



Avaya Solution & Interoperability Test Lab

Application Notes for Nine One One, Inc. QuickResponse™ with Avaya Communication Manager using Avaya Application Enablement Services – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Nine One One, Inc. QuickResponse application to successfully interoperate with Avaya Communication Manager using Avaya Application Enablement Services. The Nine One One, Inc. QuickResponse is a 911 Public Safety Answering Point management solution that uses the Avaya Telephony Services Application Programming Interface service to provide emergency call center screen pop and call control applications.

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

Nine One One, Inc. QuickResponse is a 911 Public Safety Answering Point management solution, and integration with Avaya Communication Manager is achieved through the Application Enablement Services (AES) Telephony Services Application Programming Interface (TSAPI) service. The Nine One One, Inc. QuickResponse solution consists of a server and clients connected via TCP/IP. The 911 call takers' desktops are connected to the QuickResponse server, with dispatcher-initiated actions such as answering and transferring calls mostly initiated via this interface.

The QuickResponse server uses the AES TSAPI service to monitor Vector Directory Numbers (VDNs) and call taker stations. The incoming calls are delivered from the VDN to a virtual station. The virtual station's call appearances are bridged onto the physical call takers' station, therefore all call takers will be alerted of the incoming call. When an available call taker answers the incoming 911 call, the QuickResponse server uses the ANI from the TSAPI event reports to look up the associated Automatic Locator Information (ALI) information, and populates the answering call taker screen with both ANI and ALI. The TSAPI call control services are used by QuickResponse to perform call related actions initiated from the call taker desktops.

The ALI information is typically provided by an external ALI provider that the QuickResponse server interfaces with. For the compliance testing, the QuickResponse server used an internal database to obtain the ALI information. In addition to handling incoming 911 calls, the call takers can also be configured to handle administrative calls for the 911 incident management center, which was also verified in the compliance testing.

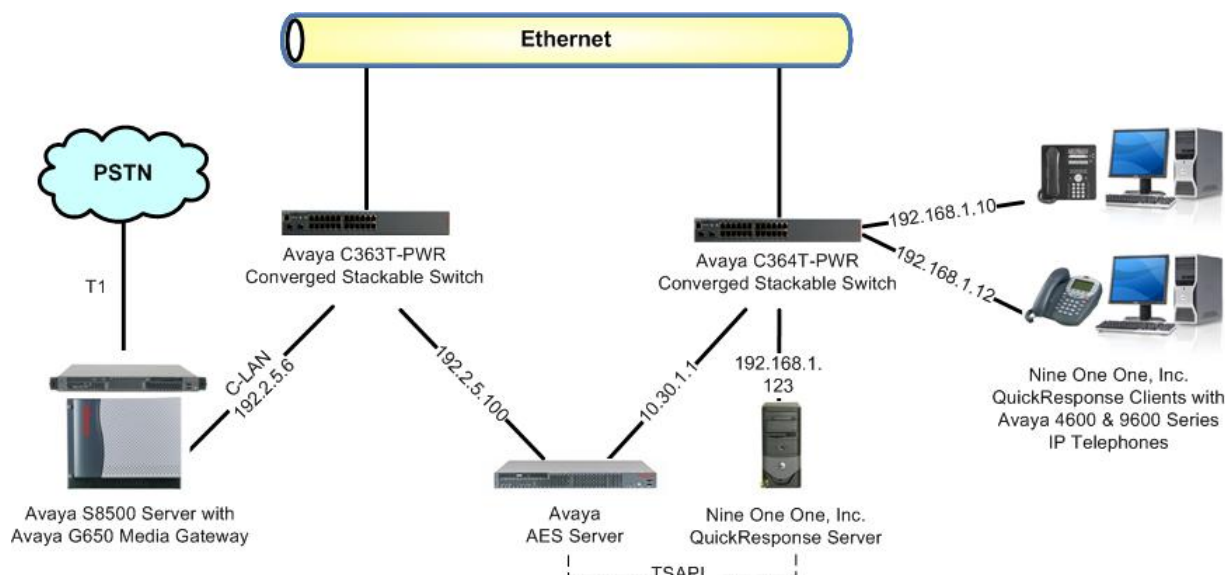


Figure 1: Nine One One, Inc. QuickResponse with Avaya Communication Manager using Avaya AES

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8500 Server	Avaya Communication Manager 5.0, R015x.00.0.825.4
Avaya MCC1 Media Gateway <ul style="list-style-type: none">• TN799DP C-LAN Circuit Pack	HW01 FW017
Avaya Application Enablement Services	4.2
Avaya 4600 Series IP Telephones (H.323)	2.9
Avaya 9600 Series IP Telephones (H.323)	1.2
Nine One One QuickServer (server)	2.00.0011
Nine One One QRConnectAv (server)	2.0.1.13
Nine One One QuickResponse (client)	2.00.0010

3. Configure Avaya Communication Manager

The detailed administration of basic connectivity between Avaya Communication Manager and Avaya AES are not the focus of these Application Notes and will not be described. For administration of basic connectivity to Avaya AES, refer to the appropriate documentation listed in **Section 10**. This section provides the procedures for the following:

- Verify Avaya Communication Manager License
- Administer TSAPI CTI link
- Administer virtual stations
- Administer call taker stations
- Administer 911 vector and VDN
- Administer administrative vector and VDN

