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Avaya Solution & Interoperability Test Lab

Application Notes for Plantronics Calisto P420 USB Speakerphones with Avaya IP Softphone, Avaya IP Agent, Avaya one-X® Communicator and Avaya one-X® Agent - Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration comprised of Plantronics Calisto P420 USB Speakerphones with Avaya IP Softphone, Avaya IP Agent, Avaya one-X® Communicator and Avaya Aura™ Communication Manager. The Calisto P420 USB Speakerphone transforms any workspace into a conference room, providing hands-free, PC-based calls and conferencing for everyone on the call.

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 for Plantronics Calisto P420 USB Speakerphones with Avaya IP Softphone, Avaya IP Agent, Avaya one-X® Communicator and Avaya Aura™ Communication Manager. The Calisto P420 USB Speakerphone transforms any workspace into a conference room, providing hands-free, PC-based calls and conferencing for everyone on the call. The Calisto P420 USB Speakerphone employs simple plug-and-play USB connectivity to the PC.

1.1. Interoperability Compliance Testing

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 Avaya IP Softphone, Avaya IP Agent, Avaya one-X Communicator and Avaya one-X Agent using Plantronics Calisto P420 USB Speakerphones and verifying good talk path in both directions. The type of calls made included calls to voicemail, to internal extensions and to the PSTN.

The serviceability testing focused on verifying the usability of Plantronics Calisto P420 USB Speakerphones after restarting the Avaya softphone applications, disconnecting and reconnecting the speakerphones and rebooting the PC.

1.2. Support

For technical support and information on Plantronics products, contact Plantronics at:

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

2. Reference Configuration

Figure 1 illustrates the test configuration used to verify the Plantronics solution. The configuration comprised of an Avaya S8510 Server running Avaya Aura™ Communication Manager and an Avaya G650 Media Gateway with connections to the following: an Avaya 9640 IP Telephone and an ISDN-BRI trunk to the PSTN. Avaya Aura™ Communication Manager Messaging was used as the voicemail system. Avaya IP Softphone, Avaya IP Agent, Avaya one-X Communicator and Avaya one-X Agent were installed on three desktop PCs respectively, each having a Plantronics Calisto P420 USB Speakerphone attached to the USB Port of the desktop PC. The Avaya C364T-PWR Converged Stackable Switch provides Ethernet connectivity to the Avaya Server, Media Gateway, desktop PCs and IP telephone.
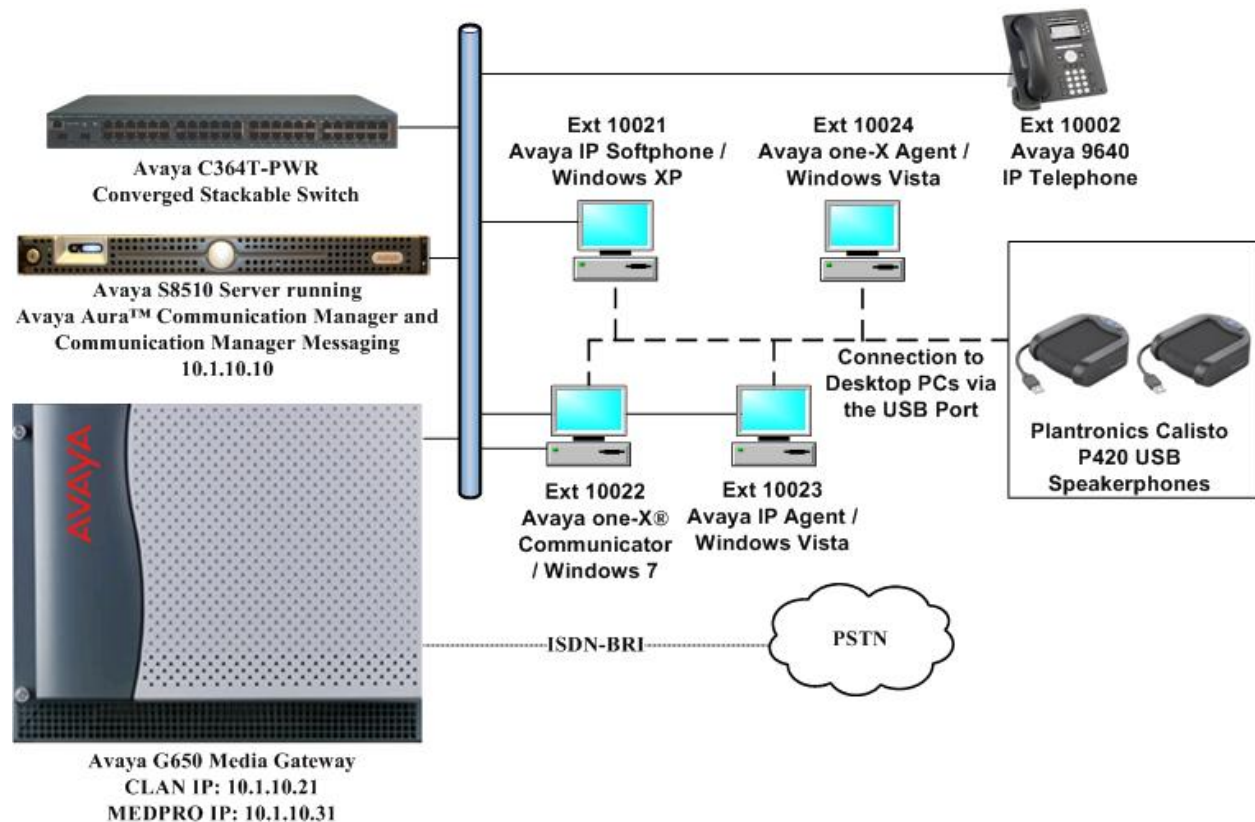
Figure 1: Test Configuration

