



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Phybridge PoLRE with Avaya Aura® Communication Manager 6.3 and Avaya Aura® Session Manager 6.3 – Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required for Phybridge PoLRE to interoperate with Avaya Aura® Communication Manager 6.3 and Avaya Aura® Session Manager 6.3. In the compliance testing, the Phybridge PoLRE leveraged the existing single-pair telephony wiring to provide dedicated Ethernet voice path and Power over Ethernet to Avaya H.323 IP telephones registered to Avaya Aura® Communication Manager and Avaya SIP IP telephones registered to Avaya Aura® Session Manager.

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 a compliance-tested configuration consisting of Phybridge PoLRE, Phybridge Phylink adapters, Avaya Aura® Communication Manager, Avaya Aura® System Manager Avaya Aura® Session Manager, Avaya H.323 and Avaya SIP IP telephones.

The Phybridge PoLRE is a LAN appliance that leverages the existing single-pair telephony wiring to provide dedicated Ethernet and Power over Ethernet (PoE) to Avaya IP H.323 and SIP telephones.

## 2. General Test Approach and Test Results

The compliance testing focused on the interoperability between Phybridge PoLRE and Avaya IP telephones to ensure that the phones work as expected. Serviceability testing was also performed.

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

Testing consisted of typical call scenarios involving Avaya endpoints connected to PoLRE. External call scenarios were also tested with a PRI PSTN connection. All tests were performed manually and the focus was on verifying interoperability compliance.

Feature testing included, registration, audio codec, media shuffling, basic calls, hold/reconnect, conference, transfer, display, DTMF, and message waiting indicator (MWI) scenarios.

The serviceability testing focused on verifying the ability of Phybridge PoLRE to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cables to the Phybridge PoLRE and to the Avaya IP telephones. Reboots and power cycling of Phybridge PoLRE were also tested.

### 2.2. Test Results

All applicable test cases were executed and passed with the following observation:

The Avaya B179 Conference Phone was powered with its local power supply and connected to the Phylink adapter with an Ethernet cable as per **Reference 4** in **Section 10**. This configuration was used because the B179 phone required more PoE power than could be supplied by UniPhyer. Other Class 3 endpoints may also require this configuration. UniPhyer Switches can power Class 1, Class 2 and some Class 3 IEEE 802.3af compliant IP devices.

## 2.3. Support

Technical support on the Phybridge PoLRE can be obtained through the following:

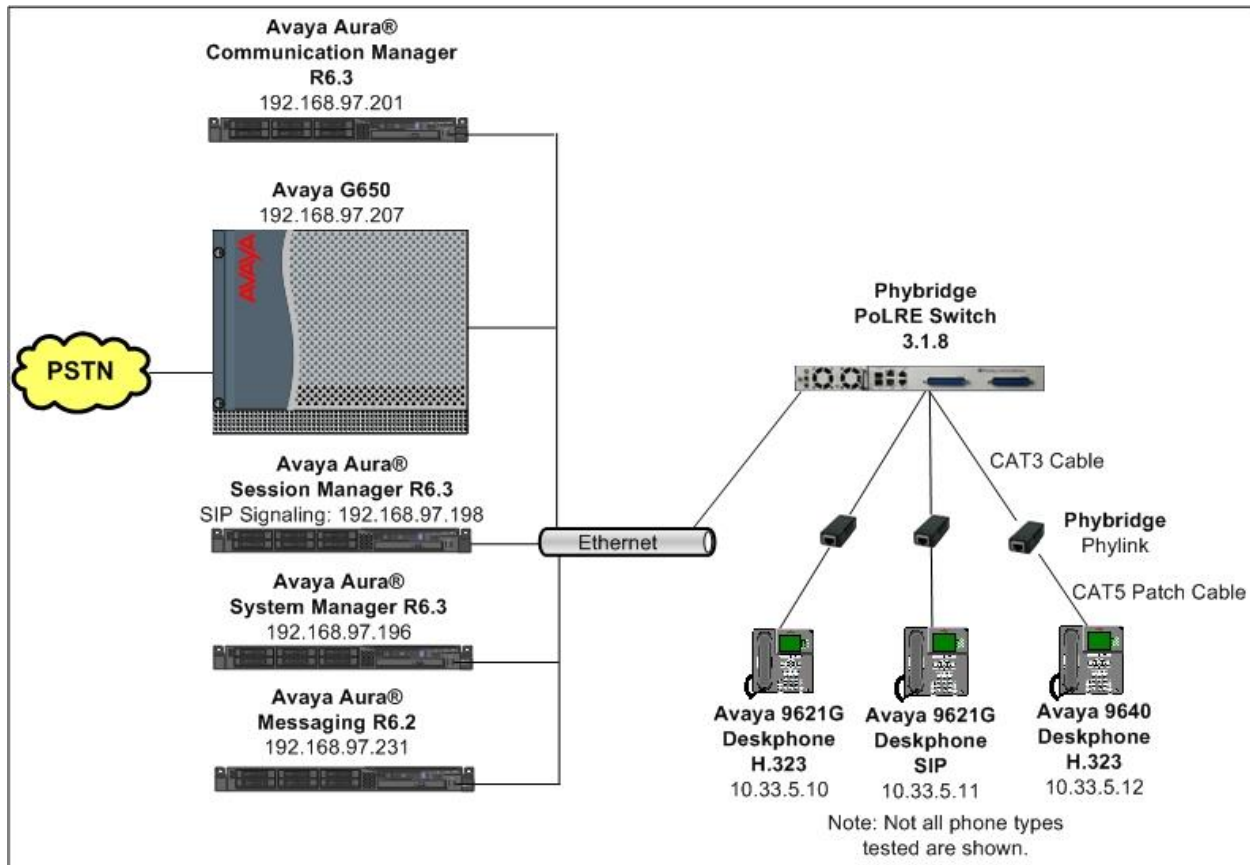
- **Phone:** (888) 901-3633
- **Email:** [Support@Phybridge.com](mailto:Support@Phybridge.com)

