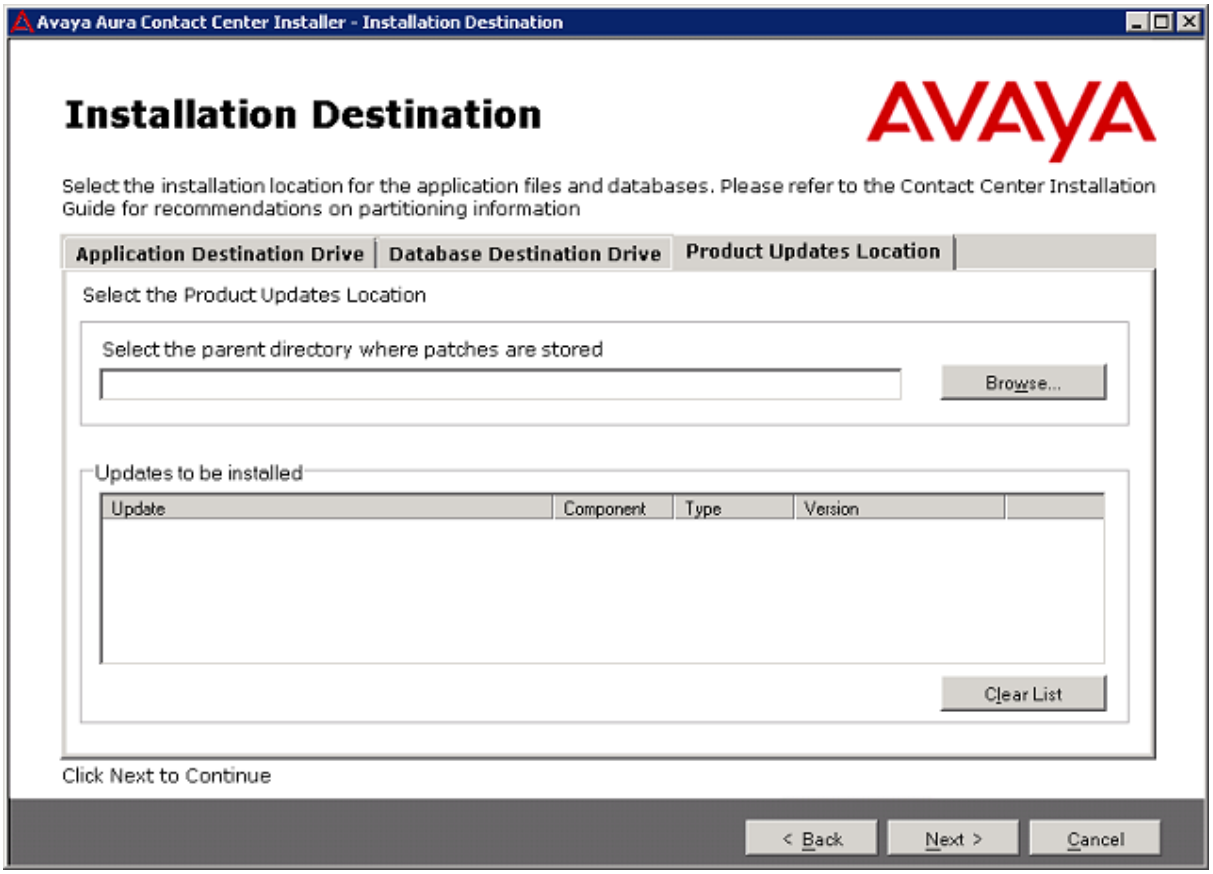
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Voice Contact Server Only**.
9. Click **Next**.



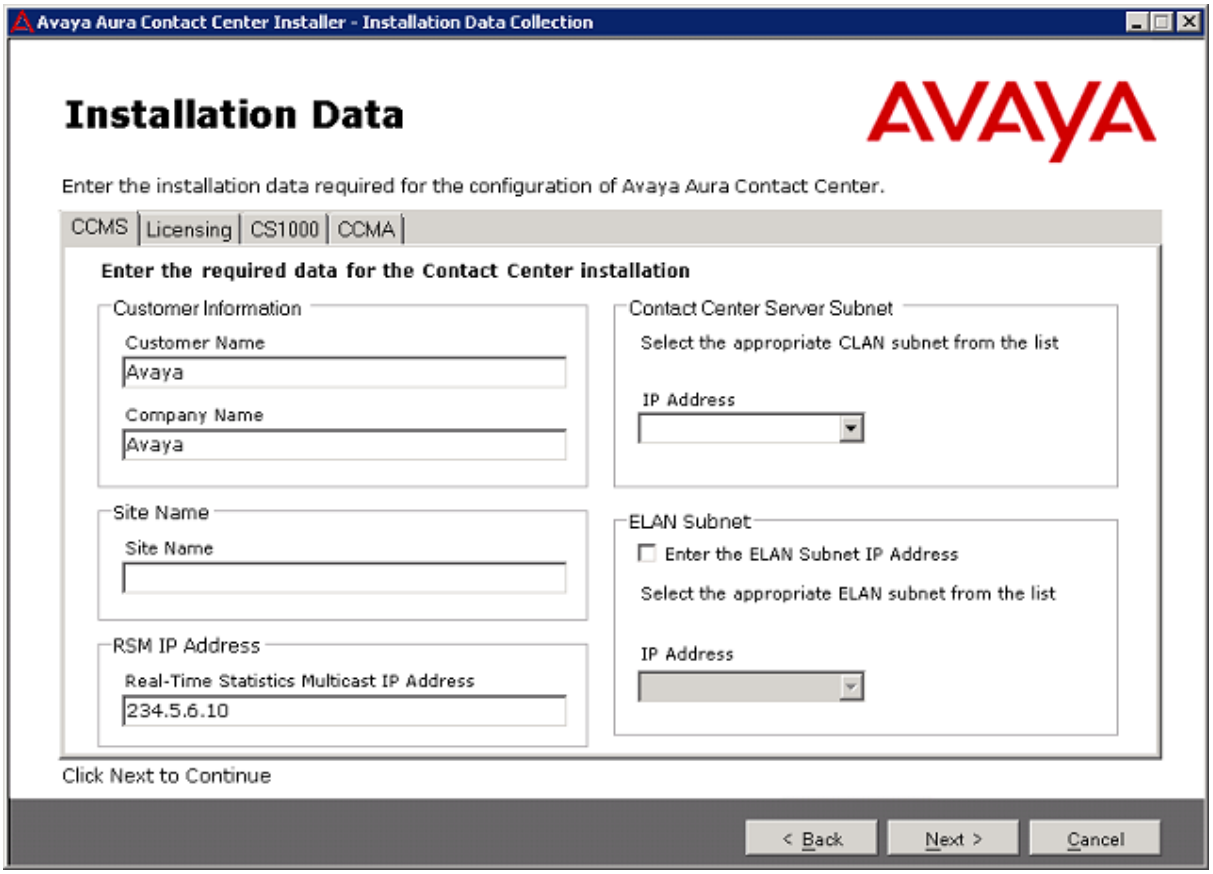
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Click the **Product Updates Location** tab.



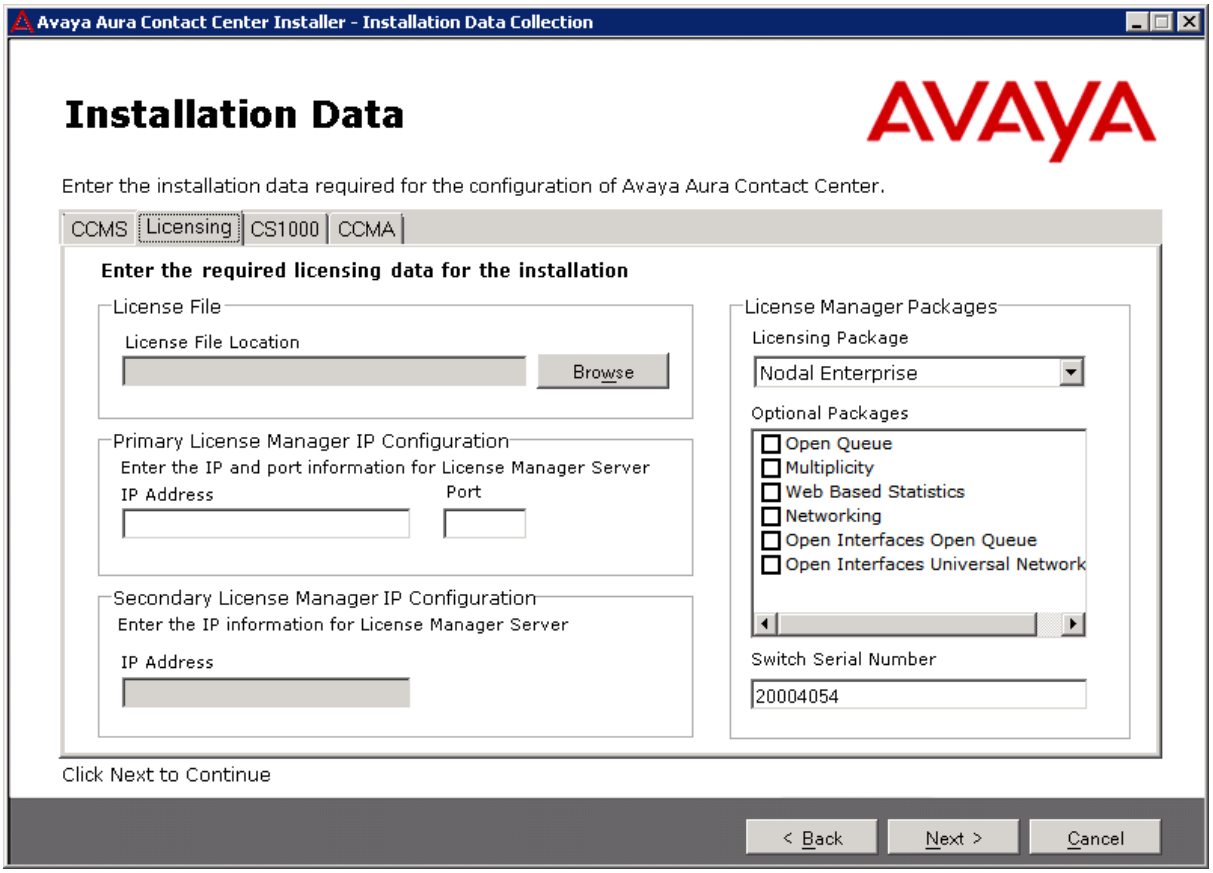
15. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
16. Click **Next**.

    The System Readiness Check runs on the server.
17. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

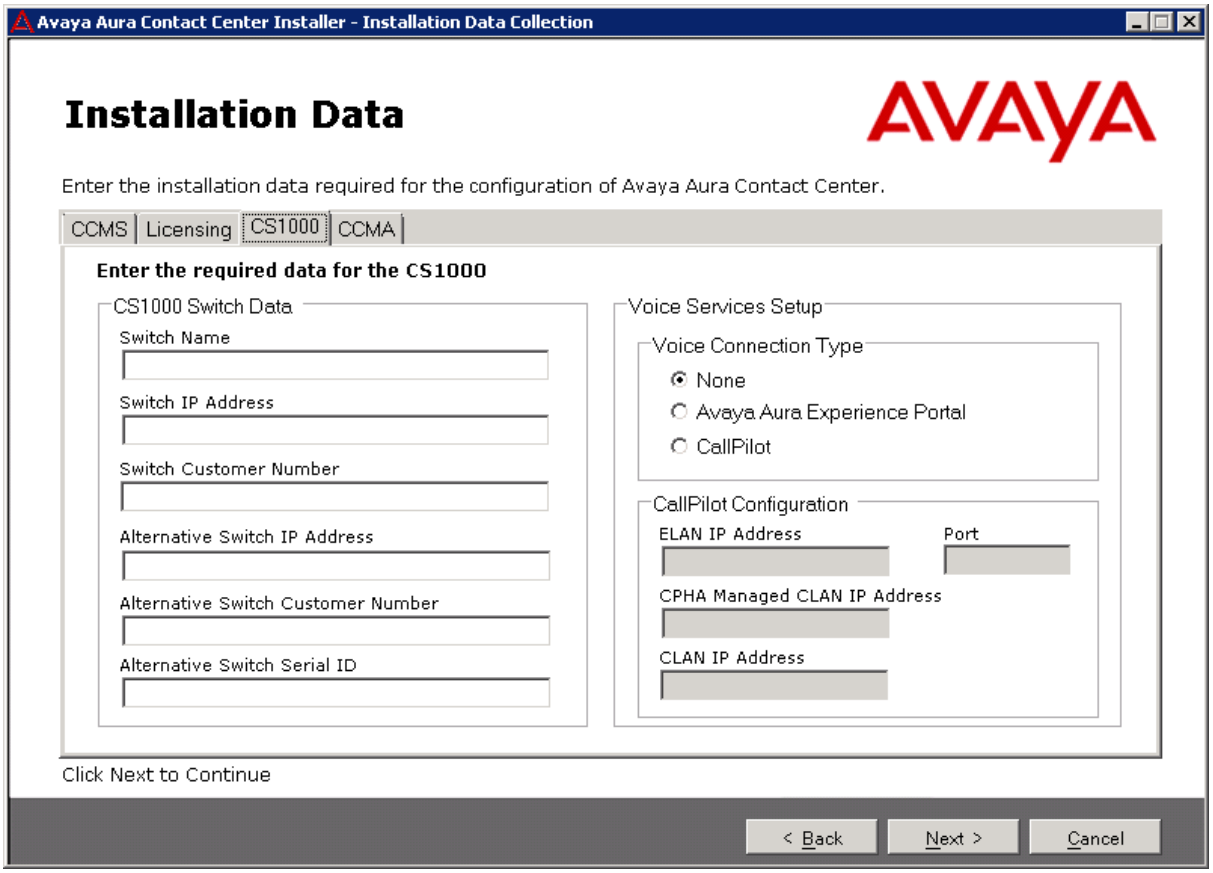
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
18. Click **Next**.
19. On the **Installation Data** window, type the installation details for each tab.
20. Select the **CCMS** tab, and configure the server details.



21. In the **Customer Name** box, type the customer name.
22. In the **Company Name** box, type the name of the company.
23. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
24. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
25. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
26. In the **ELAN Subnet** section, from the **IP Address** list, select the IP Address of the embedded local area network. The embedded local area network (ELAN) is a dedicated Ethernet LAN that connects Contact Center Manager Server to the PABX. You must select the check box for the ELAN subnet IP Address if you use an ELAN subnet.
27. Select the **Licensing** tab, and configure the licensing details.

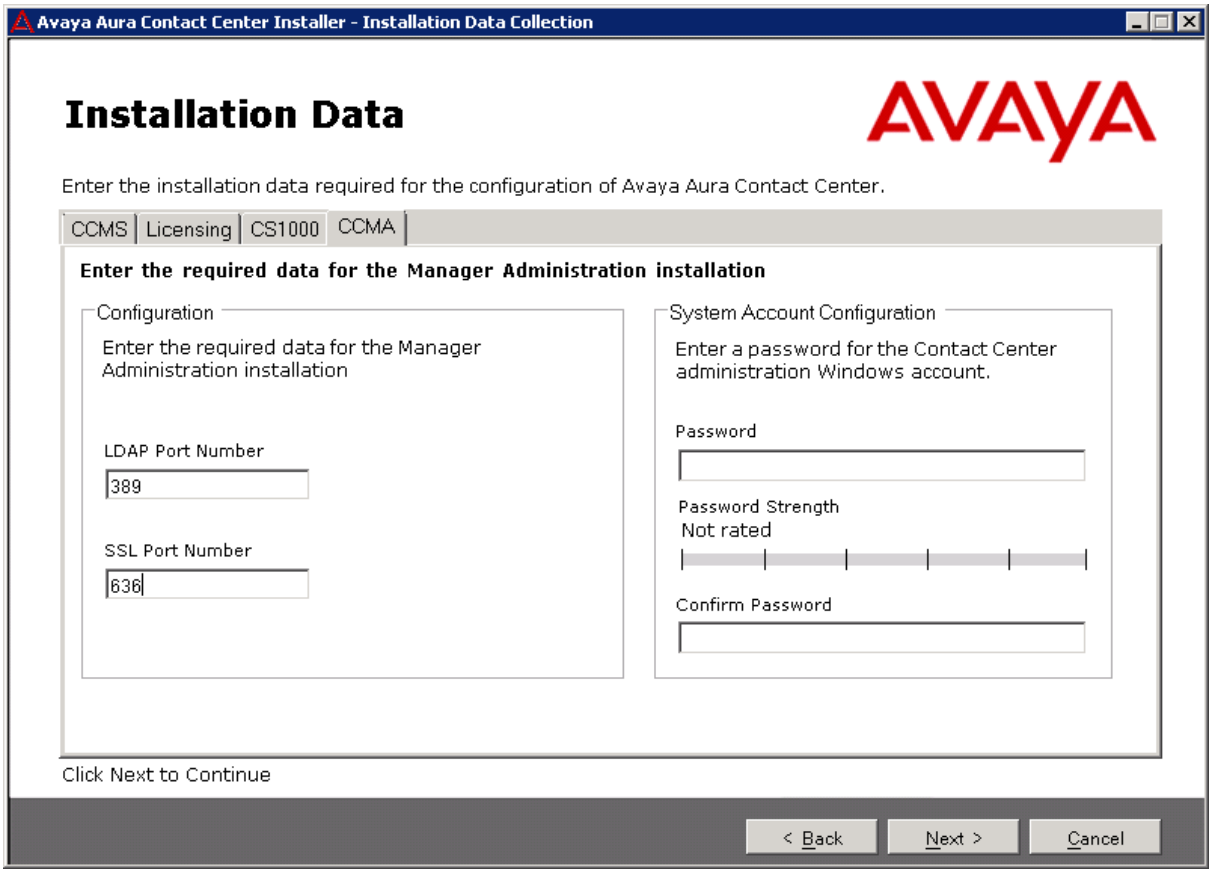


28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Voice Contact Server contains a License Manager server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
32. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers. Select **Corporate Enterprise** for multi-site contact centers.
33. From the list of **Optional Packages**, enable the licensed features that you have purchased.
34. Select the **Open Queue** check box.
35. In the **Switch Serial Number** box, type the serial number for the Avaya Communication Server 1000.
36. Select the **CS1000** tab, and configure the Avaya Communication Server 1000 details.



37. In the **Switch Name** box, type the name of the AML Avaya Communication Server 1000 telephone switch. Valid characters for Avaya Communication Server 1000 names are A–Z, a–z, 0–9, underscore (_), and period (.). Names must begin with an alphabetical character and cannot contain spaces. The last character must not be an underscore or a period. Names must not exceed 80 characters in length.
38. In the **Switch IP Address** box, type the IP address of the Avaya Communication Server 1000.
39. In the **Switch Customer Number** box, type the customer number for the Avaya Communication Server 1000.
40. In the **Alternative Switch IP Address** box, type the IP address of an alternate Avaya Communication Server 1000, if you have one.
41. In the **Alternative Switch Customer Number** box, type the customer number of the alternate Avaya Communication Server 1000, if you have one.
42. In the **Alternative Switch Serial ID** box, type the serial number of the alternate Avaya Communication Server 1000, if you have one.
43. In the **Voice Connection Type** section, select the method used to connect to the PABX. Select **None**, **Avaya Aura Experience Portal**, or **CallPilot**.

44. If you are using an Avaya CallPilot® server, enter the Avaya CallPilot® server **ELAN IP Address** and then configure the **Port** to 10008.
45. If you are using Avaya CallPilot® High Availability, in the **CPHA Managed CLAN IP Address** box, type the Avaya CallPilot® Managed CLAN IP address.
46. If you are using an Avaya CallPilot® server, in the **CLAN IP Address** box, type the CLAN IP address of the Avaya CallPilot® server.
47. Select the **CCMA** tab, and configure the CCMA details.



48. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
49. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
50. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.

51. Click **Next**.
52. On the **Summary** window, review and verify the information.
53. Click **Install**.
54. After the installation is complete, click **Finish**.
55. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 22: Multimedia Contact Server software installation

This chapter describes how to install the Multimedia Contact Server software that enables your contact center to handle multimedia contacts. Contact Center Multimedia (CCMM) software enables routing of email (including voice mail, SMS, faxes, and scanned documents), outbound, and Web communication contacts to appropriate agents based on subject, contact type, or the time that the contact arrives.

This section describes how to install Multimedia Contact Server software in Avaya Communication Server 1000 based solutions.

In some small contact center environments, you can install a Voice and Multimedia Contact Server to process both voice and multimedia contacts. But in large contact center environments, you must install the Multimedia Contact Server software on a standalone server. Separate servers are also required for email (MS Exchange for example), Web communication, and some outbound call processing.

You must complete all the procedures in this section in sequential order.

Standby Multimedia Contact Server - High Availability note

Avaya Aura® Contact Center Multimedia Contact Server supports High Availability. To install a standby Multimedia Contact Server, first use the procedures in this chapter to install a primary active Multimedia Contact Server, then repeat the procedures in this chapter to install a standby Multimedia Contact Server.

You can use the procedures in this chapter to install the following:

- Primary active Multimedia Contact Server
- (Optional) Standby Multimedia Contact Server
- (Optional) Remote Geographic Node Multimedia Contact Server

You can install a Multimedia Contact Server and commission it to be the standby Multimedia Contact Server in a campus High Availability solution. The standby server takes over multimedia contact processing and becomes the active server if the existing active Multimedia Contact Server fails. The standby server provides High Availability redundancy and resiliency. The standby and active servers must be at the same patch level and have the same hard disk drive partitions.

You can install another standby Multimedia Contact Server and commission it to be the Remote Geographic Node Multimedia Contact Server in a solution with Disaster Recovery. The Remote Geographic Node (RGN) server shadows the active server. The Remote Geographic Node server does not automatically take over if the active server fails. The standby server, Remote Geographic

Node server, and active server must be at the same patch level and have the same hard disk drive partitions.

The roles and responsibilities of the active, Remote Geographic Node, and standby Multimedia Contact Servers are defined later during commissioning.

Multimedia Contact Server installation prerequisites

Procedure

- Install a Voice Contact Server to provide the core functionality for this Multimedia Contact Server.
- If you use email in your contact center, install and configure an inbound email server and an outbound email server in your network.
- If you use Web communications in your contact center, install and configure a Web server in your network.
- If you use predictive outbound in your contact center, ensure that the predictive outbound hardware and software is configured for your network.
- Ensure that your new Contact Center license file is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site.

Name	Description
	You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.

8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

Adding the server to a domain or workgroup

About this task

Add the server to a domain or workgroup. Avaya recommends that you add the server to the domain or workgroup before installing Contact Center software.

If you are using a domain:

- 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.
- On the server, configure a preferred Domain Name System (DNS) server on the Network Interface Card (NIC).
- 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. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. To add the server to a workgroup, skip to step 8.

7. To add the server to a domain, in the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
    a. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
    b. Click **OK**.
    c. Type the domain administrator **User name** and **Password**.
    d. Click **OK**.
    e. Skip to step 9.
8. To add the server to a workgroup, in the **Computer Name/Domain Changes** dialog box, click the **Workgroup** option.
    a. Type the workgroup name.
    b. Click **OK**.
    c. Type the workgroup administrator **User name** and **Password**.
    d. Click **OK**.
9. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.

4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.

4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Multimedia Contact Server software

Before you begin

- Download the most recent Contact Center Multimedia and common component patches to the server.
- Empty all temporary folders on the server. To determine the specific temporary folders for a server, access the DOS prompt and type set. Note the values listed for TEMP and TMP, and delete all files in those locations.

About this task

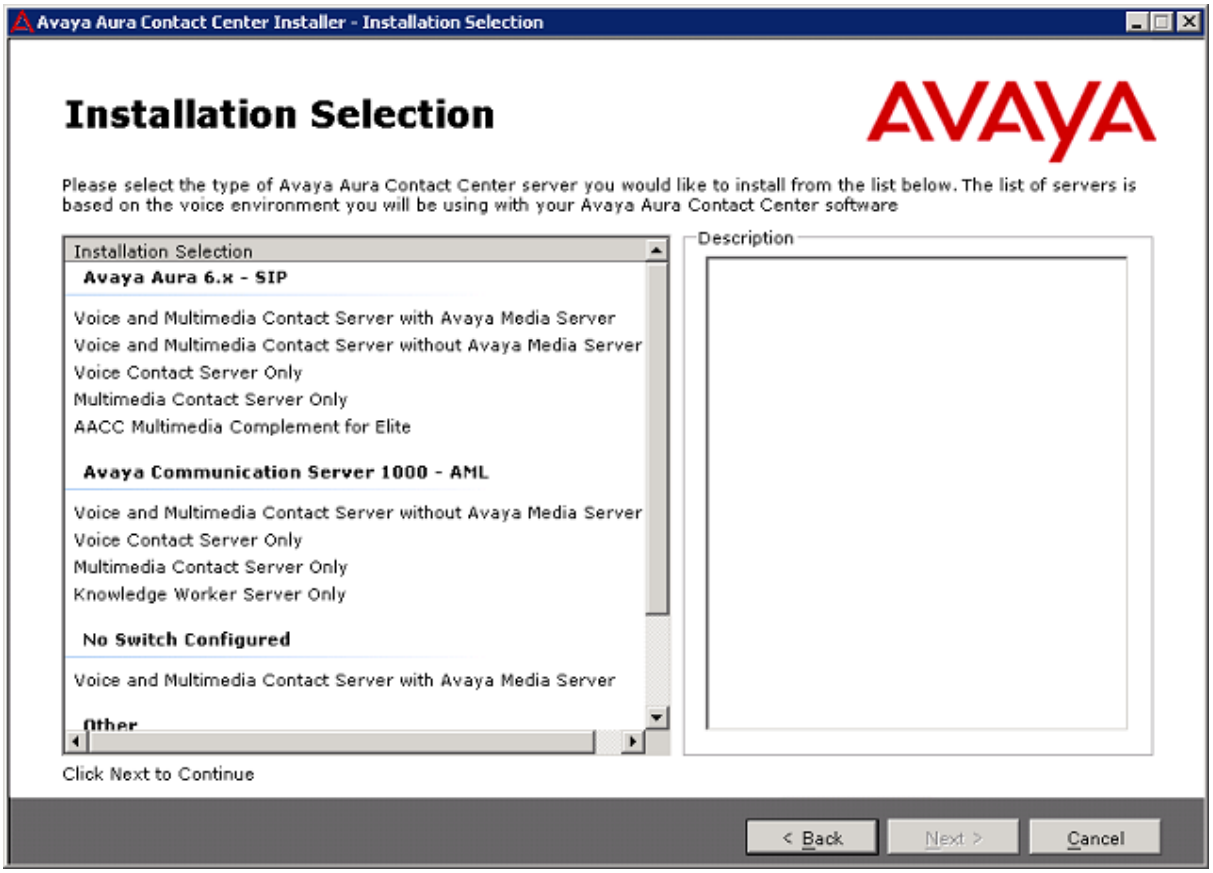
Install the Multimedia Contact Server software to provide inbound and outbound voice, email (including voice mail, SMS, faxes and scanned documents), and Web communications contact types in your contact center. Multimedia Contact Server also supports Instant Messaging in SIP-enabled contact centers.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.

5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.

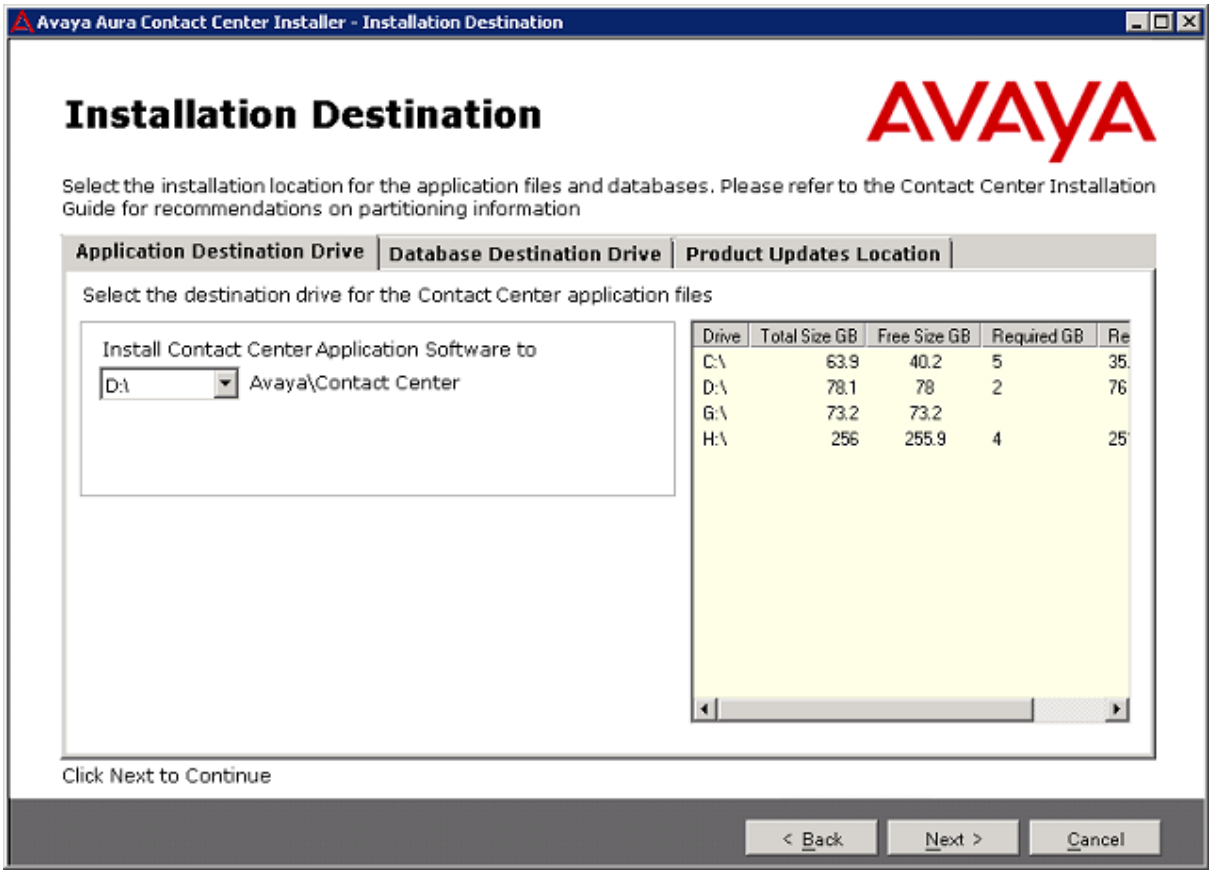


8. Select the type of multimedia server to install:

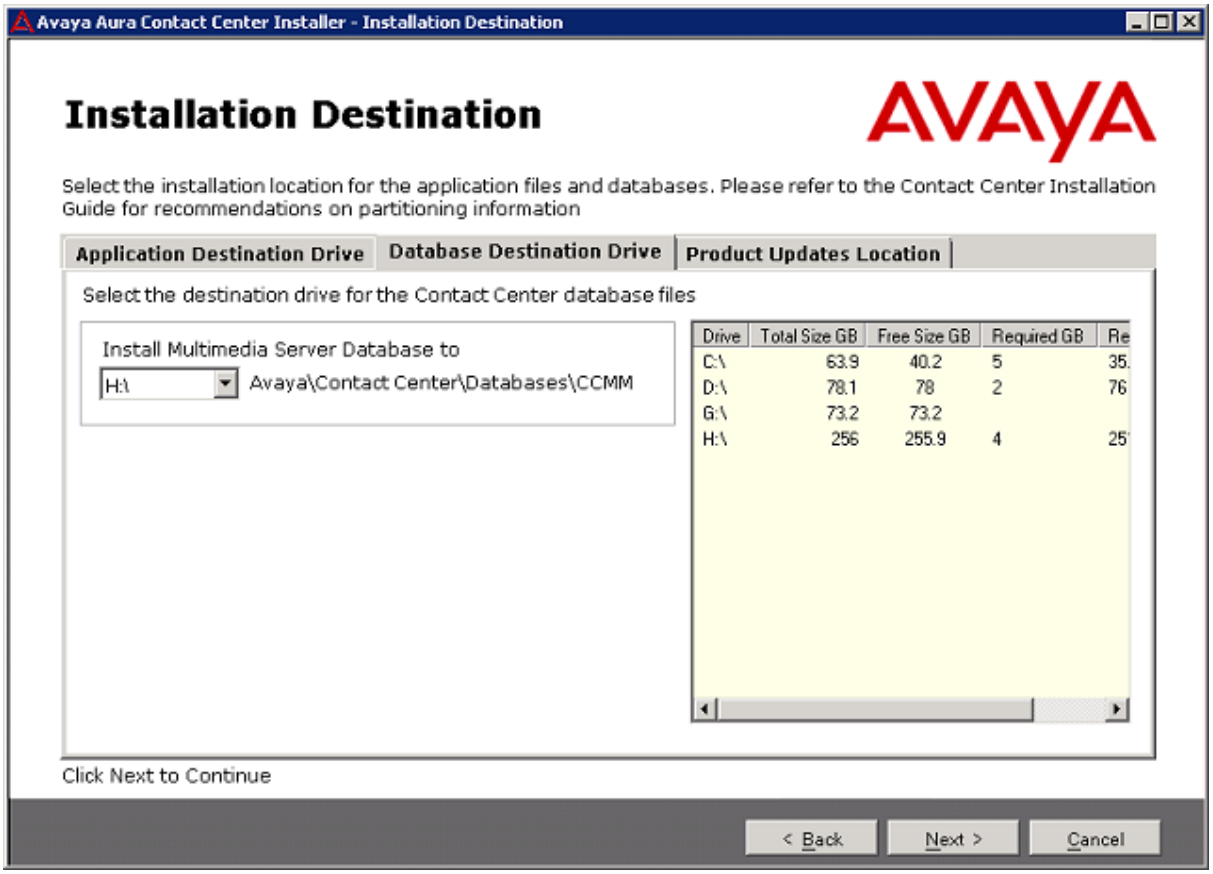
   In an Avaya Communication Server 1000 (CS1000) based solution, on the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Multimedia Contact Server Only**.

   In a SIP-enabled solution, on the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **Multimedia Contact Server Only**.

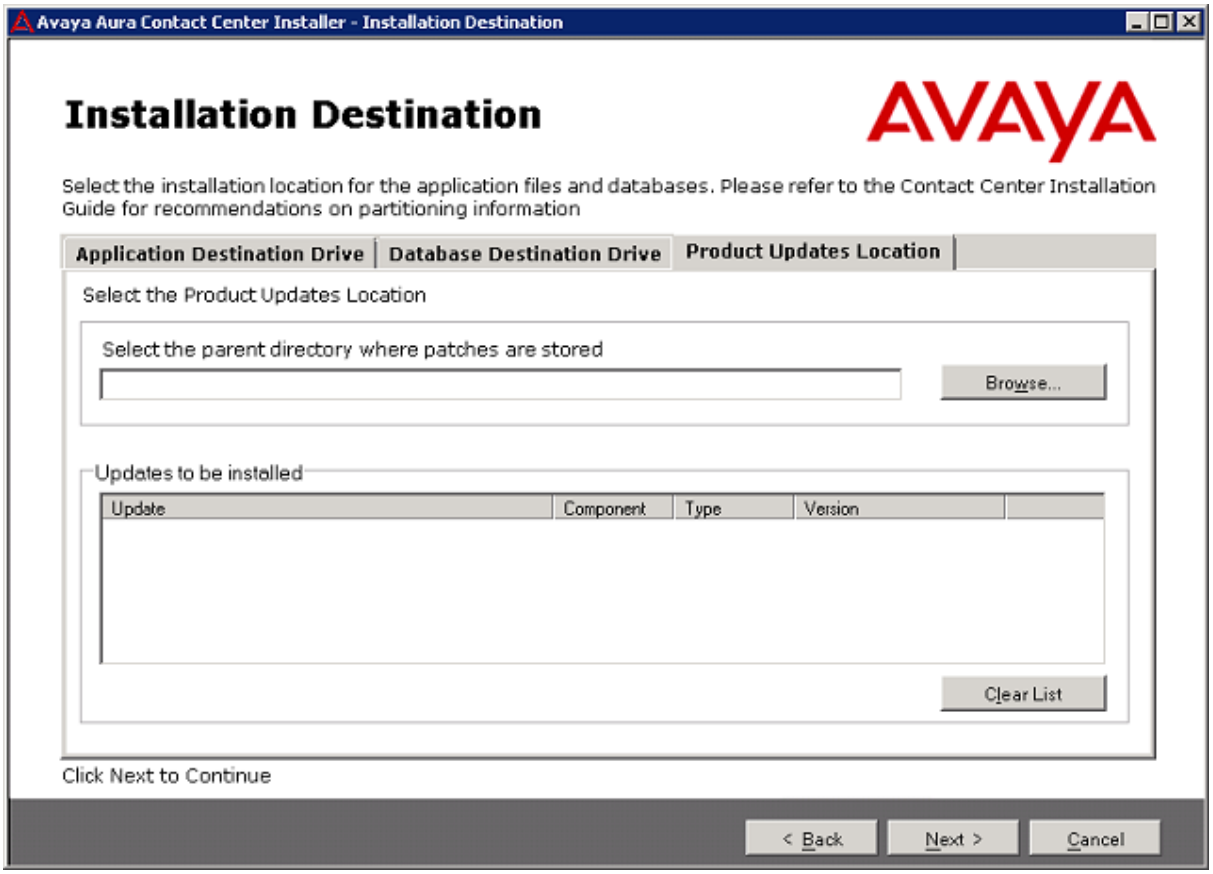
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select the drive for the contact center software applications.
11. Click the **Database Destination Drive** tab.



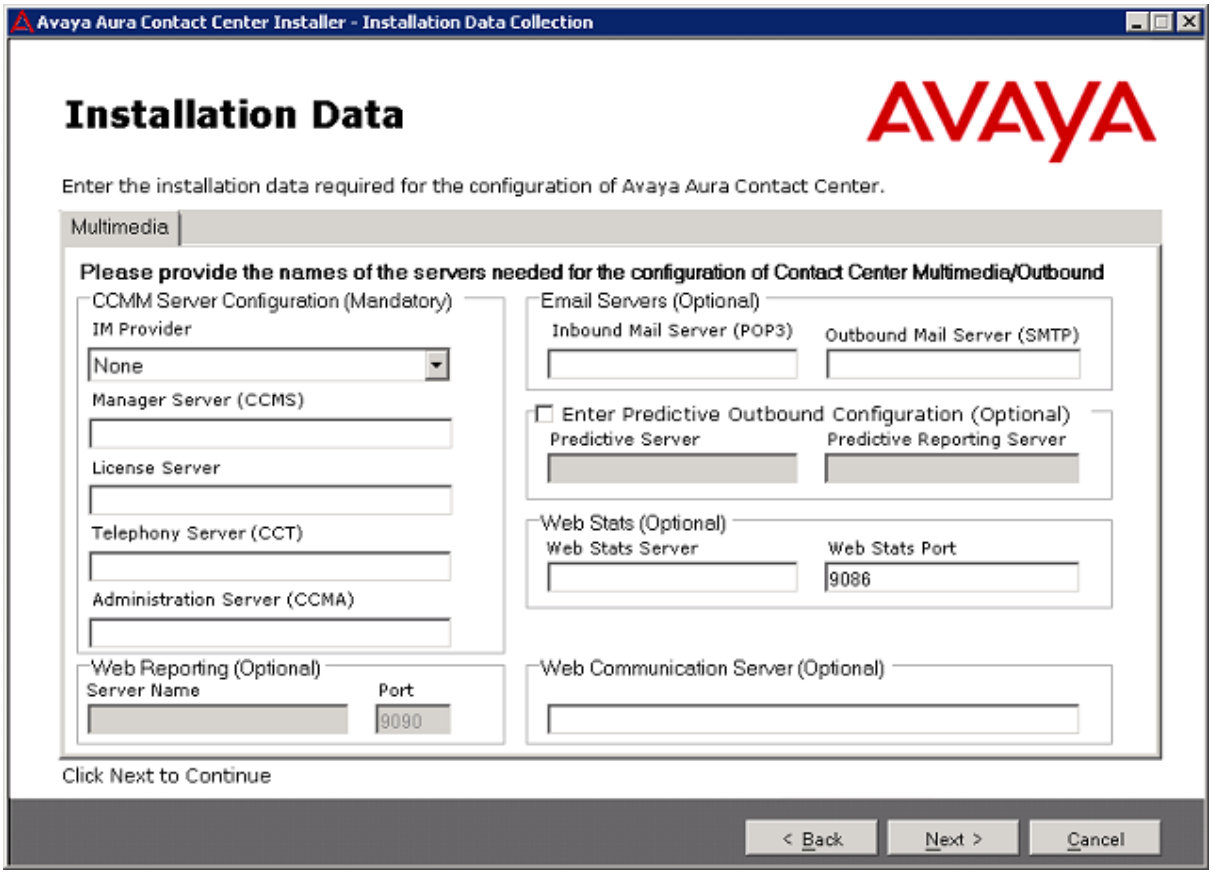
12. Under **Install Multimedia Server Database to**, select the drive for the multimedia server database.
13. Click the **Product Updates Location** tab.



14. Under **Select the parent directory where patches are stored**, select the drive on which you stored the patches. Click **Browse** to locate the folder.
15. Click **Next**.

    The System Readiness Check utility runs on the server.
16. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
17. Click **Next**.
18. On the **Installation Data** window, type the installation details for the **Multimedia** tab.



19. From the **IM Provider** list, select either None, Microsoft OCS, Microsoft Lync, or Aura Presence Services. IM and presence features are supported for Avaya Aura® Presence Services server, Microsoft Office Communications Server, Microsoft Lync. Instant Messaging contacts are supported only in SIP-enabled contact center solutions. Avaya Communication Server 1000 (CS1000) based solutions do not support Instant Messaging contact routing.
20. In the **Manager Server (CCMS)** box, type the name of the server on which the Contact Center Manager Server software is installed.
21. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
22. In the **Telephony Server (CCT)** box, type the name of the server on which the Communication Control Toolkit software is installed.
23. In the **Administration Server (CCMA)** box, type the name of the server on which the Contact Center Manager Administration software is installed.
24. In the **Web Reporting (Optional)** section, in the **Server Name** box, type the IP address of the optional peer-to-peer IM Web Reporting server. This question is enabled if you select a peer-to-peer Instant Messaging provider from the **IM Provider** list.
25. In the **Web Reporting (Optional)** section, in the **Port** box, type the port number of the optional peer-to-peer IM Web Reporting server. The default is 9090.

26. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
27. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
28. Select **Enter Predictive Outbound Configuration** to enable integration with a predictive outbound server.
29. In the **Predictive Server** box, type the name or IP address of the primary Proactive Outreach Manager (POM) server, or the SER CPSE^2 server.
30. In the **Predictive Reporting Server** box, type the name of the SER Predictive Outbound Portfolio server.

    Important:

    If your Contact Center solution includes POM, you must leave the **Predictive Reporting Server** box blank.
31. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
32. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
33. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
34. Click **Next**.
35. On the **Summary** window, review and verify the information.
36. Click **Install**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database
- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 23: Knowledge Worker Server software installation

This chapter describes how to install the Knowledge Worker Server software on a server that is connected directly to the Avaya Communication Server 1000 switch. The contact center has no Contact Center Manager Server and, therefore, no skill-based routing capability. A Knowledge Worker Server includes the following server software:

- Communication Control Toolkit (CCT) — Knowledge Worker version
- Contact Center License Manager

Install a Knowledge Worker server to provide Computer-Telephony Integration (CTI) functionality and call data handling capabilities.

Knowledge Worker Server does not support High Availability.

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

Knowledge Worker Server software installation prerequisites

Procedure

Ensure that your new license file is available.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.

10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008

documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.

2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

Adding the server to a domain or workgroup

About this task

Add the server to a domain or workgroup. Avaya recommends that you add the server to the domain or workgroup before installing Contact Center software.

If you are using a domain:

- 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.
- On the server, configure a preferred Domain Name System (DNS) server on the Network Interface Card (NIC).
- 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. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. To add the server to a workgroup, skip to step 8.
7. To add the server to a domain, in the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
    a. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
    b. Click **OK**.
    c. Type the domain administrator **User name** and **Password**.
    d. Click **OK**.
    e. Skip to step 9.
8. To add the server to a workgroup, in the **Computer Name/Domain Changes** dialog box, click the **Workgroup** option.
    a. Type the workgroup name.
    b. Click **OK**.
    c. Type the workgroup administrator **User name** and **Password**.
    d. Click **OK**.
9. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Installing the Knowledge Worker Server software

Before you begin

- Ensure the Avaya Communication Server 1000 is configured. For more information see *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).

- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Knowledge Worker Server software to enable the Computer-Telephony Integration (CTI) between the PABX and the applications.

