



## Avaya Solution & Interoperability Test Lab

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# Application Notes for Metropolis OfficeWatch SL Professional with Avaya IP Office – Issue 1.0

### Abstract

These Application Notes describe the steps required to integrate the Metropolis OfficeWatch SL Professional Call Accounting System with Avaya IP Office 9.1. Metropolis OfficeWatch SL Professional (OfficeWatch) Call Accounting System captures call records from Avaya IP Office using a Station Message Detail Recording (SMDR) link. In turn, OfficeWatch processes the call records and generates detailed reports.

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 steps required to integrate the Metropolis OfficeWatch Call Accounting System with Avaya IP Office 9.1. Metropolis OfficeWatch Call Accounting System captures call records from Avaya IP Office using a Station Message Detail Recording (SMDR) link. In turn, OfficeWatch processes the call records and generates detailed reports.

## 2. General Test Approach and Test Results

This section describes the compliance testing used to verify interoperability of Metropolis OfficeWatch Call Accounting System with Avaya IP Office 9.1. This section covers the general test approach and the test results. The testing covered feature and serviceability test cases. The feature testing covered the ability of OfficeWatch to capture and process call records.

The call records captured and displayed by OfficeWatch were compared for accuracy to the call records displayed by Avaya IP Office Monitor. Call records for various call types were generated, including internal calls, inbound and outbound trunk calls, including PSTN calls, transferred calls, and conference calls.

The serviceability testing focused on the ability of OfficeWatch to recover from adverse conditions such as loss of network connectivity. It was also verified that call records that were generated while OfficeWatch was disconnected from the network were not lost.

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

Interoperability compliance testing covered the following features and functionality:

- Sending call records from IP Office to OfficeWatch for various call types, including internal calls, inbound and outbound trunks, including PSTN calls, transferred calls, and conference calls
- Call records were captured and displayed on OfficeWatch
- Call records were processed by OfficeWatch, which generated detailed reports
- Proper system recovery after loss of network connectivity and power loss

## 2.2. Test Results

OfficeWatch passed compliance testing with Avaya IP Office 9.1.

## 2.3. Support

For technical support on Metropolis OfficeWatch Call Accounting System, contact Metropolis Customer Service by phone, through their website, or email.

