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Avaya Solution & Interoperability Test Lab

Application Notes for Plantronics APV-63 EHS Adapter and Plantronics Savi 700-M Series Wireless Headset System with Avaya 96x1 Series IP Telephones - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the Plantronics APV-63 EHS (Electronic Hook Switch) Adapter and the Plantronics Savi 700-M Series Wireless Headset System with Avaya 96x1 Series IP Telephones using H.323 and SIP protocols. Plantronics APV-63 EHS provides Plantronics headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the headset when the user is away from their desk. The Savi 710-M wireless headset was used for this compliance test.

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.

1. Introduction

These Application Notes describe the configuration steps required to integrate the Plantronics APV-63 EHS (Electronic Hook Switch) Adapter and the Plantronics Savi 700-M Series Wireless Headset System with Avaya 96x1 Series IP Telephones using H.323 and SIP protocols. Plantronics APV-63 EHS provides Plantronics headsets the ability to hear ring tones, answer and end calls, and mute/un-mute calls directly from the headset when the user is away from their desk. The Savi 710-M wireless headset was used for this compliance test.

2. General Test Approach and Test Results

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'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.

The interoperability compliance test included feature and serviceability testing. The feature testing focused on placing calls to and from the Avaya 96x1 Series IP Telephones with the Plantronics APV-63 EHS Adapter and Plantronics Savi 710-M wireless headset and verifying two-way audio. The call types included calls to voicemail, local stations, and the PSTN.

The serviceability testing focused on verifying the usability of the Plantronics wireless headset after restarting the Avaya 96x1 Series IP Telephones and re-connecting the Plantronics headset.

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 incoming call notification.
- Hearing ring back tone for outgoing calls.
- Answering and ending calls using the call control button on the headset.
- Toggling between handset, speakerphone, and headset.
- Using the volume control buttons on the Plantronics headset to adjust the audio volume.
- Using the mute control button on the Plantronics headset to mute and un-mute the audio.
- Using the headset with 9611G H.323 and 9621G SIP telephones.

For serviceability testing, the IP telephone and headset were restarted to verify proper operation of the headset after the reboot was completed.

2.2. Test Results

All test cases passed. See **Section 3.1** for instructions on answering, ending, and placing calls with the headset.

2.3. Support

For technical support and information on Plantronics APV-63 EHS Adapter and Plantronics Savi 700-M Series Wireless Headset System, contact Plantronics at:

- Phone: 800-544-4660 (toll free)
          +1 831-426-5858 (International)
- Website: http://www.plantronics.com/north_america/en_US/support/

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Plantronics APV-63 EHS Adapter and Plantronics Savi 710-M Wireless Headset System with Avaya 96x1 Series IP Telephones using H.323 and SIP protocols. The configuration consists of an Avaya S8300 Server running Avaya Aura® Communication Manager 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.
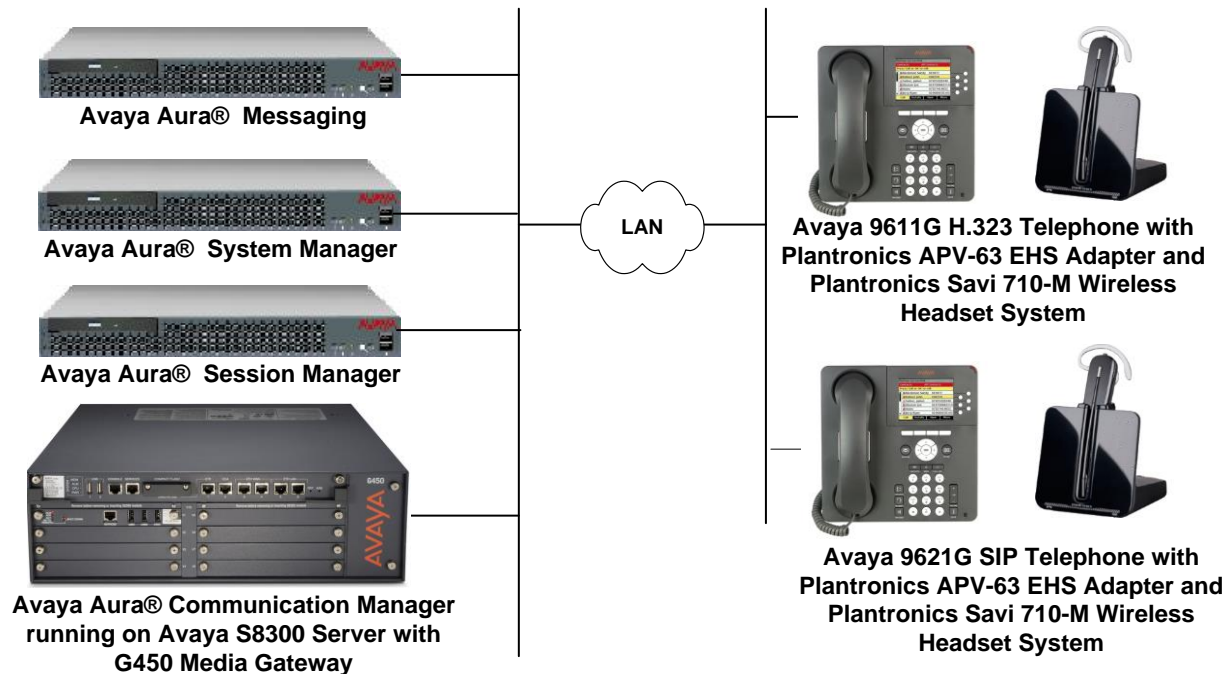

