



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

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# **Application Notes for Metropolis ProfitWatch Hotel Call Accounting with Avaya IP Office – Issue 1.0**

### **Abstract**

These Application Notes describe the configuration steps required for Metropolis ProfitWatch Hotel Call Accounting to interoperate with Avaya IP Office. Metropolis ProfitWatch Hotel Call Accounting 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 for a hospitality environment.

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 ProfitWatch Hotel Call Accounting to interoperate with Avaya IP Office. Metropolis ProfitWatch Hotel Call Accounting 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 for a hospitality environment.

## 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 ProfitWatch Hotel Call Accounting 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 ProfitWatch Hotel Call Accounting to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable on the Metropolis ProfitWatch Hotel Call Accounting server.

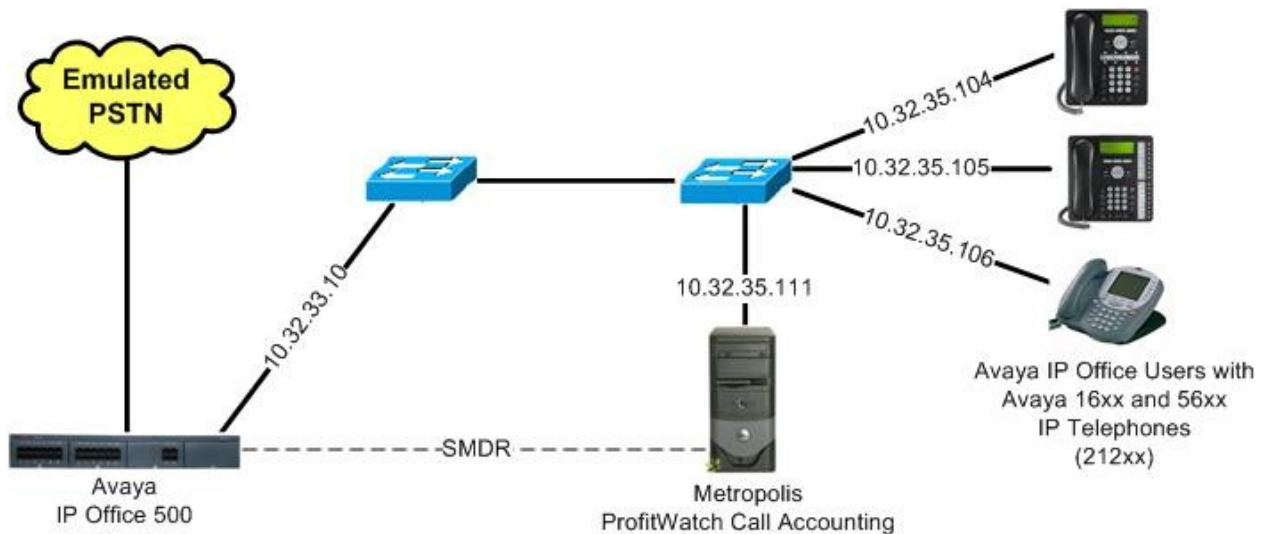
## 1.2. Support

Technical support on Metropolis ProfitWatch Hotel Call Accounting can be obtained through the following:

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

## 2. Reference Configuration

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



**Figure 1: Metropolis ProfitWatch Hotel Call Accounting 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 ProfitWatch Hotel Call Accounting	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 ProfitWatch Hotel Call Accounting 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 ProfitWatch Hotel Call Accounting.



## 5. Configure Metropolis ProfitWatch Hotel Call Accounting

This section provides the procedures for configuring Metropolis ProfitWatch Hotel Call Accounting. The procedures include the following areas:

- Administer PBX
- Administer customize
- Administer grace periods

### 5.1. Administer PBX

From the Metropolis ProfitWatch Hotel Call Accounting server, select **Start > All Programs > Metropolis > ProfitWatch** to display the **ProfitWatch Call Accounting 2010** screen. Select **Setup > PBX** from the top menu.

