



Avaya Solution & Interoperability Test Lab

Application Notes for InfinityCTI Click and Dial with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for InfinityCTI Click and Dial to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services.

In the compliance testing, InfinityCTI Click and Dial used the Telephony Services Application Programming Interface from Avaya Aura® Application Enablement Services to launch outbound calls on behalf of users.

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 for InfinityCTI Click and Dial to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services.

In the compliance testing, InfinityCTI Click and Dial used the Telephony Services Application Programming Interface (TSAPI) from Avaya Aura® Application Enablement Services to launch outbound calls on behalf of users.

The TSAPI interface is used by InfinityCTI Click and Dial to monitor the user station extension, and to launch outbound calls and send DTMF on behalf of the user. All call progress tones are played back on the user telephone connected to Avaya Aura® Communication Manager.

InfinityCTI Click and Dial supports automatic dialing of highlighted telephone number string from any application running on the user desktop such as web browser, email, spreadsheet, text document, etc. The telephone number string can consist of digits and/or letters. InfinityCTI Click and Dial strips all special characters from the telephone number string, and prepends any required network prefixes to the resultant number prior to sending to Avaya Aura® Application Enablement Services. Once the outbound call is established, InfinityCTI Click and Dial also supports sending of highlighted digits string as DTMF digits.

2. General Test Approach and Test Results

The feature test cases were performed manually. The outbound calls were initiated by users and launched by Click and Dial. Necessary user actions such as answer and drop were performed manually from the user telephones to test the various call scenarios.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to the user PC running Click and Dial.

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 test included feature and serviceability testing.

The feature testing focused on verifying the following on Click and Dial:

- Use of TSAPI event report service to monitor agent station.
- Use of TSAPI call control service to launch outbound calls and send DTMF digits.
- Proper handling of call scenarios involving incomplete number, invalid number, ring no answer, voicemail coverage, no route available, busy, spreadsheet, email, web browser, text document, DTMF, internal call, local call, long distance, international, special characters, multiple calls, and multiple users.

The serviceability testing focused on verifying the ability of Click and Dial to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet connection to the user PC running Click and Dial.

2.2. Test Results

All test cases were executed, and the following were observations on Click and Dial:

- By design, outbound call is not launched when the number of digits in the resultant telephone number is less than the length of internal extensions.
- By design, all special characters are stripped from the highlighted telephone number string, including * and #, prior to sending to Application Enablement Services as destination digits.
- By design, all special characters are stripped from the highlighted DTMF string, excluding * and #, prior to sending to Application Enablement Services as DTMF digits. Therefore * and # characters are retained in the resultant DTMF string.
- For a call that stayed up during an Ethernet disruption to the user PC, the first attempt by the user to send DTMF post recovery for the active call will fail, but can succeed in the second attempt.

2.3. Support

Technical support on Click and Dial can be obtained through the following:

- **Phone:** (800) 795-1546
- **Email:** support@infinitycti.com

3. Reference Configuration

The Click and Dial solution consists of a Windows server for application licensing, and the Click and Dial application running on the user PCs. As shown in **Figure 1**, each user PC has a TSAPI connection to Application Enablement Services via the Click and Dial application.

The Windows server has an InfinityCTI LicenseServiceApp component, which is a custom component built for each customer for the purpose of Click and Dial licensing. The custom component takes into account the customer network server and port information.

