**Avaya Solution & Interoperability Test Lab**

# Application Notes for Configuring Flying Voice Technology G502N Analogue Telephone Adapter with Avaya Aura® Session Manager 6.1 and Avaya Aura® Communication Manager 6.0.1 - Issue 1.0

## Abstract


These Application Notes describe the configuration steps required for Flying Voice Technology G502N Analogue Telephone Adapter (ATA) to interoperate with Avaya Aura® Session Manager 6.1 and Avaya Aura® Communication Manager 6.0.1.

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 steps required to configure Flying Voice Technology G502N Analogue Telephone Adapter (ATA) to interoperate with an Avaya SIP infrastructure consisting of Avaya Aura® Session Manager 6.1 and Avaya Aura® Communication Manager 6.0.1. The Flying Voice G502N ATA allows standard analog telephones and fax machines to be connected to the Avaya SIP infrastructure.

# 2. General Test Approach and Test Results

To verify interoperability of Flying Voice G502N ATA with Session Manager and Communication Manager, calls were made between Flying Voice ATAs and Avaya SIP, H.323 and Digital telephones using various codec settings and exercising common PBX features.

## 2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- Successful registration of Flying Voice ATAs with Session Manager.
- Calls between Flying Voice ATAs and Avaya SIP, H.323, and digital telephones.
- G.711 and G.729A codec support and negotiation, with and without media shuffling.
- Basic features including answer / hang up, music on hold, DTMF transmission, Message Waiting Indicator (MWI) subscription and feature access code dialing.
- PBX features including Call Waiting, Hold and T.38 fax.
- Proper system recovery after a Flying Voice G502N restart and loss of IP connection.

## 2.2. Test Results

All test cases were executed. The following were observations on Flying Voice G502N from the compliance testing.

- For G.729A codec, calls with Avaya SIP users did not shuffle.
- For G.729A codec, calls between G502N ATAs did not shuffle.
- For outgoing calls, DTMF was sent in-band as the RFC2833 negotiation was not successful.
- G502N ATA is not able to light up the MWI on the analog phone attached.
- T.38 fax transmission was successfully completed at 9600bps.

## 2.3. Support

Technical support from Flying Voice Technology can be obtained through the following:

- Phone: +86-755-26099365
- E-mail: support@e3call.com

# 3. Reference Configuration

The diagram illustrates an enterprise site with an Avaya SIP-based network, including Session Manager, an S8800 Server running Communication Manager with a G450 Media Gateway, and Avaya SIP, H.323 and Digital endpoints. The enterprise site also contains two Flying Voice G502N ATAs with an Avaya analog phone and a fax machine connected to them respectively. The Flying Voice G502N ATAs are registered with Session Manager and are configured as endpoint users.

