



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Configuring EAL WinBAS TENS with Avaya Communication Server 1000E R7.5 and Avaya Aura® Session Manager R6.1 – Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps for provisioning EAL WinBAS TENS application to interoperate with Avaya Communication Server 1000E and Avaya Aura® Session Manager.

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 for provisioning EAL WinBAS TENS application to interoperate with Avaya Communication Server 1000E R7.5 (CS1000E) and Avaya Aura® Session Manager R6.1. EAL WinBAS TENS Application is designed to register with Session Manager as a SIP user. The WinBAS TENS Application behaves as a SIP extension on Session Manager, and is able to make/receive internal/external calls. Although single calls can be made and received, the EAL TENS application is designed to handle alarm roles containing large numbers of calls to be made and received in the shortest time possible.

## 2. General Test Approach and Test Results

The interoperability compliance testing evaluates the ability of the TENS application to make and receive calls to and from Avaya 1140E UNISim and SIP deskphones. Users can dial into the TENS application either locally from a Digital or IP deskphone on the CS1000E or over PSTN connection to the CS1000E to hear various announcements.

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 testing focuses on various technical testing scenarios to verify the usage of TENS application with Avaya Communication Server 1000E. In addition, serviceability tests were also performed to assess the reliability and accuracy of the joint solution. The testing focused on the following types of calls:

- **Session Manager Registration** – Ensure that TENS device can register correctly as a SIP user endpoint with Session Manager.
- **Make internal calls to CS1000E Extensions** – Ensure that calls can be made to CS1000E extensions from the TENS application. Check that DTMF tones can be detected.
- **Receive internal calls from CS1000E extensions** – Ensure that calls can be made to the TENS application from the CS1000E extensions. Check that DTMF tones can be detected.
- **Make external calls to PSTN from TENS Application** - Ensure that calls can be made from the TENS application to PSTN. Check that DTMF tones can be detected on TENS.
- **Receive external calls from PSTN into TENS Application** – Ensure that calls can be made to the TENS application from the PSTN. Check that DTMF tones can be detected.
- **Failover testing** - Verify the behaviour of TENS application under different simulated LAN failure conditions on the Avaya platform.

## 2.2. Test Results

All Test Cases passed successfully; the following was noted during compliance testing.

- The TENS receives the DTMF and the # did invoke the TENS to send a “bye” but the “bye” is not hanging up the set.

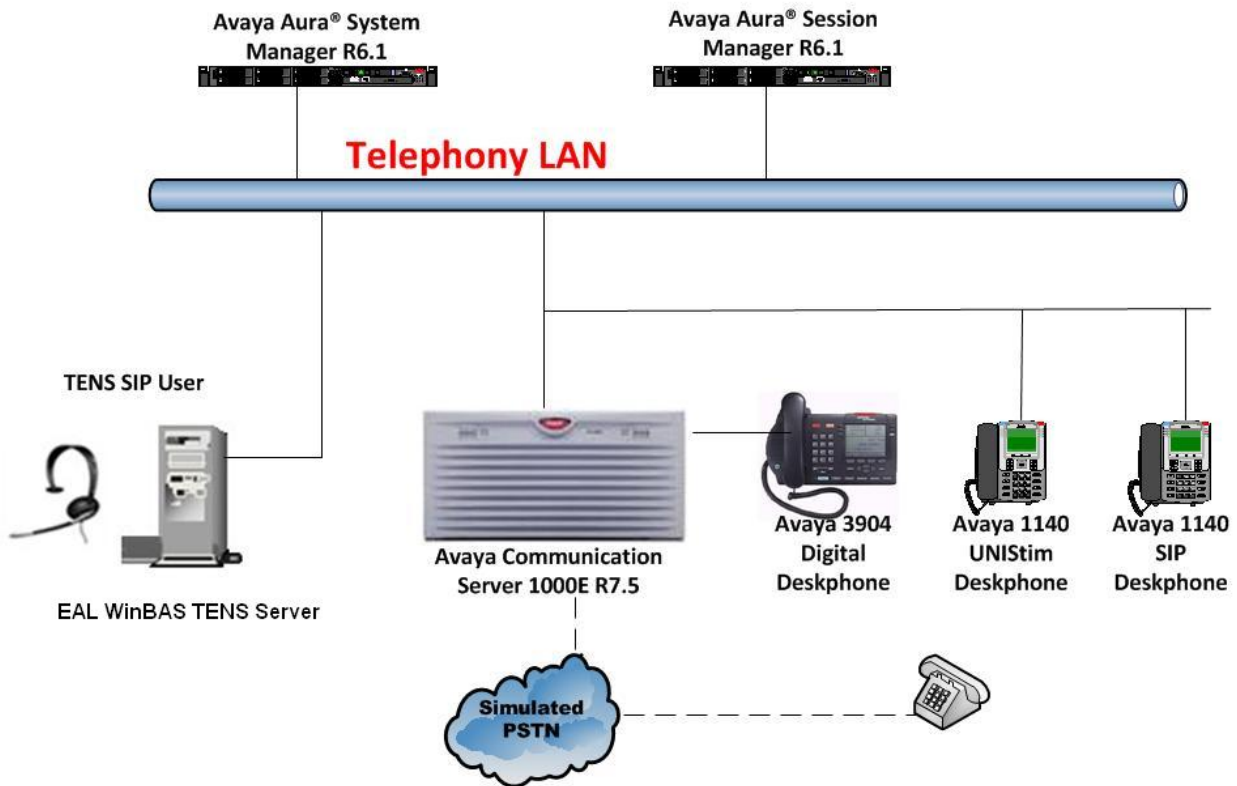
## 2.3. Support

Support from Avaya is available by visiting the website <http://support.avaya.com> and a list of product documentation can be found in **Section 10** of these Application Notes. Technical support for the EAL WinBAS TENS product can be obtained as follows.

- EAL (Apeldoorn) B.V.
- The Netherlands
- ☎ +31 (0)55 539 49 00
- 📠 +31 (0)55 539 49 01
- 💻 [www.eal.nl](http://www.eal.nl)
- @ [support@eal.nl](mailto:support@eal.nl)

### 3. Reference Configuration

**Figure 1** shows the network topology during compliance testing, EAL WinBAS TENS with Avaya Communication Server R7.5 and Avaya Aura® Session Manager R6.1. The TENS application registers with Session Manager as a SIP user. The administration of Session Manager is achieved using System Manager. Calls were made between the WinBAS TENS application and Avaya 3904 Digital, Avaya IP 1140 SIP and UNISTim deskphones.



**Figure 1: Network Solution of EAL WinBAS TENS with Avaya Communication Server 1000E R7.5 and Avaya Aura® Session Manager R6.1**

## 4. Equipment and Software Validated

The following equipment and software was used for the compliance test.

<i>Equipment/Software</i>	<i>Release/Version</i>
Avaya Communication Server 1000E on CPPM	R7.5 SP1 (See full list of CS1000E patches in Appendix A)
Avaya Aura <sup>®</sup> System Manager running on Avaya S8800 Server	R6.1 SP4
Avaya Aura <sup>®</sup> Session Manager running on Avaya S8800 Server	R6.1 SP4
Avaya 1140 UNISTim Deskphone	UNISTim V0625C8D
Avaya 1140 SIP Deskphone	SIP V04.00.04.00
Avaya M3904 Digital Deskphone	N/A
EAL WINBAS TENS Application	Ver.: 10.09 R003 C024

## 5. Configure Avaya Communication Server 1000E

It is assumed that a fully functioning CS1000E is in place with the necessary licensing and with SIP trunks in place to Session Manager. See Appendix B for a printout of the SIP route, d-channel, and trunk information. For further information on the configuration of CS1000E please see **Section 10** of these Application Notes. A telnet application such as “Putty” was used to administer the CS1000E. Open the putty application and telnet to the Node IP address of the CS1000E. Login to the Linux application using the appropriate credentials and once logged in type “cslogin” (not shown) to gain access to the PBX command line.

**Note:** A simulated PSTN connection was added the configuration of which is outside the scope of these Application Notes.

