



Avaya Aura[®] Conferencing Overview and Specification Guide for Avaya Aura[®]

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Chapter 1: Introduction

Purpose

This document describes tested product characteristics and capabilities, including feature descriptions, interoperability, performance specifications, security, and licensing requirements.

Intended audience

This document is intended for people who want to gain a high-level understanding of the product features, functions, capacities, and limitations.

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 7

[Implementation](#) on page 7

[Administration](#) on page 8

[Supporting](#) on page 8

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 6

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

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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 6

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

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

Procedure

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

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

*** Note:**

Videos are not available for all products.

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.

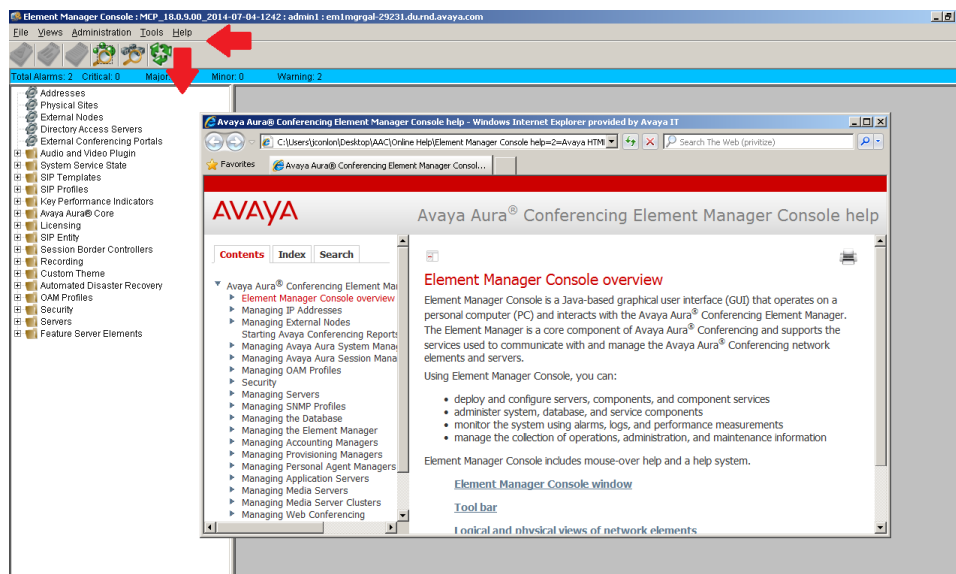


Figure 1: Online Help for Element Manager

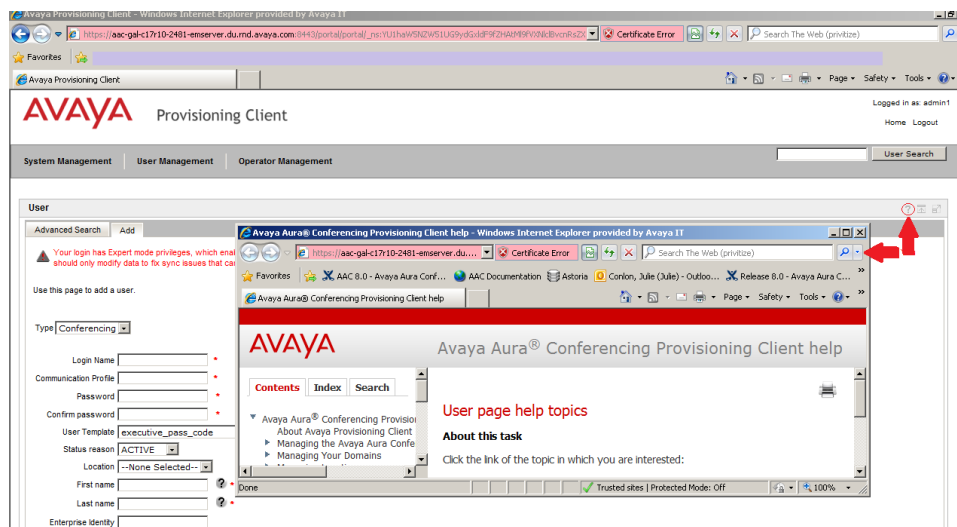


Figure 2: Online Help for the Provisioning Client

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

Go to 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.

Warranty

Chapter 2: Avaya Aura® Conferencing for Aura overview

Avaya Aura® Conferencing for Avaya Aura® overview

The Avaya Aura® Conferencing for Avaya Aura® solution is a meet me conferencing solution which provides audio, video, and Web conferencing. The Avaya Aura® Conferencing for Avaya Aura® solution provides the ability to deploy Avaya Aura® Conferencing within 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 for Avaya Aura® solution, a lower total cost of ownership is driven by a unified infrastructure, simplified management and lower acquisition, upgrade, and bandwidth costs. Avaya Aura® comprises a number of key components that work together to provide a powerful unified communications solution. The following components provide integrated management of the solution:

- Avaya Aura® Session Manager
- Avaya Aura® System Manager
- Avaya Aura® Conferencing components
- Feature servers and access elements

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 and other Unified Communications (UC) clients.

Administrators can manage the Avaya Aura® Conferencing components and users using the Avaya Aura® System Manager, 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 for Avaya Aura® 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 for Avaya Aura® 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.

*** Note:**

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

Support for cascading

Media cascading reduces the number of media streams travelling across the WAN by consolidating these streams based by location. This technique is applied to both audio and video streams. Media cascading provides bandwidth optimization with no significant reductions in the quality of audio or video. Conferences are scalable with proper configuration and management which is fully transparent to end users. Media cascading is available for event conferences. The combination of these two features — event conferencing and media cascading — provides a very compelling solution for very large global conferences.

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 Reservatio n (GHz)
Cascading Avaya Media Servers (6 vCPUs)	540	160	6	16	150	2.893	17.358

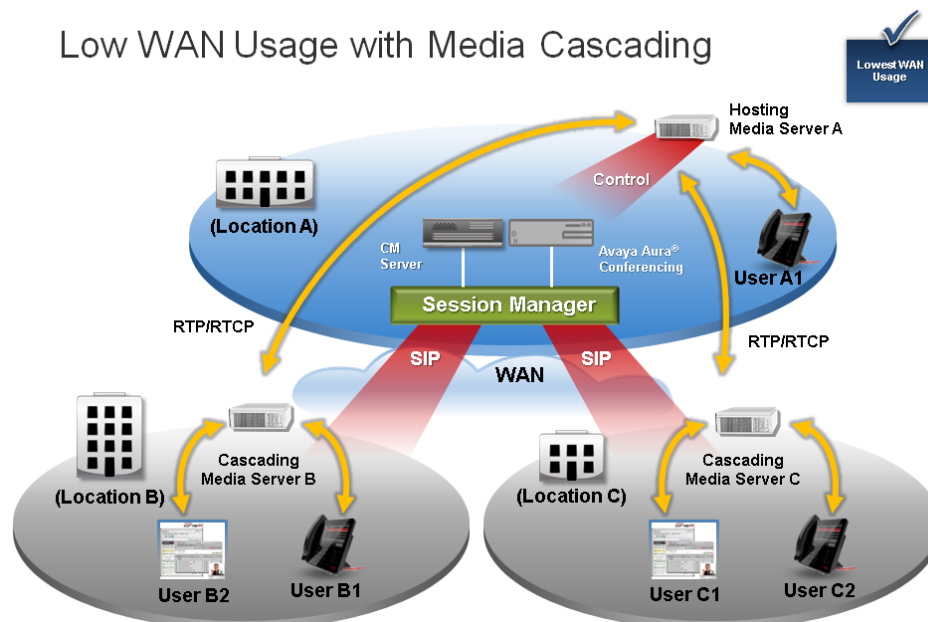


Figure 3: Avaya Aura® Conferencing network architecture

Related Links

[Session Manager](#) on page 14

[System Manager](#) on page 14

[Avaya Aura Conferencing components](#) on page 14

[Feature servers and Avaya Aura access elements](#) on page 15

Session Manager

Session Manager plays a critical role in Avaya Aura®. Session Manager determines the routing between components, manages the SIP registration of users, manages the bandwidth of the network, and performs a number of other key functions.

Avaya Aura® Conferencing can only have one domain. This means that a single Session Manager must be associated with an Avaya Aura® Conferencing system. So, in a deployment, even if there are multiple Avaya Aura® stacks with interconnecting SIP trunks, only one of the Session Managers can be the manager of the Avaya Aura® Conferencing system.

Avaya Aura® Conferencing is dependent on the various roles of Session Manager, including:

- SIP routing of sessions between Avaya Aura® Conferencing and other components in the network. Avaya Aura® Conferencing is administered in Session Manager as an application that can originate and terminate SIP sessions.
- Management of the network bandwidth. Session Manager provides a shared bandwidth management interface so that Avaya Aura® Conferencing can request bandwidth for sessions that terminate in Avaya Aura® Conferencing.

Related Links

[Avaya Aura Conferencing for Avaya Aura overview](#) on page 12

System Manager

System Manager provides an integrated management interface for all the components in an enterprise network, including a common view of the network elements and navigation to the various components in the solution.

A Conferencing profile is required for a user to be able to host a conference on Avaya Aura® Conferencing. You can administer a Conferencing profile in Communication Profile of users through System Manager.

Related Links

[Avaya Aura Conferencing for Avaya Aura overview](#) on page 12

Avaya Aura® Conferencing components

The various components of Avaya Aura® Conferencing that are deployed in an enterprise network provide conferencing and collaboration capabilities to users and the tools to manage the resources used in Application Server.

Related Links

[Avaya Aura Conferencing for Avaya Aura overview](#) on page 12

Feature servers and Avaya Aura® access elements

Avaya Aura® supports various feature servers and access elements that provide features for a variety of devices and gateways. Avaya Aura® Communication Manager Releases 5.2.1, 6.0.1, 6.2, and 6.3 or Avaya Communication Server 1000 Release 7.6 provide features in a network that is equipped with one or multiple instances of the Avaya Aura® access elements.

In addition to providing features, Communication Manager or CS 1000 support bandwidth management for resources that the Avaya Aura® access elements control. You can also manage bandwidth usage of the audio and the video media streams in the network through Session Manager. Using a shared bandwidth management interface, Avaya Aura® Conferencing performs network bandwidth management through Session Manager.

 Note:

You must have the following versions of these feature servers and access elements to support video conferencing:

- Communication Manager Release 6.3
- CS 1000 Release 7.6 with the CS 1000 Collaboration Pack feature.

Related Links

[Avaya Aura Conferencing for Avaya Aura overview](#) on page 12

New features in this release

These sections describe the new features in this release of Avaya Aura® Conferencing.

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Automated security

In Avaya Aura® Conferencing 8.0, the process of installing and configuring security certificates is largely automated. In previous releases, the process was completely manual and required a large number of steps before you could provide single sign-on or secure conferencing. If you install Avaya Aura® Conferencing 8.0 in an Avaya Aura deployment, the various Avaya Aura® Conferencing network elements are associated with certificates from Avaya Aura® System Manager. So, initially, Avaya Aura® System Manager is the certificate authority (CA). If you would like to use a CA other than Avaya Aura® System Manager, you can easily configure an alternative CA after initial Avaya Aura® Conferencing installation and verification. The adoption of an alternative CA is appropriate for certain network elements such as the Web Conferencing Server or if any network elements communicate with another external node such as a Directory Server that uses certificates signed by a third party. If you install Avaya Aura® Conferencing 8.0 in a Turnkey deployment, you always use an alternative CA.

Related Links

[New features in this release](#) on page 15

Reverse proxy support

Avaya Aura® Conferencing 8.0 supports reverse proxy servers. Avaya has tested two particular reverse proxies for the 8.0 release.

The A10 Network AX Series Application Delivery Controller (ADC) provides advanced load balancing as well as reverse proxies for Web Collaboration and the Audio/Video in Collaboration Agent clients.

The Barracuda Load Balancer Application Delivery Controller (ADC) provides advanced load balancing and reverse proxy for Web Collaboration as well as for the Audio/Video in Collaboration Agent clients.

This configuration assumes that Avaya Aura® Conferencing is configured with transport layer security (TLS) enabled for all Web interfaces using server certificates signed by an internal Certificate Authority (CA). Typically, the internal CA is Avaya Aura® System Manager, or, as in the case of Turnkey deployments, an alternative CA. For the external side of the ADC, Avaya assumes that a third party CA, such as Verisign, is used to authenticate external clients.

Related Links

[New features in this release](#) on page 15

Enhancements for mobile users

Avaya has improved the functionality available to Android and iPhone users. In Avaya Aura® Conferencing Release 8.0, users can now start or join audio or video conferences from their smartphones. In addition, they can access a greater number of in-conference features, such as full roster control.

Note:

Video access is only available for registered users and is not available for guests who have not registered.

Related Links

[New features in this release](#) on page 15

VMWare support

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

*** Note:**

VMware is only supported on medium and large deployments and is not supported on SMB deployments.

Related Links

[New features in this release](#) on page 15

DCS on Linux

For the Avaya Aura® Conferencing 8.0 release, Avaya is deploying the Document Conversion Server (DCS) as a Network Element on the Linux platform.

The DCS is required for sharing documents during Avaya Aura® Conferencing conferences. Linux is a UNIX-like, open-source, operating system. Linux is the leading operating system on most servers.

For the Avaya Aura® Conferencing 8.0 release, Avaya will no longer support the DCS on a Windows operating system. As a result, if you have an existing Avaya Aura® Conferencing 7.2 system, you must migrate the DCS from the Windows operating system to the Linux operating system.

You can repurpose/reuse the existing Windows server by installing the Linux operating system and Avaya Aura® Conferencing 8.0 on it. You can now use this server as a DCS. For SMB and medium deployments, you have the choice of placing the DCS on the same server hosting the other network elements, or having it on its own server. For large deployments, the DCS must always be on its own server.

HTTPS

Currently, Avaya only supports HTTPS connections to the DCS. As a result, you must generate and assign a certificate for each DCS Network Element.

Automatic migration

Avaya has automated most of the DCS migration tasks. All existing DCS data elements automatically convert to new DCS Network Elements data objects. Similarly, all current configuration settings, such as location mapping, automatically convert to the new platform.

Related Links

[New features in this release](#) on page 15

Video quality

In Avaya Aura® Conferencing Release 8.0, there are a number of significant improvements related to video quality. The new architecture optimizes bandwidth management which results in a higher video quality for all users.

