



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

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# **Application Notes for Configuring Oak Telecom reportX with Avaya IP Office R9.1 - Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps for configuring reportX from Oak Telecom with Avaya IP Office R9.1. reportX integrates with Avaya IP Office using the SMDR link to collect call records.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the 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

These Application Notes describe the configuration steps for Oak Telecom reportX and Avaya IP Office 500 V2 as a standalone server, focusing on verifying that Station Message Detail Records (SMDR) records are being sent to reportX via the SMDR link on IP Office. reportX call logging server processes SMDRs and generates reports on calls. reportX calculates the cost of a call based on the duration, origin, and destination.

## 2. General Test Approach and Test Results

This section describes the compliance testing used to verify interoperability of reportX with IP Office and covers the general test approach and the test results. Calls were made to and from the IP Office both internally and to a simulated PSTN. Various Avaya endpoints were registered to IP Office and calls were made to and from these Avaya endpoints in order to generate SMDR records. Using the SMDR link on IP Office, reportX was able to compile a list of call records and present them using a client application.

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 evaluates the ability of reportX to carry out SMDR collection and reporting under a variety of call handling scenarios. Execution of call scenarios and verification of correct call data was performed manually and the results compared against reports generated via the reportX client application. These included:

**Integration:** determine whether reportX works as documented by Oak Telecom in the test plan without negative impact to the Avaya Solution.

**Functionality:** determine the ability of reportX to function as documented by Oak Telecom.

**Stability:** Determine the ability reportX to continue to function during the complete established test audit session and over its full range of use, without failing or causing negative impact to the Avaya Solution.

**Main test areas included:**

- Making calls to and from Avaya IP H323, SIP and Digital phones.
- Making incoming calls over PRI and SIP trunks.
- Making calls for Call Forwarding on Busy or No Answer.
- Making calls for Transfers – Blind and Supervised.
- Making Calls using Call Park and Call Pick Up.
- Utilizing Account Codes.
- Accounting for Daylight Savings.
- Simulate failure and recovery to ensure recovery following LAN or Serial connection interrupts.

**2.2 Test Results**

All functionality and serviceability test cases were completed successfully with the following observations noted.

1. When a call is transferred into IP Office over a PRI QSIG trunk the call is seen as an outgoing call not an incoming call. This is only the case for incoming call from a transfer over a QSIG trunk; over a SIP trunk the call is shown correctly. A ticket has been raised with the Avaya IP Office team to investigate this.
2. For call records of any calls to busy or unobtainable numbers, a variable on the reportX server must be set to allow reporting on zero duration calls.
3. Calls from an internal extension to a hunt group produces 3 records but the record to ext 5299 (hunt group) shows duration of 1 second and not the correct duration. This is because the reportX reports this as an internal call to the end station and not to the hunt group number.

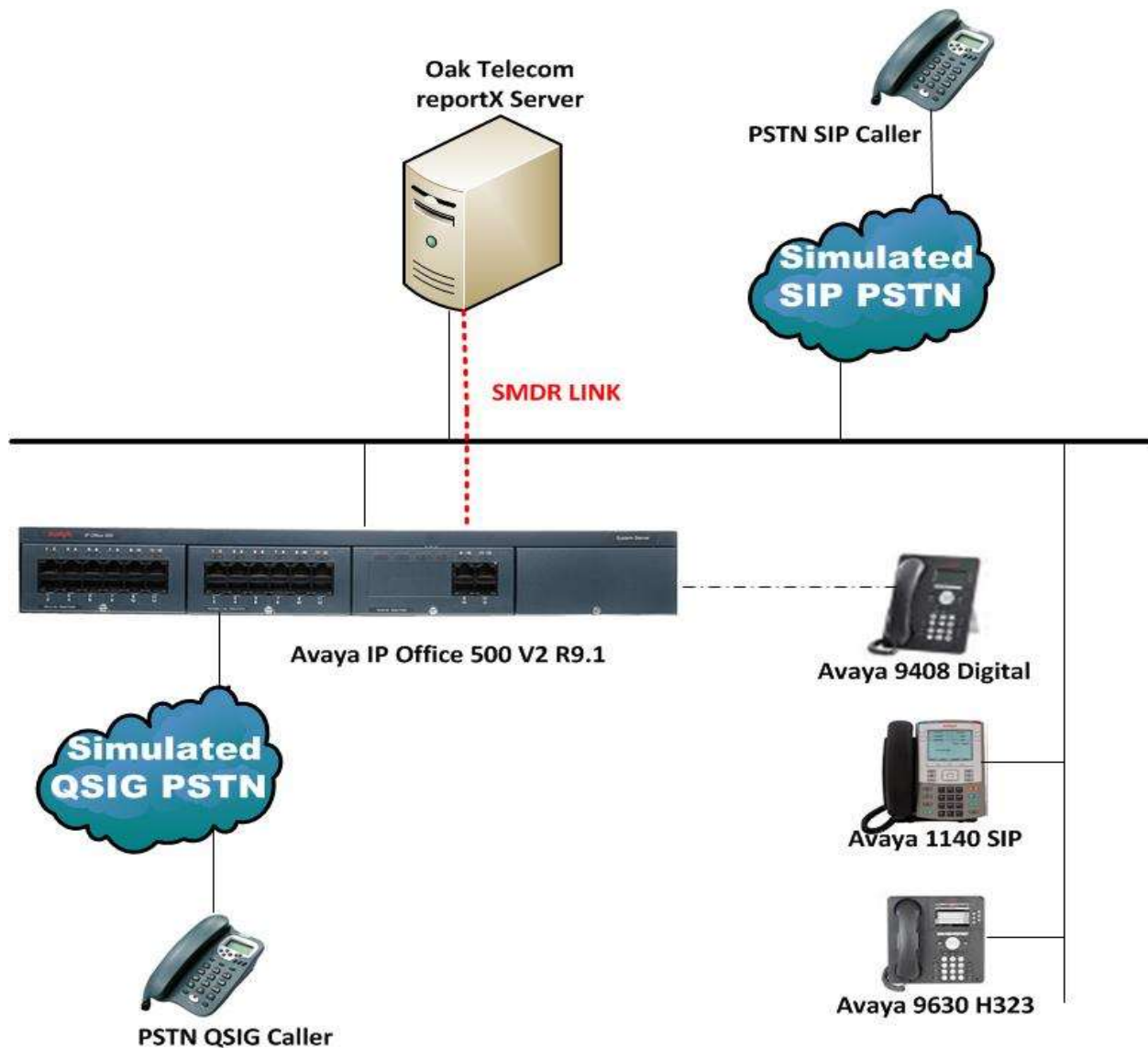
**2.3 Support**

Technical support can be obtained for reportX from the website <http://help.oak.co.uk> or from the following.

