Avaya Solution & Interoperability Test Lab

Application Notes for Spectralink 84-Series Wireless Telephones and Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Spectralink 84-Series Wireless Telephones which were compliance tested with Avaya IP Office.

The overall objective of the interoperability compliance testing was to verify Spectralink 84-Series Wireless Telephones functionalities in an environment compromised of Avaya IP Office and various Avaya H.323, SIP, Analog and Digital Telephones. Spectralink 84-Series Wireless Telephones are SIP based.

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 procedures for configuring Spectralink 84-Series Wireless Telephones (8452 and 8450) which were compliance tested with Avaya IP Office.

Spectralink 84-Series Telephones (herein referred to as Spectralink 84-Series) improve productivity and responsiveness for on-site mobile professionals across a wide range of industries, including healthcare, retail, manufacturing and hospitality. Built on open standards, Spectralink 84-Series transforms the delivery of mobile enterprise applications by bringing the power of thin client and browser technology to front-line professionals in an easy-to-use and easy-to-manage interface. Additionally, Spectralink 84-Series supports a broad range of interfaces to enterprise-grade PBX, wireless LAN, and infrastructures to deliver maximum interoperability with the low cost of ownership.

2. General Test Approach and Test Results

The general test approach was to place calls to and from Spectralink 84-Series and exercise basic telephone operations. The main objectives were to verify the following:

- Registration
- Codecs (G.711MU and G.729A)
- Inbound calls
- Outbound calls
- Hold/Resume, Call Transfer and Conferencing
- Call termination (origination/destination)
- Avaya Feature Name Extension (FNE)
    - Call Park
    - Call Pickup
    - Call Forward (Unconditional, Busy/no answer)
- Message Waiting Indicator (MWI)
- Voicemail
- Serviceability

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.

2.1. Interoperability Compliance Testing

The interoperability compliance test included features and serviceability. The focus of interoperability compliance testing was primarily on verifying call establishment on Spectralink

84-Series. Spectralink 84-Series operations such as inbound calls, outbound calls, hold/resume, transfer, conference, short code, and Spectralink 84-Series interactions with Avaya IP Office, and Avaya SIP, H.323, Analog and Digital telephones were verified. The serviceability testing introduced failure scenarios to see if Spectralink 84-Series can recover from failures.

2.2. Test Results

The test objectives were verified. For serviceability testing, Spectralink 84-Series operated properly after recovering from failures such as cable disconnects, and resets of Spectralink 84-Series and Avaya IP Office. Spectralink 84- Series successfully negotiated the codec that was used. The features tested worked as expected.

2.3. Support

Technical support on Spectralink 84-Series can be obtained through the following:

North America:

Phone: +1-800-775-5330
Email: nolarma@spectralink.com
Web: http://support.spectralink.com

EMEA:

Phone: +33 176774541
Email: emeaom@spectralink.com
Web: http://support.spectralink.com

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of an Avaya IP Office and Spectralink 84-Series. For completeness, Avaya 9600 Series H.323 IP Telephones, Avaya 1200 Series SIP IP Telephones, Avaya Digital Telephones and Avaya Analog Telephone, are included in **Figure 1** to demonstrate calls between the SIP-based Spectralink 84-Series and Avaya SIP, H.323, and Digital and Analog Telephones.

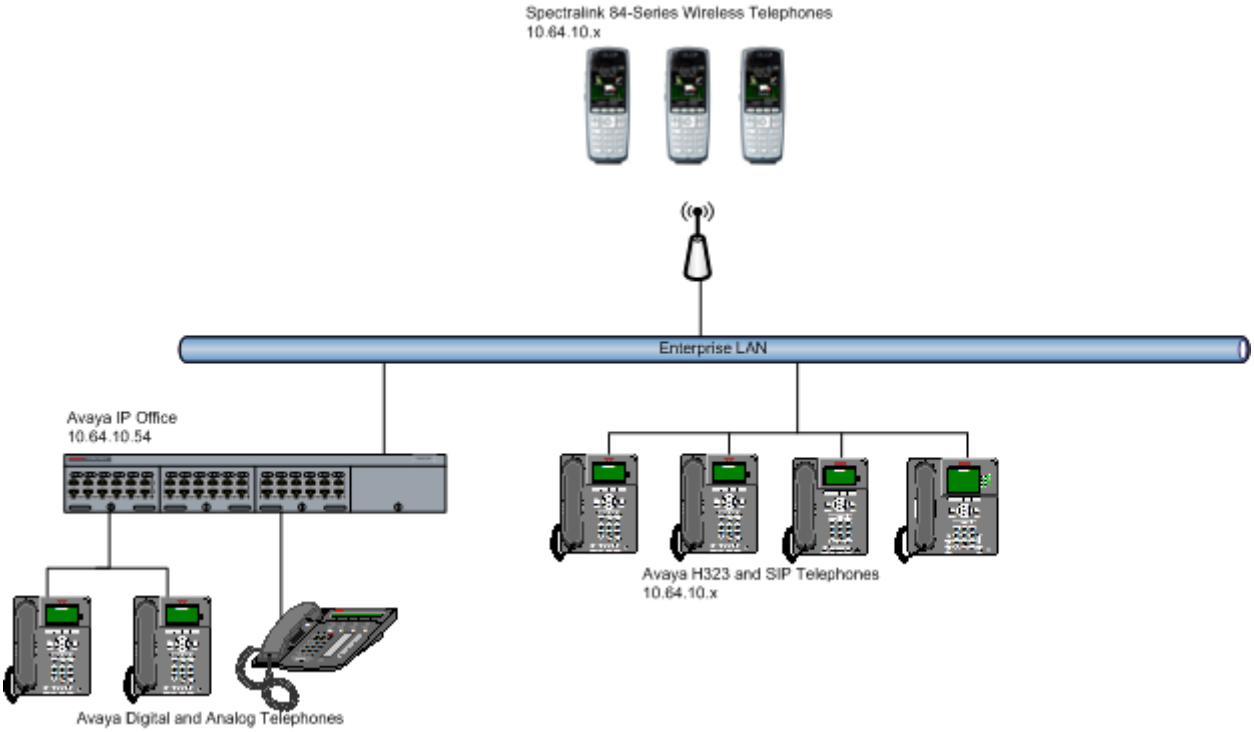


Figure 1: Test Configuration of Spectralink 84-Series Wireless Telephones with Avaya IP Office

4. Equipment and Software Validated

The following equipment and software were used for the test configuration.

