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Avaya Solution & Interoperability Test Lab

Application Notes for Jabra Direct and Jabra Evolve 75e Headset with Avaya Equinox® for Windows - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Jabra Direct and Jabra Evolve 75e Headset with Avaya Equinox® for Windows. Jabra Evolve 75e Headset can be connected to the PC via Jabra Link 370 Bluetooth Dongle or USB cable. In this compliance test, the Bluetooth Dongle will be used. The Jabra Direct is a collection of programs that enable remote call control with Jabra headset and Avaya Equinox® for Windows. With a Jabra headset connected via the Jabra Link 370 Bluetooth Dongle plug into the USB interface on a PC, users can directly answer, end, mute/unmute calls and adjust volume using buttons on the Jabra headset.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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 Evolve 75e Headset together with Jabra Direct software allows connection and call control with Avaya Equinox® for Windows (hereafter referred to as Avaya Equinox) via Bluetooth to a PC. The Jabra Direct is a collection of programs that enable remote call control with Jabra headset and Avaya Equinox. With a Jabra headset connected via the Jabra Link 370 Bluetooth Dongle plug into the USB interface on a PC, users can directly answer, end, mute/unmute calls and adjust volume using buttons on the Jabra headset.

The Jabra Direct includes 2 core functions, which were exercised during the compliance testing:

- **Readiness Status:** Status of your device and softphone via a dashboard
- **Personalized Headset:** This is done via settings, firmware update and call control.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls with Avaya Equinox, answering and ending calls using the call control buttons on the Jabra headset, and verifying two-way audio. The call types included calls to voicemail, local extensions, and the PSTN. Call hold and resume, mute and un-mute are also tested.

The serviceability testing focused on verifying the usability of the Jabra headset solution after restarting the Avaya Equinox, restarting the PC, reconnecting the Jabra Bluetooth Dongle to the PC and moving the headset out of Bluetooth range.

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 telephones 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.
- Answering and ending calls using the call control button on the headset and the soft button on Avaya Equinox.
- Using the voice control button on the Jabra headset and the soft button on Avaya Equinox to hold and resume the audio.
- Using the volume control buttons on the Jabra headset to adjust the audio volume.
- Using the voice control button on the Jabra headset and the soft button on Avaya Equinox to mute and un-mute the audio.
- Verifying incoming call notification on Jabra headset.
- Verifying call ended notification on Jabra headset.

The serviceability testing focused on verifying the usability of the Jabra headset solution after restarting the Avaya Equinox, restarting the PC, reconnecting the Bluetooth Dongle to the PC and moving the headset a distance away from PC.

2.2. Test Results

All test cases passed successfully.

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 Direct and Jabra Evolve 75e Headset solution. 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 a simulated public trunk. Avaya Aura® Messaging was used as the voicemail system. The Jabra Direct software was installed on the PC. The Jabra headset is connected via the Jabra Link 370 Bluetooth Dongle to the PC.
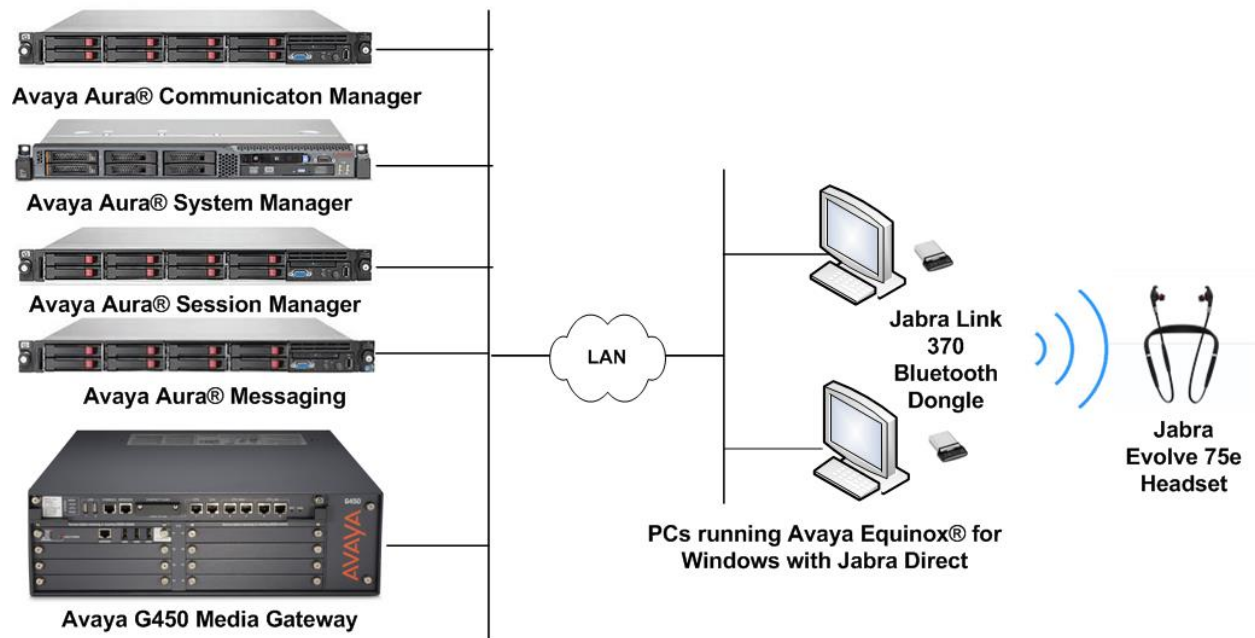
Figure 1: Test Configuration

