



Avaya Solution & Interoperability Test Lab

Application Notes for CallTech CTMail® Unified Messaging system with Avaya Aura® Communication Manager R6.3 and Avaya Aura® Session Manager R6.3 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the CallTech CTMail® Unified Messaging system to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Session Manager.

CallTech CTMail® Unified Messaging system is an integrated automatic operator system, voicemail, audio text, fax server, Interactive Voice Response System and the most modern unified messaging server (fax, voicemail, email) with voice recognition and voice text.

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

1. Introduction

The overall objective of this interoperability compliance testing is to verify that the CallTech CTMail® Unified Messaging system software can interoperate with Avaya Aura® Communication Manager R6.3 and Avaya Aura® Session Manager R6.3. CallTech CTMail® Unified Messaging system (herein referred to as CTMail) connects to Avaya Aura® Communication Manager via Avaya Aura® Session Manager.

CallTech CTMail® Unified Messaging system is an integrated automatic operator system, voicemail, audio text, fax server, Interactive Voice Response System and the most modern unified messaging server (fax, voicemail, email) with voice recognition and voice text.

CallTech CTMail® Unified Messaging system is integrated with telephone systems, digital, analog and IP as well as the majority of mail servers on the market.

An assumption is made that Avaya Aura® Session Manager, Avaya Aura® System Manager and Avaya Aura® Communication Manager are already installed and basic configuration has been performed.

Only steps relevant to this compliance test will be described in this document. In these Application Notes, the following topics will be described:

- Avaya Aura® Communication Manager – A SIP trunk configuration between Avaya Aura® Communication Manager and Avaya Aura® Session Manager.
- Avaya Aura® Session Manager – A SIP trunk configuration between Avaya Aura® Communication Manager and Avaya Aura® Session Manager.
- CallTech CTMail® Unified Messaging system – IP address configurations for CTMail Automatic Operator, CTMail Voicemail, CTMail IVR System, and Fax Server (FAXMail®)

2. General Test Approach and Test Results

The general test approach was to manually place PSTN calls to CTMail users or direct calls to CTMail and verify the welcome prompt for each feature (CTMail Automatic Operator, CTMail Voicemail and CTMail IVR System). During the compliance test, an analog port on Communication Manager was connected to an external fax machine to send/receive fax to/from CTMail.

For serviceability testing, physical and logical links were disabled/re-enabled, Avaya Servers were reset and CTMail was restarted.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by

DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance testing included feature and serviceability tests. The focus of the compliance testing was primarily on verifying the interoperability of CTMail in an Avaya telephony environment that includes Communication Manager, Session Manager, and various endpoints. During the CTMail solution test, the following features were verified:

- CTMail Automatic Operator
- CTMail Voicemail
- CTMail IVR System
- Fax Server (FAXMail®)

2.2. Test Results

All executed test cases passed successfully. CTMail successfully interoperated in an Avaya telephony environment. For testing CTMail, there are two ways (many-to-one and one-to-many) to accomplish the test.

- The first method is utilizing Vector Directory Numbers (VDNs) and a route-to feature in the vector. CTMail will inspect the History-Info header in the SIP trace coming into CTMail to find which Dialed Number Identification Service (DNIS) number the call is coming from. Depending upon the DNIS number, the call is redirected to an appropriate destination system mentioned in **Section 2.1**.
- The second method is providing a different extension for each system mentioned in **Section 2.1**. Thus a call coming into the CTMail will have a different called number. In this case, the History-Info header will have the called number.

During the compliance test, the member utilized the latter method to accomplish tasks.

2.3. Support

Technical support for CTMail can be obtained through the following:

- support@calltechsa.com
- +57 (1) 6 35 65 35 Ext: 911

3. Reference Configuration

Figure 1 illustrates a configuration used during the compliance test. For completeness, Avaya 96xx Series SIP IP Telephones on the Avaya S8300D Server and Avaya G450 Media Gateway side have been registered to Session Manager. These endpoints are included in Figure 1 to demonstrate calls between the SIP IP telephones that are going through the IP/PRI trunk between two Communication managers. The solution described herein is also extensible to other Avaya Servers and Media Gateways.

***Note:** Avaya S8300D Server with an Avaya G430 Media Gateway was included in the test only to provide an inter-switch scenario. Thus, there will not be any discussion on configuring Avaya S8300D Server with an Avaya G430 Media Gateway.*

