



Deploying Avaya Aura[®] Conferencing: Basic installation

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Chapter 1: An introduction to Avaya Aura® Conferencing

About this document

This document provides an overview of the components and services that comprise the Avaya Aura® Conferencing solution. This document also contains technical specifications and requirements, and a list of procedures required to install this solution. This document describes the procedures to perform the initial installation and deployment of Avaya Aura® Conferencing Application Server software and Avaya Media Server software.

This document (called *Deploying Avaya Aura® Conferencing: Basic Installation*) describes the basic installation instructions only. It does not describe the advanced installation and configuration steps. To learn more about the advanced installation and configuration steps, see *Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration*, which is available from the Avaya Support website: <http://www.avaya.com/support>.

Related resources

Documentation

Download the following related documents at <http://support.avaya.com>.

The Avaya Support website also includes the latest information about product compatibility, ports and Avaya Aura® Conferencing releases.

Related Links

[Overview](#) on page 8

[Implementation](#) on page 8

[Administration](#) on page 9

[Supporting](#) on page 9

Overview

Document number	Title	Use this document to:	Audience
04-604343	<i>Avaya Aura® Conferencing Overview and Specification for Avaya Aura®</i>	Understand the high-level features and functionality of the product	Customers, Partners, Services, and Support personnel
04-604344	<i>Avaya Aura® Conferencing Overview and Specification for Turnkey</i>	Understand the high-level features and functionality of the product	Customers, Partners, Services, and Support personnel
04-604323	<i>Avaya Aura® Conferencing Solution Description for SME</i>	Understand the high-level features and functionality of the solution	Customers, Partners, Services, and Support personnel
04-604328	<i>Avaya Aura® Conferencing Solution Description for Medium Enterprises</i>	Understand the high-level features and functionality of the solution	Customers, Partners, Services, and Support personnel
04-604333	<i>Avaya Aura® Conferencing Solution Description for Large Enterprises</i>	Understand the high-level features and functionality of the solution	Customers, Partners, Services, and Support personnel

Related Links

[Documentation](#) on page 7

Implementation

Document number	Title	Use this document to:	Audience
04-604418	<i>Deploying Avaya Aura® Conferencing: Basic Installation</i>	Perform installation and configuration tasks	Partners, Services, and Support personnel
04-604363	<i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i>	Perform installation and configuration tasks	Partners, Services, and Support personnel
04-604353	<i>Upgrading Avaya Aura® Conferencing</i>	Perform upgrading and configuration tasks	Partners, Services, and

Document number	Title	Use this document to:	Audience
			Support personnel

Related Links

[Documentation](#) on page 7

Administration

Document number	Title	Use this document to:	Audience
04-604378	<i>Administering Avaya Aura® Conferencing</i>	Perform system-wide administration tasks	System administrators
04-604403	<i>Migrating Avaya Aura® Conferencing</i>	Perform system-wide security administration and backup/restore tasks	System administrators
04-604398	<i>Maintaining and Troubleshooting Avaya Aura® Conferencing</i>	Perform maintenance and troubleshooting tasks. Understand logs and fault tracking.	System administrators Partners, Services, and Support personnel

Related Links

[Documentation](#) on page 7

Supporting

Document number	Title	Use this document to:	Audience
04-604423	<i>Avaya Aura® Conferencing Accounting Records Reference</i>	Collect information about accounting records	System administrators Customers, Partners, Services, and Support personnel
04-604443	<i>Avaya Aura® Conferencing Alarms and Logs Reference</i>	Collect information about alarms and logs, including the alarms and logs families	System administrators Customers, Partners, Services, and Support personnel

Document number	Title	Use this document to:	Audience
04-604444	<i>Avaya Aura® Conferencing Operational Measurements Reference</i>	Collect information about operational measurements	System administrators Customers, Partners, Services, and Support personnel

Related Links

[Documentation](#) on page 7

Training

The following courses are available on <http://www.avaya-learning.com>. In the **Search** field, type the course code, and click **Go** to search for the course.

Course code	Course title
2U00110O	Selling Avaya Aura® Conferencing Solution Learning Bytes
2U00325O	Avaya Aura® Conferencing 7 L1 Customer Scenario
3U00260W	Designing Avaya Aura® Conferencing
5U00120E	Avaya Aura® Conferencing
3204	Avaya Aura® Conferencing Implementation and Maintenance Exam

Viewing Avaya Mentor videos

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

About this task

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

Procedure

- To find videos on the Avaya Support site, go to <http://support.avaya.com> and perform one of the following actions:
 - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
 - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.

- To find the Avaya Mentor videos on YouTube, go to <http://www.youtube.com/AvayaMentor> and perform one of the following actions:
 - Enter a key word or key words in the Search Channel to search for a specific product or topic.
 - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the site.

*** Note:**

Videos are not available for all products.

Deploying online help

Avaya Aura® Conferencing contains a number of online help files and online manuals to guide you through the process of installing, configuring, and maintaining your conferencing system. These online help files include:

- Online help for Element Manager
- Online help for the Provisioning Client
- Online help for Reports
- Online help for users of Collaboration Agent

By default, each of these online help packages is fully integrated with the component which it describes. So, for example, if you view help on Element Manager, you can access the Element Manager online help. The Element Manager online help file describes each of the Element Manager fields and describes many of the common procedures that you can perform using the Element Manager interface.

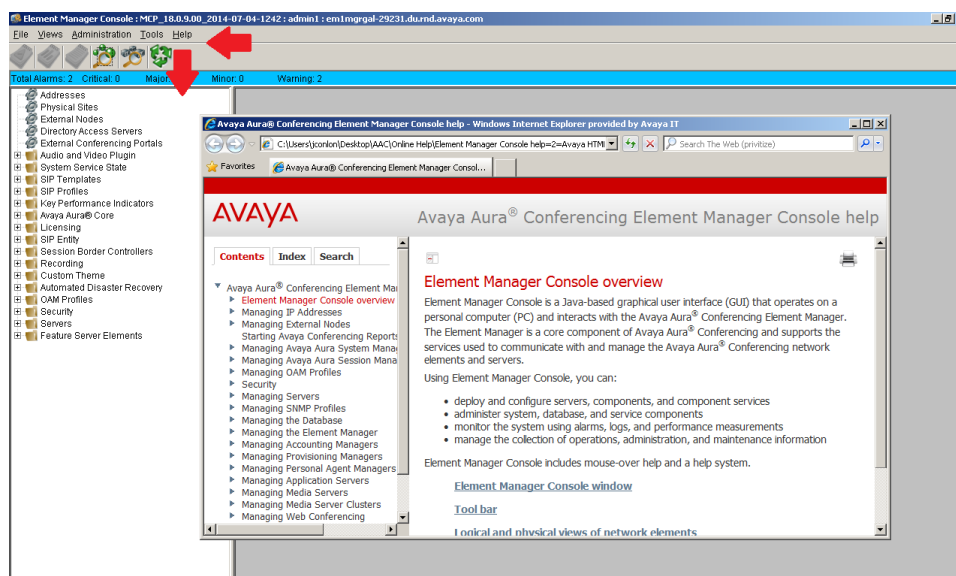


Figure 1: Online Help for Element Manager

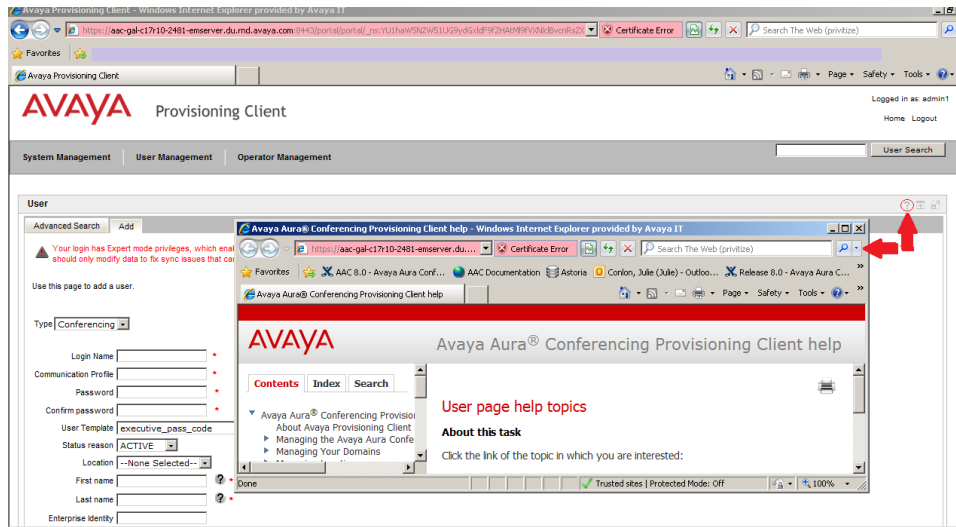


Figure 2: Online Help for the Provisioning Client

In the case of the online help for users of Collaboration Agent, Avaya has translated the online help into several languages. The list of available languages conforms with the i18n and L10n (internationalization and localization standards). When users install the Collaboration Agent application, it chooses which language to display based on the computer's locale.

The online help files are packaged within the Avaya Aura® Conferencing software application bundle.

Support

Visit the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Audience

The intended audience for this document is:

- Tier 1 Avaya technical support
- Avaya Professional Services
- Authorized Business Partners

You must have the following core competencies:

- The ability to access servers using:
 - a locally attached keyboard and monitor or KVM (Keyboard, Video, Mouse) switch
 - the ssh remote access protocol
- Basic Linux operations:
 - navigating the file system (changing directories)
 - managing the implications of uninformed or careless use of system commands while logged in as the root user
- Basic server tasks:
 - powering servers up
 - powering servers down
 - resetting servers
 - inserting and removing CD-ROM and DVD-ROM disks
- Basic Microsoft knowledge:

Windows:

 - editing text files
 - creating folders
 - Microsoft Excel:
 - transitioning between worksheets of a workbook
 - entering data into cells
 - copying/pasting between cells and commands, such as Control+c, Control+v, and Edit > Paste Special menu
- The ability to operate a supported Web browser (such as Firefox or Internet Explorer):
 - Interacting with pop-up windows
 - Inspecting and accepting x.509 certificates and installing CA certificates that are presented by the browser
 - Downloading and installing software through the browser
- Basic Public Key Infrastructure (PKI) tasks:
 - Creating Certificate Signing Requests (CSR)
 - Inspecting the details of a certificate
 - Installing Certificate Authority certificates on Windows Certificate Store
 - Installing Personal certificates on Windows Certificate Store
 - Installing Certificate Authority certificates on Firefox Certificate Manager
 - Installing Your Certificates on Firefox Certificate Manager

How to use this document

You must complete a given task successfully before beginning the next one. If you encounter issues while performing a step, contact the Avaya Support Web site at <http://support.avaya.com> to open a service request.

Use the Avaya Aura® Conferencing 8.0 Intelligent Workbook together with this document to guide you through the preparatory requirements and installation and configuration steps for Avaya Aura® Conferencing. The Intelligent Workbook can be found on the Avaya Web site at <http://support.avaya.com/>.

Related Links

[Preparing your data using the Avaya Aura Conferencing 8.0 Intelligent Workbook](#) on page 14

Preparing your data using the Avaya Aura® Conferencing 8.0 Intelligent Workbook

The Avaya Aura® Conferencing 8.0 Intelligent Workbook is a data collection tool. It is in the Microsoft Excel format. The important tabs are **Checklist**, **Design**, and **Configuration Data** tabs. The other steps and tabs of the workbook are dynamic and depend on the layout selected in the **Design** tab, so they might not be listed as they are listed below. This is an example of typical tabs that might be visible:

- Instructions
- 0-Configuration Data
- 1-OS Linux Install
- 2-OS Patches Install
- 3-ACC Apps Install
- 4-Licensing
- 5-Single sign-on
- 6-Config AAC Services
- 7-Config Avaya Aura
- 8-Provisioning
- 9-Web Conferencing: Enabling Web conferencing
- 10-Video
- A-Flare for Windows and iPad
- B-Update AAC
- C-Apply patches
- FAQ
- Troubleshooting

- Values

Related Links

[How to use this document](#) on page 14

License key

Licensing functionality operates in a different way, depending on your type of Avaya Aura® Conferencing deployment.

You can deploy Avaya Aura® Conferencing 8.0 with the Avaya Aura® platform. The Avaya Aura® platform consists of Avaya Aura® System Manager, Avaya Aura® Session Manager, and Avaya Aura® System Platform. This type of deployment is called an Avaya Aura® deployment. Alternatively, you can deploy Avaya Aura® Conferencing 8.0 without the Avaya Aura® platform. This type of deployment is called a Turnkey deployment.

In an Avaya Aura® deployment, licensing is supported on the Application Server and the Media Server. The License key is installed on the Web License Manager (WebLM) server which is co-resident with System Manager. The license key must be obtained prior to starting the deployment.

WebLM is a client/server model where numerous clients can share the same WebLM server and the same license key. For more information, see [Installing the license key on](#) on page 85.

In a Turnkey deployment, licensing is also supported by WebLM. However, in a Turnkey deployment, the WebLM server is embedded with Avaya Aura® Conferencing. For more information, see [Applying a license key](#) on page 77.

For both solutions, a grace period of 30 days exists for upgrades and new installations. Additionally, new upgrades and installations include a number of default licenses. If the licensing limits are exceeded, Avaya Aura® Conferencing displays full explanatory error messages to users. Licenses must be periodically renewed. If they are not renewed, they expire.

The license monitors:

- Maximum number of provisioned audio, video, and web users
- Maximum number of media servers allowed in the Avaya Aura® Conferencing system
- Maximum number of recording Avaya Aura® Conferencing systems

Administrative user roles and preconfigured accounts

Roles define operational boundaries (access permissions) for administrators. Administrators can have more than one role, depending on their duties. You assign roles to new administrators when you create their accounts. During server installation, the installation software creates the following user accounts:

Preconfigured/ Admin accounts	Default password	Preassigned role	Description
ntsysadm	password	System Security Administrator (SSA) role.	The SSA can perform system configuration and specify security attributes such as: • Password configuration • User management • Certificate management • Access control • Antivirus • File System Integrity tools • Network configuration • System backup and restore
ntappadm	password	Application Administrator (AA) role	The AA can install the Avaya Aura® Conferencing application software and manage components related to the application. The AA is responsible for installing, maintaining, patching, and upgrading Avaya Aura® Conferencing software only.
ntsecadm	password	Security Auditor (SA) role	The SA can collect and view security audit logs and syslogs at the platform level. The SA can also transfer the security logs off the server.
ntbackup	password	Backup Administrator (BA) role	The BA can perform only system backups. A BA cannot perform: • any operation on the server except backups. • a system restore—only the SSA or root user can perform a system restore.
ntdbadm	password	Database Administrator (DBA) role	The DBA can manage the database schemas and database tools on servers where the database resides. The server must host the database for this role to be relevant.
ntossadm	password	Operational Support System Administrator (OSS) role	Downstream processors can use the ntossadm account with this role to connect to the server and collect OSS logs.
admin admin1	admin admin1	Unlimited privileges	For expert mode login to Avaya Aura® Conferencing, Element Manager, and Provisioning Manager.

Preconfigured/ Admin accounts	Default password	Preassigned role	Description
admin2 admin3 admin4 admin5	admin2 admin3 admin4 admin5		
init	Not applicable	System Security Administrator (SSA) role and Database Administrator (DBA) role	SSA and DBA account for Avaya Services access.
craft	Not applicable	Application Administrator (AA) role	AA account for Avaya Services access

Supported Web browsers

Avaya Aura® Conferencing supports the following browsers for Collaboration Agent users and Avaya Aura® Conferencing administrators. Administrators use the following applications to administer and maintain Avaya Aura® Conferencing:

- Element Manager Console
- Provisioning Client
- Avaya Conferencing Reports & Monitors

Browsers	Operating System	Collaboration Agent	Administration Applications
Microsoft Internet Explorer 7.0 and 8.0	Windows XP Windows 7	yes	yes
Microsoft Internet Explorer 9.0 and 10.0	Windows 7	yes	yes
Mozilla Firefox version 10 and later	Windows XP Windows 7	yes	yes

Possible limitations

When running the Audio/Video in Collaboration Agent feature, Google Chrome may demonstrate poor lip synchronization. When Collaboration Agent detects when a user wishes to use the Audio/Video in Collaboration Agent feature in Google Chrome, it displays an information message to inform them of this possible limitation.

In addition, users running Google Chrome for the Mac operating system may experience issues when sharing their desktop. Avaya recommends using Apple Safari or Mozilla Firefox for desktop sharing instead.

Supported hardware

Avaya Aura® Conferencing 8.0 supports the HP ProLiant DL360p G8 for all deployment configurations. Alternatively, if you have an existing HP ProLiant DL360 G7, you can reuse it. If you have existing Dell 610 or IBM S8800 servers, you may be able to reuse them as cascading Avaya Media Server (MS)'s. However, you cannot reuse the Dell 610 or IBM S8800 servers as Avaya Aura® Conferencing 8.0 core servers.

The hardware requirements for Avaya Aura® Conferencing 8.0 are the same whether you are installing the product in an Avaya Aura® deployment or a Turnkey deployment. In both cases, it is the HP ProLiant DL360p G8 server.

Server type	Supported use
HP ProLiant DL360p G8	Used for new installations of Avaya Aura® Conferencing 8.0.
HP ProLiant DL360 G7	Can be reused when upgrading existing Avaya Aura® Conferencing 7.2 deployments to Avaya Aura® Conferencing 8.0. ¹
Dell 610	Can only be used as cascading media servers within Avaya Aura® Conferencing 8.0 deployments. ²
IBM S8800	Can only be used as cascading media servers within Avaya Aura® Conferencing 8.0 deployments. ²

¹ For Large deployments (previously known as Standalone in the Avaya Aura® Conferencing 7.x releases) the server hosting the Element Manager and Database must have more than 12GB of RAM. If your server only has 12GB of RAM please contact Avaya for a memory expansion kit and apply this kit prior to the upgrade to Avaya Aura® Conferencing 8.x. For more information on installing and configuring the memory expansion kit, see *Deploying Avaya Aura® Conferencing 7.2.2*, which is available from <https://support.avaya.com/>.

² For more information on cascading media servers, see [Configuring cascading](#).

Chapter 2: Before you begin

Before you begin checklist

The following checklist provides the high level steps and considerations prior to beginning your Avaya Aura® Conferencing installation. This checklist applies to deployments which use the Avaya Aura® environment, which consists of System Manager and Session Manager. If you wish to install Avaya Aura® Conferencing in an alternative environment, you can proceed directly to the next chapter. An installation of Avaya Aura® Conferencing in an alternative environment is called Avaya Aura® Conferencing Turnkey solution.

 Note:

If you are upgrading from Avaya Aura® Conferencing Release 7.2, see Upgrading Avaya Aura® Conferencing, which is available from <http://support.avaya.com/>.

#	Task	Description	Notes	✓
1	Ensure that version 6.2 is installed for System Manager, Session Manager, and Communication Manager prior to installing Avaya Aura® Conferencing. Obtain the System Manager IP address and FQDN.	For more information about the supported versions of the Avaya Aura® stack, see the <i>Overview and Specification Guide for Avaya Aura® Conferencing</i> , which is available from http://support.avaya.com/ . To learn more about alternative platform software solutions, see the <i>Overview and Specification Guide for Avaya Aura® Conferencing Turnkey Solution</i> , which is also available from http://support.avaya.com/ .		
2	Ensure that the Ignore SDP for Call Admission Control setting is disabled in System Manager.  Important: The Ignore SDP for Call Admission Control setting in System Manager <i>must be</i> disabled for Avaya Aura®	Perform the following steps: 1. Log on to System Manager. 2. On the System Manager console, click Session Manager in the Elements section. 3. In the left navigation pane, click Session Manager Administration. 4. In the Global Settings section on the Session Manager Administration page, make sure the Ignore SDP for Call Admission Control check box is not checked.		

