

Avaya Solution & Interoperability Test Lab

Application Notes for Configuring miALERT miSip Resident Unit with Avaya IP Office Server Edition – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for miALERT miSip Resident Unit to interoperate with Avaya IP Office Server Edition. miALERT miSip Resident Unit is an emergency communication solution that provides two-way speech between resident and nurse/aid.

In the compliance testing, miALERT miSip Resident Unit used the SIP user interface from Avaya IP Office to provide connectivity between resident and nurse/aid.

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.

1. Introduction

These Application Notes describe the configuration steps required for miALERT miSip Resident Unit to interoperate with Avaya IP Office Server Edition. miALERT miSip Resident Unit (miSip) is an emergency communication solution that provides two-way speech between resident and nurse/aid. In the compliance testing, miSip used the SIP user interface from Avaya IP Office to provide connectivity between resident and nurse/aid via the miALERT Event Management Server (EMS).

miSip is essentially an SIP speaker telephone that can be activated by the resident user via multiple wireless call points to reach the nurse staff. Each miSip is configured as a SIP user on Avaya IP Office, and each nurse's telephone is configured as members of a nurse hunt group.

When the resident user activates emergency on miSip via a call point to reach the nurse staff, miSip originates a call to the nurse hunt group via EMS. After the call is connected to an available nurse, the nurse can then accept the emergency notification and be connected to the miSip user with two-way voice communication. EMS is connected to Avaya IP Office Server Edition using SIP trunks and is not the scope of this application notes. Refer to **Section 9** for application notes of EMS with Avaya IP Office Server Edition.

The miSip can also be programmed for system announcements, for example a kitchen menu or activities for the week. When the menu or activity button is pressed the residents will hear through the nurse call speaker a pre-recorded message.

2. General Test Approach and Test Results

The general test approach was to configure a simulated enterprise voice network using IP Office. The miSip uses a SIP user to connect to the IP Office. See **Figure 1** for a network diagram. When a resident place an emergency call, one call leg generates a call between miSip and EMS and another call leg generates a call between EMS and a nurse/aid. Both these calls are mixed in EMS to provide a two-way speech path between miSip and a nurse staff. EMS is connected to the IP Office via SIP trunk and is not the scope of this application notes. A resident can also press the Menu or Activity button and hear a pre-recorded message that is configured in EMS. Also, when a Staff button is present in a call point panel and when it is activated, a direct call leg is generated between miSip and the called staff station.

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 this DevConnect Application Note 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 this Application Note, the interface between Avaya systems and miSip Resident Unit did not include use of any specific encryption features as requested by miALERT.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the ability of miSip to place calls to the nurse hunt group from various call points. The verification included proper connected two-way talk paths, proper call termination and proper call escalation. Verification also included the proper connectivity for Menu, Activity and Staff buttons. Note that all nurse station and hunt groups included both IP Office Primary and Expansions systems.

The serviceability testing focused on verifying the ability of miSip to recover from adverse conditions, such as disconnecting and reconnecting the network cable to the device.

2.2. Test Results

All test cases were executed and passed with the following observations,

- As per design feature of miSip, Transfer, Conference and Forwarding features are not supported.
- Only when Cancel button is activated at miSip call point, both legs of call will be terminated. Disconnecting the call at the nurse station will only terminate the call leg between EMS and the nurse station and will not terminate the call leg between miSip and EMS.
- When the Cancel button is activated, it was noted during compliance testing that it took about 6-7 seconds for both call legs to be terminated and the miSip to return to idle state.
- When a call is established between miSip and a nurse station directly, the Cancel button on miSip must be activated for the call to completely terminate.
- Allow Direct Media Path must be disabled at the SIP Line (trunk) between IP Office and EMS and at SCN between Primary and Expansion for this solution. Refer to Section 9 for further details.

2.3. Support

Technical support on miALERT miSip Resident Unit can be obtained through the following:

• **Phone:** 1-855-382-8999

Email: support@mialert.com/Web: http://mialert.com/

3. Reference Configuration

As shown in the test configuration below, the miSip solution consists of an EMS and a SIP extension connection to Avaya IP Office.

miSip supports different types of call points like miPatient 4B, miPatient 2B, Wired Pull Cord etc.

