Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Tri-Line's TIM Plus 3.0.0.92 with Avaya IP Office 500v2 9.1 to collect Station Message Detail Reports - Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Avaya IP Office 500v2 9.1 with Tri-Line's TIM Plus 3.0.0.92. The Tri-Line TIM Plus will collect Station Message Detail Reports by listening to a TCP port configured on to the Avaya IP Office

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

Tri-Line's TIM Plus is a call logger which runs as a Windows service and all of its functions, configuration, and call reports are accessible through any standard web browser. Tri-Line's TIM Plus collects Station Message Detail Reports (SMDR) data from the Avaya IP Office by listening for connections on a specific TCP port and it uses a native SQL database for storing and processing data. Tri-Line's TIM Plus provides a web interface which can be used to configure the connection with Avaya IP Office. This web interface also allows the system to be updated for additional Avaya IP Offices and for general maintenance. Users can use this web interface for reporting purposes and access can be restricted by username and password and directory position.

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 is collected by TIM Plus and received in the format as generated by Avaya IP Office. The TIM Plus Call Logger collects SMDR data by listening on a TCP port configured on 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 interoperability compliance testing included feature and serviceability testing. The feature testing evaluated processing of SMDR data obtained from the IP Office via secure port on TCP-IP link. The serviceability testing introduced failure scenarios to see if Tri-Line's TIM Plus could resume after a link failure with IP Office.
The testing included:

- Local internal call handling
- Handling of External Calls
- Call Forwarding
- Transfers – Blind and Supervised
- Conference Calls
- Call Pick Up
- Calls to hunt Groups
- Hold/Release
- Calls to unobtainable numbers
- Handling of calls to and from Avaya Digital, H323and SIP phones

2.2. Test Results

Tests were performed to verify interoperability between the TIM Plus call logger 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's TIM Plus call logger and Avaya IP Office. From the Avaya IP Office, SMDR data is sent to a specified port number for collection and processing.The Tri-Line TIM Plus Call Logger is connected on the same LAN as the Avaya IP Office and will collect SMDR. A variety of Avaya 9600 series H323, 2400 series Digital and SIP soft phones were used to generate intra-switch calls (calls between phones on the same system), and outbound/inbound calls to/from the PSTN.

