



Avaya Solution & Interoperability Test Lab

Application Notes for IPC UnigyV2 with Avaya Modular Messaging 5.2 and Avaya Aura® Communication Manager 5.2.1 in a Centralized Messaging Environment using QSIG Trunks – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for IPC UnigyV2 to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Communication Manager 5.2.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® 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

These Application Notes describe the configuration steps required for IPC UnigyV2 to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Communication Manager 5.2.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® Communication Manager.

IPC UnigyV2 is a trading communication solution. In the compliance testing, IPC UnigyV2 used E1 QSIG trunks to Avaya Aura® Communication Manager, for IPC turret users to obtain voice messaging services from Avaya Modular Messaging. E1 QSIG trunks were used from IPC UnigyV2 to Avaya Aura® Communication Manager, and T1 QSIG trunks were used from Avaya Aura® Communication Manager to reach Avaya Modular Messaging. The Avaya Modular Messaging system in the Central site supported local subscribers from Avaya Aura® Communication Manager at the Central site, and from IPC turret users at the Remote site.

2. General Test Approach and Test Results

The feature test cases were performed manually. Calls were manually established among IPC turret users with Avaya SIP, Avaya H.323, PSTN users, and/or the Avaya Modular Messaging voicemail pilot to verify various call scenarios. The Avaya Modular Messaging Web Subscriber Options web-based interface was used to configure subscriber features such as Call Me.

The serviceability test cases were performed manually by disconnecting and reconnecting the E1 connection to IPC UnigyV2.

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 feature and serviceability testing.

The feature testing included subscriber login, greeting, voice message, message waiting indicator, call forward, multiple call forward, personal operator, auto attendant, find me, call me, call sender, and transfer.

The serviceability testing focused on verifying the ability of IPC UnigyV2 to recover from adverse conditions, such as disconnecting/reconnecting the E1 connection to IPC UnigyV2.

2.2. Test Results

All test cases were executed. The following were the observations on IPC UnigyV2 from the compliance testing.

- IPC does not offer the Coverage feature, therefore coverage to voicemail for the turret users was accomplished at the turret, by setting the Modular Messaging pilot number as the Call Forwarding destination for the users.
- For all multiple call forward scenarios involving calls forwarded to the called party's forward-to extension and then covered subsequently to Modular Messaging based on the coverage setting at the forward-to extension, the greeting for the forward-to party will be played instead of the original called party due to the called number not being passed by IPC for diverted calls.

2.3. Support

Technical support on IPC UnigyV2 can be obtained through the following:

- **Phone:** (800) NEEDIPC, (203) 339-7800
- **Email:** systems.support@ipc.com

3. Reference Configuration

As shown in the test configuration below, IPC UnigyV2 at the Remote Site consisted of the Media Manager/Converged Communication Manager, Media Gateway, and Turrets. E1 QSIG trunks were used from IPC UnigyV2 to Communication Manager, and T1 QSIG trunks were used from Communication Manager to Avaya Modular Messaging. In the test configuration, QSIG allowed IPC turret users at the Remote Site to “cover” to Avaya Modular Messaging at the Central site for voice messaging services.

The detailed administration of E1 QSIG trunks between Communication Manager and IPC UnigyV2, to enable IPC turret users to reach users on Communication Manager and on the PSTN, is assumed to be in place with details described in [4].

An Avaya SIP Enablement Services was included during the compliance test only to provide SIP endpoints.

These Application Notes will focus on the additional configuration required to support IPC turret users as local subscribers on Avaya Modular Messaging.

