



Avaya Solution & Interoperability Test Lab

Application Notes for Spectralink DECT Server 2500/8000 with Avaya Aura® Communication Manager and Avaya Aura® Session Manager - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Spectralink DECT Server 2500/8000 with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Spectralink DECT Server 2500/8000 is a modular DECT wireless mobility solution that supports SIP VoIP telephony. The Spectralink DECT Server 2500/8000 supports external base stations to control the traffic in the air from Spectralink 7202, 7622, and Butterfly Handsets that register as SIP endpoints to Avaya Aura® Session Manager. The Spectralink DECT Server 2500 provides all the benefits of the larger Spectralink DECT Server 8000, but tailored to meet the needs of smaller businesses. For this compliance test, the Spectralink Server 2500 was used.

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 to integrate Spectralink DECT Server 2500/8000 with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Spectralink DECT Server 2500/8000 is a modular DECT wireless mobility solution that supports SIP VoIP telephony. The Spectralink DECT Server 2500/8000 supports external base stations to control the traffic in the air from Spectralink 7202, 7622, and Butterfly Handsets that register as SIP endpoints to Avaya Aura® Session Manager. The Spectralink DECT Server 2500 provides all the benefits of the larger Spectralink DECT Server 8000, but tailored to meet the needs of smaller businesses. For this compliance test, the Spectralink Server 2500 was used.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on establishing calls between Spectralink 7000 Series and Butterfly Handsets and Avaya SIP/H.323 telephones and exercising basic telephony features, such as hold, mute, and transfer. The Spectralink handsets gained network access via a base station on the Spectralink DECT Server 2500. Additional telephony features, such as call forward, follow me, call park/unpark, and call pickup were also verified using Feature Access Codes (FACs).

The serviceability testing focused on verifying that Spectralink DECT Server 2500 came back into service after re-connecting the Ethernet connect or rebooting the Spectralink handsets.

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 these Application Notes, the interface between Avaya systems and Spectralink DECT Server 2500 did not include use of any specific encryption features.

2.1. Interoperability Compliance Testing

Interoperability compliance testing covered the following features and functionality:

- SIP registration of Spectralink handsets with Session Manager. The DECT Server 2500 with base station controls the traffic in the air and works as the link between the Spectralink handsets and Session Manager.
- Calls between Spectralink handsets and Avaya SIP/H.323 telephones with Direct IP Media (Shuffling) enabled and disabled. Direct IP Media was supported between Spectralink handset and Avaya SIP deskphones.
- Calls between the Spectralink handsets and the PSTN.
- UDP transport protocol.
- Support of G.711 codec.
- Proper recognition of DTMF tones.
- Basic telephony features, including hold, mute, redial, multiple calls, blind/attended transfer and long duration calls.
- Extended telephony features using FACs for Call Forward, Call Park/Unpark, and Call Pickup.
- Voicemail coverage, MWI support, and logging into voicemail system to retrieve messages.
- Proper system recovery after a restart of DECT Server 2500 and Spectralink handsets and loss of IP connectivity.

2.2. Test Results

All test cases passed with the following observations noted:

- Spectralink 7000 Series Handsets do not support the initiation of 3-party conference calls.
- TLS/SRTP is currently not supported between Spectralink DECT Server 2500 and Avaya Aura® Communication Manager. When SRTP is enabled, Spectralink DECT Server 2500 only accepts encrypted SRTCP and Secure AVP (SAVP) in the SIP SDP, because RFC 5939 SDP Capability Negotiation is not supported. Although Avaya SIP deskphones 7.1 or later do support encrypted SRTCP, Avaya H.323 deskphones do not, so SRTP calls with Spectralink handsets will fail. Therefore, compliance testing was performed with TLS/SRTP disabled.

2.3. Support

For technical support on the Spectralink DECT Server 2500/8000 or Spectralink 7000 Series and Butterfly Handsets, contact Spectralink Technical Support via phone, email, or website.

- **Phone:** +1 (800) 775-5330
- **Web:** <http://support.spectralink.com/>
- **Email:** technicalsupport@spectralink.com

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of Spectralink DECT Server 2500, Spectralink Digital Base Station, and Spectralink 7000 Series and Butterfly Handsets with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. The Spectralink handsets registered with Session Manager via SIP through the DECT Server 2500. The Spectralink Digital Base Station was used to provide network access to the Spectralink handsets. Avaya G450 Media Gateway provided media resources and PSTN connectivity (not shown). Avaya Aura® Media Server provided additional media resources and Avaya Aura® Messaging served as the voicemail system. Avaya Aura® System Manager was used to configure Session Manager. Avaya 96x1 Series H.323/SIP Deskphones were used for placing and receiving calls.

