

AVAYA™

Aura Messaging

Configuration Note 88100 – Version M (12/21/2016) AVAYA CS1/CS2/CS3

SIP Integration with AVAYA Aura Session Manager



Overview

This Configuration Note (CN) is intended for AVAYA certified technicians and engineers familiar with Aura Messaging. The document assumes the user is AVAYA certified or familiar with the features and functionality of the AVAYA PBXs supported in the CN and SIP protocol.

Use this document in conjunction with the AVAYA Aura Messaging Installation Guide and the AVAYA CM Administration Guide. Visit <u>http://support.avaya.com</u> and search for the mentioned documentation.

Please read the entire document before attempting any configuration.

Disclaimer: Configuration Notes are designed to be a general guide reflecting AVAYA Inc. experience configuring its systems. These notes cannot anticipate every configuration possibility given the inherent variations in all hardware and software products. Please understand that you may experience a problem not detailed in a Configuration Note. If so, please notify the Technical Service Organization at (800) 876-2835, and if appropriate we will include it in our next revision. AVAYA Inc. accepts no responsibility for errors or omissions contained herein.

Note: Integrating Aura Messaging with multiple AVAYA CMs requires consideration special regarding Aura SM administration to ensure call handling and MWI delivery. It is advisable to consult with your ATAC or Sales Engineer representative.

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SIP Trunks allows the AVAYA PBX and AVAYA Aura Messaging Server to communicate over a LAN.

AVAYA Aura Messaging

Requirements

1.0 METHOD OF INTEGRATION

The Session Initiation Protocol (SIP) integration provides connectivity with the AVAYA PBX over a Local Area Network (LAN). The connectivity between the AVAYA Aura Messaging Server and the AVAYA PBX is achieved using an IP-connected SIP trunk via AVAYA Aura Session Manager, which serves as a proxy. This integration passes call information and MWI using SIP packets.

2.0 AVAYA AURA MESSAGING SERVER REQUIREMENTS

- The following servers are supported:
 - o Common Servers 1
 - HP DL360G7 and Dell R610
 - o Common Servers 2
 - HP DL360G8 and Dell R620
 - o Common Servers 3
 - HP DL360G9 and Dell R630
- Minimum releases required:
 - AVAYA Aura Messaging 7.0.0 base software.

At the time of writing, ensure you have the latest AAM patchware:

- CM 7.0 Kernel Service Pack 4 (combined with VMWT) KERNEL-2.6.32-642.3.1.el6.AV4
- CM 7.0 Security Service Pack 5
- CM 7.0.1.2 Service Pack
- AAM SP0004 (SP0Rev04)

3.0 PBX REQUIREMENTS

Before performing the installation ensure the customer site has had an AVAYA Network Assessment and the customer has implemented the recommendations.

• AVAYA CM 6.3.114 is the MINIMUM supported s/w release.

4.0 SUPPORTED INTEGRATION FEATURES

[✓] Items are supported

	System Forward to Personal Greeting All Calls Ring/no answer Busy Busy/No Answer	[√] [√] [√]
	Station Forward to Personal Greeting All Calls Ring/no answer Busy	[√] [√] [√]
	Auto Attendant Call Me Direct Call External Call ID (ANI) Fax * Find Me Internal Call ID Message Waiting Indication (MWI) Multiple Call Forward Multiple Greetings N+1 Outcalling Queuing Return to Operator	[√] [√] [√] [√] [√] [√] [√] [√] [√] [√]
IMPORTANT:	PBX options or features no Configuration Note are not integration. To implement described in this document, plea Messaging "Product <i>integsupport@avaya.com</i> for cla further guidance.	t described in this supported with this options/features not se contact the AVAYA Manger" or arifications in seeking
* T.38 fa	ix is supported starting with Aura M	essaging 6.1.

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5.0 SWITCH CONFIGURATION FOR IP INTEGRATION

PBX Configuration

The following tasks must be completed in the following order when programming the PBX to integrate. PBX programming is intended for <u>certified</u> PBX technicians/engineers.

- Verify customer option for SIP trunking
- Assign Local Node Number
- Administer C-LAN and IP Media Processor circuit packs (if using an S8xxx that requires this)
- Assign IP node names and IP addresses to C-LAN, IP Media Processor (if using an S8xxx that requires this)
- Define IP interfaces (if using an S8xxx that requires this)
- Administer IP Network Regions
- Add SESSION MANAGER Servers to the node names
- Create SIP signaling groups to the SESSION MANAGER servers
- Create a SIP trunk groups associated to the SIP signaling groups
- Create Hunt Groups (Pilot Numbers)
- Create Coverage Paths to Pilot Hunts
- Create Route Patterns for SIP trunking
- Modify AAR/ARS Analysis Table
- Modify AAR Digit Conversion Table
- Modify ARS Digit Conversion Table
- Define Public Numbering Format
- Note: The screens shown in this section are taken from an AVAYA Site Administration (ASA) terminal. Some parameters may not appear on all software releases.

Us the following screens as an EXAMPLE ONLY.

The table of Fields shown below and their associated Values are used in examples throughout this Config Note with regard to the S8300 / S84x0 / S85x0 / S87x0 setup.

Page	Field/Value
-	Extension Length = 8
12	Local Node Number= 1
	CLAN & MedPro Circuit Packs:
	01A08 = TN799D C-LAN
	01A09 = TN2602 IP Media Processor
15	IP Node Names:
	clan2-mtn 135.9.81.29
	clan3-mtn 135.9.81.111
	mountain-prow3 135.9.81.214
	mountain-prow2 135.9.81.52
	Gateway001 135.9.81.254
	mmsesmgr1 135.9.80.49
	mmsesmgr2 135.9.80.95
	IP Interfaces (refer to CLAN & MedPro Circuit Packs
	above)
14	IP Network Regions = 1
15	SIP Signaling Group = 15 & 16
16	Trunk Group = 15 & 16
17	Hunt group = 252, 253
	Pilot # 25281100, 25281099
18	Coverage Path = 252, 253
19, 20	Route Pattern = 15, 16
	AAR Analysis = 25281099 / 25281100
19	AAR Digit Conversion:
	Digits = n/a
20	Public Numbering Format: Public
	Extension Length = 8
21	Subscriber extensions = 252xxxxx

Note: These are example entries used for illustration only. Consult with your customer for the actual/proper values of your system.

The diagram below illustrates traffic engineering and load balancing used with Session Manager "Diamond Configuration"

 The AVAYA CM is configured so users (stations) are divided up for load balancing by assigning users one of two cover paths and routing preferences.

Users can use either one of two pilot numbers for voicemail retrieval. In this way traffic is engineered so some sip traffic will use trunk x, y as the 1^{st} and 2^{nd} choice and others will use trunk y, x as the 1^{st} and 2^{nd} choice.

All users can be served by either SM server should one go out of service for maintenance or any other reason. This provides for redundancy and provisioned load balancing.

• The Aura Messaging System is configured such the PBX Site has two entries: 10.1.1.4 and 10.1.1.5.

Should one become unavailable AURA MESSAGING will automatically route all originations to the second IP address in the PBX administration.

If using Session Manager in a Diamond Configuration you will need to provision two SIP trunk groups, two route patterns, two routing entries, two SIP pilot numbers (Hunt Groups) and two cover paths.



Note: AVAYA Site Manager or AVAYA ProVision allows you to easily assign alternate cover paths to a range of stations. Most of the following examples show only one of the two trunk groups, signal groups (etc).

Configuring Session Manager with AVAYA CM and Aura Messaging

NOTE:

OPS Licenses

"Off-PBX-Station"

OPS Licenses are needed for all SIP stations (telephones). They are considered non-native / off-premise to CM. OPS Licenses are not needed for SIP far-end appliances such as MM & AAM

NOTICE:

The screens in this Config Note are only for illustration purposes.

It is recommended a qualified technician review the customer's configuration for accuracy.



These are license based changes.

Proper SIP licenses are required. Please refer to "SIP 3.1 AVAYA Solution Designer Rules" to obtain proper codes.

5.1 VERIFY CUSTOMER OPTIONS FOR SIP TRUNKING

Ensure all required software features are enabled on the PBX. Access the System Parameters Customer Options form. Below is an example of the forms required for SIP integration, with the required features in boldface.

IMPORTANT: Only change the recommended fields.

display system-parameters customer-options	Page	1 of 10
G3 Version: V15 Software Pac Location: 1 RFA System ID Platform: 12 RFA Module ID	ckage: (SID): (MID):	Standard 1 1
Platform Maximum Ports: 44000 Maximum Stations: 36000 Maximum XMOBILE Stations: 0 Maximum Off-PBX Telephones - EC500: 100 Maximum Off-PBX Telephones - OPS: 100 Maximum Off-PBX Telephones - PVFMC: 0 Maximum Off-PBX Telephones - SCCAN: 100	USED) 1105) 1013 0 0 28 0 0 0	
(NOTE: You must logoff & login to effect the permiss:	Lon cha	anges.)

display system-parameters customer-options OPTIONAL FEATURES	pa	ge	2 of	10
IP PORT CAPACITIES		USED)	
Maximum Administered H.323 Trunks:	100	0		
Maximum Concurrently Registered IP Stations:	500	0		
Maximum Administered Remote Office Trunks:	0	0		
Maximum Concurrently Registered Remote Office Stations:	0	0		
Maximum Concurrently Registered IP eCons:	0	0		
Max Concur Registered Unauthenticated H.323 Stations:	0	0		
Maximum Video Capable H.323 Stations:	0	0		
Maximum Video Capable IP Softphones:	0	0		
Maximum Administered SIP Trunks:	5000	70		
Maximum Number of DS1 Boards with Echo Cancellation:	0	0		
Maximum TN2501 VAL Boards:	1	0		
Maximum G250/G350/G700 VAL Sources:	0	0		
Maximum TN2602 VoIP Channels:	0	0		
Maximum Number of Expanded Meet-me Conference Ports:	0	0		
(NOTE: You must logoff & login to effect the per	rmissi	on ch	anges	.)



