



Avaya Solution & Interoperability Test Lab

Application Notes for Metropolis OfficeWatch Telemanagement with Avaya IP Office – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Metropolis OfficeWatch Telemanagement to interoperate with Avaya IP Office. Metropolis OfficeWatch Telemanagement is a call accounting application that uses the Station Message Detail Recording records from Avaya IP Office to track phone calls and produce detailed reports.

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 required for Metropolis OfficeWatch Telemanagement to interoperate with Avaya IP Office. Metropolis OfficeWatch Telemanagement is a call accounting application that uses the Station Message Detail Recording (SMDR) records from Avaya IP Office to track phone calls and produce detailed reports.

1.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the proper parsing and displaying of SMDR data received from Avaya IP Office by Metropolis OfficeWatch Telemanagement for call scenarios including internal, voicemail, inbound PSTN, outbound PSTN, hold, reconnect, transfer, conference, park, forward, account codes, and authorization codes. The verification also included sanity check on the various types of reports that can be generated from the received SMDR data.

The serviceability testing focused on verifying the ability of Metropolis OfficeWatch Telemanagement to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable on the Metropolis OfficeWatch Telemanagement server.

1.2. Support

Technical support on Metropolis OfficeWatch Telemanagement can be obtained through the following:

- **Phone:** (954) 941-1010
- **Email:** support2010@metropolis.com

2. Reference Configuration

Figure 1 below shows the configuration used for the compliance testing.

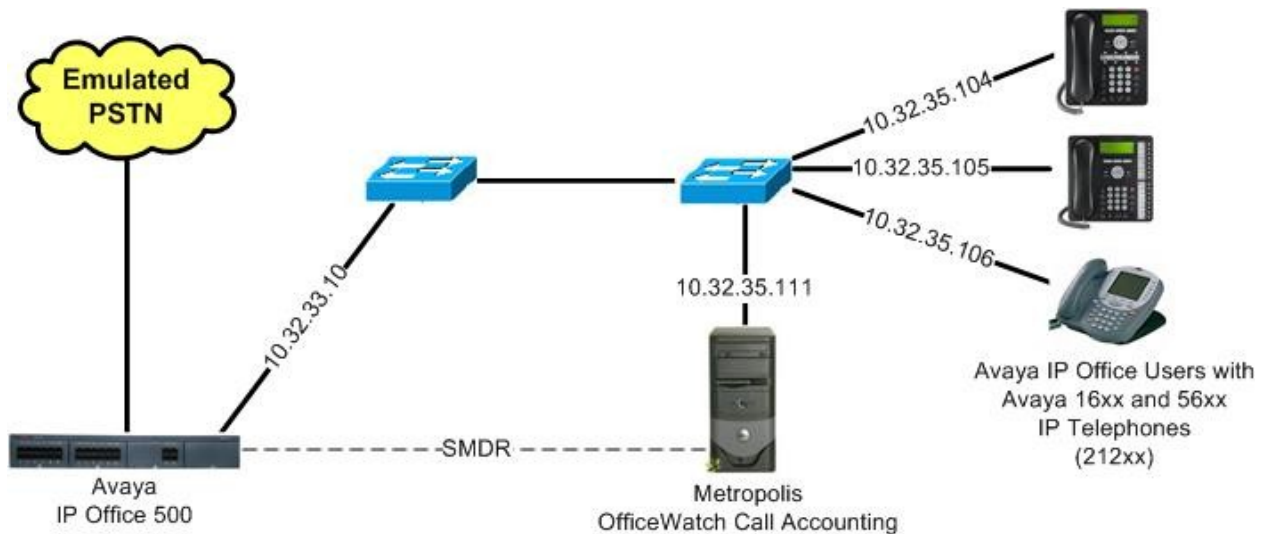


Figure 1: Metropolis OfficeWatch Telemanagement with Avaya IP Office

3. Equipment and Software Validated

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

Equipment	Software
Avaya IP Office 500	5.0 (15)
Avaya 1608 and 1616 IP Telephone (H.323)	1.21
Avaya 5620SW IP Telephone (H.323)	2.9
Metropolis OfficeWatch Telemanagement	2010.01.13

