Avaya Solution & Interoperability Test Lab

Application Notes for Oak Telecom aiOffice with Avaya IP Office and Avaya IP Office Delta Server - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Oak Telecom aiOffice call management software to successfully interoperate with Avaya IP Office Delta Server.

aiOffice is a call management and reporting software package designed to report on the phone activity of a business. aiOffice works with the Station Message Detail Reporting (SMDR) records outputted by Avaya IP Office Delta Server. aiOffice collects, stores and processes these SMDR records to provide usage analysis, call costing and billing capabilities. During compliance testing, aiOffice was shown to successfully collect and process SMDR records for all call scenarios tested, including outbound trunk calls, inbound trunk calls and intra-switch calls.

Information in these Application Notes has been obtained through interoperability compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for the aiOffice 1.3.13 call management software to successfully interoperate with Avaya IP Office Delta Server 5.0.

The IP Office Delta Server is Windows PC application designed to receive call handling and call event information from IP Office. Station Messaging Detail Reporting (SMDR) records are detailed call records output by the IP Office to the Delta Server each time a call is finished, transferred, etc. The Delta Server can then store and share that information with other applications. The Avaya IP Office Delta Server can be configured to send the SMDR records it receives from the Avaya IP Office to a number of destinations via an SMDR log file, using IP polling or sending to a specified IP address and port. The required destination depends on which methods of data transfer are supported by the third-party call accounting application being used. For this solution, the Delta Server is configured to write SMDR records to an SMDR log file. One Delta Server is supported for each IP Office. aiOffice collects, stores and processes these SMDR records to provide usage analysis, call costing and billing capabilities.

aiOffice is comprised of AIOSetup, AIOffice, AIOCommsServer, AIOConvert, OakWeb and ActiveReports. **AIOSetup** is used to configure the connection to the Avaya IP Office. **AIOCommsServer** is responsible for collecting SMDR with this information being processed by **AIOConvert** for later retrieval. Historical reports can then be run from the Win32 client application **AIOffice** which is also responsible for report scheduling. **ActiveReports** presents live information enabling live trend analysis. Finally **OakWeb** combines the features of AIOSetup and AIOffice into a web environment which clients can access through browsers.

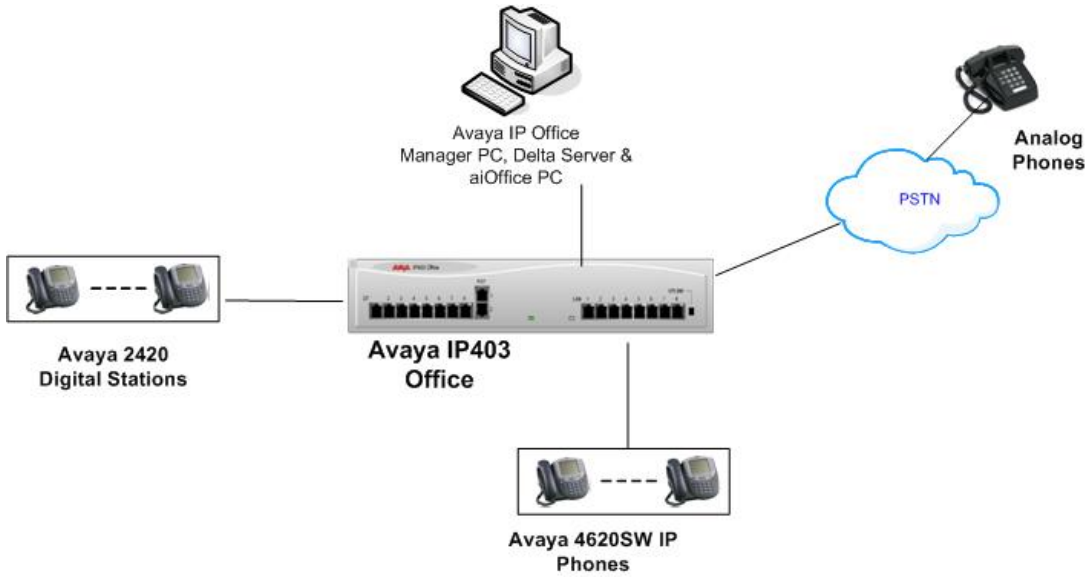


Figure 1: Avaya IP Office and aiOffice Compliance Test Configuration

2. Equipment and Software Validated

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

Equipment	Software
Avaya IP 403 Office System	3.1(45)
Avaya IP Office Manager software	5.1(45)
Avaya 4620 IP Telephones	2.3
Avaya 2420 Digital Telephones	-
Avaya IP Office Delta Server	5.0.21
Oak aiOffice	1.3.13

