Avaya Solution & Interoperability Test Lab

Application Notes for configuring Aura Alliance Client for Notes/Sametime Softphone Mode with Avaya Aura® Communication Manager and Avaya Aura® Session Manager – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning the Aura Alliance Client for Notes/Sametime Softphone mode to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager.

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

These Application Notes describe the configuration steps for provisioning the Aura Alliance Client for Notes/Sametime Softphone mode to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager.

The Aura Alliance Client for Notes/Sametime Softphone mode supports Session Initiation Protocol (SIP) for easy integration with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. It easily integrates with Notes/Sametime that support audio and video calls with Voice over IP (VoIP) telephony systems that use SIP (Session Initiation Protocol).

2. General Test Approach and Test Results

The interoperability compliance testing evaluates the ability of the Aura Alliance Client for Notes/Sametime to receive calls from Avaya Digital, H.323 and SIP endpoints as well as PSTN endpoints. The Aura Alliance Client for Notes/Sametime application is registered to Session Manager as a SIP endpoint.

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 Avaya systems and the Aura Alliance Client for Notes/Sametime utilized enabled capabilities of Transport Layer Security (TLS) but did not include use of secure media (SRTP) features as requested by Aura Alliance.

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2.1. Interoperability Compliance Testing

The compliance testing included the test scenarios shown below. Note that when applicable, all tests were performed with Avaya SIP phones, H.323 phones, Digital, analog phones and PSTN endpoints.

- Registration of Aura Alliance Client for Notes/Sametime Softphone mode.
- Invalid usernames/passwords for registration.
- Basic calls such as hold and retrieve, transfer, and conference calls.
- Basic video and conference call.
- Voice mail and Message waiting indicator.
- DTMF tones using RFC2833.
- Codec G.711 and G.729 support.
- Serviceability testing such as network outages and server reboots.

2.2. Test Results

All test cases passed successfully with the following observation:

- Aura Alliance Client for Notes/Sametime currently does not support Message Waiting Indicator (MWI).

2.3. Support

Support from Avaya is available by visiting the website http://support.avaya.com and a list of product documentation can be found in **Section 10** of these Application Notes. Technical support for the Aura Alliance Client product can be obtained as follows:

Phone: +44 (0)20 3127 7761
Web: http://www.auraalliance.com/global-support/

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3. Reference Configuration

Figure 1 shows the network topology during compliance testing an Aura Alliance Client for Notes/Sametime with Avaya Aura® Communication Manager and Avaya Aura® Session Manager.

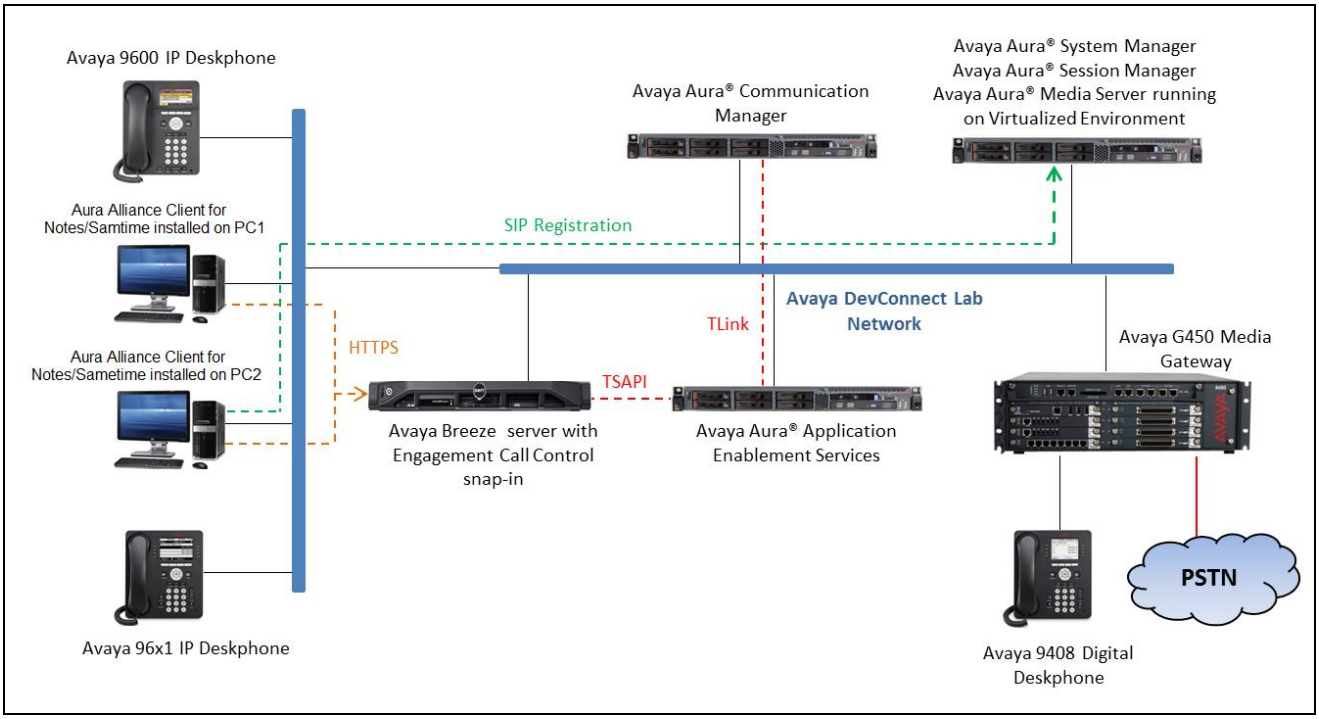

Figure 1: Reference Configuration for Aura Alliance Client Softphone mode with Avaya Aura® Communication Manager and Avaya Aura® Session Manager

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4. Equipment and Software Validated

The following equipment and software was used for the compliance test.

Equipment/Software	Version/Release
Avaya Aura® Communication Manager running on a virtual platform	7.1.1.0.0.532.23985
Avaya Aura® Session Manager running on a virtual platform	7.1.1.0.711008
Avaya Aura® System Manager running on a virtual platform	7.1.1.0.046931
Avaya Aura® Media Server	7.8.0.333
Avaya G450 Media Gateway	38.20.1
Avaya 9641GS Deskphone	H.323 Release 6.65
Avaya 9611G Deskphone	SIP 7.1.1
Avaya 1408 Digital Deskphone	V 2.0
Aura Alliance Client plug-in running on IBM Notes IBM Lotus Notes	10.1 Version 9.0.1 FP9

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5. Configure Avaya Aura® Communication Manager

Configuration and verification operations on Communication Manager illustrated in this section were all performed using Avaya Site Administrator Emulation Mode. The information provided in this section describes the configuration of Communication Manager for this solution. It is implied a working system is already in place, including SIP trunks to a Session Manager. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 10**. The configuration described in this section can be summarized as follows:

- Verify System Capacity
- Define the Dial Plan

Note: Any settings not in **Bold** in the following screen shots may be left as Default.