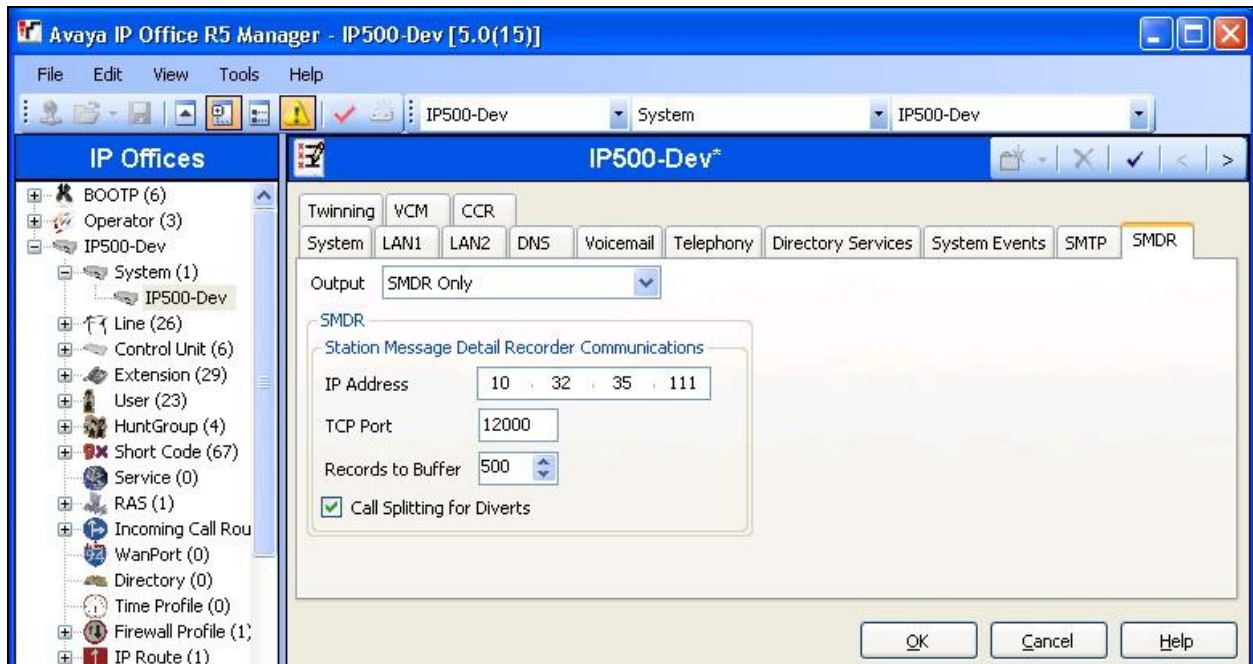
4. Configure Avaya IP Office

This section provides the procedures for configuring Avaya IP Office.

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

From the configuration tree in the left pane, select **System** to display the **IP500-Dev** screen in the right pane. Select the **SMDR** tab. Select “SMDR Only” from the **Output** field drop-down list, to display the **SMDR** section.

For **IP Address**, enter the IP address of the Metropolis OfficeWatch Telemanagement server. For **TCP Port**, enter “12000”. Modify the **Records to Buffer** field if desired, and check **Call Splitting for Diverts**. The record buffer is used by IP Office to cache SMDR records in the case of a communication failure with Metropolis OfficeWatch Telemanagement.



5. Configure Metropolis OfficeWatch Telemanagement

This section provides the procedures for configuring Metropolis OfficeWatch Telemanagement. The procedures include the following areas:

- Administer PBX
- Administer customize
- Administer grace periods

5.1. Administer PBX

From the Metropolis OfficeWatch Telemanagement server, select **Start > All Programs > Metropolis > OfficeWatch** to display the **OfficeWatch Telemanagement 2010** screen. Select **Setup > PBX** from the top menu.

