



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Avaya IP Office 7.0 with Tri-Line TIM Professional 2.181 using TCP - Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Avaya IP Office 7.0 with Tri-Line TIM Professional 2.181. The Tri-Line TIM Professional will collect Station Message Detail Reports by listening to a TCP port configured on the Avaya IP Office

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

TIM Professional is a Windows-based application call logger that uses Station Message Detail Reports (SMDR) data output from the Avaya IP Office. TIM Professional checks the data, costs it and stores it automatically in its database. TIM Professional can produce a whole range of management reports with graphs, charts and tables, custom-defined if required. All of its functions can be performed from using a standard web browser, no client software is required.

2. General Test Approach and Test Results

The interoperability compliance test included both feature and functionality testing. The feature and functionality testing focused on verifying that SMDR data is collected by TIM Professional and received in the format as generated by the Avaya IP Office. The TIM Professional Call Logger collects SMDR data by listening on a TCP port configured on the Avaya IP Office.

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 testing included:

- Verification of connectivity between the TIM Professional and Avaya IP Office using a TCP connection.
- Verification that SMDR data was collected as output by the Avaya IP Office.
- Link Failure\Recovery was also tested to ensure successful reconnection on link failure.

2.2. Test Results

Tests were performed to insure full interoperability between the TIM Professional and the Avaya IP Office. The tests were all functional in nature and performance testing was not included. All the test cases passed successfully.

2.3. Support

Technical support can be obtained for TRI-Line products as follows:

- Web Portal <http://www.tri-line.com/en/support/>
- E-mail: support@tri-line.com
- Telephone +44 (0)20 7265 2626

3. Reference Configuration

Figure 1 illustrates the network diagram of the configuration used during compliance testing. The Avaya IP Office is configured to output call records. A TCP link is established between Tri-Line TIM Professional and Avaya IP Office. From the Avaya IP Office, SMDR data are sent to a specified port number for collection and processing. The Tri-Line TIM Professional Call Logger is connected on the same LAN as the Avaya IP Office and will collect SMDR.