The following hunt groups and extensions were configured during compliance testing

Hunt Group	Hunt Group Members
26001 on Primary	26009, 26014, 26103, 26109
26503 on Expansion	26114, 26109, 26014, 26009, 26021

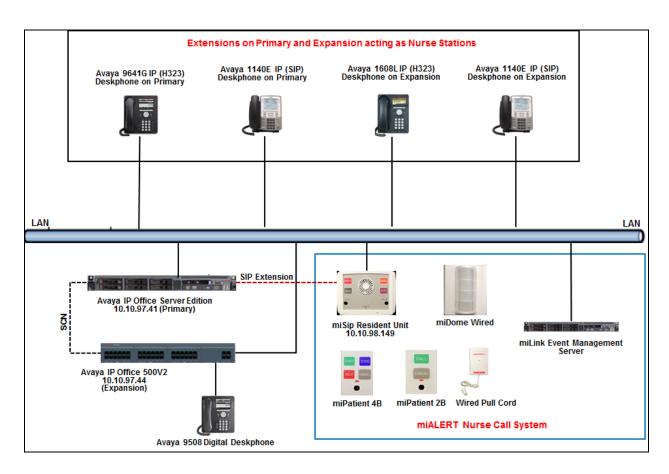


Figure 1: Avaya and miLAERT Reference Configuration

4. Equipment and Software Validated

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

Equipment	Release/Version
Avaya IP Office Server (Primary)	11.0.0.2.0 build 23
Avaya IP Office 500V2 (Expansion)	11.0.0.2.0 build 23
Avaya IP Deskphones:	
1140E (SIP on Server)	04.04.23.00
1140E (SIP on Expansion)	04.04.23.00
9641G (H323 on Server)	6.6604
1608L (H323 on Expansion)	1.3110
Avaya 9508 Digital Deskphone	R60
miALERT miSip Resident Unit	2.2.2-1802210

Note: Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office IP500V2 and also when deployed with IP Office Server Edition in all configurations.

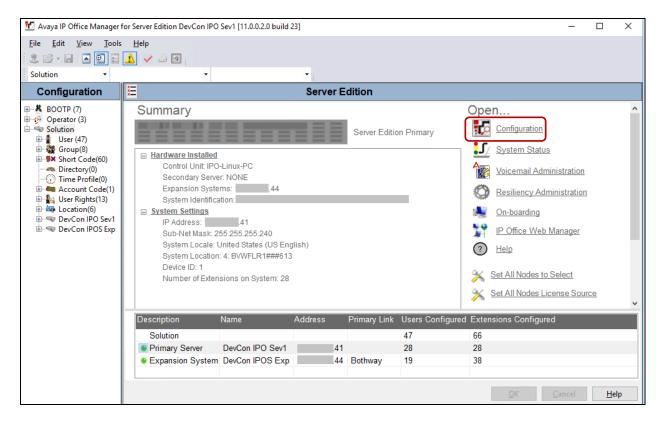
5. Configure Avaya IP Office

The document assumes that Avaya IP Office Server Edition has been installed and configured to work with a 500V2 expansion. This section provides the procedures for configuring Avaya IP Office. Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section** Error! Reference source not found. The procedures fall into the following areas:

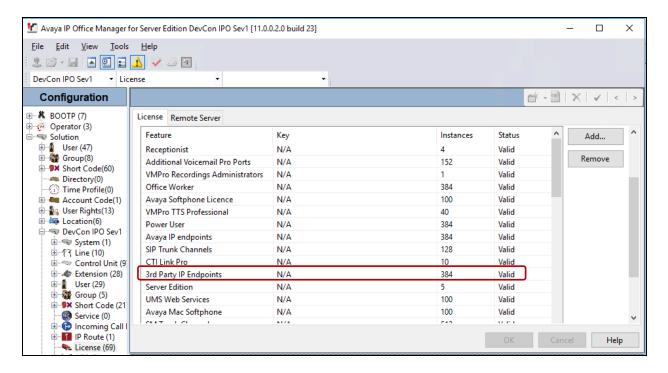
- Administer miSip extension
- Administer miSip user
- Administer nurse users
- Administer hunt group
- Save configuration