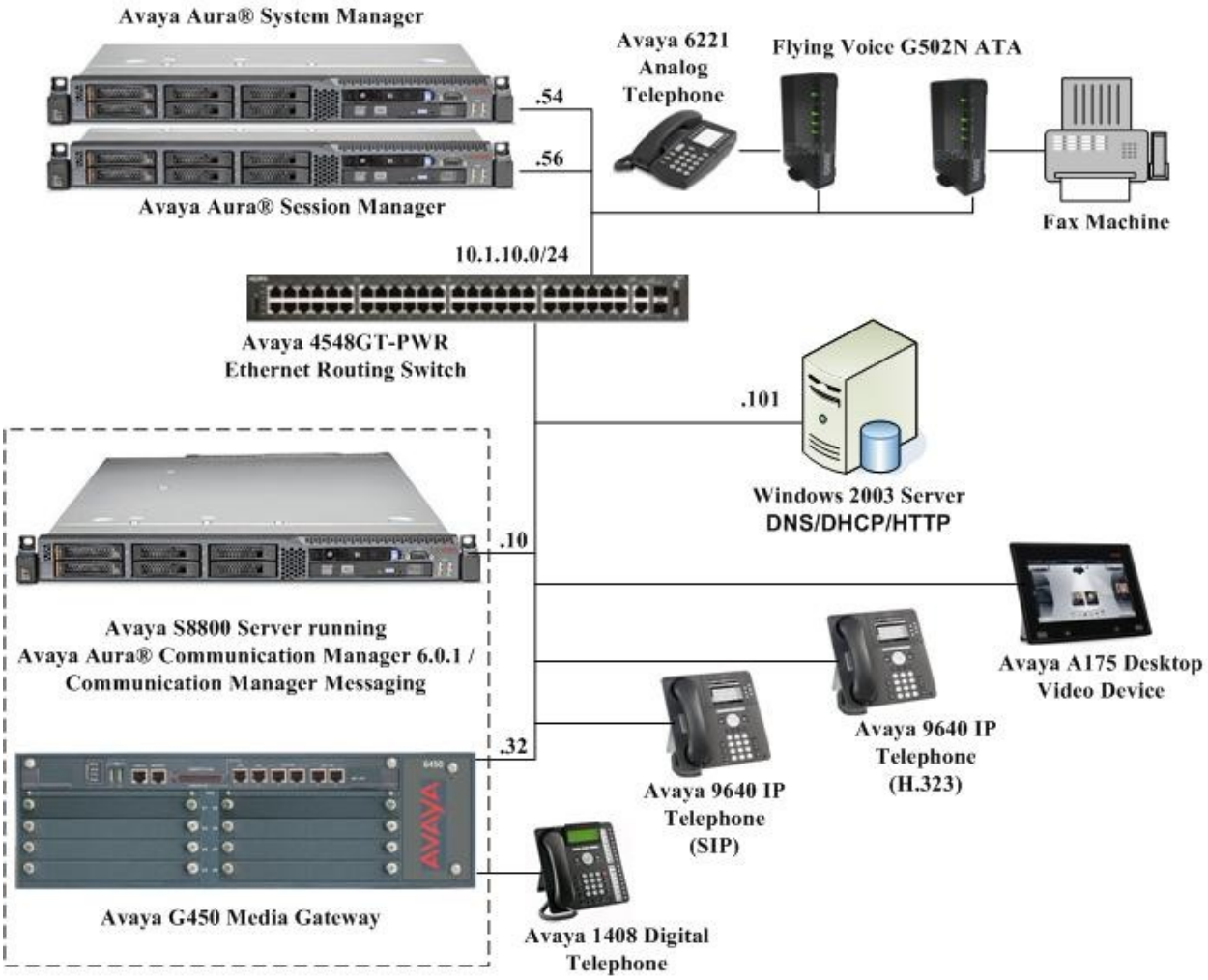



**Figure 1: Flying Voice G502N ATAs with Avaya SIP Solution**

**Table 1** lists the extensions used for this testing.

| Extension | Note |
|---|---|
| 10099 | Avaya 9640 IP Telephone (H.323) |
| 10051 | Avaya 9640 IP Telephone (SIP) |
| 10016 | Avaya 1408 Digital Telephone |
| 10061 | Avaya Desktop Video Device (ADVD) (SIP) |
| 10065 to 10066 | Flying Voice G502N ATAs |

**Table 1 – Extension Setup**

# 4. Equipment and Software Validated

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

| Equipment | Software |
|---|---|
| Avaya S8800 Server | Avaya Aura® Communication Manager 6.0.1 (Service Pack 4 00.1.510.1-19100) / Avaya Aura® Communication Manager Messaging 6.0.1 |
| Avaya G450 Media Gateway | 31.20.0 |
| Avaya S8800 Server | Avaya Aura® Session Manager 6.1 Service Pack 2 |
| Avaya S8800 Server | Avaya Aura® System Manager 6.1 Service Pack 2 |
| Avaya 9600 Series IP Telephones | 2.6.4.0 (SIP)<br>3.1 SP2 (H.323) |
| Avaya 1408 Digital Telephone | - |
| Avaya Desktop Video Device | 1.0.3 |
| Avaya 4548GT-PWR Ethernet Routing Switch | V5.4.0.008 |
| Flying Voice G502N Analogue Telephone Adapters (ATA) | Hardware Version: 1.0.1<br>Firmware Version: 3.5.4 (110811233904)<br>DSP Version: F1.21 |

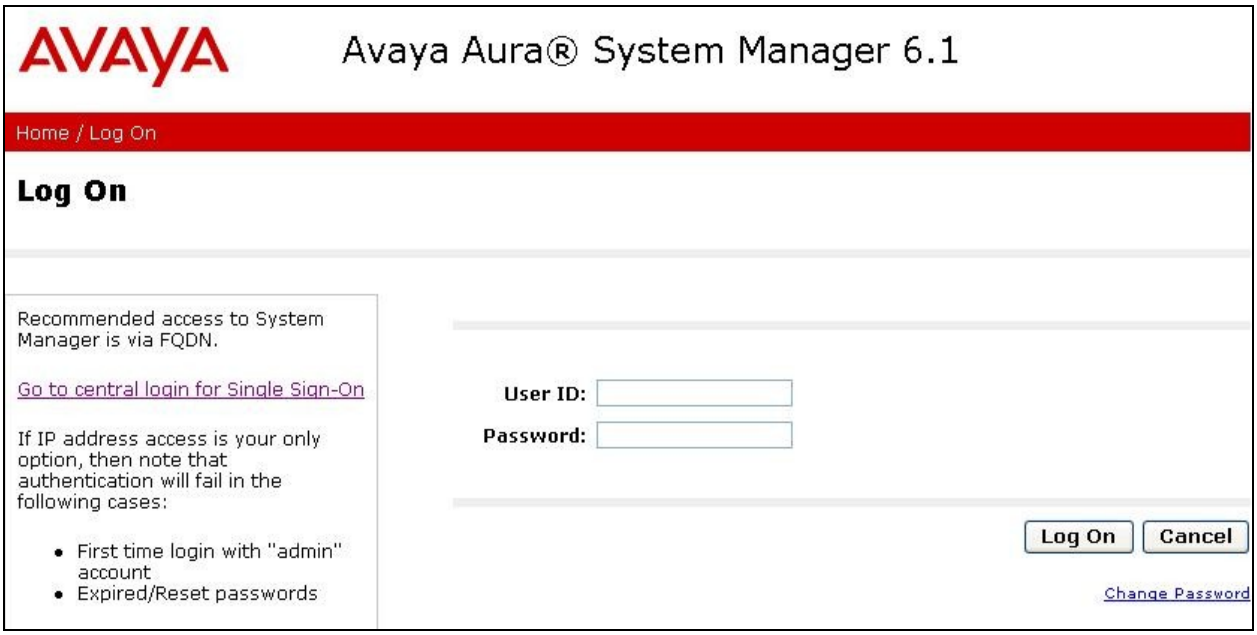
# 5. Configure Avaya Aura® Session Manager