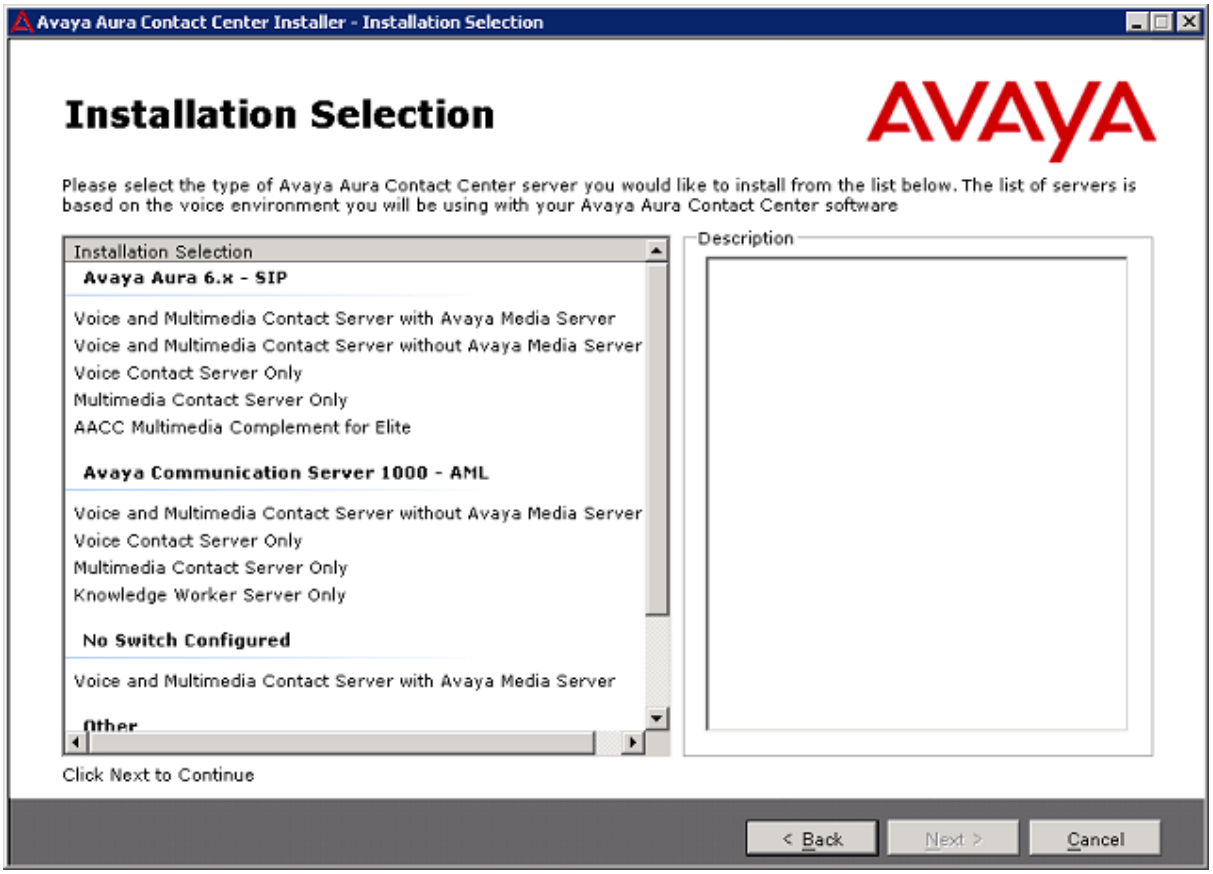
Note:

Installation of this component installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

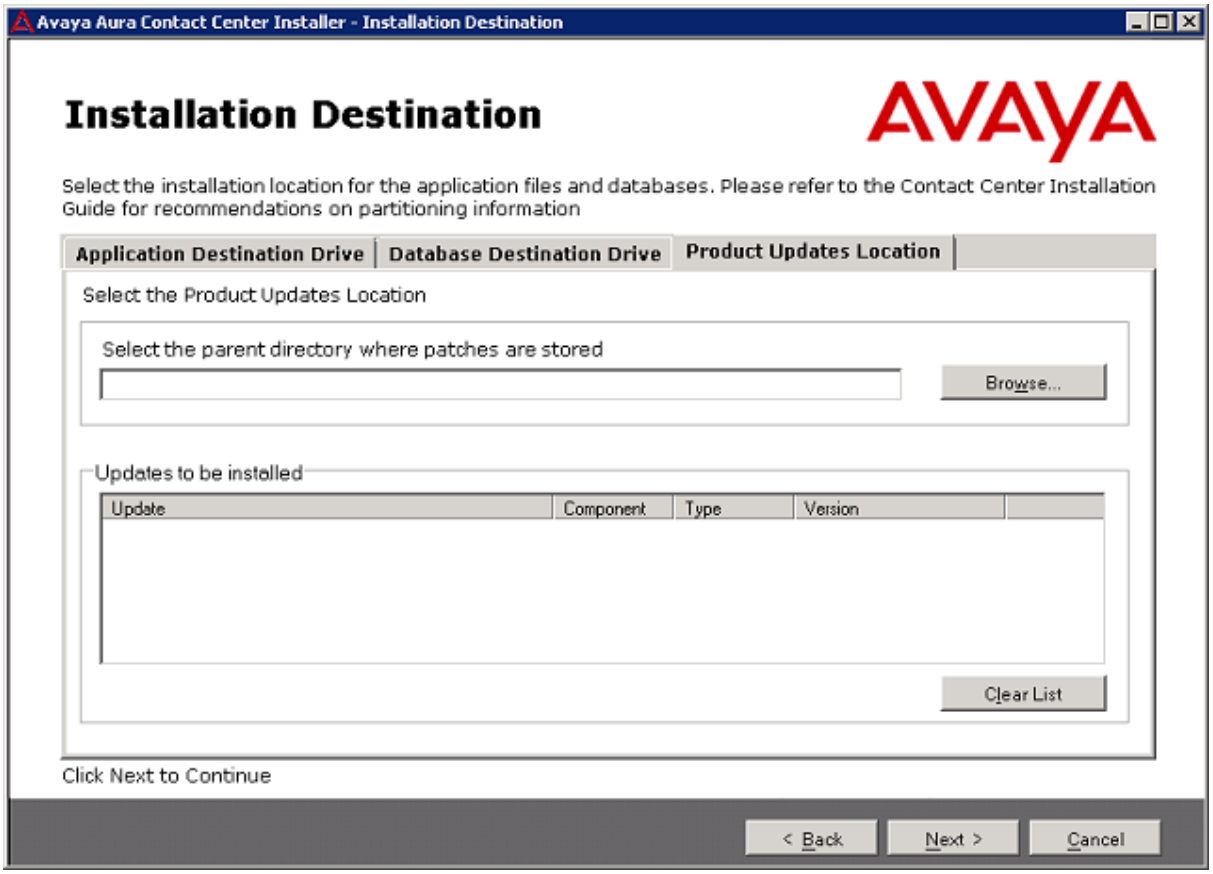
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



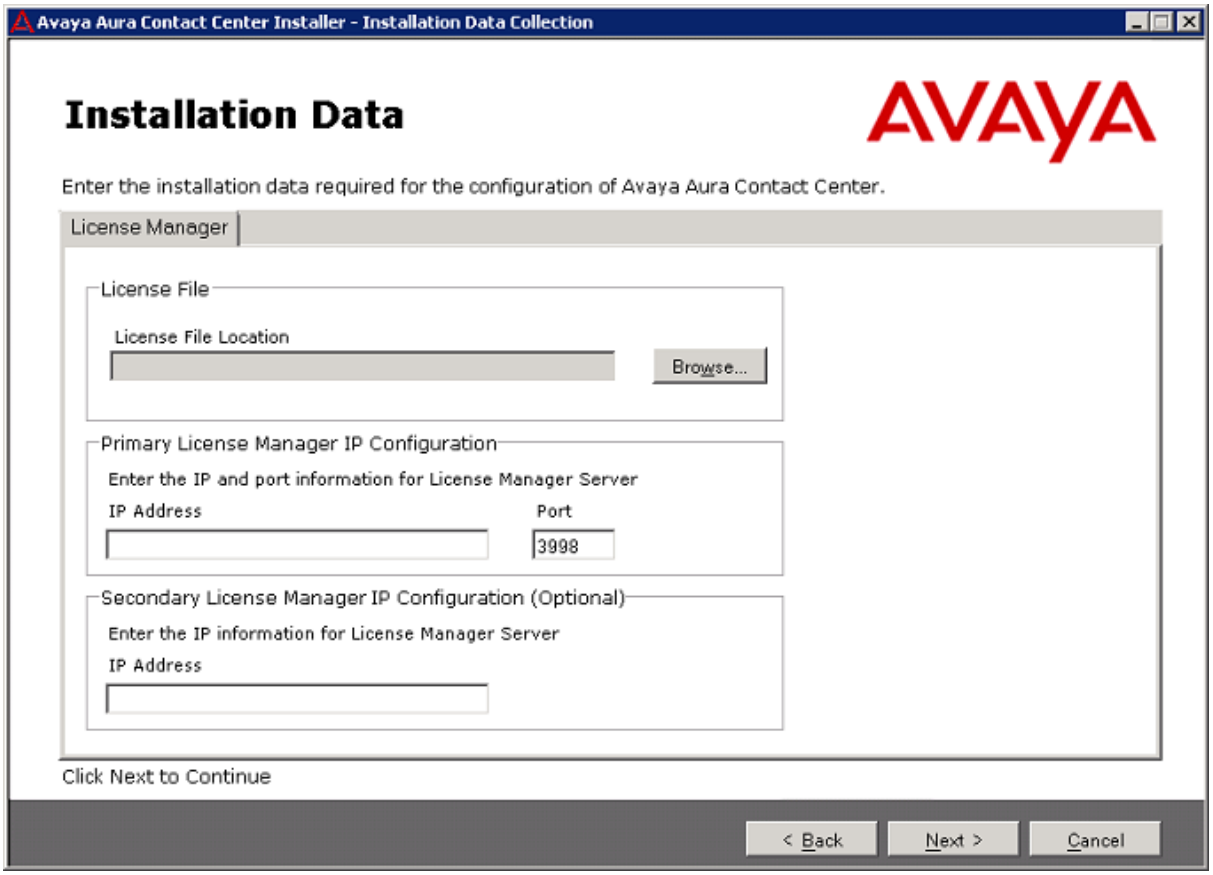
8. On the **Installation Selection** window, under **Avaya Communication Server 1000 - AML**, select **Knowledge Worker Server Only**.
9. Click **Next**.
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
13. Click the **Product Updates Location** tab.



14. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
15. Click **Next**.

    The System Readiness Check runs on the server.
16. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
17. Click **Next**.
18. On the **Installation Data** window, type the installation details for each tab.
19. Select the **License Manager** tab, and configure the licensing details.



20. The **License File Location** box displays the folder on the server which contains the license file.
21. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Knowledge Worker Server contains License Manager server software. This License Manager server is the default primary License Manager.
22. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Communication Control Toolkit. The default port number is 3998 when you use only one License Manager.
23. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
24. Click **Next**.
25. On the **Summary** window, review and verify the information.
26. Click **Install**.
27. After the installation is complete, click **Finish**.
28. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Part 3: Multimedia Complement For Elite

Chapter 24: Avaya Aura® Contact Center Multimedia Complement software installation for Avaya Aura® Call Center Elite

Avaya Aura® Contact Center Release 6.4 supports a Multimedia Complement for Avaya Aura® Call Center Elite. This server type adds multimedia contact support to an Avaya Aura® Call Center Elite voice-based solution. To implement the Avaya Aura® Contact Center High Availability feature, your solution requires additional standby servers to provide resiliency and redundancy.

AACC Multimedia Complement for Elite — Install this server to add multimedia contact routing support to a new or existing Avaya Aura® Call Center Elite voice-based solution. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM).

Prerequisites for Contact Center installation workflow

Procedure

- Complete the *Avaya Aura® Contact Center Installation Checklist* (44400-310).
- Ensure all your server hardware meets the requirements described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Know the installation configuration you plan to use in your contact center. For more information see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Contact Center server types and software installation for Avaya Aura® Call Center Elite

About this task

This work flow shows the sequence of tasks you perform to install one or more Contact Center servers to provide a multimedia complement to an Avaya Aura® Call Center Elite voice-based solution.

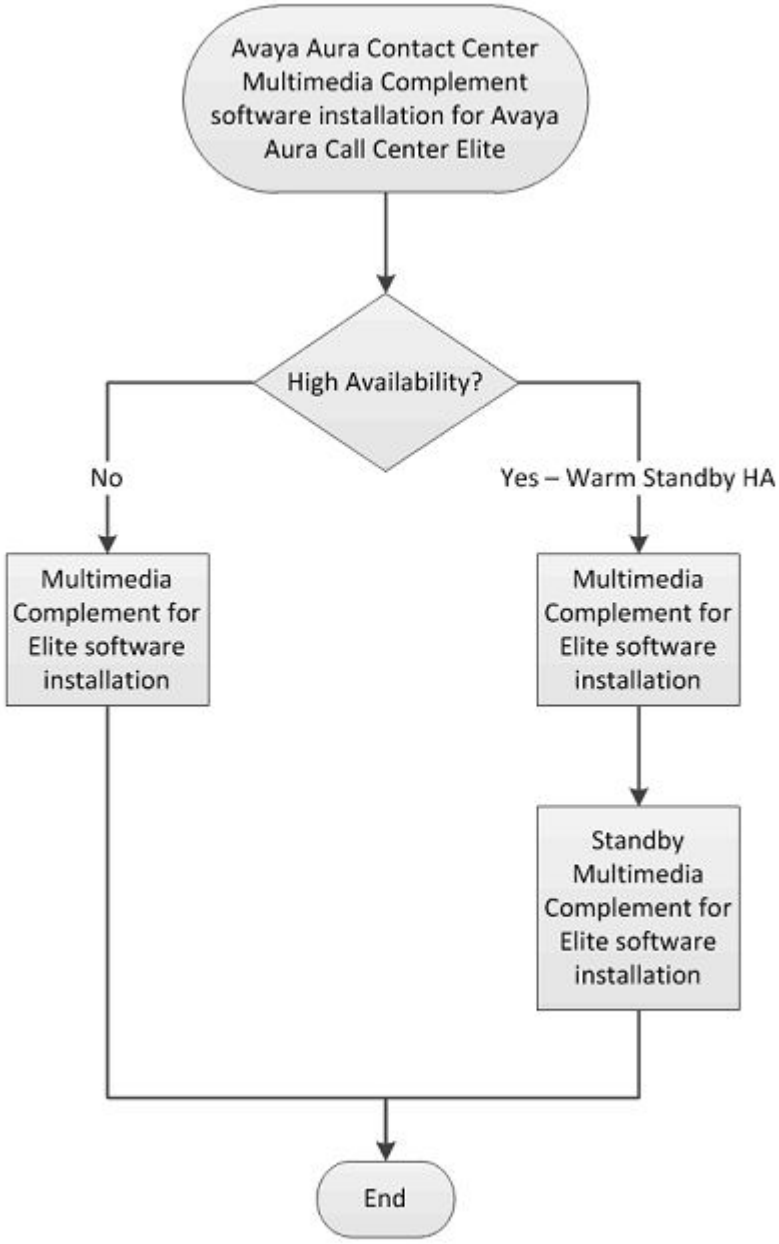


Figure 3: Contact Center software installation tasks for Avaya Aura® Call Center Elite based solutions

For more information about installing Avaya Aura® Contact Center servers for an Avaya Aura® Call Center Elite solution, see the following:

- Multimedia Complement for Elite software installation on page 519
- Standby Multimedia Complement for Elite software installation on page 542

Chapter 25: Multimedia Complement for Elite software installation

This chapter provides the steps to perform a typical installation of Avaya Aura® Contact Center server software on a Multimedia Complement for Elite Server. A Multimedia Complement for Elite Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install this server to add multimedia contact routing support to a new or existing Avaya Aura® Call Center Elite voice-based solution. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM).

You must complete all the procedures in this section in sequential order.

Multimedia Complement for Elite software installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008

documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.

2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact

Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Multimedia Complement for Elite software

Before you begin

- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the Multimedia Complement For Elite software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Multimedia Complement For Elite software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

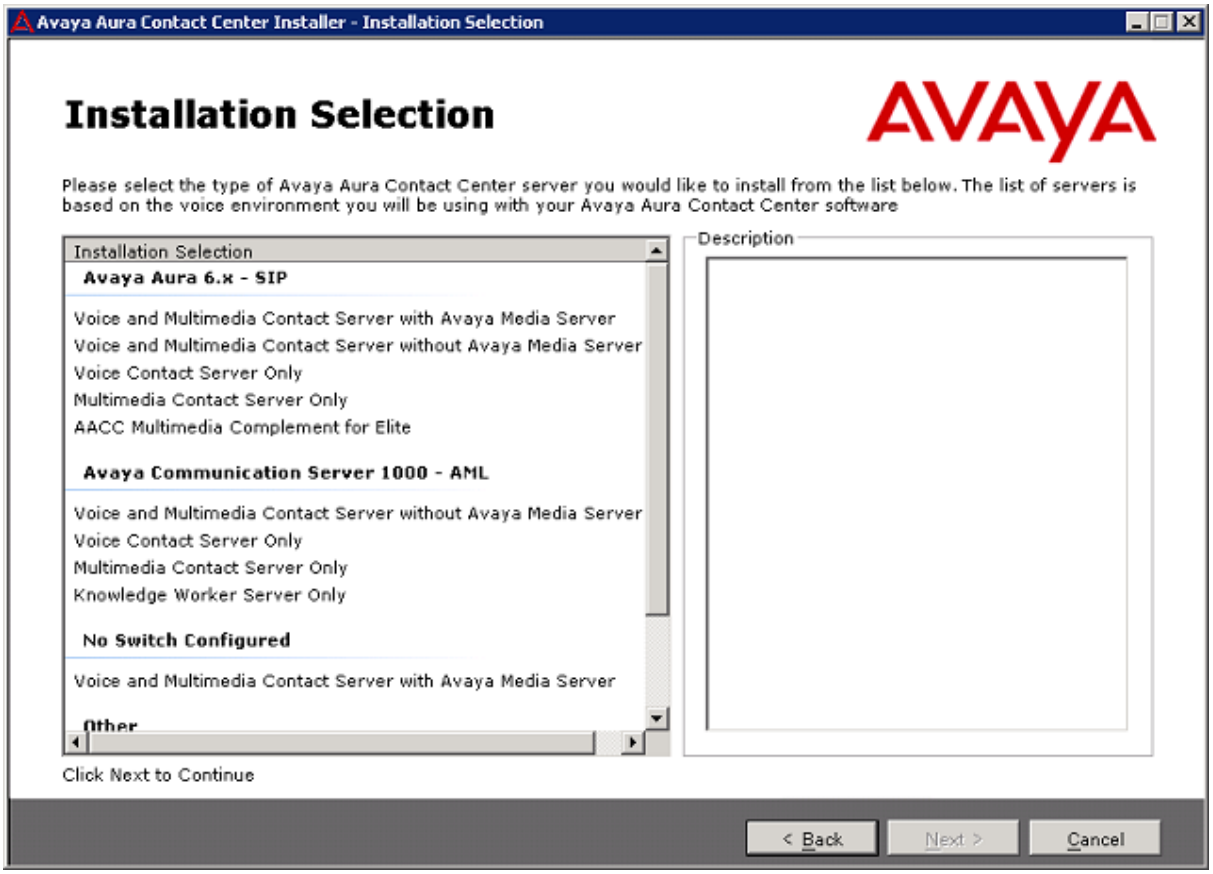
Note:

Read the Contact Center Release Notes for the most recent instructions.

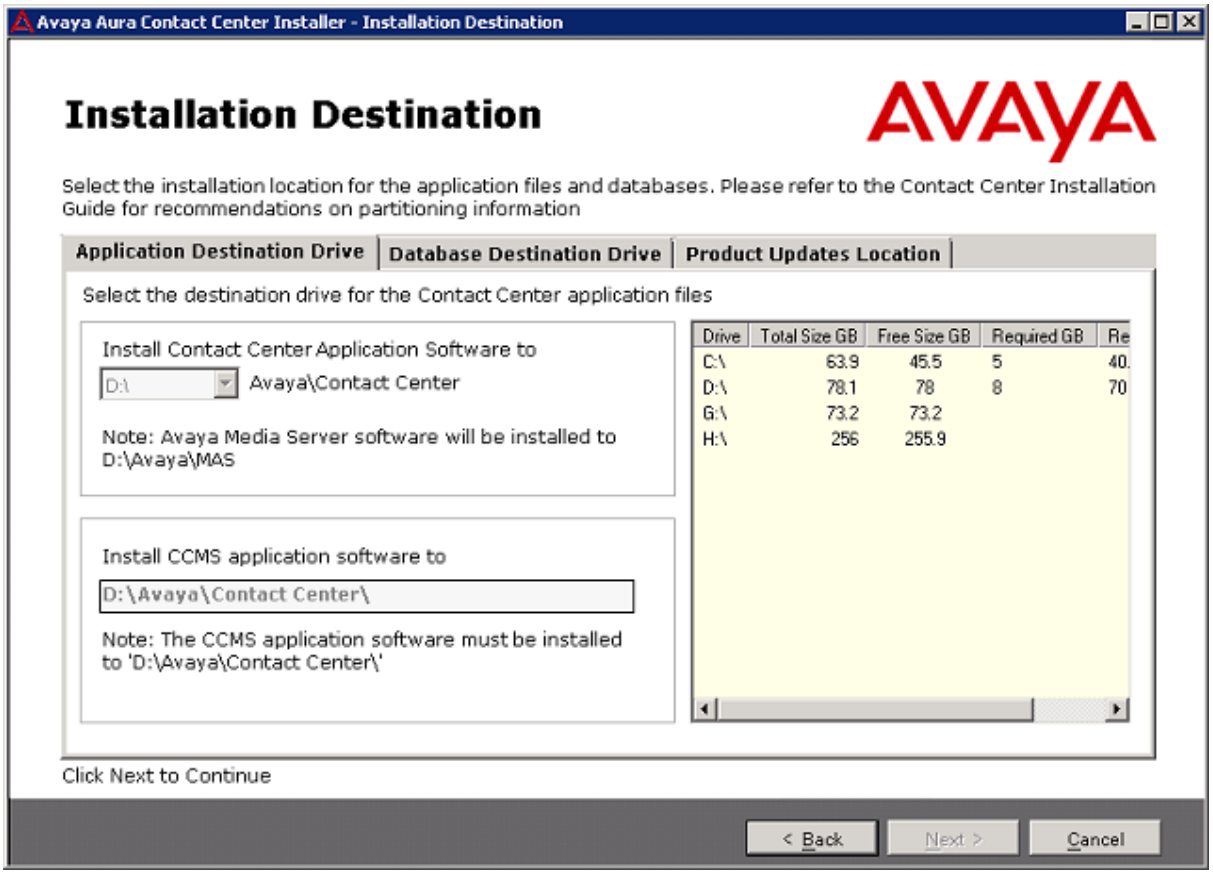
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

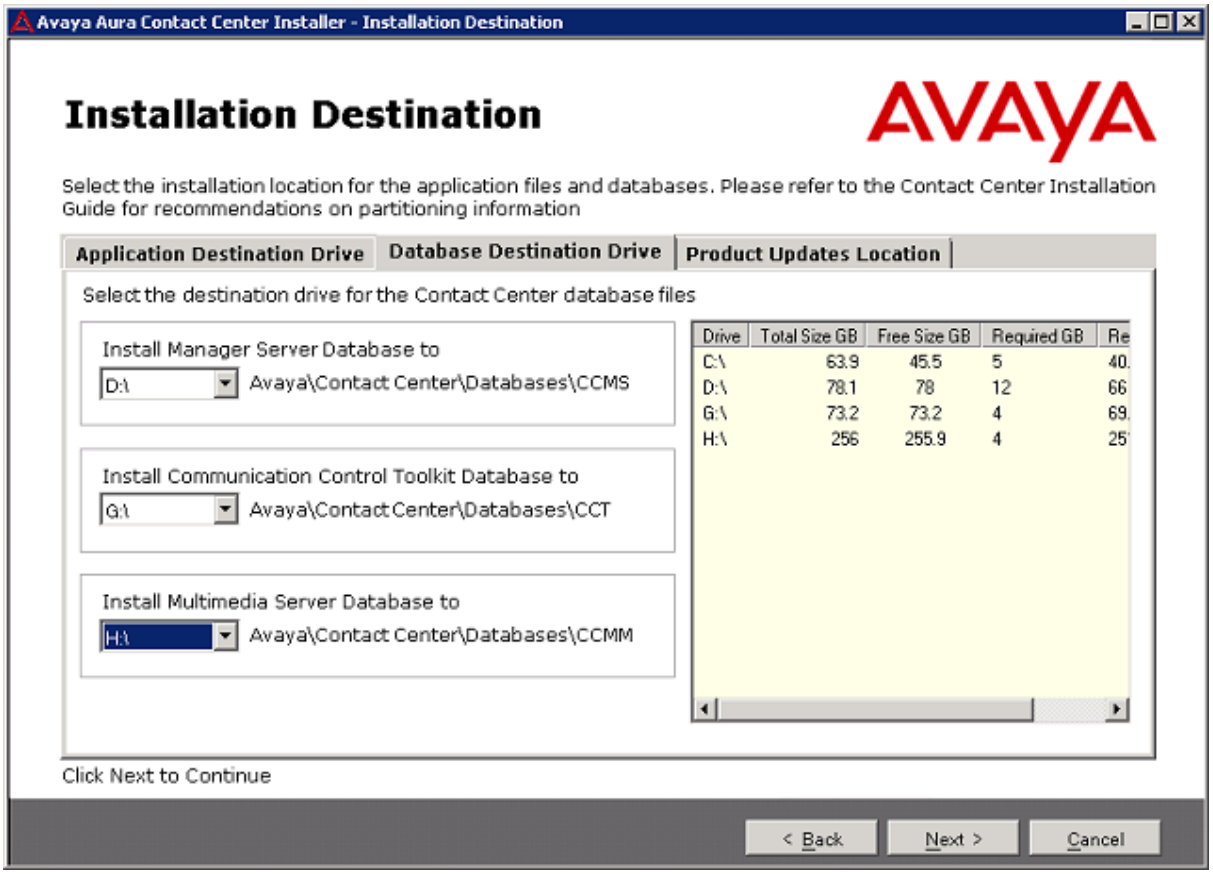
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



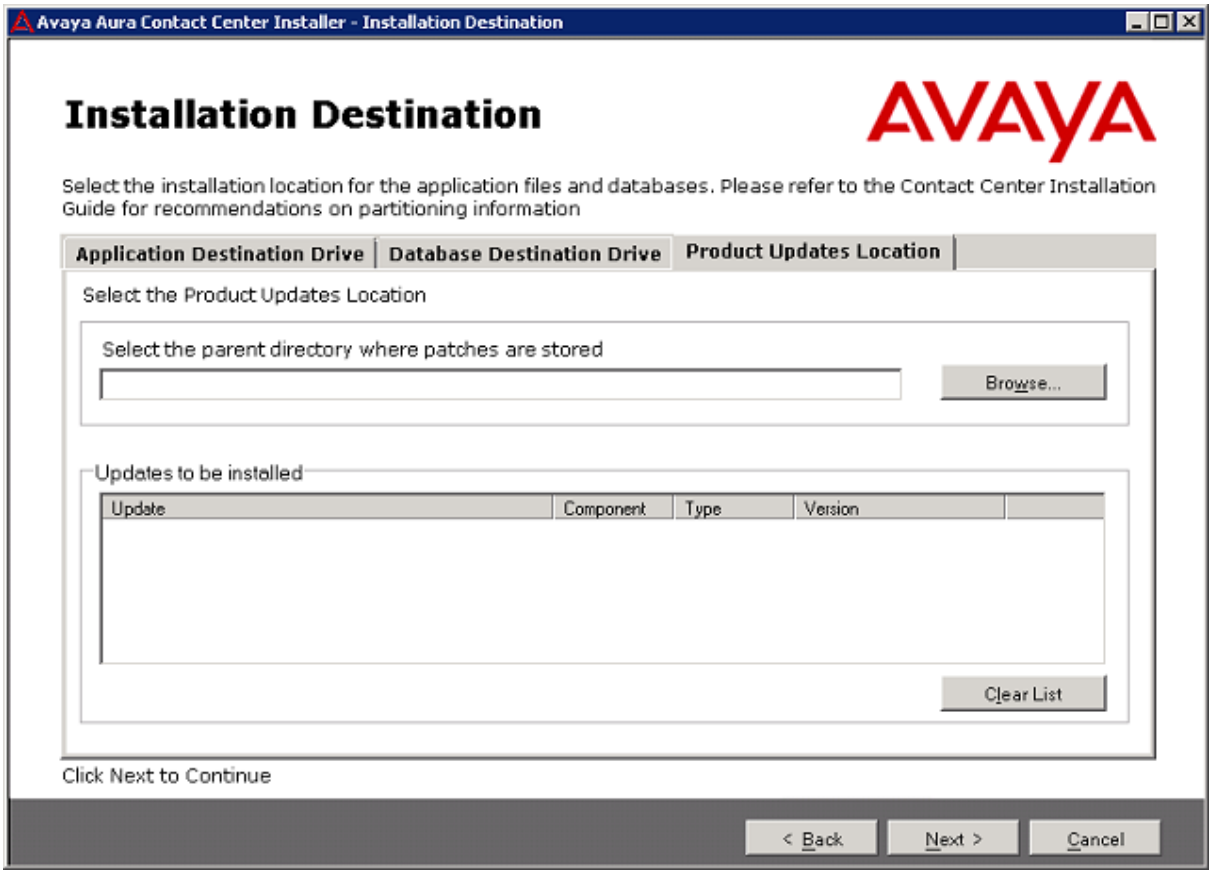
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **AACC Multimedia Complement for Elite**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



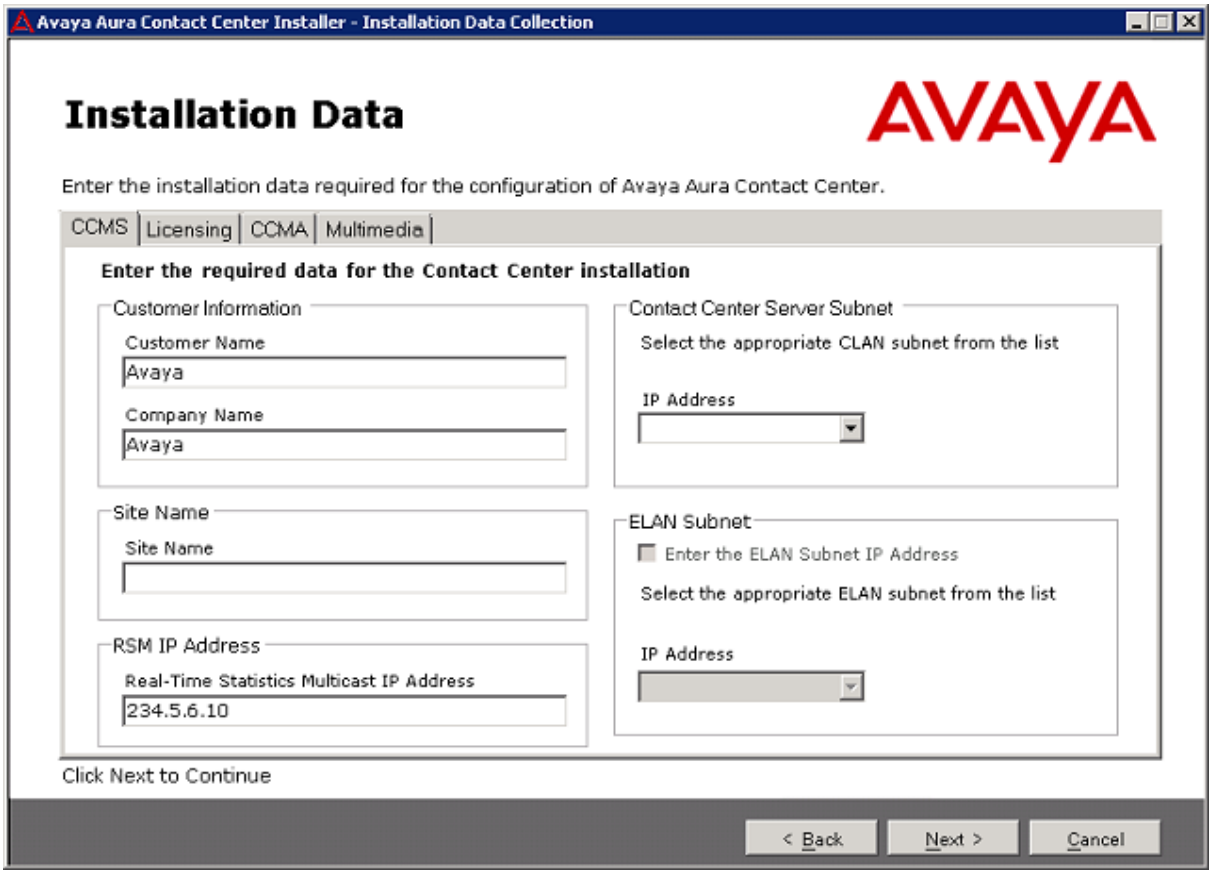
15. Click the **Product Updates Location** tab.



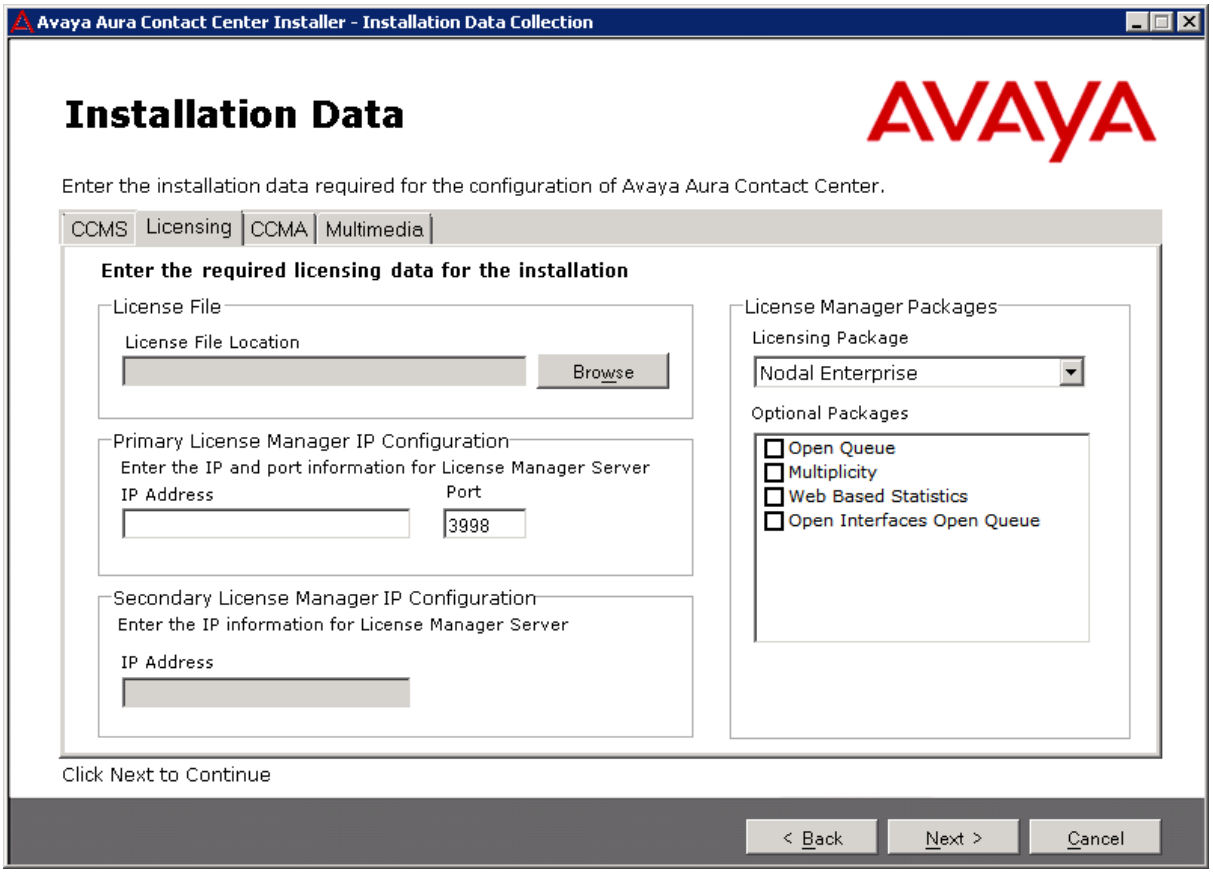
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

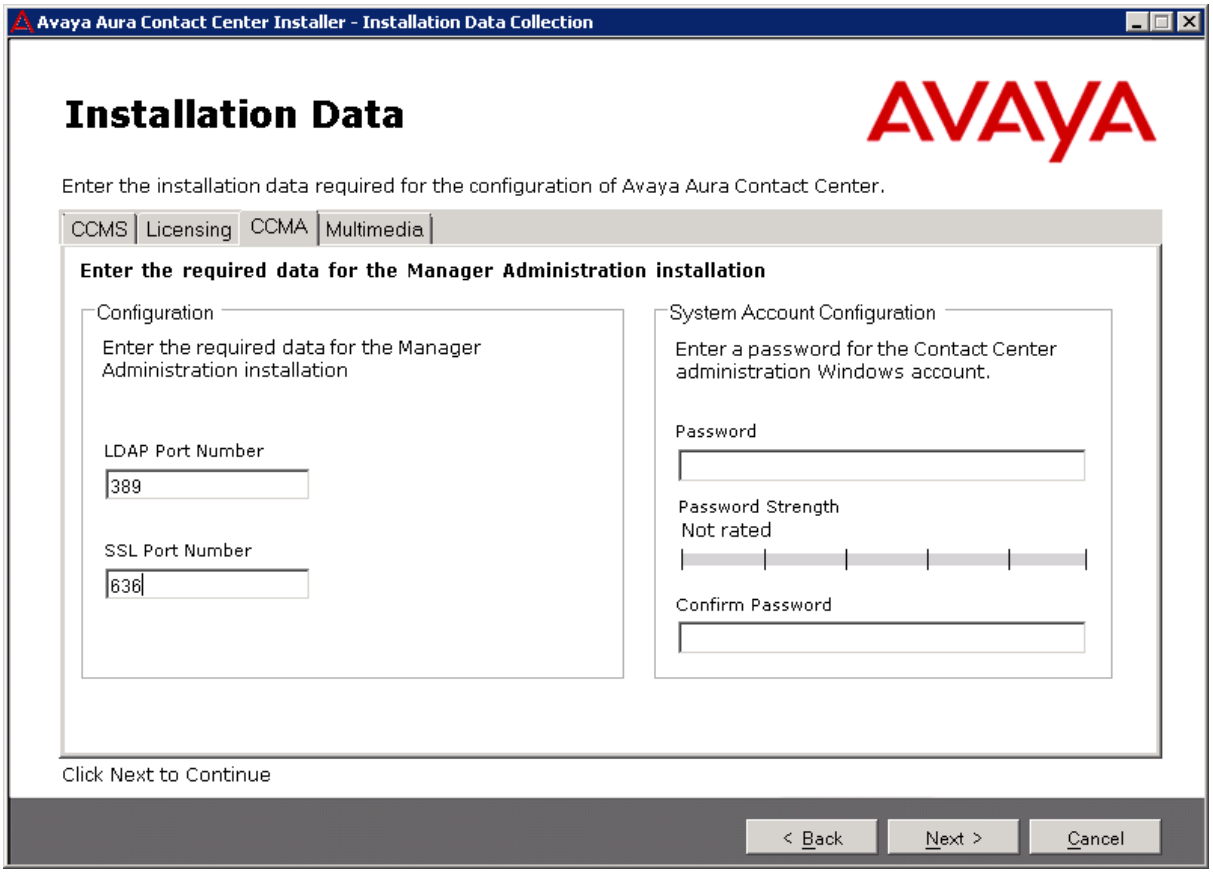
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



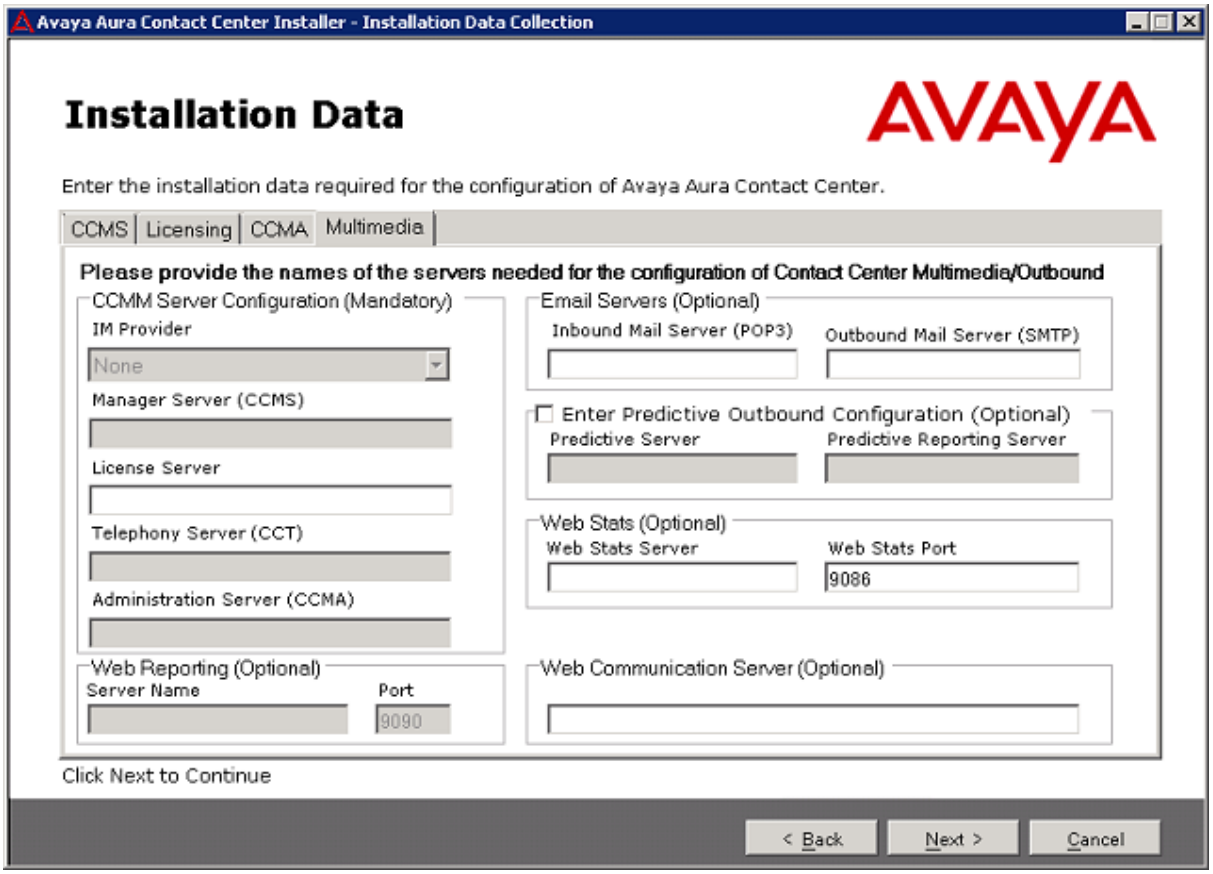
22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. Each Multimedia Complement For Elite Server contains a License Manager server. This License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **CCMA** tab, and configure the CCMA details.



35. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
36. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
37. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
38. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



39. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
40. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
41. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
42. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
43. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
44. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
45. Click **Next**.
46. On the **Summary** window, review and verify the information.
47. Click **Install**.

48. After the installation is complete, click **Finish**.
49. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database

- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Adding the domain AD-LDS replication account to the primary server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server.

Important:

If you are using High Availability, and if this server is to be the primary active server, perform this procedure. If you are not implementing High Availability, skip this procedure. Do not perform this procedure on the standby server or on the Remote Geographic Node server.

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators

and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 26: Standby Multimedia Complement for Elite software installation

This chapter describes how to install a standby Multimedia Complement for Elite Server. A Multimedia Complement for Elite Server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

This chapter describes how to configure the standby Multimedia Complement for Elite Server with the windows accounts used by CCMA replication in your High Availability Avaya Aura® Contact Center solution.

You must complete all the procedures in this section in sequential order.

Standby Multimedia Complement for Elite software installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.

3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008

documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.

2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.
10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.

22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.

12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Multimedia Complement for Elite software

Before you begin

- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Multimedia Complement For Elite server must already be installed and configured.
- The primary active Multimedia Complement For Elite server must already be configured to support AD-LDS replication.

About this task

Install the standby Multimedia Complement For Elite software and enable your contact center to route contacts to the agents that can answer the call with the correct skills.

