Avaya Solution & Interoperability Test Lab

Application Notes for Dolby Conference Phone 3.4 with Avaya Aura® Session Manager 7.1 and Avaya Aura® Communication Manager 7.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Dolby Conference Phone 3.4 to interoperate with Avaya Aura® Session Manager 7.1 and Avaya Aura® Communication Manager 7.1.

Dolby Conference Phone is a conference speaker phone with a touch screen user interface. In the compliance testing, Dolby Conference Phone registered to Avaya Aura® Session Manager as a SIP endpoint.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any 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.

1. Introduction

These Application Notes describe the configuration steps required for Dolby Conference Phone 3.4 to interoperate with Avaya Aura® Session Manager 7.1 and Avaya Aura® Communication Manager 7.1.

Dolby Conference Phone is a conference speaker phone with a touch screen user interface. In the compliance testing, Dolby Conference Phone registered to Avaya Aura® Session Manager as a SIP endpoint.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were manually established between the Dolby Conference Phone user with Avaya SIP, Avaya H.323, and/or PSTN users. Call controls were performed from various users to verify call scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to Dolby Conference Phone.

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 recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Session Manager and Dolby Conference Phone did not include use of any specific encryption features as requested by Dolby.

2.1. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability testing.

The feature testing included registration, basic call, display, mute/unmute, hold/resume, drop, media shuffling, G.711, G.729, G.722, codec negotiation, blind transfer, attended conference, music on hold, DTMF, long hold and held call reminder, session refresh, long duration, coverage, and multiple calls. In addition, testing also included feature access code dialing with asterisk and pound, and for extended telephony features of call forwarding, call park/unpark, and call pickup.

The serviceability testing focused on verifying the ability of Dolby Conference Phone to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to Dolby Conference Phone.

2.2. Test Results

All test cases were executed and verified. The following were observations on Dolby Conference Phone from the compliance testing.

- By design, Dolby Conference Phone does not support attended transfer, blind conference, and message waiting indicator.

- By design, only one incoming call can be ringing at Dolby Conference Phone at any one time, with 486 Busy Here returned for additional simultaneous incoming calls.

2.3. Support

Technical support on Dolby Conference Phone can be obtained through the following:

- **Web:** http://www.dolby.com/us/en/support/conferencing-support.html

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**, with the domain name used in the testing being "dr220.com".

The configuration of Session Manager is performed via the web interface of System Manager. The detailed administration of basic connectivity between Communication Manager, System Manager, and Session Manager are not the focus of these Application Notes and will not be described.

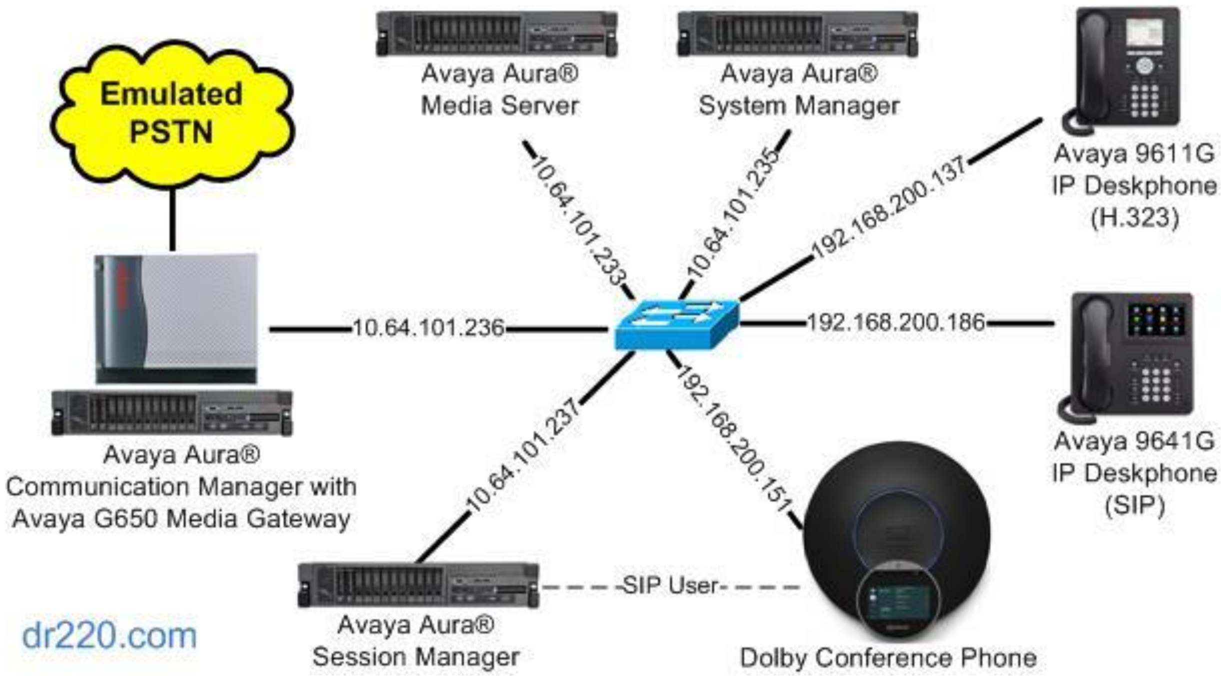


Figure 1: Compliance Testing Configuration

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 in Virtual Environment	7.1.2 (7.1.2.0.0.532.24184)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	7.8.0.333
Avaya Aura® Session Manager in Virtual Environment	7.1.2 (7.1.2.0.712004)
Avaya Aura® System Manager in Virtual Environment	7.1.2 (7.1.2.0.057353)
Avaya 9611G IP Deskphone (H.323)	6.6604
Avaya 9641G IP Deskphone (SIP)	7.1.1.0.9
Dolby Conference Phone VCP 9000	3.4.1.19

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Verify license
- Administer IP codec set

5.1. Verify License

Log in to the System Access Terminal (SAT) to verify that the Communication Manager license has proper permissions for features illustrated in these Application Notes. Use the "display system-parameters customer-options" command to verify that there is sufficient license for SIP stations by comparing the **Maximum Off-PBX Telephones - OPS** field value with the corresponding value in the **USED** column.