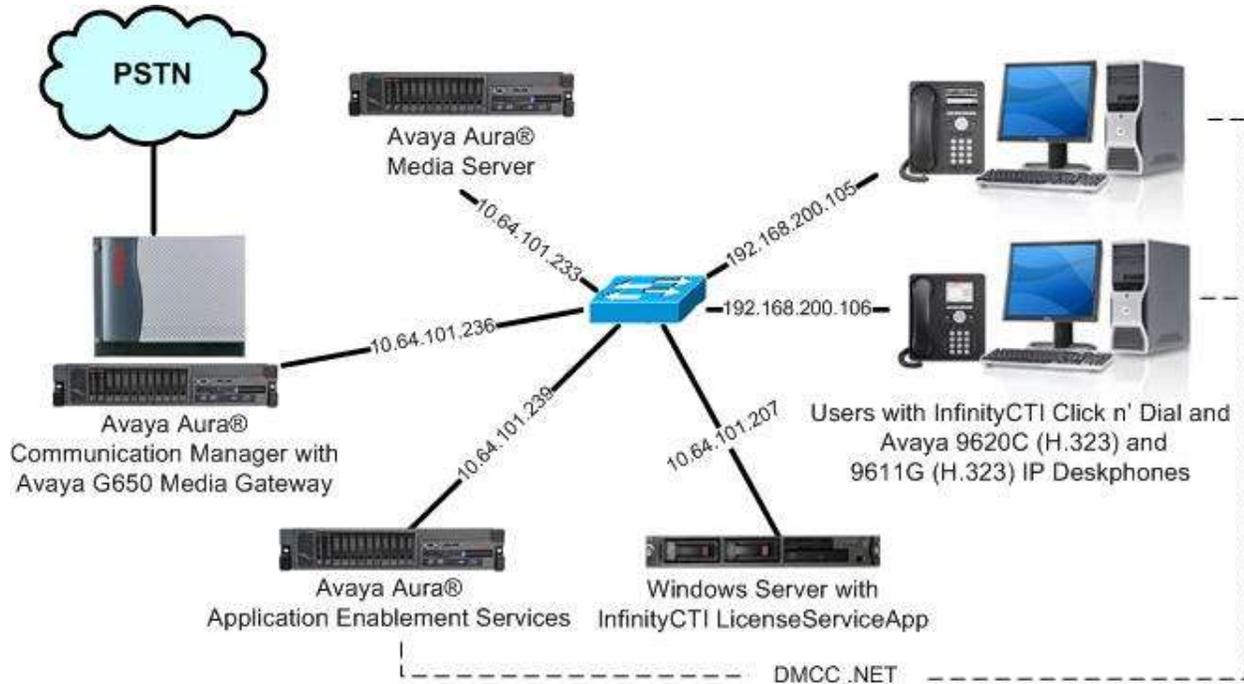


Figure 1: Compliance Testing Configuration

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 in Virtual Environment	7.0 SP 3.1 (7.0.0.3.1.441.22903)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	7.7.0.236
Avaya Aura® Application Enablement Services in Virtual Environment	7.0 Patch 2 (7.0.0.0.2.13)
Avaya 9620C & 9650 IP Deskphones (H.323)	3.250A
Avaya 9611G IP Deskphone (H.323)	6.6029
Windows Server 2008 <ul style="list-style-type: none">• InfinityCTI LicenseServiceApp	R2 Standard 6.0.0.0
InfinityCTI Click and Dial on Windows 7 Professional <ul style="list-style-type: none">• Avaya TSAPI Windows Client (csta32.dll)	4.1.3.3 SP 1 7.0.0.131

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Verify license
- Administer CTI link

5.1. Verify License

Log in to the System Access Terminal to verify that the 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 4**. 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 4 of 12
                                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          CAS Branch? n
A/D Grp/Sys List Dialing Start at 01? y   CAS Main? n
Answer Supervision by Call Classifier? y   Change COR by FAC? n
ARS? y      Computer Telephony Adjunct Links? y
ARS/AAR Partitioning? y      Cvg Of Calls Redirected Off-net? y
ARS/AAR Dialing without FAC? n          DCS (Basic)? y
ASAI Link Core Capabilities? n          DCS Call Coverage? y
ASAI Link Plus Capabilities? n          DCS with Rerouting? y
Async. Transfer Mode (ATM) PNC? n
Async. Transfer Mode (ATM) Trunking? n   Digital Loss Plan Modification? y
ATM WAN Spare Processor? n              DS1 MSP? y
ATMS? y      DS1 Echo Cancellation? y
Attendant Vectoring? y
```

5.2. Administer 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: 60111
Type: ADJ-IP
                                COR: 1
Name: AES CTI Link
```

6. Configure Avaya Aura® Application Enablement Services

This section provides the procedures for configuring Application Enablement Services. The procedures include the following areas:

- Launch OAM interface
- Verify license
- Administer TSAPI link
- Administer InfinityCTI user
- Disable security database
- Restart TSAPI service
- Obtain Tlink name

6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Application Enablement Services server.