Oak Telecom  
Unit 7 Albany Park,  
Cabot Lane, Poole,  
Dorset BH17 8BX  
United Kingdom  
Tel: +441202607000

### 3. Reference Configuration

The configuration in **Figure 1** is used to compliance test Oak Telecom reportX with Avaya IP Office 500 V2. The connection between the reportX and the IP Office is via a SMDR link.



**Figure 1: Connection of reportX from Oak Telecom with Avaya IP Office 500 V2 R9.1**

## 4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya IP Office 500 V2	R9.1.0.437
Avaya IP Office Manager	R9.1.0.437
Avaya 9630 Deskphone	96xx H.323 Release 6.4014U
Avaya 1140e SIP	R 04.03.12.00
Avaya 9408 Digital	Version 2
Oak Telecom reportX running on a Windows 2012 virtual server	Version 10.2.0.0

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.

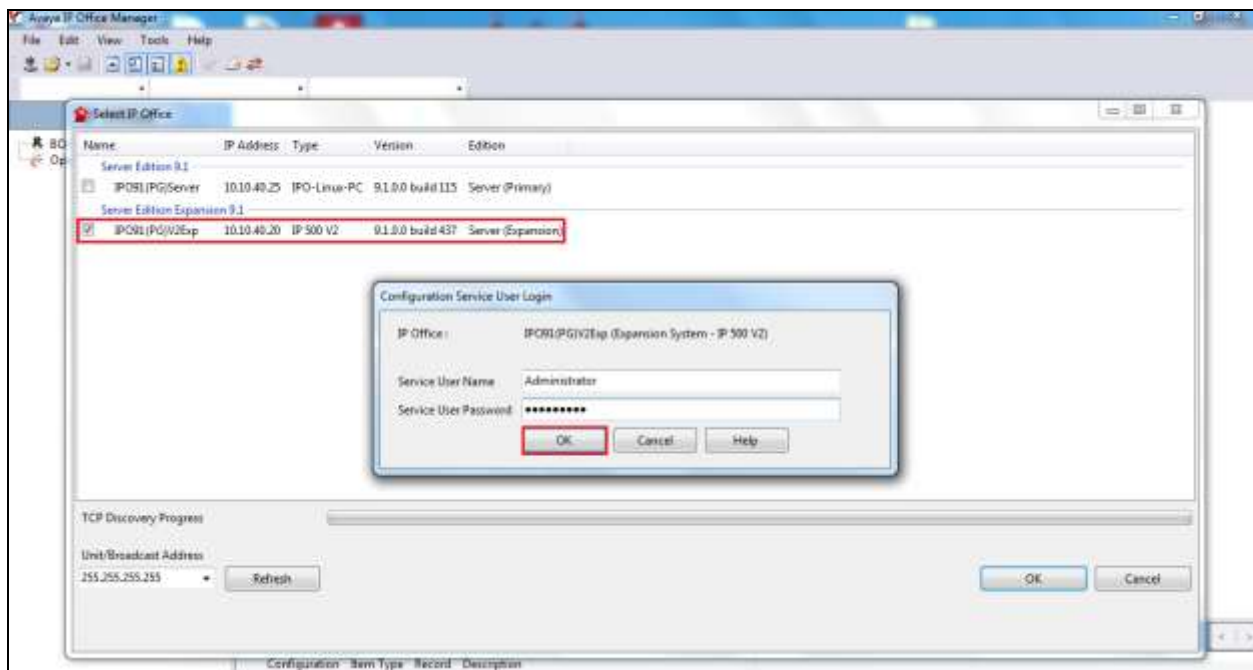
## 5. Configuration of Avaya IP Office

Configuration and verification operations on the 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 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 10**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager.
- Configure SMDR.
- Configure Account Codes.
- 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 (not shown). Tick the required server to log in to, this will be the IP Office 500 V2 then log in using the appropriate credentials to receive the configuration.

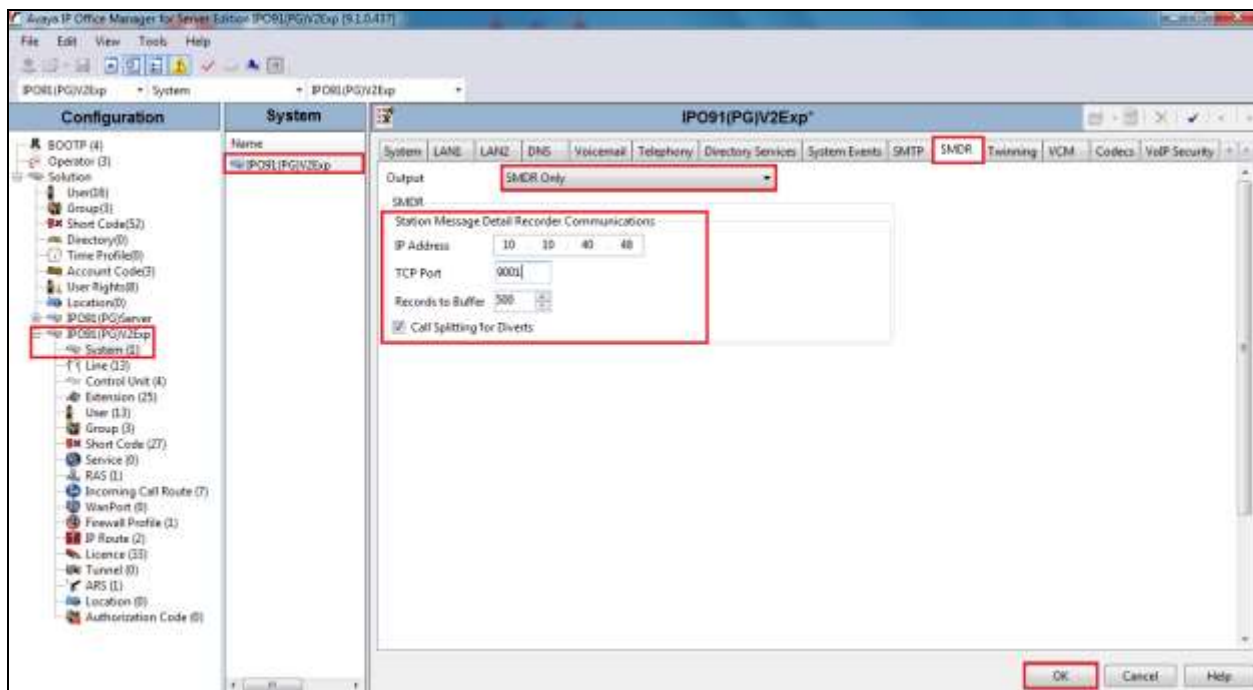


## 5.2 Configure SMDR

The SMDR settings must be administered on IP Office in order to define the destination of the SMDR output. In the left pane of the Manager application click **System** and click on the IP Office system (**IPO91(PG)V2Exp**). In the main window click on the **SMDR** tab and configure as follows:

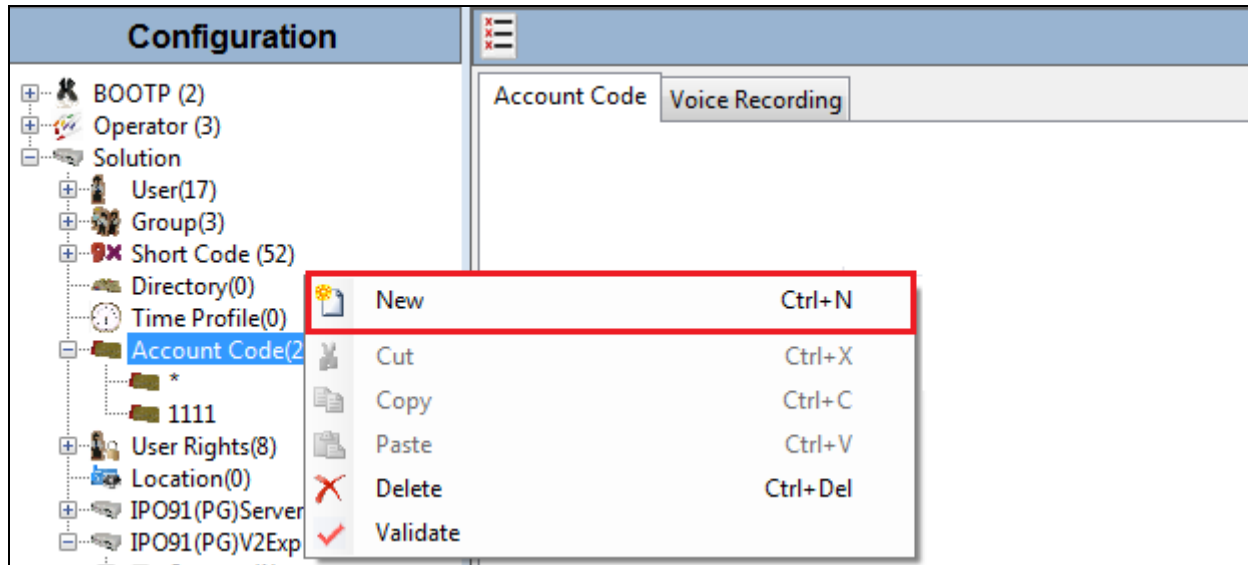
- **Output** – select **SMDR Only** from the drop down list.
- **IP Address** – enter the IP address assigned to reportX, in this case **10.10.40.48**.
- **TCP Port** – enter the port used by reportX for the SMDR connection, in this case **9001**.

Click on **OK**.

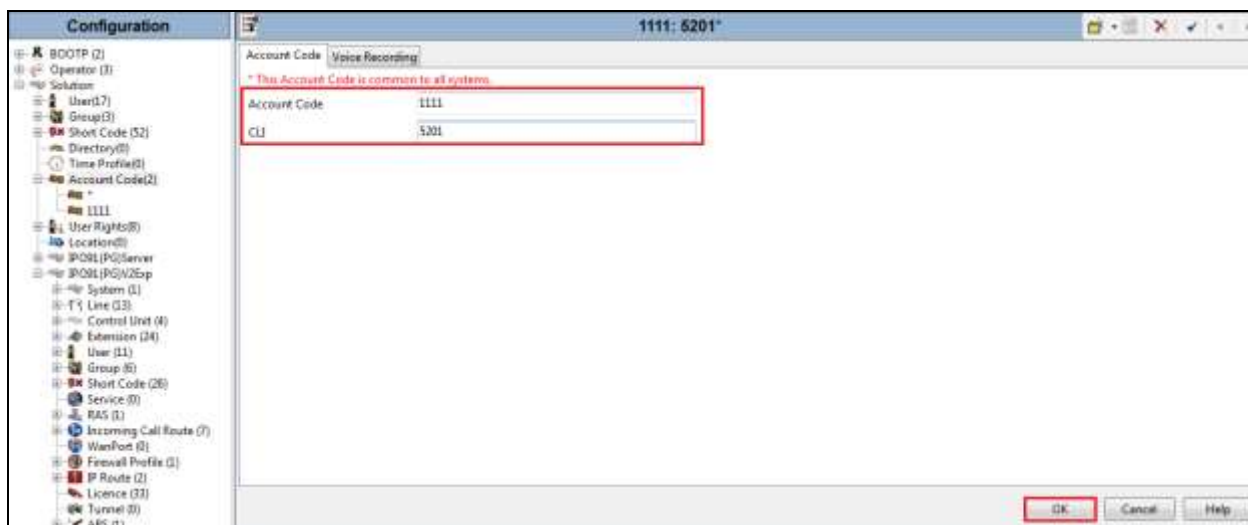


## 5.3 Configure Account Codes

To add a new account code, right click on **Account Code** in the left window and select **New** as shown below.

