



Avaya Solution & Interoperability Test Lab

Application Notes for Scantalk TeamView Unified Operator with Avaya Communication Manager and Avaya Application Enablement Services - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Scantalk TeamView Unified Operator to successfully interoperate with Avaya Communication Manager and Avaya Application Enablement Services (AES).

TeamView Unified Operator is the switchboard operator module of the TeamView Application Suite, and supports the attendant with call information from the Avaya AES.

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 Scantalk TeamView Unified Operator to successfully interoperate with Avaya Communication Manager and Avaya Application Enablement Services (AES).

TeamView Unified Operator is part of the TeamView Application Suite which provides switchboard users with information about different sources, including:

- PBXs, via Computer Telephony Integration (CTI).
- Directory information, via Microsoft Active Directory and LDAP.
- Calendar Information, via Microsoft Exchange and Lotus Notes.

TeamView Unified Operator is a switchboard operator application which, using the Telephony Services Applications Programmers Interface (TSAPI) of Avaya AES, allows an attendant to monitor, and manipulate calls and devices.

TeamView Unified Operator can also be used to log in as an Avaya Communication Manager Elite Agent (using TSAPI functions).

Figure 1 shows the compliance tested configuration.

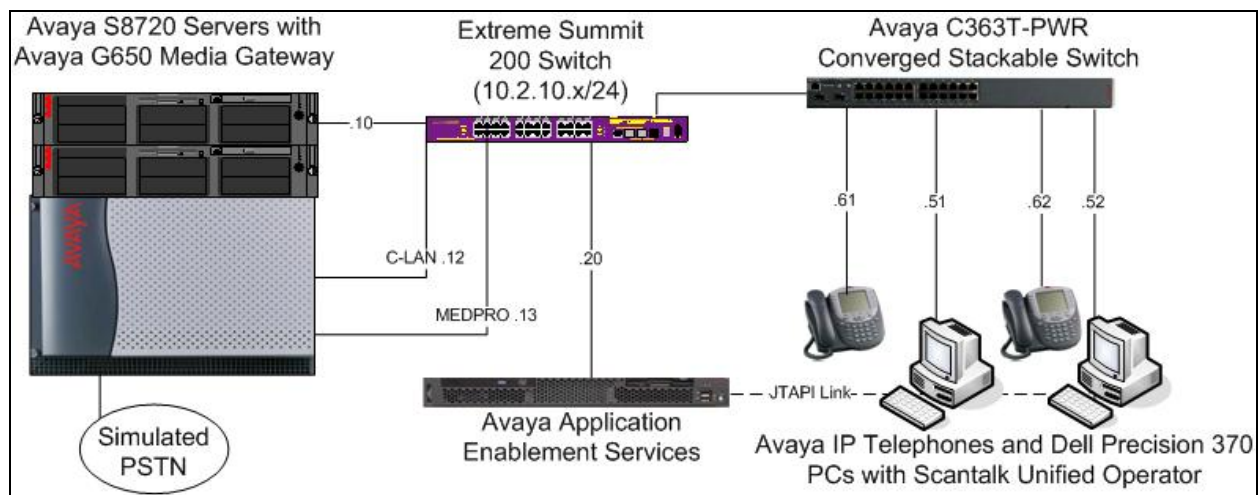


Figure 1: Network Diagram of the Compliance Tested Configuration

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration.

Equipment	Software
Avaya S8720 Servers	Avaya Communication Manager 5.0 Build 5.0.00.825.4
Avaya S8500C Server	Avaya AES 4.1 (Build 4.1.0.31.2)
Avaya G650 Media Gateway C-LAN TN799DP MEDPRO TN2602AP	HW01 FW024 HW08 FW031
Avaya 4600 Series IP Telephones (H.323)	2.8
Avaya 9600 Series IP Telephones (H.323)	1.5
Dell Precision 370 Workstations	Microsoft Windows XP Professional – SP2 Scantalk TeamView Unified Operator 1.1.5.199

3. Configure Avaya Communication Manager

This section provides the procedures for configuring Avaya Communication Manager using the System Access Terminal (SAT) interface.

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].

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.
- Configure CTI User.
- Configure SMS.

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 Administration** (not shown) to bring up the CTI OAM Home menu. Verify the TSAPI and SMS services are licensed at the Welcome to CTI OAM Screens screen by ensuring that “TSAPI” and “SMS” are in the list of services in the License Information section.