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

- Launch System Manager
- Administer users

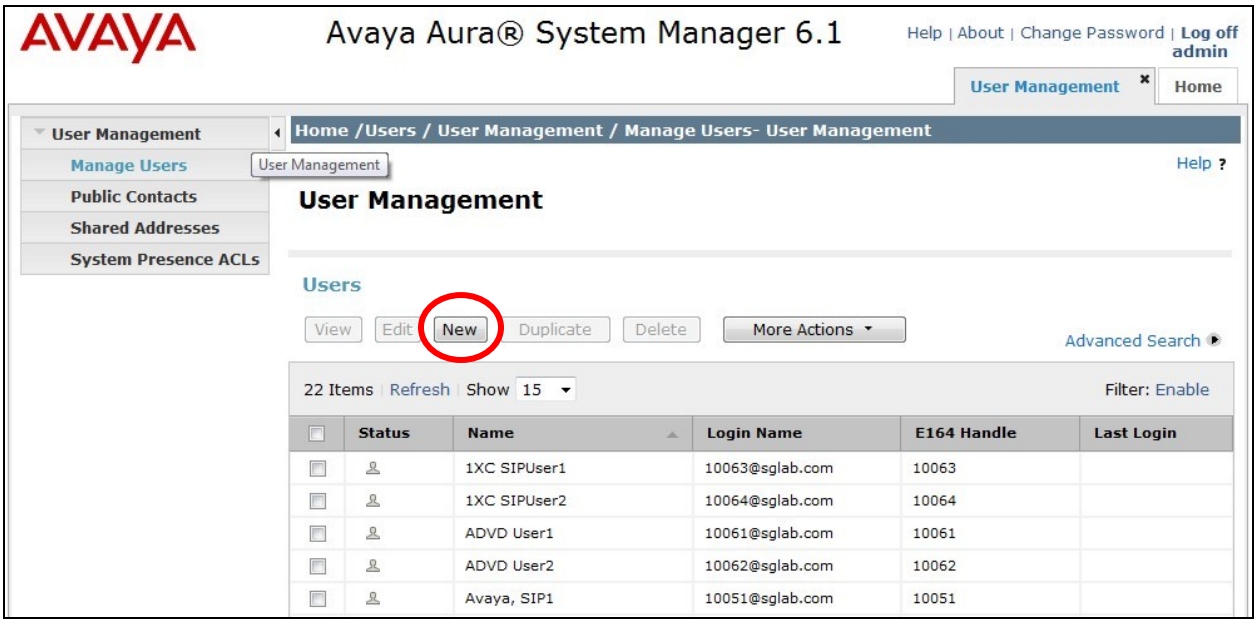
## 5.1. Launch Avaya Aura® System Manager

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



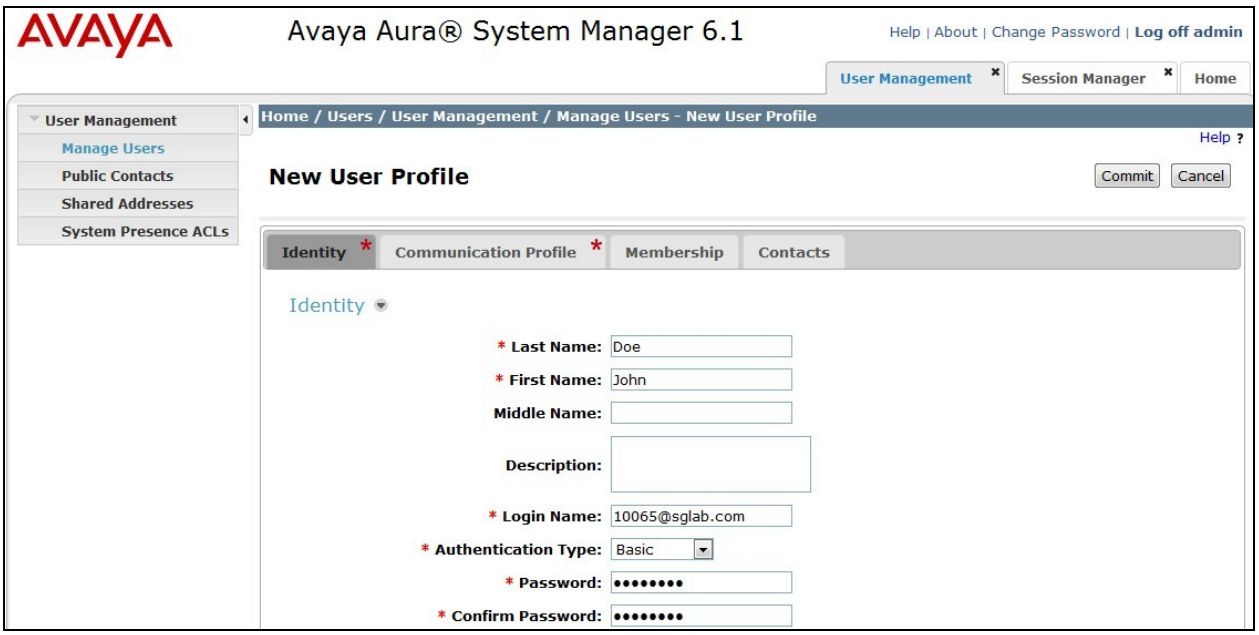
## 5.2. Administer Users

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.