3. Equipment and Software Validated

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

Equipment	Software
Avaya S8510 Server	Avaya Aura™ Communication Manager 5.2.1 (R015x.02.1.016.4) with Service Pack (02.1.016.4-17959)
Avaya G650 Media Gateway • TN2312BP IP Server Interface • TN799DP C-LAN Interface • TN2302AP IP Media Processor	- HW07, FW049 HW01, FW034 HW20, FW120
Avaya IP Softphone running on Microsoft Windows XP Professional SP3 (32-bit) PC	R6.0 SP7 (6.01.93)
Avaya IP Agent running on Microsoft Windows Vista Business SP2 (32-bit) PC	R7.0 SP8 (7.0.38.124)
Avaya one-X Communicator running on Microsoft Windows 7 Professional (32-bit) PC	5.2 (5.2.0.16)
Avaya 9640 IP Telephone	3.1.1 (H.323)
Avaya C364T-PWR Converged Stackable Switch	4.5.18
Plantronics Calisto P420 USB Speakerphones	-

4. Configure Communication Manager

The following sections show the relevant configuration screens for Communication Manager. The screen shots included in this section focused only on the configuration of the station and ip-codec-set forms. The configuration is performed via the System Access Terminal (SAT) on Communication Manager.

4.1. Configure Station for Avaya IP Softphone or Avaya one-X Communicator

Use the **add station n** command; where **n** is an available extension in the dial-plan. To create a station to be used by Avaya IP Softphone or Avaya one-X Communicator, the following information should be provided:

- **Type:** The IP Telephone type that will be emulated. In this compliance testing, the type was set to **2420**.
- **Security Code**: Password used by Avaya IP Softphone or Avaya one-X Communicator to log in.
- **Port**: Set to **X** to administer the station without hardware.
- **IP SoftPhone?**: **y**

```
add station 10023                                              Page   1 of   6
                                    STATION

Extension: 10023                      Lock Messages? n               BCC: 0
      Type: 2420                       Security Code: 12345           TN: 1
      Port: X                        Coverage Path 1:                COR: 1
      Name: IP Softphone             Coverage Path 2:                COS: 1
                                     Hunt-to Station:
STATION OPTIONS
                                       Time of Day Lock Table:
            Loss Group: 2        Personalized Ringing Pattern: 1
           Data Option: none               Message Lamp Ext: 10023
           Speakerphone: 2-way          Mute Button Enabled? y
       Display Language: english           Expansion Module? n

          Survivable COR: internal         Media Complex Ext:
   Survivable Trunk Dest? y                   IP SoftPhone? y

                                        IP Video Softphone? n

                                        Customizable Labels? Y
```