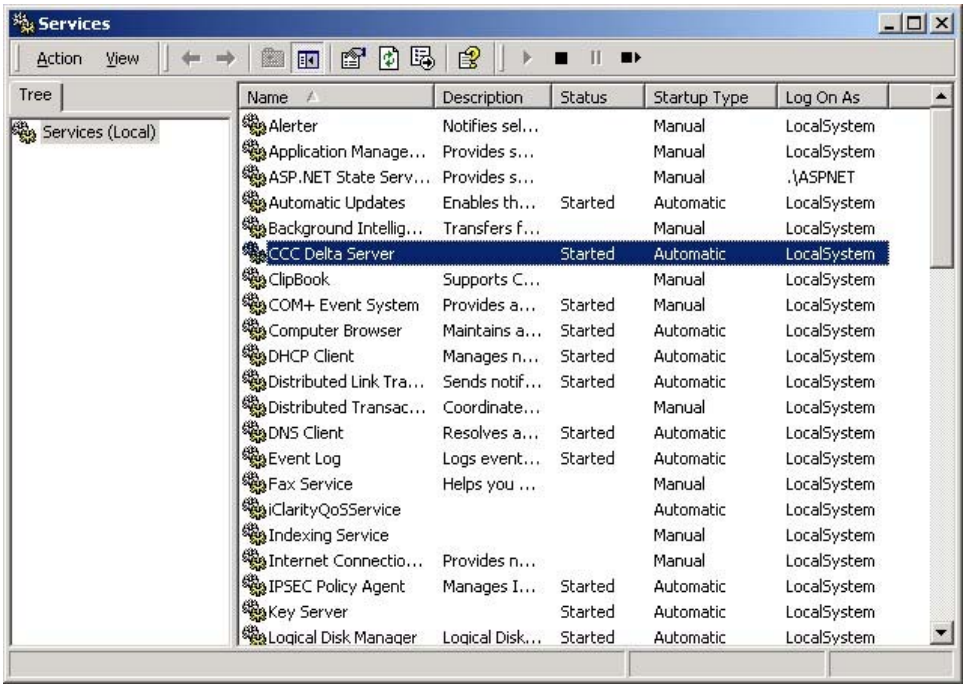
3. Configure Avaya IP Office

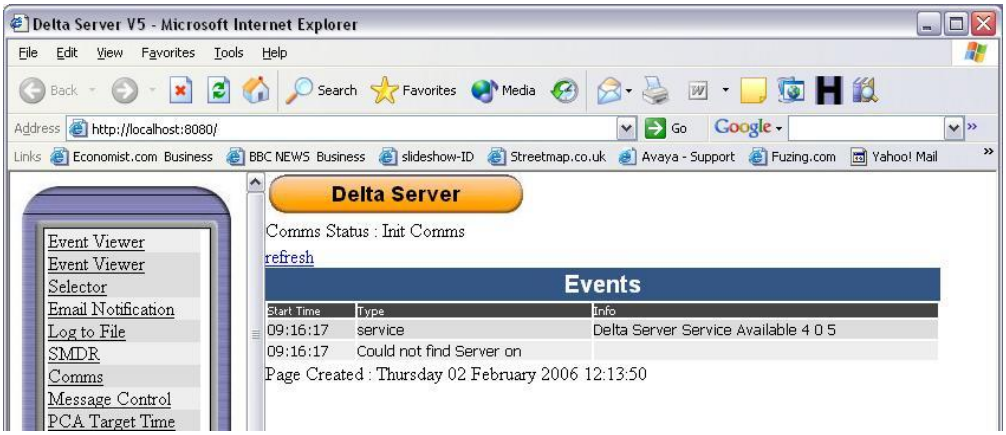
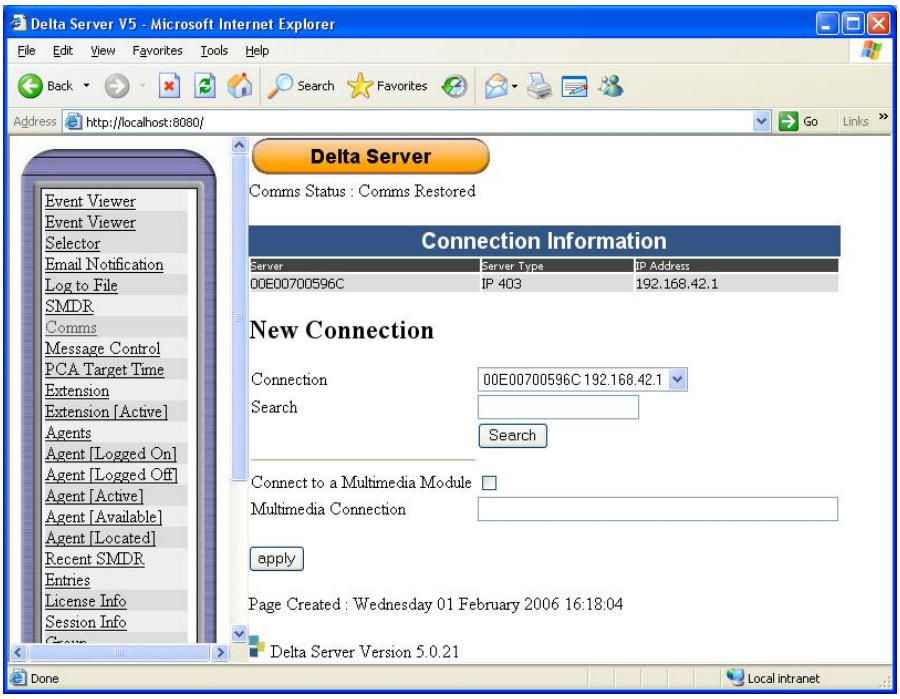
No additional configuration is required.