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 with Avaya G450 Media Gateway	7.1.2.0.0.532.24184
Avaya Aura® Messaging	7.0 SP0 Patch 2
Avaya Aura® System Manager	7.1.2.0 Build No.– 7.1.0.0.1125193
Avaya Aura® Session Manager	7.1.2.0.712004
Avaya Equinox® for Windows running on a PC with Windows 10 Pro	3.3.1.50.6
Jabra Evolve 75e	1.12
Jabra Link 370 Bluetooth Dongle	1.18
Jabra Direct running on a PC with Windows 10 Pro	3.11

5. Configure Avaya Aura® Communication Manager

The information provided in this section describes the verification of Communication Manager System Capacity for this solution.

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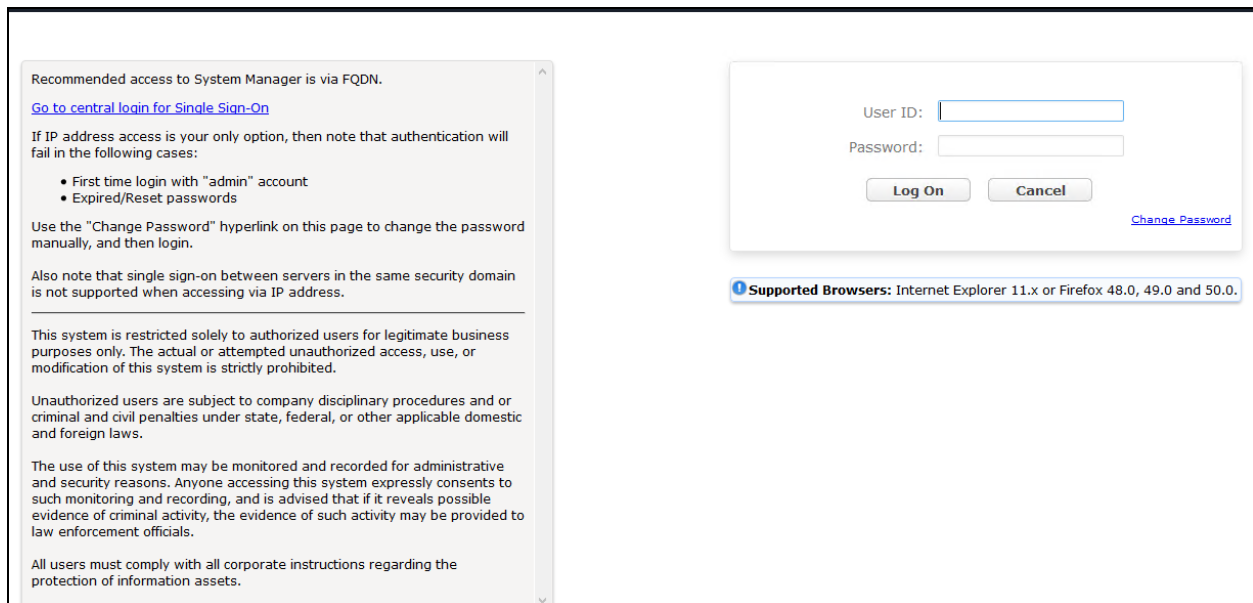
If there is insufficient capacity in either one of these parameters, contact an authorized Avaya sales representative.

```
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.)
```