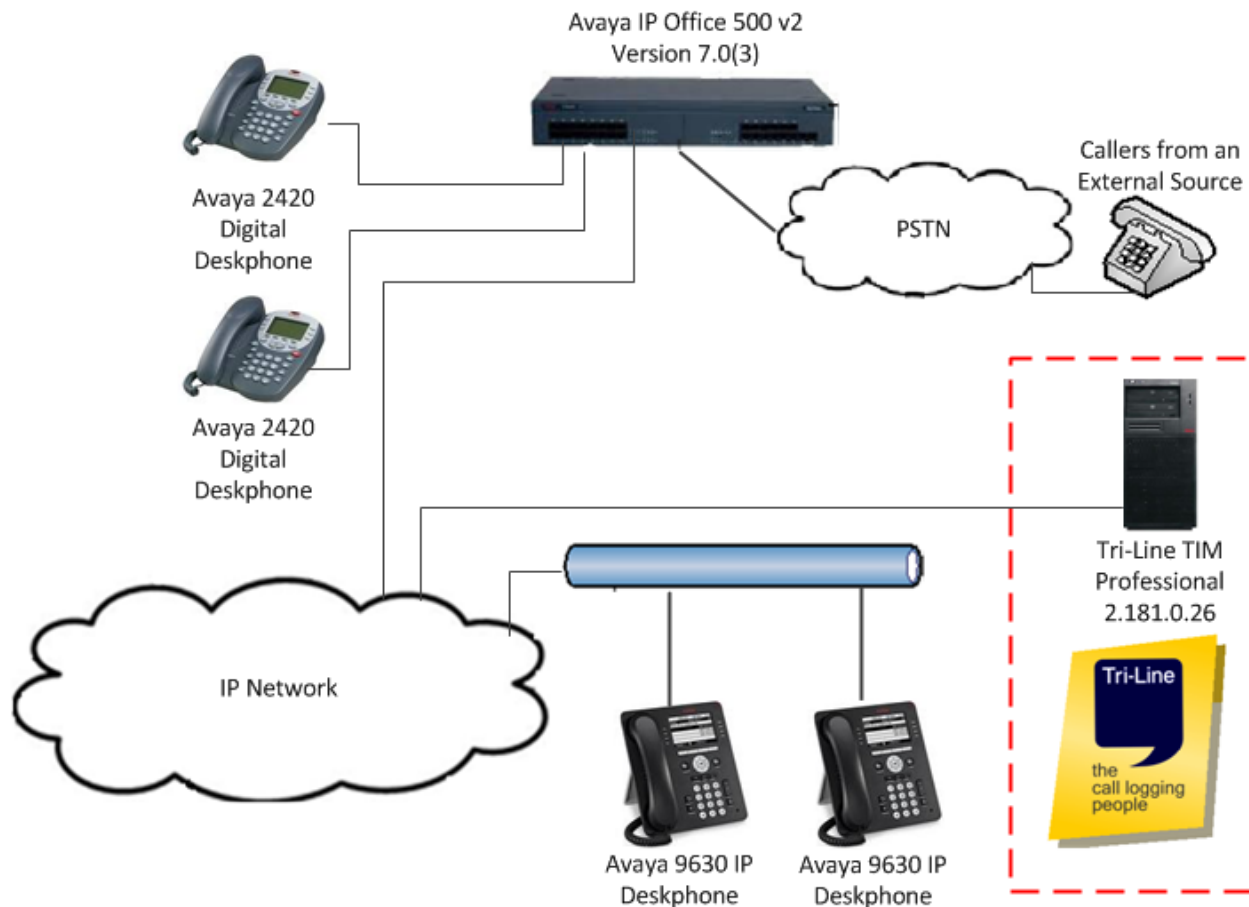


Figure 1: Avaya IP Office with Tri-Line TIM Professional Reference Configuration

4. Equipment and Software Validated

The hardware and associated software used in the compliance testing is listed below.

Equipment	Software Version
Avaya IP Office 500v2 700417462 PRI Card 700417330 DS1 Card	Avaya IP Office 7.0(3) Avaya IP Office Manager 9.0(3)
Avaya 9600-Series IP Telephones (9620, 9630)	96xx H.323 Release 3.1 SP2
Avaya 2420 Digital Telephones	N/A
Tri-Line TIM Professional	TIM Professional Version 2.181.0.26

