Avaya Solution & Interoperability Test Lab

Application Notes for ISI Infortel Select with Avaya Aura® Session Manager - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the ISI Infortel Select call accounting software to successfully interoperate with Avaya Aura® Session Manager.

ISI Infortel Select is a call accounting software that interoperates with Avaya Aura® Session Manager. Call records can be generated for various types of calls. ISI Infortel Select collects, and processes the call records, using SFTP credentials.

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

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1. Introduction

The overall objective of this interoperability compliance testing is to verify that the ISI Infortel Select call accounting software can interoperate with Avaya Aura® Session Manager 7.0. ISI Infortel Select (herein referred to as Infortel Select) connects to Avaya Aura® Session Manager over a local or wide area network using Secure File Transfer Protocol (SFTP).

ISI Infortel Select uses SFTP to log into Session Manager and access Call Detail Record (CDR) files. CDR files are stored in **the /var/home/ftp/CDR** directory. Anytime ISI Infortel Select logs into the server it will be provided direct access to this directory. The CDR files stored in the special directory are those CDR data files that Avaya Aura® Session Manager has completed and closed and that are now ready for ISI Infortel Select to collect. Once the CDR files have been retrieved, ISI Infortel Select should delete the files from Avaya Aura® Session Manager's hard drive. Typically multiple CDR files will be created each day. The file naming convention that is used for the CDR data files is as shown below:

tssssss-ssss-YYMMDD-hh_mm

Where:

- The file name is fixed at 25 alphanumeric characters, including dashes "-" and underscore "_".
- "t" is populated with the character "S" in the first SM release.
- "ssssss-ssss" is an alphanumeric string of six characters, followed by a dash "-", and followed by an alphanumeric string of four characters, for a total of eleven characters. This string uniquely identifies the Avaya Aura® Session Manager server through its IPv4 IP address, in hexadecimal.
- "YY" is a two digit number representing the year when the file was created.
- "MM" is a two digit number representing the month when the file was created.
- "DD" is the two digit number representing the day of the month when the file was created.
- "hh" is the two digit number representing the hour of the day when the file was created. (24 hour clock server time)
- "mm" is the two digit number representing the number of minutes after the hour when the file was created.

Infortel Select provides traditional call collection, rating, and reporting for any size businesses. Infortel Select can interface with most telephone systems - in particular, with the Avaya Aura® Communication Manager and Avaya Aura® Session Manager - to collect and interpret the detailed records of inbound, outbound, tandem, and internal telephone calls. Infortel Select then calculates the appropriate charge for local, long distance, international & special calls and allocates them to responsible parties.

During the test, both Avaya H.323 and SIP endpoints were included. SIP endpoints registered with Avaya Aura® Session Manager. An assumption is made that Avaya Aura® Session

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Manager and Avaya Aura® System Manager are already installed and basic configuration have been performed.

Only steps relevant to this compliance test will be described in this document. In these Application Notes, the following topics will be described:

- Avaya Aura® System Manager – Creating SFTP credentials for Infortel Select.
- Infortel Select – SFTP configuration.

2. General Test Approach and Test Results

The general test approach was to manually place a several SIP trunk calls through Session Manager. Session Manager will store CDR data in a specific directory in Session Manager. Infortel Select logs in to Session Manager (Management IP address), using the SFTP credentials. Then, Infortel Select collects CDR records, and properly classifies and reports the attributes of the call, and delete CDR data which Infortel Select collected.

For serviceability testing, Session Manager was rebooted, and, after Session manager came back up, Infortel Select was able to login using SFTP account and collect the CDR data.

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 included features and serviceability tests. The focus of the compliance testing was primarily on verifying the interoperability between Infortel Select and Session Manager.

2.2. Test Results

All executed test cases passed, except those noted below. Infortel Select was able to successfully collect the CDR records from Session Manager, using the SFTP credentials.

Observation: During the compliance test, the main feature of collecting and deleting the CDR data from Session Manager did not work as expected. The steps involve the following:

1) SFTP into Session Manager with credentials. This will lead to the CDR directory.
2) Collect the CDR data in the directory.
3) Once the CDR data is collected, delete the CDR data in Session Manager.