**Phone:** (954) 414-2900 x32

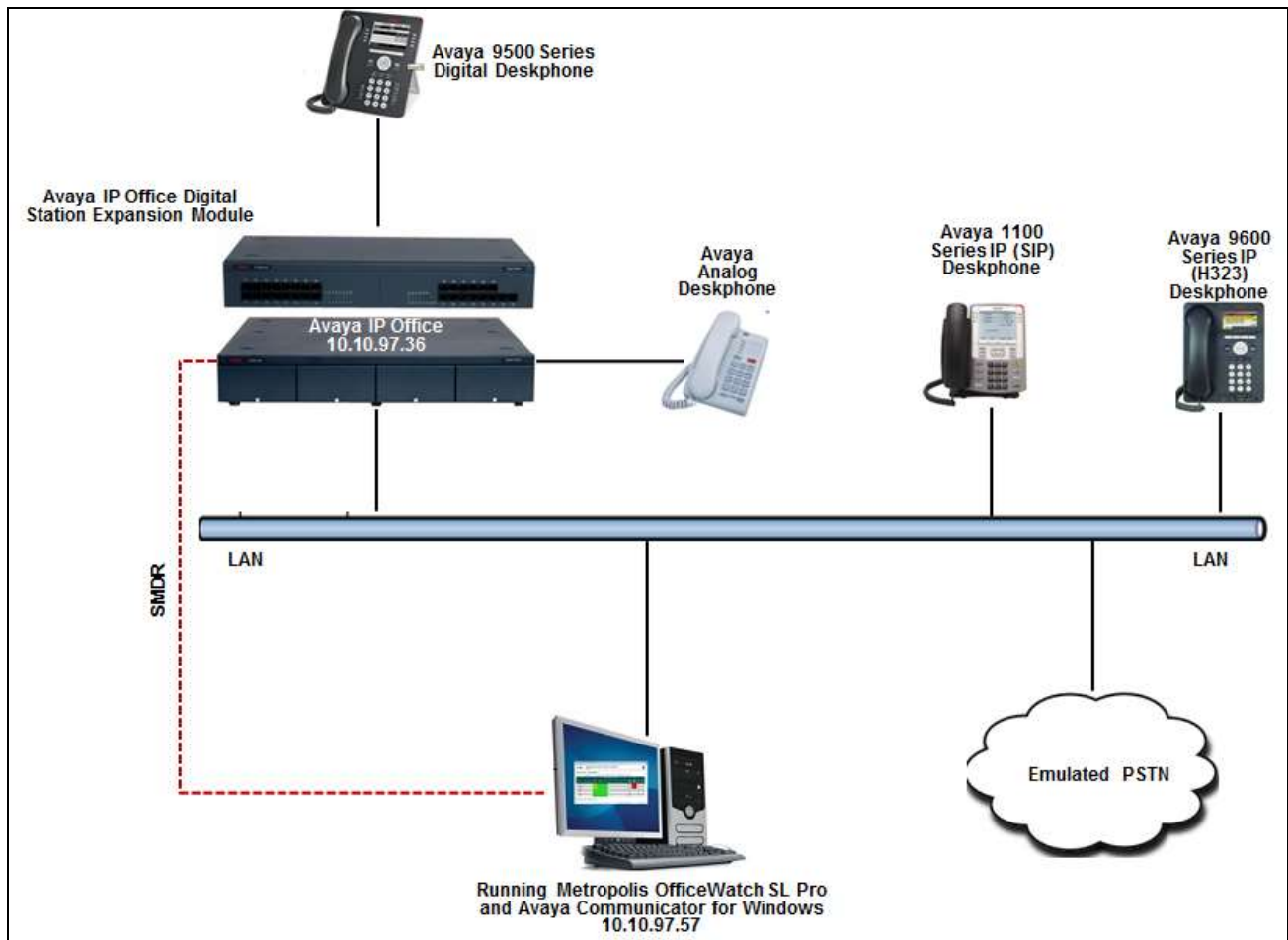
**Web:** <http://www.metropolis.com/support.html>

**Email:** [support2012@metropolis.com](mailto:support2012@metropolis.com)

### 3. Reference Configuration

**Figure 1** illustrates the configuration used for the compliance test. In the sample configuration, IP Office was connected to the Emulated PSTN site via an SIP trunk. The Emulated PSTN site was used to generate inter-site PSTN calls.

Avaya IP Office consisted of Avaya IP Office 500V2 box, Avaya IP (H323, SIP and Communicator), Digital and Analog Telephones. OfficeWatch connects via the LAN and establishes an SMDR link to IP Office.



**Figure 1: Metropolis OfficeWatch Call Accounting System with Avaya IP Office**

## 4. Equipment and Software Validated

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

Equipment	Release/Version
Avaya IP Office 500V2	9.1.0.437
Avaya Telephones: <ul style="list-style-type: none"><li>• 9621G IP (H323) Deskphone</li><li>• 1140 IP (SIP) Deskphone</li><li>• 9508 Digital Deskphone</li><li>• Communicator for Windows</li></ul>	6.4014 4.04.18 0.55 2.0.3.30
Metropolis OfficeWatch Call Accounting System running on Windows 7 Pro SP1 OS	2015.03.11C