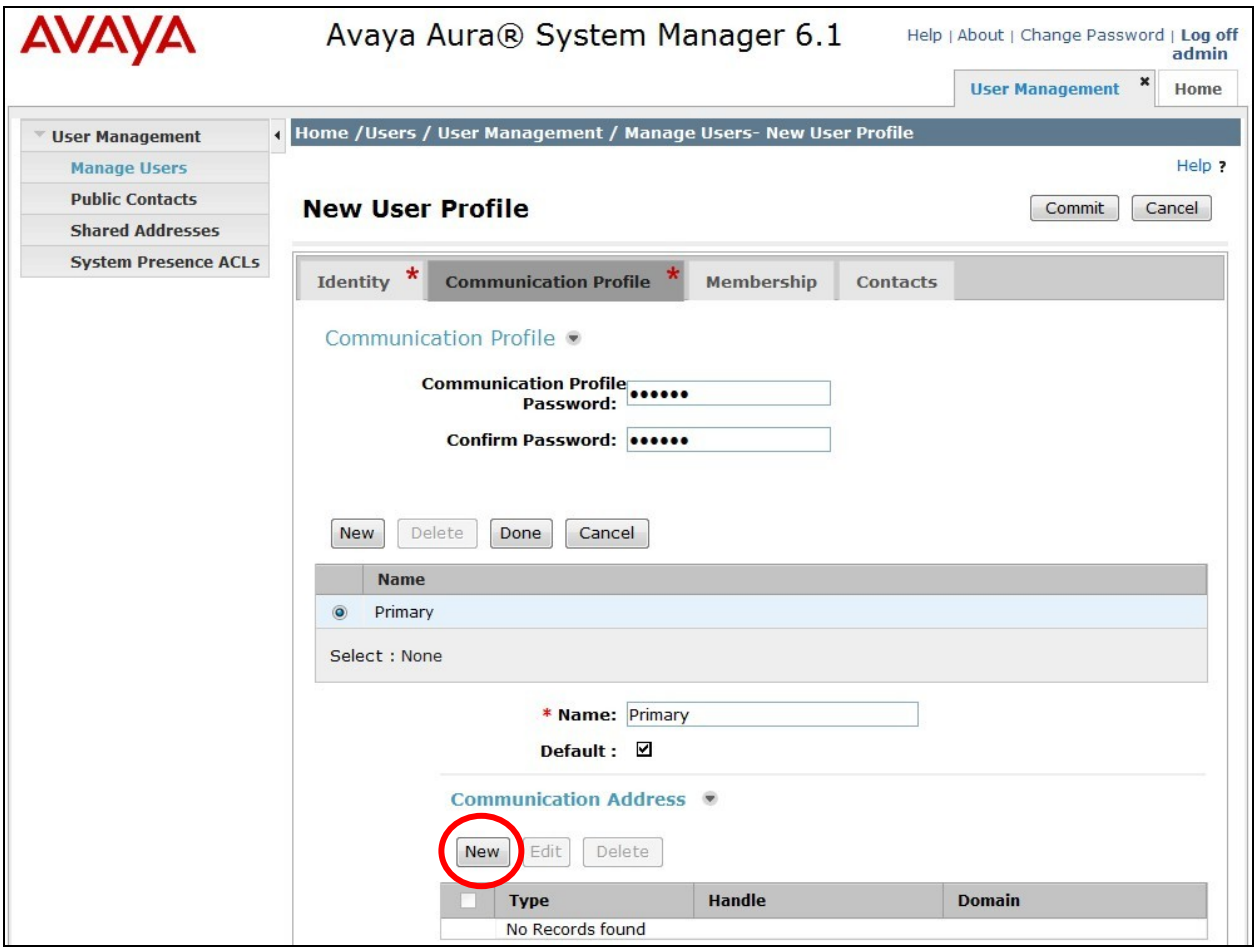
### 5.2.1. Identity

The **New User Profile** screen is displayed. Enter desired **Last Name** and **First Name**. For **Login Name**, enter **n@x**, where **n** is the first G502N user extension and **x** is the domain name used for compliance testing, in this case **sglab.com**. For **Password** and **Confirm Password**, enter the appropriate credentials to use for System Manager. Retain the default values in the remaining fields.

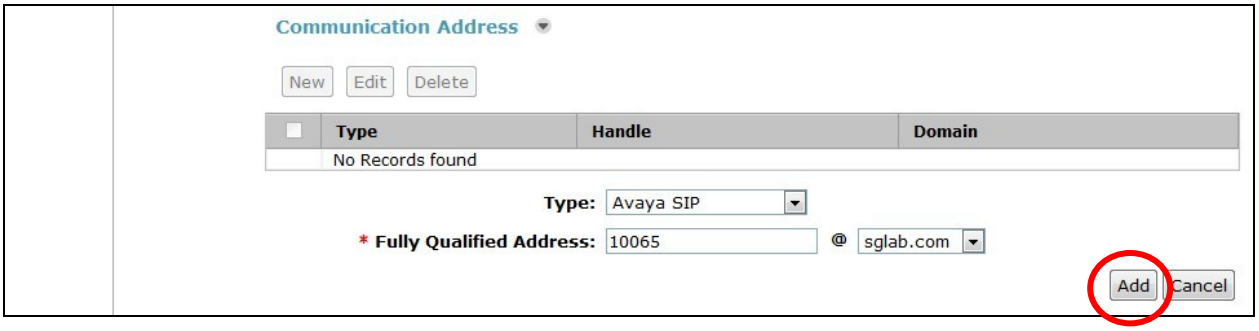


### 5.2.2. Communication Profile

Select the **Communication Profile** tab. For **Communication Profile Password** and **Confirm Password**, enter the desired password for the SIP user to use for registration. Scroll down to the **Communication Address** sub-section, and click **New** to add a new address.

