



# Installing Avaya Control Manager

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# Chapter 1: Introduction

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## Purpose

This document describes how to install Avaya Control Manager. This document also provides information about the software and hardware requirements and installation checklist.

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## Intended audience

This document is intended for people who want to install Avaya Control Manager.

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## Reason for reissue

The following sections are updated in the document:

- [Documentation](#)
  - [Architecture overview](#)
  - [Avaya Control Manager client operating system](#)
  - [Hardware requirements](#)
  - [Installing Avaya Control Manager](#)
- 

## Related resources

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### Documentation

The following table lists the related documents for Avaya Control Manager. Download the documents from the Avaya Support website at <http://support.avaya.com>.

Title	Description
<b>Installation and Configuration</b>	
Configuring Avaya Control Manager	This document describes how to configure Avaya Control Manager. This document also provides information about enabling the connectors and configuring the components of Avaya Control Manager.
Avaya Control Manager Quick Installation and Configuration	This document describes how to install Avaya Control Manager using Express mode. This document also provides information about how to configure Avaya Aura <sup>®</sup> Communication Manager and Avaya Call Management System with Avaya Control Manager.

Title	Description
<b>Administration</b>	
Administering Proactive Outreach Manager through Avaya Control Manager	This document describes how to administer the functioning of Proactive Outreach Manager through Avaya Control Manager.
Avaya Control Manager Port Matrix	This document describes the port usage for Avaya Control Manager.
Administering Avaya Control Manager for Avaya one-X <sup>®</sup> Agent Central Management	This document describes how to administer the functioning of Avaya Control Manager for Avaya one-X <sup>®</sup> Agent Central Management.
<b>Events and Alarms</b>	
Avaya Control Manager Support for SNMP Messages	This document describes the SNMP notifications for Avaya Control Manager. This document also provides information about the specific events that occur in the environment.
<b>Using</b>	
Using Avaya Control Manager	This document describes how to use Avaya Control Manager. This document also describes the features and capabilities of Avaya Control Manager.
Using Avaya Control Manager Central License and Traffic Tracker	This document describes how to use Avaya Control Manager Central License and Traffic Tracker. This document also describes the features and capabilities of Avaya Control Manager Central License and Traffic Tracker.
Using Avaya Control Manager Conversation Sphere	This document describes how to use Avaya Control Manager Conversation Sphere. This document also describes the features and capabilities of Avaya Control Manager Conversation Sphere.
Using Avaya Control Manager API	This document provides an overview of Avaya Control Manager API. This document also describes how to use Avaya Control Manager API for integrating the Avaya Control Manager provisioning server.
Using Avaya Control Manager with Avaya Voice Portal/Experience Portal sample application	This document describes how to use Avaya Control Manager with Avaya Voice Portal or Experience Portal.
<b>Upgrading</b>	
Upgrading Avaya Control Manager	This document describes how to upgrade Avaya Control Manager from the earlier releases to the current release. The document includes upgrade checklist, upgrade procedures, and verification procedures for each supported upgrade path.

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Course code	Course title
<b>Virtual Trainings</b>	
8C00010E	Knowledge Access: ASPS - Avaya Control Manager
8C00110E	Knowledge Access: Avaya Control Manager for Administrators
<b>Traditional Trainings</b>	
4C00070V	Avaya Control Manager Implementation and Maintenance
4C00071V	Avaya Control Manager for Administrators
<b>Online Test</b>	
5300	Avaya Control Manager Implementation and Maintenance Online Test

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

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- Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the site.

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# Chapter 2: Overview

The Avaya Control Manager system is a centralized operational administration solution that provides a comprehensive solution for administrators to support day-to-day operations. Avaya Control Manager complements the entire Avaya Contact Center suite by combining and integrating key management and administration tasks of a wide range of contact center entities.

With the Avaya Control Manager system, administrators can unify, streamline, and centralize the management of Avaya Aura® Contact Center operations. In addition, the administrator can track events and take necessary action to meet customer needs. The Avaya Control Manager system is for Avaya customers using different Avaya Contact Center Business Unit (CCBU) products and solutions. The Avaya Control Manager system integrates with a Unified Communication infrastructure based on Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Avaya Control Manager integrates with and supports operational administration of Avaya Contact Center suite, including the following:

- Avaya Modular Messaging
- Avaya Call Management System
- Avaya IQ
- Avaya Aura® Communication Manager
- Avaya Aura® Call Center Elite Multichannel
- Avaya Interaction Center
- Avaya Voice Portal
- Avaya Aura® Experience Portal
- Avaya Proactive Contact
- Avaya Proactive Outreach Manager
- Avaya Aura® System Manager
- Avaya Aura® Messaging
- Avaya Aura® Session Manager
- Avaya Aura® Application Enablement Services
- Avaya one-X® Agent
- Avaya Aura® Contact Center with Elite customers who are interested using a blended environment (Voice on Elite with Multimedia on Avaya Aura® Contact Center)
- Third-party Workforce Optimization (WFO) solution including WFM, QM, and Call Recording

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## Key features

- Centralized management and administration of all contact center applications
- Personalized thin client application interface
- Real-time monitoring and historical analysis of agents, skills, Vector Directory Numbers (VDNs), campaigns, and other business data

- Visual call flow design and vector management
- Role-based permissions and multi tenancy support
- Full Microsoft Active Directory integration with single sign-on (SSO) functionality

## Installation overview

This section describes the steps to complete the installation of the Avaya Control Manager Server software. Avaya Control Manager is a software only solution. Avaya ships only the Avaya Control Manager software. The customer must provide the necessary server hardware and software to deploy the Avaya Control Manager system.

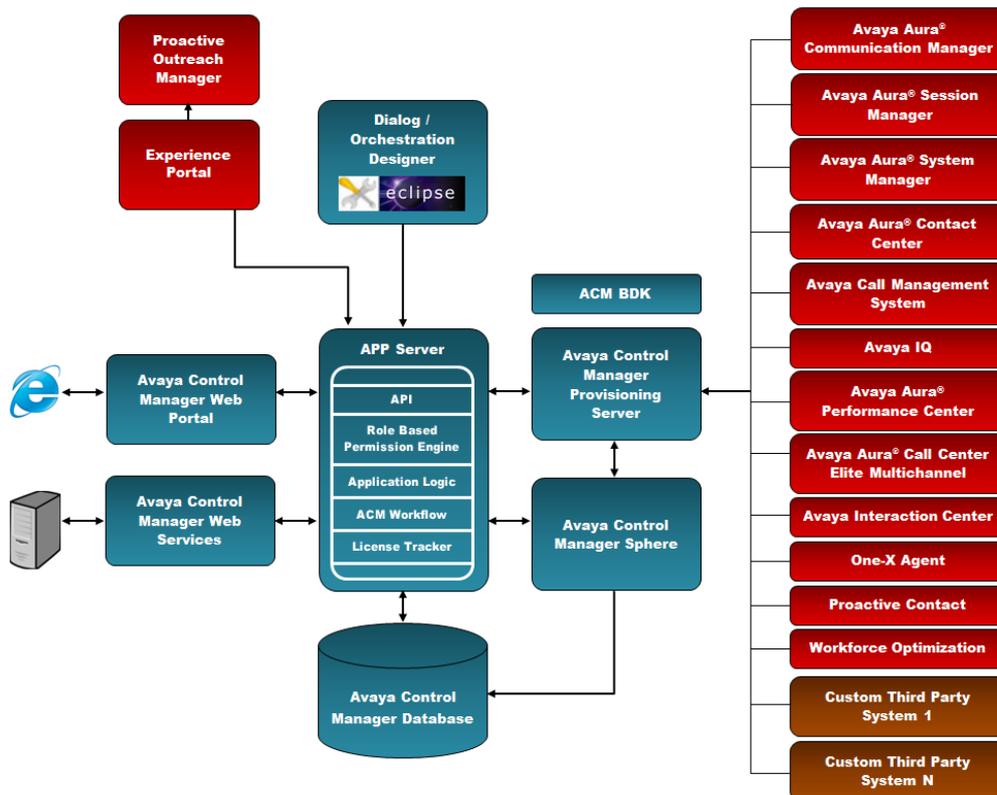
For hardware and software specification, see [Requirements](#).

## Architecture overview

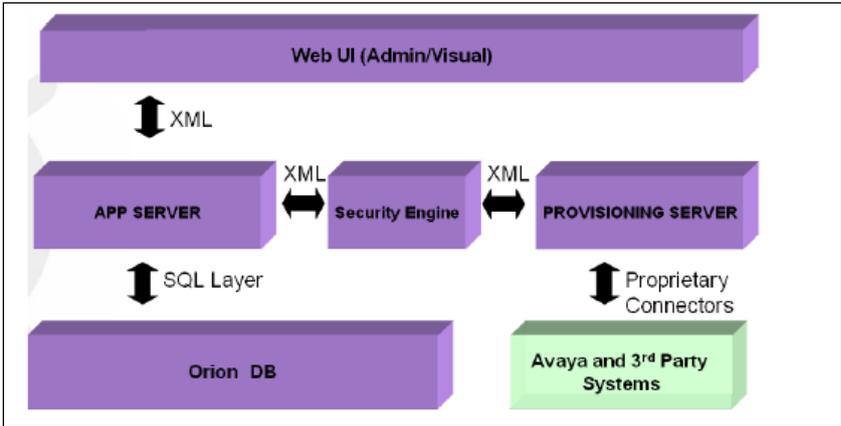
The Avaya Control Manager provisioning server integrates Avaya Control Manager with different Avaya products and systems through various connectors. These connectors are part of the overall solution subject to the type of active Avaya Control Manager connectors made active.

Avaya Control Manager uses the system architecture, software integrations, and software components to provide a multi-channel contact center solution.

The following figure provides an architectural view of the Avaya Control Manager solution:



The High-Level Solution Topology platforms, including all available solution connectors provides a centralized operational management from a single Web browser portal.



Layer	Components
<b>Web</b>	Avaya Control Manager Web Interface Avaya Control Manager Web Interface API
<b>Application</b>	Avaya Control Manager Application Server Avaya Control Manager Provisioning Server Avaya Control Manager Security Engine
<b>Data layer</b>	Avaya Control Manager Database Avaya Control Manager and third-party systems

# Chapter 3: Requirements

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## Software requirements

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### Server operating system

- Microsoft Windows 2008 Server R2 SP1  
OR
- Microsoft Windows 2012 (Standard or Datacenter edition)  
OR
- Microsoft Windows 2012 R2 (Standard or Datacenter edition)

**Note:** Avaya Control Manager supports the localized server operating system for English and German only.

### Avaya Control Manager client operating system

- Microsoft Windows XP
- Microsoft Windows Vista
- Microsoft Windows 7
- Microsoft Windows 8

**Note:**

- You require the operating system and SQL DB English operating system language for all servers.
- Ensure that the client system supports 1280x1024 pixels or higher resolution to run the Web browser.

### Supported web browsers

- Microsoft Internet Explorer 9
- Microsoft Internet Explorer 10 (in compatibility mode only)

### Supported database software

Avaya Control Manager server must have one of the following Microsoft SQL servers:

Note: If you use the Avaya Control Manager Express installation mode to install a single server environment, the installer installs the SQL Server 2008 R2 Express database automatically.

- Microsoft SQL Server 2008 R2 Express

- Microsoft SQL Server 2008 R2 Standard Edition
- Microsoft SQL Server 2008 R2 Enterprise Edition
- Microsoft SQL Server 2012 Express
- Microsoft SQL Server 2012 Standard Edition
- Microsoft SQL Server 2012 Enterprise Edition

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## Java Runtime Environment updates

Avaya Control Manager supports only specific versions of Java Runtime Environment (JRE) - Java 1.6 build 38. The Avaya Control Manager Installer installs a supported JRE version, and Avaya Control Manager service packs install required JRE updates. During installation, Avaya recommends to disable JRE automatic updates on the Avaya Control Manager servers.

**Important:** Updating to an unsupported version of JRE can cause the Avaya Control Manager to stop working and can require the reinstallation of the Avaya Control Manager server.

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## Hardware requirements

The Avaya Control Manager solution is available as:

- Standalone server deployment
- Multi-server deployment

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## Standalone server deployments

You can install the Avaya Control Manager system on a single server that runs all the application components including the database, such as, Microsoft SQL Express or Standard Edition database. The number or type of connectors that are used does not affect the server size.

**Note:** The standalone deployment does not include the Avaya Voice Portal connector.

For more information on the Avaya Voice Portal Connector, see [Installing the Avaya Voice Portal connector](#).

The following are the two types of standalone server deployment:

- Standard standalone server deployment
- Large standalone server deployment

**Note:** In a single server deployment, you can host the Avaya Control Manager database on an external database server.

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## Standard standalone server deployment

The standard standalone server deployment configuration is suitable in a setup with up to 100 concurrent administrators using Avaya Control Manager or up to 20,000 agent seats in a contact center.

The following table lists the minimum hardware requirements for standard standalone server deployment:

Hardware	Capacity
Processor	Single Quad Core Processor
RAM	8 GB
Hard disk	80 GB
Network interface controller	Single Ethernet

---

## Large standalone server deployment

The large standalone server deployment configuration is suitable in a set up with up to 200 concurrent administrators using Avaya Control Manager or up to 50,000 agent seats in a contact center.

The following table lists the minimum hardware requirements for large standalone server deployment:

Hardware	Capacity
Processor	Two Quad Core Processor
RAM	8 GB
Hard disk	80 GB
Network interface controller	Single Ethernet

---

## Multiserver deployment

In standalone server deployments, all of the ACM services and components are installed on the same server. However, in some cases, these services and components may be installed on multiple servers for a single ACM system.