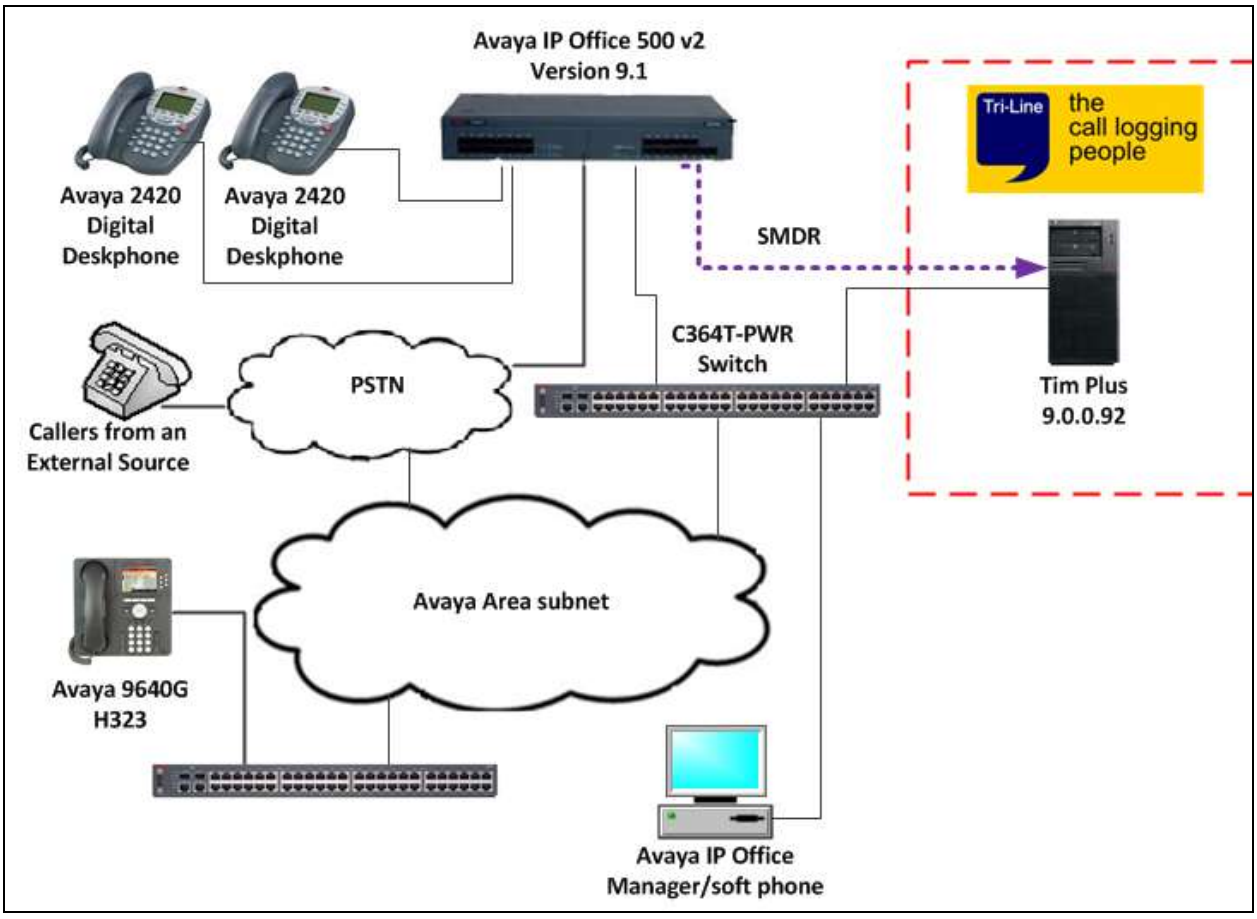


Figure 1: Avaya IP Office and Tri-Line TIM Plus Reference Configuration

4. Equipment and Software Validated

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

Avaya Equipment/Software	**Release/Version**
IP Office 500v2	R9.1.0.437
IP Office Manager	R9.1 Build 437
Avaya one-X® Deskphone Edition for 9600 Series IP Telephones	Release 3.2
Avaya 2420 Digital Telephones	F/W 6
Avaya IP Office softphone	3.2.3.49 68975
Tri-Line Equipment/Software	**Release/Version**
TIM Plus running on a Dell PowerEdge R610 with Windows 2008 R2 (64 Bit)	Version 3.0.0.92

Note: Testing was completed with IP Office 500 V2 R9.1. Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.

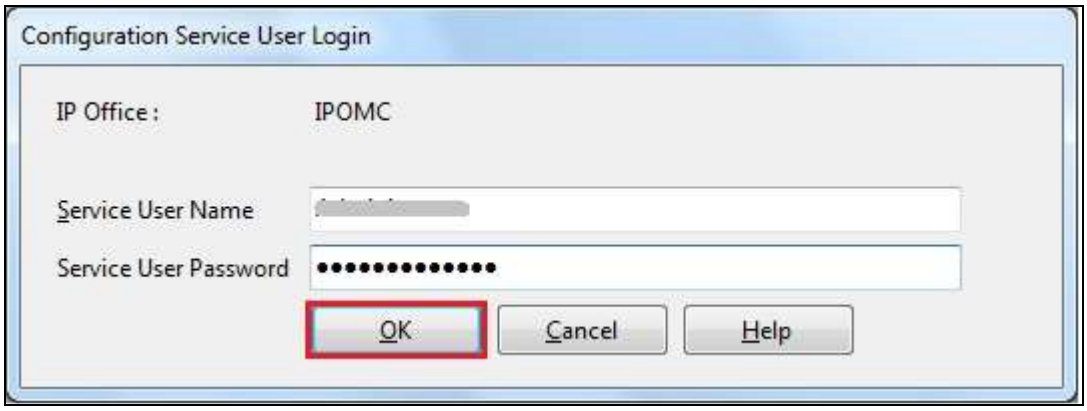
5. Avaya IP Office Configuration

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
- Save Configuration

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.

