Avaya Solution & Interoperability Test Lab

Application Notes for IPC Alliance MX 16.01 with Avaya Modular Messaging 5.2 and Avaya Aura® Session Manager 6.1 in a Centralized Messaging Environment using QSIG Trunks – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for IPC Alliance MX 16.01 to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Session Manager 6.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® Communication Manager 6.0.1.

IPC Alliance MX is a trading communication solution. In the compliance testing, IPC Alliance MX 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 Alliance MX to Avaya Aura® Communication Manager, and SIP trunks were used from Avaya Aura® Communication Manager to Avaya Aura® Session 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.

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 Alliance MX 16.01 to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Session Manager 6.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® Communication Manager 6.0.1.

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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.

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 Alliance MX to recover from adverse conditions, such as disconnecting/reconnecting the E1 connection to IPC Alliance MX.

2.2. Test Results

All test cases were executed and passed. The following were the observations from the compliance testing.

- IPC does not offer the Coverage feature, therefore coverage to voicemail for the turret users were accomplished by setting the Modular Messaging pilot number as the Call Forwarding destination for the users.

- For 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 may be played instead of the original called party. Furthermore, the call may ring at the forward-to party for ~30 seconds along with a zero length voice message at the conclusion of the call. This will be addressed in a future Communication Manager release.

2.3. Support

Technical support on IPC Alliance MX can be obtained through the following:

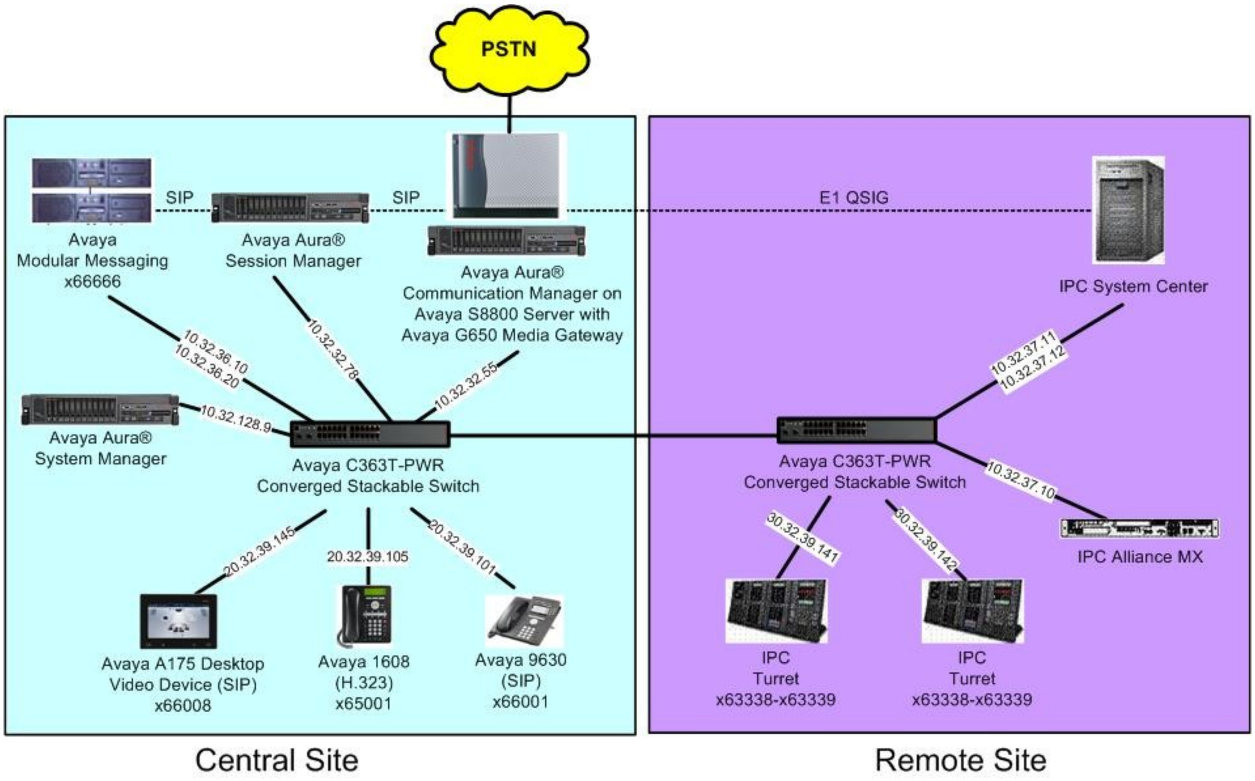
- **Phone:** (800) NEEDIPC, (203) 339-7800
- **Email:** systems.support@ipc.com

3. Reference Configuration

As shown in the test configuration below, IPC Alliance MX at the Remote Site consisted of the Alliance MX, System Center, and Turrets. E1 QSIG trunks were used from IPC Alliance MX to Avaya Aura® Communication Manager, and SIP trunks were used from Avaya Aura® Communication Manager to Avaya Aura® Session Manager to reach 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 configuration of Avaya Aura® Session Manager is performed via the web interface of Avaya Aura® System Manager. The detailed administration of basic connectivity among Avaya Aura® Communication Manager, Avaya Aura® Session Manager, and Avaya Modular Messaging is not the focus of these Application Notes and will not be described. These Application Notes will focus on the additional configuration required to support IPC turret users as local subscribers on Avaya Modular Messaging.