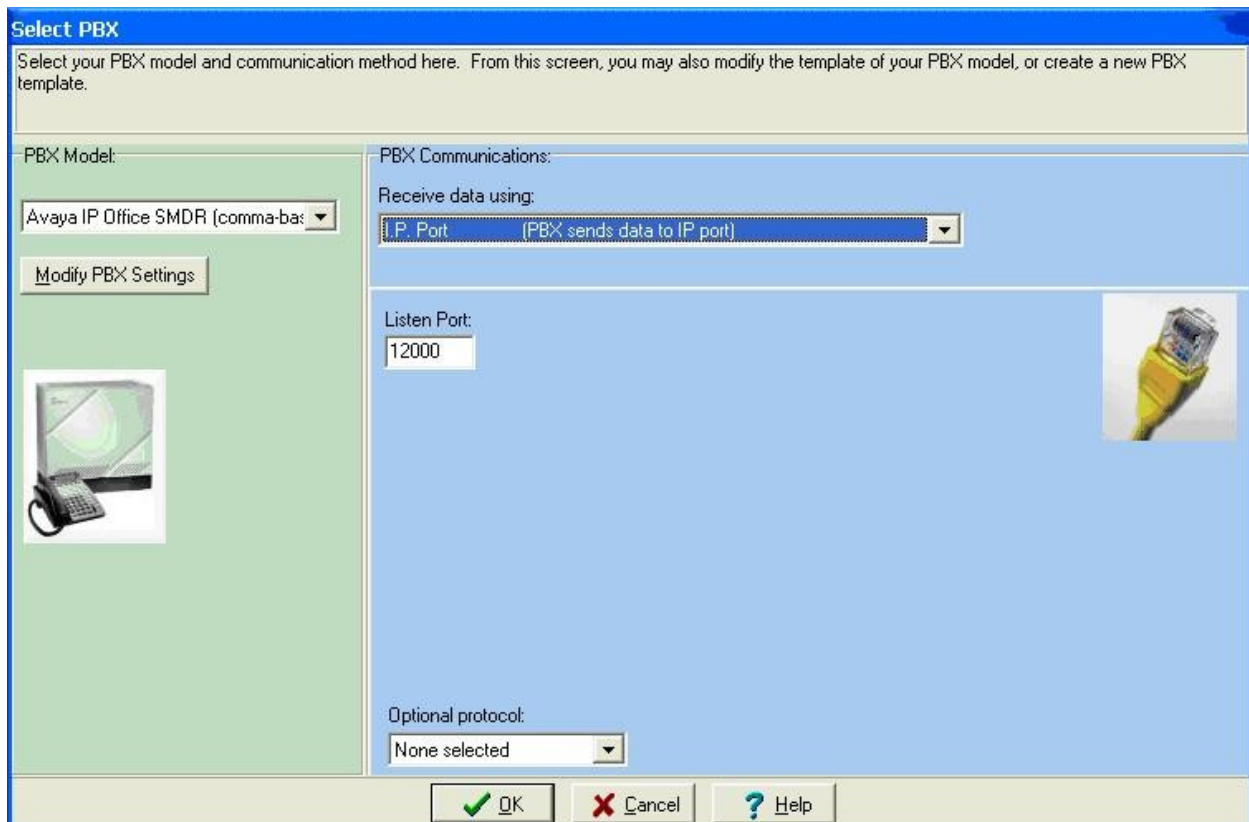


The **Password Security** screen is displayed. Enter the appropriate credentials.



The **Password Security** dialog box has a blue title bar with a close button. Below the title bar, it says "A valid password will log you in for 10 minutes." There are two input areas: "Password" with a text box and "or PIN Code" with a numeric keypad (1-9, 0, and an "erase" button). An "OK" button is at the bottom center.

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.



The **Select PBX** dialog box has a blue title bar. Below the title bar, it says "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." The dialog is split into two panes. The left pane, titled "PBX Model:", contains a dropdown menu showing "Avaya IP Office SMDR (comma-bas..." and a "Modify PBX Settings" button. Below this is an image of a computer monitor and a telephone. The right pane, titled "PBX Communications:", contains a "Receive data using:" section with a dropdown menu showing "I.P. Port (PBX sends data to IP port)". Below this is a "Listen Port:" section with a text box containing "12000" and an image of a yellow Ethernet cable. At the bottom of the right pane is an "Optional protocol:" section with a dropdown menu showing "None selected". At the very bottom of the dialog 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 for configuring call data fields:

	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

At the bottom of the window are buttons for 'OK', 'Cancel', and 'Help'.

