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Avaya Solution & Interoperability Test Lab

Application Notes for Jabra Link 33 EHS Adapter, Jabra Engage 65 and Jabra Engage 75 Convertible USB/DECT headsets with Avaya 96x1 Series IP Deskphone (H.323 and SIP) - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Jabra Link 33 EHS Adapter, Jabra Engage 65 and Jabra Engage 75 Convertible USB/DECT headsets with Avaya 96x1 Series IP Deskphones.

Readers should pay attention to Section 2, in particular the scope of testing as outlined in Section 2.1 as well as the observations noted in Section 2.2, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

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1. Introduction

The Jabra Engage 65 and Jabra Engage 75 Convertible USB/DECT headsets is an auxiliary audio input/output device that augments the Avaya 96x1 Series IP Deskphones. The Jabra Engage 65 and Jabra Engage 75 Convertible headsets are connected to the Avaya 96x1 Series IP Deskphones via Jabra Link 33 EHS Adapter. Jabra Direct software is used to support, manage and enable optimal functionality for Jabra devices.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to and from the Avaya 96x1 Series IP Deskphones using the Jabra headset and verifying two-way audio. The call types included calls to voicemail, to local extensions, and to the PSTN.

The serviceability testing focused on verifying the usability of the Jabra Engage 65 and Jabra Engage 75 Convertible headsets after restarting the Avaya 96x1 Series IP Deskphone.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and endpoints utilized enabled capabilities of TLS/SRTP.

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/handsets that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/handset to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/handsets for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's Deskphones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality.

2.1. Interoperability Compliance Testing

All test cases were performed manually. The following features were verified:

- Placing calls to the voicemail system. Voice messages were recorded and played back to verify that the playback volume and recording level were good.
- Placing calls to internal extensions to verify two-way audio.
- Placing calls to the PSTN to verify two-way audio.
- Hearing ringing tone for incoming and ring back for outgoing calls.
- Answering and ending calls using the call control button on the Avaya phone.
- Using the volume control buttons on the Avaya phone to adjust the audio volume.
- Using the mute control button on the Avaya phone to mute and un-mute the audio.
- Using the hold control button on the Avaya phone to hold and un-hold the call.
- Switching between the Jabra headsets, the phone handset and speaker while in conversation.

For the serviceability testing, the Avaya 96x1 Series IP phone was restarted to verify proper operation of the Jabra headset after the reboot was completed.

2.2. Test Results

All test cases passed.

2.3. Support

For support on this Jabra headset solution, contact Jabra Technical Support at:

- Phone: +1-866-697-8757
- Website: http://www.jabra.com/Support
- Email: JabraSupport.US@jabra.com