The license file installed on the system controls the maximum permitted. If there is insufficient capacity, contact an authorized Avaya sales representative to make the appropriate changes.

```
display system-parameters customer-options                      Page   1 of  12
                                OPTIONAL FEATURES

     G3 Version: V17                                Software Package: Enterprise
       Location: 2                                   System ID (SID): 1
       Platform: 28                                  Module ID (MID): 1

                                                              USED
                                Platform Maximum Ports: 65000 194
                                      Maximum Stations: 41000 29
                              Maximum XMOBILE Stations: 41000 0
                    Maximum Off-PBX Telephones - EC500: 41000 1
                    Maximum Off-PBX Telephones -   OPS: 41000 2
                    Maximum Off-PBX Telephones - PBFMC: 41000 0
                    Maximum Off-PBX Telephones - PVFMC: 41000 0
                    Maximum Off-PBX Telephones – SCCAN: 0     0
                         Maximum Survivable Processors: 313   0
```

5.2. Administer IP Codec Set

Use the “change ip-codec-set n” command, where “n” is an existing codec set number used for integration with Dolby Conference Phone.

Update the audio codec types in the **Audio Codec** fields as needed. Besides the two codecs shown below, G.722-64K was also verified in the compliance testing.

For customer network that uses encrypted media, make certain that “none” is included for **Media Encryption**, and that **Encrypted SRTP** is set to “best-effort”, these settings are needed for support of non-encrypted media from Dolby Conference Phone.

In the compliance testing, this IP codec set was used by Dolby Conference Phone and by all Avaya endpoints.

```
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.711MU           n         2        20
 2: G.729             n         2        20
 3:
 4:
 5:
 6:
 7:

    Media Encryption                   Encrypted SRTP: best-effort
 1: 1-srtp-aescm128-hmac80
 2: aes
 3: none
 4:
 5:
```

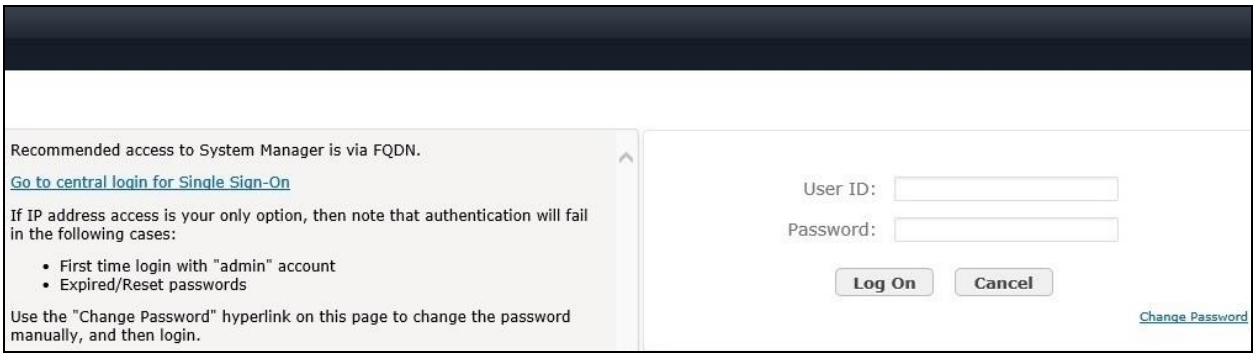
6. Configure Avaya Aura® Session Manager

This section provides the procedures for configuring Session Manager. The procedures include the following areas:

- Launch System Manager
- Administer users
- Administer Session Manager entity

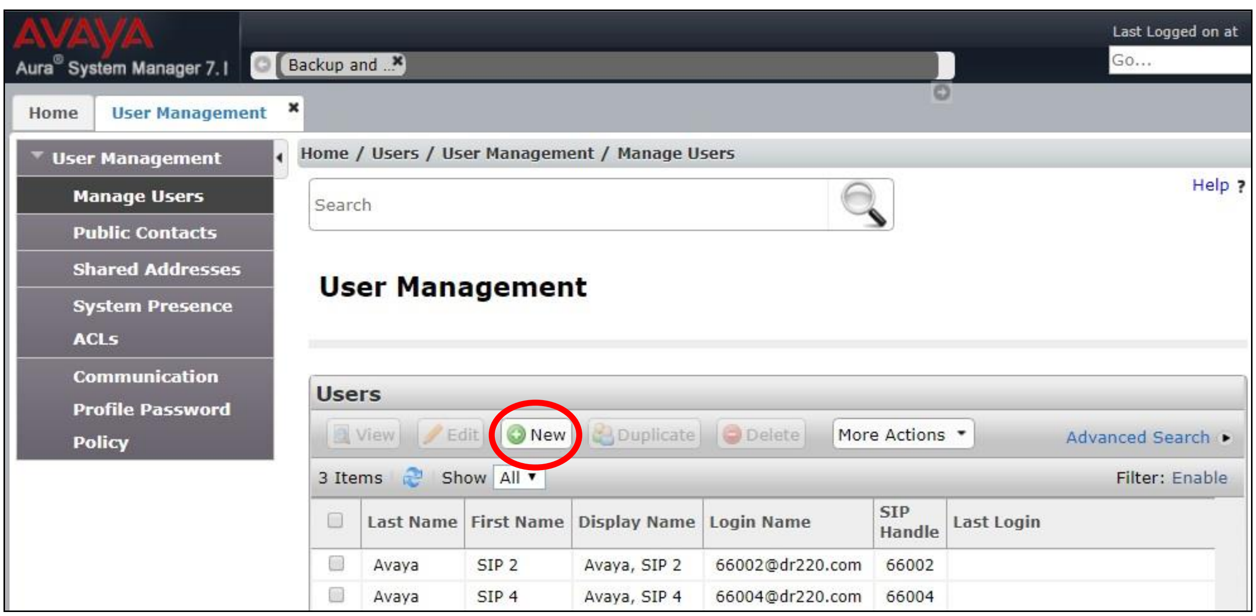
6.1. Launch System Manager

Access the System Manager web-based interface by using the URL "https://ip-address" in an Internet browser window, where "ip-address" is the IP address of System Manager. Log in using the appropriate credentials.