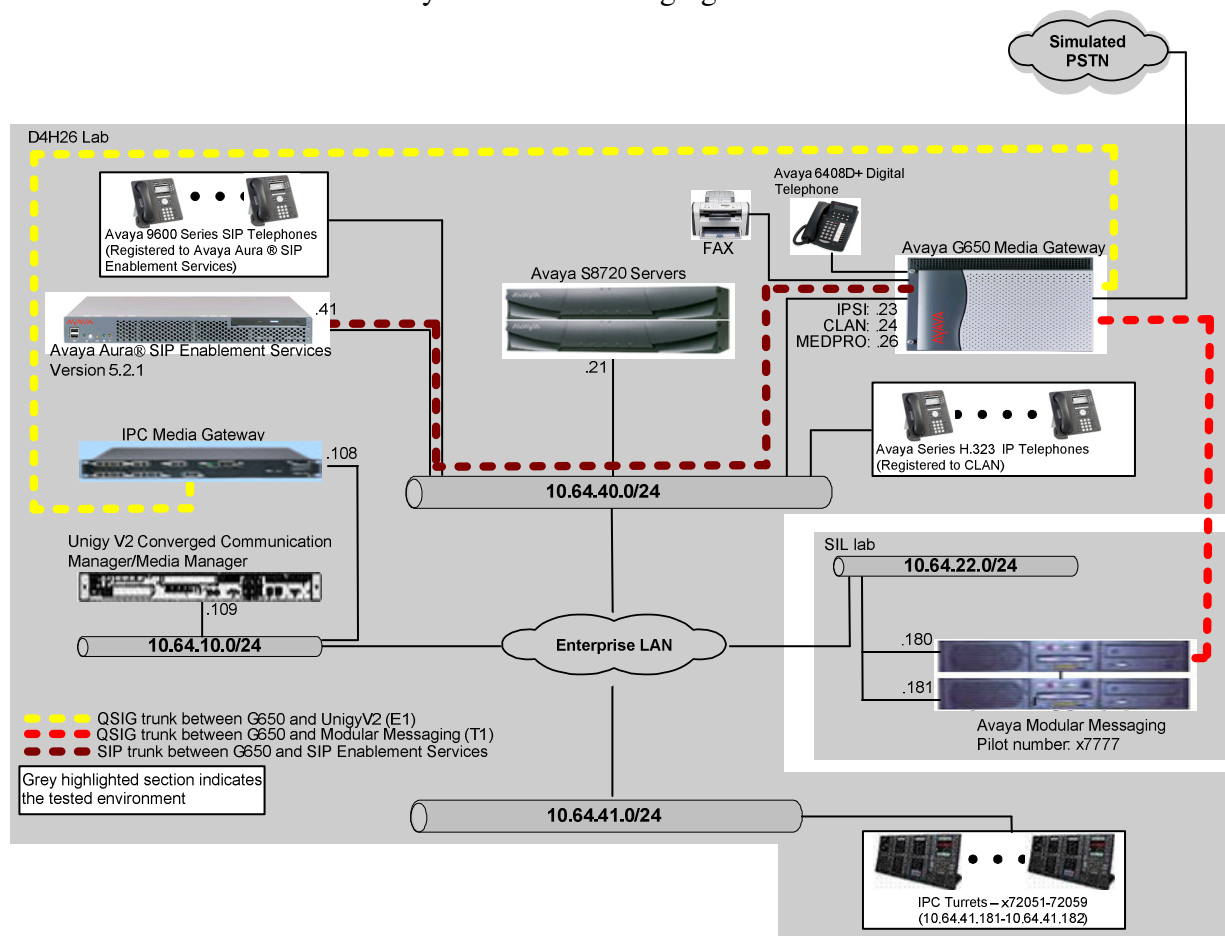


Figure 1: Test Configuration of IPC UnigyV2

4. Equipment and Software Validated

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

Equipment	Software
Avaya Modular Messaging <ul style="list-style-type: none">Messaging Storage ServerMessaging Application Server	5.2 SP9 P4 5.2 SP9 P4
Avaya Aura® Communication Manager on Avaya S8720 Servers	5.2.1 (R015x.02.1.016.4-19880)
Avaya G450 Media Gateway <ul style="list-style-type: none">TN464HP DS1 Interface	HW02 FW024
Avaya SIP Enablement Services	5.2.1 SP4 (SES-5.2.1.0-016.4-SP4C)
Avaya 96xx IP Telephone (H.323)	3.1
Avaya 96xx IP Telephone (SIP)	2.6.8
Avaya 6408D Digital Telephone	NA
IPC UnigyV2 <ul style="list-style-type: none">Media Manager on Dell R610Converged Communication ManagerMedia GatewayTurrets	02.00.00.00.1495 02.00.00.00.1495 6.40A.042.004 02.00.00.00.1495

