



Application Notes for Mutare Migration Tool with Avaya Modular Messaging 5.2 and Avaya Aura® Messaging 6.3 using SIP Trunks – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Mutare Migration Tool to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Session Manager 6.3 using SIP trunks.

The purpose of Mutare Migration Tool is, migrate subscriber's databases from Avaya Modular Messaging to Avaya Aura® Messaging.

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 Mutare Migration Tool to interoperate with Avaya Modular Messaging 5.2 and Avaya Aura® Messaging.

The purpose of Mutare Migration Tool is, migrate subscriber's mailbox information from Avaya Modular Messaging to Avaya Aura® Messaging (Hereon refers to as AAM). During the migration process, two Nodes were configured.

- Node0 indicates Avaya Modular Messaging
- Node2 indicates Avaya Aura® Messaging

Following commands were used for migrating databases from Avaya Modular Messaging to Avaya Aura® Messaging.

- mmlldapsync.exe /Node=0 /Reset
- mmlldapsync.exe /Node=2 /Reset
- mmlldapupdate.exe /Source=0 /Destination=2
- mirrorsync.exe
- mmlldapsync: This command synchronizes Avaya centralized storage servers (MSS) with local SQL database on the Migration Server. During the compliance test, Avaya Modular Messaging and AAM storage server were synchronized with SQL.
- mmlldapupdate: Once LADP is synchronized with source and destination, this command will migrate (update) from the source to destination.
- mirrorsync: This application updates the Message Mirror database with the mailboxes from Node 0 in order to have Mirror synchronizing messages and personal greeting from Avaya Modular Messaging to AAM.

2. General Test Approach and Test Results

Before running the scripts mentioned in **Section 1**, verify that Avaya Modular Messaging is working properly, meaning subscribers can be accessed to Avaya Modular Messaging and leave/retrieve the message, and MWI works. For this test Avaya Modular Messaging contained about thirty-some subscribers. Of these subscribers, three subscribers had a multiple messages.

Note: For this test, AAM was freshly installed, and the basic configuration was accomplished. In AAM, a temporary subscriber was configured to verify that the subscriber was able to leave/retrieve message, and MWI worked correctly.

During the test, the serviceability test was not performed since the test is one time execution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included executing of migrating tool's scripts and verifying the data base.

Interoperability compliance testing covered the following features and functionality:

- Mutare Migration Tool's connectivity to Messaging using IMAP and LDAP access.
- Migration of subscriber's database from Avaya Modular Messaging to AAM by verifying that new mailboxes, including greetings and passwords, were copied to AAM.

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.

2.2. Test Results

All test cases passed.

2.3. Support

Technical support on Migration Tool can be obtained through the following:

- **Phone:** (855)782-3890
- **Email:** help@mutare.com

3. Reference Configuration

Figure 1 illustrates a sample configuration with an Avaya SIP-based network that includes the following Avaya products:

- Avaya Aura® Communication Manager running on an Avaya S8300D Server with a G450 Media Gateway.
- Avaya Modular Messaging serving as the Source voicemail systems.
- AAM serving as the Destination voicemail systems.
- Avaya Aura® Session Manager connected to Communication Manager via a SIP trunk that provides SIP connectivity for AAM, and Avaya Modular Messaging.
- Avaya Aura® System Manager used to configure Session Manager.

Note: During the compliance test, Mutare Migration Tool was installed and configured on VMWare.