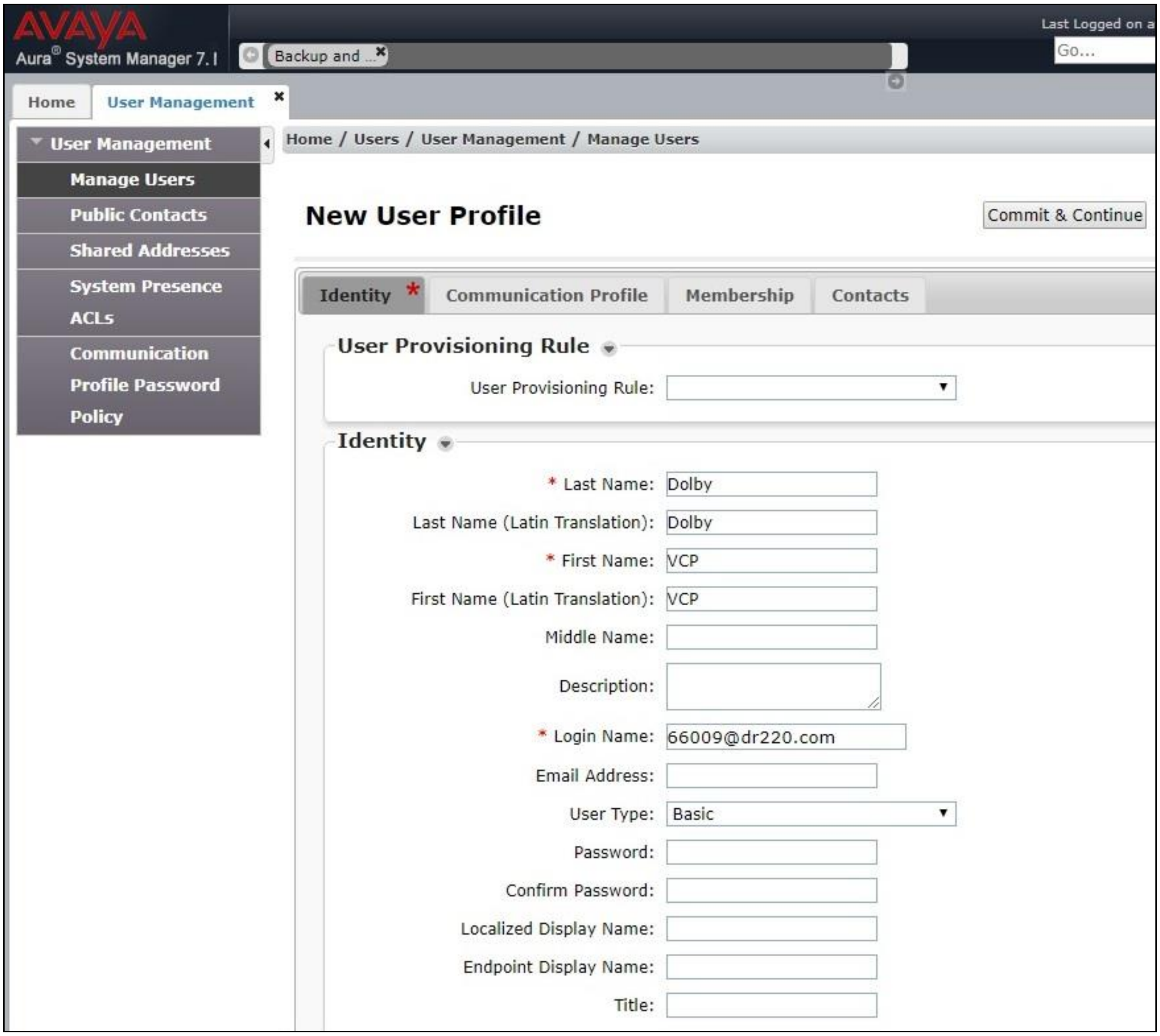
6.2. Administer Users

In the subsequent screen (not shown), select **Users** → **User Management** → **Manage Users** to display the **User Management** screen below. Click **New** to add a user.



6.2.1. Identity

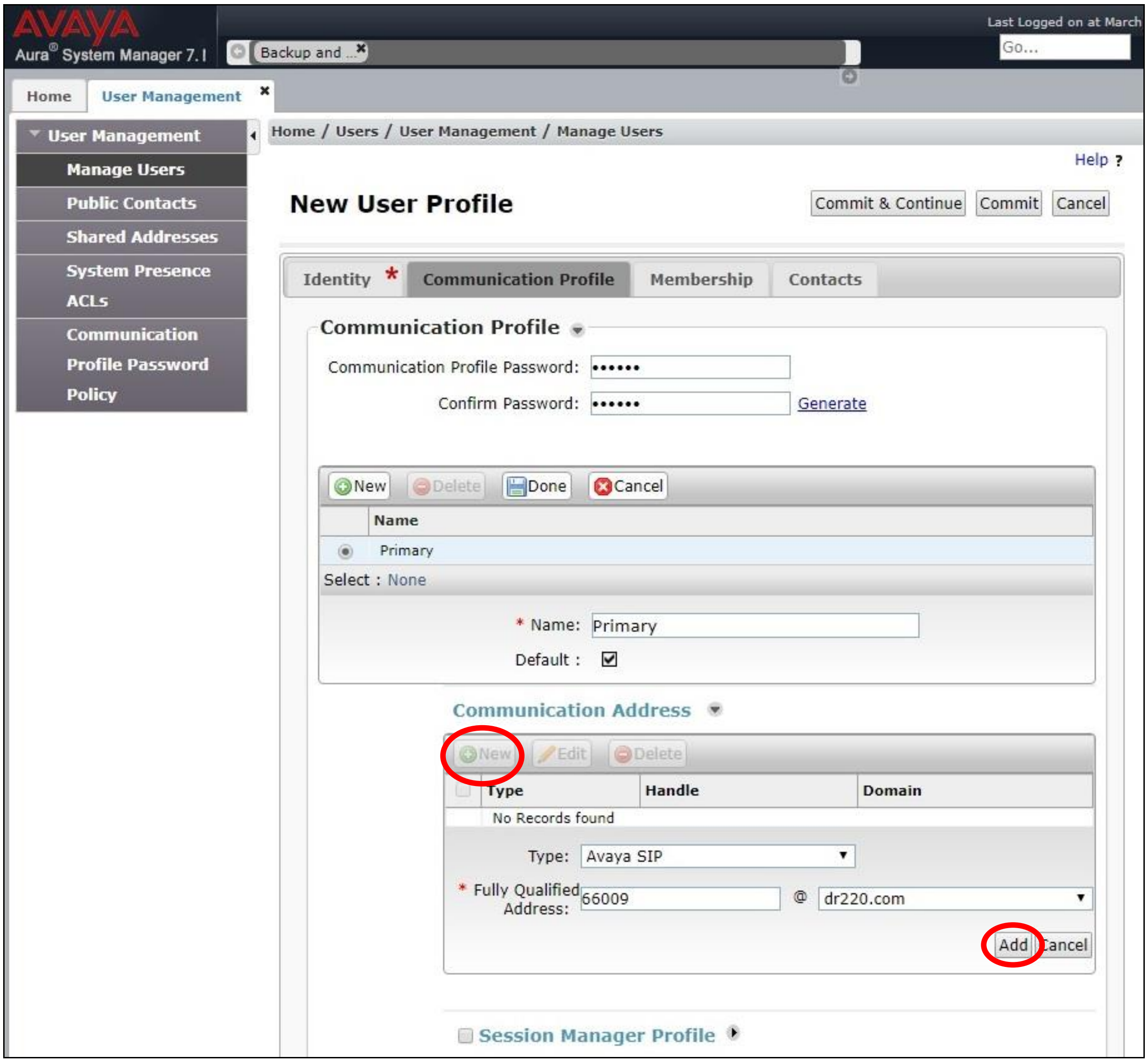
The **New User Profile** screen is displayed. In the **Identity** sub-section, enter desired **Last Name** and **First Name**. For **Login Name**, enter “n@x”, where “n” is the desired user extension and “x” is the applicable domain name from **Section 3**. Retain the default values in the remaining fields.