### 5.1. Configure a Dial Plan for TENS application

A Coordinated Dial Plan is added to place calls across the SIP trunk to the TENS Application. Add a Route List Block (**RLB**) to place calls over the SIP route that is already configured on the system. Note that an **RLB** may already be in place but the following procedure shows the addition of a new RLB. Enter overlay 86 to configure a new RLB by typing **LD 86** at the > prompt. A new Route List Index (**RLI**) is added with an ENTR 0 of that of the SIP route used.

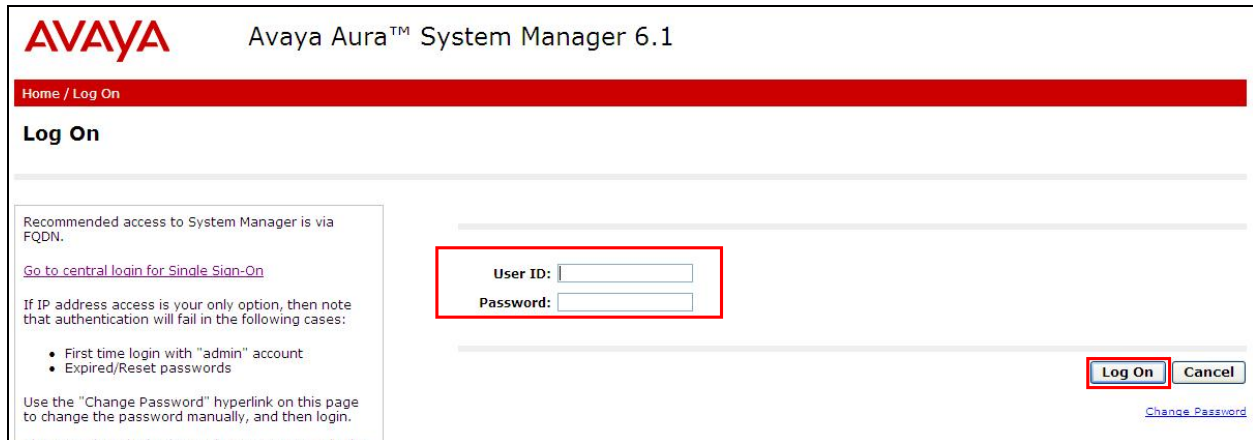
Prompt	Response	Description
>	<b>LD 86</b>	Enter Overlay 86
REQ	new	new/add
CUST	0	Customer number (default is 0)
FEAT	<b>rlb</b>	Route List Block
<b>RLI</b>	20	Route List index Number (any unused number)
ENTR	0	First Entry (0-2)
ROUT	20	Route Number (See Appendix B for info on Route 20)
DMI	0	Digit Manipulation Table (default is 0)
Return to end		

Once the **RLB** is added, the Coordinated Dial Plan (**CDP**) is added in the form of a Distance Steering Code (**DSC**). Note that in the example below, **3300** is the **DSC** as this is the extension number used for the TENS Application during the compliance testing. Enter overlay 87 to add a new **CDP** by typing **LD 87** at the > prompt.

Prompt	Response	Description
>	<b>LD 87</b>	Enter Overlay 87
REQ	new	new/add
CUST	0	Customer number (default is 0)
FEAT	<b>cdp</b>	Coordinated Dial Plan
TYPE	<b>dsc</b>	Distance Steering Code
DSC	<b>3300</b>	Extension number of the TENS Application
FLEN	4	Ext Length
DSP	LSC	DSP Type (Least Cost Routing)
RLI	20	Which RLB to use (Enter the RLB setup above)
Return to end		

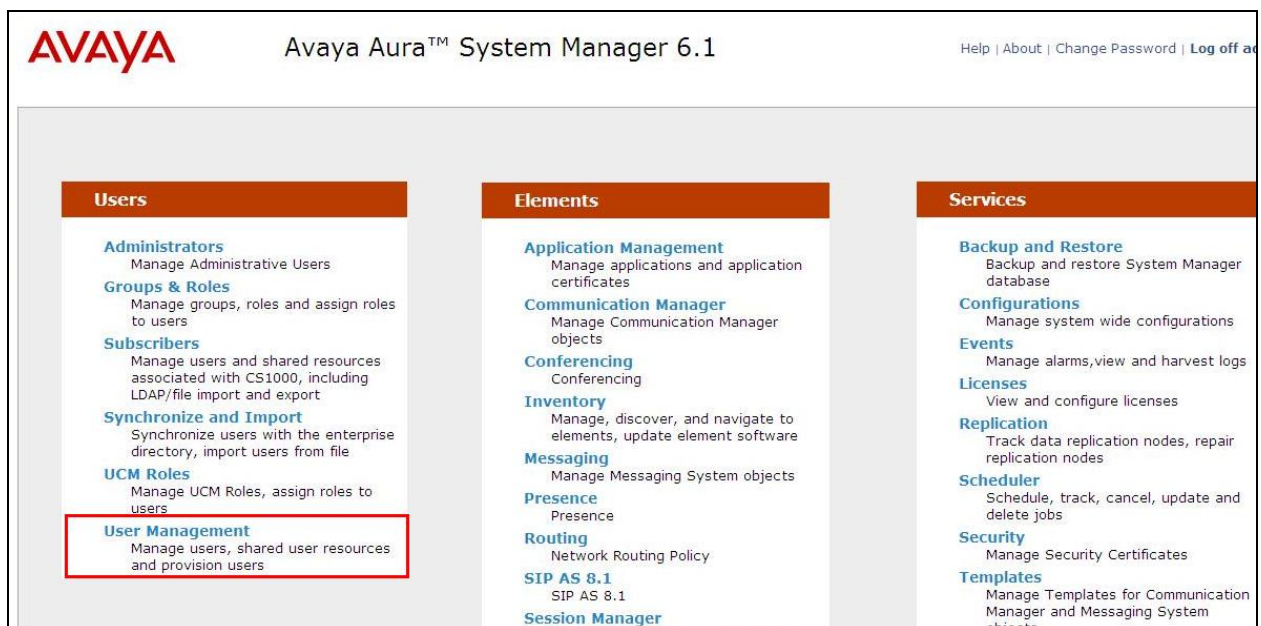
## 6. Configure Avaya Aura® Session Manager

A TENS user is configured on Session Manager. In order to make changes in Session Manager a web session is established to System Manager. Log into System Manager by opening a web browser and navigating to <http://<System Manager IP Address>/SMGR>. Enter the appropriate credentials for the **User ID** and **Password** and click on **Log On** highlighted below.



The screenshot shows the Avaya Aura™ System Manager 6.1 login page. At the top is the Avaya logo and the title 'Avaya Aura™ System Manager 6.1'. Below this is a red navigation bar with 'Home / Log On'. The main heading is 'Log On'. On the left, there is instructional text: 'Recommended access to System Manager is via FQDN. Go to [central login for Single Sign-On](#). If IP address access is your only option, then note that authentication will fail in the following cases: • First time login with "admin" account • Expired/Reset passwords. Use the "Change Password" hyperlink on this page to change the password manually, and then login.' In the center, there are two input fields: 'User ID:' and 'Password:', both highlighted with a red rectangle. To the right of these fields are two buttons: 'Log On' (highlighted with a red rectangle) and 'Cancel'. At the bottom right, there is a blue link for 'Change Password'.

Once logged in click on **User Management** highlighted below.



The screenshot shows the main menu of Avaya Aura™ System Manager 6.1 after a successful login. The top header includes the Avaya logo, the title 'Avaya Aura™ System Manager 6.1', and links for 'Help | About | Change Password | Log off'. The main content area is divided into three columns: 'Users', 'Elements', and 'Services'. Under the 'Users' column, 'User Management' is highlighted with a red rectangle. The 'Elements' column lists various system components like Application Management, Communication Manager, Conferencing, Inventory, Messaging, Presence, Routing, SIP AS 8.1, and Session Manager. The 'Services' column lists tasks like Backup and Restore, Configurations, Events, Licenses, Replication, Scheduler, Security, and Templates.

Under **User Management**, in the left pane, click on **Manage Users** and select **New**.

