



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

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# **Application Notes for Phybridge UniPhyer with Avaya Communication Manager – Issue 0.1**

### **Abstract**

These Application Notes describe the configuration steps required for the Phybridge UniPhyer LAN appliance to interoperate with Avaya Communication Manager. In the compliance testing, the Phybridge UniPhyer leveraged the existing single-pair telephony wiring to provide dedicated Ethernet voice path and Power over Ethernet to Avaya IP Telephones connected to Avaya Communication Manager.

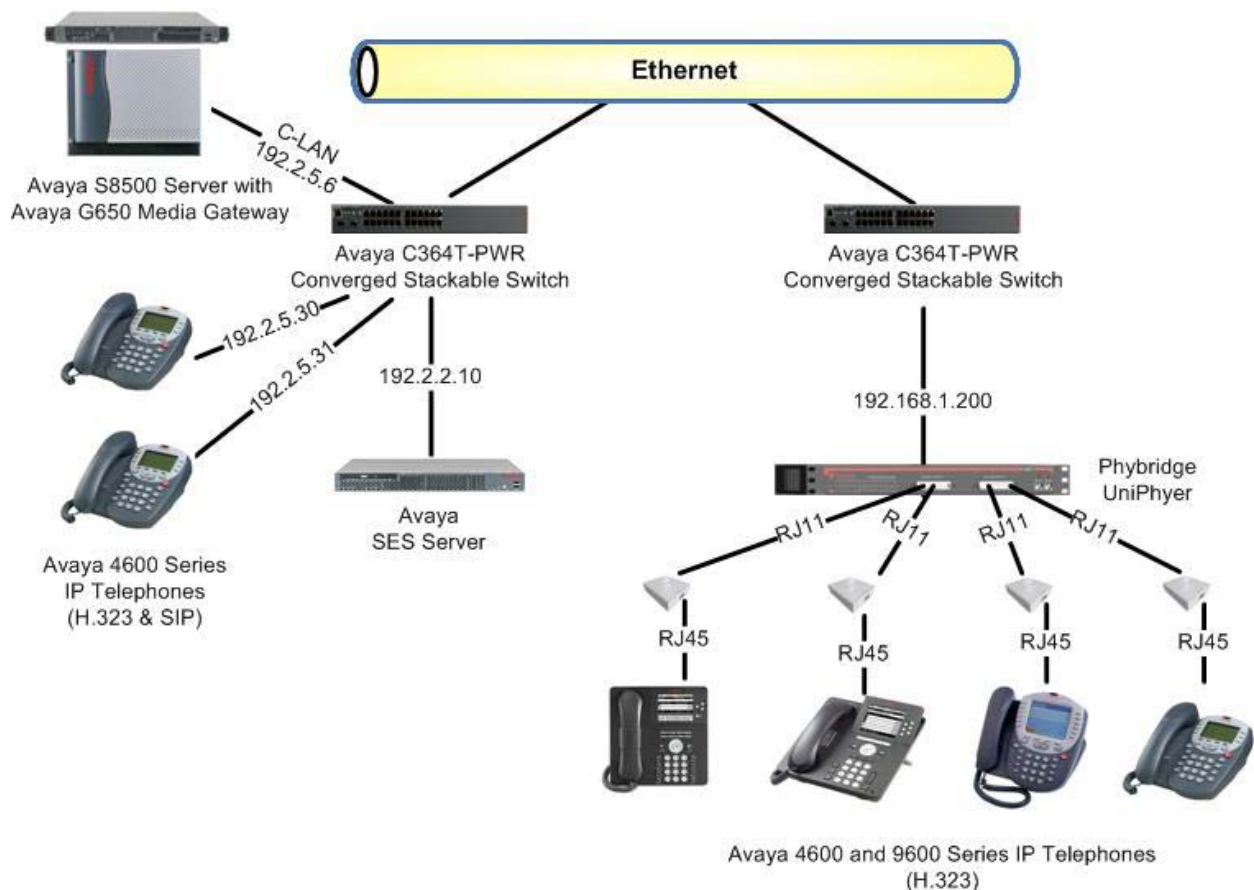
Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

# 1. Introduction

The Phybridge UniPhyer is a LAN appliance that leverages the existing single-pair telephony wiring to provide dedicated Ethernet voice path and Power over Ethernet to Avaya IP Telephones.

In the test configuration shown in **Figure 1**, four analog and digital telephones on Avaya Communication Manager were replaced with Avaya IP Telephones by leveraging the existing RJ11 cabling. For each station user, one end of the RJ11 cable was changed to connect to the Phybridge UniPhyer instead of the Analog or Digital Line circuit pack on Avaya Communication Manager, and the other end of the RJ11 cable was connected to a Phybridge Adapter. For each Phybridge Adapter, there was a RJ45 cable connection to an Avaya IP Telephone.