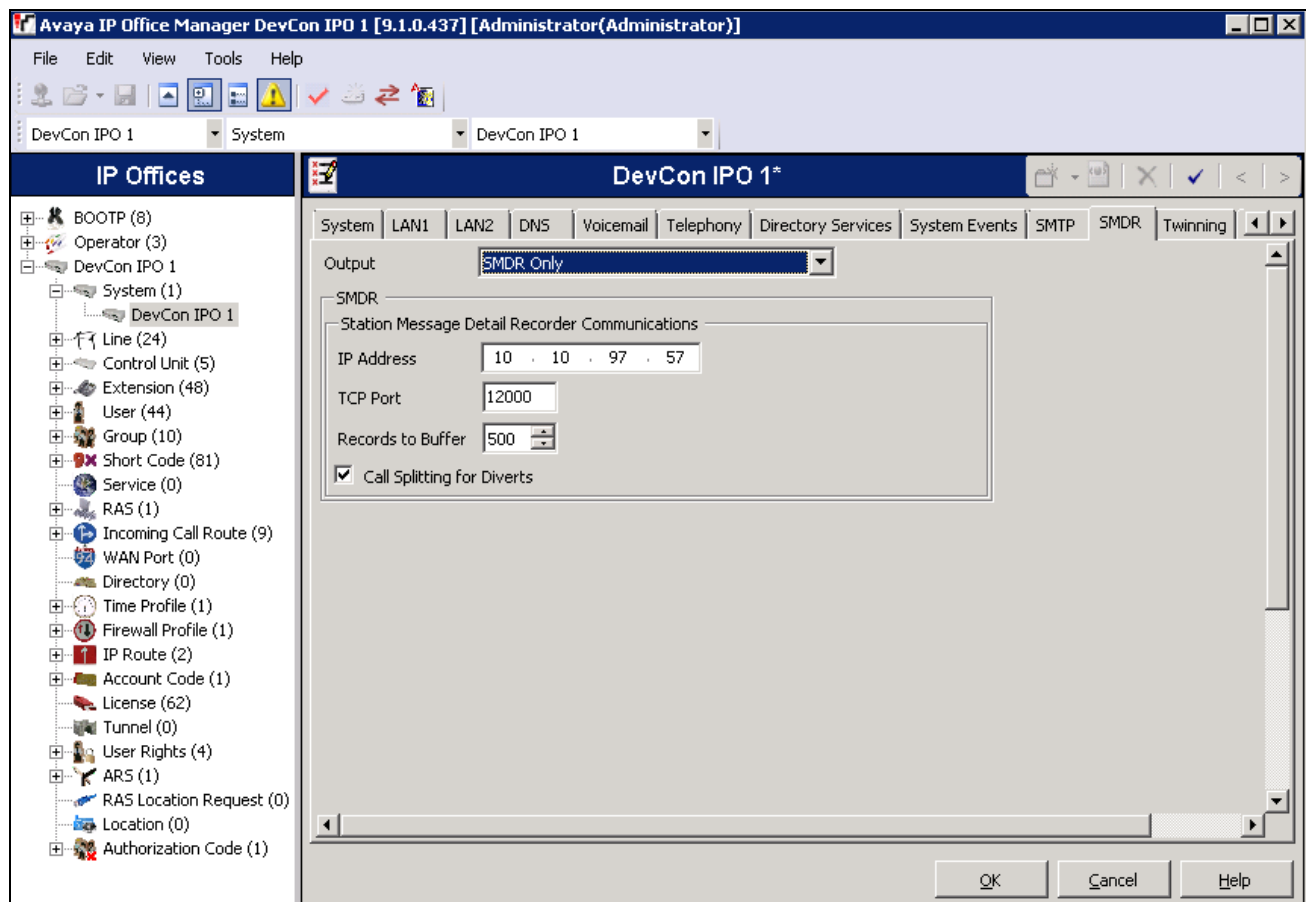
*Note: Compliance testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.*

## 5. Configure Avaya IP Office

This section describes the IP Office configuration that is required to interoperate with OfficeWatch. This section covers the configuration of the SMDR link.

Launch the Avaya IP Office 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 **DevCon IPO 1** 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 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.