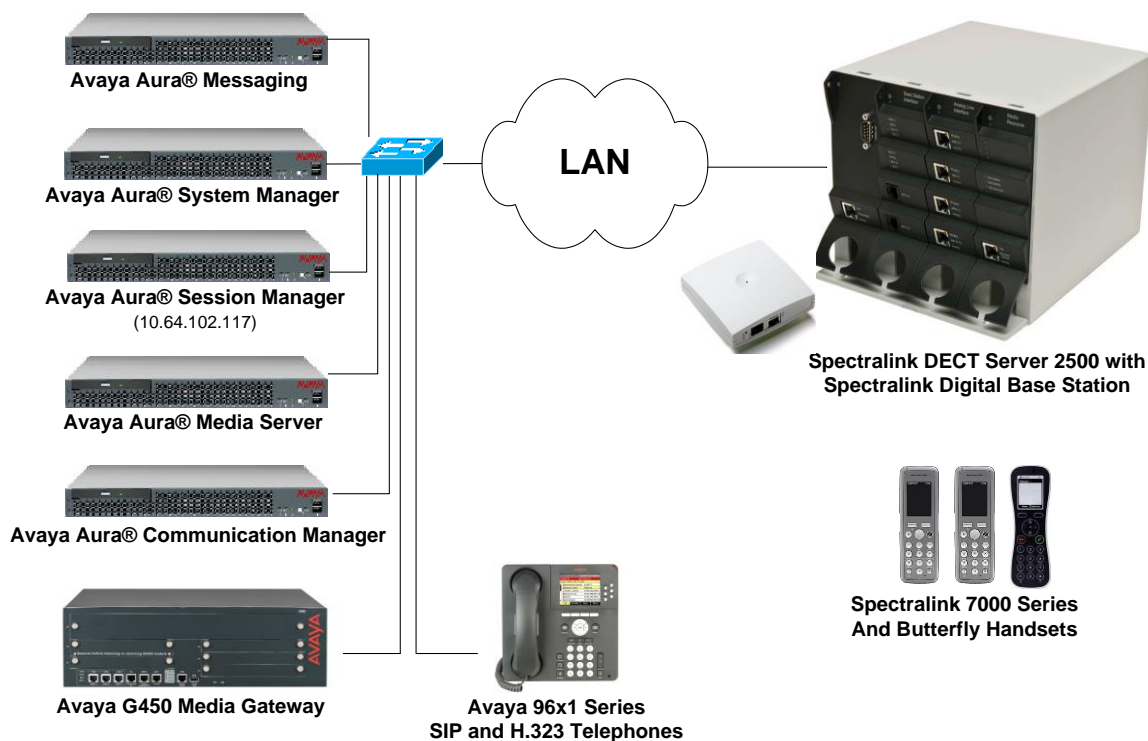


Figure 1: Spectralink DECT Server 2500, Spectralink Digital Base Station, and Spectralink 7000 Series and Butterfly Handsets with Avaya SIP Network

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 running in a Virtual Environment	7.1 (R017x.01.0.532.0)
Avaya G450 Media Gateway	38.20.1
Avaya Aura® Media Server running in a Virtual Environment	7.7.0.375
Avaya Aura® Messaging running in a Virtual Environment	6.3.3.SP 6
Avaya Aura® Session Manager running in a Virtual Environment	7.1 (7.1.0.0.710028)
Avaya Aura® System Manager running in a Virtual Environment	7.1.0.0 (Build No. 7.1.0.0.1125193 Software Update Revision No: 7.1.0.0.116654)
Avaya 96x1 Series IP Deskphone	6.6506 (H.323) 7.1.1.0.9 (SIP)
Spectralink DECT Server 2500 (see note)	PCS17Ea
Spectralink Digital Base Station 4CH	16E
Spectralink 7202 and 7622 Handsets	17J
Spectralink Butterfly Handset	17A

Note: These Application Notes also apply to the Spectralink DECT Server 8000, which uses the same firmware and SIP stack as the Spectralink DECT Server 2500. These two DECT server types differ in scalability only.

5. Configure Avaya Aura® Communication Manager

This section provides the procedure for configuring Communication Manager. The procedure includes the following areas:

- Verify Communication Manager license
- Administer IP Network Region and IP Codec Set

Use the System Access Terminal (SAT) to configure Communication Manager and log in with appropriate credentials.

Note: It is assumed that basic configuration of the Communication Manager has already been completed, such as the SIP trunk to Session Manager. However, implementers should ensure sufficient Maximum Administered SIP Trunks licenses are available to accommodate the traffic between Communication Manager and the Session Manager. The SIP station configuration for Spectralink DECT Server 2500 and handsets are configured through Avaya Aura® System Manager in **Section 6.2**.

5.1. Verify License

Using the SAT, verify that the Off-PBX Telephones (OPS) option is enabled on the **system-parameters customer-options** form. The license file installed on the system controls these options. If a required feature is not enabled, contact an authorized Avaya sales representative.

On **Page 1**, verify that the number of OPS stations allowed in the system is sufficient for the number of SIP endpoints that will be deployed.

```
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: 6400 60
Maximum Stations: 2400 22
Maximum XMOBILE Stations: 2400 0
Maximum Off-PBX Telephones - EC500: 9600 0
Maximum Off-PBX Telephones - OPS: 9600 14
Maximum Off-PBX Telephones - PBFMC: 9600 0
Maximum Off-PBX Telephones - PVFMC: 9600 0
Maximum Off-PBX Telephones - SCCAN: 0 0
Maximum Survivable Processors: 313 0

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

5.2. Administer IP Network Region and IP Codec Set

In the **IP Network Region** form, the **Authoritative Domain** field is configured to match the domain name configured on Session Manager. In this configuration, the domain name is *avaya.com*. By default, **IP-IP Direct Audio** (shuffling) is enabled to allow audio traffic to be sent directly between IP endpoints without using media resources in the Avaya G450 Media Gateway or Avaya Aura® Media Server. The **IP Network Region** form also specifies the **IP Codec Set** to be used for calls routed over the SIP trunk to Session Manager.