#	Task	Description	Notes	✓
	Conferencing to operate properly.	5. If you changed the Ignore SDP for Call Admission Control setting, click Save .		
3	Download the Avaya Aura® Conferencing Intelligent Workbook from the Avaya Web site.	Go to http://support.avaya.com/ to download the Avaya Aura® Conferencing Intelligent Workbook.		
4	Determine your deployment layout type based on the capacity and scaling requirements for your location.	Include this information in the Avaya Aura® Conferencing Intelligent Workbook For information about deployment types, see the various Overview and Specification Guides and the Solution Description Guides in Documentation on page 7.		
5	Install your HP ProLiant DL380p G8 server.	See Downloading HP documentation G8 on page 23.		
6	Obtain the latest Avaya Aura® Conferencing disks for software installation and patches: • AAC platform DVD-ROM • Application Bundle DVD-ROM • Platform patches DVD-ROM	DVD-ROM disks are provided. You can also download from Avaya PLDS and burn your own CD- or DVD-ROM (for advanced users only).		
7	Use the Avaya Aura® Conferencing Intelligent Workbook for the following: • Determine the required number of IP addresses for your deployment configuration, hostnames, and FQDNs. • Register the required FQDNs with the appropriate DNS servers.	See the Avaya Aura® Conferencing Intelligent Workbook you previously downloaded.		

#	Task	Description	Notes	✓
	! Important: FQDNs are required for single sign-on (SSO) to enable you to administer all the components using System Manager. DNS integration is required for SSO to work. * Note: To use SSO, the System Manager FQDN, Element Manager FQDN, and Provisioning Client FQDN (if required) must belong to the same root domain.			
8	Obtain an enrollment password from System Manager.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
9	If you are deploying your system with TLS enabled, ensure Certificate Authorities are imported and certificates are assigned.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
10	Obtain the supported Web browsers.	Check the latest Avaya Aura® Conferencing Release Notes which are available from http://support.avaya.com/ to see the exact versions of the Web browsers which Avaya Aura® Conferencing supports.		
11	Obtain the License key file from Avaya and install the key on the WebLM server which resides on System Manager.	See Installing the license key on on page 85.		

Before you begin

#	Task	Description	Notes	✓
12	If you are using a DMZ deployment, consider the following: • Ensure you have configured the required servers, routers, and firewalls. • Ensure the required port modifications are made.	Contact your network specialist or administrator if you have a large deployment with redundancy or a large simplex deployment and require a DMZ configuration. For the complete <i>Port Matrix: Avaya Aura® Conferencing</i> document, go to http://support.avaya.com.		

Chapter 3: Installing hardware

Downloading HP documentation

Use this procedure to find and download the HP ProLiant DL360p G8/HP ProLiant DL380p G8 documentation.

Procedure

1. Open a browser and go to <http://support.avaya.com>.
2. Click **Downloads & Documents** from the menu at the top.
3. Enter `Common Servers` in the **Enter Your Product Here** field, and select 2.0.x from the **release** dropdown.
4. Select the **Documents** option, and click **Enter**.
5. Download the documents that you need.

HP DL360p G8 document set

See the following documents for HP DL360p server information and procedures.

Documents

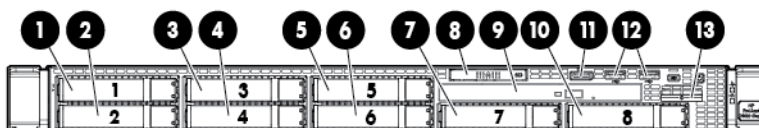
- HP ProLiant DL360p Gen8 Server User Guide
- HP ProLiant DL360p Gen8 Server Maintenance and Service Guide
- HP ProLiant Gen8 Troubleshooting Guide, Volume I: Troubleshooting
- HP ProLiant Gen8 Troubleshooting Guide, Volume II: Error Messages
- HP Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products

Documents included in the shipping container

Title	Part number
1U Rack Hardware Installation Instructions	365 494–004
Power Cord Strain Relief Kit	407 454–021
Assembly document set: • HP ProLiant Server Setup Poster	660849–001 • 667798–002

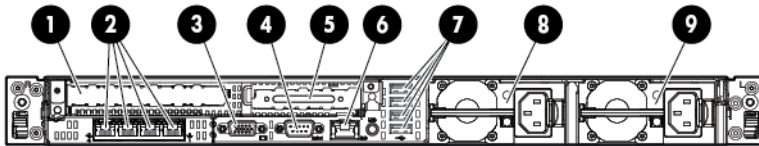
Title	Part number
• Important Safety Information	• 377834–021
• Limited Warranty and Material Limitations	• 307797–029

Front view of HP DL360p G8 Server



No.	Description
1	Hard Drive Bay
2	Hard Drive Bay
3	Hard Drive Bay
4	Hard Drive Bay
5	Hard Drive Bay
6	Hard Drive Bay
7	Hard Drive Bay
8	Slide-out System Insight Display (SID)
9	Optical Disk Drive Bay
10	Hard Drive Bay
11	Video Connector (requires Front Video Adapter Kit)
12	Two (2) USB Connectors
13	Active Health and Network Status LEDs

Rear view of HP DL360p G8 Server



No.	Description
1	PCIe 3.0 Full height/half length x16 expansion slot
2	Flexible LOM ports (Shown: 4 ports 1 Gb each/ Optional: 2 ports 10 Gb each)
3	Video connector
4	Serial connector
5	PCIe 3.0 Low Profile x8 expansion slot
6	iLO Management Engine NIC connector
7	Four (4) USB connectors
8	Power supply bay 2 (Shown populated: Optional Power Supply for Redundant Power)
9	Power supply bay 1 (Primary Power Supply)

Temperature and humidity requirements

This is a table of the temperature and humidity requirements for the HP ProLiant DL360p G8HP ProLiant DL380p G8 server.

Specification	Value
Temperature range	★ Note: All temperature ratings shown are for sea level. An altitude derating of 1°C per 304.8 m (1.8° per 1,000 ft.) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight.
Operating	10° to 35°C (50° to 95°F) Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

Specification	Value
Relative humidity (non-condensing)	
Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

Hardware dimensions and clearance requirements

Table of dimensions and clearance requirements for the HP DL360p G8 server

Type	Description
Dimensions	Height: 4.32 cm (1.70 in)
	Width: 43.47 cm (17.11 in)
	Depth: 69.85 cm (27.50 in)
Weight (maximum; two processors, two power supplies, eight hard disk drives)	19.2 kg (42.33 lb)

Installing the server in the rack

This installation checklist contains the principle steps that are necessary to install the server in the rack. The notation in the *Reference* column is a section in the appropriate HP document that contains the step-by-step procedures. Where applicable, additional information and clarifications appear in the *Avaya recommendation* column. Perform each task in the order specified.

*** Note:**

Avaya customers are required to have a monitor and USB keyboard available for server maintenance.

No.	Task	Reference	Avaya recommendation
1	Observe safety warnings	User Guide: Installing the server into the rack.	
2	Examine contents of shipping container (Avaya)	User Guide: Contents of the server shipping carton	• Server • Power extender cord • Printed setup documentation

No.	Task	Reference	Avaya recommendation
	provided equipment)		• Rack mounting hardware kit and documentation
3	Examine installation environment (customer provided equipment)	User Guide: Optimum Environment	When installing the server in a rack, select a location that meets the environmental standards.
4	Verify that the rack is installed according to the manufacturer's instructions and in accordance with all local codes and laws	User Guide: Installing the server into the rack	To install the server into a rack with square, round, or threaded holes, refer to the instructions that ship with the rack hardware kit.
5	Verify that the rack is grounded in accordance with local electrical code	User Guide: Electrical Grounding Requirements	The server must be grounded for proper operation and safety.
6	Determine and plan the vertical spacing of the servers in the frame	User Guide: Space and Airflow Requirements	Servers draw in cool air through the front and expel warm air through the rear. Therefore, the front rack doors must be adequately ventilated to allow ambient room air to enter the cabinet, and the rear door must be adequately ventilated to allow the warm air to escape from the cabinet.
7	Attach the rails to the rack.	User Guide: Installing the server into the rack	To install the server into a rack with square, round, or threaded holes, refer to the instructions that ship with the rack hardware kit. If these rails do not fit the rack the customer must provide rails or a shelf for rack installation. Also the rails included with the server might not work with round hole racks, in which case the customer can obtain rails and/or a shelf from a distributor. (RackSolutions.com)
8	Attach the server to the rack	User Guide: Installing the server into the rack	 Warning: This server is very heavy. To reduce the risk of personal injury or damage to the equipment: • Get help lifting and stabilizing the product during installation or removal, especially when the product is not fastened to the rails. HP recommends that a minimum of two people are required for all rack server installations. A third person may be required to help align the server if the server is installed higher than chest level.

No.	Task	Reference	Avaya recommendation
			• Use caution when installing the server in or removing the server from the rack; it is unstable when not fastened to the rails.
9	Connect the peripheral devices to the server	Server Setup Poster: Connecting the power cord to the power supply	Network connections, power cords, cable management arm (not included) Consult your Avaya application installation documentation at this point.
10	Power up the server.	User Guide: Powering up and configuring the server	Once powered up refer to Avaya application installation instructions

Chapter 4: Installing software for Avaya Aura[®] and Turnkey deployments on baremetal servers

Introduction to software installation

This chapter provides installation information for the following:

- Linux operating system and base level packages
- Linux patches
- Element Manager
- Avaya Media Server

Two DVDs of the software components (Platform and Application Bundle) are provided with the hardware.

Related Links

[Software installation procedure for SMB](#) on page 29

[Software installation procedure for medium enterprises](#) on page 32

[Software installation procedure for large enterprises](#) on page 34

[Software installation procedure for adding additional media servers](#) on page 36

Software installation procedure for SMB

The following table provides a high-level view of the tasks involved in installing the platform and applications software.

#	Task	Description	Notes	✓
1	Ensure you have planned your deployment layout and populated your data in the Avaya Aura [®] Conferencing Intelligent Workbook.	See Before you begin checklist on page 19.		

#	Task	Description	Notes	✓
2	Download HP documentation	See Downloading HP documentation on page 23		
3	Install hardware	See Installing the server in the rack on page 26	The hardware requirements for Avaya Aura® Conferencing 8.0 are the same whether you are installing the product in an Avaya Aura® deployment or a Turnkey deployment. In both cases, it is the HP ProLiant DL360p G8 server.	
4	Review the prerequisites.	See Prerequisites for software installation on page 38		
5	Install the Avaya Aura® Conferencing Platform on the primary Element Manager server	See Installing AAC on page 39		
6	If your deployment is a redundant deployment, install the Avaya Aura® Conferencing Platform on the secondary Element Manager server	See Installing AAC on page 39		
7	Install the components for Avaya Aura® Conferencing	Depending on your deployment type, see: • Installing the components for Avaya Aura® Conferencing for Avaya Aura® on page 49 • Installing the components for Avaya Aura® Conferencing for Turnkey on page 58		
8	Ensure that you install the latest patches.	See <i>Upgrading Avaya Aura® Conferencing</i> , which is available on https://support.avaya.com/ . This guide describes all of the patching procedures.	There are two types of patches for Avaya Aura® Conferencing: • Operating System patches	

#	Task	Description	Notes	✓
			Application bundle patches Ensure that you have the latest of both types of patch.	
9	Access Element Manager Console using local login	See Accessing Element Manager Console using local login on page 74		
10	Install the Avaya Aura® Conferencing license key	Depending on your deployment type, see: Licensing for Avaya Aura® deployments on page 84 Licensing for Turnkey deployments on page 77		

At this point, the installation is complete and the remaining tasks are configuration tasks. For the most part, the configuration of a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exceptions are:

- For Turnkey deployments, you must configure the PBX as a SIP entity on Avaya Aura® Conferencing. See [Configuration checklist](#).
- For Turnkey deployments, you must configure users using LDAP or Provisioning Manager. See [Options for user provisioning](#).

This current document describes the Avaya Aura® Conferencing configuration tasks. In addition, the *Avaya Aura® Conferencing Port Matrix Guide*, which is available on <https://support.avaya.com/> lists the ports which Avaya Aura® Conferencing uses.

Avaya recommends taking a backup of your Avaya Aura® Conferencing system after you install it. For the most part, the process of backing up a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exception is:

- For Turnkey deployments, the License Manager is embedded and must be backed up. See [Backing up WebLM](#) on page 78.

For more information on the backup procedure, see *Migrating Avaya Aura® Conferencing*, which is available on <https://support.avaya.com/> and *Upgrading Avaya Aura® Conferencing*, which is also available on <https://support.avaya.com/>.

Avaya also recommends increasing the security settings on your Avaya. For the most part, the process of increasing the security for a Turnkey deployment and a Avaya Aura® deployment is the same. For more information, see [Hardening Avaya Aura® Conferencing](#).

Related Links

[Introduction to software installation](#) on page 29

Software installation procedure for medium enterprises

The following table provides a high-level view of the tasks involved in installing the platform and applications software.

#	Task	Description	Notes	✓
1	Ensure you have planned your deployment layout and populated your data in the Avaya Aura® Conferencing Intelligent Workbook.	See Before you begin checklist on page 19.		
2	Download HP documentation	See Downloading HP documentation on page 23		
3	Install hardware	See Installing the server in the rack on page 26	The hardware requirements for Avaya Aura® Conferencing 8.0 are the same whether you are installing the product in an Avaya Aura® deployment or a Turnkey deployment. In both cases, it is the HP ProLiant DL360p G8 server.	
4	Review the prerequisites.	See Prerequisites for software installation on page 38		
5	Install the Avaya Aura® Conferencing Platform on the primary Element Manager server	See Installing AAC on page 39		
6	If your deployment is a redundant deployment, install the Avaya Aura® Conferencing Platform on the secondary Element Manager server	See Installing AAC on page 39		
7	Install the components for Avaya Aura® Conferencing	Depending on your deployment type, see: • Installing the components for Avaya Aura® Conferencing for Avaya Aura® on page 49		

#	Task	Description	Notes	✓
		• Installing the components for Avaya Aura® Conferencing for Turnkey on page 58		
8	Ensure that you install the latest patches.	See <i>Upgrading Avaya Aura® Conferencing</i> , which is available on https://support.avaya.com/ . This guide describes all of the patching procedures.	There are two types of patches for Avaya Aura® Conferencing: • Operating System patches • Application bundle patches Ensure that you have the latest of both types of patch.	
9	Access Element Manager Console using local login	See Accessing Element Manager Console using local login on page 74		
10	Install the Avaya Aura® Conferencing license key	Depending on your deployment type, see: • Licensing for Avaya Aura® deployments on page 84 • Licensing for Turnkey deployments on page 77		
At this point, the installation is complete and the remaining tasks are configuration tasks. For the most part, the configuration of a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exceptions are: • For Turnkey deployments, you must configure the PBX as a SIP entity on Avaya Aura® Conferencing. See Configuration checklist. • For Turnkey deployments, you must configure users using LDAP or Provisioning Manager. See Options for user provisioning. This current document describes the Avaya Aura® Conferencing configuration tasks. In addition, the <i>Avaya Aura® Conferencing Port Matrix Guide</i>, which is available on https://support.avaya.com/ lists the ports which Avaya Aura® Conferencing uses. Avaya recommends taking a backup of your Avaya Aura® Conferencing system after you install it. For the most part, the process of backing up a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exception is: • For Turnkey deployments, the License Manager is embedded and must be backed up. See Backing up WebLM on page 78.				

#	Task	Description	Notes	✓
For more information on the backup procedure, see <i>Migrating Avaya Aura® Conferencing</i>, which is available on https://support.avaya.com/ and <i>Upgrading Avaya Aura® Conferencing</i>, which is also available on https://support.avaya.com/. Avaya also recommends increasing the security settings on your Avaya. For the most part, the process of increasing the security for a Turnkey deployment and a Avaya Aura® deployment is the same. For more information, see Hardening Avaya Aura® Conferencing.				

Related Links

[Introduction to software installation](#) on page 29

Software installation procedure for large enterprises

The following table provides a high-level view of the tasks involved in installing the platform and applications software.

#	Task	Description	Notes	✓
1	Ensure you have planned your deployment layout and populated your data in the Avaya Aura® Conferencing Intelligent Workbook.	See Before you begin checklist on page 19.		
2	Download HP documentation	See Downloading HP documentation on page 23		
3	Install hardware	See Installing the server in the rack on page 26	The hardware requirements for Avaya Aura® Conferencing 8.0 are the same whether you are installing the product in an Avaya Aura® deployment or a Turnkey deployment. In both cases, it is the HP ProLiant DL360p G8 server.	
4	Review the prerequisites.	See Prerequisites for software installation on page 38		
5	Install the Avaya Aura® Conferencing Platform on the primary Element Manager server, primary Web Conferencing Server	See Installing AAC on page 39		

#	Task	Description	Notes	✓
	(WCS), and primary Avaya Media Server.			
6	If your deployment is a redundant deployment, install the Avaya Aura® Conferencing Platform on the secondary Element Manager server. Also, install the secondary Web Conferencing server and the secondary Avaya Media Servers.	See Installing AAC on page 39		
7	Install the components for Avaya Aura® Conferencing	Depending on your deployment type, see: • Installing the components for Avaya Aura® Conferencing for Avaya Aura® on page 49 • Installing the components for Avaya Aura® Conferencing for Turnkey on page 58		
8	Ensure that you install the latest patches.	See <i>Upgrading Avaya Aura® Conferencing</i> , which is available on https://support.avaya.com/ . This guide describes all of the patching procedures.	There are two types of patches for Avaya Aura® Conferencing: • Operating System patches • Application bundle patches Ensure that you have the latest of both types of patch.	
9	Access Element Manager Console using local login	See Accessing Element Manager Console using local login on page 74		
10	Install the Avaya Aura® Conferencing license key	Depending on your deployment type, see: • Licensing for Avaya Aura® deployments on page 84		

#	Task	Description	Notes	✓
		• Licensing for Turnkey deployments on page 77		
11	Move the DCS to a separate server.	Moving the DCS to a separate server if you have a large deployment		

At this point, the installation is complete and the remaining tasks are configuration tasks. For the most part, the configuration of a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exceptions are:

- For Turnkey deployments, you must configure the PBX as a SIP entity on Avaya Aura® Conferencing. See [Configuration checklist](#).
- For Turnkey deployments, you must configure users using LDAP or Provisioning Manager. See [Options for user provisioning](#).

This current document describes the Avaya Aura® Conferencing configuration tasks. In addition, the *Avaya Aura® Conferencing Port Matrix Guide*, which is available on <https://support.avaya.com/> lists the ports which Avaya Aura® Conferencing uses.

Avaya recommends taking a backup of your Avaya Aura® Conferencing system after you install it. For the most part, the process of backing up a Turnkey deployment is the same as a Avaya Aura® deployment. The notable exception is:

- For Turnkey deployments, the License Manager is embedded and must be backed up. See [Backing up WebLM](#) on page 78.

For more information on the backup procedure, see *Migrating Avaya Aura® Conferencing*, which is available on <https://support.avaya.com/> and *Upgrading Avaya Aura® Conferencing*, which is also available on <https://support.avaya.com/>.

Avaya also recommends increasing the security settings on your Avaya. For the most part, the process of increasing the security for a Turnkey deployment and a Avaya Aura® deployment is the same. For more information, see [Hardening Avaya Aura® Conferencing](#).

Related Links

[Introduction to software installation](#) on page 29

Software installation procedure for adding additional media servers

The following table provides a high-level view of the tasks involved in configuring and deploying additional media servers.

#	Task	Description	Notes	✓
1	Install the Avaya Aura® Conferencing Platform on the additional server	See Installing AAC on page 39		
2	Install the Avaya Media Server platform on the additional server.	See Installing Avaya Media Server on page 69		
3	Add additional Avaya Media Server host.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
4	Add an Avaya Media Server network element.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
5	Deploy an Avaya Media Server network element.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
6	Create a new media server cluster.  Note: Skip this step if you want to add an additional Avaya Media Server to an existing media server cluster.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		
7	Add an additional Avaya Media Server to media server cluster.	See <i>Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration</i> , which is available from the Avaya Support website: http://www.avaya.com/support .		