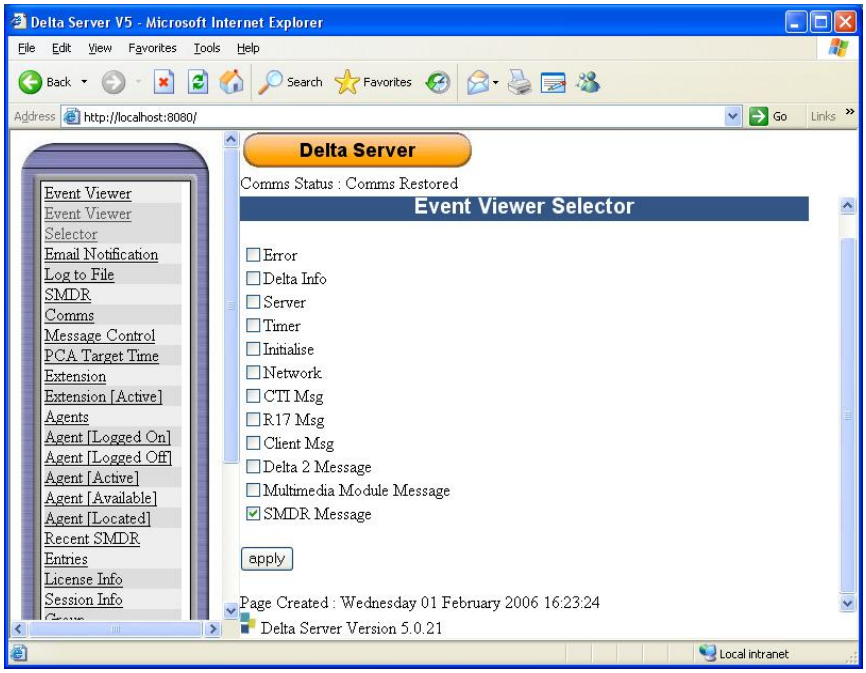
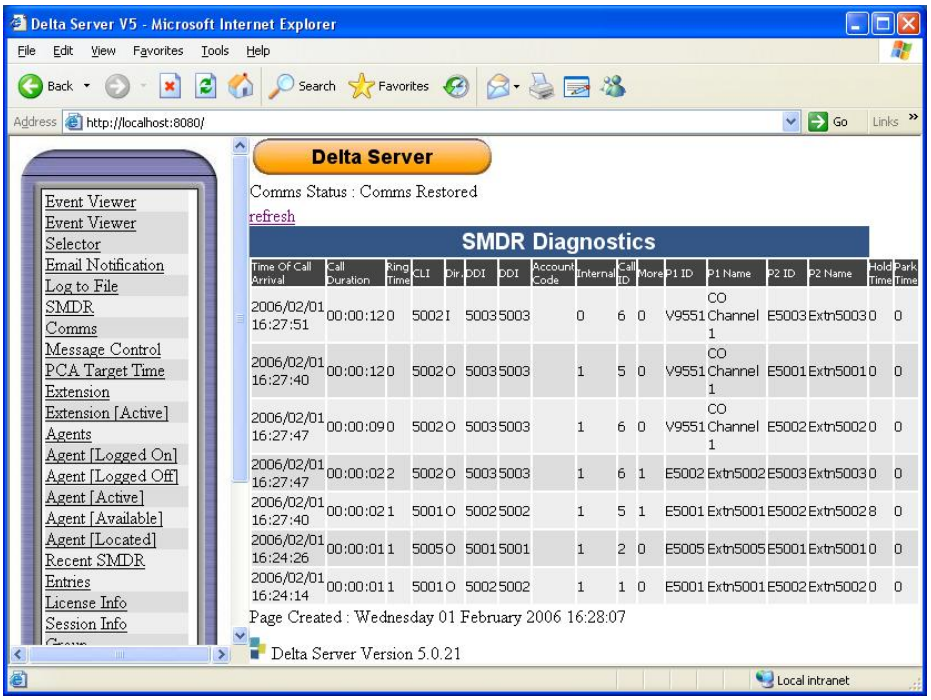
4. Configure Avaya IP Office Delta Server

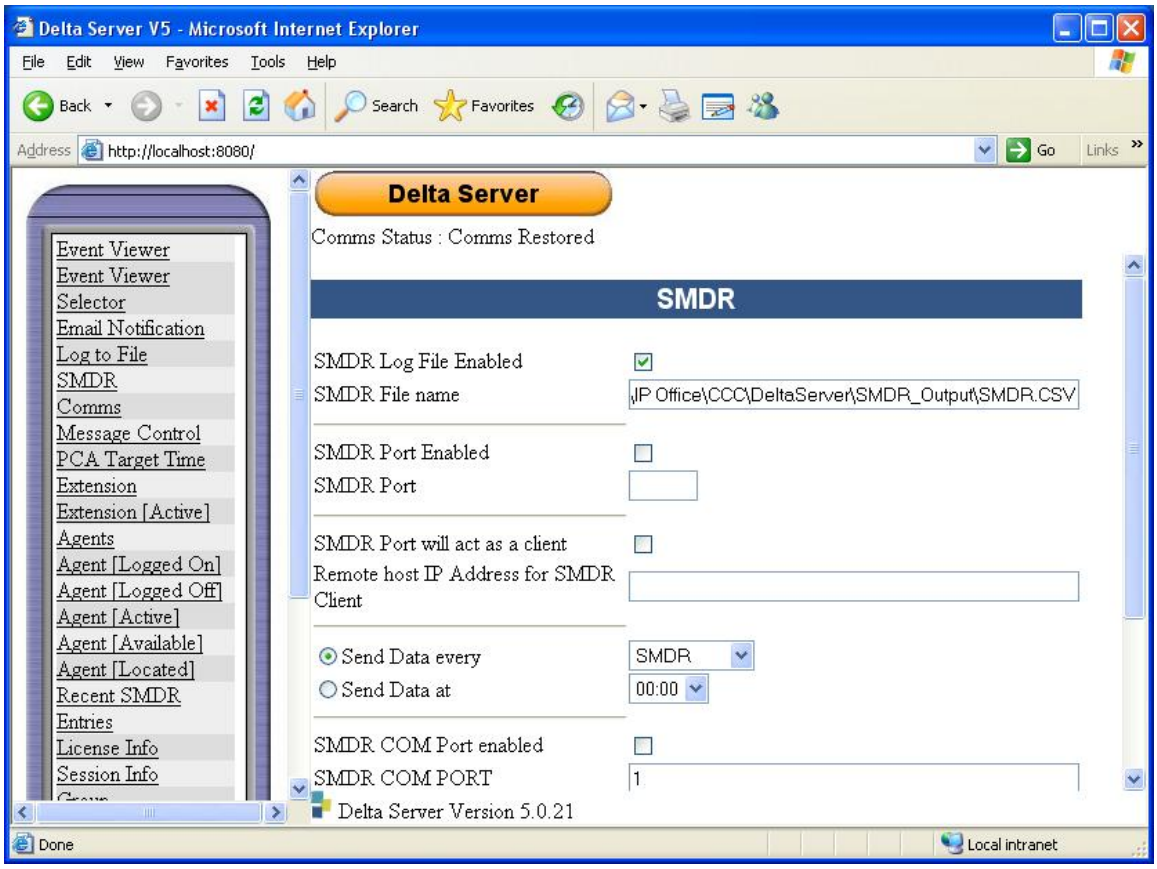
The configuration information provided in this section describes the steps required to set up Avaya IP Office Delta Server to generate SMDR records to an SMDR log file and also to a specified IP address and port.