Avaya Aura® Messaging

Avaya Aura® System Manager

Avaya Aura® Session Manager

Avaya Aura® Communication Manager running on Avaya S8300 Server with G450 Media Gateway

LAN

Avaya 9611G H.323 Telephone with Plantronics APV-63 EHS Adapter and Plantronics Savi 710-M Wireless Headset System

Avaya 9621G SIP Telephone with Plantronics APV-63 EHS Adapter and Plantronics Savi 710-M Wireless Headset System

Figure 1: Avaya 96x1 Series IP Telephones with Plantronics APV-63 EHS Adapter and Plantronics Savi 710-M Wireless Headset System

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3.1. Answering, Ending, and Placing Calls

To answer, end, or place a call using the Plantronics headset follow the instructions below.

To Answer a Call
- Press the call control button on the headset to answer an incoming call. This would automatically activate the headset button on the IP telephone.

    Alternatively, press the headset button on the IP telephone to answer an incoming call. Note that pressing the headset button on the H.323 telephone automatically activates the call control button on the headset, if the switchhook option is enabled for an H.323 telephone as described in **Section 4.1.1**. For SIP telephone, see note below.

- If auto-answer is enabled and the headset button on the IP telephone *and* the call control button on the headset are activated, subsequent incoming calls will be answered automatically and a two-way audio path will be established to the headset.

To End a Call
Press the call control button on the headset to terminate a call. This automatically deactivates the headset button on the IP telephone.

Alternatively, press the headset button on the IP telephone to terminate a call. Note that pressing the headset button on the IP telephone automatically deactivates the call control button on the headset, if the switchhook option is enabled for an H.323 telephone as described in **Section 4.1.1**. For SIP telephone, see note below.

To Place a Call
Press the call control button on the headset to get dial tone and dial the number. This would automatically activate the headset button on the IP telephone.

Alternatively, press the headset button on the IP telephone to get dial tone and dial the number. Pressing the headset button on the IP telephone automatically activates the call control button on the headset, if the switchhook option is enabled for an H.323 telephone as described in **Section 4.1.1**. For SIP telephone, see note below.

Note: The Switchhook option is available on H.323 telephones only. This option is currently not supported on SIP telephones. Pressing the headset button on a SIP telephone does not automatically activate or deactivate the call control button on the headset. If the headset button on the SIP telephone is pressed first, the user must follow up by pressing the call control button on the headset to place a call, answer a call, or terminate a call.

Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running Avaya S8300D Server with a G450 Media Gateway	6.3 SP 3 (R016x.03.0.124.0 w/Patch 21172)
Avaya Aura® System Manager running on an Avaya S8800 Server	6.3.5 Build No. – 6.3.0.8.5682-6.3.8.2826 Software Update Revision No: 6.3.5.5.2017
Avaya Aura® Session Manager running on an Avaya S8800 Server	6.3 (6.3.5.0.635005)
Avaya Aura® Messaging	6.2 SP 2
Avaya 96x1 Series IP Telephones	6.3073 (H.323) 6.3.0.73 (SIP)
Plantronics Savi W710-M Wireless Headset	Base 19.85
Plantronics APV-63 EHS Adapter	P/N 38734-11

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4. Configure Avaya Aura® Communication Manager

This section covers the station configuration for the Avaya 9611G H.323 and 9621G SIP Telephones. The configuration is performed via the System Access Terminal (SAT) on Communication Manager or via Avaya Aura® System Manager for SIP stations.

4.1. Configure a Station for Avaya 96x1 Series H.323 Telephone

Use the **add station** command to create a station for the 9611G IP telephone. Set the **Type** field to the station type to be emulated. In this example, *9611* was used. Set the **Port** field to *IP* and configure a **Security Code** as the password to be used by the Avaya telephone to log in.