6. Configure Avaya Aura® Session Manager

This section describes aspects of the Session Manager configuration required for Avaya Equinox to register. 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, Avaya Equinox® for Windows 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]**.
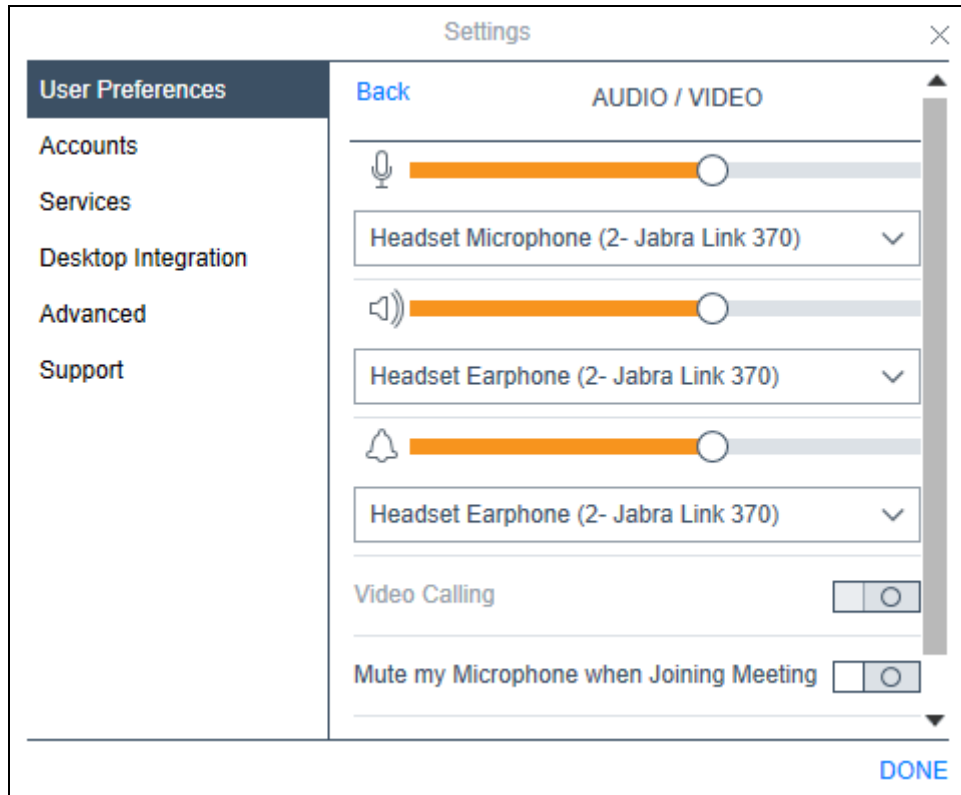
7. Configure Avaya Equinox® for Windows

Avaya Equinox client is a SIP soft phone application that provides users with access to Unified Communications (UC) services. This section shows how to configure the Jabra Evolve 75e Headset to use with Avaya Equinox.