```
change ip-network-region 1                                     Page 1 of 20

                                IP NETWORK REGION

Region: 1
Location: 1      Authoritative Domain: avaya.com
Name:                               Stub Network Region: n
MEDIA PARAMETERS      Intra-region IP-IP Direct Audio: yes
      Codec Set: 1      Inter-region IP-IP Direct Audio: yes
      UDP Port Min: 2048      IP Audio Hairpinning? n
      UDP Port Max: 3329
DIFFSERV/TOS PARAMETERS
      Call Control PHB Value: 46
      Audio PHB Value: 46
      Video PHB Value: 26
802.1P/Q PARAMETERS
      Call Control 802.1p Priority: 6
      Audio 802.1p Priority: 6
      Video 802.1p Priority: 5      AUDIO RESOURCE RESERVATION PARAMETERS
H.323 IP ENDPOINTS      RSVP Enabled? n
      H.323 Link Bounce Recovery? y
      Idle Traffic Interval (sec): 20
      Keep-Alive Interval (sec): 5
      Keep-Alive Count: 5
```

In the **IP Codec Set** form, select the audio codec type supported for calls routed over the SIP trunk to DECT Server 2500. The form is accessed via the **change ip-codec-set 1** command. Note that IP codec set '1' was specified in IP Network Region '1' shown above. The default settings of the **IP Codec Set** form are shown below. DECT Server 2500 was tested using G.711 codec.