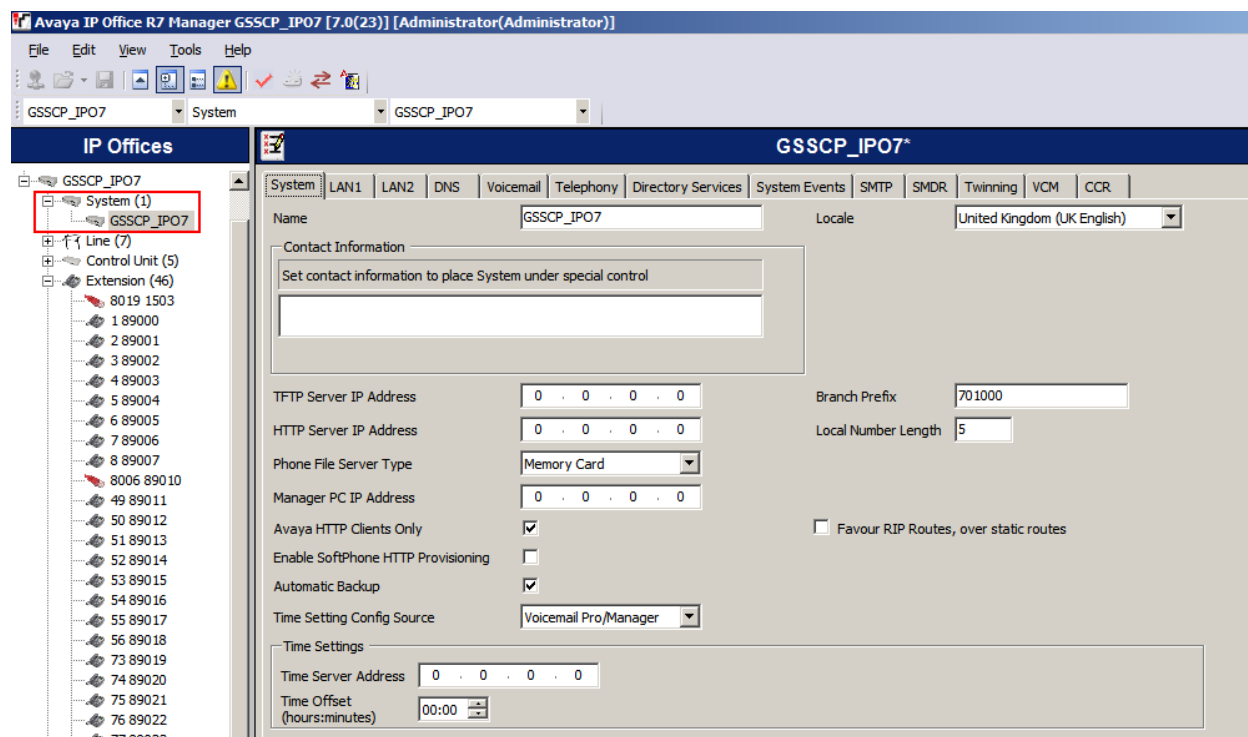
5. Avaya IP Office Configuration

Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. The information provided in this section describes the configuration of the Avaya IP Office for this solution. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager
- SMDR Configuration
- Push Configuration to Avaya IP Office

5.1. Launch Avaya IP Office Manager

From the Avaya IP Office Manager PC, go to **Start→Programs→IP Office→Manager** to launch the Manager application. Log in to Avaya IP Office using the appropriate credentials to receive its configuration. In the IP Offices window expand the Configuration Tree and double-click **System**. During compliance testing the System was called **GSSCP_IPO7**



5.2. SMDR configuration

Select the **SMDR** tab and enter the following information:

- **Output** Select **SMDR** from the drop box
- **IP Address** IP Address of the PC where TIM Professional is installed
- **TCP Port** Enter **9000**
- **Records to buffer** Enter **3000**. This is maximum available.
- Check the **Call Splitting for Diverts** Check box

Click the **OK** button to save.

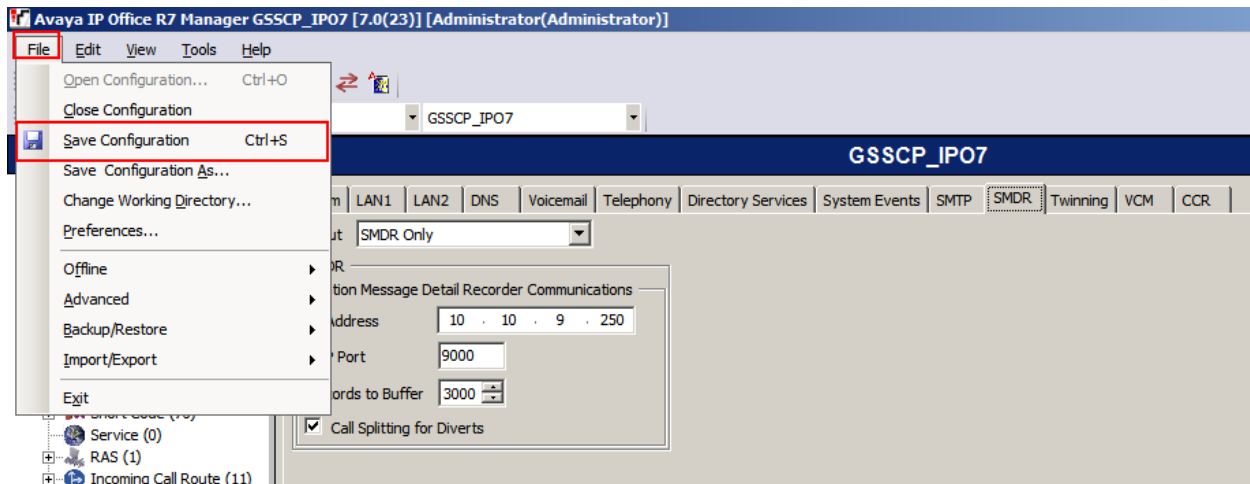
The screenshot shows the 'GSSCP_IP07*' configuration window. The 'SMDR' tab is selected and highlighted with a red box. The 'Output' dropdown menu is also highlighted with a red box and set to 'SMDR Only'. The 'SMDR' section is outlined with a red box and contains the following fields:

- Station Message Detail Recorder Communications**
- IP Address:** 10 . 10 . 9 . 250
- TCP Port:** 9000
- Records to Buffer:** 3000
- ☒ **Call Splitting for Diverts**

At the bottom right, the 'OK' button is highlighted with a red box. Other buttons visible are 'Cancel' and 'Help'.

5.3. Push Configuration to Avaya IP Office

After the configuration is saved it must be pushed to the Avaya IP Office. Select **File→Save Configuration** to push the configuration to Avaya IP Office and wait for the system to update.