Related Links

[Introduction to software installation](#) on page 29

Prerequisites for software installation

- The deployment layout type has been chosen based on the capacity and scaling requirements.
- The data in the Avaya Aura® Conferencing Intelligent Workbook has been completed and the required number of IP addresses obtained. For more information, see [How to use this document](#) on page 14.
- Obtain the latest installation disks for Linux and software installation:
 - Avaya Aura® Conferencing 8.0 Platform DVD ROM
 - Application Bundle DVD-ROM
- The target servers meet the following requirements:
 - All Application Servers have the same hardware type with the same disk, CPU, memory, and network interface configuration according to the appropriate deployment layout.
 - All servers meet the minimum hardware and configuration requirements for Avaya Aura® Conferencing.
 - All servers are connected and installed into the target environment including cables and network connections.
 - All servers have the Motherboard BIOS and the disk controller BIOS settings configured to ensure installation of the server platform software.
- The host environment meets the following:
 - Networking is in place to host the target servers and it is configured to route traffic between servers, firewalls, routers, switches, DMZ, and any other equipment in the host network, for example, management stations.
 - Up to two NTP clock sources available for the system to receive clocking information.
 - Up to three DNS servers available for the system to resolve addresses
 - A desktop computer or server (other than the one hosting the target server), that can execute ICMP ping requests.
 - A Windows based PC with Internet Explorer 8.0 or 9.0, or Firefox 4.0 or later.
 - A desktop computer or server that is synchronized to the same external NTP clock sources used by the target servers.
- Obtain any certificates that are to be used from either an Enterprise Certificate Authority or from some other well-known trusted Certificate Authority.

- If you are installing Avaya Aura® Conferencing with Avaya Aura®:
 - The following components must be installed and operational prior to installing Avaya Aura® Conferencing.
 - Avaya Aura® Session Manager Release 6.2
 - Avaya Aura® System Manager Release 6.2 or 6.3
 - The following data has been gathered:
 - Avaya Aura® System Manager OAM IP address
 - Avaya Aura® Session Manager Signaling Service IP Address
- If you are installing Avaya Aura® Conferencing with another SIP-based PBX (Turnkey)
 - One of the following PBX/SIP Entities must be installed and operational prior to installing Avaya Aura® Conferencing:
 - Communication Manager Release 5.2.1 or 6.0.1
 - Avaya Communication Server 1000 Release 7.5
 - IP Office Release 9.0
 - Media Connection Preservation must be enabled for the SIP line between IP Office Release 9.0 and Avaya Aura® Conferencing Turnkey. If Media Connection Preservation is not enabled, the IP Office calls will be dropped in the event of a failover from an active application server to a standby application server.

Installing the AAC Platform

This section provides the procedures for installing the Avaya Aura® Conferencing platform operating system and base level packages to the target servers required for the initial system installation.

Before you begin

- Ensure that you have the skills required to install, configure, and upgrade Avaya Aura® Conferencing. For a list of the required core competencies, see [Audience](#) on page 12. Before undertaking any advanced procedures, you must complete the required Avaya Aura® Conferencing training, as listed in [Training](#) on page 10. Avaya recommends that you download all available Avaya Aura® Conferencing documentation, as listed in [Documentation](#) on page 7.
- Obtain the latest Avaya Aura® Conferencing 8.0 Platform DVD-ROM and the Application Bundle DVD-ROM.
- Obtain the Linux service pack patch disk.
- Ensure that the DVD-ROM drive is selected as the first priority boot device in the system BIOS (typically configured during initial BIOS setup).
- Ensure that the server backup file is on a remote server
- Ensure access to the server console through a locally attached keyboard and monitor or a Keyboard, video card, and monitor (KVM) switch.

- Plan and identify the deployment layout including all network IP addresses, hostnames, and FQDNs using the Avaya Aura® Conferencing Intelligent Workbook.

 Note:

Avaya recommends that you implement DNS lookup to synchronize domain names and IP addresses for the Avaya Aura® Conferencing solution. If your deployment does not support DNS lookup, see *Deploying Avaya Aura® Conferencing: Advanced Installation and Configuration*, which is available from the Avaya Support website: <http://www.avaya.com/support>.

- Plan and identify any expansion servers using the Avaya Aura® Conferencing Intelligent Workbook.

About this task

Avaya Aura® Conferencing must be installed on a Linux platform. Use the following procedure to install the Avaya Aura® Conferencing platform operating system and base level packages on the HP ProLiant DL360p G8 server.

Procedure

1. Insert the AAC Platform DVD-ROM, and reboot the server.

The following message on the installation welcome screen appears:

```
Welcome to the MCP Core Linux System Installer
```

2. At the boot prompt, type `install-kvm`, and press **Enter**.
3. To check the integrity of the system, type `y`, and press **Enter**.

 Important:

If you do not check the integrity, a defective DVD-ROM or optical drive can go undetected and result in an installation failure.

If you receive a message indicating that the integrity check has failed, follow the recommendations to clean or replace DVD-ROM, or replace the optical drive.

If there are no issues with the integrity check, the installation continues to the next prompt.

4. At the prompt, `Would you like to view licensing information? (Y/N) [Y]?`

- Type `n` if you have already viewed the licensing information from a previous server installation, and press **Enter**. Proceed to Step [5](#) on page 41.

OR

- Type `y` to acknowledge the licensing attributes, and press **Enter**.

You are prompted for the following:

- a. At the prompt, `Enter Selection`, select one of the following:
 - Enter `1` for a Licensing overview.
 - Enter `2` for a summary of Open Source RPMs and Licenses.
 - Enter `3` to exit.

- b. Press **Enter** until the `Enter Selection` prompt appears again.
- c. At the prompt to acknowledge the licensing information, type `y`, and press **Enter**.

 Warning:

In the following step, the installer erases all existing data on the attached disk drives.

5. At the `Continue [c], abort [a]` prompt, type `c` to continue, and press **Enter**.
6. At the prompt, `Do you want to keep this date and time (Y/N) [Y]`.
 - Type `y` to keep the current system date and time, and press **Enter**. Proceed to the next step.
 - Type `n` to change the system date and time from the BIOS clock, and press **Enter**. Proceed to [Modifying the BIOS clock](#) on page 41.
7. The installer attempts to identify the hardware type of the target server, perform one of the following:
 - If the installer has detected your target server as a known reference server:
Type `A` to accept and proceed to Step 9 on page 41 or type `o` and proceed to [Classifying the hardware environment](#) on page 42.

OR

 - The installer does not detect your target server as a known reference server:
At the prompt, type a number that corresponds to your hardware type, and press **Enter**.
8. At the prompt, `Is this information correct? y/n`, type `y` to continue or `n` to correct.
9. At the prompt to choose the install type, type `1` to select Manual Install, and press **Enter**.
10. On the System Configuration screen, at the prompt, `Press the Enter Key to begin configuration`, press **Enter**, and proceed to [Configuring the system](#) on page 43.
11. Configure the NTP clock source settings. See [Configuring the NTP clock](#) on page 46.
12. Configure the Syslog Server. See [Configuring the Syslog Server](#) on page 48.

Related Links

[Modifying the BIOS clock](#) on page 41
[Classifying the hardware environment](#) on page 42
[Configuring the system](#) on page 43
[Configuring the NTP clock](#) on page 46
[Configuring the Syslog Server](#) on page 48

Modifying the BIOS clock

During the software installation of the target server, you can modify the BIOS clock.

Before you begin

The procedure for Installing the license attributes is completed.

Procedure

1. At the prompt `Enter the month (1-12) [x]` type the number that represents the current month, and press **Enter**. For example, 1 represents January and 12 represents December.
2. At the prompt `Enter the day (1-xx) [x]` type the value for the current date, and press **Enter**.
3. At the prompt `Enter the year (YYYY) [xxxx]` type the current year, and press **Enter**.
4. At the prompt `Enter the hour (0-23) [xx]` type the value for the current hour using the 24-hour clock, and press **Enter**. For example, the first hour of the day is 0 and the last hour of the day is 23.
5. At the prompt `Enter the minutes (0-59) [xx]`, type the minutes using the 24-hour clock, and press **Enter**. For example, the first minute of the day is 0 and the last minute of the day is 59.
6. At the prompt `Do you want to keep this date and time (Y/N) [Y] ?`, type `y` to save your changes, and press **Enter**.

Result

The BIOS clock is modified. To verify the procedure:

- Log in as the root user and check that date is set correctly by running `date` command.

Next steps

Refer back to [Step 7](#) on page 41 in [Installing the AAC Platform](#) on page 39 to continue with the installation process.

Related Links

[Installing the AAC Platform](#) on page 39

Classifying the hardware environment

During the software installation of the target server, you can classify the server hardware as either a known reference server or as a non-reference server. The installer usually determines this classification but it can be manually changed in the following procedure.

Note:

If two disks have been detected and the reference server does not support the RAID-1 software, the two physical disks are identified by the installer as a single disk drive. If a single disk has been detected and the reference server requires two disks for RAID-1 disk mirroring, the installation aborts.

About this task

Configure the target server as a reference or non-reference server and to change the default hardware.

Procedure

1. If the installer identifies the target server as a reference server, choose the number in the list that corresponds to the hardware type, and proceed to Step 3. For example, type 7 for HP DL360 G8.
2. If the installer does not detect the server as a reference server, a list of hardware options appears, type 1 for Other, and press **Enter**. Proceed to Step 4.
3. If the target server is a reference server, at the prompt, `Hardware Environment:` `<hardware platform>`, for example, HP DL360 G8, type `y`, and press **Enter**.
4. If the installer detects a non-reference server, at the prompt, `Hardware Environment:` `Other`, type `y`, and press **Enter**.
5. A message appears to indicate the size and number of disks. If the physical disk configuration matches the requirements for the reference server, press **Enter** to continue.
 - If one of the two disks detected on the target server is not a RAID logical disk, at the prompt, type `y`, and press **Enter** to configure RAID-1 between the two disks.
 - If configuring RAID-1, a message appears indicating the size of the disk, press **Enter**.

The hardware is configured.

Result

The hardware is classified. To verify the procedure:

1. Log in as the root user and run the command `swversion.pl | grep Hardware`.
2. Check that hardware type is the same as was entered during platform installation.

For example, HP ProLiant DL360p G8.

Next steps

Refer back to [Step 9](#) on page 41 in [Installing the AAC Platform](#) on page 39 to continue with the installation process.

Related Links

[Installing the AAC Platform](#) on page 39

Configuring the system

During the Linux operating system installation, you are prompted to configure the usernames, passwords, server time, IP address, DNS, and hardware type for your system.

About this task

Configure the system.

Procedure

1. On the Network Configuration screen, at the prompt `Enter hostname (FQDN)`, type a hostname for the server.

*** Note:**

You must enter the fully qualified domain name (FQDN) in the `Enter hostname` field, rather than the short name.

2. At the prompt `Enter bond name [bond0]`, press **Enter** to accept the default.
A list of available Ethernet Network interfaces appears.
3. At the prompt `Enter the first slave [eth0]` type the Bond0 Slave0 value for the server or press **Enter** to accept the default value.
4. At the prompt `Enter the second slave [eth1]`, type the Bond0 Slave1 value for the server or press **Enter** to accept the default value.
5. At the prompt `Enter VLAN ID (0=no VLAN) (0-4094)`, type 0 as this is not supported, and press **Enter**.
6. At the prompt `Enter subnet name [sn0]`, press **Enter** to accept the default value.
7. At the prompt `Enter IP address`, type the Network IP address of the server, and press **Enter**.
8. At the prompt, `Enter subnet prefix length (1-32)`, type the Network Prefix of the server, and press **Enter**.
9. At the prompt `Enter gateway IP address`, type the Network Default Gateway, and press **Enter**.
10. At the prompt `Do you want to configure DNS Client? (Y/N) [Y]`, type `y` and press **Enter**.

The following prompt appears:

```
Please select one of the following actions:
- [A]dd Domain Suffix(es)
- Re[S]elect all Domain Suffix(es)
- [C]ontinue
```

11. At the prompt, type `c` to continue or `a` to add suffixes, and press **Enter**.
12. At the prompt `How many DNS Servers would you like to reference (1-3) [1]`, type the number of available DNS servers, and press **Enter**.
13. At the prompt `Enter DNS Server`, type the IP address of the DNS server, and press **Enter**.
14. At the prompt `You entered "<IP address>". Is this correct? (Y/N) [N]`, verify the IP address.
15. If the IP address is correct, type `y` and press **Enter**.

16. The System Console Redirection screen appears. At the prompt `Select an option (1-3)`, type `3` to select `Do not redirect the system console after installation` as the default, and press **Enter**.
17. The Timezone Selection screen appears. At the prompt `Enter Region (1-62)`, type the number that corresponds to the Timezone Field1 for the target server, and press **Enter**.
18. If you see the screen Timezone Selection for Region, at the prompt `Enter Timezone`, type the number that corresponds to the Timezone Field2 for the target server, and press **Enter**.
19. The Configuration Validation screen appears. Type `y` to accept the values or type `n` to reenter the information. Press **Enter**.

Result

The system is configured. To verify the procedure:

1. Log in as the root user.
2. Check that the Hostname is set correctly by running `hostname` command.
3. Check that the network is configured correctly:

Run `cat /admin/nwk/userinfo.txt` and check that bond name, slave names, VLAN ID, subnet name, server IP, Network Prefix and Network Default Gateway are configured correctly.

Run `ifconfig` and check that bond name, slave names, subnet name, server IP, and Network Default Gateway are configured correctly.

Run `ping <server IP>` to check that system is a ping-able from an external server.

4. Check that the DNS is configured correctly:

Run `cat /etc/resolv.conf | grep name` and check that all configured DNS servers are present at displayed list.

Run `cat /etc/resolv.conf | grep search` and check that all configured Domain Suffix are present at displayed list.

Run `nslookup `hostname`` and check that the DNS hostname name was resolved successfully.

Run `nslookup <server IP>` and check that the server IP was resolved successfully.

5. Check that the timezone is configured correctly.

Run `tzConfig.pl`. Then, press **ENTER** and check that default value for Timezone is the same as it was entered during installation. Press **ENTER** in order to complete working with `tzConfig.pl`.

Next steps

Refer back to [Step 11](#) on page 41 in [Installing the AAC Platform](#) on page 39 to continue with the installation process.

Related Links

[Installing the AAC Platform](#) on page 39

Configuring the NTP clock

During the software installation, you are prompted to configure the Network Time Protocol (NTP) settings.

*** Note:**

You must use the same NTP sources that are being used on the System Manager. For more information about the NTP server IP addresses, see the Avaya Aura® Conferencing Intelligent Workbook.

About this task

Configure the NTP clock settings.

Procedure

1. At the prompt, Please indicate the Clock Source function of this server:
 - 1. Primary Clock Source server (primary Element Manager server machine). For example, EMServer1.
 - 2. Secondary Clock Source server (secondary Element Manager server machine). For example, EMServer2.
 - 3. This server is NOT a Clock Source server (all other server machines). If you select this option, continue to Step 5 on page 47.

Select an option (1-3):

*** Note:**

If this is a non-redundant layout and you are configuring a server hosting Element Manager, type 1, and press **Enter**.

2. The primary clock source server requires an external clock. At the prompt, Select External Clock for time source(s) external to this server.
Select Internal clock to use the system clock as the time source.
E – External Clock Source (IP Addresses)
I – Internal Clock (Unreliable)
Select an option (E, I): Type e, and press **Enter**.
3. At the prompt How many external clock sources would you like to reference (1-2) [1], type a number based on the following:
 - If both External Clock Source #1 and External Clock Source #2 have an IP address, type 2, and press **Enter**.
 - If there is only one external clock source, type 1 or press **Enter** to accept the default.
4. At the prompt Enter Clock Source IP address #1, type the IP address for the external clock source.

If you have more than one clock source, a second prompt appears.

5. At the prompt, `Enter IP Address of Primary Clock Source`, type the IP address for the Primary Clock Source, and press **Enter**.

If you have a secondary clock source, a second prompt appears.

6. At the prompt, `Enter IP Address of Secondary Clock Source`, type the IP address for the Secondary Clock Source, and press **Enter**.

*** Note:**

For non-redundant layouts, you can use the same IP address for primary and secondary clock source.

7. At the prompt, `Is this information correct? Y/N [N]`, type `y` to continue or `n` to correct.
8. At the prompt, `Please indicate the Clock Source function of this server:`
 - a. Primary clock Source server (primary Element Manager server machine)
 - b. Secondary Clock Source server (secondary Element Manager server machine)
 - c. This server is NOT a Clock Source server (all other server machines)

Select an option (1-3) [1]. Type 2, and press **Enter**.

9. At the prompt, `The Secondary Clock Source server requires the use of an external clock.`

Select External Clock for time source(s) external to this server.

Select Internal Clock to use the local system clock as the time source.

E - External Clock source (IP Addresses)

I - Internal Clock (Unreliable)

Select an option (E, I) : Type `e`, and press **Enter**.

10. At the prompt, `How many external clock sources would you like to reference (1-2) [1]`, type 2, and press **Enter**.
11. At the prompt, `Enter IP Address of Primary Clock Source:`, type the IP address, and press **Enter**.

Result

The NTP clock is configured. To verify the procedure:

1. Log in as the root user.
2. Run the command `ntpConfig.pl` and at the following prompt `Do you wish to configure/display the NTP configuration? Enter 'c' to configure, 'd'`

to display, or 'q' to quit [c/d/q]:, enter d and check that NTP servers are configured correctly and time is synchronized with NTP server.

3. At the prompt Do you wish to configure/display the NTP configuration? Enter 'c' to configure, 'd' to display, or 'q' to quit [c/d/q]:, enter q to complete work with ntpConfig.pl script.

4. Run following commands and check that the NTP shift is small and there is no issues:

```
service ntpd stop  
ntpdate <ntpServer_ip>  
service ntpd start
```

Next steps

Refer back to [Step 12](#) on page 41 in [Installing the AAC Platform](#) on page 39 to continue with the installation process.

Related Links

[Installing the AAC Platform](#) on page 39

Configuring the Syslog Server

During the Linux operating system installation, you are prompted to configure the Syslog Server.

About this task

Configure the settings for the Syslog Server, if required.

Procedure

1. On the Syslog Configuration screen, at the prompt Do you wish to configure a Syslog Server IP address (Y/N) [N]?, type n (default), and press **Enter**. Proceed to the next section for viewing the user accounts and passwords.
 - If you want to configure the Syslog Server IP address, type y, and press **Enter**. Proceed to the next step.
2. At the prompt Enter the Syslog Server IP address, type the value for the Syslog IP address, and press **Enter**.
3. On the Configuration Validation screen, if the values are correct, type y, and press **Enter** to accept and continue or type n, and press **Enter** to reenter the data.

Result

The syslog is configured. To verify the procedure:

1. Log in as the root user and run the command syslogConfig.pl.
2. At the Do you wish to configure/unconfigure/display the SysLog Server IP Address? Enter 'c' to configure, 'u' to unconfigure, 'd' to display, or 'q' to quit [c/u/d/q]: prompt, enter d in order to see if the syslog is configured correctly.

3. At the Do you wish to configure/unconfigure/display the SysLog Server IP Address? Enter 'c' to configure, 'u' to unconfigure, 'd' to display, or 'q' to quit [c/u/d/q]: prompt, enter q to complete working with the syslogConfig.pl script.
4. Run the command ntpConfig.pl.
5. At the Do you wish to configure/display the NTP configuration? Enter 'c' to configure, 'd' to display, or 'q' to quit [c/d/q]: prompt, enter c in order to emulate the ntp changing. This is required in order to send a message to the syslog.
6. Press **ENTER** and accept the default values.
Wait until the ntpConfig.pl script completes.
7. Take a look in syslog logs on the syslog server and check that the logs about the ntp update appeared.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Related Links

[Installing the AAC Platform](#) on page 39

Installing the components for Avaya Aura® Conferencing for Avaya Aura®

Use the following procedure for a fresh installation of the Avaya Aura® Conferencing components on a new system. At this point, if you wish to use VMware to perform certain aspects of this procedure, consult [Installing AAC for Avaya Aura® using VMware](#) on page 86.

* Note:

Currently, Avaya Aura® Conferencing does not support VMware for the SMB-sized solution. You can only using VMware for medium or large deployments.

Before you begin

- The AAC Platform operating system is installed.
- The Application Bundle DVD-ROM content is in /var/mcp/extract.
- You have obtained the installation properties and identified the tags file based on your deployment type. To assist, use the Avaya Aura® Conferencing Intelligent Workbook. For more information, see [How to use this document](#) on page 14.
- You have obtained the required number of IP addresses for your deployment layout type.
- Ensure that you have the skills required to install, configure, and upgrade Avaya Aura® Conferencing. For a list of the required core competencies, see [Audience](#) on page 12. Before undertaking any advanced procedures, you must complete the required Avaya Aura®

Conferencing training, as listed in [Training](#) on page 10. Avaya recommends that you download all available Avaya Aura® Conferencing documentation, as listed in [Documentation](#) on page 7.

