Avaya Mobile Video Overview and Specification

Release 3.4
Issue 1
December 2017

© 2017, Avaya Inc.
All Rights Reserved.

Notice

While reasonable efforts have been made to ensure that the information in this document is complete and accurate at the time of printing, Avaya assumes no liability for any errors. Avaya reserves the right to make changes and corrections to the information in this document without the obligation to notify any person or organization of such changes.

Documentation disclaimer

“Documentation” means information published in varying mediums which may include product information, operating instructions and performance specifications that are generally made available to users of products. Documentation does not include marketing materials. Avaya shall not be responsible for any modifications, additions, or deletions to the original published version of Documentation unless such modifications, additions, or deletions were performed by or on the express behalf of Avaya. End User agrees to indemnify and hold harmless Avaya, Avaya's agents, servants and employees against all claims, lawsuits, demands and judgments arising out of, or in connection with, subsequent modifications, additions or deletions to this documentation, to the extent made by End User.

Link disclaimer

Avaya is not responsible for the contents or reliability of any linked websites referenced within this site or Documentation provided by Avaya. Avaya is not responsible for the accuracy of any information, statement or content provided on these sites and does not necessarily endorse the products, services, or information described or offered within them. Avaya does not guarantee that these links will work all the time and has no control over the availability of the linked pages.

Warranty

Avaya provides a limited warranty on Avaya hardware and software. Refer to your sales agreement to establish the terms of the limited warranty. In addition, Avaya’s standard warranty language, as well as information regarding support for this product while under warranty is available to Avaya customers and other parties through the Avaya Support website: https://support.avaya.com/helpcenter/getGenericDetails?detailId=C20091120112456651010 under the link “Warranty & Product Lifecycle” or such successor site as designated by Avaya. Please note that if You acquired the product(s) from an authorized Avaya Channel Partner outside of the United States and Canada, the warranty is provided to You by said Avaya Channel Partner and not by Avaya.

“Hosted Service” means an Avaya hosted service subscription that You acquire from either Avaya or an authorized Avaya Channel Partner (as applicable) and which is described further in Hosted SAS or other service description documentation regarding the applicable hosted service. If You purchase a Hosted Service subscription, the foregoing limited warranty may not apply but You may be entitled to support services in connection with the Hosted Service as described further in your service description documents for the applicable Hosted Service. Contact Avaya or Avaya Channel Partner (as applicable) for more information.

Hosted Service

THE FOLLOWING APPLIES ONLY IF YOU PURCHASE AN AVAYA HOSTED SERVICE SUBSCRIPTION FROM AVAYA OR AN AVAYA CHANNEL PARTNER (AS APPLICABLE), THE TERMS OF USE FOR HOSTED SERVICES ARE AVAILABLE ON THE AVAYA WEBSITE, HTTPS://SUPPORT.AVAYA.COM/LICENSEINFO UNDER THE LINK “Avaya Terms of Use for Hosted Services” OR SUCH SUCCESSOR SITE AS DESIGNATED BY AVAYA, AND ARE APPLICABLE TO ANYONE WHO ACCESSES OR USES THE HOSTED SERVICE. BY ACCESSING OR USING THE HOSTED SERVICE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE DOING SO (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THE TERMS OF USE. IF YOU ARE ACCEPTING THE TERMS OF USE ON BEHALF A COMPANY OR OTHER LEGAL ENTITY, YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO BIND SUCH ENTITY TO THESE TERMS OF USE. IF YOU DO NOT HAVE SUCH AUTHORITY, OR IF YOU DO NOT WISH TO ACCEPT THESE TERMS OF USE, YOU MUST NOT ACCESS OR USE THE HOSTED SERVICE OR AUTHORIZE ANYONE TO ACCESS OR USE THE HOSTED SERVICE.

Licenses

THE SOFTWARE LICENSE TERMS AVAILABLE ON THE AVAYA WEBSITE, HTTPS://SUPPORT.AVAYA.COM/LICENSEINFO, UNDER THE LINK “AVAYA SOFTWARE LICENSE TERMS (Avaya Products)” OR SUCH SUCCESSOR SITE AS DESIGNATED BY AVAYA, ARE APPLICABLE TO ANYONE WHO DOWNLOADS, USES AND/OR INSTALLS AVAYA SOFTWARE, PURCHASED FROM AVAYA INC., ANY AVAYA AFFILIATE, OR AN AVAYA CHANNEL PARTNER (AS APPLICABLE) UNDER A COMMERCIAL AGREEMENT WITH AVAYA OR AN AVAYA CHANNEL PARTNER. UNLESS OTHERWISE AGREED TO BY AVAYA IN WRITING, AVAYA DOES NOT EXTEND THIS LICENSE IF THE SOFTWARE WAS OBTAINED FROM ANYONE OTHER THAN AVAYA, AN AVAYA AFFILIATE OR AN AVAYA CHANNEL PARTNER; AVAYA RESERVES THE RIGHT TO TAKE LEGAL ACTION AGAINST YOU AND ANYONE ELSE USING OR SELLING THE SOFTWARE WITHOUT A LICENSE. BY INSTALLING, DOWNLOADING OR USING THE SOFTWARE, OR AUTHORIZING OTHERS TO DO SO, YOU, ON BEHALF OF YOURSELF AND THE ENTITY FOR WHOM YOU ARE INSTALLING, DOWNLOADING OR USING THE SOFTWARE (HEREINAFTER REFERRED TO INTERCHANGEABLY AS “YOU” AND “END USER”), AGREE TO THESE TERMS AND CONDITIONS AND CREATE A BINDING CONTRACT BETWEEN YOU AND AVAYA INC. OR THE APPLICABLE AVAYA AFFILIATE (“AVAYA”).