Note:

Installing Multimedia Complement For Elite software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

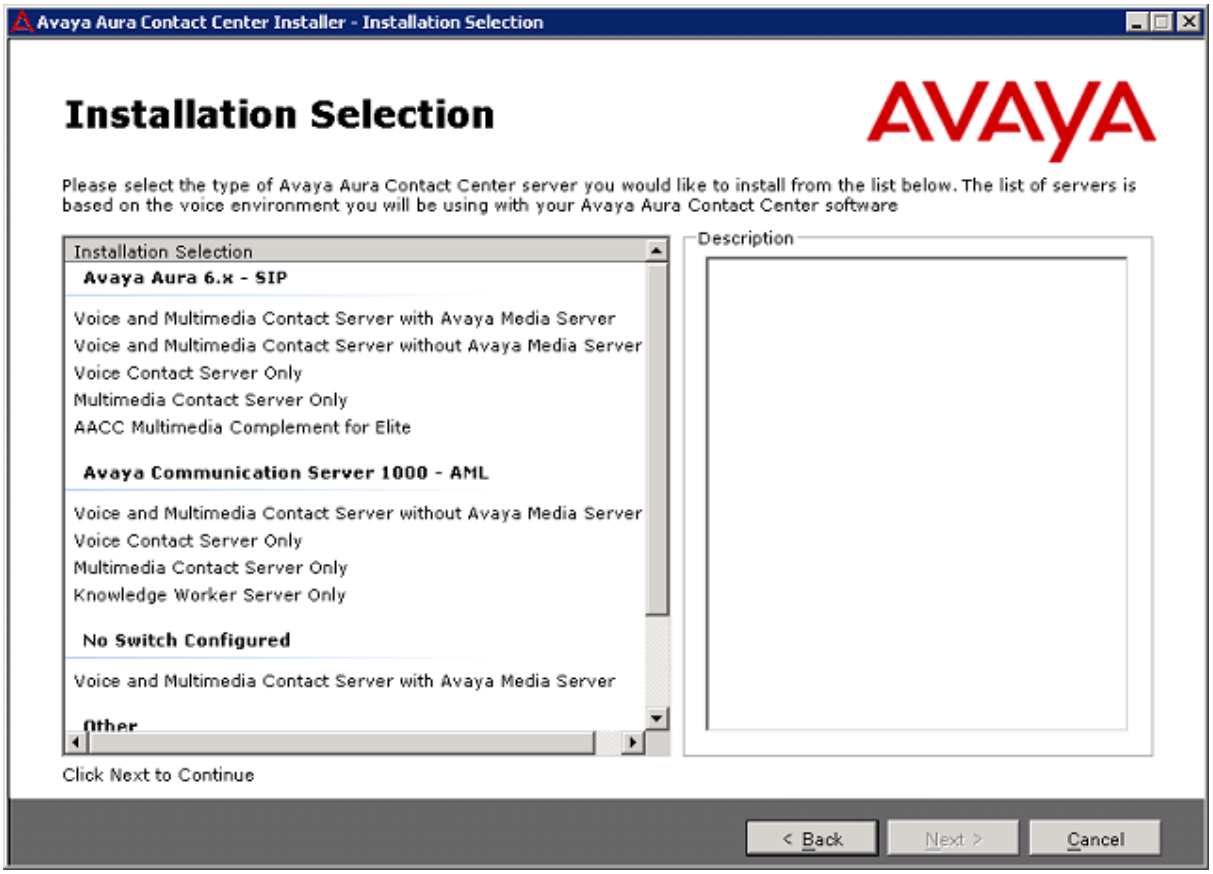
Note:

Read the Contact Center Release Notes for the most recent instructions.

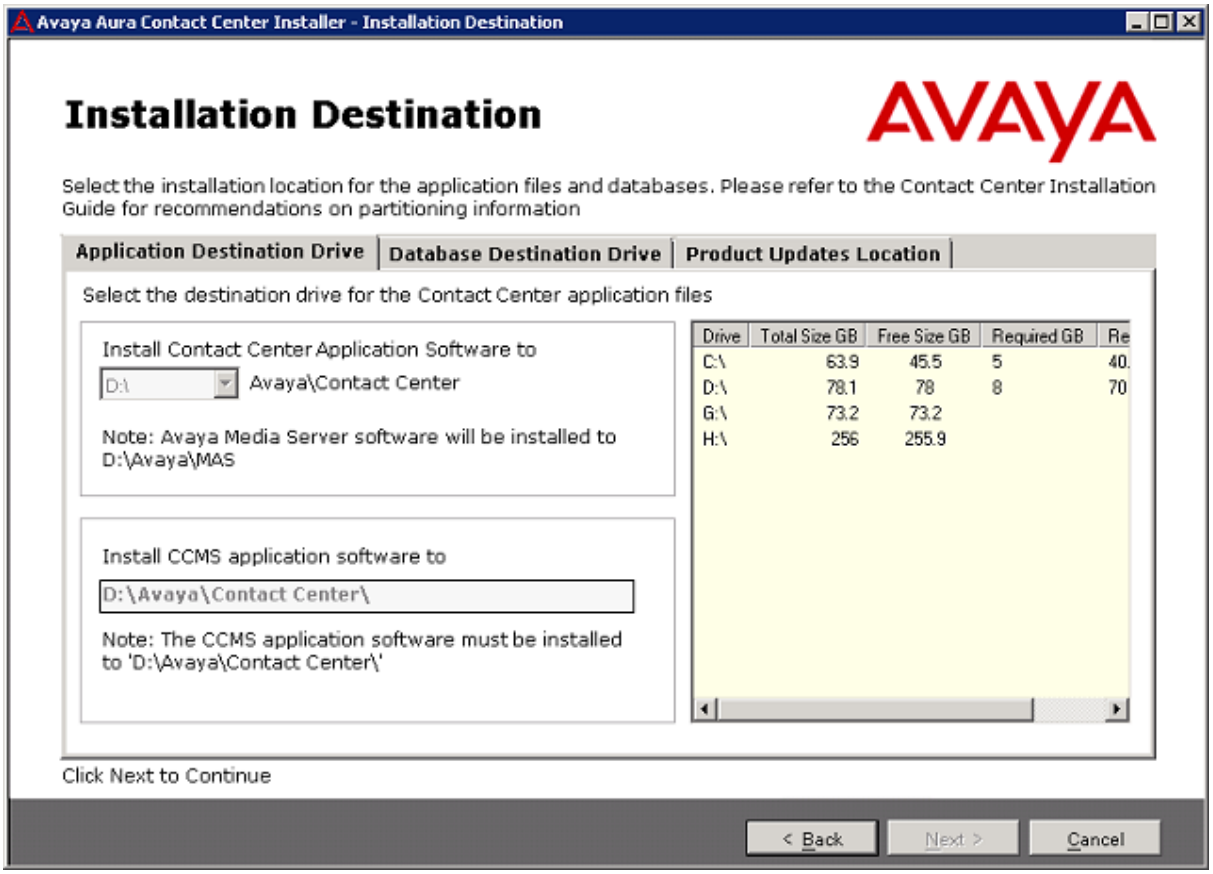
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

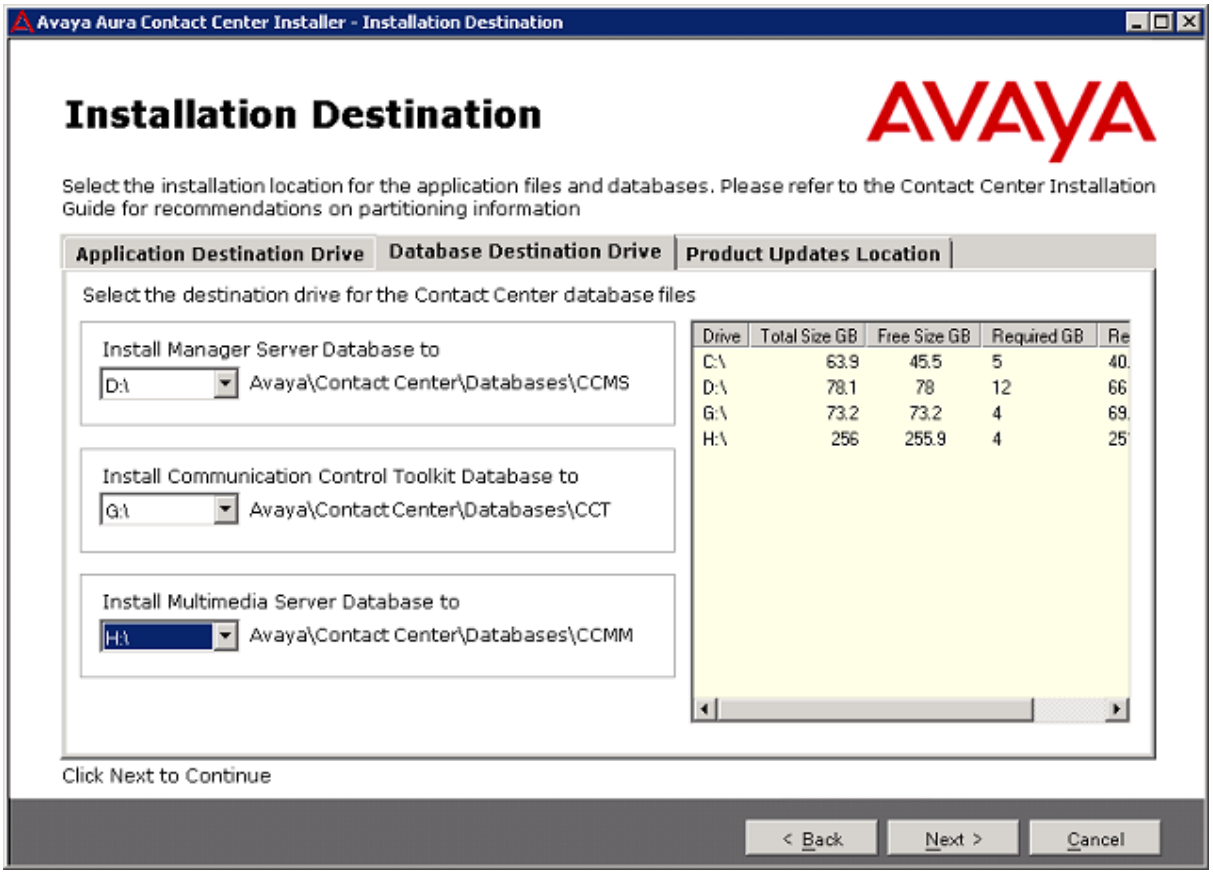
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



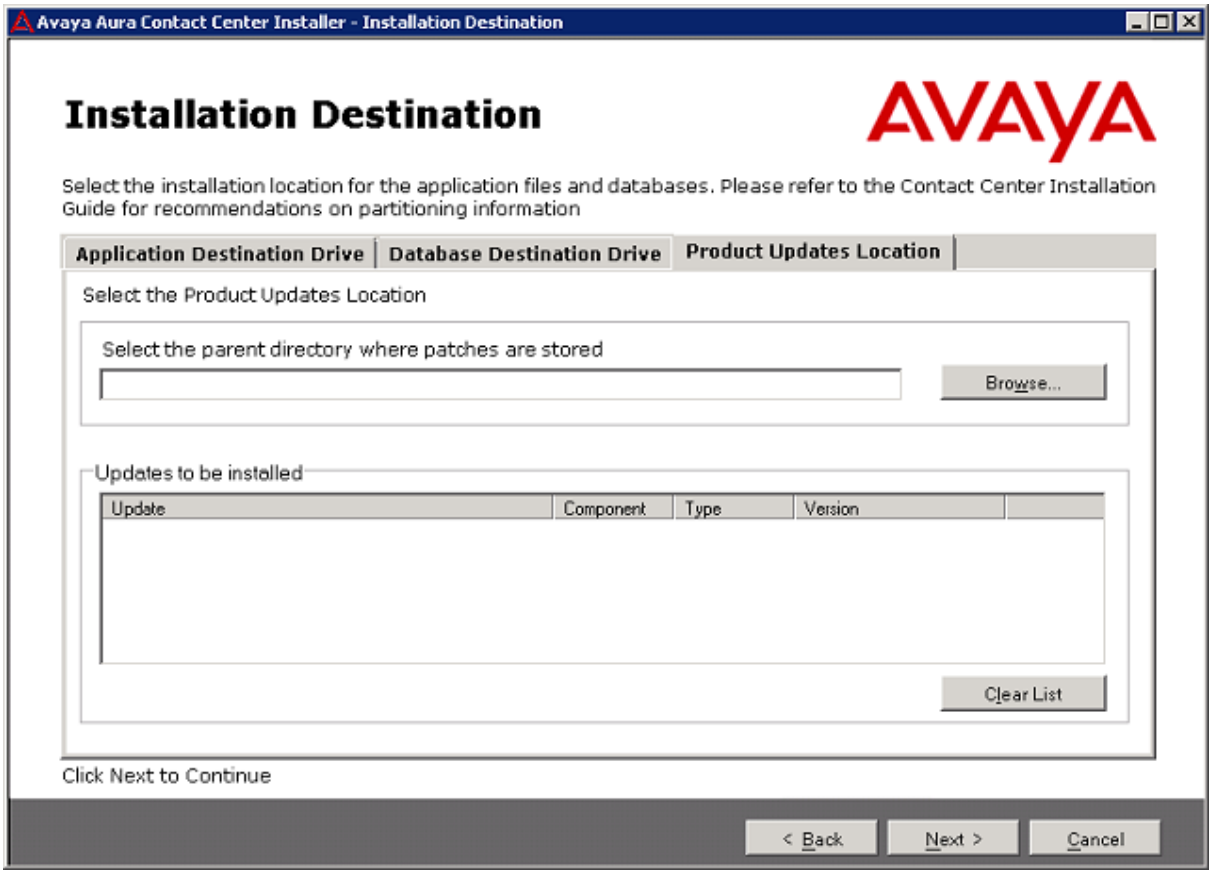
8. On the **Installation Selection** window, under **Avaya Aura 6.x - SIP**, select **AACC Multimedia Complement for Elite**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



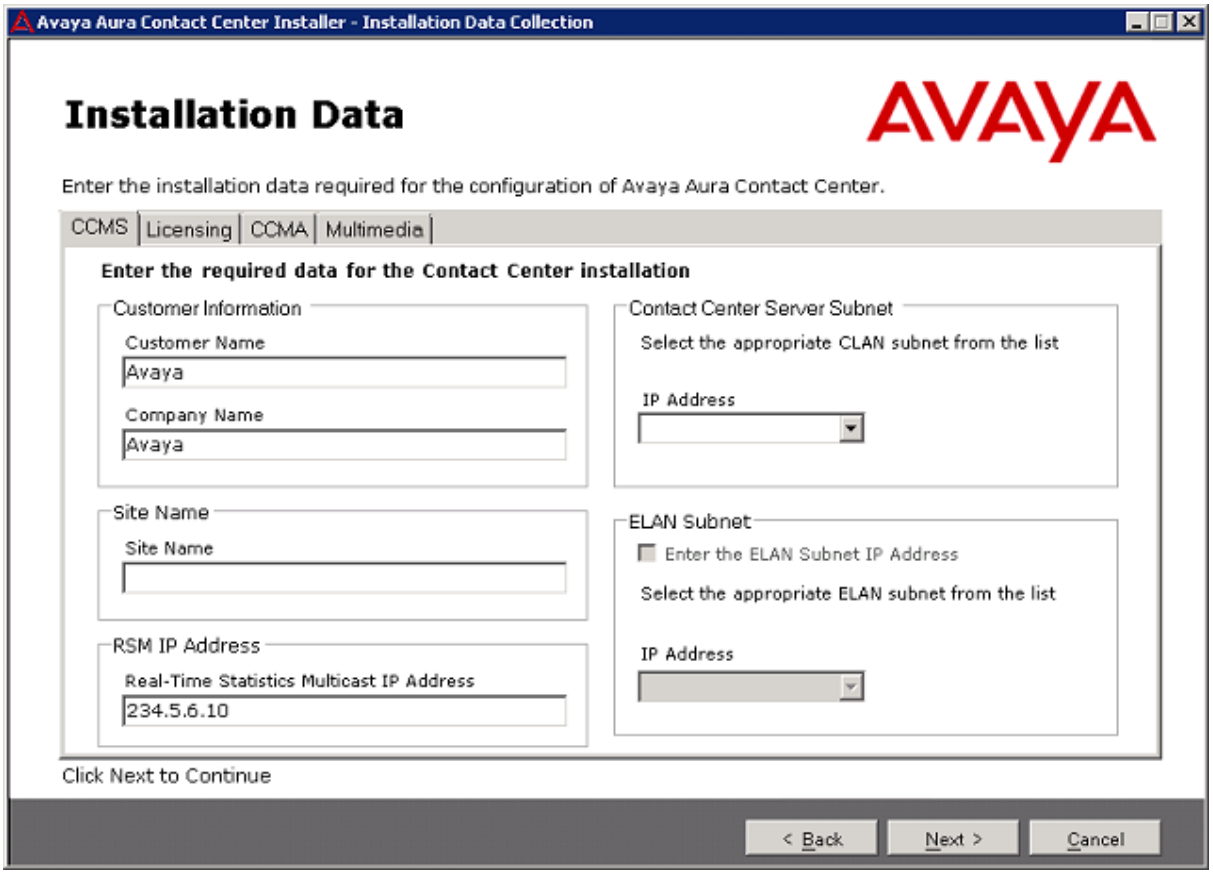
15. Click the **Product Updates Location** tab.



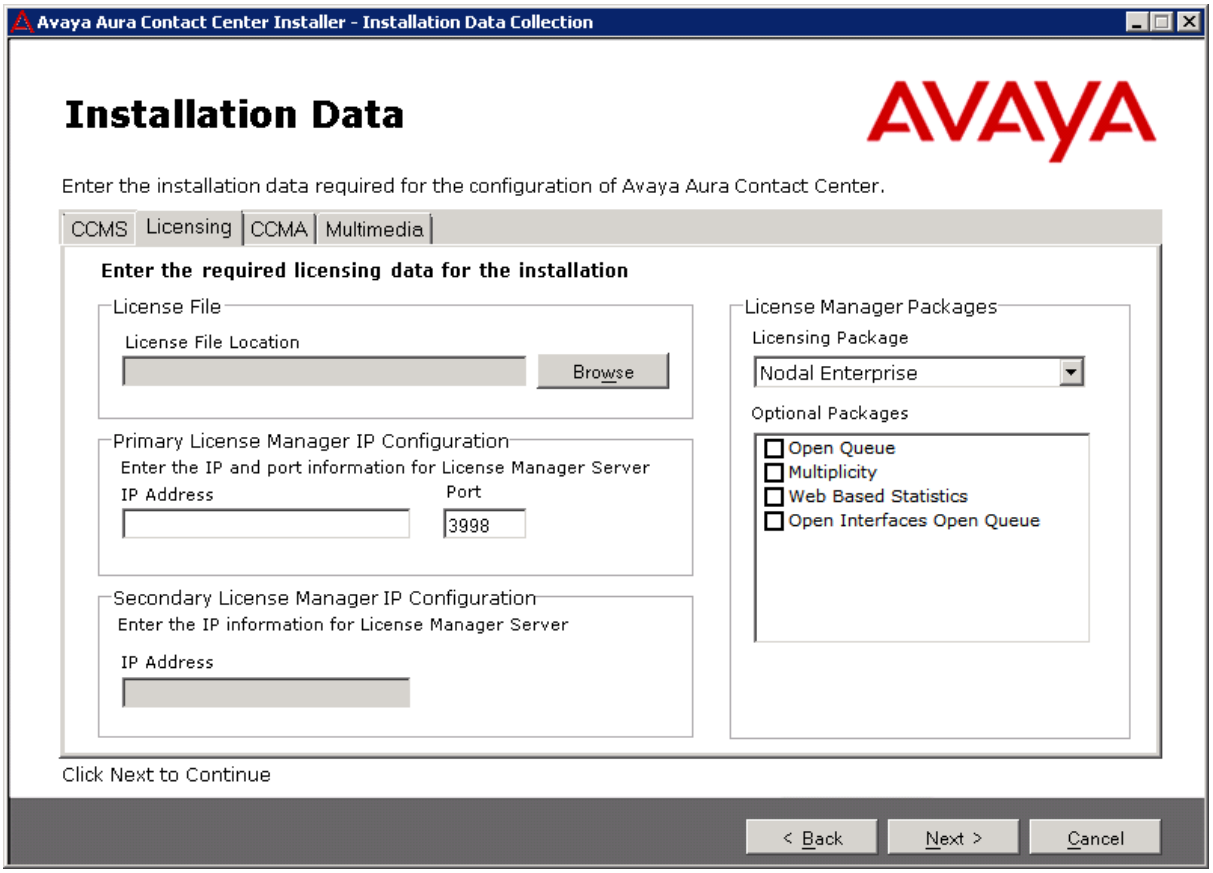
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

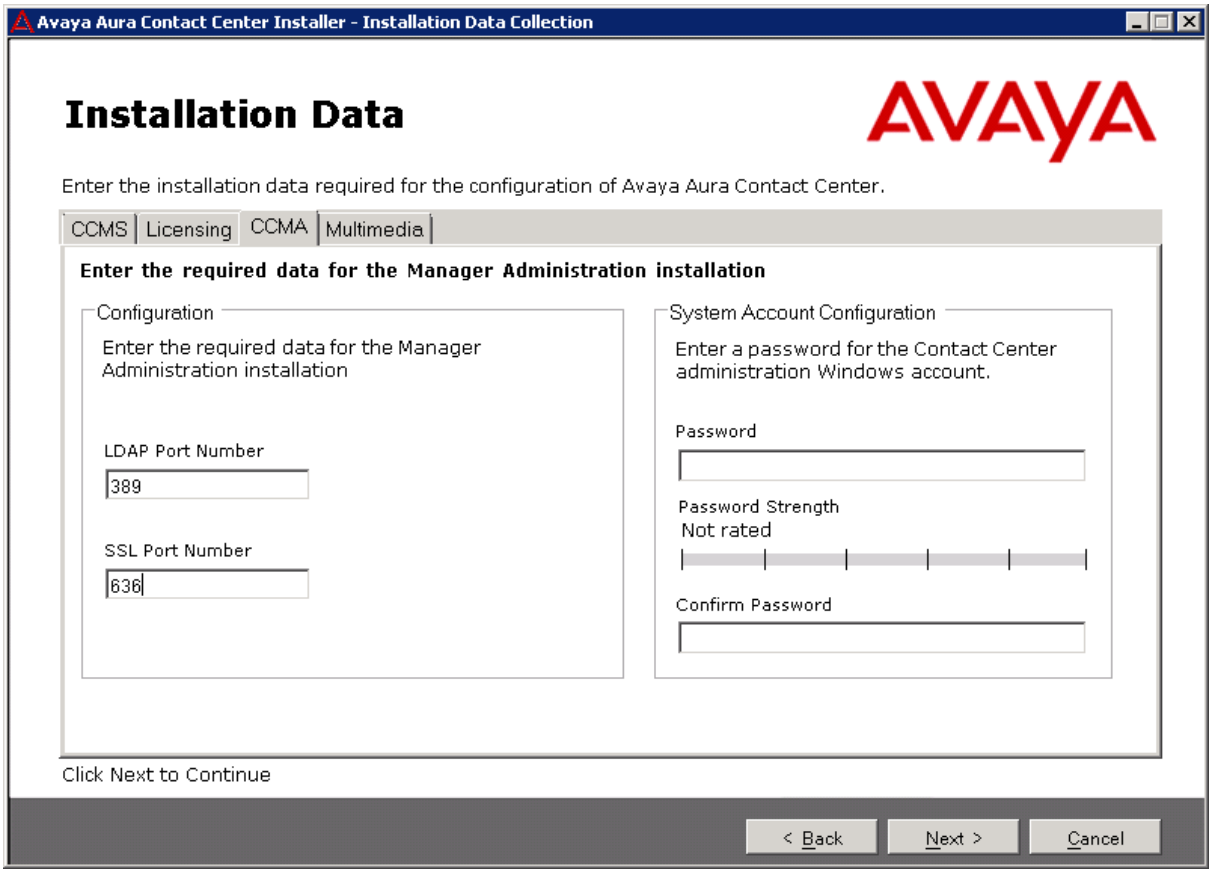
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



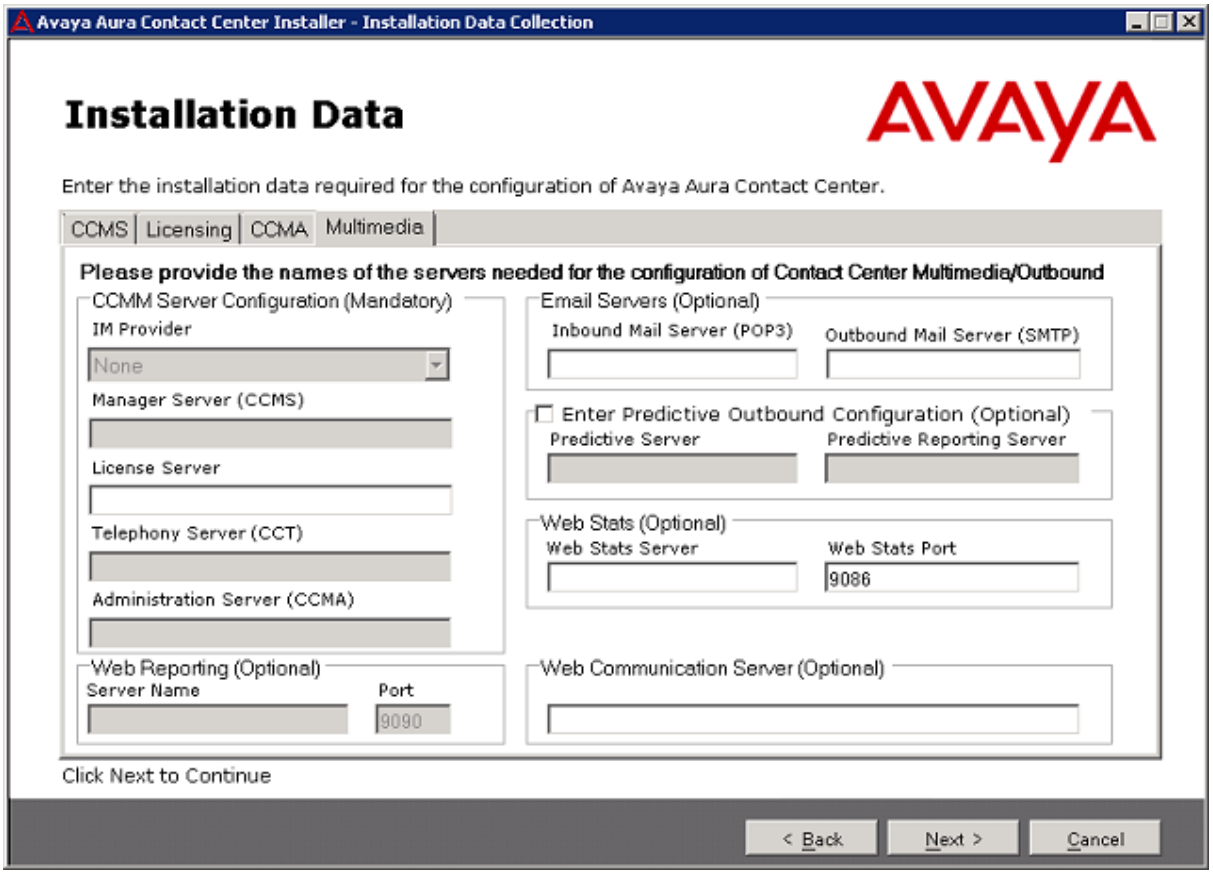
22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the standby License Manager. Each Multimedia Complement for Elite Server contains a License Manager server. Type the IP address of the standby Multimedia Complement for Elite Server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **CCMA** tab, and configure the CCMA details.



35. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
36. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
37. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
38. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



39. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
40. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
41. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
42. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
43. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
44. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
45. Click **Next**.
46. On the **Summary** window, review and verify the information.
47. Select **Install**.

48. After the installation is complete, click **Finish**.
49. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

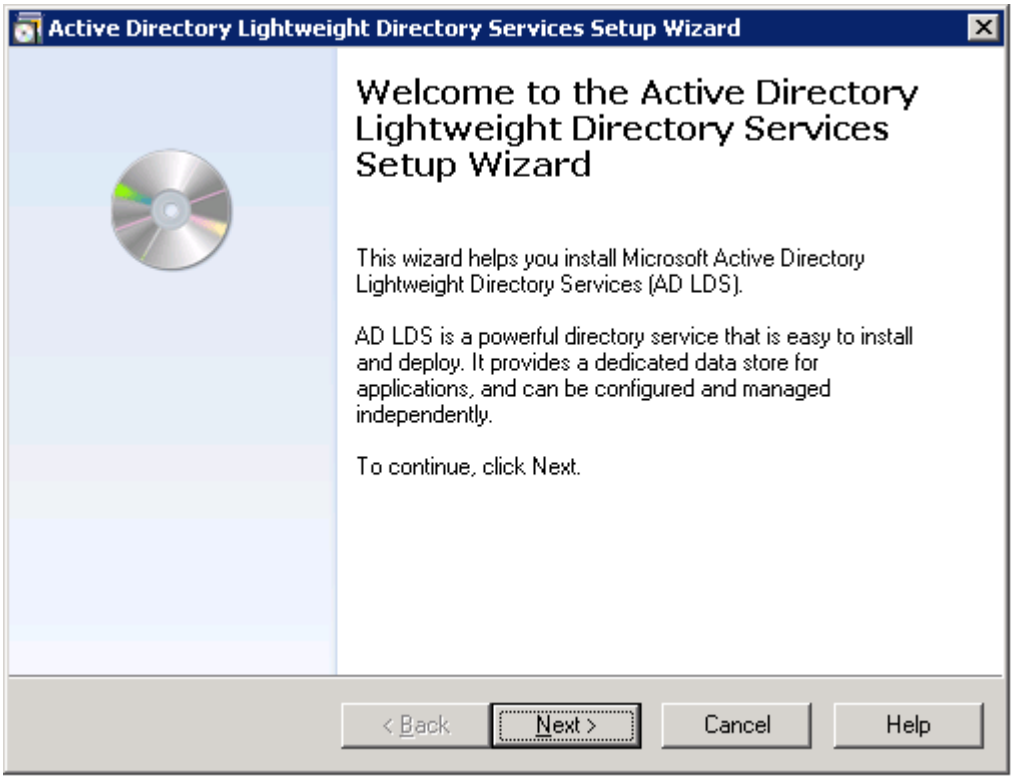
Read the Contact Center Release Notes for the most recent instructions.

Procedure

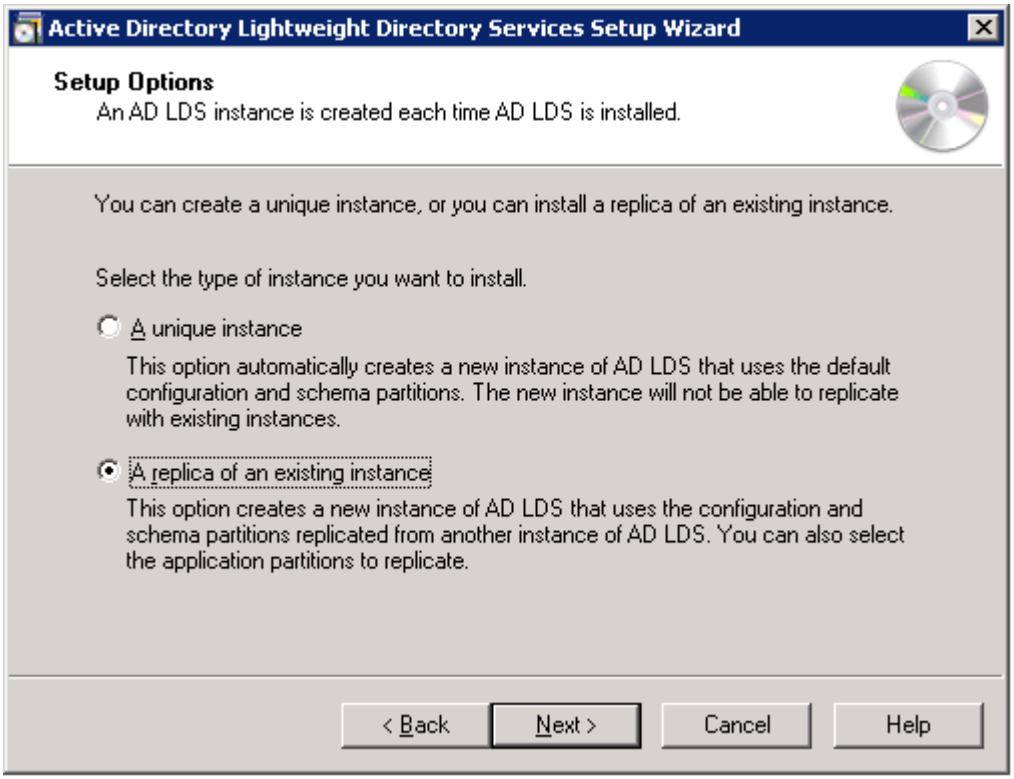
1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

   `D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\`
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

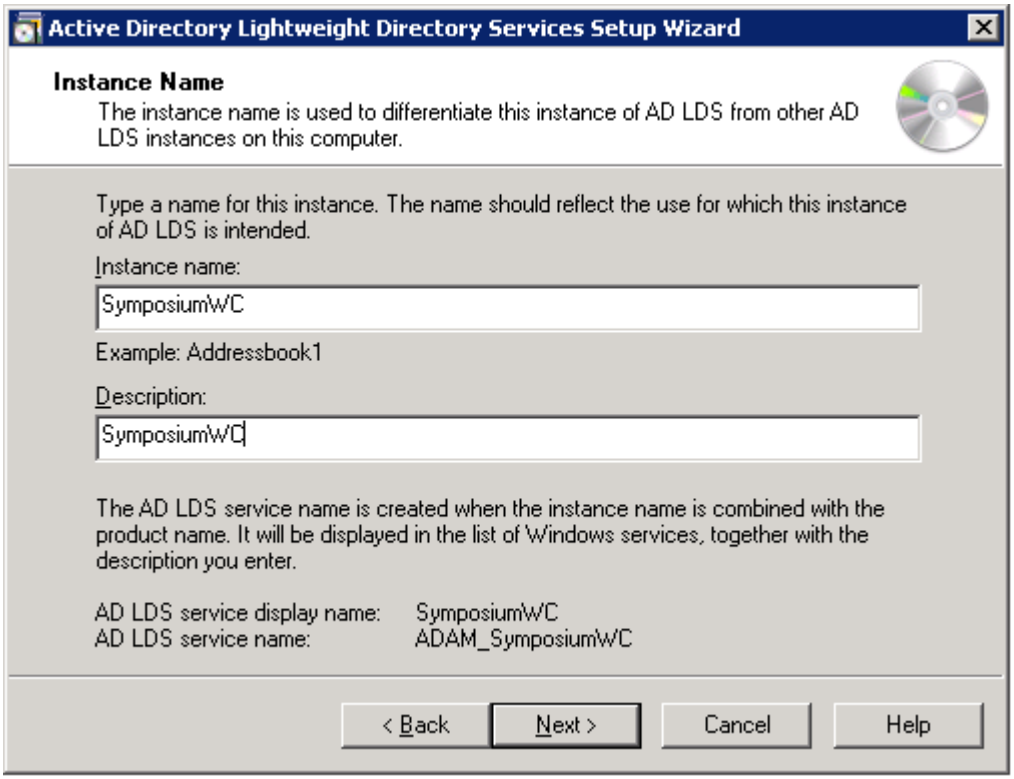
   `ConvertToStandbyCCMAServer.bat`
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



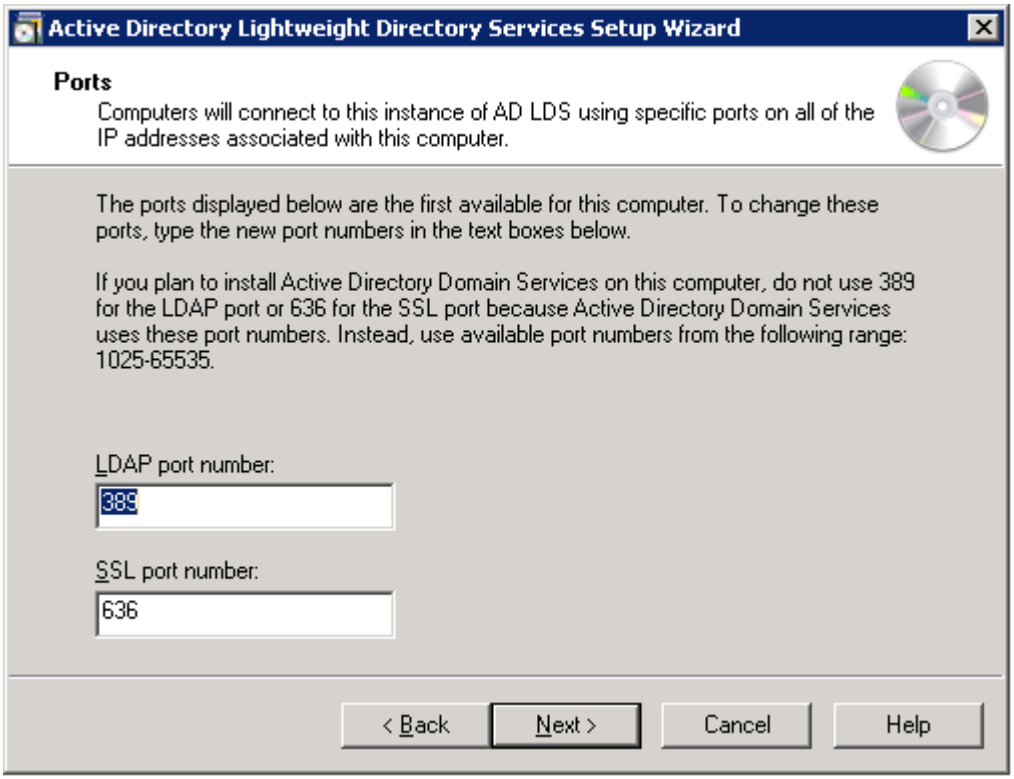
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

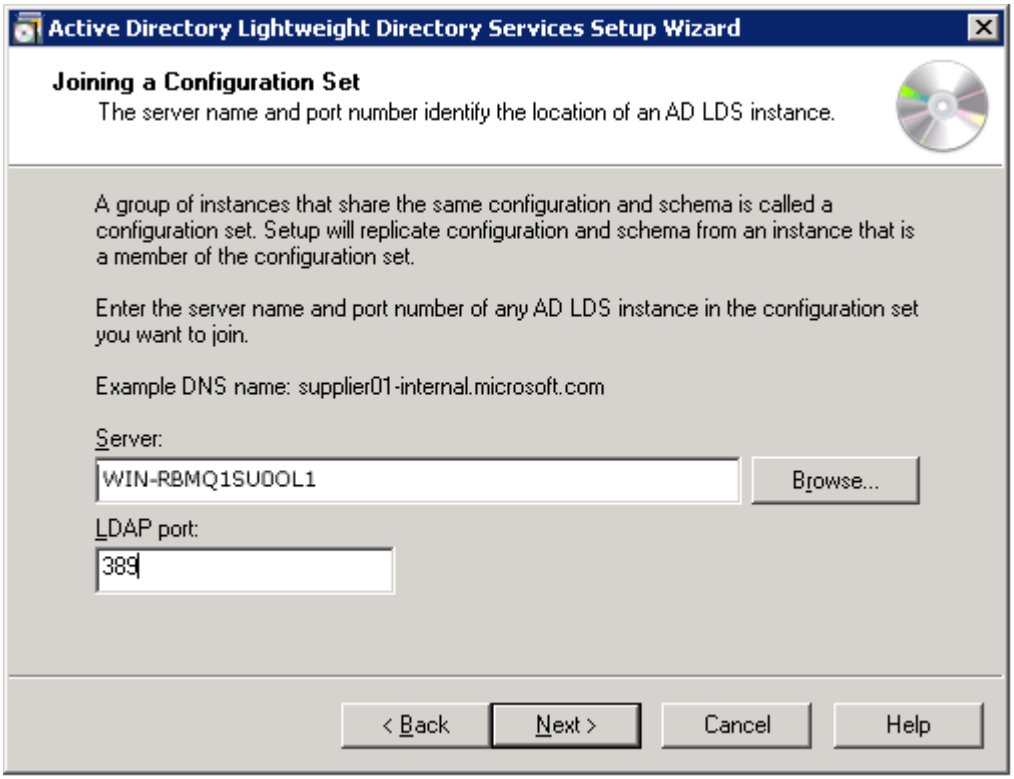


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



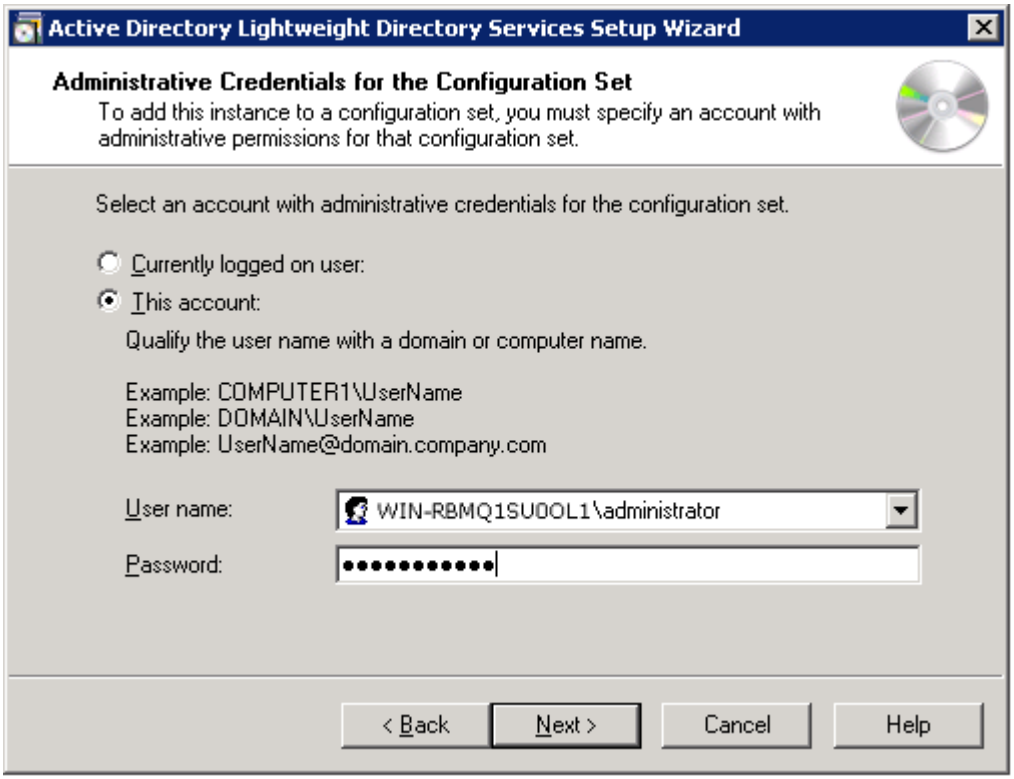
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

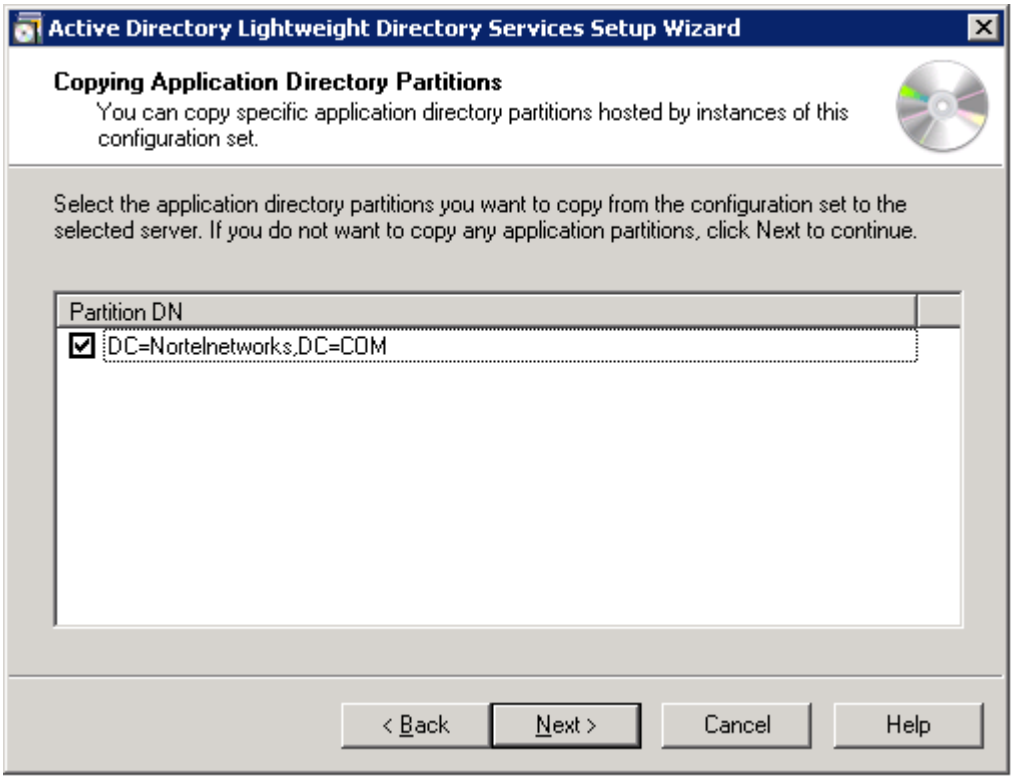


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

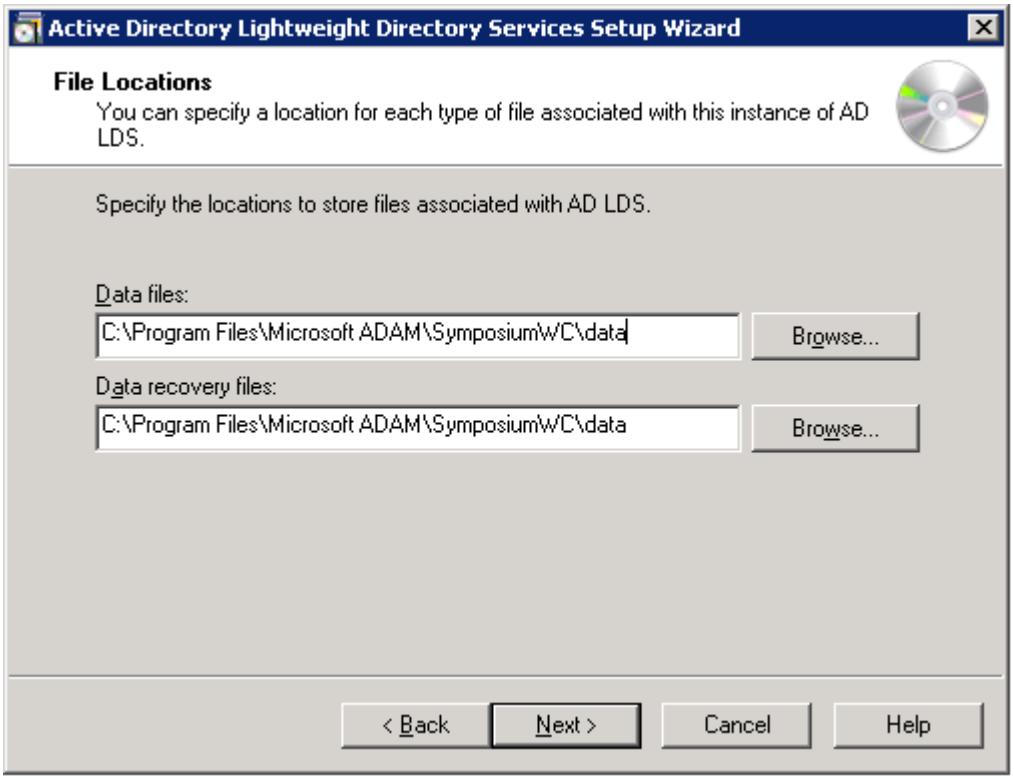
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