About this task

This procedure uses an automated mcpInstaller script that installs the following components in the following order:

- Avaya Aura® Conferencing Application Database: The Avaya Aura® Conferencing application requires a database in which all configuration, provisioning, and operational data is stored. The database software is installed on the server(s) that host the Element Manager.
- Avaya Aura® Conferencing Application software: This is the core conferencing application. After the installation is complete, the primary instance (0) of Element Manager is running, along with the primary and optionally (if redundant system) secondary database instances. The Element Manager administration console can be accessed after this step is complete.
- Avaya Media Server: The Avaya Aura® Conferencing application requires one or more Avaya Media Servers for media processing. The mcpInstaller script can install the media server automatically in all (SMB, medium, and large) configurations. If you are implementing a redundant deployment, the mcpInstaller automatically installs a primary and a secondary Avaya Media Server.
- Install certificates signed by the Avaya Aura® System Manager Certificate Authority: The Avaya Aura® Conferencing application requires certificates signed by the Avaya Aura® System Manager Certificate Authority. They are used by Network Element instances.

* Note:

You cannot use the mcpinstaller installation tool to install media servers in remote locations. This is due to the potential network delays that could be encountered during the installation process. To install remote media servers individually, see [Installing Avaya Media Server](#) on page 69. Remote locations, in this context, are locations that are separated from the core application servers.

Procedure

1. Log on to EMServer1 as ntappadm through ssh or directly at the server console.
2. At the password prompt, type the password for ntappadm.

When you first log on to the system, you may be prompted to change your password.

3. Type `mcpInstaller`, and press **Enter**.
4. Type the password for ntappadm, and press **Enter**.
5. Type `y` to continue with the installation.

The following prompt appears:

```
Searching for installation software...
```

```
The following application load instances have been found:
```

```
[1] /var/mcp/extract/  
dvd_AAC_MCP_18.0.0.00_2013-10-29-1155_coreApps.iso  
[2] Optical Drive
```

Please select which load instance you wish to install [1..2]:

6. Type the number of the Application Bundle you want to use, and press **Enter**.

7. Type **y** to continue with the installation.

The following prompt appears:

Select the deployment type for AAC

[1] AAC with Avaya Aura

[2] AAC connected to a SIP based PBX (CM, CS1k, IPO, etc)

Please enter number [1 to 2] of selection:

8. Type **1** to install AAC with Avaya Aura® or type **2** to install AAC connected to a SIP based PBX.

9. Press **Enter**.

10. Type **n** to continue with the installation.

The following prompt appears:

Please select the Staging File that will be used

[1] Staging_AAC_Large_Redundant

[2] Staging_AAC_Large_Simplex

[3] Staging_AAC_Medium_Redundant

[4] Staging_AAC_Medium_Simplex

[5] Staging_AAC_SMB_Redundant

[6] Staging_AAC_SMB_Simplex

Please enter number [1 to 6] of selection:

11. Type the number of the staging file that you want to use and press **Enter**.

The following prompt appears:

Looking for loads in /var/mcp/loads/

Only one load found: MCP_18.0.0.00_2013-10-25-1137

Use this load?(Y/N) [Y]:

12. Type **y** to continue with the installation.

The following prompt appears:

Please select configuration to use

[1] AAC_Large_Dell610-24GB12Core

[2] AAC_Large_HPDL360G7-12GB12Core

[3] AAC_Large_HPDL360G7-12GB8Core

```
[4] AAC_Large_HPDL360G7-36GB12Core
[5] AAC_Large_HPDL360G8-16GB6Core
[6] AAC_Large_HPDL360G8-32GB12Core
[7] AAC_Large_S8800-24GB8Core
[8] AAC_Medium_Dell610-24GB12Core
[9] AAC_Medium_HPDL360G7-36GB12Core
[10] AAC_Medium_HPDL360G8-16GB6Core
[11] AAC_Medium_HPDL360G8-32GB12Core
[12] AAC_Medium_S8800-24GB8Core
[13] AAC_SMB_Dell610-24GB12Core
[14] AAC_SMB_HPDL360G7-36GB12Core
[15] AAC_SMB_HPDL360G8-16GB6Core
[16] AAC_SMB_HPDL360G8-32GB12Core
[17] AAC_SMB_Other-8GB4Core
[18] AAC_SMB_S8800-24GB8Core
```

Please enter number [1 to 18] of selection:

13. Type the number of the configuration you want to use, and press **Enter**.
14. Type `n` to continue with the installation.
15. At the prompt `Please enter the value for <tag name> [<default>]`, provide the information from the Avaya Aura® Conferencing Intelligent Workbook, and press **Enter**.
The list of tags for the various deployment layout types is shown in [Populating tags](#) on page 53.
16. A summary of the installation parameters appears. Type `y` to accept and begin the installation or `n` to edit the information before installing, or `Q` to quit the installer.

 Note:

This process can take more than 30 minutes to complete.

17. At the prompts `Please enter the Enrollment Password` and `Please reenter the Enrollment Password` type and confirm the enrollment password

 Note:

If you chosen AAC connected to a SIP-based PBX this step does not appear.

Result

The components are installed. To verify the installation:

1. Run the `swversion.pl` script. Check the Database Version and AAC Applications Load Information sections to verify that the expected database version and MCP load was installed..
2. Run the `/var/mcp/run/MCP_18.0/EM_0/bin/getInstanceState.pl` script.
You should see an **ACTIVE** message.
3. Check that you can login to the Element Manager Console. For more information, see [Accessing Element Manager Console using local login](#) on page 74.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Related Links

[Populating tags](#) on page 53

Populating tags

The following tables identify the parameters that are required to configure your specific deployment layout. Tags are used to enter configuration data such as IP address and hostname for all elements of a particular deployment layout. You are prompted to enter these tags after starting the `mcpInstaller` script on the initial install. The tags can also be manually modified by using the command `populateTagsFile.pl -t <tag file name>`. Prior to starting your installation, populate the tags in the Configuration Data tab of the Avaya Aura® Conferencing 8.0 Intelligent Workbook. The following tables contain the tag file names by deployment layout type.

* Note:

To use single sign-on (SSO), the System Manager FQDN, Element Manager FQDN, and Provisioning Client FQDN (if required) must belong to the same root domain.

SMB Simplex and Medium Simplex

Table 1: Tag population—SMB Simplex & Medium Simplex

Installation properties and tag prompts	Property or tag name	Example value
Service IPv4 address of Element Manager	TAG_EM_INT_OAM_SVC_ADDR	192.168.209.1
Service IPv4 address of Accounting Manager	TAG_AM1_INT_OAM_SVC_ADDR	192.168.209.2
Service IPv4 address of Application Server	TAG_AS1_INT_OAM_SVC_ADDR	192.168.209.3

Installation properties and tag prompts	Property or tag name	Example value
Media IPv4 address of the primary Avaya Media Server	TAG_EM_SVR1_MEDIA_ADDR	192.168.209.4
Service IPv4 address of the primary Web Conferencing Server	TAG_WCS1_SVC_ADDR	192.168.209.5
FQDN for the Service IPv4 address of the Element Manager	TAG_EM_SVC_FQDN	emsrv.domain.com
FQDN for the Provisioning Manager	TAG_PROV1_SVC_FQDN	prov1.domain.com
FQDN for the Collaboration Agent Manager	TAG_CA1_SVC_FQDN	ca1.domain.com
FQDN for the Document Conversion Server	TAG_DCS1_SVC_FQDN	dcs1.domain.com
FQDN for the Web Conferencing Server	TAG_WCS1_SVC_FQDN	wcs1.domain.com
Site Name of the Avaya Aura® Conferencing installation.	TAG_SITE_NAME	UpdateMeSite
Site Long Name of the Avaya Aura® Conferencing installation.	TAG_SITE_LONG_NAME	UpdateMeSiteLongName

SMB Redundant & Medium Redundant

Table 2: Tag population—SMB Redundant & Medium Redundant

Installation properties and tag prompts	Property or tag name	Value
Internal OAM (Default) IPv4 address of the secondary Element Manager server	TAG_EM_SVR2_INT_OAM_ADDR	192.168.209.1
Service IPv4 address of Element Manager	TAG_EM_INT_OAM_SVC_ADDR	192.168.209.2
Service IPv4 address of Accounting Manager	TAG_AM1_INT_OAM_SVC_ADDR	192.168.209.3
Service IPv4 address of Application Server	TAG_AS1_INT_OAM_SVC_ADDR	192.168.209.4
Media IPv4 address of the primary Avaya Media Server	TAG_EM_SVR1_MEDIA_ADDR	192.168.209.5
Media IPv4 address of the secondary Avaya Media Server	TAG_EM_SVR2_MEDIA_ADDR	192.168.209.6
Service IPv4 address of the primary Web Conferencing Server	TAG_WCS1_SVC_ADDR	192.168.209.7

Installation properties and tag prompts	Property or tag name	Value
Service IPv4 address of the secondary Web Conferencing Server	TAG_WCS2_SVC_ADDR	192.168.209.8
FQDN for the Service IPv4 address of the Element Manager	TAG_EM_SVC_FQDN	emsvc.domain.com
FQDN for the primary Provisioning Manager	TAG_PROV1_SVC_FQDN	prov1.domain.com
FQDN for the secondary Provisioning Manager	TAG_PROV2_SVC_FQDN	prov2.domain.com
FQDN for the primary Web Conferencing Server	TAG_WCS1_SVC_FQDN	wcs1.domain.com
FQDN for the secondary Web Conferencing Server	TAG_WCS2_SVC_FQDN	wcs2.domain.com
FQDN for the primary Collaboration Agent Manager	TAG_CA1_SVC_FQDN	ca1.domain.com
FQDN for the secondary Collaboration Agent Manager	TAG_CA2_SVC_FQDN	ca2.domain.com
FQDN for the primary Document Conversion Server	TAG_DCS1_SVC_FQDN	dcs1.domain.com
FQDN for the secondary Document Conversion Server	TAG_DCS2_SVC_FQDN	dcs2.domain.com
Site Name of the Avaya Aura® Conferencing installation.	TAG_SITE_NAME	UpdateMeSite
Site Long Name of the Avaya Aura® Conferencing installation.	TAG_SITE_LONG_NAME	UpdateMeSiteLongName

Large Simplex

Table 3: Tag population—Large Simplex

Installation properties and tag prompts	Property or tag name	Value
Service IPv4 address of Element Manager	TAG_EM_INT_OAM_SVC_ADDR	192.168.209.1
Service IPv4 address of Accounting Manager	TAG_AM1_INT_OAM_SVC_ADDR	192.168.209.2
Service IPv4 address of Application Server	TAG_AS1_INT_OAM_SVC_ADDR	192.168.209.3
IPv4 address of the primary Media and Web Conferencing Server	TAG_MWC_SVR1_ADDR	192.168.209.4
Service IPv4 address of the primary Web Conferencing Server	TAG_WCS1_SVC_ADDR	192.168.209.5

Installation properties and tag prompts	Property or tag name	Value
Media IPv4 address of the primary Avaya Media Server	TAG_MWC_SVR1_MEDIA_ADDR	192.168.209.6
FQDN for the Service IPv4 address of the Element Manager	TAG_EM_SVC_FQDN	emsvc.domain.com
FQDN for the primary Provisioning Manager	TAG_PROV1_SVC_FQDN	prov1.domain.com
FQDN for the primary Collaboration Agent Manager	TAG_CA1_SVC_FQDN	ca1.domain.com
FQDN for the primary Web Conferencing server	TAG_WCS1_SVC_FQDN	wcs1.domain.com
FQDN for the primary Document Conversion Server	TAG_DCS1_SVC_FQDN	dcs1.domain.com
Site Name of this AAC installation	TAG_SITE_NAME	UpdateMeSite
Site Long Name of this AAC installation	TAG_SITE_LONG_NAME	UpdateMeSiteLongName

Large Redundant

Table 4: Tag population—Large Redundant

Installation properties and tag prompts	Property or tag name	Example value
Internal OAM (Default) IPv4 address of the secondaryElement Manager server	TAG_EM_SVR2_INT_OAM_ADDR	192.168.209.1
Service IPv4 address of Element Manager	TAG_EM_INT_OAM_SVC_ADDR	192.168.209.2
Service IPv4 address of Accounting Manager	TAG_AM1_INT_OAM_SVC_ADDR	192.168.209.3
Service IPv4 address of Application Server	TAG_AS1_INT_OAM_SVC_ADDR	192.168.209.4
IPv4 address of the primary Media and Web Conferencing Server	TAG_MWC_SVR1_ADDR	192.168.209.5
Service IPv4 address of the primary Web Conferencing Server	TAG_WCS1_SVC_ADDR	192.168.209.6
IPv4 address of the secondary Media and Web Conferencing Server	TAG_MWC_SVR2_ADDR	192.168.209.7

Installation properties and tag prompts	Property or tag name	Example value
Service IPv4 address of the secondary Web Conferencing Server	TAG_WCS2_SVC_ADDR	192.168.209.8
Media IPv4 address of the primary Avaya Media Server	TAG_MWC_SVR1_MEDIA_ADDR	192.168.209.9
Media IPv4 address of the secondary Avaya Media Server	TAG_MWC_SVR2_MEDIA_ADDR	192.168.209.10
FQDN for the Service IPv4 address of the Element Manager	TAG_EM_SVC_FQDN	emsvc.domain.com
FQDN for the primary Provisioning Manager	TAG_PROV1_SVC_FQDN	prov1.domain.com
FQDN for the secondary Provisioning Manager	TAG_PROV2_SVC_FQDN	prov2.domain.com
FQDN for the primary Collaboration Agent Manager	TAG_CA1_SVC_FQDN	ca1.domain.com
FQDN for the secondary Collaboration Agent Manager	TAG_CA2_SVC_FQDN	ca2.domain.com
FQDN for the primary Web Conferencing server	TAG_WCS1_SVC_FQDN	wcs1.domain.com
FQDN for the secondary Web Conferencing server	TAG_WCS2_SVC_FQDN	wcs2.domain.com
FQDN for the primary Document Conversion Server	TAG_DCS1_SVC_FQDN	dcs1.domain.com
FQDN for the secondary Document Conversion Server	TAG_DCS2_SVC_FQDN	dcs2.domain.com
Site Name of this AAC installation	TAG_SITE_NAME	UpdateMeSite
Site Long Name of this AAC installation	TAG_SITE_LONG_NAME	UpdateMeSiteLongName

Avaya Aura® System Manager and Session Manager

Table 5: Tag population—Avaya Aura® System Manager and Session Manager

Installation properties and tag prompts	Property or tag name	Example value
IPv4 address of the System Manager	TAG_SMGR1_SVR_ADDR	192.168.100.1
IPv4 address of the Session Manager	TAG_ASM1_SVR_ADDR	192.168.100.2

Installation properties and tag prompts	Property or tag name	Example value
FQDN for the Aura System Manager	TAG_SMGR1_FQDN	smgr.domain.com
SMGR SNMP Trap Listener Port (for Alarm forwarding)	TAG_SMGR_SNMP_TRAP_PORT	162
SMGR SNMP Community String (for Alarm forwarding)	TAG_SMGR_COMMUNITY_STRING	

Related Links

[Installing the components for Avaya Aura Conferencing for Avaya Aura](#) on page 49

Installing the components for Avaya Aura® Conferencing for Turnkey

Use the following procedure for a fresh installation of the Avaya Aura® Conferencing components on a new system. At this point, if you wish to use VMware to perform certain aspects of this procedure, consult [Installing AAC for Turnkey using VMware](#) on page 105. In an Avaya Aura® Conferencing for Turnkey deployment, the conferencing software does use the Avaya Aura® solution stack. Instead, it uses an alternative PBX. In this context, the “Avaya Aura® solution stack” refers to staging and management software such as System Platform and System Manager. An alternative PBX might refer to Avaya Communication Server 1000 or Avaya IP Office.

*** Note:**

Currently, Avaya Aura® Conferencing does not support VMware for the SMB-sized solution. You can only using VMware for medium or large deployments.

Before you begin

- The AAC Platform operating system is installed with Domain Name Server (DNS) and Network Time Protocol (NTP) configured.
- You have downloaded the latest software application bundle.
- You have obtained the required number of IP addresses for your deployment layout type. Enter the information in the following table:

Name	IP Address	Fully Qualified Domain Name (FQDN)
Primary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		

Name	IP Address	Fully Qualified Domain Name (FQDN)
Media Server Media Address		
Web Conferencing Server (WCS) Service		
DNS Server		
NTP Server		

- Ensure that you have the skills required to install, configure, and upgrade Avaya Aura® Conferencing. For a list of the required core competencies, see [Audience](#) on page 12. Before undertaking any advanced procedures, you must complete the required Avaya Aura® Conferencing training, as listed in [Training](#) on page 10. Avaya recommends that you download all available Avaya Aura® Conferencing documentation, as listed in [Documentation](#) on page 7.

About this task

As an alternative to installing the application bundle from the DVD-ROM, you can install the application bundle using an ISO image file. Prior to running the `mcpInstaller` script, you can download an ISO image file from the Avaya Product Licensing and Delivery System (PLDS) and transfer this file to the `/var/mcp/extract/` directory on the Element Manager (EMServer1). The script prompts you to select whether you wish to install from the ISO image file or from the optical drive.

* Note:

You cannot use the `mcpinstaller` installation tool to install media servers in remote locations. This is due to the potential network delays that could be encountered during the installation process. To install remote media servers individually, see [Installing Avaya Media Server](#) on page 69. Remote locations, in this context, are locations that are separated from the core application servers.

Procedure

1. Log on to EMServer1 as `ntappadm` through `ssh` or directly at the server console.
2. At the prompt, change the directory by typing `cd /var/mcp/install`.
3. Type `mcpInstaller`, and press **Enter**.
4. Type the password for `ntappadm`, and press **Enter**.

When you first log on to the system, you may be prompted to change your password.

5. Type `y` to continue with the installation.

The following prompt appears:

```
Searching for installation software...
```

```
The following application load instances have been found:
```

```
[1] /var/mcp/extract/
dvd_AAC_MCP_18.0.0.00_2013-10-29-1155_coreApps.iso
[2] Optical Drive
```

Please select which load instance you wish to install [1..2]:

6. Type the number of the Application Bundle you want to use, and press **Enter**.
7. Type **y** to continue with the installation.

The following prompt appears:

Select the deployment type for AAC

- [1] AAC with Avaya Aura
- [2] AAC connected to a SIP based PBX (CM, CS1k, IPO, etc)

Please enter number [1 to 2] of selection:

8. Type **2** to install Avaya Aura® Conferencing for Turnkey.
9. Press **Enter**.
10. Type **n** to continue with the installation.

The following prompt appears:

Please select the Staging File that will be used

- [1] Staging_AAC_Large_Redundant
- [2] Staging_AAC_Large_Simplex
- [3] Staging_AAC_Medium_Redundant
- [4] Staging_AAC_Medium_Simplex
- [5] Staging_AAC_SMB_Redundant
- [6] Staging_AAC_SMB_Simplex

Please enter number [1 to 6] of selection:

11. Type the number of the staging file that you want to use and press **Enter**.

For example, select [5] Staging_AAC_SMB_Redundant.

The following prompt appears:

Looking for loads in /var/mcp/loads/

Only one load found: MCP_18.0.0.00_2013-10-25-1137

Use this load?(Y/N) [Y]:

The load number used here is an example only.

12. Type **y** to continue with the installation.

The following prompt appears:

Please select configuration to use

- [1] AAC_Large_Dell610-24GB12Core

- [2] AAC_Large_HPDL360G7-12GB12Core
- [3] AAC_Large_HPDL360G7-12GB8Core
- [4] AAC_Large_HPDL360G7-36GB12Core
- [5] AAC_Large_HPDL360G8-16GB6Core
- [6] AAC_Large_HPDL360G8-32GB12Core
- [7] AAC_Large_S8800-24GB8Core
- [8] AAC_Medium_Dell610-24GB12Core
- [9] AAC_Medium_HPDL360G7-36GB12Core
- [10] AAC_Medium_HPDL360G8-16GB6Core
- [11] AAC_Medium_HPDL360G8-32GB12Core
- [12] AAC_Medium_S8800-24GB8Core
- [13] AAC_SMB_Dell610-24GB12Core
- [14] AAC_SMB_HPDL360G7-36GB12Core
- [15] AAC_SMB_HPDL360G8-16GB6Core
- [16] AAC_SMB_HPDL360G8-32GB12Core
- [17] AAC_SMB_Other-8GB4Core
- [18] AAC_SMB_S8800-24GB8Core

Please enter number [1 to 18] of selection:

13. Type the number of the configuration you want to use, and press **Enter**.
14. Type **n** to continue with the installation.
15. At the prompt `Please enter the value for <tag name> [<default>]`, provide the information from the Avaya Aura® Conferencing Intelligent Workbook, and press **Enter**.
The list of tags for the various deployment layout types is shown in [Populating tags](#) on page 53.
16. A summary of the installation parameters appears. Type **y** to accept and begin the installation or **n** to edit the information before installing, or **q** to quit the installer.