The screenshot displays the Avaya Application Enablement Services (AES) Operations Administration and Maintenance (OAM) web interface. The page title is 'Application Enablement Services Operations Administration and Maintenance'. The left sidebar contains a navigation menu with links: CTI OAM Home, Administration, Status and Control, Maintenance, Alarms, Logs, Utilities, and Help. The main content area shows the 'Welcome to CTI OAM Screens' message, a login timestamp, and a table of services and their controller status. Below the table is a link to 'Status and Control'. The 'License Information' section states that the user is licensed to run Application Enablement (CTI) version 4.0 and lists the licensed services: DLG, CVLAN, TSAPI, and SMS.

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

License Information

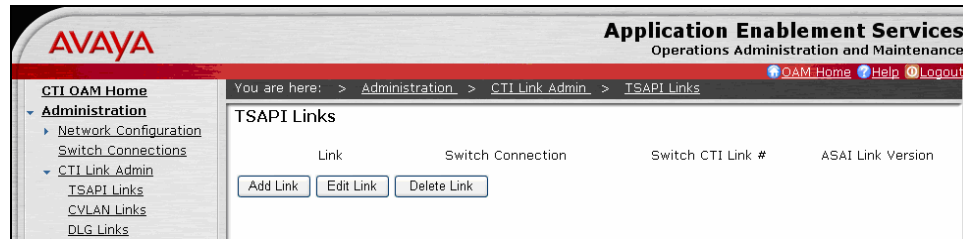
You are licensed to run Application Enablement (CTI) version 4.0.

You are licensed for the following services

- DLG
- CVLAN
- TSAPI
- SMS

4.2. Administer TSAPI link

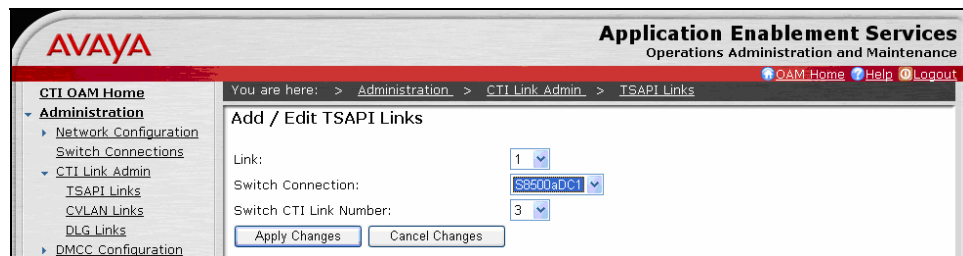
From the CTI OAM Home menu, select **Administration > CTI Link Admin > TSAPI Links**. On the TSAPI Links screen, click **Add Link**.



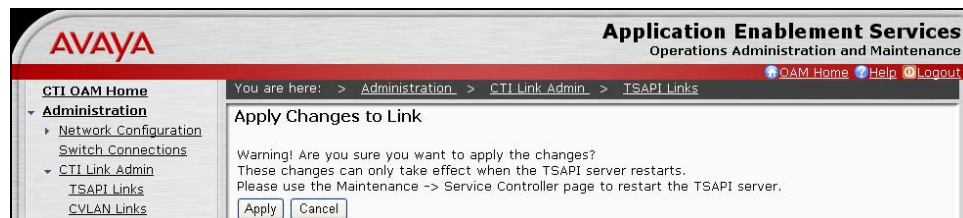
On the Add/Edit TSAPI Links screen, enter the following values.

- **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**.

Once completed, click **Apply Changes**.



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



4.3. Configure the CTI User

Initialise the AES OAM web interface (see **Section 4.1**) and select **User Management** (not shown). From the **User Management Home** menu, select **User Management > Add User** and configure the following fields.

- **User Id:** Enter a login name to be used by TeamView Unified Operator to access the AES.
- **Common Name:** A descriptive name.
- **Surname:** A descriptive name.
- **User Password:** Enter a password to be used by TeamView Unified Operator to access the AES.
- **Confirm Password:** Re-enter the password.
- **Avaya Role:** Use the default value of “None”.
- **CT User:** Select “Yes” from the drop down list.

The remaining fields may be left at their default values. Once completed, click on **Apply** (not shown) at the bottom of the screen.