display system-parameters customer-options 5 of 11 Page OPTIONAL FEATURES Multinational Locations? n Station and Trunk MSP? Multiple Level Precedence & Preemption? n Station as Virtual Extension? n Multiple Locations? n System Management Data Transfer? n Personal Station Access (PSA)? n Tenant Partitioning? n PNC Duplication? n Terminal Trans. Init. (TTI)? y Port Network Support? y Time of Day Routing? n Posted Messages? n TN2501 VAL Maximum Capacity? y Uniform Dialing Plan? **y** Private Networking? y Usage Allocation Enhancements? y Processor and System MSP? n Processor Ethernet? y Wideband Switching? n Wireless? n Remote Office? n Restrict Call Forward Off Net? y Secondary Data Module? y

On the System-Parameters Features page, enable the following:

display system-parameters features FEATURE-RELATED SYSTEM PARAMETER	Page S	1 of	18
Self Station Display Enabled? Trunk-to-Trunk Transfer:	n all*		
Automatic Callback with Called Party Queuing? Automatic Callback - No Answer Timeout Interval (rings):	n 3 10		
Off-Premises Tone Detect Timeout Interval (minutes): AAR/ARS Dial Tone Required?	20 V		
Music/Tone on Hold: music Type: Music (or Silence) on Transferred Trunk Calls?	port all	01C100)1
Internal Auto-Answer of Attd-Extended/Transferred Calls: Automatic Circuit Assurance (ACA) Enabled?	trans n	ferred	
Abbreviated Dial Programming by Assigned Lists?	n		
Auto Abbreviated/Delayed Transition Interval (rings): Protocol for Caller ID Analog Terminals: Display Calling Number for Room to Room Caller ID Calls?	2 Bellc n	ore	

*<u>NOTE</u>:

Trunk-to-trunk transfer should be set to none and COS used to access this feature.

Important:

Transfers may be affected by new P-Asserted Identity functionality in AAM.

• Change features-access-codes and assign your private network access code, in this example we assigned 799.

FEATURE ACCESS CODE (FAC)
Abbreviated Dialing List1 Access Code:
Abbreviated Dialing List2 Access Code:
Abbreviated Dialing List3 Access Code:
Abbreviated Dial - Prom Group List Access Code:
Announcement Access Code:
Answer Back Access Code:
Attendant Access Code:
Auto Alternate Routing (AAR) Access Code: 799
Auto Polito Soloction (ARS) - Accoss Code 1: 0 - Accoss Code 2:
Auto Route Selection (ARS) - Actess code 1. 5 Actess code 2.
Automatic Caliback Activation: Deactivation:
Call Forwarding Activation Busy/DA: All: *21 Deactivation: #21
Call Forwarding Enhanced Status: Act: Deactivation:
Call Park Access Code:
Call Pickup Access Code:
CAS Remote Hold/Answer Hold-Unhold Access Code:
CDR Account Code Access Code.
Change Con Access Code.
Change Coverage Access Code:
Conditional Call Extend Activation: Deactivation:
Contact Closure Open Code: Close Code:

The above information is provided by AVAYA Inc. as a guideline. See disclaimer on page 1

• Assign Local Node Number. Ensure the PBX has an assigned Local Node Number. If there is no assigned number, enter 1.

display dialplan parameters DIAL PLAN PARAMETERS Local Node Number: 1 ETA Node Number: UDP-ARS Calls Considered Offnet? n ETA Routing Pattern: UDP Extension Search Order: local-extensions-first Retry ARS/AAR Analysis If All-Location Entry Inaccessible? n EXTENSION DISPLAY FORMATS Inter-Location/SAT Intra-Location 6-Digit Extension: xx.xx.xx xx.xx.xx 7-Digit Extension: XXX-XXXX XXX-XXXX 8-Digit Extension: XXXXXXXX XXXXXXXX xxx-xxx-xxx xxx-xxx-xxxx XXXX-XXX-XXXX XXXXXX-XXXXX XXXXXXXXXXXXXX



Define the IP Codec Set and ensure G.711 is added. You can use G.711 mu-law or G.711 a-law or have both entries in the set. G.729 is now

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 Define IP Network Regions. In this example network region '1' is selected. Define the local domain for the SIP network in this example "cmapsv.AVAYA.com" is used.



 Allow SIP URI Conversion? (default is "y") – Used to specify whether a SIP Uniform Resource Identifier (URI) is permitted to change. For example, if "sips://in the URI is changed to "sip://" then the call would be less secure but this may be necessary to complete the call. If you enter n for 'no' URI conversion, then calls made from SIP endpoints that support SRTP to other SIP endpoints that do not support SRTP will fail. Enter "y" to allow conversion of SIP URIs.

Authoritative Domain:

The name entered here (our example shows cmapsv.AVAYA.com) must match what is used on the Signaling Group or a call from the Aura Messaging Server to the CM will not authenticate.

Add the Session Manager Servers to the IP Nodes Names. Enter the IP ٠ address used for SIP trunking on these servers.

list node-names all

	Ν	IODE NAMES
Туре	Name	IP Address
IP	mmsesmgr1	135.9.80.49
IP	mmsesmgr2	135.9.80.95
IP	mountain-prow	135.9.81.131
IP	mountain-prow2	135.9.81.52
IP	mountain-prow3	135.9.81.214

Create the signaling group for SIP. The Near-end Node Name is the name • assigned to the C-LAN above. The Far-end Node Name is the name assigned to the SESSION MANAGER Server above. For this example signal group 8 was selected using TLS transport with port 5061.

Far-end Domain: The name entered here (our example shows cmapsv.avaya.com) must match what's in the Author Domain field on the NR or inbound calls (SIP messages) to CM from the AAM may not work.	display signaling-group 15 SIGNALING GROUP Group Number: 15 Group Type: sip Transport Method: tls IMS Enabled? n
For SIP Options use with Session Manager, Enable Later 3 Test must be set to "Y"	Near-end Node Name: clan1 Near-end Listen Port: 5061 Far-end Listen Port: 5061 Far-end Node Name: mmsesmgr1 Far-end Listen Port: 5061 Far-end Network Region: 2 Bypass If IP Threshold Exceeded? n DTMF over IP: rtp-payload DTMF over IP: rtp-payload DTMF over IP: rtp-payload
Messaging recommends 'Direct IP' and 'Hairpining' be a is without concern. If however you have H323 phone a	Enable Layer 3 Test? y Session Establishment Timer (min): 3 Alternate Route Timer (sec): 6 nabled (set to 'y'). When using pure SIP IP Phone endpoints this recommendation adpoints, it's possible, during a voice mailbox greeting recording, during playback, and the advector of the UDOP in the U
one may observe audio 'clipping' at about the 6 second and Direct IP-IP Audio Connections set to 'y'. Enabling these two CM features minimizes your G450, phones assigned to this trunk group will, now, all the t more gateway resources than available. Such designs the audio clipping is bothersome, best practices, should 'n' and all SIP phones set to 'y'. Direct IP must be enabled for reliable (Aura Messaging)	mark of your greeting. This is expected architecture behavior with H323 phones G650 DSP media needs to which is desirable. If you leave the settings at 'n', all me, use your gateway media resources full time and you run the risk consuming hould ensure enough gateway resources are in place to avoid unanswered calls. If be to create a separate trunk group for you H323 phones with these settings set to fax transmissions. Alternate Route Time ro '4 and the SIP Timer B/F (secs) on the SM Entity Link form to "2" Note: In newer CM releases there is a newer parameter "Initial IP-IP- direct Media" this should also be set to Y (yes).

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- Create the trunk group for SIP.
- Note: With a Session manager "**Diamond Configuration**" 2 SIP trunk groups are programmed; 1 between the PBX and Each SM. These Trunk Groups can be used by all applications that interface with SM. You will need to confirm how many members it has.

Additionally, you can use **Class of Restriction (COR) on the PBX** to **prevent inbound/outbound calls** on that trunk group as needed. The COR controls inbound calls where the external originating endpoint, for example an Aura Messaging or another CM, does not send a known P-Asserted Identity, or if this has been modified using adaptation on Session Manager to an unknown ID (AVAYA CM Endpoint Extension) on the local CM. For example, If Aura Messaging asserts as a local CM station, that station's COR and COS is used for calling or transfer permissions instead of the Trunk COR and COS 1.

display trunk-group 15 TRU	Page 1 of 21 JNK GROUP
Group Number: 15 Group Name: mmesmgr1 Direction: two-way Outgoir Dial Access? n Queue Length: 0 Service Type: tie	Group Type: sip CDR Reports: y COR: 1 TN: 1 TAC: 715 ng Display? n Night Service: Auth Code? n
	Number of Members: 255
display trunk-group 15 Group Type: sip	Page 2 of 21
TRUNK PARAMETERS	
Unicode Name: yes	
	Redirect On OPTIM Failure: 5000
SCCAN? n Preferred Minim	Digital Loss Group: 18 num Session Refresh Interval(sec): 600
In newer CM trunk screen shots, "Disconnect Supervision –In? and Out? Should be BOTH y (yes).	Ensure the value is set to 600 to match CM's known default value.
	going forward.