For all other provisioning, such as Avaya IP Office Delta Server installation, refer to the Avaya IP Office Delta Server product documentation reference in section 10.

Step	Description
1.	Navigate to Start → Programs → Administrative Tools → Services on the Avaya IP Office Delta Server PC.
2.	In the Services window that appears, verify **CCC Delta Server** is started. If it is not, then start it manually. **NOTE**: Following initial installation, the CCC Delta Server service is not started until either the PC is restarted or the service is started manually. 

3.	Navigate to Start → Programs → CCC → Delta Server to launch the Delta Server. The Delta Server webpage address is http://localhost:8080. Click **Comms** in the left panel. 
4.	Click on **Comms** in the left panel. In the Connection Information page, select the required IP Office system from the **Connection** drop-down. If the required IP Office system is not listed, enter its IP address in the **Search** field and click **Search.** Once the correct system is selected, click **apply**. Ensure that **Comms Status** changes to *Comms Restored*. This may take a few minutes. Once this connection is established with the IP Office, the Delta Server will generate SMDR records for all calls that occur on the IP Office. 

5.	Click on **Event Viewer Selector** in the left panel to enable logging of SMDR events by checking the SMDR checkbox and then click **apply**. 
6.	Verify the Delta Server properly logs SMDR records by placing inbound and outbound calls on the Avaya IP Office. Then click **Recent SMDR Entries** and confirm the call activity is properly reflected. 

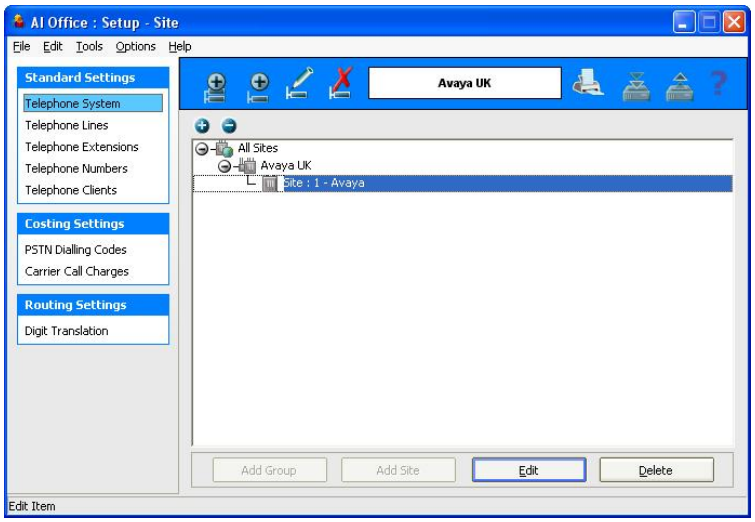
7.	Click **SMDR** in the left panel. In the SMDR page, check **SMDR Log File Enabled** and set the **SMDR File name** to the absolute path name of the file. The Delta Server will log the SMDR records to (default: **c:\Program Files\Avaya\IP Office\CCC\ DeltaServer\ SMDR_Output\SMDR.csv**). This will match the location entered in Section 5 Step 7. Click **apply**. 

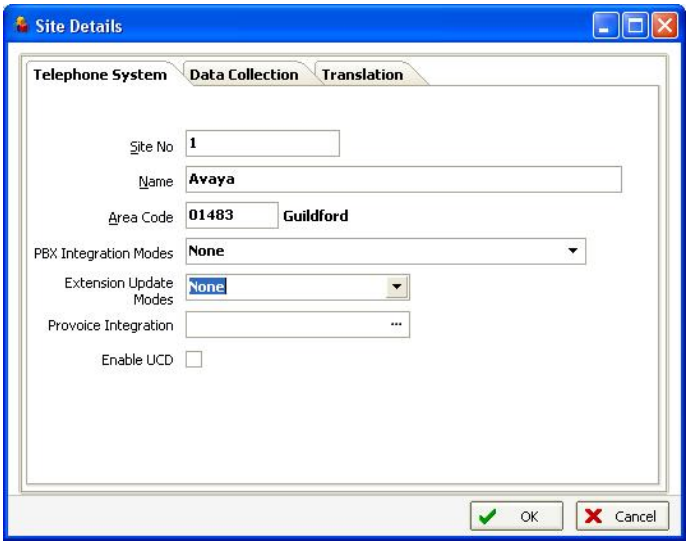
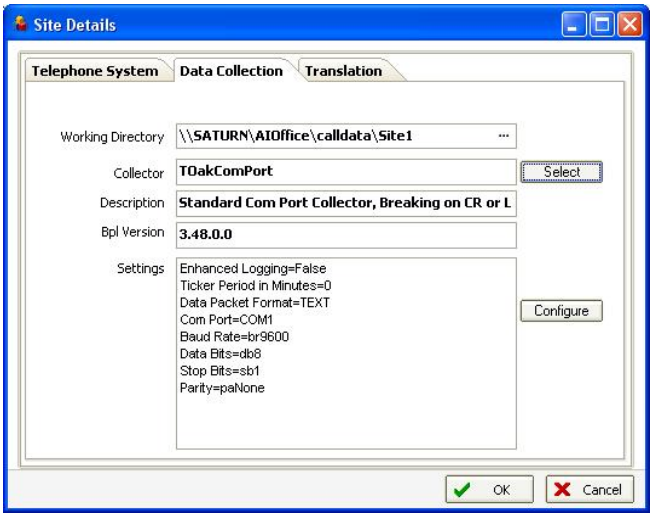
5. Configure aiOffice