Avaya Aura™ System Manager 6.1

Help | About | Change Password | Log off admin

User Management x Home

Home / Users / User Management / Manage Users- User Management

**User Management**

Users

View Edit **New** Duplicate Delete More Actions

Advanced Search

4 Items Refresh Show ALL Filter: Enable

<input type="checkbox"/>	Status	Name	Login Name	E164 Handle	Last Login
<input type="checkbox"/>	Default Administrator	admin			
<input type="checkbox"/>	TENS, Test3300	3300@dpp.nortel	3300		
<input type="checkbox"/>	Test, 2000	2000@dpp.nortel	2000		
<input type="checkbox"/>	Test, 2001	2001@dpp.nortel	2001		

Select : All, None

Under the **Identity** tab enter the information as shown below. Note that the **Login Name** is the extension number @ the domain name.

Manage Users

Public Contacts

Shared Addresses

System Presence ACLs

Status

**User Profile Edit: 3300@dpp.nortel**

Identity \* Communication Profile \* Membership Contacts

Identity

\* Last Name: TENS

\* First Name: Test3300

Middle Name:

Description:

Status: Offline

Update Time : June 12, 2012 12:20:03

\* Login Name: 3300@dpp.nortel

\* Authentication Type: Basic

Change Password

Source: local

Localized Display Name: TENS, Test3300

Endpoint Display Name: TENS, Test3300



Under the **Communication Profile** tab enter the **Communication Profile Password** and click **Done**. Note that this is the password user to register the TENS Application with Session Manager and will be used again in **Section 7**.

Under the Communication Address ensure that **Avaya SIP** is selected for **Type** and the **Fully Qualified Address** is selected properly as this is the extension number @ domain name.

Type	Handle	Domain
<input checked="" type="checkbox"/> Avaya SIP	3300	dpp.nortel

Select : All, None

Type: Avaya SIP

\* Fully Qualified Address: 3300 @ dpp.nortel

Ensure that **Session Manager Profile** is ticked and fill in the correct information for the **Primary Session Manager** and **Home Location**. All others should be left as default (**None**). Once all the correct information is filled in click on **Commit** to save the new user to Session Manager.

☒ Session Manager Profile

\* Primary Session Manager: Session\_Manager

Secondary Session Manager: (None)

Origination Application Sequence: (None)

Termination Application Sequence: (None)

Survivability Server: (None)

\* Home Location: Session\_Location

Primary	Secondary	Maximum
3	0	3

Primary	Secondary	Maximum

☐ Endpoint Profile

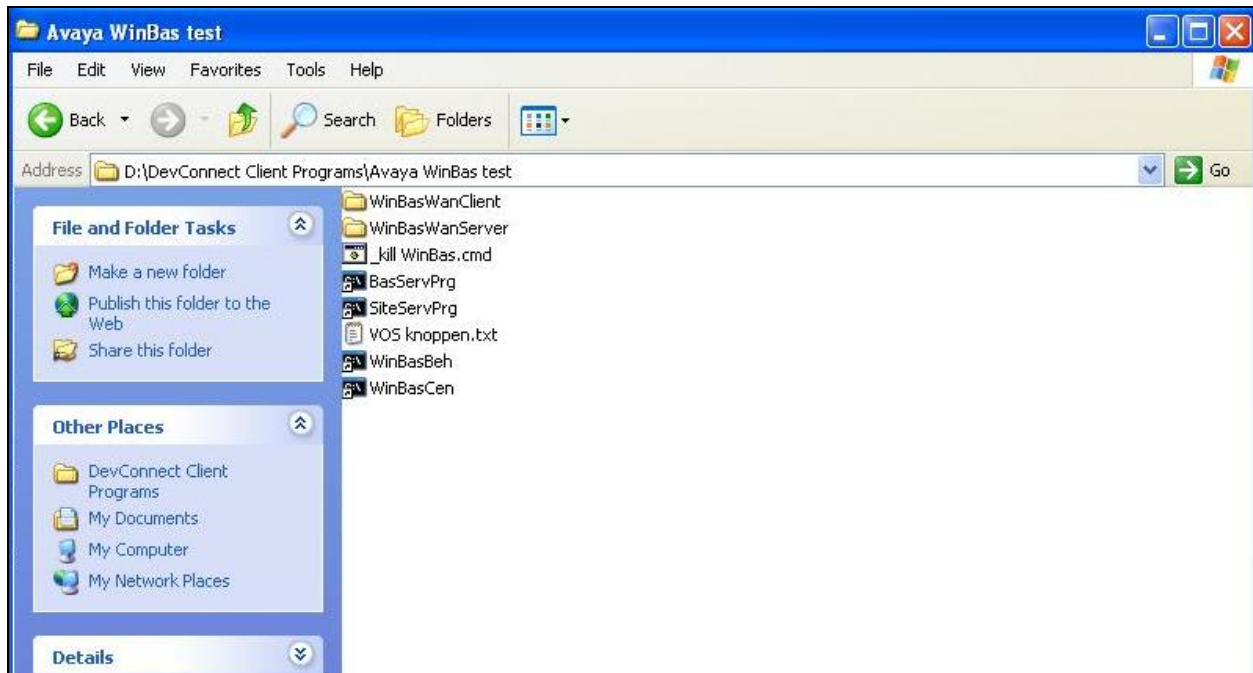
☐ Messaging Profile

\* Required

Commit

## 7. Configure EAL WinBAS TENS Application

The EAL WinBAS TENS Application was not installed during compliance testing this was sent as a zipped folder and expanded to reveal the following files. A folder was created on a PC and the following files were added to the folder.



The TENS application must be started in the following order.

1. **BasServPrg**
2. **SiteServPrg**

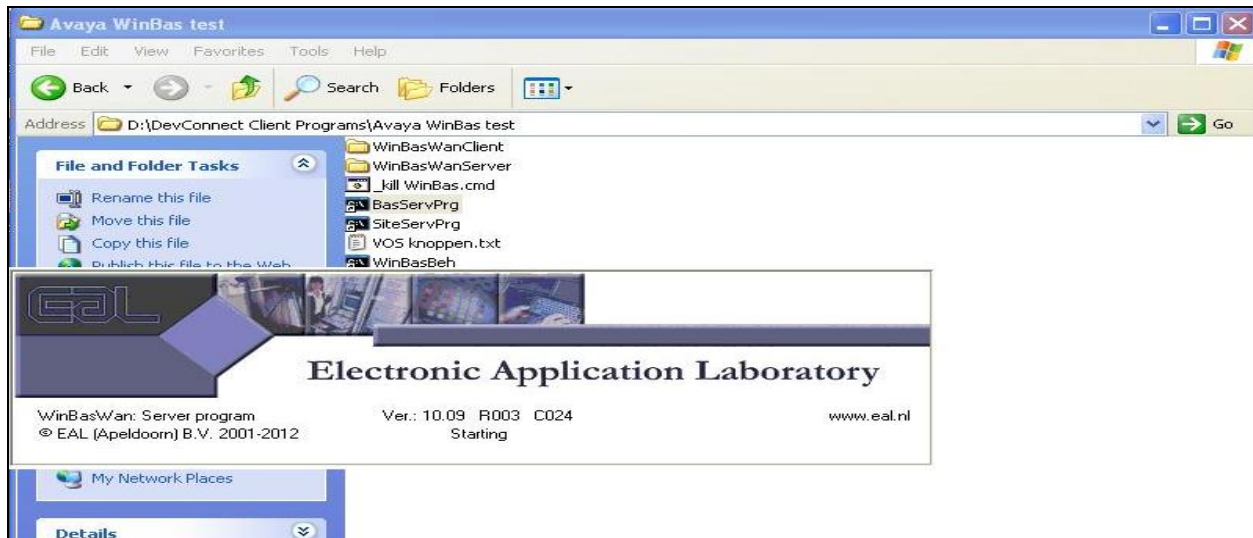
To configure the TENS application the management interface **WinBasBeh** is started. To make any changes in the user interface the **WinBasCen** is started.

**Note:** As an operational installation of TENS the above mentioned **BasServPrg** and **SiteServPrg** applications are run as Windows Services. **These applications should not be started** when the services are running because this will **corrupt** the internal database.