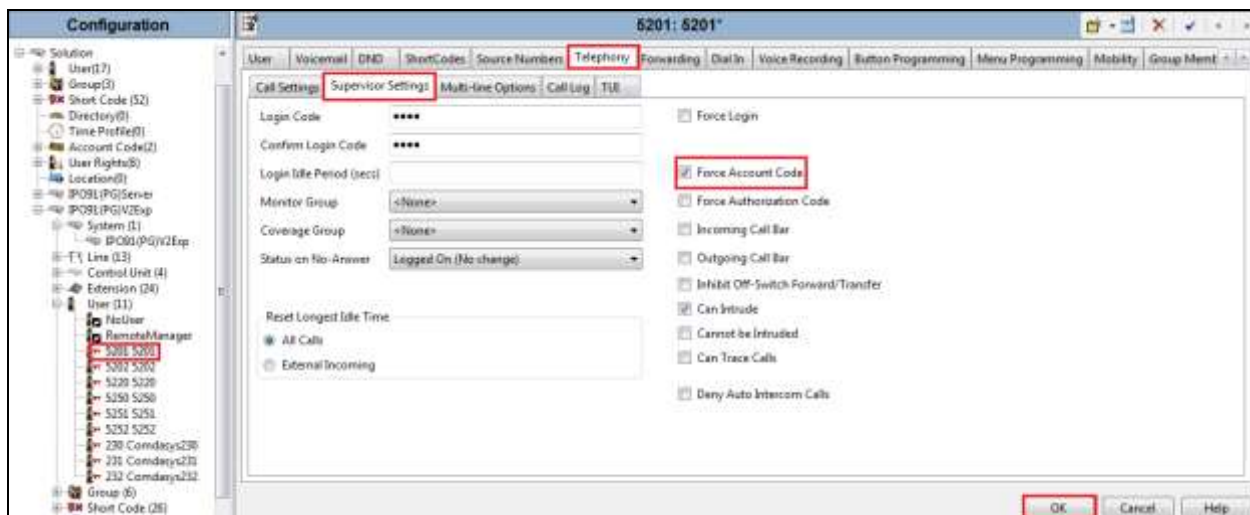


Enter the **Account Code** number and the **CLI** of the phoneset that is it to be applied to. Click on **OK**.



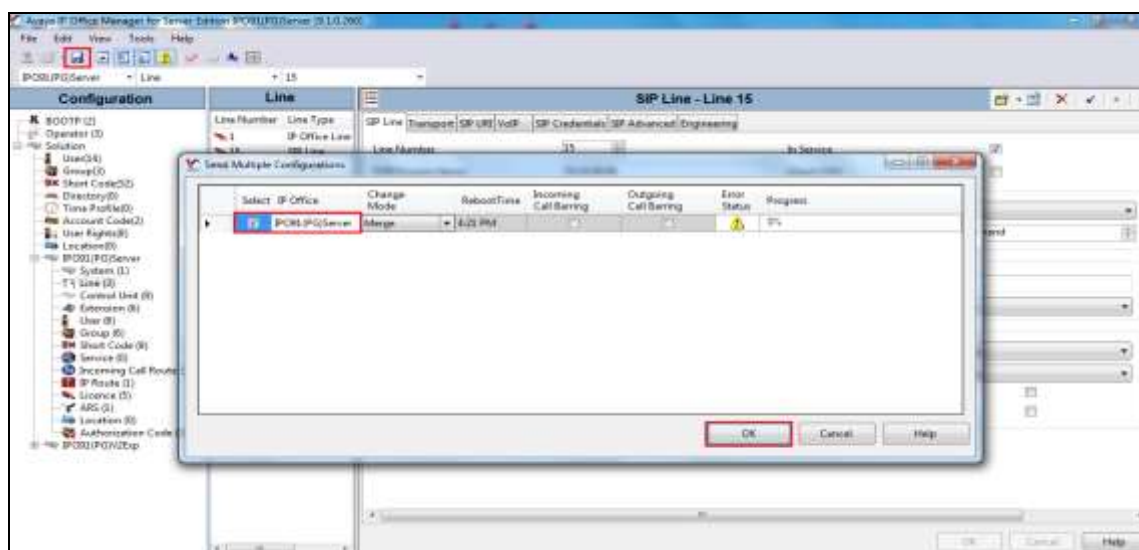


To ensure that the account code is used tick the **Force Account Code** box by selecting the required user in the left window and navigating to **Telephony** → **Supervisor Settings** in the main window.



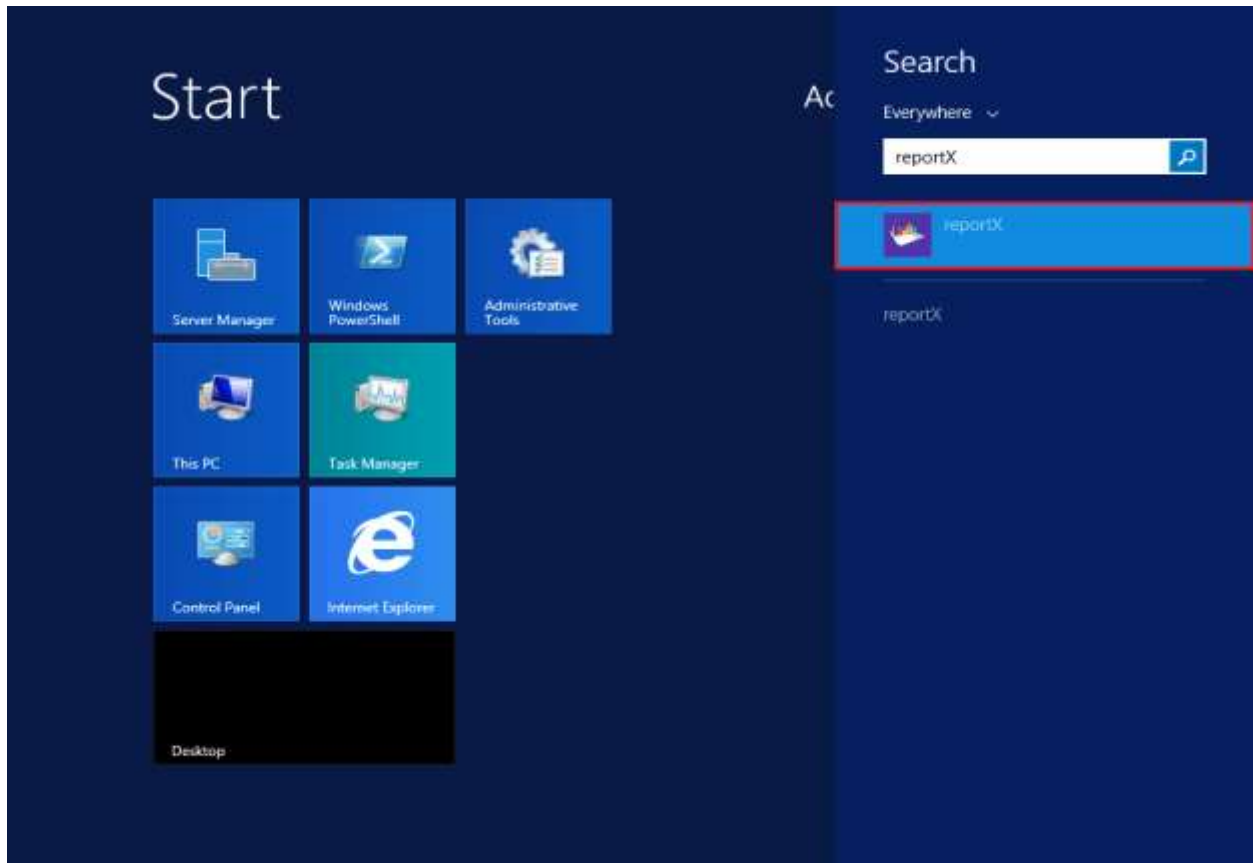
## 5.4 Save Configuration

Once the configuration has been made it must be sent to the IP Office. Click on the **Save** Icon at the top left of the screen as shown below. Once the **Save Configuration** window opens, either the **Merge** or **Immediate** button will be filled in depending on the changes that are made. Click on the **OK** button.