## 6. Configure Metropolis OfficeWatch Call Accounting System

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

- Administer PBX
- Administer Call Processing Options
- Administer Grace Periods

### 6.1. Administer PBX

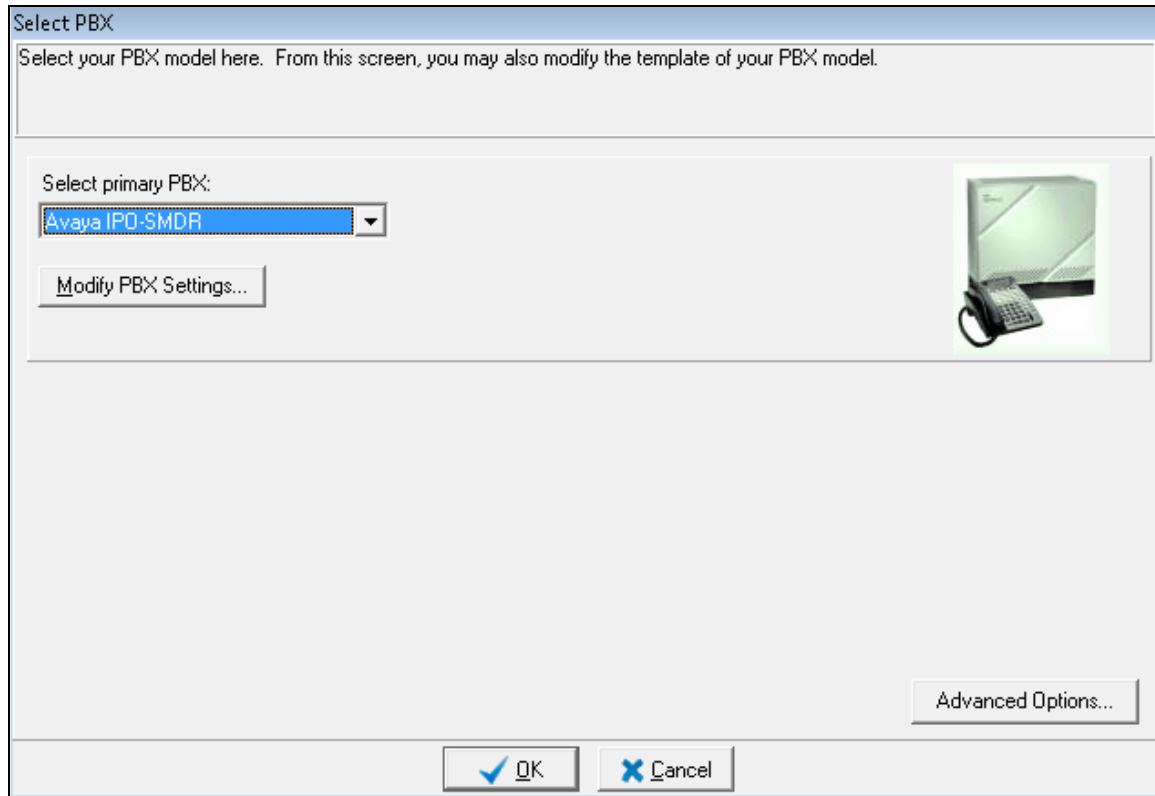
From the Metropolis OfficeWatch Call Accounting System server, launch **OfficeWatch** to display the **OfficeWatch SL Pro Telemanagement 2015 – AVAYA DEVCONNECT DEMO** screen as shown below. Select **PBX → Select PBX** (not shown) from the top menu.



The **Select PBX** screen is displayed next. Enter the following value for the specified field.

- **Select primary PBX:** Select an applicable type, in this case *Avaya IP Office SMDR*

Click **Modify PBX Settings**.



Select PBX

Select your PBX model here. From this screen, you may also modify the template of your PBX model.

Select primary PBX:

Avaya IPO-SMDR

Modify PBX Settings...

Advanced Options...

OK Cancel



The **Modify PBX – Avaya IPO – SMDR** 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** tab. For **Extension Length**, enter the maximum number of digits used for internal extensions on Avaya IP Office, in this case “6”. Retain the default values in the remaining fields.

Modify PBX - Avaya IPO-SMDR

☐ Show live cursor ☐ Show newest CDR Refresh

Data Received from PBX:

No data has been received from the PBX.

Outgoing Incoming Model Filters Translations Misc. CDR Filter Aux 1 Aux 2

	Pos	Format		Pos	Length
Time:	1	2) hh:mm:ss	Extension:	12	6
Date:	1	24) yyyy/mm/dd	Digits:	6	15
Duration:	2	1) hh:mm:ss	Trunk:	15	6

Use out trigger file on: Pos 0 Length 0 Edit File

Basic Fields Extended Fields Stages Filters

OK Cancel

Select the **Incoming** 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.

Modify PBX - Avaya IPO-SMDR

☐ Show live cursor ☐ Show newest CDR Refresh

Data Received from PBX

No data has been received from the PBX.