5.1. Verify System Capacity

The license file installed on the system controls these attributes. If a required feature is not enabled or there is insufficient capacity, contact an authorized Avaya sales representative. Use the **display system-parameters customer-options** command to determine these values. On **Page 1**, verify that the **Maximum Off-PBX Telephones** allowed in the system is sufficient. One OPS station is required per SIP device.

```
display system-parameters customer-options                    Page   1 of  10
                               OPTIONAL FEATURES

     G3 Version: V16                              Software Package: Enterprise
       Location: 2                                 System ID (SID): 1
       Platform: 28                                Module ID (MID): 1

                                                          USED
                                 Platform Maximum Ports: 65000 290
                                       Maximum Stations: 41000 44
                                  Maximum XMOBILE Stations: 41000 0
                      Maximum Off-PBX Telephones - EC500: 41000 0
                      Maximum Off-PBX Telephones -   OPS: 41000 14
                      Maximum Off-PBX Telephones - PBFMC: 41000 0
                      Maximum Off-PBX Telephones - PVFMC: 41000 0
                      Maximum Off-PBX Telephones - SCCAN: 41000 0
                           Maximum Survivable Processors: 313   0

        (NOTE: You must logoff & login to effect the permission changes.)
```


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On **Page 2** of the **system-parameters customer-options form**, verify that the number of **Maximum Administered SIP Trunks** supported by the system is sufficient.

```
display system-parameters customer-options                    Page   2 of
10
                                OPTIONAL FEATURES

IP PORT CAPACITIES                                             USED
                     Maximum Administered H.323 Trunks: 12000 16
          Maximum Concurrently Registered IP Stations: 18000 2
            Maximum Administered Remote Office Trunks: 12000 0
Maximum Concurrently Registered Remote Office Stations: 18000 0
              Maximum Concurrently Registered IP eCons: 414   0
  Max Concur Registered Unauthenticated H.323 Stations: 100   0
                       Maximum Video Capable Stations: 41000 1
                   Maximum Video Capable IP Softphones: 18000 4
                      Maximum Administered SIP Trunks: 24000 180
  Maximum Administered Ad-hoc Video Conferencing Ports: 24000 0
   Maximum Number of DS1 Boards with Echo Cancellation: 522   0
                            Maximum TN2501 VAL Boards: 128   0
                     Maximum Media Gateway VAL Sources: 250   0
           Maximum TN2602 Boards with 80 VoIP Channels: 128   0
          Maximum TN2602 Boards with 320 VoIP Channels: 128   0
   Maximum Number of Expanded Meet-me Conference Ports: 300   0

        (NOTE: You must logoff & login to effect the permission changes.)
```


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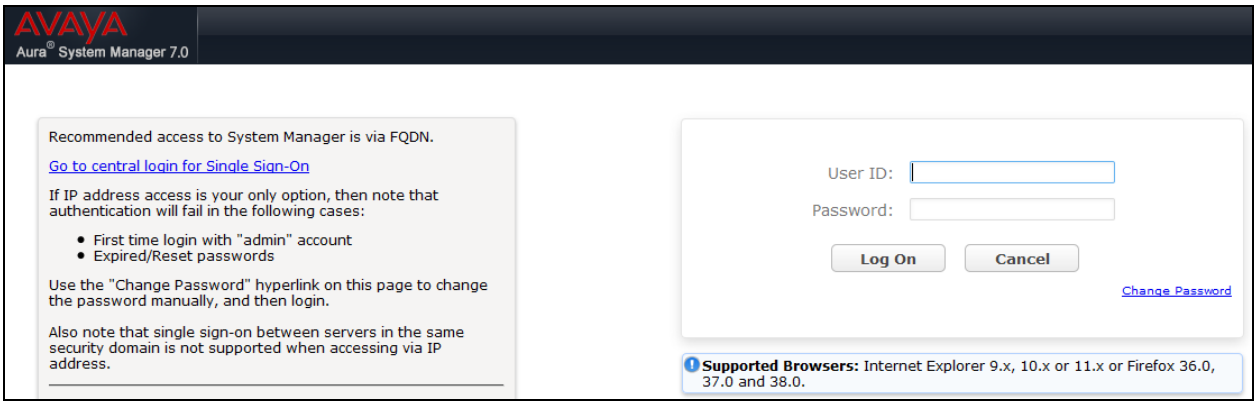
6. Configure Avaya Aura® Session Manager

This section describes aspects of the Session Manager configuration required for interoperability with Aura Alliance Client for Notes/Sametime. It is assumed that the Domains, Locations, SIP entities, Entity Links, Routing Policies, Dial Patterns and Application Sequences have been configured where appropriate for Communication Manager, Session Manager and Aura Messaging.

Session Manager is managed via System Manager. Using a web browser, access **https://<ip-address of System Manager>/SMGR**. In the **Log On** screen, enter appropriate **User ID** and **Password** and click the **Log On** button.



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6.1. Verify Avaya Aura® Session Manager Listen Ports for Aura Alliance Client for Notes/Sametime Registration

Each Session Manager Entity must be configured so that the Aura Alliance Client Softphone can register to it using TLS. From the web interface click **Routing → SIP Entities** (not shown) and select the Session Manager entity used for registration. Make sure that **TLS** entry is present as highlighted below.

Repeat accordingly on the alternative Session Manager if applicable.

