



Avaya Solution & Interoperability Test Lab

Application Notes for Plantronics APV-63 EHS Adapter and Plantronics CS500 Series Wireless Headset System with Avaya 9400/9500 Series Digital 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 CS500 Series Wireless Headset System with Avaya 9400/9500 Series Digital Telephones. Plantronics APV-63 EHS provides Plantronics headsets the ability to hear ring tones, answer and end calls, and mute/unmute calls directly from the headset when the user is away from their desk. The CS540 wireless headset was used to verify the functionality of the EHS adapter.

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 CS500 Series Wireless Headset System with Avaya 9400/9500 Series Digital Telephones. Plantronics APV-63 EHS provides Plantronics headsets the ability to hear ring tones, answer and end calls, and mute/unmute calls directly from the headset when the user is away from their desk. The CS540 wireless headset was used to verify the functionality of the EHS adapter.

Note: The Avaya 9400 Series Digital Telephone is supported on Avaya Aura® Communication Manager and the Avaya 9500 Series Digital Telephone is supported on Avaya IP Office.

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 9400/9500 Series Digital Telephones with the Plantronics APV-63 EHS Adapter and Plantronics CS540 wireless 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 Plantronics wireless headset after restarting the Avaya 9400/9500 Series Digital Telephones.

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 ring back tone for incoming and outgoing calls.
- Answering and ending calls using the call control button on the 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.

For the serviceability testing, the Avaya 9404/9508 Digital Telephones were restarted to verify proper operation of the headset after the reboot was completed.

2.2. Test Results

All test cases passed with the following observation(s):

- When the headset button on the Avaya 9508 Digital Telephone is activated, the call control button on the Plantronics headset must also be activated to hear dial tone.
- When auto-answer is enabled on the Avaya 9400/9500 Series Digital Telephones, incoming calls are automatically answered on the handset, but the call control button on the Plantronics headset still needs to be pressed in order to use the headset.

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 CS500 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 CS540 Wireless Headset System with Avaya 9400/9500 Series Digital Telephones. The configuration consists of an Avaya S8300 Server running Avaya Aura® Communication Manager with an Avaya G450 Media Gateway, which support the 9400 series digital telephone, and an Avaya IP Office, which supports the 9500 series digital telephone. The G450 Media Gateway provides connectivity to the PSTN via an ISDN-PRI trunk (not shown). Avaya Aura® Messaging was used as the voicemail system.