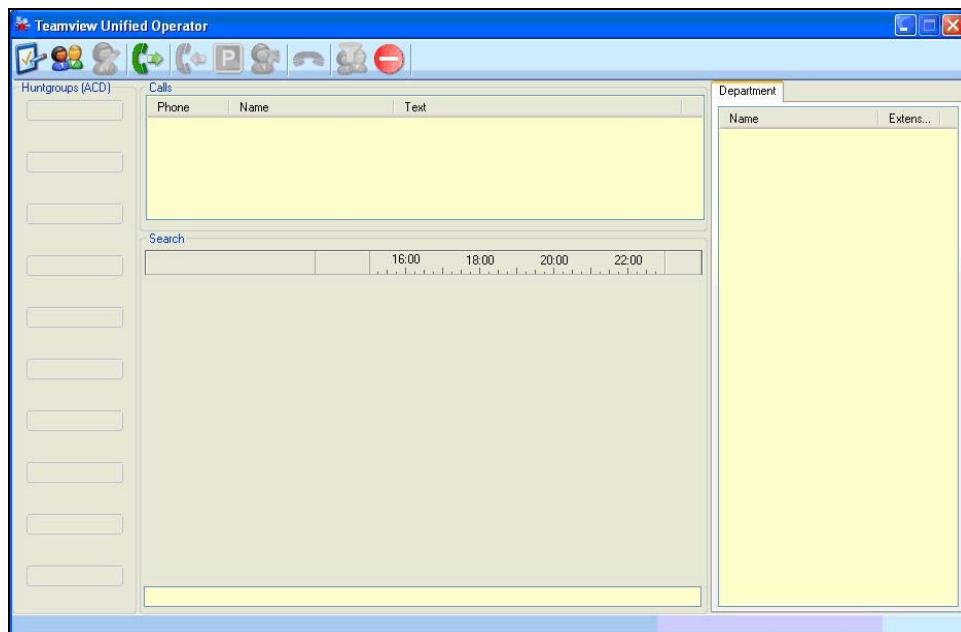
The screenshot displays the Avaya Application Enablement Services (AES) OAM web interface. The top header features the Avaya logo and the text 'Application Enablement Services Operations Administration and Maintenance'. A navigation bar includes links for 'OAM Home', 'Help', and 'Logout'. The left sidebar shows a menu with 'User Management Home' expanded, containing links for 'List All Users', 'Add User', 'Search Users', 'Modify Default User', and 'Change User Password'. The main content area is titled 'Add User' and includes a breadcrumb trail: 'You are here: > User Management > Add User'. A note states 'Fields marked with * can not be empty.' The form contains the following fields: '* User Id' (text input with 'scantalk'), '* Common Name' (text input with 'scantalk'), '* Surname' (text input with 'scantalk'), '* User Password' (password input with masked characters), '* Confirm Password' (password input with masked characters), 'Admin Note' (text input), 'Avaya Role' (dropdown menu set to 'None'), 'Business Category' (text input), 'Car License' (text input), 'CM Home' (text input), 'Css Home' (text input), and 'CT User' (dropdown menu set to 'Yes').

5. Configure Scantalk TeamView Unified Operator

This section provides the procedures for configuring Scantalk TeamView Unified Operator.

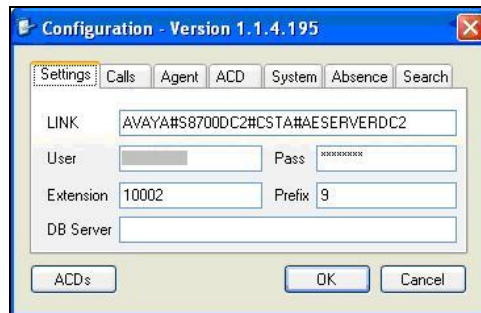
Please note that it is expected that the installer is familiar with installation and basic configuration of Scantalk TeamView Unified Operator as the focus of these Application Notes is on the configuration of the TSAPI interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Scantalk TeamView Unified Operator, etc., refer to the Scantalk TeamView Unified Operator product documentation in reference [3].

Select **Start > Programs > TeamView > Unified Operator > Unified Operator (M)**. Ignore any warning messages at this stage. On the TeamView Unified Operator screen select the  icon on the taskbar.



On the Configuration screen, select the **Settings** tab, configure the fields as follows.

- **LINK:** Enter the Avaya AES Tlink. This can be found from the AES CTI OAM web interface by selecting **Administration > Security Database > Tlinks**.
- **User:** Enter the Avaya AES CTI user administered in **Section 4.3**.
- **Pass:** Enter the password of the AES CTI user.
- **Extension:** Enter the Avaya Communication Manager station extension number of the phone to be controlled by this instance of TeamView Unified Operator
- **Prefix:** Enter the Avaya Communication Manager ARS feature access code.