## 6. Configuration of Oak Telecom reportX

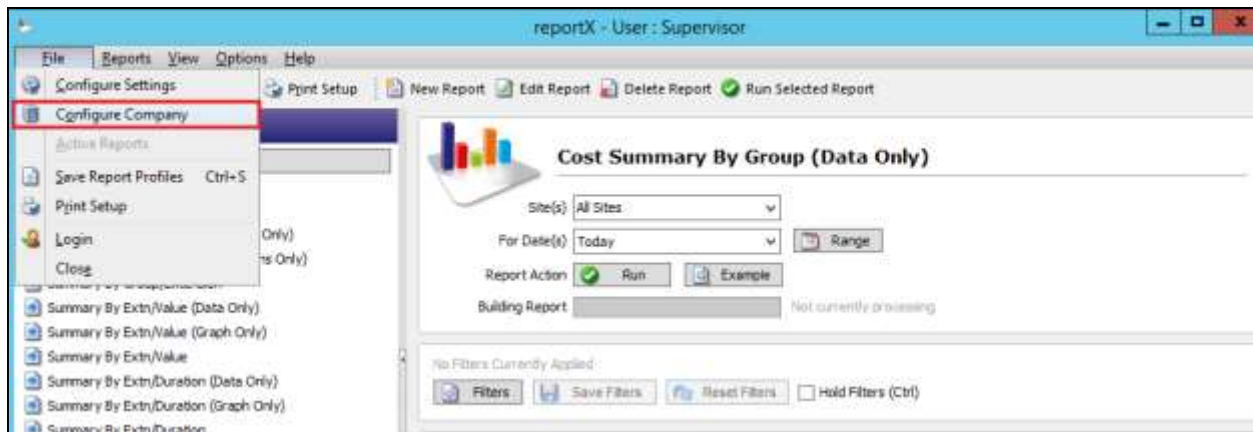
reportX is installed on Windows 2012 Server. From the server, open the reportX application to configure the connection from IP Office. Simply hit the windows key and type in **report**; this will bring up the reportX application as shown below. Click on the application to open it.



The following log in screen will be shown, enter the proper credentials and click on **Login**.

A screenshot of the reportX login screen. The window has a title bar with a close button (X). The text 'Please enter your login details:' is at the top. Below it, there are two input fields: 'Username:' with a dropdown menu showing 'Supervisor' and 'Password:' with a masked password '\*\*\*'. At the bottom right, there is a blue 'Login' button.

The reportX application is opened and the following screen appears. Click on **File → Configure Company** as shown below.



This will enter the **CSX Setup** and will again evoke the necessity to enter the credentials. Enter the same credentials and press **Login**.



Click on **Telephone System** in the left window and click on **Add Item** in the main window.

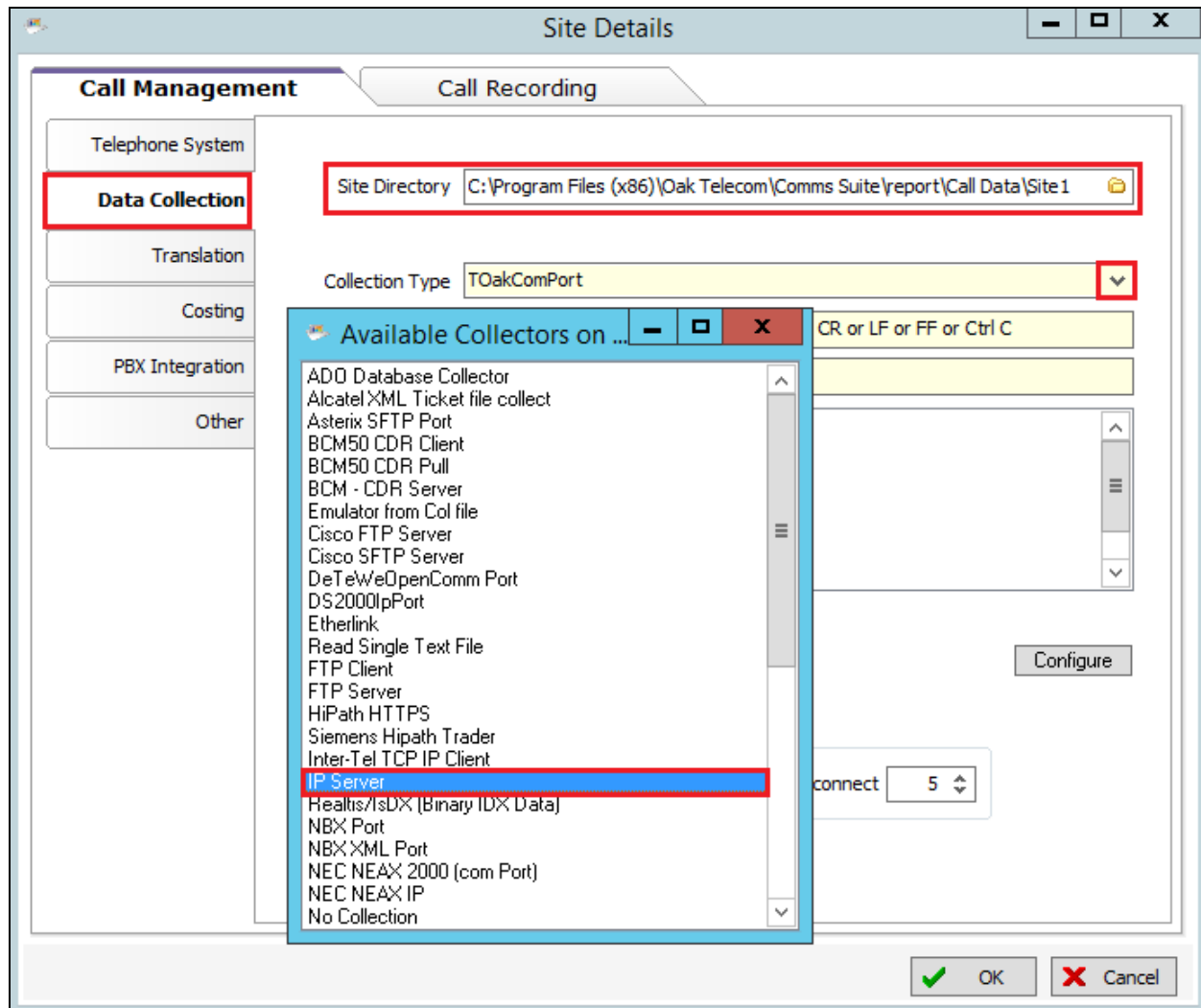


The **Site Details** window is opened. There are two tabs present, **Call Management** and **Call Recording**. For reportX the Call Management Tab is chosen and within this tab there are a number of other tabs along the left of the Site Details window. Click on the **Telephone System** tab and enter the details for the site such as a suitable **Name**, **Site No**, and **Area Code**.