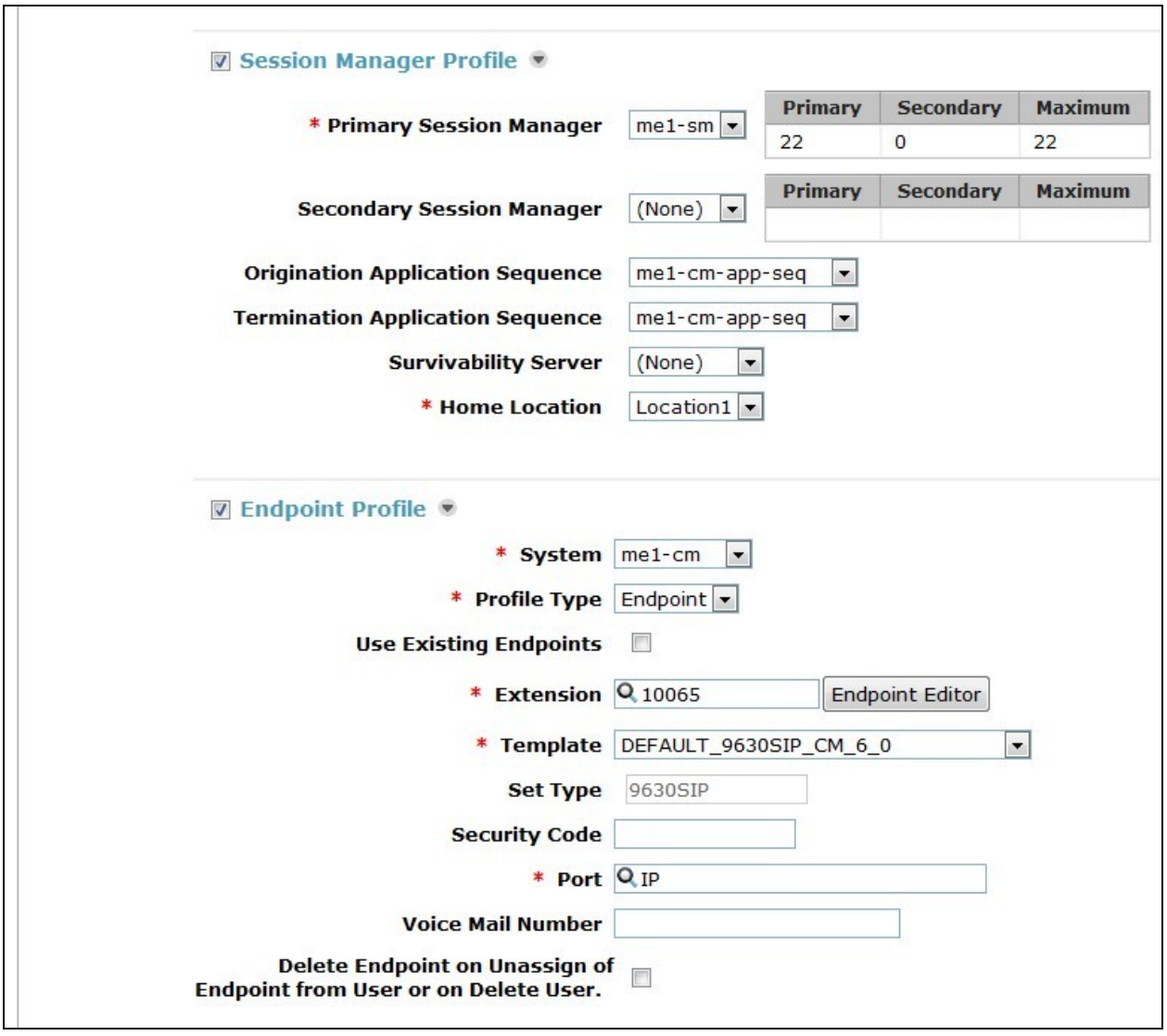



For **Type**, retain **Avaya SIP**. For **Fully Qualified Address**, enter and select the SIP user extension and domain name from **Section 5.2.1**. Click **Add**.



Scroll down to check and expand **Session Manager Profile**. For **Primary Session Manager**, **Origination Application Sequence**, **Termination Application Sequence**, and **Home Location**, select the values corresponding to the applicable Session Manager. Retain the default values in the remaining fields. These settings are configured during the initial setup of Session Manager.

Scroll down to check and expand **Endpoint Profile**. For **System**, select the value corresponding to the applicable Communication Manager. For **Extension**, enter the SIP user extension from **Section 5.2.1**. For **Template**, select **DEFAULT_9630SIP_CM_6_0**. For **Port**, select **IP**. Retain the default values in the remaining fields.




Click **Commit** to complete the creation of the new user (not shown).

Repeat **Section 5.2** to add a user for each Flying Voice G502N user. In the compliance testing, two users with extensions **10065** and **10066** were added.

# 6. Configure Avaya Aura® Communication Manager

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

- Verify Communication Manager license
- Administer IP codec set

## 6.1. Verify Avaya Aura® Communication Manager 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 capacity for SIP stations by comparing the **Maximum Off-PBX Telephones - OPS** field value with the corresponding value in the **USED** column. The difference between the two values needs to be greater than or equal to the number of Flying Voice G502N ATA extensions.

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  11
                            OPTIONAL FEATURES

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

                                                          USED
                              Platform Maximum Ports: 6400  281
                                   Maximum Stations: 1000  173
                             Maximum XMOBILE Stations: 2400  0
                    Maximum Off-PBX Telephones - EC500: 250   0
                    Maximum Off-PBX Telephones -   OPS: 1000  32
                    Maximum Off-PBX Telephones - PBFMC: 250   0
                    Maximum Off-PBX Telephones - PVFMC: 250   0
                    Maximum Off-PBX Telephones - SCCAN: 0     0
                         Maximum Survivable Processors: 10    1



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

## 6.2. Administer IP Codec Set

Use the **change ip-codec-set n** command, where **n** is the existing codec set number associated with the SIP trunk group to Session Manager. Update the audio codec types in the **Audio Codec** fields as necessary to include G.711A, G.711MU and G.729AB.

```
change ip-codec-set 6                                          Page   1 of   2

                         IP Codec Set

   Codec Set: 6

   Audio        Silence      Frames   Packet
   Codec        Suppression  Per Pkt  Size(ms)
 1: G.711MU          n          2        20
 2: G.711A           n          2        20
 3: G.729AB          n          2        20
 4:
```