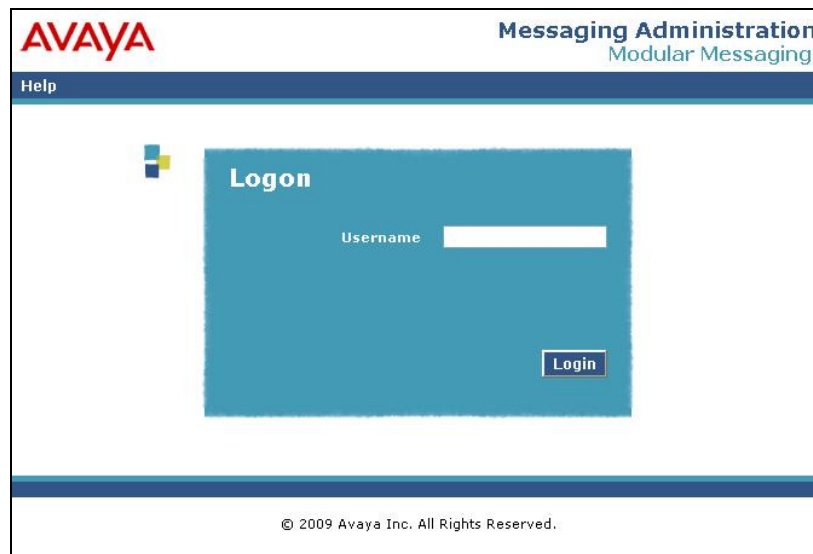
5. Configure Avaya Modular Messaging MSS

This section provides the procedures for configuring IPC turret users as local subscribers on Avaya Modular Messaging. The subscriber management is configured on the Messaging Storage Server (MSS) component. The configuration procedures include the following areas:

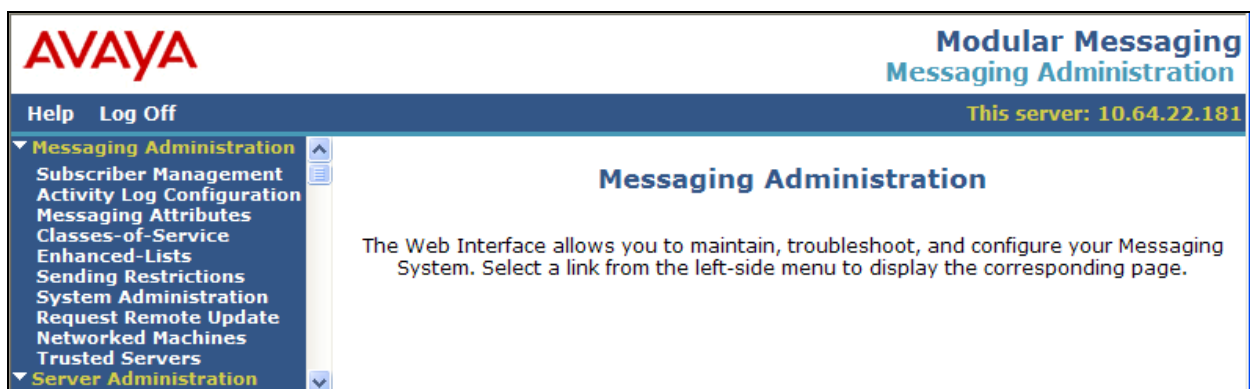
- Launch messaging administration
- Administer subscriber extension ranges
- Administer subscribers

5.1. Launch Messaging Administration

Access the MSS web interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the MSS server. The **Logon** screen is displayed. Log in using a valid user name and password. The **Password** field will appear after a value is entered into the **Username** field.



The **Messaging Administration** screen appears, as shown below.



5.2. Administer Subscriber Extension Ranges

Select **Messaging Administration** → **Networked Machines** from the left pane, to display the **Manage Networked Machines** screen on the right pane. Select the MSS server from the table listing, and click **Edit the Selected Networked Machine** toward the bottom right of the screen.