5.1. Administer miSip Extension

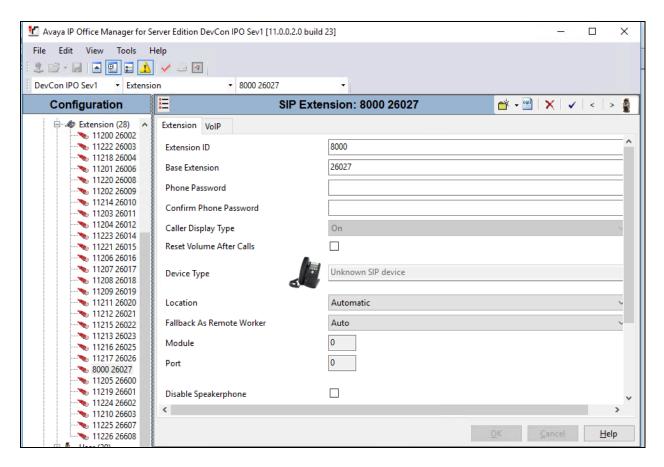
From a PC running the IP Office Manager application, select **Start** → **Programs** → **IP Office** → **Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials (not shown). The Avaya IP Office Manager for Server Edition screen is displayed as shown in the screen below. Click on **Configuration** that is highlighted on the right side of the screen below.



Once the **Avaya IP Office Manager for Server Edition** screen is displayed, from the configuration tree in the left pane, select the Primary System, which in this case is **DevCon IPO Sev1** and click on **License** to display the **License** screen in the right pane. Verify that the **Feature** for **3rd Party IP Endpoints** is "Valid", and that the **Instances** value is sufficient. If there is insufficient capacity of IP Endpoints, contact an Avaya representative to make the appropriate changes.



From the configuration tree in the left pane, navigate to **DevCon IPO Sev1** \rightarrow **Extension** and right click on **Extension** and select **New** \rightarrow **SIP Extension** (not shown). In the **Extension** tab enter a valid number in the in **Base Extension**, which was "26027" which will be used in the next section.



In the **VoIP** tab, the following selections were made during compliance testing,

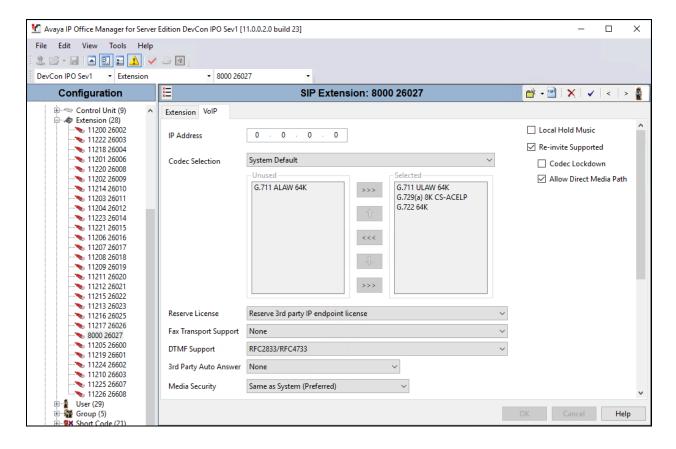
• Codec Selection: Select "System Default" from the drop-down menu.

• **Reserve License:** Select "Reserve 3rd party IP endpoint license" from the drop-down

menu.

• Media Security: Select "Same as System (Preferred)" from the drop-down menu.

Retain default values for all other fields and click on the \mathbf{OK} button.