```
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:
3:
4:
5:
6:
7:
```

6. Configure Avaya Aura® Session Manager

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

- Launch System Manager
- Set Network Transport Protocol for DECT Server 2500
- Administer SIP User

Note: It is assumed that basic configuration of Session Manager has already been performed. This section will focus on the configuration of a SIP user for DECT Server 2500.

6.1. Launch 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.

6.2. Set Network Transport Protocol for Spectralink DECT Server 2500

From the System Manager **Home** screen, select **Elements** → **Routing** → **SIP Entities** and edit the SIP Entity for Session Manager shown below.

The screenshot shows the Avaya Aura System Manager 7.1 interface. The left sidebar contains a navigation menu with options: Routing, Domains, Locations, Adaptations, SIP Entities (selected), Entity Links, Time Ranges, Routing Policies, Dial Patterns, Regular Expressions, and Defaults. The main content area is titled 'SIP Entity Details' and shows the configuration for 'devcon-sm'. The 'General' tab is active, displaying fields for Name, FQDN or IP Address, Type, Notes, Location, Outbound Proxy, Time Zone, Minimum TLS Version, and Credential name. The 'Monitoring' section at the bottom shows 'SIP Link Monitoring' set to 'Use Session Manager Configuration' and 'CRLF Keep Alive Monitoring' set to 'CRLF Monitoring Disabled'. The top right corner shows the user is logged in as 'admin' on September 15, 2017, at 11:16 AM.

Field	Value
Name	devcon-sm
FQDN or IP Address	10.64.102.117
Type	Session Manager
Location	Thornton
Outbound Proxy	
Time Zone	America/New_York
Minimum TLS Version	Use Global Setting
Credential name	
SIP Link Monitoring	Use Session Manager Configuration
CRLF Keep Alive Monitoring	CRLF Monitoring Disabled

Scroll down to the **Listen Ports** section and verify that the transport network protocol used by DECT Server 2500 is specified in the list below. For the compliance test, DECT Server 2500 used UDP network transport.

Listen Ports

Add Remove

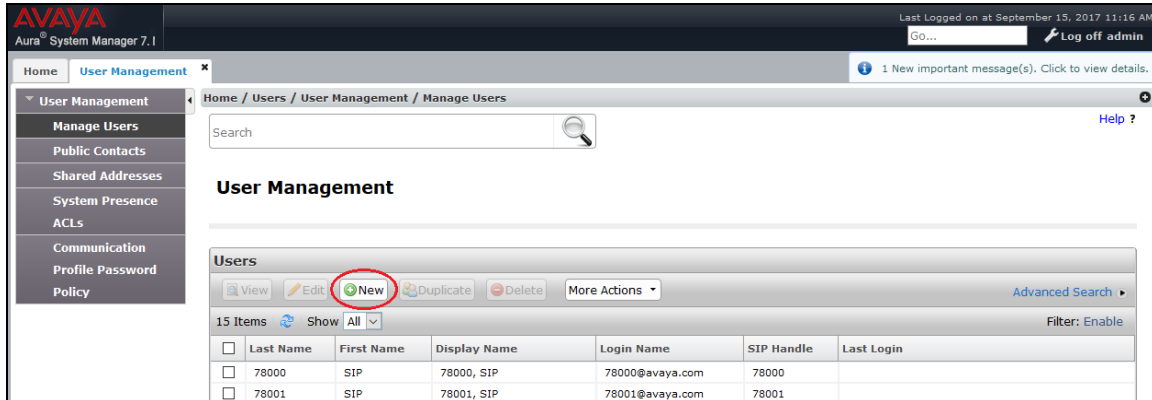
3 Items Filter: Enable

<input type="checkbox"/>	Listen Ports	Protocol	Default Domain	Endpoint	Notes
<input type="checkbox"/>	S060	TCP	avaya.com	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	S060	UDP	avaya.com	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	S061	TLS	avaya.com	<input checked="" type="checkbox"/>	

Select : All, None

6.3. Administer SIP User

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



6.3.1. Identity

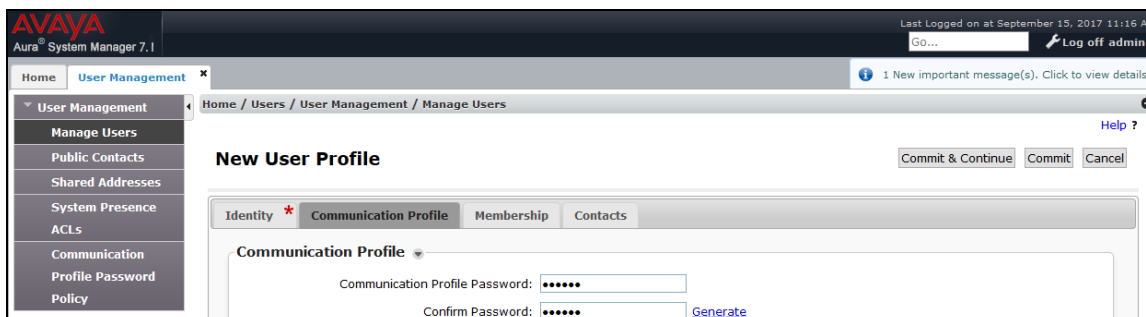
The **New User Profile** screen is displayed. Enter desired **Last Name** and **First Name**. For **Login Name**, enter “<ext>@<domain>”, where “<ext>” is the desired DECT Server 2500 SIP extension and “<domain>” is the applicable SIP domain name from **Section 5.2**. Retain the default values in the remaining fields.

The screenshot shows the 'New User Profile' screen with the 'Identity' tab selected. The 'User Provisioning Rule' is set to 'User Provisioning Rule:'. The 'Identity' section contains the following fields:

- * Last Name: 78005
- Last Name (Latin Translation): 78005
- * First Name: Spectralink
- First Name (Latin Translation): Spectralink
- Middle Name:
- Description:
- * Login Name: 78005@avaya.com
- Email Address:
- User Type: Basic
- Password:
- Confirm Password:

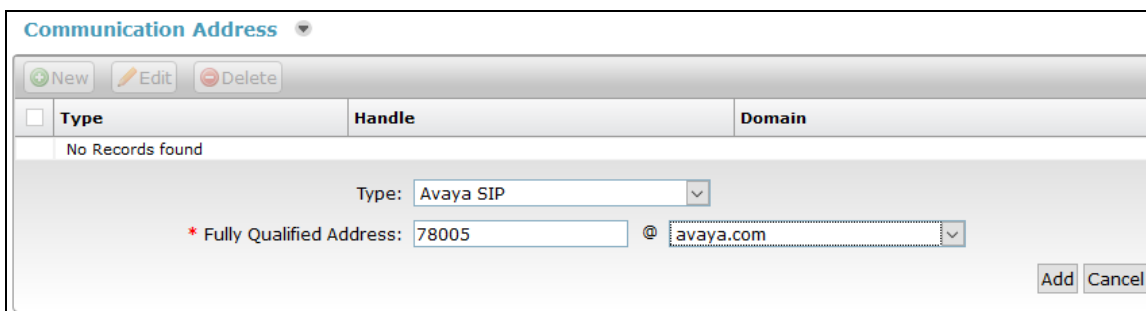
6.3.2. Communication Profile

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



6.3.3. Communication Address

In the **Communication Address** sub-section, click **New** to add a new entry. The **Communication Address** 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 6.3.1**. Click **Add**.