From Avaya Equinox window, navigate to **Settings → Accounts → User Preferences → Audio/Videos.**
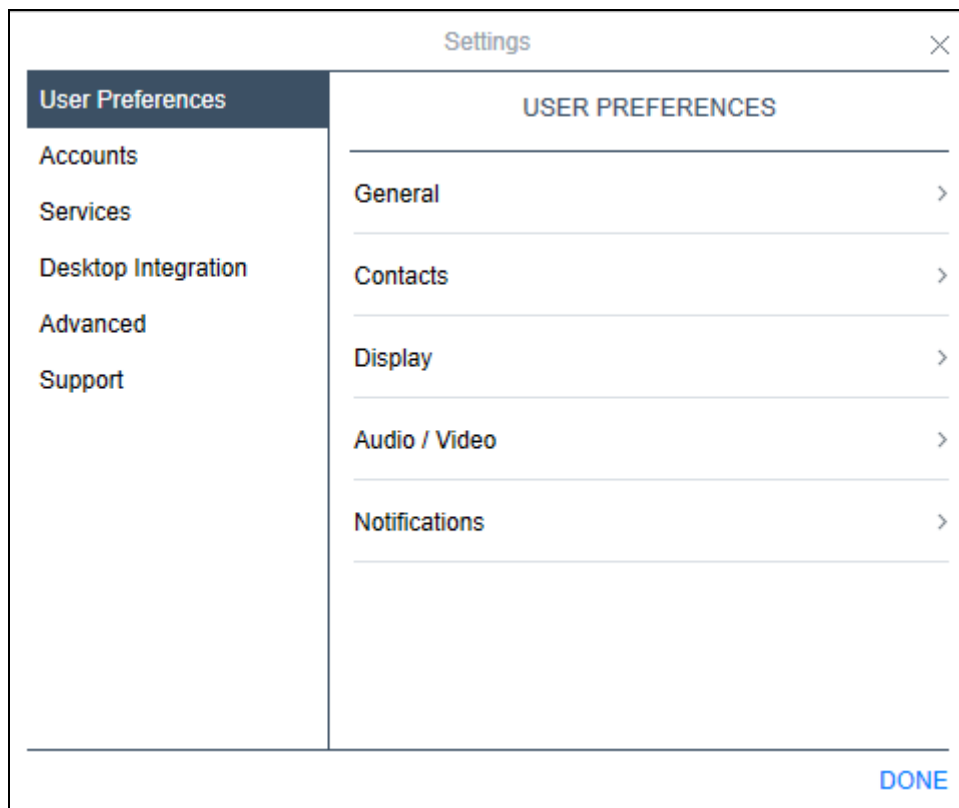
Select **Headset Microphone (2- Jabra Link 370)** for *Microphone* 🎤 and **Headset Earphone (2- Jabra Link 370)** for *Speaker* 🔊 as shown below. It is optional for *Ringing on incoming calls* 🔔 to be set to **Headset Earphone (2- Jabra Link 370)**. But if **Ringtone in headset (Bluetooth)** is turn **On** in **Section 8.3** when configuring headset through Jabra Direct software, then it is better to be set the same.

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From Avaya Equinox window, navigate to **Settings → Accounts → Phone Service**; enter the SIP user and its password for a configured user.
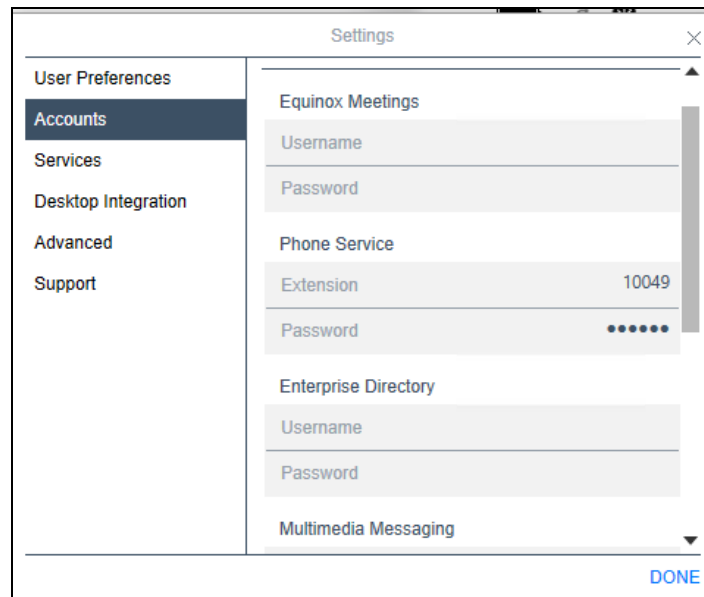
This window shows the Avaya Equinox had successfully registered to Session Manager.
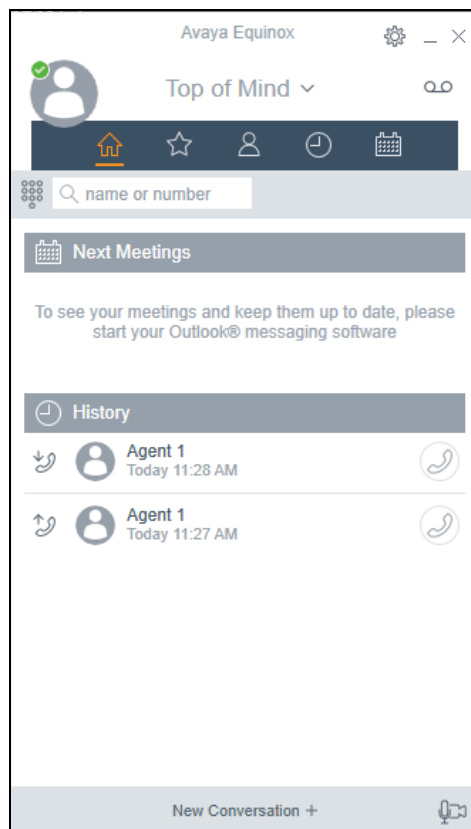
8. Configure Jabra Evolve 75e Headset solution