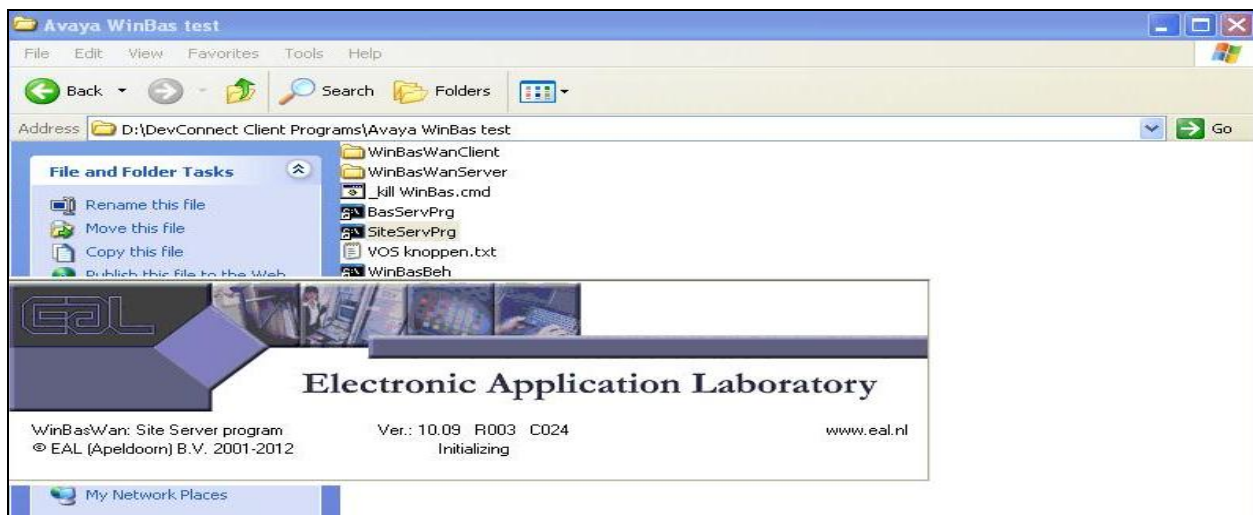
## 7.1. Launching the EAL WinBAS TENS Application

**Note:** Skip this section if the TENS Windows Services are running.

Double click on the **BasServPrg** icon. This is started when the **Electronic Application Laboratory** window disappears.

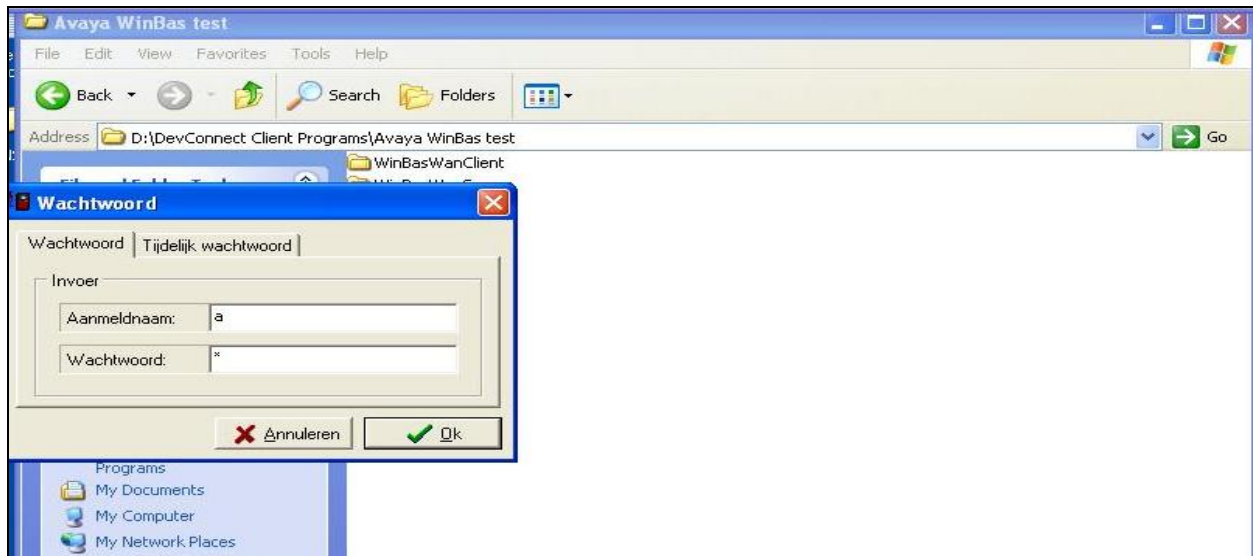


Double click on the **SiteServPrg** icon. This is fully started when the **Electronic Application Laboratory** window disappears. Once both of these have been started the TENS Application is running.

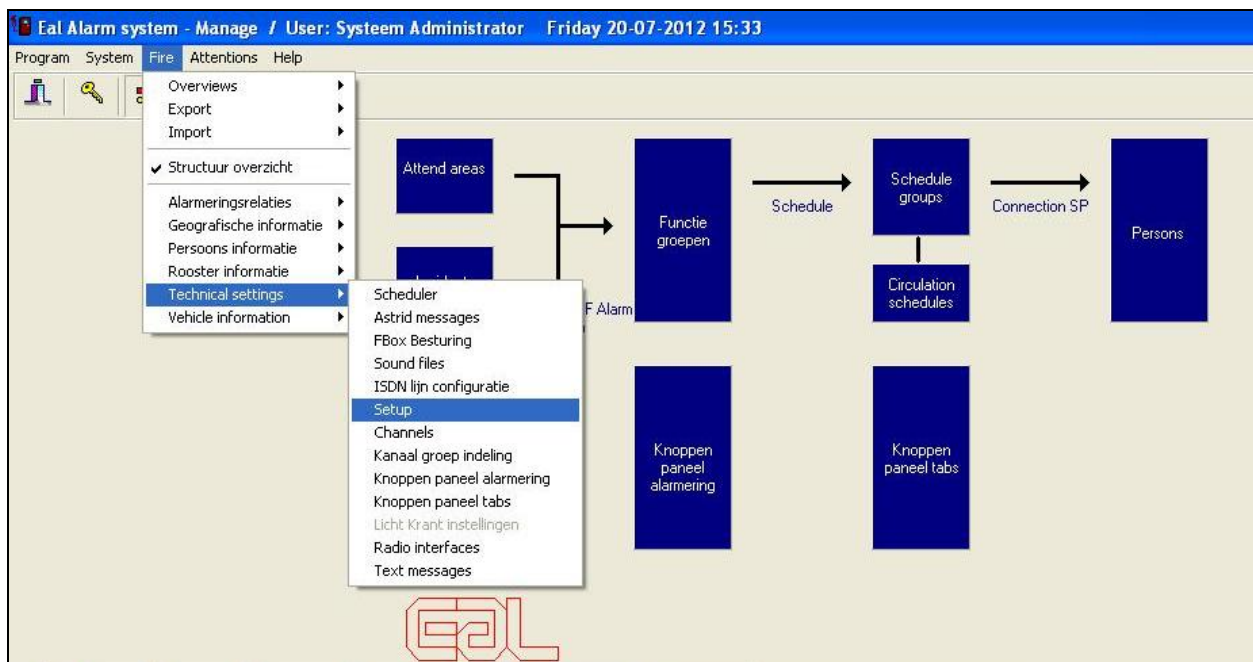


## 7.2. Configuration of the EAL WinBAS TENS Application

To configure the Application the Management interface **WinBasBeh** is started. Double click on the WinBasBeh icon. This opens the following window. Enter the correct username and password and click **Ok**.



The following window is opened. Click on **Fire** in the top menu and select **Technical settings** and **Setup** as shown below.



Navigate to the SIP tab to see an example of the SIP setup that was used in the compliance testing. Under **Login** the **Id** and **Password** is the information configured in **Section 6** above. Under **Proxy** the Session Managers IP Address is entered for **Host FQDN/IP** and the local PC's/Server IP address is entered for **local IP**. Note the **Phone Context** will be different depending on country the application is installed. In the example below **+31** for the Netherlands is added.