6. Configuring Tri-Line TIM Professional

A number of steps are required to configure TIM Professional to interoperate with Avaya IP Office. The TIM Professional Call Logger uses a TCP/IP port to collect SMDR data from the Avaya IP Office. The TIM Professional application is downloaded from the Tri-Line Web Site once the end customer has a registered account. The end customer will also download a template file which matches the PBX type which is required during configuration. It is implied that TIM Professional software is already installed. The configuration operations described in this section can be summarized as follows:

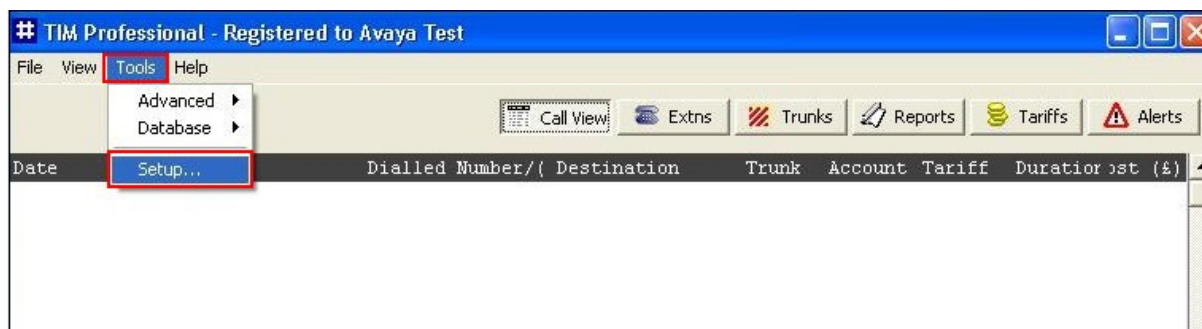
- Downloading Avaya IP Office template.
- Configuring the TIM Professional Call Logger to collect SMDR data from Avaya IP Office.

6.1. Downloading Avaya IP Office template

As part of configuration an Avaya IP Office template is required. This template is used as the **PBX Data Format** in **Section 6.2** Once the end customer has a registered an account with Tri-Line the template is available for download as a ZIP file. Download the Avaya IP Office template ZIP file. During compliance testing the template used was called **Avaya IP Office tdt**. Unzip the template file to the directory **C:\tim\config**.

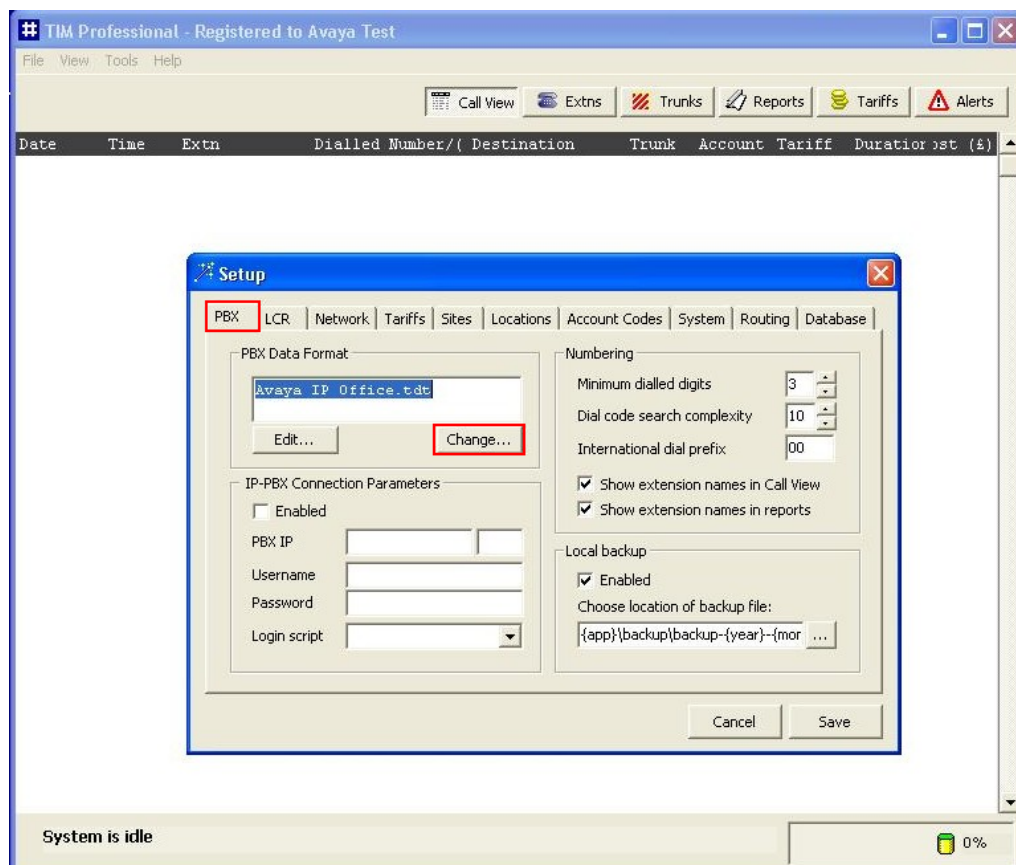
6.2. Configuring TIM Professional Call Logger to Collect SMDR Data from Avaya IP Office