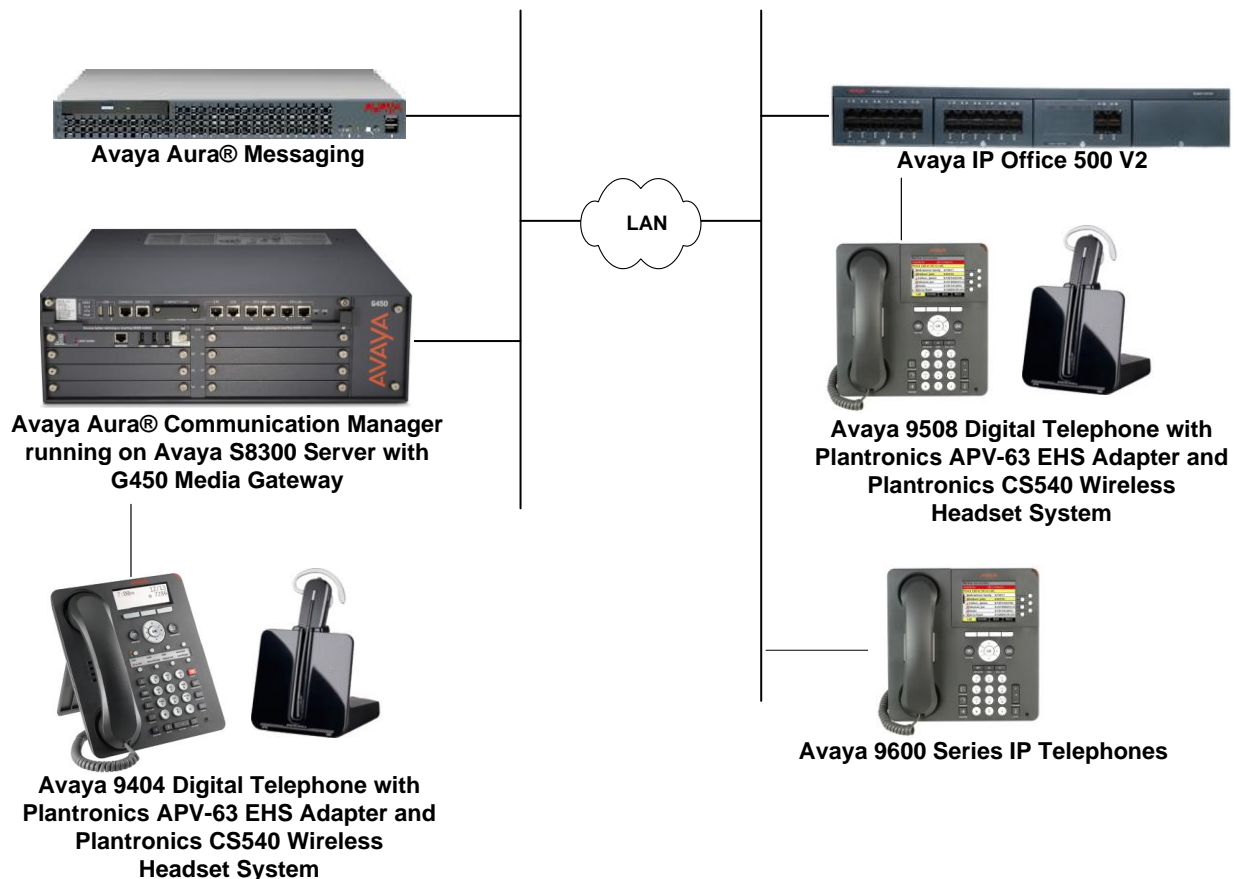


Figure 1: Avaya 9400/9500 Series Digital Telephones with Plantronics APV-63 EHS Adapter and Plantronics CS540 Wireless Headset System

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 | <ul style="list-style-type: none">▪ Press the call control button on the headset to answer an incoming call. This would automatically activate the headset button on the digital telephone. <p style="margin-left: 40px;">Alternatively, if the headset button on the digital telephone is pressed first, then press the call control button on the headset, if it isn't already activated, to answer an incoming call. Note that pressing the headset button on the digital telephone does not automatically activate the call control button on the headset.</p> <ul style="list-style-type: none">▪ If auto-answer is enabled and the headset button on the digital telephone <i>and</i> 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 | <p>Press the call control button on the headset to terminate a call. This automatically deactivates the headset button on the digital telephone.</p> <p style="margin-left: 40px;">Alternatively, if the call is terminated by pressing the headset button on the digital telephone, the call control button on the headset remains activated. Note that pressing the headset button on the digital telephone does not automatically deactivate the call control button on the headset.</p> |
| To Place a Call | <p>Press the call control button on the headset or the headset button on the phone to get dial tone and dial the number. For the 9500 series digital phones, the call control button must be activated to get dial tone manually, if the headset button on the phone was pressed first.</p> |

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 running Avaya S8300D Server with a G450 Media Gateway	6.0.1 SP 5.01 (R016x.00.1.510.1 w/Patch 19303)
Avaya IP Office 500 V2	8.0(44)
Avaya Aura® Messaging	6.0.1 SP 1
Avaya 9400 Series Digital Telephones	--
Avaya 9500 Series Digital Telephones	--
Avaya 9600 Series IP Telephones	3.1 SP 4 (H.323)
Plantronics APV-63 EHS Adapter	P/N 38734-11
Plantronics CS540 Wireless Headset System	--

5. Configure Avaya Aura® Communication Manager

This section covers the station configuration for the Avaya 9404 Digital Telephone. The configuration is performed via the System Access Terminal (SAT) on Communication Manager.

5.1. Configure a Station for Avaya 9400 Series Digital Telephone

Use the **add station** command to create a station for the 9404 Digital telephone. Set the **Type** field to the station type to be emulated. In this example, *1408* was used. Set the **Port** field to *the appropriate digital port*.