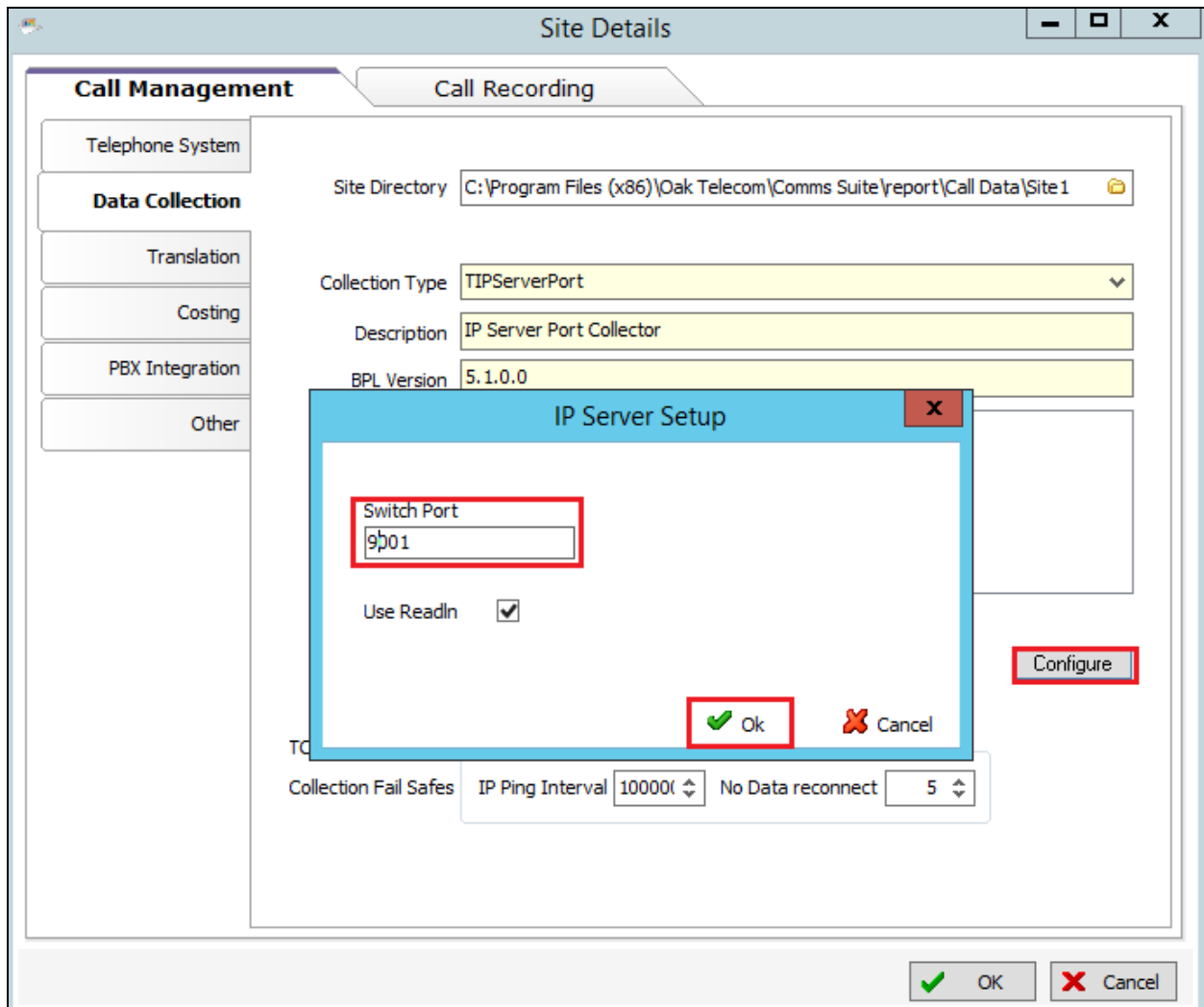
The screenshot shows the 'Site Details' window with the 'Call Management' tab selected. The 'Telephone System' sub-tab is highlighted. The form fields are as follows:

Field	Value
Site No	1
Short Name	DevC
Name	AvayaDevConnect
Area Code	0
National	<input type="radio"/>

Click on the **Data Collection** tab on the left side of the window. The **Site Directory** should already be populated but if not enter the location of the folder where the SMDR data will be kept. Click on the drop down menu for **Collection Type** and select **IP Server** from the **Available Collectors**.



Click on **Configure**, this will bring up the **IP Server Setup** window as shown below. Enter the **Switch Port** number; this will be the same port configured in **Section 5.2**. Click on **Ok**.



Select the **Translation** tab from the left side. Enter the device information as shown below for the connection to Avaya IP Office.

The screenshot shows a web application window titled "Site Details". It has two tabs: "Call Management" (active) and "Call Recording". Under "Call Management", there is a sidebar with several options: "Telephone System", "Data Collection", "Translation" (highlighted with a red box), "Costing", "PBX Integration", and "Other". The main content area is for the "Translation" tab. It contains a form with the following fields:

- Manufacturer:** A dropdown menu with "AVAYA" selected.
- Device:** A dropdown menu with "IP 500" selected.
- Translator (VCE):** A dropdown menu with "AVAYA IPOFFICE ENHANCED (IP)" selected.
- Translator Authors comments:** A large text area containing the text "No Description provided".

Below the text area is a button labeled "Refresh VCE Library". At the bottom right of the window are two buttons: "OK" (with a green checkmark icon) and "Cancel" (with a red X icon).