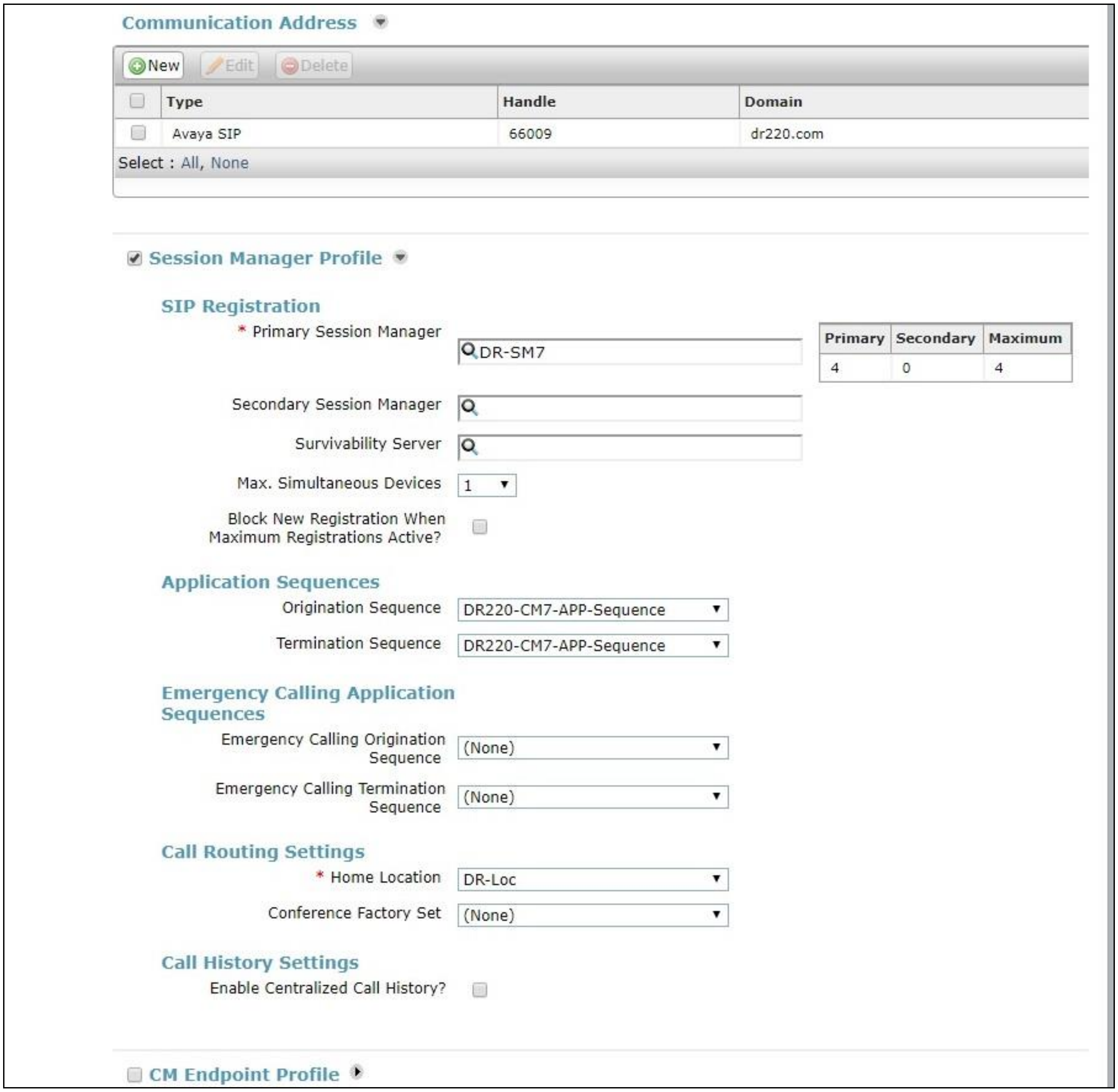
6.2.2. Communication Profile

Select the **Communication Profile** tab. For **Communication Profile Password** and **Confirm Password**, enter the desired password for the SIP user to use for registration.