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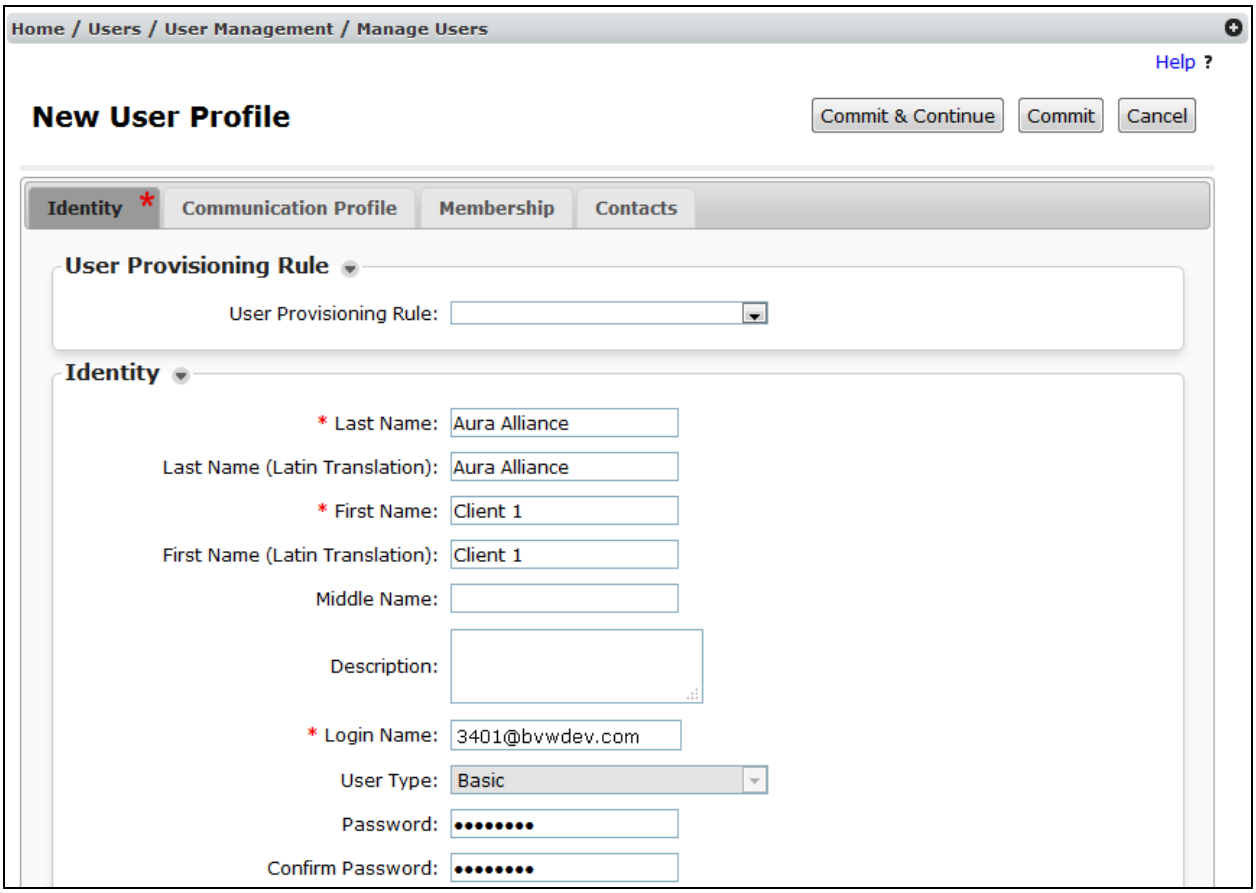
6.2. Add a SIP User

The Aura Alliance Client SIP user must be added as a user. A user must be added for each Aura Alliance Client. Click **User Management → Manage Users → New** (not shown) and configure the following in the **Identity** tab.

- **First Name** and **Last Name** — Enter an identifying name
- **Login Name** — Enter the extension number followed by the domain, in this case **3401@bvwdev.com**



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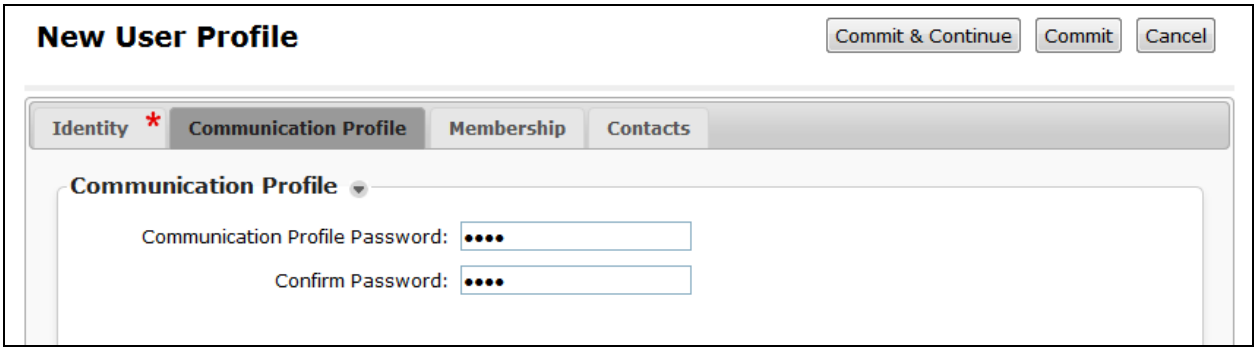
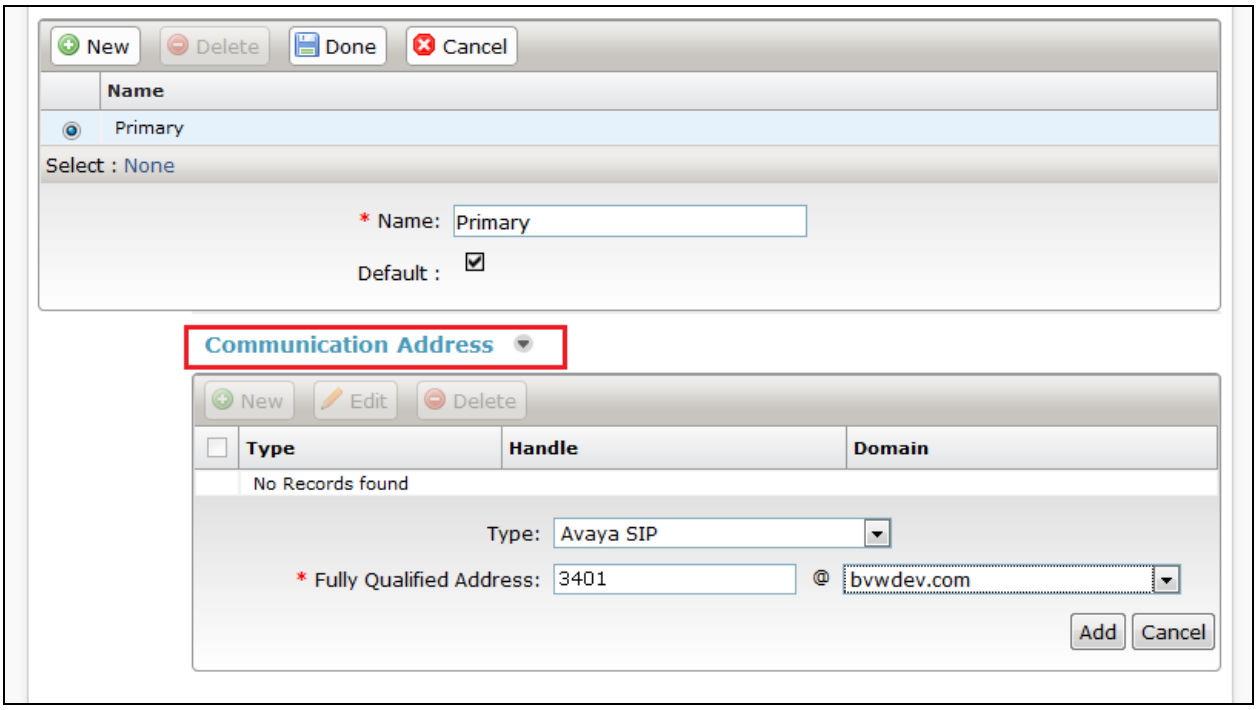
Click the **Communication Profile** tab and in the **Communication Profile Password** and **Confirm Password** fields, enter a numeric password. This will be used to register the Aura Alliance Client for Notes/Sametime Softphone.