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Jabra Engage 65 and Jabra Engage 75 Convertible USB/DECT headsets via Jabra Link 33 cable with Avaya 96x1 Series IP Deskphones. The configuration consists of an Avaya Aura® Communication Manager running on a virtualized server with an Avaya G450 Media Gateway providing connectivity to the PSTN via an ISDN-PRI trunk (not shown). Avaya Aura® Messaging was used as the voicemail system. The Jabra headsets are connected wirelessly via DECT to the base, and via Jabra Link 33 from the base to Avaya IP Deskphones port (see **Figure 2** on **Section 6.2**).
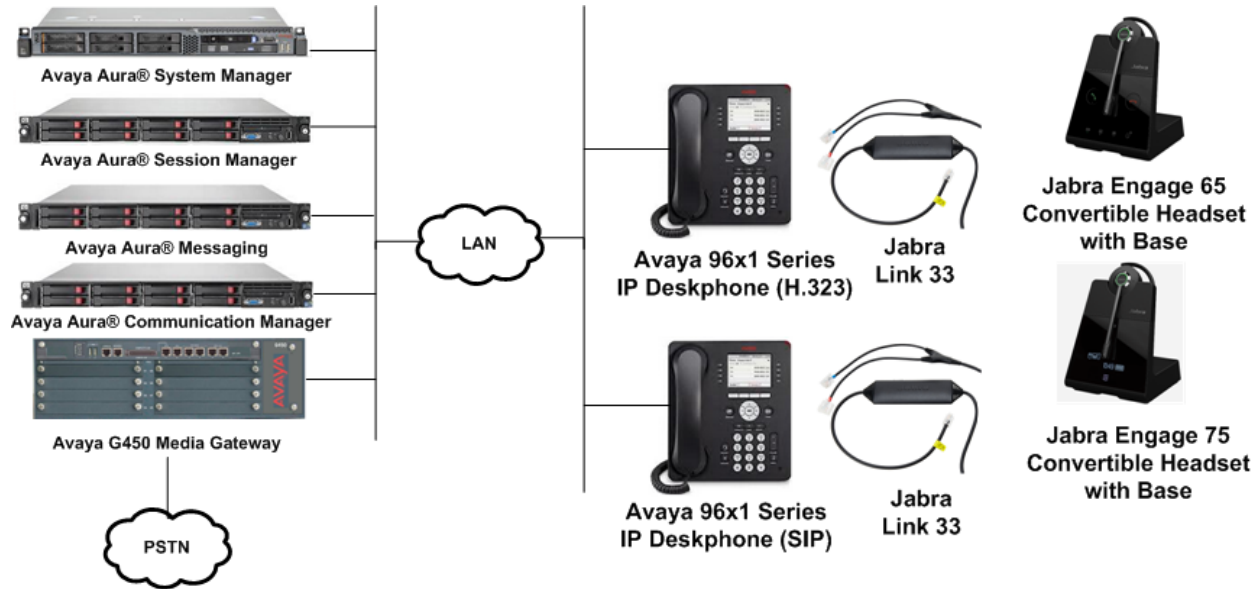

Figure 1: Test Configuration

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya Aura® Communication Manager	7.1.3.0.0.532.24515
Avaya Aura® Messaging	7.0 SP0 Patch 2
Avaya Aura® System Manager	7.1.3.0 Build No. - 7.1.0.0.1125193
Avaya Aura® Session Manager	7.1.3.0.713014
Avaya 9611G IP Deskphone (H.323)	6.6.6.04
Avaya 9641G IP Deskphone (SIP)	7.1.2.0.13
Jabra Engage 65 Convertible USB/DECT headsets with Base	1.9.13 1.9.13 (Service Pack 2)
Jabra Engage 75 Convertible USB/DECT headsets with Base	1.9.13 1.9.13 (Service Pack 2)
Jabra Link 33	1.7

5. Configure Avaya Aura® Communication Manager

The information provided in this section covers the H.323 station configuration and the verification of Communication Manager System Capacity for SIP station. The configuration of SIP station will be administered on Session Manager via the System Manager in the next section.

It is implied a working Communication Manager system is already in place, including dial plans and SIP trunks to a Session Manager. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 11**.

5.1. Verify System Capacity

Using Avaya Site Administrator Emulation Mode, use the **display system-parameters customer-options** command to determine the values of user license for **Maximum Off-PBX Telephones** allowed in the system. One OPS station is required per SIP User.

```
display system-parameters customer-options                    Page  1 of  12
                              OPTIONAL FEATURES

    G3 Version: V17                           Software Package: Enterprise
      Location: 2                             System ID (SID): 1
      Platform: 28                            Module ID (MID): 1

                                                         USED
                               Platform Maximum Ports: 65000 381
                                     Maximum Stations: 41000 192
                              Maximum XMOBILE Stations: 41000 0
                    Maximum Off-PBX Telephones - EC500: 41000 1
                    Maximum Off-PBX Telephones -   OPS: 41000 33
                    Maximum Off-PBX Telephones - PBFMC: 41000 0
                    Maximum Off-PBX Telephones - PVFMC: 41000 0
                    Maximum Off-PBX Telephones - SCCAN: 0     0
                       Maximum Survivable Processors: 313   2




        (NOTE: You must logoff & login to effect the permission changes.)
```

On **Page 2** of the **system-parameters customer-options form**, verify that the number of **Maximum Administered SIP Trunks** supported by the system is sufficient.