The Phybridge UniPhyer provided power to the connected Avaya IP Telephones, and acted as a straight pass through and transparent to these Avaya IP Telephones in terms of the telephones' network settings.



**Figure 1: Phybridge UniPhyer with Avaya Communication Manager**

## 2. Equipment and Software Validated

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

Equipment	Software
Avaya S8500 Server	Avaya Communication Manager 5.0, R015x.00.0.825.4
Avaya G650 Media Gateway • TN799DP C-LAN	HW01 FW024
Avaya 4600 Series IP Telephones (H.323)	2.9
Avaya 4600 Series IP Telephones (SIP)	2.2.2
Avaya 9600 Series IP Telephones (H.323)	2.0
Phybridge UniPhyer	0.77B03
Phybridge Adapters	xxx

### 3. Configure Avaya Communication Manager

This section provides the procedures for configuring Avaya Communication Manager. The procedures fall into the following areas:

- Pre-configuration
- Modify stations

#### 3.1. Pre-Configuration

Prior to the start of test, two analog and two digital stations were connected to Avaya Communication Manager, as shown below.

```
list station 61001 count 4
```

STATIONS									
Ext/ Hunt-to	Port/ Type	Name/ Surv GK NN		Move	Room/ Data Ext	Cv1/ Cv2	COR/ COS	Cable/ Jack	
61001	01A0901 2500	Phybridge User #1		no			1	1	
61002	01A0904 2500	Phybridge User #2		no			1	1	
61003	01A0801 6408D+	Phybridge User #3		no			1	1	
61004	01A0804 6408D+	Phybridge User #4		no			1	1	

### 3.2. Modify Stations

After installation of the Phybridge UniPhyer, each analog and digital telephone set was replaced with an Avaya IP Telephone, and the RJ11 cables were reconnected as described in **Section 1**. This section modifies the station type for each user to match the new Avaya IP Telephone, and allows the users to retain the same extension numbers.

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 “4620”, and the **Port** field will be populated automatically. Enter a desired **Security Code**.

```
change station 61001                                     Page 1 of 5
                                                    STATION
Extension: 61001                                         Lock Messages? n          BCC: 0
  Type: 4620                                           Security Code: 61001    TN: 1
  Port: IP                                             Coverage Path 1:         COR: 1
  Name: Phybridge User #1                               Coverage Path 2:         COS: 1
                                                    Hunt-to Station:
STATION OPTIONS
  Loss Group: 19                                         Time of Day Lock Table:
  Speakerphone: 2-way                                    Personalized Ringing Pattern: 1
  Display Language: english                             Message Lamp Ext: 61001
  Survivable GK Node Name:                               Mute Button Enabled? y
  Survivable COR: internal                               Expansion Module? n
  Survivable Trunk Dest? y                              Media Complex Ext:
  IP SoftPhone? n
  Customizable Labels? Y
```

Repeat this section to modify the station type for all applicable analog and digital stations. In the compliance testing, two analog and two digital stations were changed over to IP.

```
list station 61001 count 4
                                                    STATIONS
Ext/      Port/   Name/      Room/      Cv1/  COR/  Cable/
Hunt-to   Type    Surv GK NN  Move      Data Ext  Cv2  COS  Jack
61001     S00169  Phybridge User #1      no          1
         4620
61002     S00165  Phybridge User #2      no          1
         4610
61003     S00167  Phybridge User #3      no          1
         9620
61004     S00168  Phybridge User #4      no          1
         9630
```