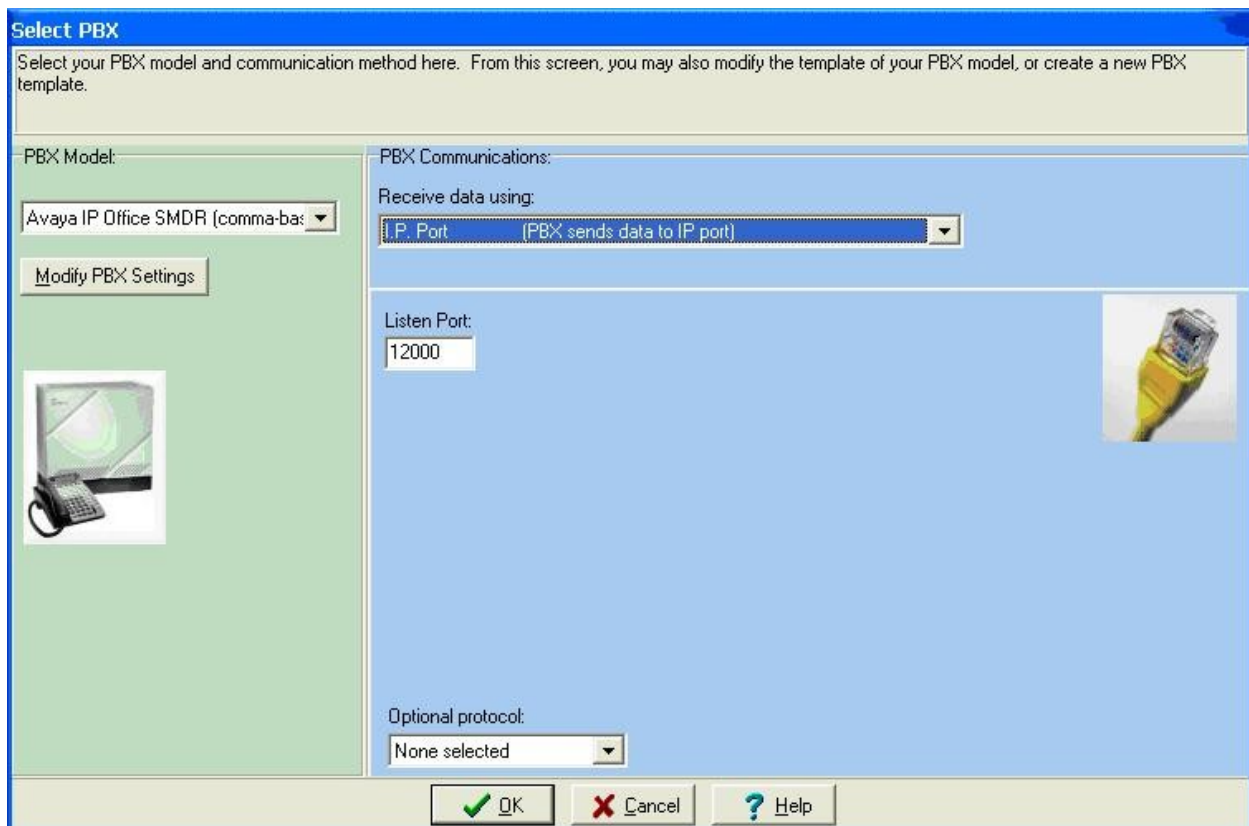


The **Password Security** screen is displayed. Enter the appropriate credentials.



A dialog box titled "Password Security" with a close button (X) in the top right corner. It contains the text "A valid password will log you in for 10 minutes." Below this, there are two input areas: "Password" with a text box, and "or PIN Code" with a numeric keypad (0-9) and an "erase" button. At the bottom center is an "OK" button.

The **Select PBX** screen is displayed next. Select “Avaya IP Office SMDR (comma-based)” for **PBX Model**, and “I.P. Port” for **Receive data using** as shown below. For **Listen Port**, enter the TCP port number from **Section 4**. Retain the default value in the remaining field, and click **Modify PBX Settings** in the left pane.



A dialog box titled "Select PBX" with a close button (X) in the top right corner. It contains the text "Select your PBX model and communication method here. From this screen, you may also modify the template of your PBX model, or create a new PBX template." Below this, there are two main sections: "PBX Model:" and "PBX Communications:". The "PBX Model:" section has a dropdown menu showing "Avaya IP Office SMDR (comma-bas)" and a "Modify PBX Settings" button. The "PBX Communications:" section has a "Receive data using:" dropdown menu showing "I.P. Port (PBX sends data to IP port)", a "Listen Port:" text box with "12000" entered, and an "Optional protocol:" dropdown menu showing "None selected". There are two small images: a computer monitor and a yellow Ethernet cable. At the bottom are three buttons: "OK" (with a green checkmark), "Cancel" (with a red X), and "Help" (with a question mark).