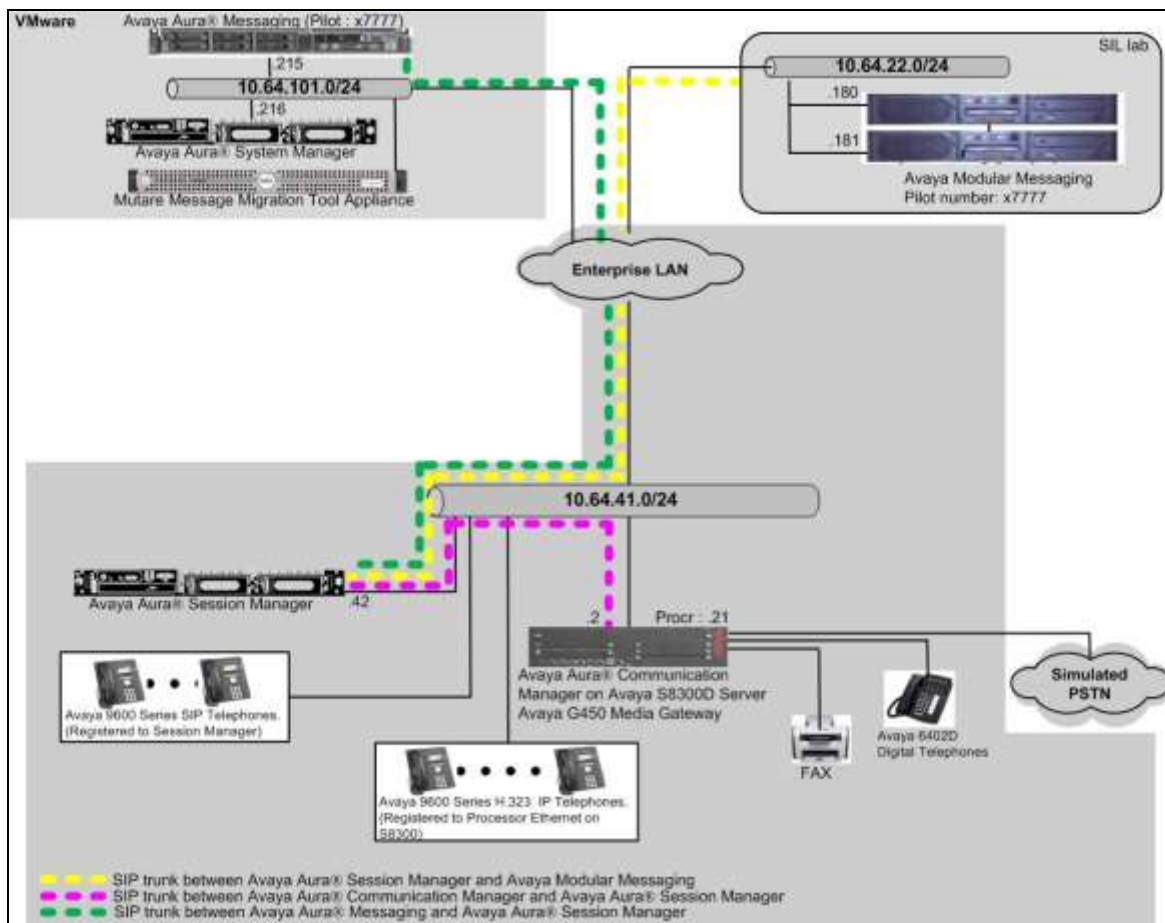


Figure 1: Avaya SIP Network with Avaya Modular Messaging, Avaya Aura® Messaging, and Mutare Migration Tool

4. Equipment and Software Validated

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

Equipment	Software
Avaya Modular Messaging	5.2 SP16
Avaya Aura® Messaging	MSG-03.0.124.0-335_0212
Avaya Aura® Communication Manager on Avaya S8300D Server	R016x.03.0.124.0-21754
Avaya Aura® Session Manager	6.3.9.0.639011
Avaya Aura® System Manager	6.3.9
Avaya 9620 IP Telephone (H.323)	3.22
Avaya 9630 IP Telephone (SIP)	2.6.12
Mutare Migration Tool on Windows Server 2008	Message Mirror 2.1.2 and LDAP Package 1.3.9

5. Configure Avaya Aura® Communication Manager

Communication Manager was already configured prior to the compliance test, and is not a critical part of testing, and these Application Notes will not include the Communication Manager configuration to discuss.

6. Configure Avaya Aura® Session Manager

Session Manager was already configured prior to the compliance test, and is not a critical part of testing, and these Application Notes will not include and discuss the Session Manager configuration.

7. Configure Avaya Modular Messaging

This section provides the procedures for configuring Avaya Modular Messaging for integration with Mutare Migration Tool.