Related Links

[New features in this release](#) on page 15

Server clusters and bandwidth management

Within the Avaya Aura® Conferencing environment, the concept of a 'cluster' provides a mechanism for Avaya Aura® Conferencing administrators to provision a collection of servers as one single server. This mechanism reduces the number of configuration tasks but also maximizes load balancing between the servers. In the 8.0 release, Avaya Aura® Conferencing supports the concept of a media server (MS) cluster and a Web Conferencing Server (WCS) cluster. In the Avaya Aura® Conferencing 8.0 release, WCS clusters replace WCS groups from previous releases.

When Avaya Aura® Conferencing chooses which WCS cluster to use for a particular conference, it uses the following process:

- Avaya Aura® Conferencing checks if there is a WCS cluster provisioned to serve the user (conference owner) in their location.
- If there are no WCS clusters available in the same location as the user, Avaya Aura® Conferencing searches for WCS clusters serving the user's location, and selects the least loaded WCS from amongst those clusters.
- If there are still no WCS available, Avaya Aura® Conferencing uses the default WCS cluster.

There are additional options available if you wish to ensure that users from a particular location use the system resources in another location.

Avaya Aura® Conferencing follows this process:

- When it chooses which WCS to use for hosting a conference.
- When it chooses which WCS to use for recording a conference.
- When it chooses which WCS to use for playing back a conference.
- When it chooses which WCS to use for encoding a conference that does not include web collaboration.

Encoding, within this context, refers to the process of processing a conference recording to convert it to a playable format. If the conference contains web collaboration, Avaya Aura® Conferencing uses the hosting server for the encoding process.

Related Links

[New features in this release](#) on page 15

Increased codec flexibility

In Avaya Aura® Conferencing, the recording function operates by establishing a trunk between the conferencing media server and the recording media server. You can specify the audio codec for this trunk.

In addition to the ability to specify the audio codec for the recording trunk, you can now implement the G.726 codec in your deployment of Avaya Aura® Conferencing. The G.726 codec is also available for cascading trunks.

Related Links

[New features in this release](#) on page 15

Recording enhancements

The [Increased codec flexibility](#) on page 20 contributes to an improved recording experience for users. In addition, Avaya Aura® Conferencing Release 8.0 provides increased storage capacity for recordings and improved contingency in the event of any hardware failures.

Related Links

[New features in this release](#) on page 15

[Conference recording](#) on page 29

Cleaner upgrades

In Avaya Aura® Conferencing Release 8.0, Avaya introduces the HP ProLiant DL360p G8. This new server provides performance improvements and increased redundancy. In this release, Avaya also introduces a number of new deployment models. These deployment models replace the existing deployment models and have been designed to simplify the process of installation and upgrade. For installations and upgrades, customers can now also avail of virtualization which means that they can perform remote maintenance on their servers. Avaya Aura® Conferencing Release 8.0 includes a large number of staging files that help to automate some of the more complex configuration tasks, such as security certificate management.

Related Links

[New features in this release](#) on page 15

Licensing

Licensing enforcement is a new feature in the Avaya Aura® Conferencing Release 8.0. The enforcement rules are identical for the Avaya Aura® Conferencing for Turnkey solution and the Avaya Aura® Conferencing for Avaya Aura® solution.

Avaya uses an application called Web License Manager (WebLM) to manage licenses for Avaya products. For the Avaya Aura® Conferencing for Turnkey solution, WebLM is installed directly on the Avaya Aura® Conferencing application server. For the Avaya Aura® Conferencing for Avaya Aura® solution, WebLM is installed on System Manager. WebLM is managed as a Linux service.

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

Related Links

[New features in this release](#) on page 15

New mode of operation

In all previous releases of Avaya Aura® Conferencing, only moderators could start the Web Collaboration component of a conference. For Avaya Aura® Conferencing 8.0, customers can choose to retain this mode of operation for their Avaya Aura® Conferencing deployment. Alternatively, customers can choose to enable a mode of operation in which all participants can start the Web Collaboration component of a conference. In this alternative mode, typically called Presentation Mode, all participants have the presenting privileges that were previously available only after a moderator manually promoted a participant to presenter.

Related Links

[New features in this release](#) on page 15

Call me/call someone else

The Avaya Aura® Conferencing 8.0 server can dial out to participants and enable them to join the conference without entering a passcode. This feature enables participants to bring other people into the conference rapidly. It also enables participants who join a conference online to call their own telephone from the Collaboration Agent interface. For example, if participants are attending a standalone web conference (SWC), they can introduce an audio component without separate verification of credentials. If a participant already has an audio connection to a conference, they can only dial out to other participants. They cannot dial their own line. This feature is available for all types of users, including guest users.

Related Links

[New features in this release](#) on page 15

Private chat

The Messages window contains a list of messages sent by the moderator and participants during the conference. There is also a field for entering text for messages. The maximum number of characters you can enter in this field is 1024. You can also paste a text message in the field.

The messages are shown with the sender's name and the time the message was sent. The most recent message is at the end of the list.

You can send a message to all the participants in the conference or you can send a private message to a particular participant.

Avaya Aura® Conferencing does not re-send historical private messages if a user rejoins a conference or joins the conference from a second device.

Related Links

[New features in this release](#) on page 15

Multiple association of telephone numbers

Avaya Aura® Conferencing 8.0 supports multiple association of telephone numbers. This feature means that users can associate up to 10 numbers with their Avaya Aura® Conferencing profile. This feature is useful if a user uses several different devices each with different numbers to attend conferences. Administrators can view the list of associated telephone numbers for each user using the Avaya Aura® Conferencing Provisioning Manager interface. Administrators can also search this list and can delete numbers.

Related Links

[New features in this release](#) on page 15

Collaboration Agent logs

Collaboration Agent can automatically send logs to Avaya when Collaboration Agent detects a network connectivity issue during a conference. Avaya uses these logs to troubleshoot issues faced by users.

Collaboration Agent displays a dialog box for users to select whether to send the logs. If users choose to send the logs, Collaboration Agent opens an email in Microsoft Outlook that contains an attachment of the Collaboration Agent plug-in logs, which includes all conference events. The email also contains a list of questions which the users must answer before sending the email.

You can also manually send the logs using the **Send logs** option in the **Information** menu on the Collaboration Agent GUI.

Limitations

- Collaboration Agent supports only Windows-based computers to send logs.

- Collaboration Agent displays a message for Mac-based computers to again log in to the conference.
- Collaboration Agent supports only Microsoft Outlook to send the email with the details of the issue.
- Users must install the Collaboration Agent plug-in for the logs feature.

For more information, see *Using Avaya Aura® Conferencing Collaboration Agent* at the Avaya Support website: <http://support.avaya.com/>.

Related Links

[New features in this release](#) on page 15

Avaya Web Collaboration audio and video plug-in

In Avaya Aura® Conferencing 8.0, there is a new Web-based audio and video client. This client is a browser plug-in which executes within the Web Collaboration Agent client. It enables users to receive their audio and video through the Web. This functionality means that users do not have to dial into the conference using a phone connection. The client is available for all deployment types and can operate seamlessly with other supported clients, such as Avaya Aura® Communicator. For the 8.0 release, Avaya are delivering this feature as a browser plug-in. In previous releases, Avaya delivered a similar but inferior feature using a Flash-based client. The newly enhanced browser plug-in offers an improved audio and video experience and a more intuitive user interface. The older client is still available as part of the software bundle.

For Avaya Aura® Conferencing turnkey deployments, it is likely that most users will receive their audio and video using this feature.

Specific requirements in relation to the Avaya Web Collaboration audio and video plug-in

The new Avaya Web Collaboration audio and video plug-in has a particular set of operating system and browser requirements. These requirements are separate to the limitations that Avaya has identified with the existing (Flash-based) Audio/Video in Collaboration Agent feature. The following table shows the (browser-based) Avaya Web Collaboration audio and video plug-in requirements:

Note:

Avaya provides two options for integrated audio and video in this release: The existing (Flash-based) Audio/Video in Collaboration Agent and the new (browser-based) Avaya Web Collaboration audio and video plug-in.

Supported Operating Systems	Supported Browsers
Microsoft Windows Vista, 7, and 8. (32 and 64 bit)	Mozilla Firefox (latest version)
Apple OS X 10.9, 10.8, and 10.7	Google Chrome (latest version)
	Microsoft Internet Explorer 8, 9, 10, and 11 for Windows
	Apple Safari (latest version) for Apple OS X

Supported Operating Systems	Supported Browsers
	 Note: For each of these browsers, the Avaya Web Collaboration audio and video plug-in requires the 32-bit versions.

The Avaya Web Collaboration audio and video plug-in does not operate successfully with the following operating systems and browsers:

Unsupported Operating Systems	Unsupported Browsers
Older Microsoft Windows operating systems, such as Microsoft Windows XP Google Android and Apple iOS Google Chrome Linux Microsoft Windows Mobile	Any 64-bit version of a browser Microsoft Metro (Internet Explorer) Opera Any other mobile browsers

In addition, the Avaya Web Collaboration audio and video plug-in requires a Session Border Controller (SBC) for conference participants who wish to access the feature from outside of the enterprise.

Related Links

[New features in this release](#) on page 15

Web Sockets

Avaya Aura® Conferencing 8.0 supports the Web Socket standard. Previous versions of Avaya Aura® Conferencing used HTTP-based request/response support using standard and non-standard HTTP and HTTPS based ports. The HTTP approach had limited scalability, excessive resource load, and response latencies. To address these limitations, Avaya Aura® Conferencing 8.0 uses Web Sockets to provide a new mechanism for client-server interaction that provides a full-duplex communication channel that starts off as a HTTP connection that is then upgraded to a regular TCP channel. Web Sockets also supports cascading by communicating with remote servers. Web Sockets provides the following collaboration benefits:

- Remote control during document sharing in Collaboration Agent
- Live drawing on the whiteboard, rather than ‘mouse-up’ updates
- Improvements in screen sharing performance
- Whiteboard and meeting minutes functionality for mobile devices

Related Links

[New features in this release](#) on page 15

Key product features

Avaya Aura® Conferencing comprises the following key features:

- Audio and video conferencing
- Web collaboration

Related Links

[Audio and video conferencing](#) on page 25

[Web collaboration](#) on page 26

[Conference recording](#) on page 29

Audio and video conferencing

Avaya Aura® Conferencing works in tandem with Avaya Media Server to support different audio codecs, such as G.711, G.722, G.726, and G.729, and video codecs, such as H.264 SVC and AVC for conferencing. Avaya Aura® Conferencing also supports different classes of service for audio and video conferencing to ensure that the best quality of audio and video classes are chosen for a conference based on the available bandwidth.

Avaya Aura® Conferencing supports single stream and continuous presence video conferences. In continuous presence video conferences, users can receive up to eight video streams of the last four active speakers on the conference. Avaya Aura® Conferencing also supports conferencing features and events such as muting audio, muting video, muting audio and video, and muting all participants except Presenter.

The following sections describe the different type of conferences that Avaya Aura® Conferencing supports based on the requirements of users.

Related Links

[Key product features](#) on page 25

[MeetMe conferencing](#) on page 25

[Adhoc conferencing](#) on page 26

[Event conferencing](#) on page 26

MeetMe conferencing

MeetMe conferencing supports audio, video, and Web collaboration. MeetMe conferencing is used for planned meetings where the meeting owner distributes the conference number and the participant access code before the scheduled conference.

With MeetMe conferencing, a user can host a conference call using pre-configured conference access codes. The system administrator provisions one or more MeetMe SIP addresses and telephone numbers.

Conference participants can join a MeetMe conference by dialing the MeetMe SIP address or the telephone number. Each conference participant dials a participant access code to connect to the

conference. This access code is unique for each conference. Moderator has a unique moderator access code for the MeetMe conference which identifies Moderator as the host of the conference.

Related Links

[Audio and video conferencing](#) on page 25

Adhoc conferencing

Adhoc conferencing supports audio, video, and Web collaboration. Adhoc conferencing is used to conduct an impromptu conference. The system administrator provisions the Adhoc conferencing numbers. This number is also called the conference factory.

A user start an Adhoc conference by dialing out and adding a third user in a point-to-point call. A user can also merge two point-to-point calls to create an Adhoc conference. A user cannot manually dial in to an Adhoc conference.

A user who receives an Adhoc conferencing invitation can accept or decline the invitation.

Related Links

[Audio and video conferencing](#) on page 25

Event conferencing

Event conferencing is used by enterprises to conduct large conferences that involve a large number of participants. Event conferences have the following unique characteristics:

- The audio of all participants in the conference are always muted. Moderator enables the audio of a participant who requests permission to speak by virtually raising a hand.
- The conference stays active until a Presenter is logged in to the conference.
- Presenters join the conference with a separate access code which identifies these participants as Presenters. This access code ensures that the audio of Presenters is not muted.
- Participants view a limited roster that lists Presenters and the participants who have speaking privileges. Moderator views the entire roster. Presenters can view requests to speak from the participants who virtually raise a hand.
- Entry and exit tones are disabled.

Related Links

[Audio and video conferencing](#) on page 25

Web collaboration

Web collaboration tools support management of Web conferences and participation in these Web conferences. Through Web conferencing tools, you can:

- Join a Web conference by clicking the Collaboration Agent URL and entering your authentication credentials.
- Join only the audio conference of a Web conference through a telephone by dialing the MeetMe conference number.

- View the roster of conference participants in Collaboration Agent.
- Use conference controls, such as virtually raising a hand, to seek permission to ask a question or talk to the presenter.

Avaya Aura® Conferencing supports Web collaboration through Collaboration Agent.

For more information about Collaboration Agent, see *Using Avaya Aura® Conferencing Collaboration Agent* at the Avaya Support website: <http://support.avaya.com>.

Related Links

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[Collaboration Agent](#) on page 27

Collaboration Agent

Collaboration Agent provides tools for managing and participating in conferences and sharing information. In the integrated Web Collaboration workspace, participants can share content such as documents, virtual whiteboards, and applications. Collaboration Agent and Web Collaboration form Avaya Aura® Conferencing.

Collaboration Agent provides web-based conferencing and online meeting tools through which users with Avaya Aura® Conferencing accounts and invited guests can join conferences at a particular location or from remote locations.