The **Please login here** screen is displayed. Log in using the appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login interface. At the top left is the Avaya logo. The title "Application Enablement Services Management Console" is centered at the top. Below the title is a red horizontal bar. The main content area contains a login form with the text "Please login here:" followed by "Username" and "Password" labels, each with a corresponding text input field. Below the input fields are "Login" and "Reset" buttons. At the bottom of the page is another red horizontal bar and a copyright notice: "Copyright © 2009-2015 Avaya Inc. All Rights Reserved."

The **Welcome to OAM** screen is displayed next.

The screenshot shows the Avaya Application Enablement Services Management Console. The top left features the Avaya logo and the title 'Application Enablement Services Management Console'. The top right displays user information: 'Welcome: User', 'Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20', 'Number of prior failed login attempts: 0', 'HostName/IP: aes7/10.64.101.239', 'Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE', 'SW Version: 7.0.0.0.2.13', 'Server Date and Time: Tue Mar 22 09:10:45 EDT 2016', and 'HA Status: Not Configured'. A red navigation bar contains 'Home | Help | Logout'. On the left, a sidebar menu lists: 'AE Services', 'Communication Manager Interface', 'High Availability', 'Licensing', 'Maintenance', 'Networking', 'Security', 'Status', 'User Management', 'Utilities', and 'Help'. The main content area is titled 'Welcome to OAM' and contains the following text: 'The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:'. A bulleted list follows: '• AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.', '• Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.', '• High Availability - Use High Availability to manage AE Services HA.', '• Licensing - Use Licensing to manage the license server.', '• Maintenance - Use Maintenance to manage the routine maintenance tasks.', '• Networking - Use Networking to manage the network interfaces and ports.', '• Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.', '• Status - Use Status to obtain server status infomations.', '• User Management - Use User Management to manage AE Services users and AE Services user-related resources.', '• Utilities - Use Utilities to carry out basic connectivity tests.', '• Help - Use Help to obtain a few tips for using the OAM Help system'. Below the list, it states: 'Depending on your business requirements, these administrative domains can be served by one administrator for all domains, or a separate administrator for each domain.'

6.2. Verify License

Select **Licensing** → **WebLM Server Access** in the left pane, to display the applicable WebLM server log in screen (not shown). Log in using the appropriate credentials, and navigate to display installed licenses (not shown).

The screenshot shows the Avaya Application Enablement Services Management Console with the 'Licensing' page selected. The top left features the Avaya logo and the title 'Application Enablement Services Management Console'. The top right displays user information: 'Welcome: User', 'Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20', 'Number of prior failed login attempts: 0', 'HostName/IP: aes7/10.64.101.239', 'Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE', 'SW Version: 7.0.0.0.2.13', 'Server Date and Time: Tue Mar 22 09:10:45 EDT 2016', and 'HA Status: Not Configured'. A red navigation bar contains 'Home | Help | Logout'. On the left, a sidebar menu lists: 'AE Services', 'Communication Manager Interface', 'High Availability', 'Licensing', 'Maintenance', and 'Networking'. The 'Licensing' item is expanded, showing sub-items: 'WebLM Server Address', 'WebLM Server Access', and 'Reserved Licenses'. The main content area is titled 'Licensing' and contains the following text: 'If you are setting up and maintaining the WebLM, you need to use the following:'. A bulleted list follows: '• WebLM Server Address'. Below this, it states: 'If you are importing, setting up and maintaining the license, you need to use the following:'. A bulleted list follows: '• WebLM Server Access'. Below this, it states: 'If you want to administer TSAPI Reserved Licenses or DMCC Reserved Licenses, you need to use the following:'. A bulleted list follows: '• Reserved Licenses'.

Select **Licensed products** → **APPL_ENAB** → **Application Enablement** in the left pane, to display the **Application Enablement (CTI)** screen in the right pane.

Verify that there are sufficient licenses for **TSAPI Simultaneous Users**, as shown below.