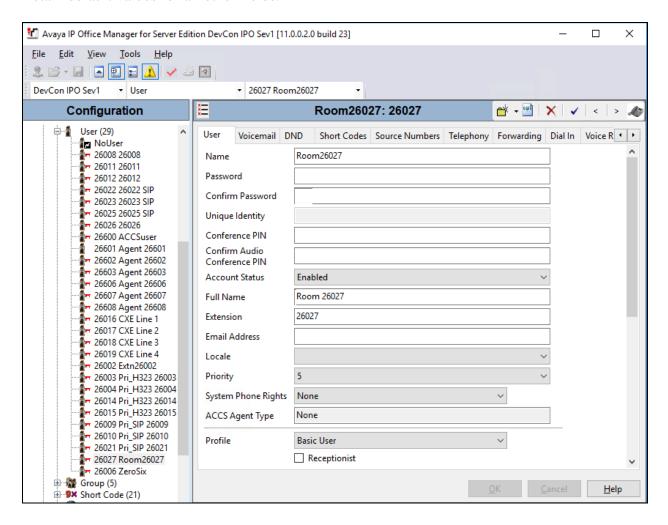
5.2. Administer miSip User

From the configuration tree in the left pane, navigate to **DevCon IPO Sev1** \rightarrow **User** and right click on **User** and select **New** (not shown). The following values were configured during compliance testing in the **User** tab.

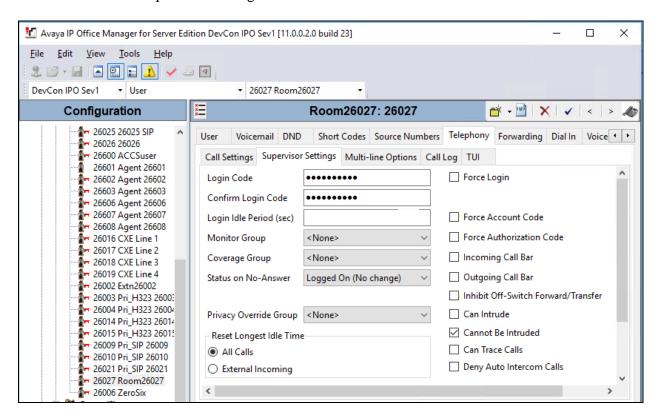
Name: A descriptive name.Full Name: A descriptive name.

• **Extension:** The base extension configured in **Section 5.1**.

Retain default values for all other fields.



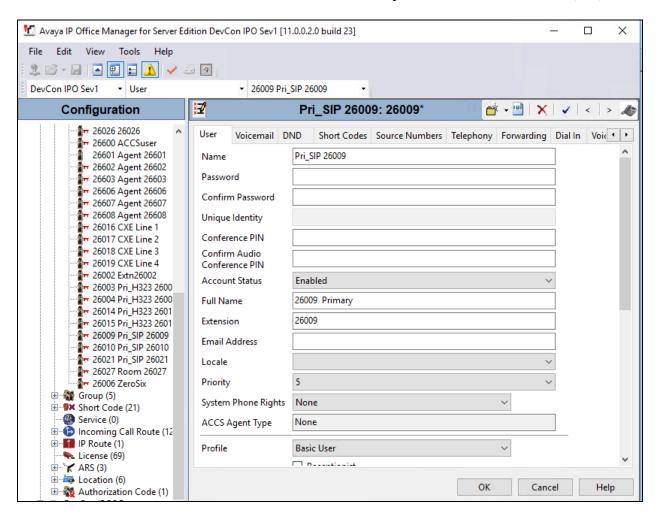
In the **Telephony** → **Supervisor Settings** tab, configure a **Login Code** and **Confirm Login Code**. This code will be used in **Section 6.2**. Retain default values for all other fields and click on **OK** button to complete the configuration.



5.3. Administer Nurse Users

As explained in **Section 5.1** and **5.2** above, nurse users are configured the same way. Note that if digital telephones are used for the nurses instead of IP, then the existing digital users may be used instead of creating new ones.

