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Avaya Solution & Interoperability Test Lab

Application Notes for ADDASOUND Crystal 2701/2702 Headsets and ADDASOUND DN1002 Direct Connect Cable with Avaya 96x1 Series IP Deskphones - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2701/2702 Headsets and ADDASOUND DN1002 Direct Connect Cable with Avaya 96x1 Series IP Deskphones using H.323 and SIP protocols. The Crystal 2701/2702 headsets provide two-way audio. The Crystal 2701 and 2702 Headsets are monaural and binaural headsets, respectively. This solution does not provide call control features, mute or volume control directly from the headsets.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the 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 of 10
ADD-270x-96x1

1. Introduction

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2701/2702 Headsets and ADDASOUND DN1002 Direct Connect Cable with Avaya 96x1 Series IP Deskphones using H.323 and SIP protocols. The Crystal 2701/2702 headsets provide two-way audio. The Crystal 2701 and 2702 Headsets are monaural and binaural headsets, respectively. This solution does not provide call control features, mute or volume control directly from the headsets.

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 ADDASOUND Crystal 2701/2702 Headsets and DN1002 Direct Connect Cable 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 ADDASOUND headset after restarting the Avaya 96x1 Series IP Telephones and re-connecting the ADDASOUND 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 ring back tone for outgoing calls.
- Toggling between handset, speakerphone, and headset.
- Using the headset with 9621G H.323 and 9611G SIP deskphones.

For the serviceability testing, an Avaya 96x1 IP Deskphone was 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):

- Incoming call alert is not heard through the headset, it is heard through the Avaya 96x1 Series IP Telephone.
- The Crystal 2701/2702 Headsets do not provide call control features, mute or volume control directly from the headsets.

2.3. Support

For technical support and information on ADDASOUND Crystal 2701/2702 Headsets and DN1002 Direct Connect Cable, contact ADDASOUND in Denmark:

- Phone: +45 72 628 622
- Website: http://addasound.dk/customer-services.aspx
- Email: info@addasound.dk

3. Reference Configuration

Figure 1 illustrates the test configuration used to verify the ADDASOUND solution. The configuration consists of Avaya Aura® Communication Manager running in a virtual environment with an Avaya G450 Media Gateway providing connectivity to the PSTN via an ISDN-PRI trunk (not shown). Avaya Aura® Session Manager served as the SIP registrar and proxy for the SIP endpoints and Avaya Aura® System Manager was used to configure Session Manager. Avaya Aura® Messaging was used as the voicemail system. ADDASOUND Crystal 2701/2702 Headsets and DN1002 Direct Connect Cable were connected to the headset port of the Avaya 9611G and 9621G IP Deskphones.
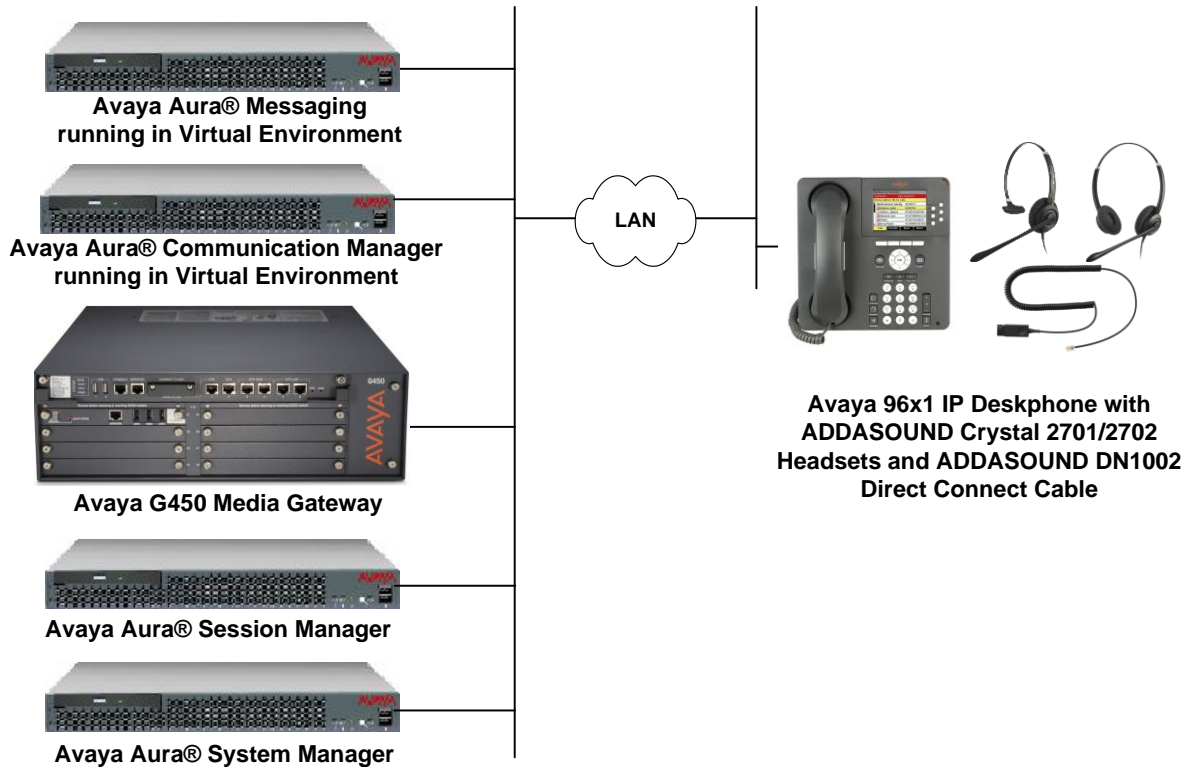