3.1. Verify Avaya Communication Manager License

Log into the System Access Terminal (SAT) to verify that the Avaya Communication Manager license has proper permissions for features illustrated in these Application Notes. Use the “display system-parameters customer-options” command to verify that the **Computer Telephony Adjunct Links** customer option is set to “y” on **Page 3**. If this option is not set to “y”, then contact the Avaya sales team or business partner for a proper license file.

display system-parameters customer-options		Page	3 of	11
OPTIONAL FEATURES				
Abbreviated Dialing Enhanced List?	y	Audible Message Waiting?	y	
Access Security Gateway (ASG)?	n	Authorization Codes?	y	
Analog Trunk Incoming Call ID?	y	Backup Cluster Automatic Takeover?	n	
A/D Grp/Sys List Dialing Start at 01?	y	CAS Branch?	n	
Answer Supervision by Call Classifier?	y	CAS Main?	n	
ARS?	y	Change COR by FAC?	n	
ARS/AAR Partitioning?	y	Computer Telephony Adjunct Links?	y	
ARS/AAR Dialing without FAC?	y	Cvg Of Calls Redirected Off-net?	y	
ASAI Link Core Capabilities?	y	DCS (Basic)?	y	
ASAI Link Plus Capabilities?	y	DCS Call Coverage?	y	

3.2. Administer TSAPI CTI Link

Add a CTI link using the “add cti-link n” command, where “n” is an available CTI link number. Enter an available extension number in the **Extension** field. Note that the CTI link number and extension number may vary. Enter “ADJ-IP” in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields.

add cti-link 1		Page	1 of	3
CTI LINK				
CTI Link:	1			
Extension:	60100			
Type:	ADJ-IP			
		COR: 1		
Name:	NineOneOne TSAPI Link			

3.3. Administer Virtual Stations

Add a virtual station for delivering of 911 calls using the “add station n” command, where “n” is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Type:** “X”
- **Name:** A descriptive name.

add station 66102		Page 1 of 5
STATION		
Extension: 66102	Lock Messages? n	BCC: 0
Type: 6408D+	Security Code:	TN: 1
Port: X	Coverage Path 1:	COR: 1
Name: NineOneOne virtual 911	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
	Time of Day Lock Table:	
Loss Group: 2	Personalized Ringing Pattern: 1	
Data Module? n	Message Lamp Ext: 66102	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? n	
	Remote Office Phone? N	

Navigate to **Page 2**, and disable the **Restrict Last Appearance** field.

add station 66102		Page 2 of 5
STATION		
FEATURE OPTIONS		
LWC Reception: spe	Auto Select Any Idle Appearance? n	
LWC Activation? y	Coverage Msg Retrieval? y	
LWC Log External Calls? n	Auto Answer: none	
CDR Privacy? n	Data Restriction? n	
Redirect Notification? y	Idle Appearance Preference? n	
Per Button Ring Control? n	Bridged Idle Line Preference? n	
Bridged Call Alerting? n	Restrict Last Appearance? n	
Active Station Ringing: single		
H.320 Conversion? n	Per Station CPN - Send Calling Number?	
Service Link Mode: as-needed		
Multimedia Mode: basic		
MWI Served User Type:	Display Client Redirection? n	
AUDIX Name:	Select Last Used Appearance? n	
	Coverage After Forwarding? s	
Automatic Moves: no	Multimedia Early Answer? n	
	Direct IP-IP Audio Connections? y	
Emergency Location Ext: 66102	IP Audio Hairpinning? n	

Navigate to **Page 4**, and administer a sufficient number of **call-appr** buttons. Note that one **call-appr** button is needed for each simultaneous 911 calls. In the compliance testing, two **call-appr** buttons were administered for support of two simultaneous 911 calls.

```

add station 66102

```

		Page 4 of 5
STATION		
SITE DATA		
Room:		Headset? n
Jack:		Speaker? n
Cable:		Mounting: d
Floor:		Cord Length: 0
Building:		Set Color:
ABBREVIATED DIALING		
List1:	List2:	List3:
BUTTON ASSIGNMENTS		
1: call-appr	5:	
2: call-appr	6:	
3:	7:	
4:	8:	

Repeat this section to administer a virtual station for delivering of administrative calls. For the compliance testing, two virtual stations were administered as shown below.

```

list station 66102 count 2

```

STATIONS									
Ext/ Hunt-to	Port/ Type	Name/ Surv GK NN	Move	Room/ Data Ext	Cv1/ Cv2	COR/ COS	Cable/ Jack		
66102	X	NineOneOne virtual 911				1			
	6408D+		no			1			
66103	X	NineOneOne virtual adm				1			
	6408D+		no			1			

3.4. Administer Call Taker Stations

Add a station for each 911 call taker's telephone using the "add station n" command, where "n" is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Type:** A valid station type, in this case "9650".
- **Name:** A descriptive name.
- **Security Code:** A desired value.

add station 60201		Page 1 of 6
STATION		
Extension: 60201	Lock Messages? n	BCC: 0
Type: 9650	Security Code: 60201	TN: 1
Port: IP	Coverage Path 1:	COR: 1
Name: NineOneOne call taker 1	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 19	Time of Day Lock Table:	
	Personalized Ringing Pattern: 1	
Speakerphone: 2-way	Message Lamp Ext: 60201	
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? n	
	Customizable Labels? y	