The detailed administration of E1 QSIG trunks between Avaya Aura® Communication Manager and IPC Alliance MX, to enable IPC turret users to reach users on Avaya Aura® Communication Manager and on the PSTN, is assumed to be in place with details described in [4]. A five digit Uniform Dial Plan (UDP) was used to facilitate dialing between the Central and Remote sites. Unique extension ranges were associated with Avaya Aura® Communication Manager users at the Central site (65xxx-66xxx), and IPC turret users at the Remote site (63xxx). The Avaya Modular Messaging pilot number was 66666.



4. Equipment and Software Validated

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

Equipment	Software
Avaya Modular Messaging • Messaging Storage Server • Messaging Application Server	5.2 SP8 5.2 SP8
Avaya Aura® Communication Manager on Avaya S8800 Server	6.0.1 SP2 with special patch 18993 (R016x.00.1.510.1-18993)
Avaya G650 Media Gateway • TN799DP C-LAN Circuit Pack • TN2302AP IP Media Processor • TN464HP DS1 Interface	HW01 FW038 HW20 FW122 HW02 FW024
Avaya Aura® Session Manager	6.1 SP2
Avaya Aura® System Manager	6.1 SP2
Avaya A175 Desktop Video Device (SIP)	1.0.2
Avaya 1608 IP Telephone (H.323)	1.3
Avaya 9630 IP Telephone (SIP)	2.6.4
IPC • Alliance MX • System Center ○ QSIG Line Card • Turrets	16.01.01.04.0005 16.01.01.04.0005 16.01.01.04.0005 16.01.01.04.0005

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Avaya Aura® Communication Manager.

Use the “change system-parameters coverage-forwarding” command. Enable **QSIG/SIP Diverted Calls Follow Diverted to Party’s Coverage Path**, as shown below.

```
change system-parameters coverage-forwarding                   Page   1 of   2
                SYSTEM PARAMETERS CALL COVERAGE / CALL FORWARDING
CALL COVERAGE/FORWARDING PARAMETERS
          Local Cvg Subsequent Redirection/CFWD No Ans Interval (rings): 2
        Off-Net Cvg Subsequent Redirection/CFWD No Ans Interval (rings): 2
                          Coverage - Caller Response Interval (seconds): 4
     Threshold for Blocking Off-Net Redirection of Incoming Trunk Calls: n
                          Location for Covered and Forwarded Calls: called
                        PGN/TN/COR for Covered and Forwarded Calls: caller
                     COR/FRL check for Covered and Forwarded Calls? n
       QSIG/SIP Diverted Calls Follow Diverted to Party's Coverage Path? y
COVERAGE
```

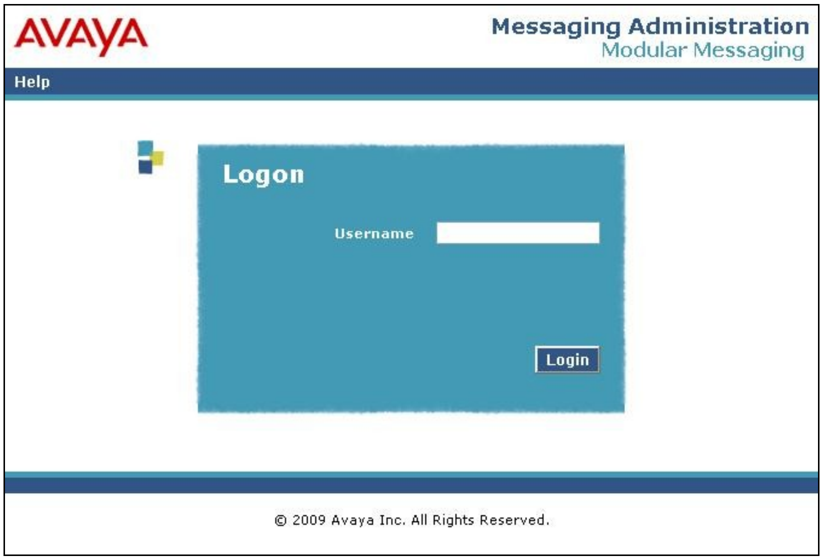
6. Configure Avaya Modular Messaging MSS

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:

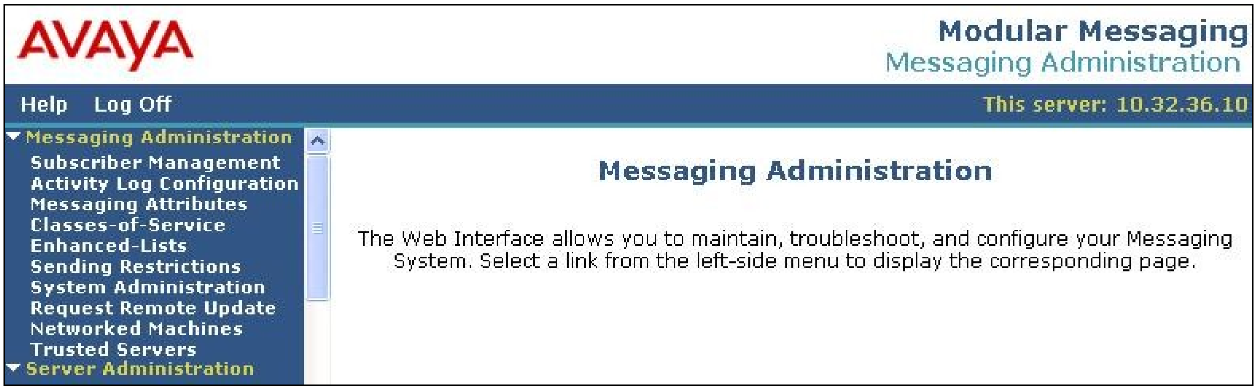
- Launch messaging administration
- Administer subscriber extension ranges
- Administer subscribers

6.1. 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.