Select the **Costing** tab from the left side. The **Tariff Library** should already be populated and the **Default Tariff** and **Default Currency** will depend on the country where this application is installed and running. All other tabs can be left as default so click on **OK** at the bottom of the screen to submit these changes.

The screenshot shows a window titled "Site Details" with a blue header bar. Inside, there are two tabs: "Call Management" and "Call Recording". Under "Call Management", there is a vertical list of sub-tabs: "Telephone System", "Data Collection", "Translation", "Costing" (highlighted with a red box), "PBX Integration", and "Other". The "Costing" sub-tab is active, showing three configuration fields: "Tariff Library" with a text box containing "C:\Program Files (x86)\Oak Telecom\Common Files\Costing Libraries" and a folder icon; "Default Tariff" with a dropdown menu showing "BT Basic Rate"; and "Default Currency" with a dropdown menu showing "GBP". At the bottom right of the window, there are two buttons: "OK" (with a green checkmark icon) and "Cancel" (with a red X icon). Both buttons are highlighted with red boxes.

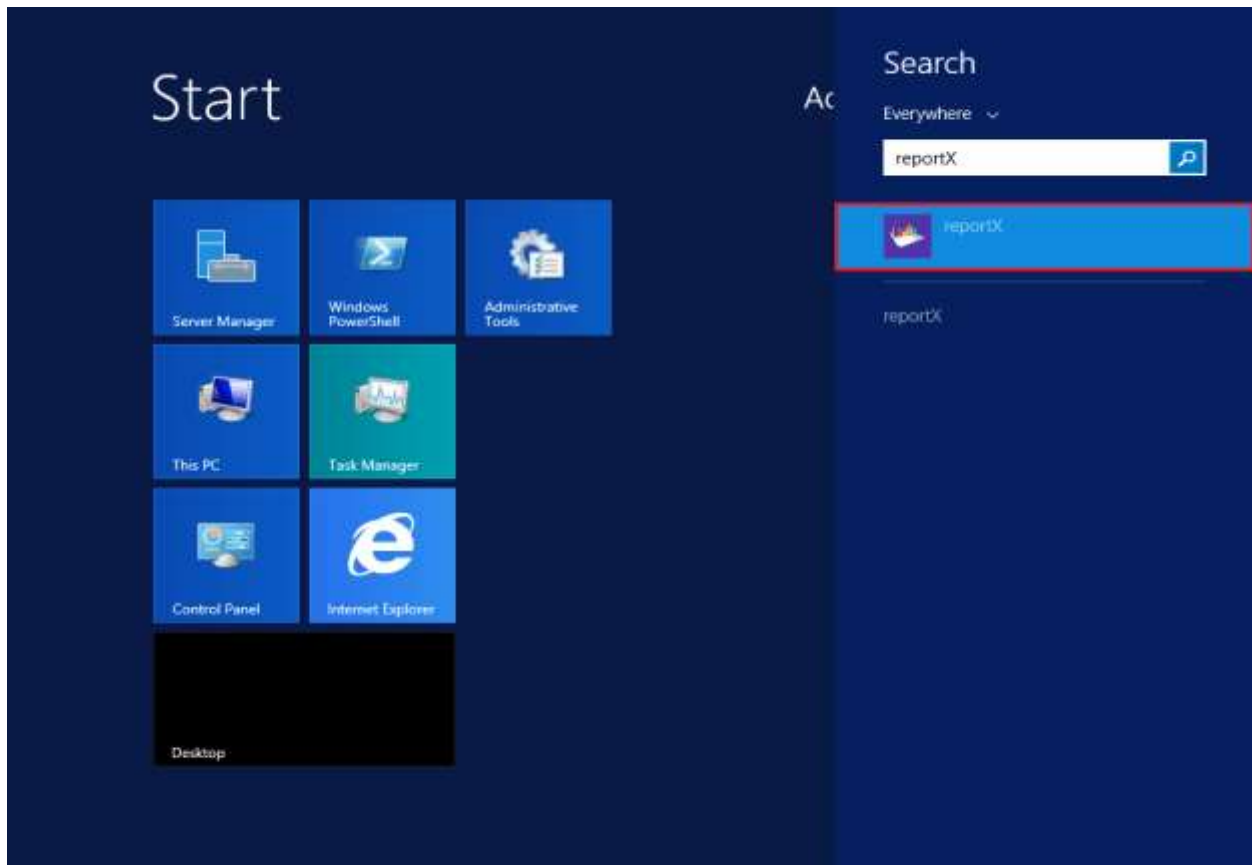


## 7. Verification Steps

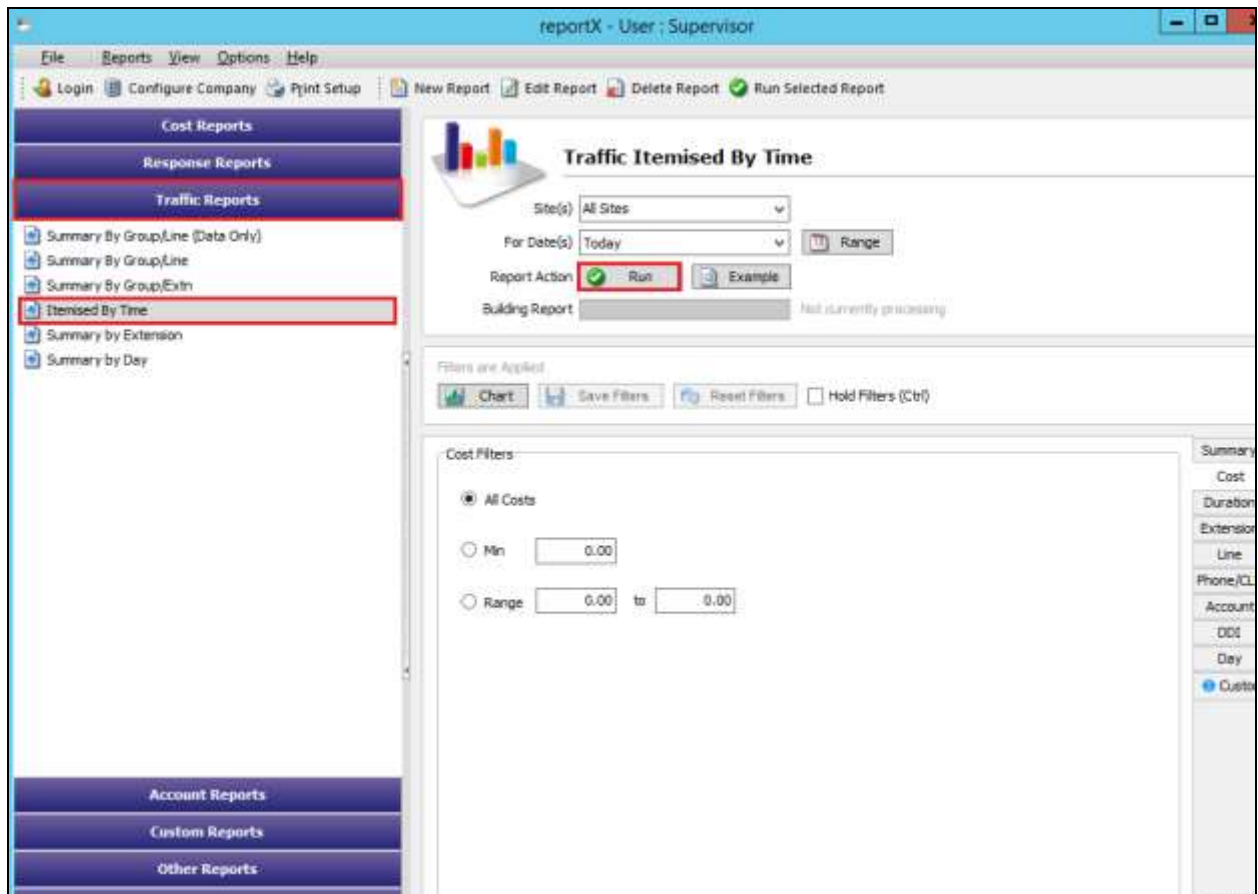
This section illustrates the steps necessary to verify that the reportX is configured correctly to collect CDR data from IP Office using the SMDR link.