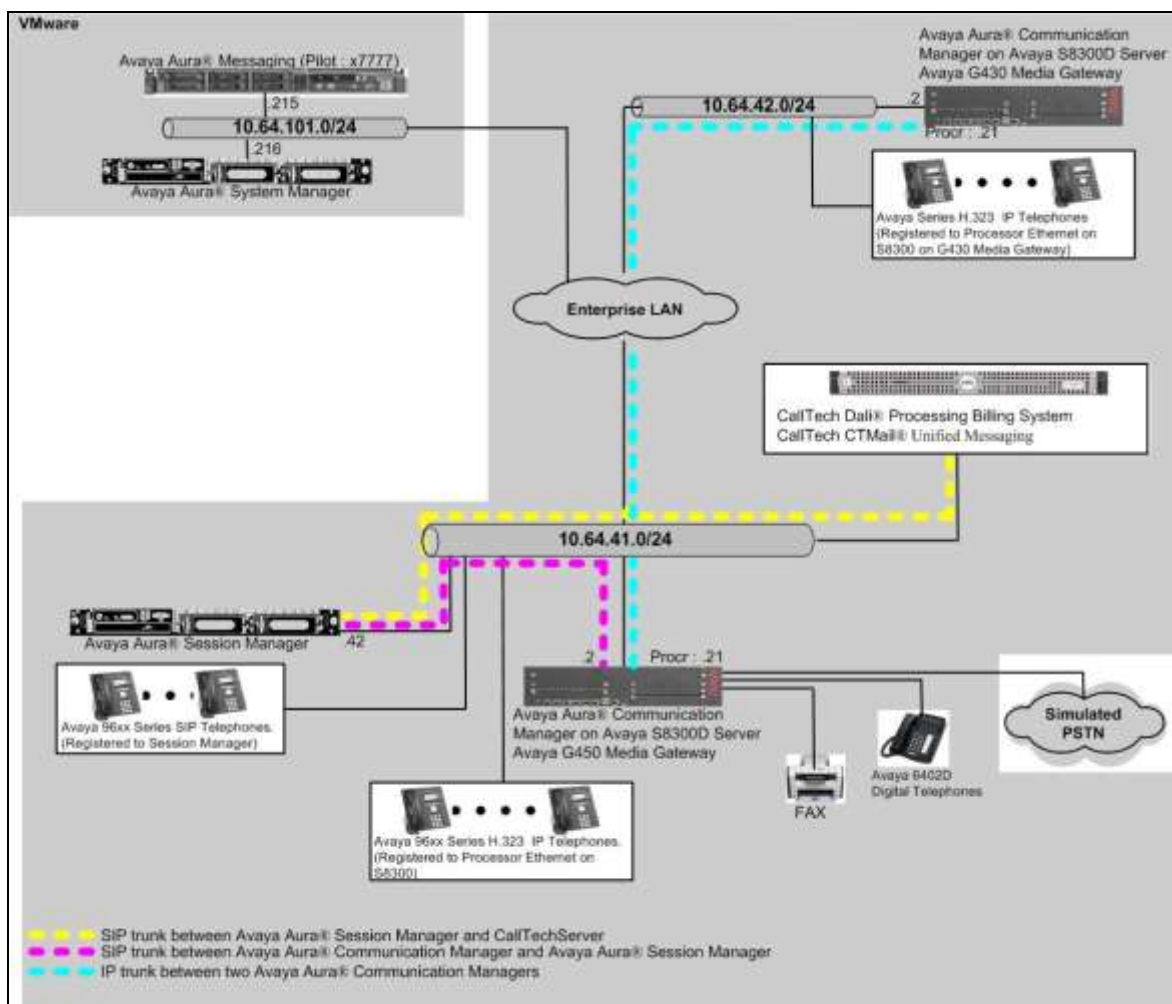


Figure 1. Test configuration of CTMail with Avaya Aura® Communication Manager

4. Equipment and Software Validated

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

Equipment		Software
Avaya S8300D Server with Avaya G450 Media Gateway		Avaya Aura® Communication Manager 6.3 (R016x.03.0.124.0) with Patch 03.0.124.0-21754
Avaya Aura® System Manager		6.3.13
Avaya Aura® Session Manager		6.3.13.0.631304
Avaya S8300D Server with Avaya G430 Media Gateway		Avaya Aura® Communication Manager 6.01 (R015x.02.1.016.4)
Avaya 9600 Series SIP IP Telephone		
	9620	2.6.12
	9641G	6.4.1.25
Avaya 9600 and 96X1 Series H.323 IP Telephone		
	9620	3.22
	9621G	6.23
	9650	3.23
CallTech CTMail® Unified Messaging system on Windows 8.1 Enterprise		5.2

5. Configure Avaya Aura® Communication Manager

This section describes the procedure for configuring Communication Manager. These steps are performed through the System Access Terminal (SAT). These steps describe the procedure used for the Avaya S8300D Server. All steps are the same for the other Avaya Servers. In this section, the following topics are discussed:

- **Configure IP Network Region**
- **Configure IP Node Name**
- **Configure IP Codec**
- **Configure SIP Signaling**
- **Configure SIP Trunk**
- **Configure Route Pattern**

5.1. Configure IP Network Region

This section describes the steps for administering an IP network region in Communication Manager for communication between Communication Manager and Session Manager. Enter the **change ip-network-region <n>** command, where **n** is a number between **1** and **250** inclusive, and configure the following:

- **Authoritative Domain** – Enter the appropriate name for the Authoritative Domain. Set to the appropriate domain. During the compliance test, the authoritative domain is set to “avaya.com”.
- **Codec Set** – Set the codec set number as provisioned in the **IP Codec Set** form.

```
change ip-network-region 1                                     Page 1 of 20
                                                              IP NETWORK REGION
Region: 1
Location: Authoritative Domain: avaya.com
Name:
MEDIA PARAMETERS                                             Intra-region IP-IP Direct Audio: yes
Codec Set: 1                                                 Inter-region IP-IP Direct Audio: yes
UDP Port Min: 2048                                           IP Audio Hairpinning? n
UDP Port Max: 3329
DIFFSERV/TOS PARAMETERS
Call Control PHB Value: 46
Audio PHB Value: 46
Video PHB Value: 26
802.1P/Q PARAMETERS
Call Control 802.1p Priority: 6
Audio 802.1p Priority: 6
Video 802.1p Priority: 5
H.323 IP ENDPOINTS                                           AUDIO RESOURCE RESERVATION PARAMETERS
H.323 Link Bounce Recovery? y                                RSVP Enabled? n
Idle Traffic Interval (sec): 20
Keep-Alive Interval (sec): 5
Keep-Alive Count: 5
```

5.2. Configure IP Node Name

This section describes the steps for setting IP node name for Session Manager in Communication Manager. Enter the **change node-names ip** command, and add a node name for **SM-1** (Session Manager) along with its IP address.

```
change node-names ip                                         Page 1 of 2
                                                              IP NODE NAMES
Name      IP Address
CTMail    10.64.43.249
default   0.0.0.0
procr     10.64.41.21
procr6    ::
rdtt      10.64.40.14
SM-1      10.64.41.42
```

5.3. Configure IP Codec

This section describes the steps for setting IP codec. Also included in this section is for configuring the fax configuration. During the compliance test, G.711MU and G.729 were utilized.

```
change ip-codec-set 1                                     Page 1 of 2

                                IP CODEC SET

Codec Set: 1

Audio      Silence      Frames      Packet
Codec      Suppression   Per Pkt    Size (ms)
1: G.711MU      n          2          20
2:
3:

Media Encryption
1: none
2:
3:
```

On Page 2 of the IP Codec form, the FAX field was configured “t.38-standard” mode, as shown below. During the compliance test, t.38-standard and pass-through was tested.

```
change ip-codec-set 1                                     Page 2 of 2

                                IP CODEC SET

                                Allow Direct-IP Multimedia? y
                                Maximum Call Rate for Direct-IP Multimedia: 4096:Kbits
                                Maximum Call Rate for Priority Direct-IP Multimedia: 4096:Kbits

Mode      Redundancy      Packet
FAX      t.38-standard      0      ECM: y
Modem      off      0
TDD/TTY      US      3
H.323 Clear-channel      n      0
SIP 64K Data      n      0      20
```

5.4. Configure SIP Signaling

This section describes the steps for administering a signaling group in Communication Manager for signaling between Communication Manager and Session Manager. Enter the **add signaling-group** <s> command, where s is an available signaling group and configure the following:

- **Group Type** – Set to “sip”.
- **Transport Method** – Set to “tls”.
- **Near-end Node Name** - Set to “procr” as displayed in **Section 5.2**.
- **Far-end Node Name** - Set to the “SM-1” configured in **Section 5.2**.
- **Far-end Network Region** - Set to the region configured in **Section 5.1**.
- **Far-end Domain** - Set to “avaya.com”.
- **Direct IP-IP-Audio Connections:** Set to “y”

```
add signaling-group 92                                     Page 1 of 2
                                     SIGNALING GROUP

Group Number: 92
IMS Enabled? n
Q-SIP? n
IP Video? y
Peer Detection Enabled? y
Prepend '+' to Outgoing Calling/Alerting/Diverting/Connected Public Numbers? y
Remove '+' from Incoming Called/Calling/Alerting/Diverting/Connected Numbers? n

Group Type: sip
Transport Method: tls

Priority Video? y
Enforce SIPS URI for SRTP? y
Peer Server: SM

Near-end Node Name: procr
Near-end Listen Port: 5061

Far-end Node Name: SM-1
Far-end Listen Port: 5061
Far-end Network Region: 1

Far-end Domain:avaya.com

Incoming Dialog Loopbacks: eliminate
DTMF over IP: rtp-payload
Session Establishment Timer(min): 3
Enable Layer 3 Test? y
H.323 Station Outgoing Direct Media? n

Bypass If IP Threshold Exceeded? n
RFC 3389 Comfort Noise? n
Direct IP-IP Audio Connections? y
IP Audio Hairpinning? n
Initial IP-IP Direct Media? n
Alternate Route Timer(sec): 6
```


5.5. Configure SIP Trunk

This section describes the steps for administering a trunk group in Communication Manager for trunking between Communication Manager and Session Manager. Enter the **add trunk-group** <t> command, where **t** is an unallocated trunk group and configure the following:

- **Group Type** – Set the Group Type field to “sip”.
- **Group Name** – Enter a descriptive name.
- **TAC (Trunk Access Code)** – Set to any available trunk access code.
- **Signaling Group** – Set to the Group Number field value configured in **Section 5.4**.
- **Number of Members** – Allowed value is between 0 and 255. Set to a value large enough to accommodate the number of SIP telephone extensions being used.