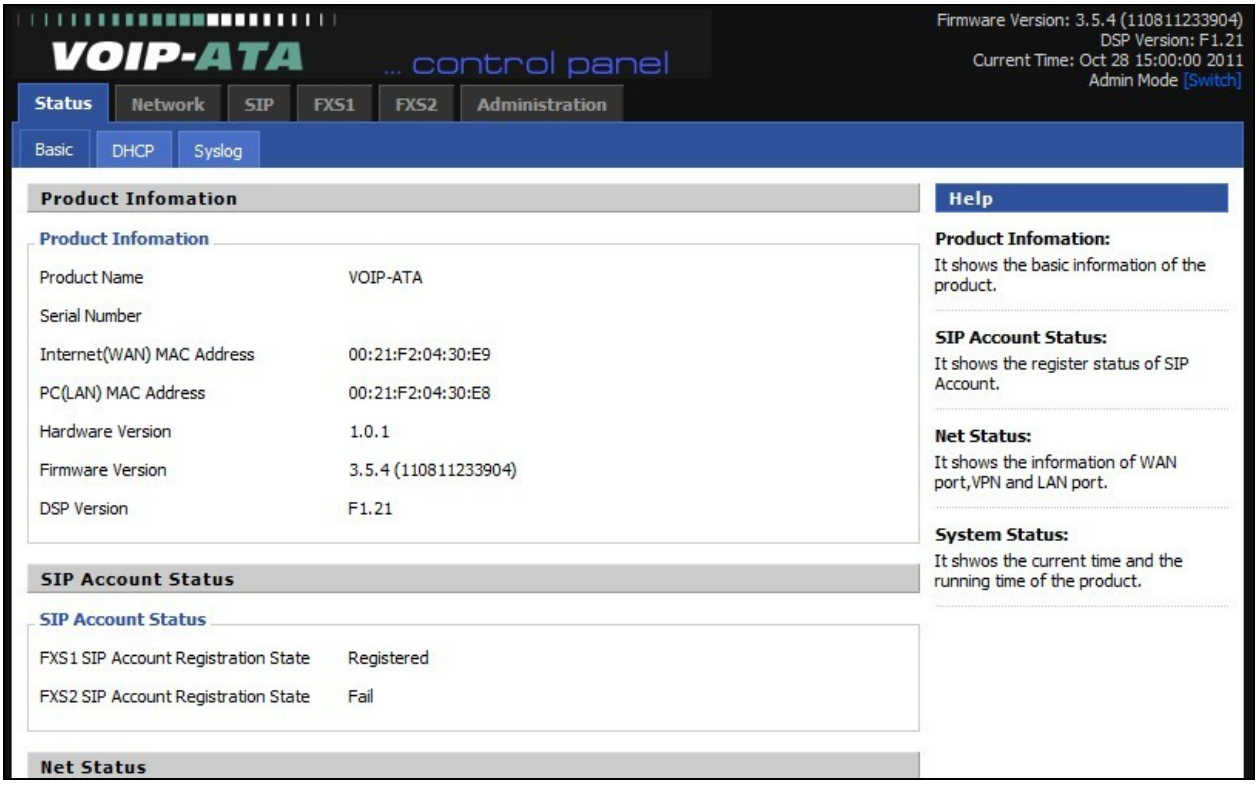
# 7. Configure Flying Voice G502N ATAs

This section provides the procedures for configuring Flying Voice G502N ATAs. The procedures include the following areas:

- Access Web Interface
- Configure SIP Account

## 7.1. Access Web Interface

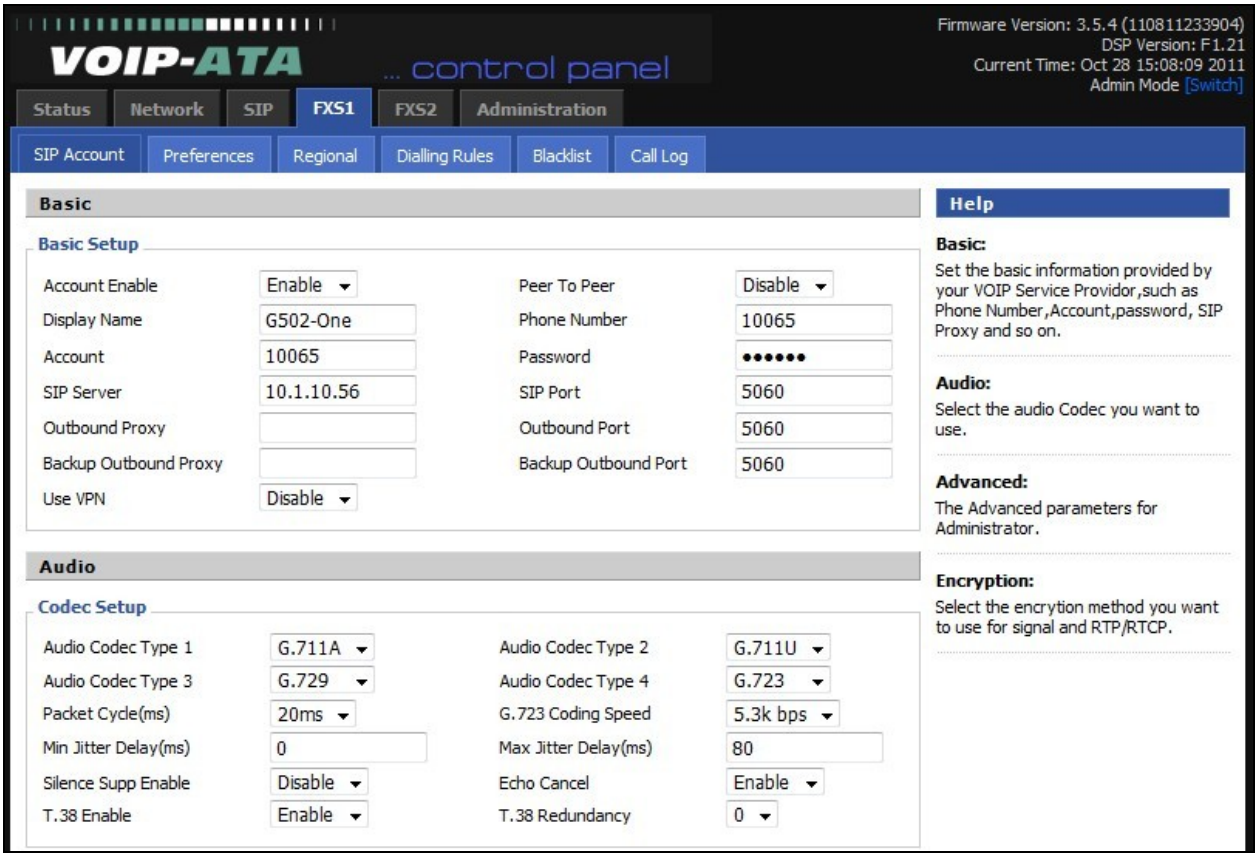
Enter the IP address of the G502N ATA into the address bar of web browser and log in using a valid account. The **Status** screen is displayed.