Infortel Select was able to collect the data, but could not delete the data. Thus, they will get duplication CDR data, every time Infortel Select comes in for collecting data. This issue is with Session Manager 7.0 permission related. With Session Manager 6.3.x, this behavior was not

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observed. Note that Infortel Select was able to filter out the duplicate records and not include the duplicates in the report they produce. Fix for the CDR delete file problem has been targeted for 7.0.1.0.

2.3. Support

Technical support for Infortel Select can be obtained through the following:

- http://www.isi-info.com/support/support.htm
- (847) 592-3250

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of an Avaya Server running Communication Manager on VMware, an Avaya G450 Media Gateway, a Session Manager, and Infortel Select. Avaya 9600 Series SIP IP Deskphones have been registered to Session Manager. The solution described herein is also extensible to other Avaya Servers and Media Gateways.

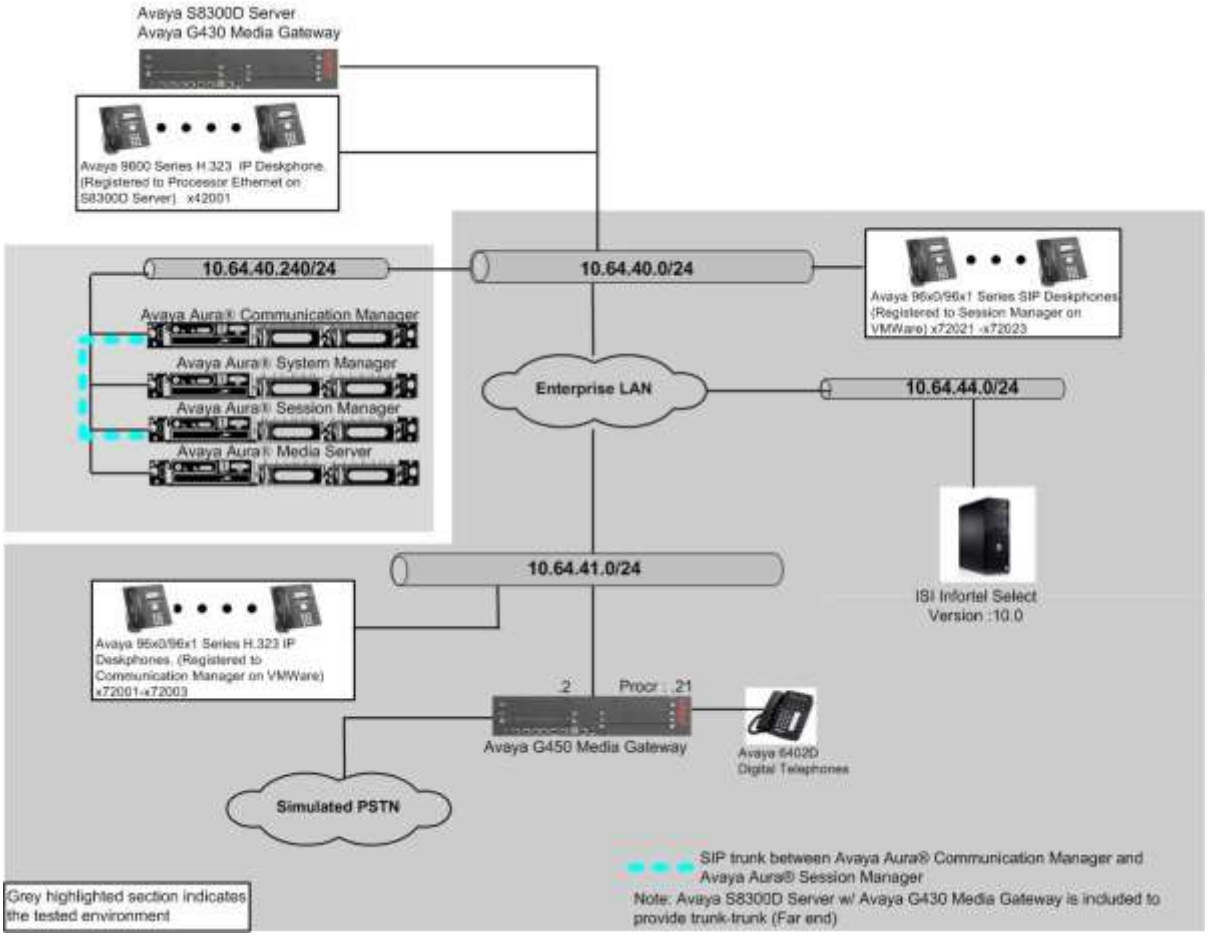

Figure 1. Test configuration of ISI Infortel Select with Avaya Aura® Session Manager