Conference participants can join conferences quickly by logging in to the Collaboration Agent link and then dialing in to the bridge number assigned for the conference. In Collaboration Agent, the participants and the moderator can perform multiple tasks such as:

- View a list of other participants
- Virtually raise a hand and seek permission to speak
- Send messages
- Annotate shared content
- Record or edit minutes
- Set the entry and exit tones
- Dial out to other users
- Disconnect users
- Promote a participant to the moderator role
- Invite more participants to join an active conference

With the Web Collaboration feature, the conference moderator or a selected participant can share:

- Desktop
- Specific applications
- Documents
- Virtual whiteboards

Using the library, users with an Avaya Aura® Conferencing account can store documents before a conference starts and gain access to the documents for sharing during the conference. Participants

can collaborate by viewing these documents and making notes on a shared whiteboard. During the conference, participants can view the following in Collaboration Agent:

- The participants who joined only the audio call
- The participants active on Web Collaboration
- The participant currently speaking
- The current presenter

Users can also use the Avaya Aura® Conferencing tools to boost productivity and track accountability for action items even after the conference call has ended. Conference moderators can:

- Record all aspects of a conference.
- Record and edit meeting minutes
- Create and distribute reports based on the meeting minutes

At the end of a web collaboration session, Avaya Aura® Conferencing automatically generates a transcript or the meeting report. Users can gain access to the report in Collaboration Agent. These reports contain:

- The conference duration, including the details about when the recording of the conference started and stopped
- The meeting minutes, including the action items, notes, keywords and questions
- All messages exchanged during the conference
- Library files that were shared during the conference, including individual pages and slides
- The events during the conference, including sharing the whiteboard, desktop, screenshot, and application

Avaya Aura® Conferencing stores all conference reports for 90 days. User can sort these saved sessions by the report name, the date and time of the conference, or the duration of the conference.

Related Links

[Web collaboration](#) on page 26

[Collaboration Agent Permanent Association](#) on page 28

[Collaboration Agent customization](#) on page 29

[Collaboration Agent plug-in](#) on page 29

Collaboration Agent Permanent Association

Collaboration Agent displays two entries in the roster for users logging in through Collaboration Agent and a PSTN phone. With the Collaboration Agent Permanent Association feature, users associate Collaboration Agent and the number of the PSTN phone to appear as a single entry.

This association also applies to actions such as muting. The muting feature in Collaboration Agent does not mute the audio of the PSTN phone.

Related Links

[Collaboration Agent](#) on page 27

Collaboration Agent customization

Enterprise users can choose to customize the login screens of Collaboration Agent with the enterprise brand and colors.

Avaya can customize Collaboration Agent by replacing:

- The Avaya log with the enterprise logo.
- The Avaya Aura® brand in the Collaboration Agent name with the enterprise brand.
- The background color with the color of the enterprise brand.

Related Links

[Collaboration Agent](#) on page 27

Collaboration Agent plug-in

The Web collaboration feature of Collaboration Agent requires a Java applet for desktop sharing. Because of the recent modifications to Web browsers by developers to resolve security vulnerabilities, your Web browser might block Collaboration Agent from invoking the Java applet. With the Collaboration Agent plug-in, Collaboration Agent does not require the Java applet for desktop sharing.

Collaboration Agent prompts you to install the plug-in when you share your desktop for the first time. If you do not install the plug-in, Collaboration Agent prompts you to install the plug-in again when you share your desktop the next time, and continues to use the Java applet for desktop sharing. If you face issues with desktop sharing without the plug-in, you have the option to resolve the Java-related issues on your computer or install the plug-in.

You can also manually install the plug-in by clicking **Download Collaboration Plugin** from the **Begin sharing** options. For more information about installing the Collaboration Agent plug-in, see *Using Avaya Aura® Conferencing Collaboration Agent* at the Avaya Support website: <http://support.avaya.com>.

Related Links

[Collaboration Agent](#) on page 27

Conference recording

Capacity

How many hours of storage do the recording server(s) provide?

In terms of recording hours, capacity is a function of what is being recorded. The best case is audio-only and the worst case is audio with screen sharing with lots of movement. The table below defines the recording capacity per recording server. You can deploy multiple recording servers. The key here is that one recording server is permitted per location (physical or virtual). Users are assigned to a particular recording server based on their location as defined within Avaya Aura® System Manager or a Turnkey equivalent. Avaya Aura® Conferencing 7.2 supported the 900Gbyte server. Avaya Aura® Conferencing 8.0 introduces optional support for a 1.8Tbyte server.

Table 1: Capacity

Type of Media	Format	Size (MB/Hour)	Capacity on the 1.8Tbyte system (Hours)	Capacity on the 900Gbyte system (Hours)
Audio Only Recording	swf	40	45000	22000
Audio + Web (50% slides 50% screen share)	swf	72	25000	12000
Audio + Web (100% screen share, with movement)	swf	105	17000	8000

Archives

How are archived recordings, that are stored to external storage, accessed and retrieved? Through the application, directly from the external storage?

In terms of archiving and playback:

- Users can view recordings using the Avaya Aura® Conferencing playback infrastructure, by reaching the recording by way of the URL
- Administrators can configure the backup schedule to automatically backup the recordings daily to the external system.
- Administrators can restore the recordings by choosing from several options: Restore a single recording, all recordings for a given user, or all recordings in the backup folder
- Users can download the recording as audio (.mp3) or audio+web (.swf) and store it anywhere.
- You cannot view recordings that are not in the recording media server, even if they are archived. To view them again, you must restore them.

* Note:

These downloads don't have the robust playback capabilities of the native Avaya Aura® Conferencing playback experience e.g. time line, activity stream, and so on.

Related Links

[Key product features](#) on page 25

[Recording enhancements](#) on page 20

Key components

Avaya Aura® Conferencing consists of the following key components:

- Application Server
- Avaya Media Server
- Web Server
- Document Conversion Server
- Conference Recording Server

- Flash Media Gateway
- Session Border Controller

Depending on the deployment layout of an enterprise, some or all of these components might be co-resident on one server or deployed on separate servers.

Related Links

[Application Server](#) on page 31

[Media Server](#) on page 31

[Web Server](#) on page 32

[Document Conversion Server](#) on page 32

[Conference Recording Server](#) on page 32

[Flash Media Gateway](#) on page 33

[Session Border Controller](#) on page 33

[Load-balancing functionality](#) on page 34

[Introduction to Application Delivery Controllers \(ADCs\)](#) on page 34

Application Server

Application Server is a functionally-rich SIP collaboration server which provides an audio, video, and Web collaboration session control software engine. Application Server is highly scalable and supports high availability and:

- Hosts the MeetMe, Adhoc, and Event conference applications.
- Processes the SIP signals from clients.
- Supports advanced client integration for the SIP events defined in RFC 4579, RFC 4575, and CCMP.

The functions of Application Server also include management and optimization of bandwidth usage and selection of the Media Server for cascading.

Related Links

[Key components](#) on page 30

Media Server

Avaya Media Server processes the audio and the video media streams of a conference, including voice mixing. Media Servers can be distributed across different enterprise locations to provide bandwidth optimization that is aligned with the enterprise network topology. Application Server controls Media Server.

Media Server supports the following codecs:

- Audio: G.711, including the μ -law and the A-law algorithms, G.722, G.729, and G.726.
- Video: H.264, including AVC and SVC.

Related Links

[Key components](#) on page 30

Web Server

Web Server is a solution component that supports content sharing through Collaboration Agent or from supported clients such as Avaya Web Collaboration Agent, Avaya Web Collaboration Agent for iOS, and Avaya Web Collaboration Agent for Android.

Related Links

[Key components](#) on page 30

Document Conversion Server

Document Conversion Server is a Linux-based server that converts Microsoft Word, Microsoft PowerPoint, PDF, and other document types into a format for content sharing through Web collaboration.

The administrator sets up Document Conversion Server as a network element. The administrator can also create clusters of Document Conversion Server which improves the scalability of the server.

In a large Avaya Aura® Conferencing deployment, the Document Conversion Server is deployed for each location and there is no default server or failover support. In an SMB or medium deployment, the Document Conversion Server is bundled in the offer as a network element.

Related Links

[Key components](#) on page 30

Conference Recording Server

Conference Recording Server is a pair of Media Server to record conferences and store these recordings. You can configure these server clusters for the conferencing function, for the recording function, or for the combined function of conferencing and recording.

- The SMB and medium deployment layouts support the Media Server clusters for conferencing and recording conferences.
- The large deployment layout requires a dedicated Media Server for recording conferences to ensure enhanced storage capacity.



Note:

Conference Recording Server is an optional server with the optional Conference Recording feature.

Related Links

[Key components](#) on page 30

Flash Media Gateway

Flash Media Gateway supports the Audio/Video in Collaboration Agent feature to provide integrated audio and video in Collaboration Agent to users located outside the enterprise network. These users can log in to a conference through a Web browser and use the Flash-based features of the browser that support audio and video in Collaboration Agent.

Flash Media Gateway supports communications between the clients in the Flash domain using RTMP and the network elements in the multimedia domain using SIP and RTP.

 Note:

Flash Media Gateway is an optional server with the optional Audio/Video in Collaboration Agent feature.

Related Links

[Key components](#) on page 30

Session Border Controller

Avaya Aura® Conferencing supports the deployment of SBC between the enterprise network and the endpoints. You must deploy SBC only at the edge of the enterprise network between the Avaya Aura® Conferencing network and Session Manager.

Avaya Aura® Conferencing supports the deployment of SBC as a client application on the enterprise network. In this scenario, you do not need to administer Session Manager through System Manager, but you must add the IP address of the internal interface of SBC to the SIP firewall of Session Manager.

Avaya Aura® Conferencing supports the following different options to deploy SBC. These deployment methods are not specific to SBC, but are similar to administering a SIP entity. You can:

- Deploy SBC as a client application on the enterprise network. In this scenario, you do not need to administer Session Manager through System Manager, but you must add the IP address of the internal interface of SBC to the SIP firewall of Session Manager.
- Administer a SIP trunk between SBC and Session Manager. In this scenario, you must administer the SIP trunk on Session Manager, and add the SBC SIP entity to the SIP firewall of Session Manager.

Related Links

[Key components](#) on page 30

Load-balancing functionality

For Avaya Aura® Conferencing 8.0, load-balancing is supported through the use of more than one server for a particular purpose. For example, you could have more than one Web Conferencing Server (WCS) or you could have more than one Document Conversion Server (DCS) or you could have more than one media server. The WCS hosts web conferences. The DCS converts files for sharing online. The media server provides a number of functions, such as, audio/video mixing, Dual Tone Multi Frequency (DTMF) detection, and message playing. In times of heavy system usage, a single WCS might become overloaded. Similarly, if large numbers of users are converting files at the same time, a single DCS might reach capacity. The same is true for a single media server. For these situations, it is a good idea to share the load across multiple WCSs or multiple DCSs or multiple media servers. If the first server is full, the traffic can automatically go to another available server.

Related Links

[Key components](#) on page 30

Introduction to Application Delivery Controllers (ADCs)

Avaya recommends an ADC for providing external access as well as for providing load balancing for redundant and large deployments. Figure 1 shows an example deployment with redundancy.

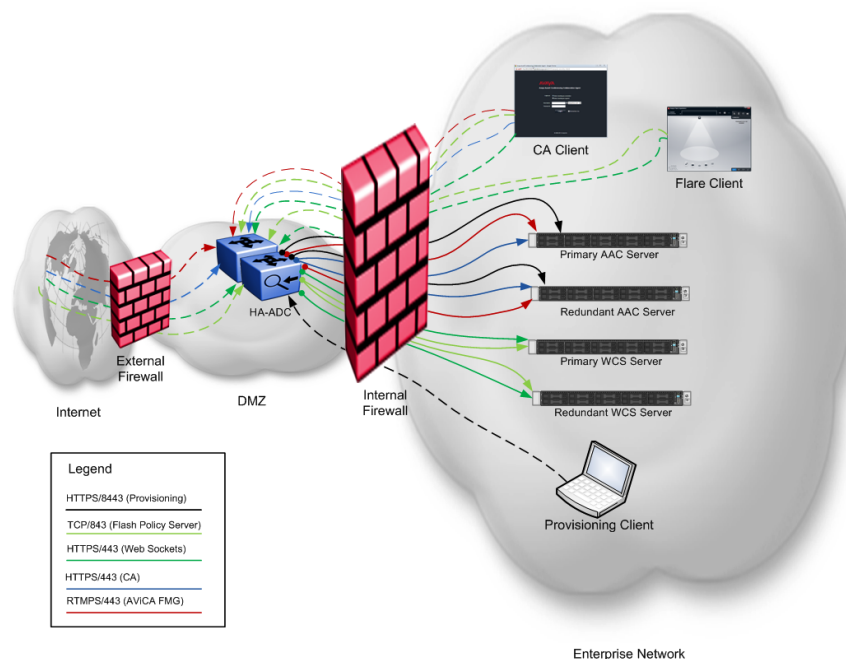


Figure 4: External ADC Deployment

You can deploy an additional ADC in the enterprise network if further traffic separation is required as shown in Figure 2.

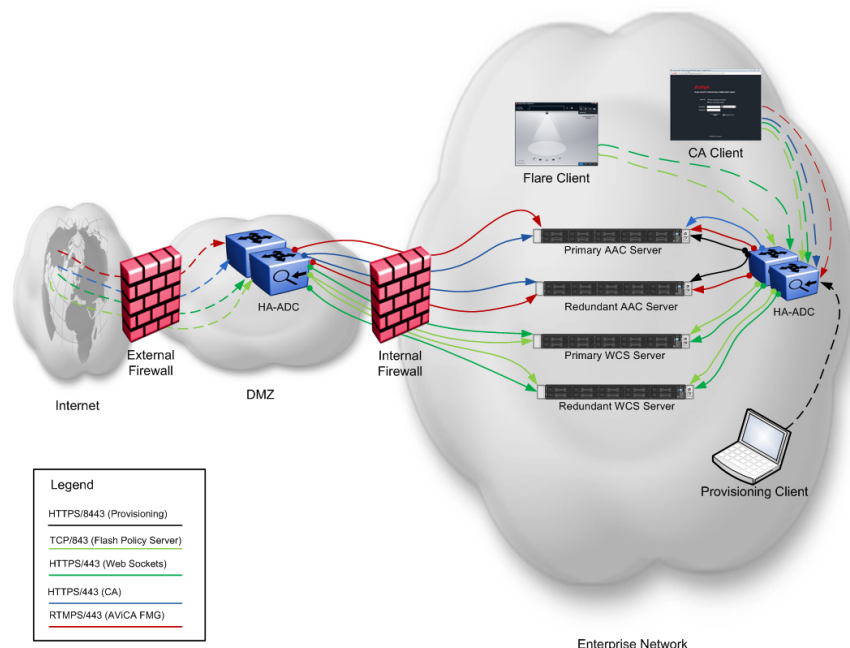


Figure 5: Internal/External ADC Deployment

One of the key benefits of using an ADC in the solution is that the number of firewall rules required is greatly reduced, simplifying configuration and maintenance of the solution. Additional features such as DDoS protection and Web Application Firewalls (WAF) common on ADCs can be used to enhance the defense-in-depth security of the deployment. Please refer to the specific ADC vendor documentation on how to tune these features for your deployment such that service is not impacted.