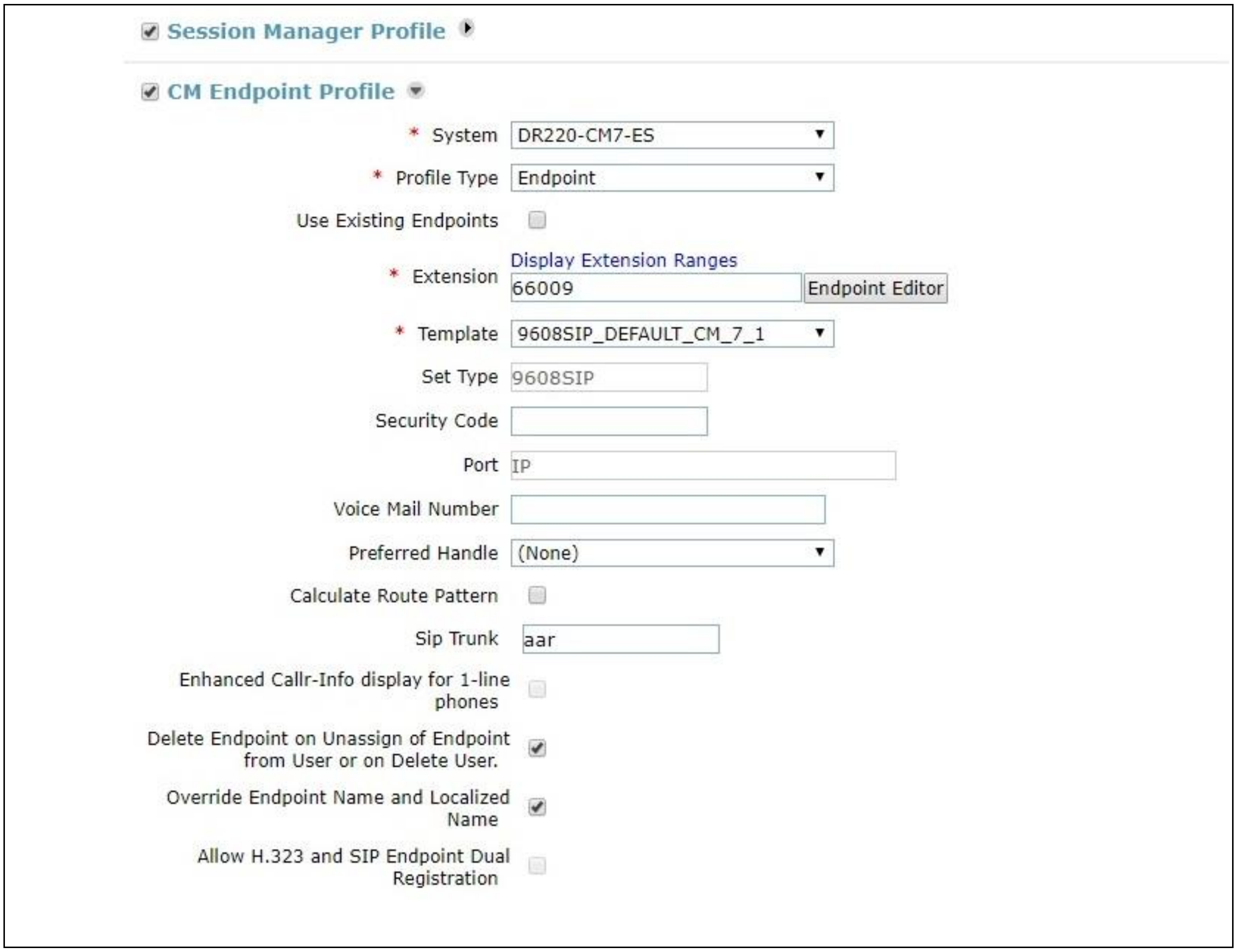
In the **Communication Address** sub-section, click **New** to add a new address. The sub-section is updated with additional fields, as shown below. For **Type**, retain “Avaya SIP”. For **Fully Qualified Address**, enter and select the SIP user extension and domain name to match the login name from **Section 6.2.1** respectively. Click **Add**.



Scroll down to check and expand **Session Manager Profile**. For **Primary Session Manager**, **Origination Sequence**, **Termination Sequence**, and **Home Location**, select values corresponding to the applicable Session Manager and Communication Manager. Retain the default values in the remaining fields.

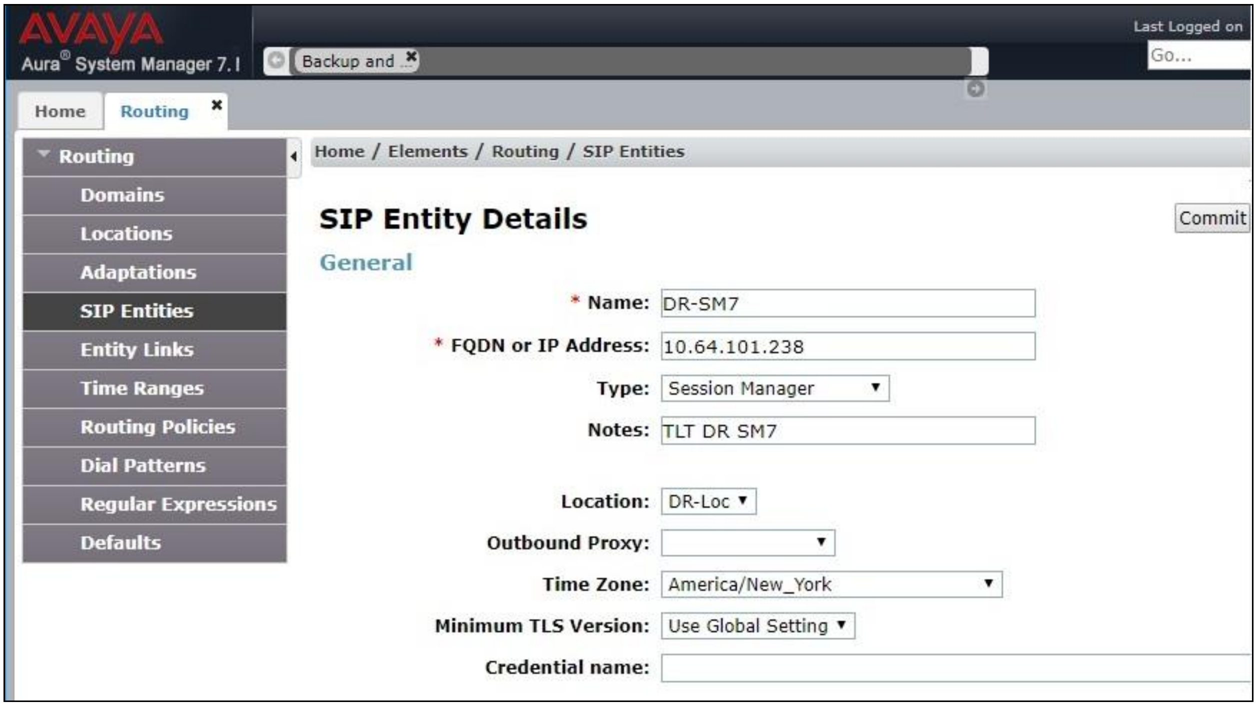


Scroll down to check and expand **CM Endpoint Profile**. For **System**, select value corresponding to the applicable Communication Manager. For **Extension**, click and select the SIP user extension from **Section 6.2.1**. For **Template**, select “9608SIP_DEFAULT_CM_7_1”. Retain the default values in the remaining fields.