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4. Equipment and Software Validated

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

Equipment		Software
Avaya Aura® Communication Manager on Virtual Environment		7.0 (R017x.00.0.441.0)
Avaya G450 Media Gateway		37.19.0
Avaya Aura® Media Server		7.7.0.226
Avaya Aura® System Manager on Virtual Environment		7.0.0.0.3929
Avaya Aura® Session Manager on Virtual Environment		7.0.0.0.700007
Avaya 96x1/96x0 Series SIP IP Deskphone		
	9611G 9630	7.0.0.39 2.6.14
Avaya 96X0 and 96X1 Series H.323 IP Deskphone		
	9620 9621G 9650	3.25 6.6 3.25
Infortel Select on Windows 2008 Server R2 Standard, 64 bit		10.0.5740

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5. Configure Avaya Aura® Session Manager

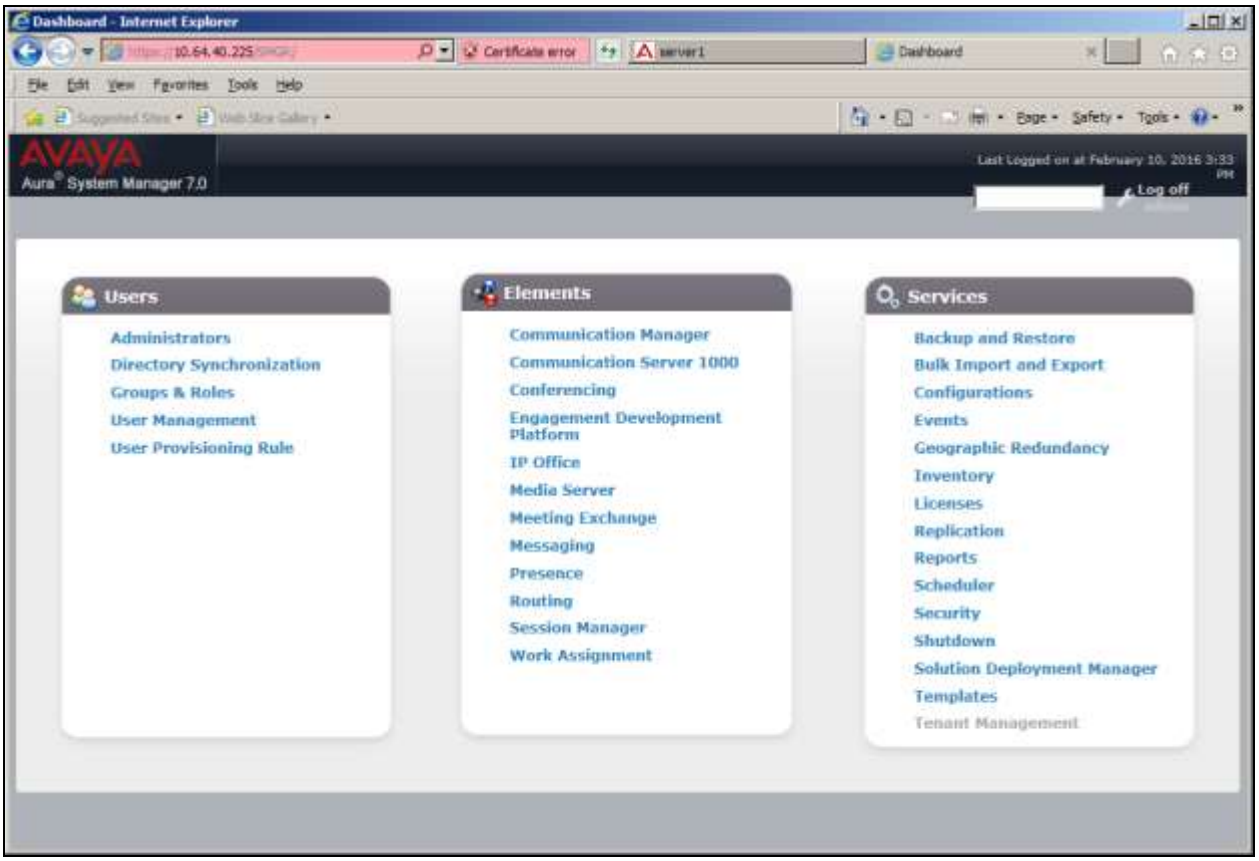
This section describes how to create a CDR user account. This CDR user account will be utilized for Infortel Select to SFTP to Session Manager for collecting and removing CDR data.