add trunk-group 92		Page 1 of 21	
TRUNK GROUP			
Group Number: 92	Group Type: sip	CDR Reports: y	
Group Name: SM 41 42	COR: 1	TN: 1	TAC: 1092
Direction: two-way	Outgoing Display? n	Night Service:	
Dial Access? n			
Queue Length: 0			
Service Type: tie	Auth Code? n	Member Assignment Method: auto	
		Signaling Group: 92	
		Number of Members: 10	

5.6. Configure Route Pattern

Enter **change route-pattern <r>**, where **r** is the route-pattern number. The route pattern 92 routes calls to the trunk group 92, which is the SIP trunk to Session Manager.

change route-pattern 92														Page 1 of 3		
Pattern Number: 92														Pattern Name: no IMS SIP trk		
SCCAN? n														Secure SIP? n		
Grp	FRL	NPA	Pfx	Hop	Toll	No.	Inserted							DCS/	IXC	
No			Mrk	Lmt	List	Del	Digits							QSIG		
														Dgts		Intw
1:	92	0												n	user	
2:														n	user	
3:														n	user	
BCC		VALUE		TSC	CA-TSC		ITC		BCIE		Service/Feature		PARM	No.	Numbering	LAR
0		1 2 M 4 W			Request									Dgts	Format	
														Subaddress		
1:	y	y	y	y	y	n	n							rest	none	
2:	y	y	y	y	y	n	n							rest	none	
3:	y	y	y	y	y	n	n							rest	none	

6. Configure Avaya Aura[®] Session Manager

This section provides the procedures for configuring Session Manager as provisioned in the reference configuration. Session Manager is comprised of two functional components: the Session Manager server and the System Manager server. All SIP call provisioning for Session Manager is performed through the System Manager Web interface and is then downloaded into Session Manager.

It is assumed that Session Manager and System Manager have been installed, network connectivity exists between the two platforms, and following topics between Communication Manager and Session Manager are already configured:

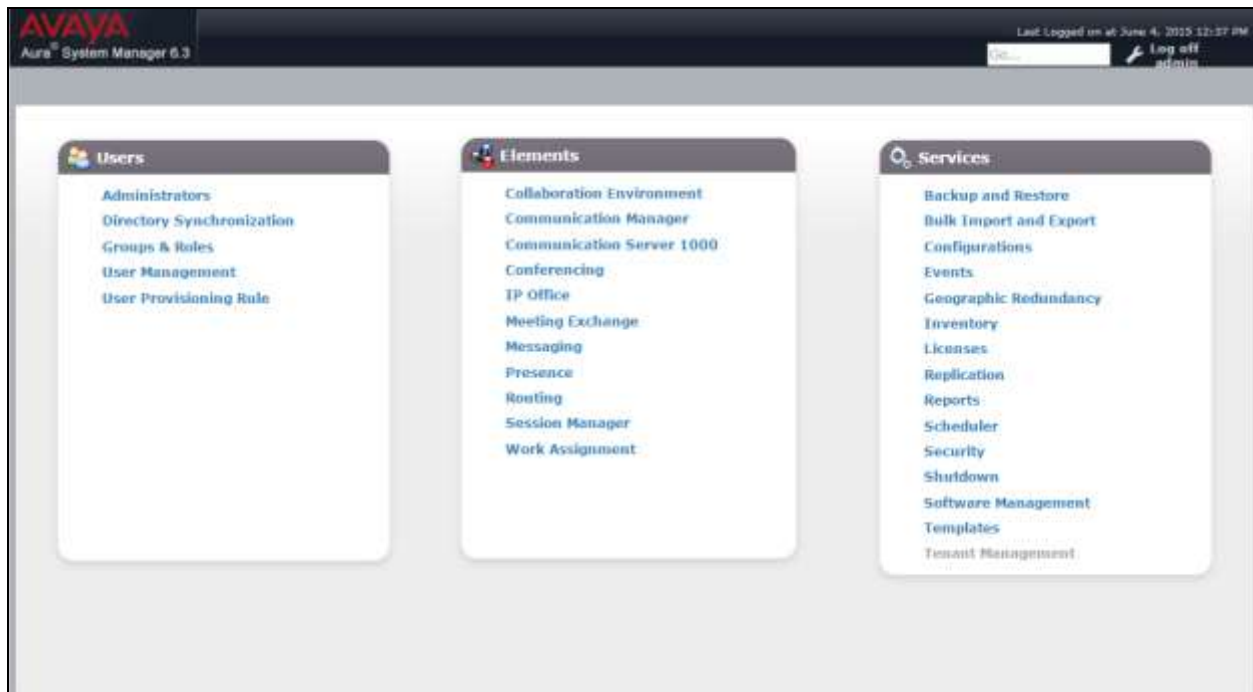
- **SIP Domains**
- **Locations**
- **SIP Entities**
- **Entity Links**
- **Time Ranges**
- **Routing Policy**
- **Dial Patterns**
- **Manage Element**
- **Applications**
- **Application Sequence**

This section only discusses the configuration of below topics:

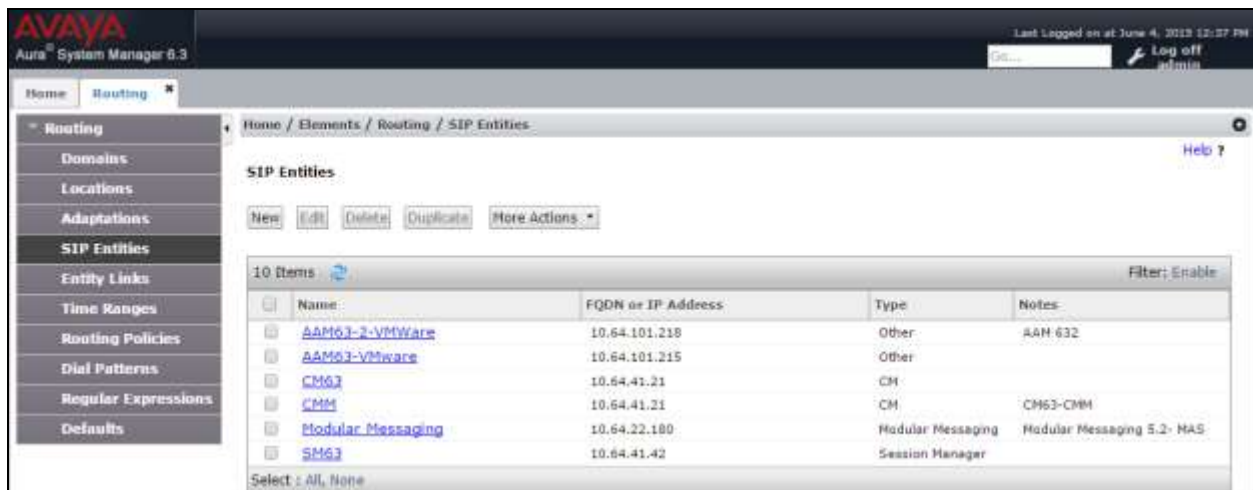
- **Configure SIP Entities for CTMail**
- **Configure Entity Links for CTMail**
- **Configure Routing Policy for CTMail**
- **Configure Dial Patterns for CTMail**

6.1. Configure SIP Entity for CTMail

Launch a web browser, enter <http://<IP address of System Manager>> in the URL, and log in with the appropriate credentials. Navigate to **Elements** → **Routing**.



From the left pane, select **SIP Entities**. On the SIP Entities page, click the **New** button in the subsequent screen to add a new SIP entity for CTMail..



The **SIP Entity Details** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **FQDN or IP Address:** The IP address of the CTMail server.
- **Type:** “Other”.
- **Location:** Select the CTMail location name.
- The Entity Links section will be automatically populated after the Entity Links page is configured.