Equipment	Software/Firmware
Avaya IP Office 500 V2	9.0
Avaya IP Office Manager	9.0
Avaya 9600 Series H.323 Deskphones 96x0 96x1	 3.2.0 6.3.0
Avaya 12x0 Series SIP Phones	4.3.18
Avaya 9508 and 1408 Digital Telephones	-
Avaya 6211 Analog Phone	-
Spectralink 84-Series	4.3.0.0165

5. Configure Avaya IP Office

This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

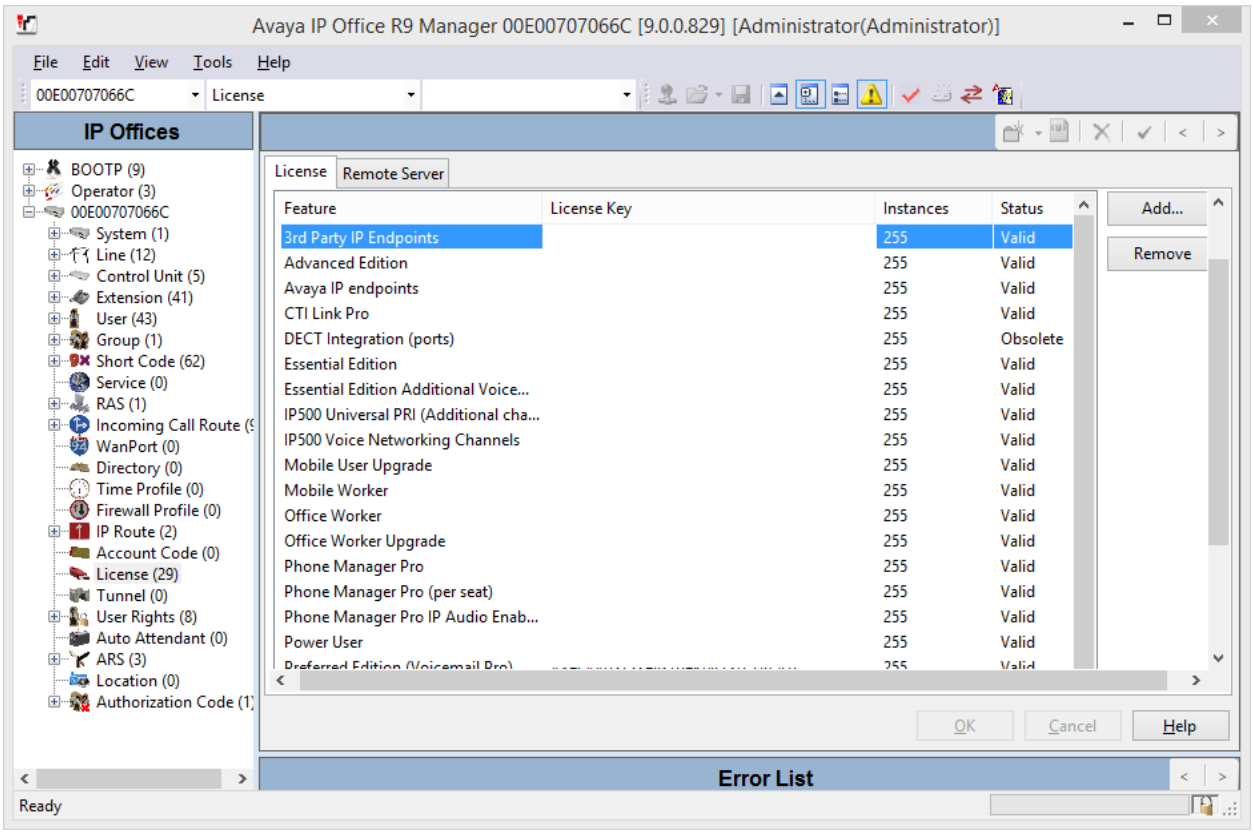
- Verify IP Office license
- Obtain LAN IP address
- Administer SIP registrar
- Administer SIP extensions
- Administer SIP users

These steps are performed from the Avaya IP Office Manager. Also, please note that it is assumed that, where needed, after each configuration step **Ok** button is selected.

5.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start → All Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system if there are more than one IP Office system, and log in with the appropriate credentials.

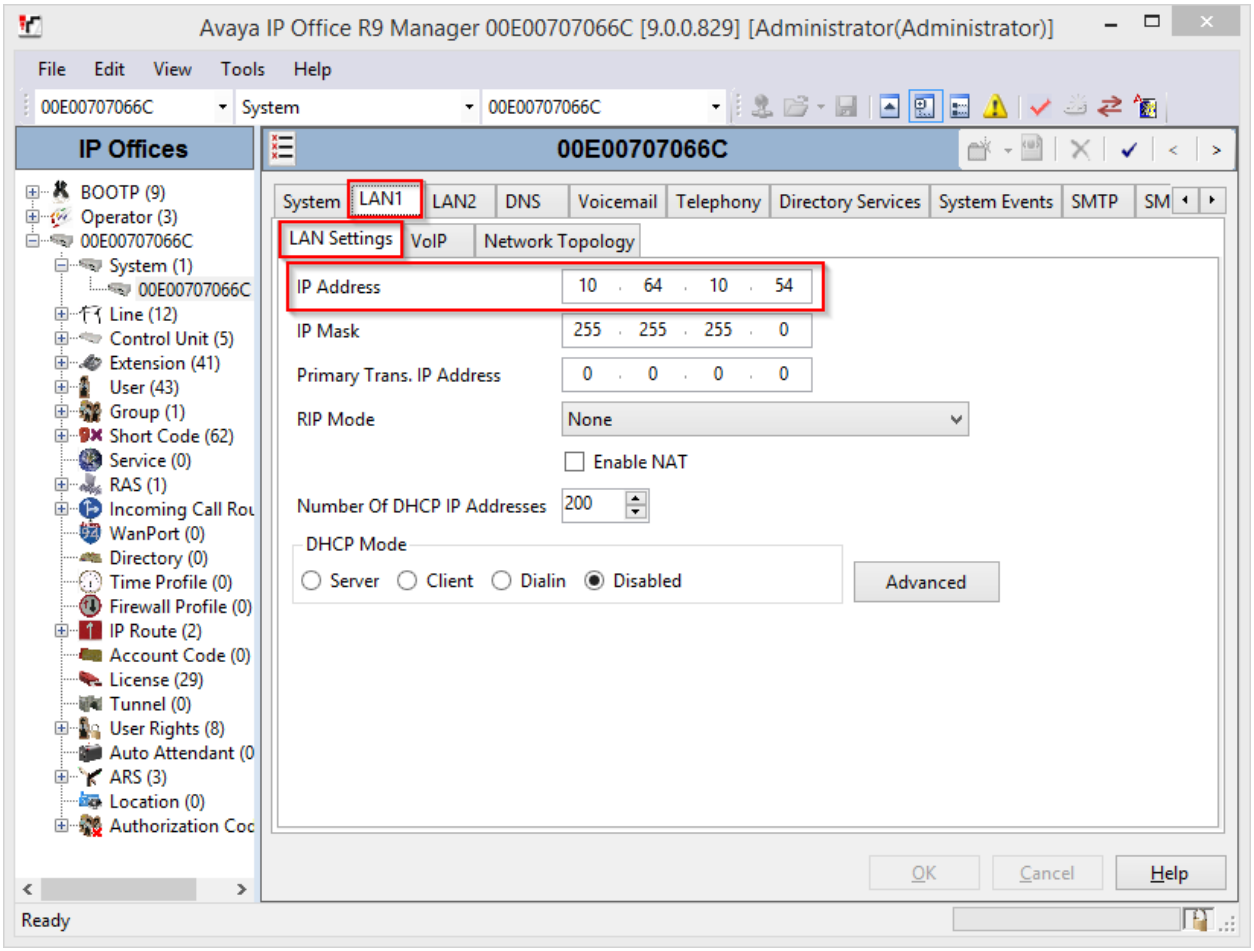
The Avaya IP Office Manager screen is displayed. From the configuration tree in the left pane, select **Licence → 3rd Party IP Endpoints** to display the Avaya IP endpoints screen in the right pane. Verify that the License Status field is set to **Valid**.