AVAYA Modular Messaging
Messaging Administration

Help Log Off This server: 10.64.22.181

▼ Messaging Administration

- Subscriber Management
- Activity Log Configuration
- Messaging Attributes
- Classes-of-Service
- Enhanced-Lists
- Sending Restrictions
- System Administration
- Request Remote Update
- Networked Machines**
- Trusted Servers

▼ Server Administration

- Configure Using DCT
- TCP/IP Network Configuration
- External Hosts
- MAS Host Setup
- MAS Host Send
- Windows Domain Setup
- Console Reboot Option
- Date/Time/NTP Server
- Syslog Server
- Modem/Terminal Display
- Modem/Terminal Configuration
- Modem/Terminal Removal
- TCP/IP Service Settings

▼ IMAP/SMTP Administration

- SMTP Options
- Mail Options
- IMAP/SMTP Status

▼ Server Information

- Server Status
- Alarm Summary
- Disk Information
- Server Notes
- CMOS Settings
- RAID Status
- Rebuild RAID Status

Manage Networked Machines

Machine	IP Address	Machine Type	Total Subs
alpinemss1	10.64.22.181	local	18

Display Report of Networked Machines Delete the Selected Networked Machine

Add a New Networked Machine **Edit the Selected Networked Machine**

Display Network Snapshot Display Report of Networked Machine Ranges

Help

The **Edit Networked Machine** screen is displayed. Under the **MAILBOX NUMBER RANGES** section, locate an available entry line and enter the desired starting and ending mailbox numbers to be used for the IPC subscribers as necessary.

AVAYA Modular Messaging
Messaging Administration
This server: 10.64.22.181

Help Log Off

▼ Messaging Administration
 Subscriber Management
 Activity Log Configuration
 Messaging Attributes
 Classes-of-Service
 Enhanced-Lists
 Sending Restrictions
 System Administration
 Request Remote Update
 Networked Machines
 Trusted Servers

▼ Server Administration
 Configure Using DCT
 TCP/IP Network Configuration
 External Hosts
 MAS Host Setup
 MAS Host Send
 Windows Domain Setup
 Console Reboot Option
 Date/Time/NTP Server
 Syslog Server
 Modem/Terminal Display
 Modem/Terminal Configuration
 Modem/Terminal Removal
 TCP/IP Service Settings

▼ IMAP/SMTP Administration
 SMTP Options
 Mail Options
 IMAP/SMTP Status

▼ Server Information
 Server Status
 Alarm Summary
 Disk Information
 Server Notes
 CMOS Settings
 RAID Status
 Rebuild RAID Status
 Reboot Interval

Edit Networked Machine

<u>Machine Name</u>	alpinemss1	<u>Password</u>	
		<u>Confirm Password</u>	
<u>IP Address</u>	10.64.22.181	<u>Machine Type</u>	tcpip
<u>Mailbox Number Length</u>	5	<u>Default Community</u>	1
<u>Updates In</u>	yes	<u>Updates Out</u>	yes
<u>LDAP Port</u>	56389	<u>Log Updates In</u>	no

MAILBOX NUMBER RANGES		
<u>Prefix</u>	<u>Starting Mailbox Number</u>	<u>Ending Mailbox Number</u>
	00000	99999

5.3. Administer Subscribers

Select **Messaging Administration** → **Subscriber Management** from the left pane, to display the **Manage Subscribers** screen. For the **Local Subscriber Mailbox Number** field toward the top of the screen, enter the first IPC turret user extension to add as a local subscriber, in this case “72051”. Click **Add or Edit**.