In the **Communication Address** section select **New**; for **Type** select **Avaya SIP** from the drop down list. In the **Fully Qualified Address** field enter the extension number and select the appropriate **Domain** from the drop down list. Click **Add** when done.



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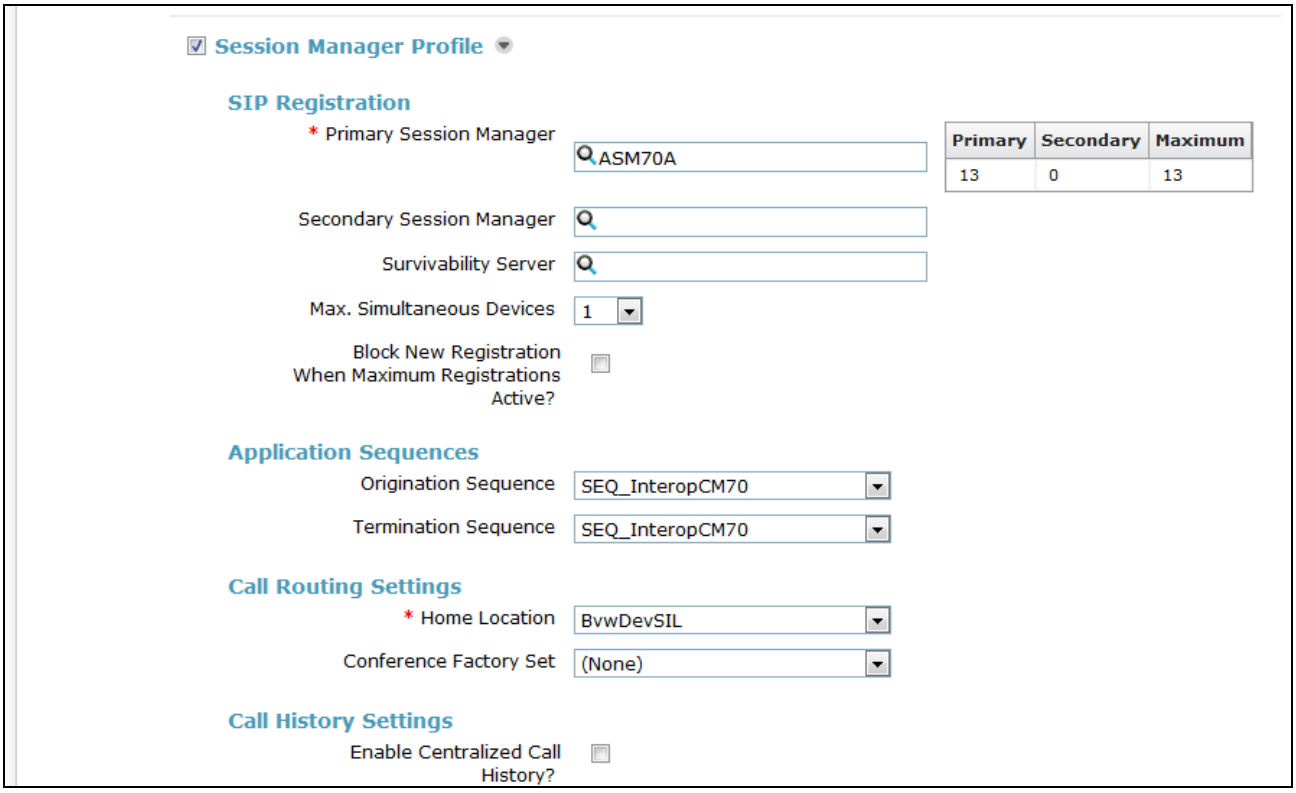
Select the check box for **Session Manager Profile** and configure the **Primary Session Manager, Origination Sequence, Termination Sequence** and **Home Location,** from the respective drop down lists.



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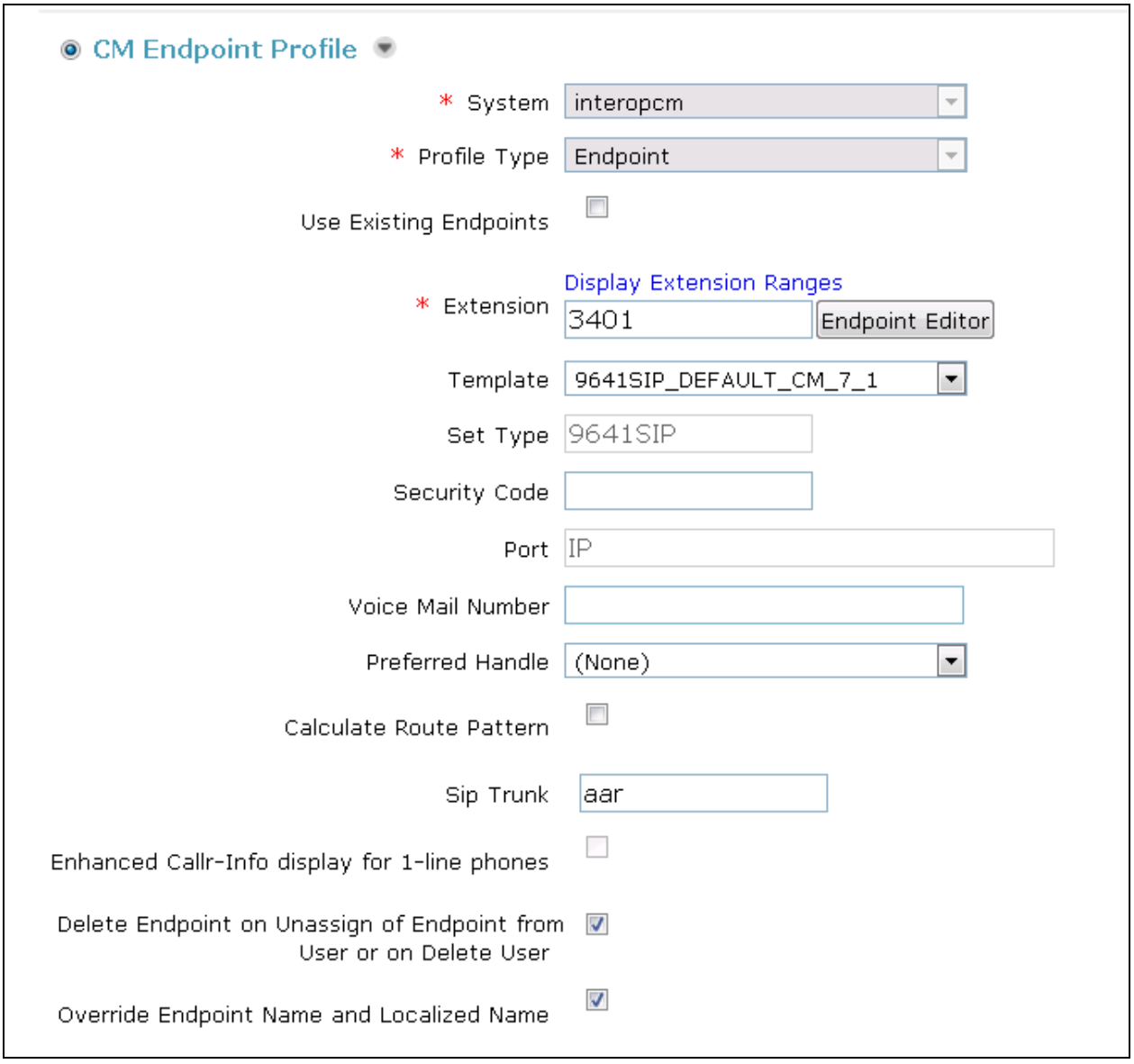
Select the check box for **CM Endpoint Profile** and configure as follows:

- **System** Select the relevant Communication Manager Element from the drop down list
- **Profile Type** Select **Endpoint** from the drop down list
- **Extension** Enter the required extension number, in this case **3401**
- **Template** Select **9641SIP_DEFAULT_CM_7_1** from the drop down list
- **Port** The "IP" is auto filled out by the system



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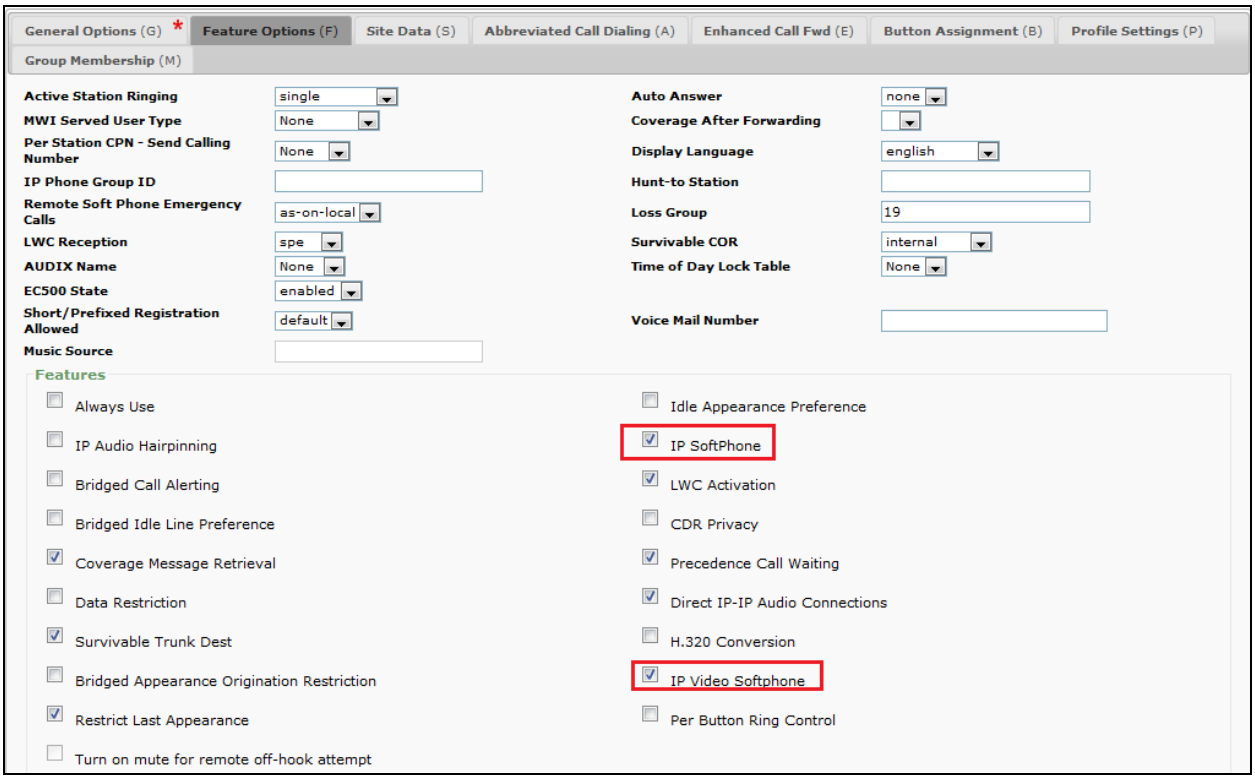
Continuing from above, click on **Endpoint Editor**. Click on the **Feature Options** tab, the screen shot below shows the Feature options that were used during compliance testing.