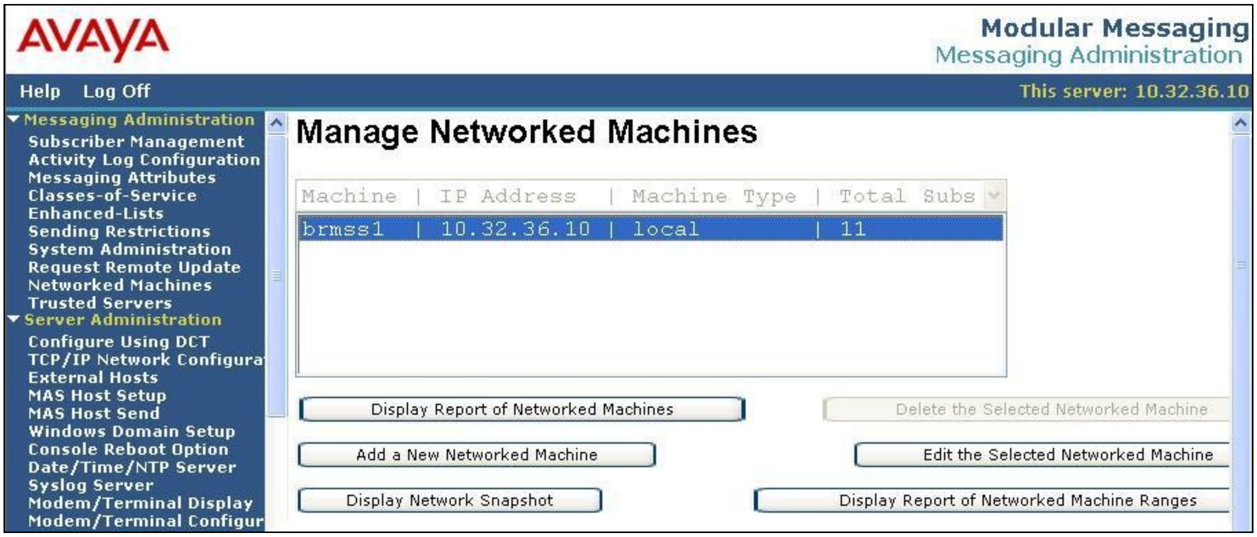
The **Messaging Administration** screen appears, as shown below.



The Web Interface allows you to maintain, troubleshoot, and configure your Messaging System. Select a link from the left-side menu to display the corresponding page.

6.2. Administer Subscriber Extension Ranges

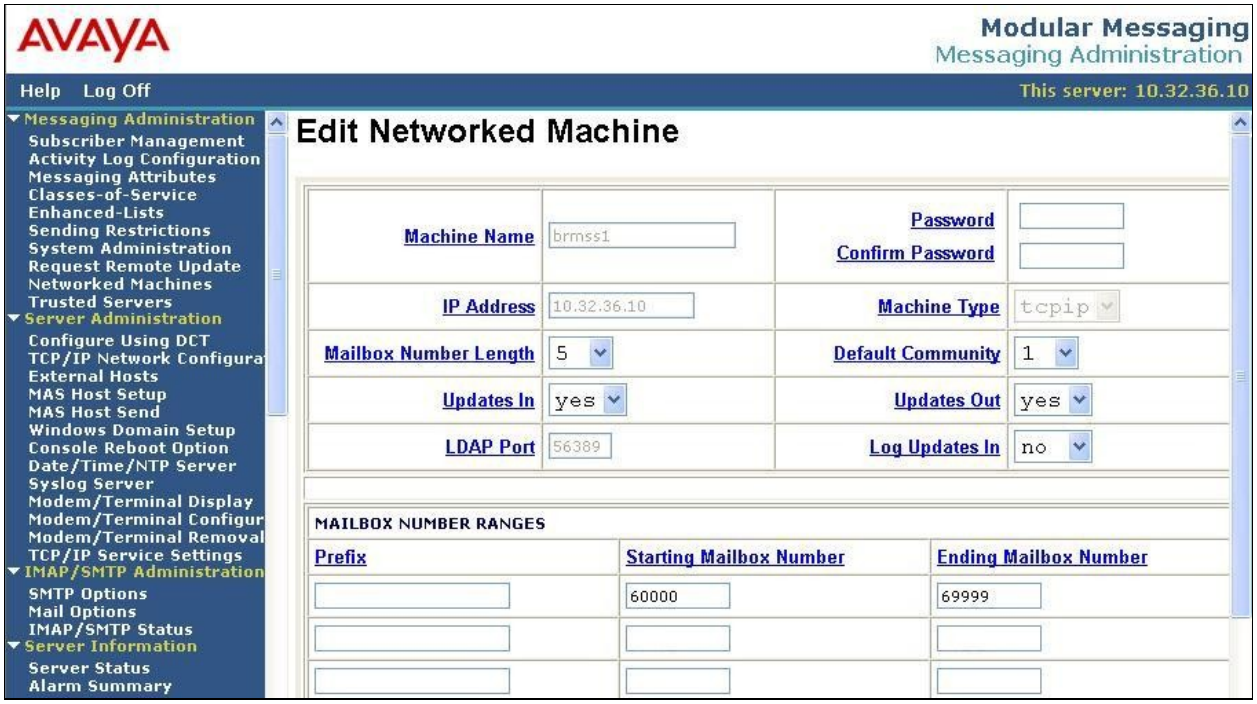
Select **Messaging Administration > Networked Machines** from the left pane, to display the **Manage Networked Machines** screen. Select the MSS server from the table listing, and click **Edit the Selected Networked Machine** toward the bottom right of the screen.