 Note:

This process can take more than 30 minutes to complete.

Result

The components are installed. To verify the installation:

1. Run the `swversion.pl` script. Check the Database Version and AAC Applications Load Information sections to verify that the expected database version and MCP load was installed..

2. Run the `/var/mcp/run/MCP_18.0/EM_0/bin/getInstanceState.pl` script.

You should see an **ACTIVE** message.

3. Check that you can login to the Element Manager Console. For more information, see [Accessing Element Manager Console using local login](#) on page 74.

Next steps

Using the output link, launch the Element Manager Console and start each of the network elements (Accounting Manager, Application Server, Provisioning Manager, Web Conferencing Server (WCS), Web Conferencing Management Server (WCMS), Avaya Media Server, and so on). For more information, see [Starting a Network Element instance](#).

Proceed to the Avaya Aura® Conferencing for Turnkey configuration steps. For more information, see [Configuration checklist](#).

Installing the media servers and recording media servers

Recording and memory

Introduction

In Avaya Aura® Conferencing 8.0, there are two possible scenarios in relation to recording and memory space capacity:

- If you order Avaya Aura® Conferencing with recording, the servers come with extra disks for recording. In this scenario, you must complete a specific set of tasks in order to install and configure the extra disks. For more information, see [Checklist for a system with recording](#) on page 63.
- If you order the recording feature at a later point in time, there is a disk kit to cover this purchase. In this scenario, you must complete a different set of tasks in order to install and configure the extra disks. At this point, you have two options:
 - You can add a new server for recording. For more information, see [Checklist for adding a new server](#) on page 63.
 - You can change the existing Avaya Media Server to make it a recording Avaya Media Server. For more information, see [Checklist for repurposing your existing server](#) on page 64.

Note:

These tasks apply equally to Avaya Aura® and Turnkey solutions.

Checklist

Table 6: If you order a system with recording

#	Task	Description	Notes	✓
1	Configure RAID arrays using the Avaya Aura® Conferencing RAID Tool CD.	Reconfiguring the RAID 10 arrays using the Avaya Aura Conferencing RAID Tool CD on page 65		
2	Install the Avaya Aura® Conferencing platform.	Installing Avaya Aura Conferencing on page 39		
3	Format and mount the second RAID 10	Formatting and mounting the second RAID 10 on page 68		
4	Install the Avaya Media Server.	Installing Avaya Media Server on page 69		
5	Configure recording.	Introduction to configuring the recording feature		

Table 7: If you order recording at a later date, as a disk kit and install a new server

#	Task	Description	Notes	✓
1	Install 4 x 900 Gb hard drives into the HP DL360 G8 server	Installing the new 4 x 900 Gb drives on page 64		
2	Reconfigure the RAID 10 arrays using the Avaya Aura® Conferencing RAID Tool CD	Reconfiguring the RAID 10 arrays using the Avaya Aura Conferencing RAID Tool CD on page 65		
3	Extend the system to a two disk configuration.	Extending the system to a two disk configuration on page 66		
4	Format and mount the second RAID 10.	Formatting and mounting the second RAID 10 on page 68		
5	Install the Avaya Media Server.	Installing Avaya Media Server on page 69		
6	Configure recording.	Introduction to configuring the recording feature		

Table 8: If you order recording at a later date, as a disk kit and repurpose your Avaya Media Server

#	Task	Description	Notes	✓
1	Order the disk kit.	Contact your Avaya representative for more information about ordering.		
2	Back-up your existing Avaya Media Server.	Backing up the Avaya media servers on page 71		
3	Stop and undeploy the Avaya Media Server network elements.	Stopping and undeploying a network element instance		
4	Uninstall Avaya Media Server.	Uninstalling the Avaya Media Server		
5	Install 4 x 900 Gb hard drives into the HP DL360 G8 server.	Installing the new 4 x 900 Gb drives on page 64		
6	Configure the RAID 10 arrays using the Avaya Aura® Conferencing RAID Tool CD.	Reconfiguring the RAID 10 arrays using the Avaya Aura Conferencing RAID Tool CD on page 65		
7	Format the disk.	Formatting and mounting the second RAID 10 on page 68		
8	Install Avaya Media Server.	Installing the Avaya media server to the recording media server on page 70		
9	Deploy and start Avaya Media Server network elements.	Deploying and starting the Avaya Media Server Network Element		

Installing the 4 x 900 Gb hard drives into the HP ProLiant DL360p G8 server

Before you begin

- You have backed up your Avaya Aura® Conferencing system.
- You have the memory upgrade kit, which contains the 4 x 900 Gb hard drives.
- You have the HP ProLiant DL360p G8 document set. For more information, see [Downloading HP documentation G8](#) on page 23.

About this task

Use this procedure to install the 4 x 900 Gb hard drives from the Avaya Aura® Conferencing upgrade kit into the HP ProLiant DL360p G8 server.

Procedure

1. Observe safety warnings.
2. Observe all ESD safety precautions before unwrapping the new hard drives.
3. Power off the Avaya Aura® Conferencing server.
4. Lift the release lever on hard drive bay 5 on the server and insert a new 900 Gb drive into hard drive bay 5. For more information about the locations of the hard drive bays, see [Front view of HP DL360p G8 server](#) on page 24.
5. When the locking tab engages on the 900 Gb hard drive, close the release lever to securely seat the 900 Gb hard drive in hard drive bay 5.
6. Repeat these steps for bays 6, 7, and 8.

Reconfiguring the RAID 10 arrays using the Avaya Aura® Conferencing RAID Tool CD

Before you begin

- You have installed the 4 x 900 Gb hard drives from the Avaya Aura® Conferencing upgrade kit.
- You have the Avaya Aura® Conferencing RAID Tool CD.
- You have a keyboard and monitor.
- You have backed up any important data.

Note:

Do not remove HDD while the tool is executing.

About this task

Use this procedure to configure the four hard drives to two RAID 10 arrays on the HP ProLiant DL360p G8 server.

Procedure

1. On the HP ProLiant DL360p G8 server, insert the Avaya Aura® Conferencing RAID Tool CD into the CD-ROM drive.
2. Boot the system from the Avaya Aura® Conferencing RAID Tool CD.
3. When prompted, type Y to indicate that you are ready to start running the tool.
4. When prompted, type Y or N to indicate whether you wish to preserve the existing data/RAID array in the first HDD slots 1–4.
 - Type Y to preserve the data/RAID array in HDD bays 1-4.
 - Type N to delete all data/RAID arrays and continue.

The tool configures a RAID ARRAY based on the number of HDDs installed:

- 2 HDDs=RAID 1

- 4 HDDs=RAID 10
- 8 HDDs=2 x 4HDD RAID 10 with either preserved or newly installed HDDs in bays 1-4

The tool loads the Avaya RAID settings, ejects the disc, and powers off the server when complete. The RAID array has now been successfully configured

5. Eject the Avaya Aura® Conferencing RAID Tool CD from the server.

Extending the system to a two disk configuration

Before you begin

Ensure:

- You have installed the 4 x 900 Gb hard drives the Avaya Aura® Conferencing upgrade kit.
- You have mounted the drives into bays 5-8 of the server and configured them as second RAID array.

About this task

Use this task to extend the system to a two disk configuration model.

Note:

The recording feature requires the second logical drive. You must extend system to a two disk configuration model before installing the Avaya Media Server (AMS) platform.

Procedure

1. Log on to the server as a user with the SSA role (for example, ntsysadm) through ssh or directly on the server console.
2. Enter `su` – to log on as root.
3. At the prompt password, type the root password, and press **Enter**.
4. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to check that the second logical drive is available.

The system should display information indicating that the RAID status is okay and the query command succeeded.

An example of the output is:

```
The expected data partition '/dev/sdb1' is not present on the system.  
The raid controller reports:  
A logical drive is available.  
It is 1.6 TB large and RAID 1+0.  
It has a RAID status of OK.  
Query command succeeded.
```

5. Type `mcpDataDiskMgt.pl -f`, and press **Enter** to format the second logical drive.

The system displays the following information:

```
Are you certain that you wish to reformat this disk? All information that is  
currently on it will be lost! (Y/N) [N]?
```

6. Type `y`, and press **Enter**.

The system should display the following information:

```
Format command succeeded.
```

7. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to check that the second logical drive is ready for mounting.

The system should display information indicating that the RAID status is okay and the query command succeeded.

An example of the output is:

```
The data disk logical volume partition /dev/mapper/vg_data-lv_var_mcp_datadisk is
not currently mounted on /var/mcp/data.
The raid controller reports:
A logical drive is available.
It is 1.6 TB large and RAID 1+0.
It has a RAID status of OK.
Query command succeeded.
```

8. Type `mcpDataDiskMgt.pl -u`, and press **Enter** to unmount the `vg_data-lv_var_mcp_datadisk` volume partition.

The system should display the following information:

```
Successfully un-mounted
Umount command succeeded.
```

9. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to extend system till 2 disks configuration.

The system should display information indicating that the correct data partition is mounted.

An example of the output is:

```
The correct data partition is mounted on the expected mount point.
The mount point information reported by the operating system is:
/dev/mapper/vg_data-lv_var_mcp_datadisk /var/mcp/data ext4
rw,nosuid,nodev,relatime,barrier=1,stripe=32,data=ordered 0 0
The raid controller reports:
A logical drive is available.
It is 1.6 TB large and RAID 1+0.
It has a RAID status of OK.
Query command succeeded.
```

10. Type `mcpDataDiskMgt.pl -c`, and press **Enter** to unmount the `vg_data-lv_var_mcp_datadisk` volume partition.

The system displays the following information:

```
Are you certain that you wish to move data from /dev/sda3 to /dev/sdb1?
All information that is currently on it may be lost!
(Y/N) [N]?
```

11. Type `y`, and press **Enter**. Please note that this operation may take a long time – do not interrupt it.

The system should display the following information:

```
Carry-over-data command succeeded.
```

Formatting and mounting the second RAID

Before you begin

- You have installed the 4 x 900 Gb hard drives from the Avaya Aura® Conferencing upgrade kit.
- You have mounted the drives into bays 5-8 of the server and configured them as second RAID array.

About this task

Use this procedure to format and mount the second logical drive on the HP ProLiant DL360p G8 server.

Note:

The recording feature requires the second logical drive. You must format and mount the second logical drive before installing the Avaya Media Server (MS) platform.

Procedure

1. Log on to the server as a user with the SSA role (for example, `ntsysadm`) through ssh or directly on the server console.
2. Enter `su -` to log on as root.
3. At the prompt `password`, type the root password, and press **Enter**.
4. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to check that the second logical drive is available.

The system should display information indicating that the RAID status is okay and the query command succeeded. An example of the output is:

```
The expected data partition '/dev/sdb1' is not present on the system.
The raid controller reports:
A logical drive is available.
It is 1.6 TB large and RAID 1+0..
It has a RAID status of OK.
Query command succeeded.
```

5. Type `mcpDataDiskMgt.pl -f`, and press **Enter** to format the second logical drive.

The system displays the following information:

```
Are you certain that you wish to reformat this disk?
All information that is currently on it will be lost! (Y/N) [N]?
```

6. Type `y`, and press **Enter**.

The system should display the following information:

```
Format command succeeded.
```

7. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to check that the second logical drive is ready for mounting.

The system should display information indicating that the RAID status is okay and the query command succeeded. An example of the output is:

```
The data disk logical volume partition /dev/mapper/vg_data-lv_var_mcp_datadisk is
not currently mounted on /var/mcp/data.
The raid controller reports:
A logical drive is available.
It is 1.6 TB large and RAID 1+0..
It has a RAID status of OK.
Query command succeeded.
```

8. Type `mcpDataDiskMgt.pl -m`, and press **Enter** to mount the second logical drive.

The system should display the following information:

```
Created mount point
Mount command succeeded.
```

9. Type `mcpDataDiskMgt.pl -q`, and press **Enter** to check that the second logical drive is mounted.

The system should display information indicating that the correct data partition is mounted. An example of the output is:

```
The correct data partition is mounted on the expected mount point.
The mount point information reported by the operating system is:
/dev/mapper/vg_data-lv_var_mcp_datadisk /var/mcp/data ext4
rw,nosuid,nodev,relatime,barrier=1,stripe=32,data=ordered 0 0
The raid controller reports:
A logical drive is available.
It is 1.6 TB large and RAID 1+0.
It has a RAID status of OK.
Query command succeeded.
```

Installing Avaya Media Server

About this task

Use this procedure to install Avaya Media Server.

Procedure

1. Log on to the server which hosts Avaya Media Server as a user with the SSA role (for example, `ntsysadm`) through SSH or directly at the server console.
2. At the prompt, type `su -` and press **Enter**.
3. Type the root password, and then press **Enter** to become the root user.
4. If this server is the primary Element Manager server then go to step 8.

This procedure is for all types of servers. But if this is the primary Element Manager server, skip steps 5-7.

5. At the prompt, type `scp ntappadm@<IP address of the primary Element Manager server>:/var/mcp/loads/MCP_MediaServer_18*.zip /var/mcp/loads/` and press **Enter**.

6. At the `Are you sure you want to continue connecting (yes/no)?` prompt, type `yes` and press **Enter**.
7. At the `ntappadm@<IP address>'s password` prompt, type the `ntappadm` password for the primary Element Manager server and press **Enter**.
8. At the prompt, type `mcpMsInstall.pl` press **Enter**.

The install script finds the zipped file. The system will detect more than one zipped file.

9. At the `Use this load? (Y/N) [Y]` prompt, type `y`, and press **Enter**
10. At the `Continue installation? (Y/N)` prompt, type `y` and press **Enter**.

Result

The `Installation completed SUCCESSFULLY` message is displayed. The Avaya Media Server load is now installed.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Restoring the Avaya Media Server to the recording media server

About this task

Use this procedure to install the Avaya Media Server software to the recording media server.

Procedure

1. Log on to the server which hosts Avaya Media Server as a user with the SSA role (for example, `ntsysadm`) through SSH or directly at the server console.
2. At the prompt, type `su -` and press **Enter**.
3. Type the root password, and then press **Enter** to become the root user.
4. At the prompt, type `mcpDataDiskMgt.pl -m` and press **Enter**.
The data disk mounts.
5. If this server is the primary Element Manager server then go to step 9.
6. At the prompt, type `scp ntappadm@<IP address of the primary Element Manager server>:/var/mcp/loads/MCP_MediaServer_18*.zip /var/mcp/loads/` and press **Enter**.
7. At the `Are you sure you want to continue connecting (yes/no)?` prompt, type `yes` and press **Enter**.
8. At the `ntappadm@<IP address of the primary Element Manager server>'s password` prompt, type the `ntappadm` password for the primary Element Manager server and press **Enter**.

9. At the prompt, type `mcpMsInstall.pl -dontStart` and press **Enter**.

The install script finds the zipped file. The system will detect more than one zipped file.

10. At the `Use this load? (Y/N) [Y]` prompt, type `y`, and press **Enter**
11. At the `Continue installation? (Y/N)` prompt, type `y` and press **Enter**.
12. At the prompt, type `cd /var/mcp/ma/MAS/platdata/EAM/Backups/latest/` and press **Enter**.
13. At the prompt, type `tar -xf <AMS backup>` and press **Enter**.
14. At the prompt, type `exec bash` and press **Enter**.
15. At the prompt, type `amsupgrade /var/mcp/ma/MAS/platdata/EAM/Backups/latest/service_config.zip` and press **Enter**.
16. Configure the SSH keys for conference recordings backup.

See *Upgrading Avaya Aura® Conferencing*, which is available from the Avaya Support website: <http://www.avaya.com/support>.

Result

The Avaya Media Server is installed.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Backing up the Avaya Media Server (MS)

About this task

Use this procedure to backup the Avaya Media Server (MS).

Procedure

1. Log on to the server which hosts Avaya Media Server (MS) as a user with the SSA role (for example, `ntsysadm`) through SSH or directly at the server console.
2. At the prompt, type `su` and press **Enter**.
3. Type the root password and press **Enter** to become the root user.
4. At the prompt type `msBackup.pl` and press **Enter**.

Result

A backup summary report is displayed. The backup file is stored in the `/var/mcp/ma/MAS/platdata/EAM/Backups/latest` folder.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Related Links

[Scheduling automatic backups on an Avaya Media Server](#) on page 72

Scheduling automatic backups on an Avaya Media Server

Before you begin

- You are a user with the SSA role (for example, ntbackup and ntsysadm).
- You have root account privileges to access the backup files and log files.

About this task

Use this procedure to schedule automatic backups for an Avaya Media Server .

Important:

Avaya recommends that you schedule backups for off-peak hours. The default backup time is 3:30 a.m.

Procedure

1. Log on to the server as ntbackup or ntsysadm through SSH or an account with the SSA role.
2. Enter `sudo msScheduleBackup.pl`.
3. Enter the password (if required).
4. Enter `E` to schedule a daily backup.
5. Enter the time at which you want to perform the backup (hh:mm format).
6. Enter `Y` to confirm.
7. Enter `Q` to quit.

Result

The backup is scheduled to occur at the specified time and will be stored in the `/var/mcp/ma/MAS/platdata/EAM/Backups/latest` folder. The backup file name will be in the format `AUTO_msBackup_on_YYYY-MM-DD.tar`.

A summary report of your activity is stored at `/var/log/mas/msScheduleBackup.log.yyyymmdd_hhmmss`. You can view the backup log file when you are logged on to the server with root privileges.

The backup file from the previous scheduled automatic backup will be moved to the `/var/mcp/ma/MAS/platdata/EAM/Backups/AUTO_history` folder. If the `/var/mcp/ma/MAS/platdata/EAM/Backups/latest` folder contains a manual backup file, the manual backup file is moved to the `/var/mcp/ma/MAS/platdata/EAM/Backups` folder.

Note:

The `/var/mcp/ma/MAS/platdata/EAM/Backups/AUTO_history` folder can contain up to two scheduled backup files (that is, the two latest scheduled backup files).

Related Links

[Backing up the Avaya Media Server \(MS\)](#) on page 71

Deploying online help

Avaya Aura® Conferencing contains a number of online help files and online manuals to guide you through the process of installing, configuring, and maintaining your conferencing system. These online help files include:

- Online help for Element Manager
- Online help for the Provisioning Client
- Online help for Reports
- Online help for users of Collaboration Agent

By default, each of these online help packages is fully integrated with the component which it describes. So, for example, if you view help on Element Manager, you can access the Element Manager online help. The Element Manager online help file describes each of the Element Manager fields and describes many of the common procedures that you can perform using the Element Manager interface.

