



## Avaya Solution & Interoperability Test Lab

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# Application Notes for Initiative Software synTelate with Avaya Communication Manager and Avaya Application Enablement Services - Issue 1.0

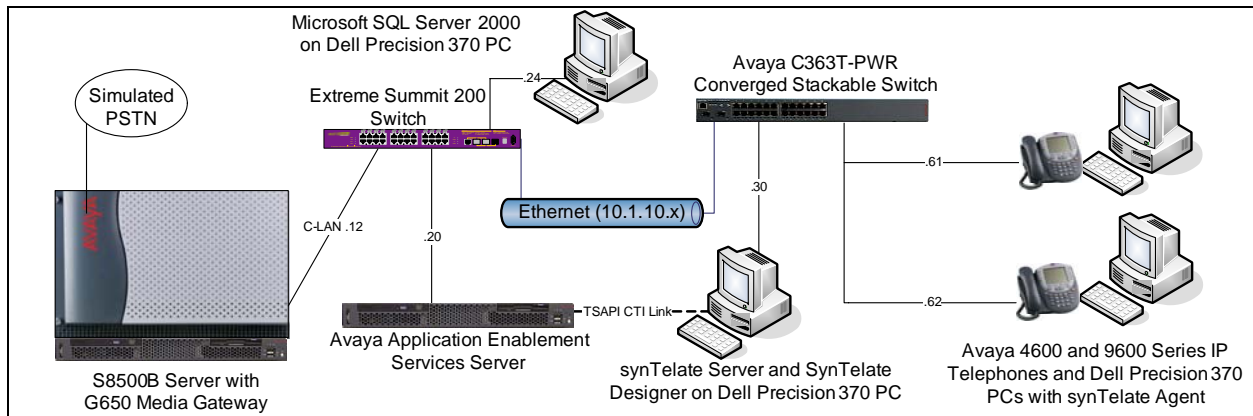
### Abstract

These Application Notes describe the configuration steps required for Initiative Software synTelate to successfully interoperate with Avaya Communication Manager and Avaya Application Enablement Services. The objective of the test was to evaluate interoperability of the above products in a contact center, handling predictive outbound and inbound calling campaigns, as well as agent blending. 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 Initiative Software synTelate to successfully interoperate with Avaya Communication Manager and Avaya Application Enablement Services (AES).

synTelate is a call center scripting application for creating inbound and outbound campaigns. For the compliance testing, synTelate was integrated with Avaya Communication Manager and Avaya AES using Computer Telephony Integration (CTI) over the Telephony Services Application Programmer Interface (TSAPI). The diagram below shows the configuration used for the compliance testing.



The synTelate Designer application is used to administer synTelate including the agents, campaigns, and the CTI link and stores this information in a Microsoft SQL Server 2000 database. Each instance of the synTelate Agent application retrieves this information from the database on login and establishes a TSAPI link to Avaya AES.

For inbound campaigns, Avaya Communication Manager routes the calls using call center features and synTelate monitors the agent phones allowing the agent to answer and control calls using the synTelate Agent application. synTelate routes outbound contacts to the synTelate Agent application using two outbound pacing modes, as follows.

- **Preview Dial:** The contact is routed to the agent who has to accept it manually before the application dials the contact's number.
- **Power Dial:** The application starts dialing the contacts' number as soon as the contact is routed to the agent.

synTelate can also operate in blend mode, passing outbound contacts to agents when there are no queuing inbound contacts.

## 2. Equipment and Software Validated

The following equipment and software were used for the compliance testing.