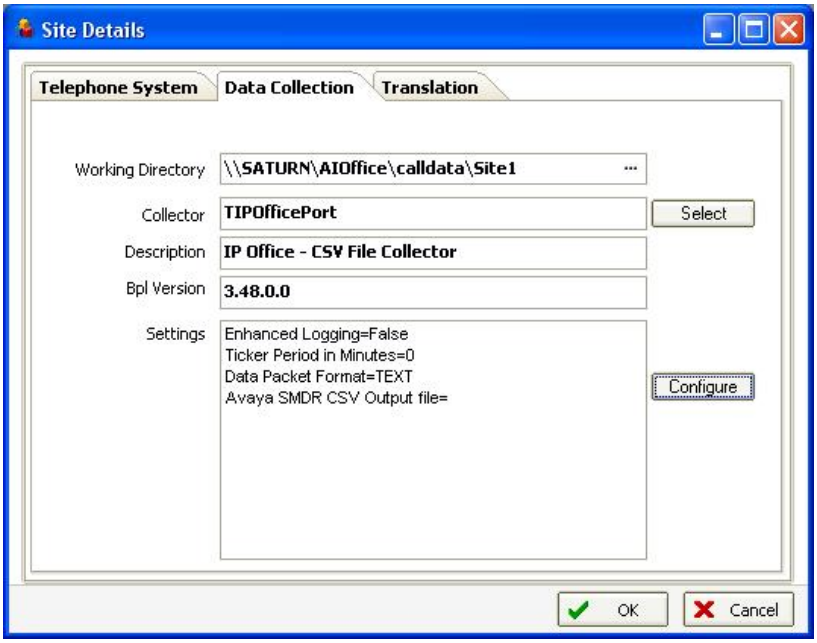
This section describes the steps required to set up aiOffice to read and import SMDR records generated to a file by the Avaya IP Office Delta Server.

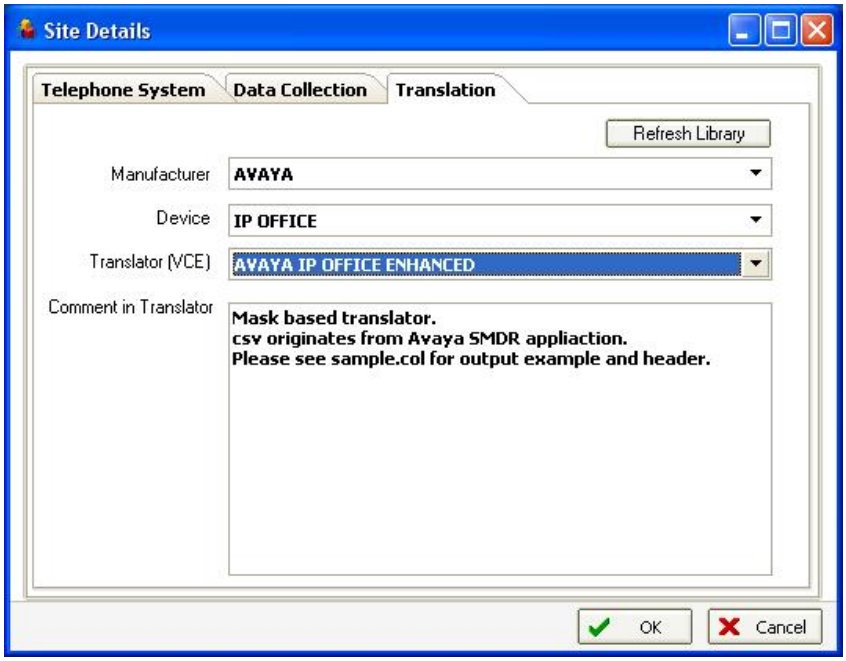
For all other provisioning information, such as aiOffice software installation, see the Oak aiOffice product documentation referenced in Section 10.