The screenshot shows a 'Setup' dialog box with a blue title bar and a red 'X' close button. The 'Sip' tab is selected and highlighted with a red box. The 'Login' section is also highlighted with a red box and contains the following fields:

Id	3300
Password	xxxxxx
Registration Interval	60

The 'Proxy' section is highlighted with a red box and contains the following fields:

Host FQDN / IP	47.166.92.217
local IP	47.166.92.205
RTP port	5200

The 'Phone Context' section contains the following fields:

Tel 1	101	Context	nederland
Tel 2	999	Context	+31
Default context			

At the bottom right, there are two buttons: 'Cancel' with a red 'X' icon and 'Ok' with a green checkmark icon. The 'Ok' button is highlighted with a red box.



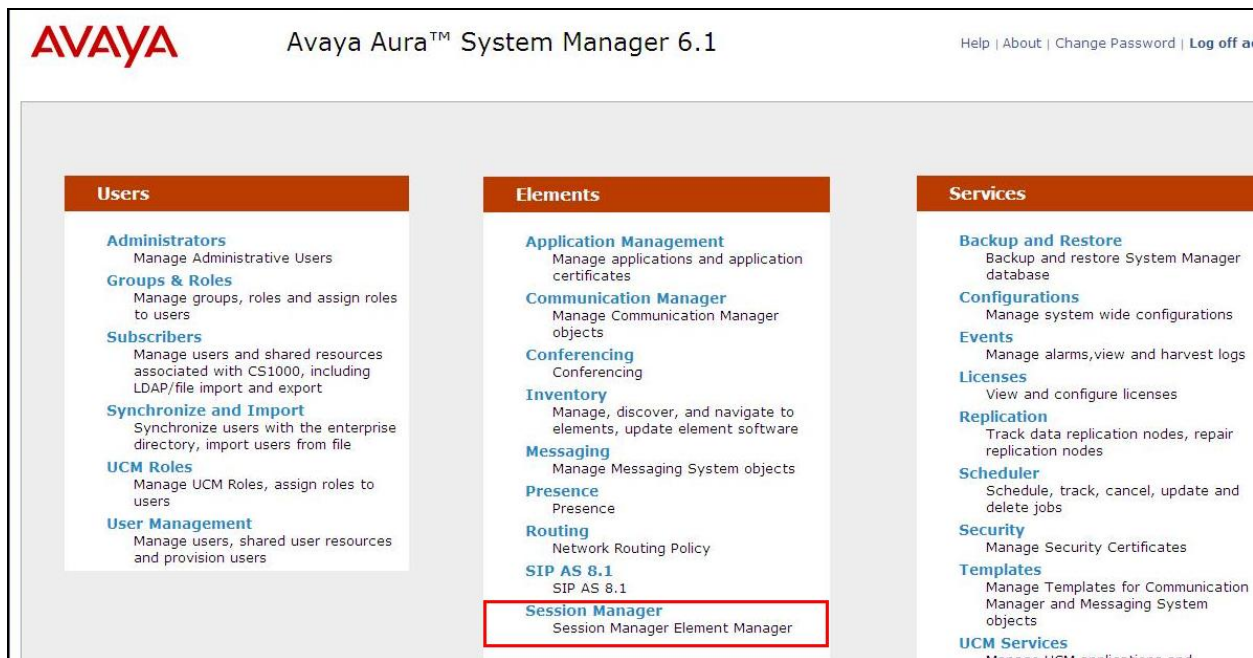
## 8. Verification Steps

The following steps can be taken to ensure that the connection between the EAL WinBAS TENS application and Session Manager are up. Once the TENS Application is registered as a SIP user calls to and from the application should be possible. There are two simple verification steps that can be carried out to ensure the application is configured and connected properly to the Avaya Solution.

1. Verify on Session Manager that TENS application is registered.
2. Make a call to the TENS Application and verify that the correct announcement is heard.

### 8.1. Verify that EAL WinBAS TENS is registered to Avaya Aura® Session Manager

Log into Session Manager as outlined in **Section 6** of these Application Notes, and once logged in double click on **Session Manager** highlighted below.



Select **System Status** in the left window and select **User Registrations** highlighted below.

The screenshot shows the Avaya Aura™ System Manager 6.1 web interface. The left sidebar contains a navigation menu with the following items: Session Manager, Dashboard, Session Manager, Administration, Communication Profile Editor, Network Configuration, Device and Location, Configuration, Application, Configuration, **System Status** (highlighted with a red box), SIP Entity Monitoring, Managed Bandwidth Usage, Security Module Status, Status, Registration, Summary, and User Registrations (highlighted with a red box). The main content area displays the 'System Status' page with a table of actions and descriptions.

Action	Description	Help
SIP Entity Monitoring	View Session Manager SIP Entity Link monitoring status.	SIP Monitoring Page Fields
Managed Bandwidth Usage	Displays system-wide bandwidth usage information for locations where usage is managed. The details expansion shows the breakdown of usage among Session Manager Instances.	Managed Bandwidth Page Fields
Security Module Status	View Security Module status and perform actions on Security Modules for Core and Branch Session Manager instances.	Security Module Status Page Fields
Registration Summary	View per-Session Manager registration status and send notifications to AST devices.	Registration Summary Page Fields
User Registrations	View detailed user registration status and send notifications to AST devices.	Device Failback User Registrations Page Fields

The screen below shows that the TENS application is not registered.

The screenshot shows the 'User Registrations' page in the Avaya Aura System Manager 6.1 interface. The left sidebar is the same as the previous screenshot, with 'System Status' and 'User Registrations' highlighted. The main content area displays the 'User Registrations' page with a table of user registrations. The table has columns for Details, Address, Login Name, First Name, Last Name, Location, IP Address, AST Device, and Registered (Prim, Sec). The first three rows show registrations for the TENS application, all with a status of 'Not Registered'.

Details	Address	Login Name	First Name	Last Name	Location	IP Address	AST Device	Registered
<input type="checkbox"/> Show	---	3300@dpp.nortel	Test3300	TENS	Session_Location	---	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Show	---	2000@dpp.nortel	2000	Test	Session_Location	---	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Show	---	2001@dpp.nortel	2001	Test	Session_Location	---	<input type="checkbox"/>	<input type="checkbox"/>

Once the TENS application is started and configured properly the **Address** and **IP Address** fields are populated as shown in the following screen showing that the TENS application is registered correctly.

Session Manager

Dashboard

Session Manager

Administration

Communication Profile

Editor

Network Configuration

Device and Location

Configuration

Application

Configuration

System Status

SIP Entity Monitoring

Managed Bandwidth

Usage

Security Module

Home / Elements / Session Manager / System Status / User Registrations - User Registrations

User Registrations

Select rows to send notifications to AST devices. Click on Details column for complete registration status.

AST Device

Notifications:

Reboot

Reload

Failback

As of 11:12 AM

3 Items

Refresh

Show ALL

Filter:

	Details	Address	Login Name	First Name	Last Name	Location	IP Address	AST Device	Registered	
									Prim	Sec
<input type="checkbox"/>	➤ Show	3300@dpp.nortel	3300@dpp.nortel	Test3300	TENS	Session_Location	47.166.92.205:5060	<input type="checkbox"/>	<input checked="" type="checkbox"/> (AC)	<input type="checkbox"/>
<input type="checkbox"/>	➤ Show	---	2000@dpp.nortel	2000	Test	Session_Location	---	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	➤ Show	---	2001@dpp.nortel	2001	Test	Session_Location	---	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select : All, None



## 9. Conclusion

These Application Notes describe the configuration steps required for EAL WinBAS TENS application to successfully interoperate with Avaya Communication Server 1000E R7.5 and Avaya Aura® Session Manager R6.1 by registering the TENS application with Session Manager as a SIP user. Please refer to **Section 2.2** for test results and observations.

## 10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com> where the following documents can be obtained.

- [1] *Software Input Reference Administration Avaya Communication Server 1000, Release 7.5; Document No. NN43001-611\_05.02, Dec 2010*
- [2] *Administering Avaya Aura® Session Manager, Doc # 03603324, Issue 1 Release 6.1*
- [3] *Implementing Avaya Aura® Session Manager Document ID 03-603473*

Technical documentation is available directly from EAL. Please refer to **Section 2.3** of these Application Notes for information on EAL support.

