



Avaya Solution & Interoperability Test Lab

Application Notes for Beta80 IO and emma CAD CTI with Avaya Aura® Communication Manager R7.0 using Avaya one-X Agent 2.5 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Beta80 IO and emma CAD CTI Integration with Avaya Aura® Communication Manager R7.0 using Avaya one-X Agent 2.5. Beta 80 IO and emma CAD CTI platform Provides a Graphical User Interface with Avaya Aura providing Public Safety Answering Points for emergency service calls.

Readers should pay attention to Section 2, in particular the scope of testing as outlined in Section 2.1 as well as any observations noted in Section 2.2, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required to integrate Beta80 IO and emma CAD CTI Integration with Avaya Aura® Communication Manager R7.0 using Avaya one-X Agent 2.5. The Beta 80 IO and emma CAD CTI platform provides a Graphical User Interface providing Public Safety Answering Points (PSAP) for emergency service calls. Beta 80 CAD platform complements Avaya Aura in providing Public Safety Answering Points (PSAP) using a complete, full featured, Computer Aided Dispatch platform; CAD helps PSAP professionals to streamline emergency calls processing by automatically retrieving and displaying the caller's position, suggesting standard operating procedures Agents and dispatchers have to follow given the specific call for service (CFS), monitoring dispatched units and providing necessary information for dispatchers to assure a quick and effective engagement of first responders and resources upon the creation of new incidents.

2. General Test Approach and Test Results

The general test approach was to configure the IO and emma CAD CTI platform to communicate with one-X Agent to allow calls to be identified when routed from a Communication Manager VDN.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and the Beta 80 CAD CTI did not include use of any specific encryption features as requested by Beta80.

2.1. Interoperability Compliance Testing

The interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on interacting with the CAD CTI Platform in different call scenarios. The tests included:

- Make Call
- Call pick up & CLI Import
- Call hang up

2.2. Test Results

All test cases were passed with the following observations.

2.3. Support

E-Mail: sales@beta80group.com

Internet: www.beta80group.com

3. Reference Configuration

The configuration shown in Figure 1 was used during the compliance test of Beta 80 CAD CTI, with Communication Manager using one-X Agent.