To configure the **TIM Professional Call Logger** to collect SMDR data from the Avaya IP Office, launch the **TIM Professional** application by navigating to **Start → All Programs → Call Logger → TIM Professional**. When the TIM Professional Window opens choose **Tools** from the main menu and select **Setup**.



Once the Setup window opens choose the **PBX** tab, and carry out the following:

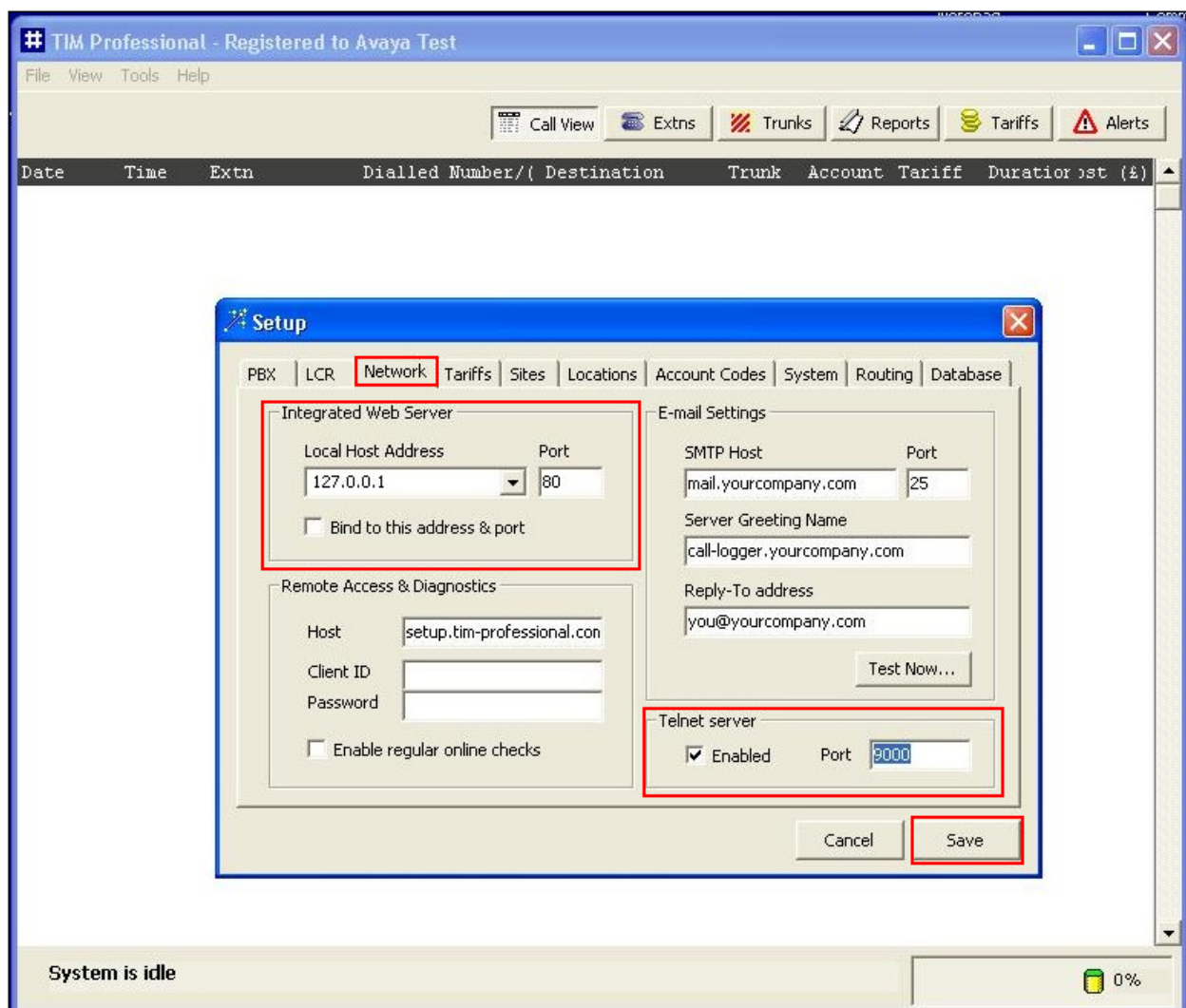
- Click on the **Change** button and browse to **C:\tim\config** and select **Avaya IP Office.tdt**.