Avaya grants You a license within the scope of the license types described below, with the exception of Heritage Nortel Software, for which the scope of the license is detailed below. Where the order documentation does not expressly identify a license type, the applicable license will be a Designated System License as set forth below in the Designated System(s) License (DS) section as applicable. The applicable number of licenses and units of capacity for which the license is granted will be one (1), unless a different number of licenses or units of capacity is specified in the documentation or other materials available to You. “Software” means computer programs in object code, provided by Avaya or an Avaya Channel Partner, whether as stand-alone products, pre-installed on hardware products, and any upgrades, updates, patches, bug fixes, or modified versions thereto. “Designated Processor” means a single stand-alone computing device. “Server” means a set of Designated Processors that hosts (physically or virtually) a software application to be accessed by multiple users. “Instance” means a single copy of the Software executing at a particular time: (i) on one physical machine; or (ii) on one deployed software virtual machine (“VM”) or similar deployment.

License types

Concurrent User License (CU). End User may install and use the Software on multiple Designated Processors or one or more Servers, so long as only the licensed number of Units are accessing and using the Software at any given time. A “Unit” means the unit on which Avaya, at its sole discretion, bases the pricing of its licenses and can be, without limitation, an agent, port or user, an e-mail or voice mail account in the name of a person or corporate function (e.g., webmaster or helpdesk), or a directory entry in the administrative database utilized by the Software that permits one user to interface with the Software. Units may be linked to a specific, identified Server or an Instance of the Software.

Heritage Nortel Software

“Heritage Nortel Software” means the software that was acquired by Avaya as part of its purchase of the Nortel Enterprise Solutions Business in December 2009. The Heritage Nortel Software is the software contained within the list of Heritage Nortel Products located at https://support.avaya.com/LicenseInfo under the link “Heritage Nortel Products” or such successor site as designated by Avaya. For Heritage Nortel Software, Avaya grants Customer a license to use Heritage Nortel Software provided hereunder solely to the extent of the authorized activation or authorized usage level, solely for the purpose specified in the Documentation, and solely as embedded in, for execution on, or for communication with Avaya equipment. Charges for Heritage Nortel Software may be based on extent of activation or use authorized as specified in an order or invoice.

Copyright

Except where expressly stated otherwise, no use should be made of materials on this site, the Documentation, Software, Hosted Service, or hardware provided by Avaya. All content on this site, the documentation, Hosted Service, and the product provided by Avaya including the selection, arrangement and design of the content is owned either by Avaya or its licensors and is protected by copyright and other intellectual property laws including the sui generis rights relating to the protection of databases. You may not modify, copy, reproduce, republish, upload, post, transmit or distribute in any way any content, in whole or in part, including any code and software unless expressly authorized by Avaya. Unauthorized reproduction, transmission, dissemination, storage, and or use without the express written consent of Avaya can be a criminal, as well as a civil offense under the applicable law.

Virtualization

The following applies if the product is deployed on a virtual machine. Each product has its own ordering code and license types. Note, unless otherwise stated, that each Instance of a product must be separately licensed and ordered. For example, if the end user customer or Avaya Channel Partner would like to install two Instances of the same type of products, then two products of that type must be ordered.

Third Party Components

"Third Party Components" mean certain software programs or portions thereof included in the Software or Hosted Service may contain software (including open source software) distributed under third party agreements ("Third Party Components"), which contain terms regarding the rights to use certain portions of the Software ("Third Party Terms"). As required, information regarding distributed Linux OS source code (for those products that have distributed Linux OS source code) and identifying the copyright holders of the Third Party Components and the Third Party Terms that apply is available in the products, Documentation or on Avaya's website at: https://support.avaya.com/Copyright or such successor site as designated by Avaya. The open source software license terms provided as Third Party Terms are consistent with the license rights granted in these Software License Terms, and may contain additional rights benefiting You, such as modification and distribution of the open source software. The Third Party Terms shall take precedence over these Software License Terms, solely with respect to the applicable Third Party Components to the extent that these Software License Terms impose greater restrictions on You than the applicable Third Party Terms.