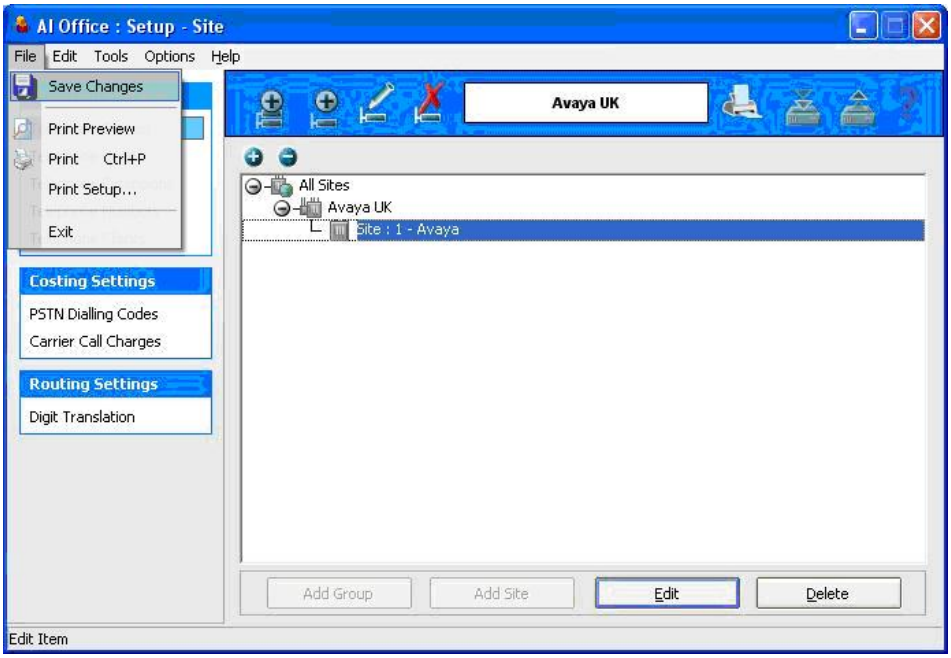
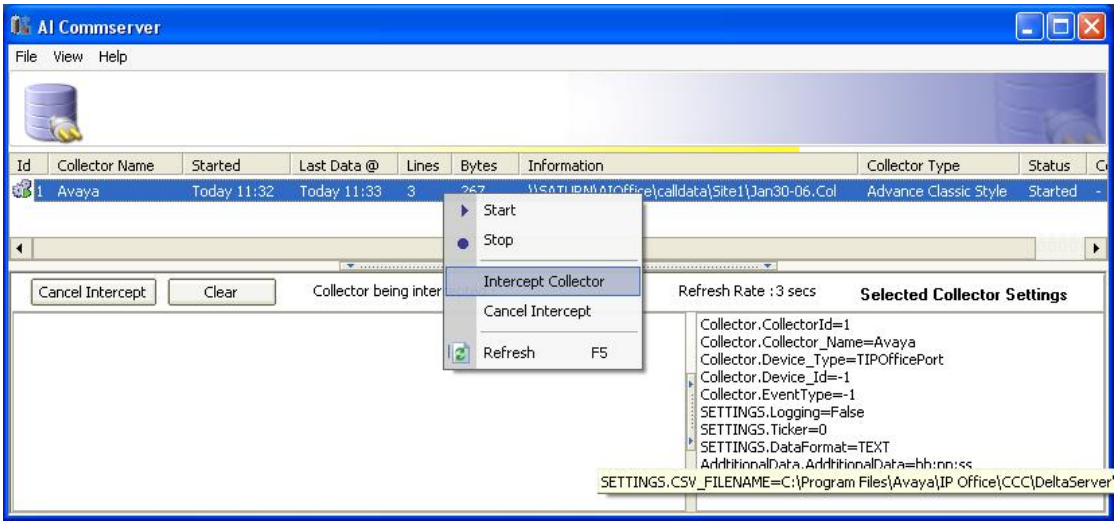
5.1. aiOffice Configuration

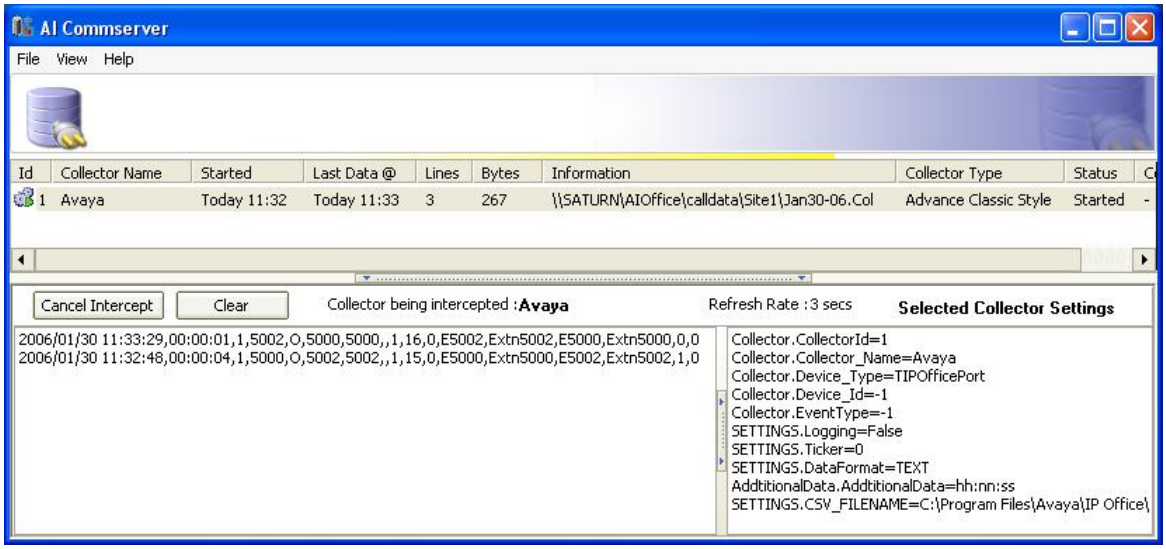
Step	Description
1.	On the aiOffice PC navigate to Start → Programs → Oak Telecom → AI Office → AI Office Setup. Select "Supervisor" for the **User Name** and enter the appropriate password. Click **OK**. 
2.	From the Standard Settings section in the left pane, select **Telephone System** to display the sites configured. All default installations will be provided with a default site for configuration. If a site name was added during installation, it will be viewable in the right pane. In this case, "Avaya" was entered as the site name. Select the site and click the **Edit** button. 