Click the **Commit** button.

AVAYA
Aura System Manager 6.3

Last Logged on at June 4, 2015 12:37 PM
Log off admin

Home Routing

Home / Elements / Routing / SIP Entities

SIP Entity Details [Commit] [Cancel] [Help ?]

General

* Name: CTMail

* FQDN or IP Address: 10.64.41.241

Type: Other

Notes:

Adaptation:

Location: 41-subnet

Time Zone: America/Fortaleza

* SIP Timer B/F (in seconds): 4

Credential name:

Call Detail Recording: none

CommProfile Type Preference:

Loop Detection

Loop Detection Mode: Off

SIP Link Monitoring

SIP Link Monitoring: Use Session Manager Configuration

Supports Call Admission Control: ☐

Shared Bandwidth Manager: ☐

Primary Session Manager Bandwidth Association:

Backup Session Manager Bandwidth Association:

Entity Links

Override Port & Transport with DNS SRV: ☐

[Add] [Remove]

1 Item Filter: Enable

Name	SIP Entity 1	Protocol	Port	SIP Entity 2	Port	Connection Policy	Deny New Service
* SM63_CTMail_5060_UDP	SM63	UDP	* 5060	CTMail	* 5060	trusted	<input type="checkbox"/>

Select: All, None

The following screen shows the SIP Entities page after the entity for CTMail was added.

The screenshot shows the Avaya Aura System Manager 6.3 interface. The top navigation bar includes the Avaya logo, the text "Aura System Manager 6.3", and a "Last Logged-on at: June 4, 2015 12:07 PM" status. The left sidebar contains a menu with options: Routing, Domains, Locations, Adaptations, SIP Entities (selected), Entity Links, Time Ranges, Routing Policies, Dial Patterns, Regular Expressions, and Defaults. The main content area is titled "SIP Entities" and shows a list of 10 items. The list has columns for Name, FQDN or IP Address, Type, and Notes. The CTMail entity is highlighted in blue.

Name	FQDN or IP Address	Type	Notes
AAM63-2-VMware	10.64.101.218	Other	AAM 632
AAM63-VMware	10.64.101.215	Other	
CM63	10.64.41.21	CH	
CMM	10.64.41.21	CH	CH63-CMM
CTMail	10.64.41.241	Other	
Modular_Messaging	10.64.22.180	Modular Messaging	Modular Messaging 5.2- NAS
SM63	10.64.41.42	Session Manager	

6.2. Configure Entity Link for CTMail

Select **Routing** → **Entity Links** from the left pane, and click **New** in the subsequent screen (not shown) to add a new entity link for CTMail.

The **Entity Links** screen is displayed. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:** A descriptive name.
 - **SIP Entity 1:** The Session Manager entity name.
 - **Protocol:** The signaling group transport method. During the compliance test, the UDP protocol was used between Session Manager and CTMail.
 - **Port:** An appropriate signaling group listen port number is displayed.
 - Following is the default port
 - TLS – 5061
 - TCP/UCP - 5060
 - **SIP Entity 2:** Select the CTMail entity name.
 - **Port:** An appropriate signaling group listen port number is displayed.
 - **Connection :** Retain the default value, “trusted”.
- Policy**

Click the **Commit** button.

AVAYA
Aura System Manager 6.3

Last Logged on at June 4, 2015 12:57 PM

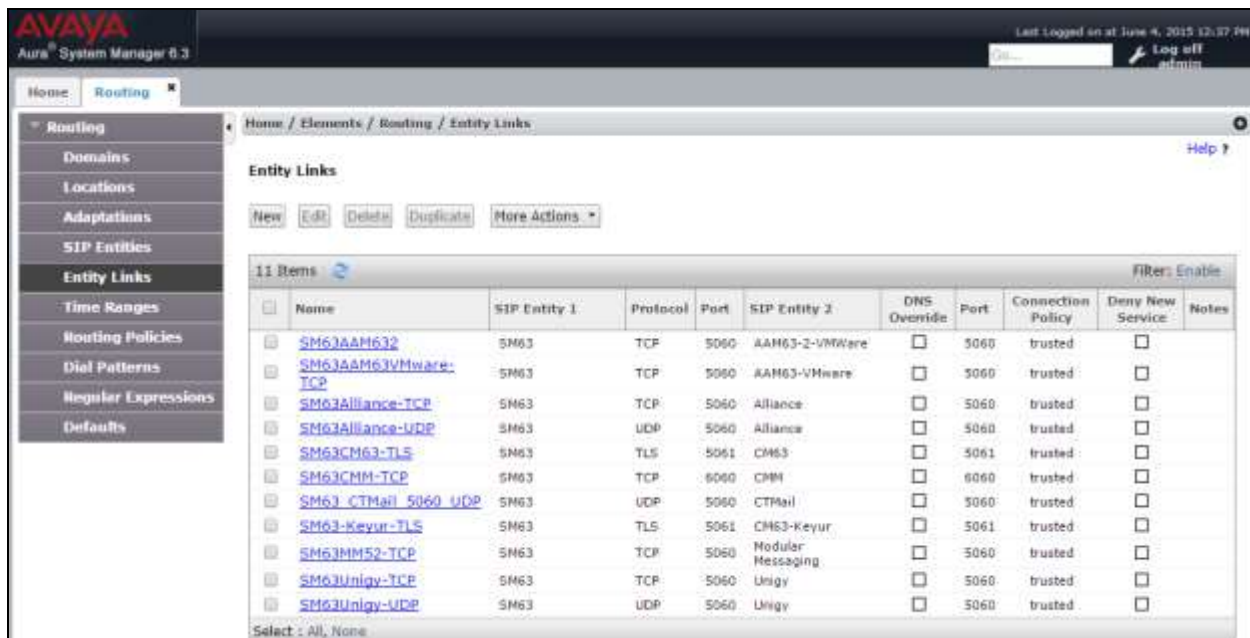
Home / Elements / Routing / Entity Links

Entity Links

Name	SIP Entity 1	Protocol	Port	SIP Entity 2	DNS Override	Port	Connection Policy
* SM63_CTMail_5060_UDP	* SM63	UDP	* 5060	* CTMail	<input type="checkbox"/>	* 5060	trusted

Commit Cancel

The following screen shows the Entity Links page after the entity link for CTMail was added.



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Aura® System Manager 6.3

Last Logged on at June 4, 2015 12:37 PM

Home / Routing

Home / Elements / Routing / Entity Links

Entity Links

New Edit Delete Duplicate More Actions

11 Items

Name	SIP Entity 1	Protocol	Port	SIP Entity 2	DNS Override	Port	Connection Policy	Deny New Service	Notes
SM63AAM632	SM63	TCP	5060	AAM63-2-VMWare	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63AAM63VMware-TCP	SM63	TCP	5060	AAM63-VMware	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63Alliance-TCP	SM63	TCP	5060	Alliance	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63Alliance-UDP	SM63	UDP	5060	Alliance	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63CM63-TLS	SM63	TLS	5061	CM63	<input type="checkbox"/>	5061	trusted	<input type="checkbox"/>	
SM63CMM-TCP	SM63	TCP	5060	CMM	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63 CTMail 5060 UDP	SM63	UDP	5060	CTMail	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63-Keypur-TLS	SM63	TLS	5061	CM63-Keypur	<input type="checkbox"/>	5061	trusted	<input type="checkbox"/>	
SM63MM52-TCP	SM63	TCP	5060	Modular Messaging	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63Unigy-TCP	SM63	TCP	5060	Unigy	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	
SM63Unigy-UDP	SM63	UDP	5060	Unigy	<input type="checkbox"/>	5060	trusted	<input type="checkbox"/>	

Select: All, None

6.3. Configure Routing Policy for CTMail

Navigate to **Routing** → **Routing Policies** from the left pane, and click **New** in the subsequent screen (not shown) to add a new routing policy for CTMail.