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 same 'Modify PBX - Avaya IP Office SMDR (comma-based)' window, but with the 'Incoming Calls' tab selected. The configuration table is updated to reflect incoming call settings:

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

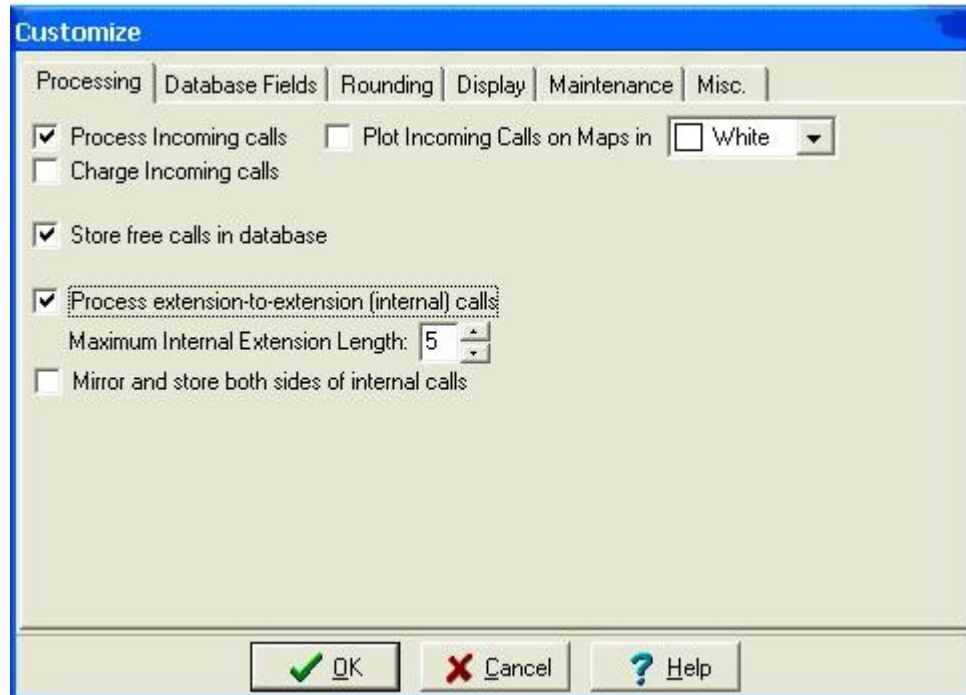
Below the table, there is a 'Duplicate Outgoing Format' button. To the right of the table, the 'Incoming Call Identifiers' section is visible, showing 'Col' set to 5 and 'Ascii Codes' set to 73, with 'or' options for 0 and 0, and an 'Ascii Chart...' button. The 'OK', 'Cancel', and 'Help' buttons remain at the bottom.



## 5.2. Administer Customize

The **ProfitWatch Call Accounting 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 **ProfitWatch Call Accounting 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 title bar, there is a text box explaining: "Calls which are shorter than the grace period are ignored and usually indicate busy or ring-out calls." Below this, there is a section titled "Grace Periods" containing 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 the table, there is a checkbox labeled "Apply grace periods to admin calls" which is checked. At the bottom of the window, there 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 ProfitWatch Hotel Call Accounting.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet cables on the Metropolis ProfitWatch Hotel Call Accounting server.

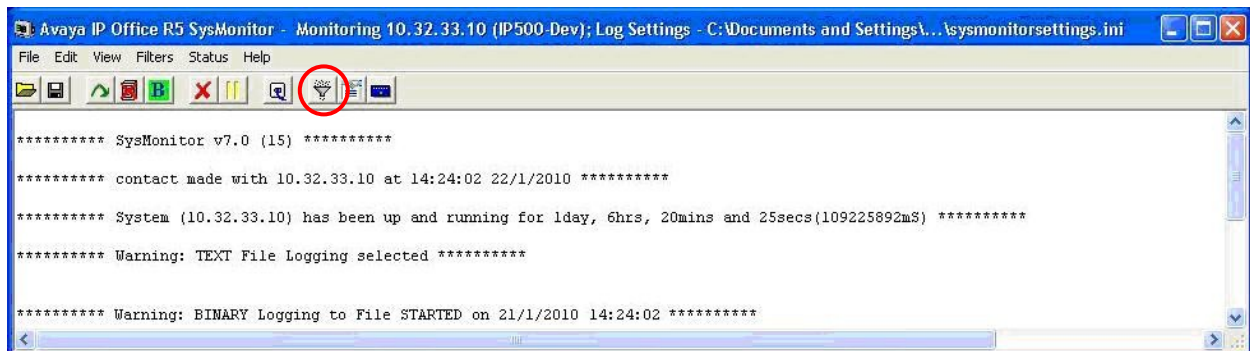
All test cases were executed and passed.