Application Enablement (CTI) - Release: 7 - STD: 10503000 Standard

You are here: Licensed Products > Application_Enablement > View License Capacity

License installed on: October 12, 2015 3:21:49 PM -04:00

License File Host IDs: VI-19-37-80-8F-8F

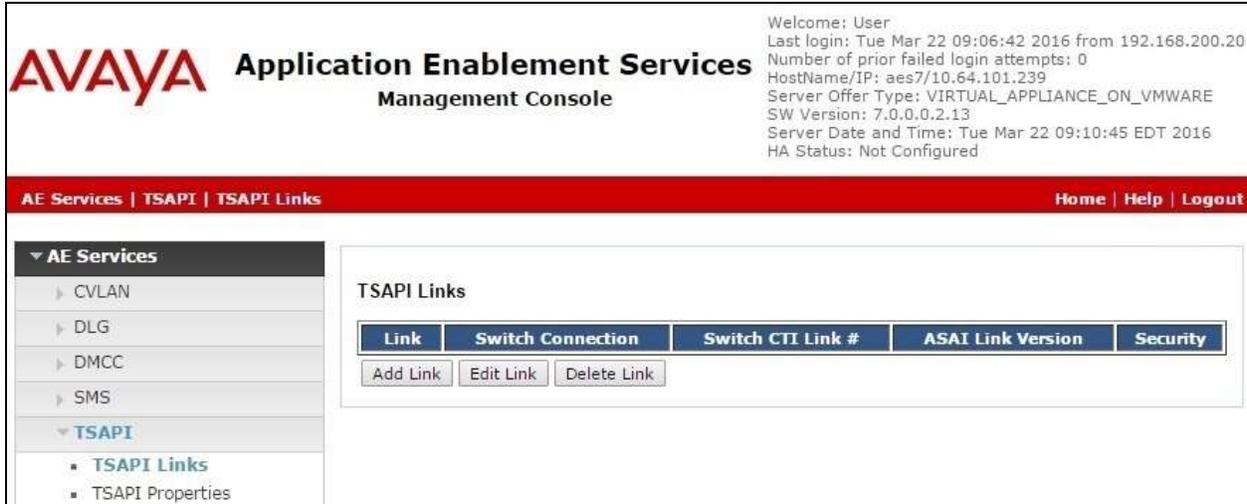
Licensed Features

10 Items Show All

Feature (License Keyword)	Expiration date	Licensed capacity
CVLAN ASA VALUE_AES_CVLAN_ASA	permanent	16
Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP	permanent	1000
AES ADVANCED SMALL SWITCH VALUE_AES_AEC_SMALL_ADVANCED	permanent	3
CVLAN Proprietary Links VALUE_AES_PROPRIETARY_LINKS	permanent	16
Product Notes VALUE_NOTES	permanent	SmallServerTypes: s8300c;s8300d;icc;premio;tn8400;laptop;C85 MediumServerTypes: ibmx306;ibmx306m;dell1950;xen;hs20;hs20_2 LargeServerTypes: isp2100;ibmx305;d380g3;d385g1;d385g2;u TrustedApplications: IPS_001, BasicUnrestrict DMCUnrestricted; IXP_001, BasicUnrestricted; DMCUnrestricted; IXM_001, BasicUnrestricted; DMCUnrestricted; FC_001, BasicUnrestricted; DMCUnrestricted; CIE_001, BasicUnrestricted; DMCUnrestricted; OSPC_001, BasicUnrestricted; DMCUnrestricted; YP_001, BasicUnrestricted; DMCUnrestricted; SAMETIME_001, VALUE_AES CCE_001, BasicUnrestricted, AdvancedUnresb CSI_TL_001, BasicUnrestricted, AdvancedUnr CSI_TL_001, BasicUnrestricted, AdvancedUnr AVAYAVERINT_001, BasicUnrestricted, Advan DMCUnrestricted; CCT_ELITE_CALL_CTRL_001 AdvancedUnrestricted, DMCUnrestricted, Ager BasicUnrestricted, AdvancedUnrestricted, DMC AgentEvents; UNIFIED_DESKTOP_001, BasicU AdvancedUnrestricted, DMCUnrestricted, Ager BasicUnrestricted, AdvancedUnrestricted, DMC
AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	3
TSAPI Simultaneous Users VALUE_AES_TSAPI_USERS	permanent	1000
DLG VALUE_AES_DLG	permanent	16
Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	1000
AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	3