This section assumes that initial configuration on Session Manager has been performed, and Routing and Session Manager Instance are administered properly. This section will only discuss enabling the CDR configuration. During the compliance test, the CDR data will be stored in the hard disk drive of Session Manager. All calls that pass through this trunk (or entity link) will have their associated call data stored. To enable CDR in Session Manager, the following has to be modified:

- Session Manager instances (**Elements → Session Manager → Session Manager Administration → Session Manager Instances**)
- SIP Entities (**Routing → SIP Entities**)

To create credentials, enter http://<IP address of System Manager> in the URL field of your browser, and log in with the appropriate credentials for accessing System Manager.

Navigate to **Elements→ Session Manager → Session Manager Administration**.



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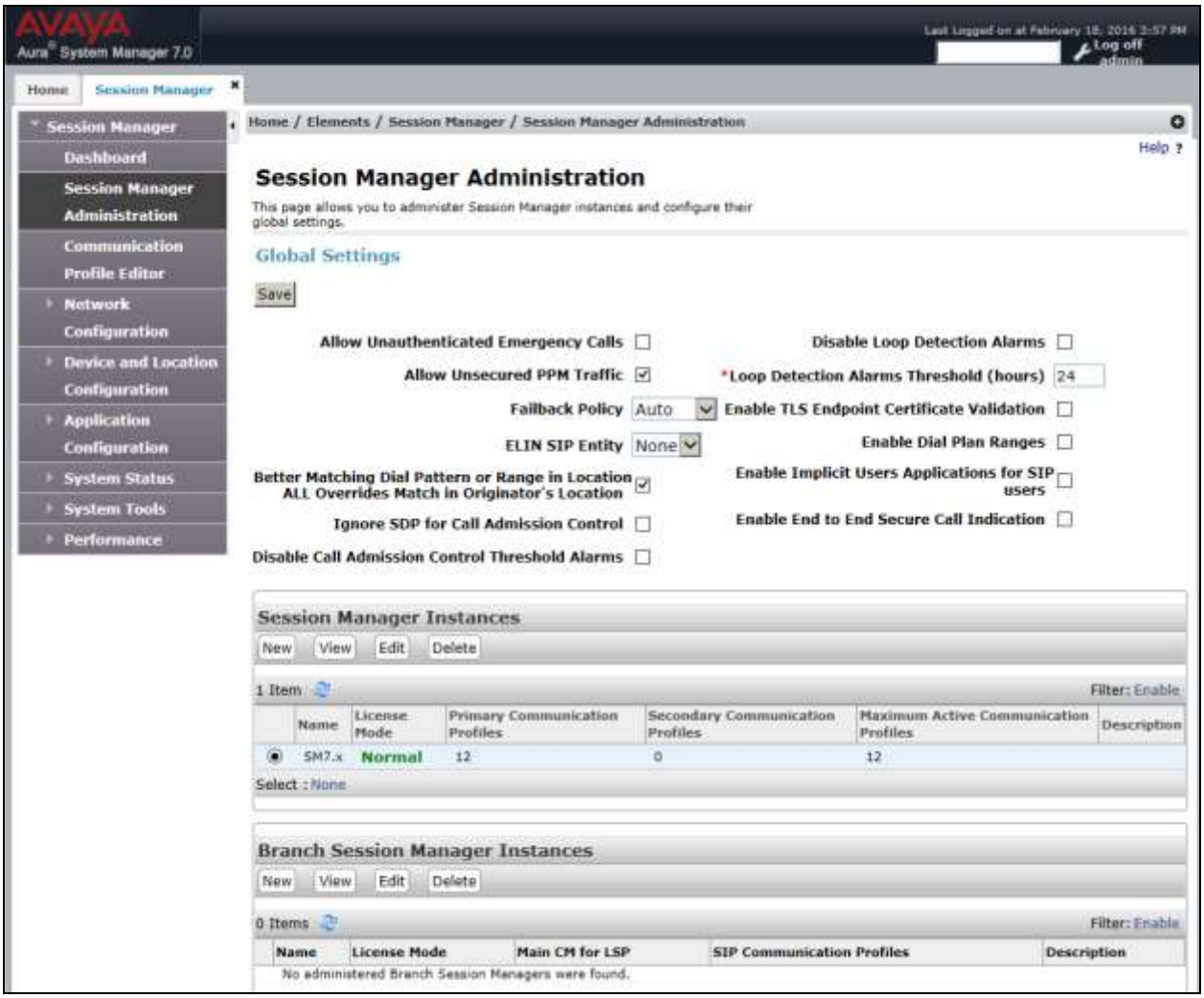
The **Session Manager Administration** screen is displayed.
Under the **Session Manager Instances** section, select an instance and click **Edit**.