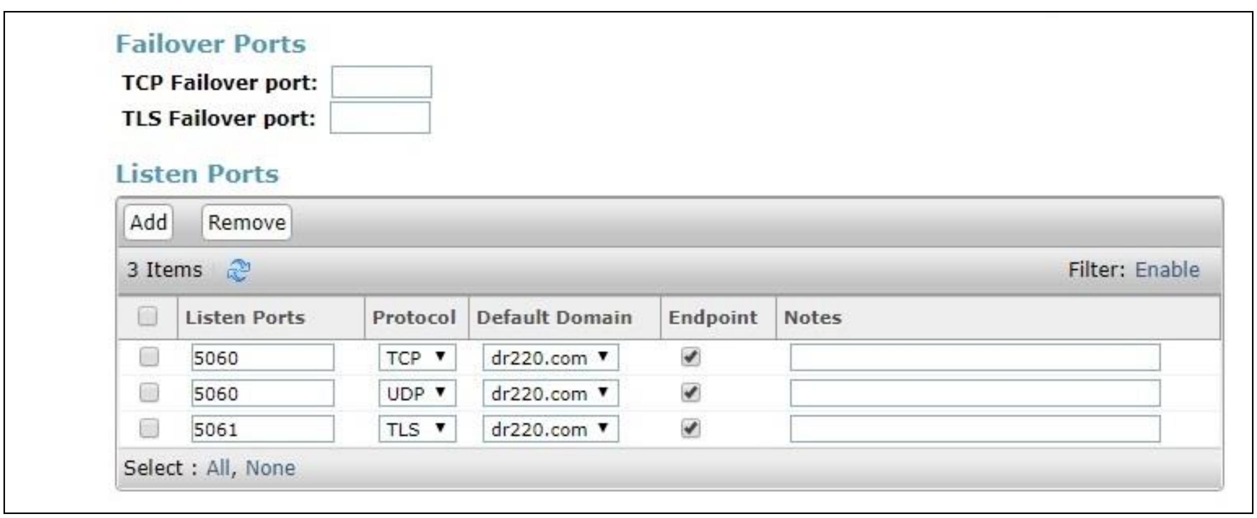


6.3. Administer Session Manager Entity

Select **Routing → SIP Entities** from the left pane, followed by the applicable SIP entity for Session Manager, in this case "DR-SM7". The **SIP Entity Details** screen is displayed.



Scroll down to **Listen Ports** and verify that the transport protocol used by Dolby Conference Phone is specified in the list, as shown below. Note that Dolby Conference Phone can support UDP or TCP with Session Manager, and the compliance testing used UDP.



7. Configure Dolby Conference Phone

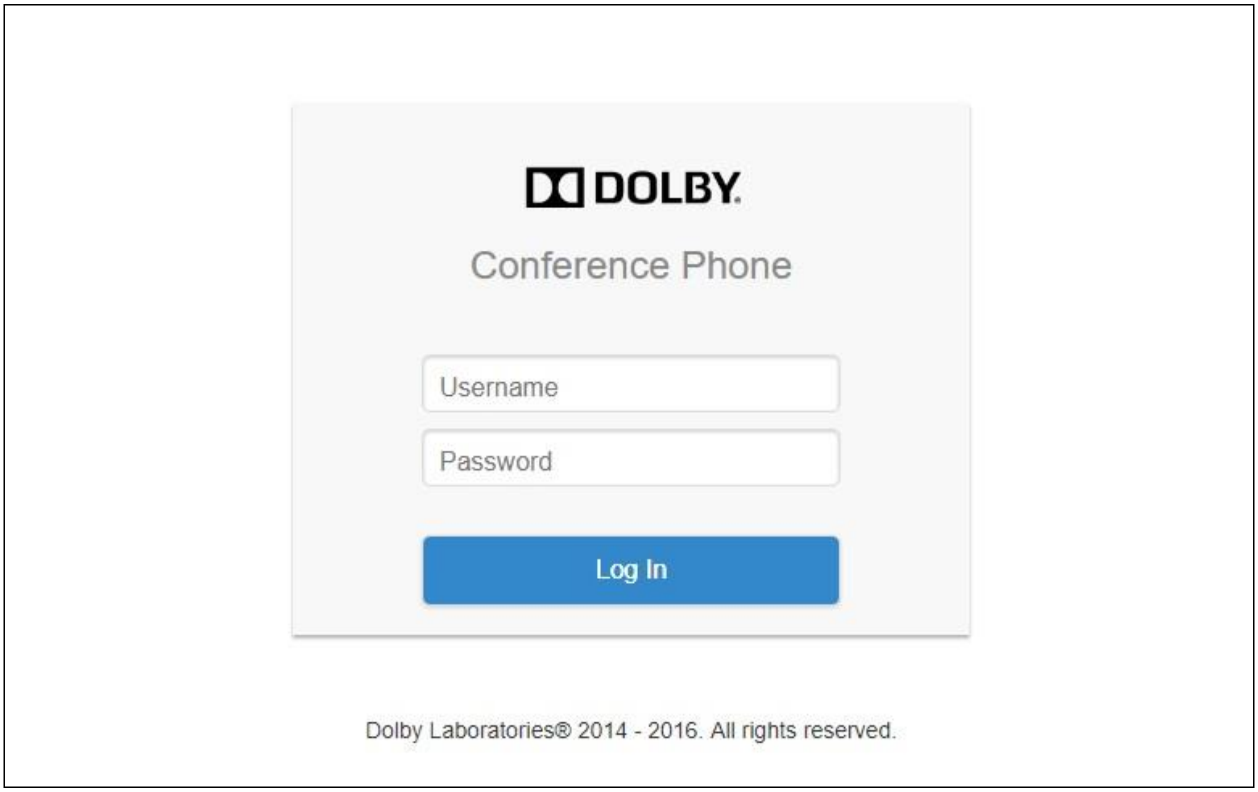
This section provides the procedures for configuring Dolby Conference Phone. The procedures include the following areas:

- Launch web interface
- Administer IP PBX settings

Prior to configuration, follow the procedures in reference [4] to manually set the IP address of Dolby Conference Phone.