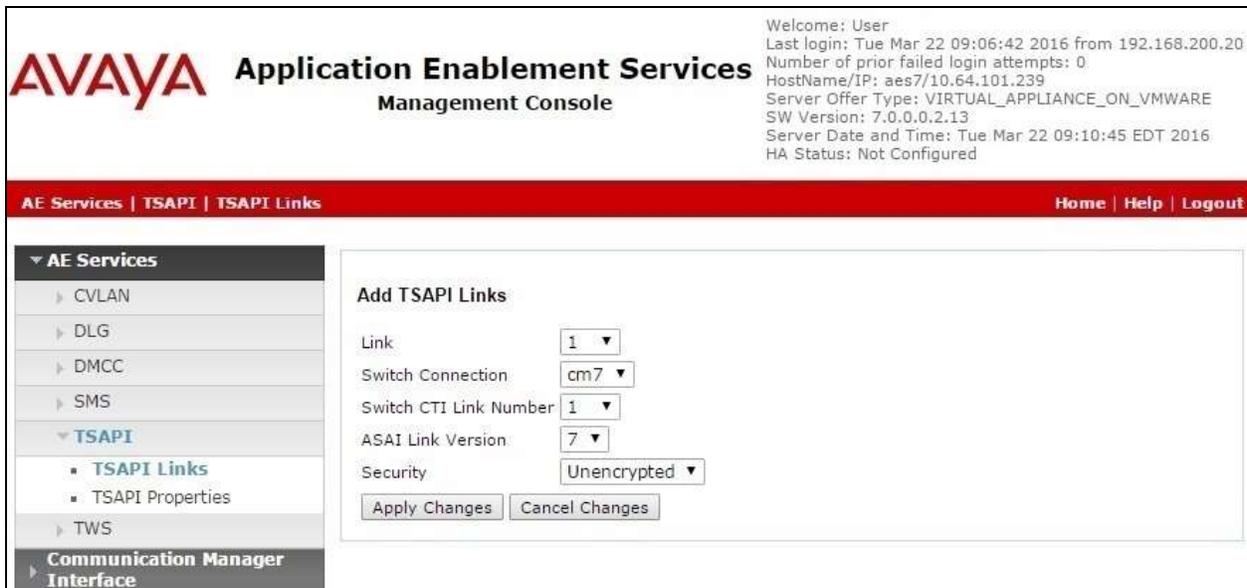
6.3. Administer TSAPI Link

Select **AE Services** → **TSAPI** → **TSAPI Links** from the left pane of the **Management Console**, to administer a TSAPI link. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.



The **Add TSAPI Links** screen is displayed next.

The **Link** field is only local to the Application Enablement Services 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 “cm7” is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.



6.4. Administer InfinityCTI User

Select **User Management** → **User Admin** → **Add User** from the left pane, to display the **Add User** screen in the right pane.

Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select “Yes” from the drop-down list. Retain the default value in the remaining fields.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the text 'Application Enablement Services Management Console'. On the right side of the header, there is a welcome message and system information: 'Welcome: User', 'Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20', 'Number of prior failed login attempts: 0', 'HostName/IP: aes7/10.64.101.239', 'Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE', 'SW Version: 7.0.0.0.2.13', 'Server Date and Time: Tue Mar 22 09:13:39 EDT 2016', and 'HA Status: Not Configured'. Below the header is a red navigation bar with 'User Management | User Admin | Add User' on the left and 'Home | Help | Logout' on the right. The main content area is divided into a left sidebar and a right main panel. The sidebar contains a tree view of navigation options: 'AE Services', 'Communication Manager Interface', 'High Availability', 'Licensing', 'Maintenance', 'Networking', 'Security', 'Status', 'User Management' (expanded), 'Service Admin', 'User Admin' (expanded), 'Add User' (selected), 'Change User Password', 'List All Users', 'Modify Default Users', 'Search Users', 'Utilities', and 'Help'. The main panel is titled 'Add User' and contains a form with the following fields: '* User Id' (text input, value: 'infinity'), '* Common Name' (text input, value: 'infinity'), '* Surname' (text input, value: 'infinity'), '* User Password' (password input, masked with dots), '* Confirm Password' (password input, masked with dots), 'Admin Note' (text input), 'Avaya Role' (dropdown menu, value: 'None'), 'Business Category' (text input), 'Car License' (text input), 'CM Home' (text input), 'Css Home' (text input), 'CT User' (dropdown menu, value: 'Yes'), 'Department Number' (text input), 'Display Name' (text input), 'Employee Number' (text input), 'Employee Type' (text input), 'Enterprise Handle' (text input), and 'Given Name' (text input). A note above the form states: 'Fields marked with * can not be empty.'