## 7. Verification Steps

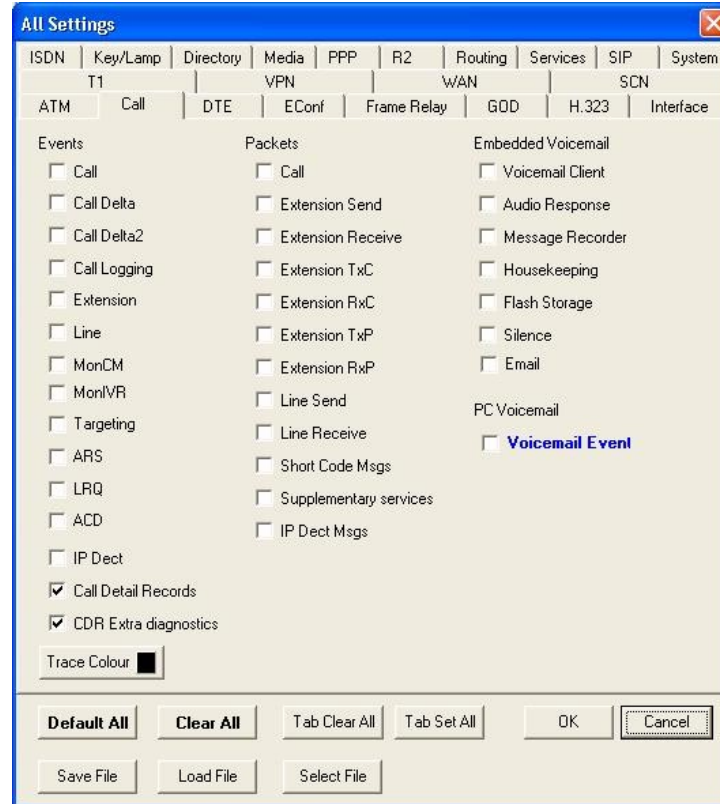
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and Metropolis ProfitWatch Hotel Call Accounting.

### 7.1. Verify Avaya IP Office

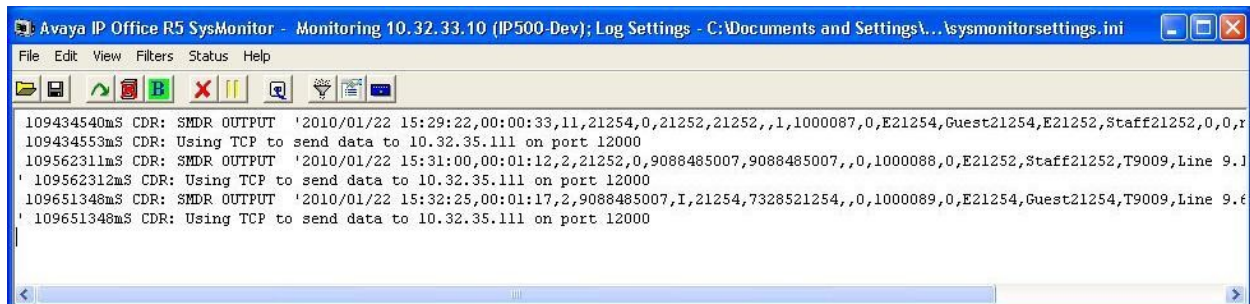
From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R5 SysMonitor** screen is displayed, as shown below. Click on the **Filter** icon.