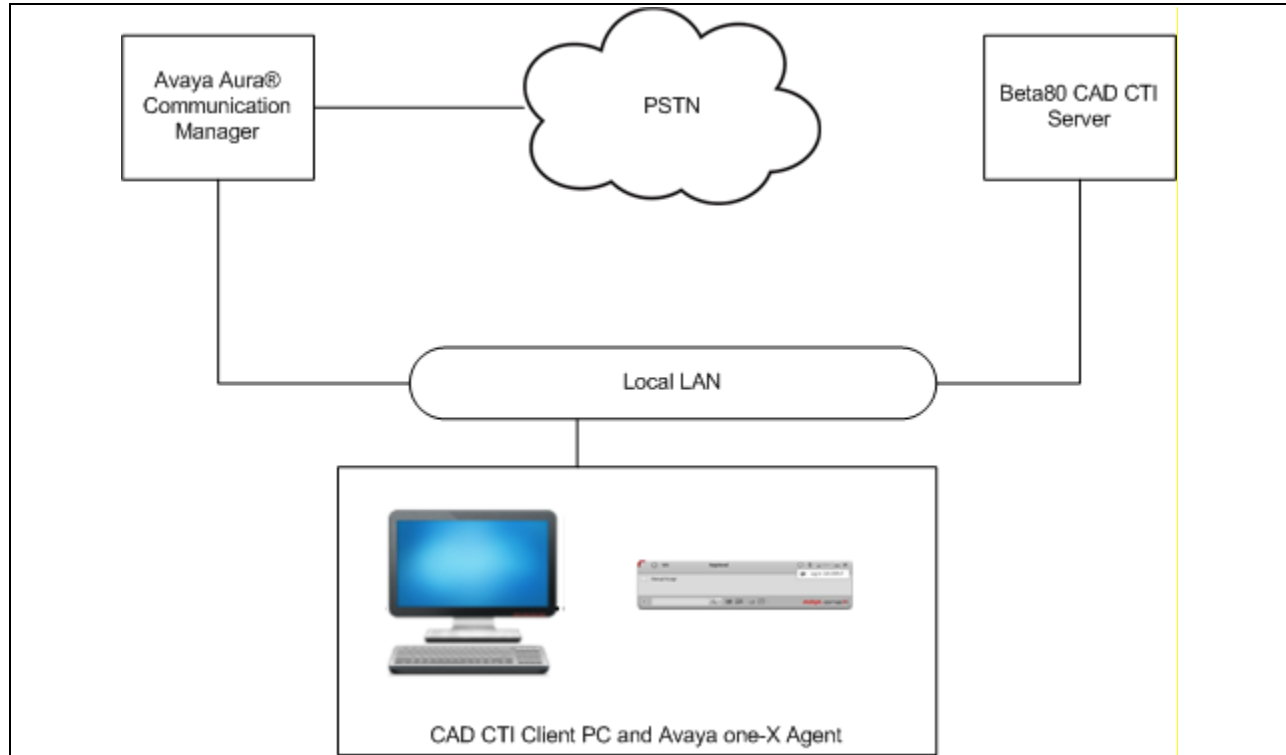


Figure 1: Beta80 CAD CTI with Application Enablement Services

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on a VMware Virtual Machine	7.0.1.2.0-FP1SP2
Avaya one-X Agent H323	2.5.10
Beta 80 EMMA	6.4.0.0

5. Configure Avaya Aura® Communication Manager

The information provided in this section describes the configuration of Communication Manager relevant to this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 10**.

The configuration illustrated in this section was performed using Communication Manager System Administration Terminal (SAT).

5.1. Verify System Features

Use the **display system-parameters customer-options** command to verify that Communication Manager has permissions for features illustrated in these Application Notes. On **Page 11**, ensure that **IP_Agent** has a sufficient number to allow the required one-X Agent instances.

display system-parameters customer-options				Page 11 of 12
MAXIMUM IP REGISTRATIONS BY PRODUCT ID				
Product ID	Rel.	Limit	Used	
AgentSC	*	: 2400	0	
IP_API_A	*	: 2400	0	
IP_Agent	*	: 2400	2	
IP_NonAgt	*	: 2400	0	
IP_Phone	*	: 2400	4	
IP_ROMax	*	: 2400	0	
IP_Soft	*	: 2400	0	
IP_Supv	*	: 2400	0	
IP_eCons	*	: 68	0	
oneX_Comm	*	: 2400	1	

5.2. Add a Softphone extension

Use **add station x** where x is the extension used for one-X agent. Enter a **Security Code** that will be used to log into one-X Agent. Set **IP SoftPhone** to **y**

add station 8230004		Page 1 of 5
STATION		
Extension: 823-0004	Lock Messages? n	BCC: M
Type: 9640	Security Code: *	TN: 1
Port: S00003	Coverage Path 1:	COR: 1
Name: Station 8230004	Coverage Path 2:	COS: 1
	Hunt-to Station:	Tests? y
STATION OPTIONS		
Loss Group: 19	Time of Day Lock Table:	
	Personalized Ringing Pattern: 1	
Speakerphone: 2-way	Message Lamp Ext: 823-0004	
Display Language: english	Mute Button Enabled? y	
Survivable GK Node Name:	Button Modules: 0	
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? y	
	IP Video Softphone? y	
	Short/Prefixed Registration Allowed: default	
	Customizable Labels? y	

5.3. Add an Agent-LoginID

Use **add agent-loginID x** where x is the agent extension used for one-X agent. On **Page 1** enter a **Password** and **Password (enter again)**.

add agent-loginID 8231004		Page 1 of 2
AGENT LOGINID		
Login ID: 823-1004	AAS? n	
Name: Agent 8231004	AUDIX? n	
TN: 1	Check skill TNs to match agent TN? n	
COR: 1		
Coverage Path:	LWC Reception: spe	
Security Code:	LWC Log External Calls? n	
Attribute:	AUDIX Name for Messaging:	
	LoginID for ISDN/SIP Display? n	
	Password:	
	Password (enter again):	
	Auto Answer: station	
AUX Agent Remains in LOA Queue: system	MIA Across Skills: system	
AUX Agent Considered Idle (MIA): system	ACW Agent Considered Idle: system	
Work Mode on Login: system	Aux Work Reason Code Type: system	
	Logout Reason Code Type: system	
	Maximum time agent in ACW before logout (sec): system	
	Forced Agent Logout Time: :	
WARNING: Agent must log in again before changes take effect		

On **Page 2** enter the skill number (SN) and skill level (SL) administered in **Section 5.4**.

change agent-loginID 8231001			AGENT LOGINID			Page 2 of 2		
Direct Agent Skill: 1						Service Objective? n		
Call Handling Preference: skill-level						Local Call Preference? n		
SN	RL	SL	SN	RL	SL			
1: 1		1	16:					

5.4. Add a Hunt Group

Use add hunt-group x where x is the number of the hunt group that will be added to the agent.