4.2. Configure Station for Avaya IP Agent or Avaya one-X Agent

Use the **add station n** command; where **n** is an available extension in the dial-plan to create a new station to be used by Avaya IP Agent or Avaya one-X Agent. Configure the following:

- **Type:** The IP Telephone type that will be emulated. In this compliance testing, the type was set to **2420**.
- **Security Code**: Password used by Avaya IP Agent or Avaya one-X Agent to log in.
- **Port**: Set to **X** to administer the station without hardware.
- **IP SoftPhone?**: **y**

```
add station 10021                                               Page   1 of   6
                                  STATION

Extension: 10021                      Lock Messages? n                 BCC: 0
      Type: 2420                      Security Code: 12345             TN: 1
      Port: X                       Coverage Path 1:                  COR: 1
      Name: IP Agent                Coverage Path 2:                  COS: 1
                                    Hunt-to Station:
STATION OPTIONS
                                            Time of Day Lock Table:
             Loss Group: 2        Personalized Ringing Pattern: 1
            Data Option: none                Message Lamp Ext: 10021
           Speakerphone: 2-way             Mute Button Enabled? y
       Display Language: english            Expansion Module? n

         Survivable COR: internal           Media Complex Ext:
   Survivable Trunk Dest? y                     IP SoftPhone? y

                                          IP Video Softphone? n

                                          Customizable Labels? Y
```

On **Page 4** of the STATION form, configure the additional feature buttons that are used by Avaya IP Agent or Agent one-X Agent to log in as an Automatic Call Distribution (ACD) agent. The following feature buttons were configured.

```
add station 10021                                               Page   4 of   6
                                  STATION
 SITE DATA
       Room:                                        Headset? n
       Jack:                                        Speaker? n
      Cable:                                        Mounting: d
      Floor:                                     Cord Length: 0
   Building:                                       Set Color:

ABBREVIATED DIALING
    List1:                 List2:                     List3:

BUTTON ASSIGNMENTS
 1: call-appr                        5: manual-in         Grp:
 2: call-appr                        6: after-call        Grp:
 3: call-appr                        7: aux-work     RC:  Grp:
 4: auto-in          Grp:            8: assist            Grp:

    voice-mail Number:
```

4.3. Configure IP Codec Set

The following screen shows the codec set configuration that was used during the test. To configure the codec set, use the **change ip-codec-set n** command, where **n** is the IP codec set used by the Avaya softphone applications. In this compliance testing, the G.722-64K and G.711 mu-law codec were used.

```
change ip-codec-set 1                                            Page   1 of   2

                            IP Codec Set

     Codec Set: 1

     Audio          Silence       Frames    Packet
     Codec          Suppression   Per Pkt   Size(ms)
  1: G.722-64K                      2          20
  2: G.711MU           n            2          20
  3:
  4:
  5:
  6:
  7:
```

5. Configure Avaya IP Softphone

After logging into Avaya IP Softphone, select **Audio → Tuning Wizard** from the menu as shown below.

Plantronics Calisto P420 USB Speakerphone is automatically detected in Microsoft Windows as **Plantronics P420**. Select this device as the **Primary Playback Device** and **Recording Device** as shown below. Select **Next**.

Select **PC Microphone and PC Speakers**. Click **Next** and follow the remaining procedures to tune the audio.

6. Configure Avaya IP Agent

After logging into Avaya IP Agent, select **Audio → Tuning Wizard** from the menu as shown below.

Plantronics Calisto P420 USB Speakerphone is automatically detected in Microsoft Windows as **Plantronics P420**. Select this device as the **Primary Playback Device** and **Recording Device** as shown below. Select **Next**.

Select **PC Microphone and PC Speakers**. Click **Next** and follow the remaining procedures to tune the audio.