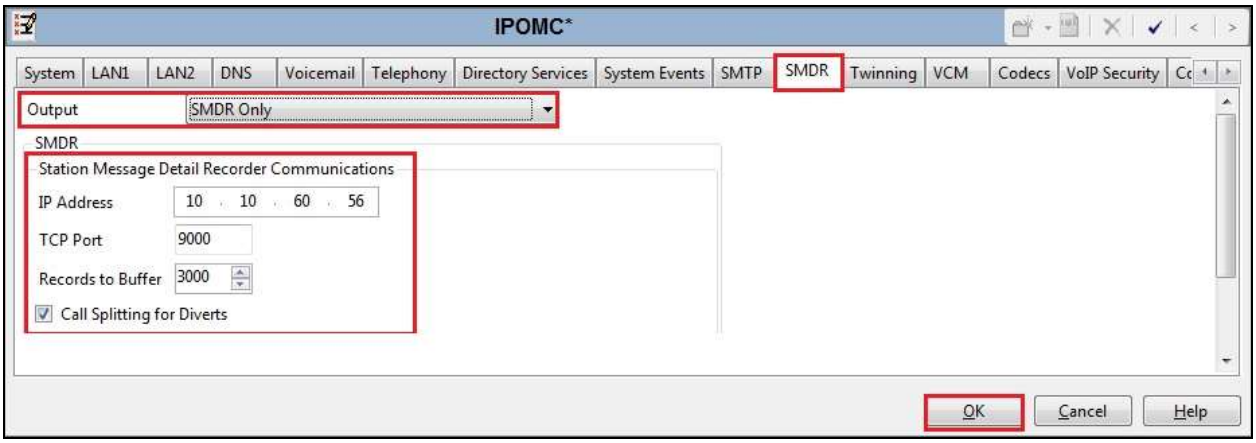


5.2. SMDR configuration

Select **System** (not shown) followed by the **SMDR** tab and enter the following information:

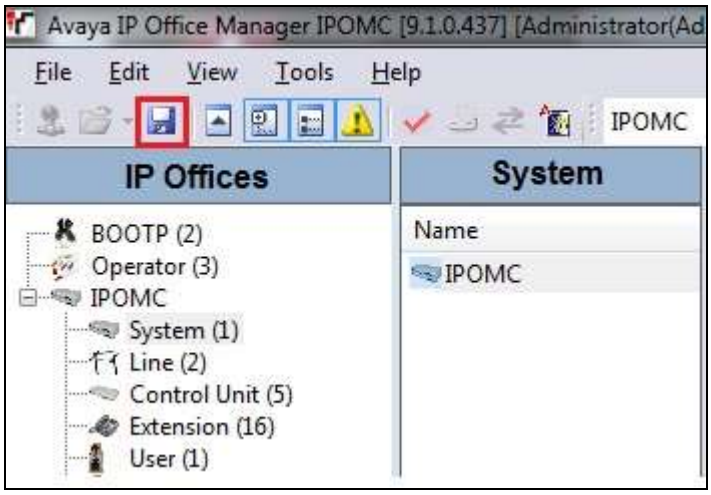
- **Output** Select **SMDR** from the drop box
- **IP Address** Enter the IP Address of the PC TIM Plus is installed
- **TCP Port** Enter **9000**
- **Records to buffer** Enter **3000**. This is maximum available
- Check the **Call Splitting for Diverts** Check box

Click the **OK** button to save.