On **Page 1** set **ACD**, **Queue** and **Vector** to **y**

add hunt-group 1			HUNT GROUP			Page 1 of 4		
Group Number: 1						ACD? y		
Group Name: ACD Default						Queue? y		
Group Extension: 823-3001						Vector? y		
Group Type: ucd-mia								
TN: 1								
COR: 1						MM Early Answer? n		
Security Code:						Local Agent Preference? n		
ISDN/SIP Caller Display:								
Queue Limit: unlimited								
Calls Warning Threshold:			Port:					

On **Page 2** set **Skill** to **y**.

add hunt-group 1			HUNT GROUP			Page 2 of 4		
Skill? y			Expected Call Handling Time (sec): 180					
AAS? n								
Measured: none								
Supervisor Extension:								
Controlling Adjunct: none								
Multiple Call Handling: none								
Timed ACW Interval (sec):			After Xfer or Held Call Drops? n					

5.5. Add a VDN and edit Vector

Use **add vdn x** where x is the extension number of the VDN used to queue to the hunt group add in **Section 5.4**. Enter a **Name*** and **Destination** as **Vector Number** and in this example **50**. Enter the hunt group number added in **Section 5.4** as **1st Skill***.

add vdn 8234050	Page 1 of 3
VECTOR DIRECTORY NUMBER	
Extension: 823-4050	
Name*: Default Agent	
Destination: Vector Number	50
Attendant Vectoring? n	
Meet-me Conferencing? n	
Allow VDN Override? n	
COR: 1	
TN*: 1	
Measured: none	Report Adjunct Calls as ACD*? n
VDN of Origin Annc. Extension*:	
1st Skill*: 1	

Use **change vector 50** to edit the vector contents and script the queuing of calls to the hunt group added in **Section 5.4**. A line must be added to queue-to skill 1st so that calls are sent to the agents logged into the hunt group set in **Section 5.5**.

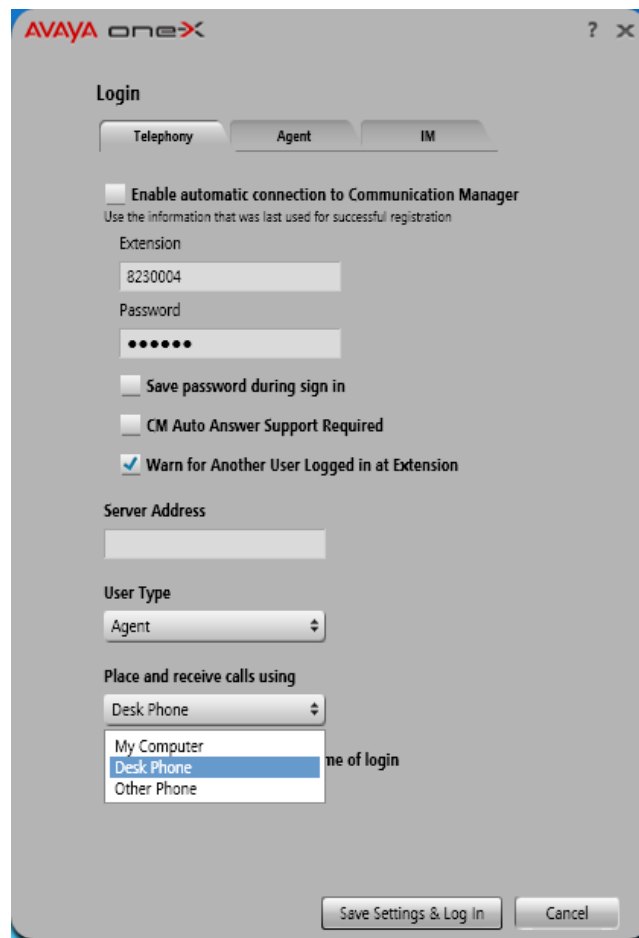
change vector 50	Page 1 of 6
CALL VECTOR	
Number: 50 Name: Default Agent Route	
Multimedia? n	Attendant Vectoring? n Meet-me Conf? n Lock? n
Basic? y	EAS? y G3V4 Enhanced? y ANI/II-Digits? y ASAI Routing? y
Prompting? y	LAI? y G3V4 Adv Route? y CINFO? y BSR? y Holidays? y
Variables? y	3.0 Enhanced? y
01 wait-time	2 secs hearing ringback
02 queue-to	skill 1st pri m
03 wait-time	30 secs hearing ringback
04 goto step	3 if unconditionally