Outgoing Incoming Model Filters Translations Misc. CDR Filter Aux 1 Aux 2

Time: Pos: 1 Format: 2) hh:mm:ss Extension: Pos: 12 Length: 6

Date: Pos: 1 Format: 24) yyyy/mm/dd Digits: Pos: 4 Length: 15

Duration: Pos: 2 Format: 1) hh:mm:ss Trunk: Pos: 15 Length: 6

Duplicate Outgoing Format

Call is incoming if: Pos: 5 Text: contains |

Pos: not used Text: not used

Pos: 0 Length: not used

Incoming if short field: Pos: 0 Length: 0 Min Digits: 0 Exception list:

Use in trigger file on: Pos: 0 Length: 0 Edit File

Basic Fields Extended Fields Stages Filters

OK Cancel

## 6.2. Administer Call Processing Options

From the **OfficeWatch SL Pro Telemanagement 2015 – AVAYA DEVCONNECT DEMO** screen shown in **Section 6.1** select **Setup → Call Processing Options** (not shown) from the top menu to display the **Call Processing Options** screen.

Check **Process Incoming calls**, **Process free 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.

Call Processing Options

Various features for processing calls can be enable or disabled in this screen depending on specific needs. For multi-site operation, each site may be configured independently from other sites.

Processing | Rounding | Translations | Misc. |

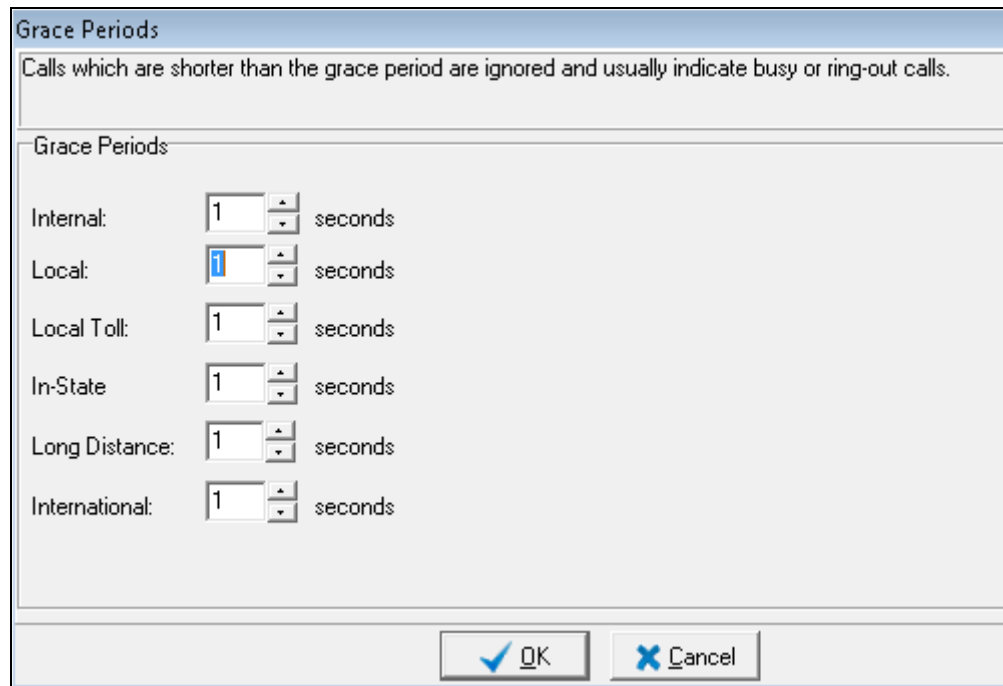
- ☒ Process Incoming calls
- ☐ Charge Incoming calls
- ☒ Process free calls
- ☒ Process extension-to-extension (internal) calls
  - Maximum Internal Extension Length:
- ☐ Mirror and store both sides of internal calls

☐ Centralize billing sites

OK Cancel

### 6.3. Administer Grace Periods

From the **OfficeWatch SL Pro Telemanagement 2015 – AVAYA DEVCONNECT DEMO** screen shown in **Section 6.1** select **Setup → Grace Periods** (not shown) 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". At the top, a text box contains the message: "Calls which are shorter than the grace period are ignored and usually indicate busy or ring-out calls." Below this is a section labeled "Grace Periods" containing six rows of settings. Each row consists of a call type label, a numeric input field with up/down arrows, and the word "seconds". The settings are: Internal (1), Local (1), Local Toll (1), In-State (1), Long Distance (1), and International (1). At the bottom of the window are two buttons: "OK" with a blue checkmark icon and "Cancel" with a blue X icon.