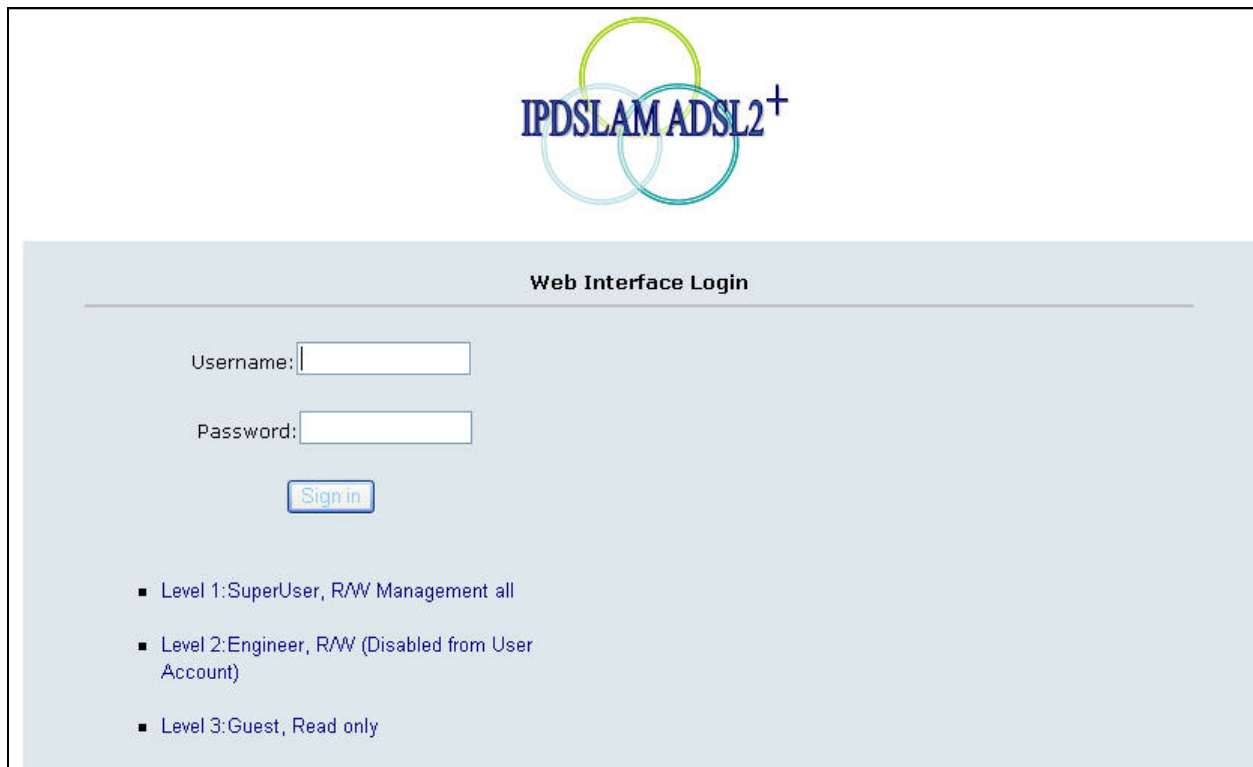
## 4. Configure Phybridge UniPhyer

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

- Launch web interface
- Administer board IP

### 4.1. Launch Web Interface

Access the Phybridge UniPhyer web interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Phybridge UniPhyer. Note that the default IP address of the Phybridge UniPhyer management port is “192.168.1.1”. The **Web Interface Login** screen is displayed as shown below. Log in using the appropriate credentials.



IPDSLAM ADSL2<sup>+</sup>

Web Interface Login

Username:

Password:

Sign in

- Level 1: SuperUser, R/W Management all
- Level 2: Engineer, R/W (Disabled from User Account)
- Level 3: Guest, Read only

## 4.2. Administer Board IP

In the subsequent screen, select **System > Board IP Setup** to display the **Board IP Setup** screen. Modify the **IP Address** and **Subnet Mask** fields under the **GBE (In Band)** and **MGMT (Out Band)** sections to match the network configuration. Click **Modify**, followed by **RESTART**.

Note that the **MGMT (Out Band)** configuration is optional, and needs to be on a different subnet from the **GBE (In Band)** if used.

The screenshot shows the 'Board IP Setup' configuration page. On the left is a navigation menu with 'System' and 'Bridge' sections. The main content area is titled 'Board IP Setup' and contains the following configuration fields:

- Modify** and **RESTART** buttons.
- Address Management** section with two columns: **GBE (In Band)** and **MGMT (Out Band)**.
- IP Address** fields: 192.168.1.200 for GBE and 192.168.3.1 for MGMT.
- Subnet Mask** fields: 255.255.255.0 for GBE and 255.255.255.224 for MGMT.
- I/O Limit VID** checkbox (checked).
- DHCP Client** dropdown menu (set to 'Disable DHCP Client').
- Limit VID** text input field.
- DHCP Timeout** text input field (set to 60).
- Priority** dropdown menu (set to 0).
- DHCP Lease** text input field (set to 4294967295).
- HTTP Port** table with columns: HTTP Port, MGMT Speed, Remote IP, System Name.

HTTP Port	MGMT Speed	Remote IP	System Name
80	Auto Negotiate	192.168.1.10	Uniphyer-01

[ System Inventory ]

**Modify the configuration may cause the connection loss**

## **5. Interoperability Compliance Testing**

The interoperability compliance test included feature and serviceability testing.

The feature testing included firmware downloads, registration, audio codec, media shuffling, basic call, hold/reconnect, conference, transfer, display, call forwarding, DTMF, button activation/deactivation, feature access codes activation/deactivation, and message waiting lamp scenarios.