3.	The **Telephone System** tab is pre-populated with information of the site details entered during the aiOffice installation. 
4.	Select the **Data Collection** tab. The Working Directory will be the folder to which all collected and processed SMDR information will be stored. Pressing the three dots at the end of the entry box will present a folder selection dialog box where this location can be set. In a Client/Server environment a Uniform Naming Convention (UNC) path should be used so that data is visible to other network clients. To set the **Collector** field, click the **Select** button. 

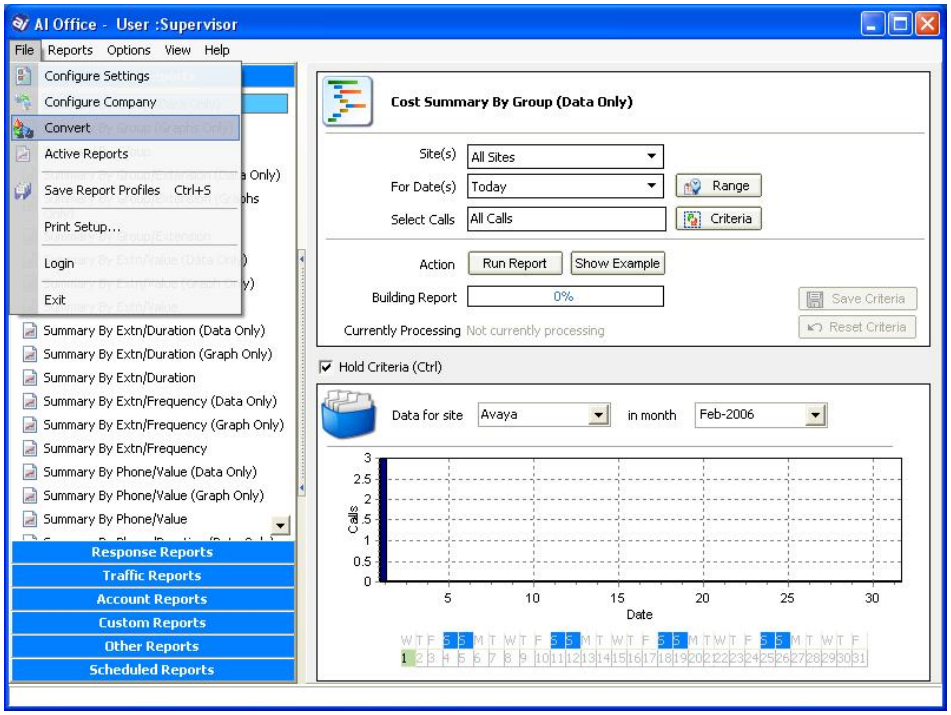
5.	Pressing the **Select** button launches a selection dialog displaying the available Collector types. Double click on the collector named **IP Office**. 
6.	To set the **Settings** click on the **Configure** button. 

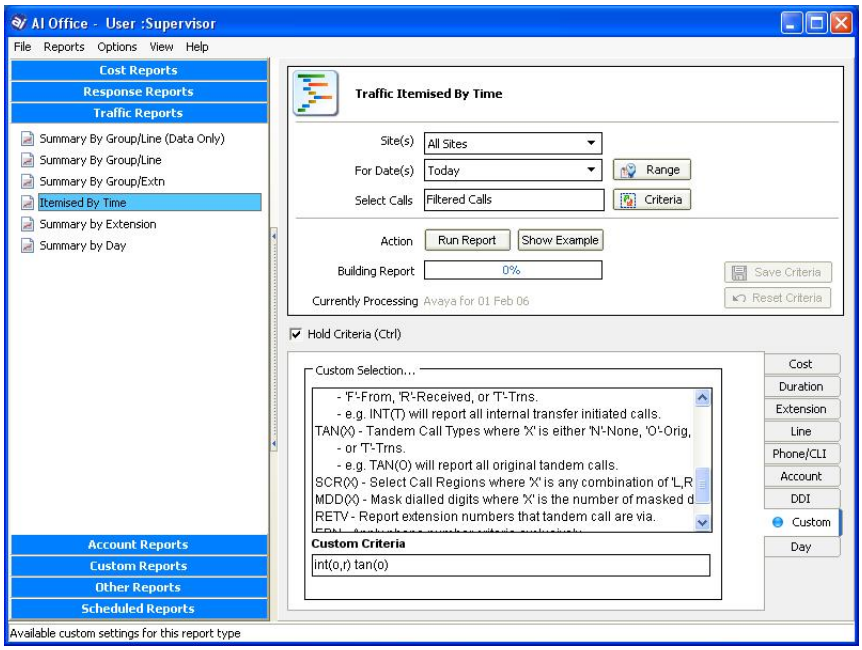
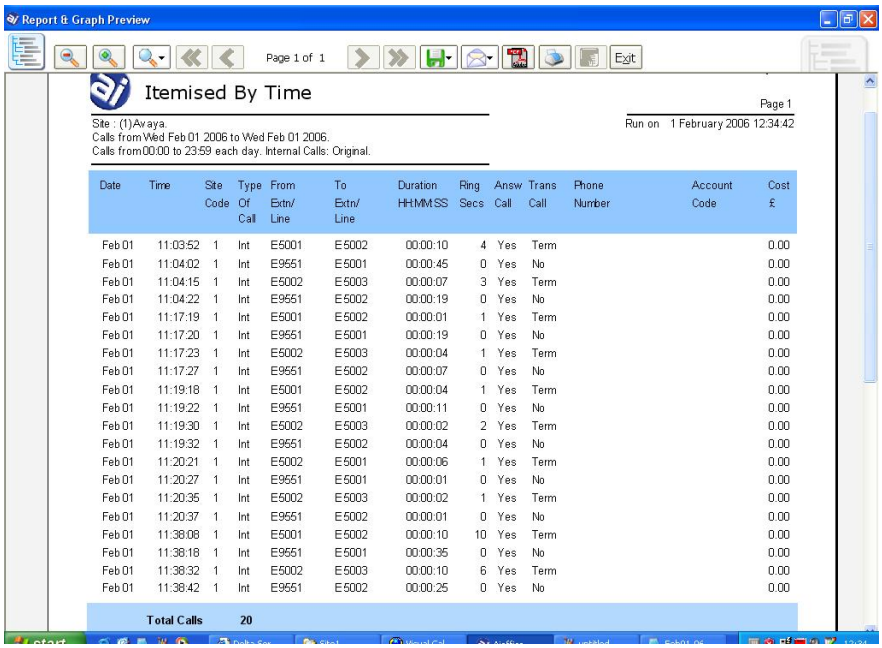
7.	The **SMDR CSV Filename** entry box should contain the location of the csv file that the Avaya Delta Server outputs. It will have a default location that matches the default location of the Avaya IP Office Delta Server output in Section 4 Step 8. If the Avaya Delta Server csv output file was modified then this entry box must match it. 
8.	Select the **Translation** tab. Select "AVAYA" from the **Manufacturer** drop-down followed by "IP OFFICE" from the **Device** drop-down followed by Avaya IP OFFICE ENHANCED from the **Translator (VCE)** drop-down. Click **OK** to return to the Main AI Office Setup. 