This is known as a multiserver deployment and it is suitable in an environment where there are special requirements from the customer IT department.

**Note:** The configuration for a multiserver deployment varies as it is customized based on the customer's requirements. For this reason, you must contact Avaya support before providing hardware to a customer.

The following table lists the minimum hardware requirements for Avaya Control Manager web and application server deployment:

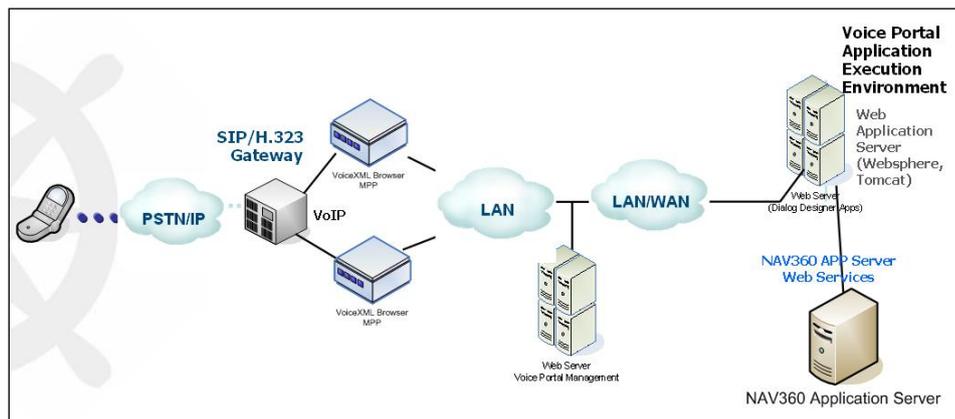
Hardware	Capacity
Processor	Two Quad Core Processor
RAM	8 GB
Hard disk	80 GB
Network interface controller	Single Ethernet

The following table lists the minimum hardware requirements for Avaya Control Manager database server deployment:

Hardware	Capacity
Processor	Two Quad Core Processor
RAM	8 GB
Hard disk	80 GB
Network interface controller	Single Ethernet

## Avaya Voice Portal Connector deployment requirements

You can allocate the first 1,000 ports to the same server where the Avaya Control Manager software is installed. After the first 1,000 ports, you require a separate Avaya Control Manager Voice Portal Connector server for every additional 1,000 Avaya Voice Portal ports that are using Avaya Control Manager Voice Portal Connector.



The following table lists the minimum hardware requirements for Avaya Voice Portal connector deployment:

Hardware	Capacity
Processor	Two Quad Core Processor
RAM	2 GB
Hard disk	80 GB
Network interface controller	Single Ethernet

## Virtualization support

Avaya Control Manager supports deployments on the following virtualization platforms:

- VMware Release 3.x, 4.x, and 5.x
- Hyper-V
- Xen

---

## Avaya Control Manager database sizing

The Avaya Control Manager database stores only the configuration data of the Avaya Control Manager system. The database size is between 50 MB to 4 GB. The database size increases if Avaya one-X<sup>®</sup> Agent Central Management is running on the system.

For more information, see the Database Sizing tool. You can download the Database Sizing tool from the Avaya Support site.

**Important:** You must turn off the transaction log of the database because the Avaya Control Manager Sync Service activity can affect the size of the transaction log. For more details see [Turning off the transaction log of the database](#).

# Chapter 4: Avaya Control Manager installation checklist

Avaya Control Manager interacts with many different products and services. Use the following checklist to ensure that all requirements are in place to complete the installation.

#	Task	✓
1	Determine how your enterprise wants to deploy Avaya Control Manager.	
2	Ensure that all product licenses are in place.	
3	Download the software package from the Avaya support site.	
4	Ensure that the end user and enterprise environments can support Avaya Control Manager.	
5	Administer the Avaya Control Manager feature on Avaya Aura <sup>®</sup> Communication Manager.	
6	Determine how you will distribute the Avaya Control Manager software to your employees.	
7	Begin the installation process. For details see <a href="#">Installing Avaya Control Manager</a> .	
8	Start Avaya Control Manager.	
9	Complete the initial administration. For details refer to <i>Administering Avaya Control Manager 7.1 guide</i> .	

**Note:** By default, Avaya Control Manager Web server uses HTTP settings which are unsecured. You must ensure that all Avaya Control Manager Web sites are configured as secured (HTTPS) for Avaya Control Manager Web Server after installing the Avaya Control Manager system. For more information about configuring HTTPS setting, see *Configuring Avaya Control Manager guide*.

# Chapter 5: Avaya Control Manager installation

You can install Avaya Control Manager on either Microsoft Windows 2008 R2 or Microsoft Windows 2012. To install on either operating system, you must install and configure Microsoft Internet Information Services (IIS) for the Web Server.

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## Prerequisites to install on Microsoft Windows 2008 R2 SP1

Complete the following set up on the server:

- Install Microsoft Windows 2008 R2 SP1.

**Note:**

- The computer name of the server must not contain underscores.
  - After the installation, Avaya Control Manager does not support a change in the computer name.
- Install and configure Microsoft Internet Information Services (IIS) for the Web Server component.
  - Do not install Windows updates on the system during the Avaya Control Manager installation process. You can either disable the Windows updates or install all the available updates before the Avaya Control Manager installation.
  - Ensure that the client system supports the minimum resolution of 1280x1024 pixels or higher to run the web browser.

**Note:** If you install Avaya Control Manager on the C:\ drive of the operating system, change the permissions of the Avaya directory and provide full control to the network account. In this case, the network account corresponds to the user of the Avaya Control Manager application pool. All other processes use the Service user name.

---

## Installing and configuring IIS

The Avaya Control Manager Web portal runs on IIS.

### Procedure

1. On the server desktop, right-click **My Computer** and click **Manage**.
2. On the **Server Manager** window, right-click **Roles** and select **Add roles**.
3. On the **Before You Begin** screen, click **Next**.
4. On the **Select Server Roles** screen, select **Application Server** and **Web Server (IIS)**.

The system displays the **Add features required for Application Server?** dialog box if the system does not have the required components to install the application server.

5. Click **Add Required Features** to install the missing components required for application server. After the installation is complete, the system provides the option to select the component.
6. On the **Select Server Roles** screen, select **Web Server (IIS)** and click **Next**.
7. On the **Introduction to Application Server** screen, click **Next**.
8. On the **Select the role services to install for Application Server** screen, click **Next**.
9. On the **Introduction to Web Server (IIS)** screen, click **Next**.
10. On the **Select the Role Services to install for Web Server (IIS)** screen, perform the following:
  - a. On **Common HTTP Features**, select the following components:
    - Static Content
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - HTTP Redirection
  - b. On **Application Development**, select the following components:
    - ASP.NET
    - .NET Extensibility
    - ASP
    - CGI
    - ISAPI Extensions
    - ISAPI Filters
    - Server Side Includes
  - c. On **Health and Diagnostics**, select the following components:
    - HTTP Logging
    - Logging Tools
    - Request Monitor
    - Tracing
  - d. On **Security**, select the following components:
    - Basic Authentication
    - Windows Authentication
    - Request Filtering
  - e. On **Performance**, select **Static Content Compression**.
  - f. On **Management Tools**, select **IIS Management Console**.
  - g. On **Management Tools**, select **IIS 6 Management Compatibility**.
  - h. Select the following components of IIS 6 Management Compatibility:
    - IIS 6 Metabase Compatibility
    - IIS 6 WMI Compatibility

- IIS 6 Scripting Tools
  - IIS Management Console
11. Click **Next**.
  12. On the **Confirm Installation Selections** screen, click **Install**.  
The system displays the Installation Results screen.
  13. If the installation is successful, click **Close**. If the installation is unsuccessful, repeat the procedure.
  14. Exit the Server manager.
  15. Restart the server.

---

## Prerequisites to install on Microsoft Windows 2012

Complete the following setup on the server:

- Install Microsoft Windows 2012.  
**Note:**
  - The computer name of the server must not contain underscores.
  - After the installation, Avaya Control Manager does not support a change in the computer name.
- Install and configure Microsoft Internet Information Services (IIS) for the Web Server component.
- Do not install Windows updates on the system during the Avaya Control Manager installation process. You can either disable the Windows updates or install all the available updates before the Avaya Control Manager installation.
- Ensure that the client system supports the minimum resolution of 1280x1024 pixels or higher to run the web browser.
- If you integrate Avaya Control Manager with a messaging system, then you must apply the Windows8-RT-KB2802148-x64.msu patch on the Avaya Control Manager server.

**Note:** If you install Avaya Control Manager on the C:\ drive of the operating system, change the permissions of the Avaya directory and provide full control to the network account. In this case, the network account corresponds to the user of the Avaya Control Manager application pool. All other processes use the Service user name.

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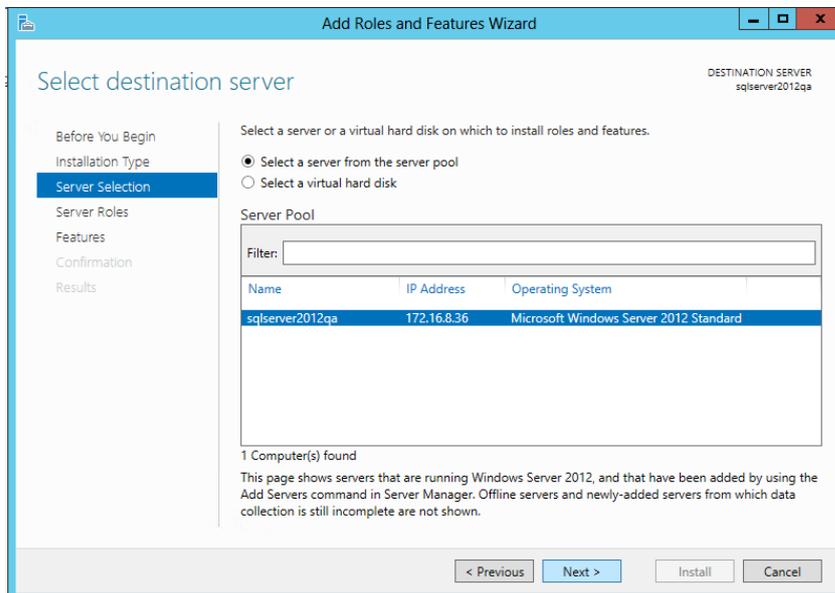
## Installing and configuring IIS

The Avaya Control Manager Web portal runs on IIS.

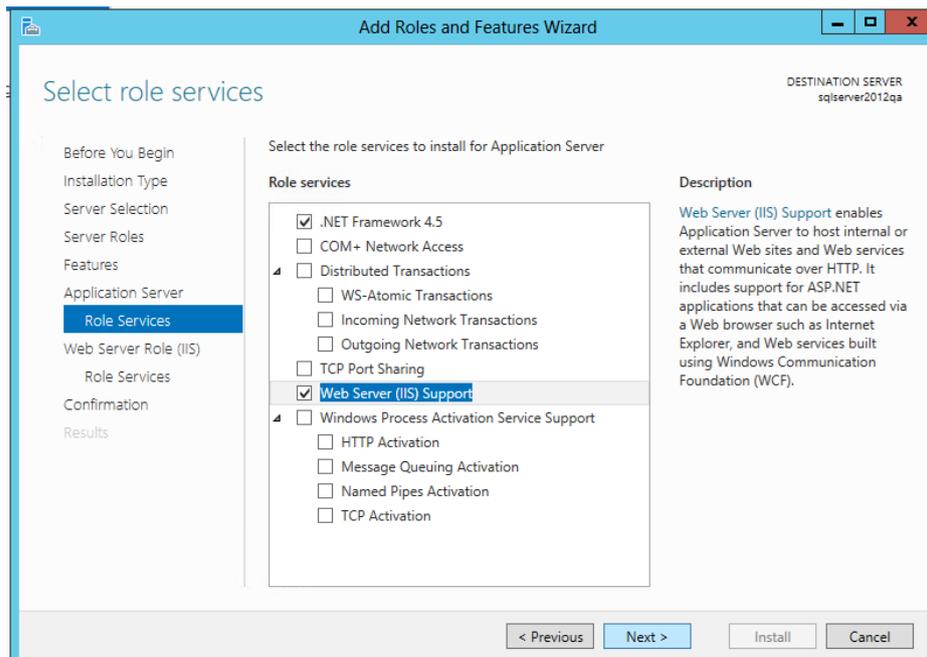
### Procedure

1. On the server desktop, click **Server Manager > Dashboard**.
2. On the **WELCOME TO SERVER MANAGER** screen, click **Add Roles and features**.
3. On the **Before you begin** screen, click **Next**.
4. On the **Select installation type** screen, select **Role-based or feature-based installation**.

5. Click **Next**.
6. On the **Select destination server** screen, click **Select a server from the server pool**.
7. In the **Server Pool** section, select the server and click **Next**.



8. On the **Select server roles** screen, select **Application Server** and **Web Server IIS**.
  - a. On the **Add Roles and Features Wizard** screen click **Add Features**.
  - b. Click **Next**.
9. On the **Select Server roles** screen, click **Next**.
10. On the **Select features** screen, select **.NET Framework 4.5 Features** option.
11. Click **Next**.
12. On the **Application Server** screen, click **Next**.
13. On the **Select role services** screen, select **Web Server (IIS) Support option**.  
The system displays the **Add Roles and Features Wizard** window.
  - a. On the **Add Roles and Features Wizard** widow click **Add Features**.
14. Click **Next**.