If there is insufficient capacity in either one of these parameters, contact an authorized Avaya sales representative.

```
display system-parameters customer-options               Page   2 of  12
                         OPTIONAL FEATURES

IP PORT CAPACITIES                                            USED
                 Maximum Administered H.323 Trunks: 12000 90
          Maximum Concurrently Registered IP Stations: 18000 6
           Maximum Administered Remote Office Trunks: 12000 0
Maximum Concurrently Registered Remote Office Stations: 18000 0
             Maximum Concurrently Registered IP eCons: 414   0
   Max Concur Registered Unauthenticated H.323 Stations: 100   0
                    Maximum Video Capable Stations: 41000 0
               Maximum Video Capable IP Softphones: 18000 3
                 Maximum Administered SIP Trunks: 24000 28
   Maximum Administered Ad-hoc Video Conferencing Ports: 24000 0
    Maximum Number of DS1 Boards with Echo Cancellation: 522   0




         (NOTE: You must logoff & login to effect the permission changes.)
```

5.2. Configure H.323 station

Use the **add station** command to create station. On **Page 1**, set the **Type** field to the station type to be emulated. In this example, *9611G* was used. Set the **Port** field to *IP* and configure a **Security Code**, which will be used as the password by user to log in. Configure phone options settings in HOME → Options & Settings → Call Settings → Headset Signalling → Switchhook and Alert".

```
add station 10001                                          Page   1 of   5
                              STATION

Extension: 10001                   Lock Messages? n            BCC: 0
     Type: 9611G                 Security Code: xxxxxx          TN: 1
     Port: S00002                Coverage Path 1:             COR: 1
     Name: one-XC                Coverage Path 2:             COS: 1
                                 Hunt-to Station:          Tests? y
STATION OPTIONS
              Location:              Time of Day Lock Table:
            Loss Group: 19     Personalized Ringing Pattern: 1
                                        Message Lamp Ext: 10001
          Speakerphone: 2-way        Mute Button Enabled? y
      Display Language: english        Button Modules: 0
 Survivable GK Node Name:
          Survivable COR: internal      Media Complex Ext:
   Survivable Trunk Dest? y                IP SoftPhone? n

                                        IP Video Softphone? n
                      Short/Prefixed Registration Allowed: default

                                        Customizable Labels? y
```

6. Configure Avaya Aura® Session Manager

This section describes aspects of the Session Manager configuration required for SIP registration. It is assumed that the Domains, Locations, SIP entities, Entity Links, Routing Policies, Dial Patterns and Application Sequences have been configured where appropriate for Communication Manager, Session Manager and Aura Messaging.

Session Manager is managed via System Manager. Using a web browser, access **https://<ip-addr of System Manager>/SMGR**. In the **Log On** screen, enter appropriate **User ID** and **Password** and click the **Log On** button.

Recommended access to System Manager is via FQDN.

Go to central login for Single Sign-On

If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

Use the "Change Password" hyperlink on this page to change the password manually, and then login.

Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.

This system is restricted solely to authorized users for legitimate business purposes only. The actual or attempted unauthorized access, use, or modification of this system is strictly prohibited.

Unauthorized users are subject to company disciplinary procedures and or criminal and civil penalties under state, federal, or other applicable domestic and foreign laws.

The use of this system may be monitored and recorded for administrative and security reasons. Anyone accessing this system expressly consents to such monitoring and recording, and is advised that if it reveals possible evidence of criminal activity, the evidence of such activity may be provided to law enforcement officials.

All users must comply with all corporate instructions regarding the protection of information assets.