5.2. Obtain LAN IP Address

From the configuration tree in the left pane, select **System** to display the System screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure Spectralink 84-Series.

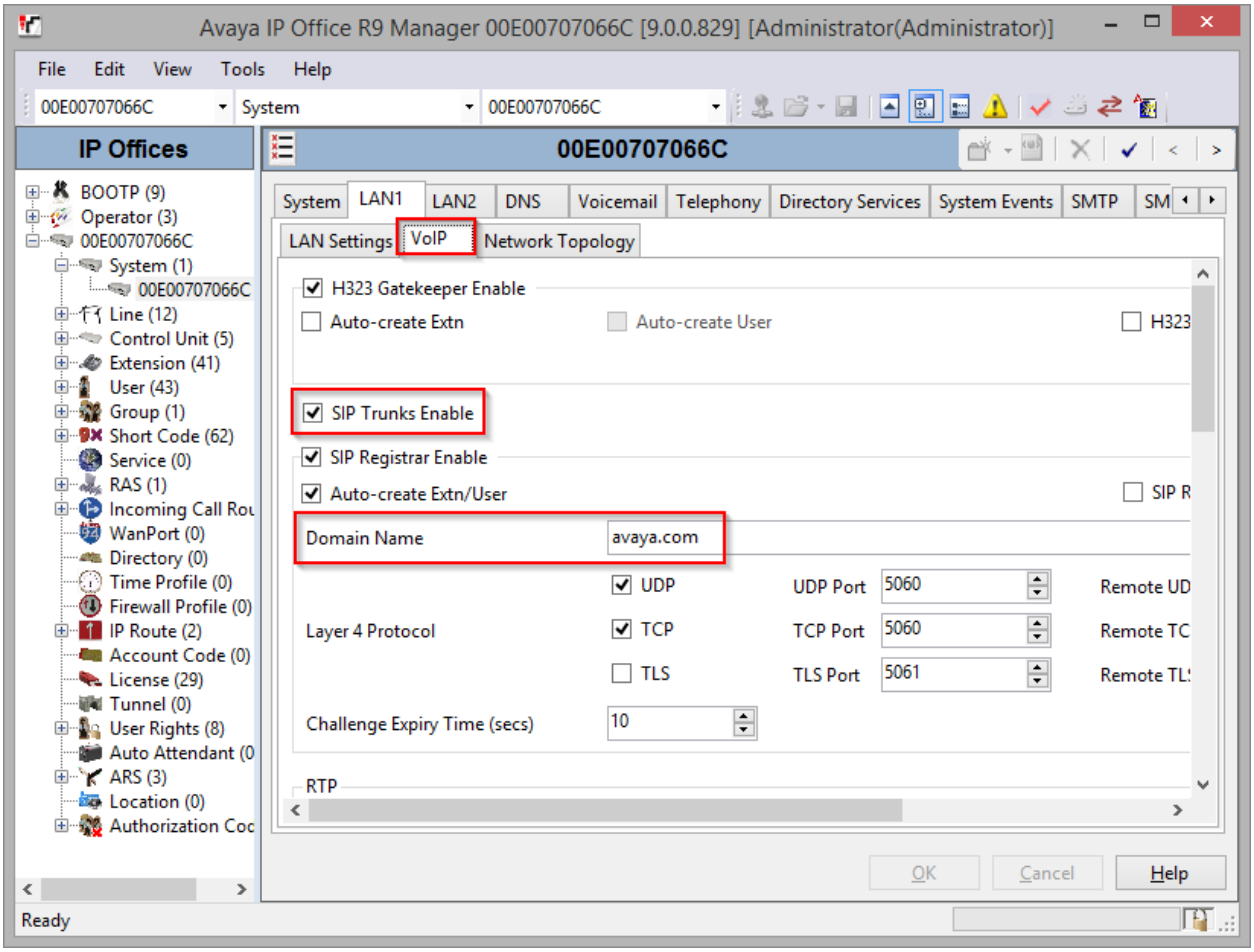
Note: During the initial configuration of Avaya IP Office, the LAN1 was configured on the private network side and LAN2 was configured on the public network side. Avaya IP Office can support SIP extensions on the LAN1 and/or LAN2 interfaces, but the compliance test used the LAN1 interface. Thus, only the LAN1 configuration will be discussed in these Application Notes.



5.3. Administer SIP Registrar

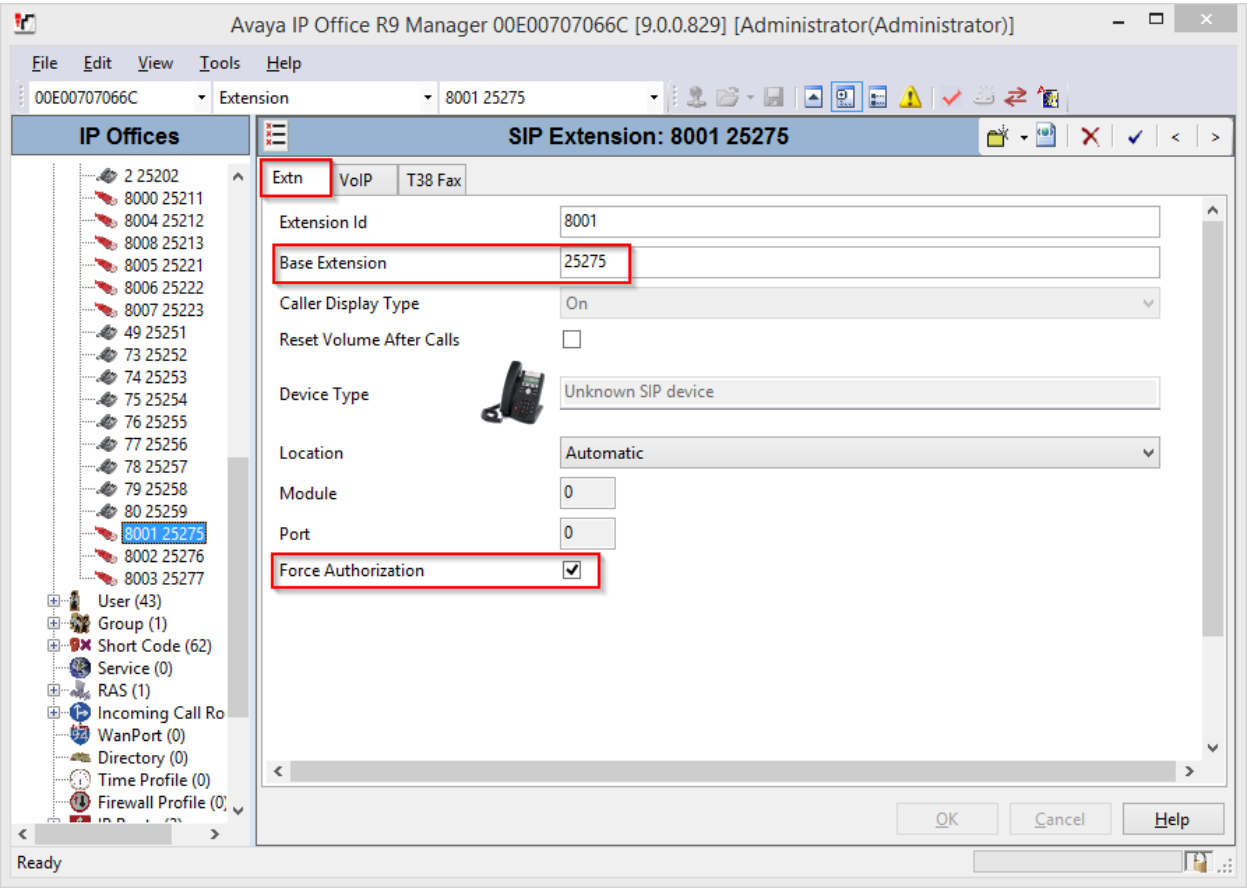
Select the **VoIP** sub-tab. Ensure that **SIP Registrar Enable** is checked, as shown below.