15. On the **Web Server Role (IIS)** screen, click **Next**.

16. On the **Select role services** screen, select the following:

- Web Server
- Common HTTP Features
  - Default Document
  - Directory Browsing
  - HTTP Errors
  - Static Content
  - HTTP Redirection
- Health and Diagnostics
  - HTTP Logging
  - Logging Tools
  - Request Monitor
  - Tracing
- Performance
  - Static Content Compression
- Security
  - Request Filtering
  - Basic Authentication
  - Windows Authentication
- Application Development
  - .NET Extensibility 3.5
  - .NET Extensibility 4.5
  - Application Initialization

- ASP.NET 3.5
- ASP.NET 4.5
- CGI
- ISAPI Extensions
- ISAPI Filters
- Server Side Includes
- WebSocket Protocol
- Management Tools
  - IIS Management Console
  - IIS Management Compatibility
    - ◆ IIS 6 Metabase Compatibility
    - ◆ IIS 6 Management Console
    - ◆ IIS 6 Scripting Tools
    - ◆ On the **Add Roles and Features Wizard** screen click **Add Features**.
- IIS 6 WMI Compatibility
  - IIS Management Scripts and Tools

17. Click **Next**.

18. On the **Confirm installation selections** screen, click **Install**.

19. When the installation is complete, click **Finish**.

## Prerequisites to start License Server

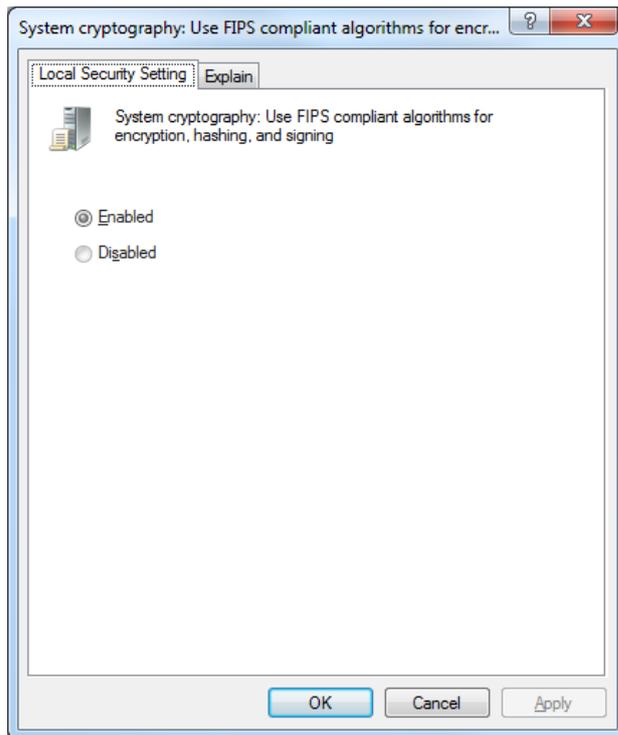
### Disabling the System Cryptography settings for License Server

To start License Server, you must disable the System Cryptography settings on Windows.

#### Procedure

1. Log on to the system using the administrative credentials.
2. Start Local Group Policy Editor by performing the following actions:
  - a. Click **Start > Run**.
  - b. In the **Run** dialog box, type `gpedit.msc`.
  - c. Click **OK**.
3. In the left pane, click **Computer Configuration > Windows Settings > Security Settings > Local Securities > Security Options**.
4. In the right pane, double-click **System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing**.

The system displays the following dialog box:



5. Click **Disabled** and then click **OK**.
6. Close Local Group Policy Editor.

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## Installing Avaya Control Manager

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### Prerequisites

- Ensure that the client system supports the minimum resolution of 1280x1024 pixels or higher to run the Web browser.
- By default, Avaya Control Manager Web server uses HTTP settings which are unsecured. You must ensure that all Avaya Control Manager Web sites are configured as secured (HTTPS) for Avaya Control Manager Web Server after installing the Avaya Control Manager system. For more information about configuring HTTPS setting, see *Configuring Avaya Control Manager guide*.

**Note:** For installation wizard logging, ensure that you have full administrative rights to access the server and to create files on the **C:\** drive. You must initiate the installation by choosing the **Run as Administrator** option.

### Procedure

1. From the Avaya Control Manager installation CD, double-click the Avaya Control Manager installation wizard.

The system starts the installation automatically. If the installation does not begin, you must run the Avaya Control Manager.EXE file from the CD drive.

The Avaya Control Manager installation setup writes the log file with the summary of the entire installation process. You can locate the log file on the computer at **c:\accminstaller.log**.

2. On the **Welcome to the Avaya Control Manager 7.1 Setup Wizard** screen, click **Next**.

The system displays the following screen:



The installation setup offers two types of Avaya Control Manager deployments, **Express** and **Custom**.

Installation mode	Description
<b>Express</b>	Use the Express installation mode to install a single server environment, including the SQL Express Database. This default mode uses the location of the installation folder on the server. The default location for express installation is C:\ drive and requires minimum 20 GB hard disk space on the system drive. For more information about using Express installation, see <a href="#">Installing Avaya Control Manager in the Express mode</a> .
<b>Custom</b>	With the Custom installation mode, you can select the components to install, set passwords, and select the installation directory. For more information about using Custom installation, see <a href="#">Installing Avaya Control Manager in the Custom mode</a> . You can use the Custom installation mode in a High Availability environment. For more information about using Custom installation mode in a High Availability environment, please contact Avaya Professional Services.

## Installing Avaya Control Manager in the Express mode

Perform the following steps if you select the Express mode to complete the Avaya Control Manager installation:

### Procedure

1. On the **Install Mode** screen, select **Express**.
2. Click **Next**.

3. On the **License Server installation** screen, perform the following steps:
  - a. In the **License Server Host** field, enter the host name that runs the license server. By default, this corresponds to the server name where you are running the installation wizard.
  - b. In the **License Server Port** field, enter the license server port number. By default, the port number is **35353**.

You can upload the Avaya Control Manager License file, which is an optional step. You can add the license file later manually.
4. (Optional) To upload the Avaya Control Manager license file, perform the following steps:
  - d. Click **Load License**.
  - e. Browse to the location of the Avaya Control Manager license file, **license.lic**.
  - f. Select the license file, and click **Open**.

The system closes the dialog box indicating the successful upload of license.
5. Click **Next**.
6. On the **Configure Avaya Control Manager wizard** screen, perform the following steps:
  - a. In the **Communication Manager Version** field, click the version of Avaya Aura<sup>®</sup> Communication Manager.

The system uses this value as the default Communication Manager version under the Avaya Control Manager System Parameters.
  - b. In the **Install AACC Integration** field, select the appropriate value.

By default the value is set to **Yes**. If you are not integrating Avaya Aura Contact Center in this environment, change the value to **No**.
  - c. From the **System Language** field, select the language that you want to install for the Avaya Control Manager.

The default value is set to **English**.
  - d. In the **Central Logging** field, select one of the following:
    - **Database**: To store all system logs in the Avaya Control Manager database.
    - **Files**: To store all system logs on the file system.
7. Click **Next**.
8. (Optional) To review the installation settings, click **Back**.
9. On the **Ready to Install** screen, click **Install** to begin the installation.

The system begins the installation process. The installation process takes between ten minutes to an hour depending on the components you choose to install.

**Note:** During the Avaya Control Manager installation process, the system might prompt you with a security warning window to approve the prerequisite installation. You must accept the installation by clicking the **Run** button.



10. Click **Finish** to complete the Avaya Control Manager installation.
11. Restart the server. This will start all the Avaya Control Manager services.

**Note:** Few services such as AD Sync and Sphere ETL require additional configuration and will not start if not configured.

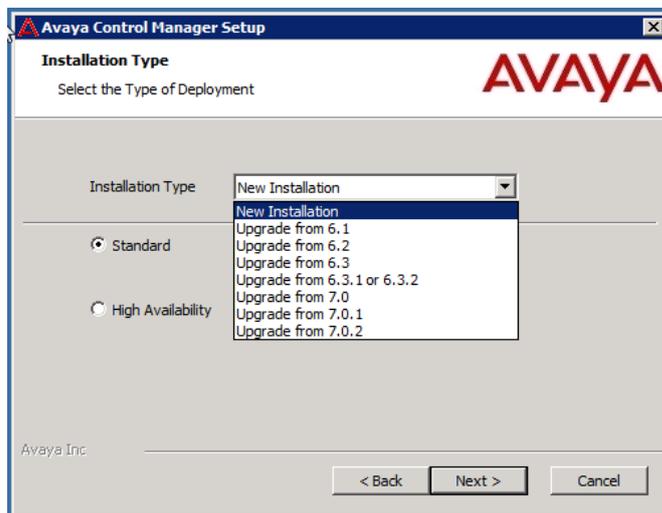
To verify the Avaya Control Manager installation, see [Testing the Avaya Control Manager installation](#).

## Installing Avaya Control Manager in the Custom mode

Perform the following steps if you selected the Custom mode to complete the Avaya Control Manager installation in the previous section.

**Note:** This guide provides installation steps for Standard installation. For information on High Availability installation, please contact Avaya Professional Services.

1. On the **Install Mode** screen, select **Custom**.
2. Click **Next**.



The Custom installation mode offers the following options:

Field Name	Values	Description
Installation Type	New Installation	Select this option for a new environment.
	Upgrade from 6.1 Upgrade from 6.2	Select the appropriate option to the existing Avaya Control Manager version installed on

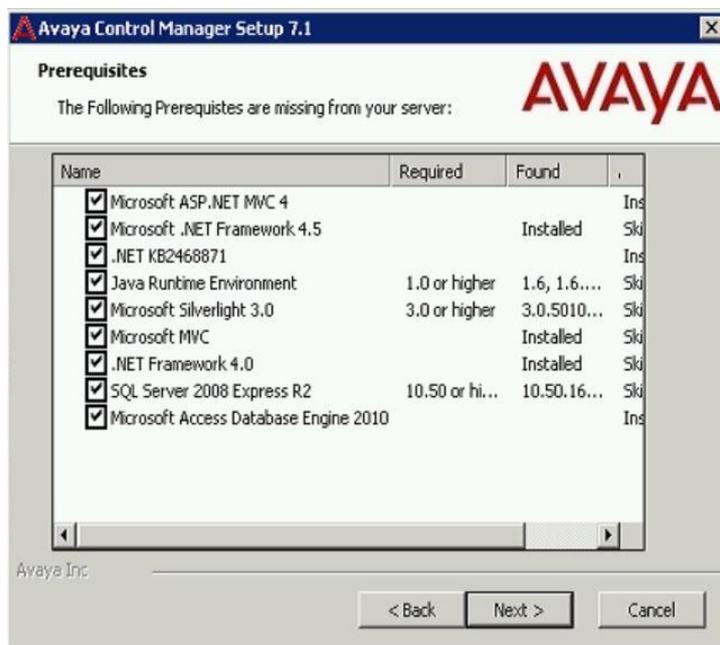
Field Name	Values	Description
	Upgrade from 6.3 Upgrade from 6.3.1 or 6.3.2 Upgrade from 7.0 Upgrade from 7.0.1 Upgrade from 7.0.2	the server.
<b>Standard</b>	-	Select the Standard mode if you are installing a standard Avaya Control Manager environment.
<b>High Availability</b>		For information on High Availability installation, please contact Avaya Professional Services.

3. Select **Standard** and click **Next**.

If the installation already exists, remove the prerequisite installation by clearing the selection on the corresponding prerequisite component.

**Important:** The wizard uses the SQL Server setup as a default installation. If you do not install the SQL Server setup as part of the Avaya Control Manager installation wizard then use the existing SQL Server in the environment.

By default, the system checks for preinstalled components as prerequisites. If the prerequisite installation components exist in the system, then the installation wizard skips the installation of existing prerequisite installation setup. If one or more component is missing, then the installation wizard installs the missing components as part of the installation process.



The system installs the following prerequisites as part of the Avaya Control Manager 7.1 installation wizard:

Prerequisite	Required for component	Comments
<b>Microsoft Silverlight 3.0</b>	Visual Phone	Select this component if you want to browse the Visual Phone website from the Avaya Control

Prerequisite	Required for component	Comments
		Manager server.
<b>Microsoft MVC</b>	Avaya one-X Agent Administration	Select this component if you are installing the Avaya one-X <sup>®</sup> Agent administration.
<b>.NET Framework 4.0</b>	Avaya one-X Agent Administration	Select this component if you are installing the Avaya one-X <sup>®</sup> Agent administration.
<b>.NET Framework 4.5</b>	Avaya Control Manager Web Portal	Select this component if you are installing the Avaya Control Manager Portal.
<b>SQL Server 2008 R2 Express</b>	Not mandatory	Select this component if you are installing a single Avaya Control Manager server with the database. <b>Important:</b> You must turn off the transaction log of the database because the Avaya Control Manager Sync Service activity can affect the size of the transaction log. For more details see <a href="#">Turning off the transaction log of the database</a> .
<b>KB2468871</b>	Avaya Control Manager Web Portal	Select this Microsoft KB for .NET update.
<b>Java Runtime</b>	Sphere	Select this if you are installing Sphere.