The procedures include the following areas:

- Enable IMAP and LDAP on System Ports and Access
- Add a Trusted Server for the Mutare Migration Tool server

7.1. Enable IMAP and LDAP

From a web browser, enter the Avaya Modular Messaging IP address (MSS) as the URL to access the Messaging web interface. Navigate to **Messaging Administration** → **System Administration** and scroll down to **System TCP/IP Ports** section. Configure and enable the LDAP and IMAP ports. The **LDAP Port** is 389 and the **LDAP SSL Port** is 636. The **IMAP4 Port** is 143 and the **IMAP4 SSL Port** is 993. These are the default ports and should match on Message Mirror.

Click on **Save** at the bottom of the screen.

The screenshot displays the Avaya Modular Messaging Administration web interface. The left sidebar contains a navigation menu with categories like Messaging Administration, Server Administration, and Utilities. The main content area is titled 'SYSTEM TCP/IP PORTS' and contains a table of port configurations. The table has columns for the port name, the port number, a status dropdown, and an enable/disable checkbox. The following table represents the data visible in the screenshot:

Port Name	Port Number	Status	Enabled/Disabled
LDAP Port	389	Authenticated or Anonymous	Enabled
LDAP SSL Port	636		Enabled
LDAP Internal Server Port	55389	Enabled	Enabled
LDAP Directory Update Port	56389		Enabled
LDAP Front End Alternate Port		Disabled	
IMAP4 TUI Port	55143		Enabled
IMAP4 Port	143	Enabled	Enabled
IMAP4 SSL Port	993		Enabled
POP3 Port	110	Disabled	Disabled
POP3 SSL Port	995		Disabled
SMTP Port	25	Enabled	Disabled
SMTP Alternate Port			Disabled
SMTP SSL Port	465	Disabled	
Allow TLS for Outgoing SMTP	25		Enabled
MCAP Port	55000	Enabled	

At the bottom of the page, there are 'Save' and 'Help' buttons.

7.2. Add the Mutare Migration Tool as a Trusted Host

Navigate to **Messaging Administration** → **Trusted Servers**. Select the **Add a New Trusted Server** button to add Mutare as a trusted server.

The screenshot shows the Avaya Modular Messaging Administration web interface. The top header includes the Avaya logo, 'Modular Messaging', 'Messaging Administration', and 'This server: 10.64.22.181'. The left sidebar contains a navigation menu with categories like 'Messaging Administration', 'Server Administration', 'IMAP/SMTP Administration', and 'Server Information'. The main content area is titled 'Manage Trusted Servers' and contains a table with the following data:

Trusted Server	IP Addr/Name	Service Name
VVSTS	192.168.1.250	NWI Server
alpinemas1	192.168.1.250	Messaging Application Server

Below the table, there are four buttons: 'Display Report of Trusted Servers', 'Delete the Selected Trusted Server', 'Add a New Trusted Server' (highlighted with a red box), and 'Edit the Selected Trusted Server'.

In the **Add Trusted Server** page, provide the following information:

- Enter the name for the Trusted Server.
- Enter the IP address of the Mutare Migration Tool on the **Machine Name / IP Address** field.
- Enter the password on the **Password and Confirm Password** fields. During the test, the same passwords were configured on AAM side in order to allow encrypted data to be migrated successfully.
- Verify that access to LDAP and IMAP was enabled.

Select the **Save** button after the completion.

AVAYA Modular Messaging
Messaging Administration
Help Log Off This server: 10.64.22.181

Add Trusted Server

Trusted Server Name	Mutare	Password	*****
		Confirm Password	*****
Machine Name / IP Address	10.64.101.211	Service Name	
Minutes of Inactivity Before Alarm	0	Default Community	1
Access to Cross Domain Delivery	no	Special Type	(none)
LDAP Access Allowed	yes	LDAP Connection Security	No encryption required
IMAP4 Super User Access Allowed	yes	IMAP4 Super User Connection Security	Must use SSL or encrypted SASL

Save Back Help

8. Configure Avaya Aura® Messaging

This section provides the procedures for configuring AAM for integration with Mutare Migration Tool.