6. Configure Avaya one-X Agent

The information in this section describes the steps required to administer Avaya one-X Agent for the solution

6.1. Configure Station settings

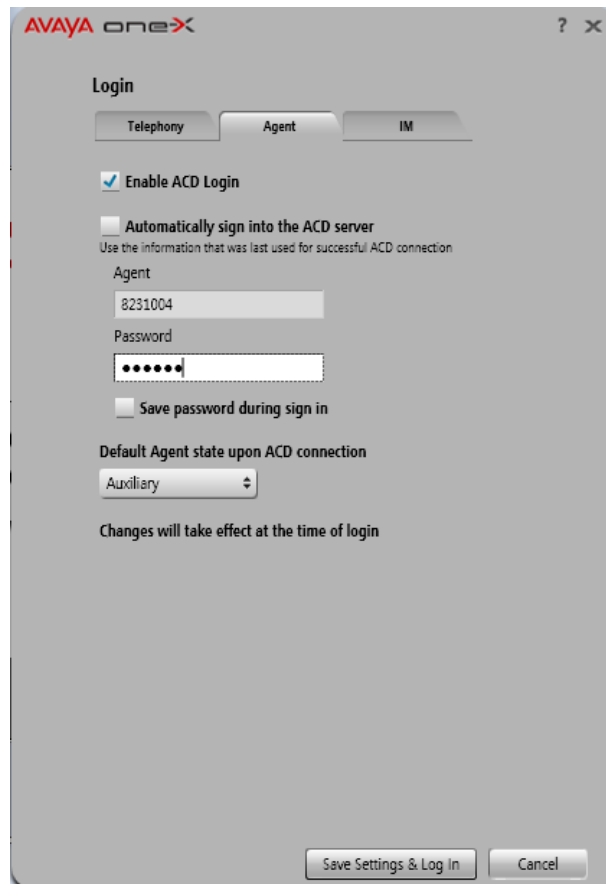
From the one-X agent application, enter the System Settings menu (not shown). On the **Telephony** tab enter the **Extension** and **Password** administered in **Section 5.2**. Set the **User Type** as **Agent** and select the required **Place and receive calls using** setting.



The image shows the Avaya one-X Agent Login dialog box. It has a title bar with the Avaya one-X logo and window controls. The dialog is divided into three tabs: Telephony, Agent, and IM. The Telephony tab is selected. Below the tabs, there is a checkbox for 'Enable automatic connection to Communication Manager' with a note 'Use the information that was last used for successful registration'. Below this are fields for 'Extension' (containing '8230004') and 'Password' (masked with dots). There are also checkboxes for 'Save password during sign in', 'CM Auto Answer Support Required', and 'Warn for Another User Logged in at Extension' (checked). Below these is a 'Server Address' field. Further down is a 'User Type' dropdown menu set to 'Agent'. At the bottom is a 'Place and receive calls using' dropdown menu with a list box showing 'My Computer', 'Desk Phone' (highlighted), and 'Other Phone'. To the right of this list box is the text 'me of login'. At the very bottom are two buttons: 'Save Settings & Log In' and 'Cancel'.

6.2. Configure Agent Settings

From the one-X agent application, enter the System Settings menu (not shown). On the Agent tab enter the **Agent LoginID** and **Password** administered in Section 5.3. Set the Set the Default **Agent state upon ACD Connection** to **Auxiliary**. Click on the **Save Settings and Log in** button to proceed.



The screenshot shows the AVAYA one-X Agent Login dialog box. It has a title bar with the AVAYA one-X logo and window controls. The dialog is titled "Login" and has three tabs: "Telephony", "Agent", and "IM". The "Agent" tab is selected. Inside the dialog, there is a checkbox for "Enable ACD Login" which is checked. Below it is a checkbox for "Automatically sign into the ACD server" which is unchecked, with a note "Use the information that was last used for successful ACD connection". There are two text input fields: "Agent" containing "8231004" and "Password" containing masked characters. Below these is a checkbox for "Save password during sign in" which is unchecked. A dropdown menu for "Default Agent state upon ACD connection" is set to "Auxiliary". At the bottom, there is a note "Changes will take effect at the time of login" and two buttons: "Save Settings & Log in" and "Cancel".