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7. Configure Avaya one-X Communicator

After logging into Avaya one-X Communicator, select ⌄☰ → **Settings** → **General Settings** from the menu as shown below.
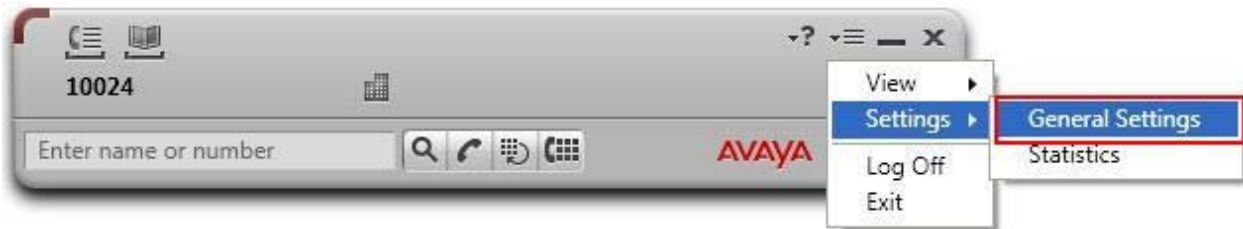
Select **Audio** from the left panel and click the **Basic** tab. Click **Audio Tuning Wizard**.