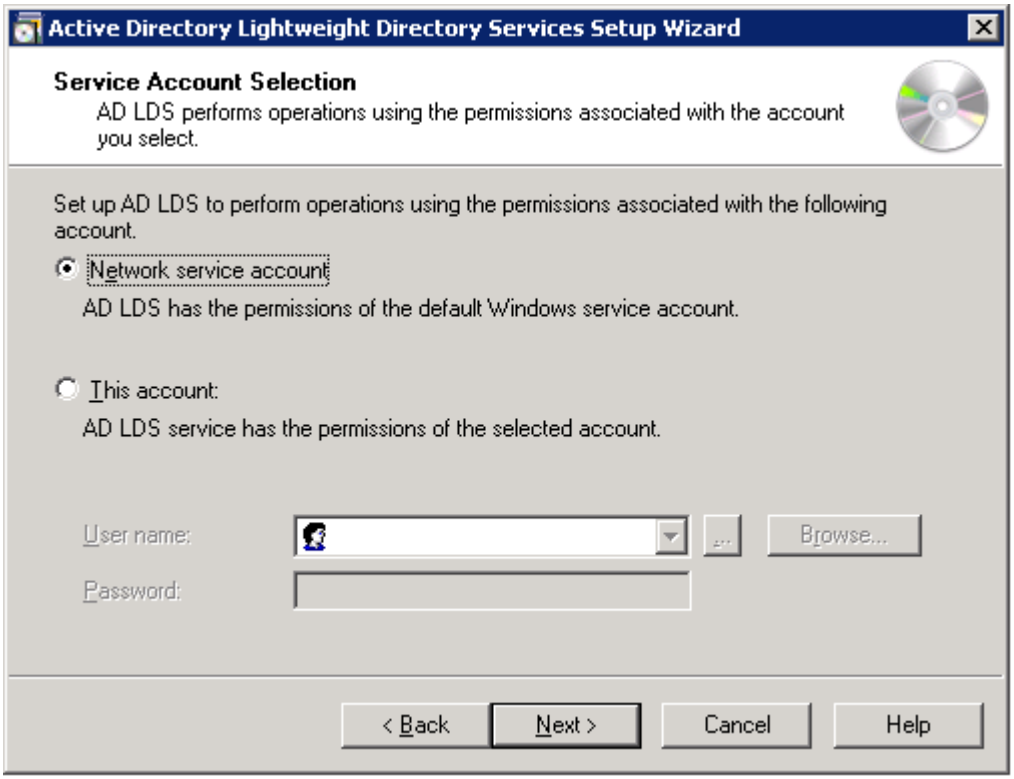


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

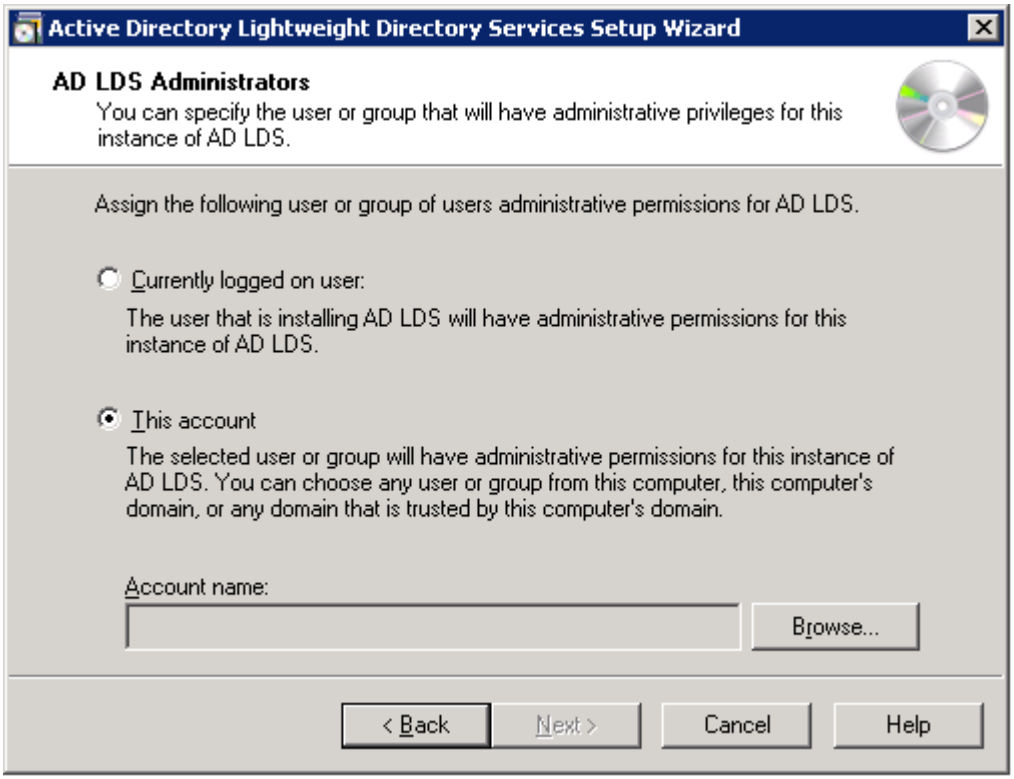


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

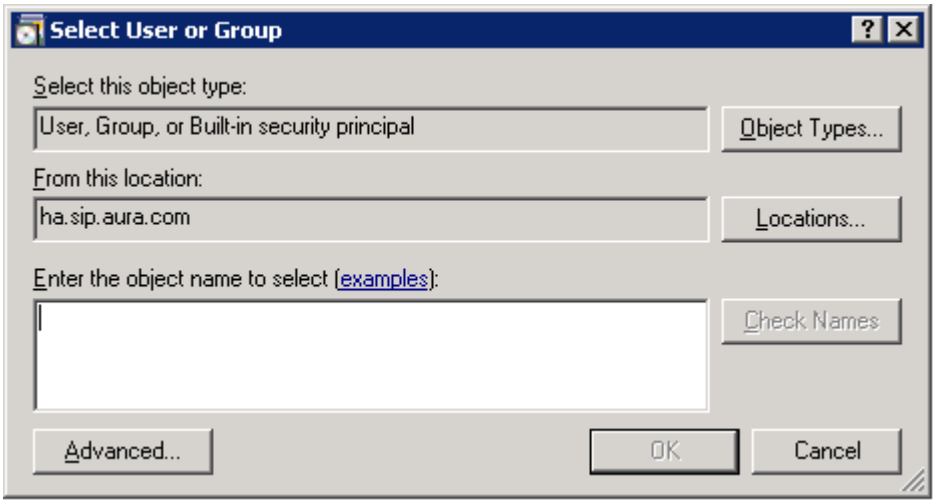


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

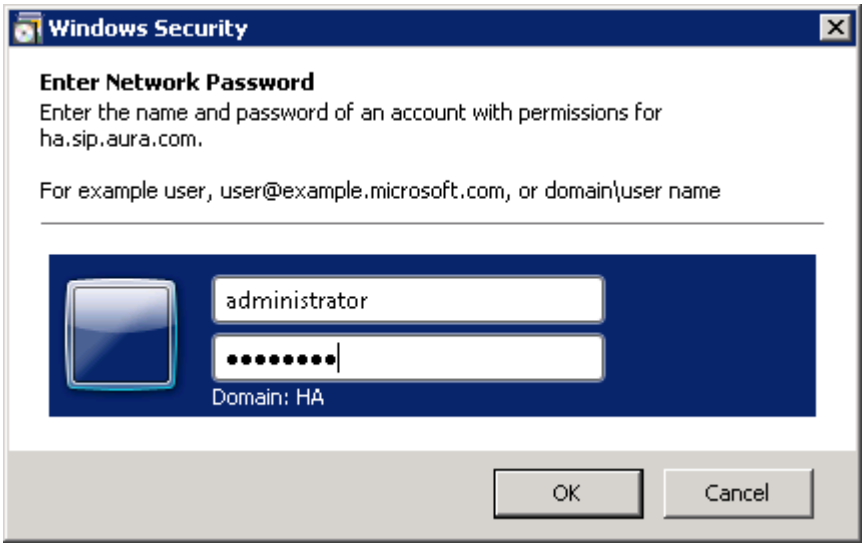


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

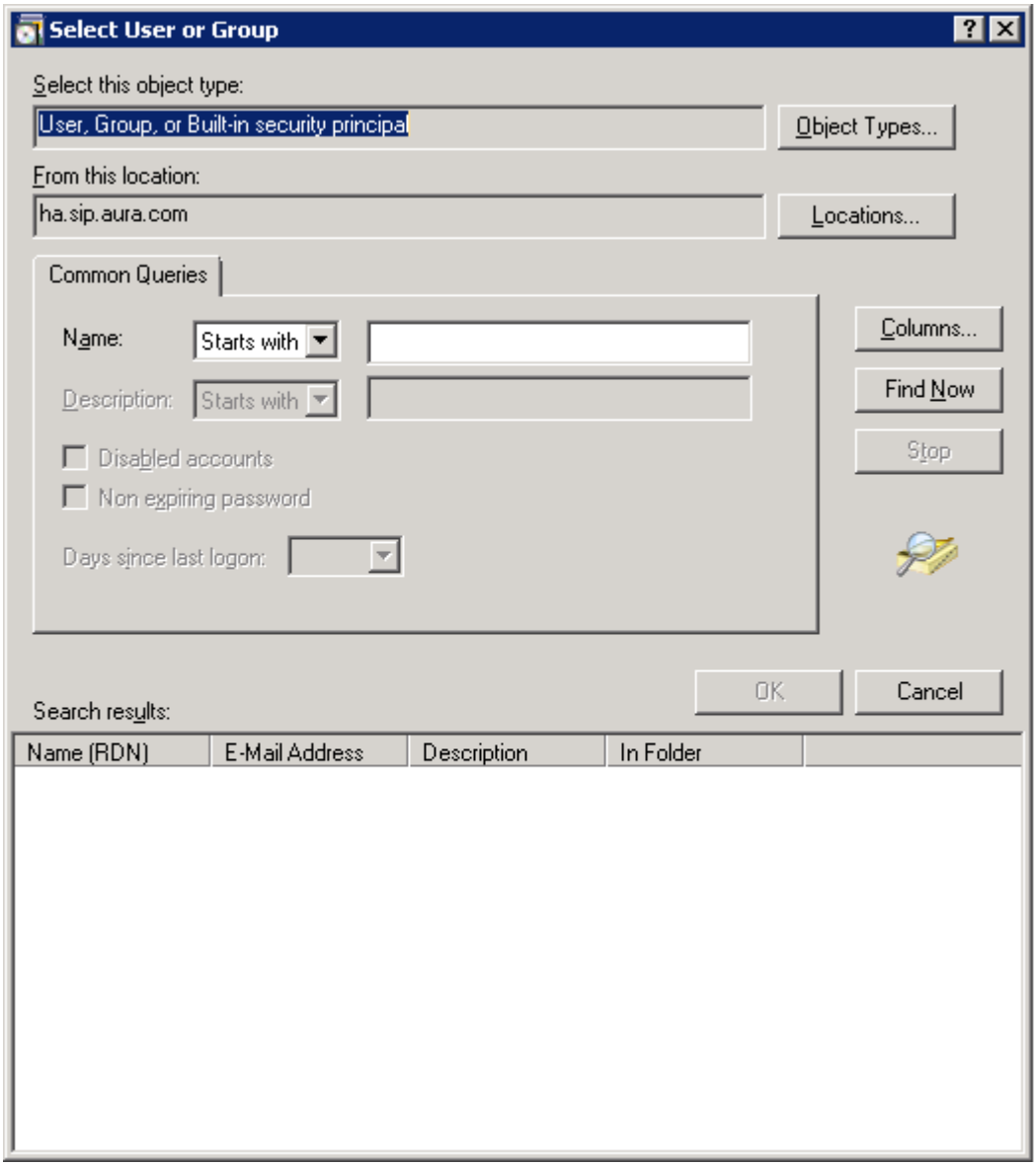


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



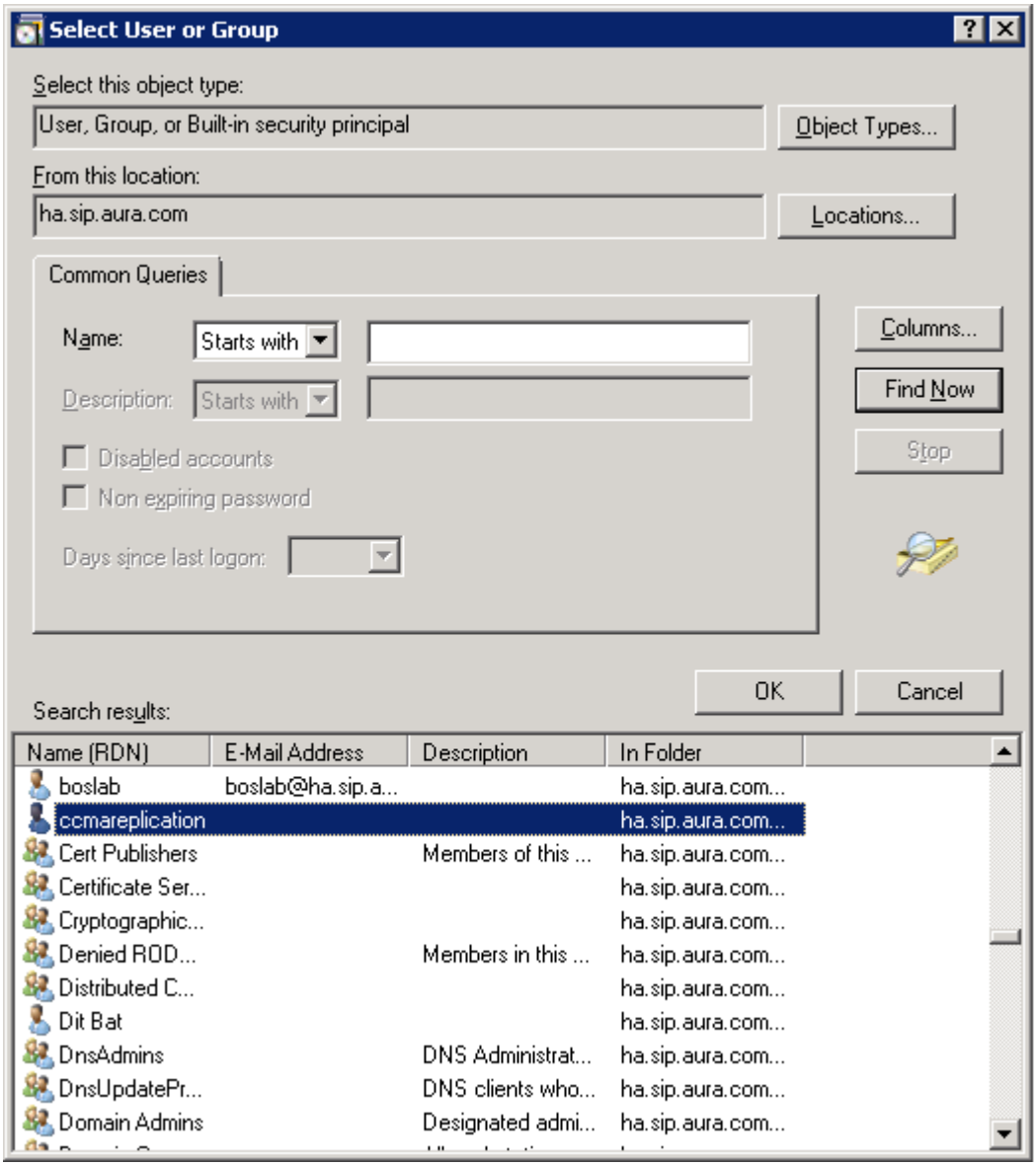
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



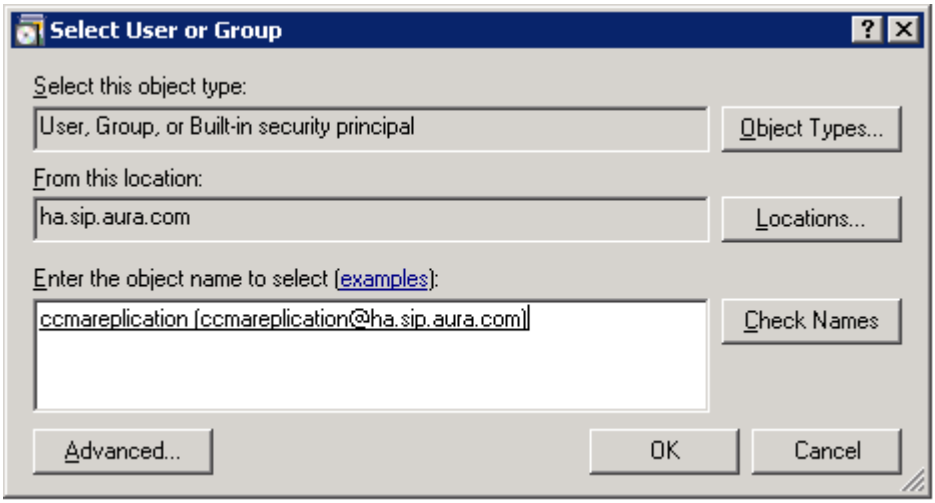
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

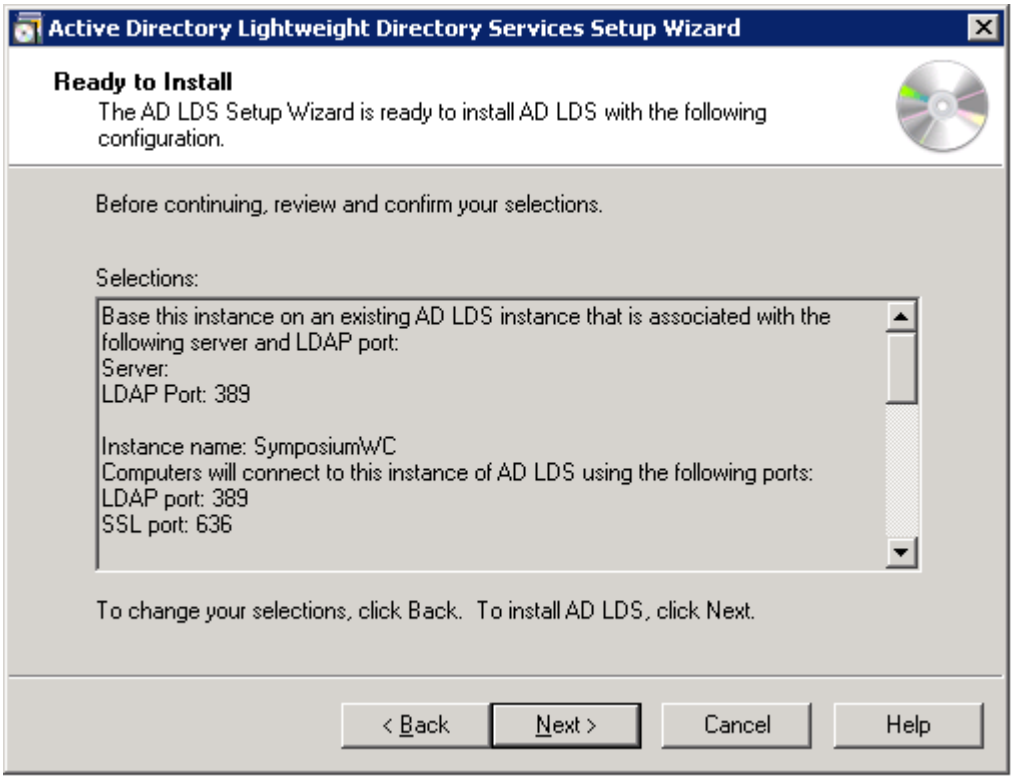


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Part 4: No Switch Configured - Multimedia only

Chapter 27: Avaya Aura® Contact Center multimedia only

Avaya Aura® Contact Center Release 6.4 supports a multimedia only contact center solution. To implement the Avaya Aura® Contact Center High Availability feature, your solution requires additional standby servers to provide resiliency and redundancy.

No Configured Switch Multimedia Only — Install this server to provide multimedia contact routing. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM).

Prerequisites for Contact Center installation workflow

Procedure

- Complete the *Avaya Aura® Contact Center Installation Checklist* (44400-310).
- Ensure all your server hardware meets the requirements described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Know the installation configuration you plan to use in your contact center. For more information see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Contact Center server types and software installation for multimedia only solutions

About this task

This work flow shows the sequence of tasks you perform to install one or more Contact Center servers to provide a multimedia solution.

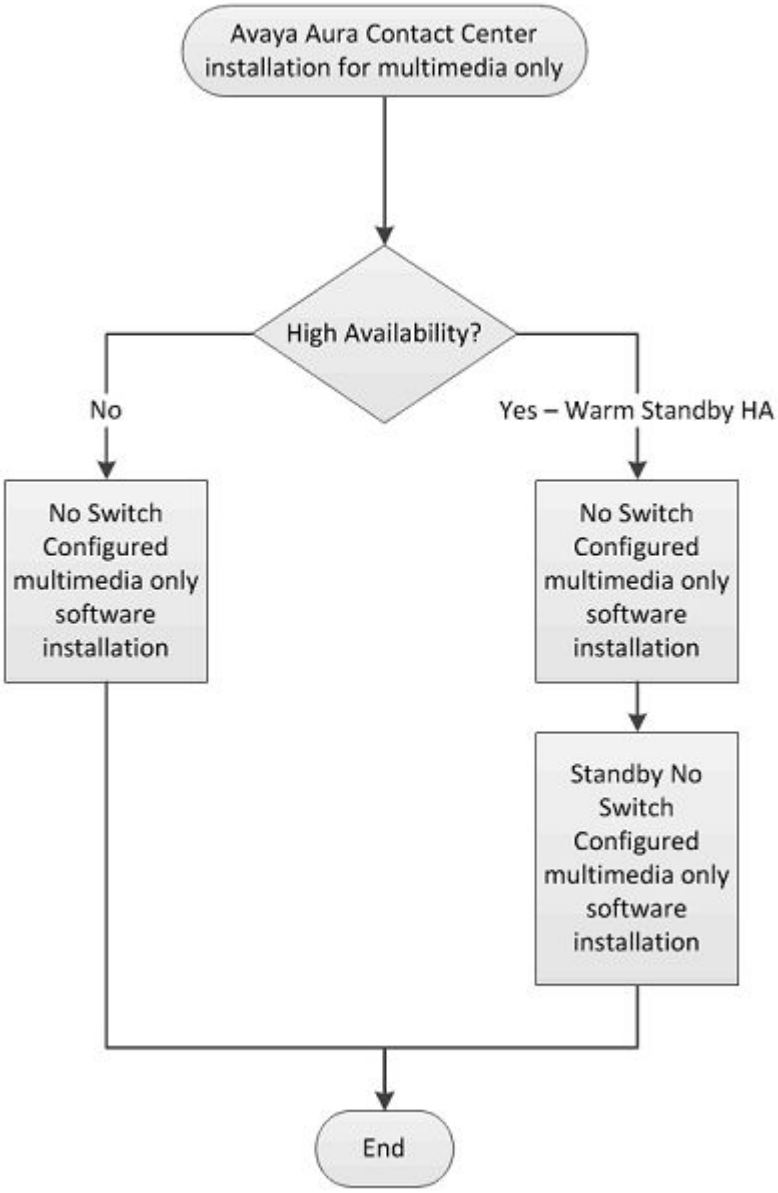


Figure 4: Contact Center software installation tasks for multimedia only solutions

For more information about installing Avaya Aura® Contact Center servers for a multimedia only solution, see the following:

- No Switch Configured Multimedia Only software installation on page 582
- Standby No Switch Configured multimedia only software installation on page 605

High Availability:

Avaya Media Server High Availability is not supported on the Windows operating system. If you plan to implement High Availability for the No Switch Configured Multimedia Only solution, you must uninstall Avaya Media Server from both the primary and the backup Multimedia Only servers. For more information about removing Avaya Media Server, see Removing the Avaya Media Server software on page 692.

Chapter 28: No Switch Configured Multimedia Only software installation

This chapter describes how to install a Multimedia Only contact center. A multimedia-only server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)
- Avaya Media Server Windows version

Install this server to add multimedia contact routing support. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM).

Install this server type when there is no existing voice-based call center, or when integration with a voice contact center is not required.

You must complete all the procedures in this section in sequential order.

High Availability note

Avaya Media Server High Availability is not supported on the Windows operating system. Avaya Media Server High Availability is supported only on the Linux operating system. If you plan to implement High Availability for the No Switch Configured Multimedia Only solution, you must uninstall Avaya Media Server from both the primary and the backup Multimedia Only servers. For more information about removing Avaya Media Server, see Removing the Avaya Media Server software on page 692.

VMware note

This server type includes the Windows version of Avaya Media Server. This server type does not support VMware.

Multimedia only software installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.
16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.
17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact*

Name	Description
	Center Fundamentals and Planning (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.

2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.

10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.

2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.

6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.

12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the Multimedia only software

Before you begin

- Download the most recent Contact Center and Common Components patches to the server.

About this task

Install the No Switch Configured multimedia software and enable your contact center to route contacts to the agents that can handle the contact with the correct skills.

Note:

Installing Contact Center software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

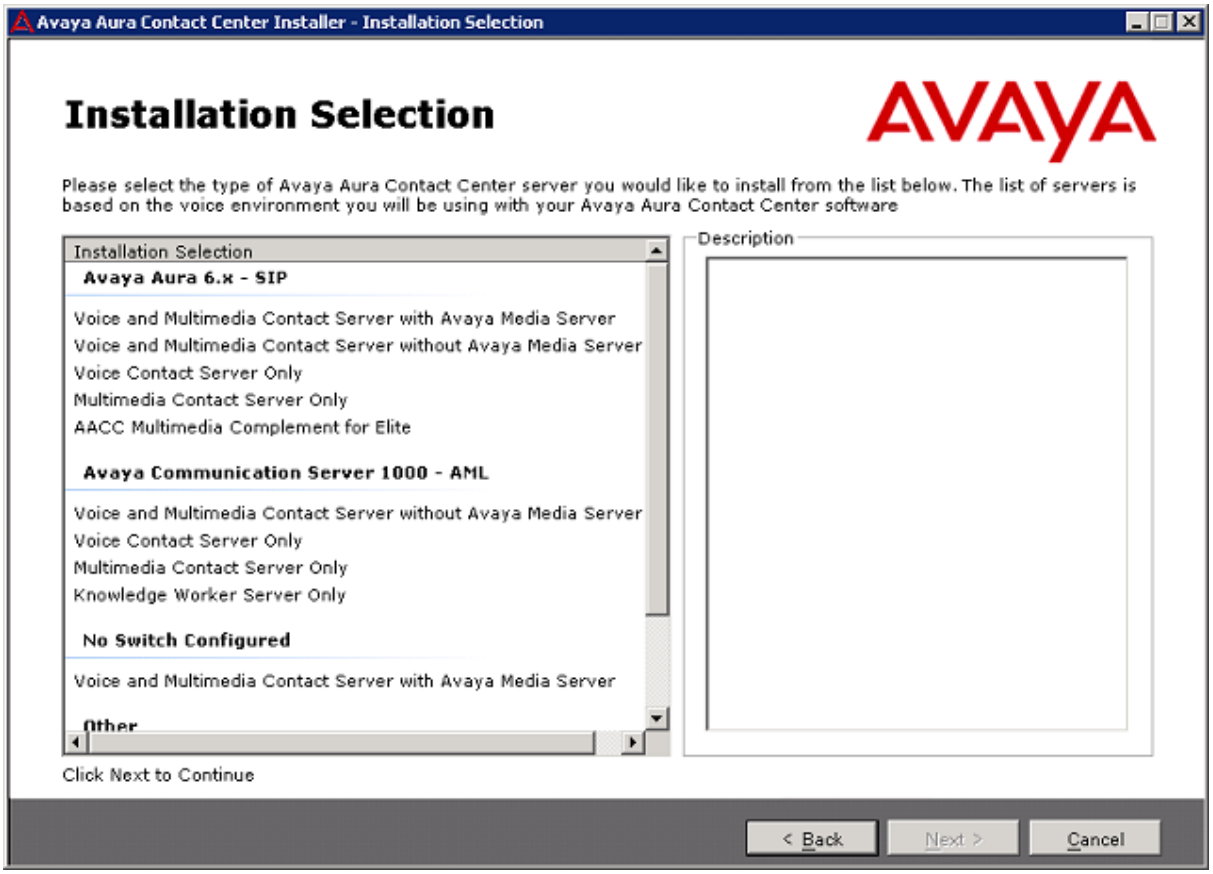
Note:

Read the Contact Center Release Notes for the most recent instructions.

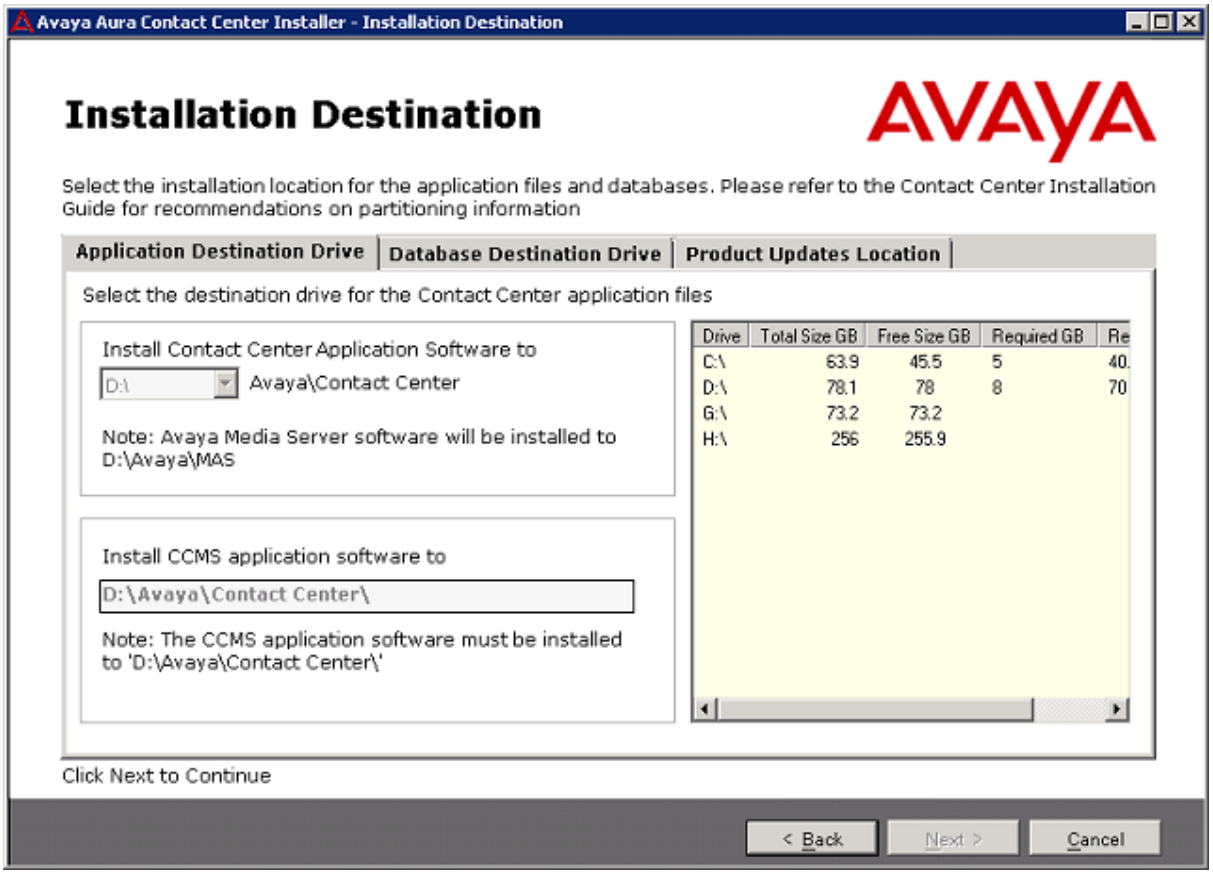
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

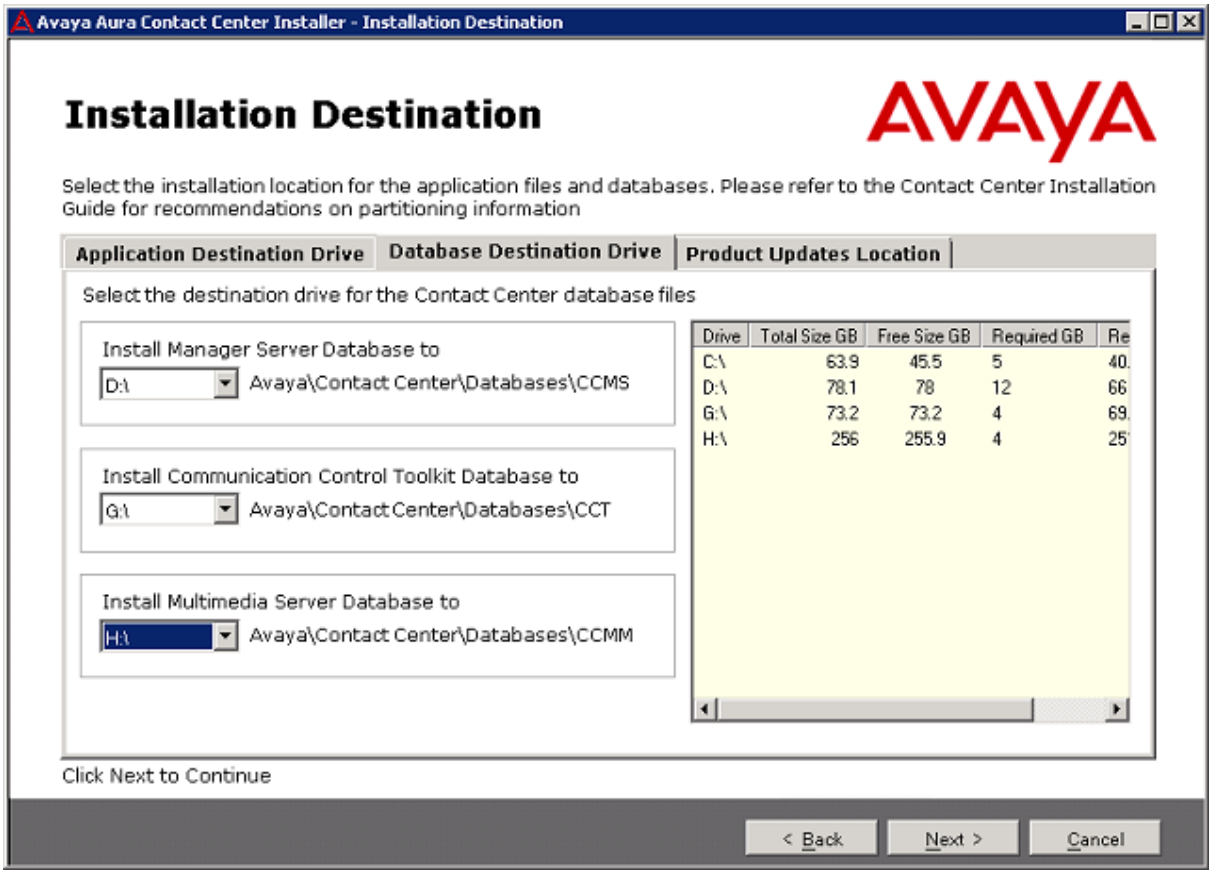
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



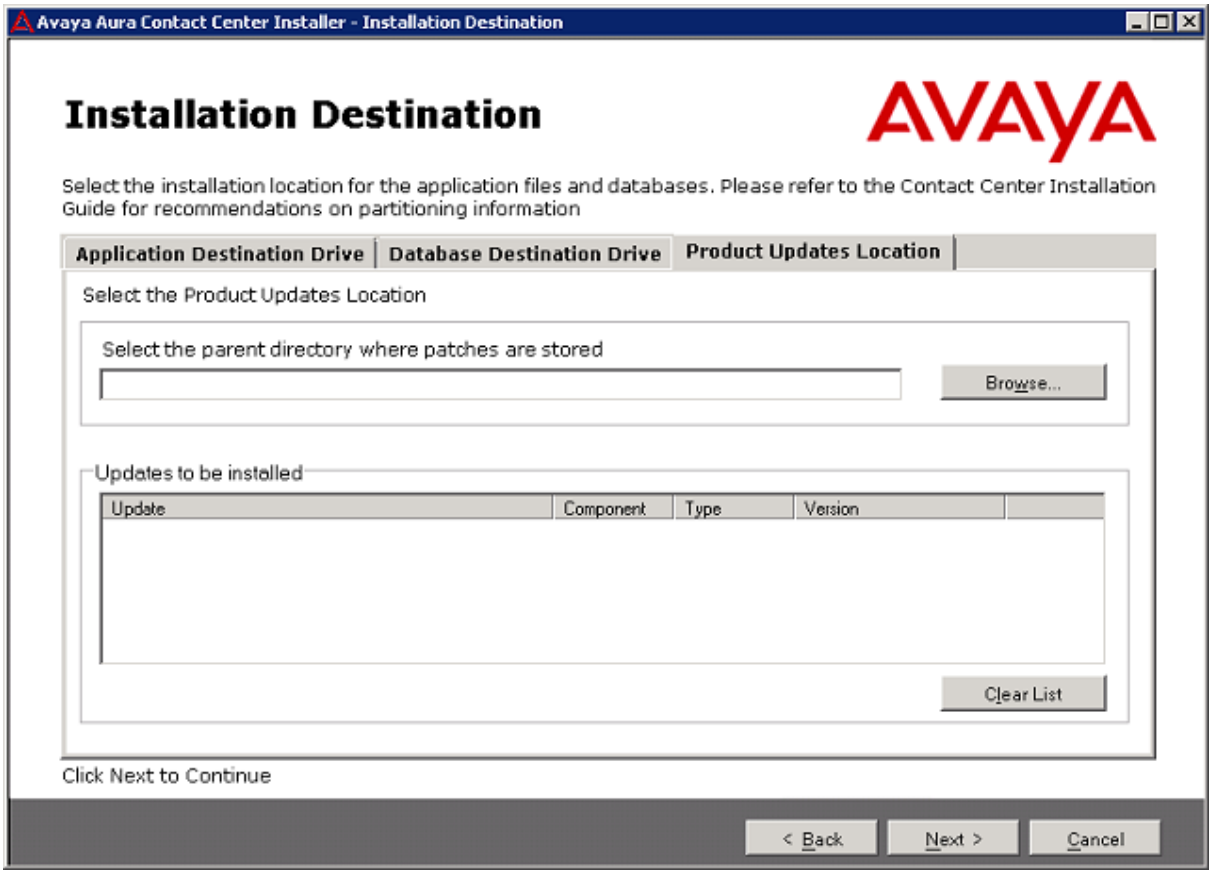
8. On the **Installation Selection** window, under **No Switch Configured**, select **Voice and Multimedia Contact Sever with Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



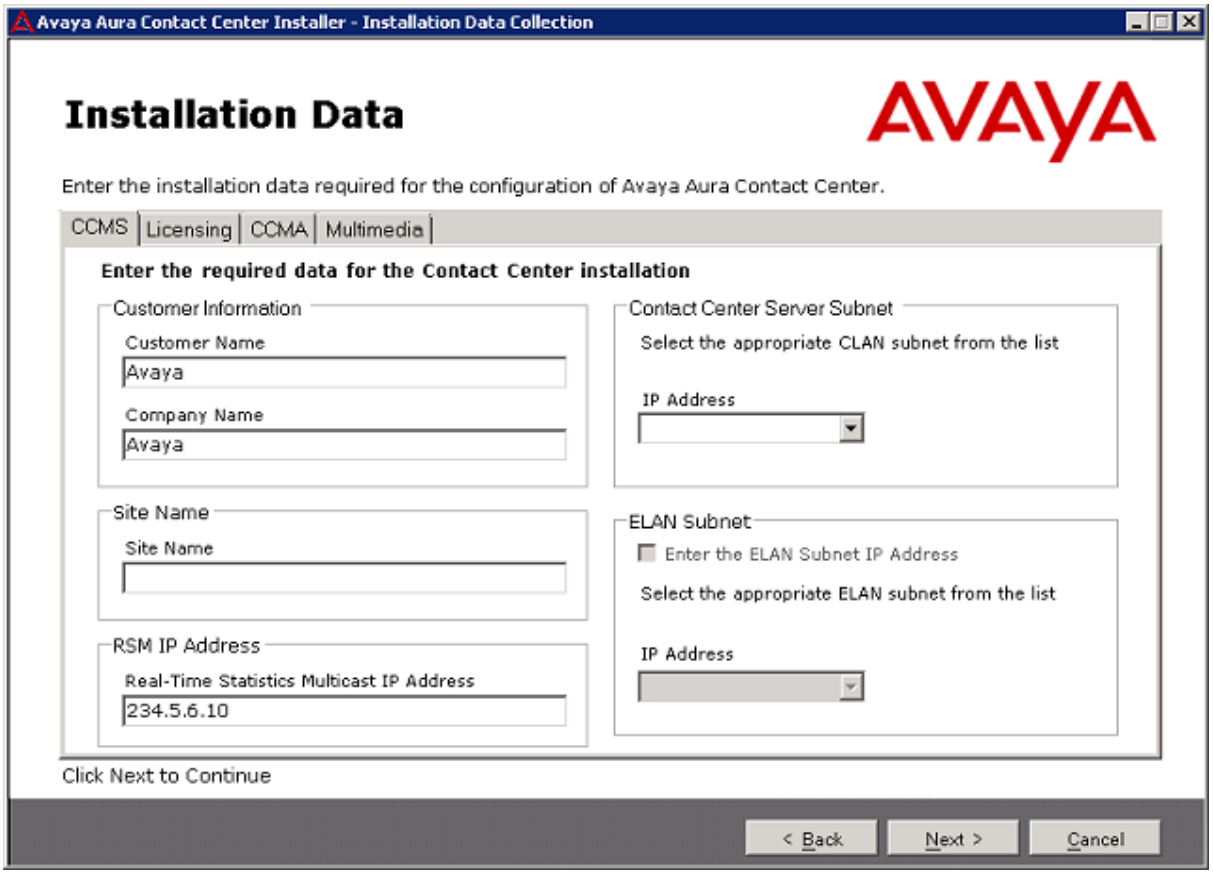
15. Click the **Product Updates Location** tab.