- Click **Next**.
- On the **Select Services to install** screen, the components are grouped into the following groups:

Group	Component	Description	Installed by Default
<b>Databases</b>	ACCCM Database	Avaya Control Manager Database stores Avaya Control Manager system configuration.	Yes
	ACCCMAVP Database	ACMAVP Database stores the Avaya Voice Portal database.	Yes
	ACCCMONEXDB Database	ACMONEXDB Database stores the Avaya one-X application database.	Yes
	ACCCMSPHEREETL Database	ACMSPHEREETL Database stores the Avaya Control Manager Sphere Analytics database.	Yes
	ACCCMSYNC Database	ACMSYNC Database synchronizes database between Communication	Yes

Group	Component	Description	Installed by Default
		Manager and Avaya Control Manager.	
<b>System Services</b>	Provisioning Server	The Provisioning server provisions components from Avaya Control Manager with different Avaya systems.	Yes
	Schedule Server	The Schedule server provides option to schedule tasks in Avaya Control Manager.	Yes
	License Server	The License server ensures licensing of Avaya Control Manager.	Yes
	Active Directory Synchronizer	The Active Directory Synchronizer tool integrates with Active Directory and allows user, agent, and extension provisioning from Active Directory into Avaya Control Manager.	Yes
	Audit Log Service	The Audit Log Service tool is responsible for all auditing within Avaya Control Manager.	Yes
	Importer	The Importer tool imports users, agents; skills, VDNs, and extensions from excel files into Avaya Control Manager.	Yes
	Synchronizer	The Synchronizer synchronizes information from Communication Manager to Avaya Control Manager.	Yes
	Vector Auditing	The Vector Auditing tool is used for vector auditing and verification.	Yes
	MM Connector	The Modular Messaging Connector.	Yes
	HA Service	High Availability Service gets installed only when Avaya Control Manager is in the HA mode. For information on High Availability installation, please contact Avaya Professional Services.	
	Notification Server	Notification Server checks for email notifications from the license tracker.	Yes
	Tracer Service	Tracker Service lists the trace actions that are performed from ACCCCM.	Yes
	SNMP Agent	SNMP Agent handles the SNMP activity in Avaya Control Manager	Yes
	License Tracker	License Tracker tracks licenses and traffic.	Yes
Log Server	Log Server is the Central Log server	Yes	
	Media Distribution	Distribution of media files between Avaya products	Yes
	Application Server	The Avaya Control Manager Application Server	Yes

Group	Component	Description	Installed by Default
<b>Web Sites Voice Portal</b>	ACM Web	Avaya Control Manager Web is the main user interface of Avaya Control Manager.	Yes
	ACM Visual Vectoring	Avaya Control Manager Visual Vectoring is a vector management tool.	Yes
	ACM Visual Phone	Avaya Control Manager Visual Phone is a visual management of extensions.	Yes
	ACM Schedule Server	Avaya Control Manager Schedule Server allows scheduling of tasks.	Yes
	ACM Audit Log	Avaya Control Manager Audit Log allows viewing of audit log results.	Yes
	ACM POM	Avaya Control Manager POM provides Avaya Proactive Outreach Manager administration capabilities.	Yes
	ACM EMC Integration	Avaya Control Manager EMC Integration provides the EMC administration capabilities. You require this component only during the EMC integration.	No
	ACM Conversation Sphere	Avaya Control Manager Conversation Sphere is a visual tool for call flow management.	Yes
	ACM Media Portal	Avaya Control Manager media portal is used for distribution of media files to Avaya products.	Yes
	ACM Configuration	Avaya Control Manager Configuration allows you to configure Avaya Control Manager features.	Yes
	ACM Portal	Avaya Control Manager Portal is the main navigation portal for Avaya Control Manager 7.1.	Yes
	ACM Bulk Portal	Avaya Control Manager Bulk Portal is a feature that allows you to do bulk actions.	Yes
	ACM Resource Portal	Avaya Control Manager Resource Portal is a feature that allows you to perform a variety of tasks such as reserving an Avaya ID for a certain object ID when an object is deleted.	Yes
<b>Voice Portal</b>	Voice Portal Web	The Voice Portal Web component used only during the Avaya Voice Portal integration. The component provides the user interface for Avaya Voice Portal administration.	Yes
	Voice Portal Configuration	This component stores all the configuration of the Avaya Voice Portal	Yes

Group	Component	Description	Installed by Default
	Database	Connector. Use this component only for Avaya Voice Portal integration.	
	Voice Portal Connector	Voice Portal Connector is a Web services API that is used by the Avaya Control Manager reusable modules. Use this component only for Avaya Voice Portal integration.	Yes
<b>Prerequisites</b>	Microsoft Silverlight 3.0	Use this component only if you intend to browse to the Visual Phone Web site from the Avaya Control Manager server.	Yes
	Microsoft MVC	Use this component only if you intend to install the Avaya one-X Agent CAM.	Yes
	.NET Framework 4.0	Use Framework 4.0 only if you intend to install the Avaya one-X Agent CAM.	Yes
	.NET Framework 4.5	Use Framework 4.5 only if you intend to install the Avaya Control Manager Portal.	Yes
	SQL Server 2008 R2 Express	Use this component if you are installing Avaya Control Manager on a single server.	Yes
<b>Avaya one-X Agent CAM</b>	Avaya one-X Management Web site	This component is Web administration for Avaya one-X Agent configuration.	Yes
	Avaya one-X Agent configuration service	This component is Web service for Avaya one-X Agent client authentication.	Yes
	Avaya one-X Agent database	This component stores all the Avaya one-X Agent configuration data.	Yes
<b>Sphere</b>	Sphere Search Engine	This component performs Sphere search for Avaya Control Manager environment.	Yes
	Sphere Analytics	This component performs Sphere search for CMS/IQ.	Yes
	Log Server Infrastructure	This component is the Central Log server infrastructure.	Yes
	Sphere ETL	This component synchronizes information from CMS/IQ into Avaya Control Manager for the indexing process. <b>Note:</b> In order to start the Avaya Control Manager Sphere ETL service, the CMS connector must be configured.	Yes

**Note:** You must select the Sphere component for successful installation of Apache Tomcat.

6. All components are selected by default. Unselect the components you do not want to install.
7. Click **Next**.

**Note:** This section covers installation steps for standard installation of the default components. Other component installation, Avaya Voice Portal, and Avaya one-X<sup>®</sup> Agent are described separately in this guide.

- For Avaya Voice Portal, see [Installing the Avaya Voice Portal connector](#).
- For Avaya one-X Agent, see [Installing Avaya one-X<sup>®</sup> Central Management on a single server or on a distributed environment](#).

**Important:** You must first determine how you want to install the Microsoft SQL Server on the Avaya Control Manager server. If you are not using the SQL Server installation setup as part of the installation wizard, skip the step and see [Customizing the Microsoft SQL Server installation](#).

8. On the **Install Microsoft SQL Server** screen, perform the following:
  - a. From the **SQL Installation** dropdown list, select one of the following options:
    - **Default:** To perform a silent installation of SQL Server based on the default values. If you select the Default option for installation of SQL Server with Avaya Control Manager the values, the SQL Database with all the default values appear automatically.
    - **Custom:** To modify the values during the installation of SQL Server. For installing and configuring SQL Server, see [Customizing the Microsoft SQL Server installation](#). If you select the **Custom** option for installation of SQL Server, then you must re-enter the details.

By default, the Avaya Control Manager wizard uses the MSSQLSERVER as the instance name in the SQL Instance Name field.

**Important:** You must turn off the transaction log of the database because the Avaya Control Manager Sync Service activity can affect the size of the transaction log. For more details see [Turning off the transaction log of the database](#).

If you have chosen to use the Default installation for SQL Server, the system disables the field. You cannot modify the value in the SQL Instance Name field. However, if you have chosen Custom as the installation of SQL Server, you can change the instance in the **SQL Instance Name** field during the installation.

- b. In the **SA Password** field, enter the password of the SA user that is managing SQL Server. Note down the password for later use during the installation process.
9. Click **Next**.
10. On the **SQL Database** screen, perform the following steps:

- a. In the **Server** field, enter the host name or the IP address of the server that hosts SQL Server.

By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as **ACMServer\sqlinstance**.

**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.

- b. In the **Port** field, enter the port number of SQL Server.  
The SQL Server uses **1433** as the default port.

- c. In the **Username** field, enter the database user name that is used for connecting to SQL Server.  
You must use **SA** as the user name. If you do not have the SA user, you must use a user that has dbo access rights on the master database.
- d. In the **Password** field, enter the password of the user.

11. Click **Next**.

12. On the **Avaya Control Manager Database** screen, perform the following steps:

- a. In the **ACCCM DB Name** field, enter the name of the Avaya Control Manager database that the system creates as part of the installation.

By default, the database name is **ACCCM**.

- b. In the **DB Username** field, enter the name of the Avaya Control Manager database user.

The Avaya Control Manager application server uses this user id to access Avaya Control Manager database. By default the user name is **ACCCM**. You must change the database name as there could be multiple users with same database name.

- c. In the **Password** field, enter the password of the database user.

13. Click **Next**.

14. On the **Avaya Control Manager Sync Database** screen, perform the following steps:

- a. In the **Synchronizer DB Name** field, enter the name of the ACCCMSYNC database as part of the installation.

The default sync name is **ACCCMSYNC**.

- b. In the **DB Username** field, enter the name of the ACCCMSYNC database user.

The ACCMSYNC application server uses this user id to access Avaya Control Manager database. The default user name is ACCCMSYNC. You must change the database name, as there could be multiple users with the same sync name.

- c. In the **DB Password** field, enter the password of the database user.

15. Click **Next**.

16. On the **Select Installation Folder** window, select the folder location to install the Avaya Control Manager components and click **Next**.

**Note:** If you click Back, the installation folder location will be set to the default location again.

17. On the **Provisioning Server Installation** screen, perform the following steps:

- a. In the **Provisioning Server Host** field, enter the host name that runs the provisioning server. By default, this corresponds to the server name where you are running the installation wizard.
- b. In the **Provisioning Server Port** field, enter the provisioning server port number. The default port number is 35351.

18. Click **Next**.

19. On the **License Server Installation** screen, perform the following steps:

- a. In the **License Server Host** field, enter the host name that runs the license server. This field corresponds to the server name where you are running the installation wizard.

- b. In the **License Server Port** field, enter the license server port number. The default port number is **35353**.

You can upload the Avaya Control Manager License file, which is an optional step. You can add the license file later manually.

20. (Optional) To upload the Avaya Control Manager license file, perform the following steps:

- a. Click **Load License**.
- b. Browse to the location of the Avaya Control Manager license file, **license.lic**.
- c. Select the license file, and click **Open**.

The system closes the dialog box indicating the successful upload of license.

21. Click **Next**.

22. On the **Importer Service Installation** screen, perform the following steps:

- a. In the **Importer Host** field, enter the host name that runs the importer server. The default value is the server name where you are running the installation wizard.
- b. In the **Importer Port** field, enter the importer server port number. The default port number is **35352**.

23. Click **Next**.

24. On the **Configure Avaya Control Manager** screen, perform the following steps:

- a. From the **Communication Manager Version** drop-down list, click the appropriate Avaya Aura<sup>®</sup> Communication Manager version.

The system saves this value as the default Avaya Aura<sup>®</sup> Communication Manager version under the System Parameters of Avaya Control Manager. You can change this value after the installation from the Avaya Control Manager UI in the **System Parameters** tab.

- b. From the **Install AACC Integration** drop-down list, click the appropriate value.

The default value is set to **Yes**. If you are not integrating Avaya Aura Contact Center in this environment, change the value to **No**.

- c. From the **System Language** drop-down list, click the language that you want to install for the Avaya Control Manager UI. The default system language is set to *English*.

- d. From the **Central Logging** drop-down list, do one of the following:

- **Database**: To store all system logs in the Avaya Control Manager database.
- **Files**: To store all system logs on the file system.

25. Click **Next**. You can review or change the installation settings by clicking **Back**.

26. On the **Ready to Install** screen, click **Install** to begin the installation.

**Note:** During the installation process, the system may prompt you with a security warning window to approve the prerequisite installation. Accept the installation by clicking **Run**.



The installation process can take between ten minutes to an hour, depending on the components that you have chosen to install.

Upon successful installation, the system displays the completion window.

27. Click **Finish** to close the installation wizard.

28. Restart the server. This will start all the Avaya Control Manager services.

**Note:** Few services such as AD Sync and Sphere ETL require additional configuration and will not start if not configured.

To verify the Avaya Control Manager installation, see [Testing the Avaya Control Manager installation](#).

---

## Customizing the Microsoft SQL Server installation

With the Custom SQL Server installation, you can configure the SQL Server settings during the installation process. You can also install the SQL Server setup manually from the Avaya Control Manager Installation CD.

Perform the following steps if you select the Custom option during the SQL installation process:

### Procedure

1. The system displays the Extracting Files window, if you have chosen to use the Custom the Microsoft SQL Server option.

The system begins the installation package and displays the SQL Server Installation wizard. While extracting the files, the system might display the following screen.