Navigate to a page with available buttons, in this case **Page 5**. Administer a **brdg-appr** button for each call appearance on the virtual stations for the 911 and administrative calls, as shown below.

add station 60201		Page 5 of 6
STATION		
AUXILIARY BUTTON ASSIGNMENTS		
Main View	Shifted View	
4: brdg-appr B:1 E:66102	12:	
5: brdg-appr B:2 E:66102	13:	
6: brdg-appr B:1 E:66103	14:	
7: brdg-appr B:2 E:66103	15:	
8:	16:	
9:	17:	
10:	18:	
11:	19:	
BUTTON ASSIGNMENTS		
20:		
21:		
22:		
23:		
24:		

Repeat the “add station n” command to add the desired number of call taker stations. For the compliance testing, two call taker stations were administered as shown below.

list station 60201 count 2										
STATIONS										
Ext/ Hunt-to	Port/ Type	Name/ Surv GK NN		Move	Room/ Data	Ext	Cv1/ Cv2	COR/ COS	Cable/ Jack	
60201	S00000	NineOneOne	call taker 1					1		
	9650			no				1		
60202	S00166	NineOneOne	call taker 2					1		
	4625			no				1		

3.5. Administer 911 Vector and VDN

Modify a vector using the “change vector n” command, where “n” is an available vector number. This vector will provide routing of incoming 911 calls to the proper virtual station. Note that the vector **Number** and **route-to number** may vary, and that the **route-to number** is the extension of the virtual station for the 911 calls from **Section 3.3**.

```
change vector 2                                     Page 1 of 6
                                                    CALL VECTOR

  Number: 2                      Name: NineOneOne 911
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? n      G3V4 Adv Route? y      CINFO? y      BSR? y      Holidays? y
  Variables? y      3.0 Enhanced? y
01 route-to      number 66102      with cov n if unconditionally
02
```

Add a VDN using the “add vdn n” command, where “n” is an available extension. Associate this VDN with the newly added vector.

- **Name:** A descriptive name.
- **Vector Number:** The vector number from above, in this case “2”.

```
add vdn 60502                                     Page 1 of 3
                                                    VECTOR DIRECTORY NUMBER

                                Extension: 60502
                                Name*: NineOneOne 911 VDN
                                Vector Number: 2
                                Attendant Vectoring? n
                                Meet-me Conferencing? n
                                Allow VDN Override? n
                                COR: 1
                                TN*: 1
                                Measured: none

                                VDN of Origin Annc. Extension*:
                                1st Skill*:
                                2nd Skill*:
                                3rd Skill*:

* Follows VDN Override Rules
```

3.6. Administer Administrative Vector and VDN

Modify a vector using the “change vector n” command, where “n” is an available vector number. This vector will provide routing of incoming administrative calls to the proper virtual station.

Note that the vector **Number** and **route-to number** may vary, and that the **route-to number** is the extension of the virtual station for the administrative calls from **Section 3.3**.

```
change vector 3                                     Page 1 of 6
                                                    CALL VECTOR

  Number: 3                      Name: NineOneOne adm
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? n      G3V4 Adv Route? y      CINFO? y      BSR? y      Holidays? y
  Variables? y      3.0 Enhanced? y
01 route-to      number 66103      with cov n if unconditionally
02
```

Add a VDN using the “add vdn n” command, where “n” is an available extension. Associate this VDN with the newly added vector, and submit these changes.

- **Name:** A descriptive name.
- **Vector Number:** The vector number from above, in this case “3”.

```
add vdn 60503                                     Page 1 of 3
                                                    VECTOR DIRECTORY NUMBER

      Extension: 60503
      Name*: NineOneOne adm VDN
      Vector Number: 3
      Attendant Vectoring? n
      Meet-me Conferencing? n
      Allow VDN Override? n
      COR: 1
      TN*: 1
      Measured: none

      VDN of Origin Annc. Extension*:
      1st Skill*:
      2nd Skill*:
      3rd Skill*:

* Follows VDN Override Rules
```

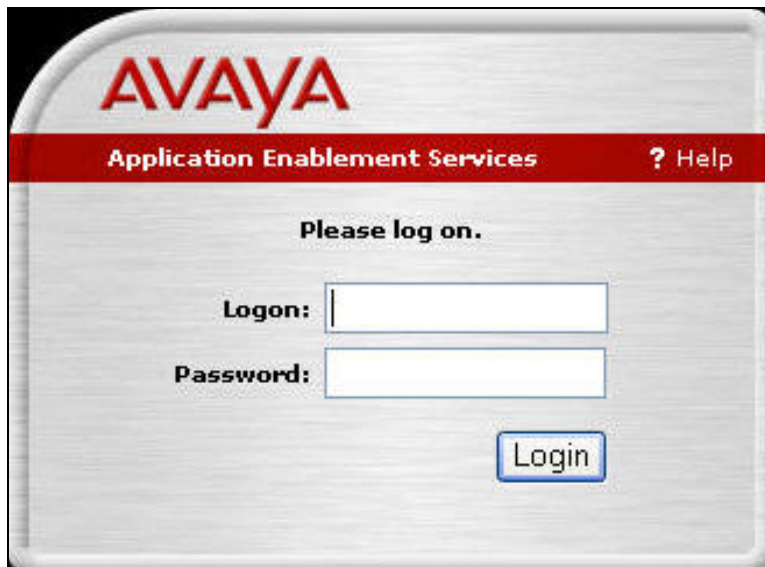
4. Configure Avaya Application Enablement Services

This section provides the procedures for configuring Avaya AES. The procedures include the following areas:

- Verify AES license
- Administer TSAPI link
- Obtain Tlink name
- Administer QuickResponse user
- Restart TSAPI service

4.1. Verify AES License

Access the AES OAM web-based interface by using the URL “https://ip-address:8443/MVAP” in an Internet browser window, where “ip-address” is the IP address of the AES server. The **Login** screen is displayed as shown below. Log in with appropriate credentials.