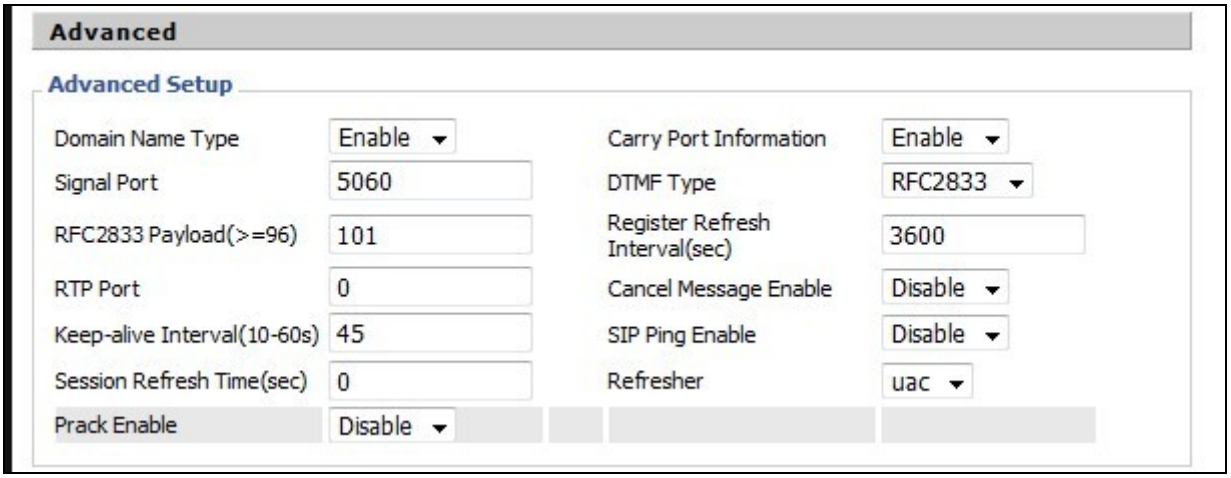
## 7.2. Configure SIP Account

Select **FXS1 → SIP Account** from the top menu. Set the **Account Enable** field to **Enable**. Enter the IP address of Session Manager signaling interface as shown in **Figure 1** for the **SIP Server** field. For the fields **Account**, **Phone Number** and **Password**, enter the account details as shown below to match the User settings in Session Manager added in **Section 5.2**.

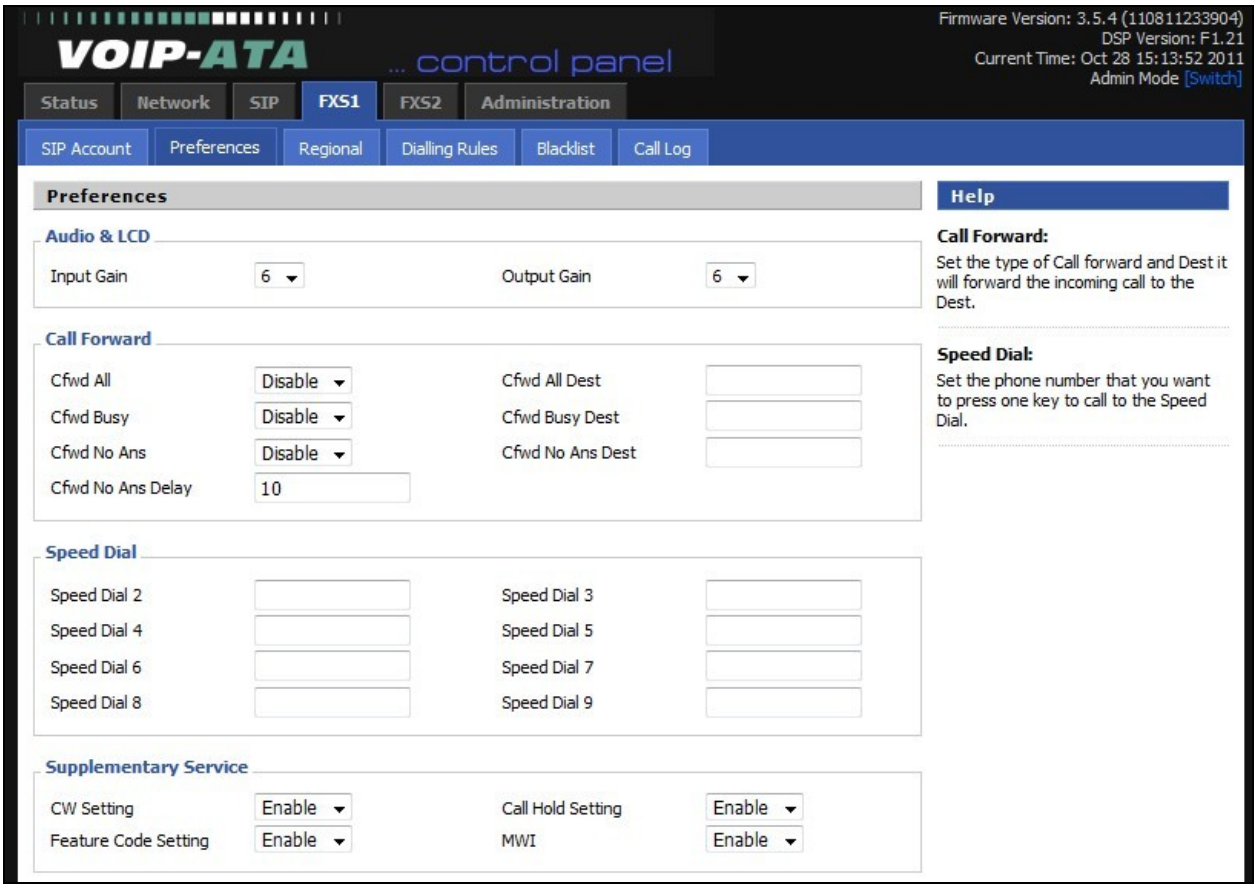
In the **Codec Setup** section, prioritize the audio codecs accordingly.



In the **Advanced Setup** section, set **DTMF Type** to **RFC2833**. The rest of the fields can be left at their default values. Click **Save Settings**, then followed by **Reboot** to restart the phone. This completes the configuration required for Flying Voice G502N ATAs.