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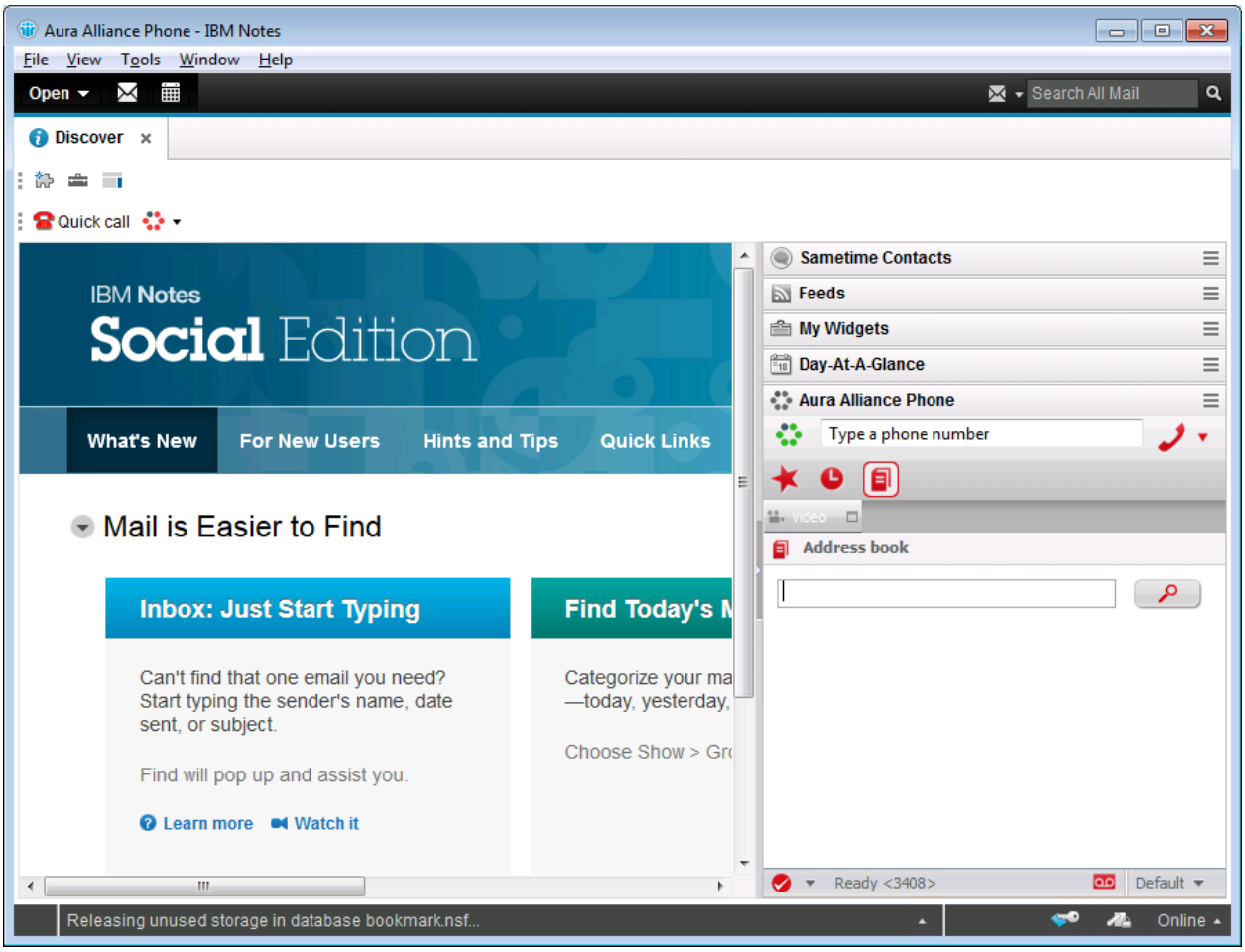
7. Configure Aura Alliance Client for Notes/Sametime

Please refer to Aura Alliance Client for Notes/Sametime documentation listed in **Section 10** of these Application Notes for further information about the Aura Alliance Client for Notes/Sametime configuration. The following sections cover specific settings concerning SIP and the connectivity to Session Manager.

From a PC where IBM Notes application is installed, start the application. The Aura Alliance Phone – IBM Notes window is displayed as below.



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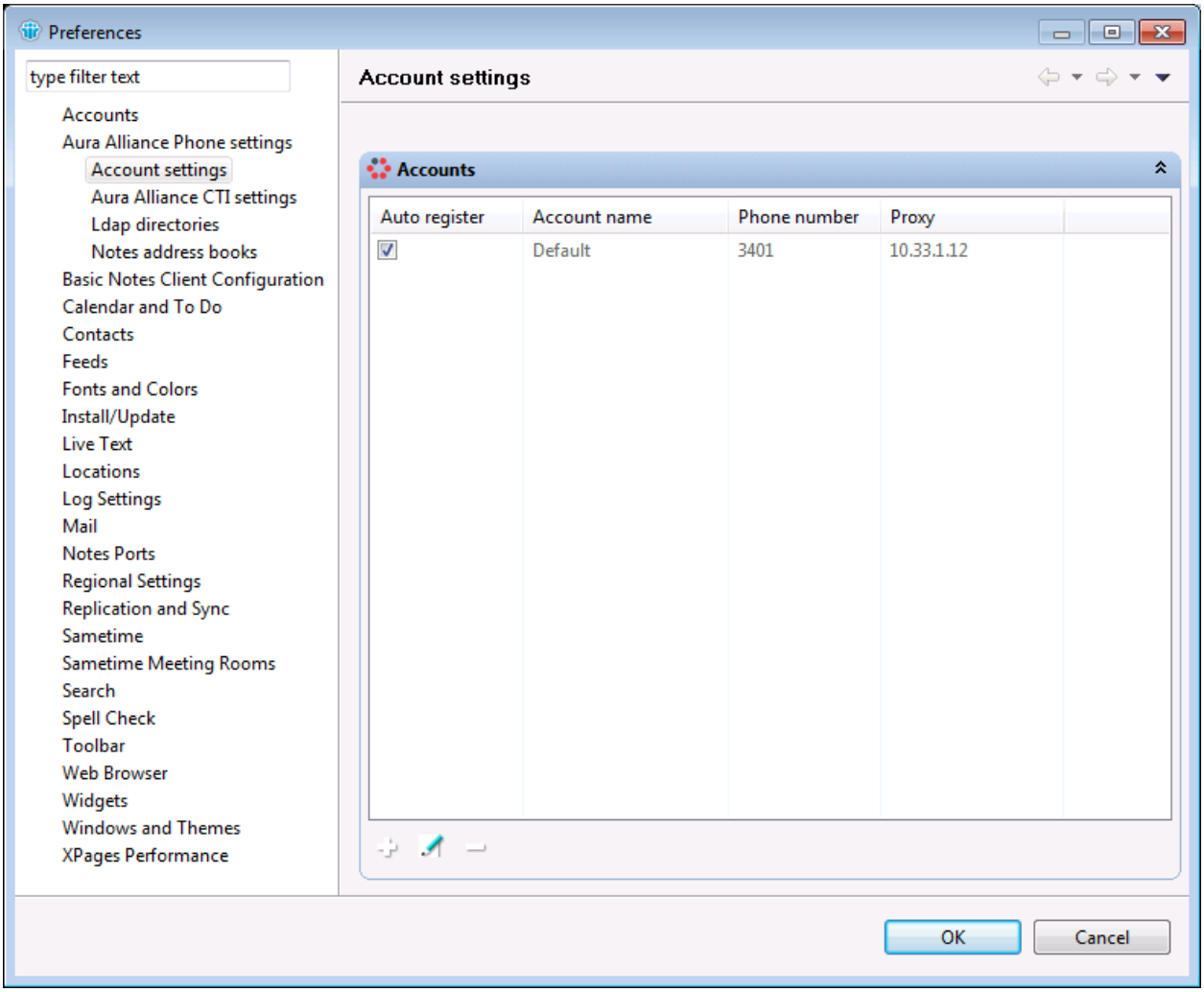
Navigate to **File → Preferences → Aura Alliance Phone settings → Account settings**. The **Accounts Settings** section is displayed on the right side of **Preferences** Window.

Select the plus **(+)** button in the bottom to create a new account or select the blue pen icon to edit an existing account. In this case, the default account was already created during the testing therefore select the blue pen button to edit the default account.