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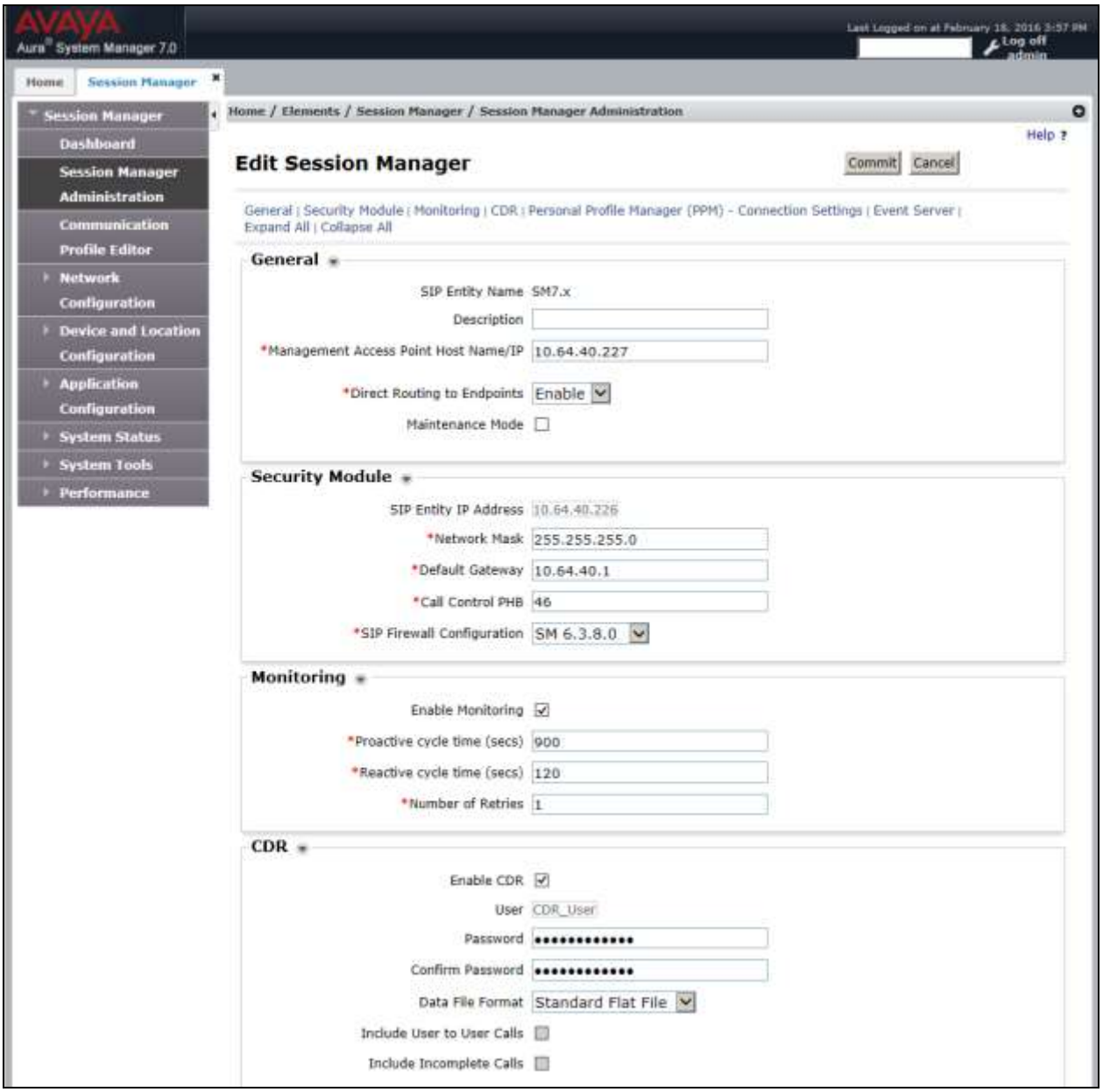
The **Edit Session Manager** screen is displayed.
Under the **CDR** section, provide the following information:

- Check the checkbox on the **Enable CDR** field to enable the CDR process.
- Provide a password for **CDR_User**. This password was utilized during the SFTP access to Session Manager.
- Enter the same password for the **Confirm Password** field.

Click **Commit**.



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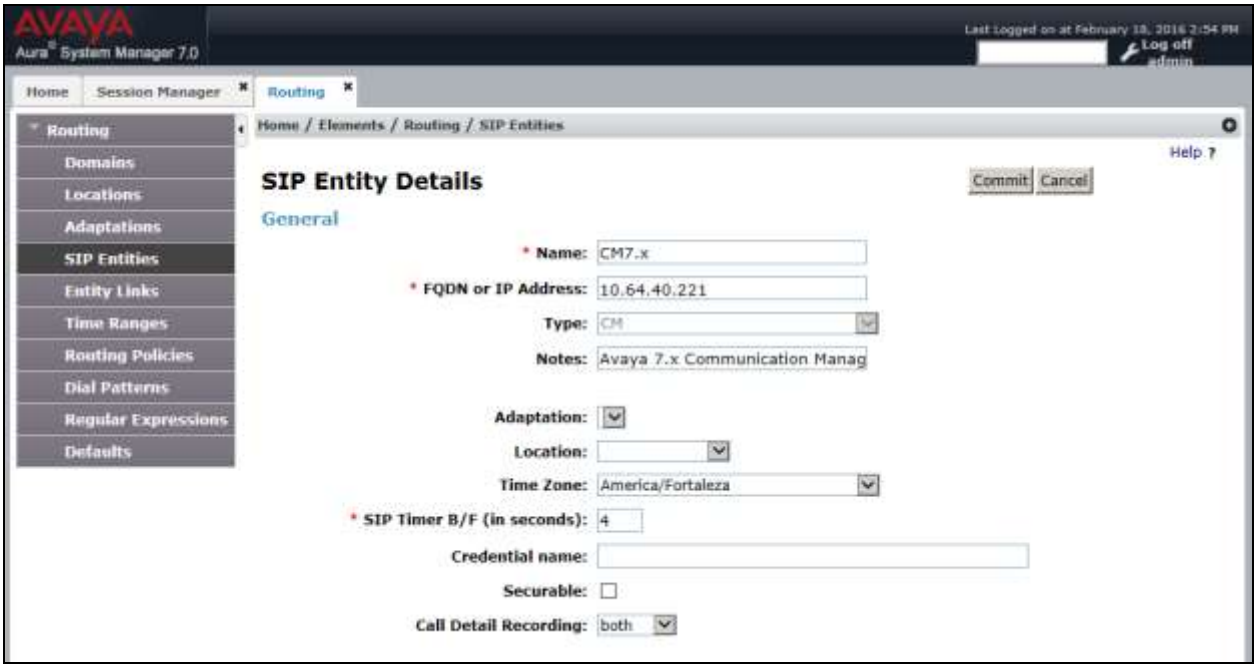
During the SIP entity configuration, every SIP entity, that collects CDR data, has to be enabled and specified which direction of calls (ingress/egress/both/none) will be stored.
Navigate to **Element → Routing → SIP Entity**. The following screen describes **CM7.x Entity Detail**s, which is already configured prior to the compliance test. On the **Call Detail Recording** field, select which directions of calls are stored in Session Manager. During the compliance test, "both" was selected.