### 3. Reference Configuration

In the test configuration shown in **Figure 1**, Avaya IP telephones are connected to the network via the Phybridge PoLRE leveraging the existing CAT3 cabling that was previously used for Analog and Digital phones. For each station user, one end of the CAT3 cable is changed to connect to the Phybridge PoLRE instead of the Analog or Digital Line circuit pack on the Avaya G650. The other end of the CAT3 cable connects to a Phybridge Phylink adapter with an RJ11 connector. Each Phylink adapter is connected using a standard CAT5 Ethernet cable to an Avaya IP telephone. Each Phylink adapter is connected using a standard CAT5 Ethernet cable to an Avaya IP telephone.

In the sample configuration Avaya H.323 IP telephones register to Communication Manager and Avaya SIP IP telephones register to Session Manager.

The Phybridge PoLRE provides power to the Avaya IP telephones, and is transparent to the telephones in terms of the telephones' network settings.



**Figure 1: Phybridge PoLRE with Avaya Aura® Communication Manager and Avaya Aura® Session Manager**

## 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Session Manager running on S8800 Server	Release: 6.3.2.0.632023
Avaya Aura® System Manager running on S8800 Server	6.3.0 - FP2 Build No. - 6.3.0.8.5682-6.3.8.1627
Avaya Aura® Communication Manager running on Avaya S8800Server/G650 Media Gateway	R016x.03.0.124.0 patch 21172
Avaya Aura® Messaging	6.2
Avaya 1140E Deskphone (SIP)	04.04.10.00
1608 IP Deskphone (H.323)	1.3.4
Avaya 9621G IP Deskphone (H.323)	6.3.1.16
Avaya 9621G IP Deskphone (SIP)	6.3.0.73
Avaya 9640 IP Deskphone (H.323)	3.2.1
Avaya 9620L IP Deskphone (SIP)	2.6.11.4
Avaya B179 Conference Phone (SIP)	2.3.8
Phybridge Phylink	PL-PA011
Phybridge PoLRE Switch PL-048/024	3.1.8

## 5. Configure Avaya H.323 Phones on Avaya Aura® Communication Manager

No special configuration is required for Avaya H.323 phones to interoperate with PoLRE. For completeness this section provides the procedures for configuring Avaya H.323 phones on Communication Manager. It is assumed that Communication Manager and Session Manager have already been installed and are functioning.

In a typical installation of Phybridge PoLRE analog and digital telephones using existing CAT3 cabling would be replaced with new IP telephones as described in **Section 3**. This section shows an example of modifying an existing station type to match the new Avaya H.323 IP telephone, and allows the user to retain the same extension number.