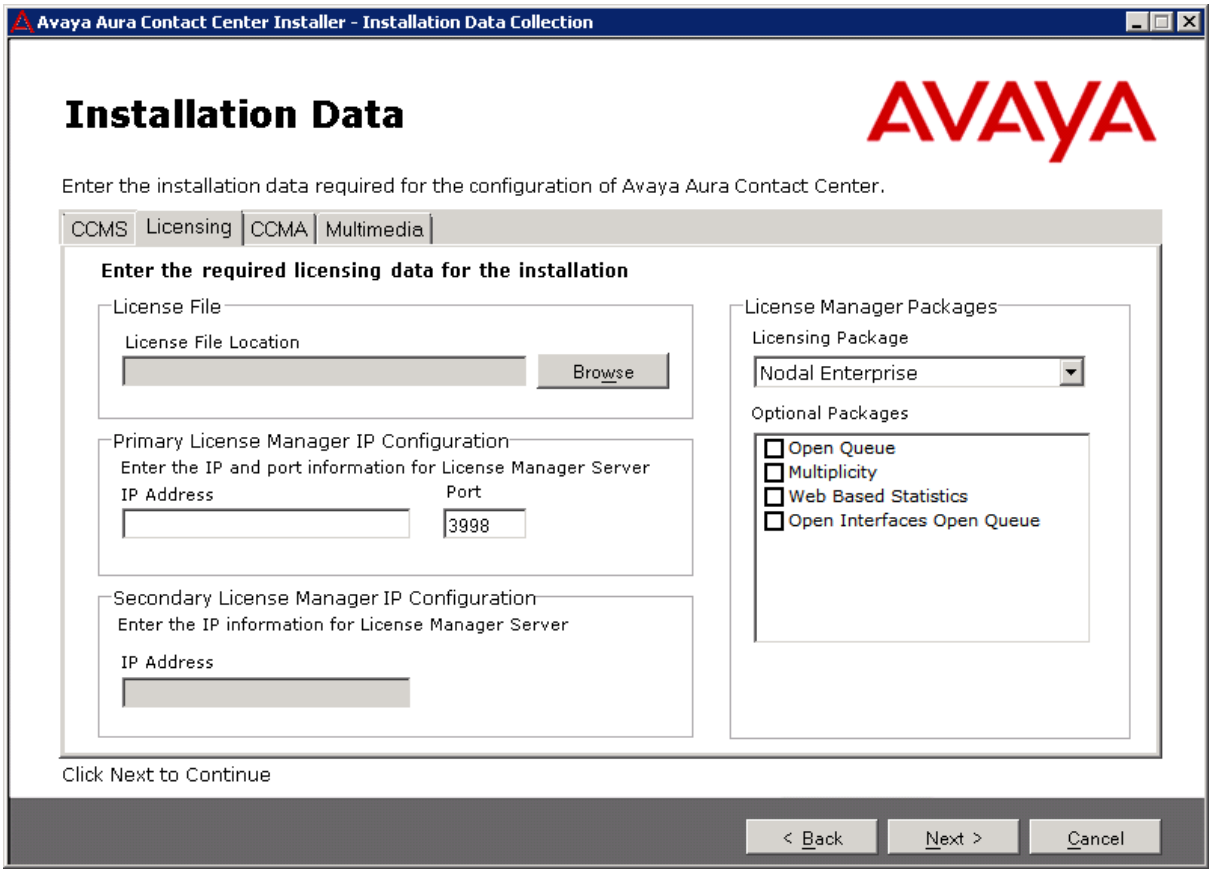
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

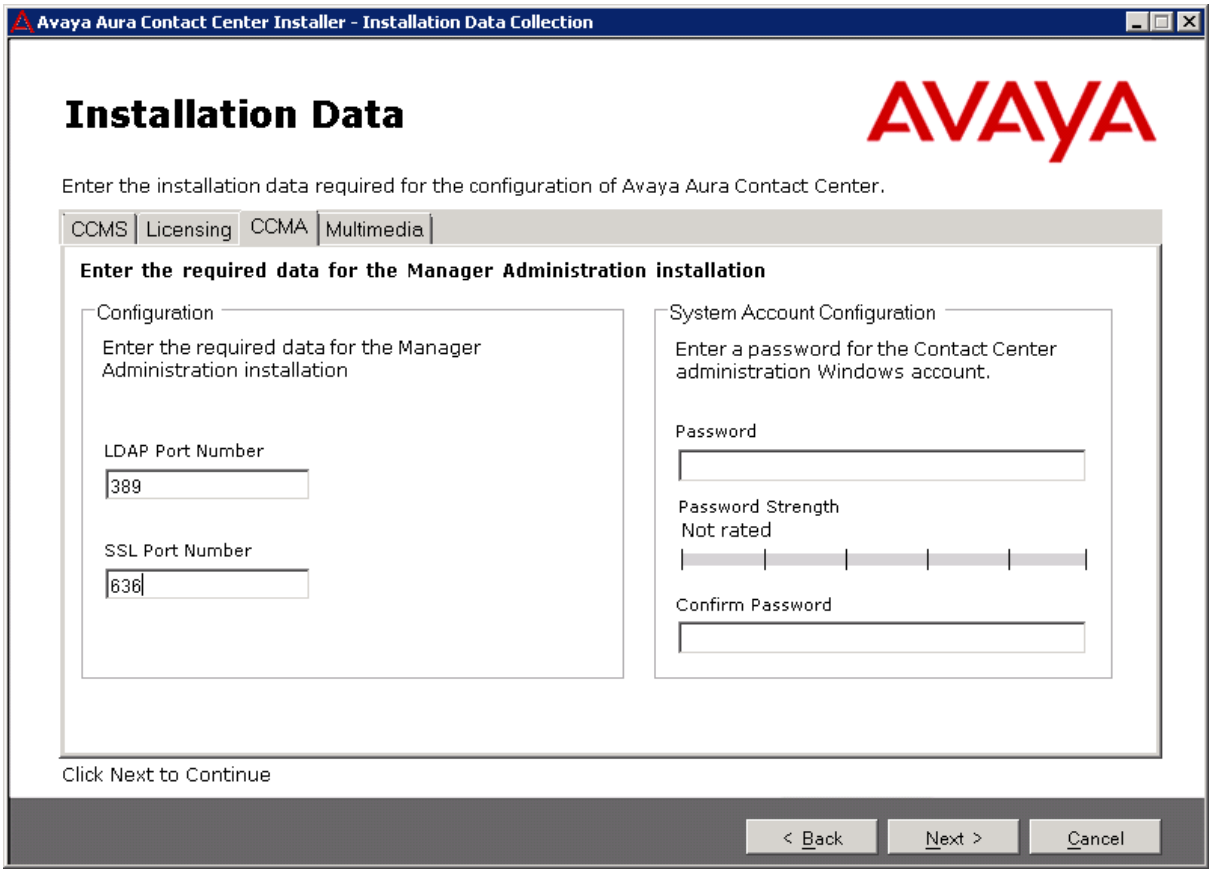
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



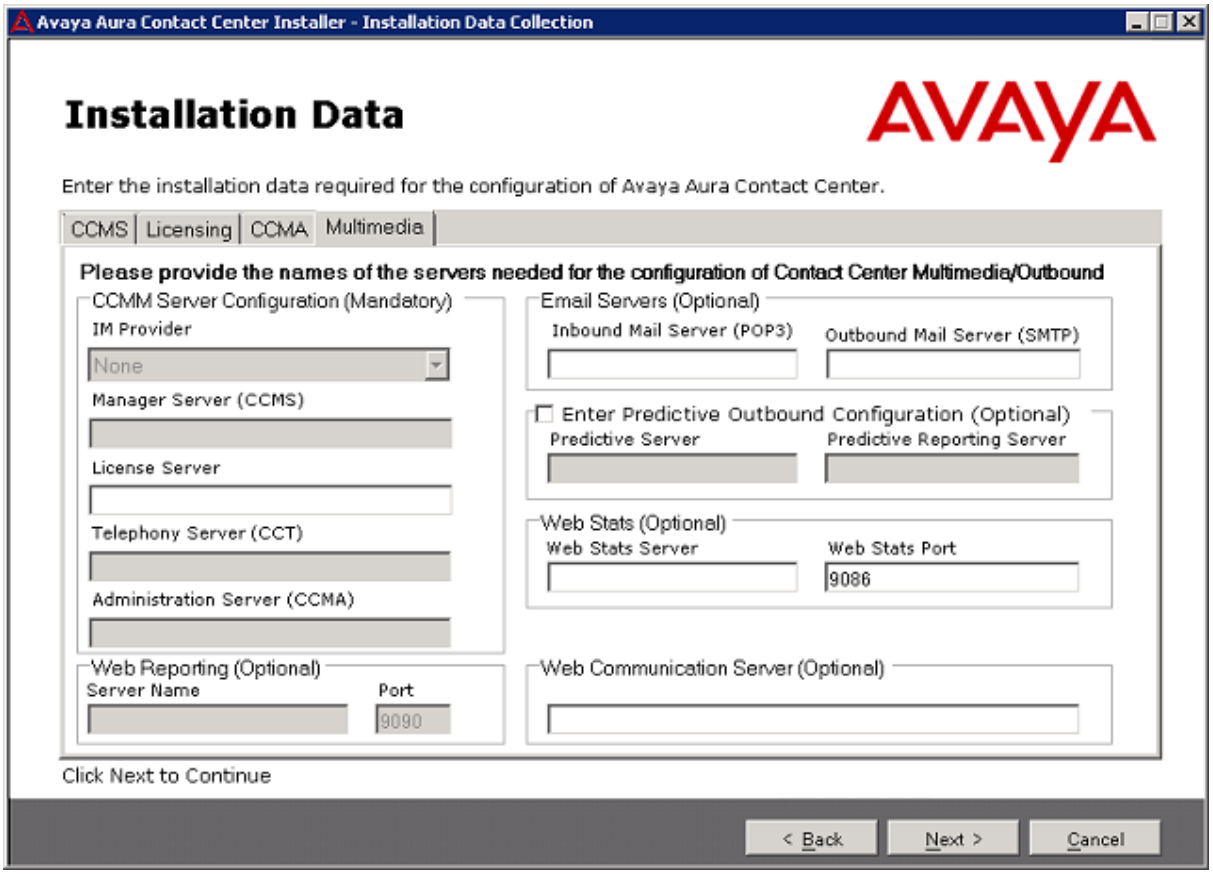
22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center Manager Server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. This server contains a License Manager server. This installed License Manager server is the default primary License Manager.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **CCMA** tab, and configure the CCMA details.



35. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
36. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
37. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
38. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



39. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
40. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
41. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
42. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
43. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
44. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
45. Click **Next**.
46. On the **Summary** window, review and verify the information.
47. Click **Install**.

48. After the installation is complete, click **Finish**.
49. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Installing the external Web communication server software

Before you begin

- Install Contact Center Multimedia software.

About this task

If you use Web communications in your contact center, you can use the Sample Customer Interface (CI) Web site implementation to help you develop pages for your corporate Web site. The Web services architecture is a platform-independent interface that customers can access from both Microsoft .NET and Java applications. Customer Web sites or third-party applications use the open interface for integration with the Contact Center Multimedia system.

The Customer Interface Web services provide a range of methods to perform the following functions:

- Register new customers in the Contact Center Multimedia database

- Log on or log off existing customers
- Update customer logon credentials
- Create customer contacts
- Update customer details
- Read customer information
- Review a customer contact history
- Request immediate or scheduled callback requests
- Read a contact
- Create and maintain a Web communications chat session

To integrate Web Communications with the Contact Center Multimedia system, download the Avaya Aura® Contact Center Web Communications SDK package and Reference Implementation from www.avaya.com/devconnect. The Web Communications Reference Implementation contains information about customizing the Web communication application to your solution.

Important:

Do not install the Web Communications Reference Implementation on an Avaya Aura® Contact Center server. Install the Web Communications Reference Implementation on your own server in the contact center solution.

Procedure

1. Locate and download the Web Communications Reference Implementation software from www.avaya.com/devconnect.
2. Copy the Web Communications Reference Implementation software to the external Web server.
3. Follow the Reference Implementation instructions to install and commission the Web Communications server.

Adding the domain AD-LDS replication account to the primary server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the primary Contact Center server.

Important:

If you are using High Availability, and if this server is to be the primary active server, perform this procedure. If you are not implementing High Availability, skip this procedure. Do not perform this procedure on the standby server or on the Remote Geographic Node server.

Ask your Network or System Administrator to create a domain account that Contact Center can use as the AD-LDS replication account. Add the AD-LDS replication account to the local Administrators

and replicator group on the primary Contact Center server. The primary and standby Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the primary Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.
4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used by CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used by CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Chapter 29: Standby No Switch Configured multimedia only software installation

This chapter describes how to install a standby multimedia only contact center. A multimedia-only server includes the following server software:

- Contact Center Manager Server (CCMS)
- Contact Center Manager Server Utility
- Contact Center License Manager
- Contact Center Manager Administration (CCMA)
- Communication Control Toolkit (CCT)
- Contact Center Multimedia (CCMM)

Install this server to provide multimedia contact routing functionality. This server supports contact routing for web communications, fax messages, SMS text messaging, and email messages, with additional support for peer-to-peer Instant Messaging (IM).

Avaya Media Server High Availability is not supported on the Windows operating system. If you plan to implement High Availability for the No Switch Configured Multimedia Only solution, you must uninstall Avaya Media Server from both the primary and the backup Multimedia Only servers. For more information about removing Avaya Media Server, see Removing the Avaya Media Server software on page 692.

You must complete all the procedures in this section in sequential order.

Multimedia only software installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file with a High Availability standby server license is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Standby multimedia only software installation prerequisites

Procedure

- Copy the most recent patches for the Contact Center software.
- Ensure that your new Contact Center license file is available.

Important:

For the system to correctly handle backup and restore SNMP events, you must install Windows SNMP Service before you install Contact Center server software.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

  Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.
- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

Important:

You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.
18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    This server time zone daylight saving setting must match the time zone daylight saving setting on the Avaya Media Server(s) in this SIP-enabled contact center solution.

20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode.

Name	Description
	Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don’t display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.

11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.
2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.

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

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.
2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.
6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Adding the domain AD-LDS replication account to the standby server administrators and replicator group

About this task

Add the AD-LDS replication account to the local Administrators and replicator group on the standby server. Perform this procedure before installing Contact Center software on the standby server.

If you are using a domain, you must request this AD-LDS replication account from your Network or System Administrator. The primary and standby replicating Contact Center servers must both be added to the same domain.

For this procedure, the name of the AD-LDS replication account is CCMAReplication. You can choose another name for the account.

Procedure

1. Log on to the standby Contact Center server.
2. Click **Start** > **Administrative Tools** > **Computer Management**.
3. In the **Computer Management** window, expand **Local Users and Groups**.

4. Click the **Groups** folder.
5. Double-click on the **Administrators** group.
6. Click **Add** > **Locations**.
7. On the **Windows Security** dialog box, type the domain logon details.
8. On the **Locations** dialog, select the domain to be used for CCMA replication.
9. Expand the domain folder to display domain users.
10. Click **Users**.
11. Click **OK**.
12. Click **Advanced** > **Find Now**, to display domain users.
13. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
14. Click **OK**.
15. Click **OK** > **Apply** > **OK**.
16. Click the **Groups** folder.
17. Double-click on the **Replicator** group.
18. Click **Add** > **Locations**.
19. On the **Windows Security** dialog box, type the domain logon details.
20. On the **Locations** dialog, select the domain to be used for CCMA replication.
21. Expand the domain folder to display domain users.
22. Click **Users**.
23. Click **OK**.
24. Click **Advanced** > **Find Now**, to display domain users.
25. From the list of users select the CCMA replication domain user account, for example select the myDomain\CCMAReplication user account.
26. Click **OK**.
27. Click **OK** > **Apply** > **OK**.

Updating server for a network location installation

About this task

Configure the server .NET security settings to prepare the server for a remote network installation. Avaya Aura® Contact Center supports network installation. You can insert the Avaya Aura® Contact Center DVD into a computer on your network. You then add this computer as a trusted site and network location on the new server. You can access this DVD from the network location, and with

some .NET security updates, use the remote DVD to install Avaya Aura® Contact Center software on the new server.

Note:

Skip this procedure if you plan to use the Avaya Aura® Contact Center DVD from the DVD drive of the server.

Procedure

1. Insert the Avaya Aura® Contact Center DVD into a computer on the contact center network.
2. Log on to the new server you are preparing for Contact Center.
3. Choose **Start** > **Control Panel** > **Network and Internet** > **Internet Options**.
4. In the **Security** tab, click **Trusted sites**.
5. In the **Trusted sites** section, click **Sites**.
6. In the **Add this Web site to the zone** box, type the <IP address> of the remote computer with the Avaya Aura® Contact Center DVD.
7. Click **Add**.
8. Click **OK**.
9. Close the Internet Options box.
10. From the new server, navigate to the network location with the DVD.
11. Access the remote DVD and in the root folder of the DVD, double-click **NetworkSetup.bat**.

    .NetFramework installs and the .NetSecurity settings are modified.
12. If the Avaya Aura® Contact Center installation does not automatically start, in the root folder of the DVD double-click **Setup.exe**.
13. After Avaya Aura® Contact Center installs, navigate to your network location and double-click **NetworkSetupReset.bat**.

Installing the standby Multimedia only software

Before you begin

- Download the most recent Contact Center and Common Components patches to the server.
- The primary active Multimedia only server must already be installed and configured.
- The primary active Multimedia only server must already be configured to support AD-LDS replication.

About this task

Install the standby No Switch Configured multimedia software and enable your contact center to route contacts to the agents that can handle the contact with the correct skills.

Note:

Installing Contact Center software installs Apache Tomcat Server. The default port number for Apache Tomcat is 8081. If you need to change the port number to avoid conflicts with third-party software, see your Apache Tomcat documentation.

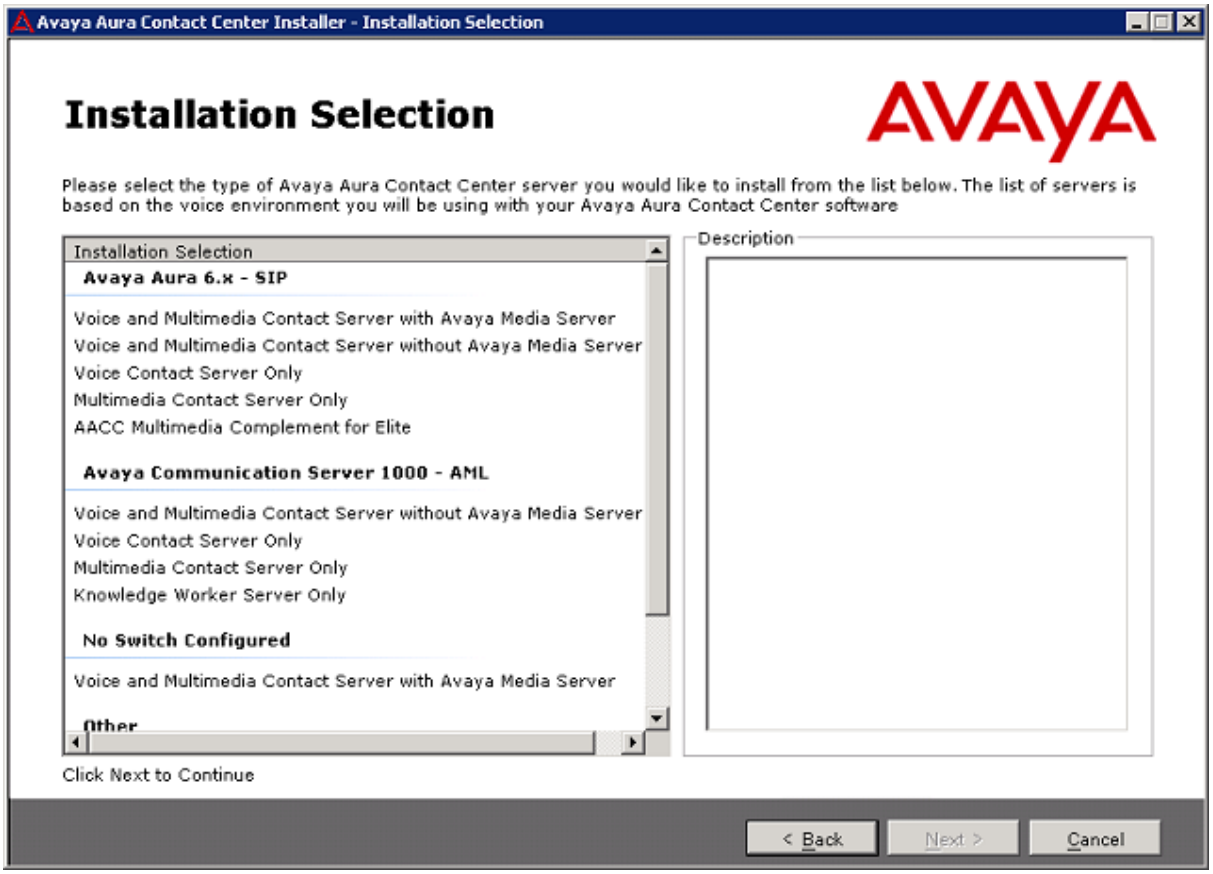
Note:

Read the Contact Center Release Notes for the most recent instructions.

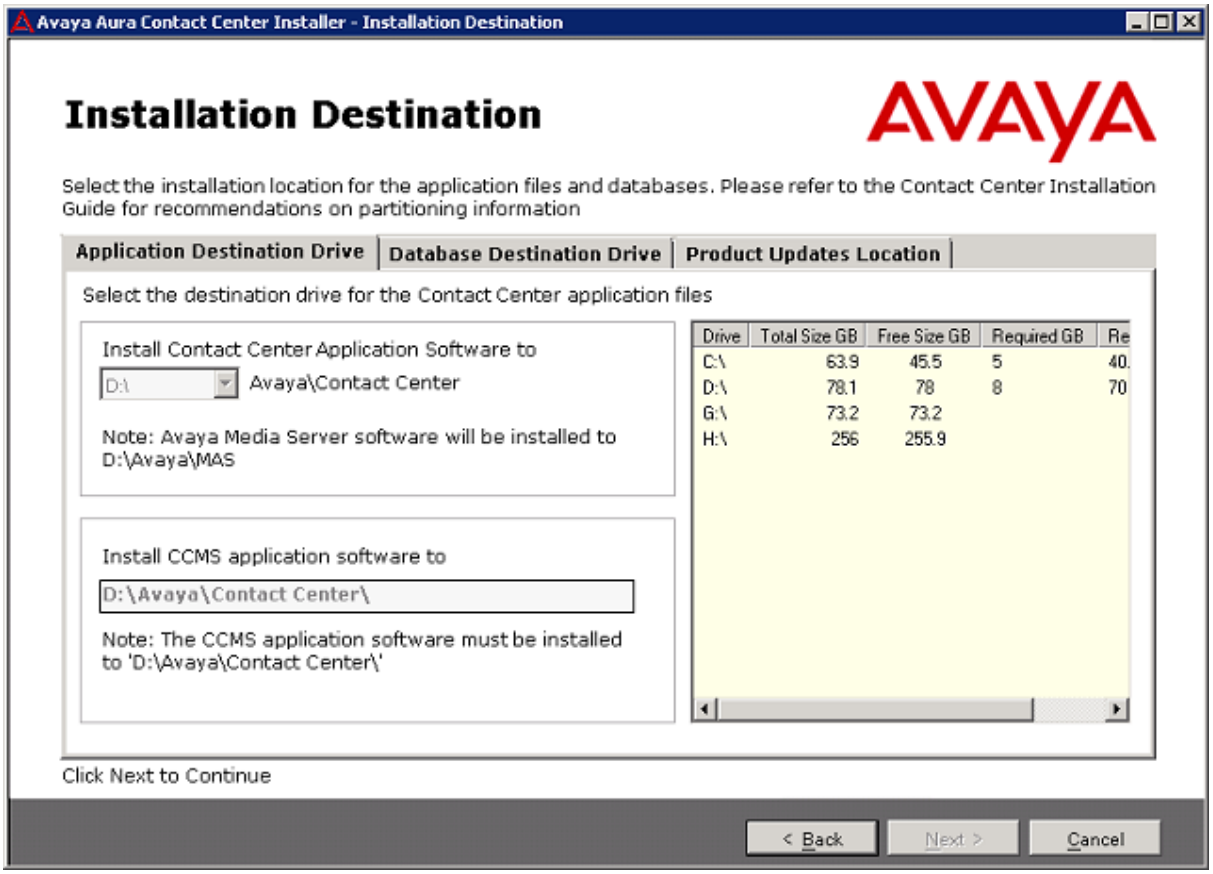
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

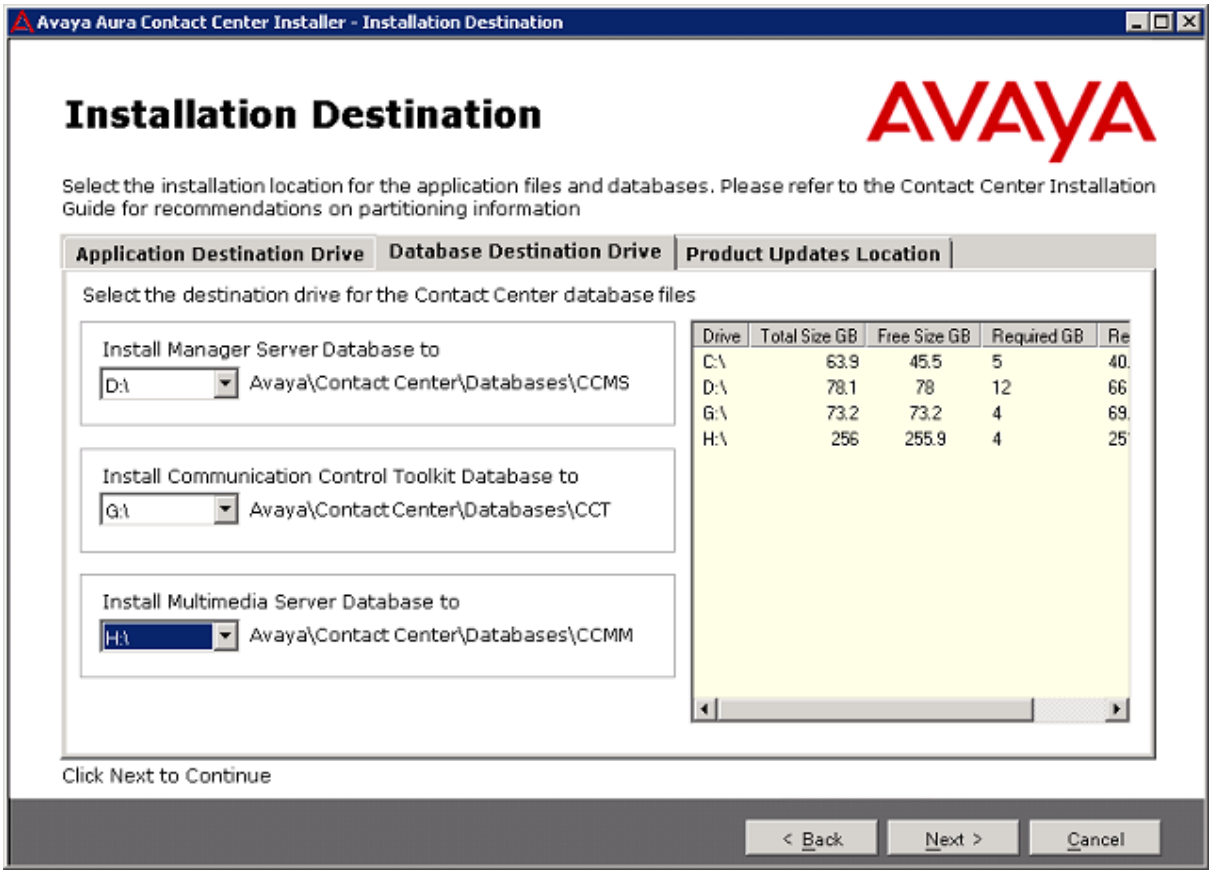
   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.



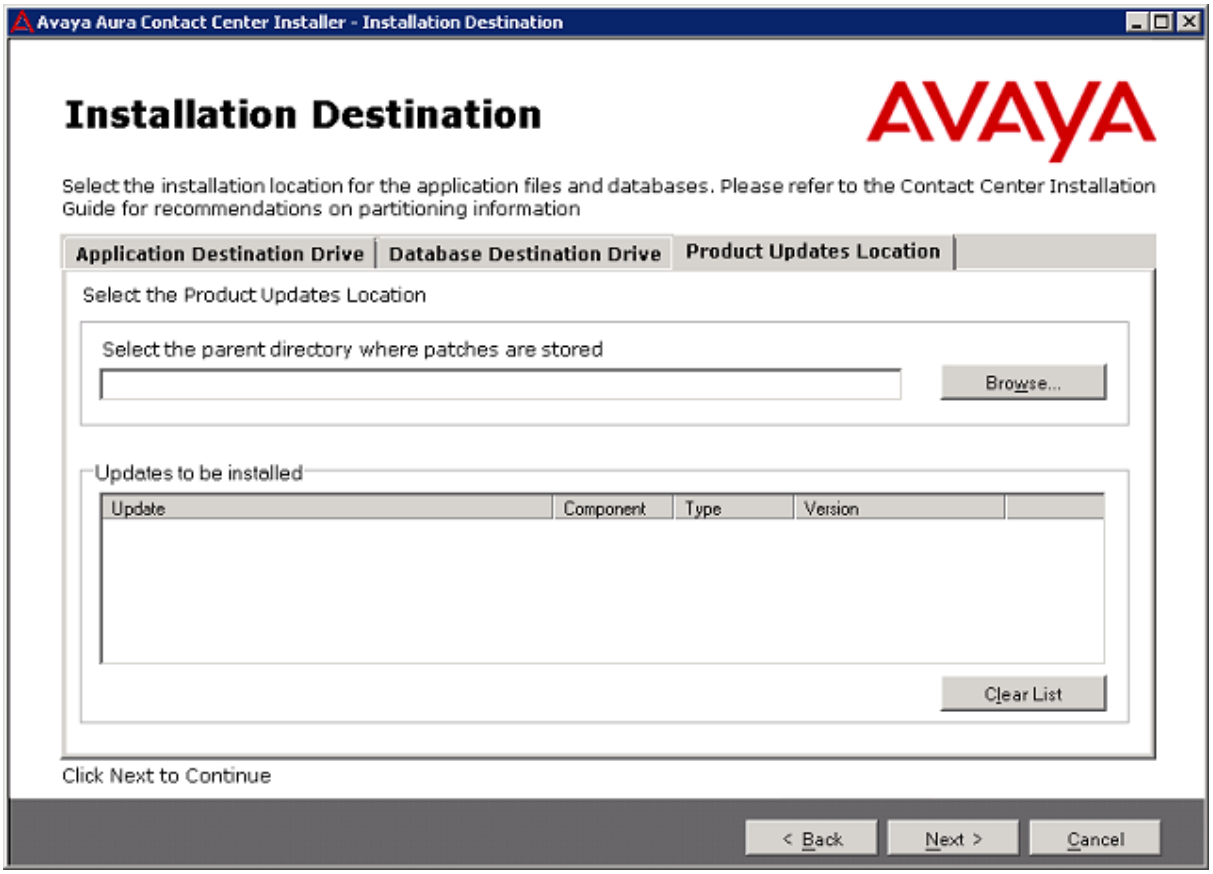
8. On the **Installation Selection** window, under **No Switch Configured**, select **Voice and Multimedia Contact Sever with Avaya Media Server**.
9. Click **Next**.



10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Under **Select the destination drive for the Contact Center database files**, select the drive for the Communication Control Toolkit database.
14. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Multimedia database.



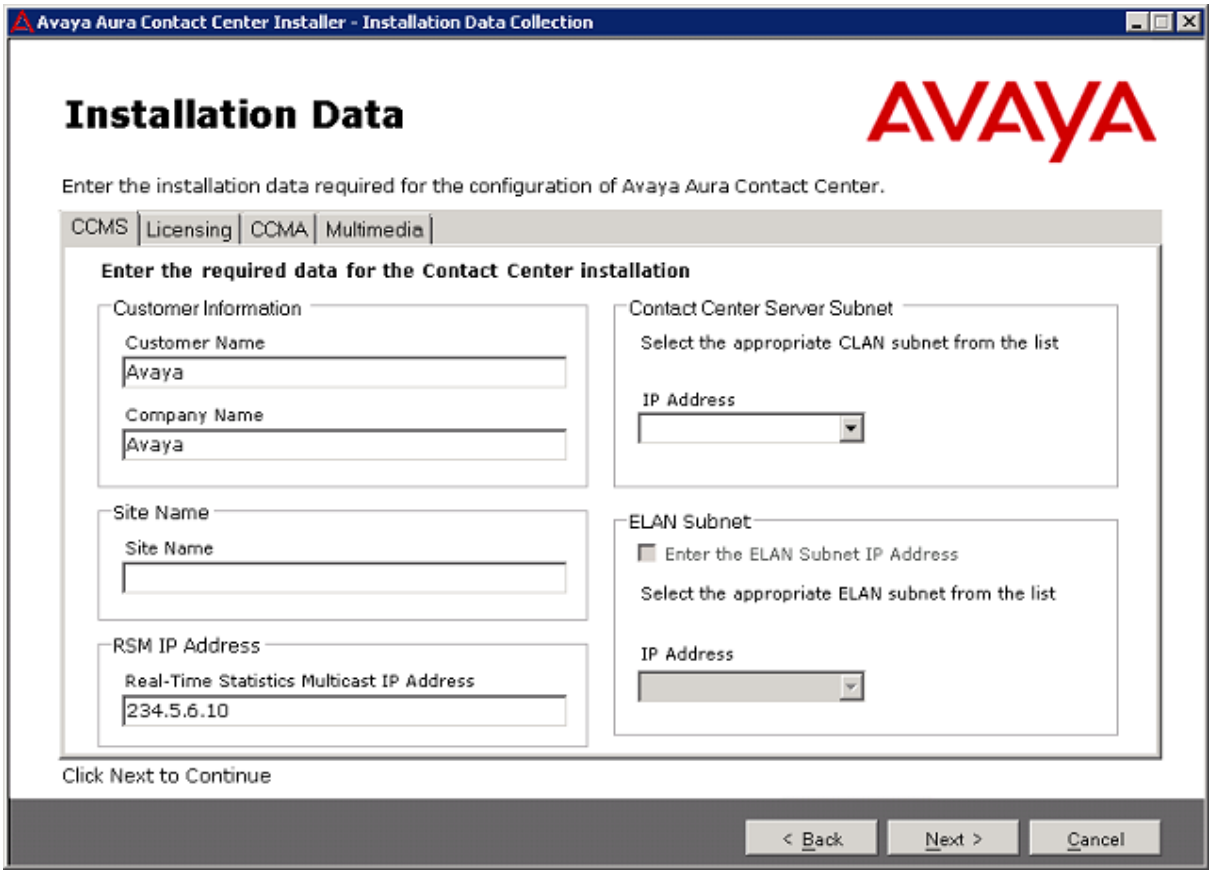
15. Click the **Product Updates Location** tab.



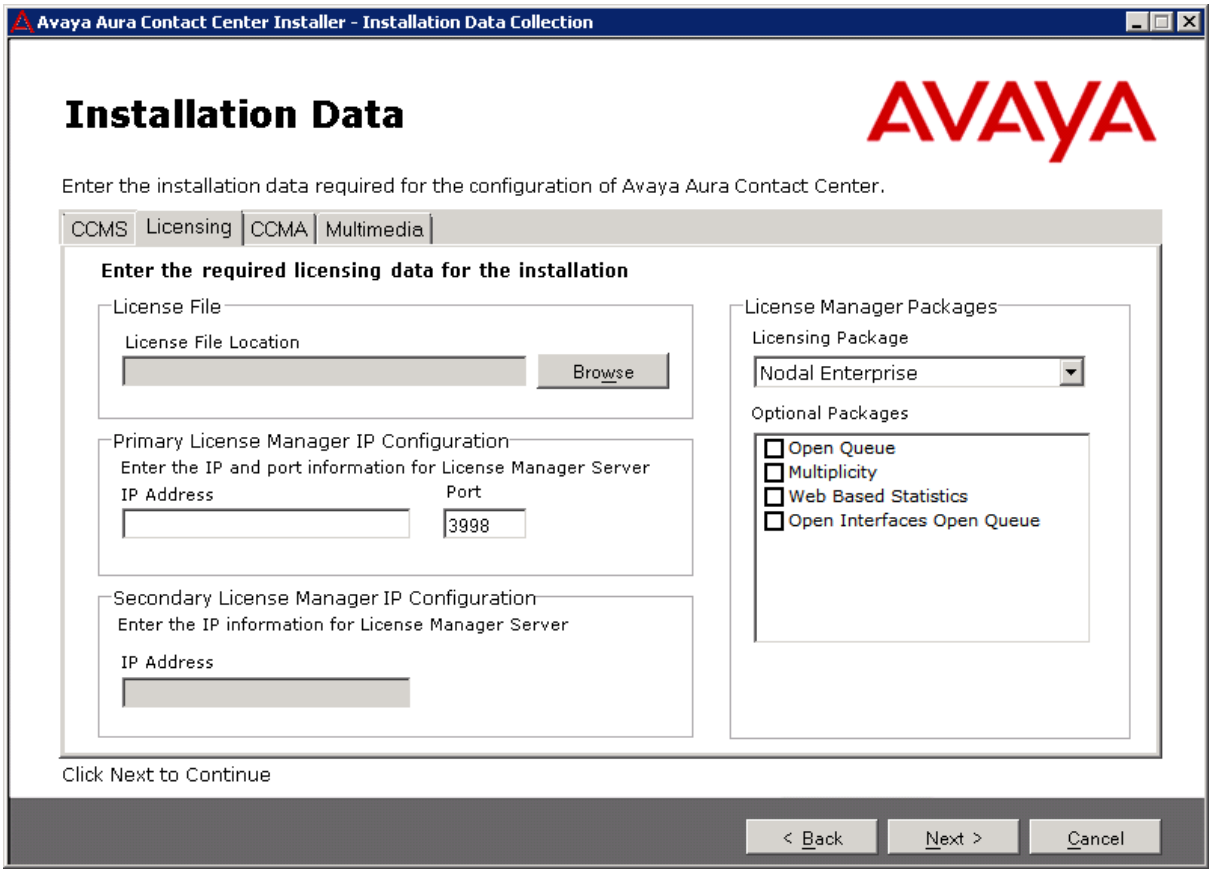
16. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
17. Click **Next**.

    The System Readiness Check runs on the server.
18. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

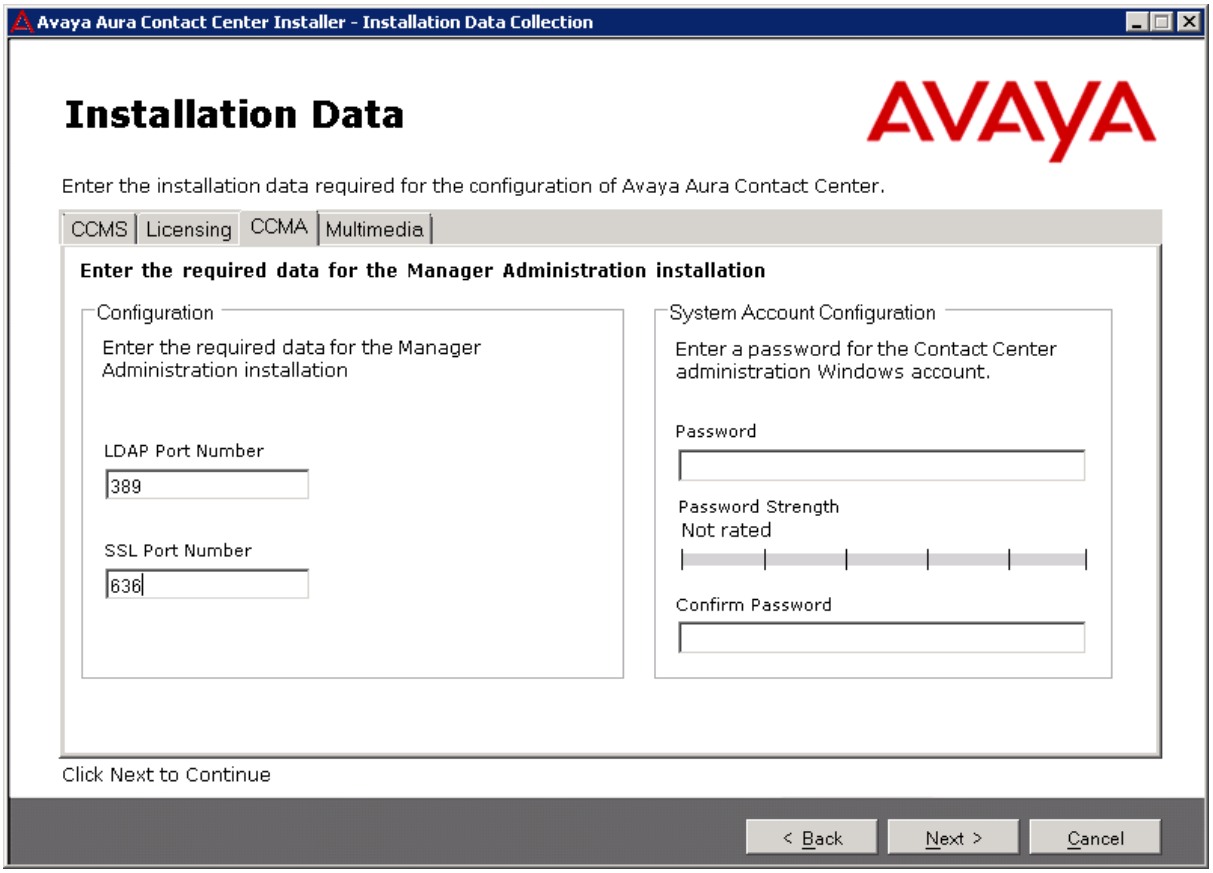
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
19. Click **Next**.
20. On the **Installation Data** window, type the installation details for each tab.
21. Select the **CCMS** tab, and configure the server details.



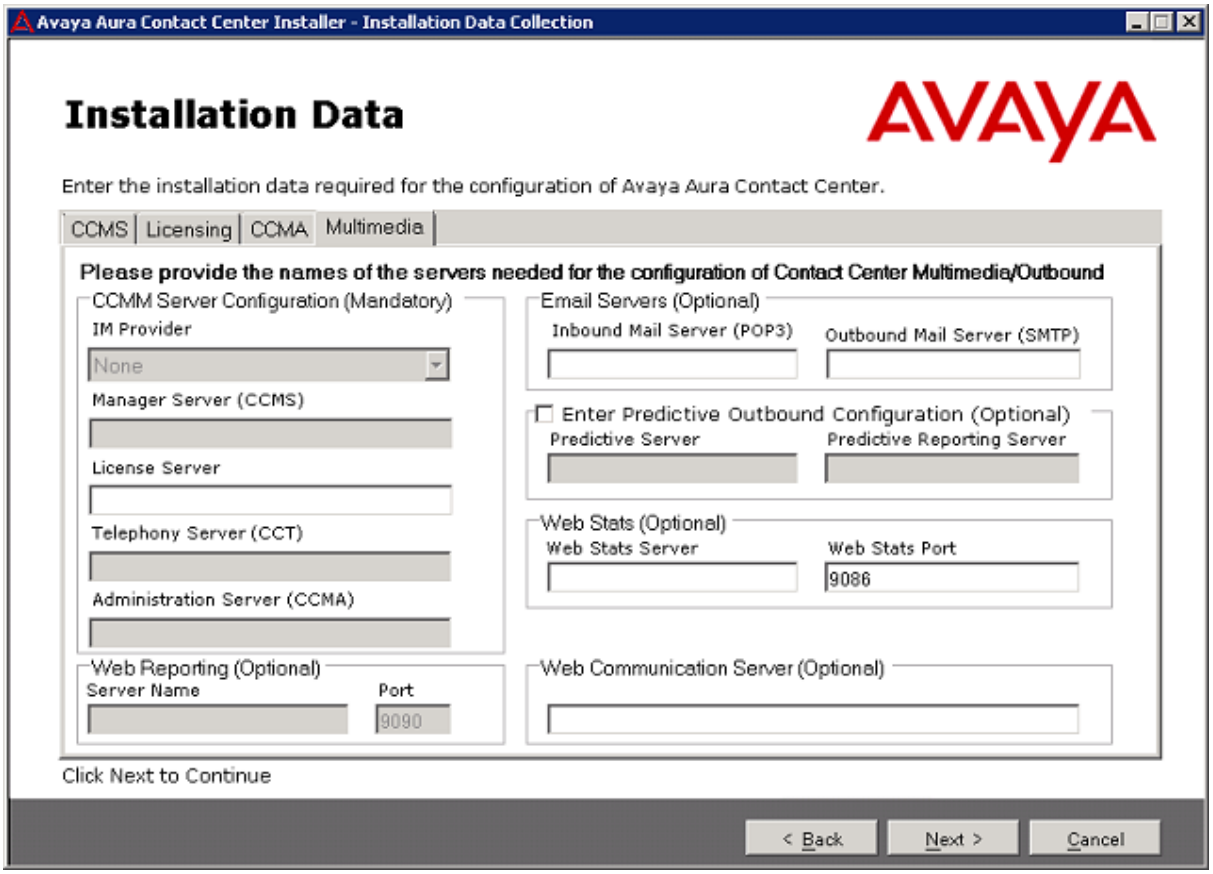
22. In the **Customer Name** box, type the customer name.
23. In the **Company Name** box, type the name of the company.
24. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters. The Site Name of the standby server must be the same as the Site Name of the primary server.
25. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
26. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the server.
27. Select the **Licensing** tab, and configure the licensing details.



28. The **License File Location** box displays the folder on the server which contains the license file. Click **Browse** to locate and load your license file.
29. In the **Primary License Manager IP Address** box, type the IP address of the standby License Manager. This server contains a License Manager. Type the IP address of the standby Multimedia only server.
30. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Contact Center Manager Server. The default port number is 3998 when you use only one License Manager.
31. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal Enterprise** for single-site contact centers.
32. From the list of **Optional Packages**, enable the licensed features that you have purchased.
33. Select the **Open Queue** check box.
34. Select the **CCMA** tab, and configure the CCMA details.



35. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
36. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
37. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
38. Select the **Multimedia** tab, and configure the Contact Center Multimedia details.