In the compliance testing, the **Domain Name** field was set to **avaya.com**. If the **Domain Name** field is left blank, then the SIP endpoints will use the LAN IP address for registration.



5.4. Administer SIP Extensions

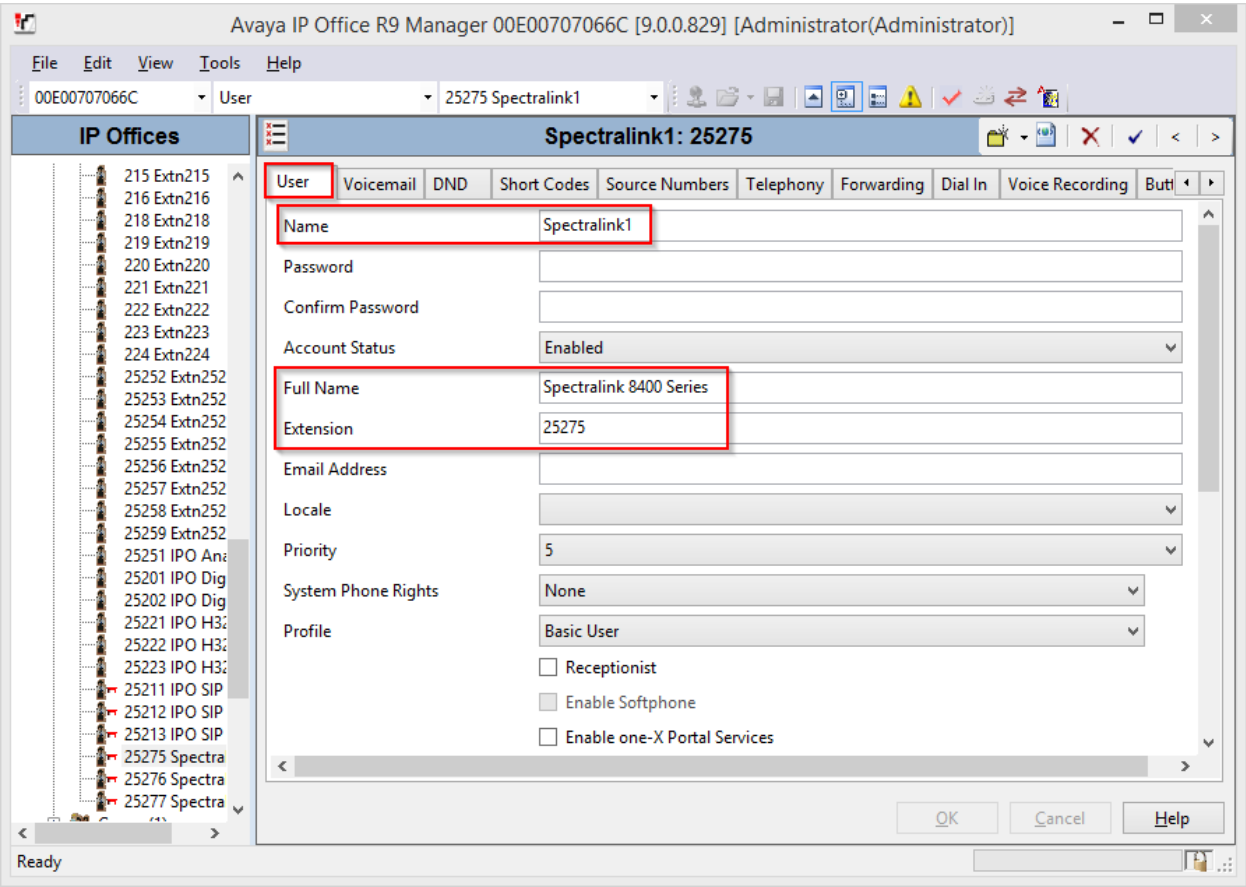
From the configuration tree in the left pane, right-click on **Extension** and select **New ➔ SIP Extension** from the pop-up list (not shown) to add a new SIP extension. Enter the desired digits for the **Base Extension** field, and retain the default check in the **Force Authorization** field as shown below.