The following applies only if the H.264 (AVC) codec is distributed with the product. THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE HTTP://WWW.MPEGLA.COM.

Service Provider

THE FOLLOWING APPLIES TO AVAYA CHANNEL PARTNER'S HOSTING OF AVAYA PRODUCTS OR SERVICES. THE PRODUCT OR HOSTED SERVICE MAY USE THIRD PARTY COMPONENTS SUBJECT TO THIRD PARTY TERMS AND REQUIRE A SERVICE PROVIDER TO BE INDEPENDENTLY LICENSED DIRECTLY FROM THE THIRD PARTY SUPPLIER. AN AVAYA CHANNEL PARTNER'S HOSTING OF AVAYA PRODUCTS MUST BE AUTHORIZED IN WRITING BY AVAYA AND IF THOSE HOSTED PRODUCTS USE OR EMBED CERTAIN THIRD PARTY SOFTWARE, INCLUDING BUT NOT LIMITED TO MICROSOFT SOFTWARE OR CODECS, THE AVAYA CHANNEL PARTNER IS REQUIRED TO INDEPENDENTLY OBTAIN ANY APPLICABLE LICENSE AGREEMENTS, AT THE AVAYA CHANNEL PARTNER'S EXPENSE, DIRECTLY FROM THE APPLICABLE THIRD PARTY SUPPLIER.

WITH RESPECT TO CODECS, IF THE AVAYA CHANNEL PARTNER IS HOSTING ANY PRODUCTS THAT USE OR EMBED THE G.729 CODEC, H.264 CODEC, OR H.265 CODEC, THE AVAYA CHANNEL PARTNER ACKNOWLEDGES AND AGREES THE AVAYA CHANNEL PARTNER IS RESPONSIBLE FOR ANY AND ALL RELATED FEES AND/OR ROYALTIES. THE G.729 CODEC IS LICENSED BY SIPRO LAB TELECOM INC. SEE WWW.SIPRO.COM/CONTACT.HTML. THE H.264 (AVC) CODEC IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO: (I) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (II) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION FOR H.264 (AVC) AND H.265 (HEVC) CODECS MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE HTTP://WWW.MPEGLA.COM.

Compliance with Laws

You acknowledge and agree that it is Your responsibility for complying with any applicable laws and regulations, including, but not limited to laws and regulations related to call recording, data privacy, intellectual property, trade secret, fraud, and music performance rights, in the country or territory where the Avaya product is used.

Preventing Toll Fraud

"Toll Fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, a person who is not a corporate employee, agent, subcontractor, or is not working on your company's behalf). Be aware that there can be a risk of Toll Fraud associated with your system and that, if Toll Fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya Toll Fraud intervention

If You suspect that You are being victimized by Toll Fraud and You need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Support website: https://support.avaya.com or such successor site as designated by Avaya.

Security Vulnerabilities

Information about Avaya's security support policies can be found in the Security Policies and Support section of https://support.avaya.com/security.

Suspected Avaya product security vulnerabilities are handled per the Avaya Product Security Support Flow (https://support.avaya.com/css/P8/documents/100161515).

Downloading Documentation

For the most current versions of Documentation, see the Avaya Support website: https://support.avaya.com, or such successor site as designated by Avaya.

Contact Avaya Support

See the Avaya Support website: https://support.avaya.com for product or Hosted Service notices and articles, or to report a problem with your Avaya product or Hosted Service. For a list of support telephone numbers and contact addresses, go to the Avaya Support website: https://support.avaya.com (or such successor site as designated by Avaya), scroll to the bottom of the page, and select Contact Avaya Support.

Trademarks

The trademarks, logos and service marks ("Marks") displayed in this site, the Documentation, Hosted Service(s), and product(s) provided by Avaya are the registered or unregistered Marks of Avaya, its affiliates, its licensors, its suppliers, or other third parties. Users are not permitted to use such Marks without prior written consent from Avaya or such third party which may own the Mark. Nothing contained in this site, the Documentation, Hosted Service(s) and product(s) should be construed as granting, by implication, estoppel, or otherwise, any license or right in and to the Marks without the express written permission of Avaya or the applicable third party.

Avaya is a registered trademark of Avaya Inc.

All non-Avaya trademarks are the property of their respective owners.
Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

Contents

Chapter 1: Introduction 6
Purpose 6
Chapter 2: Avaya Mobile Video overview 7
Avaya Mobile Video overview 7
Benefits 7
Mobile Video solution architecture 8
Mobile Video components 9
Chapter 3: Interoperablity 11
Product compatibility 11
Operating system compatibility 11
Chapter 4: Licensing requirements 12
Chapter 5: Performance specifications 13
Chapter 6: Security 15
Security specification 15
Chapter 7: Interactions between Media Client and Avaya one-X® Agent 16
Chapter 8: Resources 19
Documentation 19
Training 20
Support 20

Chapter 1: Introduction

Purpose

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

This document is for people who want to gain a high-level understanding of Mobile Video features, capacities, and limitations.