The image shows a web-based login interface for Avaya Application Enablement Services (AES). At the top, the Avaya logo is displayed in red. Below it, a red banner contains the text "Application Enablement Services" and a "? Help" link. The main area of the interface is light gray and contains the text "Please log on." in bold. Below this text are two input fields: one labeled "Logon:" and another labeled "Password:". To the right of the "Logon:" label is a white text box with a blue border. To the right of the "Password:" label is a white text box with a blue border. Below these input fields is a blue button with the text "Login" in white.

The **Welcome to OAM** screen is displayed next. Select **CTI OAM Admin** from the left pane.

The screenshot shows the Avaya Application Enablement Services (OAM) interface. The header includes the Avaya logo and the title 'Application Enablement Services Operations Administration and Maintenance'. A navigation bar at the top right contains links for 'OAM Home', 'Help', and 'Logout'. The left sidebar lists 'Home', 'CTI OAM Admin', and 'User Management'. The main content area is titled 'Welcome to OAM' and contains the following text:

You are here: > [Home](#)

Welcome to OAM

The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:

- CTI OAM Admin - Use CTI OAM Admin to manage all AE Services that you are licensed to use on the AE Server.
- User Management - Use User Management to manage AE Services users and AE Services user-related resources.

Depending on your business requirements, these administrative domains can be served by one administrator for both domains, or a separate administrator for each domain.

The **Welcome to CTI OAM Screens** is displayed. Verify that AES is licensed for the TSAPI service, as shown below. If the TSAPI service is not licensed, contact the Avaya sales team or business partner for a proper license file.

The screenshot shows the Avaya Application Enablement Services (OAM) interface. The header includes the Avaya logo and the title 'Application Enablement Services Operations Administration and Maintenance'. A navigation bar at the top right contains links for 'OAM Home', 'Help', and 'Logout'. The left sidebar lists 'CTI OAM Home', 'Administration', 'Status and Control', 'Maintenance', 'Alarms', 'Logs', 'Utilities', and 'Help'. The main content area is titled 'Welcome to CTI OAM Screens' and contains the following information:

You are here: > [CTI OAM Home](#)

Welcome to CTI OAM Screens

[craft] Last login: Mon Sep 22 12:14:55 2008 from 192.168.1.10

IMPORTANT: AE Services must be restarted for administrative changes to fully take effect. Changes to the Security Database do not require a restart.

Service	Controller Status	Licenses Purchased
ASAI Link Manager	Running	N/A
DMCC Service	Running	Yes
CVLAN Service	Running	No
DLG Service	Running	Yes
Transport Layer Service	Running	N/A
TSAPI Service	Running	Yes
SMS	N/A	Yes

For status on actual services, please use [Status and Control](#).

License Information

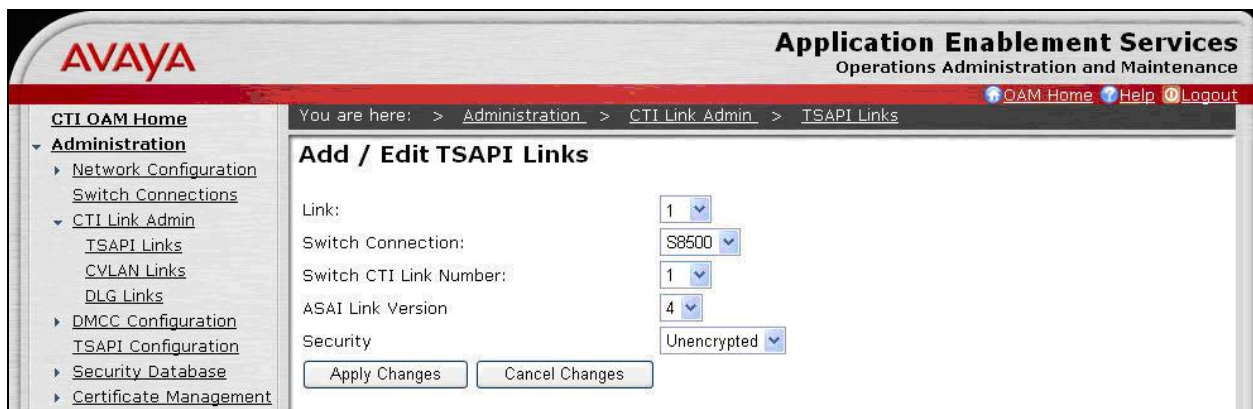
You are licensed to run Application Enablement (CTI) version 4.2.

4.2. Administer TSAPI Link

To administer a TSAPI link, select **Administration > CTI Link Admin > TSAPI Links** from the left pane. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.