This section covers the steps to integrate Jabra Evolve 75e Headsets with Avaya Equinox, including:

- Installing the Jabra Direct software
- Connect the Jabra headset
- Configuring Jabra Direct

Note: After successfully performing this procedure, the Jabra headset will be detected in Avaya Equinox as described in **Section 7**.

8.1. 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.

8.2. Connect the Jabra headset

Plug the Jabra Link 370 Bluetooth dongle to the USB port of the PC. The device drivers will automatically be installed. Power on the Jabra Evolve 75e. The Jabra Evolve 75e Headset and the Jabra Link 370 are pre-paired and will automatically connect.

Once the Jabra Link 370 is paired with the headset, open the Jabra Direct program installed on the PC. Select the **Bluetooth** tab on the top menu and it will show the Jabra Link 370 is paired with the Jabra Evolve 75e as below:
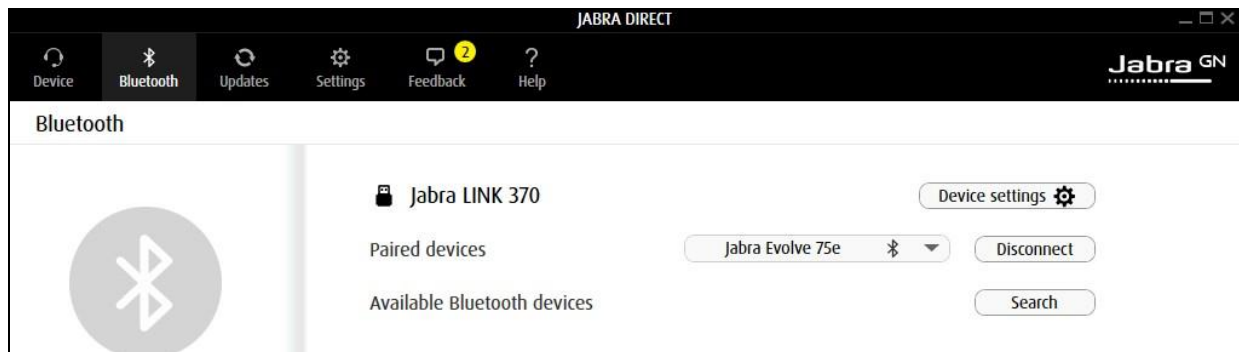
Select the **Device** tab on the top menu and the **Device ready for use** is shown on the right pane.
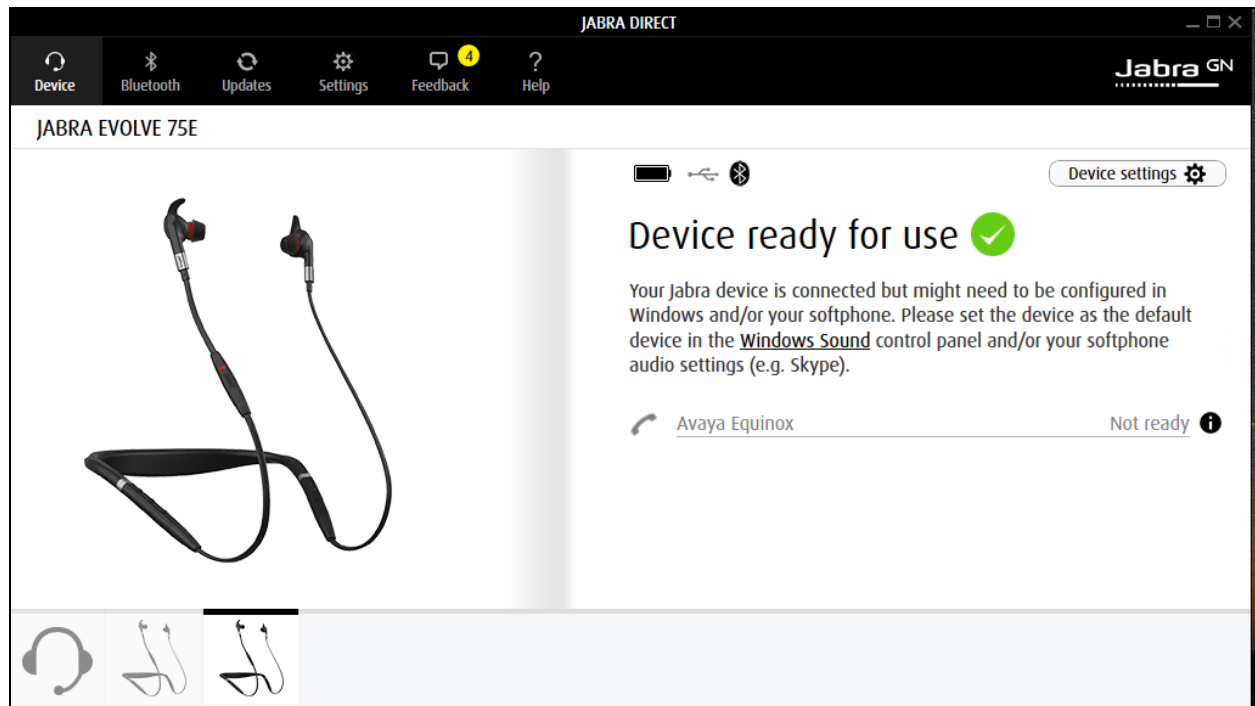
8.3. Configuring Jabra Direct