39. In the **License Server** box, type the name of the server on which the Contact Center License Manager software is installed.
40. In the **Inbound Mail Server (POP3)** box, type the name of the server on which email messages are received in your network.
41. In the **Outbound Mail Server (SMTP)** box, type the name of the server from on which email messages are sent. Your inbound and outbound mail servers can have the same name.
42. In the **Web Stats Server** box, type the name of the optional Web Statistics server that agents and supervisors use to view real-time statistics for call handling, skillset data, and the state information on the Agent Desktop. Web Based Statistics is an optional licensed feature and requires a Web Based Statistics feature license.
43. In the **Web Stats Port** box, type the port number of the Web Statistics server. The default port number is 9086.
44. In the **Web Communications Server (Optional)** box, type the name of the server on which the Web Customer Interface is installed if Web communications is licensed in your contact center.
45. Click **Next**.
46. On the **Summary** window, review and verify the information.
47. After the installation is complete, click **Finish**.

48. If prompted, restart the server.

Configuring Contact Center Manager Administration replication

Before you begin

- Download the most recent Contact Center and Common Components patches to the server. Ensure the backup server has the same patch line up as the primary server.
- The primary active server must be configured to support AD-LDS replication. Ensure the AD-LDS replication account is added to the local Administrators and replicator group on the primary Contact Center server, before performing this procedure.

About this task

Configure Contact Center Manager Administration (CCMA) replication to enable the standby server to replicate the data store information from the primary server.

Note:

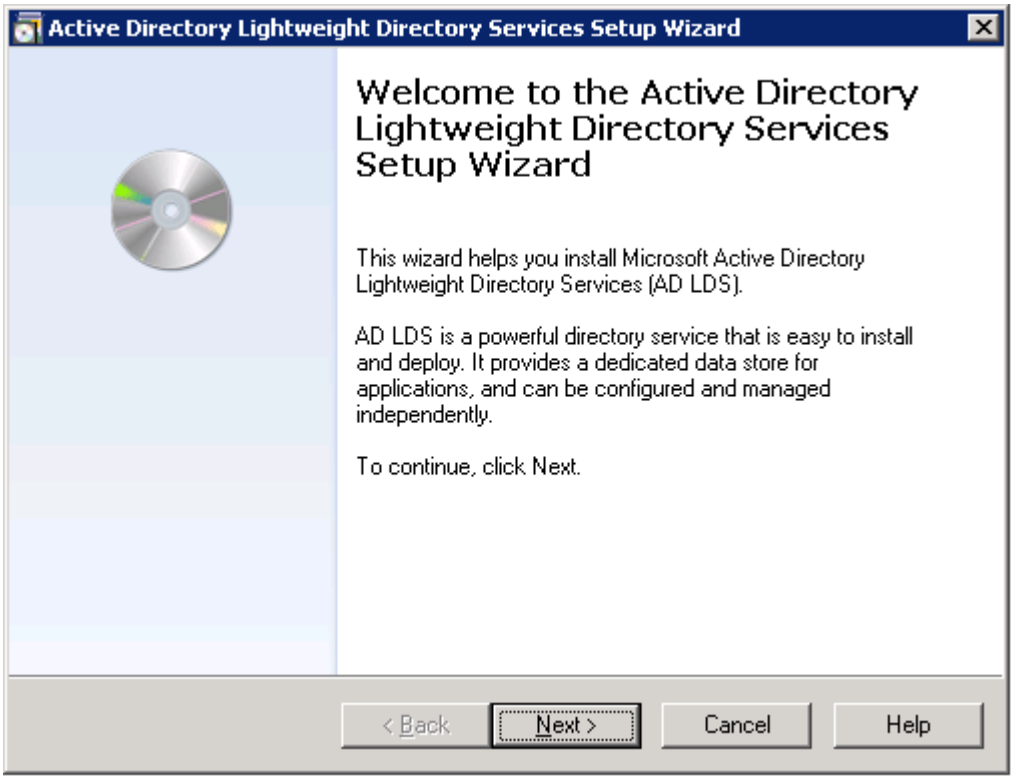
Read the Contact Center Release Notes for the most recent instructions.

Procedure

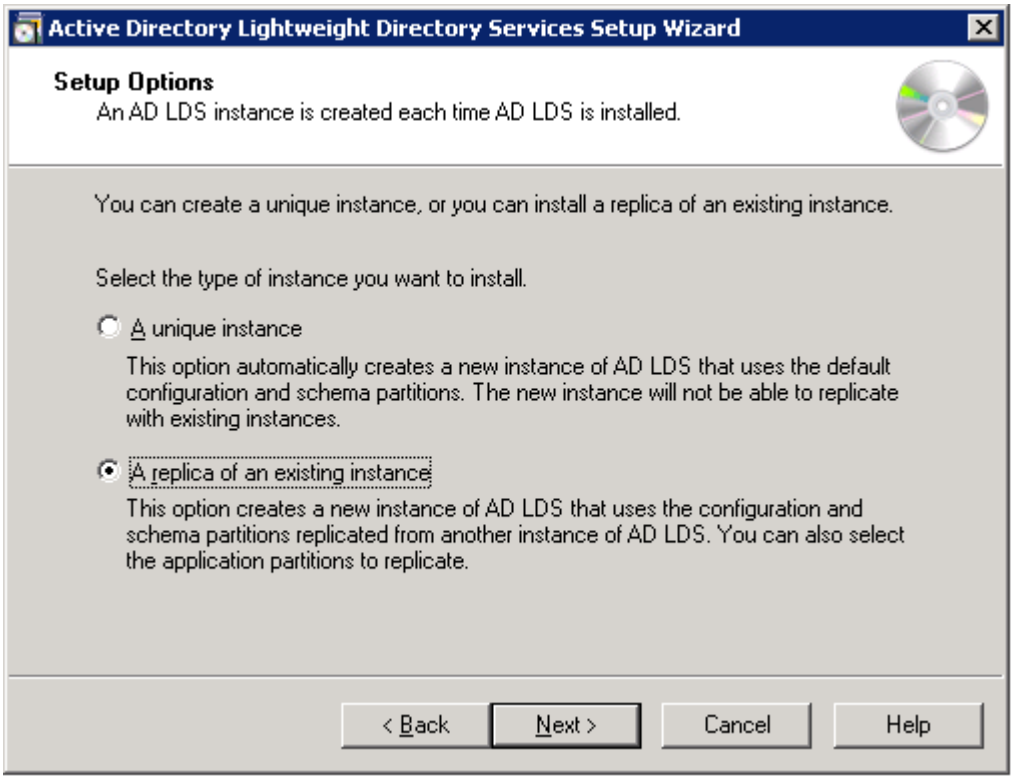
1. Log on to the standby Contact Center server.
2. Locate the AD-LDS utility. Navigate to the following folder:

   `D:\Avaya\Contact Center\Manager Administration\Apps\SupportUtil\`
3. Run the AD-LDS replication utility by double-clicking on the following batch file:

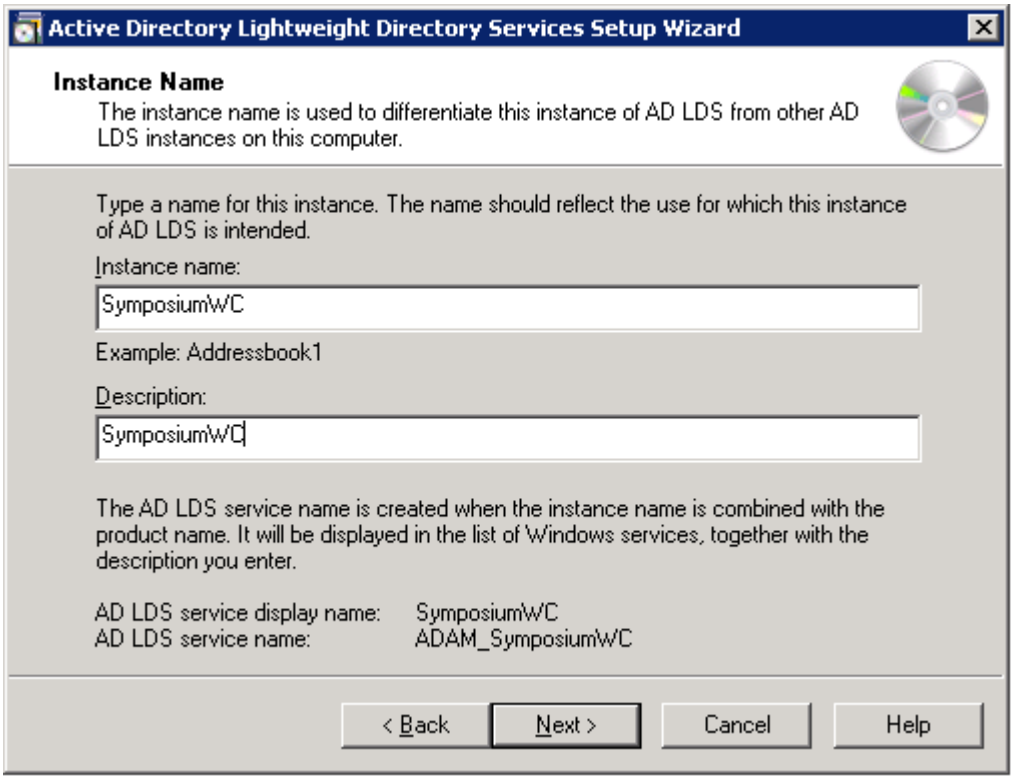
   `ConvertToStandbyCCMAServer.bat`
4. On the first **CCMA AD/LDS Replication** message box, click **Yes**.
5. On the second **CCMA AD/LDS Replication** message box, click **Yes**.
6. The AD-LDS setup wizard appears.



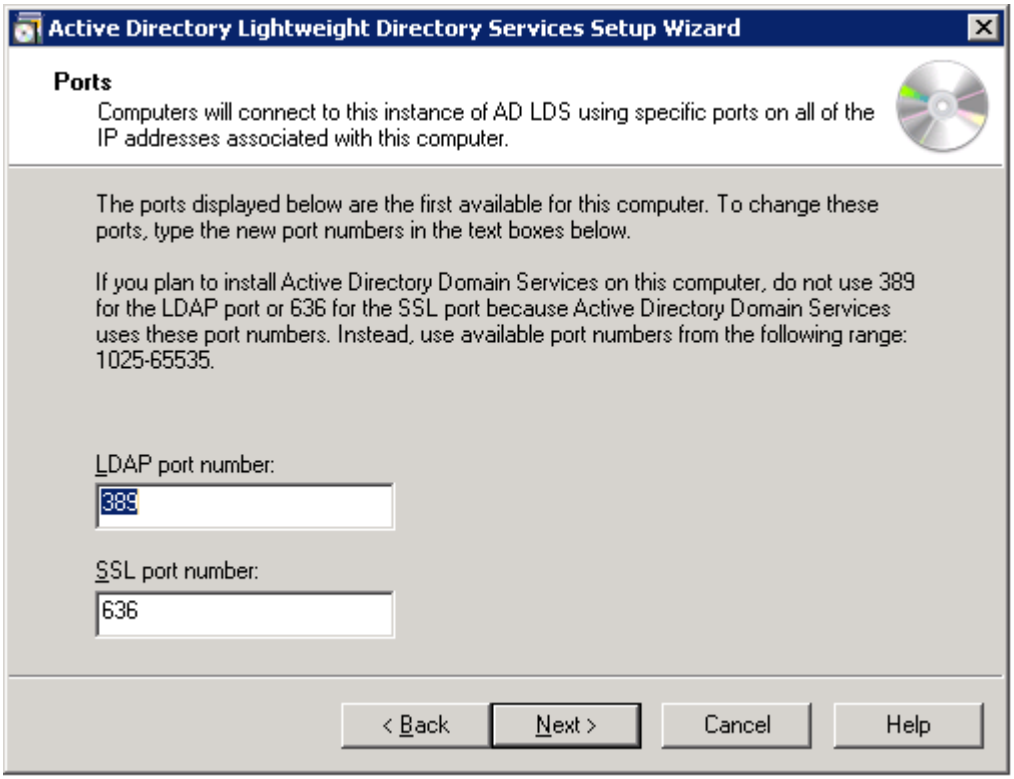
7. Select **Next**.
8. In the **Setup Options** dialog box, select **A replica of an existing instance**.



9. Select **Next**.
10. On the **Instance Name** dialog box, in the **Instance name** box, type the AD-LDS instance name. The default instance name is SymposiumWC, so type `SymposiumWC`.

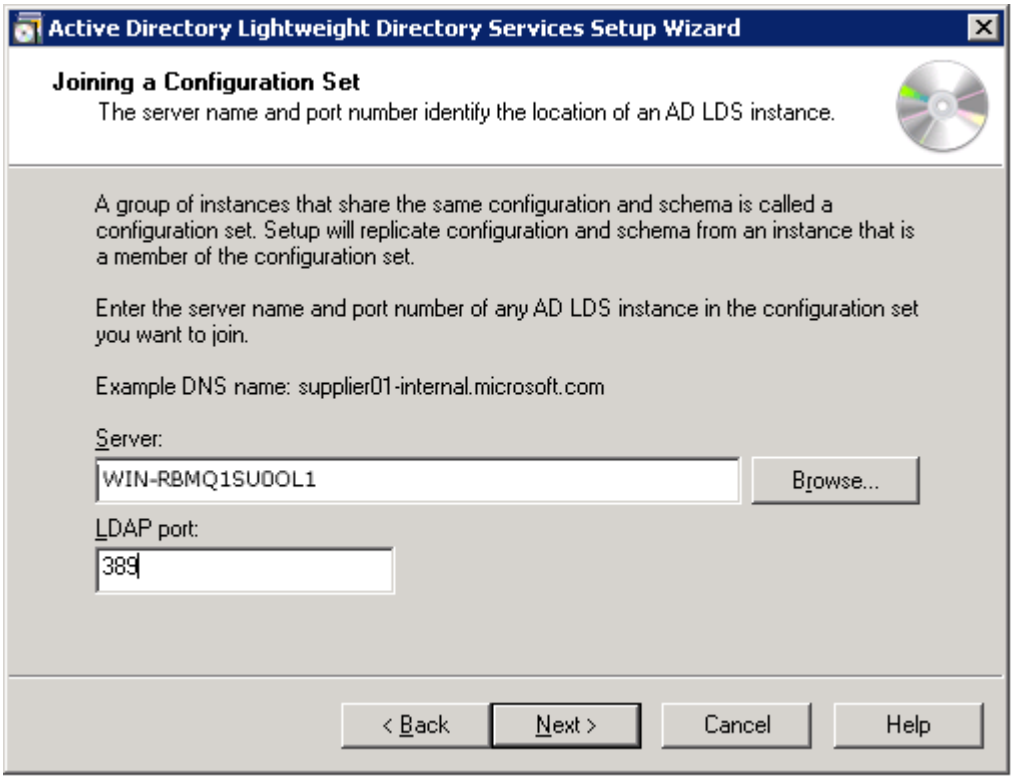


11. In the **Description** box, type `SymposiumWC`.
12. Click **Next**.
13. On the **Ports** dialog box, if no other applications use the ports, accept the default values in the **LDAP port number** and **SSL port number** boxes and select **Next**.



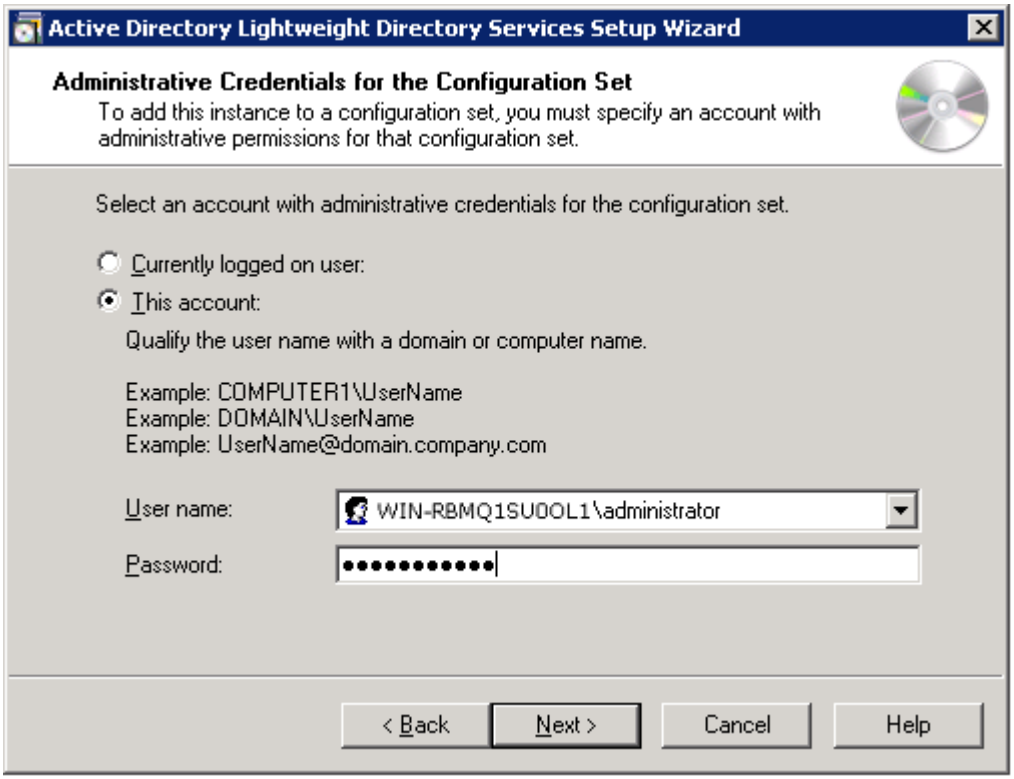
14. On the **Joining a Configuration Set** dialog box, in the **Server** box, type the FQDN name of the primary Contact Center server to replicate.

    Example of entering the primary Contact Center server name.

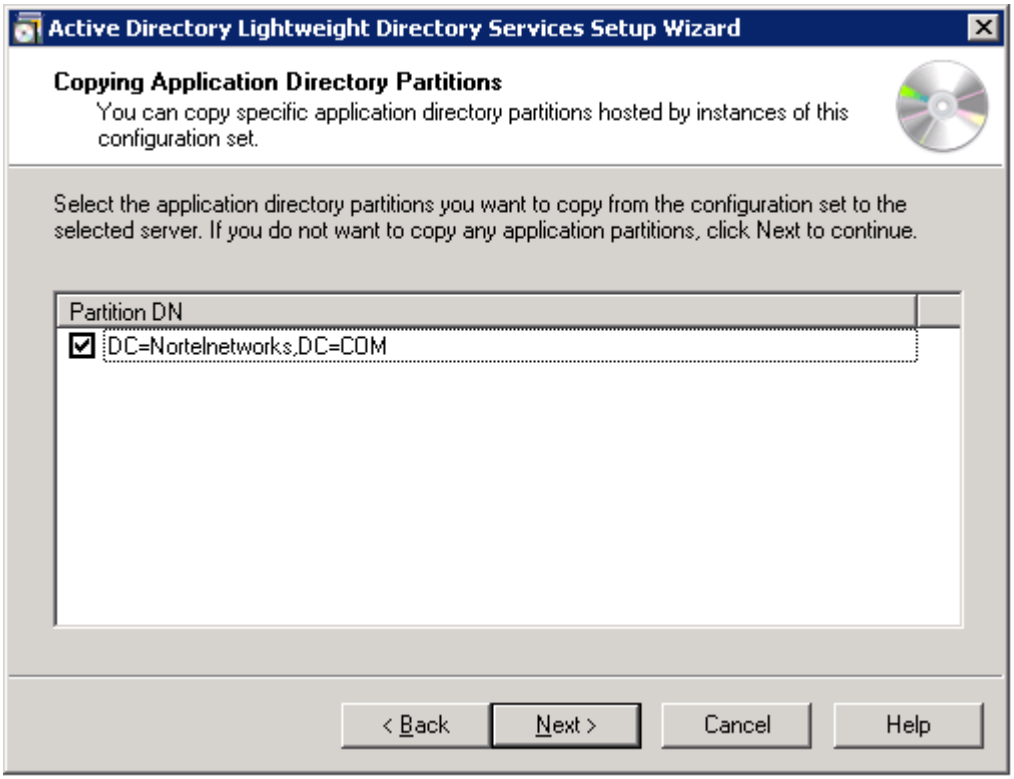


15. On the **Joining a Configuration Set** window, in the **LDAP Port** box, type the port number on the AD-LDS instance on the primary Contact Center server. The default is port number 389.
16. Click **Next**.
17. On the **Administrative Credentials for the Configuration Set** window, select **This account**.
18. In the **User name** box, type the primary Contact Center server name followed by its Administrator name in the format <primary Contact Center server name>\Administrator. For example enter WIN-RBMQ1SU0OL1\Administrator. If you have created another administrator account for Contact Center, then enter the details (name and password) for that primary Contact Center server administrator account here. Your administrator account must have full administrative privileges.

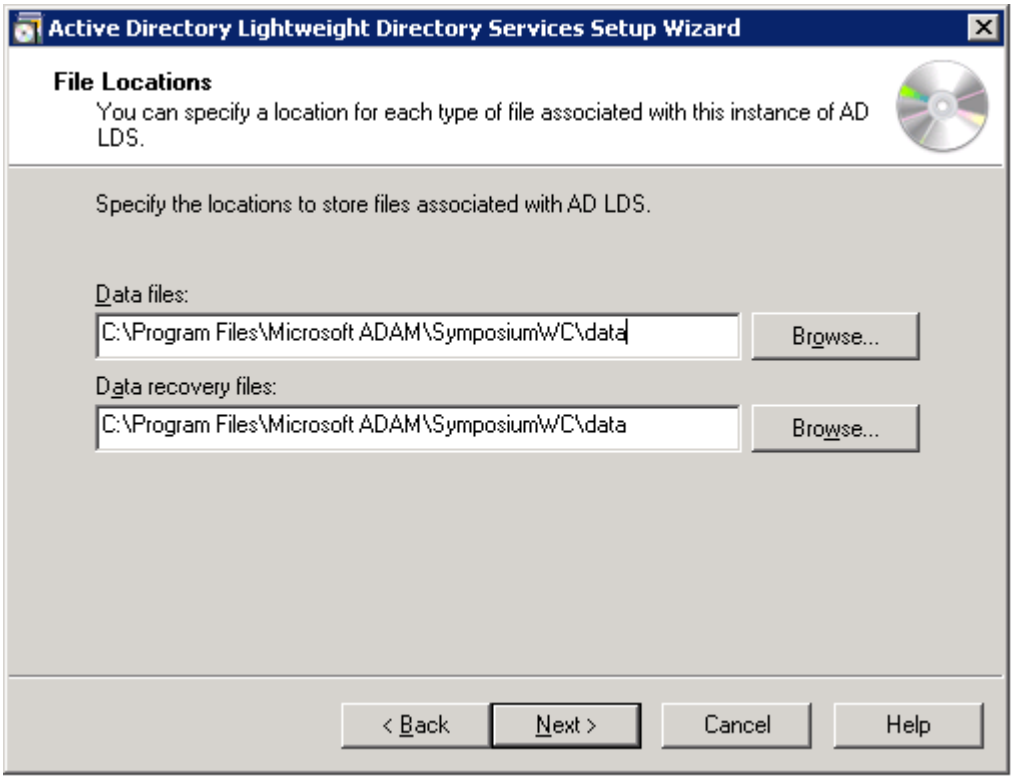
    Example of entering the administrative credentials.



19. In the **Password** box, type the password for this user account.
20. Click **Next**.
21. In the **Copying Application Directory Partitions** dialog box, in the **Partition DN** list, select the partition **DC=Nortelnetworks,DC=COM**.

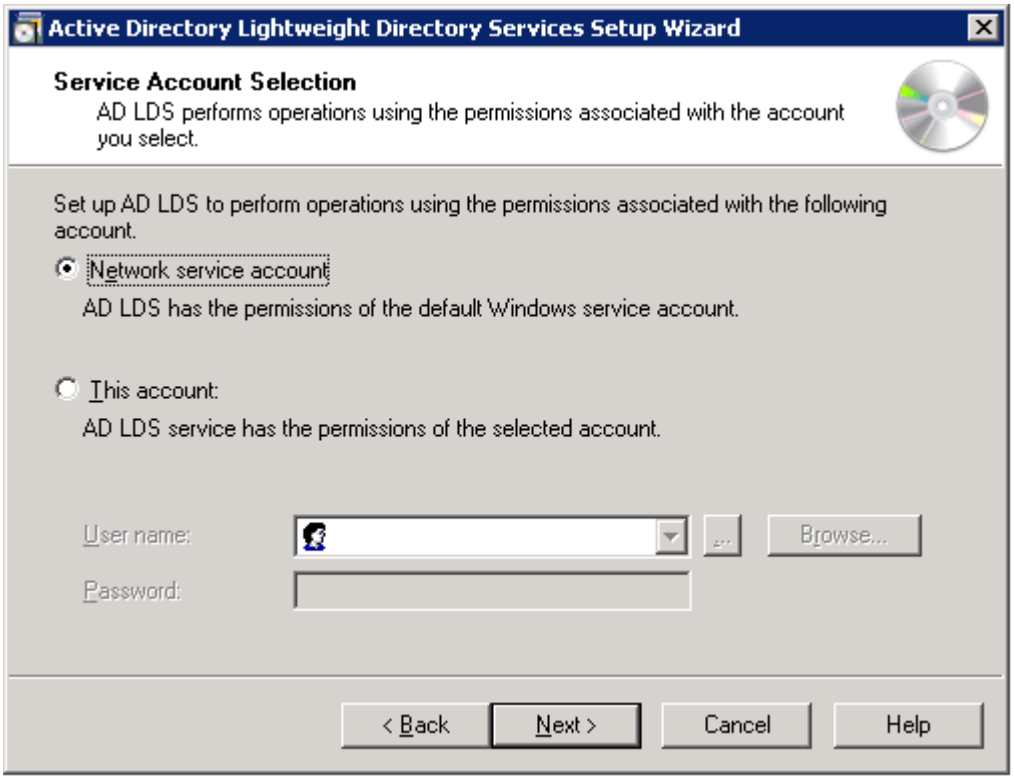


22. Select **Next**.
23. In the **File Locations** dialog box, accept the default values, click **Next**.

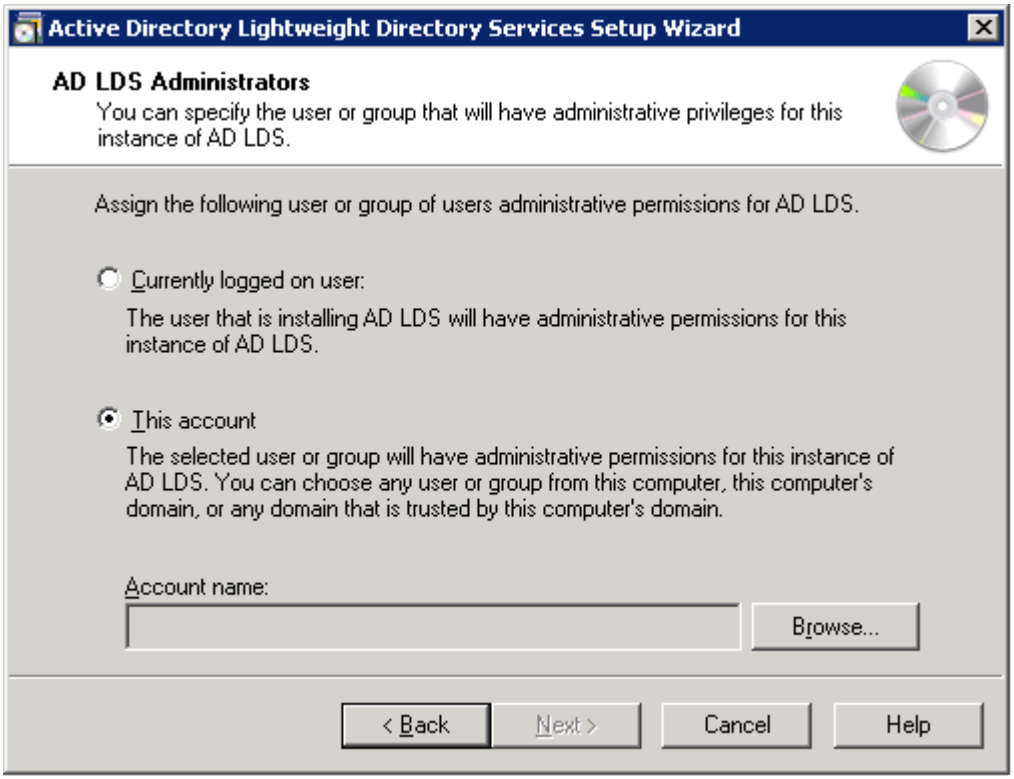


24. In the **Service Account Selection** dialog box, select **Network service account**.

    Example of using a domain and selecting Network service account.

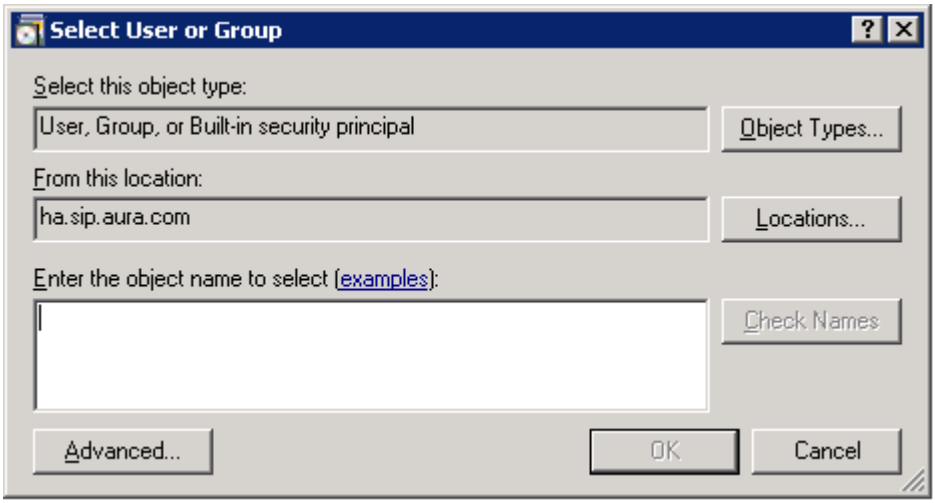


25. Click **Next**.
26. In the **AD LDS Administrators** dialog box, select **This account**.

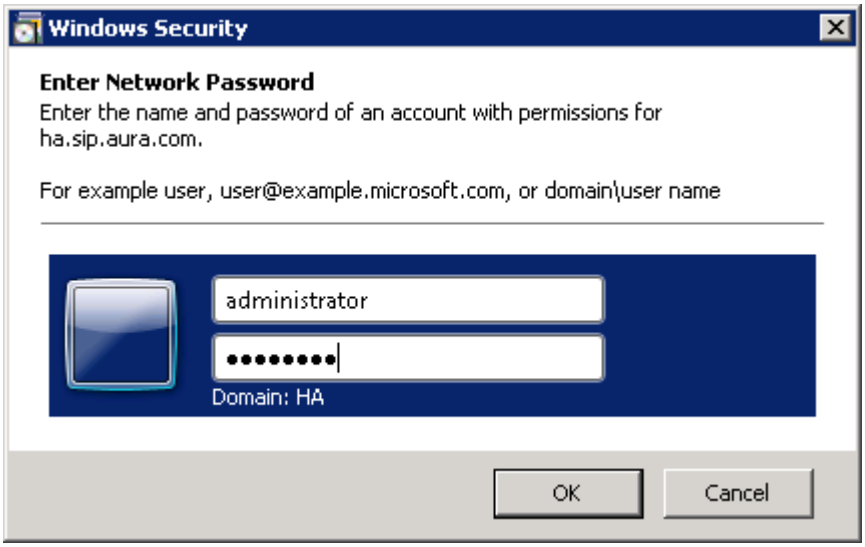


27. Select **Browse** to locate the CCMA AD-LDS replication account.

    The Select User or Group dialog box appears. Note that the location is the local domain.

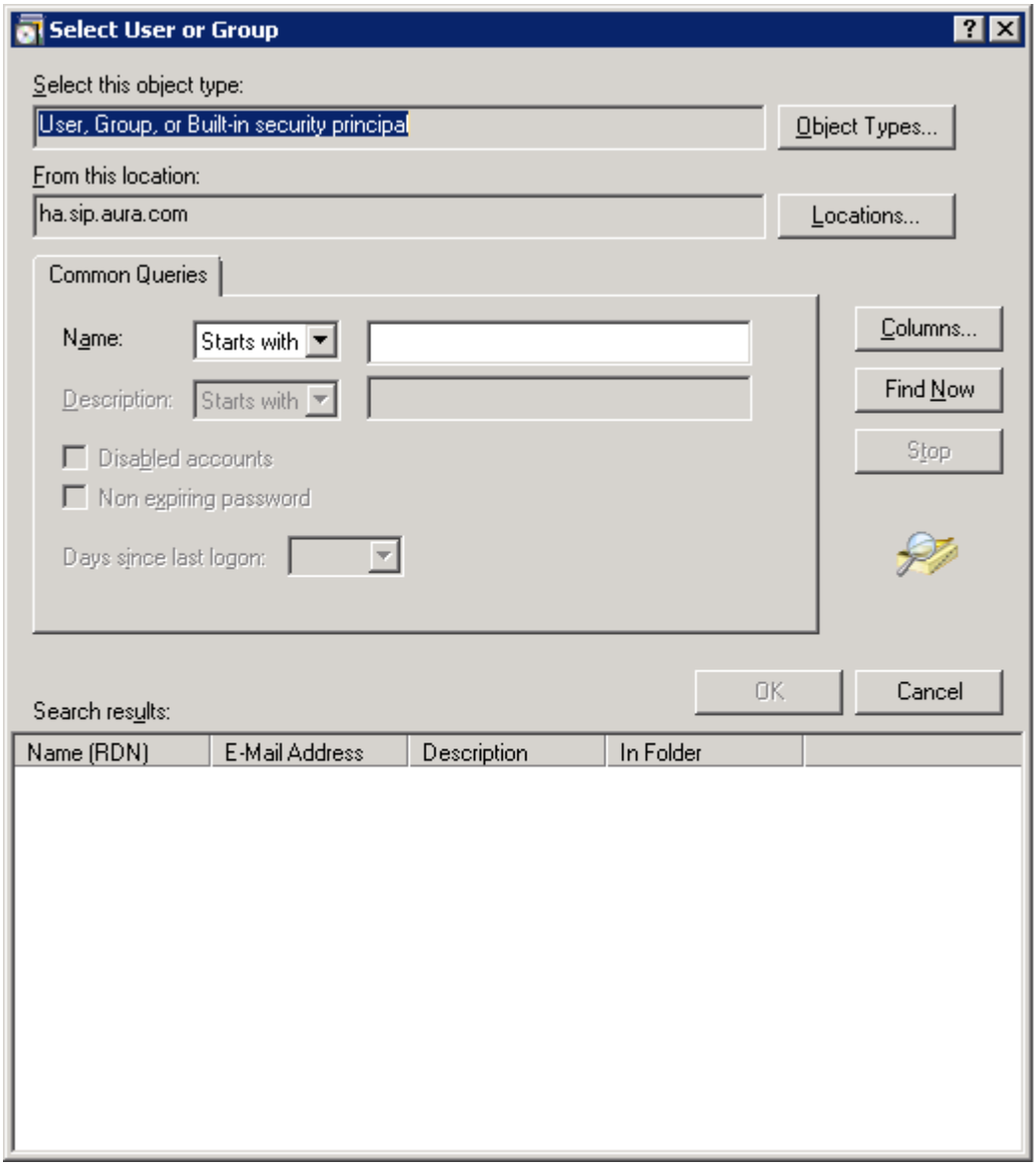


28. In the **Select User or Group** dialog box, click **Advanced**.
29. In the **Windows Security** dialog box, type a logon name and password of an account with permissions to access your domain.



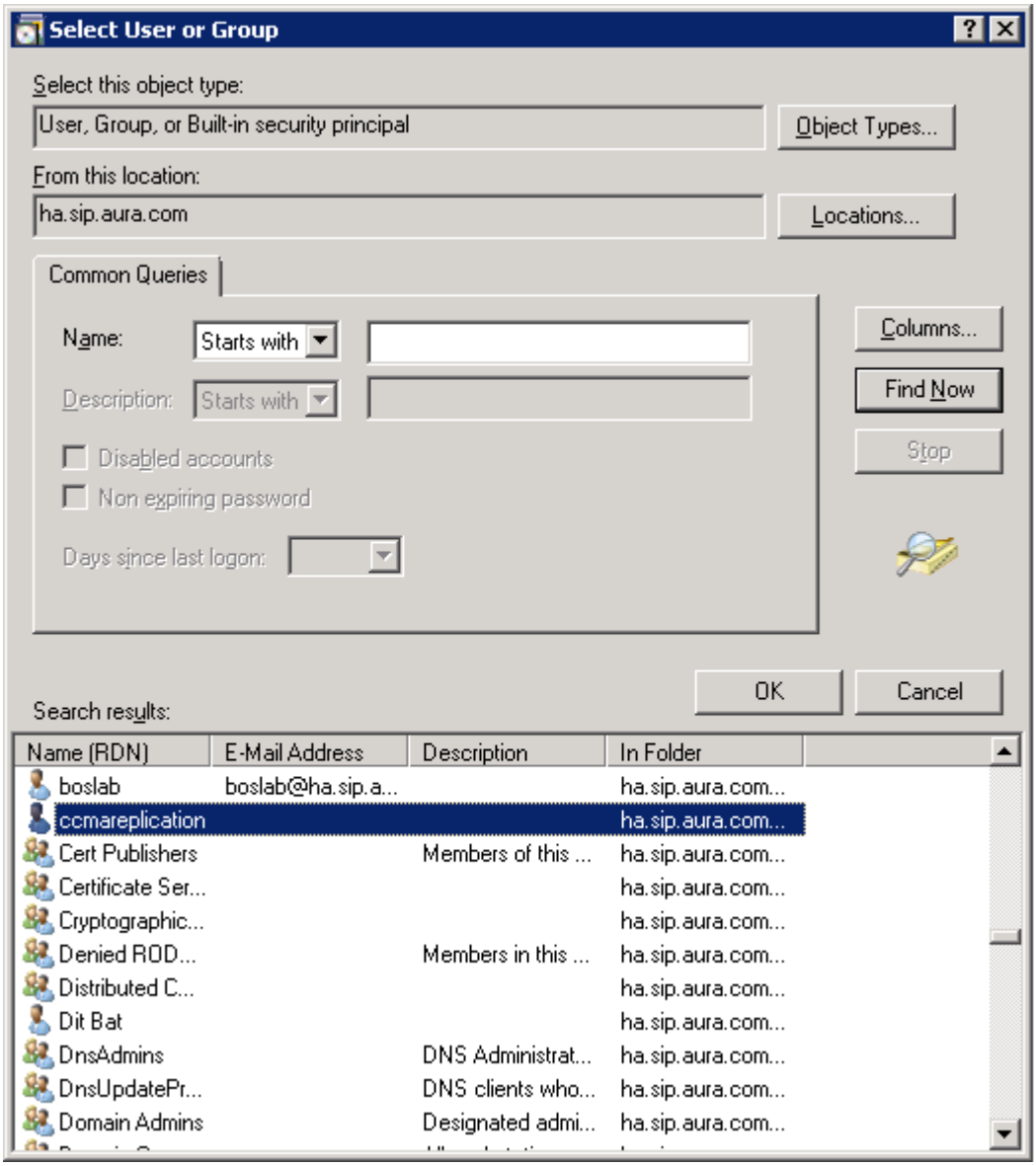
30. Click **OK**.

    The advanced Select User or Group dialog box appears.



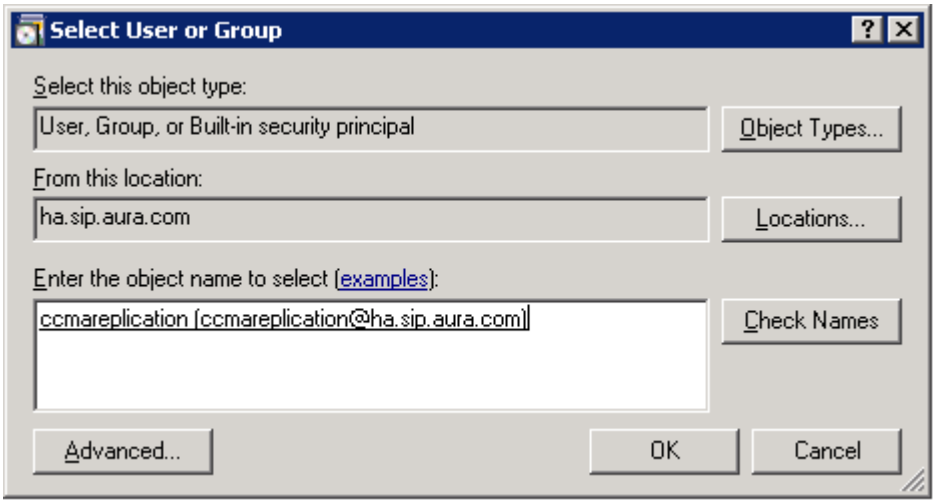
31. In the advanced **Select User or Group** dialog box, click **Find Now**.
32. From the **Search results** list, select the CCMA replication account.

    Example of selecting a domain CCMA replication account:



33. In the advanced **Select User or Group** dialog box, click **OK**.

    Example of selecting a CCMA replication account:

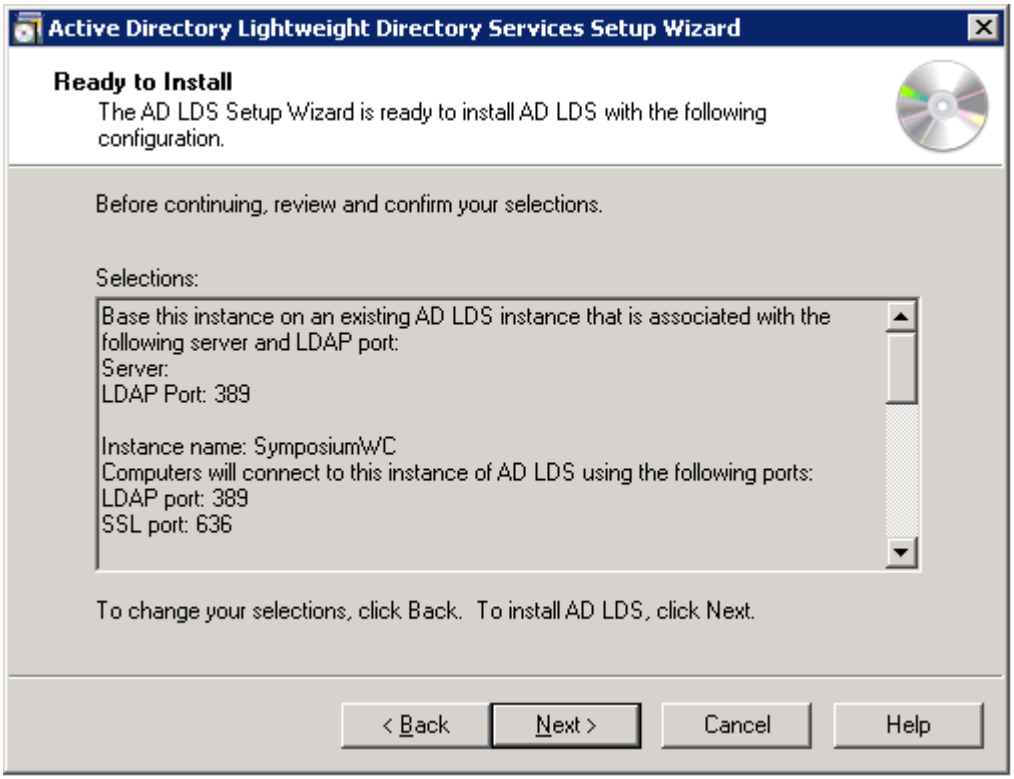


34. In the **Select User or Group** dialog box, click **OK**.

    Example of selecting a domain CCMA replication account:



35. Click **Next**.



36. Confirm the installation components, and click **Next**.
37. After the installation is complete, click **Finish**.
38. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.

2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Part 5: Network Control Center Server

Chapter 30: Network Control Center Server software installation

This chapter describes how to install the Network Control Center Server software on a network. The Network Control Center (NCC) server is required when servers in multiple Contact Center Manager Server sites are networked and operate as a single distributed contact center.

A Network Control Center Server includes the following server software:

- Contact Center Manager Server — Network Control Center (NCC)
- Contact Center License Manager (LM)
- Contact Center Manager Administration (CCMA)

Install this server to add networking, network skill-based routing, and consolidated reporting support for a number of Voice and Multimedia Contact Servers operating as a single distributed contact center. Use this server to configure contact routing between the Voice and Multimedia Contact Server nodes of a distributed contact center solution.

Avaya Aura® Contact Center supports networked calls between AML-based and SIP-enabled nodes. The Network Control Center (NCC) software must be the most recent release, relative to the other nodes on the network. For example, in a network with Avaya Aura® Contact Center Release 6.4 and Release 6.3 nodes, the NCC must be Release 6.4. All nodes in the network must be Avaya Aura® Contact Center Release 6.3 or later.

All nodes in an Avaya Aura® Contact Center networking deployment, including the Network Control Center server, must be installed on operating systems from the same language family. Contact Center Manager Administration does not support displaying names from two different languages families. For example, a single Contact Center Manager Administration does not support one node with French and another node with Russian.