The procedures include the following areas:

- Enable IMAP and LDAP on System Ports and Access
- Add a Trusted Server for the Mutare Migration Tool server

8.1. Enable IMAP and LDAP

From a web browser, enter the Avaya Modular Messaging IP address (MSS) as the URL to access the Messaging web interface. Navigate to **Messaging Administration** → **System Administration** and scroll down to **System TCP/IP Ports** section. Configure and enable the LDAP and IMAP ports. The **LDAP Port** is 389 and the **LDAP SSL Port** is 636. The **IMAP4 Port** is 143 and the **IMAP4 SSL Port** is 993. These are the default ports and should match on Message Mirror.

Select the **Save** button at the bottom (not shown).

Port Name	Port Number	Status
LDAP Port	389	Enabled
LDAP SSL Port	636	Enabled
LDAP Front End Port		Disabled
LDAP Directory Update Port	56389	Disabled
Internal System IMAP4 Port	55143	Enabled
IMAP4 Port	143	Enabled
IMAP4 SSL Port	993	Enabled
POP3 Port	110	Disabled
POP3 SSL Port	995	Enabled
SMTP Port	25	Enabled
SMTP Alternate Port		Disabled
SMTP SSL Port	465	Enabled
Allow TLS for Outgoing SMTP	25	Enabled
Web Client Statistics Port	10000	Enabled

8.2. Add the Mutare Migration Tool as a Trusted Host

Navigate to **Messaging Administration** → **Trusted Servers**. Select the **Add a New Trusted Server** button to add Mutare as a trusted server.

The screenshot shows the Avaya Aura Messaging System Management Interface (SMI) with the 'Manage Trusted Servers' page. The sidebar on the left contains various navigation links, including 'Remote Users', 'Uninstalled Mailboxes', 'Login Failures', 'Locked Out Users', 'Sites', 'Dormant Mailboxes', 'Full Mailboxes', 'Web Access', 'Server Information', 'System Status', 'Alarm Summary', 'Voice Channels (Application)', 'Cache Statistics (Application)', 'Outbound Fax (Storage)', 'Server Settings', 'Server Role / AvC Address', 'Server Settings (Storage)', 'External Hosts', 'Trusted Servers', 'Networked Servers', 'Request Remote Update', 'Server Settings (Application)', 'Dial Rules', 'Cluster', 'System Parameters', 'Languages', 'Log Configuration', 'Mail/SMTP Settings (Storage)', 'General Options', 'Mail Options', and 'Mail/SMTP Status'. The main content area is titled 'Manage Trusted Servers' and includes a description: 'The Manage Trusted Servers page is used to select a trusted server for display, editing or deleting used by the messaging feature.' Below this is a table with the following data:

Trusted Server	IP Addr/Name	Service Name
aic	127.0.0.1	AIC

At the bottom of the page, there are four buttons: 'Display Report of Trusted Servers', 'Delete the Selected Trusted Server', 'Add a New Trusted Server' (highlighted with a red box), and 'Edit the Selected Trusted Server'.

In the **Add Trusted Server** page, provide the following information:

- Enter the name for the Trusted Server.
- Enter the IP address of the Mutare Migration Tool on the **Machine Name / IP Address** field.
- Enter the password on the **Password and Confirm Password** fields. During the test, the same passwords were configured on Avaya Modular Messaging side in order to allow encrypted data to be migrated successfully.
- Verify that access to LDAP and IMAP was enabled.

Select **Save** button to complete addition of the trusted server.

The screenshot displays the 'Add Trusted Server' configuration page in the Avaya Aura Messaging System Management Interface (SMI). The page title is 'Add Trusted Server' and it includes a sub-header: 'The Add Trusted Server allows the creation of a trusted server.' The form contains the following fields and values:

- Trusted Server Name:** Mutare
- Machine Name / IP Address:** 10.64.101.211
- Password:** [Redacted]
- Confirm Password:** [Redacted]
- Service Name:** [Empty]
- Minutes of Inactivity Before Alarm:** 0
- Access to Cross Domain Delivery:** no
- LDAP Access Allowed:** yes
- IMAP4 Super User Access Allowed:** yes
- Special Type:** (none)
- LDAP Connection Security:** No encryption required
- IMAP4 Super User Connection Security:** Must use SSL or encrypted SASL

At the bottom of the form, there are three buttons: 'Back', 'Save', and 'Help'. The 'Save' button is highlighted with a red box.