Change the station type of an existing analog or digital station by using the command **change station n**, where “n” is the existing extension number. For **Type**, enter the applicable IP station type, in this case “9640”, and the **Port** field will be populated automatically. Enter a desired **Security Code**.

change station 53044		Page 1 of 5
STATION		
Extension: 53044	Lock Messages? n	BCC: 0
Type: 9640	Security Code: 53044	TN: 1
Port: IP	Coverage Path 1:	COR: 1
Name: 9640	Coverage Path 2:	COS: 1
	Hunt-to Station:	Tests? y
STATION OPTIONS		
Time of Day Lock Table:		
Loss Group: 19	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 53044	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english	Button Modules: 0	
Survivable GK Node Name:		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? n	
	IP Video? n	
	Short/Prefixed Registration Allowed: default	
	Customizable Labels? y	

Repeat this section to modify the station type for all applicable analog and digital stations that are being replaced with H.323 Stations.

Use the **save translation** command to save these changes.

## 6. Configure Avaya SIP Phones

No special configuration is required for Avaya SIP phones to interoperate with PoLRE. For completeness this section provides information for configuring Avaya SIP phones with Session Manager and Communication Manager. It is assumed that Communication Manager and Session Manager have already been installed and are functioning. It is also assumed that dial plan routing has been configured on Session Manager and Communication Manager.

In a typical installation of Phybridge PoLRE analog and digital telephones using existing CAT3 cabling would be replaced with new IP telephones as described in **Section 3**. This section shows an example of modifying an existing station type to match the new Avaya SIP IP telephone, and allows the user to retain the same extension number. **Section 6.1** will cover changing an analog or digital station to SIP on Communication Manager. **Section 6.2** will then cover additional required configurations using System Manager.

### 6.1. SIP Phone Configuration on Avaya Aura® Communication Manager

This section provides the procedures for modifying a current station on Communication Manager to be a SIP station. **Section 6.2** will then cover additional required configurations using System Manager to allow this SIP phone to register with Session Manager. The procedures fall into the following areas:

- Change Station Configuration
- Verify Off-PBX-Telephone Station-Mapping

### 6.1.1. Change Station Configuration

Change the station type of an existing analog or digital station by using the command **change station n**, where “n” is the existing extension number. For **Type**, enter the applicable IP station type, in this case “9621SIP”, and the **Port** field will be populated automatically. Enter a desired **Security Code**.

change station 53045		Page 1 of 6
STATION		
Extension: 53045	Lock Messages? n	BCC: 0
Type: 9621SIP	Security Code: 53045	TN: 1
Port: IP	Coverage Path 1:	COR: 1
Name: 53045	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
	Time of Day Lock Table:	
Loss Group: 19		
	Message Lamp Ext: 53045	
Display Language: english		
Survivable COR: internal		
Survivable Trunk Dest? y	IP SoftPhone? n	
	IP Video? n	



Navigate to **Page 4**, add the desired number of **call-appr** entries in the **BUTTON ASSIGNMENTS** section. This governs how many concurrent calls can be supported. In the sample configuration, three call appearances were configured to support transfer and conferencing scenarios.

change station 53045		Page 4 of 6	
STATION			
SITE DATA			
Room:		Headset?	n
Jack:		Speaker?	n
Cable:		Mounting:	d
Floor:		Cord Length:	0
Building:		Set Color:	
ABBREVIATED DIALING			
List1:	List2:	List3:	
BUTTON ASSIGNMENTS			
1: call-appr	5:		
2: call-appr	6:		
3: call-appr	7:		
4:	8:		

Navigate to **Page 6**. Enter **aar** for the **SIP Trunk** setting and use defaults for remaining fields.

change station 53045		Page 6 of 6	
STATION			
SIP FEATURE OPTIONS			
Type of 3PCC Enabled: None			
SIP Trunk: aar			

### 6.1.2. Verify Off-PBX-Telephone Station-Mapping

Use the **change off-pbx-telephone station-mapping x** command where x is an extension assigned to a SIP Deskphone to verify an Off-PBX station mapping was automatically created for the SIP station.

On **Page 1**, verify the following fields were correctly populated.

- **Application** Verify “**OPS**” is assigned.
- **Trunk Selection** Verify “**aar**” is assigned.

change off-pbx-telephone station-mapping 53045							Page 1 of 3
STATIONS WITH OFF-PBX TELEPHONE INTEGRATION							
Station	Application	Dial	CC	Phone Number	Trunk	Config	Dual
Extension		Prefix			Selection	Set	Mode
53045	OPS	-		53045	aar	1	

On **Page 2**, verify the following fields were correctly populated.