User ID: [   ]
Password: [   ]

[Log On]   [Cancel]

Change Password

ⓘ **Supported Browsers:** Internet Explorer 11.x or Firefox 48.0, 49.0 and 50.0.

6.1. Verify Session Manager Ports for SIP endpoint registration

Each Session Manager Entity must be configured so that the SIP Endpoint can register to it. From the home page, under **Elements**, click **Routing → SIP Entities** (not shown) and select the Session Manager entity used for registration. Make sure that **TCP**, **UDP** and **TLS** entries are present. During the compliance test, station user Communicator registered to the Session Manager using TLS transport.

Listen Ports

[Add] [Remove]

3 Items   Filter: Enable

	Listen Ports	Protocol	Default Domain	Endpoint	Notes
☐	5060	TCP ▾	sglab.com ▾	☑	
☐	5060	UDP ▾	sglab.com ▾	☑	
☐	5061	TLS ▾	sglab.com ▾	☑	

Select : All, None

6.2. Add SIP User

The addition of SIP User will not be detailed here. Refer to details in adding user in the administration document for Avaya Aura® Session Manager in **[4]**. Configure phone options settings as in **Section 5.2**.

7. Configure Jabra Engage 65 and 75 headset solutions

This section covers the steps to integrate Jabra Engage 65 and Jabra Engage 75 headsets with Avaya IP Deskphones, including:

- Installing the Jabra Direct software
- Connect the Jabra headset with Jabra Link 33 EHS Adapter
- Configuring Jabra headset with Jabra Direct

7.1. Installing the Jabra Direct Software

Jabra Direct software can be obtained from Jabra support portal at https://www.jabra.com/support/. Installation of the software is done through executing the setup file and following the prompt.

7.2. Connect the Jabra headset with Jabra Link 33 EHS Adapter

Dock the headsets to the base. Plug the base to the power supply with the adapter provided. The primary headset will be registered with the base.