Note: To enable Auto Answer on the IP telephone set the **Auto Answer** field on **Page 2** (not shown) to the appropriate value, such as *all*.

```
add station 40000                                          Page   1 of   5
                                 STATION

Extension: 40000                     Lock Messages? n              BCC: 0
     Type: 9611                       Security Code: 40000           TN: 1
     Port: IP                        Coverage Path 1: 50            COR: 1
     Name: Plantronics               Coverage Path 2:               COS: 1
                                     Hunt-to Station:            Tests? y
STATION OPTIONS
                                     Time of Day Lock Table:
            Loss Group: 19      Personalized Ringing Pattern: 1
                                          Message Lamp Ext: 40000
         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? n
                     Short/Prefixed Registration Allowed: default

                                    Customizable Labels? y
```

4.1.1. Enable Switchhook & Alerting Option

In the `46xxsettings.txt` file, the HEADSETBIDIR parameter needs to be set to '1' so that switchhook and alerting are enabled for the H.323 phone. This allows incoming call alert to be heard on the headset and the call control button activated/deactivated by pressing the headset button on the phone. Below is an example for setting the parameter.

```
############  HEADSET SETTINGS (H.323 ONLY)  ###############
##
## HEADSETBIDIR specifies whether bidirectional signaling
##  on the headset interface will be enabled or disabled.
##  Value  Operation
##   0    Disabled (default)
##   1    Switchhook and alerting signaling are both enabled
##   2    Only switchhook signaling is enabled
##  This parameter is supported by:
##      96x1 H.323 R6.3 and later (values 0-2)
##      96x1 H.323 R6.2.1 and later (values 0-1)
##  Note that 96x1 H.323 R6.2 only supported signaling for alerting.
SET HEADSETBIDIR 1
```

Alternatively, the switchhook and alerting options can be enabled through the 96x1 phone menu. Press the **Menu** button on the phone and then navigate to **Options & Settings** →**Call Settings** → **Headset Signaling…** Select the **Switchhook & Alerting** option.

4.2. Configure a Station for Avaya 96x1 Series SIP Telephone

The SIP station was configured automatically through Avaya Aura® System Manager. Use the **display station** command to view the station for the 9621G IP telephone. The **Station Type** was set to *9621SIP* and a descriptive **Name** was also provided. Use the default values for the other fields on **Page 1**.

Note: To enable Auto Answer on the IP telephone set the **Auto Answer** field on **Page 2** (not shown) to the appropriate value, such as *all*.

```
display station 46020                                      Page   1 of   6
                              STATION

Extension: 46020                   Lock Messages? n              BCC: 0
     Type: 9621SIP                  Security Code:                TN: 1
     Port: IP                   Coverage Path 1: 50             COR: 1
     Name: Plantronics          Coverage Path 2:                COS: 1
                                Hunt-to Station:
STATION OPTIONS
                                    Time of Day Lock Table:
           Loss Group: 19
                                        Message Lamp Ext: 46020

     Display Language: english

        Survivable COR: internal
  Survivable Trunk Dest? y                         IP SoftPhone? n

                                                    IP Video? n
```

5. Configure Plantronics APV-63 EHS and Plantronics Savi 700-M Wireless Headset System

To connect the Savi 710-M wireless headset to the Avaya 96x1 Series IP Telephone, use the APV-63 EHS adapter to connect the wireless base of the headset to the headset port of the IP telephone. All other default settings on the wireless base were used. Note that for the H.323 telephone, an external ring detect cable is not required for the headset to hear incoming call notification (i.e., beeps). However, the `46xxsettings.txt` file must be modified or the Alerting option must be enabled as described in **Section 4.1.1**. For the SIP telephone, an external ring detect cable is required and the `46xxsettings.txt` file does not have to be altered. The adhesive end of the ring detect cable is connected to the speaker grill of the SIP telephone and the other end connects into the APV-63 EHS cable.

6. Verification Steps

Verify that the Plantronics APV-63 EHS and Plantronics Savi 700-M have been connected to the Avaya 96x1 Series IP Telephone. Once the headset is connected to the phone, verify that incoming and outgoing calls are established with two-way audio to the headset. In addition, verify that the headset can get dial tone, hear incoming call alert, answer an incoming call, and terminate an active call.

7. Conclusion

These Application Notes describe the configuration steps required to integrate the Plantronics APV-63 EHS Adapter and Plantronics Savi 700-M Series Wireless Headset System with Avaya 96x1 Series IP Telephones configured for H.323 and SIP. All test cases were completed successfully with observations noted in **Section 2.2**.

8. Additional References

This section references the Avaya and Plantronics 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 6.3, Issue 9, October 2013, Document Number 03-300509.
[2] *Administering Avaya 9601/9608/9608G/9611G/9621G/9641G Deskphones SIP*, Release 6.3.1, Issue 3, January 2014, Document Number 16-601944.
[3] *Installing and Maintaining Avaya Deskphone SIP 9601/9608/9608G/9611G/9621G/9641G Deskphones*, Release 6.3.1, Issue 4, January 2014, Document Number 16-603504.
[4] *Administering Avaya IP Deskphone H.323 9608, 9608G, 9611G, 9621G, and 9641G*, Release 6.3.1, Issue 17, January 2014, Document Number 16-300698.
[5] *Installing and Maintaining Avaya IP Deskphone H.323 9608, 9608G, 9611G, 9621G, and 9641G*, Release 6.3.1, Issue 9, January 2014, Document Number 16-603603.

The following Plantronics documentation can be found at http://www.plantronics.com.

[6] *Plantronics APV-63 EHS Adapter Quick Reference Guide.*
[7] *Plantronics Savi W710-M Multi-Device Wireless Headset System Quick Start Guide.*

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