6.3.4. Session Manager Profile

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 and Communication Manager. Retain the default values in the remaining fields.

☒ **Session Manager Profile** ▼

SIP Registration

* Primary Session Manager

devcon-sm

Secondary Session Manager

Survivability Server

Max. Simultaneous Devices

1 ▼

Block New Registration When Maximum Registrations Active?

☐

Primary	Secondary	Maximum
15	0	15

Application Sequences

Origination Sequence

DEVCON-CM App Sequence ▼

Termination Sequence

DEVCON-CM App Sequence ▼

Call Routing Settings

* Home Location

Thornton ▼

Conference Factory Set

(None) ▼

Call History Settings

Enable Centralized Call History?

☐

6.3.5. CM Endpoint Profile

Scroll down to check and expand **CM Endpoint Profile**. For **System**, select the value corresponding to the applicable Communication Manager. For **Extension**, enter the SIP user extension from **Section 6.3.1**. For **Template**, select *9600SIP_DEFAULT_CM_7_1*. For **Port**, click and select *IP*. Retain the default values in the remaining fields. Click **Commit** to save the configuration (not shown).

☒ **CM Endpoint Profile**

* System

devcon-cm

* Profile Type

Endpoint

Use Existing Endpoints

☐

* Extension

78005

Endpoint Editor

* Template

9600SIP_DEFAULT_CM_7_1

Set Type

9600SIP

Security Code

Port

IP

Voice Mail Number

Preferred Handle

(None)

Calculate Route Pattern

☐

Sip Trunk

aar

Enhanced Callr-Info display for 1-line phones

☐

Delete Endpoint on Unassign of Endpoint
from User or on Delete User

☒

Override Endpoint Name and Localized Name

☒

Allow H.323 and SIP Endpoint Dual
Registration

☐

In the **CM Endpoint Profile** sub-section, click the **Endpoint Editor** button to display the page below. In the **General Options** tab, specify that coverage path that points to the voicemail system in the **Coverage Path 1** field. This provides voicemail coverage for the SIP user. In this example, coverage path 10 was used.

AVAYA
Aura System Manager 7.1

Last Logged on at September 15, 2017 11:16 AM
GO... Log off admin

Home / User Management / Manage Users

Edit Endpoint

Done Cancel

[Save As Template]

System: devcon-cm Extension: 78005
 Template: 9600SIP_DEFAULT_CM_7_1 Set Type: 9600SIP
 Port: IP Security Code:
 Name: 78005,Spectralink

General Options (G) * Feature Options (F) Site Data (S) Abbreviated Call Dialing (A) Enhanced Call Fwd (E)

Button Assignment (B) Group Membership (M)

* Class of Restriction (COR) 1
 * Emergency Location Ext 78005
 * Tenant Number 1
 * SIP Trunk Q.aar
 Coverage Path 1 10
 Lock Message ☐
 Multibyte Language Not Applicable

* Class Of Service (COS) 1
 * Message Lamp Ext. 78005
 Type of 3PCC Enabled None
 Coverage Path 2
 Localized Display Name 78005,Spectralink
 Enable Reachability for Station Domain Control

* Required

Done Cancel

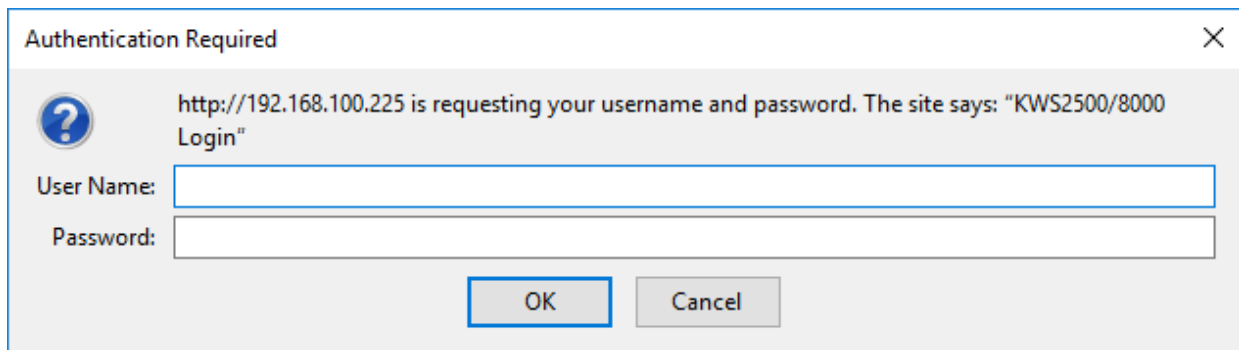
7. Configure Spectralink DECT Server 2500

This section provides the procedures for configuring Spectralink DECT Server 2500. The procedures fall into the following areas:

- Launch web interface.
- Administer network settings.
- Administer SIP settings, including SIP port, transport protocol, Message Waiting Indicator (MWI) and audio codecs.
- Add SIP Users.

7.1. Launch Web Interface

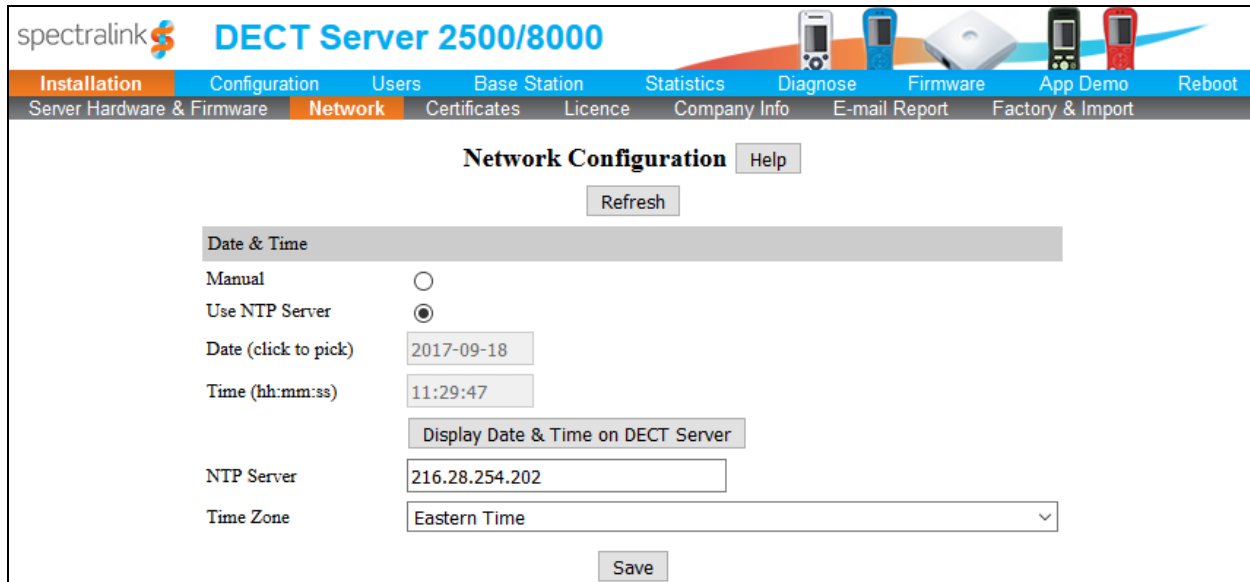
Spectralink DECT Server 2500 was configured through the web interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of DECT Server 2500. Log in using the appropriate credentials and then click **OK**.



