Avaya Solution & Interoperability Test Lab

Application Notes for Configuring GN Netcom Jabra GN9300e Headsets and Jabra LINK 14201-20 to interoperate with Avaya IP Telephones – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning GN Netcom's Jabra GN9300e headsets to successfully interoperate with Avaya IP Telephones. Jabra GN9300e series are wireless headsets that use an Electronic Hookswitch (EHS) adapter Jabra LINK 14201-20 to interoperate with Avaya IP Telephone series 96xx and 16xx.

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

These Application Notes describe the compliance tested configuration using GN Netcom's Jabra GN9300e headset solution and Avaya IP telephones. The Avaya telephones used are the 9600 Series and 1600 Series IP telephones connected to Avaya Aura™ Communication Manager.

Jabra GN9300e series are wireless headsets used in the office environment. It uses the EHS adapter LINK 14201-20 attached to the Avaya Telephone to communicate with Avaya 9600 and 1600 series IP telephones. The base connects to the headset via DECT technology. The GN9300e series includes the GN9350 and GN9330 models. The Jabra GN9350 model was used for the compliance test. It features a LCD display on the base unit to set device parameters. The Jabra GN9350 has a headband, neckband and ear-hook style. The headband style was used in the compliance test.

1.1 Interoperability Compliance Testing

Avaya 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 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 both feature functionality and serviceability testing. The feature functionality testing focused on placing calls from the Avaya telephones using the Jabra GN9300e series of headsets and verifying that good quality audio was sent and received. Intra-switch calls were made on the Communication Manager and inbound and outbound calls to\from the PSTN. The serviceability testing focused on verifying the ability of the Jabra GN9300e headsets to recover from disconnection and reconnection of the Avaya telephones. Link Failure\Recovery was also tested to ensure successful reconnection on link failure.
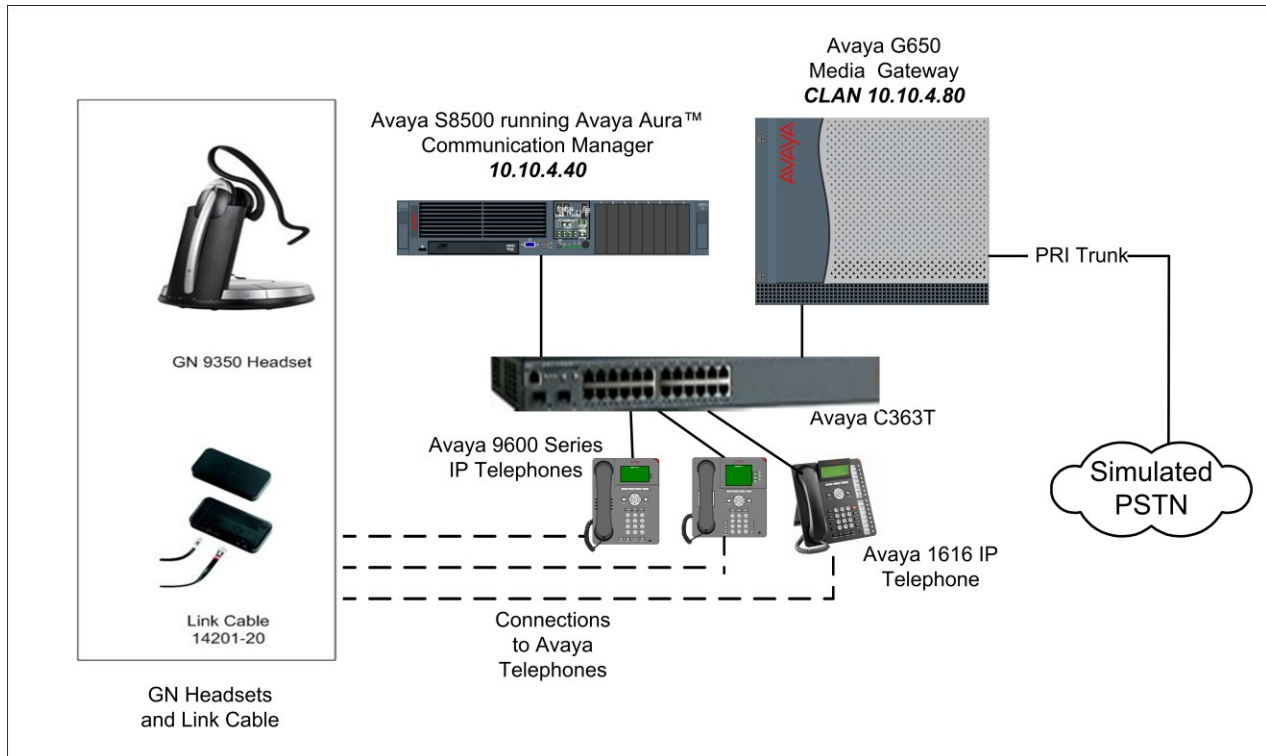
1.2 Support

Technical support can be obtained for GN Netcom's Jabra GN9300e solution as follows:
- Email: Please check www.jabra.com for your local support contact.
- Website: http://www.jabra.com/avaya
- Phone: Please check www.jabra.com for your local support contact.

2 Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of an Avaya S8500B Server running Communication Manager and Avaya G650 Media Gateway as the PBX. Avaya 9600 series and 1600 series IP telephones are connected to the PBX and used in the testing. GN Netcom's Jabra GN9300e wireless headsets and GN Netcom Jabra LINK 14201-20 adapters connect to the headset ports of the Avaya telephones.

Figure 1: Network Topology

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3 Equipment and Software Validated

All the hardware and associated software used in the compliance testing is listed below.