Manage Networked Machines

```
Machine  | IP Address   | Machine Type | Total Subs
brmss1   | 10.32.36.10  | local        | 11
```

The **Edit Networked Machine** screen is displayed. Under the **MAILBOX NUMBER RANGES** sub-section, locate an available entry line and enter the desired starting and ending mailbox numbers to be used for the IPC subscribers as necessary. In the compliance testing, the existing entry covered the 63xxx extensions used by the IPC turret users.



Edit Networked Machine

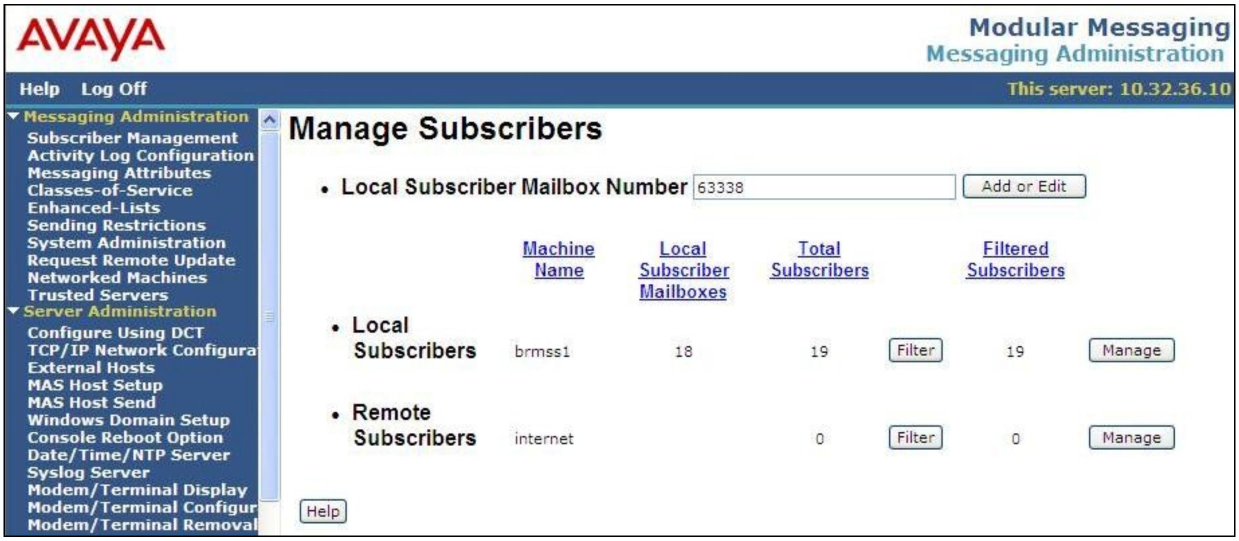
Machine Name	brmss1	Password Confirm Password	
IP Address	10.32.36.10	Machine Type	tcpip
Mailbox Number Length	5	Default Community	1
Updates In	yes	Updates Out	yes
LDAP Port	56389	Log Updates In	no

MAILBOX NUMBER RANGES

Prefix	Starting Mailbox Number	Ending Mailbox Number
	60000	69999

6.3. 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 "63338". Click **Add or Edit**.



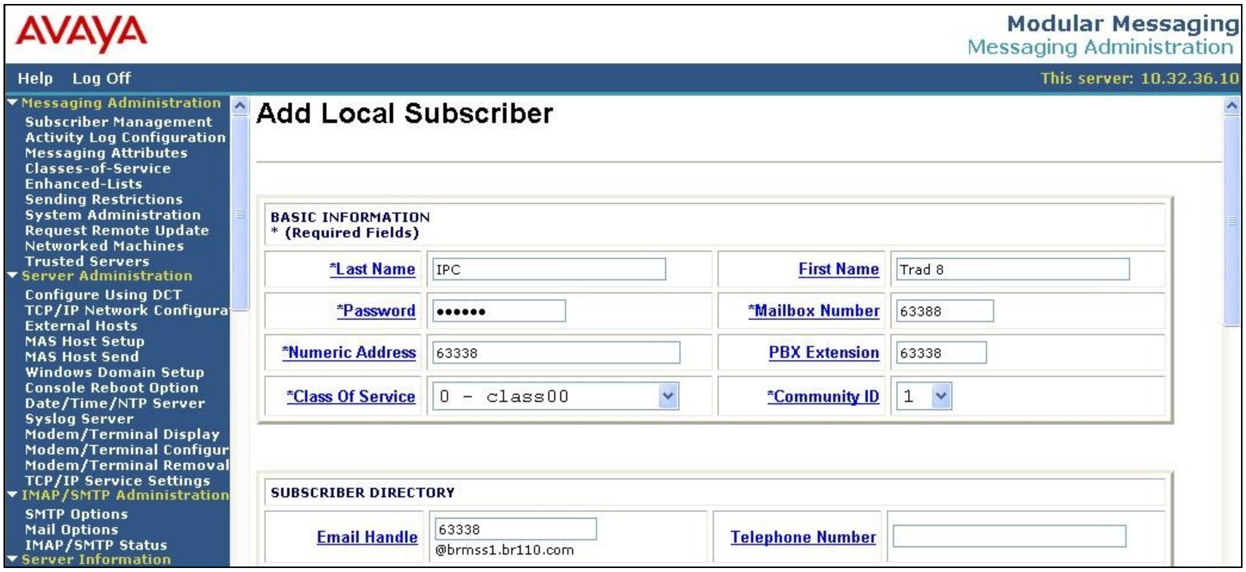
Manage Subscribers

- Local Subscriber Mailbox Number 63338 [Add or Edit]

	Machine Name	Local Subscriber Mailboxes	Total Subscribers		Filtered Subscribers	
• Local Subscribers	brmss1	18	19	Filter	19	Manage
• Remote Subscribers	internet		0	Filter	0	Manage

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**, **PBX Extension**, and **Email Handle** fields. Select the appropriate **Class Of Service**, and retain the default values in the remaining fields. Repeat this section to add all IPC subscribers.