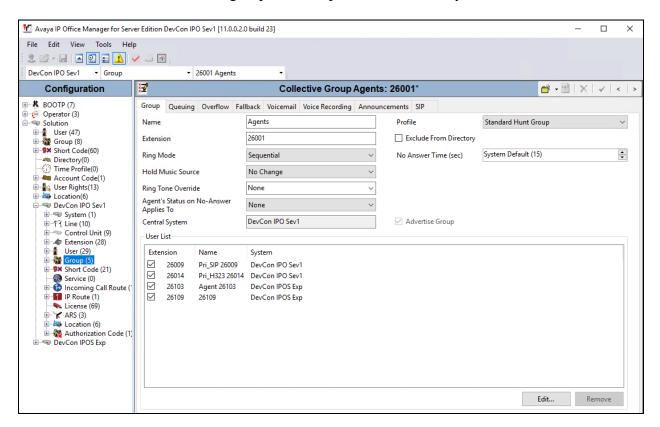
Repeat this section to administer a user for each nurse. In the compliance testing, couple of nurse users (SIP and H.323) were administered in both Primary and Expansion IP Office Systems. A list of these users is shown in **Section 3**. Below is an example of one of the nurse user (SIP).



5.4. Administer Nurse Hunt Group

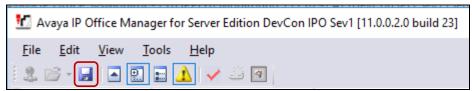
From the configuration tree in the left pane, right-click on **Group** and select **New** from the popup list (not shown) to add a new hunt group. Enter a desired **Name**, and an available **Extension**. Retain default values for all other fields.

In the **User List** sub-section, click **Edit** and select the nurse user extensions from **Section 5.3** from the pop-up list. Below screen shows the users selected during compliance testing. Repeat this section to add a similar hunt group in the Expansion IP Office System.



5.5. Save Configuration

Navigate to **File > Save Configuration** (not shown) in the menu bar at the top of the screen or click on the **Save** Icon as shown below to save the configuration performed in the preceding sections.



6. Configure miALERT miSip Resident Unit

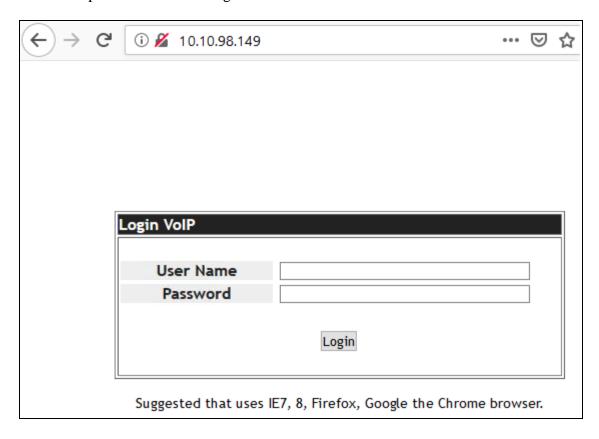
This section provides the procedures for configuring miALERT miSip Resident Unit.

For detail provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9.** The procedures fall into the following areas:

- Login to miSip Web Interface
- Configure Service Domain
- Configure Speed Dial
- Configure Phone Book

6.1. Login to miSip Web Interface

The miSip Resident Unit can be configured using a web interface. To access miSip, enter the IP address of miSip in a browser and login to the unit with the correct credentials as shown below.



6.2. Configure Service Domain

From the screen shown below, navigate to $SIP \rightarrow Service$ and configure the following values.

• **Realm Active:** Select "Enable" from the drop-down menu.

• **Display Name:** A descriptive name.

• **Phone Number:** A descriptive phone number.

Authentication ID: Enter the extension from Section 5.2.
Authentication Password: Enter the password from Section 5.2.