Equipment	Software Version
Avaya S8500B Server	Avaya Aura™ Communication Manager 5.2.1 (R015x.02.1.016.4)
Avaya G650 Media Gateway - IPSI TN2312BP - CLAN TN799DP - IP Media Processor TN2602AP - DS1 Interface TN246CP	 HW15, FW49 HW01, FW34 HW02, FW49 HW02, FW024
Avaya 96xx Telephones (H.323) - 9620 - 9630 - 9640 - 9670G	 3.1 3.1 3.1 3.1
Avaya 16xx Telephones (H.323) - 1616	 1.211
GN Netcom GN9300e – Base and Headsets - 9350e - 9330e	 5.42 /1.33 5.42 / 1.33
GN Netcom Jabra LINK cable 14201-20	1.6.0

Table 1: Hardware and Software Version Numbers

4 Configuration of Avaya Aura™ Communication Manager

These Application Notes assume that Communication Manager is configured and operational. There are no additional settings required to be configured for the connection of the Jabra GN9300e series headsets and Jabra LINK cable adaptor to the Avaya telephones. The compliance tests with the Jabra GN9300e series headsets was carried out with the default server settings for audio parameters. Please refer to documentation in **Section 9**.

5 Configuration of Jabra GN9300e

The Jabra GN9300e series headset model can be used with desk phone as configured in this compliance test. The headset variant used in the compliance test is the Jabra GN9350 monaural but the configuration described in these application notes also applies to variants GN9330. The configuration of the headset comprises connection of cables, configuring base settings and headset settings.

5.1 Connection of Cables

The Jabra LINK 14201-20 adapter cable is used for the connection of the Jabra GN9300e series headsets to the Avaya 9600 and 1600 series IP telephones. The Jabra LINK has a connection to power supply.
There are two connections from the Jabra LINK to the headset base:
1. The AUX socket is used to interface between Jabra LINK box and the headset base unit.
2. The audio connection from headset base to Jabra LINK box
There are two connections from Jabra LINK to the Avaya telephone:
1. A ring tone detector is attached with adhesion to the phone speaker. It is a magnetic detector that picks up the magnetic impulses.
2. A headset socket connection from the Jabra LINK to the headset port on the back of the 9600 and 1600 series telephones using the cable marked **C**.

5.2 Configure Base Settings

There are six properties to be configured on the base of the headset as follows:
1. Set the telephone termination switch on side of base to position **A**.
2. **Microphone volume**: Make a test call and alter volume to appropriate level.
   a. **9330e**: Use the base center wheel to adjust microphone volume.
   b. **9350e**: Use the microphone volume control on the LCD menu to adjust microphone level.
3. **Interface protocol**: **DHSG** is the interface used. To set the interface for the 9350e: Use the LCD display to set DHSG as the EHS interface. To set the interface for the 9330e:
   a. Place the headset in the charge cradle.
   b. Press and hold the base telephone button for 5 seconds and monitor the headset until it starts flashing.
   c. Use the volume rocker to choose DSHG. DHSG is set when the second charge LED is lit.
   d. Exit by pressing the base telephone button again for 5 seconds.
4. **RF strength**: Choose **Normal**, **low** or **v low**, this can be changed according to the range and density required.
5. **RX Receiver**: The options are **Treble**, **Normal** or **Bass**. **Normal** is used by default.
6. **Protection Level**: **Level 0** is the default level used.

5.3 Headset Settings

The Multi-Function Button (MFB) is positioned on the headset and is used to accept and end calls. The rocker button controls volume (up and down) and pressing on the rocker button enables/disables the microphone mute function.

6 General Test Approach and Test Results

The test approach was to verify that the calls placed and received using the Jabra GN9300e headsets with Avaya telephones functioned correctly with good audio received. Functionality testing included basic telephony operations such as answer, hold/retrieve and transfer and calls to\from the PSTN. The tested features available from the headset are:

- Receive incoming call notification away from the desk
- Answer/end calls away from your desk using the headset
- Enable dial tone from headset to place outgoing call
- Use microphone mute and volume control from the headset

The tests were all functional in nature and performance testing was not included. All test cases passed successfully.

The serviceability tests were performed by disconnecting the Jabra GN9300e headsets from the Avaya telephones and ensuring successful placing of calls and good audio on re-connection. These tests were repeated for the Avaya solution by disconnecting and reconnecting the Avaya telephones. All the test cases passed successfully.

7 Verification Steps

This section provides the tests that can be performed to verify correct configuration of Avaya telephones and Jabra GN9300e series headsets.

7.1 Verify Avaya Telephones

Verify that inbound and outbound calls can be made successfully with good audio on the Avaya telephones.

7.2 Verify Jabra GN9300e Headsets

Once the headset is charged for 20 minutes a LED blinking on the bottom of the base indicates power, that the headset is charged and connected. The following steps can be performed to verify the basic operation of the system components:

- Make calls from to and from Avaya telephones using the headsets to hook on and off
- Perform hold, transfer and conferencing operations and ensure that the headsets function as expected.

8 Conclusion

These Application Notes describe the configuration steps required for GN Netcom Jabra GN9300e headsets to successfully interoperate with Avaya IP Telephones. All functionality and serviceability test cases were completed successfully.

9 Additional References

This section references the Avaya and GN Netcom product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at http://support.avaya.com
1. *Administering Avaya Aura™ Communication Manager, Release 5.2; Document No. 03-300509, May 2009*
2. *Avaya Audio Quality Tuning for IP Telephones, Issue 2.0, Document No. 120942, July 2007*

Product documentation for GN Netcom Jabra GN9300e can be found at
http://www.jabra.com/UK-CP/headsetsolutions/Pages/JabraGN9300.aspx