Add Local Subscriber

BASIC INFORMATION
* (Required Fields)

*Last Name	IPC	First Name	Trad 8
*Password	••••••	*Mailbox Number	63388
*Numeric Address	63338	PBX Extension	63338
*Class Of Service	0 - class00	*Community ID	1

SUBSCRIBER DIRECTORY

Email Handle	63338 @brmss1.br110.com	Telephone Number	

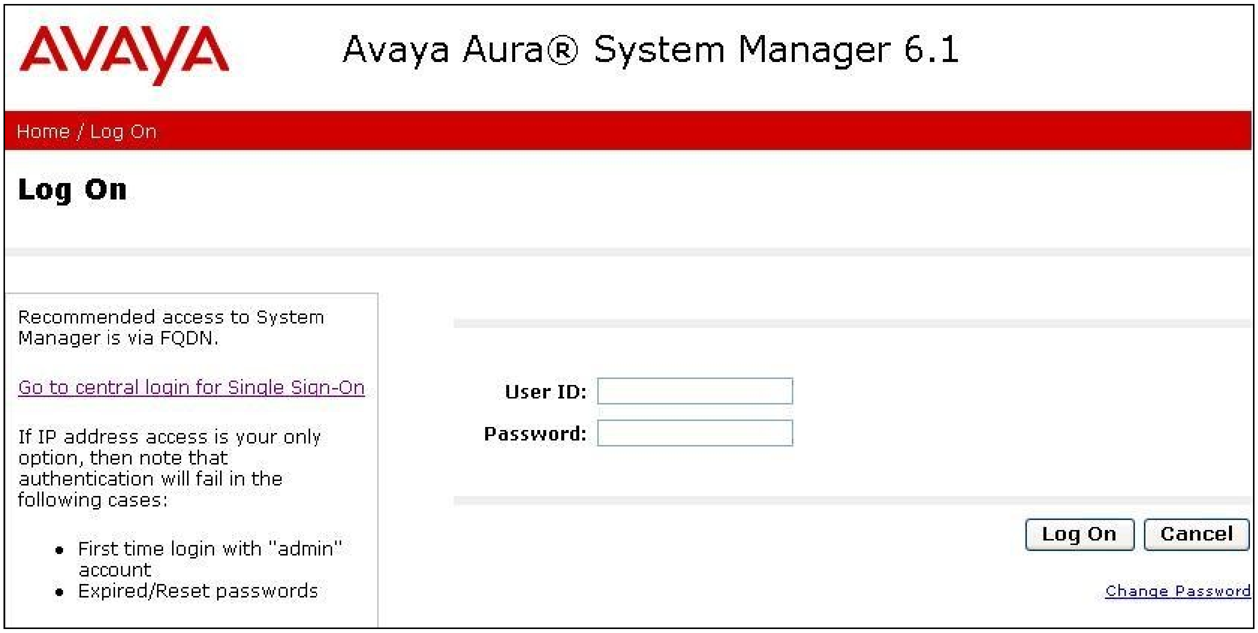
7. Configure Avaya Aura® Session Manager

This section provides the procedures for configuring Avaya Aura® Session Manager. The procedures include the following areas:

- Launch System Manager
- Administer dial patterns

7.1. 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.



Avaya Aura® System Manager 6.1

Home / Log On

Log On

Recommended access to System Manager is via FQDN.