The screenshot shows the Avaya Modular Messaging Messaging Administration web interface. The left sidebar contains a navigation menu with categories like Messaging Administration, Server Administration, and IMAP/SMTP Administration. The main content area is titled "Manage Subscribers". At the top of this area, there is a form for "Local Subscriber Mailbox Number" with the value "72051" entered and an "Add or Edit" button. Below this, there is a table with columns: Machine Name, Local Subscriber Mailboxes, Total Subscribers, and Filtered Subscribers. The table lists two categories: Local Subscribers and Remote Subscribers. The Local Subscribers row shows "alpinemss1" as the machine name, 17 local subscribers, 18 total subscribers, and 18 filtered subscribers. The Remote Subscribers row shows "internet" as the machine name, 0 local subscribers, 0 total subscribers, and 0 filtered subscribers. Each row has a "Filter" button and a "Manage" button. A "Help" button is located at the bottom left of the main content area.

	<u>Machine Name</u>	<u>Local Subscriber Mailboxes</u>	<u>Total Subscribers</u>	<u>Filtered Subscribers</u>
• Local Subscribers	alpinemss1	17	18	18
• Remote Subscribers	internet		0	0

The **Add Local Subscriber** screen is displayed next. Enter the desired string into the **Last Name**, **First Name**, and **Password** fields.

In the compliance testing, the same telephone extensions for the IPC subscribers were used for the **Mailbox Number**, **Numeric Address**, and **PBX Extension** fields. Select the appropriate **Class Of Service**, and retain the default values in the remaining fields.

Scroll down to the bottom of the screen and click **Save** (not shown).

Repeat this section to add all IP Trade subscribers.

The screenshot displays the Avaya Modular Messaging Administration web interface. The top header includes the Avaya logo, the title 'Modular Messaging Administration', and the server IP '10.64.22.181'. A left-hand navigation menu lists various configuration options under 'Messaging Administration' and 'Server Administration'. The main content area is titled 'Add Local Subscriber' and contains a 'BASIC INFORMATION' section with a list of required fields. The fields are arranged in a two-column grid:

BASIC INFORMATION * (Required Fields)	
*Last Name	Unigy-V2
First Name	72051
*Password	*****
*Mailbox Number	72051
*Numeric Address	72051
PBX Extension	
*Class Of Service	0 - class00
*Community ID	1

6. Configure IPC Converged Communication Manager

This section provides the procedures for configuring IPC Media Manager. The procedures include the following areas:

- Launch Unigy Management System
- Administer dial patterns
- Administer route plans
- Administer voicemail buttons

The configuration of Media Manager is typically performed by IPC installation technicians. The procedural steps are presented in these Application Notes for informational purposes.

6.1. Launch Unigy Management System

Access the Unigy Management System web interface by using the URL “http://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Media Manager. Log in using the appropriate credentials.

The screen below is displayed. Enter the appropriate credentials. Check **I agree with the Terms of Use**, and click **Login**.

In the subsequent screen (not shown), click **Continue**.



The screenshot shows the login interface for the IPC Unigy Management System. It features the IPC logo on the left. To the right of the logo are two input fields: 'User Name:' and 'Password:'. Below these fields is a checkbox labeled 'I agree with the' followed by a link to 'Terms of Use'. A 'Login' button is positioned to the right of the checkbox. At the bottom of the form, the following text is displayed: 'IPC Unigy™ Management System', 'Unigy™ Version 02.00.00.1495', and '© Copyright 2012 IPC Systems, Inc.'

6.2. Administer Dial Patterns

In the subsequent screen, select **Configuration → Site Configuration** from the top menu. The **Site Configuration** information is displayed in the left pane.

Select **Routing → Dial Patterns** in the left pane, to display the **Dial Patterns** screen in the right pane. Click **Add New**.

In the **Dial pattern Details** sub-section in the lower right pane, enter the desired **Name** and **Description**. For **Pattern String**, enter the dial pattern to match for Avaya endpoints, in this case “*” meaning any digits will be sent to Communication Manager via IPC Media Gateway. For **Zone**, select “Default Zone 1”. Click **Save** (not shown).