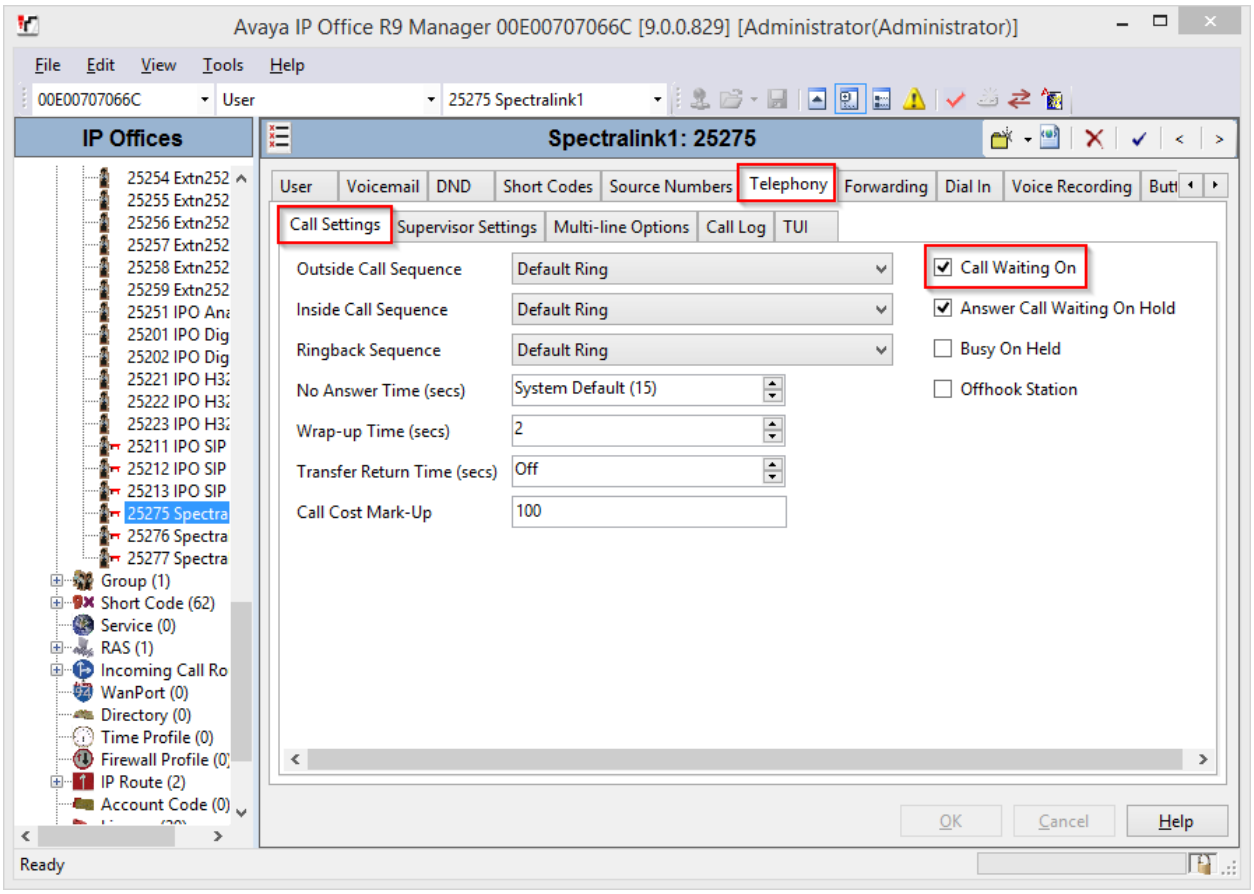
Repeat this section to add a new SIP extension for each Spectralink 84-Series. During the compliance test, extensions 25275, 25276 and 25277 were created for Spectralink 84-Series.

5.5. Administer SIP Users

From the left pane, right-click on **User**, and select **New** from the pop-up list (not shown). Enter desired values for the **Name** and **Full Name** fields. For the **Extension** field, enter the SIP extension created in **Section 5.4**.

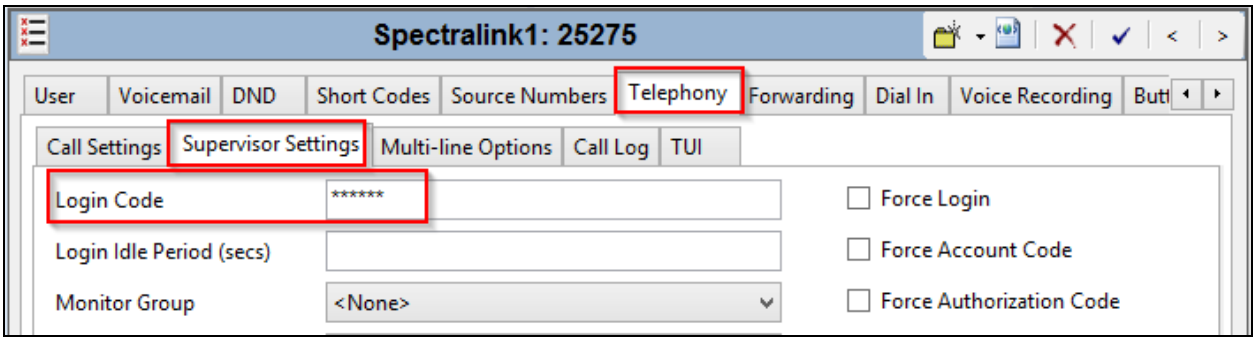


Select the **Telephony** tab, followed by the **Call Settings** sub-tab. Check the **Call Waiting On** field, as shown below.



Select the **Supervisor Settings** tab, and enter a desired **Login Code**. This code will be used as a password for Spectralink 84-series phones.

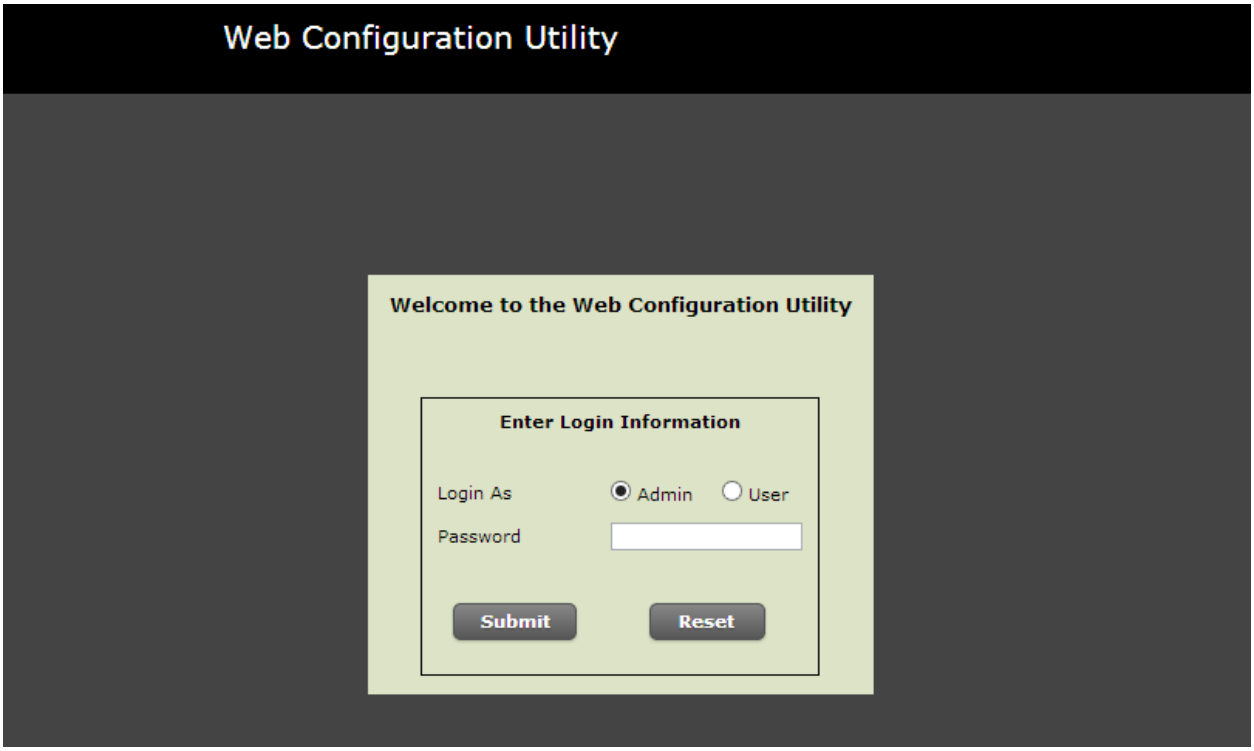
Repeat this section for each SIP extension from **Section 5.4**.