2. Click **OK**.

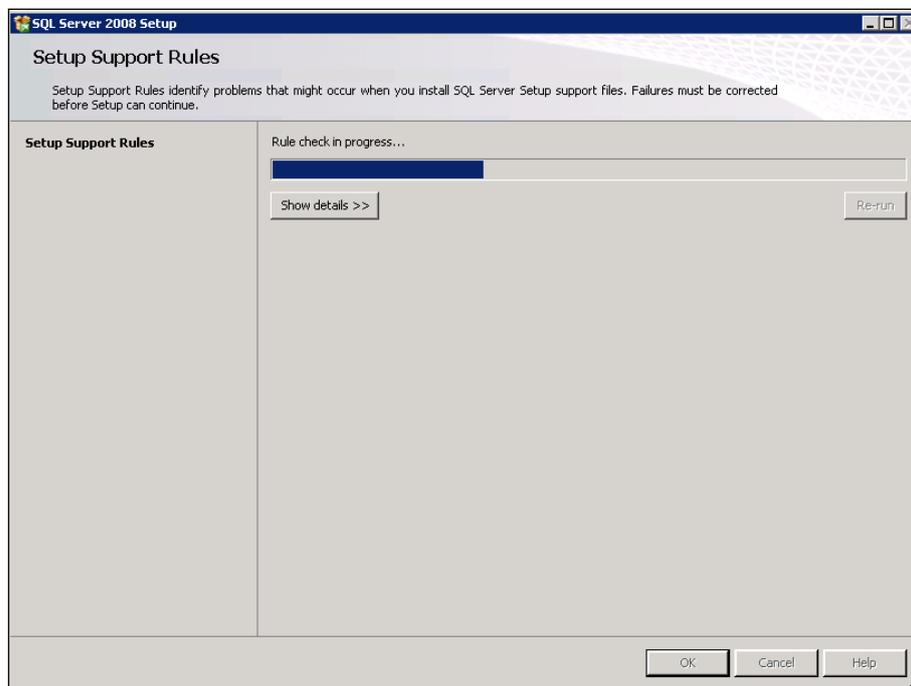
3. Navigate to the Avaya Control Manager Installation CD, locate the SQL Server setup, and click the **SQL Server** setup.

**Note:** If select the **Custom** option during the installation process, the system begins the installation package automatically and displays the SQL Server Installation wizard.



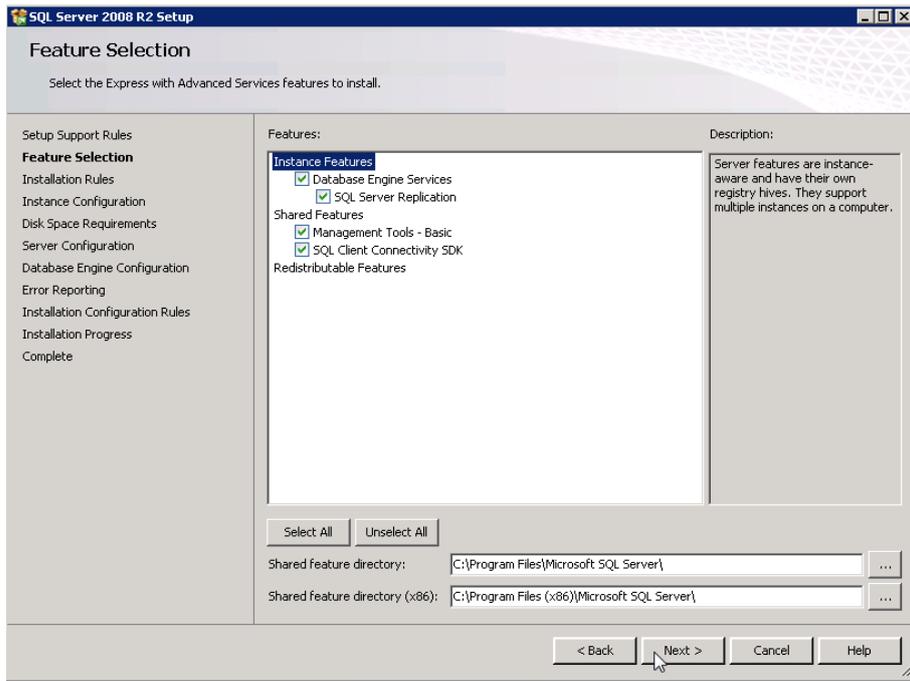
4. On the left pane of the SQL Server Installation wizard, click **Installation**.
5. Select **New SQL Server stand-alone installation** or add features to an existing installation.

The system begins the installation process and displays the following screen:



6. On the **License Terms** screen, select **I accept the license terms** and click **Next**.
7. On the **Setup Support Files** screen, click **Install**.
8. On the **Feature Selection** screen, select all features and the installation location and click **Next**.

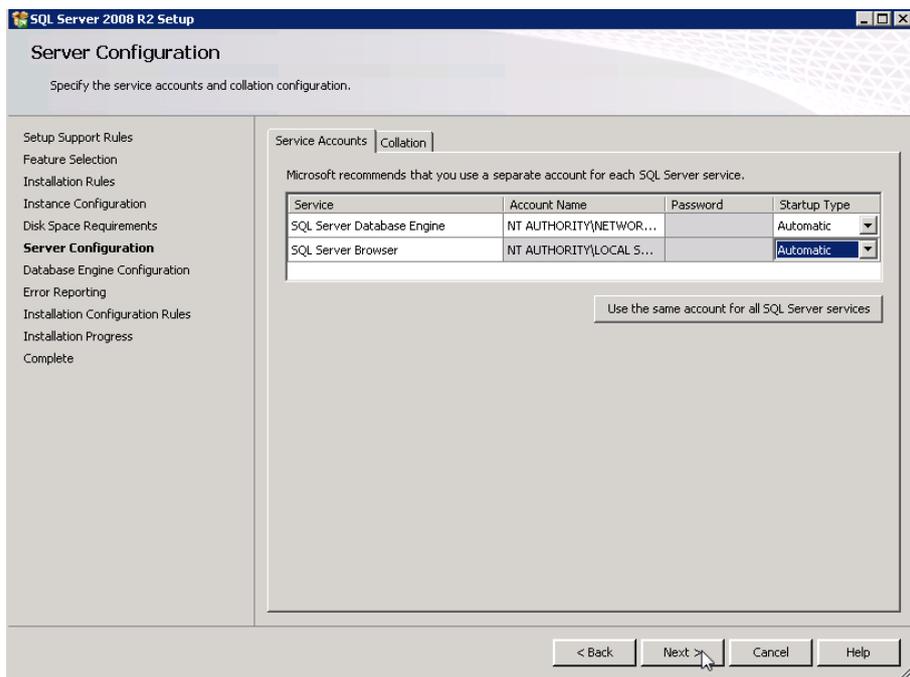
The system displays the following screen:



9. On the **Instance Configuration** screen, select **Default Instance** and select the location to store the instance.

10. Click **Next**.

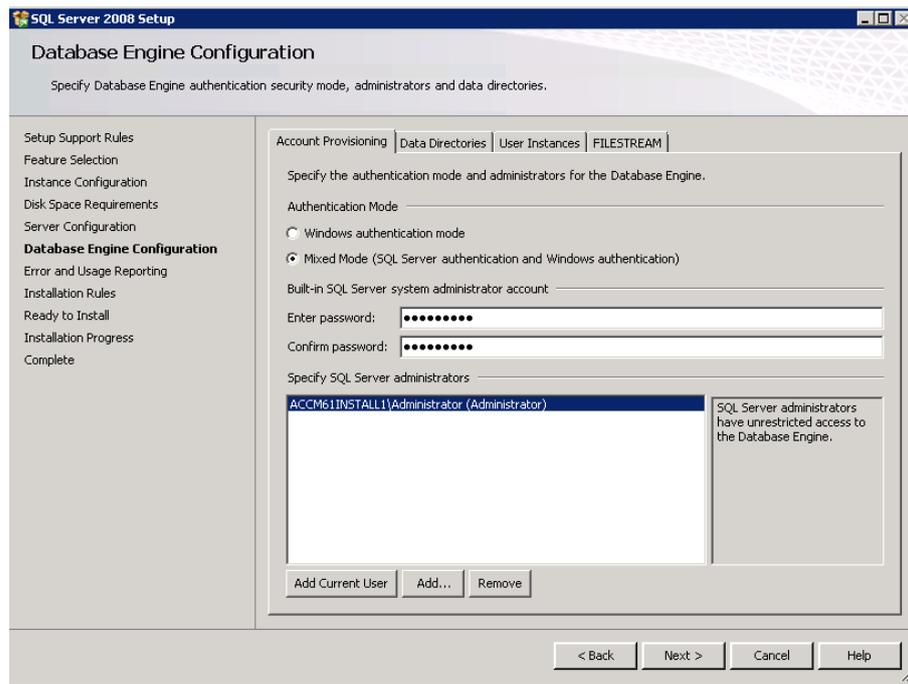
The system displays the following screen:



11. On the **Server Configuration** screen, activate **SQL Server Browser** by changing the **Startup Type** to **Automatic**.

12. Click **Next**.

The system displays the following screen:



13. On the **Database Engine Configuration** screen, perform the following steps:
  - a. Under **Authentication Mode** section, select **Mixed Mode (SQL Server authentication and Windows authentication)** as the authentication mode for both SQL Server and Windows.
  - b. In the **Enter password** field, enter the password of the SA database administrator.
  - c. In the **Confirm password** fields, confirm the password.
 

**Note:** You must note down this password for later use during the database administration.
  - d. Click **Add Current User** to add a Windows administrative account for SQL Server user.
14. Click **Next**.
15. On the **Error and Usage Reporting** screen, click **Next**.
 

The system begins the installation process.
16. On the **Complete** screen, click **Close** to exit the installation wizard.

---

## Installing the Avaya Voice Portal connector

### Procedure

1. From the Avaya Control Manager installation CD, double-click the Avaya Control Manager installation wizard.
2. On the **Welcome to the Avaya Control Manager Setup Wizard** screen, click **Next**.
3. On the **Modify, Repair or Remove installation** screen, click **Modify**.
4. On the **Custom Setup** screen, select the **Voice Portal** components.
5. On the **SQL Database** screen, perform the following steps:

- a. In the **Server** field, enter the host name or the IP address of the server that hosts SQL Server.  
By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as **ACMServer\sqlinstance**.  
**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.
  - b. In the **Port** field, enter the port number of SQL Server. The SQL Server uses **1433** as the default port.
  - c. In the **Username** field, enter the database user name that is used for connecting to SQL Server.  
You must use the **SA** as the user name. If you do not have the SA user, you must use a user that has dbo access rights on the master database.
  - d. In the **Password** field, enter the password of the user.
  - e. In the **ACM DB** field, enter the name of the Avaya Control Manager database.  
The database name is the original database you created for Avaya Control Manager application. By default, the database name is **ACM**.
6. Click **Next**.
  7. On the **Voice Portal Connector Configuration** screen, perform the following steps:
    - a. In the **Database Server** field, enter the host name or the IP address of the server that hosts SQL Server.  
By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as **ACMServer\sqlinstance**.  
**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.
    - b. In the **Port** field, enter the port number of Avaya Voice Portal Configuration database. The Avaya Voice Portal Configuration uses **1433** as the default port.
    - c. In the **Database Name** and **Database User** fields, enter the database user name that is used for connecting to Avaya Voice Portal Configuration connector. By default, the database name and database user is **ACMAVP**.
    - d. In the **Password** field, enter the password of the user.
    - e. In the **ACM DB** field, enter the name of the Avaya Control Manager database.  
The database name is the original database you created for ACMAVP. By default, the database name is **ACCCMAVP**.
  8. Click **Next**.
  9. (Optional) To review or change the installation settings, click **Back**.
  10. On the **Ready to Install** screen, click **Install** to begin the installation.
  11. On the **Completing the Avaya Control manager Setup Wizard** screen, click **Finish** to complete the installation.

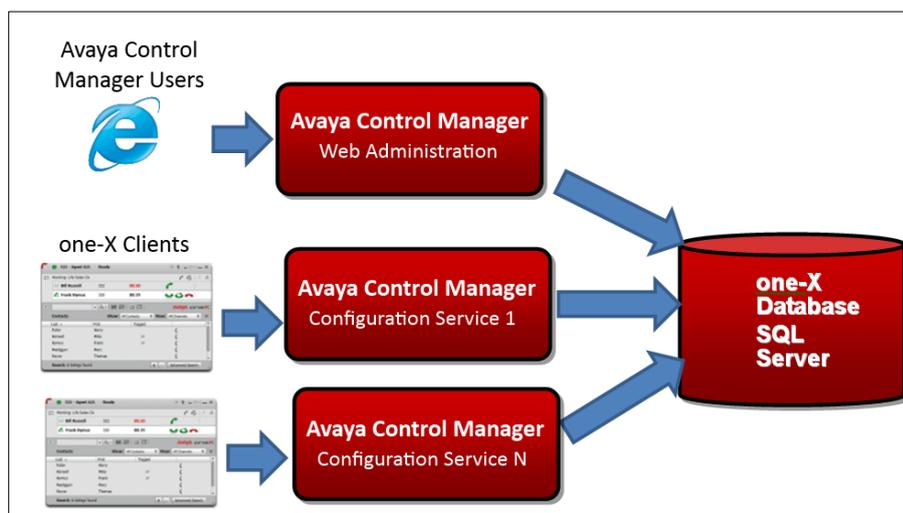
# Installing Avaya one-X<sup>®</sup> Central Management on a single server or on a distributed environment

You can install the following components as part of the Avaya one-X<sup>®</sup> Central Management installation process:

Component	Description
<b>one-X Database</b>	One-X Database is different from the Avaya Control Manager database. You can use the one-X Database only for Avaya one-X <sup>®</sup> Agent configuration and authentication of the Avaya one-X <sup>®</sup> Agent clients.
<b>one-X Administration website</b>	Administrators can use this website to manage the Avaya one-x Agent client profiles, templates, and other configurations related to Avaya one-X <sup>®</sup> Agent clients. The website name is <b>ACMONEX</b> .
<b>one-X Configuration Services</b>	This Web service is installed as a website on the Microsoft Internet Information Services (IIS) Web server. Avaya one-X <sup>®</sup> Agent clients use the one-X Configuration Services to authenticate user credentials, retrieve client configuration, and store contact history. The Web service the name is <b>ACMONEXCFG</b> . In case of SSO, the name is <b>ACMONEXSSO</b> .