- **Mapping Mode**: Verify “**both**” is assigned.
- **Calls Allowed**: Verify “**all**” is assigned.

change off-pbx-telephone station-mapping 53045							Page 2 of 3
STATIONS WITH OFF-PBX TELEPHONE INTEGRATION							
Station	Appl	Call	Mapping	Calls	Bridged	Location	
Extension	Name	Limit	Mode	Allowed	Calls		
53045	OPS	4	both	all	none		

Use the **save translation** command to save these changes.

## 6.2. SIP Phone Configuration on Avaya Aura® Session Manager

This section describes the procedure to complete the configuration of the SIP IP phone from **Section 6.1** on Session Manager. It is assumed that Application and Application Sequence have already been configured.

The procedures fall into the following areas:

- Add SIP User
- Synchronize Changes with Communication Manager

The configuration is accomplished by using System Manager. Access the browser-based GUI of System Manager, using the **URL `http://<FQDN>/SMGR`**, where <FQDN> is the fully qualified domain name of System Manager. Log in to System Manager with the appropriate credentials (not shown).

### 6.2.1. Add SIP User

Add a new SIP user for the SIP station defined in **Section 6.1**.

On the System Manager home screen under the **Users** column select **User Management** (not shown). Select **Manage Users** from the left navigation menu.

**Step 1:** Click **New** (not shown). Enter values for the following required attributes for a new SIP user in the **Identity** section and use default values for the remaining fields.

- **Last Name:** Enter last name of user.
- **First Name:** Enter first name of user.
- **Login Name:** Enter “**extension number@<domain>**” where “**<domain>**” matches the domain being used. In this example bvwdev.com is used.
- **Authentication Type:** Verify “**Basic**” is selected.
- **Password:** Enter password used to log into System Manager.
- **Confirm Password:** Repeat value entered above.
- **Localized Display Name:** Enter display name for user [Optional].

The screen below shows results from **Step 1** for a new SIP user. Click **Commit & Continue** to save changes from **Step 1**.

**New User Profile**

Identity \* Communication Profile \* Membership Contacts

Identity

\* Last Name: User

\* First Name: SIP

Middle Name:

Description:

\* Login Name: 53045@bvwdev.com

\* Authentication Type: Basic

Password: .....

Confirm Password: .....

Localized Display Name:

Endpoint Display Name:

Commit & Continue Commit Cancel

**Step 2:** The **Communication Profile** tab should now be displayed. Click on **Edit** beside the **Communication Profile Password** text box (not shown). Enter the value the endpoint will use to register to Session Manager in the **Communication Profile Password** and **Confirm Password** fields. The **Communication Profile Password** should match the **Security Code** field defined in **Section 6.1.1**.

Verify there is a default entry identified as the Primary profile as shown below:

**User Profile Edit: 53045@bvwdev.com**

Identity \* Communication Profile \* Membership Contacts

Communication Profile

Communication Profile Password: .....

Confirm Password: ..... Cancel

New Delete Done Cancel

Name
Primary

Select : None

\* Name: Primary

Default : ☒

Commit & Continue Commit Cancel

If an entry does not exist, select **New** and enter values for the following required attributes:

- **Name:** Enter "**Primary**".
- **Default:** Verify that the check box is selected.

**Step 3:** Expand **Communication Address** sub-section and select **New** to define a **Communication Address** for the new user.

Enter values for the following required attributes:

- **Type:** Select “**Avaya SIP**” from drop-down menu.
- **Fully Qualified Address:** Enter the same extension number as used for **Login Name** in **Step 1** in the textbox.
- **Domain:** Select the value that matches the domain name defined in **Step 1**.

Click **Add** to save the Communication Address.

**Communication Address** ▼

<input type="checkbox"/>	Type	Handle	Domain
No Records found			

**Type:**  ▼

**\* Fully Qualified Address:**  @  ▼

**Step 4:** Scroll down to the **Session Manager Profile** section and select the check box.

Enter the following values.

- **Primary Session Manager:** Select the appropriate Session Manager. In this example DevSM is used.
- **Origination Application Sequence:** Select an **Application Sequence**.
- **Termination Application Sequence:** Select an **Application Sequence**.
- **Conference Factory Set:** Retain the default value of “(None)”.
- **Survivability Server:** Select “(None)” from drop-down menu.
- **Home Location:** Select the required Location.

The remaining values were left at default for this sample configuration. The screen below shows results from Step 4.