7. Configure Beta 80 CAD CTI

Once PSAP's positions have been created and enabled for use of the One-X agent API connector, it is possible to configure each CAD client to handshake with the co-resident One-X Agent.

For each CAD client, the relevant "INI" file has to be configured with the following instructions:

```
<!-- Sezione di configurazione dedicata ad Avaya -->
<!-- ACDIntegrationType key value:
1 = ACD with no automatic answer
2 = ACD with automatic answer
-->
<AvayaSection
  RegistryKey="SOFTWARE\Avaya\Avaya one-X Agent\Settings"
  URIBase="http://127.0.0.1:{0}/onexagent/api/"
  URIRegister="{0}registerclient?name={1}"
  URIUnregister="{0}unregisterclient?clientid={1}"
  URINotification="{0}nextnotification?clientid={1}"
  URIMakeCall="{0}voice/makecall?clientid={1}&number={2}"
  URIMute="{0}voice/mute?clientid={1}"
  URIUnmute="{0}voice/unmute?clientid={1}"
  URIAccept="{0}voice/accept?clientid={1}&interactionid={2}"
  URIRelease="{0}voice/release?clientid={1}&interactionid={2}"
  URIHold="{0}voice/hold?clientid={1}&interactionid={2}"
  URIUnhold="{0}voice/unhold?clientid={1}&interactionid={2}"
  NotificationRequestInterval="250"
  RegExCallIdParsing="( ?&lt;beforePhoneNumber&gt;:[\w]{0}) ( ?&lt;phoneNumber&gt;:[+{0,1}\d{1,20}) ( ?&lt;afterPhoneNumber&gt;:[\w]{0}) "
  ACDIntegrationType="1"
  ExtendedEventLogs="true"
/>
<!-- ***** -->
```

In this file, the One-X Agent's APIs are properly configured (from *URIBase* to *RegExCallIdParsing*); the last two parameters, i.e. "*ACDIntegrationType*" and "*ExtendedEventLogs*", are emma / iO CAD specific values:

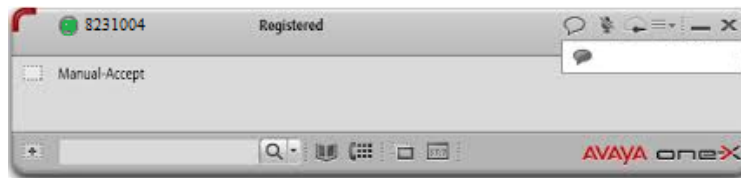
- The *ACDIntegrationType* parameter represents the "auto answer"/"No auto answer" option: the value "1" means that auto answer mode is off, the value "2" means that the auto answer feature is on. This configuration has to match the One-X Agent auto answer settings.
- The *ExtendedEventLogs* parameter enables extended log capture

8. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the Avaya and the Beta80 CAD CTI solution.

8.1. Verify Avaya one-X agent

The following steps can validate that the Avaya one-X Agent application is logged in and working. The top bar shows the Agent LoginID and shows as Green for Available. A Call should be placed to the VDN number and the call is routed to the Agent.



8.2. Verify Beta 80 CAD CTI

The following shows that the CAD Client is logged in, a call has been answered and the CLI has been correctly imported.

Dispatch	Agency	Vehicle Code	Dispatch Status	Dispatch Outcome	Patient Form	No. of patients	Stand Organizations	Name

9. Conclusion

These Application Notes describe the configuration steps required for Beta80 CAD CTI to successfully interoperate with Avaya Aura® Communication Manager R7.0 using Avaya one-X Agent 2.5. All feature functionality and serviceability test cases were completed successfully as outlined in **Section 2.2**.

10. Additional References

This section references the Avaya and Beta80 product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at <https://support.avaya.com>.

- [1] *Administering Avaya Aura® Communication Manager*, Document ID 03-300509
- [2] *Avaya Aura® Communication Manager Feature Description and Implementation*, Document ID 555-245-205
- [3] *Avaya one-X Agent Administration and Maintenance Guide Release 2.5*

Product documentation for Beta80 can be obtained as follows:

E-Mail: sales@beta80group.com

Internet: www.beta80group.com

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