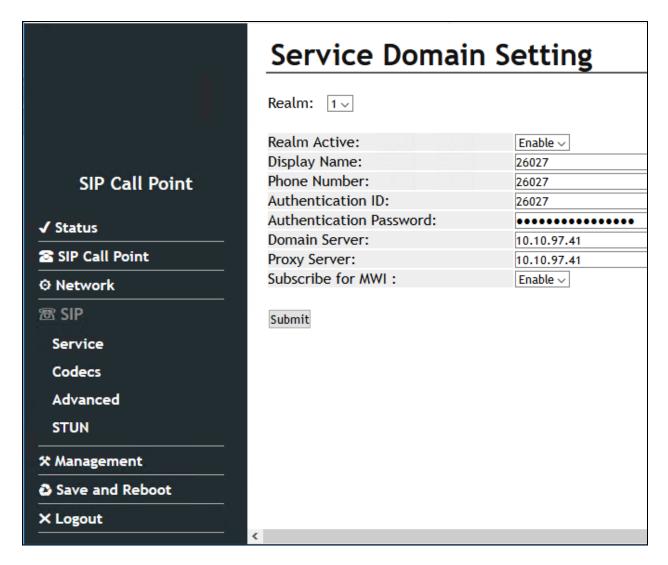
• **Domain Server:** Enter the IP address of IP Office where this extension is

configured.

• **Proxy Server:** Enter the IP address of IP Office where this extension is

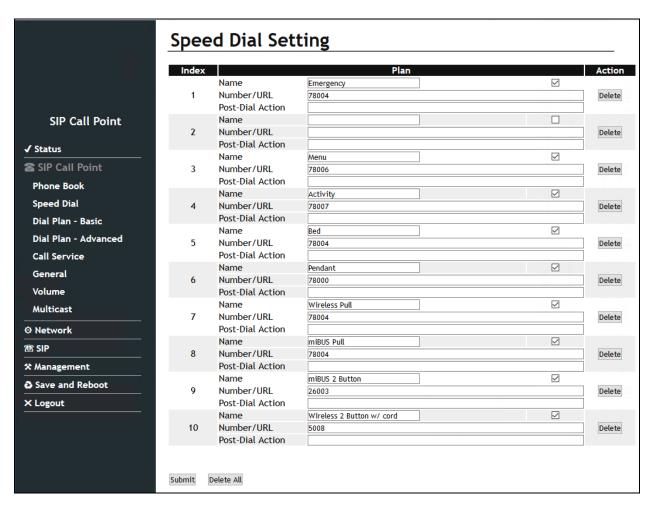
configured.

Retain default value for all other fields and click on **Submit**.



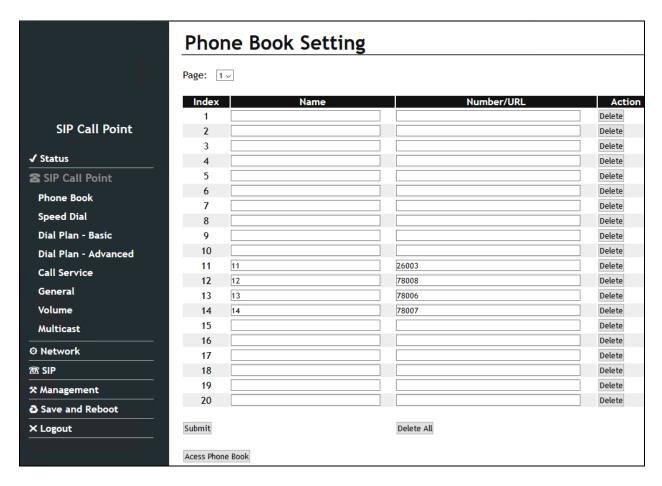
6.3. Configure Speed Dial

Various call points for miSip are configured as speed dial. To configure the speed dial, navigate to SIP Call Point → Speed Dial. The screen below shows the Speed Dial Setting configured for this compliance testing. Any number with 78xxx are configured to call EMS and any number with 26xxx is configured to call extensions on IP Office.