☒ **Session Manager Profile**

**SIP Registration**

\* Primary Session Manager

DevSM

Primary	Secondary	Maximum
38	0	38

Secondary Session Manager

(None)

Survivability Server

(None)

Max. Simultaneous Devices

1

Block New Registration When Maximum Registrations Active?

☐

**Application Sequences**

Origination Sequence

DevCM-SEQ

Termination Sequence

DevCM-SEQ

**Call Routing Settings**

\* Home Location

Belleville

Conference Factory Set

(None)

**Step 5:** Scroll down to the **CM Endpoint Profile** section and select the check box.

Enter the following values and use defaults for remaining fields.

- **System:** Select Managed Element defined for Communication Manager.
- **Profile Type:** Select “**Endpoint**”.
- **Use Existing Endpoints:** Select the check box to use the existing extension.
- **Extension:** Enter same extension number used for Login Name in Step 1.
- **Template:** Select template for type of SIP phone.
- **Security Code:** Enter numeric value used to register the SIP endpoint.  
**Note:** this field should match the value entered for the Communication Profile Password field in Step 2.
- **Voice Mail Number:** Enter Pilot Number for Avaya Modular Messaging or Avaya Aura Messaging if installed. Else, leave field blank.

The screen below shows the results from **Step 5** when adding a new SIP user in this sample configuration.

The screenshot shows a web-based configuration form for a 'CM Endpoint Profile'. At the top, there is a section header 'CM Endpoint Profile' with a dropdown arrow. Below this, the form contains several fields and checkboxes. The 'System' field is a dropdown menu with 'DevCM' selected. The 'Profile Type' field is a dropdown menu with 'Endpoint' selected. There is a checkbox labeled 'Use Existing Endpoints' which is checked. The 'Extension' field is a text input with '53045' and a magnifying glass icon, followed by a button labeled 'Endpoint Editor'. The 'Template' field is a dropdown menu with '9621SIP\_DEFAULT\_CM\_6\_3' selected. The 'Set Type' field is a text input with '9621SIP'. The 'Security Code' field is a text input with six dots. The 'Port' field is a text input with 'IP'. The 'Voice Mail Number' field is a text input. The 'Preferred Handle' field is a dropdown menu with '(None)' selected. There are three checkboxes at the bottom: 'Enhanced Callr-Info display for 1-line phones' (unchecked), 'Delete Endpoint on Unassign of Endpoint from User or on Delete User' (checked), and 'Override Endpoint Name' (checked).

☒ **CM Endpoint Profile**

\* **System** DevCM

\* **Profile Type** Endpoint

**Use Existing Endpoints** ☒

\* **Extension** 53045 **Endpoint Editor**

**Template** 9621SIP\_DEFAULT\_CM\_6\_3

**Set Type** 9621SIP

**Security Code** ●●●●●●

**Port** IP

**Voice Mail Number**

**Preferred Handle** (None)

**Enhanced Callr-Info display for 1-line phones** ☐

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

**Override Endpoint Name** ☒

Click **Commit** (not shown) to save the definition of the new user.

## 6.2.2. Synchronize Changes with Avaya Aura® Communication Manager

After completing these changes in System Manager, perform an on demand synchronization. From the System Manager Home page navigate to **Services → Inventory → Synchronization → Communication System**.

On the **Synchronize CM Data and Configure Options** page, select the row associated with Communication Manager as shown below.

Home / Services / Inventory / Synchronization / Communication System

**Synchronize CM Data and Configure Options**

Note: Please avoid any administration task on CM while synchronization or audit is in progress.

Synchronize CM Data/Launch Element Cut Through

4 Items Refresh Show ALL Filter: Enable

<input type="checkbox"/>	Element Name	FQDN/IP Address	Last Sync Time	Last Translation Time	Sync Type	Sync Status	Location	Software Version
<input checked="" type="checkbox"/>	DevCM	192.168.97.201	February 26, 2014 11:00:10 PM -05:00	10:00 pm WED FEB 26, 2014	Incremental	Completed		R016x.03.0.124.0
<input type="checkbox"/>	DevCM2	192.168.97.246	February 26, 2014 11:00:05 PM -05:00	10:00 pm WED FEB 26, 2014	Incremental	Completed		R016x.03.0.124.0
<input type="checkbox"/>	DevCM3_62	10.33.4.9	February 26, 2014 11:00:06 PM -05:00	10:00 pm WED FEB 26, 2014	Incremental	Completed		R016x.03.0.124.0
<input type="checkbox"/>	DevCMS	192.168.97.219	February 26, 2014 11:00:06 PM -05:00	10:00 pm WED FEB 26, 2014	Incremental	Completed		R015x.02.1.016.4

Select : All, None

☐ Initialize data for selected devices  
☒ Incremental Sync data for selected devices  
☐ Execute 'save trans all' for selected devices  
☐ Audit

Now Schedule Launch Element Cut Through View Audit Report

Select the **Incremental Sync data for selected devices** option and click **Now** to start the synchronization.