On the default screen (**Device** tab), click on **Device settings** on the right pane (not shown)**.** Scroll to the lower portion of the screen and expand the **Softphone (PC).** Assuming Avaya Equinox is setup and login, set the option for the following:

- **Softphone integration (Bluetooth): On**
- **Preferred softphone (Bluetooth): Avaya Equinox** [as opposed to Standard Softphone]
- **Ringtone in headset (Bluetooth): On** [optional for ringtone to be played on headset]
- **PC audio: Off** [turning on will setup audio link to headset which might interfere with the conversation using Avaya Equinox]
- **Manual control of PC audio from Jabra Direct Dashboard: Off** [Control of PC audio link and PC communication link is not required]

.
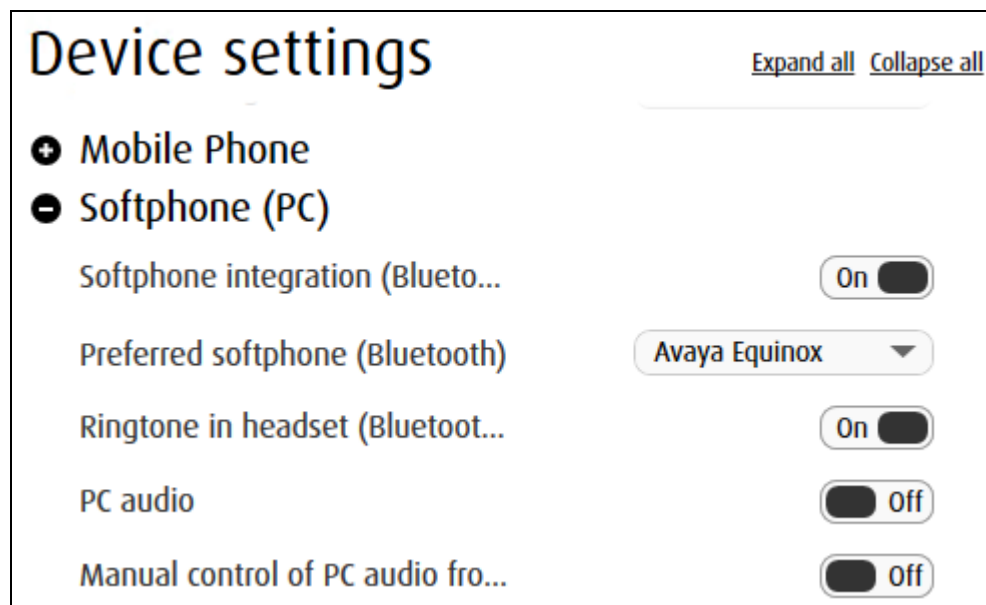
9. Verification Steps

This section verifies that the Jabra headset has been successfully integrated with the Avaya Equinox.