Chapter 2: Avaya Mobile Video overview

Avaya Mobile Video overview

Avaya Mobile Video is an is an on-premise solution for Avaya Contact Center customers. With this solution, enterprises whose contact center infrastructure is based on Avaya Aura® Call Center Elite can integrate voice and video communications using the customer mobile devices. This solution provides the infrastructure to handle these calls securely with minimum changes to the contact center including the agent experience. Agents can accomplish the collaboration through deployment of Avaya Media Client for video calls and desktop applications in getting the call through the enterprise system.

The solution delivers a rich interactive experience in a collaborative manner. Enterprises can deploy this solution on top of existing communications capabilities and the core solution enables interaction with customers.

The Avaya Mobile Video solution includes:

- WebRTC platform to integrate with Avaya Aura® Call Center Elite
- Developer SDKs to create iOS, Android, and Chrome applications
- Avaya Media Client as a voice and video endpoint in the contact center

Benefits

Avaya Mobile Video offers the following benefits:

- **Increase customer loyalty**: With Mobile Video, customers can establish face-to-face interactions with agents. Thereby, the solution brings customers closer to the business and improves customer loyalty.
- **Improve customer retention**: Mobile Video provides a personal connection with customers and thereby improves customer retention rates.
- **Make the enterprise easier to do business with**: By implementing the click-to-call feature, customers need not look up or write down the contact center number. With Mobile Video, customers can click to call and reach the right resource without time spent in a queue. This feature reduces the call duration and increases customer satisfaction.
- **Reduce close times**: Seeing a customer improves the information gathered by a contact center agent. Mobile Video increases agents' understanding of the customer and thereby the ability to close cases and sales.

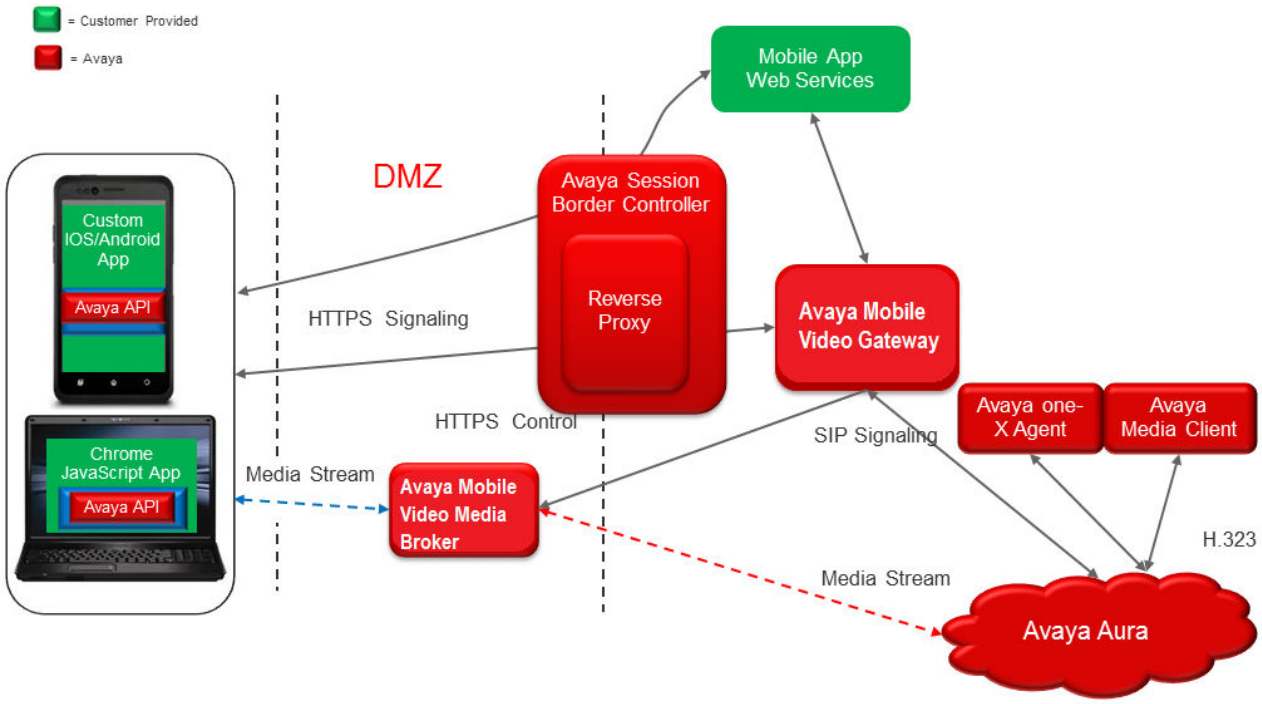
- **Give the best customers the best support**: High value customers can receive a better level of service. Enterprises can take advantage of the solution to offer personal care to their most valued customers.