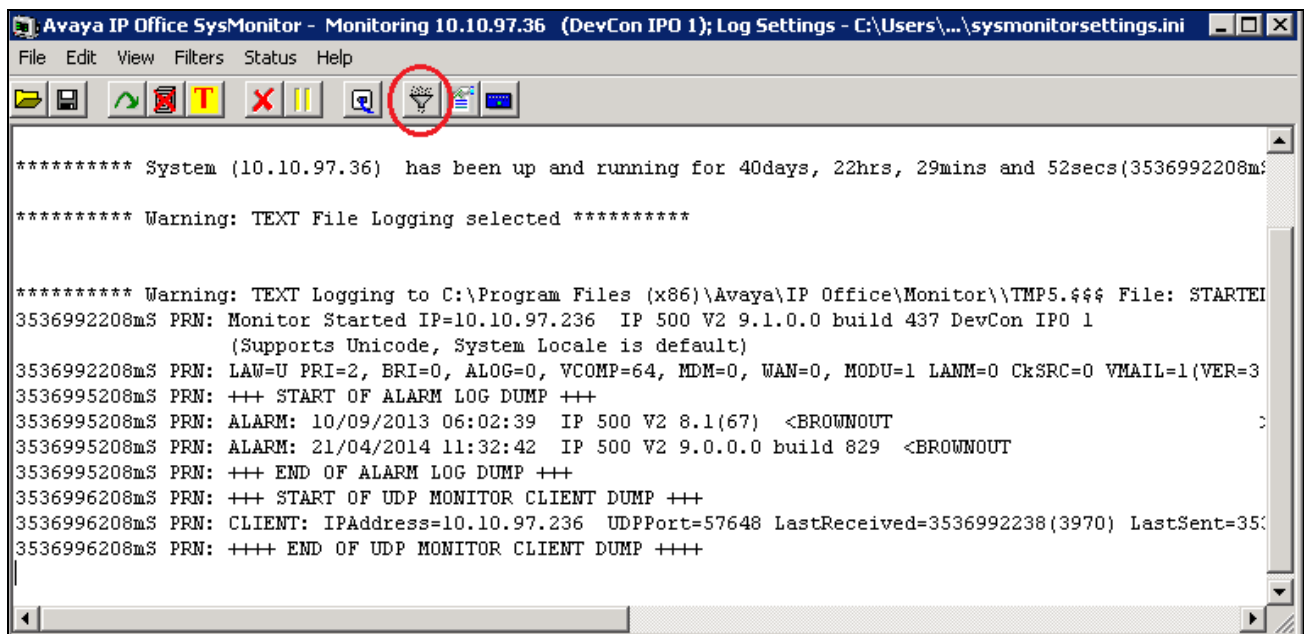
Call Type	Grace Period (seconds)
Internal	1
Local	1
Local Toll	1
In-State	1
Long Distance	1
International	1

## 7. Verification Steps

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

### 7.1. Verify Avaya IP Office

Launch the Avaya IP Office Monitor application to display the **Avaya IP Office SysMonitor** screen 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.

**All Settings**

ISDN	Key/Lamp	Directory	Media	PPP	R2	Routing	Services	SIP	System
T1		VPN		WAN		SCN		Jade	
ATM	Call	DTE	EConf	Frame Relay		GOD	H.323	Interface	