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 40010		Page 1 of 5
STATION		
Extension: 40010	Lock Messages? n	BCC: 0
Type: 1408	Security Code:	TN: 1
Port: 001V301	Coverage Path 1:	COR: 1
Name: Plantronics	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
	Time of Day Lock Table:	
Loss Group: 2	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 40010	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english		
Survivable COR: internal		
Survivable Trunk Dest? y	IP SoftPhone? n	
	Remote Office Phone: n	
	IP Video? n	

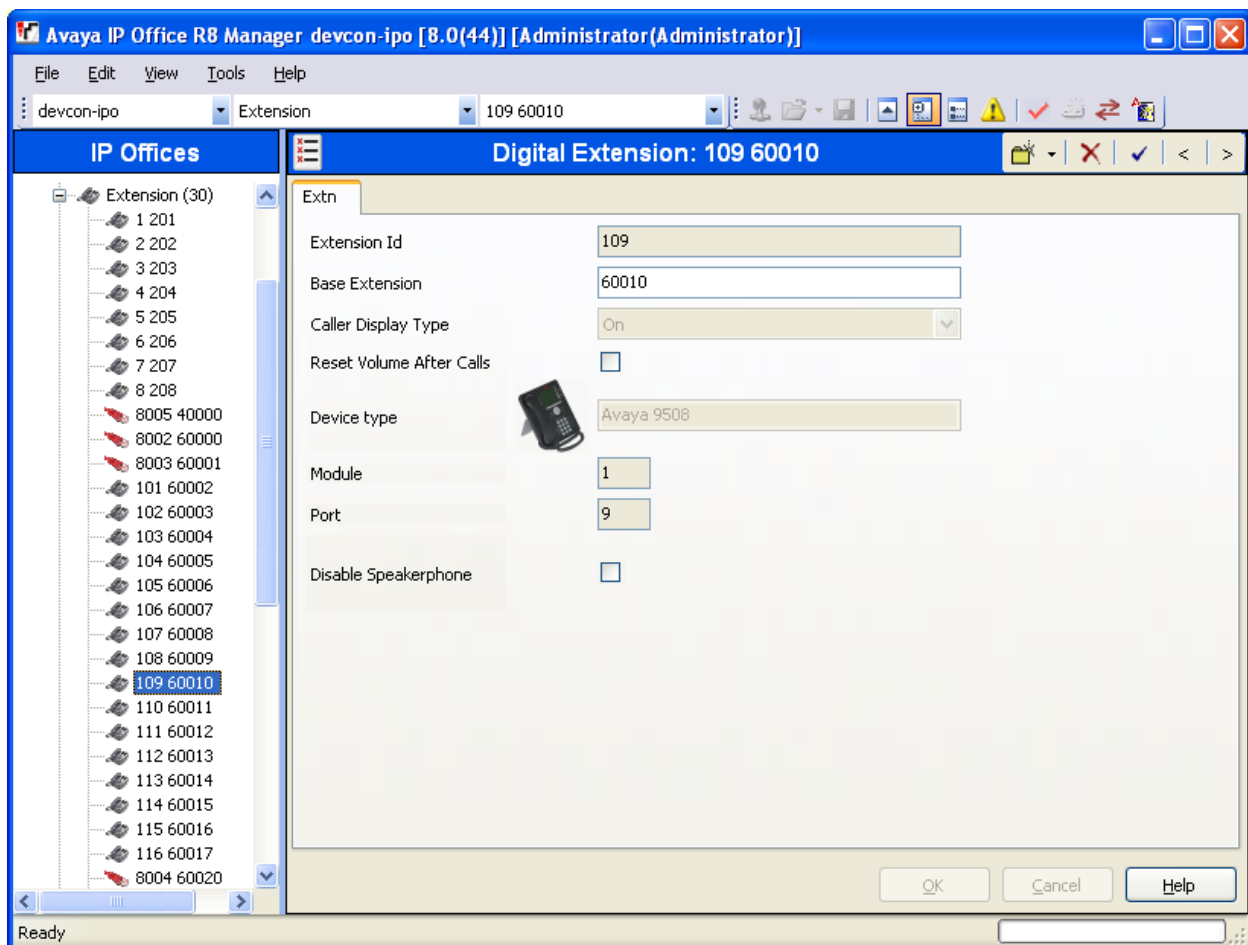
6. Configure Avaya IP Office

Avaya IP Office automatically configured a digital station (extension and user) for the 9508 digital telephone, which will use the Plantronics headset. This section displays the extension and user configuration using the Avaya IP Office Manager application.

From a PC running the Avaya IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system and log in with the appropriate credentials.

6.1. Extension Configuration

From the configuration tree in the left pane, select the appropriate **Extension** for the digital station to view the configuration, which is shown below. In this example, extension *60010* was used.



6.2. User Configuration

From the configuration tree in the left pane, select the appropriate **User** for the digital station to view the configuration, which is shown below. In this example, extension *60010* was used.