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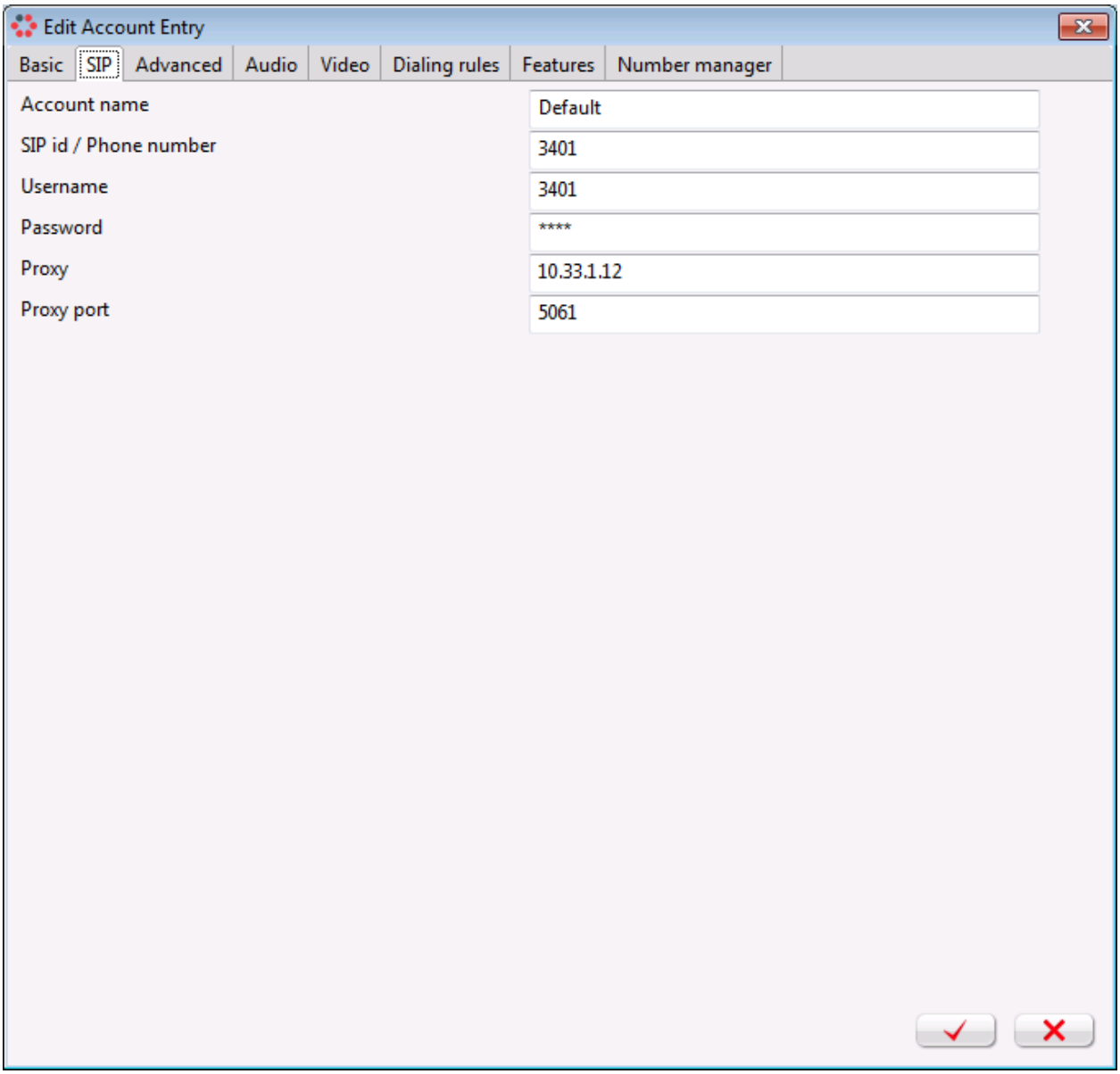
The **Edit Account Entry** window is displayed; enter the information as configured in **Section 6.2** in the **SIP id / Phone number**, **Username** and **Password** fields. Enter the SIP(SM100) IP address of Session Manager and the proxy port 5061 as configured in **Section 6.1** in **Proxy** and **Proxy port** fields.



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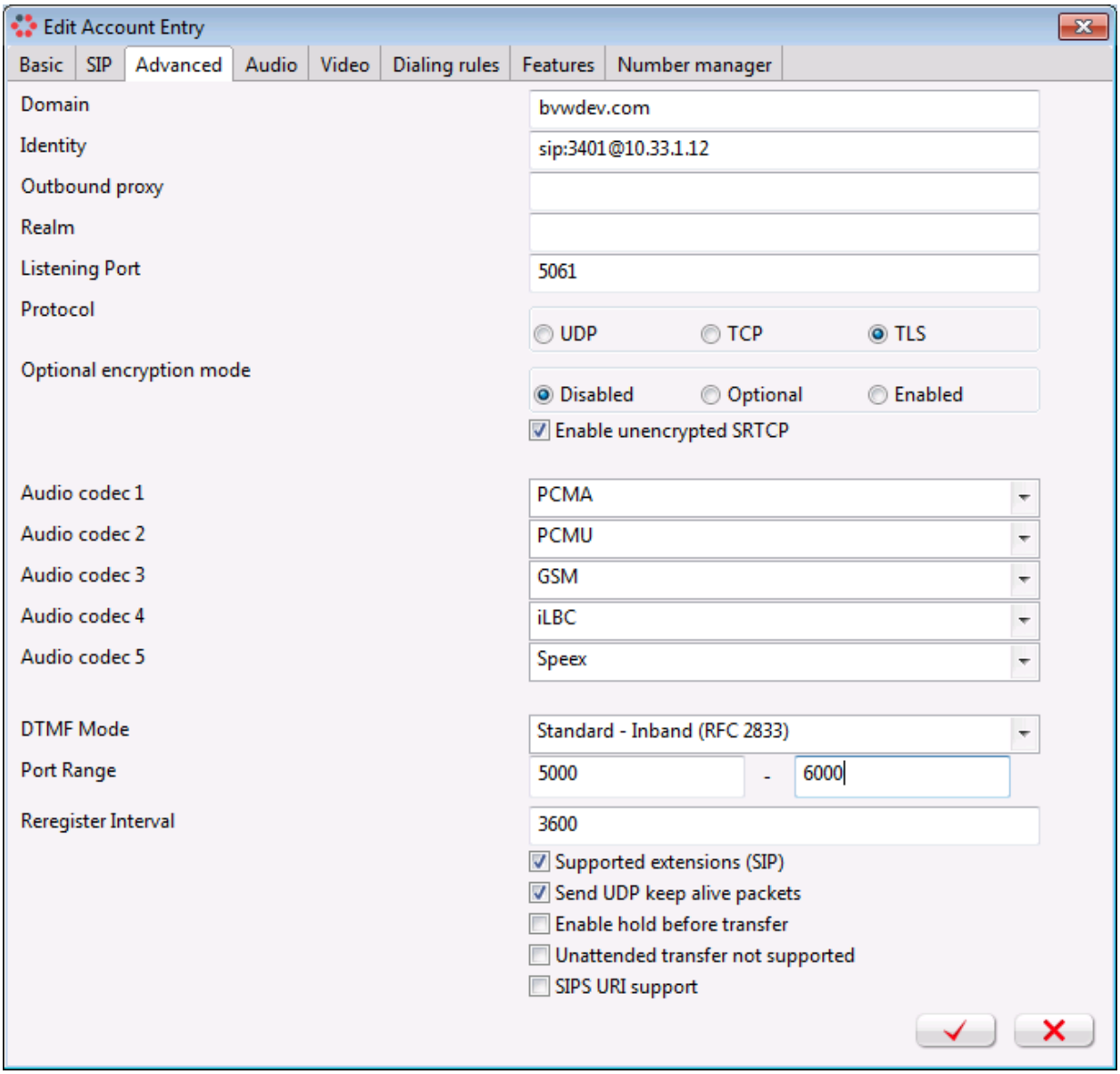
In order to configure other settings such as sip domain, codec and DTMF settings, navigate to the **Advanced** tab. In the compliance test, the **TLS** protocol, codec **PCMU** (G.711U) and DTMF **RFC 2833** were used.