9. Configure Mutare Migration Tool

This section covers the configuration of Mutare Migration Tool. Refer to [2] for additional information on configuring Message Mirror. In these Application Notes, the following is discussed:

- Configuring Nodes (Source and Destination)
- Configuring Message Mirror

9.1. Configuring Nodes

Access to Mutare Migration Tool. During the compliance test, the Remote Desktop was utilized. Navigate to **SQL Server Management Studio → Database → MSSLDAP → Tables → dbo.Nodes**, and select the **Default.MSSLDAP – dbo.Nodes** tab, and the following two screens are displayed.

As mentioned in **Section 1**, “0” indicates the source (Avaya Modular Messaging), and “2” indicates the Destination (AAM). Verify the NetName, HostIP, TrustedServerName, encrypted TrustedServerPassword, Trusted ServerPort, and Mutare License (not shown) are populated.

NodeId	NetName	Status	SubTotal	SeatTotal	SubSeqNo	LastSubSeqNo	LastUpdated	HostIP	TrustedServer...
0	alpinemas1	2	38	37	1456	1455	2015-04-15 12:...	10.64.22.181	Mutare
1	server1	2	33	33	72	64	2015-04-15 12:...	10.64.101.215	Mutare
2	server1	2	33	33	119	119	2015-04-15 12:...	10.64.101.218	Mutare
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

TrustedServerPassword	TrustedServerPort	TrustedServer...	LastBucketUpdate	LastIncrementa...	SerialNo	MutareLicense	LastSyncStarte...
rt156fm3Wx1GV8=	389	1000	2015-04-15 12:...	NULL	131500	rt156/CnR0EIQmZdL+EnBf8A2a6chW/Nr5J	2015-04-15 12:...
rt156fm3Wx1GV8=	389	1000	2015-04-15 12:...	2015-04-14 15:...	131501	rt156M7oQJG4FOQUsGVAZ1dJ/Dv4QRXUo6nC	2015-04-15 12:...
rt156fm3Wx1GV8=	389	1000	2015-04-15 12:...	NULL	131502	rt156++HfV8S8FYLsGVAZ1dJ/EQ8toOx3W	2015-04-15 12:...
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

9.2. Configuring Message Mirror

Access to Mutare Migration Tool web interface by using the URL, “<http://ip-address>”, in an Internet browser window, where “ip-address” is the IP address of Mutare Migration Tool. The following login page is presented. On the **Message Mirror Admin** page, log in with the appropriate credentials.



To edit the **Global Settings**, click on **Edit Global Settings** at the top of the following page.

Mutare Message Mirror Admin

[Edit Global Settings](#) | [Edit Admins](#) | [Logout](#) (Default Admin)

Target:

IP / Port	Super User	License Usage
10.64.101.218 / 143	Mutare	37 of 10000

Sources: [Edit](#)

ID	Description	IP / Port	Super User	Mailboxes
1	Initial Source	10.64.22.161 / 143	Mutare	37

Runs (Last 2): [More](#)

Src ID	Run ID	Type	Start	End	Duration	Processed	Total	Errors	Progress
1	4521	Sync	4/16/2015 2:55:35 PM	4/16/2015 2:55:35 PM	0 sec	0	16	2	Done
1	4520	Sync	4/16/2015 2:54:34 PM	4/16/2015 2:54:35 PM	1 sec	0	16	2	Done

Mailboxes (Last 3): [More](#) | [Edit](#) | Find Mailbox Src for Source ID [Find](#)

Src ID	Run ID	Src Mbx	Dest Mbx	Start	End	Src Cnt	Dest Cnt	Errors
1	4521	42001	42001	4/16/2015 2:55:35 PM	4/16/2015 2:55:35 PM	0	0	1
1	4521	72025	72025	4/16/2015 2:55:35 PM	4/16/2015 2:55:35 PM	0	0	1
1	4520	72025	72025	4/16/2015 2:54:35 PM	4/16/2015 2:54:35 PM	0	0	1