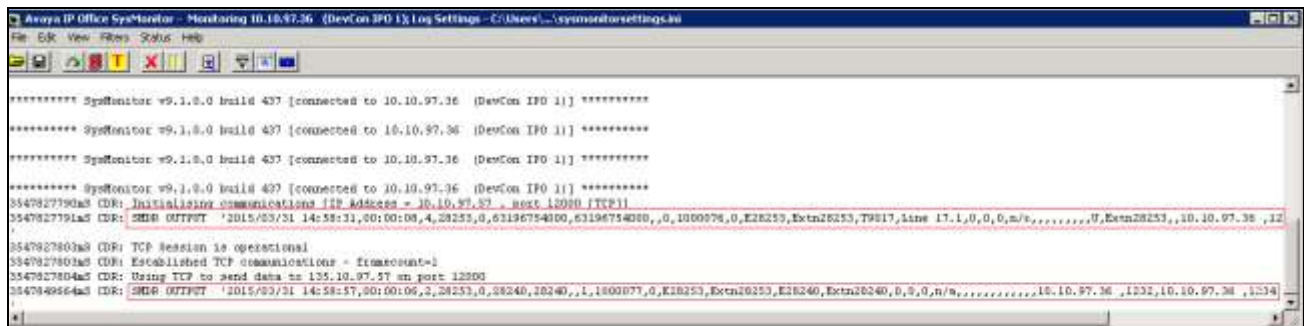
  

<b>Events</b> <input type="checkbox"/> Call <input type="checkbox"/> Call Delta <input type="checkbox"/> Call Delta2 <input type="checkbox"/> Call Logging <input type="checkbox"/> Extension <input type="checkbox"/> Line <input type="checkbox"/> MonCM <input type="checkbox"/> MonIVR <input type="checkbox"/> <b>Targeting</b> <input type="checkbox"/> <b>ARS</b> <input type="checkbox"/> <b>LRQ</b> <input type="checkbox"/> ACD <input type="checkbox"/> <b>IP Dect</b> <input checked="" type="checkbox"/> Call Detail Records <input checked="" type="checkbox"/> CDR Extra diagnostics  Trace Colour <span style="background-color: black; color: black;">█</span>	<b>Packets</b> <input type="checkbox"/> Call <input type="checkbox"/> Extension Send <input type="checkbox"/> Extension Receive <input type="checkbox"/> Extension Tx C <input type="checkbox"/> Extension Rx C <input type="checkbox"/> Extension Tx P <input type="checkbox"/> Extension Rx P <input type="checkbox"/> Line Send <input type="checkbox"/> Line Receive <input type="checkbox"/> Short Code Msgs <input type="checkbox"/> Supplementary services <input type="checkbox"/> <b>IP Dect Msgs</b> <input type="checkbox"/> Sort IEs	<b>Embedded Voicemail</b> <input type="checkbox"/> Voicemail Client <input type="checkbox"/> Audio Response <input type="checkbox"/> Message Recorder <input type="checkbox"/> Housekeeping <input type="checkbox"/> Flash Storage <input type="checkbox"/> Silence <input type="checkbox"/> Email  <b>PC Voicemail</b> <input type="checkbox"/> Voicemail Events <input type="checkbox"/> Voicemail Messaging
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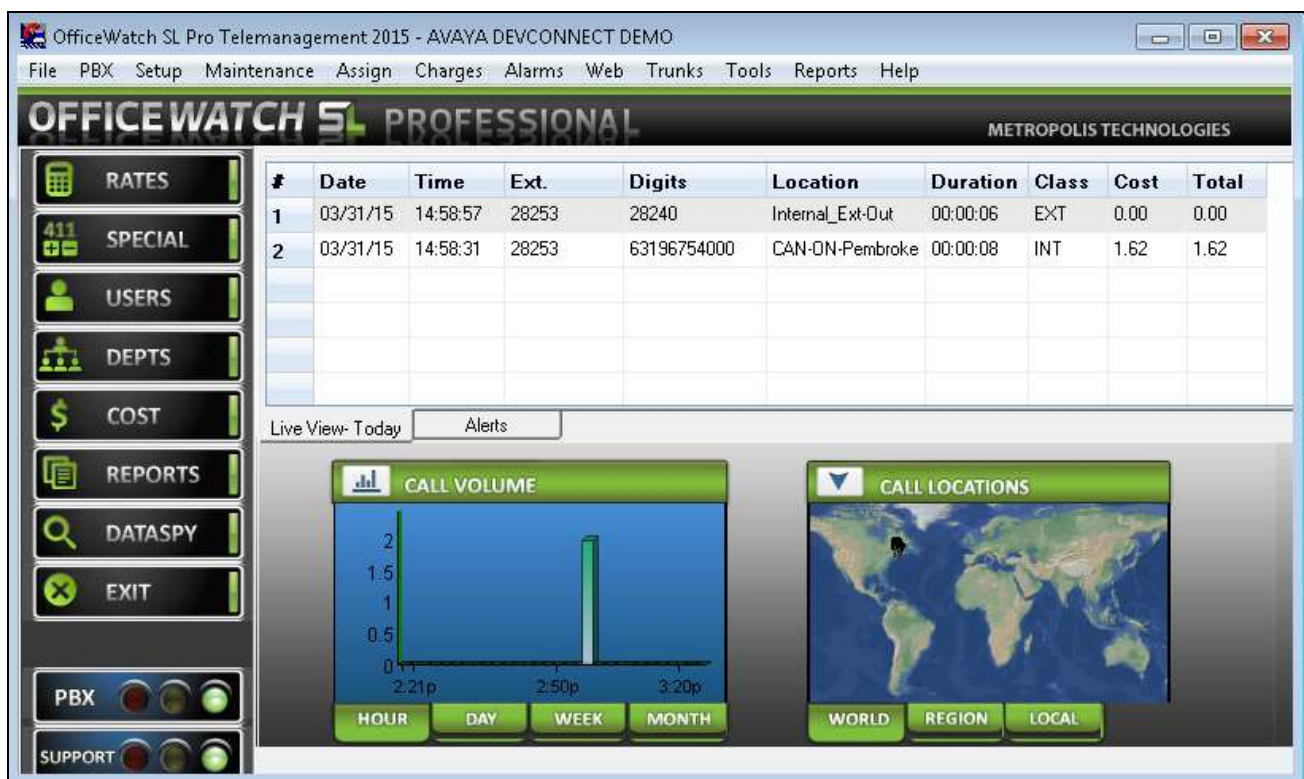
<b>Default All</b>	<b>Clear All</b>	Tab Clear All	Tab Set All	<b>OK</b>	Cancel
Save File	Load File	Load Partial File	Select File		