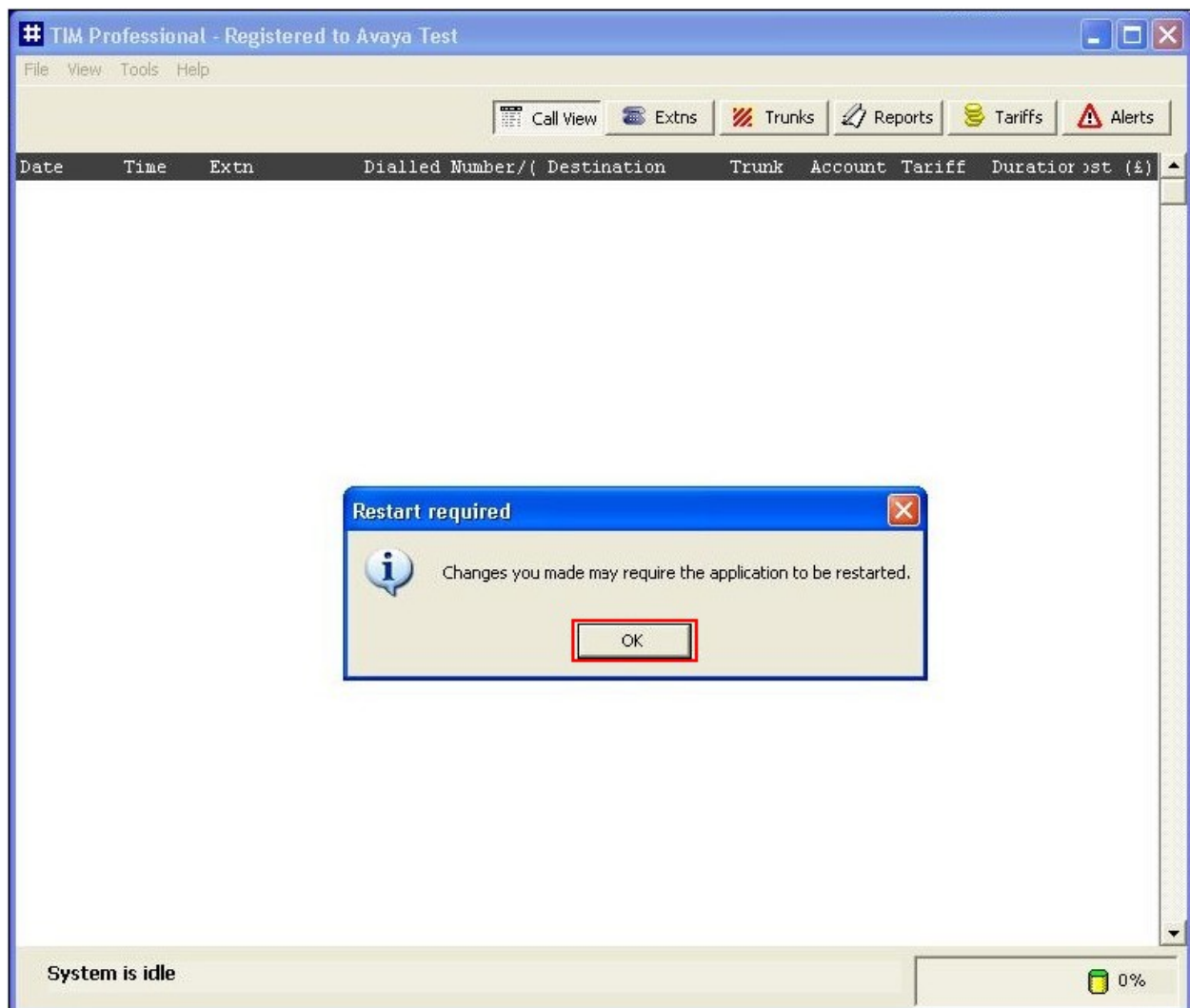
Choose the **Network** tab. The screen shot below shows the settings used during compliance testing. Fill in the following:

- **Integrated Web Server** As the Integrated Web Server is located on the same PC as TIM Professional select the Loop back Address **127.0.0.1** from the **Local Host Address** drop down box, and enter **80** as the **Port number**
- **Telnet Server** Click the **Enable** check box
- **Port Number** Enter **9000**
Note this is the Remote Port as configured in **Section 5.2**.