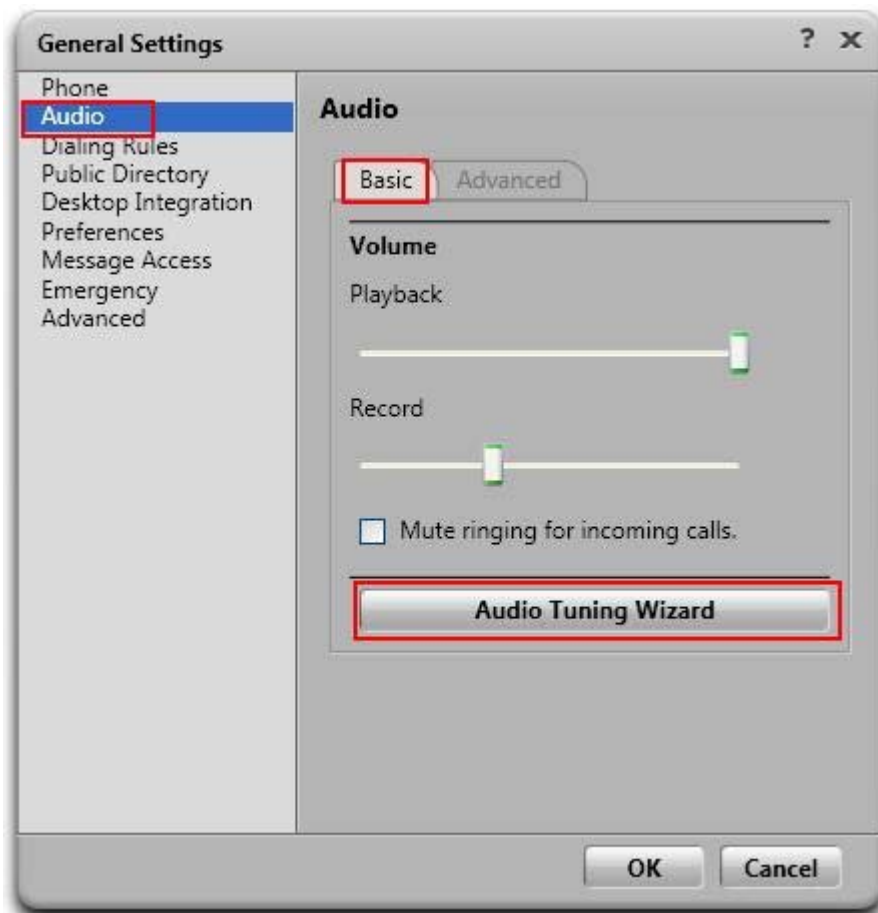
Plantronics Calisto P420 USB Speakerphone is automatically detected in Microsoft Windows as **Plantronics P420**. Select this device as the **Playback Device** and **Recording Device** as shown below. Click **Next** and follow the remaining procedures to tune the audio.
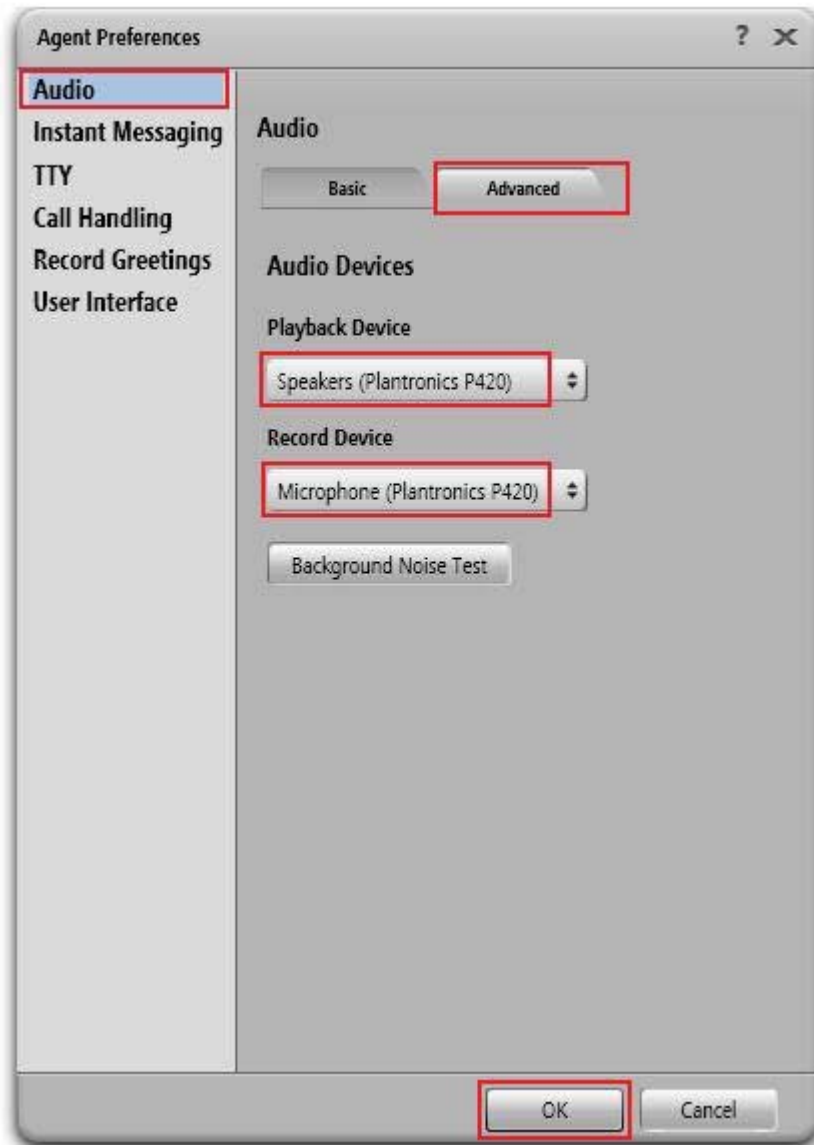
8. Configure Avaya one-X Agent