The image shows a standard Windows-style dialog box titled "Authentication Required" with a close button (X) in the top right corner. On the left side, there is a blue circular icon containing a white question mark. To the right of this icon, the text reads: "http://192.168.100.225 is requesting your username and password. The site says: 'KWS2500/8000 Login'". Below this text, there are two input fields. The first is labeled "User Name:" and the second is labeled "Password:". At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

7.2. Administer Network Settings

To configure network settings, click **Installation** and then select the **Network** tab. Under **Date & Time**, configure the **NTP Server**, if desired, and specify the appropriate **Time Zone**.

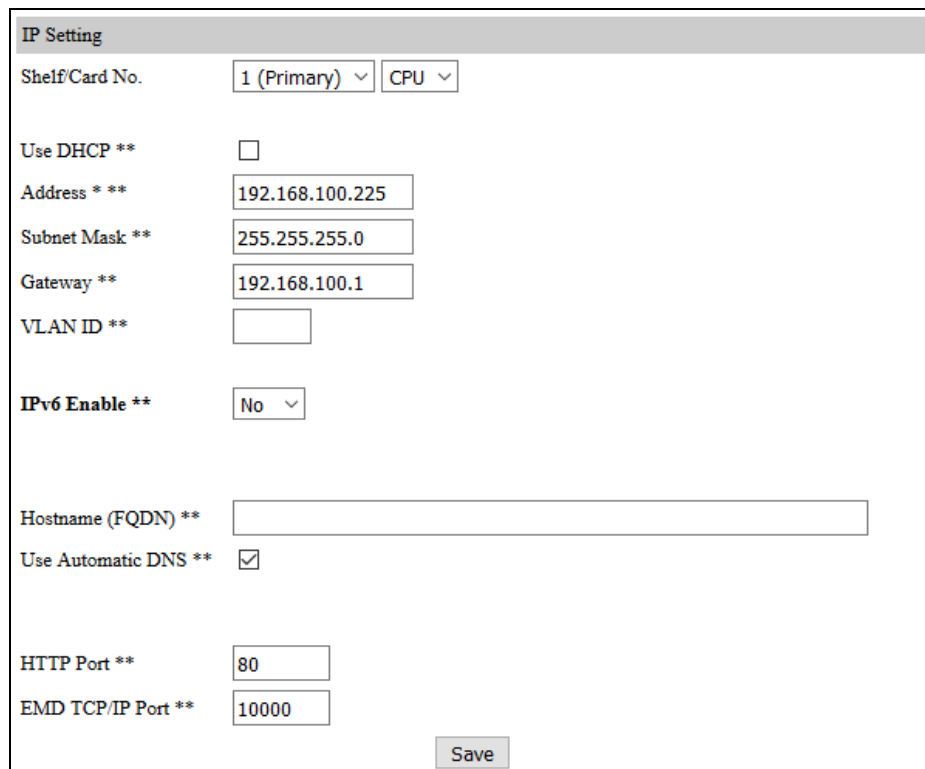


The screenshot shows the 'Network Configuration' page for the Spectralink DECT Server 2500/8000. The 'Date & Time' section is expanded, showing the following settings:

- Manual:** ☐
- Use NTP Server:** ☒
- Date (click to pick):** 2017-09-18
- Time (hh:mm:ss):** 11:29:47
- Display Date & Time on DECT Server:**
- NTP Server:** 216.28.254.202
- Time Zone:** Eastern Time

A 'Save' button is located at the bottom right of the configuration area.

Scroll down to the **IP Setting** section. The Spectralink DECT Server 2500 is pre-configured to use DHCP. However, for the compliance test, a static IP address was used as shown below.



The screenshot shows the 'IP Setting' page for the Spectralink DECT Server 2500/8000. The settings are as follows:

- Shelf/Card No.:** 1 (Primary) CPU
- Use DHCP **:** ☐
- Address **:** 192.168.100.225
- Subnet Mask **:** 255.255.255.0
- Gateway **:** 192.168.100.1
- VLAN ID **:**
- IPv6 Enable **:** No
- Hostname (FQDN) **:**
- Use Automatic DNS **:** ☒
- HTTP Port **:** 80
- EMD TCP/IP Port **:** 10000

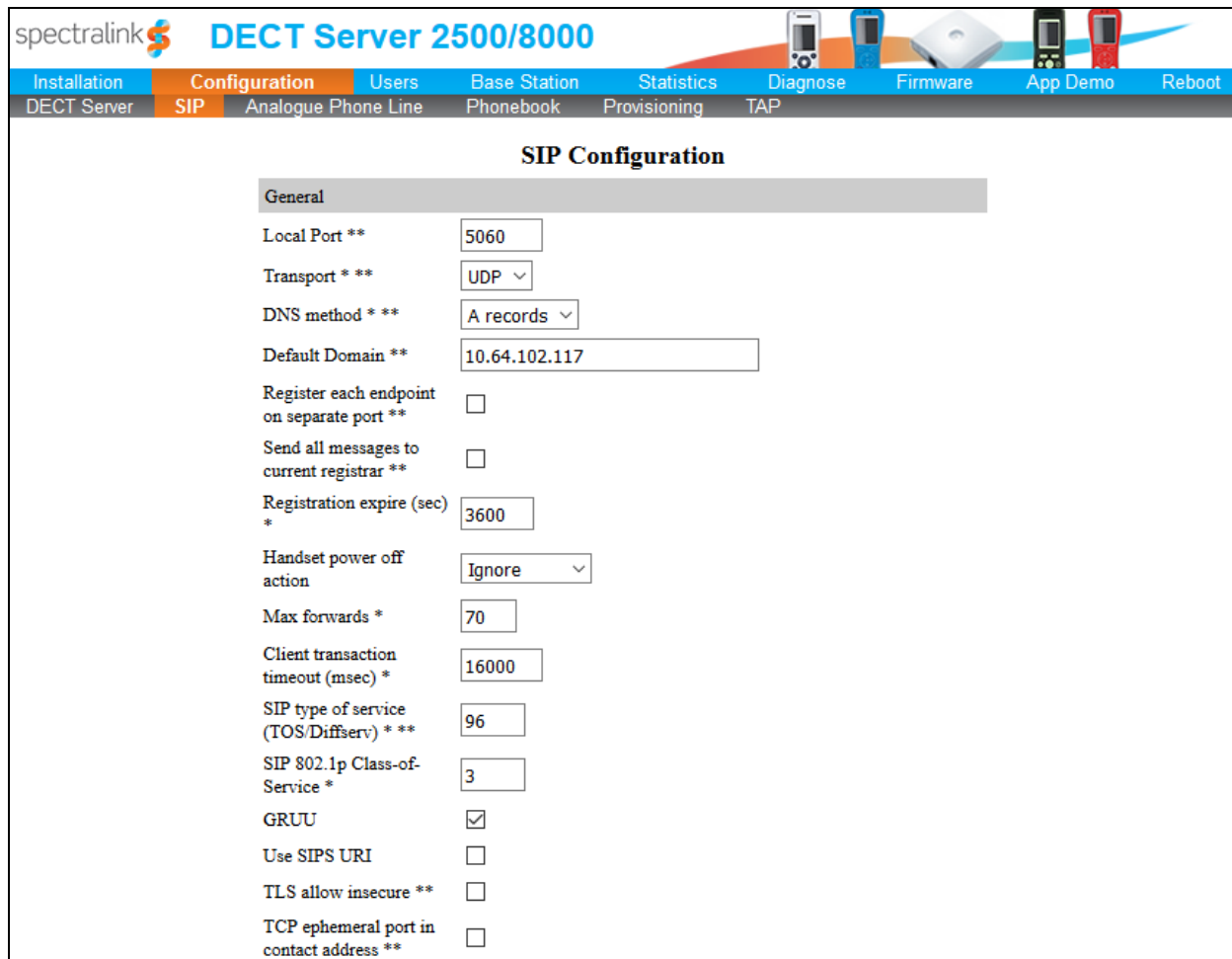
A 'Save' button is located at the bottom right of the configuration area.

7.3. Administer SIP Settings

To configure SIP settings, click **Configuration** and then select the **SIP** tab. Under **General**, configure the following fields:

- **Local port** Specify UDP port *5060*. This also matches the ports configured on System Manager in **Section 6.2**.
- **Transport** Specify the *UDP* transport protocol.
- **Default Domain** Specify the IP address of Session Manager.

Retain the default values for the other fields as shown below.



spectralink **DECT Server 2500/8000**

Installation Configuration Users Base Station Statistics Diagnose Firmware App Demo Reboot

DECT Server **SIP** Analogue Phone Line Phonebook Provisioning TAP

SIP Configuration

General

Local Port ** 5060

Transport * ** UDP

DNS method * ** A records

Default Domain ** 10.64.102.117

Register each endpoint on separate port ** ☐

Send all messages to current registrar ** ☐

Registration expire (sec) * 3600

Handset power off action Ignore

Max forwards * 70

Client transaction timeout (msec) * 16000

SIP type of service (TOS/Diffserv) * ** 96

SIP 802.1p Class-of-Service * 3

GRUU ☒

Use SIPs URI ☐

TLS allow insecure ** ☐

TCP ephemeral port in contact address ** ☐

Scroll down to the **Message Waiting Indication** and **Media** sections. In the **Message waiting indication** section, select the **Enable indication** and **Enable subscription** check boxes as shown below. This is required to support updates to the Message Waiting Indicator (MWI) lamp. In the **Media** section, allow G.711 as shown below.

DTMF Signalling	
Send as RTP (RFC2833)	<input checked="" type="checkbox"/>
Offered RFC2833 payload type	96
Send as SIP INFO	<input type="checkbox"/>
Tone duration (msec) *	270
Message Waiting Indication	
Enable indication	<input checked="" type="checkbox"/>
Enable subscription **	<input checked="" type="checkbox"/>
Subscription expire (sec) *	3600
Media	
Packet duration (msec) *	20