Go to central login for Single Sign-On

If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

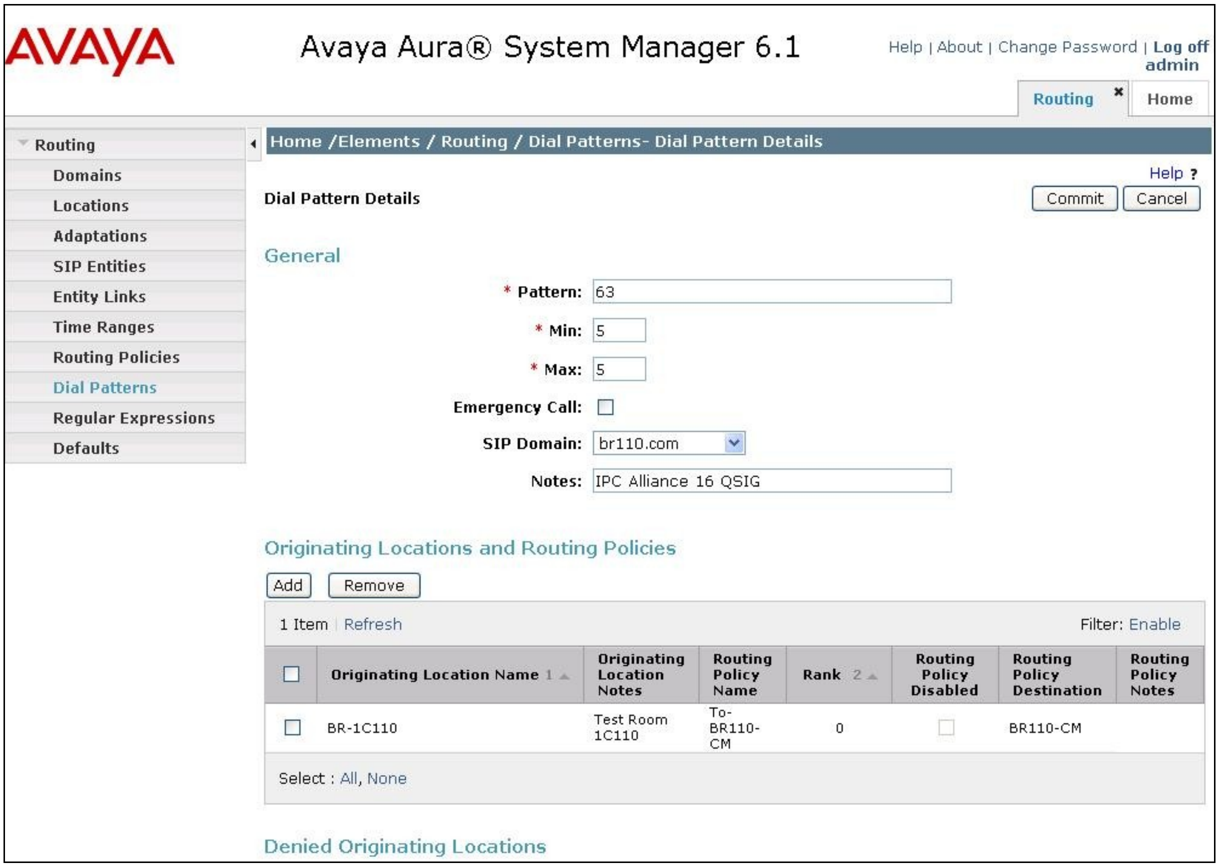
7.2. Administer Dial Patterns

Select **Routing > Dial Patterns** from the left pane, and click **New** in the subsequent screen (not shown) to add a new dial pattern for Modular Messaging to reach IPC turret users.

The **Dial Pattern Details** screen is displayed. In the **General** sub-section, enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Pattern:** A dial pattern to match.
- **Min:** The minimum number of digits to be matched.
- **Max:** The maximum number of digits to be matched.
- **SIP Domain:** Select the applicable domain for the relevant Communication Manager.
- **Notes:** Any desired description.

In the **Originating Locations and Routing Policies** sub-section, click **Add** and create a new policy for reaching IPC turret users with extensions 63xxx. In the compliance testing, the policy allowed for call origination from location "BR-1C110", and the destination is Communication Manager, as shown below. Retain the default values in the remaining fields. Modular Messaging will dial out to IPC turret users for features such as Call Sender, and the call will be delivered as SIP from Modular Messaging to Session Manager, and SIP from Session Manager to Communication Manager, and then QSIG from Communication Manager to Alliance MX.



Dial Pattern Details

General

* Pattern: 63

* Min: 5

* Max: 5

Emergency Call: □

SIP Domain: br110.com

Notes: IPC Alliance 16 QSIG

Originating Locations and Routing Policies

1 Item | Refresh Filter: Enable

□	Originating Location Name 1	Originating Location Notes	Routing Policy Name	Rank 2	Routing Policy Disabled	Routing Policy Destination	Routing Policy Notes
□	BR-1C110	Test Room 1C110	To-BR110-CM	0	□	BR110-CM	

Select : All, None

8. Configure IPC Alliance MX

This section provides the procedures for configuring IPC Alliance MX. The procedures include the following areas:

- Launch One Management System
- Administer voicemail buttons

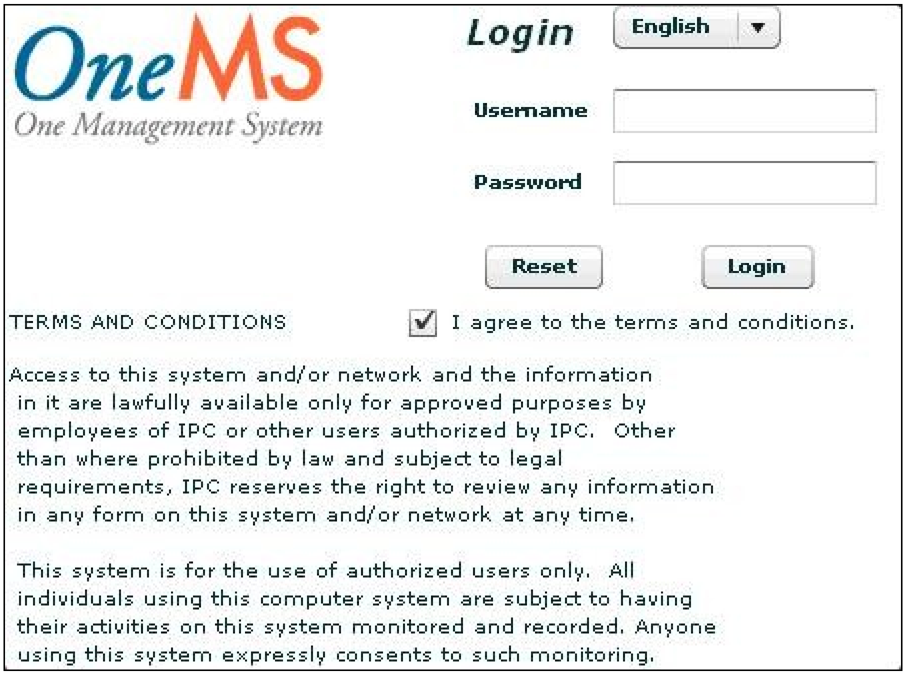
The configuration of Alliance MX is typically performed by IPC installation technicians. The procedural steps are presented in these Application Notes for informational purposes.