isplay trunk-group 15			Page	3 of 21
ACA Assignment?	n	Measured: no	one Maintenance Te	sts? y
Numbe	ering Form	mat: public		
		Replace	e Unavailable Nu	mbers? n
 Add Hunt Group(s). Coverage Point for subscribers. This hu the Aura Messaging no members assigne 	Configu the Call int group's Access N d to it, and	re a Hunt Group Coverage Path s extension numb umber. This hund d should be config	to be used as assigned to th er is going to be group is configu gured as follows:	the Call ne AAM used as ired with
splay hunt-group 252.	1	HUNT GROUP	Page	1 of 60
splay hunt-group 252 Group Number: Group Extension: Group Extension: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 1 mbr-name	HUNT GROUP Ca Night Service MM I Local Agent	Page ACD? n Queue? n Vector? n overage Path: Destination: Early Answer? n C Preference? n	1 of 60
Splay hunt-group 252 Group Number: Group Name: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 1 mbr-name	HUNT GROUP Ca Night Service MM 1 Local Agent	Page ACD? n Queue? n Vector? n Overage Path: Destination: Early Answer? n C Preference? n	1 of 60
splay hunt-group 252 Group Number: Group Name: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 mbr-name	HUNT GROUP Ca Night Service MM 1 Local Agent	Page ACD? n Queue? n Vector? n overage Path: Destination: Early Answer? n t Preference? n	1 of 60
splay hunt-group 252 Group Number: Group Name: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 1 mbr-name	HUNT GROUP Ca Night Service MM 1 Local Agen	Page ACD? n Queue? n Vector? n Destination: Early Answer? n t Preference? n	1 of 60
splay hunt-group 252 Group Number: Group Name: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 mbr-name	HUNT GROUP Ca Night Service MM 1 Local Agent	Page ACD? n Queue? n Vector? n overage Path: Destination: Early Answer? n t Preference? n	1 of 60
splay hunt-group 252 Group Number: Group Name: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 mbr-name	HUNT GROUP Ca Night Service MM I Local Agent	Page ACD? n Queue? n Vector? n overage Path: Destination: Early Answer? n t Preference? n	1 of 60
Splay hunt-group 252 Group Number: Group Extension: Group Type: TN: COR: Security Code: SDN/SIP Caller Display:	252 Apollo12 25281100 ucd-mia 1 mbr-name	HUNT GROUP Ca Night Service MM 1 Local Agent	Page ACD? n Queue? n Vector? n overage Path: Destination: Carly Answer? n C Preference? n	1 of 6(

On page 2, the voice mail handle will be used by the ASM. In the "Routing Digit (e.g. AAR/ARS Access Code)" field of this form, enter your PBX's AAR Access Code as defined on page 1 of the Feature Access Codes form if using AAR to route call to SIP trunk(s).

change hunt-group 252	HUNT GROUP			Page	2 of	60
Message	Center: sip-adjunct	-				
Voice Mail Number	Voice Mail Handle	(e.g.,	Routing	Digits	(ode)	
25281100	25281100*	(c.g./	799			

• Setup a coverage path for the subscriber's extensions. Assign to it the pilot hunt group number created in the earlier step.

display coverage path 252			
	COVERAGE	PATH	
0	Deth Numbers 0	5.0	
Cug Enabled for VDN Po	e Path Number: 2	52 Hunt a	ftor Coverage? n
Next	: Path Number:	Linkag	e
COVERAGE CRITERIA			
Station (Chaun Status	Incide Coll	Outoido Coll	
Station/Group Status	Inside Call	outside call	
ACLIVE:	11	11	
Busy:	У	У	Number of Discuss 0
Don't Answer?	У	У	Number of Rings: 2
All?	n	n	
DND/SAC/Goto Cover?	У	У	
Holiday Coverage?	n	n	
COVEDACE DOINTS			
Terminate to Coverage I	to with Pridge	d Annoarangog?	2
Deint1, b252	CS. WICH BILLUYE	u Appearances:	11
POINCI: NZ5Z RI	ig: Pointz:		
Points:	Point4:		
Point5:	Point6:		
Command			
commaria.			

The Voice Mail Number and Voice Mail Handle are sent to the SESSION MANAGER. These are provisioned in the Network Routing Policy, Dial Patterns, and Regular Expressions.

*Note: With CM 5.2.x and CM 6.x, the Voice Mail Hunt Group Pilot number may not be available to the VXIBrowser. To correct this change the "voice mail handle" field to match the "voice mail number."

Additionally, in Session Manager if you are using a "Regular Expression" that matches the alphanumeric "voice mail handle" delete/change it. For new systems, simply do not add it.



The "**Proxy Selection Route Pattern**" field identifies the routing pattern that is used to route-to the proxy server. Normally this refers to the route pattern between CM and SM.

If multiple switches are in use, you may need to configure this parameter setting further to better adhere to your telephony switch topology. Please refer to "Communication Manger" documentation in reference to further specifics.

• Set the route pattern for the switch location.

display locations	LOCATIONS	
ARS	Prefix 1 Required For 10-Digit NANP Calls? y	
Loc Name	Timezone Rule NPA	Proxy Sel
1: Main	+ 00:00 0	15

• Define Public Numbering. For this example extension 8XXX is used. For the trunk group use the same trunk group number created above (7 for example).

Note: No more than 7 digits should be sent, so administer with a blank CPN Prefix. Ext Len and CPN Len values should not be more than 7.

This may not be applicable with current CM releases.

: :	list public-ı	inknown-number	ing	
N	UMBERING - PU	JBLIC/UNKNOWN	FORMAT	
Ext Ext	Trk	CPN	CPN	
Len Code	Grn(s)	Prefix	Len	
8 2	010(0)	TIGTIN	8	
5 3			5	
5 3	130		5	
4 4	13	1415263	11	
	NT Ext Ext Len Code 8 2 5 3 5 3 5 3 4 4	list public-u NUMBERING - PU Ext Ext Trk Len Code Grp(s) 8 2 5 3 5 3 130 4 4 13	list public-unknown-number NUMBERING - PUBLIC/UNKNOWN Ext Ext Trk CPN Len Code Grp(s) Prefix 8 2 5 3 5 3 130 4 4 13 1415263	list public-unknown-numbering NUMBERING - PUBLIC/UNKNOWN FORMAT Total Ext Ext Trk CPN CPN Len Code Grp(s) Prefix Len 8 2 8 5 3 5 5 3 130 5 4 4 13 1415263 11

5.2 SUBSCRIBER ADMINISTRATION

Subscriber administration has several parts: Administering the MWI, assigning the call coverage path, and specifying softphone capability.

Follow these steps to program the subscribers stations assigned to the AAM.

The screens for station 25281101 show how to administer for a non-SIP phone. The screens for station 25281110 show how to administer for a SIP phone which includes off-PBX administration.

Note: Ensure you administer each user's *MWI Served User Type* as "*sip-adjunct*" or MWI interrogation (polling) will not work.

AVAYA SIP Integration

5.2.1 ADMINISTERING A NON-SIP STATION

(This section is NOT MADATORY for AAM setup. It's an optional overview.)

change station 25281101		
change Station 25201101	STA	Page 1 of 5 ATION
Extension: 25281101 Type: 7406+ Port: 01C1702 Name: apollo12 x2528: STATION OPTIONS	1101	Lock Messages? n BCC: 0 Security Code: 25281101 TN: 1 Coverage Path 1: 252 COR: 1 Coverage Path 2: COS: 1 Hunt-to Station:
Loss Group: Data Module? Display Module? Display Language:	2 n y english	Time of Day Lock Table: Personalized Ringing Pattern: 1 Message Lamp Ext: 25281101
Survivable COR: Survivable Trunk Dest?	internal Y	Media Complex Ext: IP SoftPhone? n
change station 25281101		Page 2 of 5
-		STATION
FEATURE OPTIONS LWC Reception: LWC Activation? LWC Log External Calls?	spe y n	Auto Select Any Idle Appearance? n Coverage Msg Retrieval? y Auto Answer:
CDR Privacy? Redirect Notification? Per Button Ring Control? Bridged Call Alerting? Active Station Ringing:	n y n single	Data Restriction? n Idle Appearance Preference? n Bridged Idle Line Preference? n Restrict Last Appearance? y
H.320 Conversion? Service Link Mode: Multimedia Mode: MWI Served User Type:	n H as-needed basic sip-adjun	Per Station CPN - Send Calling Number? y EC500 State: disabled Audible Message Waiting? n Display Client Redirection? n Select Last Used Appearance? n Coverage After Forwarding? s
Emergency Location Ent.	25281101	Direct IP-IP Audio Connections? y IP Audio Hairpinning? n

5.2.2 ADMINISTERING A SIP STATION

display st	ation 25281112	STAT	ION	Page	1 of
Extension: Type: Port: Name:	25281112 4620 s00000 apollo12 x2528:	Co 1112 Co	Lock Messages? n Security Code: verage Path 1: 253 verage Path 2: Hunt-to Station:		BCC: TN: COR: COS:
Di Survivabl	TIONS Loss Group: Speakerphone: splay Language: e GK Node Name: Survivable COR: ble Trunk Dest?	19 Pers 2-way english internal y	Time of Day Lock onalized Ringing Pa Message Lam Mute Button Er Expansion M Media Comple IP Soft	Table: attern: 1 mp Ext: 26 aabled? y Module? n ex Ext: Phone? n	341112
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Note: Ensure you administer each user's *MWI Served User Type* as "*sip-adjunct*" or MWI interrogation (polling) will not work.

5.2.3 CREATE AN 'OFF-PBX" STATION MAPPING

- Create an "Off-PBX" station mapping using the SIP trunk defined earlier.
- **Note:** In our previous example screens we had used trunk 7. Your trunk may be different.

display off-pbx-telephone station-mapping 25281112 Page 1 of 3 STATIONS WITH OFF-PBX TELEPHONE INTEGRATION Station Application Dial CC Phone Number Trunk Config Dual Extension Prefix Selection Set Mode 25281112 OPS - 25281112 aar 1

5.3 CONFIGURING THE SESSION MANAGER

Please note that section 5.3 includes information enough to configure SM to work with AAM single server. If you need information about cluster system configuration, please additionally refer to section 7.0 SESSION MANGER CONFIG & AAM CLUSTERING.

- Log using a web browser per example below:
- Default login and password are Admin / admin please check with your customer service representative for account access questions.