**Note:** To distribute the Avaya one-X<sup>®</sup> Agent components across several servers, you can install the components separately.

In a multiserver environment, you can deploy as many Avaya one-X<sup>®</sup> Agent Configuration Services that you need. The central database server hosts the Avaya one-X<sup>®</sup> Central Management database. Use the multiserver configuration in the High Availability mode for the Avaya one-X<sup>®</sup> Central Management feature. For information on High Availability deployment, please contact Avaya Professional Services.



By default, the Avaya Control Manager Installation wizard installs a single Configuration Service. You can install the configuration service in the different authentication modes that Avaya Control Manager and Avaya one-X<sup>®</sup> Agent administration supports.

Perform the following steps to install the CAM services using the Avaya Control Manager installer:

## Prerequisites

- Ensure that .NET Framework 4.0 is installed.
- Microsoft MVC is installed using the Avaya Control Manager Installation wizard.

## Procedure

1. From the Avaya Control Manager installation CD, double-click the Avaya Control Manager Installation wizard.
2. On the **Welcome to the Avaya Control Manager Setup Wizard** screen, click **Next**.
3. On the **Modify, Repair, or Remove installation** screen, click **Modify**.
4. On the **Custom Setup** screen, select the **one-X Agent CAM** component and click **Next**.

**Note:** If you have already installed the **one-X Agent database** in your environment, you must enter the details of the connection to the database.

5. On the **SQL Database** configuration screen, perform the following:
  - a. In the **Server** field, enter the host name or the IP address of the server that hosts SQL Server.

By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as **ACMServer\sqlinstance**.

**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.

- b. In the **Port** field, enter the port number of SQL Server. By default, the SQL Server uses port **1433**.
  - c. In the **Username** field, enter the database user name that is used for connecting to SQL Server. Use the **SA** user. If you do not have the **SA** user, use the user that has **dbo** access rights on the master database.
  - d. In the **Password** field, enter the password of the user.
  - e. In the **ACM DB** field, enter the name of the Avaya Control Manager database.

The database name is the original database you created for Avaya Control Manager. By default, the database name is **ACM**.
6. Click **Next**.
  7. On the **Select Installation Folder** screen, select the location to install the Avaya one-X Agent components and click **Next**.
  8. On the **one-X Agent Central Management** screen, perform the following steps:
    - a. In the **one-X Database Name** field, enter the name of the Avaya one-X<sup>®</sup> Agent Central Management database. By default, the database name is **ACMONEXDB**.
    - b. In the **Username** field, enter the username for one-X agent user. The default the user name is **ACMonexuser**.
    - c. In the **Password** field, enter the password for one-X agent user.
    - d. In the **Client Authentication Mode** field, select one of the following:
      - **Basic:** Standard username and password that are authenticated with the Avaya one-X<sup>®</sup> Agent database.
      - **SSO:** Single Sign-on with active directory.

9. Click **Next**.
10. On the **Ready to Install** screen, click **Install**.
11. On the **Completing the Avaya Control Manager Setup Wizard** screen, click **Finish** to complete the installation.

---

## Installing the Avaya Aura<sup>®</sup> Call Center Elite Multichannel connector

Perform the following steps to install the Call Center Elite Multichannel connector using the Avaya Control Manager installer:

### Procedure

1. From the Avaya Control Manager installation CD, double-click the Avaya Control Manager installation wizard.
2. On the **Welcome to the Avaya Control Manager Setup Wizard** screen, click **Next**.
3. On the **Please Select Services to install** screen, select the **Avaya Control Manager EMC Integration** and click **Next**.
4. On the **Configure SQL Connection to your SQL Server** screen, perform the following steps:
  - a. In the **Server** field, enter the host name or the IP address of the server that hosts SQL Server.  
  
By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as `ACMServer\sqlinstance`.  
  
**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.
  - b. In the **Port** field, enter the port number of SQL Server. SQL Server uses **1433** as the default port.
  - c. In the **Username** field, enter the database user name that is used for connecting to SQL Server. Use the SA user. If you do not have the SA user, use a user that has *dbo* access rights on the master database.
  - d. In the **Password** field, enter the password of the user.
  - e. In the **ACM DB** field, enter the name of the Avaya Control Manager database.  
  
The database name is the original database you created for Avaya Control Manager. By default, the database name is *ACM*.
5. Click **Next**.
6. On the **Select Installation Folder** screen, select the location to install the Avaya EMC Connector and click **Next**.
7. On the **Configure EMC Integration** screen, perform the following steps:
  - a. In the **Database Server** field, enter the host name or IP address of the SQL server that hosts the EMC ACS database.
  - b. In the **Database Port** field, enter the port of the SQL server database. By default, the database is *1433*.

- c. In the **Database Name** field, enter the name of the EMC ACS database. By default, the database name is ACS.
  - d. In the **Username** field, enter the user name that has DBO access rights on the ACS database. Avaya Control Manager uses this user to update the information in the EMC ACS database.
  - e. In the **Password** field, enter the password of the user.
8. Click **Next**.
  9. On the **Ready to Install** screen, click **Install**.
  10. On the **Completing the Avaya Control Manager Setup Wizard** screen, click **Finish**.

To install Avaya EMC connectors manually; see [Installing the EMC connector manually](#).

---

## Testing the Avaya Control Manager installation

### Procedure

1. To test the installation and to start the system, start Avaya Control Manager License Server.
2. Perform one of the followings step:
  - If you had uploaded the license file during the installation, you can skip this step and go to Step 4.
  - If you have not uploaded the license file, go to Step 3.
3. Copy the license file, **license.lic** to the license server folder.  
The default path to the license server folder is: C:\Program Files (x86)\Avaya\Avaya Control Manager 7.1\Services\ACCCM License Server
4. Goto **Start > Run**.
5. In the run box type **services.msc** and press **Enter**.  
**Note:** The license server must start before any other services are started.
6. In the **Services** window, right-click **ACCCM License Server** and select **Start**.  
The system starts the service.
7. If the service fails to start, verify the service log files for details on any errors.  
The default location of the License Server log file is: C:\Program Files (x86)\Avaya\Avaya Control Manager 7.1\Services\ACCCM License Server\logs
8. Go to the Services window.
9. Right-click the **ACCCM Application Server** and select **Start**.  
The system starts the service.
10. Start all the system services that you installed, except the AD Sync service.  
All the service names start with ACCCM.
11. Open the Internet Explorer browser and in the address bar, enter the following:  
`http://<server name>/ACCCMPortal`
12. On the Avaya Control Manager login page, perform the following steps:

- a. In the **Username** field, enter admin as the user name.
- b. In the **Password** field, enter itnv as the password.

When you login for the first time, the system displays **Your password has expired. Please choose a new password** message, prompting you to change the password.

13. In the **Old Password** field, enter the existing password.
14. In the **New Password** field, enter the new password and click **OK**.  
The system displays the Avaya Control Manager menu page.

# Chapter 6: Modifying or removing the Avaya Control Manager system

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## Modifying the Avaya Control Manager components

The Avaya Control Manager installation wizard provides an option to modify the initial installation. You can:

- Install the additional Avaya Control Manager components that are not installed during the installation process.
- Remove existing Avaya Control Manager components.

To modify the installation, you must run the Avaya Control Manager installation wizard.

### Procedure

1. Double-click the Avaya Control Manager Installation setup.exe file.
2. On the **Welcome to the Avaya Control Manager Setup Wizard** screen, click **Next**.
3. On the **Modify, Repair or Remove installation** screen, click **Modify**.
4. On the **Custom Setup** screen, select the components that you want to add or remove and click **Next**.
5. On the **SQL Database** screen, perform the following steps:

- a. In the **Server** field, enter the host name or the IP address of the server that hosts SQL Server.

By default, the system uses the host Avaya Control Manager server address. If you are using a database instance, enter the instance name. For example, enter the database name as **ACMServer\sqlinstance**.

**Note:** The Avaya Control Manager default SQL Server installation does not install a special instance. Therefore, the value must be the server name or the IP address.

- b. In the **Port** field, enter the port number of SQL Server. SQL Server uses **1433** as the default port.
- c. In the **Username** field, enter the database user name that is used for connecting to SQL Server. Use the **SA** user. If you do not have the SA user, use a user that has *dbo* access rights on the master database.
- d. In the **Password** field, enter the password of the user.
- e. In the **ACMDB** field, enter the name of the Avaya Control Manager database.

The database name is the original database you created for Avaya Control Manager. By default, the database name is **ACM**.

6. Click **Next**.

Depending on the components you have chosen to add or remove, the system displays the next screen. If you have chosen to remove components, the system removes the following components from the Avaya Control Manager server:

Component	Action
<b>Databases</b>	The wizard does not delete any existing databases or database users.
<b>Web sites</b>	The wizard removes the websites from IIS and files on the file system.
<b>Services</b>	The wizard removes Windows services and all files on the file system.
<b>Prerequisites</b>	The wizard does not delete prerequisites from the Avaya Control Manager server.

---

## Uninstalling the Avaya Control Manager system

Use the following steps to uninstall the Avaya Control Manager setup from the Avaya Control Manager installation wizard:

### Procedure

1. Double-click the Avaya Control Manager Installation wizard.
2. On the **Welcome to the Avaya Control Manager Setup Wizard** screen, click **Next**.
3. On the **Modify, Repair or Remove installation** screen, click **Remove**.

The system removes all the components from the Avaya Control Manager server.

Component	Action
<b>Databases</b>	The wizard does not delete any existing databases or database users.
<b>Web sites</b>	The wizard removes the websites from IIS and files on the file system.
<b>Services</b>	The wizard removes Windows services and all files on the file system.

At the end of the removal process, the wizard removes the Avaya Control Manager system from the server. However, the wizard retains the prerequisites and database related components in the system.

You must remove the prerequisite components manually from the system.

To remove the prerequisite components, see [Removing the prerequisite components manually](#).

To remove database related components see [Removing the Avaya Control Manager databases manually](#).

---

## Removing the prerequisite components manually

The Avaya Control Manager installation wizard may not remove the prerequisite components if the services are installed as part of the Avaya Control Manager installation process.

Use the following steps to remove the prerequisite components manually.

### Procedure

1. Select **Start > Control Panel > All Control Panel Items** and click **Programs and Features**.
2. On the **Uninstall or change a program** window, right-click on the prerequisite application that you want to uninstall and click **Uninstall**.

The system removes the selected component from the server.

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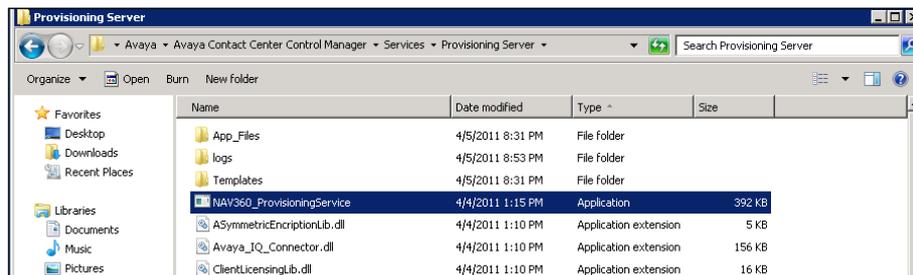
## Removing the Avaya Control Manager services manually

The Avaya Control Manager installation wizard may not remove the Avaya Control Manager services if the services are installed as part of the Avaya Control Manager installation process. You must remove the Avaya Control Manager services manually.

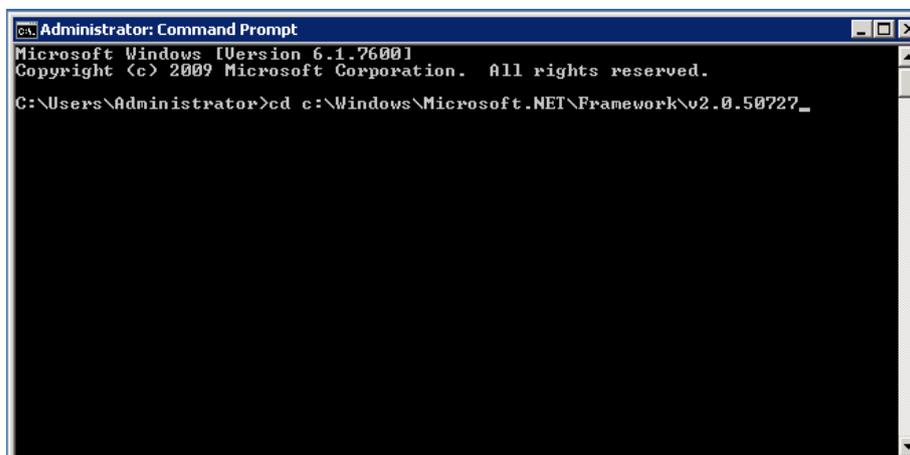
### Procedure

1. Navigate to the folder of the service you want to remove. For example, to remove Provisioning Server, select **Avaya > Avaya Control Manager > Services** and click **Provisioning Server** folder.