Mobile Video solution architecture

Avaya Mobile Video consists of the following components:

- Mobile Video SDK
- Avaya Mobile Video Gateway
- Avaya Session Border Controller for Enterprise (Avaya SBCE)
- Avaya Mobile Video Media Broker
- Avaya Media Client
- Avaya one-X® Agent

The following is the high-level architecture of Avaya Mobile Video designed to inter-operate with existing Communication Manager Elite Contact Centers.



A customer starts a video call either from a mobile phone or a browser application built using the appropriate Mobile Video Application Programming Interface (API), located in the public internet. The initial setup, including application authentication, takes place through HTTP(S), passing through the demilitarized zone (DMZ), with the enterprise topology concealed behind Avaya SBCE.

The system streams the media over Secured Real-time Protocol (SRTP) to the Avaya Mobile Video Media Broker component located in the DMZ. The system transmits the signaling and media securely to Avaya Mobile Video Gateway and Avaya Aura infrastructure respectively. Customers call directly to H.323 endpoints or Communication Manager Elite Contact Center Vector Directory Numbers (VDN) for routing.

You can also use Mobile Video for audio-only calls. Audio-only calls are useful when customers do not have a working camera or are using a browser at a personal computer that does not have a camera. When audio-only calls are made, you cannot later add video as part of the call.

Mobile Video components

Mobile Video SDK

The Mobile Video SDK provides Application Programming Interfaces (APIs) for application designers to develop mobile applications with real-time audio and video capabilities.

The solution also offers SDK support for Android, iOS, and Google Chrome (for Windows OS). The Mobile Video SDK also includes a sample client application.

The API supports the following operations:

- Use Click-to-Call (audio only) from a web or mobile application
- Use Click-to-Video Call (two-way video) from a web or mobile application
- Allow customers to add video to an escalatable audio call
- Disable outgoing video
- Mute or unmute audio
- Turn the video off or on from a mobile device while keeping the live audio
- Receive and display appropriate error messages with user-friendly reasons for the failure and an offer for a retry
- Support video resolutions, such as 180p, CIF, 360p, 480p (VGA), 4CIF, and 720p

Avaya Mobile Video Gateway

Avaya Mobile Video Gateway is the signaling component that communicates with web browsers and mobile applications through HTTP or HTTPS protocol.

Avaya Mobile Video Gateway communicates with the client using the TCP-based WebSockets protocol to provide a standardized format for the server to send content to the client and allow messages to be passed back and forth while keeping the connection open.

The primary functions of Avaya Mobile Video Gateway are to:

- Provide Client-to-SIP signaling conversion
- Create and manage application collaboration sessions, sharing data, and sending messages to client applications

Avaya Mobile Video Media Broker

Avaya Mobile Video Media Broker converts the streaming of media between client SRTP with Avaya one-X® Agent and Avaya Media Client.

Avaya Media Client

The solution offers Media Client for video and voice. Media Client is a standalone client application to handle incoming voice and video calls. The Media Client UI provides only media control features unavailable in the controlling application. For example, video mute, video hold, audio mute, and audio hold. Agents install the client application either in silent mode or the desktop installation mode. Media Client supports on a single Communication Manager system in a customer's deployment.

From a UI perspective, agents control the voice and video calls from Avaya one-X® Agent and receive incoming voice and video on Media Client.

Avaya one-X® Agent

Avaya one-X® Agent is a desktop software application built specifically to meet the needs of contact center agents. When using Media Client with Avaya one-X® Agent, there are some operational interactions between the two user interfaces. You can find these interactions in Chapter 6: Interactions between Media Client and Avaya one-X® Agent on page 16.

Chapter 3: Interoperablity

Product compatibility

Mobile Video is compatible with the following Avaya products:

- Avaya Aura® Call Center Elite
- Avaya one-X® Agent (H.323)
- Avaya Media Client
- Avaya Aura® Communication Manager
- Avaya Aura® Session Manager
- Avaya Aura® System Manager
- Avaya Aura® Session Border Controller for Enterprise

For the latest and most accurate compatibility information, go to https://support.avaya.com/CompatibilityMatrix/Index.aspx.

Operating system compatibility

Mobile Video supports the following devices and web browsers:

- Android on operating system 6.0 or later with minimum CPU speed 1GHz on ARM architecture
- Apple with iOS 9.0 or later on iPhone 5 or later, iPad Air, iPad Air 2 or iPad Pro and iPad Mini2 or later
- Google Chrome browser on Microsoft Windows with version 60 or later
- Firefox browser on Microsoft Windows with version 55 or later
- Microsoft Edge browser on Microsoft Windows with version 40 or later

Chapter 4: Licensing requirements

To adjust the solution size and to meet customer service needs, Mobile Video is available as a full solution. The full solution consists of components, such as Mobile Video SDK, Authorization, and Media Client.