You must complete all the procedures in this section in sequential order.

Network Control Center Server software installation prerequisites

Procedure

Ensure that your new Contact Center license file is available.

Job aid: Installation time

The estimated time to install the Network Control Center server software is 30 minutes. This time can vary depending on the server, network infrastructure, and your confidence level with the software. This installation time is based on installing a server that meets the minimum specification for this function.

Downloading the latest documentation

Before you begin

- Download the most recent version of Acrobat Reader.
- Access the Avaya Web site at www.avaya.com/support.

About this task

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

Procedure

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

Installing Windows Server 2008 Release 2

Before you begin

- Ensure that you have a newly formatted server that meets the specifications in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) on which to install Microsoft Windows Server 2008 64-bit, Release 2, Service Pack 1.

Do not upgrade your operating system from a previous release. Contact Center is not supported on an upgraded operating system.

- Configure all servers for RAID as described in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Ensure that you have a DVD for Windows Server 2008 Release 2.
- Install the network interface card in the server.
- Know the IP addresses for the contact center subnet.

About this task

Install the Windows operating system, which is required for the Contact Center server software. During the installation, configure the Windows settings as required. You must perform this procedure on each server before you install Contact Center server software on the server.

Procedure

1. Insert the Windows Server 2008 64-bit Release 2 Standard Edition or Windows Server 2008 64-bit Release 2 Enterprise Edition DVD into the DVD drive.
2. Install Windows Server 2008 Release 2 according to the instructions supplied by the DVD.
3. On the first install page, select your language for installation.
4. Click **Next**.
5. On the **Installation** window, select a **Language to install** from the list.
6. Select a **Time and currency** format from the list.
7. Select **Keyboard or input** method from the list.
8. Click **Next**.
9. Click **Install Now**.
10. Select an operating system from the list.
11. Click **Next**.
12. On the first Install Windows screen, read the terms of the license agreement and select **I accept the license terms**.
13. Click **Next**.
14. Select **Custom**.
15. Select the disk partition on which you want to install Windows Server 2008.

    Important:

    You can use the partition management options to configure the partitions on your server.

16. Click **Next**.

    The installation proceeds and automatically restarts the server several times.

17. After completing the installation, log on to the server as Administrator. Enter and confirm the Administrator password.

18. In the **Initial Configuration Tasks** window, select **Activate Windows** and follow the instructions or the Microsoft documentation to activate your server.
19. Select **Set time zone** and complete the information as required for your system.

    If you are installing Voice Contact Server Only software or Knowledge Worker Server software on this server, ensure that you clear **Automatically adjust clock for daylight saving changes**. Otherwise select **Automatically adjust clock for daylight saving changes**.
20. Select **Configure Networking** and complete the information for your Network Interface Card (NIC) with the server IP address.
21. Select **Provide computer name and domain** and complete the information for your server name and network settings.
22. Change the DVD drive letter to E: to ensure the correct drive letters are free for the Contact Center application and database hard disk drives and partitions.
23. Configure the hard disk drives and partitions for this server using the Windows Server 2008 Server Manager - Disk Management utility. For more information about hard disk drives and partitions, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
24. Install other required drivers for your hardware configuration.

Procedure job aid

Name	Description
Computer name	Do not use spaces or underscores or exceed 15 characters. The name must start with an alphabetic character. The computer name must match (including case sensitivity) the DNS name.
Disk drives	Format the partitions as required for the server. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
Domain name	Configure as required for your site. You must check to ensure the DNS Domain name (including case) matches the server name if the server is added to a domain after configuration.
Licensing modes	Select Per server licensing mode. Accept the default five concurrent connections.
Modem dialing	Configure as required for your site. Do not install a modem on a Communication Control Toolkit server.
Network components	Configure IP Address, WINS, DNS for one or two network cards as per configuration. Contact Center does not support IPv6.

Name	Description
Network connections	If the server has more than one NIC/adapter, ensure contact center subnet appears first in the network adapter binding order.
Partitions	Configure C: drive to be a primary drive. Configure the other drives on your server to meet the requirements according to *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) for the server.
Regional settings window	Configure as required for your site.
SNMP	Configure for all servers.

Configuring Windows Server 2008

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.

About this task

Before you install Avaya Aura® Contact Center software on the server, make a backup of the server software.

Procedure

1. Log on to the Windows Server 2008 server using an administrator account.
2. Select the **Don't display this screen on startup** check box.
3. Update the emergency repair disk to record the latest configuration data for the server.
4. Choose **Start** > **Administrative Tools** > **Server Manager**.
5. In the left pane, click **Features**.
6. Click **Add Features**.
7. Select **Windows Server Backup Features**.
8. Click **Next**.
9. Click **Install**.
10. Click **Close**.
11. Choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Windows Server Backup**.
12. Follow the on-screen instructions to select what you want to back up.

Installing the latest supported operating system service packs

Before you begin

- Access the Avaya hotfixes list on the Web site www.avaya.com/support.
- Install and configure Microsoft Windows Server 2008 64-bit Release 2 Service Pack 1 on your server.
- Review the specifications on operating system service updates in *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

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. Log on to the server and disable the Windows Update feature. There are a number of methods for disabling the Windows Update feature, refer to the Windows Server 2008 documentation for a method suitable to your solution. Disabling the Windows Update feature prevents Windows Server 2008 from automatically applying operating system patches and potentially rebooting the server.
2. Review the Contact Center Service Packs Compatibility and Security Hotfixes Applicability List to determine the most recent Avaya Aura® Contact Center supported patches or service packs.
3. Download the appropriate Microsoft Windows Server 2008 patches for the Avaya Aura® Contact Center software installed on this server.
4. Install the most recent Windows Server 2008 service pack that is validated with Avaya Aura® Contact Center by following the Microsoft Installation instructions.

Connecting to the contact center subnet

About this task

Connect the Contact Center server to the contact center subnet. The contact center subnet is the network on which the server software applications work together to route contacts and generate reports.

Procedure

1. Locate the slot assigned to the contact center subnet network interface card for the server. Make a note of the slot.

2. Connect the cable from the contact center subnet to the contact center subnet network interface card in the server in accordance with customer site networking guidelines.
3. Use the ping command to test the contact center subnet.

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.

If your solution is going to use High Availability, ask your System Administrator to add one DNS static entry for each managed name and associated managed IP address. A typical High Availability campus solution with a pair of servers requires three DNS static entries; one DNS static entry for the active server, one DNS static entry for the standby server, and one DNS static entry for the managed name and associated IP address. Avaya Aura® Contact Center High Availability solutions do not support Windows Server 2008 Dynamic DNS.

Procedure

1. Log on to the server.
2. Click **Start** > **Administrative Tools** > **Server Manager**.
3. Beside **Computer Information**, click **Change System Properties**.
4. In the **System Properties** dialog box, click the **Computer Name** tab.
5. Click **Change**.
6. In the **Computer Name/Domain Changes** dialog box, click the **Domain** option.
7. Type the domain name (you must provide the fully qualified domain name, which includes the prefix and suffix).
8. Click **OK**.
9. Type the domain administrator **User name** and **Password**.

10. Click **OK**.
11. Restart the server when you are prompted to do so.

Downloading the most recent Contact Center patches to the server

Before you begin

- Download and install the most recent and supported updates for Microsoft Windows Server 2008 64-bit Release 2.
- Know the location at which you plan to install each Contact Center server software package.
- Ensure that you use one administrator account on your server to un-install and install software updates.

About this task

To ensure that you have the most current software, download the most recent Contact Center patches from www.avaya.com/support to the server you plan to install.

Procedure

1. Log on to the server using the administrator account.
2. Create a folder <Drive>:\Avaya-ProductUpdates\ to save the software updates. Where <Drive> is the drive letter on which you want to save the Contact Center software updates.
3. Download the most recent service pack file. Save and unzip the file on the Contact Center server in the `Avaya-ProductUpdates` folder.
4. If new patches are available for the latest service pack, download and save the patches on the Contact Center server in the Avaya-ProductUpdates folder.
5. Read the Contact Center Release Notes for the most recent instructions.

Disabling unused Network Adapters

About this task

Disable all unused Network Adapters or Network Interface Cards (NICs) to improve network communications and prevent the erroneous configuration of unused NICs during Contact Center server commissioning.

Procedure

1. Log on to the server.

2. Click **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Change Adapter Settings**.
3. Right-click on the unused Network Adapter, and select **Disable**.
4. Repeat this procedure for all unused Network Adapters.

Enabling Microsoft Remote Desktop connection

Before you begin

- Install Microsoft Windows Server 2008 64-bit Release 2 on your server.
- Log on to the server with administrator privileges.

About this task

Enable Microsoft Remote Desktop connection as your remote access tool. Microsoft Remote Desktop provides remote access for support on the server.

Procedure

1. Choose **Start** > **Control Panel** > **System and Security**.
2. In the **System** section, select **Allow remote access**.
3. Click the **Remote** tab.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. Click **OK**.
6. Click **Apply**.

Configuring Data Execution Prevention

About this task

Configure the Data Execution Prevention (DEP) hardware and software to perform additional checks on memory that protect the Avaya Aura® Contact Center server against malicious code exploitation.

Procedure

1. Log on to Windows as administrator.
2. Choose **Start** > **Control Panel** > **System and Security**.
3. Click **System**.
4. In the **System** window, click **Advanced system settings**.
5. In the **System Properties** dialog box, click the **Advanced** tab.

6. Under **Performance**, click **Settings**.
7. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
8. On the **Data Execution Prevention** tab, select **Turn on DEP for essential Windows programs and services only**.
9. Click **OK**.
10. On the **System Properties** dialog box, click **OK**.
11. Click **OK** to restart the computer.

Installing the Network Control Center Server software

Before you begin

- If you install Network Control Center server software with an AML Avaya Communication Server 1000, ensure the PABX is configured. See *Avaya Aura® Contact Center Configuration – Avaya CS1000 Integration* (44400-512).
- If you install Network Control Center server software with an Avaya Aura® Unified Communications platform, ensure the platform is configured. See *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).
- Download the most recent Network Control Center patches to the server.

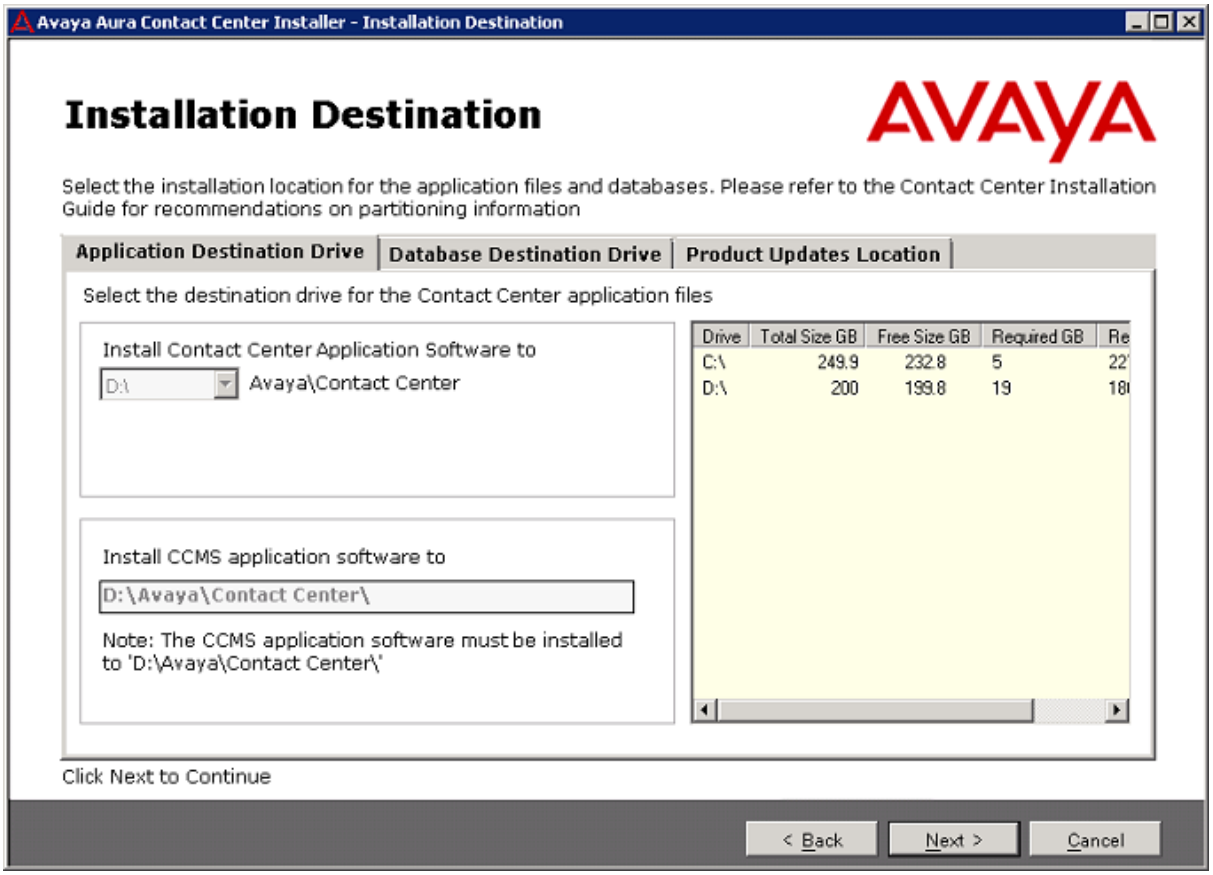
About this task

Install the Network Control Center server software to enable your contact center to route contacts to available agents with the correct skills.

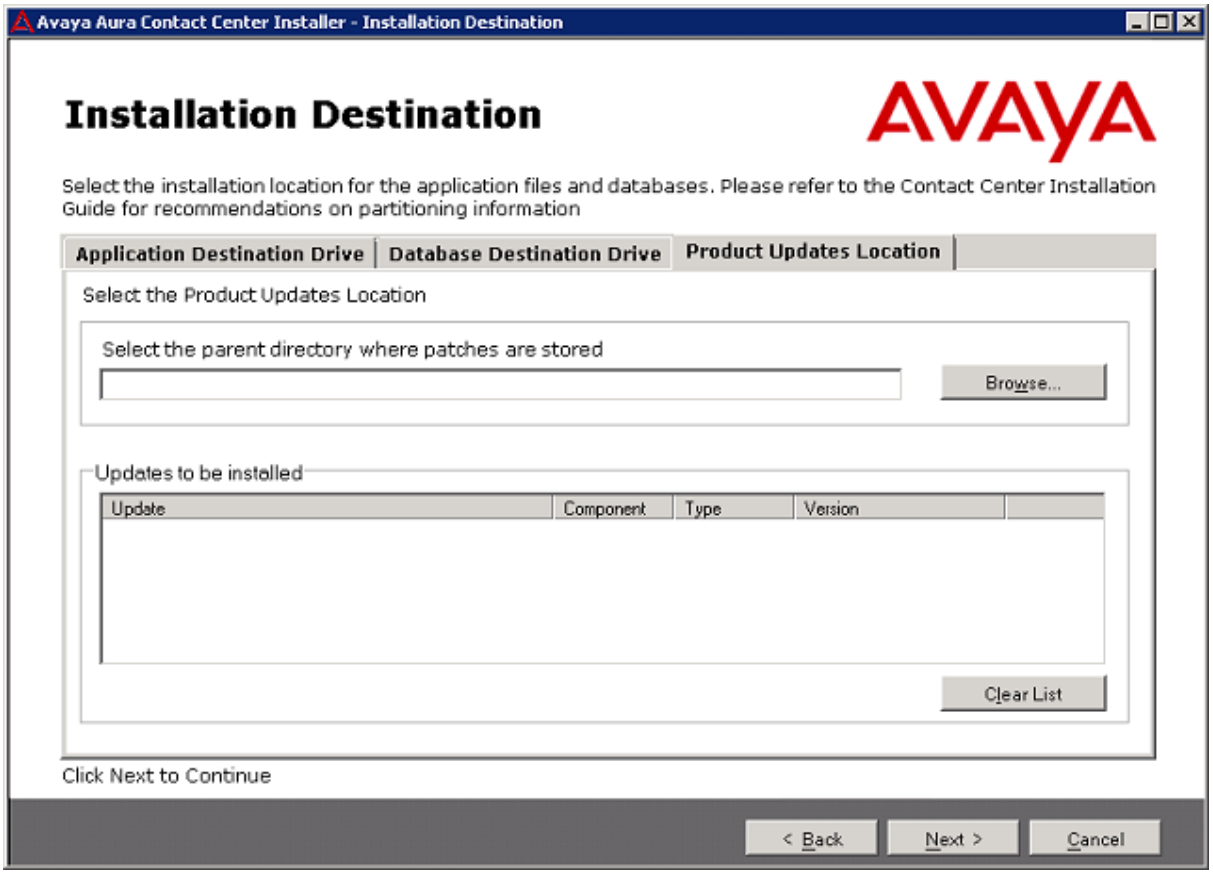
Procedure

1. Insert the Contact Center DVD into the DVD drive of your server.
2. If the installation does not automatically start, double-click **Setup.exe**.
3. Click **Install** to install the Microsoft .NET Framework and Visual C++ runtime libraries on the server.

   If you are prompted to accept the Microsoft .NET Framework license agreement, click **Accept**. If you are prompted to restart the server, click **Yes** and repeat step 2.
4. On the **Welcome** window, click **Next**.
5. On the **License Agreement** window, read the terms of the agreement.
6. Click **I Accept the Terms of the End-User License Agreement**.
7. Click **Next**.
8. On the **Installation Selection** window, under **Other**, select **Network Control Center Server Only**.
9. Click **Next**.



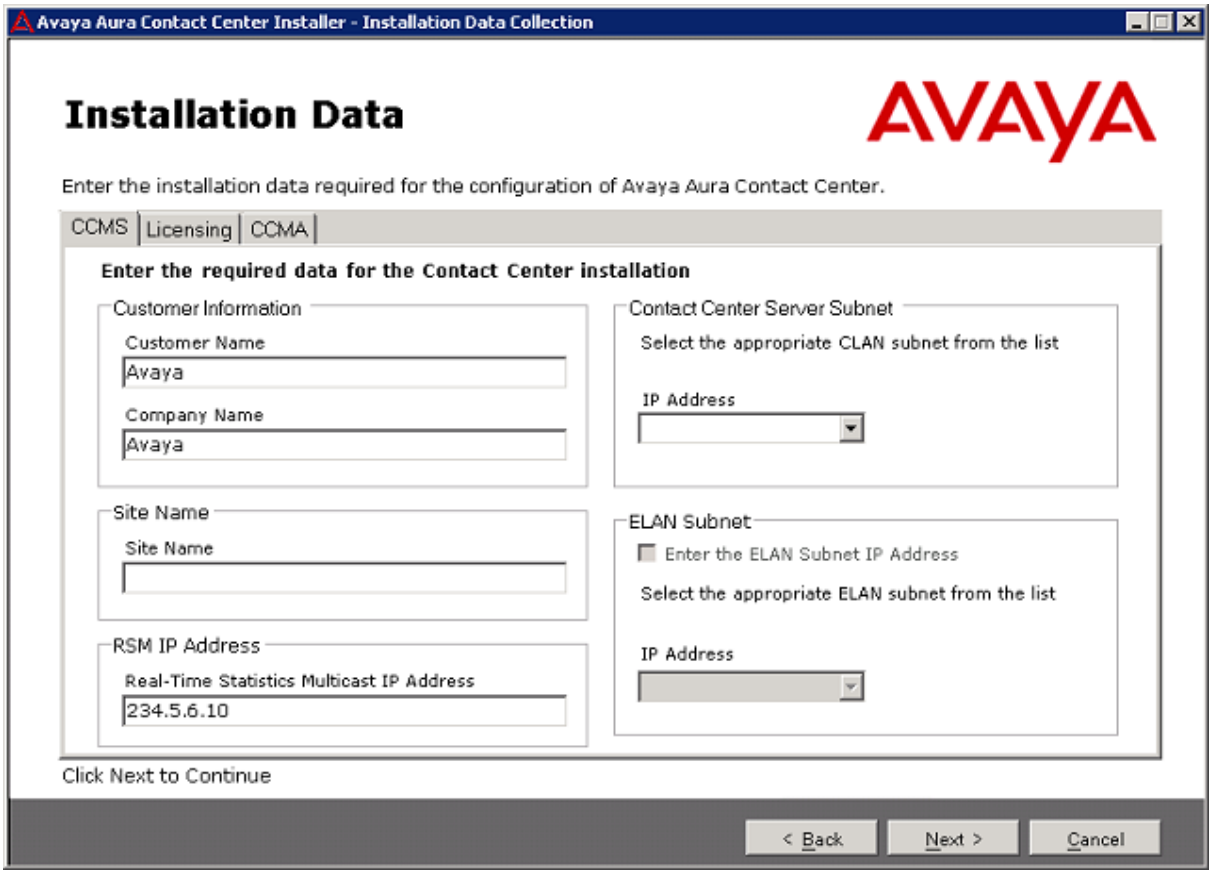
10. On the **Installation Destination** window, on the **Application Destination Drive** tab, select where to install the Contact Center application software by choosing a disk drive letter.
11. Click the **Database Destination Drive** tab.
12. Under **Select the destination drive for the Contact Center database files**, select the drive for the Contact Center Manager Server database.
13. Click the **Product Updates Location** tab.



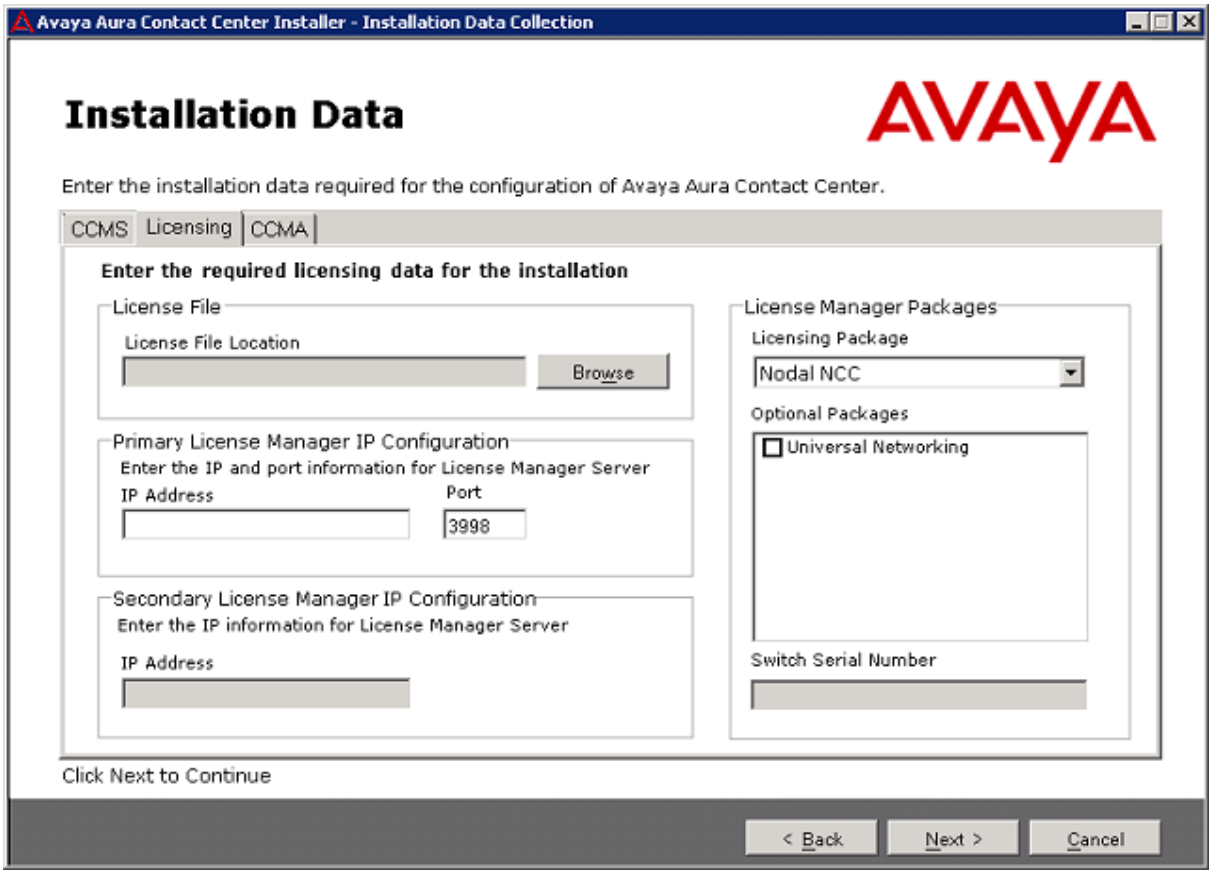
14. Under **Select the Product Updates Location**, click **Browse** to locate the folder containing the Contact Center product updates.
15. Click **Next**.

    The System Readiness Check runs on the server.
16. If the System Readiness Check utility returns a Fail, the software installation cannot proceed until you correct the problem. Review any failures returned by the System Readiness Check and consult *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211) to determine the actions to resolve the issue.

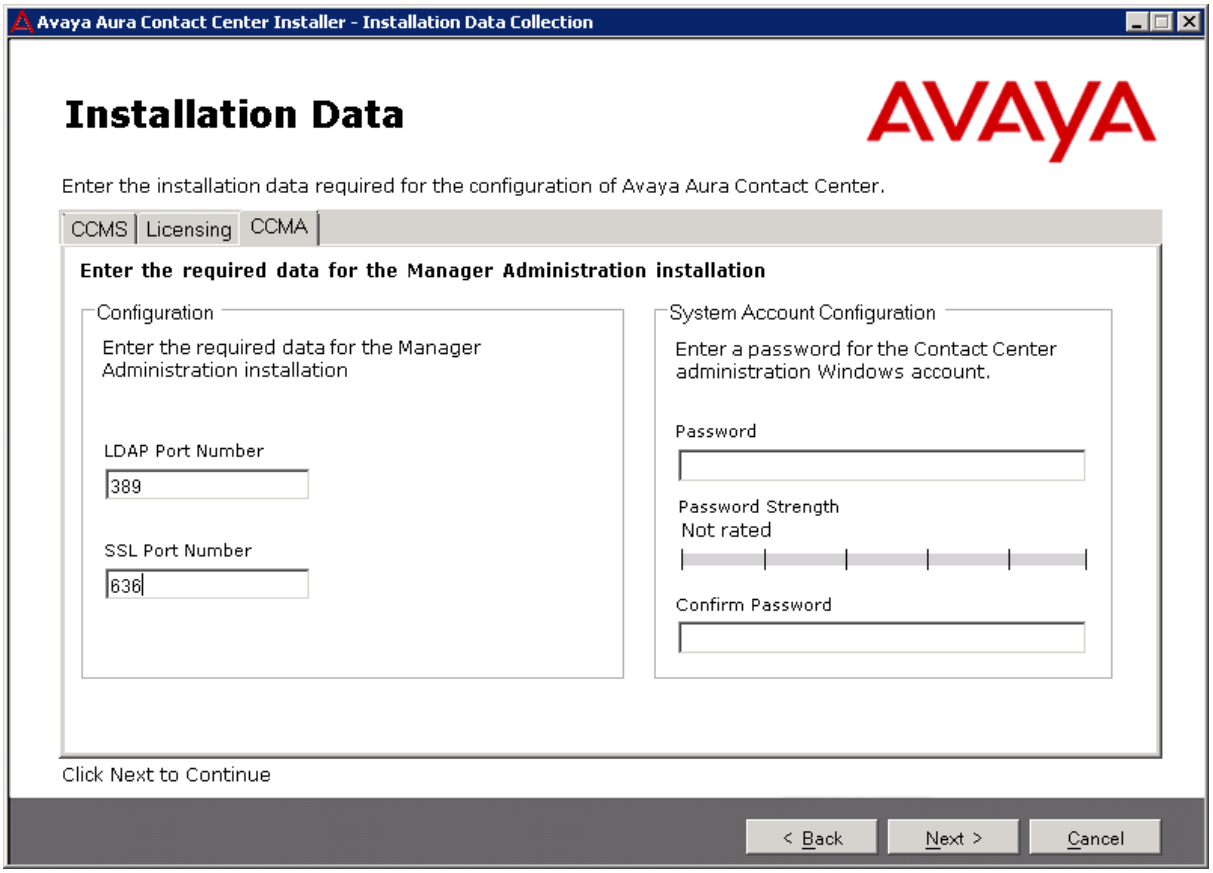
    You can ignore warnings if the potential impact to the operation of the contact center is understood and not applicable.
17. Click **Next**.
18. On the **Installation Data** window, type the installation details for each tab.
19. Select the **CCMS** tab, and configure the server details.



20. In the **Customer Name** box, type the customer name.
21. In the **Company Name** box, type the name of the company.
22. In the **Site Name** box, type the site name for the Contact Center server. The site name must not contain spaces or non-alphabetical characters except hyphen (-) and underscore (_). The first character must be a letter. The site name must be unique and can consist of 6 to 15 characters.
23. In the **RSM IP Address** box, type the Real-time Statistics Multicast IP Address of the server to associate with sending real-time data. The IP address must be from 224.0.1.0 to 239.255.255.255. The default is 234.5.6.10.
24. In the **Contact Center Server Subnet** section, from the **IP Address** list, select the IP Address of the NCC server.
25. Select the **Licensing** tab, and configure the licensing details.



26. The **License File Location** box displays the folder on the server which contains the license file.
27. In the **Primary License Manager IP Address** box, type the IP address of the primary License Manager server. This server contains a License Manager server. This License Manager server is the default primary License Manager.
28. In the **Primary License Port** box, type the number of the communication port opened between the License Manager and Network Contact Center. The default port number is 3998 when you use only one License Manager.
29. In the **Secondary License Manager IP Address** box, type the IP address of the secondary License Manager server. The secondary License Manager server is used only in a corporate licensed environment.
30. From the **Licensing Package** list, select the licenses that you have purchased. Select **Nodal NCC** or **Corporate NCC**.
31. From the list of **Optional Packages**, enable the licensed features that you have purchased.
32. Select the **CCMA** tab, and configure the CCMA details.



33. In the **LDAP Port Number** box, type the port number for the Lightweight Directory Access Protocol (LDAP) for which common contact information is stored on a server. The default value of the port is 389. Check with the system administrator to ensure that the port number is not already in use.
34. In the **SSL Port Number** box, type the port number for the Secure Sockets Layer (SSL) that controls security when applications are communicating across the network. The default port is 636. Check with the system administrator to ensure that the port number is not already in use.
35. In the **System Account Configuration** section, in the **Password** box, type the password for the CCMA System Account user account. Confirm the password in the second box. 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.
36. Click **Next**.
37. On the **Summary** window, review and verify the information.
38. Click **Install**.
39. After the installation is complete, click **Finish**.
40. If prompted, restart the server.

Securing the Windows server

About this task

Apply optional security measures to your operating system to further secure your server.

Important:

Scanning software can degrade the performance and decrease the reliability of the system. Install virus scanning software only if the system connects to an exposed network or to the Internet.

Important:

To maintain server performance, you must schedule virus scans during maintenance periods or low usage hours only.

Procedure

1. Harden the operating system using defined site procedures.
2. Install antivirus software. If you install antivirus software, Avaya recommends that you exclude some contact center files and folders from real-time and scheduled scans. For more information, and for a list of files and folders to exclude, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

Commissioning the server

About this task

Commission the installed server software.

Procedure

Commission the installed server software.

For information about commissioning the installed server software, see *Avaya Aura® Contact Center Commissioning* (44400-312).

Part 6: Client Software Installation

Chapter 31: Agent Desktop client software installation

This chapter describes how to install the Agent Desktop client software on each client computer in your contact center. The Agent Desktop enables agents to handle contacts of all media types enabled in your contact center from the start to the end of a contact. The Agent Desktop is part of the Avaya Aura® Contact Center solution.

You install the Agent Desktop client application on the client computers. Download the client software from the server by accessing a Web location on the server.

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

Agent Desktop client software installation prerequisites

Procedure

- Install Voice and Multimedia Contact Server software or Multimedia Contact Server software.
- Install one of the supported operating systems for Agent Desktop on the client computer. The supported operating systems are as follows:
  - Windows XP with Service Pack 2 (SP2) or later
  - Windows 7

    Note:

    If you are using Agent Desktop in *My Computer* mode on a client computer with the Microsoft Windows 7 operating system, you must install Windows 7 Service Pack 1 or later.
  - Windows Vista
  - Windows 8.1

Note:

Windows 8.1 environment does not support the *My Computer* mode in Agent Desktop, since embedded phone operation is not supported in Windows 8.1.

- Install Internet Explorer Release 7.0, 8.0, 9.0, or 10.0.
- If the contact center PABX is not an Avaya Communication Server 1000, on the contact center domain create a Windows OU that contains all the agents' desktop computers.

Assigning a group policy for embedded softphone settings

Before you begin

- This procedure does not apply to solutions using an Avaya Communication Server 1000. If you are using an Avaya Communication Server 1000, skip this procedure.
- You understand Windows group policy management.

Important:

This procedure describes the steps to follow on Windows 2008 Server. If you are using an earlier version of Windows for your domain controller, refer to the appropriate Windows documentation.

- You have created on the contact center domain a Windows OU that contains all the desktop computers for the agents using Agent Desktop.
- You have copied the `AAADSignalPort.ADM` file from the <Install Drive>:\Avaya\Contact Center\Multimedia Server\Common Utilities folder on the server where CCMM is installed, to a folder on the domain controller.

About this task

Assign the Group Policy administrative template with specific settings for Agent Desktop to your Windows domain controller. You need to copy the administrative template file from the CCMM server to the Windows domain controller. You also need to add all the desktop computers for the agents using Agent Desktop to an organization unit (OU) on the contact center domain. This procedure requires a reboot of all the desktop computers for the agents using Agent Desktop.

To support Secure Real-Time Transport Protocol (SRTP), you must configure Media Encryption settings on the Group Policy. The Media Encryption setting requires a string value which must include two values (X,Y). These two values are numbers corresponding to the supported media encryption settings, for example:

- 1 aescm128-hmac80
- 2 aescm128-hmac32
- 9 none

For more information on configuring SRTP in your Contact Center solution, see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration* (44400-521).

Important:

If agents do not have full registry read/write privileges you must apply this group policy.

Procedure

1. On the Windows domain controller, choose **Start** > **Administrative Tools** > **Group Policy Management**.
2. Right-click the OU to which you want to link the Group Policy administrative template. This is the OU that contains the agents' desktop computers.
3. Select **Create a GPO in this domain, and Link it here**.

   Windows displays the **New GPO** dialog.
4. In the **Name** box, type a name for the new GPO.
5. Click **OK**.
6. Expand the OU that contains the agents' desktop computers and right-click the GPO you created.
7. Click **Edit**.

   Windows displays the **Group Policy Management Editor** dialog.
8. Expand **Computer Configuration** > **Policies**.
9. Under **Computer Configuration**, right-click **Administrative Templates**.
10. Select **Add/Remove Templates**.

    Windows displays the **Add/Remove Templates** dialog.
11. Click **Add**.

    Windows displays the **Policy Templates** dialog.
12. Browse to the location where you copied the `AAADSignalPort.ADM` file, select this file, and click **OK**.
13. Click **Close**.
14. From the **View** menu, ensure filtering is turned off.
15. Under **Administrative Templates**, expand **Classic Administrative Templates (ADM)**.

    Two policy templates appear.
16. Select the first policy template you added, for example select SOFTWARE\Avaya\Avaya one-X Agent\Settings.



17. In the right-hand pane, right-click the **SignalProtocol** setting and click **Edit**.

    Windows displays the SignalProtocol Properties dialog.

18. On the **Setting** tab, select **Enabled**.
19. Type “1” in the **Signal Protocol** box.

    OR

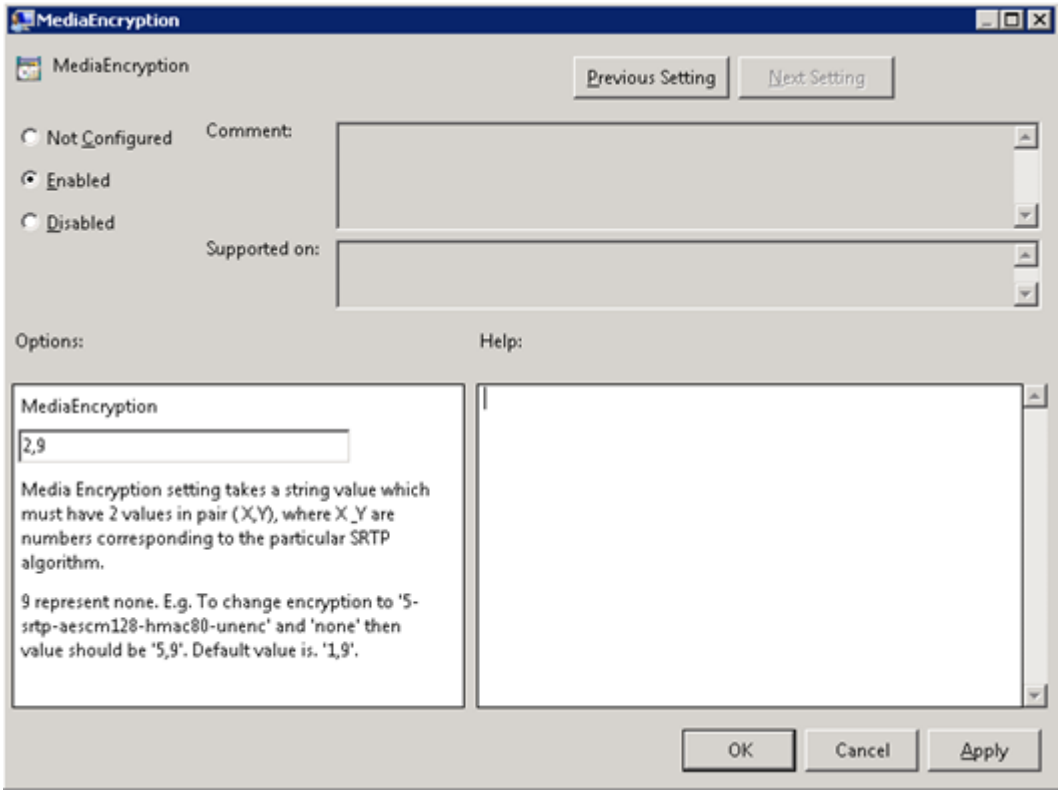
    If you are implementing SRTP for voice contacts within the contact center, type “2” in the **Signal Protocol** box.

20. Click **OK**.

    If you do not implement SRTP for voice contacts within the contact center, skip to step 25 on page 663.

21. In the right-hand pane, right-click the **MediaEncryption** setting and click **Edit**.
22. On the **MediaEncryption** window, select **Enabled**.
23. In the **MediaEncryption** box, type two of the supported media encryption settings.

    For example, type two of the supported values separated by a comma.



24. Click **OK**.
25. Select the second policy template you added, for example select SOFTWARE \Wow6432Node\Avaya\Avaya one-X Agent\Settings.
26. In the right-hand pane, right-click the **SignalProtocol** setting and click **Edit**.

    Windows displays the SignalProtocol Properties dialog.
27. On the **Setting** tab, select **Enabled**.
28. Type “1” in the **Signal Protocol** box.

    OR

    If you are implementing SRTP for voice contacts within the contact center, type “2” in the **Signal Protocol** box.
29. Click **OK**.

    If you do not implement SRTP for voice contacts within the contact center, skip to step 34 on page 664.
30. In the right-hand pane, right-click the **MediaEncryption** setting and click **Edit**.
31. On the **MediaEncryption** window, select **Enabled**.
32. In the **MediaEncryption** box, type two of the supported media encryption settings.

    For example, type two of the supported values separated by a comma.

33. Click **OK**.
34. Exit the **Group Policy Management Editor**.
35. Ensure all agents restart their desktop computers before accessing the Agent Desktop application for the first time.

Installing the Agent Desktop software prerequisites

About this task

Install the prerequisites for Agent Desktop client software. You must have administrator privileges to install Agent Desktop prerequisites.

Procedure

1. Log on to the client computer using administrator privileges.
2. On the client computer, start Internet Explorer.
3. In the **Address** box, type `http://<servername>/agentdesktop`.

   Where servername is the name of the server on which the Contact Center Multimedia server software is installed.
4. On the Agent Desktop page, click **Install Prerequisites**.

   The client downloads the .NET Framework and C++ software from the server and installs the application on the client.

   Note:

   Different client PC operating systems use different versions of MSI installer. Information about the different versions of MSI is available at http://www.microsoft.com/en-us/download/details.aspx?id=8483.

Installing the Agent Desktop client software

Before you begin

- Ensure that you have installed the prerequisites required for the Agent Desktop client software. For more information, see Installing the Agent Desktop software prerequisites on page 664.

About this task

Install the Agent Desktop client software on each client computer for which an agent logs on to handle contacts using the softphone and multimedia toolbar.

Procedure

1. On the client computer, start Internet Explorer.

2. In the **Address** box, type `http://<servername>/agentdesktop`.

   Where servername is the name of the server on which the Contact Center Multimedia server software is installed.

3. Click **Launch AAAD**.
4. On the **Application Install - Security Warning** message box, click **Install**.

Installing the required services for Agent Desktop QoS support

Before you begin

- Download the AAADQoS.zip file from http://support.avaya.com. Unzip the file and save the contents to a location on the client computer.

About this task

Quality of Service (QoS) allows for the prioritization of voice traffic over data traffic by tagging voice packets with priority tags. This allows switches to differentiate between both and to favour voice packets. This tagging is supported with the installation of an additional Windows service (iClarityQOSService) on each client computer. The AAADQoS.zip file contains iClarityQOSService.

Agent Desktop supports QoS only when using the embedded softphone mode on the Avaya Aura® Unified Communications platform. This procedure must be performed on each Agent Desktop client computer.

Note:

Support for Agent Desktop QoS requires additional Avaya Aura® Communication Manager configuration. For more information, see *Avaya Aura® Contact Center Configuration – Avaya Aura® Unified Communications Platform Integration*.

Procedure

1. Log on to the Agent Desktop client computer.
2. Open a command prompt by clicking **Start** > **All Programs** > **Run**. Type **cmd** and press Enter.
3. Navigate to the location of the downloaded QoS files.
4. Type the following command and press Enter:

   ```
   QosServInst –I [systemfolder]
   ```

   where, for example, systemfolder is `C:\windows\system32`

5. Type the following command and press Enter:

   ```
   net start iClarityQOSService
   ```

6. Close the command prompt window.

Registering Agent Desktop third-party headsets

Before you begin

- Download the AAADHeadsetSupport.msi file from http://support.avaya.com. Save the file to a location on the client computer.

About this task

Where Agent Desktop is deployed with an Avaya Aura® Communication Manager, you can use Agent Desktop in embedded soft phone mode. While using Agent Desktop in embedded soft phone mode, you can perform telephony operations (for example, call answer or hold) using buttons on certain third-party headsets. If you want to use third-party headsets to perform telephony operations, you must install the required third-party software on the client computer and you must register the headset interface dll.

Avaya Aura® Contact Center includes an .msi file that performs this automatic registration. This procedure describes how to install the required dll for Agent Desktop headset support.

Procedure

1. Navigate to the location of the downloaded AAADHeadsetSupport.msi file.
2. Double-click **AAADHeadsetSupport**.
3. Click **Next**.
4. Click **Install**.
5. After the installation completes, click **Finish**.

Chapter 32: Agent Desktop client software silent installation

This chapter describes how to install the Avaya Aura® Agent Desktop client software silently on each client computer in your contact center. Avaya Aura® Contact Center agents use Agent Desktop software to handle customer voice and multimedia contacts.

Installing software prerequisites for an Agent Desktop silent install

Before you begin

- Download the most recent Service Pack and patches from the Avaya support Web site, http://support.avaya.com.

About this task

Install the software prerequisites for Avaya Aura® 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 Contact Center server using administrator privileges.
2. Browse to `<DRIVE>:\Avaya-ProductUpdates\Install Software\CCMM \AvayaAura_CCMM_<XXX>\AAAD`, where <DRIVE> is the drive on which you downloaded the most recent Service Pack, and <XXX >is the version number of the latest Service Pack.
3. Copy the `AAAD 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.
4. Log on to the client computer using administrator privileges.
5. Copy the `AAAD Prerequisites` folder to the client computer.

6. If the client computer operating system is Windows Vista SP1:
   a. Open the Windows Installer 4.5 folder that matches the operating system version.
   b. Install Windows Installer 4.5.
7. Install Microsoft Dot Net Framework 4.0.
8. Install Microsoft Visual C++ 2005 SP1 Redistributable Package x86.
9. Install Microsoft Visual C++ 2008 SP1 Redistributable Package x86.

Installing Agent Desktop client software silently

Before you begin

- Download the most recent Service Pack and patches from the Avaya support Web site, http://support.avaya.com.

About this task

Install Avaya Aura® 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.

You can use the Windows Add\Remove programs utility to uninstall the Agent Desktop software.