Media type of service (TOS/Diffserv) * **	184
Media 802.1p Class-of-Service *	5
Port range start * **	58000
Codec Priority *	1: PCMU/8000 2: PCMA/8000 3: None 4: None 5: None 6: None
SDP answer with preferred codec	<input type="checkbox"/>
SDP answer with a single codec	<input type="checkbox"/>
Ignore SDP version	<input type="checkbox"/>
Enable RTP encryption **	<input type="checkbox"/>
Require RTP encryption	<input type="checkbox"/>
Include lifetime in SDP offers	<input type="checkbox"/>
Include MKI in SDP offers	<input type="checkbox"/>
Enable ICE	<input type="checkbox"/>
Enable TURN	<input type="checkbox"/>

Use the default settings for the **Call Status** section shown below. Click **Save**.

Call Status

Play on-hold tone ☒

Provide Music-on-Hold ☐ Browse... No file selected.

Display status messages ☒

'#' key ends overlap dialing (bypassing the inter digit timeout) ☐

Call waiting ☒

*) Required field **) Require restart

Save

7.4. Add SIP Users

To create a SIP user for one of the Spectralink handsets, click **Users** and then click **List Users**. Next, click on the **New** button shown below.

DECT Server 2500/8000

Installation
Configuration
Users
Base Station
Statistics
Diagnose
Firmware
App Demo
Reboot

Overview
SIP
Analogue
DECT to DECT
Shared Phone and Line
Devices
Import & Export
Backup & Restore

Sip
Help

ARI: 10042033074

Refresh
New
Enable
Disable
Delete
Re-register

Current progress: 100%

Show 20 entries

Search:

<input type="checkbox"/>	Service Status	SIP Status	Local Number	Name	Standby Text	CFU Number	SIP Username	Line Type	Product name	SW PCS
<input type="checkbox"/>	✓	200	78005	Spectralink 1	78005		78005	SIP line & phone	Spectralink 7202	17J
<input type="checkbox"/>	✓	200	78006	Spectralink 2	78006		78006	SIP line & phone	Spectralink 7622	17J
<input type="checkbox"/>	✓	200	78007	Spectralink 3	78007		78007	SIP line & phone	spectralink Butterfly	17A

Showing 1 to 3 of 3 entries

First
Previous
1
Next
Last

In the **Add new entry** page shown below, configure the following fields.

Under **DECT Device**:

- **IPEI** Enter the IPEI number of the handset.

Under **User**:

- **Local Number (DN):** Enter the SIP extension.
- **Standby Text:** Enter the SIP extension.

Add new entry (phone and/or line)	
Interface	
Line Type	SIP
DECT device	
Model	
Software part Number	
Firmware	
HW version	
IPEI	05003 0547786
Access Code	
User	
Local Number (DN)	78005
Standby Text	78005
Disabled	<input type="checkbox"/>
Absent in single charger	<input type="checkbox"/>
Absent in multi charger	<input type="checkbox"/>

Under **SIP**:

- **SIP Username** Specify user name for handset.
- **Domain** Specify the Session Manager IP address of IP Office (e.g., 192.168.100.117). May leave blank if **Default Domain** was configured in **Section 7.3**.
- **Displayname** Specify a display name for the handset (e.g., *Spectralink 1*).
- **Authentication user** Set to the SIP extension configured in **Section 6.3**.
- **Authentication password** Enter the password configured in the **Communication Password Profile** field in **Section 6.3.2**.

Retain the default values for the other fields. Click **Save**.

SIP	
SIP Username	<input type="text" value="78005"/>
Domain	<input type="text" value="10.64.102.117"/>
Displayname	<input type="text" value="Spectralink 1"/>
SIP Auth Username	<input type="text" value="78005"/>
SIP Auth Password	<input type="text" value="123456"/>
Features	
Master Handset	<input type="checkbox"/>
CFU Number	<input type="text"/>
TX Gain [-12:12] dB	<input type="text" value="0"/>
RX Gain [-12:12] dB	<input type="text" value="0"/>
<input type="button" value="Save"/> <input type="button" value="Delete"/> <input type="button" value="Previous"/> <input type="button" value="Next"/> <input type="button" value="Close"/>	