The **Routing Policy Details** screen is displayed. In the **General** sub-section, enter a descriptive **Name**.

In the **SIP Entity as Destination** sub-section, click **Select** and select the CTMail's entity name from **Section 6.1** in the listing (not shown).

The Dial Patterns section will be automatically populated after the Dial Patterns page is configured (**Section 6.4**).

Retain the default values in the remaining fields.

Click the **Commit** button.

AVAYA
Aura® System Manager 6.3

Last Logged on at: June 4, 2015 12:37 PM
Log off
admin

Home Session Manager Routing

Home / Elements / Routing / Routing Policies

Routing Policy Details

Commit Cancel

Help

General

* Name: Route2CTMail

Disabled: ☐

* Retries: 0

Notes:

SIP Entity as Destination

Select

Name	FQDN or IP Address	Type	Notes
CTMail	10.64.41.241	Other	

Time of Day

Add Remove View Gaps/Overlaps

1 Item

Filter: Enable

Ranking	Name	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start Time	End Time	Notes
0	24/7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	00:00	23:59	

Select: All, None

Dial Patterns

Add Remove

4 Items

Filter: Enable

Pattern	Min	Max	Emergency Call	SIP Domain	Originating Location	Notes
7775	4	4	<input type="checkbox"/>	-ALL-	-ALL-	
7777	4	4	<input type="checkbox"/>	-ALL-	-ALL-	
7778	4	4	<input type="checkbox"/>	-ALL-	-ALL-	
7779	4	4	<input type="checkbox"/>	-ALL-	-ALL-	

Select: All, None

The following screen shows the Routing Policies page after the routing policy for CTMail was added.

The screenshot displays the Avaya Aura System Manager 6.3 interface. The left sidebar shows the 'Routing' menu with 'Routing Policies' selected. The main content area shows the 'Routing Policies' page with a list of 9 items. The 'Route2CTMail' policy is highlighted, indicating it has been added. The table columns are Name, Disabled, Retries, Destination, and Notes.

Name	Disabled	Retries	Destination	Notes
Route2AAM632	<input type="checkbox"/>	0	AAM63-2-VMWare	
Route2AAM63-VMware	<input checked="" type="checkbox"/>	0	AAM63-VMware	
Route2Alliance-system	<input type="checkbox"/>	0	Alliance	
Route2CM63	<input type="checkbox"/>	0	CM63	
Route2CMM	<input checked="" type="checkbox"/>	0	CMM	
Route2CTMail	<input checked="" type="checkbox"/>	0	CTMail	
Route2MM	<input checked="" type="checkbox"/>	0	Modular Messaging	
Route2Unigy-system	<input type="checkbox"/>	0	Unigy	
Route-Keyur	<input checked="" type="checkbox"/>	0	CM63-Keyur	

6.4. Configure Dial Patterns for CTMail

Navigate to **Routing → Dial Patterns** from the left pane, and click **New** in the subsequent screen (not shown) to add a new dial pattern to reach CTMail.

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

- **Pattern:** A dial pattern to match.
- **Min:** The minimum number of digits to be matched.
- **Max:** The maximum number of digits to be matched.
- **SIP Domain:** During the compliance test, “all” was selected for the sip domain.

In the **Originating Locations and Routing Policies** sub-section, click **Add** and create a new policy for reaching CTMail.

AVAYA
Aura® System Manager 6.3

Last Logged on at June 4, 2015 12:37 PM
Log off admin

Home Session Manager **Routing**

Home / Elements / Routing / Dial Patterns

Dial Pattern Details [Commit] [Cancel] [Help ?]

General

* Pattern: 7777

* Min: 4

* Max: 4

Emergency Call: ☐

Emergency Priority: 1

Emergency Type:

SIP Domain: -ALL-

Notes:

Originating Locations and Routing Policies

[Add] [Remove]

4 Items [Filter: Enable]

<input type="checkbox"/>	Originating Location Name	Originating Location Notes	Routing Policy Name	Rank	Routing Policy Disabled	Routing Policy Destination	Routing Policy Notes
<input type="checkbox"/>	-ALL-		Route2AAM632	0	<input checked="" type="checkbox"/>	AAM63-2-VMWare	
<input type="checkbox"/>	-ALL-		Route2CTMail	0	<input type="checkbox"/>	CTMail	

Select : All, None

In the **Originating Location** section, check the “Apply The Selected Routing Policies to All Originating Locations” checkbox.

In the **Routing Policies** section, check an appropriate routing policy from **Section 6.3**.

Click the **Select** button.

The screenshot shows the Avaya Aura System Manager 6.3 interface. The left sidebar contains a navigation menu with options: Home, Session Manager, Routing, Domains, Locations, Adaptations, SIP Entities, Entity Links, Time Ranges, Routing Policies, Dial Patterns, Regular Expressions, and Defaults. The main content area is titled 'Home / Elements / Routing / Dial Patterns'. It features a 'Select' button and a 'Cancel' button. Below this, the 'Originating Location' section is displayed, with a checkbox labeled 'Apply The Selected Routing Policies to All Originating Locations' checked. A table lists 8 items with columns for Name and Notes. The 'Routing Policies' section follows, with a table listing 9 items with columns for Name, Disabled, Destination, and Notes. The 'Route2CTMail' policy is selected.

Name	Notes
101-subnet	VMware Network
10-subnet	Ally network
22-Subnet	Modular Messaging Network
40-subnet	CM521 Network
41-subnet	CM63 Network
42-subnet	CM601 Network
45-subnet	
49-subnet	Unigy Network

Name	Disabled	Destination	Notes
Route2AAM632	<input checked="" type="checkbox"/>	AAM63-2-VMWare	
Route2AAM63-VMware	<input checked="" type="checkbox"/>	AAM63-VMware	
Route2Alliance-system	<input type="checkbox"/>	Alliance	
Route2CM63	<input type="checkbox"/>	CM63	
Route2CMM	<input checked="" type="checkbox"/>	CMM	
Route2CTMail	<input type="checkbox"/>	CTMail	
Route2MM	<input checked="" type="checkbox"/>	Modular Messaging	
Route2Unigy-system	<input type="checkbox"/>	Unigy	
Route-Keyur	<input checked="" type="checkbox"/>	CM63-Keyur	

After the **Originating Locations** page is completed, Click **Commit** on the Dial Pattern Details page.

The following screen shows the Dial Pattern page after the Dial Patterns for CTMail were added.