The **Modify PBX** screen is displayed. Note that in a live customer environment, SMDR data may start appearing in the top portion of the screen. Select the **Outgoing Calls** tab. For **Extension Length**, enter the maximum number of digits used for internal extensions on Avaya IP Office, in this case “5”. Retain the default values in the remaining fields.

The screenshot shows the 'Modify PBX - Avaya IP Office SMDR (comma-based)' window. The 'Data Received from PBX' section at the top displays 'No data has been received from the PBX.' Below this is a tabbed interface with 'Outgoing Calls' selected. The 'Outgoing Calls' tab contains a table with columns 'Col' and 'Length'. The table has rows for 'Time', 'Date', 'Duration', 'Extension', 'Digits', 'Trunk', 'Account', and 'PIN Code'. The 'Extension' row has a value of 5 in the 'Length' column. The 'Digits' row has a value of 15 in the 'Length' column. The 'Trunk', 'Account', and 'PIN Code' rows have a value of 0 in the 'Length' column. The 'Time', 'Date', and 'Duration' rows have values in the 'Col' column (1, 1, and 2 respectively) and dropdown menus for 'Format' (hh:mm:ss, yyyy/mm/dd, and hh:mm:ss respectively). At the bottom are 'OK', 'Cancel', and 'Help' buttons.

	Col	Format	Col	Length
Time:	1	2) hh:mm:ss	12	5
Date:	1	24) yyyy/mm/dd	6	15
Duration:	2	1) hh:mm:ss	0	0
Extension:			0	0
Digits:			0	0
Trunk:			0	0
Account:			0	0
PIN Code:			0	0

Select the **Incoming Calls** tab. For **Extension Length**, enter the maximum number of digits used for internal extensions on Avaya IP Office. Retain the default values in the remaining fields.

The screenshot shows the 'Modify PBX - Avaya IP Office SMDR (comma-based)' window with the 'Incoming Calls' tab selected. The 'Data Received from PBX' section at the top displays 'No data has been received from the PBX.' Below this is a tabbed interface with 'Incoming Calls' selected. The 'Incoming Calls' tab contains a table with columns 'Col' and 'Length'. The table has rows for 'Time', 'Date', 'Duration', 'Extension', 'Digits', 'Trunk', 'Account', 'PIN Code', 'Call ID Name', and 'Incoming Call Identifiers'. The 'Extension' row has a value of 5 in the 'Length' column. The 'Digits' row has a value of 15 in the 'Length' column. The 'Trunk', 'Account', 'PIN Code', and 'Call ID Name' rows have a value of 0 in the 'Length' column. The 'Time', 'Date', and 'Duration' rows have values in the 'Col' column (1, 1, and 2 respectively) and dropdown menus for 'Format' (hh:mm:ss, yyyy/mm/dd, and hh:mm:ss respectively). The 'Incoming Call Identifiers' section has a 'Col' dropdown set to 5 and 'Ascii Codes' set to 73. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