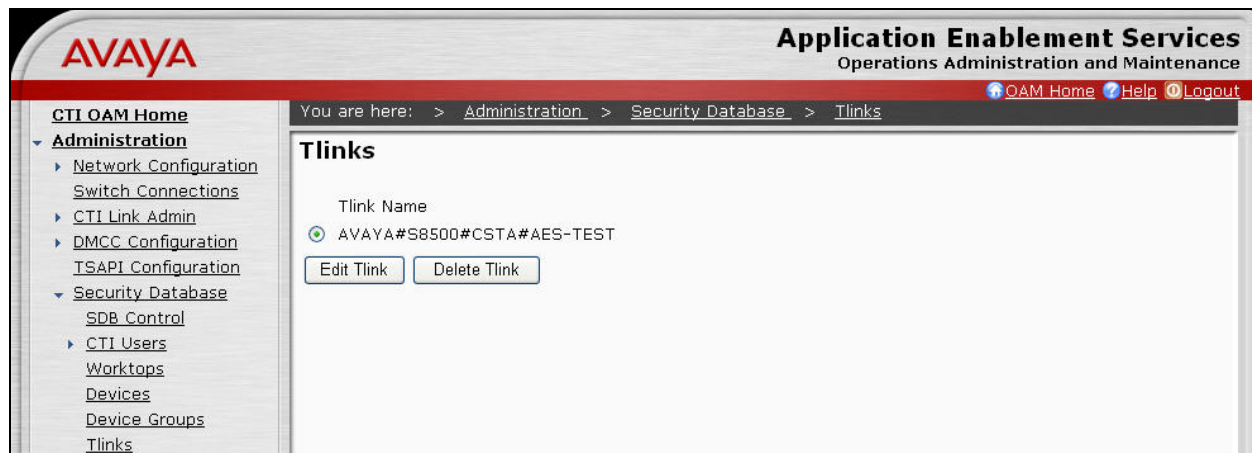
The **Add / Edit TSAPI Links** screen is displayed next. The **Link** field is only local to the AES server, and may be set to any available number. For **Switch Connection**, select the relevant switch connection from the drop-down list. In this case, the existing switch connection "S8500" is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 3.2**. Retain the default values in the remaining fields, and click **Apply Changes**.



4.3. Obtain Tlink Name

Select **Administration > Security Database > Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. A new Tlink name is automatically generated by the AES server, upon creation of a new switch connection. Locate the Tlink name associated with the relevant switch connection, which would use the name of the switch connection as part of the Tlink name. Make a note of the associated Tlink name, to be used later for configuring the QuickResponse server.

In this case, the associated Tlink name is “AVAYA#S8500#CSTA#AES-TEST”. Note the use of the switch connection “S8500” as part of the Tlink name.



4.4. Administer QuickResponse User

Administer a new user account for the QuickResponse server, which is created from the AES User Management web pages. Select **OAM Home**, located at the upper right corner of the screen, to display the **Welcome to OAM** screen below. Select **User Management** from the left pane.



The **Welcome to the User Management home page** screen is displayed, as shown below.



Select **User Management > Add User** from the left pane. In the **Add User** screen shown below, enter descriptive values for the **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password** fields. For the **CT User** field, select “Yes” from the drop-down list. Retain the default value in the remaining fields. Click **Apply** at the bottom of the screen (not shown below).

AVAYA Application Enablement Services
Operations Administration and Maintenance

You are here: > [User Management](#) > [Add User](#)

Add User

Fields marked with * can not be empty.

* User Id

* Common Name

* Surname

* User Password

* Confirm Password

Admin Note

Avaya Role

Business Category

Car License

CM Home

Cms Home

CT User

Department Number

4.5. Restart TSAPI Service

Select **Maintenance > Service Controller** from the left pane. The **Service Controller** screen is displayed, and shows a listing of the services and associated status. Check the **TSAPI Service**, and click **Restart Service**.

AVAYA Application Enablement Services
Operations Administration and Maintenance

You are here: > [Maintenance](#) > [Service Controller](#)

Service Controller

Service	Controller Status
<input type="checkbox"/> ASAI Link Manager	Running
<input type="checkbox"/> DMCC Service	Running
<input type="checkbox"/> CVLAN Service	Running
<input type="checkbox"/> DLG Service	Running
<input type="checkbox"/> Transport Layer Service	Running
<input checked="" type="checkbox"/> TSAPI Service	Running

For status on actual services, please use [Status and Control](#).

5. Configure Nine One One, Inc. QuickResponse Server

This section provides the procedures for configuring the Nine One One, Inc. QuickResponse server. The procedures include the following areas:

- Administer Connections
- Administer VDN
- Administer Stations

5.1. Administer Connections

From the QuickResponse server, select **Start > All Programs > QRConnectAv > QRConnectAv**. Select **Tools > Options** from the top menu (not shown below), to display the **QRConnect Options** screen.

Select the **Connections** tab. For **TSAPI Server name**, enter the Tlink name from **Section 4.3**. Check the **Automatically Start Tsapi Service** field. For **Tsapi Login**, **Tsapi Password** and **Confirm Password**, enter the QuickResponse user credentials from **Section 4.4**. Uncheck the **Asterisk #1** and **Asterisk #2** fields. For **Bind all Socket connections to this IP**, select the IP address of the QuickResponse server that will be used to interface to the clients.