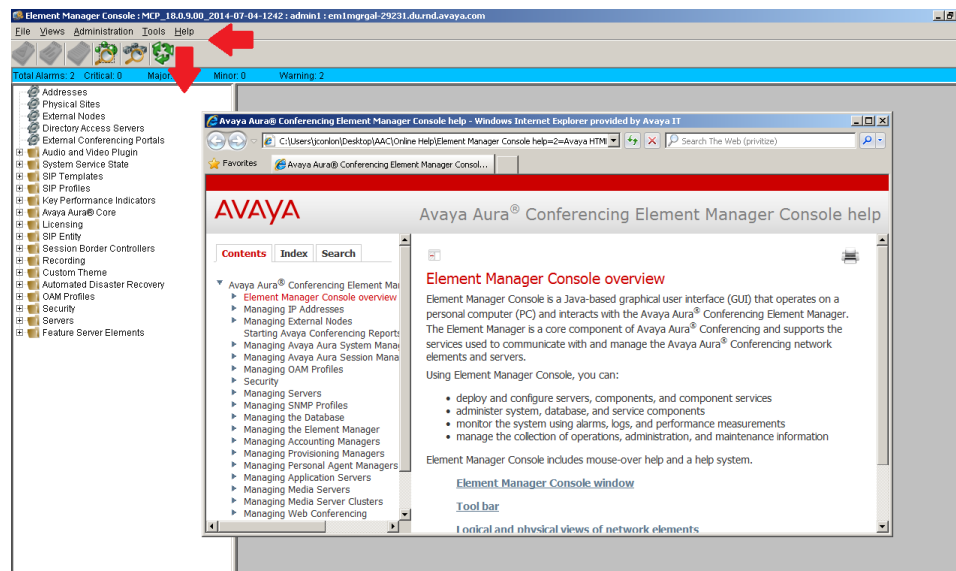


Figure 3: Online Help for Element Manager

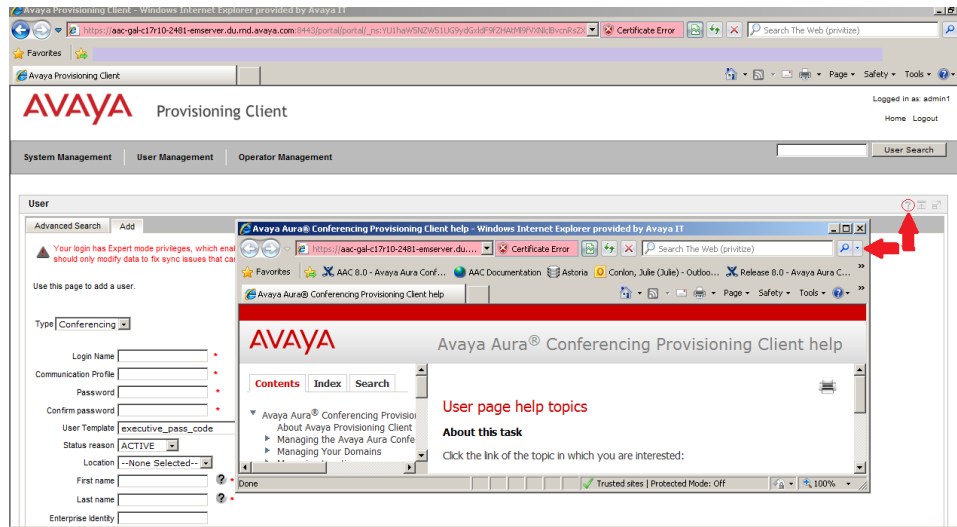


Figure 4: Online Help for the Provisioning Client

In the case of the online help for users of Collaboration Agent, Avaya has translated the online help into several languages. The list of available languages conforms with the i18n and L10n (internationalization and localization standards). When users install the Collaboration Agent application, it chooses which language to display based on the computer's locale.

The online help files are packaged within the Avaya Aura® Conferencing software application bundle.

Accessing Element Manager Console using local login

There are two ways to log on to the Element Manager (EM) Console:

- locally (as described in this procedure)
- single sign-on access through Avaya Aura® System Manager

About this task

Use this procedure to log on to the Element Manager Console for the first time.

Procedure

1. On the management PC, open the browser.
2. In the Address box, enter the following address: `https://<FQDN>:12121`.

where <FQDN> is the EM Internal OAM Service Fully Qualified Domain Name (FQDN). This is the FQDN of the EM Internal OAM Service IP address.

3. Press **Enter**.

A Web page appears displaying the IP address you entered and the link **Launch Element Manager Console**.

4. On the <IP address> page, click **Launch Element Manager Console**.

*** Note:**

If Online Certificate Status Protocol (OSCP)-checking is not configured in your deployment, it can take up to 40 seconds to launch the Element Manager Console. If OSCP is not configured, contact your network administrator to configure it. If you do not intend to configure OSCP-checking in your deployment, you must switch off certificate revocation check in the Java settings on the management computer. To switch off certificate revocation check in Java settings:

- a. Navigate to Java Settings using the Windows Control Panel.
 - b. Click the **Advanced** tab.
 - c. Change **Perform certificate revocation checks on** to **Do not check**.
 - d. Click **Apply**.
5. From the IPv4 Service Address box on the Element Manager Console window, select the IP address of the server running Element Manager Console.
 6. Click **Connect**.
 7. In the Element Manager Authentication window, click the **Accept the certificate for this session only** option button.
 8. Click **Apply**.
- A connection is established to the active Element Manager instance.
9. In the UserID box on the Element Manager Console window, enter `admin`.
 10. In the Current Password box, enter `admin`.
 11. Click **Ok**.

The Element Manager Console window appears. It is normal to see one major alarm displayed. (An orange alarm appears below the tool bar and displays `Major: 1`.) This alarm appears because the secondary instance (EM_1) of the Element Manager network element is not deployed or running. (The `Peer presumed failed` alarm is generated against the Element Manager network element.)

*** Note:**

If you have a SMB Simplex, Medium Simplex or Large Simplex deployment, this alarm does not appear.

Chapter 5: Installing the Avaya Aura® Conferencing (AAC) license key

How licensing works

Licensing functionality operates in a different way, depending on your type of Avaya Aura® Conferencing deployment.

You can deploy Avaya Aura® Conferencing 8.0 with the Avaya Aura® platform. The Avaya Aura® platform consists of Avaya Aura® System Manager, Avaya Aura® Session Manager, and Avaya Aura® System Platform. This type of deployment is called an Avaya Aura® deployment. Alternatively, you can deploy Avaya Aura® Conferencing 8.0 without the Avaya Aura® platform. This type of deployment is called a Turnkey deployment.

In an Avaya Aura® deployment, licensing is supported on the Application Server and the Media Server. The License key is installed on the Web License Manager (WebLM) server which is co-resident with System Manager. The license key must be obtained prior to starting the deployment.

WebLM is a client/server model where numerous clients can share the same WebLM server and the same license key. For more information, see [Installing the license key on](#) on page 85.

In a Turnkey deployment, licensing is also supported by WebLM. However, in a Turnkey deployment, the WebLM server is embedded with Avaya Aura® Conferencing. For more information, see [Applying a license key](#) on page 77.

For both solutions, a grace period of 30 days exists for upgrades and new installations. Additionally, new upgrades and installations include a number of default licenses. If the licensing limits are exceeded, Avaya Aura® Conferencing displays full explanatory error messages to users. Licenses must be periodically renewed. If they are not renewed, they expire.

The license monitors:

- Maximum number of provisioned audio, video, and web users
- Maximum number of media servers allowed in the Avaya Aura® Conferencing system
- Maximum number of recording Avaya Aura® Conferencing systems

Licensing for Turnkey deployments

In a Turnkey deployment, the WebLM server is embedded in the Avaya Aura® Conferencing application.

Related Links

- [Applying a license key](#) on page 77
- [Backing up WebLM](#) on page 78
- [Changing the administrator password for WebLM](#) on page 78
- [Changing the certificate for WebLM](#) on page 79
- [Installing WebLM](#) on page 79
- [Resetting the administrator password for WebLM](#) on page 80
- [Restoring WebLM](#) on page 81
- [Starting a WebLM service](#) on page 82
- [Stopping a WebLM service](#) on page 83
- [Uninstalling WebLM](#) on page 83
- [Upgrading WebLM](#) on page 84

Applying a license key

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to apply a license for a Turnkey deployment.

Procedure

1. Open the WebLM link `https://<primary EM host address>:12108/WebLM/`
2. Enter an administrator login and password.
The default values for login and password are `admin` and `weblmadmin`.
3. Click **Log On**.
4. Select **Install license** from the left menu.
5. Click **Browse**.
6. Select a license file in XML format and click **Open**.
7. Click **Install**.

Related Links

- [Licensing for Turnkey deployments](#) on page 77

Backing up WebLM

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to back up all of the WebLM server data to the archive of the primary Element Manager.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmBackup.pl`.
3. Type `Y` to confirm.

Example

```
[ntappadm@server58 install]$ weblmBackup.pl
Do you want to backup "WebLM service" (Y/N)?[Y]: Y
Backing up WebLM service...
Backup file: /var/mcp/weblm_backup_09-30-13_16-37-01.tar.gz
Backing up WebLM service completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Changing the administrator password for WebLM

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to change the administrator password for WebLM.

Procedure

1. Open the Weblm link `https://<primary EM host address>:12108/WebLM/`
2. Enter an administrator login and password.
3. Click **Log On**.
4. Select **Change password** at the right top corner.
5. Enter the **Current Password**.
6. Enter the **New Password**.
7. Confirm the password at the **Confirm Password** field.
8. Click **Submit**.

Related Links

[Licensing for Turnkey deployments](#) on page 77

Changing the certificate for WebLM

These steps describe how to change the certificate for WebLM. You can also use these steps to change the listening and shutdown ports, but Avaya does not recommend changing the listening and shutdown ports.

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to change the certificate used to access embedded WebLM server using a web browser.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmMgmt.pl`.
3. Enter a path to new certificate.
4. Enter a new password for certificate.
5. Choose a correct keystore format.
6. Type `Y` to confirm

Example

```
[ntappadm@server58 install]$ weblmMgmt.pl
Path to certificate [/var/mcp/run/weblm/installed/certificate/weblmserver.p12]: /var/mcp/
install/weblm.jks
Certificate password [password]: RAPtor1234
Format keystore (JKS, PKCS11 or PKCS12) [PKCS12]: JKS
Tomcat listening port [12108]:
Tomcat shutdown port [12109]:
Do you want to configure "WebLM service" (Y/N)?[Y]: Y
Configuring WebLM service...
Configuring WebLM service completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Installing WebLM

About this task

Use these steps to install WebLM.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmInstall.pl`.
3. Select `weblm` load.
4. Type `Y` to confirm.

Example

```
[ntappadm@server58 install]$ weblmInstall.pl
The following webLM application load instances have been found:
[1] /var/mcp/weblm_v6.3.3.5.8255_Tomcat_7.0.30.zip
[2] /var/mcp/weblm_v6.3.3.5.8255_tomcat_v7.0.30.zip
Please select which weblm load you wish to install [1..2]: 2
Do you want to install "WebLM service" (Y/N)?[Y]: Y
Installing WebLM service...
Installation of WebLM service completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Resetting the administrator password for WebLM

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to reset the administrator password for WebLM.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmResetAdminPwd.pl`.
3. Type `Y` to confirm.

Example

```
[ntappadm@server58 install]$ weblmResetAdminPwd.pl
WARNING: All configured users for WebLM service will be lost!
Do you want to reset password for WebLM admin (Y/N)?[Y]:Y
Resetting password for WebLM admin...
Reset password for WebLM admin completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Restoring WebLM

Before you begin

Back up the WebLM server. For more information, see [Backing up WebLM](#) on page 78.

About this task

Use these steps to restore the WebLM data from the archive.

Procedure

1. Log to primary Element Manager server as `ntappadm`.

There are three ways to use the `weblmRestore.pl` script.

2. **(Optional) Method One:**

- a. Type `weblmRestore.pl` to view a list of available files from the default directory (`/var/mcp/media/`).
- b. Choose the file you want to restore or use the Quit option to exit.
- c. If you want to restore WebLM service, type `Y` to confirm.

3. **(Optional) Method Two**

- a. Type `weblmRestore.pl -d <the directory with backup files>` to view a list of available files from the directory with backup files.
- b. Choose the file you want to restore or use the Quit option to exit.
- c. If you want to restore WebLM service, type `Y` to confirm.

4. **(Optional) Method Three**

- a. Type `weblmRestore.pl -f <the full name to backup files>`.
- b. The WebLM service is restored.

Example

Example of method one:

```
ntappadm@server118 ~]$ weblmRestore.pl

Select backup file you want to restore

[1] weblm_backup_06-19-14_14-03-17.tar.gz
[2] weblm_backup_06-19-14_14-03-23.tar.gz
[3] Quit

Please enter number [1 to 3] of selection:1

Do you want to restore "WebLM service" (Y/N)?[Y]: y
```

Installing the Avaya Aura® Conferencing (AAC) license key

```
Restoring WebLM service...
```

```
Restoring WebLM service completed successfully
```

Example of method two:

```
2) [ntappadm@server118 ~]$ weblmRestore.pl -d /var/mcp
```

```
Select backup file you want to restore
```

```
[1] weblm_backup_06-19-14_13-45-29.tar.gz
```

```
[2] weblm_backup_06-19-14_14-03-40.tar.gz
```

```
[3] Quit
```

```
Please enter number [1 to 3] of selection:1
```

```
Do you want to restore "WebLM service" (Y/N)?[Y]: y
```

```
Restoring WebLM service...
```

```
Restoring WebLM service completed successfully
```

Example of method three:

```
[[ntappadm@server118 ~]$ weblmRestore.pl -f /var/mcp/weblm_backup_06-19-14_14-03-40.tar.gz
```

```
Restoring WebLM service...
```

```
Restoring WebLM service completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Starting a WebLM service

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to start the WebLM service.

Procedure

1. Log to the primary Element Manager server as `root`.
2. Type `service weblm start`.

Example

```
[root@server58 ~]# service weblm start
```

```
Starting WebLM service:
```

```
[ OK ]
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Stopping a WebLM service

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to stop the WebLM service.

Procedure

1. Log to the primary Element Manager server as `root`.
2. Type `service weblm stop`.

Example

```
[root@server58 ~]# service weblm stop
Stopping WebLM service: [ OK ]
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Uninstalling WebLM

Before you begin

Install the WebLM server. For more information, see [Installing WebLM](#) on page 79.

About this task

Use these steps to remove WebLM from the primary Element Manager server.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmUninstall.pl`.
3. Type `Y` to confirm.

Example

```
[ntappadm@server58 install]$ weblmUninstall.pl
Do you want to uninstall "WebLM service" (Y/N)?[Y]:
Uninstalling WebLM service...
WebLM service uninstalled successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Upgrading WebLM

Before you begin

Copy the new WebLM load to the `/var/mcp` directory folder on the primary Element Manager server.

About this task

Use these steps to upgrade WebLM to a new version.

Procedure

1. Log to primary Element Manager server as `ntappadm`.
2. Type `weblmUpgrade.pl`.
3. Select `weblm` load.
4. Type `Y` to confirm.

Example

```
[ntappadm@server58 install]$ weblmUpgrade.pl
The following webLM application load instances have been found:
[1] /var/mcp/weblm_v6.3.3.5.8220_Tomcat_7.0.29.zip
[2] /var/mcp/weblm_v6.3.3.5.8255_tomcat_v7.0.30.zip
Please select weblm load you wish to use for upgrade [1..2]: 2
Do you want to upgrade "WebLM service" (Y/N)?[Y]: y
Upgrading WebLM service...
Backup file: /var/mcp/weblm_backup_09-30-13_16-42-30.tar.gz
Upgrade of WebLM service completed successfully
```

Related Links

[Licensing for Turnkey deployments](#) on page 77

Licensing for Avaya Aura® deployments

In an Avaya Aura® deployment, Avaya Aura® System Manager hosts the WebLM server.

Related Links

[Installing the Avaya Aura Conferencing license key on Avaya Aura System Manager](#) on page 85

Installing the Avaya Aura® Conferencing license key on Avaya Aura® System Manager

About this task

License keys are installed on the WebLM server, which resides with Avaya Aura® System Manager. WebLM has a client/server model where many clients share the same WebLM server and also the same license key. The license key is an XML file.

Use the following procedure to install the Avaya Aura® Conferencing license key on Avaya Aura® System Manager.

Procedure

1. In the Address box of the Web browser, enter the following address: `http://<SMGR_OAM_FQDN>`.
2. In the User ID field, enter your System Manager logon ID.
3. In the Password field, enter your password.
4. Click **Log On**.
5. In the Services area of the System Manager home page, click **Licenses**.
6. In the navigation pane, click **Install license**.
7. On the Install license page, click **Browse**.
8. In the Choose File to Upload dialog box, select the license file, and click **Open**.
9. Click **Install**.
10. In the navigation pane, click **Conferencing** to view information about the license.

Related Links

[Licensing for Avaya Aura deployments](#) on page 84

Chapter 6: Installing Avaya Aura® Conferencing (AAC) for Avaya Aura® using VMWare

Introduction to vAAC

Virtualization is becoming more prevalent within enterprise business data centers and is seen as a way to reduce both capital expenditure (capex) and total cost of ownership (TCO). VMware™ is a leader in virtualization technology and seen as an important platform for Avaya to adopt for its enterprise solutions. VMware provides centralized management of virtualized hosts and virtual machines from a single console. It provides a comprehensive suite of tools to help the administrator monitor and manage their data center.

The Avaya Aura® Conferencing on VMware feature creates images with pre-configured and fully functional Avaya Aura® Conferencing software which is packaged in the standard template format (OVA - Open Virtualization Archive) for deploying into the customer's VMware virtual infrastructure. Avaya refers to the virtualized Avaya Aura® Conferencing solution as “vAAC”.

In Avaya Aura® Conferencing 8.0 release, multiple OVAs support the various deployment scenarios:

- vAAC Medium Simplex OVA: AAC RHEL platform + Pre-installed/deployed/configured application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs are deployed & started automatically.
- vAAC Medium Redundant Primary OVA: AAC RHEL platform + Pre-installed/deployed/configured Medium Primary application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs (on Primary instances) are deployed & started automatically.
- vAAC Medium Redundant Secondary OVA: AAC RHEL platform + Pre-installed/deployed/configured medium secondary application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs are deployed & started automatically.
- vAAC Platform – Large Platform OVA: AAC RHEL platform + Application Bundle ISO file.
 - Avaya Aura® Conferencing platform is installed and started.
 - Admin has to run “mcplnstaller” to install AAC NEs.
 - The Large Footprint OVA can be used for NEs as: AAC Core NEs, WCS, AMS in vAAC large simplex deployment or large redundant deployment.

- vAAC Platform – Small Platform OVA: AAC RHEL platform + Application Bundle ISO file.
 - Avaya Aura® Conferencing platform is installed and started.
 - Admin has to run “mcplnstaller” to install AAC NEs.
 - The Small Footprint OVA can be used for cascading Avaya Media Server (MS) in all the deployment models

The Avaya Aura® Conferencing software will now be supported in VMWare environments that utilize the ESXi 5.1 hypervisor. Avaya will provide virtual machine templates called OVA files. These files specify the required number of virtual CPUs, memory, disk space, and disk performance required by the VM. ESXi 5.5 will not be supported in Avaya Aura® Conferencing 8.0.

OVA deployment model summary

The following table shows the number of OVAs that are required to deploy each of the deployment models. These are the minimum number of virtual machines (VMs) that are required as per the staging files.

*** Note:**

A solution may add additional VMs (using the vAAC Platform OVA) as required, supporting additional optional components.

OVA's required per deployment	vAAC-Medium Simplex OVA	vAAC-Medium Redundant Primary OVA	vAAC-Medium Redundant Secondary OVA	vAAC-Platform Large Footprint OVA	vAAC-Platform Small Footprint OVA
Medium Simplex	1				0 to 10 (cascading Avaya Media Server (MS)s)
Medium Redundant		1	1		0 to 10 (cascading Avaya Media Server (MS)s)
Large Simplex (starting configuration)				3	0 to 32 (cascading Avaya Media Server (MS)s)
Large Redundant (starting configuration)				6	0 to 32 (cascading Avaya Media Server (MS)s)
Large Redundant (expansion)				8	2 Document Conversion Servers (DCS) 0 to 32 Avaya Media Server (MS)s

*** Note:**

Currently, Avaya Aura® Conferencing does not support VMware for the SMB-sized solution. You can only using VMware for medium or large deployments.

OVA resource reservation requirements

AAC OVA	Processor vCPUs	Processor Reservation (MHz)	Memory (GB)	Memory reservation (GB)	Disk size (GB)	Physical cores Minimum frequency
Medium Simplex OVA	8	23,144	24	24	150	2,893
Medium Redundant Primary OVA	8	23,144	24	24	150	2,893
Medium Redundant Secondary OVA	8	23,144	24	24	150	2,893
Platform Large Footprint OVA	12	34,716	30	30	150	2,893
Platform Small Footprint OVA	6	17,358	16	16	150	2,893

*** Note:**

For medium systems, eight vCPU and 24 GB memory will only support 2000 user capacity. To support 5000 user capacity, you must increase resources to 12 vCPU, 30 GB. You must use the following procedure to update the resource reservation. For more information, see [Modifying vAAC OVA resource reservation and the number of CPUs](#) on page 102.