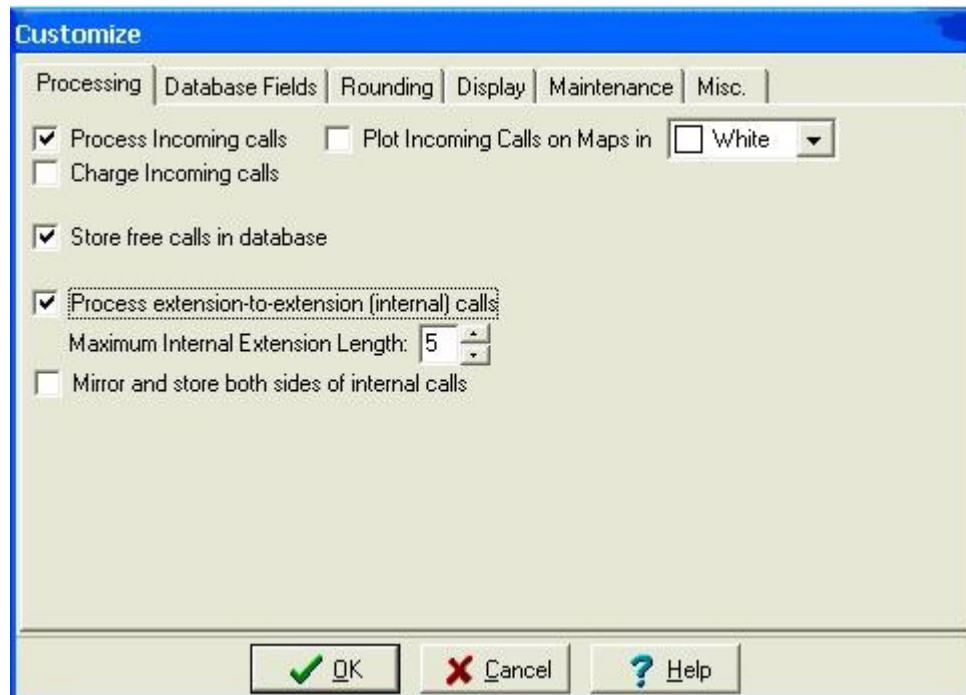
	Col	Format	Col	Length
Time:	1	2) hh:mm:ss	12	5
Date:	1	24) yyyy/mm/dd	4	15
Duration:	2	1) hh:mm:ss	0	0
Extension:			0	0
Digits:			0	0
Trunk:			0	0
Account:			0	0
PIN Code:			0	0
Call ID Name:			0	0

Incoming Call Identifiers:
Col: 5
Ascii Codes: 73 or: 0 or: 0

5.2. Administer Customize

The **OfficeWatch Telemanagement 2010** screen shown in **Section 5.1** is displayed again (not shown below). Select **Setup > Customize** from the top menu, to display the **Customize** screen.

Check **Process Incoming calls** and **Process extension-to-extension (internal) calls** if desired. Set the appropriate value for **Maximum Internal Extension Length**, and retain the default values in the remaining fields. The screenshot below shows the settings used for the compliance testing.



5.3. Administer Grace Periods

The **OfficeWatch Telemanagement 2010** screen shown in **Section 5.1** is displayed again (not shown below). Select **Charges > Grace Periods** from the top menu, to display the **Grace Periods** screen.

Modify the grace period value for each type of call if desired. Note that calls with duration shorter than the grace period will not be logged. The screenshot below shows the settings used for the compliance testing.

The screenshot shows a window titled "Grace Periods" with a blue header bar. Below the header, a text box explains: "Calls which are shorter than the grace period are ignored and usually indicate busy or ring-out calls." The main area is titled "Grace Periods" and contains five rows of settings, each with a label, a numeric input field, and the unit "seconds":

Call Type	Grace Period (seconds)
Local:	0
Local Toll:	0
In-State	0
Long Distance:	0
International:	45

Below these settings is a checkbox labeled "Apply grace periods to admin calls" which is checked. At the bottom of the window are three buttons: "OK" (with a green checkmark icon), "Cancel" (with a red X icon), and "Help" (with a blue question mark icon).

6. General Test Approach and Test Results

The feature test cases were performed manually. Different types of calls were made, along with different actions initiated from the user telephones, to verify proper parsing and displaying of received SMDR data by Metropolis OfficeWatch Telemanagement.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet cables on the Metropolis OfficeWatch Telemanagement server.

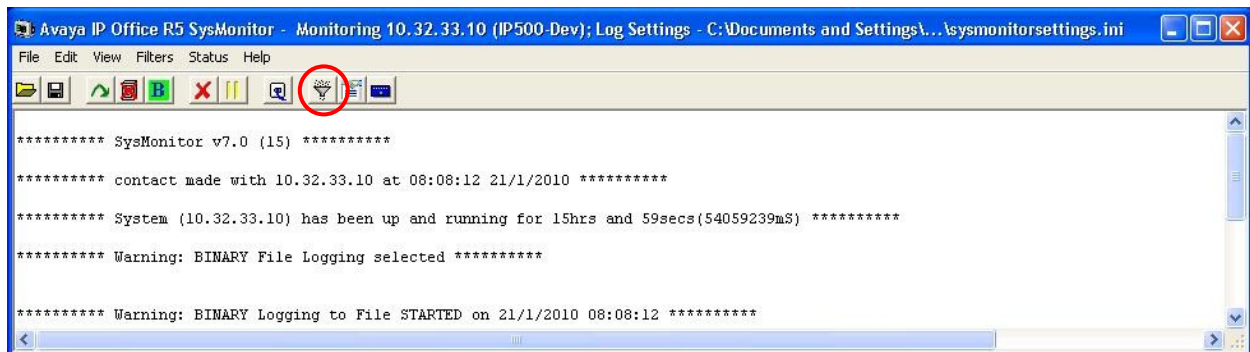
All test cases were executed and passed.