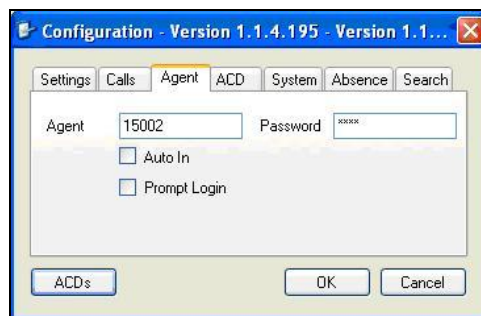


The screenshot shows the 'Configuration - Version 1.1.4.195' dialog box with the 'Settings' tab selected. The fields are filled as follows: LINK is 'AVAYA#S8700DC2#CSTA#AESERVERDC2', User is empty, Pass is masked with 'x's, Extension is '10002', Prefix is '9', and DB Server is empty. There are buttons for 'ACDs', 'OK', and 'Cancel' at the bottom.

Select the **Agent** tab, and configure the fields as follows:

- **Agent:** Enter the Avaya Communication Manager agent login id.
- **Password:** Enter the password (if any) of the Avaya Communication Manager agent login id.

The rest of the fields may be left at their default values. Once completed, select **OK**.



The screenshot shows the 'Configuration - Version 1.1.4.195 - Version 1.1...' dialog box with the 'Agent' tab selected. The fields are filled as follows: Agent is '15002', Password is masked with 'x's, and there are checkboxes for 'Auto In' and 'Prompt Login', both of which are unchecked. There are buttons for 'ACDs', 'OK', and 'Cancel' at the bottom.

6. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying that Scantalk TeamView Unified Operator can use the TSAPI protocol to request and respond to Avaya Communication Manager features.

The serviceability testing focused on verifying the ability of the Scantalk TeamView Unified Operator to recover from an outage condition, such as busying out the CTI link and disconnecting the Ethernet cable for the CTI link.

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 the states shown on the Scantalk TeamView Unified Operator application.

6.2. Test Results

All test cases were executed and passed.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager, AES, and Scantalk TeamView Unified Operator.

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) interface. The top navigation bar includes the Avaya logo and the title "Application Enablement Services - Operations Administration and Maintenance". The breadcrumb trail indicates the current location: "You are here: > Status and Control > Switch Conn Summary". The left sidebar contains a menu with options: CTI OAM Home, Administration, Status and Control (selected), Services Summary, Maintenance, Alarms, Logs, Utilities, and Help. The main content area displays the "Switch Connections Summary" table.

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", "Switch Connection Details", and "Per Service Switch Connections Details".

7.3. Verify Scantalk TeamView Unified Operator

This section assumes that the TeamView Unified Operator application has had directory entries manually added to it (see TeamView documentation in reference [3] for information on how to do this).

Open the Unified Operator application. Call the extension number associated with the application. Use the “+” key on the keyboard to answer the call. Verify that the application shows the correct information. In the example below extension 10009 called extension 10001 which was being controlled by the application and was logged into agent ID 15001.

The screenshot shows the Teamview Unified Operator application interface. The top bar includes the title "Teamview Unified Operator" and a toolbar with icons for various functions. The left sidebar contains a "Huntgroups (ACD)" list. The main content area is divided into two sections: "Calls" and "Search". The "Calls" section displays a table with columns for Phone, Name, and Text. The "Search" section displays a table with columns for Agent, Name, and a time-based status grid. The "Department" section on the right displays a table with columns for Name and Extens....

Phone	Name	Text
10009	E10009	E10001<-E10009

Search	10:00	12:00	14:00	16:00
Agent 15001				
Agent 15002				
Ext 10001				
Ext 10002				
Ext 10009				
Ext 10014				

8. Conclusion

These Application Notes describe the configuration steps required for Scantalk TeamView Unified Operator to successfully interoperate with Avaya Communication Manager and Avaya AES.

9. Additional References

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

- [1] *Administrator Guide for Avaya Communication Manager*,
Doc ID: 03-300509, Issue 4, January 2008, available at:
<http://support.avaya.com>
- [2] *Avaya Application Enablement Services 4.1 Administration and Maintenance Guide*,
Doc ID: 02-300357, Issue 9, February 2008, available at:
<http://support.avaya.com>
- [3] TeamView Unified Operator product documentation is available on request from
Scantalk.
<http://www.scantalk.com>
sales@scantalk.com

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