The screenshot displays the UniQy Configuration web interface. The top navigation bar includes 'Configuration', 'System Designer', 'Tools', 'About', and 'Help'. The main header shows 'Configuration → Sites' and 'Powered by UniQy'. On the left, a sidebar menu lists various configuration categories, with 'Routing' expanded and 'Dial Patterns' selected. The main content area is divided into two sections: 'Dial Patterns' and 'Dial pattern Details'. The 'Dial Patterns' section contains a table with columns for Name, Pattern String, Description, and Zone Name, and an 'Add New' button. The 'Dial pattern Details' section shows the 'Properties' tab with input fields for Name, Zone, Description, and Pattern String, each marked with a red asterisk to indicate required fields. The values entered are 'all' for Name, 'Default Zone 1' for Zone, 'all' for Description, and '*' for Pattern String.

Name	Pattern String	Description	Zone Name

Dial pattern Details

Properties

Name * all

Zone * Default Zone 1

Description * all

Pattern String * *

6.3. Administer Route Plans

Select **Routing** → **Route Plans** in the left pane, and click **Add New** (not shown) in the right pane to create a new route plan for each new dial pattern from **Section 6.2**.

The screen is updated with three panes, as shown below. In the **Route Plan** middle pane, enter a descriptive **UI Name** and optional **Description**. For **Calling Party**, enter “*” to denote any calling party from UnigyV2. For **Destination**, enter “*” to denote any called party from UnigyV2. Select “Forward” for **Action**. Select “Default Instance” for **Instance**, and click **Save** (not shown).

The screenshot shows the Unigy Configuration interface. The left pane has a tree view with 'Route Plans' selected. The middle pane is titled 'Route Plan' and contains a 'Create New Route Plan' form. The form fields are: UI Name (All-QSIG), Description (All calls QSIG trunk), Calling Party (*), Destination (*), Action (Forward), and Instance (Default Instance). The right pane is titled 'Available to Assign' and shows a list of route lists: TDM Recording_DoNotChange, RL_MG, RL_SI, RL_IP Office, and RL_SES.

The screen is updated with the newly created route plan. Select the route plan, and click **Edit** toward the bottom of the screen (not shown).

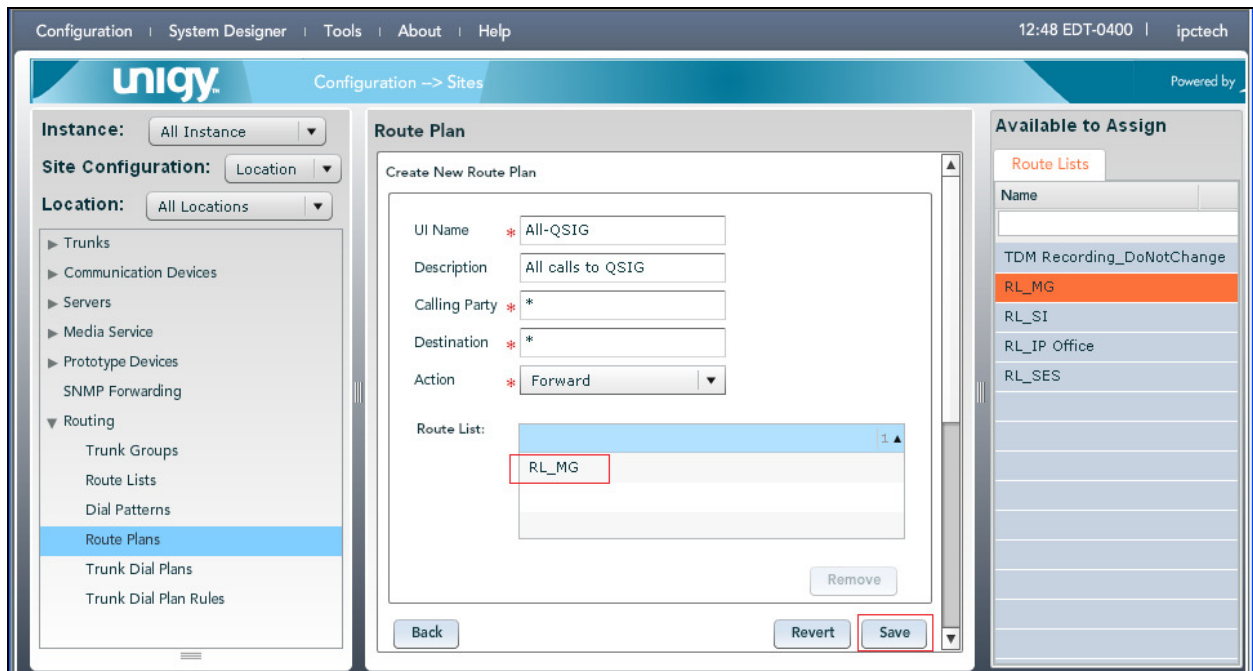
The screenshot shows the Unigy Configuration interface. The left pane has a tree view with 'Route Plans' selected. The middle pane is titled 'Route Plan' and contains a 'List of Route Plans' table. The table has columns: UI Name, Calling Party, Destination, Action, and Instance Name. The table contains one row: All-QSIG, *, *, FORWARD, Default Instance. Below the table are buttons: Delete, Add New, Revert, and Save Sequence Change. The right pane is titled 'Route Plan Details' and contains fields: Calling Party (*), Destination (*), Action (FORWARD), and RouteList.