Click the **Save** button to save the new settings.



Once the Save button is clicked Tim Professional needs to be restarted. Click the **OK** button and restart.

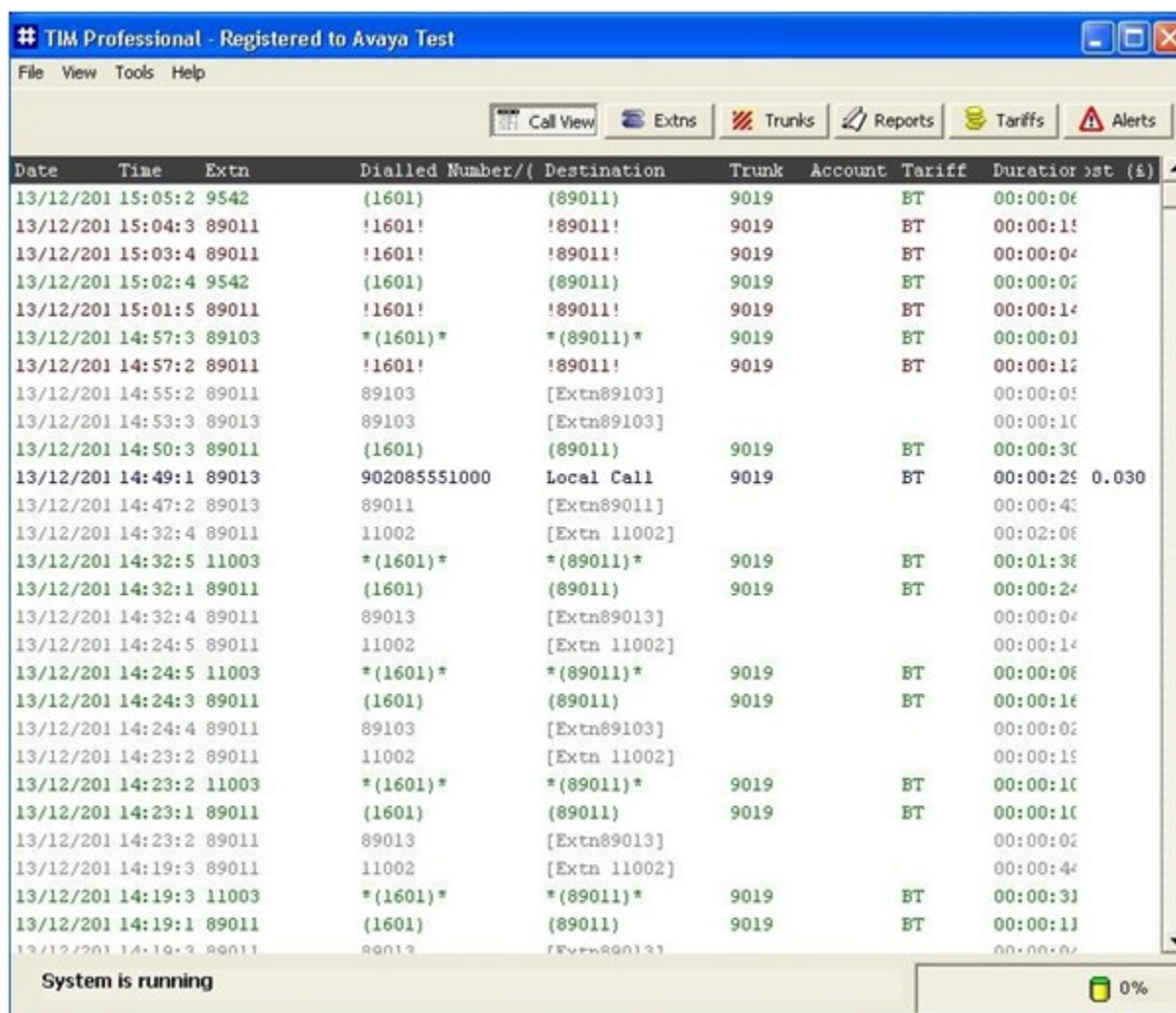


7. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the Avaya IP Office and TIM Professional.