7.1. Launch Web Interface

Access the Dolby Conference Phone web-based interface by using the URL "http://ip-address" in an Internet browser window, where "ip-address" is the IP address of the phone. Log in using the appropriate credentials.



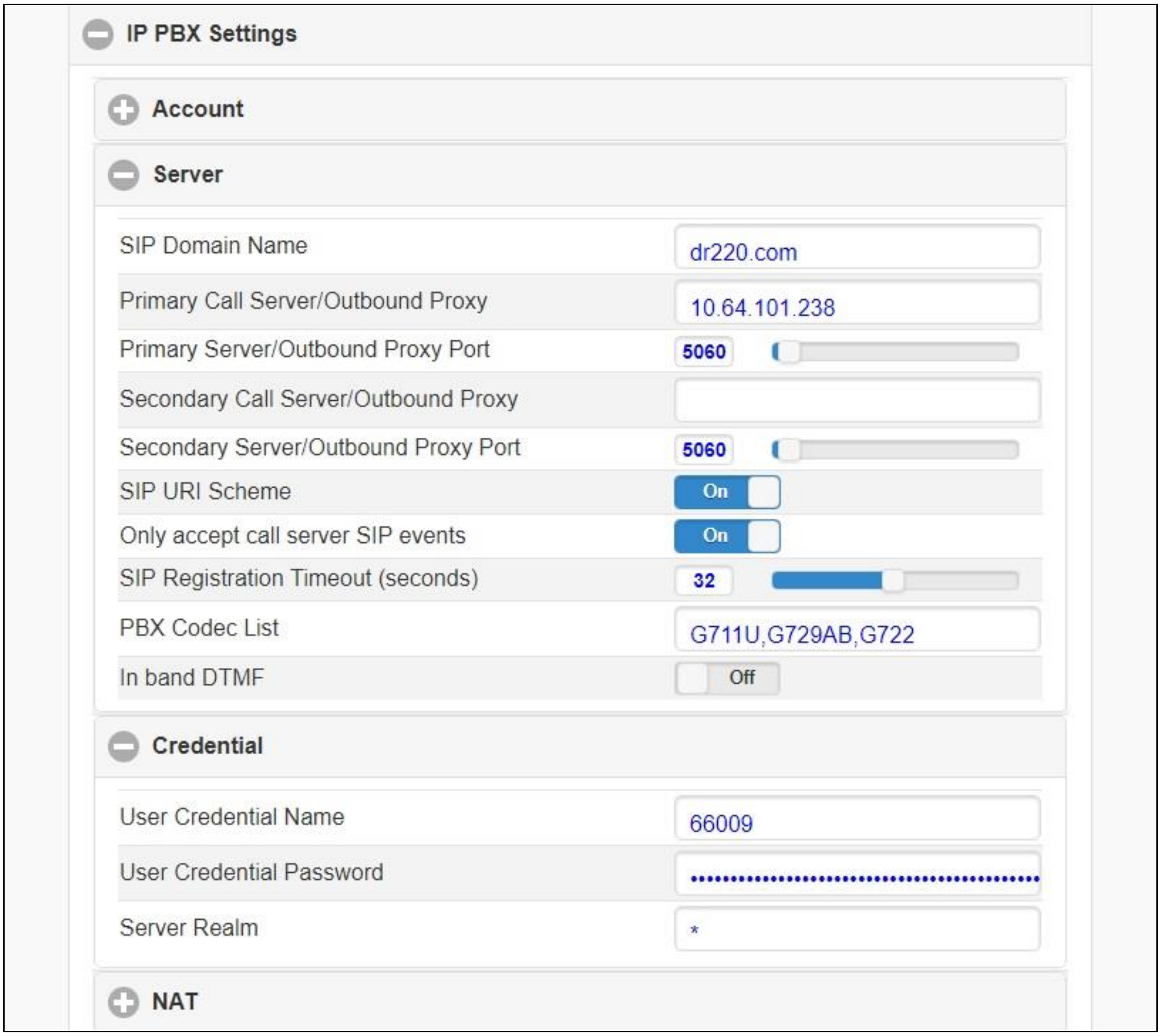
7.2. Administer IP PBX Settings

The **Settings** screen is displayed. Expand **IP PBX Settings** followed by **Account**. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Display Name:** A desired name.
- **Extension Number/Address:** The user extension from **Section 6.2.1**.
- **Display Number:** The user extension from **Section 6.2.1**.
- **Transport Type:** The applicable transport protocol from **Section 6.3**.

Expand **Server** and **Credential**. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **SIP Domain Name:** The domain name from **Section 3**.
- **Primary Call Server:** IP address of the Session Manager signaling interface.
- **PBX Codec List:** The applicable and desired codecs.
- **User Credential Name:** The user extension from **Section 6.2.1**.
- **User Credential Password:** The user password from **Section 6.2.2**.



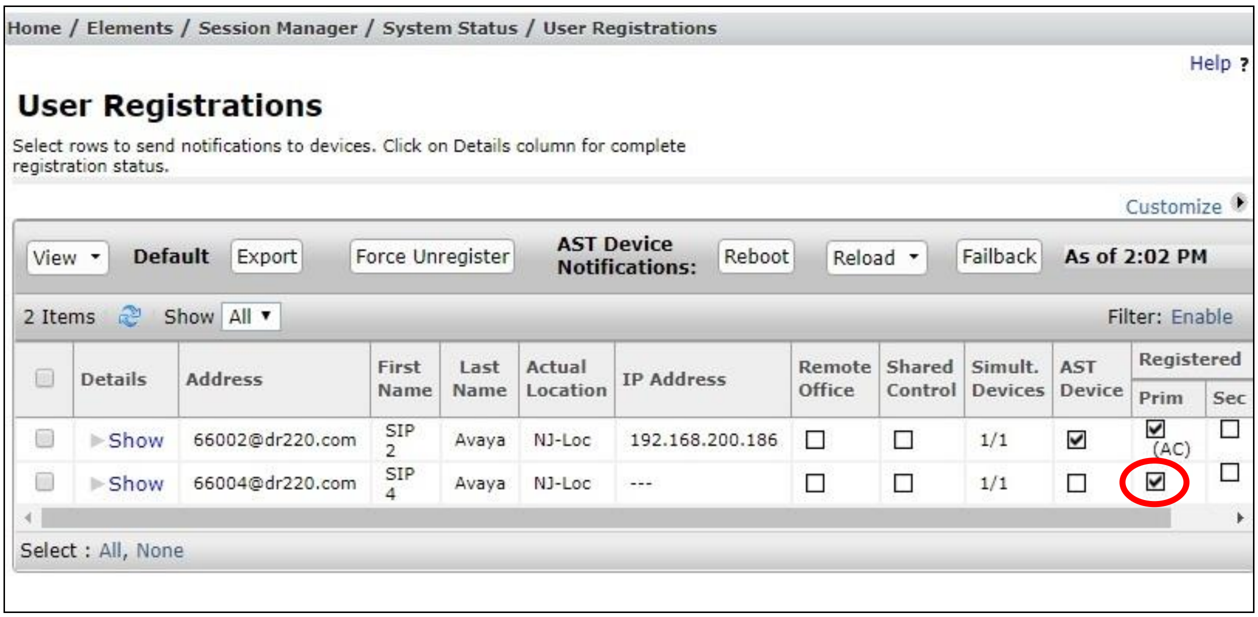
8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Session Manager and Dolby Conference Phone.