The serviceability testing focused on verifying the ability of Phybridge UniPhyer to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cables to the Phybridge UniPhyer and to the Avaya IP Telephones.

### **5.1. General Test Approach**

All tests were performed manually. The focus was on verifying the Avaya IP Telephones connected via the Phybridge UniPhyer can function seamlessly.

### **5.2. Test Results**

All tests were executed and passed. The one observation noted from the compliance test is that the Avaya IP Telephones connected to the Phybridge UniPhyer must use the HTTP method for firmware downloads.

## 6. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager and the Phybridge UniPhyer.

### 6.1. Verify Avaya Communication Manager

Use the “list registered-ip-stations” command to verify that the IP stations connected via the Phybridge UniPhyer from **Section 3.1** successfully registered with Avaya Communication Manager, as shown below.

```
list registered-ip-stations
```

REGISTERED IP STATIONS							
Station Ext/ Orig Port	Set Type	Product ID	Prod Rel	Station IP Address	Net Rgn	Gatekeeper IP Address	TCP Skt
61001	4620	IP_Phone	2.9000	192.168.1.123	1	192.2.5.6	y
61002	4610	IP_Phone	2.9000	192.168.1.102	1	192.2.5.6	y
61003	9620	IP_Phone	2.0000	192.168.1.103	1	192.2.5.6	y
61004	9630	IP_Phone	2.0000	192.168.1.104	1	192.2.5.6	y

### 6.2. Verify Phybridge UniPhyer

From the Phybridge UniPhyer web interface, select **System > ADSL Port Services**. The **Port Activity View** screen is displayed. Verify that all physically connected voice ports are in the **ON** state, as shown below.

The screenshot shows the 'ADSL Port Service' configuration page in the Phybridge UniPhyer web interface. The page title is 'UMAP2110 IPDSLAM ADSL?'. The left navigation menu is expanded to 'System', showing options like 'System Info', 'Board IP Setup', 'Ethernet Port Service', 'ADSL Port Service', 'CLI Setup', 'Cluster Setup', 'System Inventory', 'System Contact Info', 'SNTP', 'IP Routes', 'User Administration', and 'Duplicator'. The main content area shows the 'ADSL Port Service' configuration. At the top, there are fields for 'Admin' (ON), 'Service Profile' (2), 'Spectrum Profile' (2), and 'TCA Profile' (2), along with an 'All' checkbox and a 'Modify' button. Below these fields, there are three lines of text: 'The Service Profile range from 1 to 120', 'The Spectrum Profile range from 1 to 120', and 'The TCA Profile range from 1 to 64'. A dropdown menu for 'Port' is set to 'Port 01~12', and a 'Query' button is present. The main table has 7 columns: 'Select', 'Port', 'Admin Status', 'Current Status', 'Service Profile', 'Spectrum Profile', and 'TCA Profile'. The table contains 12 rows, each representing a port. The 'Admin Status' for all ports is 'ON', and the 'Current Status' for all ports is 'ON'. The 'Service Profile', 'Spectrum Profile', and 'TCA Profile' values are all '2'. At the bottom of the table, there is a footer with the text '[ SERVICE PROFILE | SPECTRUM PROFILE | TCA PROFILE ]'.

Select	Port	Admin Status	Current Status	Service Profile	Spectrum Profile	TCA Profile
<input checked="" type="radio"/>	1	ON	ON	2	2	2
<input type="radio"/>	2	ON	OFF	2	2	2
<input type="radio"/>	3	ON	ON	2	2	2
<input type="radio"/>	4	ON	ON	2	2	2
<input type="radio"/>	5	ON	ON	2	2	2
<input type="radio"/>	6	ON	OFF	2	2	2
<input type="radio"/>	7	ON	OFF	2	2	2
<input type="radio"/>	8	ON	OFF	2	2	2
<input type="radio"/>	9	ON	OFF	2	2	2
<input type="radio"/>	10	ON	OFF	2	2	2
<input type="radio"/>	11	ON	OFF	2	2	2
<input type="radio"/>	12	ON	OFF	2	2	2

## 7. Support

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

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

## 8. Conclusion

These Application Notes describe the configuration steps required for the Phybridge UniPhyer to interoperate with Avaya Communication Manager via Avaya IP Telephones. All feature and serviceability test cases were completed successfully.

## 9. Additional References

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

- *Administrator Guide for Avaya Communication Manager*, Document 03-300509, Issue 4.0, Release 5.0, January 2008, available at <http://support.avaya.com>.
- *Avaya DevConnect Partner Solutions Guide*, available xxx.
- *UniPher Installation Manual*, available xxx.

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