## Appendix A

### List of Patches on Avaya Communication Server 1000E R 7.5

VERSION 4121						
RELEASE 7						
ISSUE 50 Q +						
DepList 1: core Issue: 01 (created: 2012-03-14 13:55:18 (est))						
IN-SERVICE PEPS						
PAT#	CR #	PATCH REF #	NAME	DATE	FILENAME	SPECINS
000	wi00969890	ISS1:1OF1	p31664_1	06/07/2012	p31664_1.cpl	YES
001	wi00974635	ISS1:1OF1	p31695_1	06/07/2012	p31695_1.cpl	YES
002	wi00958776	ISS1:1OF1	p31542_1	06/07/2012	p31542_1.cpl	YES
003	wi00925218	ISS1:1OF1	p30675_1	06/07/2012	p30675_1.cpl	NO
004	wi00881777	ISS1:1OF1	p25747_1	06/07/2012	p25747_1.cpl	NO
005	wi00862574	iss1:1of1	p30870_1	06/07/2012	p30870_1.cpl	NO
006	wi00879322	ISS1:1OF1	p30954_1	06/07/2012	p30954_1.cpl	NO
007	wi00976209	ISS1:1OF1	p31717_1	06/07/2012	p31717_1.cpl	YES
008	wi00984178	ISS1:1OF1	p31786_1	06/07/2012	p31786_1.cpl	NO
009	wi00959284	ISS1:1OF1	p31531_1	06/07/2012	p31531_1.cpl	NO
010	wi00905660	ISS1:1OF1	p27968_1	06/07/2012	p27968_1.cpl	NO
011	wi00897082	ISS1:1OF1	p31124_1	06/07/2012	p31124_1.cpl	NO
012	wi00897096	ISS1:1OF1	p30676_1	06/07/2012	p30676_1.cpl	NO
013	wi00855423	ISS1:1OF1	p31328_1	06/07/2012	p31328_1.cpl	YES
014	wi00896680	ISS1:1OF1	p30357_1	06/07/2012	p30357_1.cpl	NO
015	wi00937672	ISS1:1OF1	p31276_1	06/07/2012	p31276_1.cpl	NO
016	wi00859123	ISS1:1OF1	p30648_1	06/07/2012	p30648_1.cpl	NO
017	wi00949273	ISS1:1OF1	p31411_1	06/07/2012	p31411_1.cpl	NO
018	wi00840590	ISS1:1OF1	p30767_1	06/07/2012	p30767_1.cpl	NO
019	wi00978007	ISS1:1OF1	p31737_1	06/07/2012	p31737_1.cpl	NO
020	wi00865477	ISS1:1OF1	p30897_1	06/07/2012	p30897_1.cpl	YES
021	wi00900668	ISS1:1OF1	p30456_1	06/07/2012	p30456_1.cpl	NO
022	wi00906163	ISS1:1OF1	p31205_1	06/07/2012	p31205_1.cpl	NO
023	wi00949627	ISS1:1OF1	p31462_1	06/07/2012	p31462_1.cpl	NO
024	wi00875701	ISS1:1OF1	p30942_1	06/07/2012	p30942_1.cpl	NO
025	wi00937114	ISS1:1OF1	p31310_1	06/07/2012	p31310_1.cpl	NO
026	wi00858335	ISS1:1OF1	p30819_1	06/07/2012	p30819_1.cpl	NO
027	wi00869243	ISS1:1OF1	p30848_1	06/07/2012	p30848_1.cpl	NO
028	wi00896394	ISS1:1OF1	p30807_1	06/07/2012	p30807_1.cpl	NO
029	wi00925208	ISS1:1OF1	p30986_1	06/07/2012	p30986_1.cpl	NO
030	wi00835294	ISS1:1OF1	p30565_1	06/07/2012	p30565_1.cpl	NO
031	wi00962211	ISS1:1OF1	p31580_1	06/07/2012	p31580_1.cpl	NO
032	wi00945997	ISS1:1OF1	p31641_1	06/07/2012	p31641_1.cpl	NO
033	wi00907697	ISS1:1OF1	p31227_1	06/07/2012	p31227_1.cpl	NO
034	wi00886321	ISS1:1OF1	p31009_1	06/07/2012	p31009_1.cpl	NO
035	wi00854130	ISS1:1OF1	p30443_1	06/07/2012	p30443_1.cpl	NO
036	wi00873382	ISS1:1OF1	p30832_1	06/07/2012	p30832_1.cpl	NO
037	WI00927300	ISS1:1OF1	p30999_1	06/07/2012	p30999_1.cpl	NO
038	wi00982243	ISS1:1OF1	p31797_1	06/07/2012	p31797_1.cpl	NO
039	wi00898327	ISS1:1OF1	p31136_1	06/07/2012	p31136_1.cpl	NO
040	wi00832106	ISS1:1OF1	p30550_1	06/07/2012	p30550_1.cpl	NO
041	wi00900096	ISS1:1OF1	p31006_1	06/07/2012	p31006_1.cpl	NO
042	wi00959820	ISS1:1OF1	p31562_1	06/07/2012	p31562_1.cpl	NO
043	wi00895090	ISS1:1OF1	p31105_1	06/07/2012	p31105_1.cpl	NO
044	wi00967509	ISS1:1OF1	p31294_1	06/07/2012	p31294_1.cpl	NO
045	wi00890475	p30952	p31048_1	06/07/2012	p31048_1.cpl	NO
046	wi00852365	ISS1:1OF1	p30707_1	06/07/2012	p30707_1.cpl	NO
047	wi00957252	ISS1:1OF1	p31530_1	06/07/2012	p31530_1.cpl	NO