The solution is available based on the number of concurrent sessions, which is either Voice-only or Voice and Video. Each concurrent session consumes one license in PLDS. Customers must buy enough licenses to accommodate their requirements based on the most concurrent sessions expected at peak periods.

Mobile Video SDK licensing requirements

The Mobile Video SDK is available as a free resource from Avaya DevConnect Program. Developers must sign an end-user license agreement (EULA). Users of this SDK must acquire a license for MPEG-LA, and the responsibilities are defined in an EULA.

Media Client licensing requirements

Media Client is sold based on the number of concurrent registered agents. Media Client is licensed within Communication Manager as a Type-3 feature. Each registered client uses one license of type "IP_Phone" which is same as that Avaya deskphones use. Users must sign an EULA.

Chapter 5: Performance specifications

Mobile Video supports the following capacities:

- 100 concurrent video calls
- 300 concurrent audio-only calls
- 500 concurrent agent log-ins

The solution supports multiple Mobile Video Media Brokers, which allows customers to increase the traffic handling. The Mobile Video SDK inherits the capacity limits of Communication Manager (SIP). Media Client inherits the capacity limits of Communication Manager (H.323).

The number of Avaya Mobile Video Media Brokers that you require for the deployment depends on the following factors:

- The type of video call:
  - Pass-through: This is a call where both endpoints in the call use the same codec, such as H. 264 codec.
  - Transcoded: This is a call where the endpoints in a call use a different video codec, such as V8 to H.264 codecs. In this case, Mobile Video Media Broker converts one video stream in to the other codec type for both legs of the call.
- The video resolution.
- The video bit rate used/available.

Number of video calls supported per Mobile Video Media Broker

The following tables lists the number of calls a single Avaya Mobile Video Media Broker can support at various resolutions and bit rates:

Table 1: Pass-through

Resolution	450 Kbps	620 Kbps	768 Kbps
320x240@30fps	66	50	NA
640x480@30fps	66	50	50
1280x720@30fps	NA	50	50

Note:

768 Kbps is the maximum supported video bandwidth for this product

Table 2: Transcoded

Resolution	450 Kbps	620 Kbps	768 Kbps
320x240@30fps	13	12	NA
640x480@30fps	10	7	7
1280x720@30fps	NA	6	6

Support for 100 Video Calls

The following table lists the number of Mobile Video Media Brokers you require to support 100 video calls at each of the different configurations:

Table 3: Pass-through

Resolution	450 Kbps	620 Kbps	768 Kbps
320x240@30fps	2	2	NA
640x480@30fps	2	2	2
1280x720@30fps	NA	2	2

Note:

768 Kbps is the maximum supported video bandwidth for this product

Table 4: Transcoded

Resolution	450 Kbps	620 Kbps	768 Kbps
320x240@30fps	8	9	NA
640x480@30fps	10	15	15
1280x720@30fps	NA	17	17

Support on 3G and 4G/LTE networks

Mobile Video calls made over 3G and 4G/LTE mobile networks might experience poor video quality, poor audio quality, and dropped calls caused by low mobile network bandwidth. Avaya does not provide support to troubleshoot 3G and 4G/LTE mobile network issues that might cause problems with Mobile Video calls.

Chapter 6: Security

Security specification

Mobile Video provides secure implementation in an enterprise.

The following section describes the components that secure the Mobile Video environment.

External firewall

With external firewall, the Mobile Video client gains access to both Avaya Mobile Video Gateway through Avaya SBCE and Avaya Mobile Video Media Broker. For example, Denial of Service attacks. The external firewall only communicates with Avaya SBCE and Avaya Mobile Video Media Broker.

Avaya SBCE

Avaya SBCE ensure only authenticated connections reach the internal network. Avaya SBCE also decrypts the data on behalf of the application and establish a secure context with the client.

Avaya Mobile Video Media Broker

Avaya Mobile Video Media Broker relays real-time media between clients inside and outside of the network.

Mobile Video SDK with Secure-Real Time Protocol

The Mobile Video SDK secures the media stream between the client and Avaya Mobile Video Media Broker using Secure-Real Time Protocol (SRTP). The WebRTC specification mandates that this media stream is secure.

Internal firewall

The internal firewall allows the firewall to send traffic to Avaya one-X Agent and Avaya Media Client devices on the internal network for routing the media.

Avaya Mobile Video Gateway

Avaya Mobile Video Gateway communicates securely to web browsers and mobile applications through HTTP or HTTPS protocol.