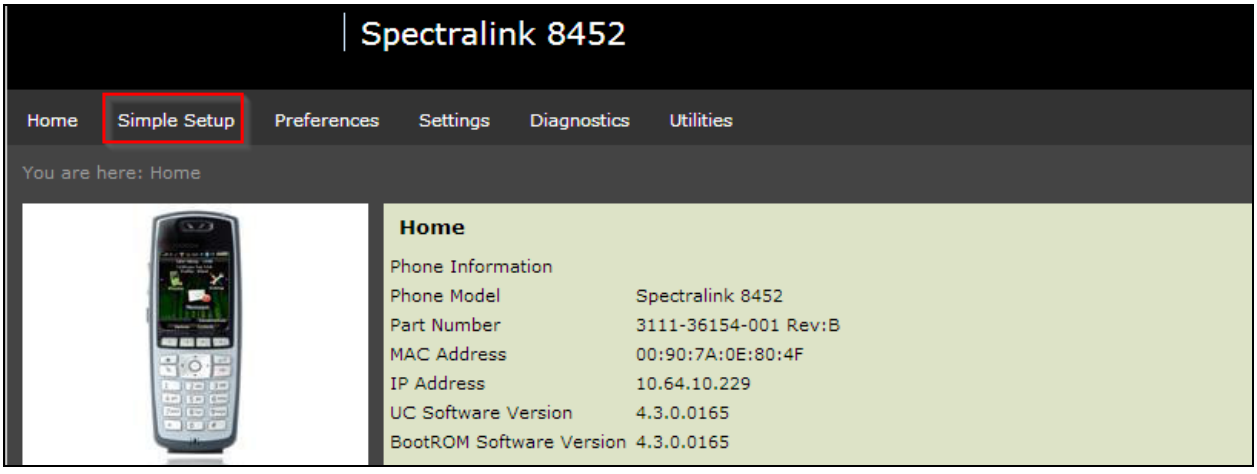
6. Configure Spectralink 84-Series Wireless Telephone

This section provides steps to configure Spectralink 84-Series. The latest firmware was provided by Spectralink. For additional information regarding configuring the Spectralink 84-Series handsets please refer to the latest product documentation available at www.spectralink.com.

To configure Spectralink 84-Series telephones, using a web browser, navigate to http://<IP Address of SpectraLink 84 Series Phone> and log in using appropriate credentials.



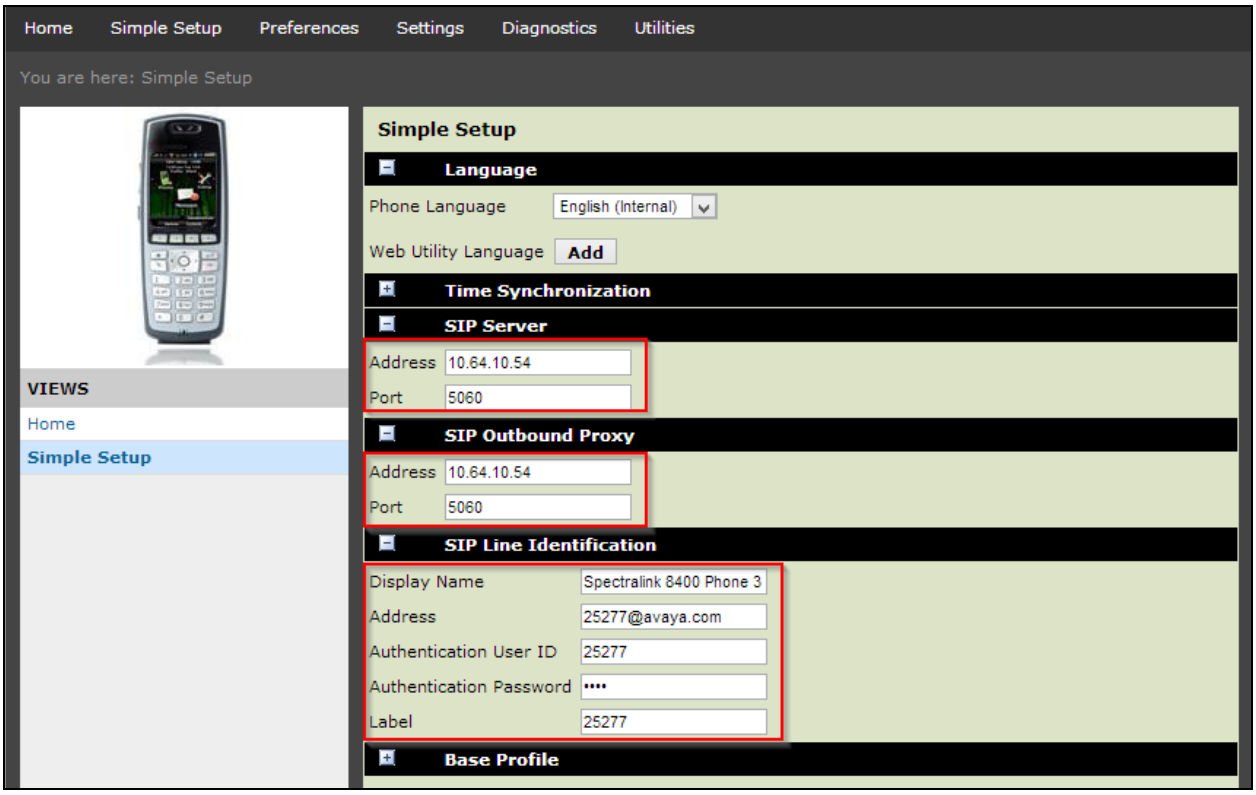
Once logged in, Select **Simple Setup**.