048	wi00887744	ISS2:1OF1	p31026_2	06/07/2012	p31026_2.cpl	NO
049	WI00853473	ISS1:1OF1	p30625_1	06/07/2012	p30625_1.cpl	NO
050	wi00905600	ISS1:1OF1	p31201_1	06/07/2012	p31201_1.cpl	NO
051	WI00889786	ISS1:1OF1	p30750_1	06/07/2012	p30750_1.cpl	NO
052	wi00827950	ISS2:1OF1	p30471_2	06/07/2012	p30471_2.cpl	NO
053	wi00843623	ISS1:1OF1	p30731_1	06/07/2012	p30731_1.cpl	YES
054	wi00960809	ISS1:1OF1	p31564_1	06/07/2012	p31564_1.cpl	NO
055	wi00898200	ISS1:1OF1	p31274_1	06/07/2012	p31274_1.cpl	NO
056	wi00938555	ISS1:1OF1	p30881_1	06/07/2012	p30881_1.cpl	YES
057	wi00964006	ISS1:1OF1	p31595_1	06/07/2012	p31595_1.cpl	YES
058	wi00865477	ISS1:1OF1	p30898_1	06/07/2012	p30898_1.cpl	YES
059	wi00905297	ISS1:1OF1	p31195_1	06/07/2012	p31195_1.cpl	NO
060	wi00839255	ISS1:1OF1	p30591_1	06/07/2012	p30591_1.cpl	NO
061	wi00960133	ISS2:1OF1	p31557_2	06/07/2012	p31557_2.cpl	NO
062	wi00967754	ISS1:1OF1	p31653_1	06/07/2012	p31653_1.cpl	YES
063	wi00943172	ISS1:1OF1	p31402_1	06/07/2012	p31402_1.cpl	NO
064	wi00877367	ISS1:1OF1	p30534_1	06/07/2012	p30534_1.cpl	NO
065	wi00857566	ISS1:1OF1	p30766_1	06/07/2012	p30766_1.cpl	NO
066	wi00948274	ISS1:1OF1	p31365_1	06/07/2012	p31365_1.cpl	NO
067	wi00841980	ISS1:1OF1	p30618_1	06/07/2012	p30618_1.cpl	NO
068	wi00897176	ISS1:1OF1	p30418_1	06/07/2012	p30418_1.cpl	NO
069	wi00865477	ISS1:1OF1	p30892_1	06/07/2012	p30892_1.cpl	YES
070	wi00931028	ISS1:1OF1	p31354_1	06/07/2012	p31354_1.cpl	YES
071	wi00875425	ISS1:1OF1	p30943_1	06/07/2012	p30943_1.cpl	NO
072	wi00968531	ISS1:1OF1	p31645_1	06/07/2012	p31645_1.cpl	NO
073	wi00895181	ISS1:1OF1	p31106_1	06/07/2012	p31106_1.cpl	NO
074	wi00973241	ISS1:1OF1	p31715_1	06/07/2012	p31715_1.cpl	NO
075	wi00948931	ISS1:1OF1	p31407_1	06/07/2012	p31407_1.cpl	NO
076	wi00968157	ISS1:1OF1	p31637_1	06/07/2012	p31637_1.cpl	NO
077	wi00871969	ISS1:1OF1	p30768_1	06/07/2012	p30768_1.cpl	NO
078	wi00967510	ISS1:1OF1	p31147_1	06/07/2012	p31147_1.cpl	NO
079	wi00891626	ISS1:1OF1	p31051_1	06/07/2012	p31051_1.cpl	YES
080	wi00946558	ISS1:1OF1	p31358_1	06/07/2012	p31358_1.cpl	NO
081	wi00839821	ISS1:1OF1	p30619_1	06/07/2012	p30619_1.cpl	NO
082	WI00839794	ISS1:1OF1	p28647_1	06/07/2012	p28647_1.cpl	NO
083	WI00843571	ISS1:1OF1	p30627_1	06/07/2012	p30627_1.cpl	NO
084	wi00856991	ISS1:1OF1	p17588_1	06/07/2012	p17588_1.cpl	NO
085	wi00842409	ISS1:1OF1	p30621_1	06/07/2012	p30621_1.cpl	NO
086	wi00927321	ISS1:1OF1	p31286_1	06/07/2012	p31286_1.cpl	YES
087	wi00974272	ISS1:1OF1	p31690_1	06/07/2012	p31690_1.cpl	YES
088	wi00880386	ISS1:1OF1	p30977_1	06/07/2012	p30977_1.cpl	NO
089	wi00865477	ISS1:1OF1	p30896_1	06/07/2012	p30896_1.cpl	YES
090	wi00838073	ISS1:1OF1	p30588_1	06/07/2012	p30588_1.cpl	NO
091	wi00965838	ISS1:1OF1	p31623_1	06/07/2012	p31623_1.cpl	NO
092	wi00879526	ISS1:1OF1	p31007_1	06/07/2012	p31007_1.cpl	NO
093	wi00958682	ISS1:1OF1	p31540_1	06/07/2012	p31540_1.cpl	NO
094	wi00969581	ISS1:1OF1	p31661_1	06/07/2012	p31661_1.cpl	YES
095	wi00973858	ISS1:1OF1	p31691_1	06/07/2012	p31691_1.cpl	NO
096	wi00946282	ISS1:1OF1	p31204_1	06/07/2012	p31204_1.cpl	NO
097	wi00863876	ISS1:1OF1	p30787_1	06/07/2012	p30787_1.cpl	NO
098	wi00908933	ISS1:1OF1	p31239_1	06/07/2012	p31239_1.cpl	NO
099	wi00856702	ISS1:1OF1	p30573_1	06/07/2012	p30573_1.cpl	NO
100	wi00975133	ISS1:1OF1	p31731_1	06/07/2012	p31731_1.cpl	NO
101	wi00932948	ISS1:1OF1	p31077_1	06/07/2012	p31077_1.cpl	NO
102	wi00969208	ISS1:1OF1	p31656_1	06/07/2012	p31656_1.cpl	NO
103	WI00836292	ISS1:1OF1	p30554_1	06/07/2012	p30554_1.cpl	NO
104	wi00908598	ISS1:1OF1	p31235_1	06/07/2012	p31235_1.cpl	NO
105	wi00880836	ISS1:1OF1	p30976_1	06/07/2012	p30976_1.cpl	NO
106	WI00854150	ISS1:1OF1	p30468_1	06/07/2012	p30468_1.cpl	NO
107	wi00894243	ISS1:1OF1	p31087_1	06/07/2012	p31087_1.cpl	NO
108	wi00877592	ISS1:1OF1	p30880_1	06/07/2012	p30880_1.cpl	NO
109	wi00871739	ISS1:1OF1	p30856_1	06/07/2012	p30856_1.cpl	NO

110	wi00688381	ISS1:1OF1	p30104_1	06/07/2012	p30104_1.cpl	NO
111	wi00955753	ISS1:1OF1	p31733_1	06/07/2012	p31733_1.cpl	NO
112	wi00850521	ISS1:1OF1	p30709_1	06/07/2012	p30709_1.cpl	YES
113	wi00932204	ISS2:1OF1	p31305_2	06/07/2012	p31305_2.cpl	NO
114	wi00906022	ISS1:1OF1	p31202_1	06/07/2012	p31202_1.cpl	NO
115	wi00860279	ISS1:1OF1	p30789_1	06/07/2012	p30789_1.cpl	NO
116	wi00959457	ISS1:1OF1	p31551_1	06/07/2012	p31551_1.cpl	NO
117	wi00852389	ISS1:1OF1	p30641_1	06/07/2012	p30641_1.cpl	NO
118	wi00941500	ISS1:1OF1	p31394_1	06/07/2012	p31394_1.cpl	NO
119	wi00834382	ISS1:1OF1	p30548_1	06/07/2012	p30548_1.cpl	NO
120	wi00883604	ISS1:1OF1	p30973_1	06/07/2012	p30973_1.cpl	NO
121	wi00921295	ISS1:1OF1	p31265_1	06/07/2012	p31265_1.cpl	NO
122	wi00946876	ISS1:1OF1	p31430_1	06/07/2012	p31430_1.cpl	NO
123	wi00909476	ISS1:1OF1	p31340_1	06/07/2012	p31340_1.cpl	NO
124	wi00923899	ISS1:1OF1	p31270_1	06/07/2012	p31270_1.cpl	NO
125	wi00856410	ISS1:1OF1	p30749_1	06/07/2012	p30749_1.cpl	NO
126	wi00859499	ISS1:1OF1	p30694_1	06/07/2012	p30694_1.cpl	NO
127	wi00951837	ISS1:1OF1	p31485_1	06/07/2012	p31485_1.cpl	NO
128	wi00978883	ISS1:1OF1	p31770_1	06/07/2012	p31770_1.cpl	NO
129	wi00950575	ISS1:1OF1	p31724_1	06/07/2012	p31724_1.cpl	NO
130	wi00869695	ISS1:1OF1	p30654_1	06/07/2012	p30654_1.cpl	NO
131	wi00899584	ISS1:1OF1	p30809_1	06/07/2012	p30809_1.cpl	NO
132	wi00891621	ISS1:1OF1	p31037_1	06/07/2012	p31037_1.cpl	NO
133	wi00969039	ISS1:1OF1	p31643_1	06/07/2012	p31643_1.cpl	NO
134	wi00942734	ISS1:1OF1	p31409_1	06/07/2012	p31409_1.cpl	NO
135	wi00865477	ISS1:1OF1	p30893_1	06/07/2012	p30893_1.cpl	YES
136	wi00930649	ISS1:1OF1	p31570_1	06/07/2012	p31570_1.cpl	NO
137	wi00841273	ISS1:1OF1	p30713_1	06/07/2012	p30713_1.cpl	NO
138	wi00826075	ISS1:1OF1	p30452_1	06/07/2012	p30452_1.cpl	NO
139	wi00959463	ISS1:1OF1	p31528_1	06/07/2012	p31528_1.cpl	NO
140	wi00929140	ISS1:1OF1	p31284_1	06/07/2012	p31284_1.cpl	NO
141	wi00824257	ISS1:1OF1	p30447_1	06/07/2012	p30447_1.cpl	NO
142	WI00836334	ISS1:1OF1	p30481_1	06/07/2012	p30481_1.cpl	NO
143	wi00936714	ISS1:1OF1	p31379_1	06/07/2012	p31379_1.cpl	NO
144	wi00903381	ISS1:1OF1	p30421_1	06/07/2012	p30421_1.cpl	NO
145	wi00839134	ISS1:1OF1	p30698_1	06/07/2012	p30698_1.cpl	YES
146	wi00962557	ISS1:1OF1	p31581_1	06/07/2012	p31581_1.cpl	NO
147	wi00853178	ISS1:1OF1	p30719_1	06/07/2012	p30719_1.cpl	NO
148	WI00928455	ISS1:1OF1	p31297_1	06/07/2012	p31297_1.cpl	NO
149	wi00903437	ISS1:1OF1	p31167_1	06/07/2012	p31167_1.cpl	NO
150	wi00884699	ISS1:1OF1	p31000_1	06/07/2012	p31000_1.cpl	YES
151	wi00932958	ISS1:1OF1	p31115_1	06/07/2012	p31115_1.cpl	NO
152	wi00896420	ISS1:1OF1	p30867_1	06/07/2012	p30867_1.cpl	NO
153	wi00865477	ISS1:1OF1	p30894_1	06/07/2012	p30894_1.cpl	YES
154	wi00925141	ISS1:1OF1	p30802_1	06/07/2012	p30802_1.cpl	NO
155	wi00857362	ISS1:1OF1	p30782_1	06/07/2012	p30782_1.cpl	NO
156	wi00956788	ISS1:1OF1	p31638_1	06/07/2012	p31638_1.cpl	NO
157	wi00924886	ISS1:1OF1	p31062_1	06/07/2012	p31062_1.cpl	YES
158	wi00854415	ISS1:1OF1	p30593_1	06/07/2012	p30593_1.cpl	NO
159	wi00930864	ISS1:1OF1	p31325_1	06/07/2012	p31325_1.cpl	NO
160	wi00968448	ISS1:1OF1	p31648_1	06/07/2012	p31648_1.cpl	YES
161	wi00962955	ISS1:1OF1	p31585_1	06/07/2012	p31585_1.cpl	NO
162	wi00977393	ISS1:1OF1	p31744_1	06/07/2012	p31744_1.cpl	YES
163	wi00868729	ISS1:1OF1	p31163_1	06/07/2012	p31163_1.cpl	NO
164	wi00951427	ISS1:1OF1	p31478_1	06/07/2012	p31478_1.cpl	NO
165	wi00894443	ISS1:1OF1	p31093_1	06/07/2012	p31093_1.cpl	NO
166	wi00956885	ISS1:1OF1	p31489_1	06/07/2012	p31489_1.cpl	NO
167	wi00968353	ISS1:1OF1	p31412_1	06/07/2012	p31412_1.cpl	NO
168	wi00836182	ISS1:1OF1	p30450_1	06/07/2012	p30450_1.cpl	NO
169	wi00961267	ISS1:1OF1	p30288_1	06/07/2012	p30288_1.cpl	NO
170	wi00907707	ISS1:1OF1	p31228_1	06/07/2012	p31228_1.cpl	NO
171	wi00965285	ISS1:1OF1	p31476_1	06/07/2012	p31476_1.cpl	NO