Minimum Requirements

The follow are the minimum requirements when choosing an ADC to use with Avaya Aura® Conferencing:

- 1 Gigabit throughput
- Minimum of 10 real servers
- Layer 4 (TCP) load balancing
- Layer 7 (HTTPS) load balancing
- Web Socket support (recommended)
- HTTP Header/URL Rewriting
- Connection Persistence

Avaya Aura® Conferencing Virtual IP Addresses

The following table lists the Virtual IP Addresses (VIP) required on the ADC for Avaya Aura® Conferencing 8.0.

Table 2: Virtual IP Addresses (VIP)

Server Role	Port	VIP Type	Description
Collaboration Agent (CA)	443	HTTPS	A single VIP represents a pool of CA servers on the back-end. Persistence is required for connections such that once a client connects, the connection to the specific back-end server is maintained through the duration of the session.
Web Conferencing Server (WCS)	443	HTTPS SSL-Proxy	If the ADC supports Web Sockets, the a single HTTPS VIP represents a single WCS cluster. Note that the ADC does not do the load balancing but routes to a specific back-end WCS based on the URL. For ADC's that do not support Web Sockets, an SSL-Proxy VIP must be configured for each WCS in the cluster.
WCS Flash Policy Server	843	TCP	A single VIP represents a pool of Flash Policy Servers on the back-end. This is required for the client to retrieve the Flash policy file on initial connection. This connection does not require persistence.
Audio Video in Collaboration Agent	443 80	SSL-Proxy HTTP	Prior to ADC support, the primary FMG for an Audio/Video in Collaboration Agent deployment did the load balancing. If this configuration is maintained, then there must be a one-to-one mapping of VIPs to back-end FMG servers. Otherwise, if each back-end FMG is configured

Server Role	Port	VIP Type	Description
			individually, then only a single VIP is required and the ADC will provide the load-balancing. If AViCA is configured to use RTMPT, the VIP type should be HTTP, or SSL-Proxy if configured for RTMPS.
Provisioning Manager (Prov)	8443	HTTPS	A single VIP representing a pool of Provisioning Manager servers on the back-end. For deployments that have an internal ADC for traffic from within the Enterprise, it is recommended to not include on the external ADC. Regardless, this interface should not be exposed to the Internet.

Related Links

[Key components](#) on page 30

Conference features

The following sections describe the supported:

- Conference features.
- User roles in Collaboration Agent.
- Conference controls.

Related Links

[Audio/Video in Collaboration Agent](#) on page 38

[Conference recording](#) on page 44

[Collaboration Agent user types](#) on page 50

[Lecture mode](#) on page 53

[Conference Lock and Unlock](#) on page 53

[Fast Start](#) on page 54

[Continuation](#) on page 54

[Conference profiles](#) on page 55

[Conference controls](#) on page 55

Audio/Video in Collaboration Agent

The Audio/Video in Collaboration Agent feature enables users to receive audio, video, and data content through a single device. Users can simply click on a conference URL (hyperlink), log in to the conference, and immediately share audio, video, and data using the Collaboration Agent Web page. Users do not need to dial into the conference and do not need to configure an additional application in order to share audio and video. This feature is aimed at guests and participants who reside outside of the enterprise and who do not have any other Avaya software products installed on their computers. The only requirement is that your computer must have a microphone.

Integrated audio

Collaboration Agent offers extensive flexibility in terms of the configuration of the audio feed into your conference. You can choose to dial into the conference using any telephone device. Alternatively, you can choose to use the audio capabilities that are embedded in Collaboration Agent. In this embedded scenario, you do not have to dial the conference telephone number separately beforehand. You can simply log in to Collaboration Agent and immediately use the audio features by speaking through your device microphone and hearing other participants through your device speakers.

Integrated video

In addition to embedded audio, Collaboration Agent offers embedded video streaming. If you have a camera, you can share your own live video feed to the conference. You can also receive live video from the other participants. At any given time, Collaboration Agent transmits the live video of the currently active speaker. Collaboration Agent also displays a self-view to show you what your camera is transmitting. If you do not have a camera, you can still see the live video but Collaboration Agent does not show a self-view.

An optional feature

Audio/Video in Collaboration Agent is an optional feature. You may not have access to this feature.

Note:

Your system administrator can control your access to certain Collaboration Agent features. Your system administrator may have restricted your access to the video feature but may have enabled your access to the audio capabilities.

Tuning wizard

Collaboration Agent provides a tuning wizard to help you to optimize your audio and video settings. You can choose to skip the tuning wizard after you first configure your selections.

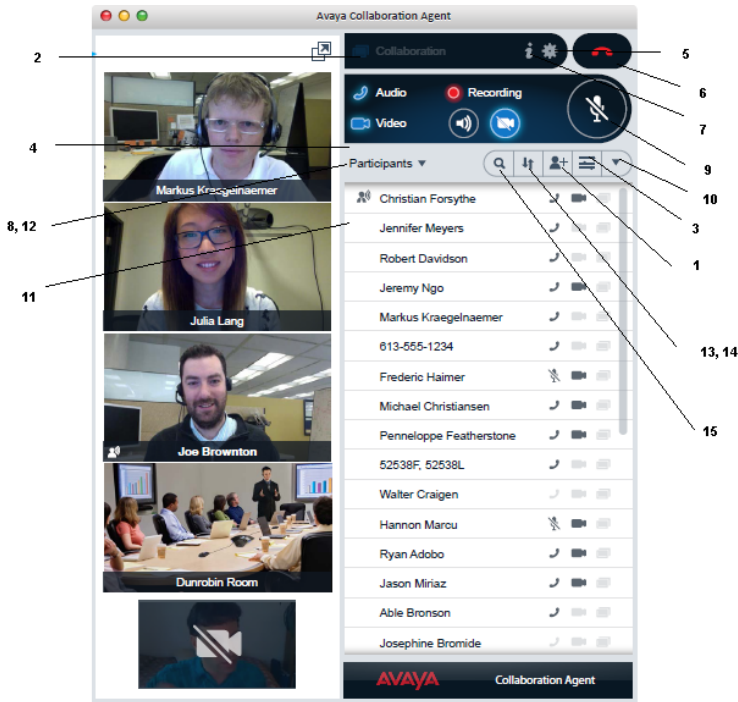
Related Links

[Conference features](#) on page 37

[Main window components](#) on page 38

Main window components

The following figure shows the components of the Collaboration Agent window of the moderator. In this example, the conference includes the moderator and two participants.



Number	Name	Description
1	Add Participants	Displays the Add Participants panel to add participants to the conference. When you specify the telephone number or SIP URI of the participant to add to the conference, Avaya Aura® Conferencing calls the participant and connects the participant to the conference.
2	Start Web Collaboration	Starts a Web collaboration session. Only the moderator can start a Web collaboration session. When the moderator starts a Web collaboration session and shares content, such as applications or the whiteboard, all participants logged in to Collaboration Agent can view the shared content.
3	Conference Controls	Displays the Conference Controls panel to enable and disable the following features for the conference: • Lecture mode • Lock conference • Entry tone • Continuation • Presentation Mode • Recording - Record - Stop

Number	Name	Description				
		You can also end the conference from the Conference Controls panel. Ending the conference from the Conference Controls panel disconnects the conference immediately.				
4	Mode bar	Displays the status of features, such as the Lecture mode, the Lock conference feature, a secure conference, and recording and error messages. Collaboration Agent displays the mode bar only when you enable a feature.  Note: Avaya Aura® Conferencing can establish secure conferences only if the endpoints of all participants support SRTP.				
5	Default Settings	Displays the Default Settings panel to configure the default settings for: <table><tr><th>Default Settings</th><th>My Passcodes</th></tr><tr><td> • Fast Start • Continuation • Entry Tone • Video • Auto Record • Presentation Mode </td><td> • Require participant passcode • Moderator passcode • Participant passcode </td></tr></table>  Note: You cannot apply the settings in the Default Settings panel to an active conference. When you close a Collaboration Agent parent dialog box, the child dialog boxes, such as Default Settings, automatically close.	Default Settings	My Passcodes	• Fast Start • Continuation • Entry Tone • Video • Auto Record • Presentation Mode	• Require participant passcode • Moderator passcode • Participant passcode
Default Settings	My Passcodes					
• Fast Start • Continuation • Entry Tone • Video • Auto Record • Presentation Mode	• Require participant passcode • Moderator passcode • Participant passcode					
6	Exit	Exits the Collaboration Agent conference.  Note: If you exit the Collaboration Agent conference, you stay connected to the audio bridge.				
7	Information	Displays the Information panel to: • View the telephone number and the participant code of the conference bridge. • View the URL of Collaboration Agent and the participant code to log in to Collaboration Agent for the conference.  Tip: You can copy and store the telephone number, URL, and the participant code of a conference. To prevent accidental				

Number	Name	Description
		publishing of the information, Collaboration Agent ensures that you cannot copy the host code. • View the list of participants on the conference. • View the keys to press to contact the operator of the conference. • View the list of conference commands that you can enter from the dial pad of your telephone. • View the list of conference recordings. • View the documentation of Collaboration Agent. • Gain access to and manage your meeting reports. When you close the Collaboration Agent parent dialog box, the child dialog boxes, such as dialog boxes that Collaboration Agent displays from the Information panel, close automatically.
8	Recent Talkers	Displays the list of participants who are speaking or who recently spoke in the conference. Collaboration Agent updates the list when other participants speak. Collaboration Agent displays the Recent Talker icon next to the name of the participants who are speaking.
9	Mute myself	Mutes and enables your audio. If you use the Audio/Video in Collaboration Agent feature, Collaboration Agent displays the Mute and Pause button. Using this button, you can pause your video and mute your audio.
10	Participant Controls	Displays the following list of actions that a moderator can perform: • Mute the media of the selected participants. • Promote the selected participants to the Moderator role. • Allow the selected participants to present and share content through Web collaboration. • Clear virtual hands raised by the selected participants. • Disconnect the selected participants from the conference. • Dissociate audio and Collaboration Agent login actions of the selected participants. Displays the following actions that a participant can perform: • Associate or dissociate audio and Collaboration Agent login actions. • Mute the media. • Virtually raise or lower hand. • Disconnect from the conference.
11	Participants List	Displays the list of the participants in the conference.

Number	Name	Description
		 Note: In Event conferences, Participant List only displays the moderator, presenters, and participants whose audio is enabled. Participant List of moderator and presenters also displays participants who virtually raise hands. The icons next to each participant display: • The name or the telephone number of the participant. • An icon indicating whether the participant is a moderator for only audio, only Collaboration Agent, or both audio and Collaboration Agent. • An icon indicating whether the audio of the participant is muted or enabled. If the conference is secure, the audio icon contains an embedded lock icon. • An icon indicating whether the participant has virtually raised a hand. • An icon indicating whether the video of the participant is paused or enabled. If the conference is secure, the video icon contains an embedded lock icon. • An icon indicating whether the Web collaboration of the participant is open.
12	Show Dropped Participants	Displays the participants who disconnected from the conference in Participant List .
13	Sort Participants By Roles	Sorts and displays the participants according the roles of the participants, such as Moderator, Participant, and Presenter, in Participant List .
14	Sort Participants By Join Time	Sorts and displays participants in the order that the participants joined the conference in Participant List .
15	Participants Search	Searches for participants in the conference. When you enter text in the Participants Search box, Collaboration Agent displays the participants whose names match the text.

Icon	Description
	Indicates that the participant is the operator.
	Indicates that the participant is the moderator for audio and Collaboration Agent.
	Indicates that the participant is the moderator for only audio.
	Indicates that the participant is the moderator for only Collaboration Agent.
	Indicates that the participant is the presenter.

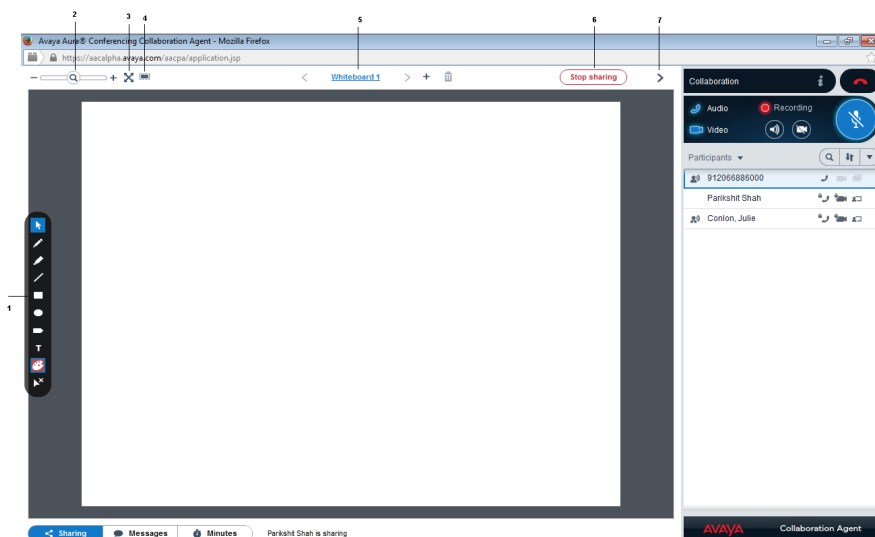
Icon	Description
	Indicates that the participant is the active speaker.
	Indicates that the participant is on an audio conference.
	Indicates that the participant is using a secure telephone line.
	Indicates that the participant is using a secure telephone line and the audio of the participant is muted.
	Indicates that the participant virtually raised a hand.
	Indicates that the participant joined Web Collaboration.
	Indicates that the participant logged in to the conference through Collaboration Agent, but the Web collaboration feature is disabled.
	Indicates that the participant is not logged in to Collaboration Agent.
	Indicates that the audio of the participant is muted. * Note: If the participant uses the mute feature of the telephone, Collaboration Agent might not update this icon to indicate that the audio of the participant is muted.
	Indicates that the participant is on a video conference.
	Indicates that the video of the participant is paused.
	Indicates that the participant is on a secure conference.