Equipment	Software
Avaya S8500B Server	Avaya Communication Manager 4.0.1 (R014X.00.1.731.2)
Avaya G650 Media Gateway	N/A
Avaya Application Enablement Services Server	AES 4.0.1
Avaya 4610 IP Telephones (H.323)	2.8
Avaya 4602 IP Telephones (H.323)	2.3
Avaya 9620 IP Telephones (H.323)	1.5
Dell Precision 370 PC	Windows XP Professional, Service Pack 1 synTelate Server 3.0, Service Pack 4 synTelate Designer 3.0, Service Pack 4
Dell Precision 370 PCs	Windows XP Professional, Service Pack 1 synTelate Agent 3.0, Service Pack 4
Dell Precision 370 PC	Windows XP Professional, Service Pack 1 Microsoft SQL Server 2000

## 3. Configure Avaya Communication Manager

This section provides the procedures for configuring Avaya Communication Manager. The procedures fall into the following areas.

- Verify Avaya Communication Manager licensing.
- Administer CTI link for the TSAPI service.

Please note that it is expected that the installer is familiar with configuring stations, agents, vectors, VDNs, etc. on Avaya Communication Manager as the focus of these Application Notes is on the configuration of the TSAPI interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Avaya Communication Manager, etc., refer to the Avaya Communication Manager product documentation in reference [1].

The System Administration Terminal (SAT) interface was used for all Avaya Communication Manager configuration.

### 3.1. Verify Avaya Communication Manager Licensing

Use the “display system-parameters customer-options” command to verify that the **ASAI Link Core Capabilities** customer option is set to “y” on **Page 3**.

```
display system-parameters customer-options                               Page 3 of 11
                                OPTIONAL FEATURES

    Abbreviated Dialing Enhanced List? y                               Audible Message Waiting? n
      Access Security Gateway (ASG)? n                               Authorization Codes? y
      Analog Trunk Incoming Call ID? n                               CAS Branch? n
    A/D Grp/Sys List Dialing Start at 01? n                           CAS Main? n
    Answer Supervision by Call Classifier? n                           Change COR by FAC? n
      ARS? y                                                           Computer Telephony Adjunct Links? n
      ARS/AAR Partitioning? y                                         Cvg Of Calls Redirected Off-net? y
      ARS/AAR Dialing without FAC? y                                   DCS (Basic)? y
      ASAI Link Core Capabilities? y                                   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? n
      ATM WAN Spare Processor? n                                       DS1 MSP? y
      ATMS? n                                                           DS1 Echo Cancellation? n
    Attendant Vectoring? n
```

On **Page 6**, verify that the **ACD** and **Vectoring (Basic)** customer options are both set to “y”.

```
display system-parameters customer-options                               Page 6 of 11
                                CALL CENTER OPTIONAL FEATURES

                                Call Center Release: 3.0

                                ACD? y
      BCMS (Basic)? n                                               Reason Codes? n
    BCMS/VuStats Service Level? n                                   Service Level Maximizer? n
    BSR Local Treatment for IP & ISDN? n                             Service Observing (Basic)? y
      Business Advocate? n                                           Service Observing (Remote/By FAC)? y
      Call Work Codes? n                                             Service Observing (VDNs)? y
    DTMF Feedback Signals For VRU? n                                 Timed ACW? n
      Dynamic Advocate? n                                             Vectoring (Basic)? y
      Expert Agent Selection (EAS)? y                                   Vectoring (Prompting)? y
      EAS-PHD? n                                                       Vectoring (G3V4 Enhanced)? n
      Forced ACD Calls? n                                             Vectoring (3.0 Enhanced)? n
      Least Occupied Agent? n                                           Vectoring (ANI/II-Digits Routing)? n
      Lookahead Interflow (LAI)? n                                       Vectoring (G3V4 Advanced Routing)? n
    Multiple Call Handling (On Request)? n                             Vectoring (CINFO)? n
      Multiple Call Handling (Forced)? n                                   Vectoring (Best Service Routing)? n
      PASTE (Display PBX Data on Phone)? n                               Vectoring (Holidays)? n
                                                                    Vectoring (Variables)? n
```

If any of the three options above are not set appropriately, then contact the Avaya sales team or business partner and request a new license file.

### 3.2. Administer CTI Link for the TSAPI Service

This section assumes that the Internet Protocol (IP) service to the Avaya AES was previously administered. Information on how to do this is available in the Avaya AES product documentation in reference [2].