Connect the Jabra Link 33 interface cable between the Avaya IP Deskphone headset port and the Jabra headset base ports as in the **Figure 2** below.
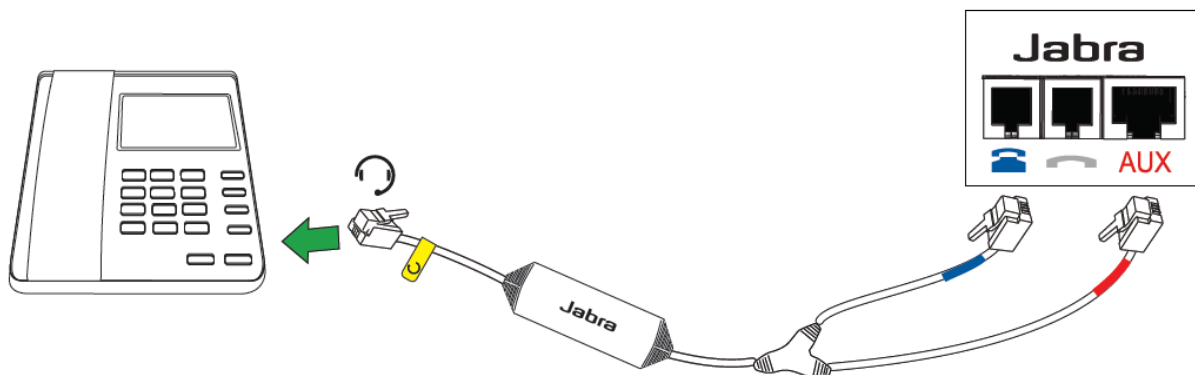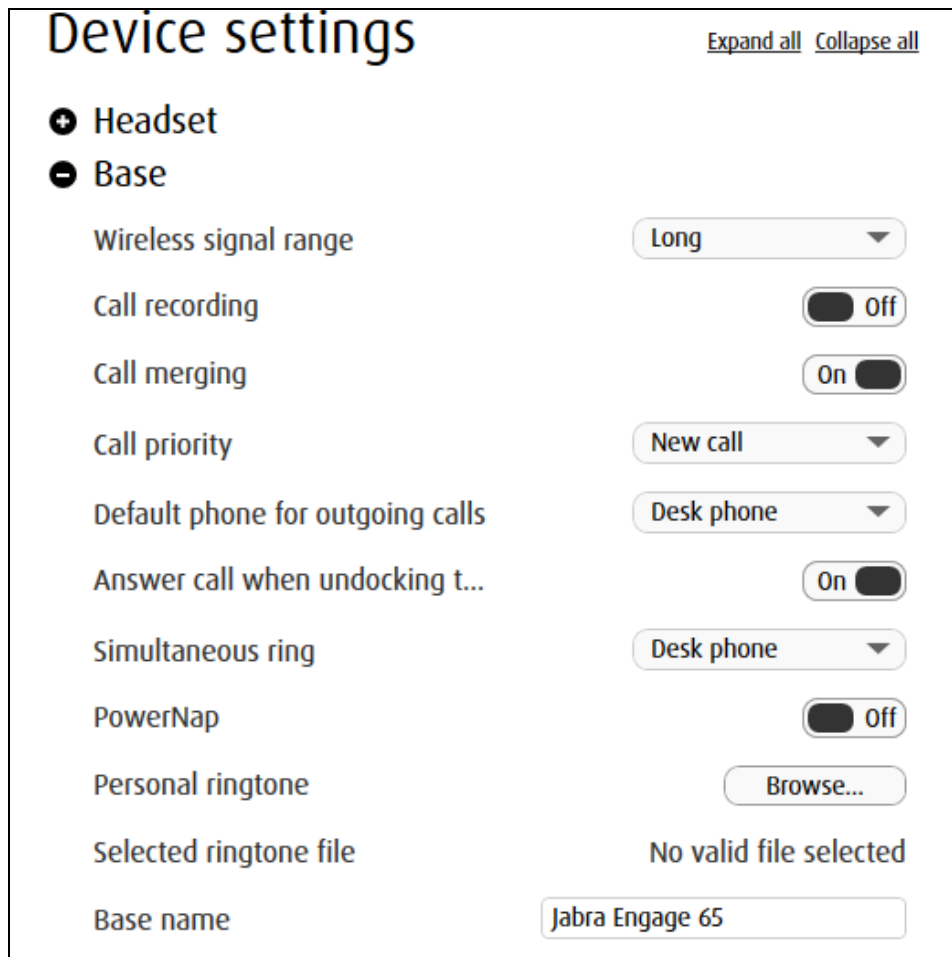
Figure 2: Setup of Jabra Link 33

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7.3. Configuring Jabra headset with Jabra Direct

Plug the Jabra Engage 65 and Jabra Engage 75 base to the USB port of a PC. Open the Jabra Direct program installed on the PC. Select the **Device** tab on the top menu and click on **Device settings** ⚙ near the top right pane (not shown). Scroll to the lower portion of the screen and expand the **Base.** Set the option for the following:

- **Default phone for outgoing calls:** *Desk phone*
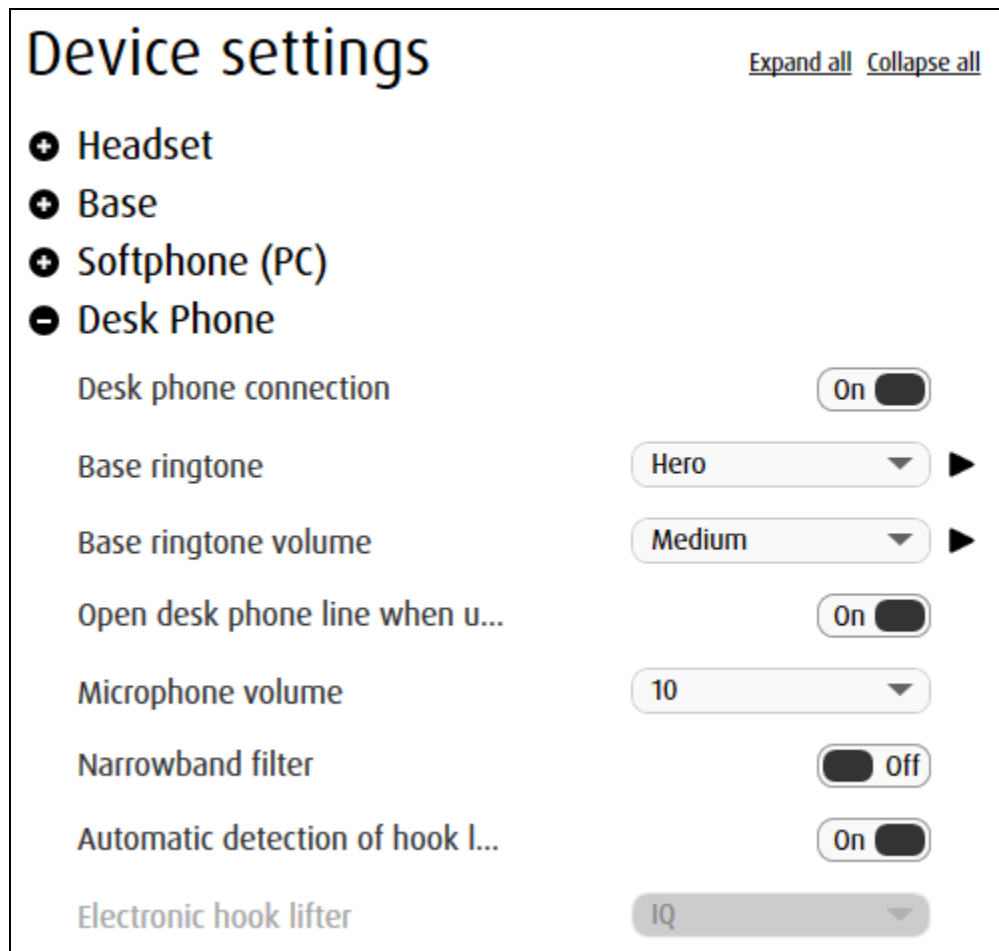- **Simultaneous ring:** *Desk phone*

Next, scroll to the lower portion of the screen and expand the **Desk Phone.** Set the option for the following:

- **Desk phone connection:** *On*
- **Automatic detection of hook lifter type:** *On*

The rest of the settings can be left as default. The **Headset** Device settings are left as default but can be adjusted for personal preferences. Click **Apply** (not shown) to confirm the settings and the base will reboot.

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8. Verification Steps

Verify that the Jabra headset has been connected to the Avaya 96x1 Series IP Deskphone. Once the headset is connected to the phone, verify that incoming and outgoing calls are established with two-way audio to the headset and that the headset can get dial tone and end an active call.

9. Conclusion

These Application Notes describe the configuration steps required to integrate the Jabra Link 33 EHS Adapter, Jabra Engage 65 and Jabra Engage 75 Convertible USB/DECT headsets with Avaya 96x1 Series IP Deskphones. All test cases were completed successfully.

10. Additional References

This section references the Avaya and Jabra documentation that are relevant to these Application Notes.

The following Avaya product documentation can be found at http://support.avaya.com.

[1] *Administering Avaya Aura® Communication Manager*, Release 7.1.3, Issue 5, February 2018.
[2] *Administering Avaya IP Deskphone H.323 9608, 9611G, 9621G, and 9641G*, Release 6.3.1, Issue 17, Jan 2014, Document Number 16-300698.
[3] *Administering Avaya Aura® Session Manager,* Release 7.1.2, Issue 4, March 2018.

The following Jabra documentation can be found at http://www.jabra.com.
[4] *Jabra Engage 65 User Manual.*
[5] *Jabra Engage 75 User Manual.*

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