Related Links

[Audio/Video in Collaboration Agent](#) on page 38

Web Collaboration components

The following figure show the components of the Web Collaboration window. In this example, the moderator is sharing a whiteboard.



No.	Name	Description
1	Annotation tools	Annotate the whiteboard or shared document. See Annotation controls
2	Zoom tools	Changes the size of the screen content. See Navigating shared content .
3	Auto fit	Fits the Web Collaboration interface to the window size.
4	Screenshot	Sends a shot of the current screen to all participants as a JPG file that participants can download.
5	Navigation tools	Navigate the shared content. The buttons change according to the content being shared. See Navigating shared content .
6	Stop Sharing	Stop sharing current content.
7	Hide or show roster	Hides or shows the conference roster.

Conference recording

The Conference Recording feature, which is an optional feature of Conferencing, provides the capability to record conferences. These conference recordings capture:

- Audio and information about the active speaker
- Library items such as presentation slides.
- Whiteboard.
- Conference notes, including questions, comments, and actions items, along with details about the author and the time when these events occurred.
- Conference events, including messages that the participants send, shared documents, and screen captures.

- The roster and the time when each participant enters and exits the conference along with information about the active speaker.

The recording feature requires a separate license. The system administrator enables or disables the conference recording permissions for users through the **Allow Conference Recording** parameter in the user communication profile. The administrator can also set the preferred codec for the trunk between the conferencing Media Server and the recording Media Server.

The recording capacity is up to 1800 GB for each recording media server cluster. Recording audio consumes approximately 40 MB of storage capacity per hour, while recording the Web conference and audio consumes up to 105 MB per hour.

The owner of a conference and a delegated moderator can record a conference. The owner can also administer Conferencing to automatically start recording when a conference starts. Conferencing automatically assigns a name to each recording. This name is the time when the recording starts.

When the owner or the moderator starts a conference recording, Conferencing plays a notification to inform the participants that the conference is being recorded. Participants joining the conference also hear the message that the conference is being recorded.

Users can play these conference recordings from a URL that the owner sends.

Conferencing captures the following recording metrics:

- The number of recordings in progress.
- The total number of recordings.
- The total minutes of recordings.

Collaboration Agent

Collaboration Agent supports the Conference Recording feature. Users can play the conference recording in a Web browser through a URL for the recording that the owner sends.

The following figure illustrates the conference Auto Record default setting of the Conference Recording feature in Collaboration Agent:

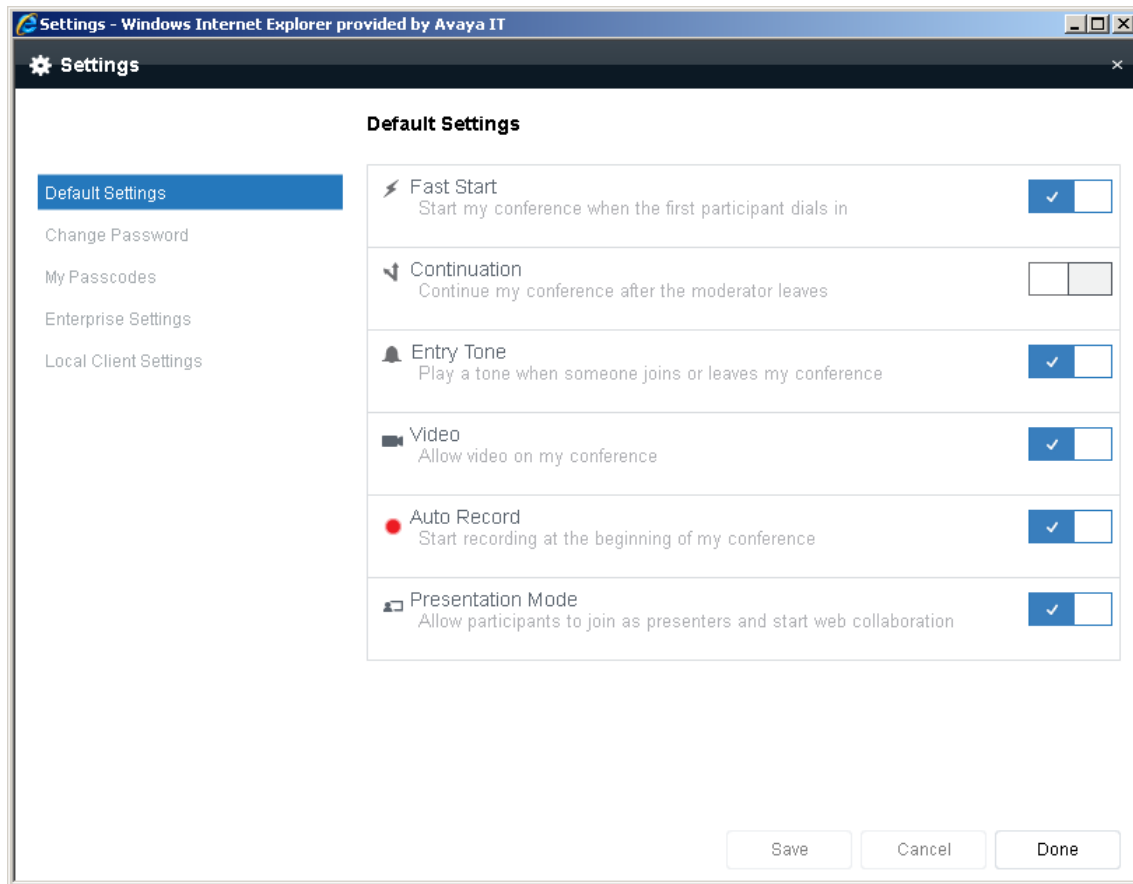


Figure 6: Conference default settings

TUI

The owner and the moderator of a conference can start and stop a conference recording through the phone keypad using TUI. Collaboration Agent displays the conference recording menu instructions through the keypad in the information tab.

For example, by default, the owner can gain access to the recording menu by pressing *2 and start the recording by pressing 1.

Conference recording components

Multiple components are involved in recording a conference.

- Application Server manages a recording, including the conference events in the recording.
- Media Server is the primary server for media recording and content storage.
 - If the host Media Server fails, the conference recording stops and the content storage contains the recording till the Media Server fails.
 - If the recording Media Server fails, the recording fails.
- The Web conferencing media server stores the metadata of the recordings.
 - If the Web conferencing media server fails, the Web conference recording fails. A new Web conference recording starts in the secondary server.

- If the Web conferencing media server fails and there is no provision of a secondary server, saving the recording depends on when the server fails. If the server fails before the recording starts, the recording does not start. If the server fails when the recording is stopped, the conference owner can manually encode the recording if the audio recording file and Web recording file is available.
- The Web collaboration server records the Web conferencing media and stores this media in the content storage of Media Server. Web collaboration server also contains the recording playback service.
 - If the Web collaboration server fails, the Web conference recording fails. A new Web conference recording starts in the secondary server.
 - If the Web collaboration server fails and there is no provision of a secondary server, the audio recording continues but the Web conference recording fails. The conference owner can manually encode the recording from the playback service interface. If the encoding service fails, the owner can again try to encode the recording from the recording management interface.
 - The database stores recordings, the metadata of the recordings, and the information required to play these recordings.

Conference recording sharing

In Collaboration Agent, the conference owner can view a list of recordings.

- For audio conferences, the recording is in the form of a .mp3 file.
- For audio and Web conferences, the recording is in the form of an .swf file which contains the audio and the Web content.

The owner can delete, rename, and share these recordings. The owner can also download a copy of the recordings.

The following figure illustrates the Recording window in Collaboration Agent:

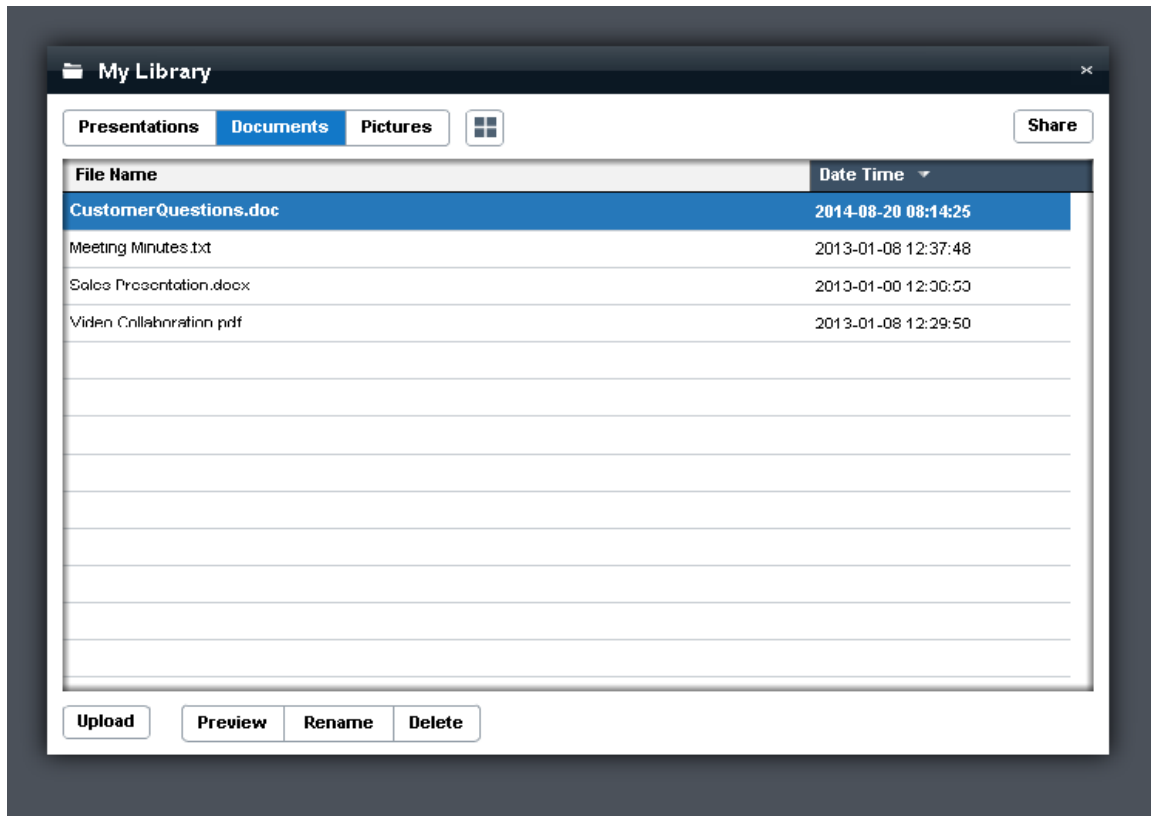


Figure 7: Conference recordings

Playback panel

The Playback panel uses a Flash-based application to display a timeline of the events in a conference recording.

Backup and restoration of a conference recording

Conferencing performs a backup of the conference recordings daily. The system administrator can configure the time of this backup process.

The backup process only updates the existing backup with the new recordings that Conferencing generates since the previous backup process.

The system administrator can restore a conference recording or gain access to a subset of the recording. The administrator can search for a particular recording of a user to restore in the conference recording folder. This folder is named with the date of the recording.

Automatic disk management

An automatic disk management process on Media Server deletes old recordings to ensure availability of disk space for new recordings.

This process runs daily after the backup process.

Conference recording limitations

The Conference Recording feature has the following limitations:

- There is no recording limit for each user. A single user can record a large number of conferences which might consume a large amount of storage capacity.
- The recording conference controls do not have pause and resume buttons. The moderator can only stop and restart a recording.
- Conferencing does not correlate multiple recordings from a single conference. The owners must perform this correlation manually.
- The conference owners cannot share a recording with specific users. If the owners enable a recording for sharing, the recording is visible to all users. The owners can send a copy of the recording through email.
- The delete process deletes all the old recordings. There is no provision to mark a recording to be excluded from the delete process.
- Users cannot search or annotate recordings.

Conference recording feature permissions

The following table lists the conference recording feature permissions for each user role in Conferencing.

Table 3: Conference recording feature permissions

User roles	Permissions
Participant and viewer	Participants and viewers can play the recorded conferences and navigate by: • A slide and play only the relevant sections. • A contributor by browsing through messages and documents. • An event by browsing each action item, question, or note. • The moderator, a participant, a subject, date and time, and a key word. • An element in the conference recording.  Note: Participants and viewers can only play a conference recording if the owner of the conference sends a URL of the conference recording. A viewer might not be a participant of the conference but can still view the conference recording through the URL.
Owner	Owner has all the permissions that a participant or a viewer has along with the following additional permissions: • Start and stop the conference recording. • Control whether the conference is recorded. Conferencing records the audio, Web, roster, and the minutes of a conference. • Gain access to all conference recordings that an owner owns, and delete, rename, or replay these recordings.

User roles	Permissions
	Obtain a link to a conference recording or a link to an excerpt of a conference recording and distribute these links.
Administrator	Administrator has all the permissions that Owner has along with the following additional permissions: - Edit and maintain user accounts. - Enable and disable the Conference Recording feature for the entire system or for individual users.

Related Links

[Conference features](#) on page 37

Collaboration Agent user types

Within the Collaboration Agent environment, there are two types of users. These types are:

- Member
- Guest

During a conference, the user type is constant. It does not change.

Members require a password and an account on Avaya Aura® Conferencing. Members have access to a large number of privileges within the Collaboration Agent environment.

Guests do not require a password and do not have an account on Avaya Aura® Conferencing. If a guest wishes to become a member, an administrator must create a conferencing profile for them in Avaya Aura® System Manager. Guests have fewer privileges than members. For example, guests can log in to a conference, raise their hands, send messages, enter minutes, associate their audio line, and be promoted to a presenter. However, they cannot be promoted to a moderator. Guests can also mute themselves if their Collaboration Agent log-in is associated with their phone in the participant list.