The screenshot shows the 'QRConnect Options' dialog box with the 'Connections' tab selected. The 'Tsapi Connections' section includes a text field for 'TSAPI Server name' containing 'AVAYA#S8500#CSTA#AES-TEST', a checked 'Automatically Start Tsapi Service' checkbox, and fields for 'Tsapi Login' (quickresponse), 'Tsapi Password' (masked), and 'Confirm Password' (masked). To the right are 'Outgoing' and 'Incoming' message and packet buffer size fields. The 'Server Connections' section has a 'QuickServer Listener' section with 'IP Address' and 'Port' fields, and a 'Bind all Socket connections to this IP' dropdown menu. Below this are checkboxes for 'Asterisk #1' and 'Asterisk #2', each with associated 'IP Address' and 'Port' fields. At the bottom are 'Asterisk Username' and 'Asterisk Password' fields, with a 'Confirm' field for the password. 'Cancel' and 'Save' buttons are at the bottom right.

Tsapi Connections	
TSAPI Server name:	AVAYA#S8500#CSTA#AES-TEST
<input checked="" type="checkbox"/> Automatically Start Tsapi Service	
Tsapi Login	quickresponse
Tsapi Password
Confirm Password
Outgoing Message Q	10
Incoming Message Q	50
Outgoing Packet Buf	5
Incoming Packet Buf	5

Server Connections	
QuickServer Listener:	Port: 914
IP Address	Bind all Socket connections to this IP (leave blank to use any local IP): 192.168.1.123
<input type="checkbox"/> Asterisk #1	IP Address: 10.0.0.88, Port: 5038
<input type="checkbox"/> Asterisk #2	IP Address: 10.0.0.98, Port: 5038
Asterisk Username	pbxadmin
Asterisk Password
Confirm

5.2. Administer VDN

Select the **VDN** tab. Add an entry for the 911 VDN created in **Section 3.5**, and an entry for the administrative VDN created in **Section 3.6**. Configure the entries as shown below.

The screenshot shows the 'QRConnect Options' dialog box with the 'VDN' tab selected. The 'Enable ACD' checkbox is unchecked. A table lists two VDN entries: 60502 (911 VDN) and 60503 (Admin VDN). Both have 'Monitor' checked, 'ACD' unchecked, 'Emergency' set to 911 and Admin respectively, 'SourceT' set to Land, and 'Bridge Type' set to None. Below the table are 'Add' and 'Delete' buttons. A note states: 'Only VDN's renamed from 0000 will be saved.' At the bottom right are 'Cancel' and 'Save' buttons.

VDN	Monitor	ACD	Desc	Emergency	SourceT	Bridge Type
60502	<input checked="" type="checkbox"/>	<input type="checkbox"/>	911 VDN	911	Land	None
60503	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Admin VDN	Admin	Land	None

5.3. Administer Stations

Select the **Stations** tab. Add an entry for each call taker station created in **Section 3.4**, as shown below. Note that the **Desc** and **Pos #** fields are used by the application to associate the client desktops with the monitored stations, and the values must match the configuration on the clients. Click **Save**.

The screenshot shows the 'QRConnect Options' dialog box with the 'Stations' tab selected. A table lists two station entries: 60201 (Calltaker01) and 60202 (Calltaker02). Both have 'Monitor' checked, 'Desc' set to Calltaker01 and Calltaker02 respectively, 'Pos #' set to 1 and 2, and 'Device Type' set to PosPhone. Below the table are 'Add' and 'Delete' buttons. A note states: 'Monitored Stations will be saved. If you do not monitor them, they last only for the current session.' At the bottom right are 'Cancel' and 'Save' buttons.

Station	Monitor	Desc	Pos #	Device Type
60201	<input checked="" type="checkbox"/>	Calltaker01	1	PosPhone
60202	<input checked="" type="checkbox"/>	Calltaker02	2	PosPhone

6. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on QuickResponse: use of TSAPI event reports to populate answering call taker desktops with ANI and ALI information, and use of TSAPI call controls to support call taker call related actions via the desktop.

The serviceability testing focused on verifying the ability of QuickResponse to recover from adverse conditions, such as disconnect and reconnect the Ethernet cable to the QuickResponse server.

6.1. General Test Approach

The feature test cases were performed both automatically and manually. Upon start of the QuickResponse application, the application automatically requests monitoring of VDNs and call taker stations. For the manual part of the testing, incoming calls were placed to the monitored 911 and administrative VDNs to enable event reports to be sent to QuickResponse. Manual call controls from both the agent desktops and the agent telephones were exercised to verify event reports associated with remaining features such as conferencing and transferring of calls.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cables to the QuickResponse server.

The verification of all tests included checking of proper states at the call taker stations and desktops, and monitoring of the QRConnect Log from the QuickResponse server.

6.2. Test Results

All feature test cases were executed and passed.

An observation was made from the serviceability testing. When the LAN cable for the QuickResponse server was disconnected and later reconnected, the QuickResponse client did not attempt any reconnection to the QuickResponse server until the agent initiates action from the desktop. The instruction to the call takers are to call for QuickResponse technical support, whenever the QuickResponse Communication Error pop up window is displayed upon loss of connectivity to the server.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager, Avaya Application Enablement Services, and Nine One One, Inc. QuickResponse.