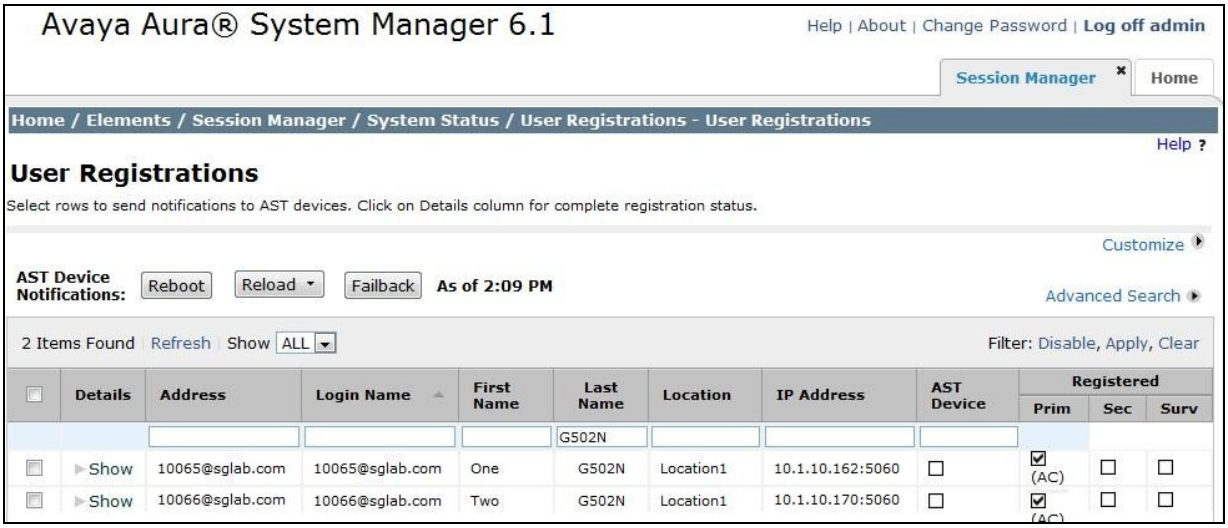



Select **FXS1 → Preferences** from the top menu. In the **Supplementary Service** section, set the **MWI Enable** field to **Enable**.

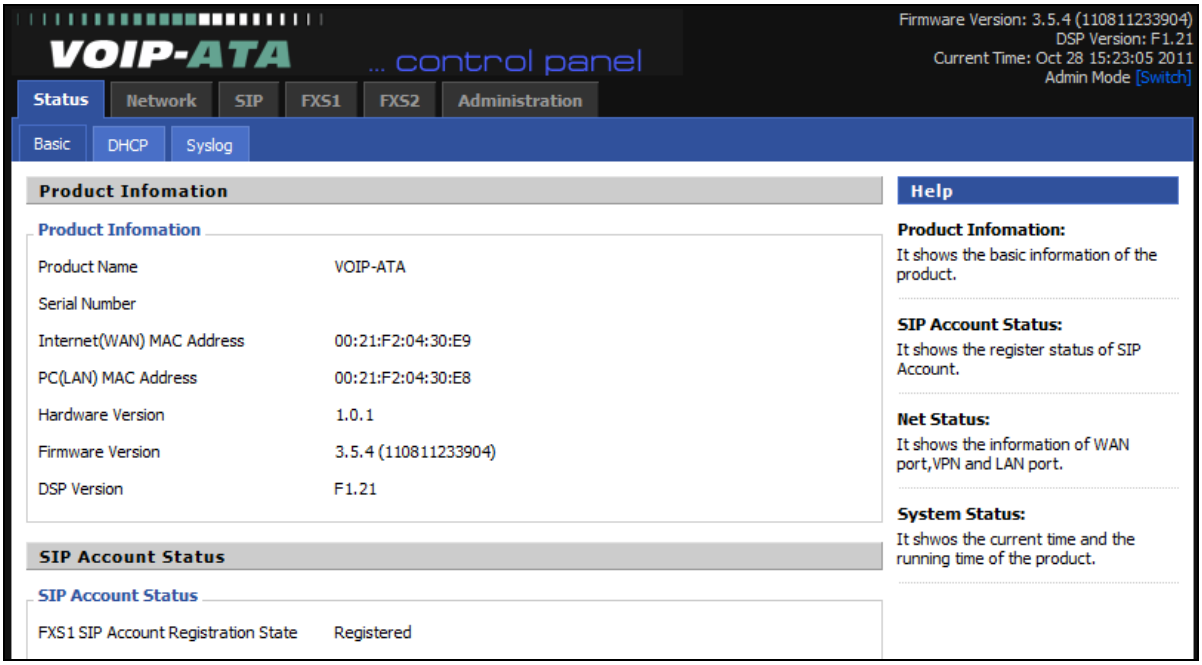


# 8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Session Manager and Flying Voice G502N ATAs. From the System Manager Web interface, select **Elements → Session Manager → System Status → User Registrations** to display the **User Registrations** screen. Verify that the users from **Section 5.2** are registered, as shown below with a check in the **Registered Prim** column.




From the web interface of the Flying Voice G502N ATA, click **Status → Basic** from the top menu. Verify that the SIP Account status for **FXS1 SIP Account Registration State** shows as **Registered**.



# 9. Conclusion

These Application Notes describe the configuration steps required for Flying Voice Technology G502N Analogue Telephone Adapters (ATA) to successfully interoperate with Avaya Aura® Session Manager 6.1 and Avaya Aura® Communication Manager 6.0.1. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

# 10. Additional References

This section references documentation relevant to these Application Notes. Avaya product documentation is available at http://support.avaya.com.


[1] *Administering Avaya Aura® Communication Manager*, Release 6.0, Doc ID 03-300509, June 2010.

[2] *Administering Avaya Aura® Session Manager*, Release 6.1, Doc ID 03-603324, Issue 1, November 2010.


The following the App Notes will be shipped with the product by Flying Voice Technology.


[3] *Flying Voice G502 User Manual*, V1.4, February 2011

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.