Use the “add cti-link x” command, where “x” is an available CTI link number, to add a new CTI link. 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. The remaining fields may be left at their default values. Submit these changes.

```
add cti-link 3                                     Page 1 of 2
                                                    CTI LINK
CTI Link: 3
Extension: 13300
  Type: ADJ-IP
                                                    COR: 1
Name: TSAPI CTI Link 3
```

## 4. Configure Avaya AES

This section provides the procedures for configuring Avaya AES. The procedures fall into the following areas.

- Verify Avaya AES licensing.
- Administer TSAPI link.

Basic configuration related to the switch connection between Avaya Communication Manager and Avaya Application Enablement Services is assumed to have been established.

### 4.1. Verify Avaya AES Licensing

Initialise the AES OAM web interface by browsing to “http://x.x.x.x/8443/MVAP/index.jsp”, where “x.x.x.x” is the IP address of the AES, and log in (not shown). From the OAM Home screen, select **CTI OAM Admin** (not shown) to bring up the CTI OAM Home menu. Verify the TSAPI service is licensed at the Welcome to CTI OAM Screens screen by ensuring that “TSAPI” is in the list of services in the License Information section.

**AVAYA** **Application Enablement Services**  
Operations Administration and Maintenance

You are here: > CTI OAM Home

Welcome to CTI OAM Screens

[craft] logged in on Tue Sept 18 10:43:28 G.M.T. 2007

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
ASAI Link Manager	Running
DMCC Service	Running
CVLAN Service	Running
DLG Service	Running
Transport Layer Service	Running
TSAPI Service	Running

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

**License Information**

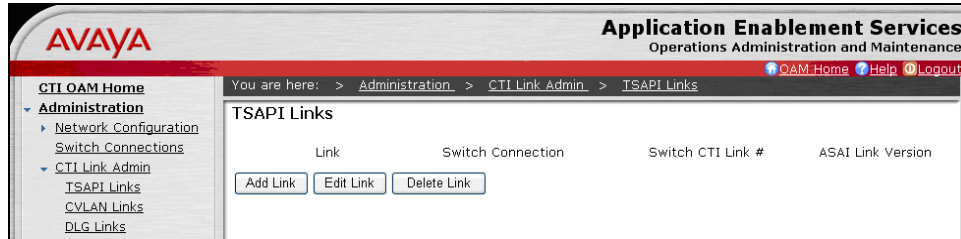
You are licensed to run Application Enablement (CTI) version 4.0.

You are licensed for the following services

- DLG
- CVLAN
- TSAPI

## 4.2. Administer TSAPI link

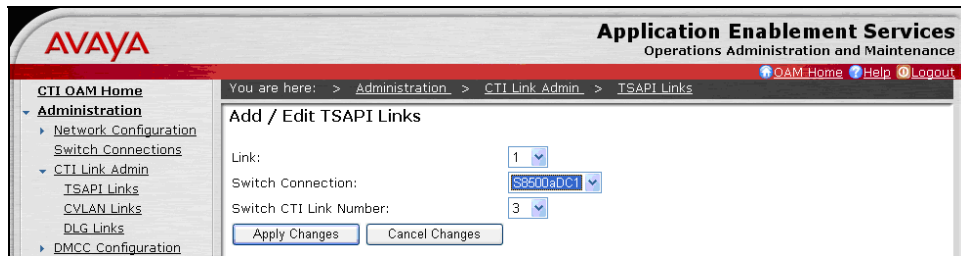
From the CTI OAM Home menu, select **Administration > CTI Link Admin > TSAPI Links**. On the TSAPI Links screen, click **Add Link**



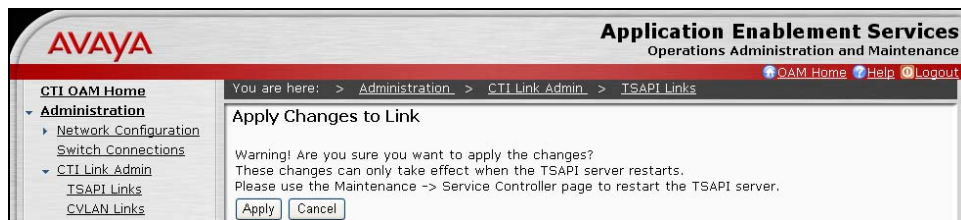
On the Add/Edit TSAPI Links screen, enter the following values.