7.1. Verify that Tri-Line TIM Professional Logger Retrieves SMDR Data

To ensure that TIM Professional Logger is retrieving Call Records make some calls on the Avaya IP Office. Verify that something similar to the following is presented.



The screenshot shows the TIM Professional application window titled "TIM Professional - Registered to Avaya Test". The interface includes a menu bar (File, View, Tools, Help) and a toolbar with icons for Call View, Extns, Trunks, Reports, Tariffs, and Alerts. The main area displays a table of call records with the following columns: Date, Time, Extn, Dialed Number/(Destination, Trunk, Account, Tariff, Duration, and Cost (\$). The table contains 30 rows of data, including calls to (89011), (89011)*, and a local call to 902085551000. The status bar at the bottom indicates "System is running" and a progress bar shows 0%.

Date	Time	Extn	Dialed Number/(Destination	Trunk	Account	Tariff	Duration	Cost (\$)
13/12/201	15:05:2	9542	(1601)	(89011)	9019	BT	00:00:06	
13/12/201	15:04:3	89011	!1601!	!89011!	9019	BT	00:00:15	
13/12/201	15:03:4	89011	!1601!	!89011!	9019	BT	00:00:04	
13/12/201	15:02:4	9542	(1601)	(89011)	9019	BT	00:00:02	
13/12/201	15:01:5	89011	!1601!	!89011!	9019	BT	00:00:14	
13/12/201	14:57:3	89103	*(1601)*	*(89011)*	9019	BT	00:00:03	
13/12/201	14:57:2	89011	!1601!	!89011!	9019	BT	00:00:12	
13/12/201	14:55:2	89011	89103	[Extn89103]			00:00:05	
13/12/201	14:53:3	89013	89103	[Extn89103]			00:00:10	
13/12/201	14:50:3	89011	(1601)	(89011)	9019	BT	00:00:30	
13/12/201	14:49:1	89013	902085551000	Local Call	9019	BT	00:00:25	0.030
13/12/201	14:47:2	89013	89011	[Extn89011]			00:00:43	
13/12/201	14:32:4	89011	11002	[Extn 11002]			00:02:06	
13/12/201	14:32:5	11003	*(1601)*	*(89011)*	9019	BT	00:01:36	
13/12/201	14:32:1	89011	(1601)	(89011)	9019	BT	00:00:24	
13/12/201	14:32:4	89011	89013	[Extn89013]			00:00:04	
13/12/201	14:24:5	89011	11002	[Extn 11002]			00:00:14	
13/12/201	14:24:5	11003	*(1601)*	*(89011)*	9019	BT	00:00:06	
13/12/201	14:24:3	89011	(1601)	(89011)	9019	BT	00:00:16	
13/12/201	14:24:4	89011	89103	[Extn89103]			00:00:02	
13/12/201	14:23:2	89011	11002	[Extn 11002]			00:00:15	
13/12/201	14:23:2	11003	*(1601)*	*(89011)*	9019	BT	00:00:10	
13/12/201	14:23:1	89011	(1601)	(89011)	9019	BT	00:00:10	
13/12/201	14:23:2	89011	89013	[Extn89013]			00:00:02	
13/12/201	14:19:3	89011	11002	[Extn 11002]			00:00:44	
13/12/201	14:19:3	11003	*(1601)*	*(89011)*	9019	BT	00:00:33	
13/12/201	14:19:1	89011	(1601)	(89011)	9019	BT	00:00:11	
13/12/201	14:19:3	89011	89013	[Extn89013]			00:00:02	

8. Conclusion

These Application Notes describe the configuration steps required for Avaya IP Office 7.0 to successfully interoperate with Tri-Line TIM Professional 2.181 using a TCP/IP connection. Tri-line TIM Professional 2.181 is considered compliant with the Avaya IP Office 7.0. All of the executed test cases have passed and met the objectives outlined in **Section 2.2**.

9. Additional References

This section references the Avaya and Tri-Line documentation that is relevant to these Application Notes.

Product documentation for Avaya products is available at <http://support.avaya.com>

[1] Avaya IP Office Release 7.0 Manager 9.0, Document No: 15-601011, 17th March 2011

Product Documentation for Tri-Line can be obtained at <http://gateway.tri-line.com/>. Login required.

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