Chapter 7: Interactions between Media Client and Avaya one-X® Agent

The following sections describe the Interactions betweenMedia Client and Avaya one-X® Agent during different call scenarios:

Interactions between Media Client and Avaya one-X® Agent during conference

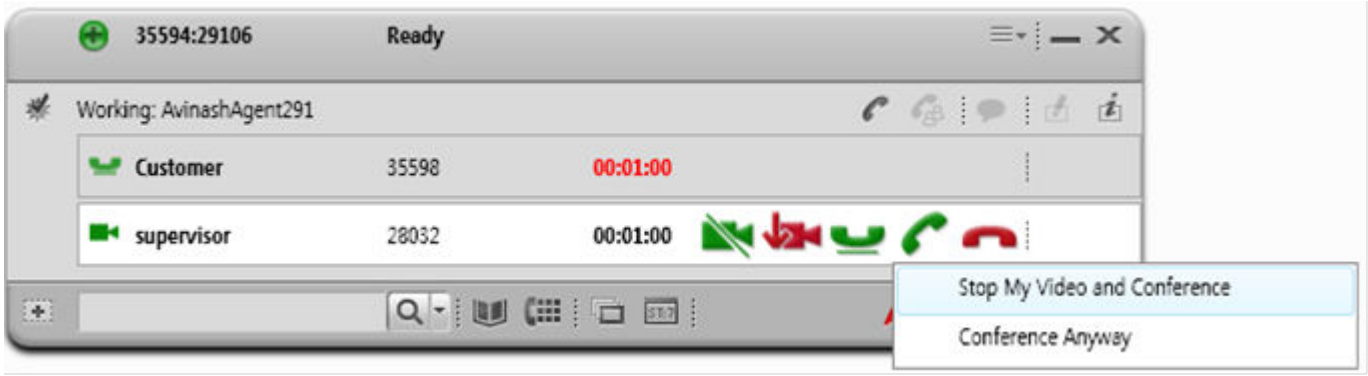
The following are interactions betweenMedia Client and Avaya one-X® Agent during conference:

- During a video call with the customer, the agent establishes a conference with the supervisor who has video capability. The system puts the customer call on hold and establishes a call to the supervisor. When the agent establishes the conference, the system puts all participants in the audio conference and video is not active among any participants. If the supervisor puts the call on hold, the video starts between the agent and the customer. In this context, the Mute Video and Stop Video buttons are available on Media Client but not on Avaya one-X® Agent.
- During the video conference between the supervisor and the customer, if the supervisor stops video, the audio conversation between the supervisor and the customer continues. If the supervisor tries to start the video again with the customer, the system may or may not allow the video depending on the state and the video capability of the agent. If the agent does not have video capability or has put the conference on hold, the system restarts the video between the supervisor and the agent. This occurs because Media Client supports video between two participants only at any given point.

Interactions between Media Client and Avaya one-X® Agent during consultative conference

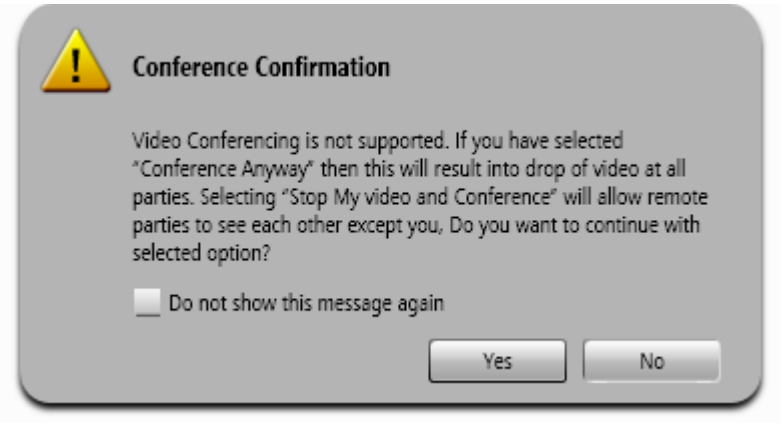
Media Client does not support video consultative conference. At any given time, a maximum of two parties can view each other if other participants from the conference stop the video or if they are not video enabled. With this limitation, there is a small change in the regular consultative conference behavior in Avaya one-X® Agent. For more information about Consultative Conference, see *Using Avaya one-X® Agent*.

In case of consultative conference, if an agent has an active video call with customer and tries to add a video enabled supervisor or another agent into a video conference by clicking the **Complete Conference** button on an active call interaction, then Avaya one-X® Agent displays the menu as shown in the below illustration:



- If the agent clicks **Stop My Video and Conference**, the system stops the video and continues with the conference which results into an audio-only conference. However, the system establishes the video communication between the customer and the supervisor. The agent can continue the conference without the video.
- If the agent clicks **Conference Anyway**, the system adds the video enabled supervisor/agent into the conference which results into loss of video communication at all parties, including the customer, the supervisor and thereby leads to an audio-only conference.

If the agent clicks any of the above menu options, the system displays the video conference warning message as shown below:



- If the agent clicks **Yes**, the system continues with the selected option.
- If the agent clicks **No**, the system cancels the complete conference operation.

If the agent selects the **Do not show this message again** option and clicks **Yes**, then the system saves the preference throughout the session. The system does not display the message again for the entire session. If the agent logs in to the next session, the system displays the message again while the agent tries to complete the video conference.