VMWare and cascading capacity

The following table shows the supported capacity for cascading Avaya Media Servers on VMWare for Avaya Aura® Conferencing 8.0

AAC on VMWare	Capacity (Audio Sessions)	Capacity (Video Sessions)	vCPU (Virtual CPU)	Virtual Memory (GB)	Virtual Storage (GB)	Minimum CPU Speed (GHz)/Per Core	vCPU Resource Reservation (GHz)
Cascading Avaya Media Servers (6 vCPUs)	540	160	6	16	150	2.893	17.358

Related Links

[Modifying the vAAC OVA resource reservation and the number of CPUs](#) on page 102

Checklist for installing the AAC Avaya Aura® solution

No.	Task	Description	Notes	✓
1	Ensure that you are qualified to perform this task.	Ensure that you have the skills required to install, configure, and upgrade Avaya Aura® Conferencing. For a list of the required core competencies, see Audience on page 12. Before undertaking any advanced procedures, you must complete the required Avaya Aura® Conferencing training, as listed in Training on page 10. Avaya recommends that you download all available Avaya Aura® Conferencing documentation, as listed in Documentation on page 7.		
2	Read the prerequisites	Prerequisites to running vAAC OVAs on page 90		
3	Deploy the OVAs	Deploying vAAC OVAs on page 90		
4	Configure the platform	Configuring the vAAC platform after the OVA deployment on page 91		
5	Configure for your specific deployment type	If you have a medium deployment without redundancy, see Configuring a vAAC medium simplex system after the OVA deployment on page 94 If you have a medium deployment with redundancy, see Configuring a vAAC medium redundant primary system after the OVA deployment on page 96 and Configuring a vAAC		

No.	Task	Description	Notes	✓
		medium redundant secondary core server after the OVA deployment on page 99		
6	Perform a number of provisioning tasks to enable you to place a test call to verify the installation.	Read the following section for guidance: Deciding the next steps on page 104		

Prerequisites to running vAAC OVAs

- You must install ESXi hypervisor. ESXi hypervisor is required on physical hosts for virtualizing resources such as, CPUs, RAMs, NICs and storage.
 - vSphere client is the administrative tool for managing ESXi hosts.
 - vCenter server is the management server, through which ESXi resources pools, and other VMware advanced features can be managed or enabled by vSphere client.
- You can create virtual machines on shared storage — in other words, iSCSI NAS (Network Attached Storage), or local attached storage.

* Note:

The virtual machines have no knowledge of the underlying physical disks. All virtual disks will appear to be SCSI disk drive to virtual machines.

Deploying vAAC OVAs

Each of the following procedures use VMware vSphere PC client and connects to VMware vCenter. The current procedure applies to all vAAC OVA deployment models.

Before you begin

Download all required vAAC OVA files to your computer before you begin.

About this task

Use this task to deploy vAAC OVAs to the VMware Virtual Machine (VM).

Procedure

1. Login to the vCenter through vSphere PC client.
2. Select a target EXSi host from **vSphere Client > Hosts and Clusters view**.

3. Click **File > Deploy OVF Template....**

The **Deploy OVF Template** wizard begins.

4. At the **Source** step, select the vAAC OVA file from your computer and click **Next**.5. At the **OVF Template Details** step, display the select OVA file information and click **Next**6. At the **End User License Agreement** step, read the license agreement, click **Accept** and click **Next**.7. At the **Name and Location** step, enter a proper VM name and select a proper data center in the **Inventory Location**.8. Click **Next**.9. At the **Storage** step, select the proper storage to which you want to deploy the OVA and click on **Next**.10. At the **Disk Format** step, select **Thick Provision Lazy Zeroed** and click **Next**.11. At the **Ready to Complete** step, verify the information and click **Finish**.

The **VM deployment progress** dialog is displayed

12. After the VM is successfully deployed, select the VM, right click on it, and select **Power > Power On**.

Result

The selected vAAC OVA has been deployed and powered on.

Next steps

Proceed to [Configuring the vAAC platform after the OVA deployment](#) on page 91.

Configuring the vAAC platform after the OVA deployment

The attribute selections in this procedure reflect a particular example configuration. Your configuration may differ and as such, may require different attribute selections.

Before you begin

Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		

Resource Name	IP Address	FQDN
Primary Media Server Media Address		
Primary Web Conferencing Server Service		
NTP Server		
DNS Server		
Gateway/Subnet address		
System Manager (SMGR)		
Session Manager (SM) SIP		

About this task

Use this task to configure the vAAC platform after the OVA deployment. This task applies to vAAC Platform Large Platform and Small Platform deployments.

Tip:

In order to progress through the VM Console, you can click **Ctrl + Alt + left click**.

Procedure

1. Right click on the VM and select **Open Console**.
2. On the Hostname Configuration screen, type the hostname and press **Enter**.
3. At the confirmation prompt, type **Y** and press **Enter**.
The Network Configuration screen is displayed.
4. Configure the network, as follows:
 - a. At the **Enter IP address** prompt, type the *Primary EM Server IP Address* from the table above.
 - b. At the **Enter subnet prefix length (1–38)** prompt, type the appropriate alphanumeric length.
 - c. At the **Enter gateway IP address** prompt, type the *Gateway address* from the table above.
 - d. At the confirmation prompt, type **Y** and press **Enter**.
The DNS Configuration screen is displayed.
5. Configure the DNS, as follows:
 - a. At the **Domain Suffix(es): Enter Selection** prompt, accept the default configuration by typing **C**.
 - b. At the **How many DNS Servers would you like to reference (1–3)** prompt, type the appropriate number, such as **1**.
 - c. At the **Enter Primary DNS Server (<DNS server IP address>)** prompt, type the DNS IP address.

- d. At the confirmation prompt, type **Y** and press **Enter**.
The Configuration Confirmation screen is displayed.
- e. Type **Y** and press **Enter**.
The Configuration Confirmation screen for the timezone is displayed.
6. Configure the timezone, as follows:
 - a. At the **Use the default value (US/Eastern) for this timezone** prompt, type **Y** to use default value or type **N** to reconfigure the timezone.
 - b. At the confirmation prompt, type **Y** and press **Enter**.
The NTP Configuration screen is displayed.
7. Configure the NTP server, as follows:
 - a. At the **Do you wish to configure/display the NTP configuration?** prompt, type **C**.
 - b. At the **Select an option (1–3):** prompt, type **3**.
 - c. At the **Enter MACHINE Logical IP of the Primary Clock Source Server** prompt, type the main NTP server IP address from the table above.
 - d. At the **Enter MACHINE Logical IP of the Secondary Clock Source Server** prompt, type the standby NTP server IP address.
 - e. Press **Enter**.
The SysLog Configuration screen is displayed.
8. Configure the SysLog server details, as follows:
 - a. At the **Do you wish to configure/unconfigure/display the SysLog Server IP Address?** prompt, type **u**.
 - b. At the confirmation prompt, type **Y** and press **Enter**.
The next screen is displayed.
 - c. Press **Enter** to reset the user account passwords to “password”.
9. Press **Enter** to finish.

Result

The vAAC platform is configured.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Configuring a vAAC medium simplex system after the OVA deployment

The attribute selections in this procedure reflect a particular example configuration. Your configuration may differ and as such, may require different attribute selections.

Before you begin

- Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		
Primary Media Server Media address		
Primary Web Conferencing Server Service		
FMG (Flash Media Gateway) Server		
NTP Server		
DNS Server		
Gateway/Subnet address		
System Manager (SMGR)		
System Manager (SMGR) enrollment password		
Session Manager (SM) SIP		

- Complete the steps in [Configuring the vAAC platform after the OVA deployment](#) on page 91.

About this task

Use this task to configure a vAAC medium simplex deployment.



Tip:

In order to progress through the VM Console, you can click **Ctrl + Alt + left click**.

Procedure

- If this is the Avaya Aura® configuration, please select option 1: AAC with Avaya Aura® on the Avaya Aura® Conferencing System Deployment Type Configuration screen.

2. On the Avaya Aura® Conferencing Core Application Configuration screen, configure the core application IP addresses, as follows:
 - a. At the **Please enter the Service IPv4 address of Element Manager** prompt, enter the *EM Service IP* address from the table above.
 - b. At the **Please enter the Service IPv4 address of Accounting Manager** prompt, enter the *Accounting Manager Service IP* from the table above.
 - c. At the **Please enter the Service IPv4 address of Application Server** prompt, enter the *Application Server IP* from the table above.
 - d. At the **Please enter the Media IPv4 address of the primary media server** prompt, enter the *Primary Media Server IP* from the table above.
 - e. At the **Please enter the Service IPv4 address of the primary Web Conferencing Server** prompt, enter the *Primary WCS Service IP* from the table above.
 - f. At the **Please enter the Site Name of this AAC installation** prompt, enter a short name for the site you are configuring.
 - g. At the **Please enter the Site Long Name of this AAC installation** prompt, enter a longer name for the site you are configuring.
3. On the Flash Media Gateway (FMG) Configuration screen, configure the FMG as follows:
 - a. At the **Enter the IP address for JMX Connections** prompt, type the *FMG Server IP address* from the table above.
 - b. At the **Enter the IP address for RTMP Connections** prompt, type the *FMG Server IP address* from the table above.
 - c. At the **Enter the IP address for HTTP Connections** prompt, type the *FMG Server IP address* from the table above.
 - d. At the **Enable RTMPS?** prompt, type *yes*.
 - e. At the **Enter the Port for RTMPS** prompt, enter the port number for RTMPS connections.
 - f. At the **Generate a self-signed certificate for RTMPS (Port 443)** prompt, type *yes*.
 - g. At the **Enable RTMP?** prompt, type *yes*.
 - h. At the **Enter the Port for RTMP** prompt, type *1935*.
 - i. At the **Enable RTMPT?** prompt, type *yes*.
 - j. At the **Enter the Port for RTMPT** prompt, type *1935*.
 - k. In the **Management Configuration** section, at the **Enter the IP address for Management Client** prompt, type the *FMG Server IP address* from the table above.
 - l. At the **Enter the Port for Management Client** prompt, enter the port number for management client connections.
 - m. At the **Generate a self-signed certificate for RTMPS for Management Portal** prompt, type *yes*.

The FMG is configured.

4. Configure the Avaya Aura® servers, as follows:

- a. At the **Please enter the IPv4 address of the Aura System Manager** prompt, enter the *System Manager IP* from the table above.
- b. At the **Please enter the IPv4 address of Aura Session Manager** prompt, enter the *Session Manager SIP IP* from the table above.
- c. At the **Please enter the SMGR SNMP Trap Listener Port for Alarm Forwarding** prompt, enter the port number for alarm connections.
- d. At the **Please enter the SMGR SNMP Community String (for Alarm forwarding)** prompt, enter the appropriate community string, such as `public`, for alarms.

The vAAC progresses through an initial configuration phase.

5. When this configuration is complete, you can configure the enrollment password, as follows:

- a. At the **Please enter the Enrollment Password** prompt, the *System Manager Enrollment password* from the table above.
- b. At the **Please reenter the Enrollment Password** prompt, enter the enrollment password again.

The vAAC installs certificates and displays a progress counter. When the configuration is complete, all network elements are up and running.

Result

The vAAC Medium Simplex system is configured.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Configuring a vAAC medium redundant primary core server after the OVA deployment

Before you begin

- Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Secondary Element Manager Server		

Resource Name	IP Address	FQDN
Element Manager Service		
Accounting Manager Service		
Application Server Service		
Primary Media Server Media address		
Secondary Media Server Media address		
Primary Web Conferencing Server (WCS) Service		
Secondary Web Conferencing Server (WCS) Service		
FMG Server IP on Primary		
NTP Server		
DNS Server		
Gateway/Subnet address		
System Manager (SMGR)		
System Manager (SMGR) Enrollment password		
Session Manager (SM) SIP		

- Complete the steps in [Configuring the vAAC platform after the OVA deployment](#) on page 91.

About this task

Use this task to configure a vAAC medium redundant primary core server.

Procedure

1. If this is the Avaya Aura® configuration, please select option 1: AAC with Avaya Aura® on the Avaya Aura® Conferencing System Deployment Type Configuration screen.
2. On the Avaya Aura® Conferencing Core Application Configuration screen, configure the core application IP addresses, as follows:
 - a. At the **Please enter the Internal OAM (Default) IPv4 address of the secondary Element Manager server** prompt, enter the *Secondary Element Manager Server* address from the table above.
 - b. At the **Please enter the Service IPv4 address of Element Manager** prompt, enter the *EM Service IP* address from the table above.
 - c. At the **Please enter the Service IPv4 address of Accounting Manager** prompt, enter the *Accounting Manager Service IP* from the table above.
 - d. At the **Please enter the Service IPv4 address of Application Server** prompt, enter the *Application Server IP* from the table above.
 - e. At the **Please enter the Media IPv4 address of the primary media server** prompt, enter the *Primary Media Server IP* from the table above.

- f. At the **Please enter the Media IPv4 address of the secondary media server** prompt, enter the *Secondary Media Server IP* from the table above.
 - g. Please enter the Media IPv4 address of the secondary Media Server
 - h. At the **Please enter the Service IPv4 address of the primary Web Conferencing Server** prompt, enter the *Primary WCS Service IP* from the table above.
 - i. At the **Please enter the Service IPv4 address of the secondary Web Conferencing Server** prompt, enter the *Secondary WCS Service IP* from the table above.
 - j. At the **Please enter the Site Name of this AAC installation** prompt, enter a short name for the site you are configuring.
 3. On the Flash Media Gateway (FMG) Configuration screen, configure the FMG as follows:
 - a. At the **Enter the IP address for JMX Connections** prompt, type the *FMG Server IP address* from the table above.
 - b. At the **Enter the IP address for RTMP Connections** prompt, type the *FMG Server IP address* from the table above.
 - c. At the **Enter the IP address for HTTP Connections** prompt, type the *FMG Server IP address* from the table above.
 - d. At the **Enable RTMPS?** prompt, type *yes*.
 - e. At the **Enter the Port for RTMPS** prompt, enter the port number for RTMPS connections.
 - f. At the **Generate a self-signed certificate for RTMPS (Port 443)** prompt, type *yes*.
 - g. At the **Enable RTMP?** prompt, type *yes*.
 - h. At the **Enter the Port for RTMP** prompt, type *1935*.
 - i. At the **Enable RTMPT?** prompt, type *yes*.
 - j. At the **Enter the Port for RTMPT** prompt, type *1935*.
 - k. In the **Management Configuration** section, at the **Enter the IP address for Management Client** prompt, type the *FMG Server IP address* from the table above.
 - l. At the **Enter the Port for Management Client** prompt, enter the port number for management client connections.
 - m. At the **Generate a self-signed certificate for RTMPS for Management Portal** prompt, type *yes*.

The FMG is configured.
 4. Configure the Avaya Aura® servers, as follows:
 - a. At the **Please enter the IPv4 address of the Aura System Manager** prompt, enter the *System Manager IP* from the table above.
 - b. At the **Please enter the IPv4 address of Aura Session Manager** prompt, enter the *Session Manager SIP IP* from the table above.

- c. At the **Please enter the SMGR SNMP Trap Listener Port for Alarm Forwarding** prompt, enter the port number for alarm connections.
- d. At the **Please enter the SMGR SNMP Community String (for Alarm forwarding)** prompt, enter the appropriate community string for alarms.

The vAAC progresses through an initial configuration phase.

5. When this configuration is complete, you can configure the enrollment password, as follows:

- a. At the **Please enter the Enrollment Password** prompt, the *System Manager Enrollment password* from the table above.
- b. At the **Please reenter the Enrollment Password** prompt, enter the enrollment password again.

The vAAC installs certificates and displays a progress counter. When the configuration is complete, all primary network elements are up and running.

Result

The vAAC medium redundant primary core server is configured.

Next steps

Proceed to [Configuring a vAAC medium redundant secondary core server after the OVA deployment](#) on page 99.

Configuring a vAAC medium redundant secondary core server after the OVA deployment

The table of IP addresses and FQDNs that you use in this task should contain the same information that you used in [Configuring a vAAC medium redundant primary core server after the OVA deployment](#) on page 96.

Before you begin

- Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Secondary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		

Resource Name	IP Address	FQDN
Primary Media Server Media address		
Secondary Media Server Media address		
Primary Web Conferencing Server (WCS) Service		
Secondary Web Conferencing Server (WCS) Service		
FMG Server IP on Secondary		
NTP Server		
DNS Server		
Gateway/Subnet address		
System Manager (SMGR)		
System Manager (SMGR) Enrollment password		
Session Manager (SM) SIP		

- Complete the steps in [Configuring the vAAC platform after the OVA deployment](#) on page 91.

About this task

Use this task to configure a vAAC medium redundant secondary core server.

Procedure

1. Configure the Avaya Aura® Conferencing Core Application only for Secondary, as follows:

At the **Please enter the Internal OAM (Default) IPv4 address of the primary Element Manager server** prompt, enter the Primary EM Server IP address from the table above.

The vAAC configuration automatically continues and displays a progress counter. When the configuration is complete, all network elements are up and running.

2. On the Flash Media Gateway (FMG) Configuration screen, configure the FMG as follows:

- a. At the **Enter the IP address for JMX Connections** prompt, type the *FMG Server IP address* from the table above.
- b. At the **Enter the IP address for RTMP Connections** prompt, type the *FMG Server IP address* from the table above.
- c. At the **Enter the IP address for HTTP Connections** prompt, type the *FMG Server IP address* from the table above.
- d. At the **Enable RTMPS?** prompt, type *yes*.
- e. At the **Enter the Port for RTMPS** prompt, enter the port number for RTMPS connections.
- f. At the **Generate a self-signed certificate for RTMPS (Port 443)** prompt, type *yes*.

- g. At the **Enable RTMP?** prompt, type *yes*.
- h. At the **Enter the Port for RTMP** prompt, type 1935.
- i. At the **Enable RTMPT?** prompt, type *yes*.
- j. At the **Enter the Port for RTMPT** prompt, type 1935.
- k. In the **Management Configuration** section, at the **Enter the IP address for Management Client** prompt, type the *FMG Server IP address* from the table above.
- l. At the **Enter the Port for Management Client** prompt, enter the port number for management client connections.
- m. At the **Generate a self-signed certificate for RTMPS for Management Portal** prompt, type *yes*.

The FMG is configured.

Result

The configuration of the secondary server is complete.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Verifying and upgrading VMWare tools

Before you begin

Ensure that the vAAC OVA is deployed on the VMWare host.

About this task

Use this task to upgrade the VMWare tools package on the deployed vAAC OVAs.

Procedure

1. Login to the vCenter using the vSphere PC client.
2. In **Hosts and Clusters** view, select a target vAAC VM from the vSphere client.
3. Navigate to **vAAC VM Summary** and verify whether the VMware Tools are **Current**.
If the VMWare Tools are current, there is no need to upgrade them.
4. If the VMware Tools are **Out-of-Date**, use the right-click to navigate to **vAAC VM > Guest > Install/Upgrade VMWare Tools**.
5. Select **Automatic Tools Update** and click **OK**.

The upgrade process takes approximate three to four minutes. The status panel displays **In Progress**.

Result

After a successful upgrade, the **vAAC VM Summary** tab displays the VMWare Tools as **Current**. If the upgrade fails, you must manually install the VMware Tools package. See [Manually installing the VMware tools package](#) on page 103.

Modifying the vAAC OVA resource reservation and the number of CPUs

For medium systems, eight vCPU and 24 GB memory will only support 2000 user capacity. To support 5000 user capacity, you must increase resources to 12 vCPU, 30 GB. You must use the following procedure to update the resource reservation. For more information, see [Modifying vAAC OVA resource reservation and the number of CPUs](#) on page 102.

Before you begin

- Deploy a vAAC medium simplex OVA, a medium redundant primary OVA, a medium redundant secondary, a platform large footprint, or a platform small footprint OVA.
- Ensure that the VM is powered off.

About this task

Use this task to modify OVA CPU and memory resources reservation and total number of CPUs for a deployed vAAC Virtual Machine (VM).