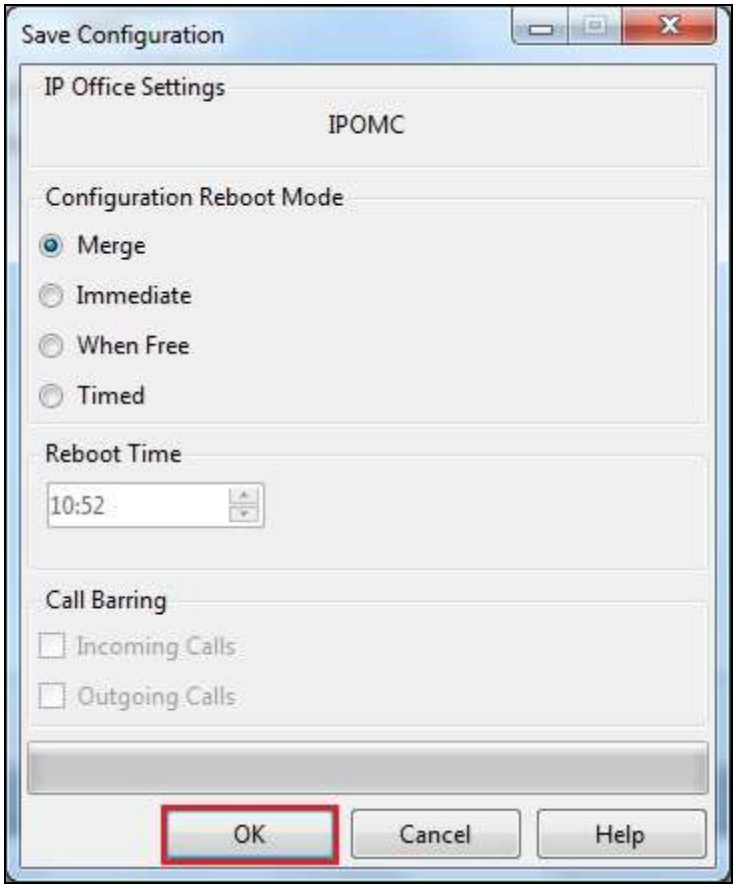


5.3. Save Configuration

Once all the configurations have been made it must be sent to the IP Office. Click on the **Save** Icon as shown below.



Once the **Save Configuration** Window opens, click the **OK** button.



6. Configuring Tri-Line TIM Plus

A number of steps are required to Configure TIM Plus to interoperate with Avaya IP Office. The TIM Plus Call Logger uses a TCP port to collect CDR data from Avaya IP Office. The TIM Plus 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.
The configuration of the TIM Plus is achieved during the initial installation. An installation wizard is used whereby certain steps require specific information relating to the TIM Plus configuration. The configuration operations described in this section can be summarized as follows:

- Downloading Avaya IP Office template
- Configure Site information
- Create an administrator account
- Logging into TIM Plus Call logger
- Access to TIM Plus

6.1. Downloading Avaya IP Office template

As part of configuration an Avaya IP Office template is required. This template is now included as standard with the installation package. During compliance testing the template used was called **Avaya IP Office 6+.tdt**.

6.2. Configure Site information

Once the TIM Plus application is downloaded start the installation wizard. Follow the wizard steps until step 5. The **PBX model** used is a template which was downloaded as described in **Section 6.1**. The following information is required for the initial site setup:

- **Site name** Enter an informative name, i.e. **Test Site**
- **PBX model** Choose **Avaya IP Office** from the dropdown box.
- **Method** Choose **Listen for connection from PBX** from the dropdown box.
- **Port** Enter **9000** (Note this is the Remote Port as configured in **Section 5.1)**

Click on the **Next** button to continue

6.3. Create an administrator account

Once the wizard has progressed to step 8 an administrator account must be created. This account allows web users to log into the TIM Plus Call Logger. The following information is required to create the administrator account:

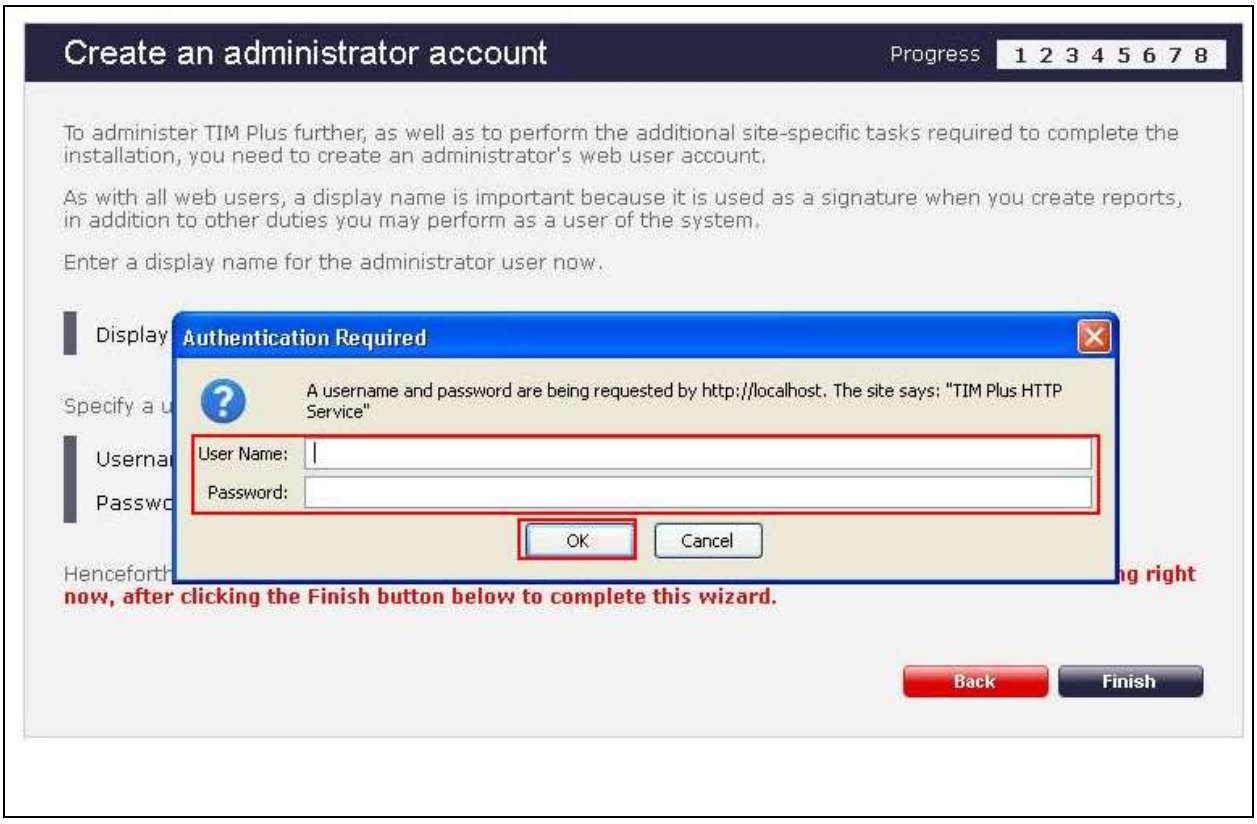
- **Display name** Enter an informative name, i.e. **Tri-Line support**
- **User Name** Enter a User name, i.e. **admin**
- **Password** Enter a password

Click on the **Finish** button to continue.

6.4. Logging into the Tri-Line TIM Plus Call Logger

Once the administrator account is created the user is prompted to log in. Log into the TIM Plus Call logger by entering the **User Name** and **Password** as created in **Section 6.3**.

Click the **OK** button to log in.