6.5. Disable Security Database

Select **Security** → **Security Database** → **Control** from the left pane, to display the **SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services** screen in the right pane. Uncheck **Enable SDB for TSAPI Service, JTAPI and Telephony Web Services** as shown below.

In the event that the security database is used by the customer with parameter already enabled, then follow reference [2] to configure access privileges for the InfinityCTI user from **Section 6.4**.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the text "Application Enablement Services Management Console". On the right side of the header, there is a welcome message: "Welcome: User", followed by system information: "Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20", "Number of prior failed login attempts: 0", "HostName/IP: aes7/10.64.101.239", "Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE", "SW Version: 7.0.0.0.2.13", "Server Date and Time: Tue Mar 22 09:10:45 EDT 2016", and "HA Status: Not Configured".

The main navigation bar is red and contains "Security | Security Database | Control" on the left and "Home | Help | Logout" on the right. The left sidebar is a dark grey menu with the following items: "AE Services", "Communication Manager Interface", "High Availability", "Licensing", "Maintenance", "Networking", "Security" (expanded), "Account Management", "Audit", "Certificate Management", "Enterprise Directory", "Host AA", "PAM", "Security Database" (expanded), and "Control" (selected).

The main content area is titled "SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services". It contains two unchecked checkboxes: "Enable SDB for DMCC Service" and "Enable SDB for TSAPI Service, JTAPI and Telephony Web Services". Below these checkboxes is an "Apply Changes" button.

6.6. Restart TSAPI Service

Select **Maintenance** → **Service Controller** from the left pane, to display the **Service Controller** screen in the right pane. Check **TSAPI Service**, and click **Restart Service**.

The screenshot displays the Avaya Application Enablement Services Management Console. The top right corner shows a welcome message for 'User' and system information including the last login time (Tue Mar 22 09:06:42 2016), number of failed login attempts (0), host name/IP (aes7/10.64.101.239), server offer type (VIRTUAL_APPLIANCE_ON_VMWARE), SW version (7.0.0.0.2.13), server date and time (Tue Mar 22 09:10:45 EDT 2016), and HA status (Not Configured). The main navigation bar includes 'Maintenance | Service Controller' and 'Home | Help | Logout'. The left sidebar contains a tree view with categories: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance (selected), Security Database, Service Controller (selected), Server Data, Networking, Security, and Status. The main content area is titled 'Service Controller' and features a table with columns 'Service' and 'Controller Status'. The table lists several services, all with a status of 'Running'. The 'TSAPI Service' is checked. Below the table, there is a note: 'For status on actual services, please use [Status and Control](#)'. At the bottom of the main content area, there are buttons for 'Start', 'Stop', 'Restart Service', 'Restart AE Server', 'Restart Linux', and 'Restart Web Server'.

Welcome: User
Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.0.0.0.2.13
Server Date and Time: Tue Mar 22 09:10:45 EDT 2016
HA Status: Not Configured

Maintenance | Service Controller Home | Help | Logout

AE Services
Communication Manager Interface
High Availability
Licensing
Maintenance
Date Time/NTP Server
Security Database
Service Controller
Server Data
Networking
Security
Status

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](#)

Start Stop Restart Service Restart AE Server Restart Linux Restart Web Server

6.7. Obtain Tlink Name

Select **Security** → **Security Database** → **Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. A new Tlink name is automatically generated for the TSAPI service. 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 Click and Dial.