The screenshot shows the Avaya IP Office R8 Manager interface. The title bar reads "Avaya IP Office R8 Manager devcon-ipo [8.0(44)] [Administrator/Administrator]". The menu bar includes File, Edit, View, Tools, and Help. Below the menu bar is a toolbar with various icons. The left pane, titled "IP Offices", shows a tree structure with "User (31)" expanded, listing users from "NoUser" to "61001 sip61001". The user "60010 Extn60010" is selected. The right pane, titled "Extn60010: 60010", shows the configuration for this user. The "User" tab is active, displaying fields for Name, Password, Confirm Password, Full Name, Extension, Locale, Priority, System Phone Rights, and Profile. Below these fields are checkboxes for "Receptionist", "Enable Softphone", "Enable one-X Portal Services", "Enable one-X TeleCommuter", "Enable Remote Worker", and "Ex Directory". The "Device Type" is set to "Avaya 9508". The "User Rights" section includes "User Rights view" (set to "User data"), "Working hours time profile" (set to "<None>"), "Working hours User Rights", and "Out of hours User Rights". At the bottom are "OK", "Cancel", and "Help" buttons. The status bar at the bottom left shows "Ready".

Avaya IP Office R8 Manager devcon-ipo [8.0(44)] [Administrator/Administrator]

File Edit View Tools Help

devcon-ipo User 60010 Extn60010

IP Offices

- User (31)
 - NoUser
 - RemoteManager
 - 201 Extn201
 - 202 Extn202
 - 203 Extn203
 - 204 Extn204
 - 205 Extn205
 - 206 Extn206
 - 207 Extn207
 - 208 Extn208
 - 60000 Extn60000
 - 60001 Extn60001
 - 60002 Extn60002
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 - 60010 Extn60010**
 - 60011 Extn60011
 - 60012 Extn60012
 - 60013 Extn60013
 - 60014 Extn60014
 - 60015 Extn60015
 - 60016 Extn60016
 - 60017 Extn60017
 - 60020 Extn60020
 - 61000 sip61000
 - 61001 sip61001
- HuntGroup (2)
- Short Code (60)
- Service (0)
- RAS (1)
- Incoming Call Route (4)
- WanPort (0)
- Directory (0)

Extn60010: 60010

User Voicemail DND ShortCodes Source Numbers Telephony Forwarding Dial In Voice Recording Bu

Name Extn60010

Password

Confirm Password

Full Name

Extension 60010

Locale

Priority 5

System Phone Rights None

Profile Basic User

☐ Receptionist

☐ Enable Softphone

☐ Enable one-X Portal Services

☐ Enable one-X TeleCommuter

☐ Enable Remote Worker

☐ Ex Directory

Device Type Avaya 9508

User Rights

User Rights view User data

Working hours time profile <None>

Working hours User Rights

Out of hours User Rights

OK Cancel Help

Ready

7. Configure Plantronics APV-63 EHS and Plantronics CS540 Wireless Headset System

To connect the CS540 wireless headset to the Avaya 9400/9500 Series Digital Telephone, use the APV-63 EHS adapter to connect the wireless base of the headset to the headset port of the 9404/9508 digital telephone. For the 9500 Series Digital Telephone, an external ring detect cable, provided by Plantronics, is required to hear incoming call notifications (i.e., beeps) through the headset. Connect the adhesive end of the cable to the speakerphone grill of the telephone and the other end to the mic port of the EHS adapter. The 9400 Series Digital Telephone does not require the external ring detect cable to hear incoming call notifications. All other default settings on the wireless base were used.

8. Verification Steps

Verify that the Plantronics APV-63 EHS and Plantronics CS540 have been connected to the Avaya 9400/9500 Series Digital Telephones. 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 Plantronics APV-63 EHS Adapter and Plantronics CS500 Series Wireless Headset System with Avaya 9400/9500 Series Digital Telephones. All test cases were completed successfully with observations noted in **Section 2.2**.

10. 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 6.0, Issue 6.0, June 2010, Document Number 03-300509.
- [2] *Avaya 9400 Series Digital Deskphone User Guide for Avaya Aura® Communication Manager*, Issue 1, August 2011, Document Number 16-603535.
- [3] *Avaya IP Office 9500 Series User Guide*, Issue 05d, April 5, 2012.

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

- [4] *Plantronics APV-63 EHS Adapter Quick Reference Guide*.
- [5] *Plantronics CS540 Wireless Headset System Quick Start Guide*.

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