6.5. Access to Tri-Line TIM Plus

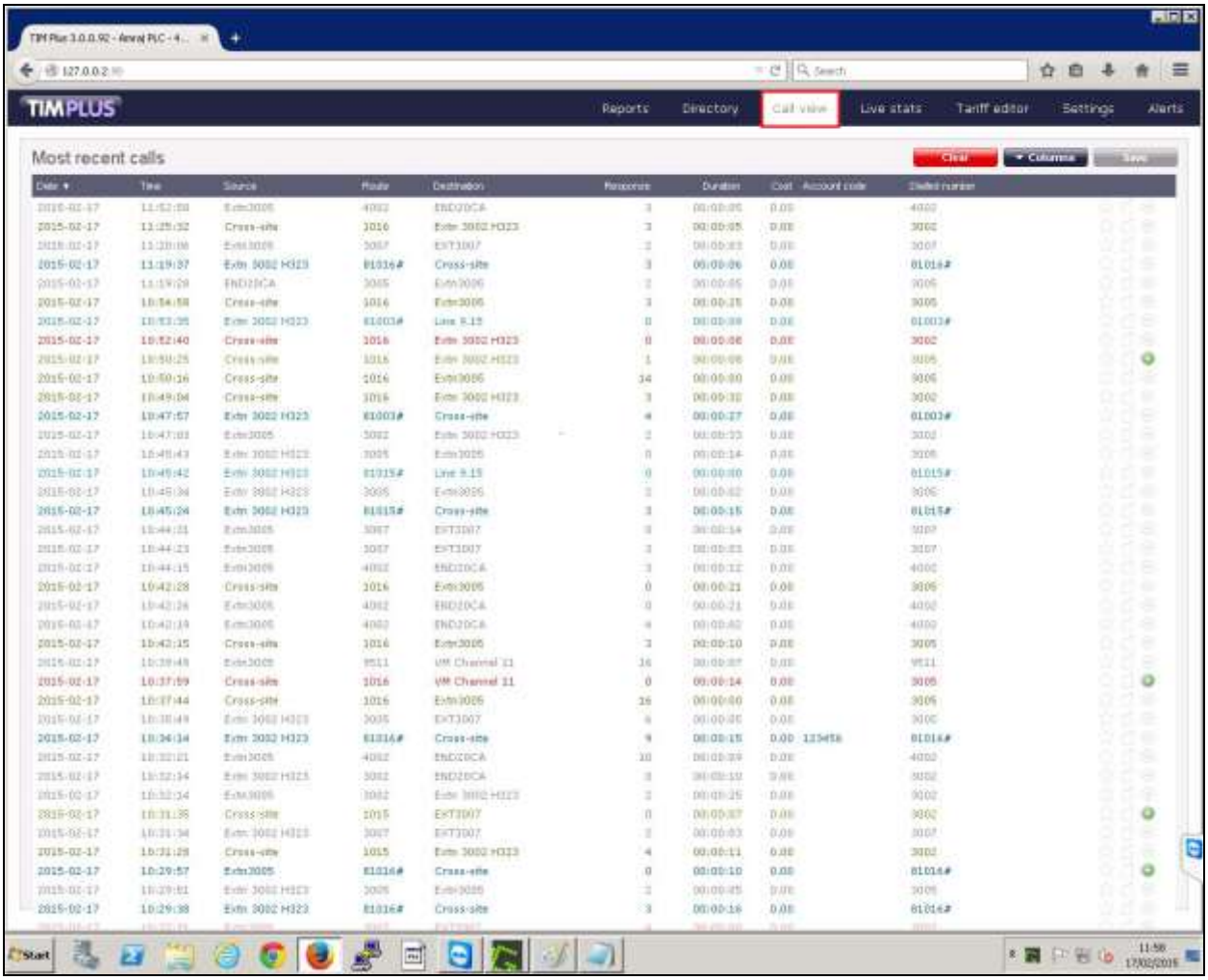
During compliance testing access to TIM Plus was via a web browser on the same PC as the TIM Plus service was installed. The loopback address **http://127.0.0.1**was used.
Note: The **User Name** and **Password** as created in **Section 6.4** is required for log in.

7. Verification Steps

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

7.1. Verify that Tri-Line TIM Plus Call Logger retrieves SMDR data

To ensure that TIM Plus Call Logger is retrieving SMDR data make some calls on the Avaya IP Office. Log in using the procedure in **Section 6.5** and click on the **Call View** tab to verify that something similar to the following is presented.



8. Conclusion

These Application Notes describe the configuration steps required for Tri-Line's TIM Plus 3.0.0.92 to successfully interoperate with Avaya IP Office using a TCP connection. Tri-line's TIM Plus 3.0.0.92 is considered compliant with the Avaya IP Office 500v2 9.1. All of the executed test cases have passed and met all objectives.

9. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from http://support.avaya.com or from your Avaya representative.

[1] Administering Avaya IP Office™ Platform with Manager Release 9.1 10.01 December 2014

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

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at *devconnect@avaya.com*.