- **Link:** Use the drop-down list to select an unused link number.
- **Switch Connection:** Choose the switch connection being used from the drop-down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 3.2**.

Once completed, click **Apply Changes**.



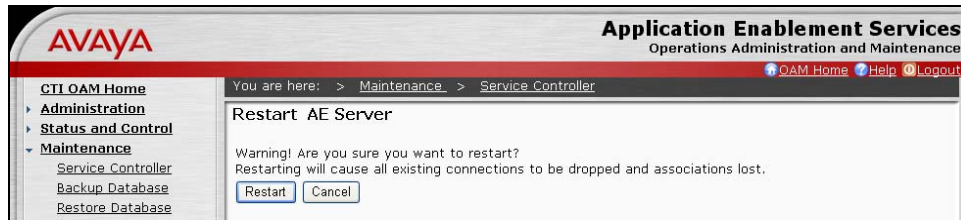
On the Apply Changes to Link screen, click **Apply**.



AES must be restarted to effect the changes made in this section. From the CTI OAM Home menu, select **Maintenance > Service Controller**. On the Service Controller screen, click **Restart AE Server**.



On the Restart AE Server screen, click **Restart**.



Wait at least 10 minutes and select **Maintenance > Service Controller**. On the Service Controller screen, verify that all services are showing “Running” in the **Controller Status** column.



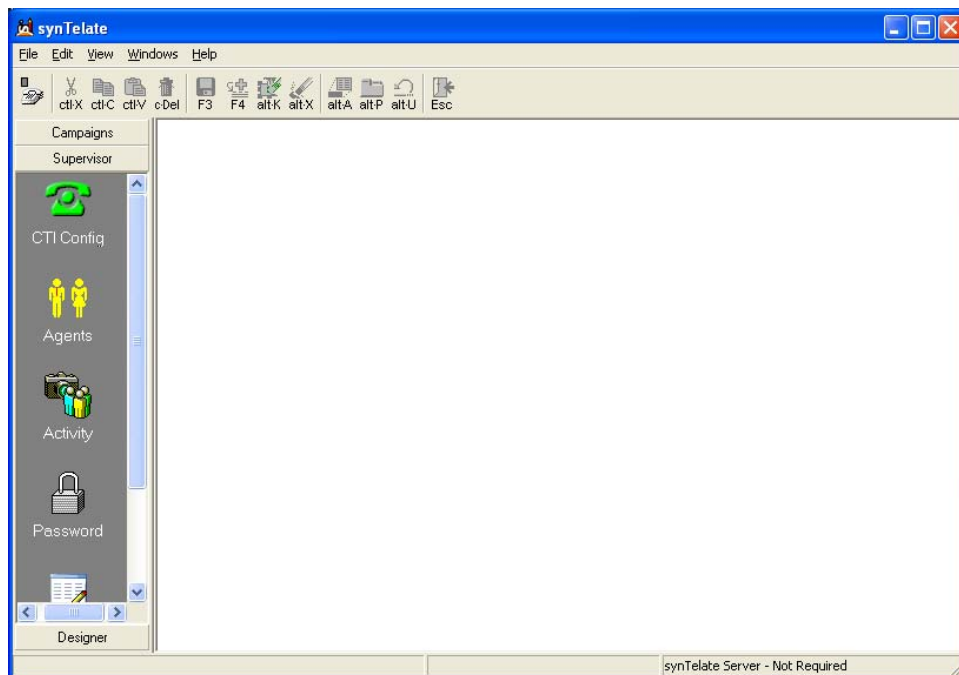
## 5. Configure synTelate

This section provides the procedures for configuring the synTelate TSAPI interface using synTelate Designer.