AVAYA
Aura® System Manager 6.3

Last Logged in at June 4, 2013 12:37 PM
Log off
admin

Home Routing

Home / Elements / Routing / Dial Patterns

Dial Patterns

New Edit Delete Duplicate More Actions

18 Items Filter: Enable

Pattern	Min	Max	Emergency Call	Emergency Type	Emergency Priority	SIP Domain	Notes
-	3	8	<input type="checkbox"/>			-ALL-	
12	10	12	<input type="checkbox"/>			-ALL-	
1303	10	12	<input type="checkbox"/>			avaya.com	
332	5	5	<input type="checkbox"/>			-ALL-	To Alliance16 using SIP
333	5	5	<input type="checkbox"/>			-ALL-	To Alliance16 using QSIG via CM
7200	5	5	<input type="checkbox"/>			-ALL-	CM stations
7201	5	5	<input type="checkbox"/>			-ALL-	
7205	5	5	<input type="checkbox"/>			-ALL-	To Unigy using SIP
7207	5	5	<input type="checkbox"/>			-ALL-	
7208	5	5	<input type="checkbox"/>			-ALL-	
7209	5	5	<input type="checkbox"/>			-ALL-	
7775	4	4	<input type="checkbox"/>			-ALL-	
7776	4	4	<input type="checkbox"/>			-ALL-	
7777	4	4	<input type="checkbox"/>			-ALL-	
7778	4	4	<input type="checkbox"/>			-ALL-	

Select: All, None

Page 1 of 2

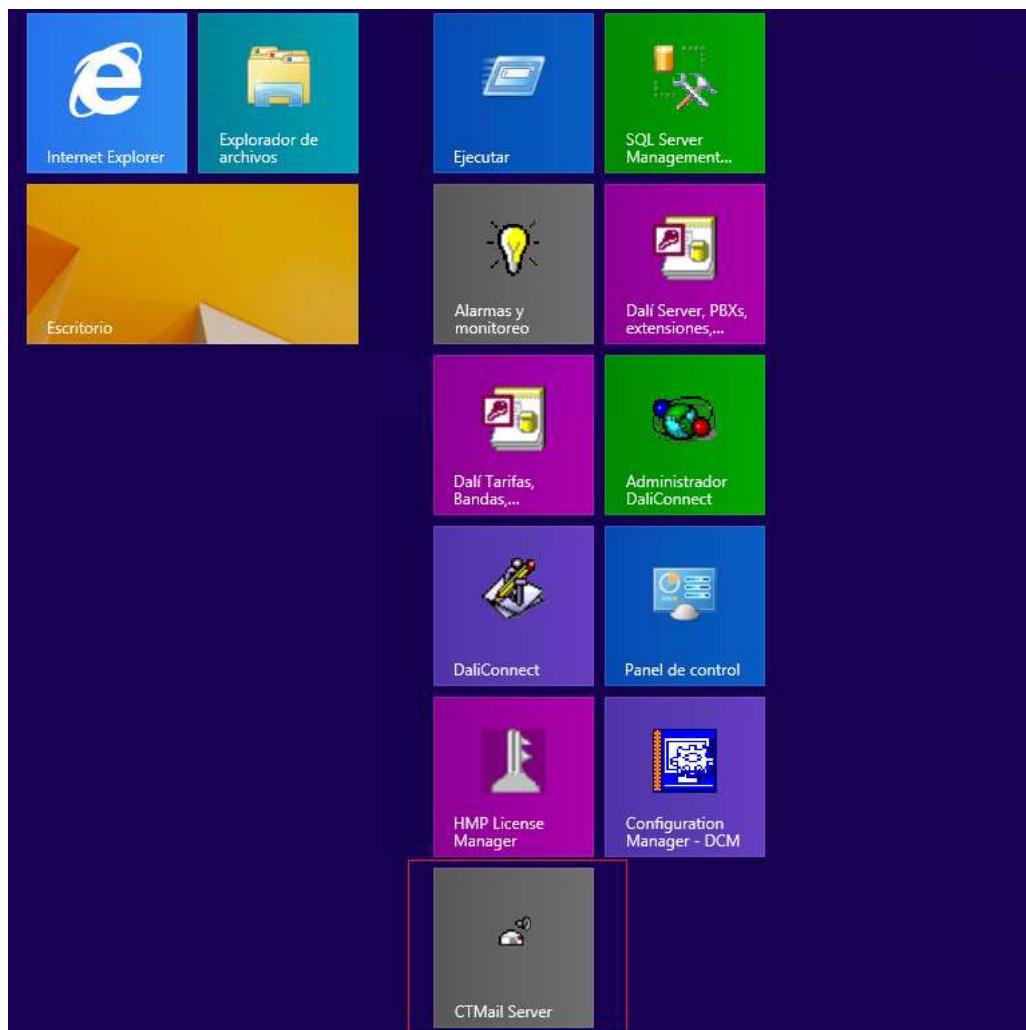
7. Configure CTMail

This section describes the configuration of CTMail. Installation of the CTMail software was performed by a CallTech engineer prior to the actual compliance test. From the Windows 8.1 system, select **CTMail Server**.

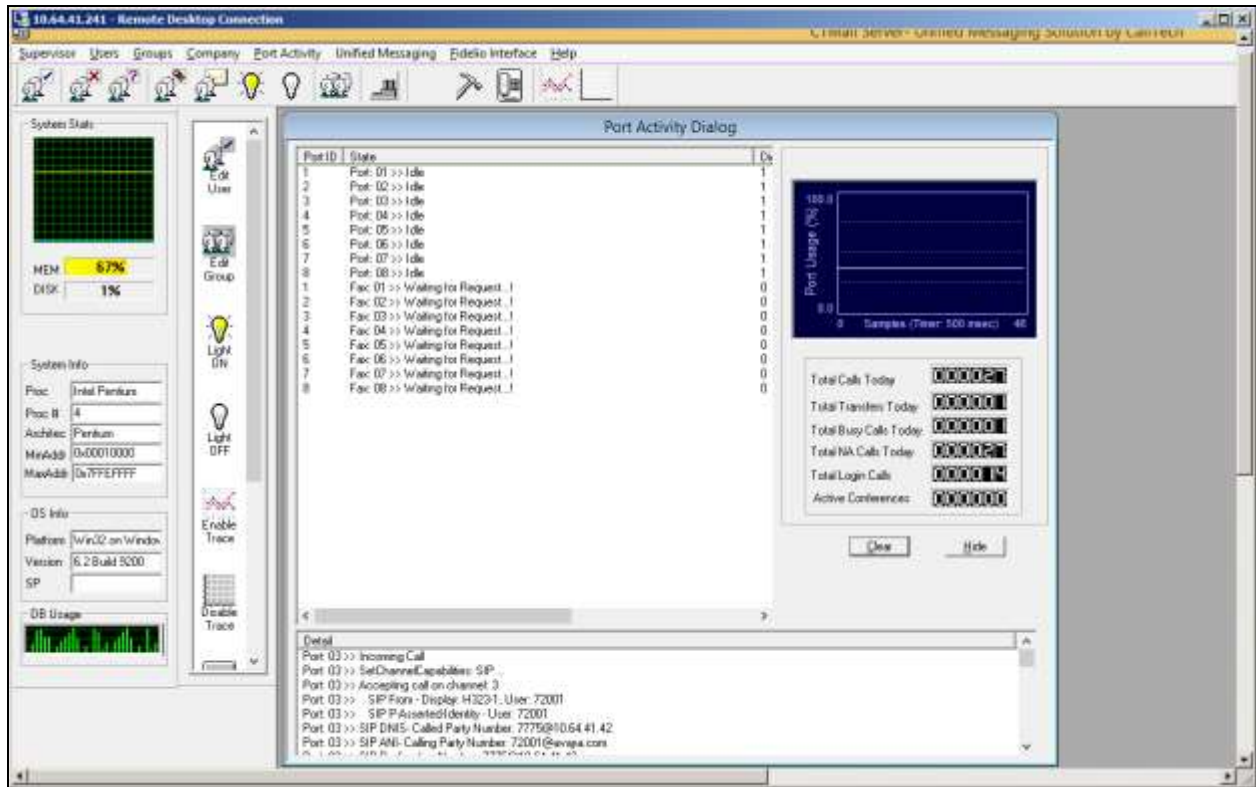
This section only discusses the configuration of below topics:

- **Configure IP Address for CTMail**
- **Configure VoiceMail for CTMail**
- **Configure FAX for CTMail**

***Note:** An Administrator can configure inbound extensions for FAX, IVR, Auto Attendant, and VoiceMail (7775/7777/7778/7779) using the same steps. Thus, in these App Notes only the FAX and VoiceMail configuration steps are discussed.*



In the main page, the port activity is displayed.