A guest must know the collaboration code to join the Collaboration Agent. Participants, including guests, who receive the Microsoft Outlook meeting invitation can also join the conference through Collaboration Agent by clicking the conference link in the invitation, which automatically opens Collaboration Agent.

Related Links

[Conference features](#) on page 37

[Collaboration Agent user roles](#) on page 50

Collaboration Agent user roles

Within the Collaboration Agent environment, there are five types of roles. These roles are:

- Owner
- Moderator
- Presenter

- Participant
- Operator

During a conference, user roles are not constant. They are dynamic. For example, a participant can become a moderator. Further, user roles are not mutually exclusive. A conference owner can be a moderator and a presenter, all at the same time. In addition, a conference owner can assign moderator or presenter roles to a participant.

Conference owner

A conference owner is a user who has complete control of the conference. You are the owner of the conference that is associated with your account and collaboration code on Avaya Aura® Conferencing. Typically, you use these conference details for meetings that you schedule. In this conferences, you are the owner, a moderator, and a presenter.

Moderator

A moderator is a user who has access to a wide variety of conference privileges. The moderator usually signs into the Avaya Aura® conference using a phone or phone application, such as a SIP phone or mobile telephone. The moderator then logs in to the Collaboration Agent using the moderator credentials. Moderators may also make any other participant a presenter or moderator.

In any given conference, there can only be a single moderator on Collaboration Agent and a single moderator in audio mode. Typically, these roles are occupied by a single individual. The Collaboration Agent login and the audio login are linked together and one person is the moderator in both modes. However, this is not always the case. As a rule, Collaboration Agent allocates the moderator role to the first person to log in with the moderator code. If several people know the moderator code, it is possible that one person could become the moderator in Collaboration Agent and another person could become the moderator in audio mode. The Collaboration Agent moderator has access to all moderator features on the Collaboration Agent. The audio moderator only has access to the moderator features that are accessible using the dialpad commands.

There can be multiple presenters and participants. A moderator always has all of the privileges of a presenter for sharing info.

The moderator can be in one of the following modes:

- Collaboration Agent and Audio
- Audio only
- Collaboration Agent only

Note:

Certain features, such as lecture mode, are not available when the moderator is in Collaboration Agent only mode. Lecture mode functionality is disabled if the conference has no audio.

Presenter

Presenters may share information, but cannot moderate a conference. Presenters can share:

- The entire screen, a portion, or a selected application
- Whiteboards: these permit the team to collaborate through drawing
- Documents

A private library is maintained for any user with a login. Users can store and retrieve presentation materials here, including PowerPoint files, documents, and graphic files

Presenters can annotate shared content, take screen shots and send to all participants.

Moderators can only promote participants who already joined Web Collaboration to “presenter” role. Moderator can also demote a presenter to normal participant.

Participant

A participant is a user who is taking part in the conference and has limited control. A participant can see who else is on the conference, shared content and can only mute themselves, if their Collaboration Agent is associated with their phone in the participant list. The participant should dial in to the audio conference and then sign in to Collaboration Agent. The participant can annotate a whiteboard, but cannot open a new whiteboard.

Participants can raise their hands, send messages, view meeting reports, and enter and edit minutes.

The participant can join in one of the following modes:

- Collaboration Agent only
- Collaboration Agent and Audio
- Audio only

A participant joins a conference by entering a participant code on the phone and/or the Collaboration Agent. A participant may be a guest or an Avaya Aura® account holder.

Participants cannot add users to the conference.

Audio participant

An audio participant joins the audio conference only by dialing in to the bridge and entering the collaboration code. A conference moderator can also dial a user and add the user as a participant in the conference..

Operator

The conference operator controls every aspect of a conference, including the control of the meeting, in the same manner as a moderator, over any conference the operators select in the Collaboration Agent.

The operator can also:

- Silence, unsilence, and drop specific participants.
- Enable and disable conference continuation after the moderator leaves the conference

Some of the moderator controls that the operator can handle include:

- Enable and disable audio entry and exit tones
- Lock and unlock the conference
- Drop all participants immediately
- Start and stop the conference recording.

Note:

The operator can only change the default settings of their own conference and cannot start or end a Web Collaboration session. Operator cannot promote themselves to presenter.

Related Links

[Collaboration Agent user types](#) on page 50

Lecture mode

All participants of a conference are muted when the Lecture mode is enabled. Moderator can enable the Lecture mode. Event conferences start in the Lecture mode.

When the Lecture mode is enabled:

- There can be more than one Presenter.
- Presenters are not automatically muted.
- Audio of Participant who is promoted to Presenter is enabled.
- Audio of Presenter who is demoted to Participant is automatically muted.
- Audio of Presenter joining an active conference in the Lecture mode is automatically muted but Presenter can mute or enable audio.
- Moderator can mute and enable the audio of Participant.
 - If Moderator enables the audio of a Participant, the Participant can mute and enable audio.
 - Moderator can return Participant to the Lecture mode by muting the audio of Participant.

Audio of Participants in a conference that is in the Lecture mode or in an Event conference is automatically muted. Participants virtually raise a hand to indicate to Moderator that they want to talk. Audio of Participants in Adhoc or MeetMe conferences is not muted, but these Participants can virtually raise a hand to indicate that they want to talk. Moderator can lower a virtually raised hand of Participant.

Related Links

[Conference features](#) on page 37

Conference Lock and Unlock

The Conference Lock feature is used only by Moderator to block new participants from joining a conference. This feature does not lock the bandwidth or other resources the conference is locked.

Moderator can lock a conference through Collaboration Agent, Avaya Communicator, or through the telephone dial pad. A conference is unlocked by default, but Moderator can lock or unlock the conference after joining the conference. After the conference is locked or unlocked, an audible message is played to notify participants of the change in the conference state. If a participant attempts to join the locked conference, an audible message plays to indicate that the conference is locked.

Moderator can unlock the conference at any time. If the conference is in a locked state, Moderator must dial out to add participants in the conference. Moderator can rejoin the conference if the conference is locked. Participants can disconnect from the locked conference but cannot rejoin the locked conference. Participants cannot dial out to add participants to a locked conference.

Moderator can promote a user to Moderator during a locked conference. If the moderator leaves the conference, the conference is unlocked.

Participant in a locked conference can:

- Upgrade from audio-only to audio and video or downgrade from audio and video to audio-only.
- Enter or exit Collaboration Agent.
- Disable or pause video.

MeetMe and Adhoc conferences support the Conference Lock feature.

Related Links

[Conference features](#) on page 37

Fast Start

With the Fast Start feature, participants can join a conference before Moderator joins. MeetMe conferences support the Fast Start feature. The Fast Start must be enabled before the start of a conference.

If Moderator does not join the conference, a participant can assume the Moderator control by joining with the Moderator code. Participants can also assume the Moderator control through Collaboration Agent, Avaya Communicator, or by dialing *51 on the telephone dial pad.

Related Links

[Conference features](#) on page 37

Continuation

With the Continuation feature, participants can continue a conference even after Moderator disconnects. By default, a conference ends after Moderator disconnects and the grace period expires. If Moderator rejoins the conference before the grace period expires or another participant assumes Moderator control, the conference continues.

Moderator can enable the Continuation feature through Collaboration Agent, Avaya Communicator, or by dialing *98 on the telephone dial pad. During a conference, Moderator can disable the Continuation feature for the conference even if the Continuation feature is enabled in the default settings of the conference.

MeetMe and Adhoc conferences support the Continuation feature.

Related Links

[Conference features](#) on page 37

Conference profiles

With the Microsoft Office Outlook delegate feature, you can create different conference profiles that contain the conference details of other users. You can use these conference profiles to set up conferences for other users who delegate this activity to you.

For example, a senior executive in a company might delegate the activity of setting up conferences to an assistant. The executive provides the conference details to the assistant, and the assistant enters these details while creating a conference profile in Conferencing Manager. If the executive has more than 1 set of conference details, the assistant can create up to 20 conference profiles that contain a different set of conference details in each profile.

While creating a conference for another user, you can select a conference profile that contains the relevant conference details. Conferencing Manager automatically adds these conference details in the body of the conference invitation. If you want to join a conference that you set up for another user, Conferencing Manager provides you with the **Join as Moderator** and **Join as Participant** drop-down options in the **Join** button. The **Join as Moderator** option is available only if you enter the Moderator code while creating the conference profile. Also, if the conference requires an additional passcode, you must enter the passcode in the conference profile.

Related Links

[Conference features](#) on page 37

Conference controls

Conference users can use a supported audio or video endpoint to use the call functions. Users can gain access to a conference through:

- The dial pad of an audio or video endpoint
- A supported client, such as Collaboration Agent, and advanced clients, such as Avaya Communicator for Windows and Avaya Communicator for iPad.

For a complete list of supported clients, see [Supported clients](#).

Through Collaboration Agent users can use the advanced conference controls for scheduled conferences such as MeetMe and Event conferences.

The following tables describes the advanced and integrated conference control features available to Moderator, Participant, and Guest through a supported client user interface:

Table 4: Conference controls for a supported client

Feature	Description	Moderator	Participant	Guest
Continuation	Toggle this control on or off. This control is disabled by default. - If you enable this control, the conference continues even after Moderator leaves the conference. - If you disable this control and Moderator leaves the conference, Conferencing notifies the participants on the number of minutes remaining until the conference ends. If Moderator joins the conference again or a Participant assumes the Moderator role, the conference returns to the normal conference state. For more information about continuation, see Continuation on page 54.	yes	no	no
Lock and unlock conference	The moderator can lock the conference to block new participants from joining. The moderator can dial out to add new participants at any time or unlock the conference. For more information about lock and unlock, see Lock and unlock on page 53.	yes	no	no
Lecture mode	The moderator becomes a lecturer and is the only one who can speak or be seen in video on the conference. All other participants are considered passive participants and in a mute for audio and paused for video state. For more information about lecture mode, see Lecture mode on page 53.	yes	no	no
Fast start	Toggle this control on or off. This control is disabled by default. - If you enable this control, Participants can start the conference even if Moderator does not join first. - If you disable this control, Participants must wait till Moderator joins for the conference to start. For more information about fast start, see Fast start on page 54.	yes	no	no
Display dropped participants	Displays participants who have left the conference.	yes	yes	yes
Sort participants by roles	Displays participants by role (moderator, participant, guest, and presenter).	yes	yes	yes
Dial out	The moderator can invite a new participant to the conference.	yes	no	no
Dial out to operator (if provisioned by	Contacts the operator.	yes	yes	no

Feature	Description	Moderator	Participant	Guest
the administrator)				
End conference	All participants are released from the conference even if conference continuation is enabled.	yes	no	no
Entry and exit tones	Toggle on or off. Disabled by default. If enabled, an audible entry or exit tone plays when a participant joins or leaves a conference. If disabled, no audible entry or exit tone plays.	yes	no	no
Audio mute or unmute	Individual participants: A moderator can mute or unmute the audio of an individual conference participant. The moderator cannot self mute. A participant can mute audio for self only.	yes	yes, only self	yes, only self
	Audio mute or unmute all participants: If enabled, only the moderator can speak and all other participants have the audio muted.	yes	no	no
Video pause or unpause	Individual participants: A moderator can pause or unpause the video for an individual conference participant. The moderator cannot self pause. A participant can pause video for self only.	yes	yes, only self	yes, only self
	Video pause or unpause all participants: If enabled, only the moderator can send video and all other participants have the video paused.	yes	no	no
Move user	Move a participant from one conference to another.	yes	no	no
Drop user	Remove a participant from the conference.	yes	no	no
Promote to moderator	Promote participant to moderator.	yes	no	no
Promote to presenter	Promote participant to presenter.	yes	no	no
Silence or unsilence	Silence or unsilence all participants.	yes	no	no
See the participant count	See the number of participants in the meeting.	yes	yes	yes
Raise and lower hand	To signal to the moderator and others in the conference that you wish to speak.	no	yes	yes
Record and stop recording	Start and stop a conference recording	yes	no	no
List feature keys	Show a list of the available feature keys.	yes	yes	yes

The following tables describes the advanced and integrated conference control features available to Moderator, Participant, and Guest through a the dial pad of an audio or video endpoint:

Table 5: Conference controls using the dialpad of an audio or video endpoint

Key	Feature	Description	Moderator	Participant	Guest
**	Help	Plays an audio list of the commands available. This is played only to the issuer.	yes	yes	yes
.#	Count participants	Audio indication of the number of active users in a conference. This is played only to the issuer.	yes	yes	yes
##	End conference	Stops the conference even if conference continuation is enabled.	yes	no	no
*0	Dial out to operator	The administrator must provision to allow dial out to operator.	yes	yes	no
*1	Dial out	Joins a new participant to the conference.	yes	no	no
*4	Entry or exit tone	Enable or disable the play entry and exit tones to participants. If enabled, tones are played to participants upon entering or exiting a conference.	yes	no	no
*21	Record and stop recording	Start and stop a conference recording	yes	no	no
*41	Raise hand	Signal to moderator and others in the conference that you wish to speak. Audio only participants receive audio feedback for a raise hand request. The audio feedback is: • your hand is raised • your hand could not be raised Video endpoint users can see a raised hand icon next to the user in the roster list.	no	yes	yes
*42	Lower hand	The moderator can lower the hand of participants. The participant can lower hand for self only. Audio only participants receive audio feedback for a lower hand request. • your hand is lowered • the moderator lowered your hand •  Note: For event conferences, the moderator must use a user interface such as Collaboration Agent to lower the hand of participants. Video endpoint users can see the hand request has been lowered as the raise hand icon next to the user in the roster list is no longer visible.	yes-participants only	yes, only self	yes, only self

Key	Feature	Description	Moderator	Participant	Guest
*5	Lecture mode	Enable or disable lecture mode for a specific conference. The moderator becomes a lecturer and is the only one who can speak or be seen in video on the conference. All other participants are considered passive participants and are in a mute for audio and paused for video state. For more information about lecture mode, see Lecture mode on page 53	yes	no	no
*51	Assume moderator	Assume the Moderator role if Moderator does not join the conference. Enter the Moderator code and the Pound key (#) to assume the Moderator role.  Note: If Moderator does not join a conference or Moderator for a conference is not identified, the first user to dial in with the Moderator code or the first user to assume the Moderator role becomes Moderator. If you join a conference as a participant, you must disconnect and again join the conference with the Moderator code or press *51 on the dial pad to assume the Moderator role. After a user is established as Moderator for a conference, all the users who join the conference with the Moderator code subsequently are added as participants.	no	yes	yes
*6	Mute or unmute audio and video	Mute or unmute audio and video.	yes, only self	yes, only self	yes, only self
*61	Mute or unmute audio	Mute or unmute audio.	yes, only self	yes, only self	yes, only self
*62	Pause or unpause video	Pause or unpause video.	yes, only self	yes, only self	yes, only self
*7	Lock or unlock conference	The moderator can lock the conference to block new participants from joining. The moderator can dial out to add new participants at any time or unlock the conference. For more information about lock and unlock, see Lock and unlock on page 53.	yes	no	no
*71	Disable video	Turns off video for the conference for the duration of the conference. New participants join without video functionality.	yes	no	no

Key	Feature	Description	Moderator	Participant	Guest
*81	Audio mute all (on or off)	Silences or unsilences all participants in the conference.	yes	no	no
*82	Video mute all (on or off)	Turn video on or off for all participants in the conference.	yes	no	no
*96	Silence all participants	Silences all participants in the conference; however, participants have the ability to unsilence.	yes	no	no
*98	Continuation	Enable or disable. If enabled, conference continues after the moderator leaves the conference. If disabled and the moderator leaves the conference, participants are notified of the number of minutes remaining until the conference ends. The conference returns to a normal conference state if the moderator rejoins the conference or one of the participants assumes moderator control. For more information about continuation, see Continuation on page 54.	yes	no	no

 Note:

Operator has the same privileges as Moderator and Presenter has the same privileges as Participant with some exceptions.