7. Verification Steps

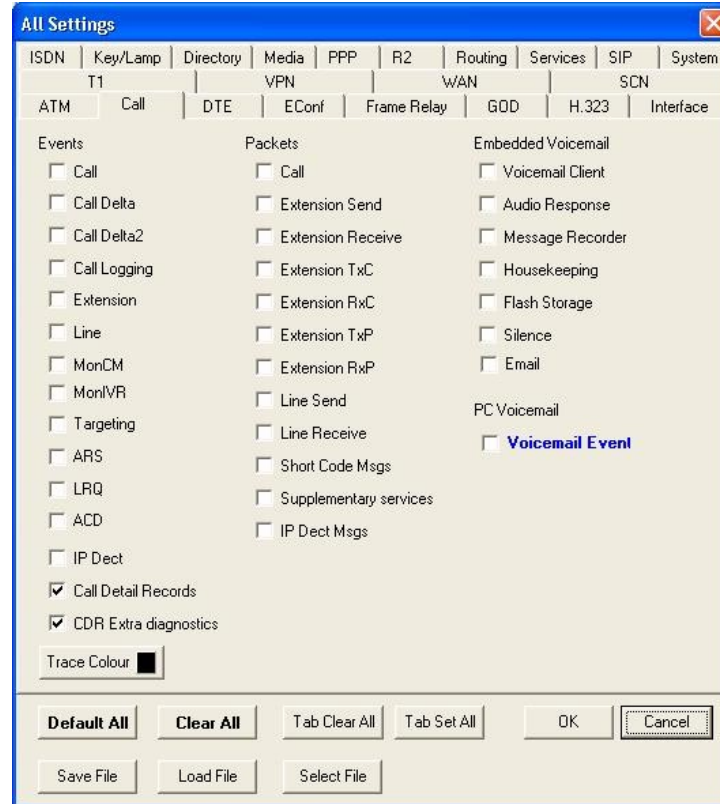
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Metropolis OfficeWatch Telemanagement.

7.1. Verify Avaya IP Office

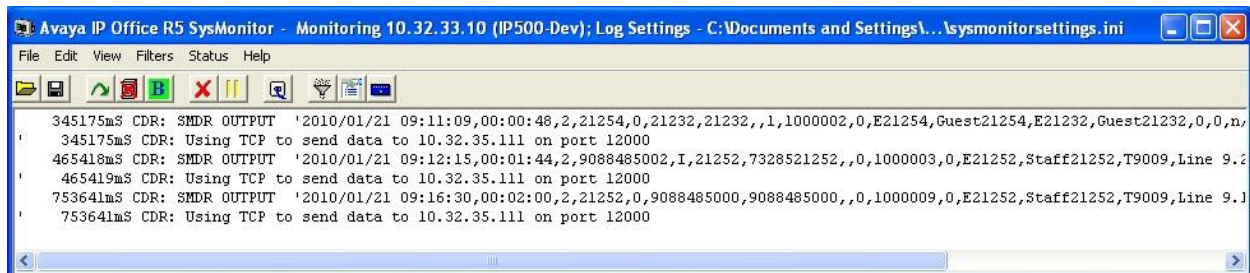
From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R5 SysMonitor** screen is displayed, as shown below. Click on the **Filter** icon.



The **All Settings** screen is displayed. Check **Call Detail Records** and **CDR Extra diagnostics**, as shown below.



Make and complete a few phone calls, including internal, inbound from the PSTN, and outbound to the PSTN. Verify that raw SMDR data is displayed on the **Avaya IP Office R5 SysMonitor** screen, as shown below.