7.1. Configure IP address for CTMail

In the CTMail directory of the CTMail server, add/modify the parameters on the Parameters.txt file as shown below.

```
SIP Parameters
"Local IP Address" SIP_LOCAL_IP_ADDRESS 10.64.41.241
"Persisten Contact Header Type: 0 - disable 1 - line(all calls) 2 - line(single
session) 3 - on a call(single session)" SIP_PERSISTENT_CONTACT_HEADER_TYPE 1
"Persisten Contact Header Value" SIP_PERSISTENT_CONTACT_HEADER_VALUE
sip:7777@10.64.41.241
```


7.2. Configure VoiceMail for CTMail

Launch a web browser, enter http://<IP address of CTMail server>/CTMail_Configurator in the URL, and log in with the appropriate credentials.



Navigate to **Configuration → Ports → Ports Configurations** (not shown).



In the **Configuration** page, provide the following information:

- **Server Name:** Select the CTMail server, using the drop-down list.
- **PBX Name:** Select “Avaya CM”, using the drop-down list.
- **Protocol:** Select “SIP”, using the drop-down list.
- Retain the default values in the remaining fields.

Select **Update**.

Configuration Name:

Server Name:

PBX Name:

Protocol:

Parameters File:

Trace: ☒

[Update](#) [Cancel](#)

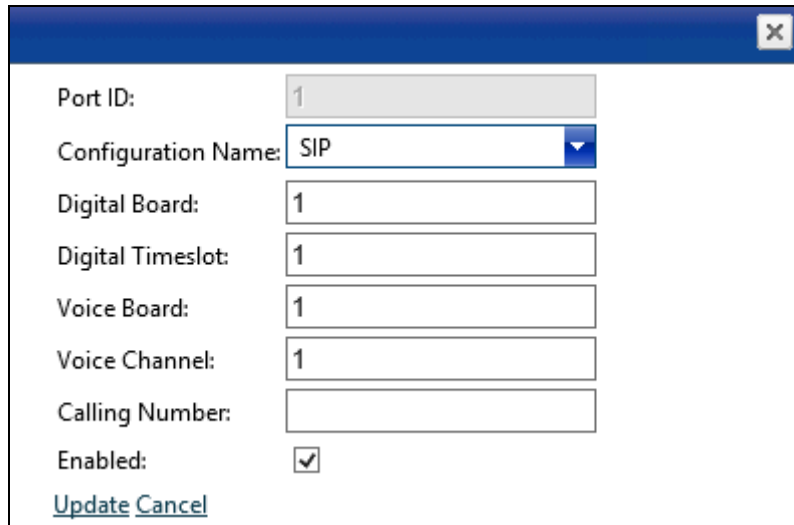
Navigate to **Configuration → Ports → Ports**. The following screen shows eight ports are enabled for receiving inbound calls. Each port can be configured using the **Edit** button.

Initial port: Final port: Configuration: [Update Configuration](#) Enabled Ports ? ☐ [Update](#)

[Add new record](#) [Refresh](#)

Port ID	Configuration Name	Server	Digital Board	Digital Timeslot	Voice Board	Voice Channel	Calling Number	Enabled		
1	SIP	PRUEBASAVAYA	1	1	1	1		<input checked="" type="checkbox"/>		Edit
2	SIP	PRUEBASAVAYA	1	2	1	2		<input checked="" type="checkbox"/>		Edit
3	SIP	PRUEBASAVAYA	1	3	1	3		<input checked="" type="checkbox"/>		Edit
4	SIP	PRUEBASAVAYA	1	4	1	4		<input checked="" type="checkbox"/>		Edit
5	SIP	PRUEBASAVAYA	1	5	2	1		<input checked="" type="checkbox"/>		Edit
6	SIP	PRUEBASAVAYA	1	6	2	2		<input checked="" type="checkbox"/>		Edit
7	SIP	PRUEBASAVAYA	1	7	2	3		<input checked="" type="checkbox"/>		Edit
8	SIP	PRUEBASAVAYA	1	8	2	4		<input checked="" type="checkbox"/>		Edit
9	SIP	PRUEBASAVAYA	0	0	3	1		<input type="checkbox"/>		Edit
10	SIP	PRUEBASAVAYA	0	0	3	2		<input type="checkbox"/>		Edit

The following screen shows the Edit process of the Port ID 1. Select “SIP”, using the drop-down list, on the **Configuration Name** field. Retain the default values in the remaining fields. After the completion of the configuration, select **Update**.



A screenshot of a configuration dialog box for Port ID 1. The dialog has a blue title bar with a close button (X) in the top right corner. The fields are as follows:

Port ID:	1
Configuration Name:	SIP
Digital Board:	1
Digital Timeslot:	1
Voice Board:	1
Voice Channel:	1
Calling Number:	
Enabled:	<input checked="" type="checkbox"/>

At the bottom left, there are two links: [Update](#) and [Cancel](#).

7.3. Configure Fax for CTMail

Navigate to **Configuration → Fax Ports → Fax Ports Configuration**. Select the **Edit** button.



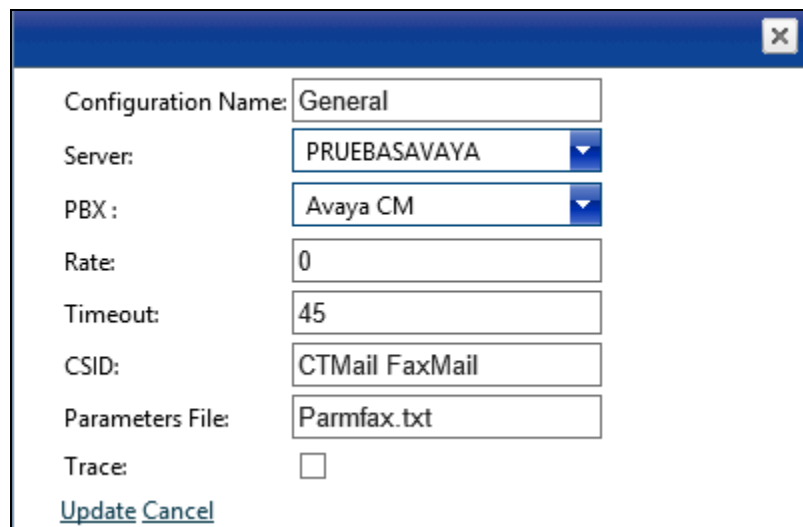
The screenshot shows a web application interface for 'Fax Configuration'. At the top is a navigation bar with tabs: Configuration (selected), Company, Mail Box Groups, Mail Box Users, Fax Groups, Remote Recording, Messages, Fax Mail Web Access, and Audio. Below the navigation bar is a 'Fax Configuration' section with a '+ Add new record' button and a 'Refresh' button. A table displays the configuration details for a record named 'General'.

Configuration Name	Server	PBX	Rate	Timeout	CSID	Parameters File	Trace	
General	PRUEBASAVAYA	Avaya CM	0	45	CTMail FaxMail	Parmfax.txt	<input type="checkbox"/>	 Edit

The **Fax Ports Configuration** screen displays. Provide the following information:

- **Server:** Select the name of the CTMail server, using the drop-down list.
- **PBX:** Select “Avaya CM”, using the drop-down list.
- Retain the default values in the remaining fields.