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 SysMonitor** screen as shown below.



## 7.2. Verify Metropolis OfficeWatch Call Accounting System

From the Metropolis OfficeWatch server, follow the navigation in **Section 6.1** to display the **OfficeWatch SL Pro Telemanagement 2015 – AVAYA DEVCONNECT DEMO** 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 6.1** to display the **Modify PBX Settings** 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.

Modify PBX - Avaya IPO-SMDR

☐ Show live cursor ☐ Show newest CDR [Refresh](#)

Data Received from PBX

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
2015/03/31 14:58:31	00:00:08	4	28253	0	63196754000	63196754000		0	10000
2015/03/31 14:58:57	00:00:06	2	28253	0	28240	28240		1	10000

Outgoing | Incoming | Model | Filters | Translations | Misc. | CDR Filter | Aux 1 | Aux 2

Time: Pos 1 Format 2) hh:mm:ss Extension: Pos 12 Length 6

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

Duration: Pos 2 Format 1) hh:mm:ss Trunk: Pos 15 Length 6

Use out trigger file on: Pos 0 Length 0 [Edit File](#)

Basic Fields | Extended Fields | Stages | Filters

[OK](#) [Cancel](#)



From the Metropolis OfficeWatch server, follow the navigation in **Section 6.1** to display the **OfficeWatch SL Pro Telemanagement 2015 – AVAYA DEVCONNECT DEMO** screen. Select **Reports → Report Generator** (not shown) from the top menu. The **Reports Generator** screen is displayed. Select **Extension → Extension Details Report** from the top menu, and click **Report**.

**Report Generator**

Extension Dept Divs & Orgs Account Code Profit Trunk Time Stages Other Custom Options

**Extension Details Report**

User ID Range: 0 to: 9999999999

Date and Time Range: 31-Mar-15 00:00 To: 31-Mar-15 23:59

Sort entries by: Date/Time

☐ Start each extension on a new page

☐ Toll Calls Only

Classes:

<input checked="" type="checkbox"/> Internal	<input checked="" type="checkbox"/> International
<input checked="" type="checkbox"/> Incoming	<input checked="" type="checkbox"/> Emergency
<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Service Charge
<input checked="" type="checkbox"/> Local Toll	<input type="checkbox"/> Other 1
<input checked="" type="checkbox"/> State	<input type="checkbox"/> Other 2
<input checked="" type="checkbox"/> Long Distance	

Departments: ☒ Default

Clear All

Output Format: HTML ☒ Include Titles

Send to: ☒ Screen ☐ Email  
☐ Printer  
☐ File

☐ Schedule it:  
☐ Memorize it:

**Report!** **Close**



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