In this case, the associated Tlink name is “AVAYA#CM7#CSTA#AES7”. Note the use of the switch connection “CM7” from **Section 6.3** as part of the Tlink name.

The screenshot displays the Avaya Application Enablement Services Management Console. The top left features the Avaya logo and the text "Application Enablement Services Management Console". The top right shows system information: "Welcome: User", "Last login: Tue Mar 22 09:06:42 2016 from 192.168.200.20", "Number of prior failed login attempts: 0", "HostName/IP: aes7/10.64.101.239", "Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE", "SW Version: 7.0.0.0.2.13", "Server Date and Time: Tue Mar 22 09:10:45 EDT 2016", and "HA Status: Not Configured". A red navigation bar contains "Security | Security Database | Tlinks" and "Home | Help | Logout". The left sidebar lists navigation options: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security (expanded), Account Management, Audit, Certificate Management, Enterprise Directory, Host AA, PAM, Security Database (expanded), Control, CTI Users, Devices, Device Groups, and Tlinks (selected). The main content area, titled "Tlinks", shows a "Tlink Name" field with a radio button selected next to "AVAYA#CM7#CSTA#AES7" and a "Delete Tlink" button.

7. Configure InfinityCTI Click and Dial

This section provides the procedures for configuring Click and Dial.

From the user PC, select **Start → All Programs → InfinityCTI → CND4 → Configuration** to display the **Click and Dial Configuration** screen. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Key Selection:** Select the desired hot keys combination for Click and Dial.
- **Area Code:** Any applicable area code to be stripped for intra-lata calls.
- **Outside Line:** The applicable prefix for external calls, in this case “9”.
- **Extension Length:** The applicable length of internal extensions, in this case “5”.
- **Device:** The applicable user station extension, in this case “65001”.
- **License Server URL:** The URL provided by InfinityCTI for the license server.
- **License Key:** The license key provided by InfinityCTI.
- **Telephony Server:** The Tlink name from **Section 6.7**.
- **User name:** The InfinityCTI user credentials from **Section 6.4**.
- **Password:** The InfinityCTI user credentials from **Section 6.4**.

Click and Dial Configuration

Key Selection
Key: F11, Shift Key: OFF, Control Key: OFF

Dialing Options
Area code: , Outside Line: 9, Extension Length: 5

Extension Options
Device: 65001, Show ballon when number is dialed: ON, Test Mode: OFF

License Information
License Server URL: http://10.64.101.207:8082/service.asmx
License Key: PhEALqCUZIAhNEB

AES Server
Telephony Server: AVAYA#CM7#CSTA#AES7
User name: infinity
Password: *****

OK Cancel

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services, and Click and Dial.

8.1. Verify Avaya Aura® Communication Manager

On 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 5.2**, 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	7	no	aes7	established	38	30

8.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify the status of the TSAPI link by selecting **Status** → **Status and Control** → **TSAPI Service Summary** from the left pane (not shown below). The **TSAPI Link Details** screen is displayed.

Verify the **Status** is “Talking” for the TSAPI link administered in **Section 6.3** and that the **Associations** column reflects the correct number of Click and Dial users, in this case “2”.

Welcome: User
 Last login: Fri Apr 1 11:29:28 2016 from 192.168.200.20
 Number of prior failed login attempts: 0
 HostName/IP: aes7/10.64.101.239
 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
 SW Version: 7.0.0.0.2.13-0
 Server Date and Time: Fri Apr 01 13:15:32 EDT 2016
 HA Status: Not Configured