8.1. Verify Avaya Aura® Session Manager

From the System Manager web-based interface, select **Elements → Session Manager → System Status → User Registrations** (not shown) to display the **User Registrations** screen.

Verify that the user from **Section 6.2** is registered, as shown below with a check in the **Registered Prim** column.

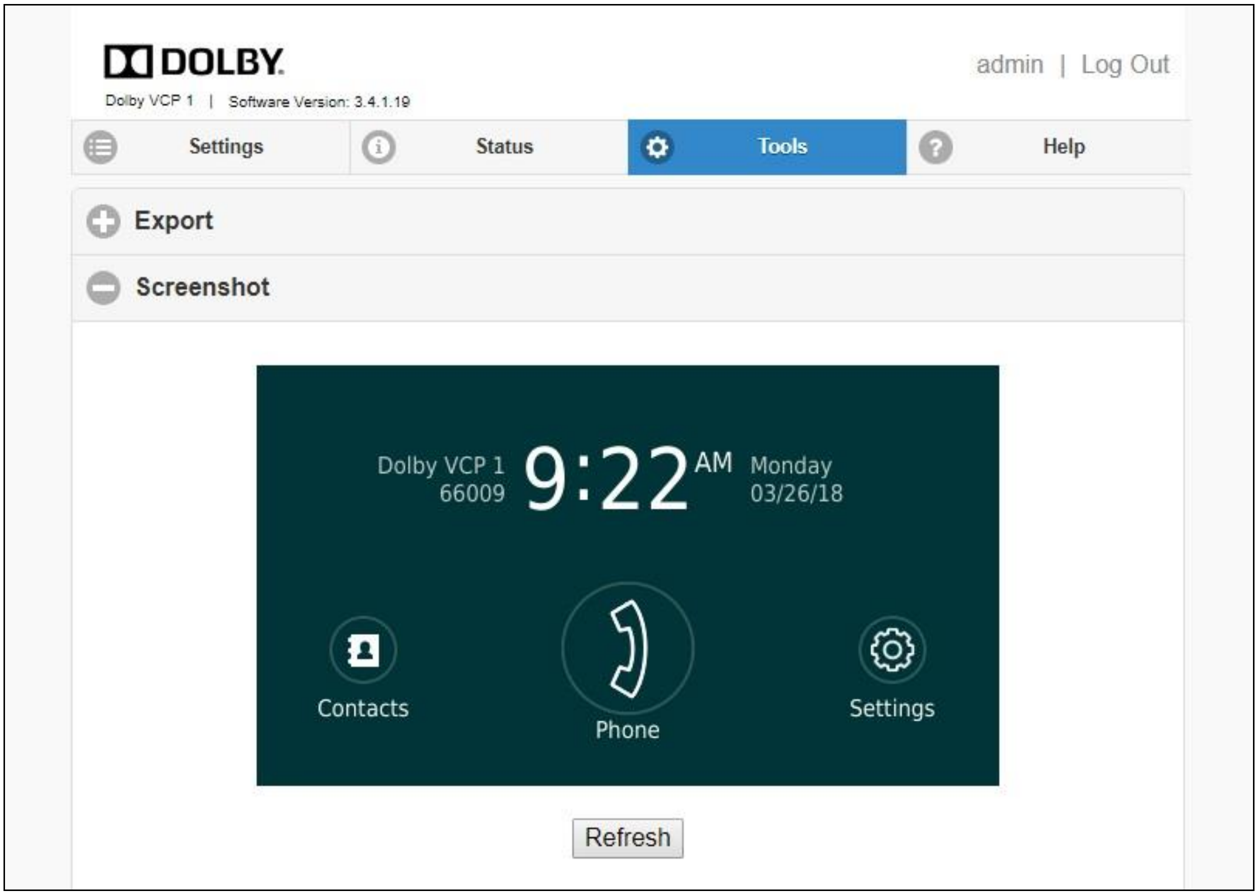


8.2. Verify Dolby Conference phone

From the Dolby Conference Phone web-based interface, select **Tools** from the top menu. Expand **Screenshot** for a snapshot of the current display on the Dolby Conference Phone.

Verify that the phone displays the proper user name and extension in the upper left portion of screen, and that there is a **Phone** icon in the middle lower portion of screen as shown in the snapshot below, which is an indication that the phone has registered successfully.

In the case of unsuccessful registration, the **Phone** icon would not be shown, and there will be a red exclamation mark on top of the **Settings** icon.



9. Conclusion

These Application Notes describe the configuration steps required for Dolby Conference Phone 3.4 to successfully interoperate with Avaya Aura® Session Manager 7.1 and Avaya Aura® Communication Manager 7.1. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

10. Additional References

This section references the product documentation relevant to these Application Notes.

1. *Administering Avaya Aura® Communication Manager*, Release 7.1.2, Issue 5, February 2018, available at http://support.avaya.com.

2. *Administering Avaya Aura® Session Manager*, Release 7.1.2, Issue 4, March 2018, available at http://support.avaya.com.

3. *Administering Avaya Aura® System Manager for Release 7.1.2*, Issue 11, March 2018, available at http://support.avaya.com.

4. *Dolby Conference Phone Administrator's Guide*, Version 3.3.1, September 14, 2017, available at http://www.dolby.com.

5. *Dolby Conference Phone Configuration Guide for Avaya Aura Platform 6.x*, Version 3.3, July 31, 2017, available at http://www.dolby.com.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.