Related Links

[Conference features](#) on page 37

Chapter 3: Interoperability

Product compatibility

Supported endpoints

Avaya Aura® Conferencing 8.0 supports a large number of endpoints.

Endpoints supported with Audio SRTP

The following endpoints support Audio SRTP:

- Avaya 9600 Series IP Deskphones 96x1 H.323 Release 6.2
- Avaya 9600 Series IP Deskphones 96x1 H.323 Release 6.3
- Avaya 9600 Series IP Deskphones 96x1 SIP Release 6.2
- Avaya 9600 Series IP Deskphones 96x1 SIP Release 6.3
- Avaya Communicator Release 2.0 for Windows (TLS only)
- Avaya Communicator Release 2.0 for iPad Devices
- Avaya one-X Communicator Release 6.1
- Avaya one-X Communicator Release 6.1.1
- Avaya one-X Communicator Release 6.1.6
- Avaya one-X Communicator Release 6.2

Endpoints supported with Video SRTP

The following endpoint supports Video SRTP:

- Avaya one-X Communicator Release 6.2 (SIP)

Limitations

With a number of minor exceptions, these endpoints support each of Avaya Aura® Conferencing features. In most cases, where there are support limitations related to an endpoint, there are engineering fixes in place to enable the feature to behave as users expect. For example, the Avaya Communicator endpoint does not recognize a conference with Presentation Mode enabled. This limitation is due to the fact that Avaya Communicator cannot interpret the Presentation Mode property in the SIP NOTIFY request that Avaya Aura® Conferencing sends. However, Avaya has implemented an engineering fix to ensure that the conference behaves like a Presentation Mode conference for all users, including Avaya Communicator users. When Avaya Communicator users join a Presentation Mode conference, Avaya Aura® Conferencing signals to them that the

collaboration session has already begun. This means that they can share files in the absence of a moderator.

Avaya Microsoft Lync Integration overview

Network administrators can use their Microsoft Lync 2010 or Lync 2013 network infrastructure to enhance existing communication services. Administrators of Microsoft networks can provide unified communication services to Lync clients utilizing their Avaya Aura® communications infrastructure

Avaya Lync Integration joins Avaya Aura® communications with the Lync client using Microsoft supported APIs. The result is industry leading Avaya communications integrated into the look and feel of Microsoft Lync. When deployed with Avaya Aura®, the Avaya Lync Integration extends the functionality of the Microsoft Lync client, providing the following telephony modes: Desk Phone mode, Other Phone mode, and Computer mode.

- Desk Phone or Shared Control mode allows the user to control the desktop phone, with media going over existing PBX telephony equipment.
- Other Phone mode allows the user to control a mobile, home, hotel, or other phone number.
- Computer mode allows the user to use the computer as a phone, using the media capabilities of the computer. Computer mode is not available if users are using VDI Communicator with Lync Integration instead of a desk phone.

For a description of the services available in Phone and Computer mode, see [Telephony services with Lync Integration](#) on page 64.

The Avaya Lync Integration interacts with the Lync 2010 or the Lync 2013 client directly using Microsoft Supported APIs. All telephony capabilities are integrated directly between Avaya Lync Integration and the Microsoft Lync client. The Avaya solutions telephony capabilities with the Lync 2010 or 2013 client requires only a Standard CAL (license), eliminating the need for a Microsoft voice infrastructure and the Microsoft Lync Enterprise CAL. Remote Call Control and Enterprise Voice must be disabled on the Lync server.

Related Links

[Lync Integration features](#) on page 62

[Telephony services with Lync Integration](#) on page 64

[Interoperability](#) on page 66

Lync Integration features

The Lync Integration solution uses the Lync 2010 and 2013 user interface to provide voice services.

Note:

For a detailed description of each voice service and a list of the services supported by each service provider, see [Telephony services with Lync Integration](#) on page 64.

The solution supports the following functionality:

- Support for Computer (soft client), Shared Control (CTI control of Desk phone), and Other Phone modes when Lync Integration is interworking with a desk phone. When Lync Integration is working with a VDI Communicator client, only the Shared Control and Other Phone modes are supported.
- Make Calls from Contact list, or search dialog box utilizing contacts' published numbers.
- In conjunction with the Collaboration Services applications, you can make calls from Microsoft Office applications, as well as Internet Explorer and Google Chrome web browsers. See *Avaya Client Applications Collaboration Services Fundamentals* (NN10850-031).
- Translation of E.164 numbers to customer dial plan including insertion or deletion of appropriate digits.
- Publish Telephony Presences on behalf of the user when their client is signed in and on a call.
- Display a conversation window with the following mid-call functionality:
 - Release/End call.
 - Place call on Hold and Retrieve call.
 - Insert DTMF digit in to an established call.
 - Speaker volume control and speaker mute function (Computer mode).
 - Microphone mute function (Computer mode).
 - Escalate to a video call.
- Handling multiple calls
 - Support for multiple Consult calls
 - While on a Consult call, instigate a Call Transfer.
 - While on a Consult call, merge another call to form a Conference call.
 - Add additional Consult calls to this Conference call.
 - Call Waiting popup display.
- Display an incoming call window with the following functionality:
 - Indicate the Incoming Caller line ID or Caller name.
 - Allow the user to answer or ignore the call.
 - While On a call, indicate that another call is waiting. Answering this call places the first call on Hold.
 - Graphically indicate which device (Computer or Phone mode) the call will be answered on.
- Set Call Forward options.
- Check for and access new voice mail messages
- Make a video call when Lync Integration is working with a desk phone.
 - Escalate an existing call to a video call.

- Initiate a video call.
- Mid call control ability to pause, resume, or stop video.
- Incoming video call prompting to accept, decline, or view incoming video.

*** Note:**

Lync Integration interworking with a VDI Communicator client does not currently support video call functionality.

- Access the Share My Bridge feature.
 - Dial in to your conference bridge or launch web collaboration from the Lync Integration bar or from a Conversation window.
 - Share conference bridge and web conference details with another user via instant message or email.

Related Links

[Avaya Microsoft Lync Integration overview](#) on page 62

Telephony services with Lync Integration

Lync Integration controls a single line, based on the user's primary line. If the user's desk phone supports multiple lines, non-primary lines will not be represented by Lync Integration.

The following table lists supported functionality.

*** Note:**

The following features are not supported for Lync Integration with Avaya Aura®:

- Call History
- Single Step Transfer (Blind Transfer)

Table 6: Telephony feature descriptions

Capability	Description
Make Call	Users can make a call on their phone by: • Clicking on a contact in their contact list and selecting the  icon in Lync 2010 • Hovering over a contact's picture and selecting the  icon in Lync 2013 • Entering a number in the Lync 2010 or 2013 dialog box
Release Call	Users can Release a phone call by clicking on the End Call button in Lync Integration Conversation Bar.
Answer Call	Users can accept an incoming call that is presented to them via a popup window.

Capability	Description
Decline or Ignore Call	Users can decline a phone call by clicking the Decline Call button in the Lync Integration Incoming Call Notification dialog box. On the PBX line, the call is treated as an unanswered call.  Note: In Shared Control mode, the desk phone continues ringing after the called party clicks the Decline Call button. To stop the phone from ringing, the calling party must end the call or the called party must manually hang up the desk phone.
Caller ID	Users receive Calling Party Name or Caller line ID in a popup window.
Forward Line	Users can activate Call Forward on their PBX line for incoming calls by selecting the Call Forward button from the Lync Integration Bar. When the call forwarding feature is activated, you do not receive incoming call notifications. The user that the call is forwarded to receives an incoming call notification, and after answering the call, a video request also appears.  Note: When Lync Integration is in Other Phone mode, call forwarding functionality is disabled.
Call Hold and Retrieve	User can place call on hold using the hold button within the Lync Integration Conversation Bar. The call may be retrieved by clicking somewhere within the text line when the call is in a held state.
Generate Digits (DTMF)	Users can initiate sending of DTMF digits through the PBX system by selecting the dial pad button on the Add-in Conversation Bar. This feature is disabled when: • The call is paused • Lync Integration is in SIP Other Phone mode. In Lync 2013, the dial pad is dimmed when disabled. In Lync 2010, the DTMF button is not visible when disabled.
Consult Call	When on an active call, the user can: • Answer a call • Instigate a second call by clicking on a contact in their contact list or entering a number in the Lync 2010 or 2013 dialog box When an additional call is answered or initiated, the previously active call is placed on hold. Multiple consult calls can be created.
Consult Transfer	When one or more consult calls are established, users are able to select, from a list of held calls, the call they wish to transfer their active call to.
Consult Conference	When one or more consult calls are established, users are able to select, from a list of held calls, the call they wish to merge into a Conference call.

Capability	Description
Call Waiting	When on an active call, a toast pop up is presented indicating that an alternative call is waiting. If the user decides to answer this call, then current active call is placed on hold. The new call now becomes the active call.
Receiver Mute	Users can select to mute or un-mute the PC speaker(s) or headset receiver. This feature is only applicable in Computer mode.
Receiver Volume Control	Users can select to adjust the volume of the PC speaker(s) or headset receiver. This feature is only applicable in Computer mode.
Audio Devices Mute	Users can select to mute or un-mute the PC speaker(s) or headset microphone. This feature is only applicable in Computer mode.
Make Video Call	Users can make a video call by clicking on a contact in their contact list and selecting Make Video Call.  Note: When making a video call or escalating an audio call to a video call, the IM pane does not appear in Lync Integration 2013. This functionality does not apply to Lync Integration 2010.
Share My Bridge feature	With Lync Integration 2013, users can use the Share My Bridge feature to launch web collaboration, dial in to their conference bridge, or share conference details with another user via IM or email. This feature is not available for Lync 2010.
Message Waiting Indication	With Lync Integration 2013, the Message Waiting Indicator button on the Lync Integration bar lights up to indicate when users have a new voice mail message. Users can press this button any time to dial in to voice mail box. This feature is not available for Lync 2010.

Related Links

[Avaya Microsoft Lync Integration overview](#) on page 62

Interoperability

Lync Integration requires certain key components to work. Lync Integration can also optionally interoperate with Avaya applications including:

- Avaya Collaboration Services
- Avaya Aura® Conferencing and Collaboration Agent

Tip:

For easy access to Collaboration Agent web conferencing, you can select the **Remember Me** check box on the login page to save your username and password. With this option selected, you can automatically log in to your web conference without entering your credentials every time.

For additional information about Avaya Collaboration Services, see *Administering Avaya Collaboration Services* (NN10850–031).

For information about Avaya Aura® Conferencing and Collaboration Agent, see:

- *Deploying Avaya Aura® Conferencing*
- *Administering Avaya Aura® Conferencing*
- *Using Avaya Aura® Conferencing Collaboration Agent*

Avaya Aura® Communicator Integration overview

Overview

Avaya Communicator for Windows enables you to log into your company's server and make and receive telephone calls (voice calls and video calls) from your telephone extension via your PC. Using the Avaya Communicator for Windows client, you can also send instant messages, access your call history, access your Avaya Aura® contacts and Microsoft Outlook contacts, share information with web collaboration, perform an enterprise search, and manage your presence status. Avaya Communicator for Windows provides enterprise users with simple access to all the communication tools in a single interface.

Avaya Communicator for Windows provides automatic integration with Avaya Aura® Conferencing. When you log in to a MeetMe conference on Avaya Aura® Conferencing with Avaya Communicator for Windows, you can:

- access the Web Collaboration features by clicking the **Collaboration** button in the main window. If you are the moderator or have presenter privileges, you can host the web collaboration session and share documents, presentations, pictures, a whiteboard, your entire screen, a portion of your screen, or an application window.
- view a graphical representation of the conference and its participants.
- manage the conference using the built-in moderator controls (when you are logged in as the moderator).

If you have Avaya Aura® Conferencing, you can also start Adhoc conferences with Avaya Communicator for Windows.

You must have access to your company's network to use Avaya Communicator for Windows.

Related Links

[Main window](#) on page 67

[Button descriptions](#) on page 72

[Support for Multiple Device Access](#) on page 73

Main window

The following figure shows the components of the main window of Avaya Communicator for Windows. This is the compact view with no tabs expanded.