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[©] System Manager 6.3		
Recommended access to System Manager is via FQDN.		
Go to central login for Single Sign-On	User ID: Admin	
authentication will fail in the following cases:	Password: ••••••	
 First time login with "admin" account Expired/Reset passwords 	Log On Cancel	
Use the "Change Password" hyperlink on this page to change the password manually, and then login.	Change Password	
Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.	Supported Browsers: Internet Explorer 8.x. 9.x or 10.x or Firefox	
This system is restricted solely to authorized users for legitimate business purposes only. The actual or attempted unauthorized access, use, or modification of this system is strictly prohibited.	19.0, 20.0 or 21.0.	
Unauthorized users are subject to company disciplinary procedures and or criminal and civil penalties under state, federal, or other applicable domestic and foreign laws.		
The use of this system may be monitored and recorded for administrative and security reasons. Anyone accessing this system expressly consents to such monitoring and recording, and is advised that if it reveals possible evidence of criminal activity, the evidence of such activity may be provided to law enforcement officials.		
All users must comply with all corporate instructions regarding the protection of information assets.		

- Most administration on AVAYA Aura SM is performed from the Network Routing Policy screens accessed from the Routing section.
- For more complete programming information on AVAYA Aura Session Manager please refer to the appropriate documentation.

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When you administer the Routing section, you will see the following list of tasks:

Welcome to the Network Routing Policy Application

AVAYA Aura System Manager contains several NRP applications like "SIP Domains", "Locations", "SIP Entities", etc.

The recommended order to use the routing applications (that means the overall routing workflow) to configure your network configuration is as follows:

- 1. Create SIP Domains
 - Other routing applications are referring domains of type SIP
- 2. Create Locations
- 3. Create Adaptations
- 4. Create SIP Entities
 - SIP Entities used as Outbound Proxies. For example, a "Gateway" or "SIP Trunk."
 - Create all other SIP Entities such as a Session Manager, CM, SIP/PSTN Gateway, or SIP Trunk
 - Assign appropriate Locations, Adaptations, and Outbound Proxies
- 5. Create the Entities Links
 - Links Between Session Managers

- Links Between Session Managers and other SIP Entities
- 6. Create Time Ranges
 - Align with the tariff information from Service Providers
- 7. Create Policies
 - Assign *Routing Destination* and *Time Of Day*. (Time Of Day = assign appropriate "Time Range" and define "Ranking")
- 8. Create Dial Patterns
 - Assign Locations and Policies to the Dial Patterns
- 9. Create Regular Expressions
 - Assign routing Policies to the Regular Expressions
 - Each routing *Policy* defines the *Routing Destination* (aka SIP Entity) and Time of Day with its associated Ranking.
- **IMPORTANT:** The Dial Pattern is defined/assigned later by administering the Dial Pattern screens (found in the Routing group on the Home Screen). This is why the overall Network Routing Policy, or NRP, workflow is described as a "Dial Pattern driven approach to define routing policies".

To help understand this, steps 7-9 handle this:

Below are screen shots are from a configured system and are to be used as an example.

- **Note:** You may find it necessary to complete later steps first in order to populate all the necessary fields.
 - 1. Create the SIP Domains.

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Routing Policies Dial Patterns Regular Expression Defaults Salext : All, Hons	Time Ranges 🔲 Name	Туре	Notes	
Dial Pattens Select: All, Mons Regular Expressions Defaults	Routing Policies	sip		
Regular Expressions Defaults	Dial Patterns Select : All, None			
Defaults	Regular Expressions			
	Defaults			

In the name field above we added a SIP Domain of ca.avaya.com. Notes can contain any text you like.

2. Create Locations.

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In our example screen above, we added a location and named it bvw.

When a new location is added you will see the screen below where you need to add an IP Address Pattern. In our example we used "10.*" as our pattern.

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* Default Audio Bandwidt	h: 80 Kbit/sec
Alarm Threshold	
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* Latency before Multimedia Alarm Trigge	r: 5 Minutes
Landian Dattains	
Add Kemove	Filter: Frable
IP Address Pattern	A Notes
* 10.*	
Select : All, None	
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3. Create *Adaptations* (If used).

1

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Our example configuration has "no adaptation." All entries are default.

- 4. Create SIP Entities
 - SIP Entities used as "Outbound Proxies" (e.g. a certain "Gateway" or "SIP Trunk")
 - Create all "other SIP Entities" (e.g. Session Manager, CM, SIP/PSTN Gateways, SIP Trunks)
 - Assign appropriate "Locations", "Adaptations" and "Outbound Proxies"

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Dial Patterns	AAM241	10.138.57.241	Modular Messaging	ILG CMM Federal
Regular Expressions	AAM253	10.138.57.253	Modular Messaging	AAMD29
Defaults	AAMCluster1	cluster1.ca.avaya.com	Modular Messaging	AAM253 (250-247-244)
	AAMCluster2	cluster2.ca.avaya.com	Modular Messaging	AAM223 (220-217-214)
	CMD1	10.138.57.139	CM	CMD1
	CPMG162	47.11.245.161	Other	CPMG Node161
	CS1K	47.11.220.178	Other	CS1K
	Hammer	47.11.241.242	Other	Hammer box
	Henry CS1000	10.138.81.20	Other	
	Rong CS1000	47.11.66.219	Other	
	rong cs1000 2	47.11.66.222	Other	
	L SMD1	10.138.57.136	Session Manager	SMD1
	Select : All, None			M 4 Page 2 of 2 ≥

In the example screen above we have a number of SIP Entities.

An example AAM SIP entity is below:

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	Loop Detection					
	Loop Detection Mo	ode: Off				
	SIP Link Monitoring					
	SIP Link Monitor	ing: Use Session Manager Configu	ration 💌			
	Supports Call Admission Cont	brol:				
	Shared Bandwidth Manag	ger:				
	Primary Session Manager Bandwidth Associat	ion: 🗾				
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		Commit	Capcel			
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5. Set up *Entities Links*.

Below is a screen that shows the entity links. These links are between multiple Session Managers, and those that are between Session Managers and "other SIP Entities."

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Below our example screen shows an administered link between 2 SIP Entities.

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The above information is provided by AVAYA Inc. as a guideline. See disclaimer on page 1 $\,$

6. Set up *Time Ranges*.

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Dial Patterns TR-BVW	R		2	E	¥	£	00:00	23:59			
Regular Expressions Select : All, None											
Defaults											

Time ranges indicate when a particular rank or cost of a routing policy is to be used when determining the least-cost route. They do not indicate when routing policies are available to be considered for routing.

You must specify as many time ranges as necessary to cover all hours and days in a week for each administered routing policy.

7. Create *Routing Policies*

Routing Policies									
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Dial Patterns	1	AAMCluster2		0	AAMCluster2	AAMCluster2			
Regular Expressions	1	AAMD193		0	AAM193	AAMD193			
Defaults	1	AAMD196		0	AAM196	AAMD196			
	1	AAMD199		0	AAM199	AAMD199			
	1	AAMD202		0	AAM202	AAMD202			
	1	AAMD205		0	AAM205	AAMD205			
	1	AAMD208		0	AAM208	AAMD208			
		AAMD211		0	AAM211	AAMD211			
	1	AAMD226		0	AAM226	AAMD226			
		AAMD229		0	AAM229	AAMD229			-
	1	-				4.440.000			

Routing Policies form your "enterprise wide dial plan". This can include "Origination of the caller", "dialed digits" and "SIP domain" of called party and actual time of the call.

Here you can use a regular expression can be used Optionally, instead of "dialed digits" of the called party and the "SIP domain" of the called party a "regular expression" can be defined.

Depending on one or multiple of the inputs mentioned above a destination where the call should be routed is determined.

Optionally, the destination can be qualified by "deny" which means that the call will not be routed.

Session Manager uses the data configured in the Routing Policy to find the best match against the number (or address) of the called party.

8. Create Dial Patterns

Dial Patterns - Mozilla Firefo	ox		1						⇔	_
e <u>E</u> dit ⊻iew Hi <u>s</u> tory <u>B</u> o	okmarks	Tools	Help							
Dial Patterns		+	/							
https://10.138.57.134/S	MGB7							🗠 🔻 🖪 - Goo	ale 🔎 📕 🧌	
								На	Last Logged on at March 10, 2014 ; In LAbout I Change Password Ling off 6	5:35 9 dm
ura ^w System Manager 6.3									in proceed enange i assirere i tog en t	
Home Routing *		1								
" Routing	 Home 	/ Eleme	nts / Ro	uting	/ Dial Patterns					
Domains		1							Help	?
Locations	Dial	accerns								
Adaptations	New	Edit	Delete	Dup	licate More Actio	ins *				
SIP Entities	1									_
Entity Links	24 I	tems 🝭							Filter: Enable	
Time Ranges		Pattern	Min	Мая	Emergency Call	Emergency Type	Emergency Priority	SIP Bomain	Notes	
Routing Policies	1 🗆	1	5	5				ca.avaya.com	CM phones 1xxxx	Π.
Dial Patterns		2	5	5				ca.avava.com	CM phones 20000	
brain a coarris									ord phones minim	_
Regular Expressions		230	4	4				ca.avaya.com	CallPilot 202i (CPMG162)	
Regular Expressions Defaults		230 25	4	4 4				ca.avaya.com ca.avaya.com	CallPilot 202i (CPMG162) CallPilot 202i (CPMG162)	
Regular Expressions Defaults		230 25 30	4 4 4	4 4 4				ca.avaya.com ca.avaya.com ca.avaya.com	CallPilot 202i (CPMG162) CallPilot 202i (CPMG162) CM Phones 3xxx	
Regular Expressions		230 25 30 476	4 4 4 7	4 4 4 7				ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com	CallPilot 2021 (CPMG162) CallPilot 2021 (CPMG162) CM Phones Зихи CM Sets for CP MWI test	
Regular Expressions		230 25 30 476 477	4 4 4 7 7	4 4 7 7				ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com	CallPilot 2021 (CPMG162) CallPilot 2021 (CPMG162) CM Phones Зики CM Sets for CP MWI test CallPilot CPMG162	
Regular Expressions Defaults		230 25 30 476 477 50	4 4 7 7 4	4 4 7 7 4				ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com	CallPilot 2021 (CPM6162) CallPilot 2021 (CPM6162) CM Phones Зики CM Sets for CP MVI test CallPilot CPM6162 Hammer box	
Regular Expressions Defaults		230 25 30 476 477 50 502	4 4 7 7 4 4	4 4 7 7 4 4				ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com	CallPilot 2021 (CPMG162) CallPilot 2021 (CPMG162) CM Phones 3xxxx CM Sets for CP MWI test CallPilot CPMG162 Hammer box CM Phones	
Regular Expressions Defaults		230 25 30 476 477 50 502 680	4 4 7 7 4 4 4	4 4 7 7 4 4 4				ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com ca.avaya.com	Calliplie 2 22: (CPMG 162) Calliplie 2 22: (CPMG 162) CM Pate 5 Cr CP MVI test Callipliet CPMG 162 Hammer Son CM Phones AMD 193	
Regular Expressions		230 25 30 476 477 50 502 680 681	4 4 7 7 4 4 4 4	4 4 7 7 4 4 4 4				Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com	Calificit 2021 (CPMG162) Calificit 2021 (CPMG162) CM Definet 2020 (CPMG162) CM Set for CP MWI test Calificit CPMG162 Hammer box CM Phones CM Phones AAMD193 AAMD193	
Regular Expressions Defaults		230 25 30 476 477 50 50 680 680 681 682 683	4 4 7 7 4 4 4 4 4 4	4 4 7 7 4 4 4 4 4 4 4				Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com	Callible 2021 (CPM6162) Callible 2021 (CPM6162) CM Phones Shuri CM Sets for CP Mivil test Callible CPM6162 Hammer box CM Phones AMD193 AAMD193 AAMD196 AAMD196	
Regular Expressions Defaults		230 25 30 476 477 50 502 680 681 682 683 683	4 4 7 7 4 4 4 4 4 4 4	4 4 7 7 4 4 4 4 4 4 4 4				Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com Ca.avaya.com	Calificit 2021 (CPMG162) Calificit 2021 (CPMG162) CM Phones 3xxxx CM Sets for CP MVI test Calificit CPMG162 Hammer box CM Phones AAMD193 AAMD193 AAMD193 AAMD202 AAMD202	