After logging into Avaya one-X Agent, select ![menu icon] → **Agent Preferences…** from the menu as shown below.

Select **Audio** from the left panel and click the **Advanced** tab. Plantronics Calisto P420 USB Speakerphone is automatically detected in Microsoft Windows as **Plantronics P420**. Select this device as the **Playback Device** and **Recording Device** as shown below. Click **OK**.

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9. Configure Plantronics Calisto P420 USB Speakerphones

The Plantronics Calisto P420 USB Speakerphones are USB plug-and-play devices. When plugged into the USB Port of the desktop PC, they are automatically detected in Microsoft Windows without requiring any additional driver software. In this test configuration, the Plantronics Calisto P420 USB Speakerphones are detected as **Plantronics P420** in Windows XP, Windows Vista and Windows 7.

10. General Test Approach and Test Results

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 that the playback volume and recording level were good.
- Placing calls to the PSTN to verify that the playback volume and recording level were good.
- Using the volume control buttons on the Plantronics Calisto P420 USB Speakerphone to adjust the playback volume.
- Using the mute control button on the Plantronics Calisto P420 USB Speakerphone to mute and un-mute the recording level.

For the serviceability testing, the Plantronics Calisto P420 USB Speakerphones were disconnected and reconnected to verify proper operation. In addition, Avaya IP Softphone, Avaya IP Agent, Avaya one-X Communicator and Avaya one-X Agent were also restarted and the desktop PCs rebooted for the same purpose.

All test cases passed successfully.

11.   Verification Steps

From the Windows Control Panel, open **Sounds and Audio Devices** and click the **Audio** tab.
Verify that the device **Plantronics P420** is listed in both the **Sound playback** and **Sound recording** section as shown below.
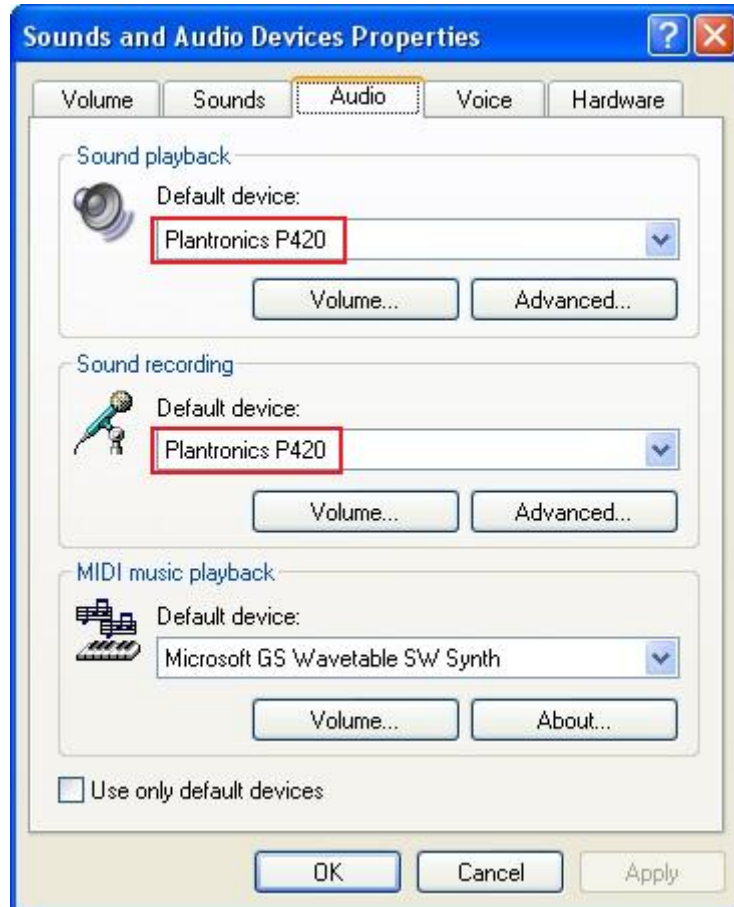
12.   Conclusion

These Application Notes describe the configuration steps required for Plantronics Calisto P420
USB Speakerphones with Avaya IP Softphone, Avaya IP Agent, Avaya one-X® Communicator
and Avaya one-X® Agent. All test cases were completed successfully.

13. 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 5.2, Issue 5.0, May 2009, Document Number 03-300509.
[2] *Avaya IP Softphone Release 6.0 User Reference*, Issue 1, May 2007.
[3] *Avaya IP Agent Release 7.0 Installation and User Guide*, Issue 1.1, August 2007.
[4] *Avaya one-X® Communicator User Reference*, November 2009.
[5] *Using Avaya one-X® Agent*, Release 2.0, November 2009.

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

[6] *Plantronics P420™ USB Speakerphone, Quick Start Guide*, 2010.
[7] *Plantronics P420™ USB Speakerphone, User Guide*, 2010.

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