9.	From the main AI Office Setup window, select the **File** menu from the task bar and select the **Save Changes** option as shown below. 
10.	To launch the AI Commserver to start collecting the SMDR records select Start → Programs → Oak Telecom → AI Office → AI Office Commserver. To verify data collection is taking place, right click on the collector and select Intercept Collector. Any SMDR being collected will be shown in the bottom left pane. 

11.	A green 'play' icon and a **Status** change to *Started* will be shown as below to indicate that the application is connected and collection has started. 

5.2. Generating aiOffice Reports

Step	Description
1.	Navigate to Start → Programs → Oak Telecom → AI Office → AI Office Reports. From the taskbar, select the **File** menu → **Convert**. 
2.	A dialog box will appear. Select continue to process the new SMDR records collected. 

3.	Select the **Traffic Reports** section from the left pane, then click the **Itemised By Time** report within that section. This report shows details of each call. The report does not include tandem and internal calls as standard. To enable tandem and internal calls, click the **Criteria** button then select the **Custom** tab in the **Custom selection** section. Enter "int(o,r)" to include internal calls and "tan(o)" to include tandem calls in the **Custom Criteria** field. Click **Save Criteria**. Now click the **Run Report** button. 
4.	An example of a Traffic Itemised By Time report is shown below. 

6. Interoperability Compliance Testing

The interoperability compliance testing included feature and performance testing. The feature testing evaluated the ability of aiOffice to collect and process SMDR records for various types of calls. The performance testing involved generating bulk calls for a two hour period to generate around 20,000 SMDR records.

6.1. General Test Approach

The general test approach was to manually place intra-switch calls, inbound trunk and outbound trunk calls to and from telephones attached to the Avaya IP Office and verify the aiOffice collects the SMDR records and properly classifies and reports the attributes of the call. For performance testing, a call generator was used to place calls over a two hour period of time.

6.2. Test Results

All test cases passed. aiOffice successfully collected the SMDR records from the Avaya IP Office Delta Server CDR file for all types of calls including intra-switch calls, inbound/outbound PSTN trunk calls, inbound/outbound private IP trunk calls, transferred calls and conference calls. Performance testing verified that aiOffice collected call records during a sustained high volume of calls for over two hours.

aiOffice reports all calls, including conference and transfer, as one of the following types: internal, inbound or outbound. In other words, aiOffice does not report calls as being part of a conference or transfer. Users wishing to know if a transfer or conference call occurred must manually verify this information.

7. Verification Steps

The following steps may be used to verify the configuration:

- Use the **ping** command to verify IP communication between the aiOffice PC, the Avaya IP Office Delta Server PC, and the Avaya IP403 Office.
- Verify the Avaya IP Office Delta Server is connected to the Avaya IP Office (Section 4, step 4).
- Place an inbound or outbound call. After completing the call, verify the SMDR record for the call appears in the SMDR Diagnostics page on the Delta Server (Section 4, step 6).
- Verify aiOffice Commserver connection to Avaya IP Office Delta Server (Section 5.1, step 10 - 11)
- Verify information appears correctly in a report (Section 5.2).

8. Support

Technical support for aiOffice can be obtained by contacting OAK Telecom. at:

- Phone: 0870 2000 247
- E-mail: support@oak.co.uk
- Web: www.oak.co.uk

9. Conclusion

These Application Notes describe the procedures required for configuring aiOffice to collect SMDR records from Avaya IP Office Delta Server SMDR log files. aiOffice was successfully compliance tested with an Avaya IP403 Office and Avaya IP Office Delta Server.

10. Additional References

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

Avaya product documentation can be found at http://support.avaya.com.

- Avaya IP Office 3.1 Installation Manual, Issue 13j (Dec 2005)
- Avaya IP Office 3.1 Manager Manual, Issue 17d (Sept 2005)

Visit the website www.oak.co.uk for on Oak Telecom and aiOffice information.

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 Developer*Connection* Program at devconnect@avaya.com.