Assign the appropriate "Routing Destination" and "Time Of Day"

A dial pattern specifies which routing policy is used to route a call based on the digits dialed by a user that match that specific pattern. The originating location of the call and the domain in the request-URI are also used as criteria to determine how the call gets routed.

Session Manager will try and match the request-URI of a request to a row in the dial pattern table. If no match is found, Session Manager modifies the domain in the request URI to remove one level of sub-domain. For example, if **us.acme.com** was tried, then Session Manager drops "us." And tries **acme.com**.

Below is an example Dial Pattern, used to route to our Aura Messaging Server system aamd202.ca.avaya.com.

🥹 Dial Pattern Details - Mozilla	a Firefox						↔	- 0 >
<u>File Edit View History Boo</u>	okmarks <u>I</u> ools <u>H</u> elp							
Dial Pattern Details	+							
🔶 🔒 https://10.138.57.134/SI	MGR/				∰ ⊽ C 🛽 🕄	≠ Google	🔎 🦊 1	1
AVAVA						Last Lo	gged on at March 10, 2014 !	5:35 PM
Aura [®] System Manager 6.3						Help About Change	Password Log off A	.dmin
Home Routing *								
▼ Routing	Home / Elements / Routing / Di	al Patterns						
Domains	Di-I D-Marson D-A-Ma				I		Help ?	- 1
Locations	Dial Pattern Details			Commit Ca	ncer			
Adaptations	General							
SIP Entities		* Pattern: 683						
Entity Links		* Min: 4						
Time Ranges		* Max: 4	-					
Routing Policies		Emergency Call:						
Pogular Expressions		Ememancy Priority: 1						
Defaults		Ememory Type:						
		SIB Domains						
		Notes: 0.00						
		Hotest HAI	10202					
	Originating Locations and Ro	uting Policies						
	Add Remove							
	1 Item 🥸						Filter: Enable	
	Originating Location Name 🔺	Originating Location Notes	Routing Policy Name	Rank	Routing Policy Disabled	Routing Policy Destination	Routing Policy Notes	
	🗖 byw	bvw	AAMD202	0	Г	AAM202	AAMD202	
	Select : All, None							
	Desired Origination Locations							
	Demeu Originaung Locations	•						
	Add Kemove							
	Ulterns 🤯						Filter: Enable	
	Unginating Location					Notes		- 1
				Commit Ca	ncel			
				John Ca				
								-

9. Create Default Patterns.

Personal Settings	+		
S + ciscular Securitys	/SMGR/	A T C Goode	01*
	onun.		/
		Last Logg Help About Change P	ed on at March 10, 2014 5:3 assword Log off Ad
v			
Home Routing "			
[™] Routing	Home / Elements / Routing / Defaults		Help 3
Domains	Personal settings for user 'Admin'	Restore Defaults Revert Apply	
Locations	Adaptations	,,	
SIP Entities	* Matching Pattern Min Length:	1	
Entity Links	* Matching Pattern Max Length:	36	
Time Ranges			
Routing Policies	Dial Patterns * Dial Pattern Min Length:	1	
Dial Patterns	* Dial Pattern Max Length:	36	
Regular Expressions			
Defaults	Entity Links		
	* Listen Port:	5061	
	Default Transport Protocol for Entity links:		
	Domain Management		
	Suffix:		
	SIP Entities		
	Туре	Session Manager 🗾	
	Time Zone	America/Fortaleza	
	Default Transport Protocol for Ports	TLS 💌	
	Override Port & Transport with DNS SRV		
	Time Ranges		
	* Time Range Start Time	00:00	
	* Time Range End Time	23:59	

The Defaults screen (above) is where you set your personal settings for all the NRP menus. You can then save these settings as your personal default.

BUTTONS AND USAGE:

- **RESTORE DEFAULTS** Restores vendor defaults.
- **REVERT** Reverts to settings before the last applied settings.
- APPLY Saves and applies the modified personal settings

Interface screen shown below.

6.0

Configuring the Message Application Servers and Message Storage Server



CONFIGURING THE AURA MESSAGING SERVER

When you first login to the AVAYA Aura Server you will see the System Management



System Management Interface

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The Messaging Administration screen below will be displayed.

 In the left panel scroll down until you see "Telephony Domains" then click on it.



Starting from AAM 6.3 there is the ability to incorporate multiple SIP domains. So in short you can instantiate multiple PBX end points. This allows for greater consolidation of PBX infrastructure over multiple sites and too simplifies routing back-out from AAM.

For this example we'll install/setup one domain end point. Often this will be your Session Manager IP address.

- Enter first your "Messaging SIP Domain" and "Far-End SIP Domain".
- Then your Gateway "IP" address of Session Manger. This then directs all calls to his end-point.
- Then "Save".

AVAYA			Avaya Aura [®] Messagi System Management Interface (Sl	ng MI)
Help Log Off	Administration			
Administration / Messaging			This Server: aam226	-hyw
Messaging System (Storage)	Talanhany Domain	Administration		
User Management	relephony Domain A	Administration		
Class of Service	The Telephony Domain Admini	stration page is used for administration of the tel	ephony domain parameters used by the messaging system.	
Sites				
Topology				
Storage Destinations	Far-end Domains	1 🔻		
System Policies	Delete Telephony Profile	Cateway ID	Messaging SIP Domain Far-end SIP Domain	
System Mailboxes	Name	Gateway 1D	Messaging SIF Domain	
System Administration	Marine			
Sending Restrictions	default	1	co.avava.com	
User Activity Log Configuration		-	contrayatesiii	
Reports (Storage)				
Users		Far-end Connections 1 -		
Into Mailboxes				
Uninitialized Mailboxes	Delete Gateway ID	<u>1P</u>	Transport Port Monitor interval	
Login Failures		10 120 57 120	TOD 5000 0	
Locked Out Users	1	10.138.57.138	TCP 5060 0	
Sites				
Dormant Mailboxes	Save Help			
Full Mailboxes				
Web Access				
Server Information	Telepho	ny Topology Reports None	▼	
Alarm Summary				
Voice Channels (Application)				
Cache Statistics (Application)				
Outbound Fax (Storage)				
Server Settings				
Server Role / AxC Address				
Server Settings (Storage)				
Trusted Servers				
Networked Servers				
Request Remote Update				
Server Settings (Application)				
Dial Rules				
Cluster				
System Parameters				
Log Configuration				
IMAP/SMTP Settings (Storage)				
General Options 👻				
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See the following page for definition explanations.

Note: Telephony Domains page is hidden for Application only server. This configuration step is supposed to be skipped for Application only server, and must be done on Storage only server or in case of Single server configuration.

Far-end Domains

Name	Description
Far-end Domains	The number of far-end SIP domains.
	SMI displays the number of rows that are equal to the number of far-end SIP domains that you select from the drop-down list. You can add a maximum of 500 SIP domains.
Delete	The check box to delete a far-end domain row.
	Select the check box for the far-end domain row to delete.
Telephony Profile	The name for the telephony profile that represents a gateway ID and SIP domain of the application server.
Name	The name can contain alphanumeric characters along with a dash (-), plus sign (+), underscore (_), and period (.).
Gateway ID	The ID of the far-end connection gateway.
Messaging SIP Domain	The name of the Messaging SIP domain.
Far-end SIP Domain	The name of the far-end connection SIP domain.