The system displays the **Stop My Video and Conference** and **Conference Anyway** options only if the agent is on a video call and adds another video enabled participant into the consultative conference. The system does not display these menu options for the audio-only conference or if any of the participants are not video enabled. Also, the system does not display these options for non-consultative video conferences or any other conference scenarios where the system does not display the **Complete Conference** button.

During a video call with a customer, if the agent stops the video by clicking the **Stop Video** button either on Avaya one-X® Agent or Media Client and adds another caller to the conference with audio-only, the system starts the video between the agent and the customer. This issue is due to Communication Manager behavior. Agent must stop the video again either from Avaya one-X® Agent or Media Client.

The following are some of the other Interactions betweenMedia Client and Avaya one-X® Agent during consultative conference:

- During a video conference with a customer, the Media Client window might close and reopen. This instance occurs while establishing the conference and creates the impression that the video call has ended and another video call has started. However, the video call remains active.
- During a video conference with a customer, if the agent selects the audio **Mute** or **Unmute** button from the Media Client window, the system changes the audio **Mute** and **Unmute** status accordingly on Media Client. However, the audio **Mute** or **Unmute** buttons does not change in the Avaya one-X® Agent UI.

Interactions between Media Client and Avaya one-X® Agent during hold operations

The following are the interactions betweenMedia Client and Avaya one-X® Agent during hold operations:

- If an agent stops a video during a call and the customer puts the call on hold, Media Client and Avaya one-X® Agent displays the **Start Video** button, but the button does not work until customer takes the call off hold.
- If either participants during the call stops the video, another party performs hold/unhold, and the participant clicks the **Start Video** button, the video does not start. The participant must first hold and then unhold the call.

Interactions between Media Client and Avaya one-X® Agent during mute operations

If an agent has not selected the **Send Video image automatically** option from the Video setting panel. In this case, if the agent unmutes the video call either from Avaya one-X® Agent or Media Client to establish a conference with the supervisor, the system mutes the video call on Media Client, although the agent has unmuted the video call.

Interactions between Media Client in multi-Communication Manager scenarios

The transfer or forwarding of mobile video calls from the target Communication Manager system to a second Communication Manager system is not supported in this release. Only a single Communication Manager system is supported.

Chapter 8: Resources

Documentation

See the following related documents at http://support.avaya.com.

Document number	Title	Use this document to:	Audience
Planning			
	Avaya Mobile Video Planning and Security Reference	Plan an installation of Avaya Mobile Video Server in terms of security considerations. Use this document during the preparation and planning of installation.	Implementation Engineers and Support Personnel
Implementing			
	Installing Avaya Mobile Video Server and Media Broker	Install, administer, maintain, and troubleshoot Avaya Mobile Video Server.	Implementation Engineers and Support Personnel
	Installing Avaya Media Client	Install, administer, maintain, and troubleshoot Avaya Media Client.	Implementation Engineers and Support Personnel
Administering			
	Administering Avaya Mobile Video	Administer Avaya Mobile Video during the initial system setup and to change the configuration.	Implementation Engineers and Support Personnel
Using			
	Using Avaya Media Client	Perform all user tasks in Avaya Media Client.	Sales Engineers, Solution, Architects, Implementation Engineers, and Support Personnel
Customizing			

Table continues…

Document number	Title	Use this document to:	Audience
	Avaya Mobile Video Server Software Development Guide	The API for customers to develop applications.	External Customers.

Training

The following courses are available for the Avaya Oceana™ Solution program.

Course code	Course title	Delivery Type
3420W	Avaya Oceana™ Solution Design Fundamentals	LMS
3470T	Avaya Oceana™ Solution Design Fundamentals APDS Online Test	LMS
2402W	Avaya Oceana™ Workspaces Agent Desktop Training	Along with the license
2404W	Avaya Oceana™ Workspaces Supervisor Desktop Training	Along with the license

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.

Index

Numerics

3G and 4G/LTE networks support 13

A

architecture 8
Authorization licensing requirements
    Media Client licensing requirements 12
Avaya Mobile Video Gateway 9, 15
Avaya Mobile Video Media Broker 9, 15
Avaya SBCE 15
Avaya Video Switcher 9

B

benefits 7

C

call transfer 16
compatibility 11
components 9
conference call 16

E

external firewall 15

I

intended audience 6
interactions
    Media Client 16
internal firewall 15

L

licensing requirements
    Authorization 12
    Mobile Video SDK 12

M

Media Client 9
media server 9
Mobile Video features 7
Mobile Video SDKs 9
Mobile Video SDKs licensing 12

O

operating system compatibility 11
overview
    Avaya Mobile Video 7

P

pass-through 13
performance specifications 13
purpose 6

R

related documentation 19

S

Secure-Real Time Protocol 15
security 15
SRTP 15
support 20

T

training 20
transcoded 13