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Session Manager and DECT Server 2500.

1. Verify that the Spectralink handset has successfully registered with Session Manager. In System Manager, navigate to **Elements → Session Manager → System Status → User Registrations** to check the registration status.

Avaya Aura System Manager 7.1

Home / Elements / Session Manager / System Status / User Registrations

User Registrations

Select rows to send notifications to devices. Click on Details column for complete registration status.

View: Default Force Unregister AST Device Notifications: Reboot Reload Failback As of 1:23 PM Advanced Search

14 Items Show: All Filter: Enable

Details	Address	First Name	Last Name	Actual Location	IP Address	Remote Office	Shared Control	Simult. Devices	AST Device	Registered
										Prim Sec Surv
<input type="checkbox"/> Show	78007@avaya.com	Spectralink	78007	---	---	<input type="checkbox"/>	<input type="checkbox"/>	1/1	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Show	78005@avaya.com	Spectralink	78005	---	---	<input type="checkbox"/>	<input type="checkbox"/>	1/1	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Show	78006@avaya.com	Spectralink	78006	---	---	<input type="checkbox"/>	<input type="checkbox"/>	1/1	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Select: All, None

2. The registration status may also be viewed on the DECT Server 2500 web interface by navigating to **Users** and selecting the **SIP** tab as shown below.

spectralink DECT Server 2500/8000

Installation Configuration **Users** Base Station Statistics Diagnose Firmware App Demo Reboot

Overview **SIP** Analogue DECT to DECT Shared Phone and Line Devices Import & Export Backup & Restore

Sip Help

ARI: 10042033074 Refresh New Enable Disable Delete Re-register Current progress: 100%

Show 20 entries Search:

	Service Status	SIP Status	Local Number	Name	Standby Text	CFU Number	SIP Username	Line Type	Product name	SW PCS
<input type="checkbox"/>	✓	200	78005	Spectralink 1	78005		78005	SIP line & phone	Spectralink 7202	17J
<input type="checkbox"/>	✓	200	78006	Spectralink 2	78006		78006	SIP line & phone	Spectralink 7622	17J
<input type="checkbox"/>	✓	200	78007	Spectralink 3	78007		78007	SIP line & phone	spectralink Butterfly	17A

Showing 1 to 3 of 3 entries First Previous 1 Next Last

3. Verify basic telephony features by establishing calls between a Spectralink handset and another phone.

9. Conclusion

These Application Notes described the configuration steps required to integrate Spectralink DECT Server 2500/8000 with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. Spectralink DECT Server 2500 allowed Spectralink 7000 Series and Butterfly Handsets to register with Avaya Aura® Session Manager and establish calls to H.323 stations, SIP stations, and the PSTN. In addition, basic telephony features were verified. All feature and serviceability test cases were completed successfully with observations noted in **Section 2.2**.

10. References

This section references the Avaya and Spectralink documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com> and the Spectralink documentation is available at <http://support.spectralink.com/products>.

- [1] *Administering Avaya Aura® Communication Manager*, Release 7.1, Issue 1, May 2017.
- [2] *Administering Avaya Aura® Session Manager*, Release 7.1, Issue 2, May 2017.
- [3] *Spectralink DECT Server 2500 Installation Guide*, 14205700 version 9.0, June 2015.
- [4] *Spectralink DECT Server 8000 and Spectralink DECT Server 2500 Configuration Guide*, 14184634 version 6.0, K016, June 2015.

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