Errors (Last 3): [More](#)

Src ID	Run ID	Src Mbx	Error Date	Error Msg
1	4521	42001	4/16/2015 2:55:35 PM	Inbox-D:312: NO Unknown mailbox
1	4521	72025	4/16/2015 2:55:35 PM	Inbox-D:312: NO Unknown mailbox
1	4520	42001	4/16/2015 2:54:35 PM	Inbox-D:312: NO Unknown mailbox

Powered By:  Mutare

The **Global Settings** page is displayed. The following parameters should be configured:

- **Backup Type** Set to *Backup to Avaya Modular Messaging*.
- **Backup IP / Port** Configure the IP address of the backup Messaging system, AAM and the IMAP4 port number.
- **Super User** Specify the Trusted Server Name configured on the backup Messaging system.
- **Super Pwd** Set to the password for the Trusted Server configured on the backup Messaging system.
- **Cycle Time (Sec)** Specify the interval in seconds which Message Mirror should check for necessary updates to the backup system.
- **From Email** Specify the email address from which all error/status emails are sent.

When done, click **Save Changes** on top of the page.



Mutare Message Mirror Admin Global Settings	
<div>Save Changes Return</div>	
Backup Type:	Backup to MM
Backup IP / Port:	10.64.101.218 143
Cache Path:	C:\ODMMFiles
Clear Local Cache:	1 AM
Use Super User (Src):	<input checked="" type="checkbox"/>
Use Super User (Dest):	<input checked="" type="checkbox"/>
Super User:	Mutare
Super Pwd:	*****
Use SSL:	<input type="checkbox"/>
Cycle Time (Sec):	60
From Email:	msgmirror@mutare.com
Error Email:	
Error Interval (Min):	1440
Last Error Sent:	4/15/2015 4:23:02 PM
Status Email:	
Status Email Times:	8:00 AM
Last Status Sent:	3/31/2015 3:20:01 PM
Backup UserInfo Folder:	<input checked="" type="checkbox"/>
Log All:	<input type="checkbox"/>
Archive Max Length Msgs:	<input type="checkbox"/>

From the home page, click on the **Edit** link by **Sources** to configure the source Messaging system. In the **Edit Sources** page configure the following parameters:

- **Description** Provide a description for the source.
- **IP** Specify the IP address of the Source Messaging system (Avaya Modular Messaging).
- **Port** Specify the IMAP4 port number.
- **Super User** Specify the Trusted Server Name on the Messaging system.
- **Super Pwd** Specify the password of the Trusted Server.
- **Use Events** Enable this option.

Del	Src ID	Description	IP	Port	Super User	Super Pwd	Use SSL	Use Events
<input type="checkbox"/>	1	Initial Source	10.64.22.181	143	Mutare	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Add New Source

Add	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Powered By: Mutare

From the home page, verify the IP/Port and Super User name on **Target** (AAM) are correct.

10. Verification Steps

After migration is completed, the following steps may use for verification:

- Verify the migrated subscribers in AAM are matching with Avaya Modular Messaging.
- Verify the migrated subscribers in AAM are able to log into the mailboxes using the same passwords as on Avaya Modular Messaging.
- Verify the migrated subscribers have the same recorded name on AAM as on Avaya Modular Messaging.
- Verify the personal greeting from AAM is the same personal greeting from Avaya Modular Messaging.
- Verify the Message-Waiting Indicators (MWI) is properly migrated. For this verification, three subscribers are configured with multiple messages. (x72001,x72002, 72023 with 8,1,4 messages respectively)
- Verify that subscribers can leave/retrieve messages from AAM.
- Verify that the messages migrated are in the same state (new, read, etc) on AAM as they are on Avaya Modular Messaging.

11. Conclusion

These Application Notes describe the configuration steps required for Mutare Migration Tool to successfully migrate subscribers from Avaya Modular Messaging to Avaya Aura® Messaging

12. Additional References

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

- *Administering Avaya Aura® Messaging*, Release 6.3, Issue 3, August 2014, available at <http://support.avaya.com>

For Mutare Migration Tool, please contact Mutare.

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