Procedure

1. Log on to the Contact Center server using administrator privileges.
2. Browse to `<DRIVE>:\Avaya-ProductUpdates\Install Software\CCMM \AvayaAura_CCMM_<XXX>\`, where <DRIVE> is the drive on which you downloaded the most recent Service Pack, and <XXX >is the version number of the Service Pack.
3. Copy the `AvayaAuraAgentDesktopClient.msi` installation file.
4. Log on to the client computer using administrator privileges.
5. Copy the `AvayaAuraAgentDesktopClient.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 AvayaAuraAgentDesktopClient.msi /
quiet /log "products.log”  MMSERVERNAME=MyCCMMServer
AAADUSEHTTPS=FALSE
```

Where:

- MMSERVERNAME — This parameter configures the name of the Contact Center Multimedia (CCMM) 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 CCMM 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.

Chapter 33: Agent Desktop Displays software installation

This chapter describes how to prepare and install the Agent Desktop Displays software on each client in your Avaya Aura® Contact Center. The Agent Desktop Displays application provides real-time skillset monitoring on agent desktops for supervisors or contact center agents.

Prerequisites to Agent Desktop Displays software installation

Procedure

- Install a Voice and Multimedia Contact Server or a Multimedia Contact Server with a Voice Contact Server.
- Ensure that you have administrative privileges on the client.
- Ensure that one of the supported operating systems for Agent Desktop Displays is installed on the client. The supported operating systems are as follows:
  - Windows XP with Service Pack 2 (SP2) or later
  - Windows Vista
  - Windows 7
  - Windows 8.1

Installing Agent Desktop Display client software

Before you begin

- Configure a shared network directory on the Contact Center Manager Administration server.
- If you install Agent Desktop Displays on a Contact Center Manager Administration server that uses proxy settings for Internet Explorer, for Agent Desktop Displays to function, ensure that the proxy settings exception list includes the full computer name and IP address of the Contact Center Manager Administration server.

- The IP multicast addresses that you select for Real-time Statistics Multicast (RSM) sending and receiving must be within the 224.0.1.0 to 239.255.255.255 range. Ask your network administrator for acceptable IP multicast addresses for your network.

About this task

Install Agent Desktop Display software to provide skillset monitoring to Contact Center Manager Server agents.

You can install both the standard English version and the multilanguage support version of the Agent Desktop Display client software.

Procedure

1. Log on to the client PC with administrator privileges.
2. Browse to the shared network directory on the Contact Center Manager Administration server at **<install directory>: \Avaya\Contact Center\Manager Administration\Apps\ADD \ADD Client**.

   OR

   Insert the Contact Center DVD into the DVD drive of the client PC and browse to **Install Software**, **CCMA**, **Agent Desktop Displays Client**.
3. Double-click **setup.exe**.
4. In the **Agent Desktop Displays - InstallShield Wizard** dialog box, from the list, select the language in which to install Agent Desktop Display.
5. Click **OK**.
6. In the **Welcome to the InstallShield Wizard for Agent Desktop Displays** dialog box, click Next.
7. In the **Customer Information** dialog box, in the **User name** box, type a user name.
8. In the **Organization** name box, type your company name.
9. Select **Anyone who uses this computer (all users)**.
10. Click **Next**.
11. In the **Setup Type** dialog box, select **Complete** to install all Agent Desktop Display components in the default directory.
12. Click **Next**.
13. In the **Ready to Install the Program** dialog box, click **Install**.
14. If a **Files in Use** dialog box appears, click **Retry**.
15. In the **Server Configuration** dialog box, in **Contact Center Manager Administration: Active** box, type the IP address or host name of the active Contact Center Manager Administration server.

    If Avaya Aura® Contact Center is configured for High Availability, enter the Managed IP address for the Avaya Aura® Contact Center server with Contact Center Manager Administration software installed.

16. In the **Active Port** box, type the port number for the active Contact Center Manager Administration server.
17. In the **Contact Center Manager Server: Active** box, type the IP address or host name of the active Contact Center Manager Server.

    If Avaya Aura® Contact Center is configured for High Availability, enter the Managed IP address for the Avaya Aura® Contact Center server with Contact Center Manager Server software installed.
18. If you install a standby Contact Center Manager Administration server, in the **Contact Center Manager Administration: Standby** box, type the IP address or host name of the standby Contact Center Manager Administration server.

    If Avaya Aura® Contact Center is configured for High Availability, enter the Managed IP address for the Avaya Aura® Contact Center server with Contact Center Manager Administration software installed.
19. In the **Standby Port** box, type the port number for the standby Contact Center Manager Administration server.
20. If you install a standby Contact Center Manager Server, in the **Contact Center Manager Server: Standby** box, type the IP address or host name of the standby Contact Center Manager Server.

    If Avaya Aura® Contact Center is configured for High Availability, enter the Managed IP address for the Avaya Aura® Contact Center server with Contact Center Manager Server software installed.
21. Select the **Active** Contact Center Manager Administration server check box.
22. Select the **Active** Contact Center Manager Server server check box.
23. Click **Save**.
24. In the **InstallShield Wizard Completed** dialog box, click **Finish**.

Installing Windows update KB917607

Before you begin

- Install Windows Vista.
- Open www.microsoft.com.

About this task

If you install Windows Vista on the client, users cannot view online help for Agent Desktop Displays. To view online help, you must download and install Windows update KB917607 on each client. This update includes the WinHlp32.exe file, which is required to view WinHelp help files, such as Agent Desktop Display online Help.

Procedure

1. On the Microsoft Web site, search for the file **KB917607**.
2. In the list of search results, browse to and click the download link.
3. Follow the download and install instructions.

Chapter 34: Orchestration Designer client software installation

This chapter describes how to install the Orchestration Designer software on a client computer so that you can create flows for routing voice and multimedia contacts in an offline mode to minimize disruption within your Avaya Aura® Contact Center.

The Orchestration Designer software is also installed on the Voice and Multimedia Contact Server, or on the Voice Contact Server, and you can use an offline mode to create scripts.

Job aid: Installation time

The estimated time to install the Orchestration Designer client software is 30 minutes. This time can vary depending on the server, network infrastructure, and your confidence level with the software. This installation time is based on installing a server that meets the minimum specification for this function.

Installing the Orchestration Designer client software

Before you begin

- Ensure that you have enough free disk space on the C drive. See *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).

About this task

Install the Orchestration Designer software on a client to allow your administrator to create scripts for routing calls offline. You can then import the new scripts into your contact center when the new scripts are tested and validated.

Procedure

1. From the client computer, log on to Contact Center Manager Administration.
2. On the Launchpad, click **Scripting**.
3. Select **Orchestration Designer** > **Launch Orchestration Designer**.

   Install any additional software, if a window opens with an installation request.

A VBScript window opens.

4. Click **OK**.
5. Click **Run**.

   Follow the on-screen instructions to complete the Orchestration Designer client software install.

Chapter 35: Avaya Communication Server 1000 Data Extraction Tool installation

This chapter describes how to install the Avaya Aura® Contact Center Avaya Communication Server 1000 Data Extraction Tool software. The CS 1000 Data Extraction Tool is a software application that extracts information about resources such as Terminal Numbers (TNs), voice ports, Controlled Directory Numbers (CDNs), Interactive Voice Response Automatic Call Distribution DNs (IVR ACD-DNs), and routes from an Avaya Communication Server 1000 PABX. The tool saves this information in Excel spreadsheets.

You can install the Avaya Communication Server 1000 Data Extraction Tool on a client PC or on the Contact Center Manager Administration server.

Avaya Communication Server 1000 Data Extraction Tool software installation prerequisites

Procedure

- Ensure that your client computer meet all requirements. For more information, see *Avaya Aura® Contact Center Fundamentals and Planning* (44400-211).
- Install Microsoft Excel 97 or later on the client computer.

Job aid: Installation time

The estimated time to install the Avaya Communication Server 1000 Data Extraction Tool software is 15 minutes. This time can vary depending on the server, network infrastructure, and your confidence level with the software. This installation time is based on installing a server that meets the minimum specification for this function.

Installing the Avaya Communication Server 1000 Data Extraction Tool software

About this task

Install the Avaya Communication Server 1000 Data Extraction Tool to allow an administrator to extract information about resources such as Terminal Numbers (TNs), voice ports, Controlled Directory Numbers (CDNs), Interactive Voice Response Automatic Call Distribution DNs (IVR ACD-DNs), and routes from the Avaya Communication Server 1000.

Procedure

1. Insert the Contact Center DVD into the DVD drive and browse to **Install Software**, **CCMA**, **CS1000 Data Extraction Tool**.
2. Double-click **CS1000 Data Extraction Tool.msi**.
3. On the **Welcome** dialog box, click **Next**.
4. On the **Destination Folder** dialog box, click **Next** to accept the default folder for the Avaya Communication Server 1000 Data Extraction Tool.

   OR

   Click **Change** to choose a new location.
5. On the **Ready to Install the Program** dialog box, click **Install**.
6. On the **InstallShield Wizard Completed** dialog box, click **Finish**.

Chapter 36: Client software installation in a Citrix deployment

This chapter describes how to configure and publish Avaya Aura® Contact Center software applications in a Citrix deployment.

Client software installation prerequisites

Procedure

- Install the required Contact Center server software.
- Ensure that you have administrative privileges on the client.
- Install one of the supported operating systems on the client computer. The supported operating systems are as follows:
  - Windows XP with Service Pack 2 (SP2) or later
  - Windows 7
  - Windows Vista
- Install Internet Explorer Release 7.0, 8.0, 9.0, or 10.0.
- If the contact center PABX is not an Avaya Communication Server 1000, on the contact center domain create a Windows OU that contains all the agents' desktop computers.

Publishing Agent Desktop client software on a Citrix server

Before you begin

- Install Avaya Aura® Agent Desktop on the Voice and Multimedia Contact Server or the Multimedia Contact Server.
- Copy the Agent Desktop client folder from the server where Agent Desktop is installed to a location on the Citrix server. The folder is located on the server at: `D:\Avaya\Contact Center\Multimedia Server\Agent Desktop\client`

About this task

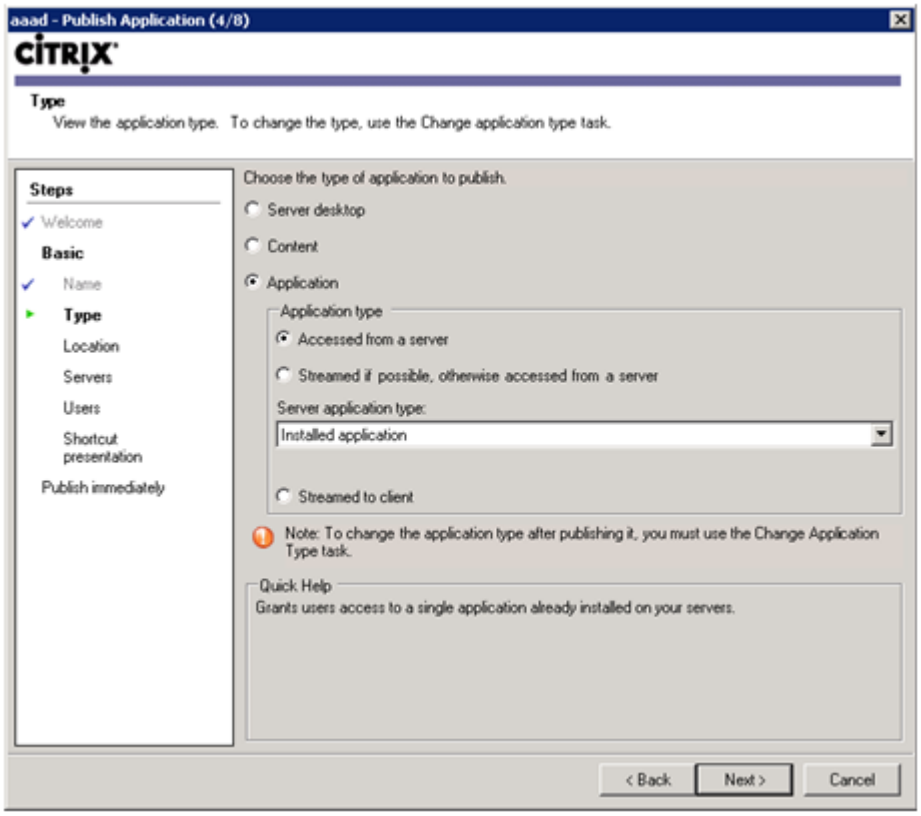
You can launch Agent Desktop client software on a client computer using a Citrix server. You must configure your Citrix server to publish Agent Desktop as a published application before you can launch Agent Desktop software on client computers. Publish Agent Desktop client software on a Citrix Server by following the procedure below.

Note:

The following example uses Citrix XenApp 6.5.

Procedure

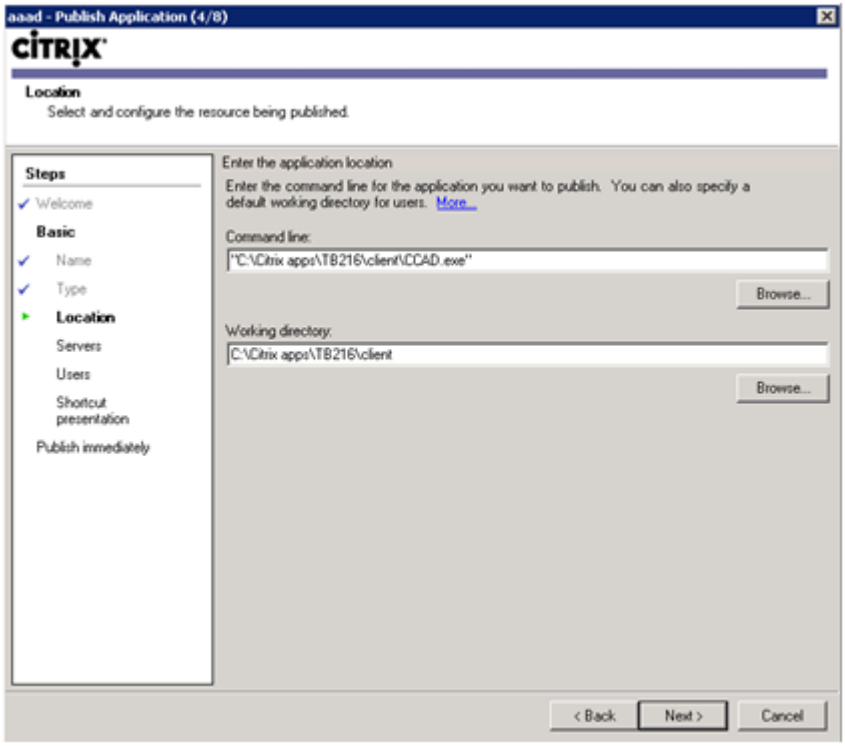
1. On your Citrix server, open Citrix AppCenter.
2. In the left pane, right-click **Applications** and click **Publish Application**.
3. On the **Name** window, in the **Display name** box, type a name for the new published application. For example, type `Agent Desktop`.
4. In the **Application description** box, type a description for the new published application.
5. Click **Next**.
6. On the **Type** window, under **Application type**, select **Accessed from a server**.



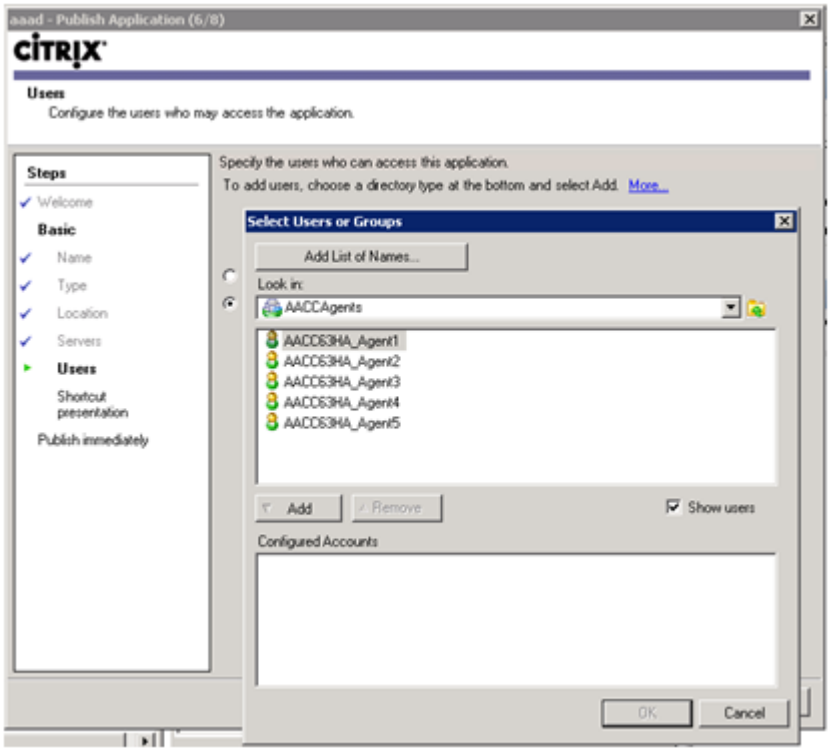
7. Click **Next**.
8. On the **Location** window, click **Browse**.

Comments? infodev@avaya.com

9. Navigate to the location on the Citrix server where the Agent Desktop client folder is stored.
10. Select the CCAD.exe file and click **OK**.



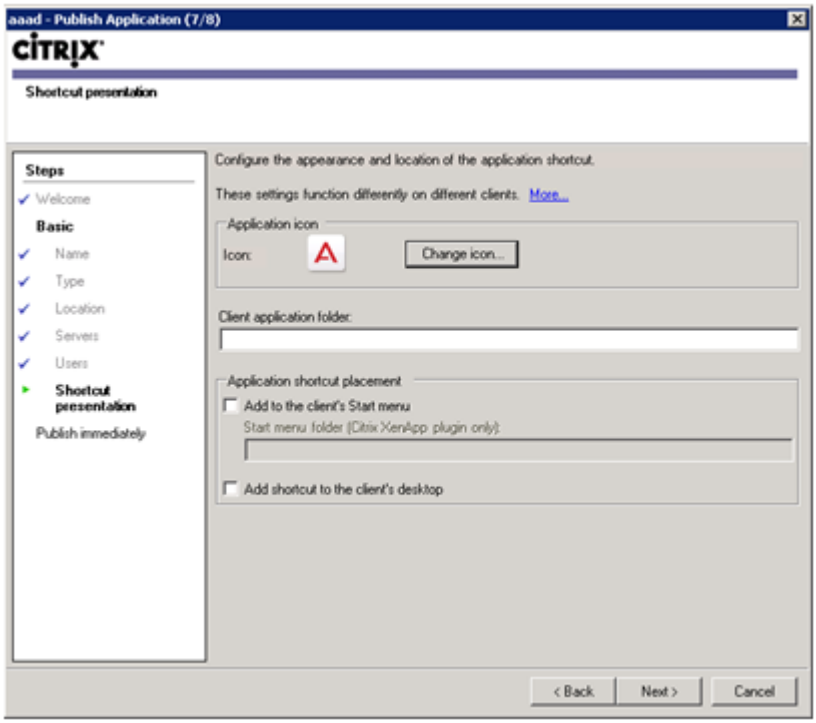
11. Click **Next**.
12. On the **Servers** window, click **Add**.
13. On the **Select Servers** dialog box, select the Citrix server used to run the Agent Desktop application and click **Add**.
14. Click **OK**.
15. Click **Next**.
16. On the **Users** window, click **Add**.
17. On the **Select Users or Groups** dialog box, select the users allowed to run the published application. For example, select your Contact Center agents and click **Add**.



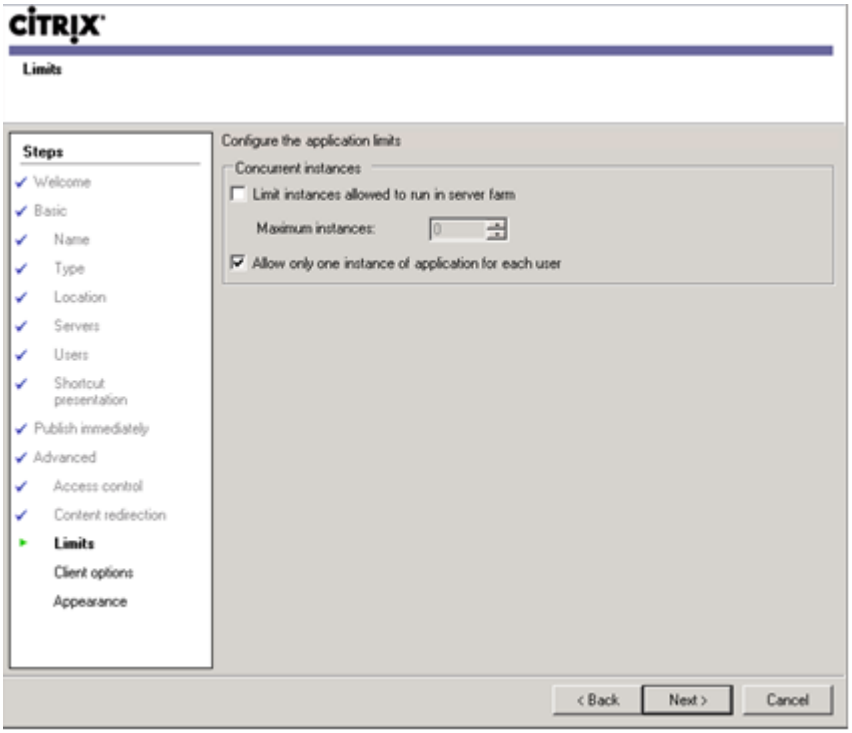
18. Click **OK**.
19. Click **Next**.
20. On the **Shortcut presentation** window you can select from a number of shortcut options for display on the browser.

    Note:

    The Agent Desktop icon appears by default as an icon. You can also choose to create a client application folder on each client computer that contains all published applications, or add shortcuts to the client's Start menu or desktop.



21. Click **Next**.
22. On the **Publish immediately** window, select **Configure advanced application settings now** and click **Next**.
23. Continue clicking **Next** until the **Limits** window appears.
24. Select **Allow only one instance of application for each user**.



25. Click **Next**.
26. Click **Finish**.
27. On the client computer, agents can now launch Agent Desktop using one of the configured shortcuts.

Publishing Contact Center Manager Administration on a Citrix server as content

Before you begin

- Install a Voice and Multimedia Contact Server or Voice Contact Server.

About this task

You can access the Contact Center Manager Administration application on a client computer using a Citrix server. You must configure your Citrix server to publish CCMA as published content.

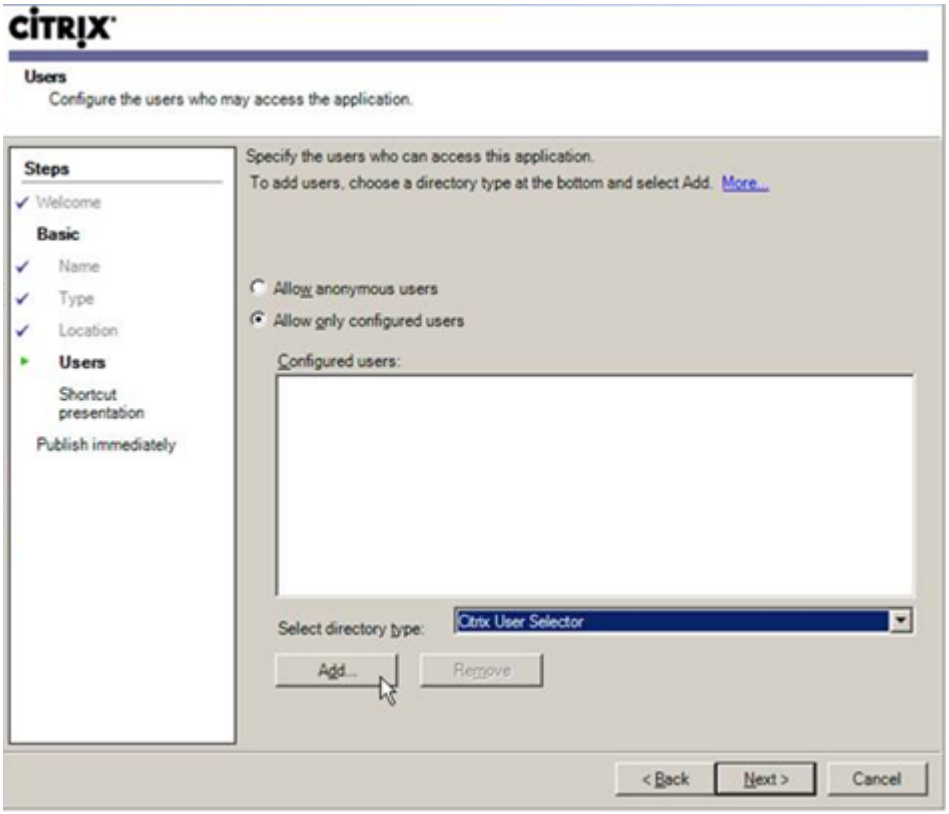
Procedure

1. On your Citrix server, open Citrix AppCenter.
2. In the left pane, right-click **Applications** and click **Publish Application**.
3. On the **Name** window, in the **Display name** box, type a name for the new published application. For example, type ccma.

4. In the **Application description** box, type a description for the new published application.
5. Click **Next**.
6. On the **Type** window, under **Choose the type of application to publish**, select **Content**.
7. Click **Next**.
8. On the **Location** window, type the Contact Center Manager Administration URL. For example, type

   `http://<server name>`

   where <server name> is the name of the server CCMA is installed on.
9. Click **Next**.
10. On the **Users** window, select **Allow only configured users**.
11. Select **Citrix User Selector** as the **directory type**.
12. Click **Add**.



13. On the **Select Users or Groups** dialog box, select the users allowed to run the published application. For example, select your Contact Center administrators and click **Add**.
14. Click **OK**.
15. Click **Next**.

16. Click **Next**.
17. Click **Finish**.
18. On the client computer, authorized users can now access CCMA using the Citrix client.

Publishing Contact Center Manager Administration on a Citrix server as an installed application

Before you begin

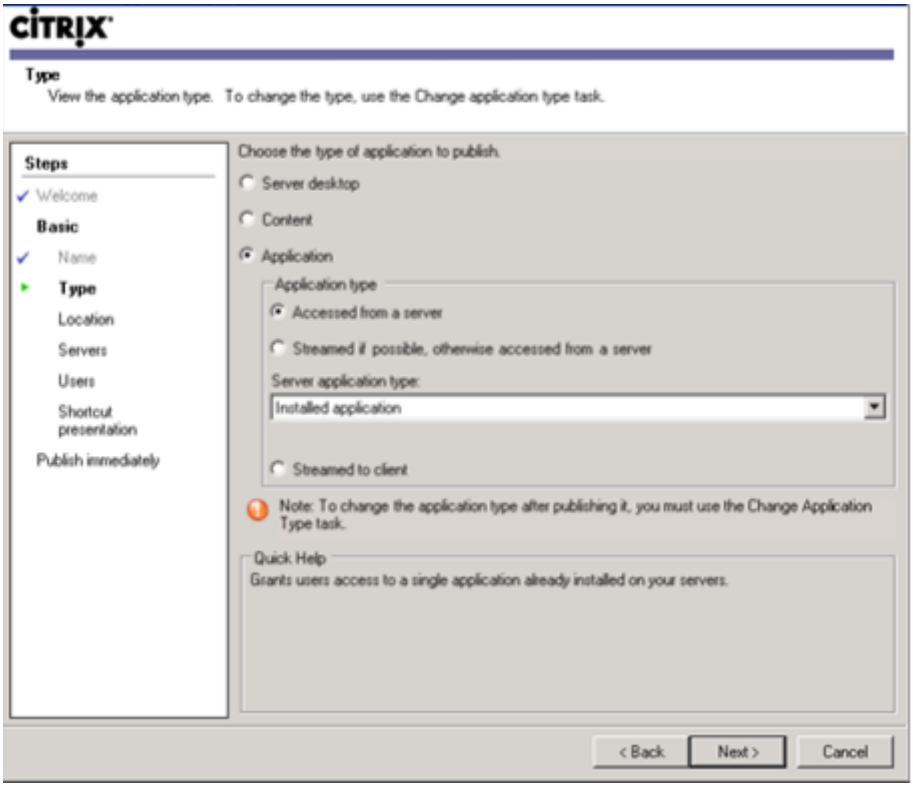
- Install a Voice and Multimedia Contact Server or Voice Contact Server.

About this task

You can access the Contact Center Manager Administration application on a client computer using a Citrix server. You must configure your Citrix server to publish CCMA as an installed application.

Procedure

1. On your Citrix server, open Citrix AppCenter.
2. In the left pane, right-click **Applications** and click **Publish Application**.
3. On the **Name** window, in the **Display name** box, type a name for the new published application. For example, type ccma.
4. In the **Application description** box, type a description for the new published application.
5. Click **Next**.
6. On the **Type** window, under **Choose the type of application to publish**, select **Application**.
7. Under **Application Type**, select **Accessed from a server**.

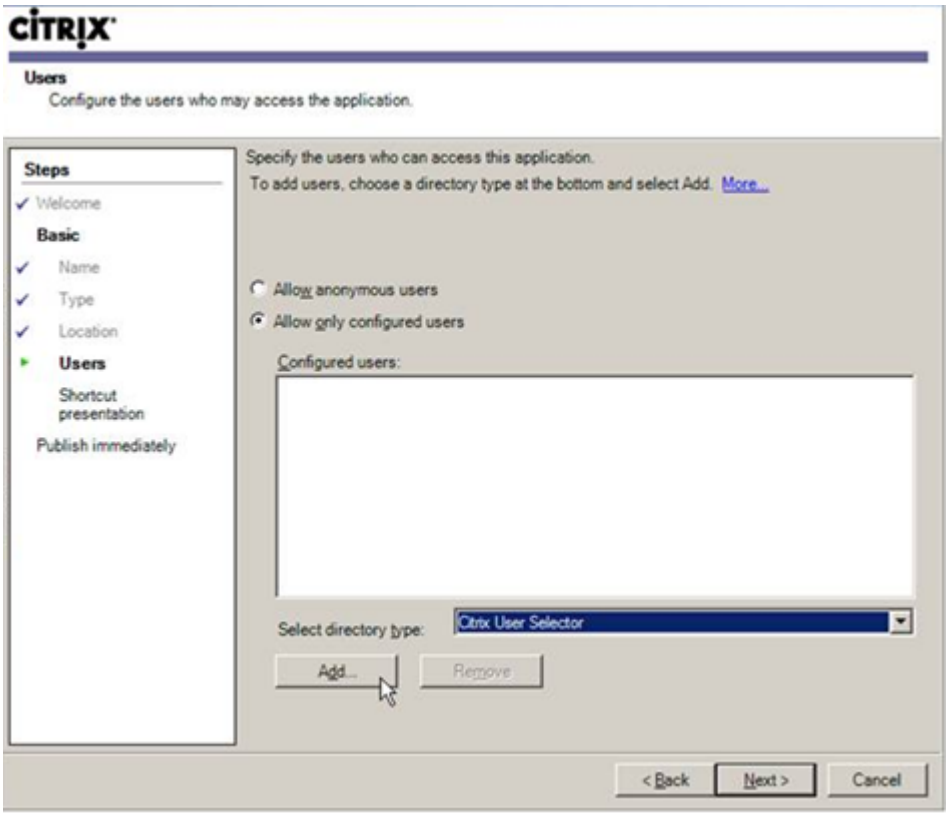


8. Click **Next**.
9. On the **Location** window, click **Browse**.
10. Navigate to the location on the Citrix server of the Internet Explorer executable. For example, navigate to C:\Program Files (x86)\Internet Explorer\iexplore.exe.
11. Ensure the location appears within quotation marks, and type the Contact Center Manager Administration URL after the location. For example, type

    ```
    "C:\Program Files (x86)\Internet Explorer\iexplore.exe" http://
    <server name>
    ```

    where <server name> is the name of the server CCMA is installed on.
12. Click **Next**.
13. On the **Servers** window, click **Add**.
14. On the **Select Servers** dialog box, select the Citrix server used to run the CCMA application and click **Add**.
15. Click **OK**.
16. Click **Next**.
17. Click **Next**.
18. On the **Users** window, select **Allow only configured users**.
19. Select **Citrix User Selector** as the **directory type**.

20. Click **Add**.



21. On the **Select Users or Groups** dialog box, select the users allowed to run the published application. For example, select your Contact Center administrators and click **Add**.
22. Click **OK**.
23. Click **Next**.
24. Click **Next**.
25. Click **Finish**.
26. On the client computer, authorized users can now access CCMA using the Citrix client.

Publishing Agent Desktop Displays client software on a Citrix server

Before you begin

- Install Agent Desktop Displays (ADD) client software on the Citrix server. The Agent Desktop Displays client folder is located on the server where CCMA is installed at `D:\Avaya\Contact Center\Manager Administration\Apps\ADD`. For more information, see Installing Display client software on page 670.

About this task

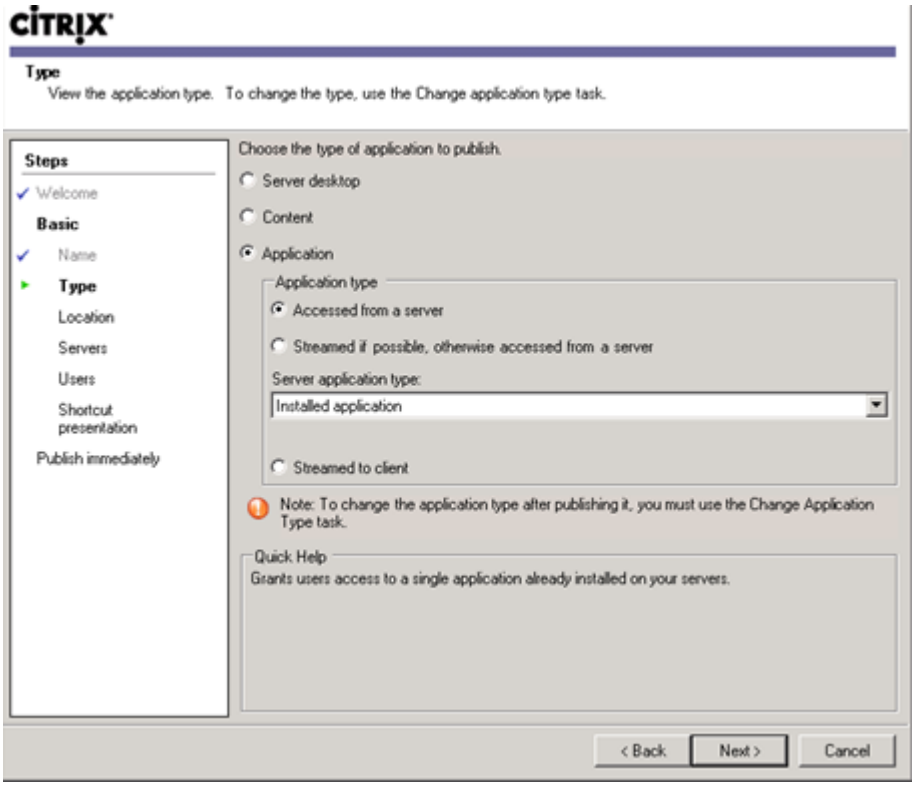
You can launch Agent Desktop Displays client software on a client computer using a Citrix server. You must configure your Citrix server to publish ADD as a published application before you can launch Agent Desktop Displays software on client computers. Publish Agent Desktop Displays client software on a Citrix Server by following the procedure below.

Note:

The following example uses Citrix XenApp 6.5.

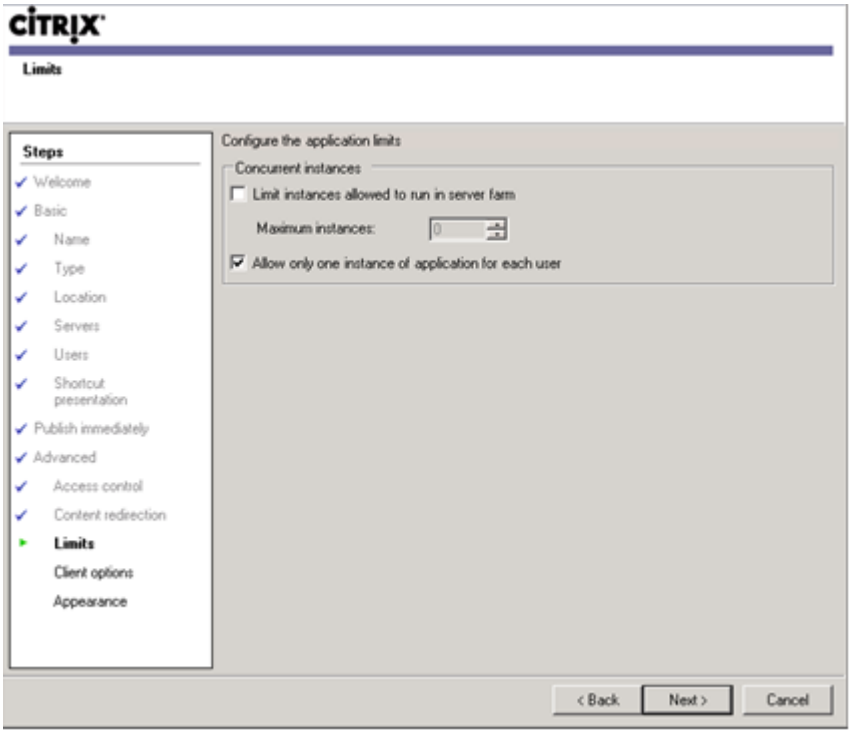
Procedure

1. On your Citrix server, open Citrix AppCenter.
2. In the left pane, right-click **Applications** and click **Publish Application**.
3. On the **Name** window, in the **Display name** box, type a name for the new published application. For example, type ADD.
4. In the **Application description** box, type a description for the new published application.
5. Click **Next**.
6. On the **Type** window, under **Application type**, select **Accessed from a server**.



7. Click **Next**.
8. On the **Location** window, click **Browse**.

9. Navigate to the location on the Citrix server where Agent Desktop Displays is installed, for example `C:\Program Files (x86)\Avaya\ADD\`.
10. Select the ADDTabular.exe file and click **OK**.
11. Click **Next**.
12. On the **Servers** window, click **Add**.
13. On the **Select Servers** dialog box, select the Citrix server used to run the ADD application and click **Add**.
14. Click **OK**.
15. Click **Next**.
16. On the **Users** window, click **Add**.
17. On the **Select Users or Groups** dialog box, select the users allowed to run the published application. For example, select your Contact Center administrators and click **Add**.
18. Click **OK**.
19. Click **Next**.
20. Click **Next**.
21. On the **Publish immediately** window, select **Configure advanced application settings now** and click **Next**.
22. Continue clicking **Next** until the **Limits** window appears.
23. Select **Allow only one instance of application for each user**.



24. Click **Next**.
25. Click **Finish**.
26. On the client computer, authorized users can now launch Agent Desktop Displays using the Citrix client.

Part 7: Software Uninstall

Chapter 37: Server software uninstallation

Remove any Avaya Aura® Contact Center Release 6.4 server software from your server to prepare to move the software component to another network server.

Caution:

Before you uninstall an Avaya Aura® Contact Center application, backup that application's database. Avaya recommends that you backup application databases to a remote secure network location.

Prerequisites for server software uninstallation

Procedure

Ensure that you have the uninstaller on the server or that you have the Contact Center Release 6.4 server installation DVD in the DVD drive.

Removing the server software patches

Before you begin

- Ensure that you know the most recent patch.

About this task

Remove the most recent patches to ensure that you have your base software remaining to remove.

Procedure

1. On the server, click **Start** > **All Programs** > **Avaya** > **Common Utilities** > **Contact Center Patch Manager**.
2. On the Avaya Contact Center Update Manager dialog box, select the **All Updates** tab.

3. Click **Select all**.
4. Click **Remove Selected Updates**.
5. Click **Remove**.
6. Click **Close**.
7. Restart the server.

Removing the server software

Before you begin

- Remove all patches for the server software you want to remove.
- To maintain the database, ensure that you back up the database to another network location.

About this task

Remove all or parts of the server software to remove the software applications and corresponding databases from the server.

You can remove the server software with the un-installer on the server or with the setup.exe file on your Contact Center Release 6.4 DVD.

The installation for CCMA includes AD-LDS software. The CCMA un-installation does not fully remove AD-LDS. Removing AD-LDS can cause the operating system to malfunction. To un-install AD-LDS software, see *Avaya Aura® Contact Center Troubleshooting* (44400-712). However, un-installing CCMA removes the AD-LDS CCMA Instance (CCMA data store).

Procedure

1. Click **Start** > **All Programs** > **Avaya** > **Contact Center** > **Uninstall Contact Center**.
2. On the **Welcome** window, click **Next**.
3. On the **Remove Selection** window, select **Remove ALL Server Software**.
4. Click **Remove**.
5. Confirm the software applications to remove.
6. Click **Remove**.
7. After the installation is complete, click **Finish**.
8. If you are prompted, restart the server.

Removing the Avaya Media Server software

Before you begin

- To maintain the database, ensure that you back up the database to another network location.

About this task

To increase the number of active agents in your contact center solution, or to support High Availability, remove the co-resident Avaya Media Server software from this server. If you remove the co-resident Avaya Media Server software, and if your contact center solution supports voice contacts, you must install one or more standalone Avaya Media Server Linux-based servers in this solution.

Procedure

1. Click **Start** > **All Programs** > **Avaya** > **Contact Center** > **Uninstall Contact Center**.
2. On the **Welcome** window, click **Next**.
3. On the **Remove Selection** window, select **Remove Avaya Media Server Software**.
4. Click **Remove**.
5. Confirm the software applications to remove.
6. Click **Remove**.
7. After the installation is complete, click **Finish**.
8. If you are prompted, restart the server.

Removing the Multimedia Contact Server software

Before you begin

- To maintain the database, ensure that you back up the database to another network location.

About this task

To increase the number of active agents in your contact center solution, backup the Multimedia database and then remove the co-resident Multimedia Contact Server software from this server. If you remove the co-resident Multimedia Contact Server software, you must install a standalone Multimedia Contact Server Only server in this solution.

Procedure

1. Click **Start** > **All Programs** > **Avaya** > **Contact Center** > **Uninstall Contact Center**.
2. On the **Welcome** window, click **Next**.
3. On the **Remove Selection** window, select **Remove Multimedia Contact Server Software**.
4. Click **Remove**.
5. Confirm the software applications to remove.
6. Click **Remove**.
7. After the installation is complete, click **Finish**.
8. If you are prompted, restart the server.

Chapter 38: Client Software uninstallation

Remove any Avaya Aura® Contact Center Release 6.4 client software from your client computer. In High Availability (HA) solutions, you must uninstall the Agent Desktop client software downloaded directly from the original server. You must then install the Agent Desktop client software from the Managed IP or Managed Name of the Voice and Multimedia Contact Server or the Multimedia Contact Server HA pair.

Removing the Agent Desktop client software

About this task

Remove Agent Desktop client software from a client computer. The software uninstall is completed using the Windows Control Panel.

Note:

This example procedure is performed on a Windows 7 client.

Procedure

1. Log on to the Agent Desktop client computer.
2. Click the Start icon and select **Control Panel**.
3. Under **Programs**, click **Uninstall a program**.
4. From the **Name** list, select **Avaya Aura Agent Desktop 6.0** and click **Uninstall/Change**.
5. On the **Avaya Aura Agent Desktop 6.0 Maintenance** box, ensure **Remove the application from this computer** is selected and click **OK**.

Removing the Agent Desktop Displays software

About this task

Remove Agent Desktop Displays software from a client computer. The software uninstall is completed using the Windows Control Panel.

Note:

This example procedure is performed on a Windows 7 client.

Procedure

1. Log on to the client computer.
2. Click the Start icon and select **Control Panel**.
3. Under **Programs**, click **Uninstall a program**.
4. From the **Name** list, select **Agent Desktop Displays** and click **Uninstall**.
5. Click **Yes**.

Removing the Orchestration Designer client software

About this task

Remove Orchestration Designer software from a client computer. The software uninstall is completed using the Windows Control Panel.

Important:

Local data is preserved in Orchestration Designer after the Orchestration Designer software is removed. If you reinstall Orchestration Designer software on the client computer, your previous local data is available.

Note:

This example procedure is performed on a Windows 7 client.

Procedure

1. Log on to the client computer.
2. Click the Start icon and select **Control Panel**.
3. Under **Programs**, click **Uninstall a program**.
4. From the **Name** list, select **Orchestration Designer - Contact Center Client** and click **Uninstall**.
5. Click **Yes**.

Uninstalling the required services for Agent Desktop QoS support

About this task

Uninstall the Windows service (iClarityQOSService) required for Agent Desktop QoS on the client computer. This procedure is similar to the installation procedure.

Procedure

1. Log on to the Agent Desktop client computer.
2. Open a command prompt by clicking **Start** > **All Programs** > **Run**. Type **cmd** and press Enter.
3. Navigate to the location of the downloaded QoS files.
4. Type the following command and press Enter:

   ```
   QosServInst –u
   ```

5. Close the command prompt window.

Chapter 39: Avaya Media Server uninstallation on Linux

This chapter describes how to uninstall Avaya Media Server software on Linux.

Uninstalling Avaya Media Server on Linux

About this task

Perform the following procedure to uninstall Avaya Media Server on Linux.

Procedure

1. Log in as the root user.
2. Run the Contact Center Services For Avaya Media Server uninstaller by using the following commands:

   ```
   cd /opt/avaya
   ./UninstallCCSA
   ```

3. At the **Also remove Avaya Media Server** prompt, type y.
4. To uninstall Access Security Gateway (ASG) software, type the following command:

   ```
   rpm -e asgtools
   ```

Appendix A: Free open source software licensing

Avaya Aura® Contact Center contains a number of open source software packages, which are embedded and delivered as part of the installation. This appendix lists the suppliers of these packages and the associated public licenses for their distribution and use.

TAO

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