8.1. Launch One Management System

Access the One Management System web interface by using the URL "http://ip-address/oneview" in an Internet browser window, where "ip-address" is the IP address of IPC System Center. Log in using the appropriate credentials.

The **Login** screen is displayed. Enter the appropriate credentials. Check **I agree to the terms and conditions**, and click **Login**.

The **License Login** screen is displayed next (not shown). Enter the appropriate password and click **Login**. In the subsequent **Login Information** screen (not shown), click **Continue**.

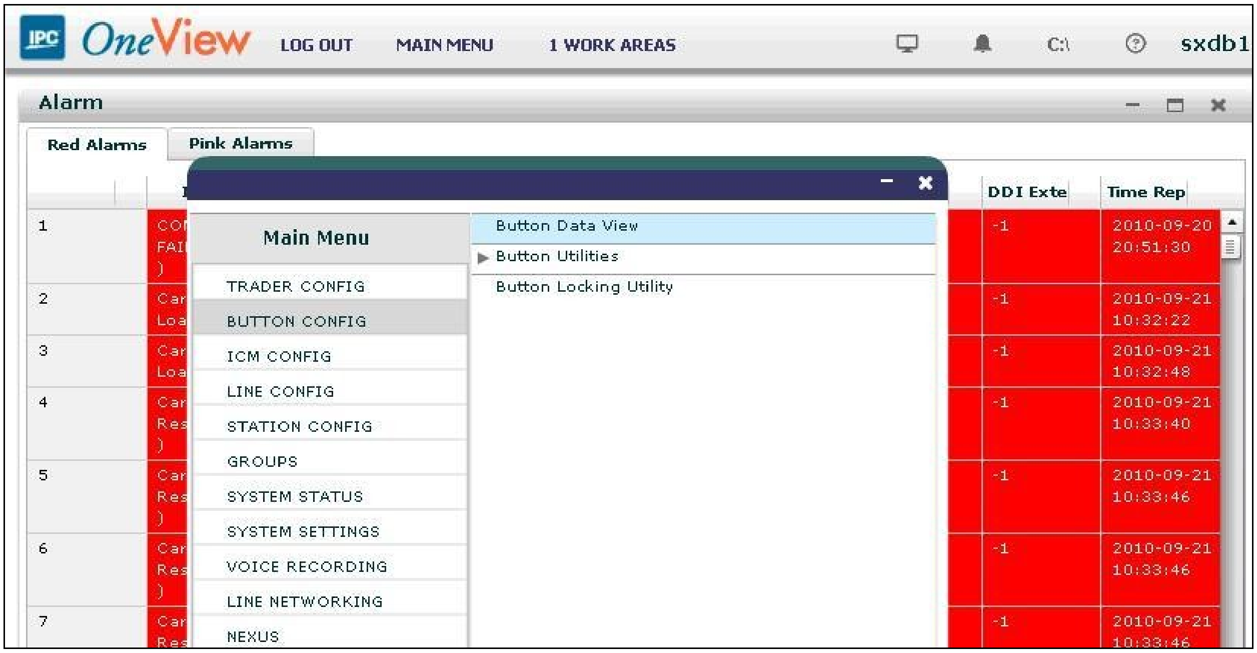


Access to this system and/or network and the information in it are lawfully available only for approved purposes by employees of IPC or other users authorized by IPC. Other than where prohibited by law and subject to legal requirements, IPC reserves the right to review any information in any form on this system and/or network at any time.

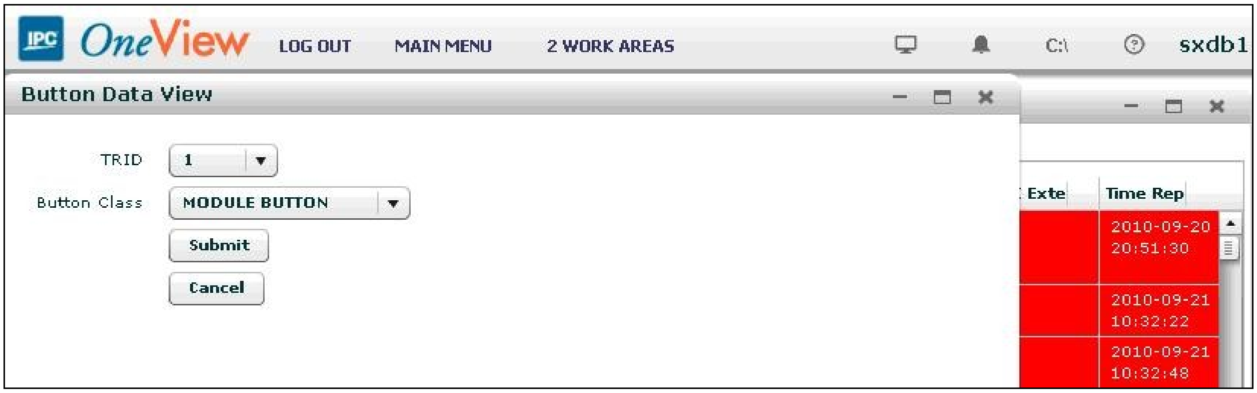
This system is for the use of authorized users only. All individuals using this computer system are subject to having their activities on this system monitored and recorded. Anyone using this system expressly consents to such monitoring.