Select **Update**.



The screenshot shows a dialog box for updating the Fax Configuration. It contains the following fields and controls:

- Configuration Name: General
- Server: PRUEBASAVAYA (dropdown menu)
- PBX: Avaya CM (dropdown menu)
- Rate: 0
- Timeout: 45
- CSID: CTMail FaxMail
- Parameters File: Parmfax.txt
- Trace: ☐
- Buttons: [Update](#) [Cancel](#)

Navigate to **Configuration → Fax Ports → Fax Ports**. Enable Fax ports by using the **Edit** button.

Add new record		Refresh			
Fax Port ID	Fax Resource ID	Configuration Name	Enabled		
1	1	General	<input type="checkbox"/>	X	Edit
1	2	General	<input type="checkbox"/>	X	Edit
1	3	General	<input type="checkbox"/>	X	Edit
1	4	General	<input type="checkbox"/>	X	Edit
2	1	General	<input type="checkbox"/>	X	Edit
2	2	General	<input type="checkbox"/>	X	Edit
2	3	General	<input type="checkbox"/>	X	Edit
2	4	General	<input type="checkbox"/>	X	Edit
3	1	General	<input checked="" type="checkbox"/>	X	Edit
3	2	General	<input checked="" type="checkbox"/>	X	Edit
3	3	General	<input checked="" type="checkbox"/>	X	Edit
3	4	General	<input checked="" type="checkbox"/>	X	Edit
4	1	General	<input checked="" type="checkbox"/>	X	Edit
4	2	General	<input checked="" type="checkbox"/>	X	Edit
4	3	General	<input checked="" type="checkbox"/>	X	Edit

The following Fax port, Fax Port ID 3 and Fax Resource ID 2, was configured and enabled.

Fax Port ID:

3

Fax Resource ID:

2

Configuration Name:

General

Enabled:

☒

[Update](#)

[Cancel](#)

For the Codec configuration, navigate to **Configuration → SIP → Audio Capabilities**. Each codec can be enabled and disabled using the **Edit** button.

Server Name	Capability	Direction	Frames Per Packet	Voice Activity Detection	Enabled	Edit
PRUEBASAVAYA	g729AnnexAwAnnexB	Transmisión	2	VAD habilitado	<input type="checkbox"/>	Edit
PRUEBASAVAYA	g729AnnexAwAnnexB	Recepción	2	VAD habilitado	<input type="checkbox"/>	Edit
PRUEBASAVAYA	g711Alaw64k	Transmisión	20	VAD deshabilitado	<input type="checkbox"/>	Edit
PRUEBASAVAYA	g711Alaw64k	Recepción	20	VAD deshabilitado	<input type="checkbox"/>	Edit
PRUEBASAVAYA	g711Ulaw64k	Transmisión	20	VAD deshabilitado	<input checked="" type="checkbox"/>	Edit
PRUEBASAVAYA	g711Ulaw64k	Recepción	20	VAD deshabilitado	<input checked="" type="checkbox"/>	Edit

The following screen shows the sample configuration of G.711Alaw64k. During the compliance test, G.711Alaw was not utilized. Thus, the **Enabled** field is not checked.

Server Name: PRUEBASAVAYA

Capability: g711Alaw64k

Direction: Recepción

Frames Per Packet: 20

Voice Activity Detection: VAD deshabilitado

Enabled: ☐

[Update](#) [Cancel](#)

For the Fax Configuration, navigate to **Configuration → SIP → Data Capabilities**.



Fax can be configured using the **Edit** button. Please provide the following information:

- **Server Name:** Select the name of the CTMail server, using the drop-down list.
- **Capability:** Select “t38UDPFax”, using the drop-down list.
- **Direction:** Select “Bidireccional”, using the drop-down list.
- **Max Bit Rate Value:** Select “9600 bits/s”, using the drop-down list.
- **Enabled:** Check the **Enabled** checkbox.

Select **Update**.

The screenshot shows a dialog box for configuring fax settings. It has a title bar with a close button. The fields are: Server Name (PRUEBASAVAYA), Capability (t38UDPFax), Direction (Bidireccional), Max Bit Rate Value (9600 bits/s), and Enabled (checked). At the bottom, there are 'Update' and 'Cancel' buttons.

For the SIP Configuration, navigate to **Configuration → SIP → Parameters**. The following two screenshots display the SIP parameters that were used during the compliance test. The configuration changes will follow the same steps as before, using the **Edit** button.

Search a parameter:

Categories: - Select a category - Category Reference: Search

Insert Default Parameter Values: Insert

+ Add new record Refresh

ID	Name	Value	Description		
4516	SIP_alias		Alias used for register		Edit
4502	SIP_domain	10.64.41.42			Edit
4518	SIP_DTMF_Payload_Type	101	SIP DTMF Payload Type (96-127) - Default 101		Edit
4512	SIP_DTMF_Type	2	DTMF Type: 2: RFC_2833, 4: INBAND_RTP, 6: RFC_2833 and INBAND_RTP		Edit
4500	SIP_Enable	1			Edit
4506	SIP_EnableRegister	0			Edit
4510	SIP_Fax_Type	1	1: T.38, 2: Pass-Through		Edit
4503	SIP_identity	sip:7777@10.64.41.241			Edit
4511	SIP_Local_IP_Address	10.64.41.241	Local IP Address		Edit
4508	SIP_Max_Calls	8	Máximo de llamadas SIP		Edit
4552	SIP_MWI_Test_Contact	sip:7777@10.64.41.241	MWI Contact		Edit
4551	SIP_MWI_Test_From	sip:72021@10.64.41.42	MWI From		Edit

1 2 Page 1 of 2, items 1 to 12 of 21.

Search a parameter:

Categories: - Select a category - Category Reference: Search

Insert Default Parameter Values: Insert

+ Add new record Refresh

ID	Name	Value	Description		
4550	SIP_MWI_Test_Port	8	MWI Test Port		Edit
4553	SIP_MWI_Test_RequestURI	sip:72021@10.64.41.42	MWI RequestURI		Edit
4554	SIP_MWI_Test_To	sip:72021@10.64.41.42	MWI To		Edit
4505	SIP_password	1234			Edit
4507	SIP_Port	5060	Port used for SIP		Edit
4501	SIP_realm	ctmail			Edit
4509	SIP_Reinvite_Enabled	1	Activa SIP re-invite		Edit
4513	SIP_T38_SEND_REQUEST	0	0: WAIT T38 REQUEST, 1: SEND T38 REQUEST		Edit
4504	SIP_username	7777			Edit

1 2 Page 2 of 2, items 13 to 21 of 21.

8. Verification Steps

- Verify a correct prompt is played when a call is made to the CTMail server.
- Verify a fax can be received at CTMail, and a fax can be sent from CTMail.

9. Conclusion

These Application Notes describe the procedures for configuring CTMail with Avaya Aura® Communication Manager and Avaya Aura® Session Manager. During the compliance test, feature tests on CTMail (*Fax, IVR, Auto Attendant, and VoiceMail*) passed successfully.

10. References

This section references the Avaya and CTMail documentation that are relevant to these Application Notes.

[1] *Administering Avaya Aura® Communication Manager*, Document 03-300509, Issue 10 Release 6.3, available at <http://support.avaya.com>.

[2] *Administering Avaya Aura® Session Manager*, Release 6.3, Issue 7, September 2014, available at <http://support.avaya.com>

The CTMail Solution and Product information is available from CTMail. Visit <http://www.calltechsa.com/CalltechHomePage/CTMail.aspx>

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