7.1. Verify Avaya Communication Manager

On Avaya Communication Manager, verify the status of the administered CTI link by using the “status aesvcs cti-link” command. Verify that the **Service State** is “established” for the CTI link number administered in **Section 3.2**, as shown below.

```
status aesvcs cti-link
```

AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	4	no	AES-Test	established	18	17

7.2. Verify Avaya Application Enablement Services

On Avaya AES, verify the status of the TSAPI link by selecting **Status and Control > Services Summary** from the left pane. Click on **TSAPI Service**, followed by **Details** (not shown below). The **TSAPI Link Details** screen is displayed. Verify the **Conn Status** is “Talking” for the TSAPI link administered in **Section 4.2**, as shown below.

AVAYA

Application Enablement Services
Operations Administration and Maintenance

[OAM Home](#) [Help](#) [Logout](#)

[CTI OAM Home](#)

[Administration](#)

[Status and Control](#)

[Switch Conn Summary](#)

[Services Summary](#)

[Maintenance](#)

[Alarms](#)

[Logs](#)

[Utilities](#)

[Help](#)

You are here: > [Status and Control](#) > [Services Summary](#)

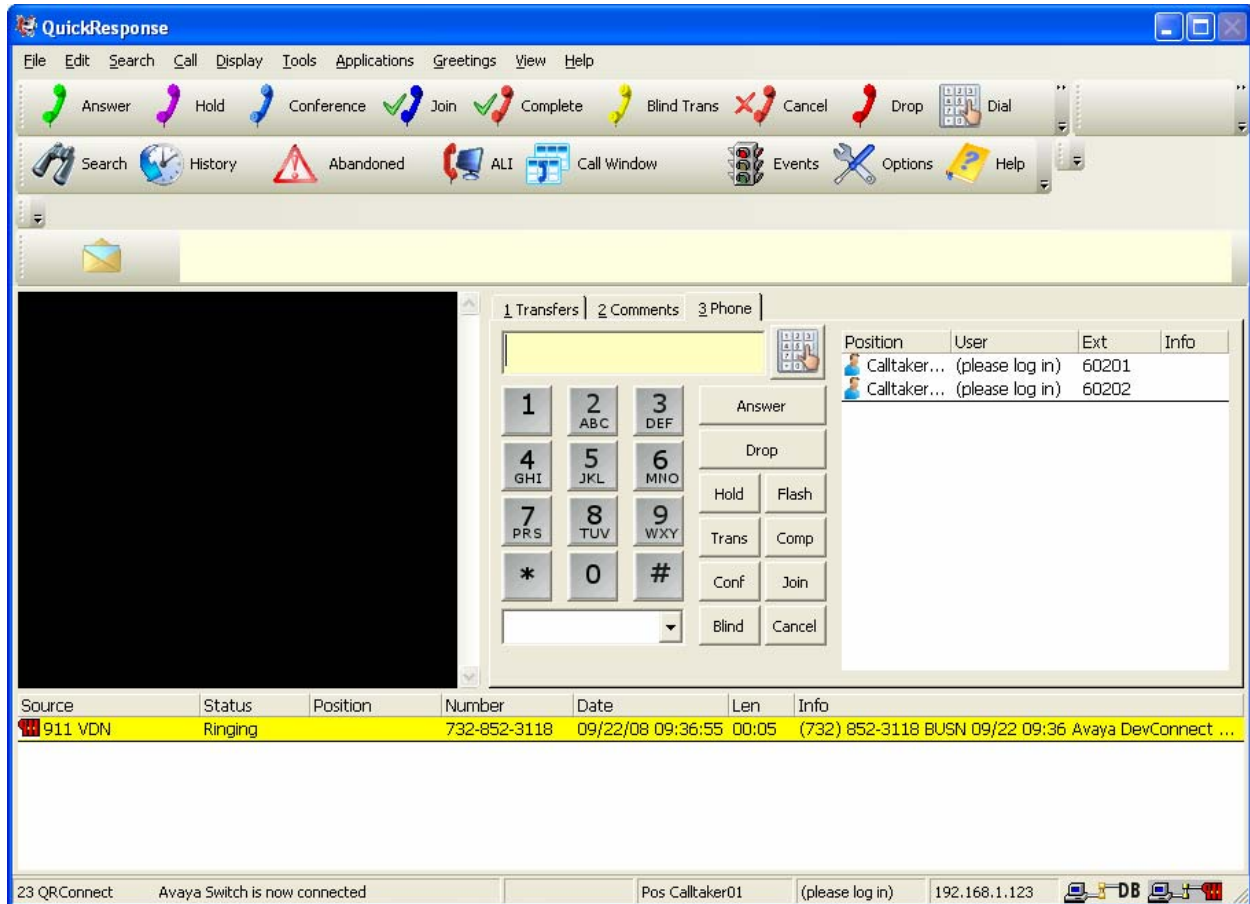
TSAPI Link Details

	Link	Switch Conn Name	Switch CTI Link Number	Conn Status	Since	Service State	Switch Version	Number of Associations	ASAI Message Rate
	1	S8500	1	Talking	2008-09-18 13:37:27.0	Online	15	4	45