Select the red check button in the bottom to save the changes.



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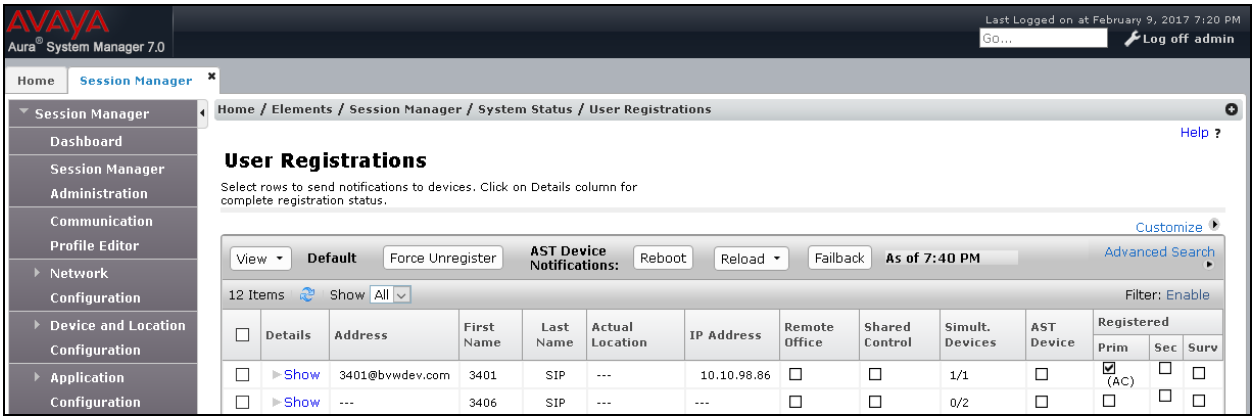
8. Verification Steps

These steps below may be used to verify functions of Aura Alliance Client for Notes/Sametime softphone with Session Manager and Communication Manager.

8.1. Verify Registration to Avaya Aura® Session Manager

From the System Manager dashboard select **Session Manager** from the **Elements** section (not shown). From the left hand menu select **System Status→User Registrations** (not shown). The Aura Alliance Client for Notes/Sametime is listed and a tick under **Registered** for the Session Manager it is registered to.



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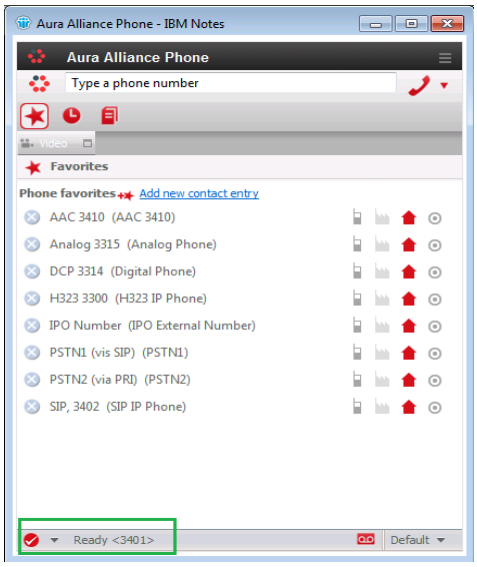
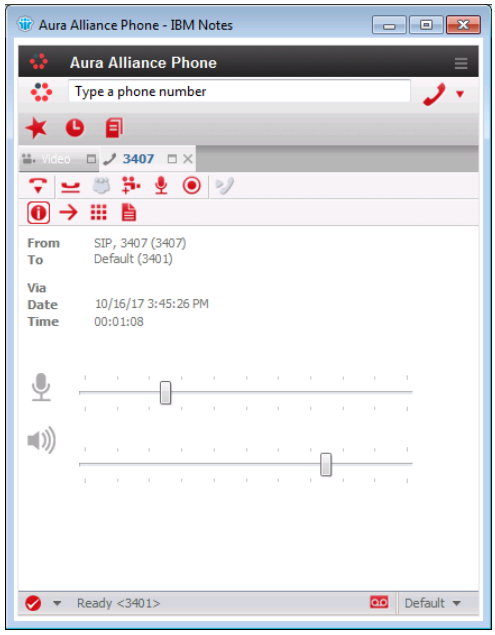
8.2. Verify Registration from Aura Alliance Client Notes/Sametime

Navigate to **Settings → Softphone → Account**; the **Register State** should display "Ready <SIP user>".



1. Place a call from an Avaya endpoint to SIP user extension 3401(Aura Alliance Client).
2. Answer the call on the Aura Alliance Client for Notes/Sametime application by selecting the **Answer** button (not shown), the **Calls** window below shows the call established.



From the **Calls** window, hang up the call by select the Hang up button (not shown). The call is released and the softphone returns to idle state.

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9. Conclusion

These Application Notes describe the configuration steps for provisioning Aura Alliance Client for Notes/Sametime from Aura Alliance to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Please refer to **Section 2.2** for test results and observations.

10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at http://support.avaya.com where the following documents can be obtained.

Product documentation for Avaya products may be found at http://support.avaya.com.

[1] Administering Avaya Aura® Communication Manager, Release 7.1, August 2017, Document Number 03-300509, Issue 1.

[2] Avaya Aura® Communication Manager Feature Description and Implementation, Release 7.1, August 2017, Document Number 555-245-205, Issue 1.

[3] Administering Avaya Aura® Session Manager, Release 7.1, Issue 1 August 2017

[4] Administering Avaya Aura® System Manager, Release 7.1, Issue 1, August, 2017

Product documentation for Aura Alliance products may be found at http://www.auraalliance.com/global-support/

[5] Lotus Notes plugin configuration guideline

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