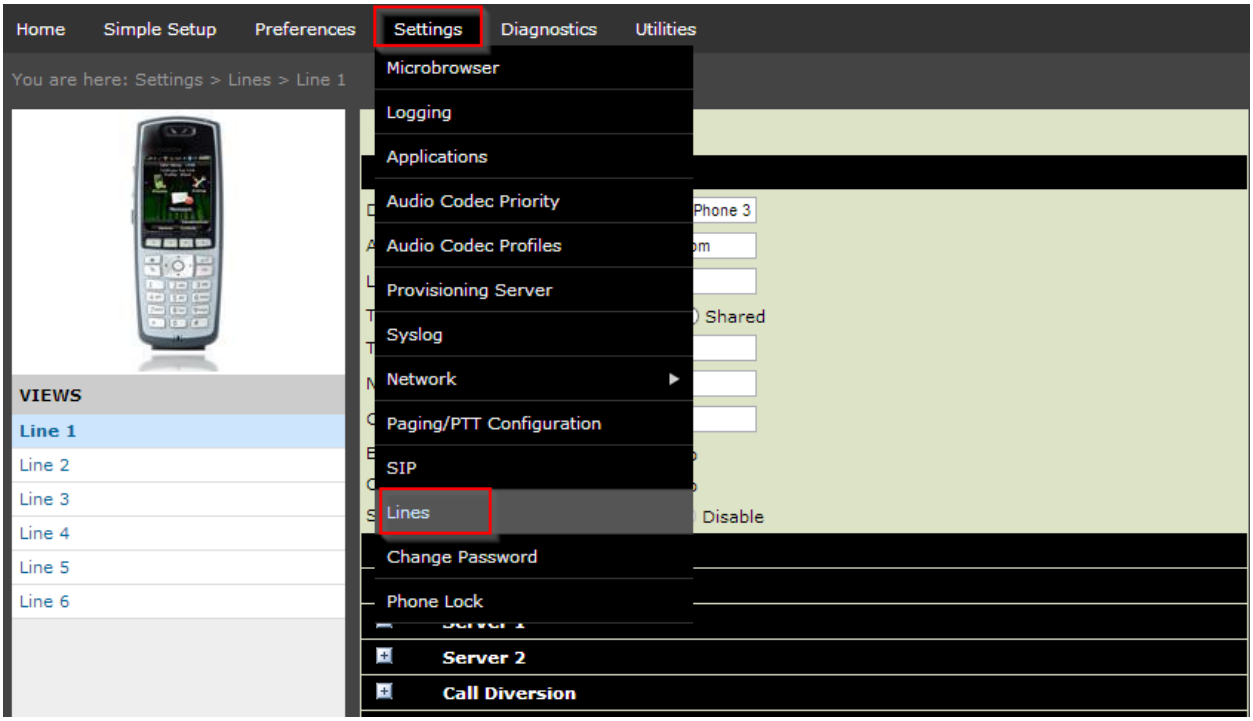
Configure as follows:

- Under **SIP Server**, configure the **Address** and **Port** of Avaya IP Office
- Under **SIP Outbound Proxy**, configure **Address** and **Port** of Avaya IP Office
- Under **SIP Line Identification:**
  - Type in desired values in **Display Name** and **Label**
  - For **Address** field, type in extension@domain that was configured in Avaya IP Office. E.g., 25277@avaya.com
  - For **Authentication User ID**, type in the extension created in Avaya IP Office
  - For **Authentication Password,** type in the **Login Code** configured in **Section 5.5**

Once done, select **Save** (not shown).



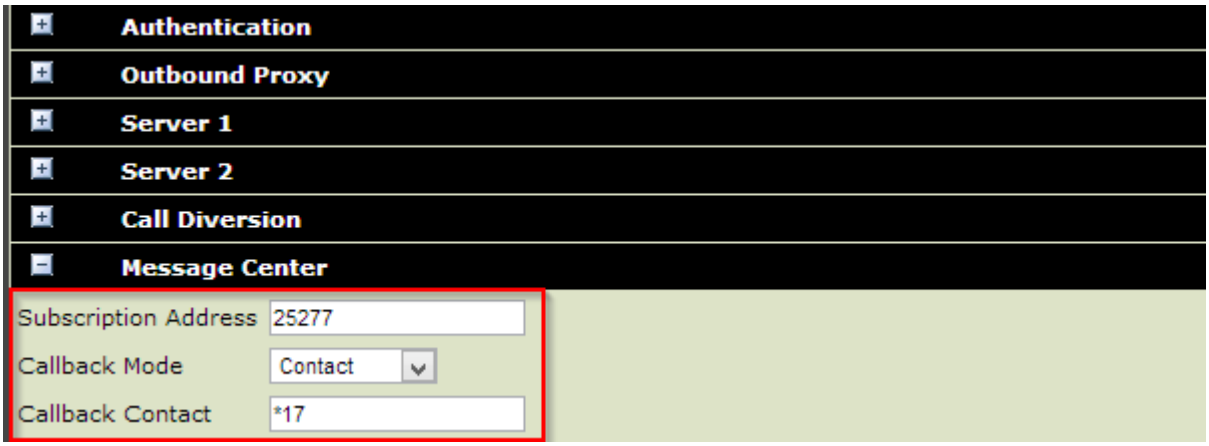
Navigate to **Settings → Lines**



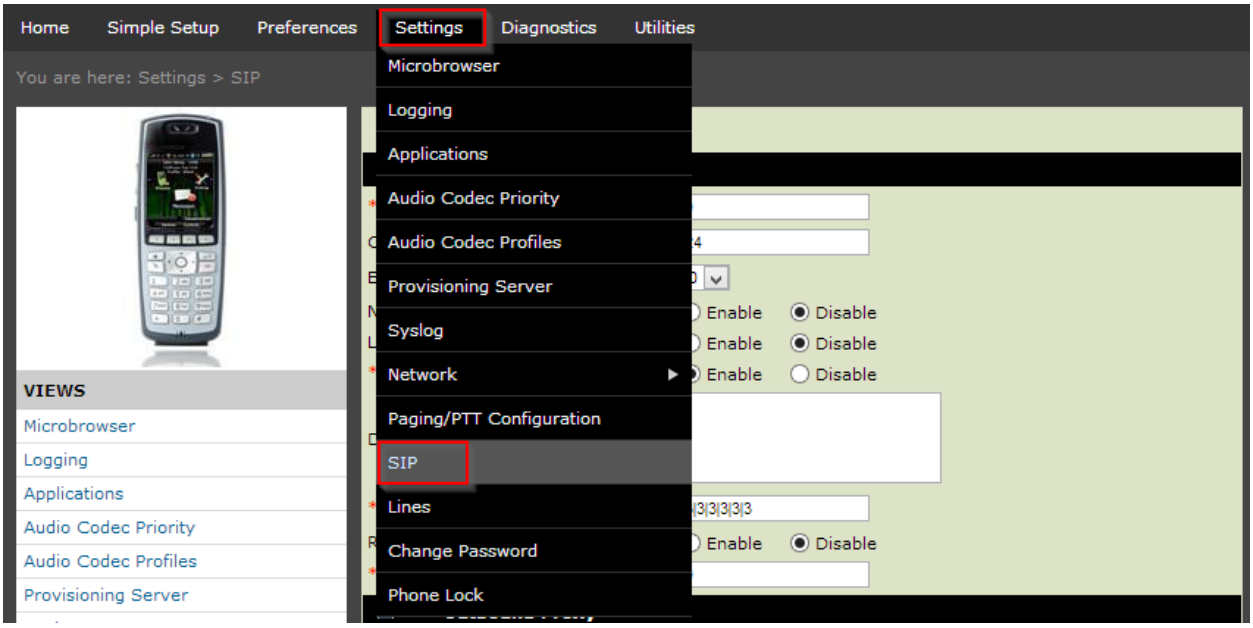
Expand **Message Center** and configure as follows:

- Type in the extension in **Subscription Address**
- From the drop down menu for **Callback Mode**, select **Contact**
- For **Callback Contact**, configure the default Short Code that is configured to retrieve voicemail in Avaya IP Office.