8.2. Administer Voicemail Buttons

The screen below is displayed next, with the **Main Menu** screen in the forefront. Select **BUTTON CONFIG > Button Data View**, as shown below.



The **Button Data View** screen is displayed. For **TRID**, select the ID of the trader whose button sheet is being configured, in this case "1". For **Button Class**, select "MODULE BUTTON".



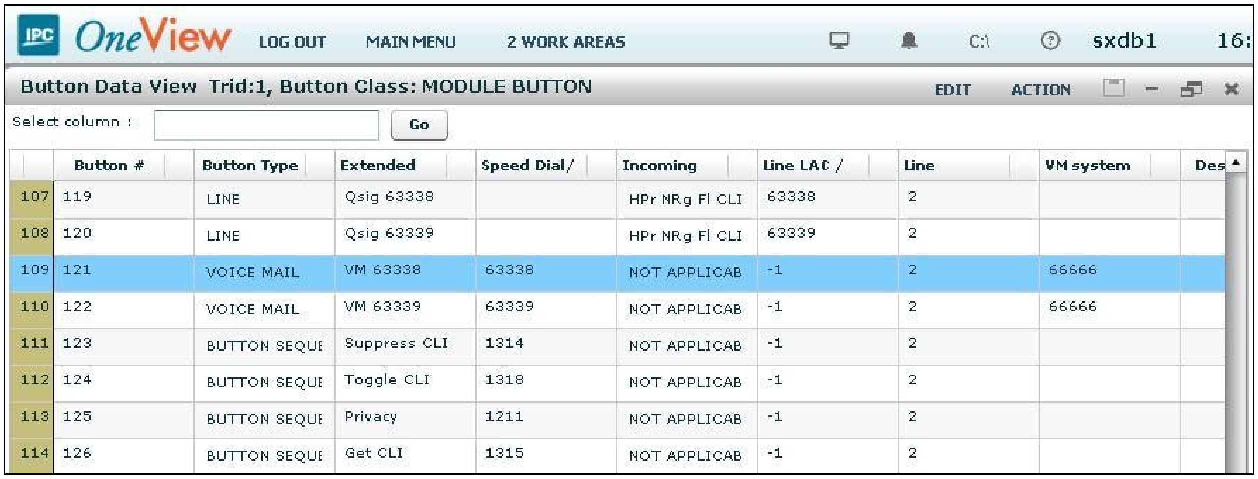
TRID: 1

Button Class: MODULE BUTTON

The **Button Data View** screen is updated with a list of configured module buttons. Follow [5] to add a voicemail button for each IPC subscriber, as shown below. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Button Type:** “VOICE MAIL”
- **Extended:** A desired name to use for the phone display.
- **Speed Dial:** The extension number of the IPC subscriber.
- **VM system:** The Modular Messaging pilot number from **Section 3**.

Repeat this for all trade users. In the compliance testing, two voicemail buttons for IPC subscriber extensions “63338” and “63339” were created on each of the two trade users.



Button Data View Trid:1, Button Class: MODULE BUTTON

	Button #	Button Type	Extended	Speed Dial/	Incoming	Line LAC /	Line	VM system	Des
107	119	LINE	Qsig 63338		HPr NRg Fl CLI	63338	2		
108	120	LINE	Qsig 63339		HPr NRg Fl CLI	63339	2		
109	121	VOICE MAIL	VM 63338	63338	NOT APPLICAB	-1	2	66666	
110	122	VOICE MAIL	VM 63339	63339	NOT APPLICAB	-1	2	66666	
111	123	BUTTON SEQUE	Suppress CLI	1314	NOT APPLICAB	-1	2		
112	124	BUTTON SEQUE	Toggle CLI	1318	NOT APPLICAB	-1	2		
113	125	BUTTON SEQUE	Privacy	1211	NOT APPLICAB	-1	2		
114	126	BUTTON SEQUE	Get CLI	1315	NOT APPLICAB	-1	2		

9. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Aura® Communication Manager, Avaya Modular Messaging, Avaya Aura® Session Manager, and IPC Alliance MX.

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.

10. Conclusion

These Application Notes describe the configuration steps required for IPC Alliance MX 16.01 to successfully interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Session Manager 6.1 in a centralized messaging environment using QSIG trunks to Avaya Aura® Communication Manager 6.0.1. All feature and serviceability test cases were completed with an observation noted in **Section 2.2**.

11. Additional References

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

1. *Administering Avaya Aura^{TM} Communication Manager*, Document 03-300509, Issue 6.0, Release 6.0, June 2010, available at http://support.avaya.com.

2. *CN 88011 Avaya S8xx0 SIP Integration using Avaya Session Manager*, Version M, August 2010, available at http://support.avaya.com.

3. *Avaya Modular Messaging for the Avaya Message Store Server (MSS) Configuration,* Release 5.0, February 2009, available at http://support.avaya.com.

4. *Application Notes for IPC Alliance MX 16.01 with Avaya Aura® Communication Manager 6.0.1 using QSIG Trunks*, Issue 1.0, available at http://support.avaya.com.

5. *Alliance MX 16.1 Loads and Syncs*, Part Number B02200152, Revision Number 00, upon request to IPC Support.

6. *Alliance MX 16.1 Configuring Call Diversions*, Part Number B02200138, Revision Number 00, upon request to IPC Support.

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