6.4. Configure Phone Book

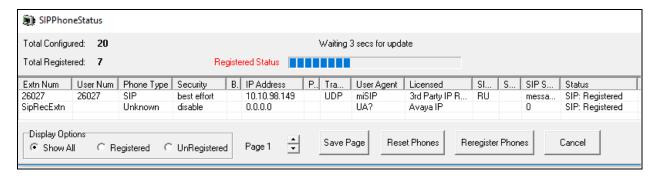
To configure the phone book, navigate to **SIP Call Point** \rightarrow **Phone Book**. The screen below shows the Phone Book Setting configured for this compliance testing. Any number with 78xxx are configured to call EMS and any number with 26xxx is configured to call extensions on IP Office.



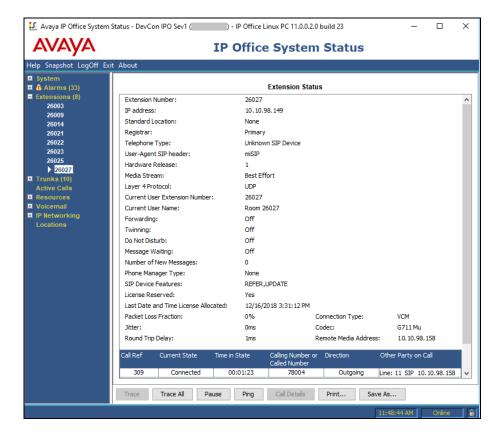
7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and miALERT miSip Resident Unit.

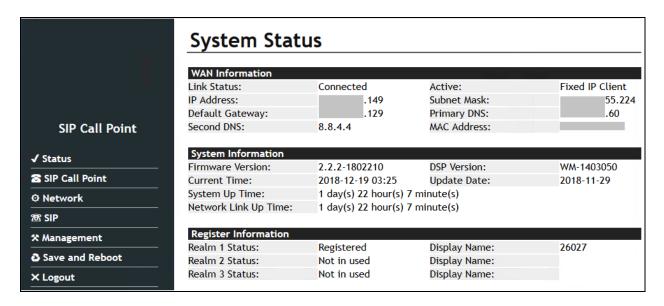
The status of miSip can be confirmed from the SysMonitor application of IP Office by navigating to **Status** → **SIP Phone Status** (not shown). Screen below shows the extension 26027 status as registered.



From IP Office Manager server, launch IP Office System Status and log in to the required IP Office, in this case the Primary System (not shown). Navigate to **Extensions** and select the extension configured for miSip. Screen below shows miSip extension registered to the Primary and in connected state due to an active call.



To verify registration status of miSip Resident Unit's using web interface, navigate to **System Status** screen as shown below.



For feature verifications, from a call point activate a call to the nurse hunt group (such as pulling the cord or pressing the emergency button, depending on the type of call point). Verify that the call is ringing at an available nurse. Answer the call at the nurse and verify two-way speech path. Once the call is completed, press the cancel button and verify that the call is terminated properly. Verify that the call follows the proper escalation path as configured in EMS if a call is not answered at the called nurse station. Verify that the call follows the proper overflow path configured in IP Office if a call is not answered by any nurse stations of the called nurse hunt group.

From a call point, activate the menu or activity button and verify that the proper pre-recorded message is heard. Once the recording is completed, press the cancel button and verify that the call is terminated properly.

From a call point, activate the staff button and verify that the call reaches the correctly configured staff phone and verify two-way speech path. Once the call is completed, press the cancel button and verify that the call is terminated properly.

8. Conclusion

These Application Notes describe the configuration steps required for miALERT miSip Resident Unit to interoperate with Avaya IP Office Server Edition. All feature and serviceability test cases were completed successfully with observations noted in **Section 2.2**.

9. Additional References

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

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

- [1] Deploying IP OfficeTM Platform Server Edition Solution, Release 11.0, May 2018.
- [2] Deploying IP Office Essential Edition (IP500 V2), Release 11.0, 15-601042 Issue 33I (Tuesday, December 4, 2018).
- [3] *Administering Avaya IP Office™ Platform with Manager*, Release 11.0, Issue 17a, August 2018.
- [4] Application Notes for Configuring miALERT miLink Event Management Server with Avaya IP Office Server Edition, 2019.

Product Documentation for miALERT can be obtained by contacting miALERT directly.

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