The system displays the following window:

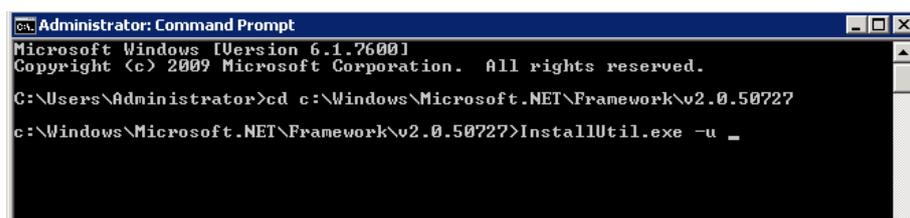


2. On the **Provisioning Server** window, locate the service executable file.  
**Note:** The service executable file is marked as application under the **Type** column.
3. Open the windows command line interface.
4. At the prompt, type `c:\windows\microsoft.net\framework\v2.0.50727`



5. At the prompt, type `installUtil.exe -u`

**Important:** Do not press the ENTER key.



6. Drag the Provisioning Server exe file from the service folder and drop it in to the command line window.

```
Administrator: Command Prompt
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>cd c:\Windows\Microsoft.NET\Framework\v2.0.50727
c:\Windows\Microsoft.NET\Framework\v2.0.50727>InstallUtil.exe -u "C:\Program Files (x86)\Avaya\Avaya Contact Center Control Manager\Services\Provisioning Server\NAU360_ProvisioningService.exe" _
```

7. Press **Enter**.

The system uninstalls the selected service.

**Important:** The manual uninstall does not update the Avaya Control Manager installation wizard. If you attempt to reinstall the service again through the installation wizard, the wizard does not recognize because the service was uninstalled from the system. The wizard marks it as a service that exists on the server.

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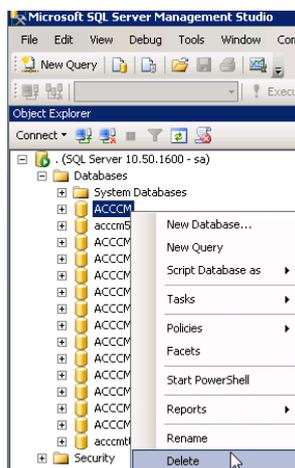
## Removing the Avaya Control Manager databases manually

The Avaya Control Manager wizard does not remove the Avaya Control Manager databases during the removal process of the Avaya Control Manager system. You must remove the Avaya Control Manager databases manually.

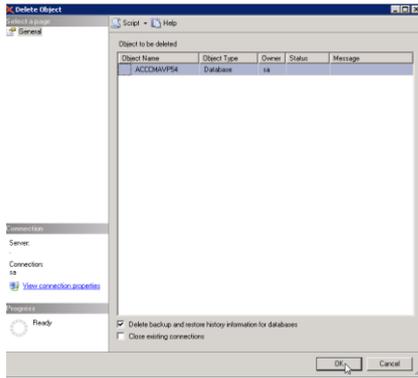
Use the following steps to remove the Avaya Control Manager database manually:

### Procedure

1. Click **Start > Microsoft SQL Server Management Studio**.
2. Login to the Microsoft SQL Server Management Studio as an administrative user.
3. In the **Microsoft SQL Server Management Studio**, right-click **ACCCM** database and select **Delete**.



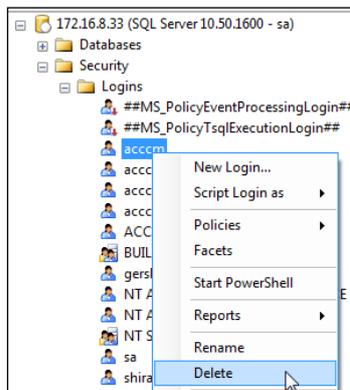
The system displays the following screen:



4. In the **Delete Object** window, select the **Close existing connection** option if there are services that are still connected to the Avaya Control Manager database.
5. Click **OK**.

**Note:** To delete a database, navigate to the main **Security > Logins** folder under the **Server**, and not a specific database.

6. Right-click the user you want to delete and select **Delete**.



# Chapter 7: Installing the EMC connector manually

To install the EMC Avaya Control Manager connector manually:

## Procedure

1. From the Avaya Control Manager installation CD, copy the folder of the `\Misc\Web\ACCMEMC` and paste the `ACCMEMC` folder to the Avaya Control Manager server at **Avaya > Avaya Control Manager 7.1 > Web**.

2. Open the **Web.config** file from Notepad and perform the following steps:

- a. Modify the connection string details of the EMC ACS database as follows:

```
<add name="ACSConnectionString" connectionString="Data Source=itnvlab9;Initial Catalog=ACS;UserID=sa;Password=&quot;byTbgT36p65P8WEN5W2XAw==&quot;" />
```

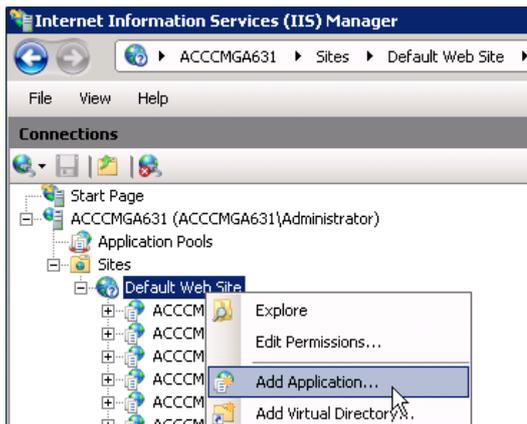
Parameter	Description
<b>Data source</b>	The host name of the server that hosts the EMC ACS database.
<b>Initial Catalog</b>	The name of the EMC ACS server. By default, the EMC ACS server name is ACS.
<b>User ID</b>	The SQL Server user name of the user that has full DBO access rights on the ACS database.
<b>Password</b>	The password of the user. You must specify the password in clear text. The system encrypts the password on the first login.

3. Modify the connection string details to the Avaya Control Manager database as follows:

```
<add name="nav360ConnectionString" connectionString="Data Source=ACM;Initial Catalog=NAV360_234qa;UserID=sa;Password=&quot;sfaq5ySLrR36bu/ztCkILg==&quot;" />
```

Parameter	Description
<b>Data source</b>	The host name of the server that hosts the Avaya Control Manager database.
<b>Initial Catalog</b>	The name of the Avaya Control Manager server. Usually it is Avaya Control Manager.
<b>User ID</b>	The SQL Server user name of the user that has full DBO access rights on the Avaya Control Manager database.
<b>Password</b>	The password of the user. You must specify the password in clear text. The system encrypts the password on the first login.

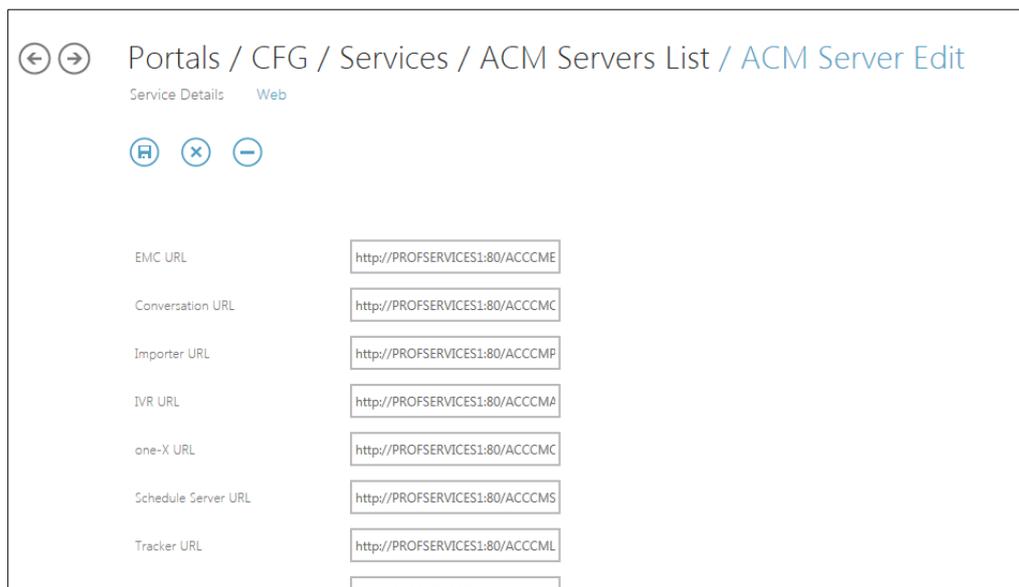
4. Save the **Web.config** file.
5. Open the IIS administration console and perform the following steps:
  - a. Expand the IIS tree, right-click **Default Web Site** and select **Add Application**.



The system opens the Add Application window.

- b. In the **Alias** field, enter the name of the website as *ACMEMC*.
  - c. In the **Application pool** field, select the application pool as *ACMIVR*.
  - d. In the **Physical path** field, browse to the location of the *ACMEMC* folder that you copied to the Avaya Control Manager server.
  - e. Click **OK**.
6. Log on to the Avaya Control Manager Web interface as administrator.
  7. On the Avaya Control Manager Portals page, navigate to the **Configuration Portal > Services > ACM Servers list**.
  8. Click on your Avaya Control Manager server to edit.
  9. Click on the **Web** tab.

The system displays the following screen:



10. Locate the Avaya Control Manager EMC URL system parameter and enter the URL to the Web application as `http://<ACMserverName>/acmemc`. Here `<ACMserverName>` is the name or IP Address of the Avaya Control Manager.

**Note:** Do not use the EMC Portal from the Avaya Control Manager Localhost. Ensure that you access the portal through FQDN or host name and not through IP address.

11. Click **Save**.

# Chapter 8: Troubleshooting

## Unable to log in to the Avaya Control Manager portal

### Authentication failed

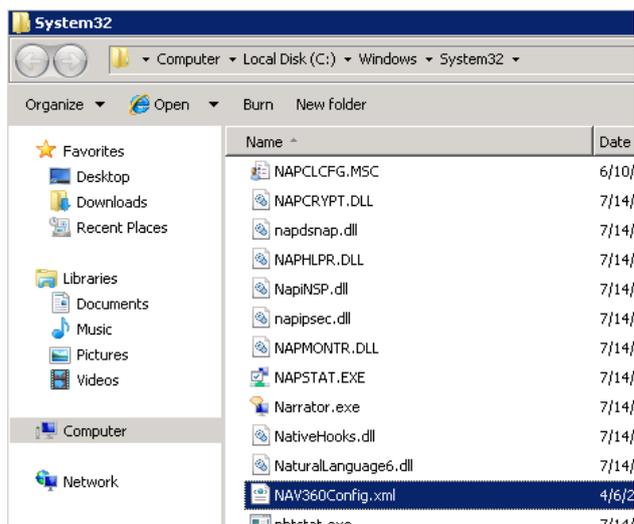
#### Problem

When trying to log in to the Avaya Control Manager Web portal for the first time, I get an error message that the authentication failed.

#### Possible resolution

If you are unable to login for the first time, check for the following:

1. Go to c:\windows\system32 folder and locate the NAV360CONFIG.XML.



2. Open the file in a text editor.

You see a file in the following structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<configuration>
<connectionString>Data Source=ACMDBSERVER;Initial
Catalog=ACMDBNAME;User
ID=ACMdbuser;Password=ACMdbpassword</connectionString>
</configuration>
```

3. Ensure that the connection string details match the database settings.

**Note:** The database setting must be the same that you entered during the installation process.

String	Description
<b>ACMDBSERVER</b>	The database server that hosts the Avaya Control Manager database. If you are using a database with an instance, the server name must include a"/". For example, myServer/SQLexpress
<b>ACMDBNAME</b>	The name of the Avaya Control Manager database.
<b>ACMdbuser</b>	The database user that Avaya Control Manager uses to access the Avaya Control Manager database.
<b>ACMdbpassword</b>	The user password. After the first successful log-in, the system encrypts the password.

- You can create an ODBC on the Avaya Control Manager server and check if the connection string details are correct. If the connection details are wrong, you can edit the details and save the file.
- Repeat step 1-3 for the same file located in **c:\windows\syswow64** folder.  
**Note:** This step is valid only for windows 2008 64-bit installation.

---

## No more licenses

### Problem

When trying to log in to the Avaya Control Manager Web portal for the first time, I get a message that there are no more licenses.

### Possible resolution

If the error appears on the screen and there are sufficient licenses, check the following:

- Goto **Start > Run**.
- In the run box type **services.msc** and press **Enter**.
- In the **Services** window, check if the Avaya Control Manager License Server is running.
- Restart the Avaya Control Manager License Server service. The default name of the service is ACCCM License Server.
- If the Avaya Control Manager License Server service does not start, then navigate to the License Server folder on the Avaya Control Manager server and check the log files of the service. The default path of the log folder for the License Server is:

```
C:\Program Files (x86)\Avaya\Avaya Control Manager
7.1\Services\ACCCM License Server\Logs
```

The log file must state:

```
06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.ConfigReader.Init |Got Config file

06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService..ctor |Initialized
ConfigReader

06/04/2011 16:09:14 |DEBUG |LicenseDBManager.DBManager..ctor
```

```
|Connection string was set
06/04/2011 16:09:14 |DEBUG
|LicenseDBManager.InfoProvider.GetAllLicenseServicesAddresses
|Got 1 License Services addresses

06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |The service
will start listening on port 35353

06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |about to
initialize LicensingService singleton instance

06/04/2011 16:09:15 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |Initialized
LicensingService singleton instance