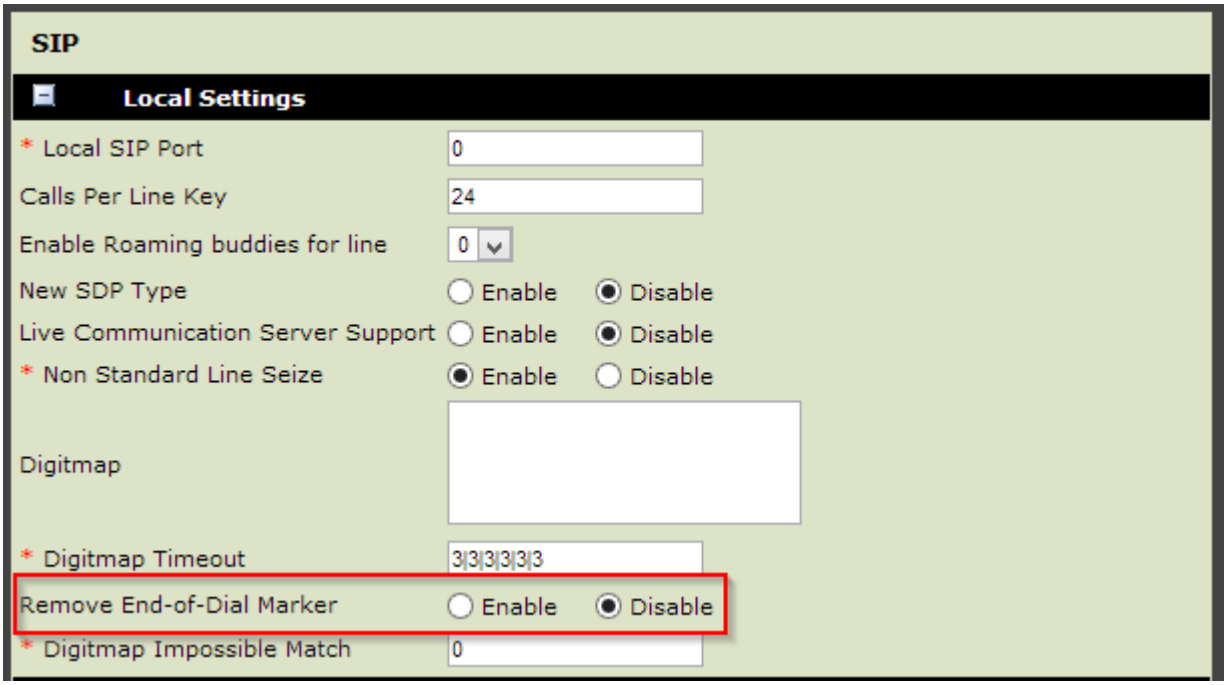
Click **Save**, once done (not shown).



Navigate to **Settings → SIP**



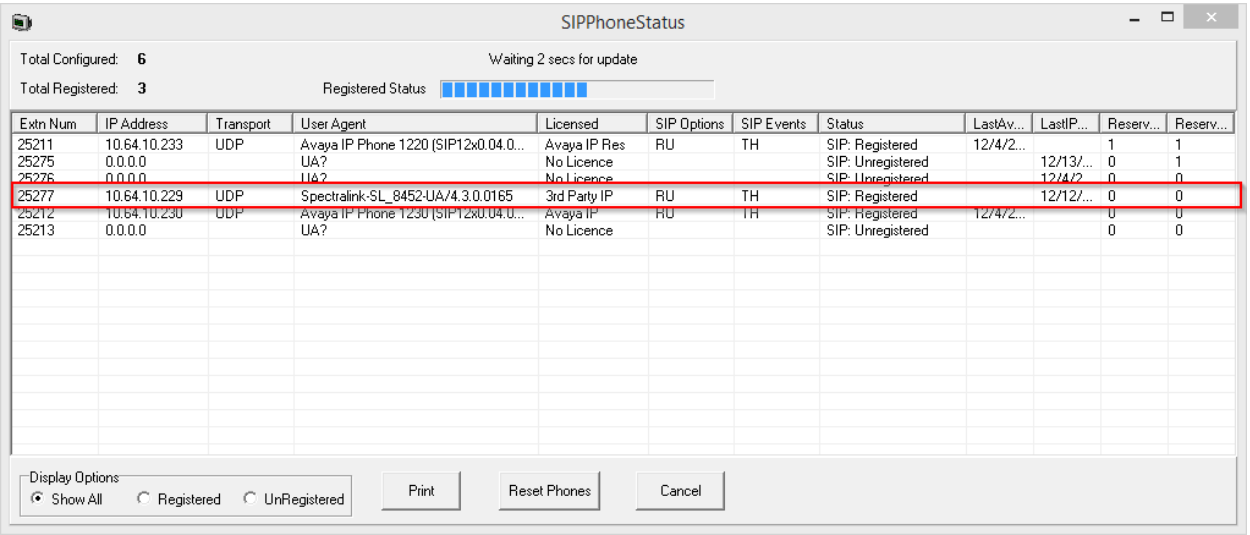
For **Remove End-of-Dial Marker,** select **Disable**. Once done, select **Save** (not shown).



7. Verification Steps

The following steps may be used to verify the configuration:

- From a PC running the Avaya IP Office Monitor application, select **Start → Programs → IP Office → Monitor** to launch the application. The **Avaya IP Office SysMonitor** screen is displayed (not shown). Select **Status → SIP Phone Status** from the top menu.



- Verify that there is an entry for each Spectralink 84-Series extension from **Section 5.4** and the Status is **SIP: Registered**.

- Place calls to and from Spectralink 84-Series Wireless telephones and verify that the calls are successfully established with two-way talk path.

8. Conclusion

Spectralink 84-Series was compliance tested with Avaya IP Office. Spectralink 84-Series functioned properly for feature and serviceability. During compliance testing, Spectralink 84-Series successfully registered with Avaya IP Office, placed and received calls to and from SIP and non-SIP telephones, and executed other telephony features like three-way conference, transfers, hold, etc.

9. Additional References

The following Avaya product documentation can be found at
http://marketingtools.avaya.com/knowledgebase/

The following document was provided by Spectralink.
http://www.spectralink.com/product-information/wi-fi/spectralink-84-series-wireless-telephones

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.