Far-end Connections

Name	Description						
Far-end	The number of connections to the far-end SIP proxy servers.						
Connections	3MI displays the number of rows that are equal to the number of far-end SIP domains that you select from the drop-down list. You can add a maximum of 15 far-end connections.						
Delete	The check box to delete a far-end connection row.						
	Select the check box for the far-end connection row to delete.						
Gateway ID	The ID of the far-end connection gateway.						
IP	The IP address of the far-end connection.						
Transport	The transport method that the telephony server uses for SIP signaling. The transport method of the application server and the telephony server must match. The types of transport methods are:						
	 TCP: Not encrypted. Use port 5060. This is the default value. TLS: Encrypted. Use port 5061. 						
Port	The port number of the far-end connection.						
	The default value is <i>5060.</i>						
Monitor Interval	The option to administer monitoring of a far-end connection in minutes.						
	The default value is 0 minutes. If you set the value to 0, Messaging does not monitor the far-end connection.						

Now proceed to "Telephony Integration". You may see the screen flicker to what looks to contain settings and then back to "NONE" – this is normal.

Move the drop down menu from **NONE** to **SIP**.



Validate the **TCP** and **TLS** ports read correctly. The AAM s/w default may show **0** for **TLS**. If so replace it with **5061** and hit save.

Once saved, perform a **Stop Messaging** and **Start Messaging** to solidify the telephony configuration.

Note: You may want to initially setup your system with TCP then after 'proof of concept' voice mail connectivity is working move over to TLS if desired. Troubleshooting a PBX with TLS enabled is challenging should issues arise.

AVAYA	Avaya Aura® Messaging System Management Interface (SMI)
Help Log Off	Administration
Administration / Messaging	This Server: aaw226.bu
Additional and a second s	
Voice Channels (Application)	Telephony Integration
Outhound Fax (Storage)	The Telephony Integration page is used for administration of the switch link parameters of the messaging system
Server Settings	
Server Role / AxC Address	
Server Settings (Storage)	BASIC CONFIGURATION
External Hosts	
Trusted Servers	Switch Integration Type SIP
Networked Servers Request Remote Lindate	
Server Settings (Application)	SIP SPECIFIC CONFIGURATION
Dial Rules	
Cluster	Far-end Domains 1 v
System Parameters	
Languages	SIP Domain 1 Telephony Profile Name default Gateway ID 1 Messaging co.avava.com Far-end co.avava.com
Log Configuration	
Gapasal Options	Ear-and Connections 1 -
Mail Ontions	
IMAP/SMTP Status	
Telephony Settings	Connection 1 Gateway ID 1 IP 10.138.57.136 TCP v Port 5060 Monitor interval 0
Telephony Integration	
Telephony Domains	Messaging IPv4 Address IP 192.168.21.129 TCP Port 5060 TLS Port 5061
Advanced (Application)	
System Operations	Messaging Ports Call Answer Ports 100 Maximum 100 Transfer Ports 20
Miscellaneous	
Core Files	Switch Teurley, Table 120. Mariane 120
Utilities	
Messaging DB Audits (Storage)	
Start Messaging	Save Help Show Advanced Options
Saprices Pastart (Storage)	
Change LDAP Password (Storage)	
Logs	
Administration History	
Administrator	
Alarm	
Software Management Maintenance	
IMAP/SMTP Messaging	
ELA Delivery Failures	
User Activity	
System Log Filter	
Collect System Log Files	
Call Records	
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Note: Configure settings on this page for both Application and Storage servers.

See the following page for definition explanations.

BASIC CONFIGURATION

Name	Description
Switch Integration Type	Messaging uses SIP integration.
	The SIP SPECIFIC CONFIGURATION section is available only for SIP integration.
IP Address Version	The version of the IP address.

SIP SPECIFIC CONFIGURATION

 SMI displays this section only if you select SIP from the Switch Integration Type drop-down list. You have read-only access to these fields on the Telephony Integration page. You can administer these fields on the Telephone Domains page.

 Name
 Description

Name	Description
Far-end	The number of far-end SIP domains.
Domains	SMI displays the number of rows that are equal to the number of far-end SIP domains that you select from the drop-down list. You can add a maximum of 500 SIP domains.
SIP Domain	The domain names of the application server and the far-end connection, for example sip.example.com.
	 Telephony Profile Name: The name for the telephony profile that represents a gateway ID and SIP domain of the application server. Gateway ID: The ID of the far-end connection gateway. Messaging: The name of the Messaging SIP domain. Far-end: The name of the far-end connection SIP domain.
Far-end	The number of connections to the far-end SIP proxy servers.
Connections	SMI displays the number of rows that are equal to the number of far-end SIP domains that you select from the drop-down list. You can add a maximum of 15 far-end connections.
Connection	The connection details of a far-end connection, including:
	Gateway ID: The ID of the far-end connection gateway. IP: The IP address of the connection.
	 TCP or TLS: The transport method that the telephony server uses for SIP signaling. The transport method of the application server and the telephony server must match. The types of transport methods are: TCP: Not encrypted. TLS: Encrypted.
	 Port: TCP: 5060 TLS: 5061 Monitor interval
Messaging	The IP address of the near-end application server.
Address	This address is always a read-only field.
	 IP: The IP address of the server. TCP: Use port 5060. TLS: Use port 5061.
Messaging	The maximum number of active calls to or from a user.
Ports	 Call Answer Ports: The range of these ports is from 2 to 100. Maximum: The maximum number of ports that Messaging uses. Transfer Ports: The maximum number of transfer ports that Messaging uses.
Switch Trunks	The number of trunk members for Messaging on the telephony server.
	 Total: The total number of trunks administered. Messaging requires at least one more port than the number of ports that you administer in Call Answer Ports Maximum: The telephony server supports a maximum of 120 trunk members. The trunk members, in addition to the call answer ports, are for features such as the transfer feature, which require more switch trunks.
	The number in the Switch Trunks field must match the number of trunk members on the telephony server if that server specifies the maximum number of trunks.

There are **Advanced Options** configuration to which may need to be tweaked. For a Session Manager installation no value needs to be changed. Some values tweaks are needed for CS1K and other 3rd PBX support (consult other CN documentation where applicable).

AVAYA			Avaya Aura® Messaging System Management Interface (SMI)
Help Log Off	Administration		
Administration / Messaging			This Server: mngmsg10
Full Mailboxes	Save Help	Hide Advanced Options	-
Web Access			
Server Information	ADVANCED OPTIO	INS	
System Status			
Voice Channels (Application)		Quality Of Service	Call Control PHB 46 Audio PHB 46
Cache Statistics (Application)			
Outbound Fax (Storage)		UDP Port Range	Start 8000 End 10000
Server Settings			_
Server Role / AxC Address		G.729 Codec Support	Enable G.729
External Hosts			
Trusted Servers			1: None
Networked Servers			None
Request Remote Update		Media Encryption	srtp-aescm128-hmac80
Dial Rular			srtp-aescm128-hmac32
Cluster			srbp-aescm2556-hmac80
System Parameters			srp-aescm256-nmac32 * Add: Clear
Languages			
Log Configuration		Enforce SIPS UKI for SRIP	yes 🗸
Gaparal Options		Include "AAM" in From/P-AI Header	
Mail Options		Include AAM INTIONAL ATTREADED	•
IMAP/SMTP Status		SIP INFO for DTMF	Ignore 👻
Telephony Settings			-
Telephony Integration		Media Encryption During CapNeg	Enabled 👻
Advanced (Application)			
System Operations E	S	upported Header includes "replaces"	no 🔻
Timeouts		Telephone French Perdend Trans	
Miscellaneous		Telephone Event Payload Type	
Core Files		Monitor Far-and OPTIONS messages	no - Prostivo Interval 0
Messaging DB Audits (Storage)		nonitor fur end of frond messages	
Start Messaging		Inactive Link Actions	Alarm Only
Stop Messaging			
Services Restart (Storage)		Minimum Session Refresh Interval	600
Change LDAP Password (Storage)			
Administration History		SIP REFER Delay	1000
Administrator			
Alarm		Enable Basic Transfer	
Software Management			
Maintenance		Cross-Switch Transfer	Enabled 🗸
ELA Delivery Failures		Constanting Auditor	Tourselos Fachlad October Fachlad Mill Fachlad
User Activity		Connection Audits	Incoming Enabled V Outgoing Enabled V MWI Enabled V
System Log Filter		Customize Blocked Caller-ID	
Collect System Log Files		Castomize biocked Caller-ID	
Call Records		Blocked Caller-TD	Literaame apopymous apopymous invalid Diselay Name apopymous
Diagnostics Results (Application)		blocked Caller-ID	
Server Reports		Blocked Caller-ID Matchas	From Header
System Evaluation		Biocked Caller-1D Matches	
IMAP Traffic (Storage)			

See the following page for definition explanations

ADVANCED OPTIONS

When the ADVANCED OPTIONS section is hidden, SMI displays the **Show Advanced Options** button. If you click **Show Advanced Options**, the button changes to **Hide Advanced Options** and SMI displays the ADVANCED OPTIONS fields.

Name	Description						
Quality Of Service	The QoS field	to administer the behavior of:					
	Call CoAudio I	ntrol PHB: The quality of service level for call control messages. PHB: The quality for audio streams.					
	Use this field if default values number in the group uses. Tl	'your IP network infrastructure supports QoS. You can keep the in QoS or enter new values. The values you enter must match the e network region of the telephony server that the Messaging signaling he range for both these fields is from 0 to 63.					
UDP Port Range	The range of p	port numbers used by UDP for RTP.					
	The default rai	inge is from 8000 to 10000.					
	 You car Messagi 	n change the Start value. jing uses the number of available trunks to calculate the End value.					
	Ensure that th ports used for	he range of ports that you allocate to UDP does not conflict with the r other purposes.					
G.729 Codec Support	1	The option to enable support for the G.729 codec for media transmission.					
		- If you select this check box, Messaging supports the G. 729 codec with the G.711 $\mu\text{-law}$ and G.711 A-law codecs.					
		 If you clear this check box, Messaging only supports the G.711 μ-law and G.711 A-law codecs. 					
		😥 Note:					
		Messaging supports the G.711 and G.729 codecs only for media transmission. Messaging supports the GSM codec and the G.711 codec for storage encoding.					
Media Encryption		The type of SRTP media encryption that the telephony server uses.					
		This field is optional.					
		😥 Note:					
		The storage server must be online for the media encryption-related changes to take effect. If you have a single-server installation, Messaging must be running.					
Enforce SIPS URI for SRTP		The option to specify whether a SIPS URI or secure URI is required for SRTP.					
		If you set the value to yes , then any incoming call that contains SRTP without a SIPS URI fails.					
SIP INFO for DTMF		The SIP INFO messages for the out-of-band DTMF.					
		The options are:					
		• Ignore : Ignore all SIP INFO DTMF digits in the signaling stream. This is the default value.					
		 Accept: Accept all incoming SIP INFO messages for the two formats and interpret the messages received in the RTP stream as RFC 2833-compliant digits. The system sends outbound DTMF as SIP INFO messages with application type DTMF relay with a specified duration of 250 milliseconds. 					