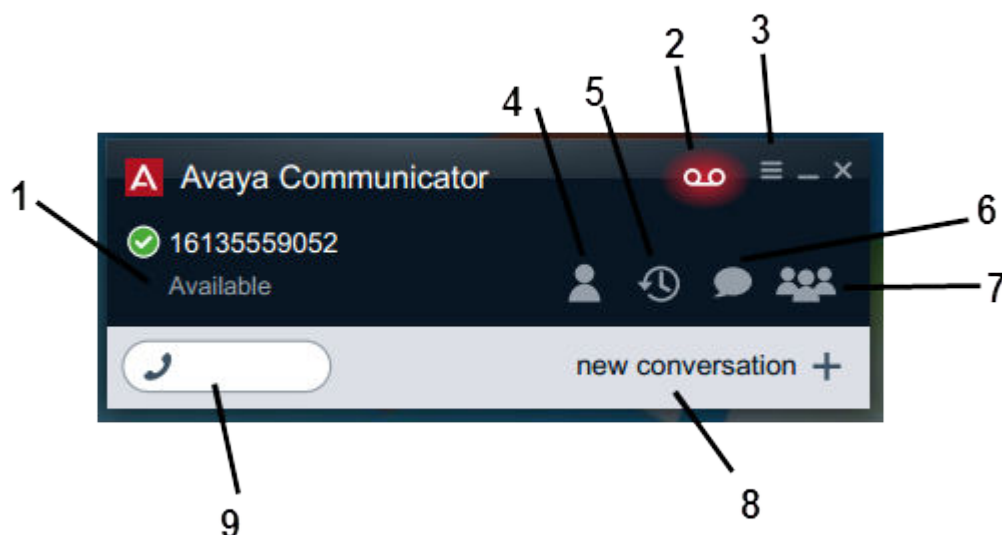


Figure 8: Compact window

No.	Name	Description
1	User Status area	Use this area to log in and log out of the client, and to view your extension number and presence status. From this area, you can: • log in and out of the client • set your presence status or enter a custom presence status message
2	Message Waiting Indicator	Lights up to indicate when you have a new voice mail message. You can click this button at any time to dial in to your voice mail.
3	Settings button	Click to display the Settings dialog box where you configure your servers, dialing rules, enterprise directory search settings, contacts search settings, audio settings, video settings, and conference settings. The Settings dialog box also displays the software release information and support information.
4	Contacts tab	Displays the Contacts fan. The Contacts fan displays cards for all of your Avaya Aura® contacts and Microsoft Outlook contacts (if Microsoft Outlook is running). When the Contacts fan is expanded, you can hover over a contact to see buttons for voice call, video call, IM, and additional options. If you have configured the enterprise search settings, you can also search for enterprise contacts from the Contacts tab. * Note: You must be logged into the server to view your Avaya Aura® contacts and Microsoft Outlook contacts. Microsoft Outlook must be running for you to view your Microsoft Outlook contacts.

No.	Name	Description
5	History tab	Click to display the History fan and the History tab buttons. The History fan displays the associated contacts for all the calls you made and received using the Avaya Communicator for Windows client. Using the History tab buttons, you can view: • all calls you received using the Avaya Communicator for Windows client • all calls you missed while you were using the Avaya Communicator for Windows client • all calls you answered using the Avaya Communicator for Windows client • all calls you made using the Avaya Communicator for Windows client A red number appears on the History tab to indicate the number of calls you missed since the last time you viewed the History fan.  Note: History records are not generated for conference calls.
6	IM tab	Displays the Instant Messaging fan. The Instant Messaging fan displays the contact card for each active messaging session or “chat.”
7	Conference tab	Click to display the Conference fan and the Conference tab buttons. The Conference fan displays the contact cards for the participants in the conference. The Conference tab buttons enable you to filter the conference participants in the Conference fan. Using the Conference tab buttons, you can view: • all participants in the conference • all participants who are viewing the web collaboration session • all participants who dropped from the call You can sort the cards in the Conference fan by most recent conference entry or alphabetically (from A to Z).
8	Conversation stage	Provides a graphical representation of the selected call. A conversation setup appears for each call you start or join. All calls in progress (active and held) are displayed in the conversation stage. You can use the + button in this area to start a new conversation. You can have a maximum of three conversations at a time.
9	Quick dial field	Allows you to enter a phone number to make a voice or video call. You can also use the dialpad in this field to re-dial a phone number.

The following figures show the Avaya Communicator for Windows client with the Contacts, History, IM, and Conference tabs expanded. You must be logged in to the Avaya Communicator for Windows client to access these tabs.

Click on the **Contacts** tab to view your list of contacts. You can also hover over a contact, as shown in the image, to access channel buttons for voice call, video call, IM, and additional options.

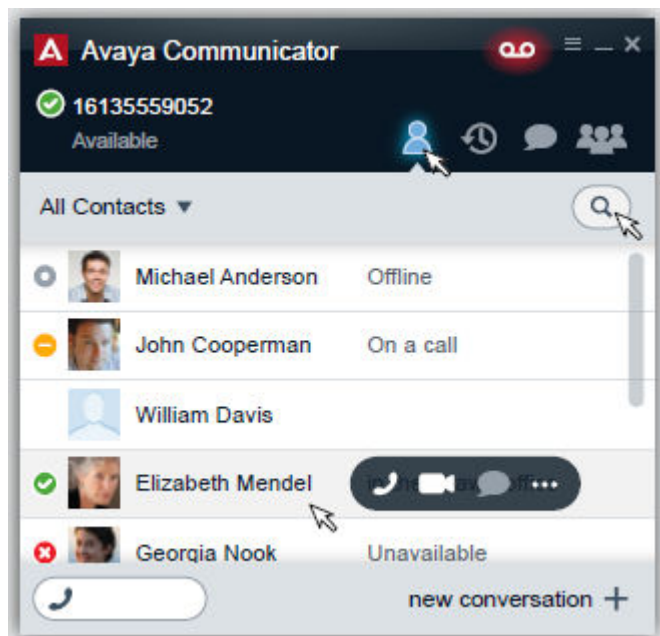


Figure 9: Avaya Communicator for Windows with Contacts fan expanded

Click on the **History** tab to view call and IM conversation history. Missed calls and conversations are emphasized in red as shown in the image.

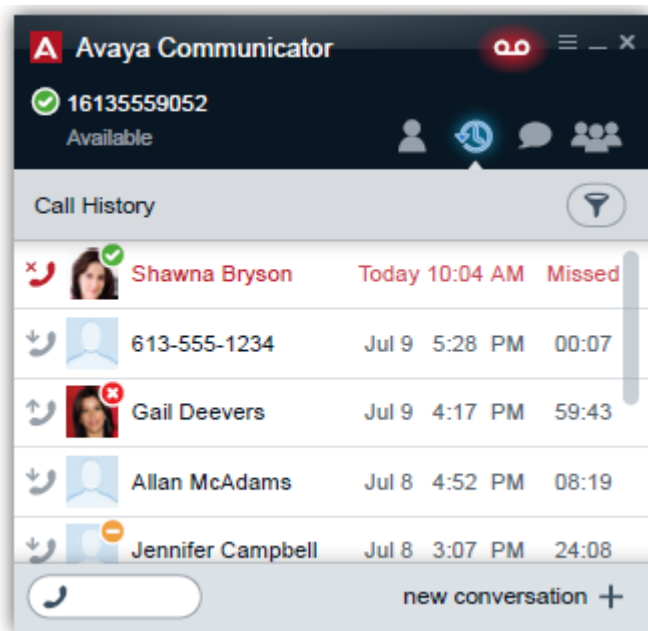


Figure 10: Avaya Communicator for Windows with History fan expanded

Click on the **IM** tab to view active IM conversations.

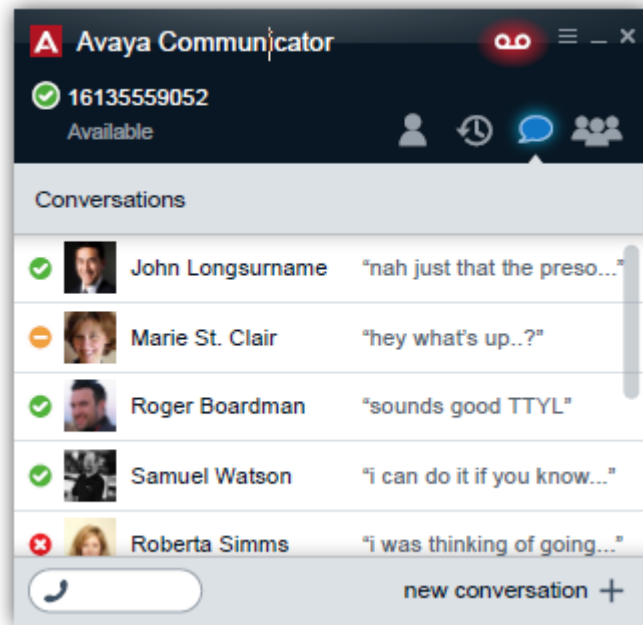


Figure 11: Avaya Communicator for Windows with Instant Messaging fan expanded

Click on the **Conference** tab to view conference call participants and manage your conference calls.

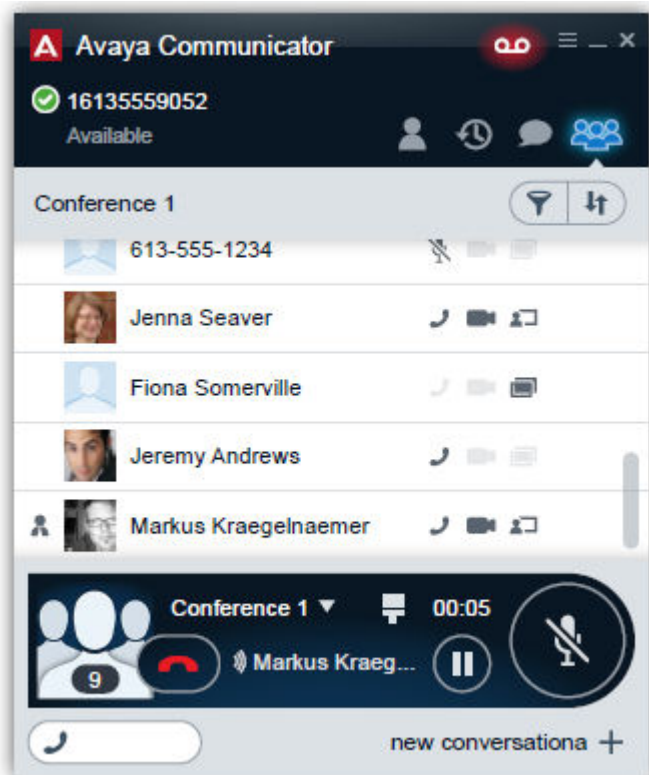


Figure 12: Avaya Communicator for Windows with Conference fan expanded

Related Links

[Overview](#) on page 67

Button descriptions

The following table shows the main buttons in the Avaya Communicator for Windows client. Buttons are grayed out when unavailable.

Button	Name	Purpose
	Call	To make a voice call. You cannot click this button from a conference call.
	Video	To make a video call. You cannot click this button from a conference call.
	Instant Message	To send an instant message. This button is not available in conference calls.
	Collaboration	To sStart or join a Web Collaboration session.
	Settings	To open the Settings dialog box where you configure your servers, dialing rules, enterprise directory search settings, contacts search settings, audio settings, video settings, and conference settings. The Settings dialog box also displays the software release information and support information. You can also access volume control options from the Settings dialog box.
	End	To hang up a voice or video call.
	Answer	To answer or join an unanswered active call (bridged, EC500, or Ignored) on the conversation setup stage.
	Cancel	To remove all cards from the conversation setup stage.
	Mute	To mute or unmute audio. When the call is muted, the button is blue.

Button	Name	Purpose
		 Tip: Use the Mute functionality in Avaya Communicator. Muting on your desktop or through a headset is not reflected on the Avaya Communicator interface.
	Dialpad	To open the dialpad. You can enter touch-tone digits during a call from the dialpad. You can also use the dialpad to enter or re-dial a phone number.
	Hold	To place the current call on hold or resume a call on hold. When the call is on hold, the button is blue.
	More	To open the More controls panel, which contains the Moderator controls tab and the Call controls tab. The Moderator controls tab is only available to the moderator. The Call controls tab is available to the moderator and participants of the selected call.

Related Links

[Overview](#) on page 67

Support for Multiple Device Access

Avaya Communicator supports Multiple Device Access (MDA). This feature enables the following capabilities:

- Ability to log on to the same extension from multiple devices, including mobile EC500 devices
- Ability to answer a call from multiple devices
- Ability to join an existing call from other logged in devices
- All logged in devices ring simultaneously when an incoming call is made to the extension

The configuration on your Avaya Aura® network determines how many devices you can log in with at the same time, and whether the first or last logged in device will be denied login access when you reach the maximum simultaneous device limit.

MDA limitations

The following sections describe the limitations for MDA.

Support on other devices

- Some devices do not support MDA. Even though you may be able to log in to these devices with the same extension that you are logged in with on your Avaya Communicator client, other

MDA functionality, such as the ability to answer a new incoming call or join an existing call, may not work properly.

Video escalation

- When more than one device is on a call, the call cannot be escalated to video. If additional devices drop from the call and only one device remains on the call, that device can escalate to a video call as normal.
- When a second device joins a video call, the video screen becomes black.
- An EC500 mobile device cannot escalate to a video call at any time. Even if the mobile device is the only device on the call, only audio calls are supported.

Joining calls

- If one of the devices on a call is on hold, another device cannot join the call.

Avaya Aura® conferencing

- When a second device that is not the Avaya Communicator client joins an existing Avaya Aura® conference, the user of the second device can hear audio on the call but cannot access conferencing features or view shared applications. The second device must dial in to the conference separately to access conferencing features.

If one of the devices on the conference call is the Avaya Communicator client, that device is able to access conferencing features and controls as soon as the other devices drop from the conference call. The Avaya Communicator client does not need to hang up and dial in again.

Glossary

**Accounting Manager
(AM)**

1. Configures and manages (deploy/undeploy/start/stop) the various network elements.

**Application Server
(AS)**

1. SIP Application Server which is the focus point of all conferences.

**Avaya Media Server
(AMS)**

1. Processes all audio/video streams under the supervision of the application server (AS).

**Collaboration Agent
(CA)**

1. Hosts the Collaboration Agent and provides the portal for end user driven service configuration changes. It is embedded in Provisioning Manager for SMB/Medium deployments

**Document
Conversion Server
(DCS)**

1. Converts uploaded presentations (Microsoft Powerpoint, and so on) into a displayable format for sharing.

**Element Manager
(EM)**

1. Configures and manages (deploy/undeploy/start/stop) the various network elements.

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