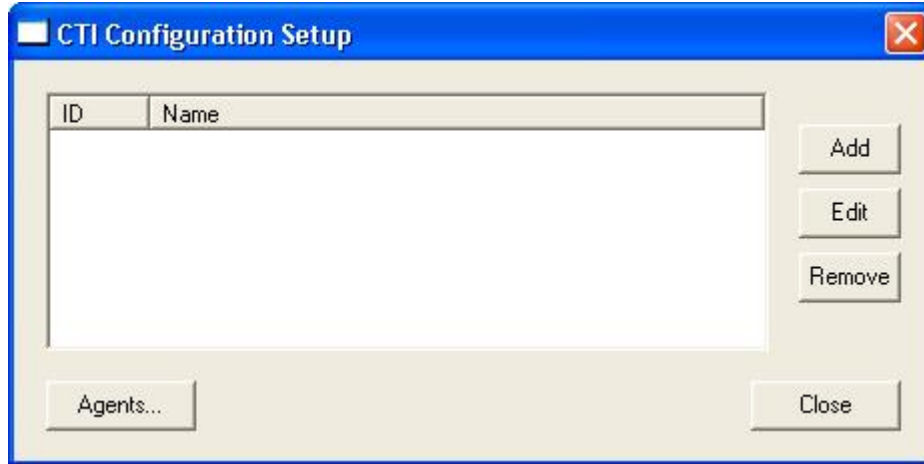
Please note that it is expected that the installer is familiar with configuring the database connection as well as agents, campaigns etc. on synTelate as the focus of these Application Notes is on the configuration of the TSAPI interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of synTelate, etc., refer to the synTelate product documentation in reference [3].

### 5.1. Administer CTI using synTelate Designer

Select **Start** → **Programs** → **synTelate** → **synTelate Designer**. In the left pane click the **Supervisor** tab and select **CTI Config**.



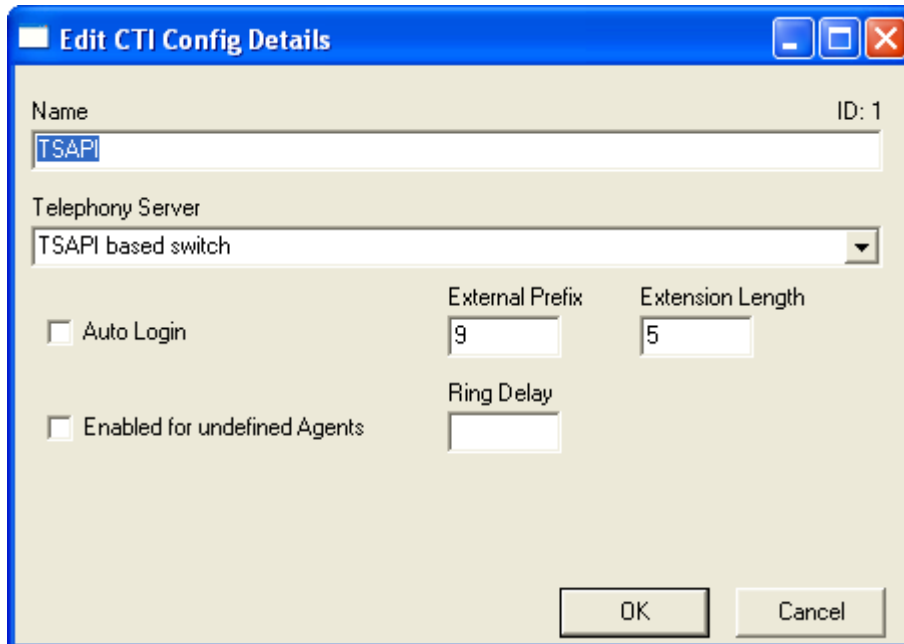
Click the **Add** button in the CTI Configuration Setup box.



In the Edit CTI Config Details dialog box, configure the fields as follows.