7.2. Verify Metropolis OfficeWatch Telemanagement

From the Metropolis OfficeWatch Telemanagement server, follow the navigation in **Section 5.1** to display the **OfficeWatch Telemanagement 2010** screen. Verify that an entry is displayed for each SMDR record output from **Section 7.1**. Note that the **Cost** data shown below is estimated by OfficeWatch based on call destination and duration.



Follow the navigation in **Section 5.1** to display the **Modify PBX** screen. In the top portion of the screen, verify that an entry is displayed for each SMDR record output from **Section 7.1** with matching values.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Col
2010/01/21 09:11:09	00:00:48	2	21254	0	21232	21232	
2010/01/21 09:12:15	00:01:44	2	9088485002	1	21252	7328521252	
2010/01/21 09:16:30	00:02:00	2	21252	0	9088485000	9088485000	

Col	Format	Col	Length
Time: 1	2) hh:mm:ss	Extension: 12	5
Date: 1	24) yyyy/mm/dd	Digits: 6	15
Duration: 2	1) hh:mm:ss	Trunk: 0	0
		Account: 0	0
		PIN Code: 0	0

From the **OfficeWatch Telemanagement 2010** screen (not shown below), select **Reports > Report Generator** from the top menu. The **Reports Generator** screen is displayed. Select **Extension > Extension Details Report** from the top menu, and click **Report**.

The screenshot shows the 'Reports Generator' window with the 'Extension Details Report' selected. The window has a menu bar with options: Extension, Dept, Account, Directories, Profit, Trunk, Time, Caller, Other, Custom, and Options. Below the menu, a description states: 'This report provides details on all outgoing calls for the extensions specified during the date and time range specified.'

Configuration fields include:

- Extension Range: 0 to 999999
- Date and Time Range: 21-Jan-10 00:00 to 21-Jan-10 23:59
- Sort entries by: Extension
- ☐ Start each extension on a new page
- Departments: A list of departments with checkboxes, including Default Staff, Reception, Sales Dept, Customer Service, Accounting, Marketing, Shipping, GeoGlobal Inc. Offices, Transworld Inc. Offices, Board Rooms, and Leased Offices. A 'Clear All' button is next to the list.
- Include Calls of Type: Outgoing + Incoming
- Send output to: ☒ Screen, ☐ Printer, ☐ File, ☐ Email

Buttons at the bottom: Report!, Close, and Help.

The **Extension Details Report** automatically pops up in a browser window. Verify that the report entries match to the entries on the **OfficeWatch Telemanagement 2010** screen.

The screenshot shows a Windows Internet Explorer browser window titled 'OfficeWatch - Extension Details Report'. The address bar shows 'C:\OfficeWatch\report.htm'. The report content is as follows:

Extension Details Report
Outgoing + Incoming calls
Extension Range: 0 to 999999
Date Range: 21-Jan-10 to 21-Jan-10

DEV CONNECT TESTING
BASKING RIDGE, NJ
Report Date: 21-Jan-10 08:22:56

Dept: Default Staff
Ext: 21252

Date	Time	Number Dialed	Location	Duration	Charge	Tax	Total
01/21/10	09:12	9088483002	INC-NJ-Bernardsvl	00:01:44	0.00	0.00	0.00
01/21/10	09:16	9088483000	NJ-Bernardsvl	00:02:00	2.78	0.00	2.78
Calls: 2				Average Dur: 01:52	00:03:44	2.78	0.00 2.78

Dept: Default Staff
Ext: 21254

Date	Time	Number Dialed	Location	Duration	Charge	Tax	Total
01/21/10	09:11	21232	Internal_Ext	00:00:48	0.00	0.00	0.00
Calls: 1				Average Dur: 00:48	00:00:48	0.00	0.00 0.00

Totals

Total Calls: 3				00:04:32	2.78	0.00	2.78
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8. Conclusion

These Application Notes describe the configuration steps required for the Metropolis OfficeWatch Telemanagement to successfully interoperate with Avaya IP Office. All feature and serviceability test cases were completed.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 5.0 Documentation CD*, August 2009, available at <http://support.avaya.com>.
2. *Call Accounting User Guide*, Version 2010.01.13, available at <http://www.metropolis.com/lib/manual.pdf>.

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