1. Verify that the Jabra headset has been successfully connected for use with Avaya Equinox. From the **Jabra Direct** program, select the **Device** tab. Verify that the **Device ready for use** is tick green ✅ as below.
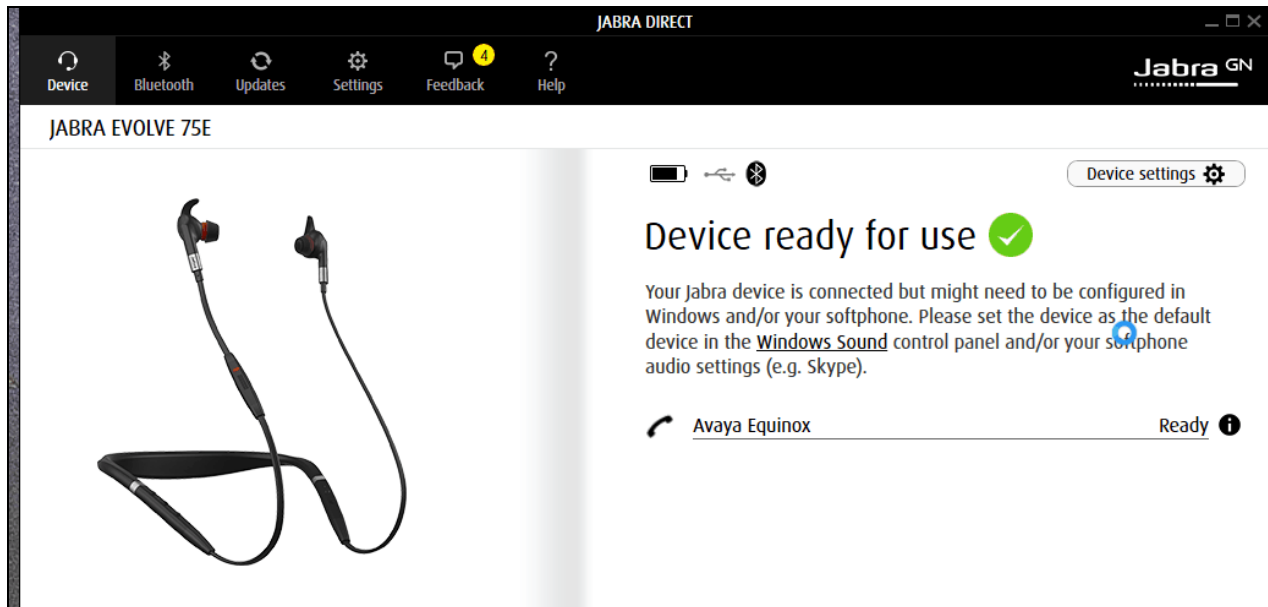
2. Verify that the Avaya Equinox is shown in **Ready** state. Once the Jabra headset is connected to Avaya Equinox, verify that incoming and outgoing calls can be established with two-way audio to the headset. For incoming calls, answer the call by pressing the **multi-function** button on the headset. Refer to Jabra Evolve 75e User Manual **[5]** for more information on the buttons.

3. End the call by pressing the call control button on the headset.

4. Verify also that Jabra Evolve 75e Headset is able to remotely control call functions from the headset such as answer, mute/un-mute, hold/resume and end the call.

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10. Conclusion

These Application Notes describe the configuration steps required to integrate Jabra Direct and Jabra Evolve 75e Headset with Avaya Equinox® for Windows. All test cases were completed successfully.

11. 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 7.1.2, Issue 5, February 2018.
[2] *Planning for and Administering Avaya Equinox® for Android, iOS, Mac and Windows,* Release 3.3, Issue 1, December 2017.
[3] *Using Avaya Equinox® for Android, iOS, Mac, and Windows,* Release 3.3, Issue 1, December 2017.
[4] *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.
[5] *Jabra Evolve 75e User Manual.*
[6] *Jabra Link 370 – Technical specifications*

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