- **Name:** Enter a descriptive name.
- **Telephony Server:** Select **TSAPI based switch** from the drop down list.
- **External Prefix:** Enter the Avaya Communication Manager feature code for Automatic Route Selection.
- **Extension Length:** Enter the number of digits used for the Avaya Communication Manager Extensions.

The rest of the fields may be left at their defaults. Click **OK** when completed.



## **6. Interoperability Compliance Testing**

The interoperability compliance test included both feature and serviceability testing.

The feature testing focused on verifying synTelate's handling of TSAPI messages to request and respond to Avaya Communication Manager features. The features tested included using the synTelate Agnet application for initiating, receiving and controlling calls and handling inbound, outbound and blended campaigns.

The serviceability testing focused on verifying synTelate's ability to recover from an outage condition, such as busying out the CTI link and disconnecting the Ethernet cable for the CTI link.

Performance of synTelate under load was not tested.

### **6.1. General Test Approach**

All feature and serviceability test cases were performed manually. The verification included checking proper states at the telephone sets, and viewing TSAPI message traces on synTelate.

### **6.2. Test Results**

All tests passed. The synTelate agent application successfully ran inbound and outbound campaigns

## 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 synTelate.

### 7.1. Verify Avaya Communication Manager

Verify the status of the administered CTI link by using the “status aesvcs cti-link” command. The **Service State** should show as “established”.

```
status aesvcs cti-link
```

AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
3	4	no	AEserver	established	216	210

### 7.2. Verify Avaya Application Enablement Services

From the CTI OAM Home menu, verify the status of the administered CTI link by selecting **Status and Control > Switch Conn Summary**. The **Conn State** should show “Talking”.

The screenshot shows the Avaya Application Enablement Services (AES) web interface. The page title is "Application Enablement Services" with the subtitle "Operations Administration and Maintenance". The breadcrumb trail is "You are here: > Status and Control > Switch Conn Summary". The main content area is titled "Switch Connections Summary" and contains a table with the following data:

Switch Conn	Conn State	Since	Online/Offline	Active CLANs/Admin'd CLANs	# of TCI Conns	Msgs To Switch	Msgs From Switch	Msg Period
S8500aDC1	Talking	2007-06-18 12:53:01.0	Online	1 / 1	2	194	209	30

Below the table, there are buttons for "Online", "Offline", "Message Period", and "Switch Connection Details". At the bottom, there is a link for "Per Service Switch Connections Details".

### 7.3. Verify synTelate

The following steps may be used to verify synTelate.

- Log an agent into an inbound campaign and make the agent available. Place an incoming call to the inbound campaign. Verify that the agents phone rings and the correct campaign information pops up.
- Log an agent into an outbound campaign and make the agent available. Verify that the correct campaign information pops up and that the agent application is able to make the outbound call.

## 8. Support

Technical support for the synTelate application is available as follows:

- Telephone Help Desk Tel: +44 (0)141 552 8800 or 0800 052 1015
- Support on the Web - <http://support.inisoft.co.uk/start.asp>. If a login is required, contact [support@inisoft.co.uk](mailto:support@inisoft.co.uk)

## 9. Conclusion

These Application Notes describe the configuration steps required for Initiative Software synTelate to successfully interoperate with Avaya Communication Manager and Avaya Application Enablement Services. All test cases were completed successfully and the configuration described in these Application Notes has been successfully compliance tested.

## 10. Additional References

This section references the product documentations that are relevant to these Application Notes.

- [1] *Documentation for Avaya Communication Manager (4.0), Media Gateways and Servers*, Document ID 03-300151, Issue 6, February 2007, available at: <http://support.avaya.com>.
- [2] *Avaya Application Enablement Services 4.0 Administration and Maintenance Guide*, Document ID 02-300357, Issue 6, February 2007, available at: <http://support.avaya.com>.
- [3] synTelate product documentation is available on request from Initiative Software.
  - Company website:- [www.inisoft.co.uk](http://www.inisoft.co.uk)
  - Product website:- [www.syntelate.com](http://www.syntelate.com)

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