Figure 1: Avaya 96x1 Series IP Telephone with ADDASOUND Crystal 2701/2702 Headsets and DN1002 Direct Connect Cable

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 in Virtual Environment with a G450 Media Gateway	7.0.1.1 FP1 SP1 (R017x.00.0.441.0 with Patch 23169)
Avaya Aura® Media Server	7.7.0.226
Aura® System Manager	7.0.1 (Build No. 7.0.0.016266 Software Update Revision No: 7.0.1.0.064859 Feature Pack 1)
Aura® Session Manager	7.0.1 (7.0.1.0.701007)
Avaya Aura® Messaging	6.3.2 SP 2 Patch 3
Avaya 96x1 Series IP Deskphones	6.6229 (H.323) 7.0.1.1.5 (SIP)
ADDASOUND Crystal 2701/2702 Headsets	N/A
ADDASOUND DN1002 Direct Connect Cable	N/A

4. Configure Avaya Aura® Communication Manager

This section covers the station configuration for the Avaya 9621G IP Telephone. The configuration is performed via the System Access Terminal (SAT) on Communication Manager. This section covers the administration of an H.323 and SIP deskphone.

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

Use the **add station** command to create a station for the 9621G IP telephone. Set the **Type** field to the station type to be emulated. In this example, *9621* was used. Set the **Port** field to *IP* and configure a **Security Code** as that 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 77305                                       Page   1 of   5
                               STATION

Extension: 77305                    Lock Messages? n              BCC: 0
     Type: 9621                     Security Code: 1234            TN: 1
     Port: IP                    Coverage Path 1:                 COR: 1
     Name: ADDASOUND             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: 77305
        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
```

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

The SIP station was configured automatically through Avaya Aura® System Manager. Use the **display station** command to view the station for the 9611G IP Deskphone. The **Station Type** was set to *9611SIP* 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 deskphone set the **Auto Answer** field on **Page 2** (not shown) to the appropriate value, such as *all*.

```
display station 78000                                          Page   1 of   6
                                 STATION

Extension: 78000                       Lock Messages? n               BCC: 0
     Type: 9611SIP                       Security Code:                TN: 1
     Port: S00018                    Coverage Path 1:                 COR: 1
     Name: 78000, SIP                Coverage Path 2:                 COS: 1
                                      Hunt-to Station:
STATION OPTIONS
                                           Time of Day Lock Table:
            Loss Group: 19
                                            Message Lamp Ext: 78000

       Display Language: English              Button Modules: 0

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

                                                    IP Video? n
```

4.3. Configure 46xxsettings.txt File

In the 46xxsettings.txt file, the HEADSYS parameter needs to be set appropriately depending on whether the headset button should be deactivated automatically if the far-end drops the call. For stations configured with auto-answer, set this parameter to '1' so that the headset button is not deactivated when the far-end drops the call. This allows the subsequent call to be answered automatically through the headset. Below is an example for setting this parameter. In this example, the parameter is set to '0', which would cause the headset button to be deactivated when the far-end drops the call first.

```
################### CALL CENTER SETTINGS #################
##
## HEADSYS specifies whether the telephone will go on-hook if the headset is active
##  when a Disconnect message is received.
##  Value  Operation
##   0   The telephone will go on-hook if a Disconnect message is received when the headset is active
##   1   Disconnect messages are ignored when the headset is active
##  Note: a value of 2 has the same effect as a value of 0, and
##       a value of 3 has the same effect as a value of 1.
##  This parameter is supported by:
##      96x1 H.323 R6.2.1 and later (the default value is 0 unless the value
##          of CALLCTRSTAT is set to 1, in which case the default value is 1)
##      96x1 H.323 R6.1 and R6.2 ignore this parameter, and will ignore Disconnect messages
##          if the user is logged in as a call center agent. If the user is not logged in
##          as a call center agent, the telephone will go on-hook if a Disconnect message
##          is received when the headset is active.
##      96x1 H.323 releases prior to R6.1 (the default value is 1)
##      96x1 SIP  R6.4 and later (the default value is 0)
##      96x1 SIP  R6.0 and later up to R6.4 (not included) (the default value is 1)
##      96x0 H.323 R1.2 and later (the default value is 1)
##      96x0 SIP  R1.0 and later (the default value is 1)
##      16xx H.323 R1.3 and later (the default value is 1)
SET HEADSYS 0
```

5. Connect ADDASOUND Crystal 2701/2702 Headsets and DN1002 Direct Connect Cable

Connect the ADDASOUND Crystal 2701/2702 Headset to one end of the DN1002 Direct Connect Cable and then connect the other end of the cable directly to the headset port of the Avaya 96x1 Series IP Deskphone.

6. Verification Steps

Verify that the ADDASOUND Crystal 2701/2702 Headset and DN1002 Direct Connect Cable have been connected to the headset port of the Avaya 96x1 Series IP Deskphone. Once the headset is connected to the phone, verify that incoming and outgoing calls are established with two-way audio to the headset.

7. Conclusion

These Application Notes describe the configuration steps required to integrate the ADDASOUND Crystal 2701/2702 Headsets and ADDASOUND DN1002 Direct Connect Cable with Avaya 96x1 Series IP Deskphones. All test cases were completed successfully with observations noted in **Section 2.2**.

8. Additional References

This section references the Avaya documentation that is 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 7.0.1, Issue 2.1, August 2016, Document Number 03-300509.
[2] *Administering Avaya 9601/9608G/9611G/9621G/9641G/9641GS IPDeskphones SIP*, Release 7.0.1, August 2016.
[3] *Administering Avaya 9608/9608G/9611G/9621G/9641G/9641GS IPDeskphones H.323*, Release 6.6.3, August 2016.