Use the **Refresh** button in the table header to verify status of the synchronization. Verify synchronization successfully completes by verifying the status in the **Sync Status** column shows **“Completed”**.

**Note:** Depending on the number of administration changes made, synchronization might take several minutes to complete.



## 7. Configure Phybridge PoLRE

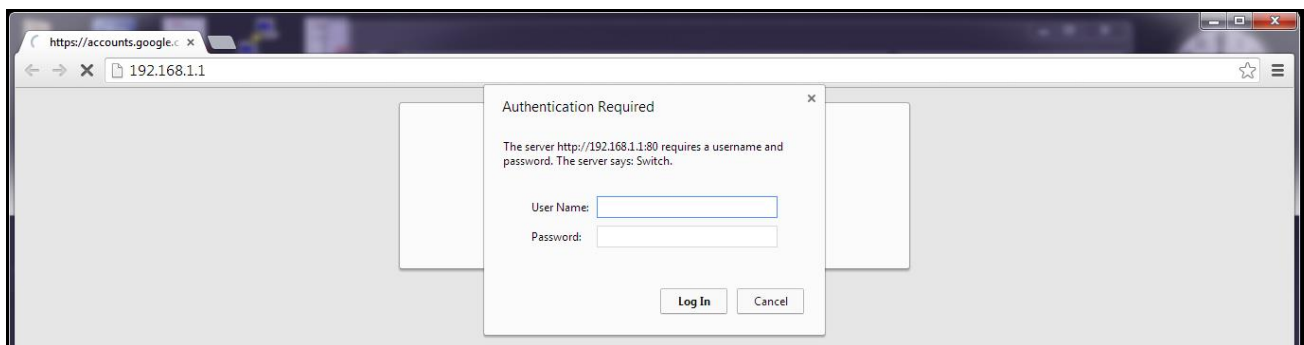
This section provides the procedures for configuring the PoLRE. The procedures fall into the following areas:

- Launch web interface
- Administer Phybridge PoLRE IP Address

All remaining configuration settings on PoLRE were left as default in this sample configuration.

### 7.1. Launch Web Interface

Access the PoLRE web interface by using the URL “http://ip-address” in an Internet browser window (Chrome and Firefox supported), where “ip-address” is a valid IP address of the PoLRE switch. The default IP address of the PoLRE management port is “192.168.1.1” and the default IP address of the PoLRE GBE ports is “192.168.100.1”. In this example the web interface of the PoLRE switch was accessed by the management port. The **Web Interface Login** screen is displayed as shown below. Log in using the appropriate credentials.



## 7.2. Administer Phybridge PoLRE IP Address

In the subsequent screen, select **ETHERNET** from the options at the top of the screen, then select the **UPLINK PORTS** tab. On this page the IP Address configuration of the PoLRE switch can be changed if required to match a given network. In this sample configuration the default values were used as below.

The screenshot displays the configuration interface for a Phybridge PoLRE Switch - 48 Port. The top navigation bar includes tabs for SYSTEM, ETHERNET, VLAN, and ADMIN, with a help icon. The ETHERNET tab is active, and the UPLINK PORTS sub-tab is selected. The interface is divided into three main sections: Configure GbE Interface, Configure Management Port, and Configure IP Route. Each section contains input fields for IP Address, Net Mask, and Broadcast, along with dropdown menus for GbE1 Medium and GbE2 Medium. The Configure IP Route section includes a Default Gateway field and an Interface dropdown. A SAVE CHANGES button is located at the bottom right. A Caution section at the bottom provides important notes regarding IP address changes, subnet requirements, gateway assignment, and the impact of switching between Copper and Fiber interfaces.