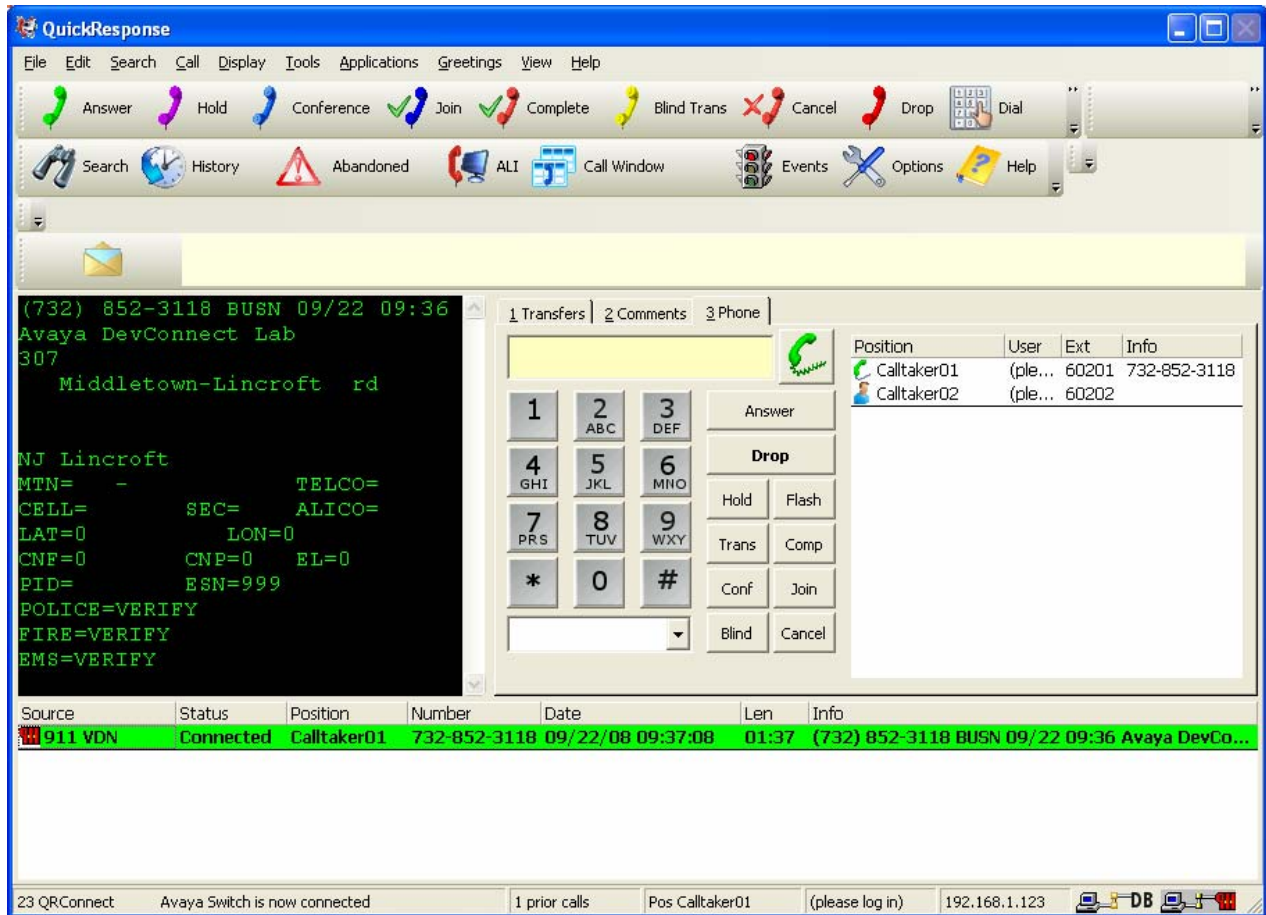
7.3. Verify Nine One One, Inc. QuickResponse

From the Nine One One, Inc. QuickResponse client, select **Start > Program > QuickResponse > QuickResponse**. The **Quick Response** screen is displayed.

Make an incoming 911 call, and verify all call takers are alerted of the ringing call in the bottom portion of the **QuickResponse** screen. Click on the **Answer** icon in the upper left portion of the screen from one of the call taker's desktop.



Verify the call taker is connected to the caller with two-way talk paths, and that the call taker screen is populated with the caller ANI and ALI information, as shown below.



8. Support

Technical support on Nine One One, Inc. QuickResponse can be obtained through the following:

- **Phone:** (800) 987-9011 24 hours emergency support
(303) 426-1911 8am-5pm MST
- **Email:** support@911-inc.com

9. Conclusion

These Application Notes describe the configuration steps required for Nine One One, Inc. QuickResponse to successfully interoperate with Avaya Communication Manager using Avaya Application Enablement Services.

All feature test cases completed successfully.

An observation was made from the serviceability testing. When the LAN cable for the QuickResponse server was disconnected and later reconnected, the QuickResponse client did not attempt any reconnection to the QuickResponse server until the agent initiates action from the desktop. The instruction to the call takers are to call for QuickResponse technical support whenever the QuickResponse Communication Error pop up window is displayed upon loss of connectivity to the server.

10. Additional References

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

- *Administrator Guide for Avaya Communication Manager*, Document 03-300509, Issue 4.0, Release 5.0, January 2008, available at <http://support.avaya.com>.
- *Avaya MultiVantage Application Enablement Services Administration and Maintenance Guide*, Release 4.2, Document ID 02-300357, Issue 10, May 2008, available at <http://support.avaya.com>.
- *QuickResponse Online Guide & QuickResponse Online Supervisor Guide*, Version 2.0.1, 2008, available on the QuickResponse server.
- *QRConnectAv Online Guide*, Version 8.0.1, 2008, available on the QuickResponse server.

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