172	wi00903369	ISS1:1OF1	p31165_1	06/07/2012	p31165_1.cpl	NO
173	wi00936935	ISS1:1OF1	p31362_1	06/07/2012	p31362_1.cpl	NO
174	wi00900766	ISS1:1OF1	p31159_1	06/07/2012	p31159_1.cpl	NO
175	wi00943748	ISS1:1OF1	p31516_1	06/07/2012	p31516_1.cpl	NO
176	wi00882293	ISS1:1OF1	p31010_1	06/07/2012	p31010_1.cpl	NO
177	wi00953900	ISS1:1OF1	p31494_1	06/07/2012	p31494_1.cpl	NO
178	wi00949410	ISS1:1OF1	p31248_1	06/07/2012	p31248_1.cpl	NO
179	wi00975659	ISS1:1OF1	p31707_1	06/07/2012	p31707_1.cpl	NO
180	wi00946477	ISS1:1OF1	p31426_1	06/07/2012	p31426_1.cpl	NO
MDP>LAST SUCCESSFUL MDP REFRESH :2012-04-27 13:11:46(Local Time)						
MDP>USING DEPLIST ZIP FILE DOWNLOADED :2012-03-27 06:55:16(est)						

## Appendix B

### SIP Route on Avaya Communication Server 1000E R7.5

```
TYPE: rdb

CUST 0

ROUT 20

TYPE RDB
CUST 00
ROUT 20
DES SIPTRK
TKTP TIE
M911P NO
ESN NO
RPA NO
CNVT NO
SAT NO
RCLS EXT
VTRK YES
ZONE 00001
PCID SIP
CRID YES
NODE 3
DTRK NO
ISDN YES
    MODE ISLD
    DCH 66
    IFC SL1
    PNI 00001
    NCNA YES
    NCRD YES
    TRO YES
    FALT NO
    CTYP UKWN
    INAC YES
    ISAR NO
    DAPC NO
MBXR NO
MBXOT NPA
MBXT 0
PTYP ATT
CNDP UKWN
AUTO NO
DNIS NO
DCDR YES
ICOG IAO
SRCH LIN
TRMB YES
STEP
ACOD 8020
TCPP NO
PII NO
AUXP NO
TARG
CLEN 1
```

BILN NO  
 OABS  
 INST  
 IDC NO  
 DCNO 0 \*  
 NDNO 0  
 DEXT NO  
 ANTK  
 SIGO STD  
 STYP SDAT  
 MFC NO  
 ICIS YES  
 OGIS YES  
 PTUT 0  
 TIMR ICF 1920  
  
 PAGE 002  
  
     OGF 1920  
     EOD 13952  
     LCT 256  
     DSI 34944  
     NRD 10112  
     DDL 70  
     ODT 4096  
     RGV 640  
     GTO 896  
     GTI 896  
     SFB 3  
     PRPS 800  
     NBS 2048  
     NBL 4096  
  
     IENB 5  
     TFD 0  
     VSS 0  
     VGD 6  
     EESD 1024  
 SST 5 0  
 DTD NO  
 SCDT NO  
 2 DT NO  
 NEDC ORG  
 FEDC ORG  
 CPDC NO  
 DLTN NO  
 HOLD 02 02 40  
 SEIZ 02 02  
 SVFL 02 02  
 DRNG NO  
 CDR YES  
 INC YES  
 LAST YES  
 TTA YES  
 ABAN YES  
 CDRB YES  
 QREC YES  
 OAL YES  
 AIA YES  
 OAN YES  
 OPD YES

NDP EXC 0  
NATL YES  
SSL  
CFWR NO  
IDOP NO  
VRAT NO  
MUS YES  
MRT 10  
PANS YES  
RACD NO  
MANO NO  
FRL 0 0  
FRL 1 0  
FRL 2 0  
FRL 3 0  
FRL 4 0  
FRL 5 0  
FRL 6 0  
FRL 7 0

PAGE 003

OHQ NO  
OHQT 00  
CBQ NO  
AUTH NO  
TDET NO  
TTBL 0  
ATAN NO  
OHTD NO  
PLEV 2  
OPR NO  
ALRM NO  
ART 0  
PECL NO  
DCTI 0  
TIDY 20 20  
ATRR NO  
TRRL NO  
SGRP 0  
CCBA NO  
ARDN NO  
CTBL 0  
AACR NO



## SIP D-channel Avaya Communication Server 1000E R7.5

```
ADAN      DCH 66
CTYP DCIP
DES  VTRK_DCH
USR  ISLD
ISLM 4000
SSRC 1800
OTBF 32
NASA YES
IFC  SL1
CNEG 1
RLS  ID  7
RCAP ND2 MWI
MBGA NO
H323
    OVLR YES
    OVLS YES
    OVLT 1
```

## SIP Trunk on Avaya Communication Server 1000E R7.5

```
TYPE TNB
TN  96 0 3 29

DATE

PAGE

DES

DES  SIPTRK
TN  096 0 03 29  VIRTUAL
TYPE IPTI
CDEN 8D
CUST 0
XTRK VTRK
ZONE 00001
TIMP 600
BIMP 600
AUTO_BIMP NO
NMUS NO
TRK  ANLG
NCOS 0
RTMB 20 30
CHID 60
TGAR 0
STRI/STRO IMM IMM
SUPN YES
AST  NO
IAPG 0
CLS  UNR DTN CND ECD WTA LPR APN THFD XREP SPCD MSBT
    P10 NTC MID
TKID
AACR NO
```

---

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