UI Name	Calling Party	Destination	Action	Instance Name
All-QSIG	*	*	FORWARD	Default Instance

The screen is updated with three panes again, as shown below. In the right pane, select the applicable route list and drag into the **Route List** sub-section in the middle pane, as shown below. Click **Save**.

The following screen shows all calls from IPC turrets will be sent to IPC Media Gateway.

Repeat this section as necessary to add a new route plan for each new dial pattern from **Section 6.2**.

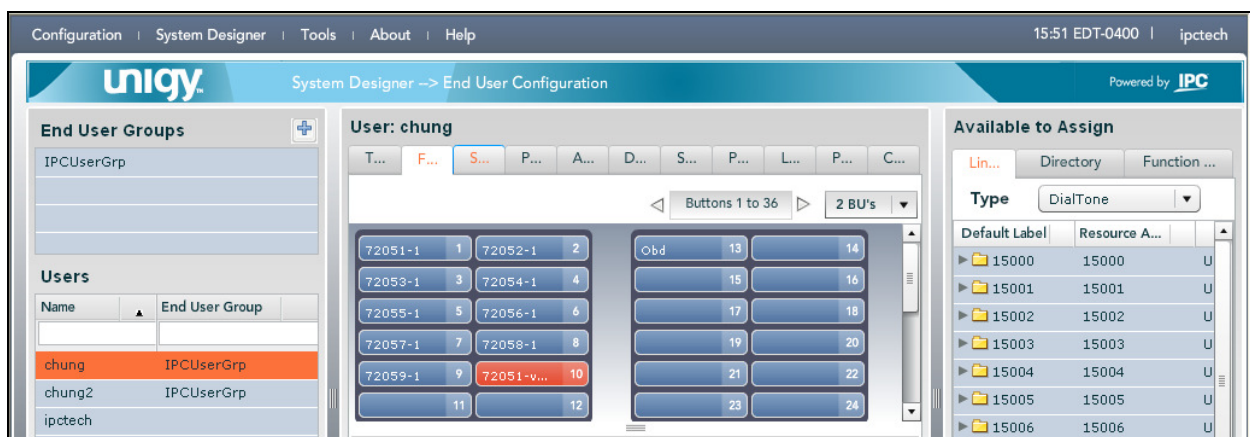


6.4. Administer Voicemail Buttons

Select **System Designer** → **End User Configuration** from the top menu, to display the end user information in the left pane. Select the desired user from the left pane, in this case “user9001”.

In the middle pane, select the **Face Layout** tab.