**Configure GbE Interface**

IP Address: 192.168.100.1  
Net Mask: 255.255.255.0  
Broadcast: 192.168.100.255  
GbE1 Medium: Copper  
GbE2 Medium: Copper  
[APPLY](#)

**Configure Management Port**

IP Address: 192.168.1.1  
Net Mask: 255.255.255.0  
Broadcast: 192.168.1.255  
Default PVID: 1001  
[APPLY](#)

**Configure IP Route**

Default Gateway: 192.168.100.254  
Interface: GbE  
[APPLY](#)

[SAVE CHANGES](#)

**Caution !**

- If the IP address is changed, the gateway for that port will be cleared if already assigned (reassign if required) and the new IP address will be required to log back into the box.
- The management port IP address and the uplink port IP address must be not on the same subnet.
- You may have your gateway assigned to only one interface, either the GbE ports or the Management port.
- The Default PVID field for the Management port is 1001 and cannot be changed.
- If you switch the interface between Copper and Fiber, it may take several seconds to regain connectivity.
- If you switch from Fiber to Copper, you will need to restart your switch for the changes to take affect after saving.
- If you do not click **SAVE CHANGES**, some changes you have made on this tab may be lost after a system reboot.

## 8. Verification Steps

This section provides tests that can be performed to verify proper configuration of Communication Manager, Session Manager and PoLRE.

### 8.1. Verify Avaya Aura® Communication Manager

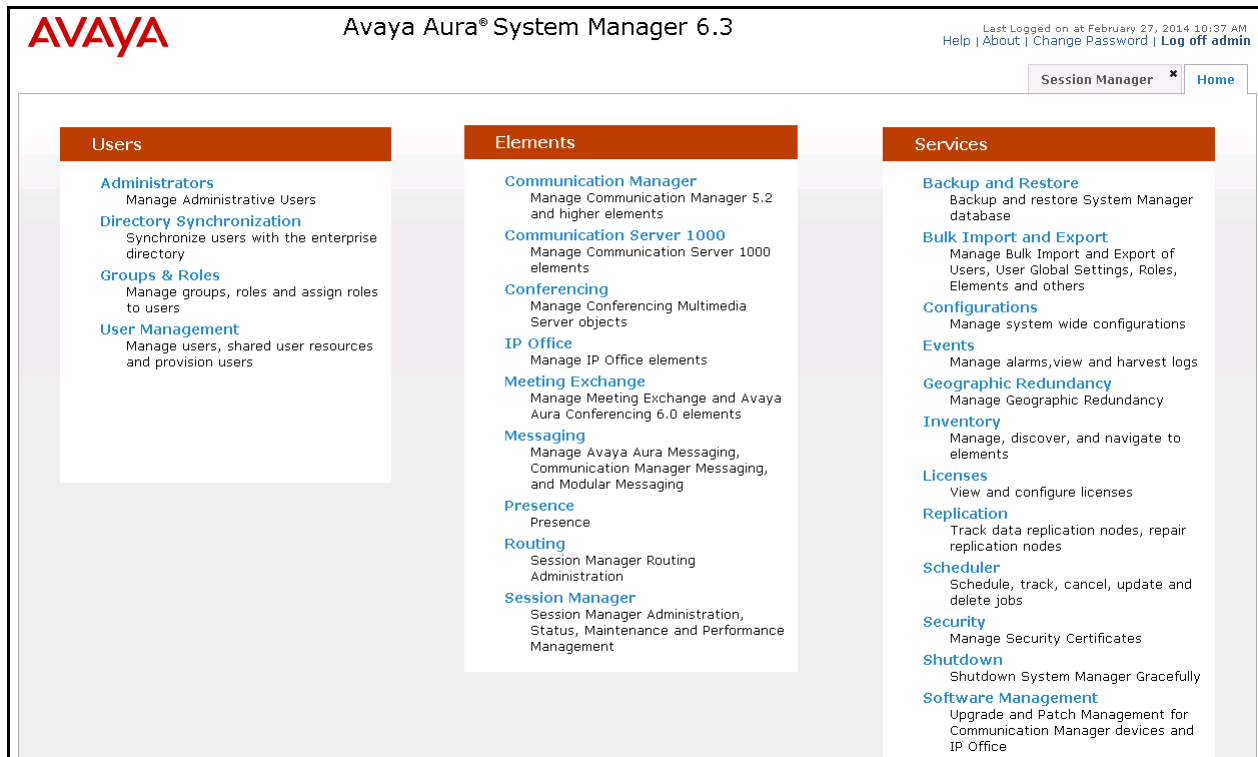
This section verifies the registration of H.323 IP phones on Communication Manager. Use the **list registered-ip-stations** command to verify that all H.323 IP stations connected via the PoLRE registered successfully with Communication Manager, as shown below.