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

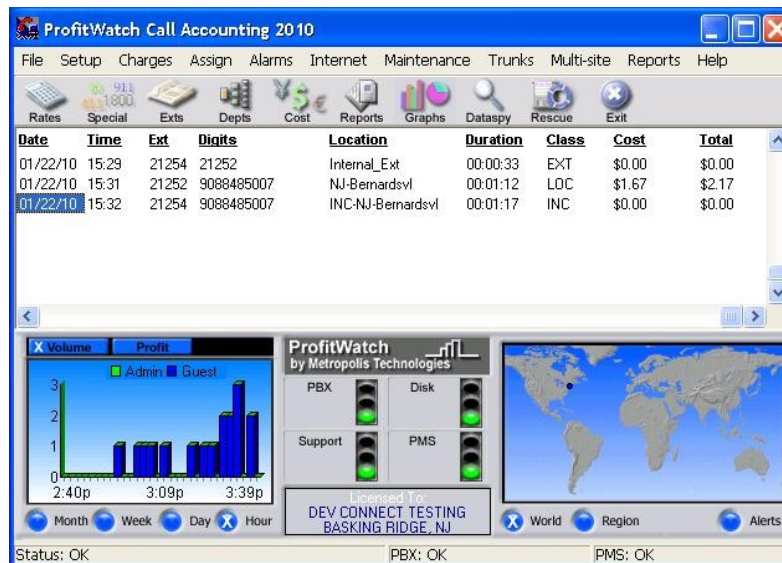


Make and complete a few phone calls, including internal, inbound from the PSTN, and outbound to the PSTN. Verify that raw SMDR data is displayed on the **Avaya IP Office R5 SysMonitor** screen, as shown below.



## 7.2. Verify Metropolis ProfitWatch Hotel Call Accounting

From the Metropolis ProfitWatch Hotel Call Accounting server, follow the navigation in **Section 5.1** to display the **ProfitWatch Call Accounting 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	Column 8
2010/01/22 15:29:22	00:00:33	11	21254	0	21252	21252	
2010/01/22 15:31:00	00:01:12	2	21252	0	9088485007	9088485007	
2010/01/22 15:32:25	00:01:17	2	9088485007	I	21254	7328521254	

**Outgoing Calls** | Incoming Calls | Model | Filters | Translations | Wakeup calls | Trunks | Misc.

Time: Col 1 Format 2) hh:mm:ss Extension: Col 12 Length 5

Date: Col 1 Format 24) yyyy/mm/dd Digits: Col 6 Length 15

Duration: Col 2 Format 1) hh:mm:ss Trunk: Col 0 Length 0

Account: Col 0 Length 0

PIN Code: Col 0 Length 0

OK Cancel Help

From the **ProfitWatch Call Accounting 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**.

**Reports Generator**

Extension Dept Account Directories Profit Trunk Time Caller Other Custom Options

Extension Details Report

This report provides details on all outgoing calls for the extensions specified during the date and time range specified.

Extension Range: 0 to 999999

Date and Time Range: 22-Jan-10 00:00 To: 22-Jan-10 23:59

Sort entries by: Extension

☐ Start each extension on a new page

Departments:

- ☒ Guest
- ☒ Back Office
- ☒ Computer Room
- ☒ Front Office
- ☒ Operators

Include Calls of Type:  Outgoing + Incoming

Send output to: ☒ Screen ☐ Email ☐ Printer ☐ File

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

**ProfitWatch - Extension Details Report - Windows Internet Explorer**

C:\ProfitWatch\report.htm

File Edit View Favorites Tools Help

ProfitWatch - Extension Details Report

Extension Details Report  
Outgoing + Incoming calls  
Extension Range: 0 to 999999  
Date Range: 22-Jan-10 to 22-Jan-10

DEV CONNECT TESTING  
BASKING RIDGE, NJ  
Report Date: 22-Jan-10 15:49:01

Dept: Guest  
Ext: 21252

Date	Time	Number Dialed	Location	Duration	Charge	Tax	Total
01/22/10	15:31	9088483007	NJ-Bernardsvl	00:01:12	2.17	0.00	2.17
		<b>Calls: 1</b>	<b>Average Dur: 01:12</b>	<b>00:01:12</b>	<b>2.17</b>	<b>0.00</b>	<b>2.17</b>

Dept: Guest  
Ext: 21254

Date	Time	Number Dialed	Location	Duration	Charge	Tax	Total
01/22/10	15:29	21252	Internal_Ext	00:00:33	0.00	0.00	0.00
01/22/10	15:32	9088483007	INC-NJ-Bernardsvl	00:01:17	0.00	0.00	0.00
		<b>Calls: 2</b>	<b>Average Dur: 00:55</b>	<b>00:01:50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Totals**

<b>Total Calls: 3</b>				<b>00:03:02</b>	<b>2.17</b>	<b>0.00</b>	<b>2.17</b>
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Done My Computer 110%

## 8. Conclusion

These Application Notes describe the configuration steps required for the Metropolis ProfitWatch Hotel Call Accounting 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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