Procedure

1. If the deployed vAAC VM has been powered on, power off the VM:
In the vSphere client, right click on the vAAC VM and select **Power > Power Off**.
2. Right click on the VM and select **Edit Settings... > Edit Settings....**
3. In the Edit Settings popup dialog, click on the **Resources** tab.
4. Change the CPU resource reservation:
Select the CPU item in the left panel and enter the desired CPU reservation number (in MHz) in the **Reservation** field in the **Resource Allocation** panel
5. Change the memory resource reservation:
Select the Memory item in the left panel and enter desired memory reservation number (in MB) in the **Reservation** field in the **Resource Allocation** panel
6. Click **OK** in the Edit Settings popup dialog.
7. Right click on the VM and select **Edit Settings... > Edit Settings....**
8. In the Edit Settings popup dialog, click on the **Hardware** tab.

9. Change the total number of CPUs:
 - a. Select the CPUs item in the left panel and select the desired virtual sockets at the **Number of virtual sockets** parameter drop-down list in right panel.
 - b. Do not change the **Number of cores per socket** parameter value.
10. Click **OK** in the Edit Settings popup dialog.
11. Select the vAAC VM, right click on it and select **Power > Power On**.

Related Links

[Introduction to vAAC](#) on page 86

Manually installing the VMware tools package

Before you begin

The deployed vAAC VM must be powered on and running. It must have access to the current VMware host's datastore.

About this task

Use this task to manually install a compatible VMware tools package to the deployed vAAC VM.

Procedure

1. In vSphere Client, select the deployed VM, right-click on it and click **Edit Settings...**
2. In the **Edit Settings** popup window, on the **Hardware** tab, select **CD/DVD drive 1**.
3. From the **Device Type** panel, select **Datastore ISO File** and click **Browse...**
4. On the **Browse** dialog, navigate to **Datastores > vmimages > tools-isoimages > linux.iso**. Click **Open** on the **linux.iso** file.
5. In the **Edit Settings** popup window, in the **Device Status** panel, select **Connected**.
6. Click **OK**.
7. Login to SSH and switch user to the root user (`su -`)
8. Execute `mount /dev/cdrom /mnt/cdrom`.
9. Execute `cd /tmp`.
10. Execute `tar xzf /mnt/cdrom/VMwareTools-xx.xx.xx-xxxxxxx.tar.gz`.
11. Execute `umount /mnt/cdrom`.
12. Execute `cd vmware-tools-distrib`.
13. Execute `./vmware-install.pl`.
14. Follow the VMware-Tools installation prompts using all of the default values.
15. After the VMware-Tools has installed successfully, execute `reboot` to restart the server.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

Deciding the next steps

If yours is an SMB or medium deployment, regardless of whether it provides redundancy, it is likely that you will not have to perform any further installation tasks. For Avaya Aura® Conferencing 8.0, Avaya has packaged each of the required network elements within the Avaya Aura® Conferencing software bundle which you have just installed.

Note:

Required network elements in this context refers to the various components that make up the Avaya Aura® Conferencing system. These network elements include the Web Conferencing Server, which provides document sharing capabilities, the Provisioning Manager, which provides user management functionality, and the Element Manager, which provides device management functionality.

At this point, it is likely that you only need to perform some provisioning tasks. Once you have completed these provisioning tasks, you can verify the end to end functionality of your Avaya Aura® Conferencing system by placing a test call from your configured endpoint. The required provisioning tasks are listed here. You perform each of these tasks using the Provisioning Client application:

- Obtain licenses for Avaya Aura® Conferencing from the Avaya Product Licensing and Delivery System (PLDS).
- Add the location of your Avaya Aura® Conferencing system.
- Configure the routing policy which applies to your Avaya Aura® Conferencing system.
- Add the communication addresses for your Avaya Aura® Conferencing system.
- Add some end users.

If your deployment requires the integrated audio and video feature of Avaya Aura® Conferencing, you will have to configure a Flash Media Gateway (FMG). If your deployment is a large deployment, you will also have to perform additional configuration tasks.

Chapter 7: Installing Avaya Aura® Conferencing (AAC) for Turnkey using VMWare

Avaya Aura® Conferencing Turnkey solution overview

The Avaya Aura® Conferencing Turnkey solution is a meet me conferencing solution which provides audio, video, and Web conferencing. The Avaya Aura® Conferencing Turnkey solution provides the ability to deploy Avaya Aura® Conferencing without the Avaya Aura® stack. The Avaya Aura® PBX stack refers to staging and management software such as System Platform and System Manager. With the Avaya Aura® Conferencing Turnkey solution, Avaya Aura® Conferencing can be deployed with a Public Branch eXchange (PBX) such as Avaya Aura® Communication Manager and Avaya Communication Server 1000 with a SIP trunk between Avaya Aura® Conferencing and the PBX.

Users can connect to the conference using audio and/or video by way of any of the PBX clients, by way of Audio Video in Collaboration Agent embedded in Collaboration Agent, or by way of the Avaya Aura® Conferencing mobile clients. Additionally, users can join Web collaboration using the Collaboration Agent interface.

Administrators can manage the Avaya Aura® Conferencing components and users using the Element Manager and Provisioning interfaces. In addition, administrators can bulk provision users by way of Lightweight Directory Access Protocol (LDAP).

Administrators can deploy the Avaya Aura® Conferencing Turnkey solution on bare metal servers. A bare metal environment refers to the installation of a server directly on to hardware rather than within the host operating system. Alternatively, the Avaya Aura® Conferencing Turnkey solution supports virtualization through VMWare.

This solution is available for all deployment models and so is suited to small to medium (SMB), medium, and large enterprises.

The installation, upgrade, and patching of the Avaya Aura® Conferencing Turnkey solution is almost the same as the process of installing, upgrading, and patching the Avaya Aura® Conferencing for Avaya Aura® solution. Moreover, the Avaya Aura® Conferencing user interfaces are identical. End users will be unaware of whether their conference bridge is powered by Avaya Aura® or an alternative PBX.

*** Note:**

Avaya Aura® Conferencing is a conferencing feature server. It is not a registrar or a proxy and does not provide proxy functions.

Introduction to vAAC

Virtualization is becoming more prevalent within enterprise business data centers and is seen as a way to reduce both capital expenditure (capex) and total cost of ownership (TCO). VMware™ is a leader in virtualization technology and seen as an important platform for Avaya to adopt for its enterprise solutions. VMware provides centralized management of virtualized hosts and virtual machines from a single console. It provides a comprehensive suite of tools to help the administrator monitor and manage their data center.

The Avaya Aura® Conferencing on VMware feature creates images with pre-configured and fully functional Avaya Aura® Conferencing software which is packaged in the standard template format (OVA - Open Virtualization Archive) for deploying into the customer's VMware virtual infrastructure. Avaya refers to the virtualized Avaya Aura® Conferencing solution as "vAAC".

In Avaya Aura® Conferencing 8.0 release, multiple OVAs support the various deployment scenarios:

- vAAC Medium Simplex OVA: AAC RHEL platform + Pre-installed/deployed/configured application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs are deployed & started automatically.
- vAAC Medium Redundant Primary OVA: AAC RHEL platform + Pre-installed/deployed/configured Medium Primary application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs (on Primary instances) are deployed & started automatically.
- vAAC Medium Redundant Secondary OVA: AAC RHEL platform + Pre-installed/deployed/configured medium secondary application bundle (EM, DB, PROV, WCMS, WCS, AS, AMS, AM, DCS, FMG)
 - All NEs are deployed & started automatically.
- vAAC Platform – Large Platform OVA: AAC RHEL platform + Application Bundle ISO file.
 - Avaya Aura® Conferencing platform is installed and started.
 - Admin has to run "mcplnstaller" to install AAC NEs.
 - The Large Footprint OVA can be used for NEs as: AAC Core NEs, WCS, AMS in vAAC large simplex deployment or large redundant deployment.
- vAAC Platform – Small Platform OVA: AAC RHEL platform + Application Bundle ISO file.
 - Avaya Aura® Conferencing platform is installed and started.
 - Admin has to run "mcplnstaller" to install AAC NEs.
 - The Small Footprint OVA can be used for cascading Avaya Media Server (MS) in all the deployment models

The Avaya Aura® Conferencing software will now be supported in VMWare environments that utilize the ESXi 5.1 hypervisor. Avaya will provide virtual machine templates called OVA files. These files

specify the required number of virtual CPUs, memory, disk space, and disk performance required by the VM. ESXi 5.5 will not be supported in Avaya Aura® Conferencing 8.0.

OVA deployment model summary

The following table shows the number of OVAs that are required to deploy each of the deployment models. These are the minimum number of virtual machines (VMs) that are required as per the staging files.

*** Note:**

A solution may add additional VMs (using the vAAC Platform OVA) as required, supporting additional optional components.

OVAs required per deployment	vAAC-Medium Simplex OVA	vAAC-Medium Redundant Primary OVA	vAAC-Medium Redundant Secondary OVA	vAAC-Platform Large Footprint OVA	vAAC-Platform Small Footprint OVA
Medium Simplex	1				0 to 10 (cascading Avaya Media Server (MS)s)
Medium Redundant		1	1		0 to 10 (cascading Avaya Media Server (MS)s)
Large Simplex (starting configuration)				3	0 to 32 (cascading Avaya Media Server (MS)s)
Large Redundant (starting configuration)				6	0 to 32 (cascading Avaya Media Server (MS)s)
Large Redundant (expansion)				8	2 Document Conversion Servers (DCS) 0 to 32 Avaya Media Server (MS)s

*** Note:**

Currently, Avaya Aura® Conferencing does not support VMware for the SMB-sized solution. You can only using VMware for medium or large deployments.

OVA resource reservation requirements

AAC OVA	Processor vCPUs	Processor Reservation (MHz)	Memory (GB)	Memory reservation (GB)	Disk size (GB)	Physical cores Minimum frequency
Medium Simplex OVA	8	23,144	24	24	150	2,893
Medium Redundant Primary OVA	8	23,144	24	24	150	2,893
Medium Redundant Secondary OVA	8	23,144	24	24	150	2,893
Platform Large Footprint OVA	12	34,716	30	30	150	2,893
Platform Small Footprint OVA	6	17,358	16	16	150	2,893

*** Note:**

For medium systems, eight vCPU and 24 GB memory will only support 2000 user capacity. To support 5000 user capacity, you must increase resources to 12 vCPU, 30 GB. You must use the following procedure to update the resource reservation. For more information, see [Modifying vAAC OVA resource reservation and the number of CPUs](#) on page 102.

VMWare and cascading capacity

The following table shows the supported capacity for cascading Avaya Media Servers on VMWare for Avaya Aura® Conferencing 8.0

AAC on VMWare	Capacity (Audio Sessions)	Capacity (Video Sessions)	vCPU (Virtual CPU)	Virtual Memory (GB)	Virtual Storage (GB)	Minimum CPU Speed (GHz)/Per Core	vCPU Resource Reservation (GHz)
Cascading Avaya Media Servers (6 vCPUs)	540	160	6	16	150	2.893	17.358

Related Links

[Modifying the vAAC OVA resource reservation and the number of CPUs](#) on page 102

Checklist for installing the AAC Turnkey solution

No.	Task	Description	Notes	✓
1	Ensure that you are qualified to perform this task.	Ensure that you have the skills required to install, configure, and upgrade Avaya Aura® Conferencing. For a list of the required core competencies, see Audience on page 12. Before undertaking any advanced procedures, you must complete the required Avaya Aura® Conferencing training, as listed in Training on page 10. Avaya recommends that you download all available Avaya Aura® Conferencing documentation, as listed in Documentation on page 7.		
2	Read the prerequisites	Prerequisites to running vAAC OVAs on page 90		
3	Deploy the OVAs	Deploying vAAC OVAs on page 90		
4	Configure for your specific deployment type	If you have a medium deployment with redundancy, see Configuring a vAAC medium redundant primary core server after the OVA deployment on page 111 and Configuring a vAAC medium redundant core server after the OVA deployment on page 113		
5	Perform a number of provisioning tasks to enable you to place a test call to verify the installation.	Read the following section for guidance: Deciding the next steps on page 104		

Prerequisites to running vAAC OVAs

- You must install ESXi hypervisor. ESXi hypervisor is required on physical hosts for virtualizing resources such as, CPUs, RAMs, NICs and storage.
 - vSphere client is the administrative tool for managing ESXi hosts.
 - vCenter server is the management server, through which ESXi resources pools, and other VMware advanced features can be managed or enabled by vSphere client.
- You can create virtual machines on shared storage — in other words, iSCSI NAS (Network Attached Storage), or local attached storage.

 Note:

The virtual machines have no knowledge of the underlying physical disks. All virtual disks will appear to be SCSI disk drive to virtual machines.

Deploying vAAC OVAs

Each of the following procedures use VMware vSphere PC client and connects to VMware vCenter. The current procedure applies to all vAAC OVA deployment models.

Before you begin

Download all required vAAC OVA files to your computer before you begin.

About this task

Use this task to deploy vAAC OVAs to the VMware Virtual Machine (VM).

Procedure

1. Login to the vCenter through vSphere PC client.
2. Select a target EXSi host from **vSphere Client > Hosts and Clusters view**.
3. Click **File > Deploy OVF Template....**
The **Deploy OVF Template** wizard begins.
4. At the **Source** step, select the vAAC OVA file from your computer and click **Next**.
5. At the **OVF Template Details** step, display the select OVA file information and click **Next**.
6. At the **End User License Agreement** step, read the license agreement, click **Accept** and click **Next**.
7. At the **Name and Location** step, enter a proper VM name and select a proper data center in the **Inventory Location**.
8. Click **Next**.
9. At the **Storage** step, select the proper storage to which you want to deploy the OVA and click on **Next**.

10. At the **Disk Format** step, select **Thick Provision Lazy Zeroed** and click **Next**.
11. At the **Ready to Complete** step, verify the information and click **Finish**.
The **VM deployment progress** dialog is displayed
12. After the VM is successfully deployed, select the VM, right click on it, and select **Power > Power On**.

Result

The selected vAAC OVA has been deployed and powered on.

Next steps

Proceed to [Configuring the vAAC platform after the OVA deployment](#) on page 91.

Configuring a vAAC medium redundant primary core server after the OVA deployment

Before you begin

- Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Secondary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		
Primary Media Server Media address		
Secondary Media Server Media address		
Primary Web Conferencing Server (WCS) Service		
Secondary Web Conferencing Server (WCS) Service		
FMG Server IP on Primary		
NTP Server		
DNS Server		
Gateway/Subnet address		

- Complete the steps in [Configuring the vAAC platform after the OVA deployment](#) on page 91.

About this task

Use this task to configure a vAAC medium redundant primary core server.

Procedure

1. If this is the Avaya Aura® configuration, please select option 2: **AAC connected to a SIP based PBX (CM, CS1K, IPO, etc)** on the Avaya Aura® Conferencing System Deployment Type Configuration screen.
2. On the Please Confirm Avaya Aura® Conferencing Core Application Configuration screen, configure the core application IP addresses, as follows:
 - a. At the **Please enter the Internal OAM (Default) IPv4 address of the secondary Element Manager server** prompt, enter the *Secondary Element Manager Server* address from the table above.
 - b. At the **Please enter the Service IPv4 address of Element Manager** prompt, enter the *EM Service IP* address from the table above.
 - c. At the **Please enter the Service IPv4 address of Accounting Manager** prompt, enter the *Accounting Manager Service IP* from the table above.
 - d. At the **Please enter the Service IPv4 address of Application Server** prompt, enter the *Application Server IP* from the table above.
 - e. At the **Please enter the Media IPv4 address of the primary media server** prompt, enter the *Primary Media Server IP* from the table above.
 - f. At the **Please enter the Media IPv4 address of the secondary media server** prompt, enter the *Secondary Media Server IP* from the table above.
 - g. At the **Please enter the Service IPv4 address of the primary Web Conferencing Server** prompt, enter the *Primary WCS Service IP* from the table above.
 - h. At the **Please enter the Service IPv4 address of the secondary Web Conferencing Server** prompt, enter the *Secondary WCS Service IP* from the table above.
 - i. At the **Please enter the Site Name of this AAC installation** prompt, enter a short name for the site you are configuring.
 - j. At the **Please enter the Site Long Name of this AAC installation** prompt, enter a long name for the site you are configuring.
 - k. Confirm that the information you entered is correct.
3. On the Flash Media Gateway (FMG) Configuration screen, configure the FMG as follows:
 - a. At the **Enter the IP address for JMX Connections** prompt, type the *FMG Server IP address* from the table above.
 - b. At the **Enter the IP address for RTMP Connections** prompt, type the *FMG Server IP address* from the table above.
 - c. At the **Enter the IP address for HTTP Connections** prompt, type the *FMG Server IP address* from the table above.

- d. At the **Enable RTMPS?** prompt, type *yes*.
- e. At the **Enter the Port for RTMPS** prompt, enter the port number for RTMPS connections.
- f. At the **Generate a self-signed certificate for RTMPS (Port 443)** prompt, type *yes*.
- g. At the **Enable RTMP?** prompt, type *yes*.
- h. At the **Enter the Port for RTMP** prompt, type 1935.
- i. At the **Enable RTMPT?** prompt, type *yes*.
- j. At the **Enter the Port for RTMPT** prompt, type 1935.
- k. In the **Management Configuration** section, at the **Enter the IP address for Management Client** prompt, type the *FMG Server IP address* from the table above.
- l. At the **Enter the Port for Management Client** prompt, enter the port number for management client connections.
- m. At the **Generate a self-signed certificate for RTMPS for Management Portal** prompt, type *yes*.

The FMG is configured.

The vAAC progresses through an initial configuration phase.

The vAAC installs certificates and displays a progress counter. When the configuration is complete, all primary network elements are up and running.

Result

The vAAC medium redundant primary core server is configured.

Next steps

Proceed to [Configuring a vAAC medium redundant secondary core server after the OVA deployment](#) on page 113.

Configuring a vAAC medium redundant secondary core server after the OVA deployment

The table of IP addresses and FQDNs that you use in this task should contain the same information that you used in [Configuring a vAAC medium redundant primary core server after the OVA deployment](#) on page 111.

Before you begin

- Enter the IP addresses and Fully Qualified Domain Names (FQDN) of each of the server resources in the following table. You will require this information during the configuration.

Resource Name	IP Address	FQDN
Primary Element Manager Server		
Secondary Element Manager Server		
Element Manager Service		
Accounting Manager Service		
Application Server Service		
Primary Media Server Media address		
Secondary Media Server Media address		
Primary Web Conferencing Server (WCS) Service		
Secondary Web Conferencing Server (WCS) Service		
FMG Server IP on Secondary		
NTP Server		
DNS Server		
Gateway/Subnet address		

- Complete the steps in [Configuring the vAAC platform after the OVA deployment](#) on page 91.

About this task

Use this task to configure a vAAC medium redundant secondary core server.

Procedure

1. Configure the Avaya Aura® Conferencing Core Application only for Secondary, as follows:

At the **Please enter the Internal OAM (Default) IPv4 address of the primary Element Manager server** prompt, enter the Primary EM Server IP address from the table above.

2. Type *y* to confirm the information.
3. On the Flash Media Gateway (FMG) Configuration screen, configure the FMG as follows:
 - a. At the **Enter the IP address for JMX Connections** prompt, type the *FMG Server IP address* from the table above.
 - b. At the **Enter the IP address for RTMP Connections** prompt, type the *FMG Server IP address* from the table above.
 - c. At the **Enter the IP address for HTTP Connections** prompt, type the *FMG Server IP address* from the table above.
 - d. At the **Enable RTMPS?** prompt, type *yes*.
 - e. At the **Enter the Port for RTMPS** prompt, enter the port number for RTMPS connections.

- f. At the **Generate a self-signed certificate for RTMPS (Port 443)** prompt, type *yes*.
- g. At the **Enable RTMP?** prompt, type *yes*.
- h. At the **Enter the Port for RTMP** prompt, type *1935*.
- i. At the **Enable RTMPT?** prompt, type *yes*.
- j. At the **Enter the Port for RTMPT** prompt, type *1935*.
- k. In the **Management Configuration** section, at the **Enter the IP address for Management Client** prompt, type the *FMG Server IP address* from the table above.
- l. At the **Enter the Port for Management Client** prompt, enter the port number for management client connections.
- m. At the **Generate a self-signed certificate for RTMPS for Management Portal** prompt, type *yes*.

The FMG is configured.

Result

The configuration of the secondary server is complete.

Next steps

Refer back to your checklist for more information about your next task. You should always use your checklist for guidance. You should print it out so that you can mark each task as you complete it.

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