06/04/2011 16:09:15 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |Starting to
listen
```

If you get a different log structure and error messages, contact Avaya Support.

6. Ensure that the License.lic file is in the root directory of the License Server folder.
7. If the log file shows that the service is up and running, there is a problem with the license file. You must contact the Avaya support for help.

---

## Synchronizer application fails to start

### Problem

When launching the synchronizer application, the application fails and the system displays an error message.

### Possible resolution:

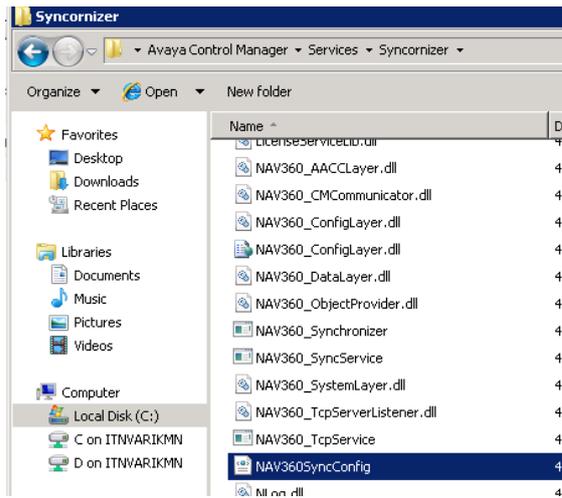
1. Check that the Synchronizer is configured on the **Avaya Control Manager Portals page > Configuration Portal > Services > Synchronizer** tile.

**Note:** The Synchronizer must be configured as part of the installation wizard process.

2. Check that the NAV360Synconfig.xml file in the synchronizer folder is pointing to the correct sync service ID.

**Note:** You can find the service ID under the **Avaya Control Manager Portals page > Configuration Portal > Services > Synchronizer** tile.

By default, the **Synchronizer** tile does not display the service ID column. Click the **Choose columns** icon, and select the **ID** column for display. For more information about personalizing the interface by choosing columns, see *Using Avaya Control Manager* guide.



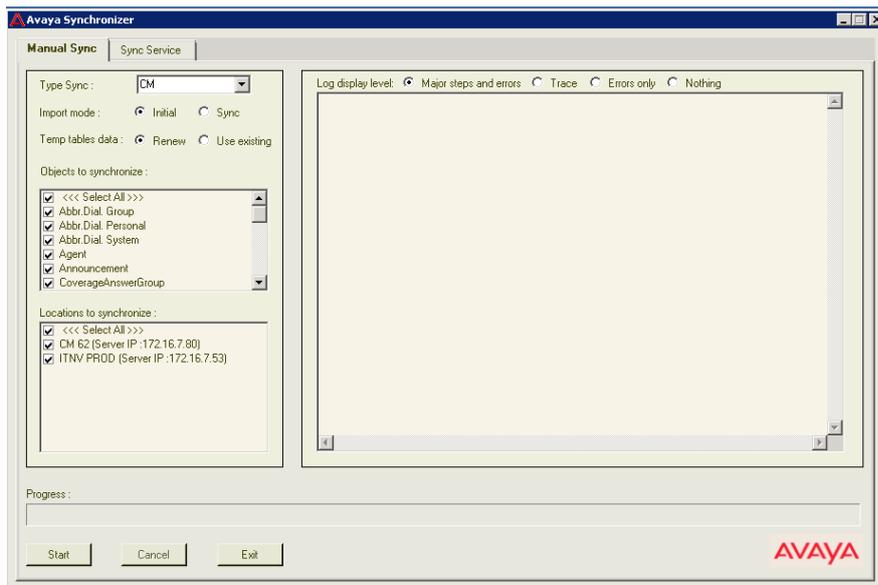
```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <configsource>
    <!-- id of configuration from NAV360 table
'Sync_Service_Parameters'-->
    <syncserviceid>1</syncserviceid>
    <!--application type: NAV360, avaya-->
    <applicationType>NAV360</applicationType>
  </configsource>
</configuration>
```

ID	Service name	Finish wz
1	ACCCM Sync	

## The Synchronizer application does not show any locations

### Problem

When launching the Synchronizer application, the location list is empty.



### Possible resolution:

Assign at least one Avaya Aura® Communication Manager to the location and restart the Synchronizer application.

```

06/04/2011 16:09:14 |DEBUG |NAV360_LicenseService.ConfigReader.Init
|Got Config file
06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService..ctor |Initialized ConfigReader
06/04/2011 16:09:14 |DEBUG |LicenseDBManager.DBManager..ctor
|Connection string was set
06/04/2011 16:09:14 |DEBUG
|LicenseDBManager.InfoProvider.GetAllLicenseServicesAddresses |Got 1
License Services addresses
06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |The service will start
listening on port 35353
06/04/2011 16:09:14 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |about to initialize
LicensingService singleton instance
06/04/2011 16:09:15 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |Initialized
LicensingService singleton instance
06/04/2011 16:09:15 |DEBUG
|NAV360_LicenseService.LicenseService.OnStart |Starting to listen

```

## Unable to connect to Communication Manager

---

## Synchronizer or Avaya Control Manager Provisioning are unable to connect to Avaya Aura® Communication Manager

### Problem

The system services are not able to establish connection to Avaya Aura® Communication Manager.

### Possible resolution

Ensure that you have configured the following Avaya Aura® Communication Manager parameters correctly:

- Avaya Aura® Communication Manager user name
- Avaya Aura® Communication Manager password
- PIN Code, if required
- Avaya Aura® Communication Manager Connection port

The Avaya Aura® Communication Manager port is configured under the system parameter page. The default Avaya Aura® Communication Manager port is 5023.

---

## Avaya Control Manager Services are not starting

### Problem

Avaya Control Manager Services are not starting.

### Possible Resolution

If one of the following does not start:

- Avaya Control Manager Provisioning Service
- Avaya Control Manager Sync Service

Ensure the Avaya Control Manager License Server is running.

---

## Failure installing one of the prerequisites

### Problem:

Unable to install the prerequisites.

### Possible resolution:

If one of the prerequisites that you select to install fails during the Avaya Control Manager installation and the system displays an error message, perform the following steps:

1. Stop the installation.

The installation wizard rolls back automatically.

2. Install the prerequisite by running the software separately.

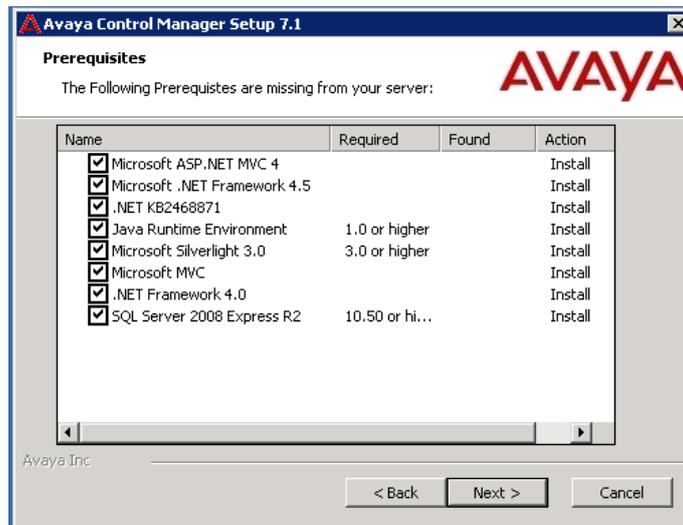
The system extracts all the installation files to the disk when you start the installation wizard.

The location of the extracted files in Microsoft Windows 2008:

C:\Users\Administrator\AppData\Roaming\Avaya\Avaya Control Manager\install

You can access these files only when the install wizard has initiated the installation process. To access the prerequisite, you must start the wizard, copy the prerequisite file from the location data, and then close the wizard.

3. Run the Avaya Control Manager installation wizard again and skip the prerequisite that you installed manually.



**Note:** You can remove prerequisites from the installation by clearing the selection option to the corresponding Prerequisite components.

## Settings for Express installation

The Express installation feature uses the following default settings during the installation process:

Parameter	Value
<b>Installation Location</b>	C:\Program Files (x86)\Avaya\Avaya Control Manager
<b>Installed Components</b>	All system components except the EMC Connector are installed.
<b>Avaya Control Manager Database name</b>	ACCCM
<b>Sync Database name</b>	ACCCMSYNC
<b>one-X Database name</b>	ACCCMONEXDB
<b>AVP Connector Database name</b>	ACCCMAVP

Parameter	Value
<b>Avaya Control Manager DB User</b>	ACCCM
<b>ACCCM DB Password</b>	See the password file in the main Avaya Control Manager folder
<b>Sync DB User</b>	ACCCMSYNC
<b>Sync DB Password</b>	See the password file in the main Avaya Control Manager folder
<b>one-X Database User</b>	ACCCMONEXUSER
<b>one-x Database Password</b>	See the password file in the main Avaya Control Manager folder
<b>AVPDatabase User</b>	ACCCMAVP
<b>Database Password</b>	See the password file in the main Avaya Control Manager folder

# Appendix A

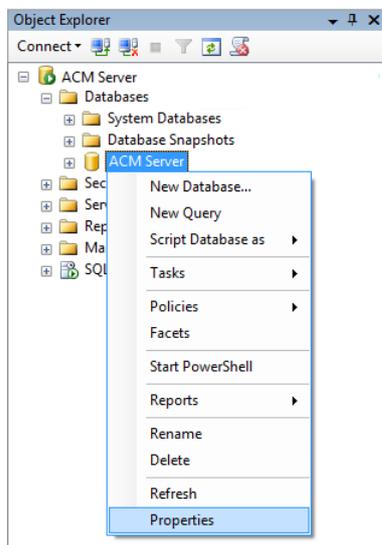
---

## Turning off the transaction log of the database

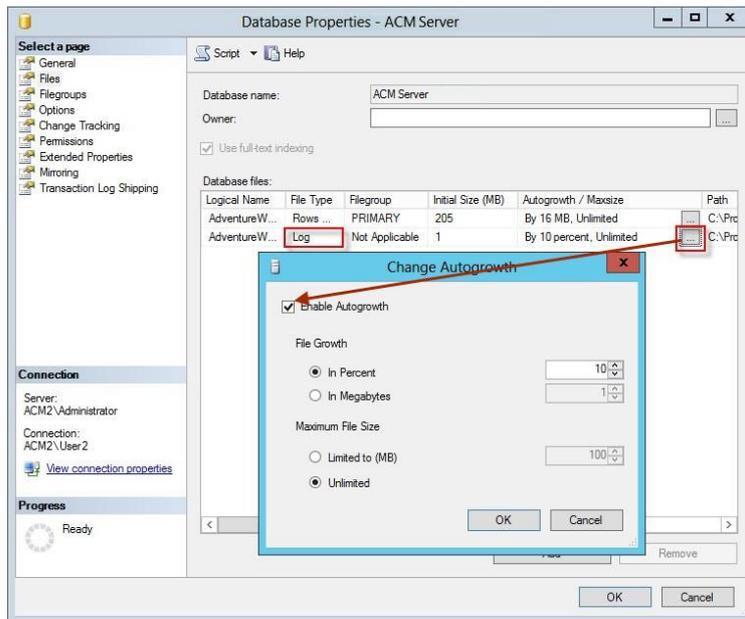
The Avaya Control Manager sync service activity can affect the size of the transaction log. To reduce the transaction log size you must turn off the transaction log of the database.

### Procedure

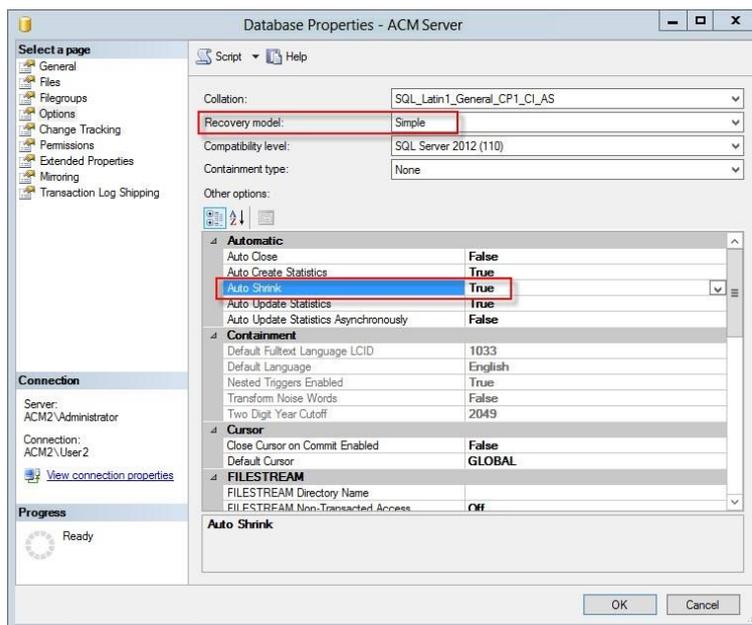
1. Connect to SQL Server Instance using SQL Server Management Studio.
2. In the **Object Explorer** pane, expand **Databases**.



3. Right-click the database and select **Properties**.
4. In the **Database Properties** window, in the **Select a page** pane, select **Files**.
5. In the right pane, under **Database files:** in the **File Type** select **Log**.
6. Click the ... button.



7. In the **Change Autogrowth** window, uncheck **Enable Autogrowth** option.
8. Click **OK**.
9. In the **Select a page** pane, select **Options**.



10. In the right pane, in the **Recovery model** field, select **Simple**.
11. In the **Other options** pane, under **Automatic**, set **Auto Shrink** value to **True**.
12. In the **Database Properties** window, click **OK**.

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