(Continued onto next page)

Name	Description
Include "AAM" in From/P-AI Header	The option to add "AAM" in the From SIP header and P- Asserted Identity SIP header.
Media Encryption During CapNeg	The SRTP media encryption that the telephony server uses when capability negotiation (CapNeg) is present in SDP.
	The options are:
	Enabled: Set the default value.
	• Disabled : Change the value in the Media Encryption field to None . Messaging automatically changes the value, and you cannot change the value. Select Disabled only for a specific telephony integration.
	For more information about administering the media encryption during CapNeg, see the configuration notes.
Supported Header includes "replaces"	The supported header that must include the <i>replaced</i> value so that endpoints reflect the capabilities in SIP headers and Messaging effectively communicates with a specific telephony integration.
	The options are:
	no: The default value.
	• yes : Only for a specific telephony integration. For more information about administering the header with the <i>replaces</i> value, see the configuration notes.
Telephone Event Payload Type	The RTP payload type for RFC2388 DTMF events.
	The dynamic payload type range is 96 to 127. The default value is 127. For example, when Messaging starts a call for a Reach Me operation, Messaging specifies the 127 RTP payload type for RFC2388 DTMF events. This field is inactive if you set the SIP INFO for DTMF field to Accept.
Monitor Far-end OPTIONS messages	The option to enable Messaging to proactively monitor the SIP OPTIONS messages that the far-end connection sends.
	If Messaging does not receive a SIP OPTIONS message from the far-end within the time specified in the Proactive Interval field, Messaging considers the far-end as nonfunctional or unreachable. The options are:
	no: Disables monitoring of the OPTIONS messages. This is the default value.
	• yes: Enables monitoring of the OPTIONS messages.
	Proactive Interval: The interval, in seconds, for which the far-end is configured for sending the OPTIONS message.

(Continued on next page)

Name	Description
Inactive Link Actions	The option to generate an alarm or disconnect all incoming connections.
	The options are:
	• Alarm Only: Messaging generates an alarm when an expected OPTIONS message does not arrive within the interval configured in Proactive Interval + 30% of the interval period. For example, if you configure the interval as 10 seconds, Messaging generates an alarm after 10 + 3 (30% of 10) = 13 seconds. On the next successful receipt of SIP OPTIONS or the next incoming call, Messaging clears the alarm.
	Close Connections: Messaging generates an alarm, closes all incoming connections, and drops all active calls.
	This option is only available if you set the value of Monitor Far-end OPTIONS messages to yes .
Minimum Session Refresh Interval	The minimum session refresh interval in seconds.
	Usually, the refresh interval value is set to match the interval value administered for the switch.
SIP REFER Delay	The delay of the transfer operation in milliseconds when a Messaging outbound call is answered and the SIP REFER request sent.
	The value range is 0 to 5000 milliseconds.
Enable Basic Transfer	The option to enable and disable the Basic Transfer feature.
	If you select this check box, Messaging performs a blind transfer operation and does not directly call the destination endpoint. The gateway of the Messaging network establishes the call and transfers the two endpoints. Because the gateway establishes the call, the caller ID might change.
	😢 Note:
	If you enable the Basic Transfer feature, Messaging does not support:
	P-Asserted Identity
	Multiple SIP domains
	• SIP UUI
Cross-Switch Transfer	The option to enable and disable call transfers between different gateways.
	Cross-switch transfer is enabled by default.

(Continued on next page)

Namo	Description
Connection Audits	The option to enable the audit of the incoming, the outgoing, and the MWI SIP connections.
	By default, Messaging disconnects the connections that are idle for 30 minutes.
Customize Blocked Caller-ID	The option to customize the appearance of the blocked caller ID with a customized caller ID.
	This check box is clear by default.
	Important:
	To determine how the system displays the customized caller ID, check with your service provider. You can understand how the network of the service provider processes a blocked caller ID.
Blocked Caller-ID	The option to administer values to at least one of the following fields to customize the caller ID appearance:
	Username
	Display Name
	These fields are available if you select the Customize Blocked Caller-ID check box.
	 The user name and the display name: anonymous@anonymous.invalid
	Only the user name: anonymous@anonymous.invalid
	The user name with the SIP domain: anonymous-sip.com
Blocked Caller-ID Matches	The option to administer the SIP headers that Messaging examines to determine whether the caller ID of the incoming call is blocked. The options are:
	From Header: To administer Messaging to examine the From SIP header.
	P-AI Header: To administer Messaging to examine the P- Asserted Identity SIP header.

7.0 SESSION MANGER CONFIG & AAM CLUSTERING

Read over this section before making any formal changes to your switch. You will want to understand the underlying philosophy. The screen shot below is largely the end result.

It's quite easy to create a round-robin, local, cluster topology within **SMGR**. In short a 3 server Messaging Application cluster setup (to which all point to a standalone 4th server MSS) can be comprised under **Local Host Name Resolution**.

You'll want to create a top level host name for the cluster, in the example below, it's **cluster1.ca.avaya.com** to which will point to your 3 AAM Application Servers. The **Priority** and **Weight** is simply a load balancing exercise. With all set to 100, SM will round-robin to each server. Consult further with Session Manager documentation on how to manipulate the **Priority** and **Weight** settings should a non-round robin duty cycle be desired.

See the following screen shots on the proceeding pages on how this setup was configured more specifically.

Session Manager - Mozilla Fi	irefox					
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Editor	Local Host Name Entries					
Network Configuration	New Edit Delete More Acti	ons •				
Failover Groups						
Local Host Name	6 Items 🧶					Filter: Enable
Resolution	Host Name (FQDN)	IP Address	Port	Priority	Weight	Transport
Remote Access	cluster1.ca.avaya.com	10.138.57.244	5060	100	100	тср
SIP Firewall	🗖 cluster1.ca.avaya.com	10.138.57.247	5060	100	100	тср
Device and Location	🗖 cluster1.ca.avaya.com	10.138.57.250	5060	100	100	тср
Configuration	cluster2.ca.avaya.com	10.138.57.214	5060	100	100	тср
Application	cluster2.ca.avaya.com	10.138.57.217	5060	100	100	тср
Configuration	cluster2.ca.avaya.com	10.138.57.220	5060	100	100	TCP
System Status	Select : All, None					
System Tools	Background Job Status					
Performance						
	View Failures Stop Job					
	0 Items 🝣 Show ALL 🔽					Filter: Enable
	Start Time Status Perce	nt Completed Total Ent	ries to Process	Failed Entries	Last Updated	Job Name
	No jobs have been queued since Sy	stem Manager was last started.				

IMPORTANT:

In AAM-7.0.0 the MWI functionality is moved from the Application Server to the Message Store Server so that MWI could be managed from the MSS. It allows to invoke polling for MWI after a call server restart. New design requires additional settings:

- Entity link for the storage ٠ server. The app server entity links remain in place for inbound and outbound SIP calls.
- If the customers CM dial plan • and AAM Site dial plan differ (CM is 10 digits and AAM is 7 digits), then the ASM must be configured with adaptation rules to strip or add digits in and out of AAM. But this adaptation will not only be applied to the app servers, but to the store as well.

Messaging is used as the Type.

With AAM-7.0.0 you also need to add the MSS address to AAM's SIP entity to support MWI notifications.

Entities		+			
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SIP Entities					
Entity Links	28 It	ems 🤤			Filter: Enab
Time Ranges		Name	FQDN or IP Address	Туре	Notes
Routing Policies		AAM238	10.138.57.238	Messaging	AAMD24
Dial Patterns		AAM241	10.138.57.241	Messaging	ILG CMM Federal
Regular Expressions		AAM253Storage	10.138.57.253	Messaging	AAM029
Defaults		AAMCluster1	cluster1.ca.avaya.com	Messaging	AAM253 (250-247-244)
		AAMCluster2	cluster2.ca.avaya.com	Messaging	AAM223 (220-217-214)
		CMD1	10.138.57.139	CM	CMD1
		CPMG162	47.11.245.161	Other	CPMG Node161
		CSIK	47.11.220.178	Other	CSIK
		Hammer	47.11.241.242	Other	Hammer box
		Henry CS1000	10.138.81.20	Other	
		Rong CS1000	47.11.66.219	Other	
		rong_cs1000_2	47.11.66.222	Other	
		SMD1	10.138.57.136	Session Manager	SMD1
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Under the **Routing Polices** for this setup, all 5 digit calls starting with 699 will get routed to this far-end entity (comprising of 3 Application Servers).



8.0 MESSAGING PATCHING

To download patch you should use appropriate SMI page: Server Maintenance-> Miscellaneous -> Download Files.

Then patches must be unpacked and activated on Server Maintenance -> Server Upgrades -> Manage Updates

Please install in following order:

- CM 7.0 Kernel Service Pack 4 (combined with VMWT) KERNEL-2.6.32-642.3.1.el6.AV4
- CM 7.0 Security Service Pack 5
- CM 7.0.1.2 Service Pack
- AAM SP0004 (SP0Rev04)

This screen shots are current at the time of AAM 7.0.0 GA.