list registered-ip-stations					
REGISTERED IP STATIONS					
Station Ext or Orig Port	Set Type/ Net Rgn	Prod ID/ Release	TCP Skt	Station IP Address/ Gatekeeper IP Address	
53010	4625 1	IP_Phone 3.103S	y	10.33.5.178 192.168.97.201	
53011	4625 1	IP_Phone 6.2313	y	10.33.5.34 192.168.97.201	
53012	4625 1	IP_Phone 6.2313	y	10.33.5.26 192.168.97.201	
53013	9608 1	IP_Phone 6.2313	y	10.33.5.52 192.168.97.201	
53015	4620 1	IP_Phone 2.300	y	10.33.5.12 192.168.97.201	
53016	9620 1	IP_Phone 6.3116	y	192.168.98.50 192.168.97.201	
53044	9640 1	IP_Phone 3.210A	y	10.33.5.53 192.168.97.201	

## 8.2. Verify Avaya Aura® Session Manager

This section verifies the registration of SIP IP phones on Session Manager. Access the browser-based GUI of System Manager, using the URL **http://<FQDN>/SMGR**, where <FQDN> is the fully qualified domain name of System Manager. Log in to System Manager with the appropriate credentials (not shown).

From the main System Manager page click on the **Session Manager** link in the **Elements** column as shown in the following figure.



In the next screen that opens, expand **System Status** from the navigation tree on the left. Now select **User Registrations** under **System Status**. As shown below a search was performed for user 53045@bvwdev.com that was used in this sample configuration. It is shown to be registered by the checkmark in the **Prim** column.

**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 2:46 PM

1 Item Found Refresh Show ALL

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	53045@bvwdev.com	SIP	User	---	192.168.98.51:5060	<input type="checkbox"/>	<input type="checkbox"/>	1/1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(AC)

Select : All, None

### 8.3. Verify Phybridge PoLRE

From the PoLRE web interface, select **SYSTEM** from the options at the top of the screen, then select the **OVERVIEW** tab. The **System Overview** screen is displayed. Verify in the **Ethernet Port Status** section of the page that all **DOWNLINK** ports are up that have physically connected IP Phones, as shown below for ports 1, 5, 9 and 13.

**Phybridge PoLRE Switch - 48 Port**

SYSTEM ETHERNET VLAN ADMIN

OVERVIEW PERFORMANCE NETWORK STATS

**System Overview**

Model	PoLRE Switch - 48 Port	Host Name	PoLRE
Product Number	PL-048	IP Address	192.168.100.1
Serial Number	2156370040	MAC Address	00:24:63:02:1C:F7
Up Time	0 Days, 4H:40M:28S	Subnet Mask	255.255.255.0
Current Time	Mon Jan 27 2014 10:16:01 AM	Default Gateway	192.168.100.254
CPU Load	0.56	IP Address (mgmt)	192.168.1.1
Memory	Used: 19.522MB Free: 35.426MB	PSE Voltage	54 Volts
Temperature	50 C	PSE Power	Used: 32.340W Free: 485.410W
Contact	http://www.phybridge.com/support/polre/ Tel: 1-888-901-3633 Mon-Fri 8am-6pm ET		

**Ethernet Port Status**

UPLINK DOWNLINK (4 PORTS UP)

F1 G1 M	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
F2 G2	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

## 9. Conclusion

These Application Notes describe the configuration steps required for Phybridge PoLRE to interoperate with Avaya IP telephones (H.323) registered to Avaya Aura® Communication Manager and Avaya IP telephones (SIP) registered to Avaya Aura® Session Manager. All feature and serviceability test cases were completed and passed as per **Section 2** with observations explained in **Section 2.2**.

## 10. Additional References

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

Documentation for Avaya products may be found at <http://support.avaya.com>.

### Avaya Aura® Communication Manager

[1] *Administering Avaya Aura® Communication Manager*, Release 6.3, Document Number 03-300509, Issue 9, October 2013

[2] *Avaya Aura® Communication Manager Feature Description and Implementation*, Release 6.3, Document Number 555-245-205, Issue 11, October 2013

Documentation for Phybridge products may be found at <http://phybridge.com>.

### Phybridge PoLRE Switch

[3] *Phybridge PoLRE Switch and Phylink Adapter Hardware Installation Guide*, Document No. 8005.01.05, Issue 5, July 2012

[4] *NON POE devices on a PhyAdater or PhyLink*, document 009-011 TS – 017 Version 002, 27 December 2012

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