Status | Status and Control | TSAPI Service Summary Home | Help | Logout

Enable page refresh every seconds

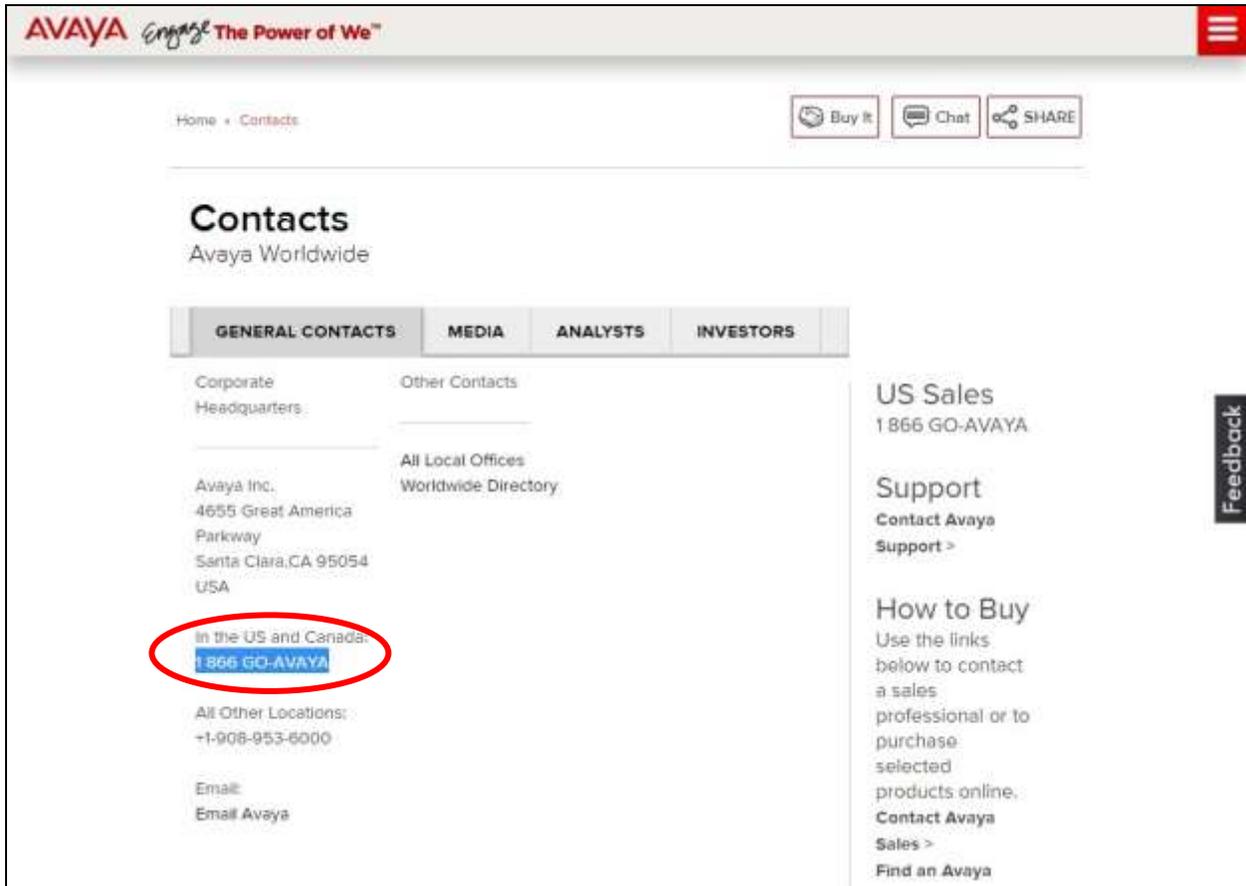
	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
<input checked="" type="radio"/>	1	cm7	1	Talking	Fri Mar 25 14:57:48 2016	Online	17	2	18	18	30

For service-wide information, choose one of the following:

8.3. Verify InfinityCTI Click and Dial

For initial start of the Click and Dial application, select **Start** → **All Programs** → **InfinityCTI** → **CND4** → **CND4**. Note that this is only needed for the initial start.

From the user PC, highlight any telephone number string, such as the string in the browser window shown below. Press the defined hot keys combination from **Section 7** for selection, and verify that a call is launched from the user telephone to the destination.



9. Conclusion

These Application Notes describe the configuration steps required for InfinityCTI Click and Dial to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services. All feature and serviceability test cases were completed with an observation noted in **Section 2.2**.

10. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Release 7.0, Issue 1, August 2015, available at <http://support.avaya.com>.
2. *Administering and Maintaining Aura® Application Enablement Services*, Release 7.0, Issue 1, August 2015, available at <http://support.avaya.com>.
3. *InfinityCTI Click n' Dial Users Guide*, available to customers as part of installation.

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