### 7.1 Verify Oak Telecom reportX

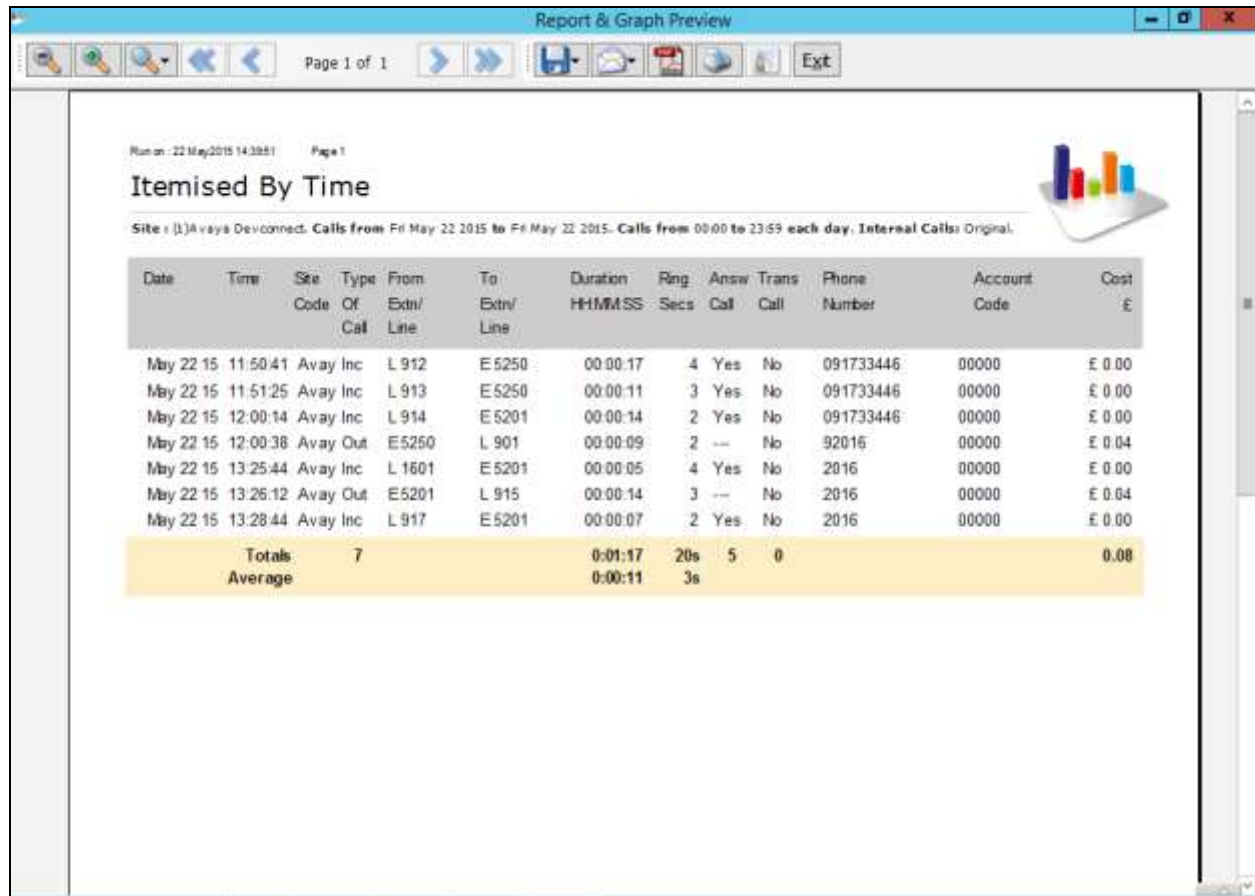
From the reportX server, open the reportX application. Simply type in **reportX** from the server and this will bring up the reportX application as shown below. Click on the application to open it.



Select **Traffic Reports** on the left side of the **reportX** window. These reports offer the best overall high level view of the IP Office call records. Within the **Traffic Reports** tab click on **Itemised By Time**. This will bring up the main window as shown below, where the report can be run. To run a report of the current day, ensure that **Today** is selected from the **For Dates(s)** menu, and then click on **Run**.



The following report is generated showing all the calls for that day.



## 8. Conclusion

These Application Notes describe the configuration steps required for reportX from Oak Telecom to interoperate with Avaya IP Office 500 V2. All feature functionality and serviceability test cases were completed successfully with any issues and observations noted in **Section 2.2**.

## 9. Additional References

This section references the Avaya and Oak Telecom product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at <http://support.avaya.com>

[1] *Avaya IP Office R9.1 Manager 10.1, Document Number 15-601011*

[2] *Avaya IP Office R9.1 Doc library*

Technical support or product documentation can be obtained for reportX from the website <http://help.oak.co.uk> or from the following.

Oak Telecom  
Unit 7 Albany Park,  
Cabot Lane, Poole,  
Dorset BH17 &BX  
United Kingdom  
Tel: +441202607000

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