AVAYA

Help Log Off	Ad	ministration										
Administration / Server (Maintenance)												
Alarms	Manac	ie Undates										
Current Alarms	manag	je opunes										
SNMP												
Agent Status	The Mana	ige Updates SMI page allows you to	manage the i	updates fo	or this server							
Access	This server is currently running release: R017x.00.0.441.0											
Incoming Traps	The server mode is currently: dormant											
FP Traps	The server	The server mode is currently: uormanic										
FP Trap Test												
FP Filters		Update ID	Status	Type								
Diagnostics	-											
System Logs		00.0.441.0-23523	activated	cold								
Ping		KERNEL-2.6.32-642.3.1.el6.AV4	activated	cold								
Traceroute	Ä	DLAT-shale E-00E0	a attracted	ا ما م								
Netstat		PEAT-mel6.5-0050	activated	cold								
Server		MSG-00.0.441.0-017_0004	activated	cold								
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Server Date/Time												
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Display Configuration												
Time Zone Configuration												
NTP Configuration												
Server Upgrades												
Manage Updates												
Data Backup/Restore												

9.0 MULTIPLE SITES & AUTO ATTENDANT DN

AAM 7.0 introduces up to 500 multiple sites. As such if one dials the voice mail DN (Internal messaging Access Number or External Messaging Access Number) to a site, AAM will answer "integrated" assuming the calling ID (phone extension) has a matching mailbox within the site as defined by the mail DN called.

If you dial an alternative site, voice mail DN not native to your mailbox, AAM will answer non-integrated and prompt to enter both your mailbox number and password.

By design AAM 7.0 if prompted for mailbox and password, AAM will allow you to login to different sites mailboxes assuming you enter the matching voice mail box number and password. The only difference or distinction between multiple sites is its perspective on integrated versus non-integrated call recognition.

In reference to Auto Attendant, AA will only transfer to calls it sees as defined in its site with a matching mailbox number. It's not possible for AAM to transfer to one of the other 499 possible sites. If you dial (for example) 6931 and there is a defined MB of 3074 under said site, AAM will allow the transfer.

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Login Failures Locked Out Users	Test	One	Sanity		3074	3074	Site Default	Avaya	Yes	Standard		
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Dormant Mailboxes Full Mailboxes	Test	Load0	Default		80000	80000	Site Default	Avaya	Yes	Standard		
Server Information	Test	Load1	Default		80001	80001	Site Default	Avaya	Yes	Standard		
System Status Alarm Summary	Test	Load2	Default		80002	80002	Site Default	Avaya	Yes	Standard		
Voice Channels (Application)	Test	Load3	Default		80003	80003	Site Default	Avaya	Yes	Standard		
Cache Statistics (Application)	Test	Load4	Default		80004	80004	Site Default	Avaya	Yes	Standard		
Server Settings	Test	Load5	Default		80005	80005	Site Default	Avaya	Yes	Standard		
Server Role / AxC Address	Test	Load6	Default		80006	80006	Site Default	Avaya	Yes	Standard		
Server Settings (Storage) External Hosts	Test	Load7	Default		80007	80007	Site Default	Avaya	Yes	Standard		
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Below is an example of a two site configuration.

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Voice Channels (Application) Cache Statistics (Application)	Country code:						
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Server Role / AxC Address	National prefix:						
Server Settings (Storage) External Hosts	International dialing (to this country):	Do not prepend N	ational Prefix 💌				
Trusted Servers Networked Servers	National destination code:						
Request Remote Update Server Settings (Application)	Dialing within national destination:	Do not prepend N	ational Prefix or National Destin	nation code 💌			
Dial Rules Cluster	Subscriber number length (within this site's national destination code):						
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10.0 CONSIDERATIONS / ALTERNATIVES

- AAM 7.0 supports TTY/TDD however you must ENSURE your PBX network is supported only for G711. AAM may present both G711 and G729 codec to the network but the PBX should only accept G711 as the true codec for TTY/TDD support.
- Multiple Network Regions If multiple network regions exist where call flow on the switch can travel to/from the network region used by AVAYA Aura Messaging, additional settings are necessary to ensure the codec defined for use with AVAYA Aura Messaging is among each of those network regions. In this case, it is recommended that AVAYA Aura Messaging be assigned its own network region. That network region number should then be placed in the "Far-end Network Region" field of the SIP Signaling Group used by AVAYA Aura Messaging as follows:
 - 1. Edit page 1 of the AVAYA Aura Messaging ip-network-region form to use the proper codec set.
 - 2. Go to page 3 of the form and enter the AVAYA Aura Messaging codec set number next to ALL network regions that may carry calls to / from AVAYA Aura Messaging.
- If using the ONE-STEP Recording feature, the Recording Delay Timer setting in Feature-Related System Parameters must be set to 2000 msecs. If not, the originator may hear a call answer greeting when using this feature.

Note: Customers using One-Step record may experience a slight delay of 2-4 seconds before recording begins.

- When using SRTP If an AVAYA Aura Messaging is connected to a single SESSION MANAGER that is networked to more than one AVAYA CM for voice messaging, all the PBXs communicating with that SESSION MANAGER should be enabled for SRTP or loss of connectivity may occur.
- If you are using Outlook and attempt to Play a message on a phone that requires an outside trunk and the call get rejected/fails, check to see if service provide is blocking calls with names.
- If the Pilot number is not available to the VXIBrowser change the "voice mail handle" field to match the "voice mail number." Additionally, in Session Manager if you are using a "Regular Expression" that matches the alphanumeric "voice mail handle" delete/change it. For new systems, simply do not add it.
- In a network consisting of an AVAYA CM and CS1000 with a Session Manager, if a call originates from a station on CM to a station on the CS1000, and subsequently gets transferred to another station on the same CS1000 (for example in a zero out scenario) the caller may

experience **no talk path**. The workaround for this issue is to disable a feature in the CM SIP trunk-group called Network Call Redirection (NCR).

CallerApps: When configuring the CM dial plan for Aura Messaging CallerApps utility, ensure when using a short dial plan, remove the AAR routing to the CallerApp, as this will embed the correct hunt group number in the SIP INVITE. The 'hunt number' is used by AAM to determine the correct site, and more importantly, have the CallerApps utility respond with the correct language prompts. If the correct hunt number is not found in the SIP INVITE and if AAM is further unable to determine the proper corresponding site, it may respond with default language voice prompts.

11.0 ADDENDUM FOR AUDIOCODES GATEWAY INTEGRATIONS

This section contains information regarding Issues and Solutions found with AudioCodes Gateways integrations. Audio Codes integration via their Mediant 1000 SIP Gateway supports a large number of T1 PRI/CAS/FXO type configurations with 3rd party PBXs.

- Note For AAM: Ensure your Audio Codes firmware is a minimum 6.40A.xxx.xxx to which is supported and known working.
 - 1. Issue: FIND ME: On a Find Me call when the called party answers they hear four DTMF digits (A, B, C, D) are played followed by about 1 second of silence, followed by the normal prompt with the first little bit missing).

SOLUTION: In the AudioCodes .ini file Add the RxDTMFHangOverTime parameter with a value of 100 instead of the default value of 1000ms.

2. Issue: DTMF: User presses the # key in a recording which is translated to a slight "bleep" when the recording is listened to.

SOLUTION: You can reduce the length of the DTMF chirp using a procedure for changing the recognition of DTMF in the AudioCodes. Please contact Integrations Support for this information.

- 3. Issue: FAC Transfer to Voice Mail is a feature that is currently NOT SUPPORTED when using AudioCodes Gateways. A solution is currently under investigation.
- 4. Issue: Transfer/FINDME Fails Calls originating through one Mediant Gateway to AAM, that have a new independent call established from the AAM through Mediant B will ring the end user but when call is answered user hears a tone and call is disconnected and a SIP 481 error is generated in the logs. Call is split and cannot be bridged as GWs do not know each has a leg of the same call.

SOLUTION: Use one Gateway. Multiple gateways are currently not supported. Investigations are underway to see if with AAM 6.3 and the feature "Multiple SIP Domains" may resolve this past known limitation.

5. Issue: Beep tone - A beep tone is heard when on a transfer just before the Personal Greeting is played. On a RNA no tone is heard.

SOLUTION: This occurs because AAM sends a SDP with (audio) "a=inactive." This then causes the Mediant gateway to play a HELP_TONE because it assumes that MoH (Music on Hold) will have to be played locally since there is no audio stream expected (a=inactive). The only way around this is to remove the tone from

the CPT file in the Gateway. A CPT with this tone removed is available from Integrations Support.

 Issue: E1 calls fail on upper half of span – If calls on E1 channels above 16 (the D-Channel for an E-1) have no talk path (dead air) it may be a setting in the AudioCodes Gateway causing it.

SOLUTION: In the AudioCodes ini file, check the ISDNGeneralCCBehavior parameter to see if it is set to 32. If so change it to 0, which is the default value. Then reload/burn the INI and calls should complete properly.

12.0 CHANGE HISTORY						
Version	Issue Date	Reason for Change				
A	4/7/11	Initial GA Release				
В	4/8/11	Corrected several typos. Removed any reference to TLS/SRTP not being supported.				
С	5/9/12	Clarification under Section 8 regarding CODECs.				
D	8/7/12	Clarification on Page 7 addressed regarding load balancing.				
E	10/25/12	Update Audio Codes Firmware Support				
F	10/26/12	Undo CPN mandating to Y on Station Form to Blank.				
G	03/17/14	AAM 6.3 Updates & updated content.				
Н	04/30/14	Minor Updates, SIP Timer and support versioning				
I	05/08/14	Clarifications to SIP shuffling config.				
J	07/02/14	Added a note regarding CallerApp and AAR.				
K	09/29/14	Changes to Proxy Route Section -Clarifications				
L	05/11/15	Minor change in CM (Send Calling Number Y)				
М	21/12/16	Updates for AAM-7.0.				

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AVAYA Inc. 4655 Great America Parkway Santa Clara CA 95054 +1-866-Go-AVAYA From Outside the US: +1 (908) 953-6000 http://www.AVAYA.com