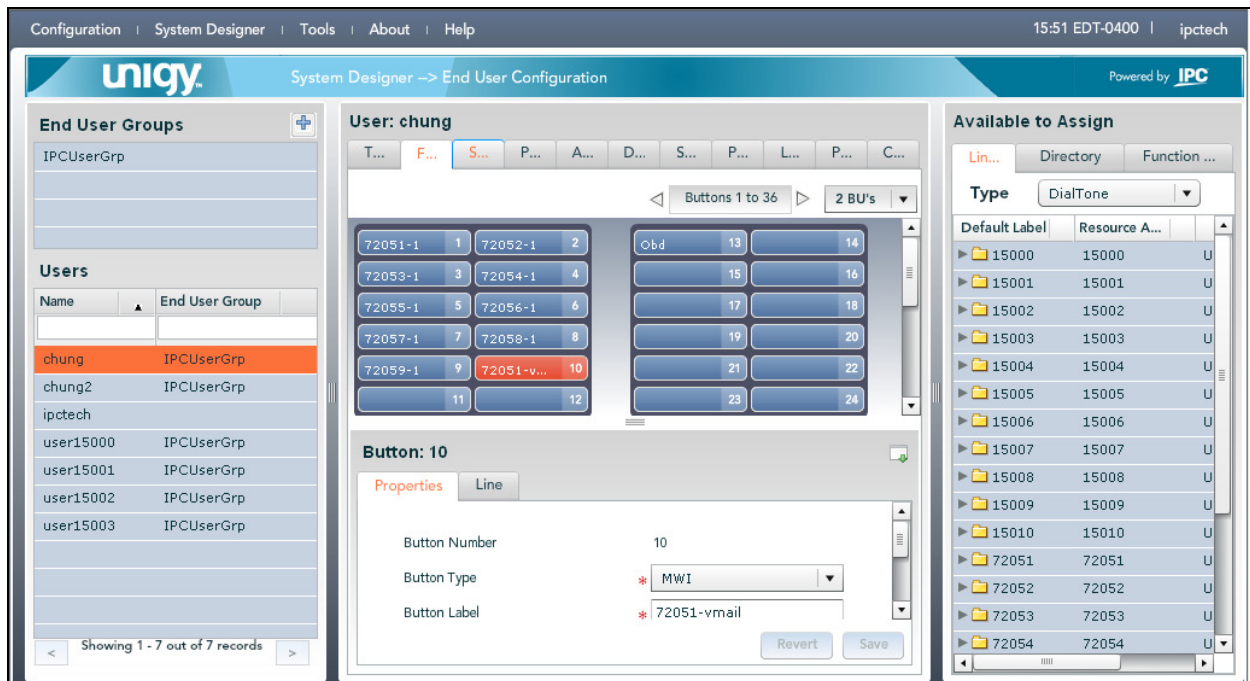
In the right pane, select the **Lines** tab. For **Type**, select “DialTone” from the drop-down list to display a list of available lines. Scroll the pane as necessary to locate and expand the desired turret extension, in this case “72051”. Select the corresponding appearance for the turret extension from the right pane, and drag into an available button in the middle pane, in this case button “10” as shown below.



Select the new button in the upper middle pane, in this case button “13”, to enable the button to be configured in the lower middle pane.

In the lower middle pane, enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Button Type:** “MWI”
- **Button Label:** A descriptive name.
- **NumberToDial:** The Modular Messaging pilot number from **Figure 1** on **Section 3**.



Repeat this section for all desired users. In the compliance testing two voicemail buttons corresponding to turret subscriber extensions of “72051” and “72052” were created for the two turrets users.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Modular Messaging and IPC UnigyV2.

Place a call from an IPC turret user to the Modular Messaging pilot number. Verify that Modular Messaging recognizes the calling party as a local subscriber.

8. Conclusion

These Application Notes describe the configuration steps required for IPC UnigyV2 to successfully interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Communication Manager 5.2.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® Communication Manager. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Document 03-300509, Issue 7.0, Release 6.2, July 2012, available at <http://support.avaya.com>.
2. *CN 88004 Avaya Definity G3, Prologix & S8xx0*, Version AW, May 2012, available at <http://support.avaya.com>.
3. *Avaya Modular Messaging for the Avaya Message Store Server (MSS) Configuration*, Release 5.2, August 2012, available at <http://support.avaya.com>.
4. *Application Notes for IPC Unigy V2 with Avaya Aura® Communication Manager 5.2.1 using QSIG Trunks*, Issue 1.0, available at <http://support.avaya.com>.
5. *Unigy V2 1.1 System Configuration*, Part Number B02200187, Release 00, upon request to IPC Support.

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