Click **Commit**.



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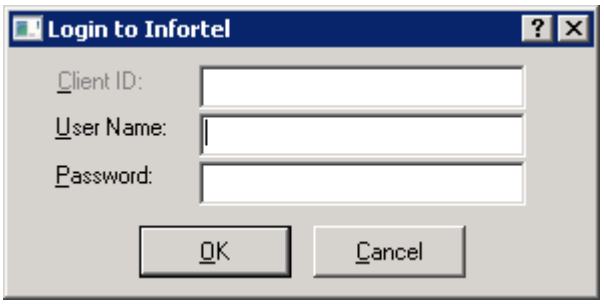
6. Configure Infortel Select

This section describes the operation of Infortel Select to collect CDR data from Session Manager. Installation of the Infortel Select software was performed by an ISI engineer prior to the actual compliance test. In this section, the following topics are discussed:

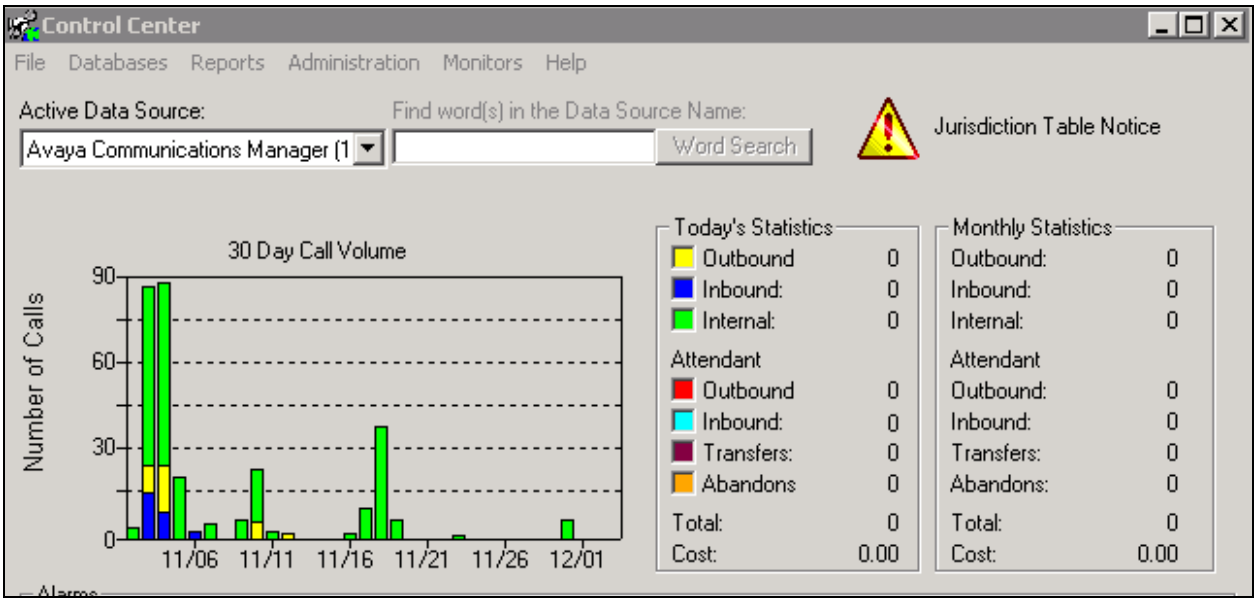
- Configure ISI Infortel Select for SFTP
- View ISI Infortel Select CDR report

6.1. Configure ISI Infortel Select for SFTP

To create SFTP credentials, navigate to **Start → Control Center**, and provide credentials to log into the **Control Center** page.



From the **Control Center** page, select **Administration → System Configuration Options**.



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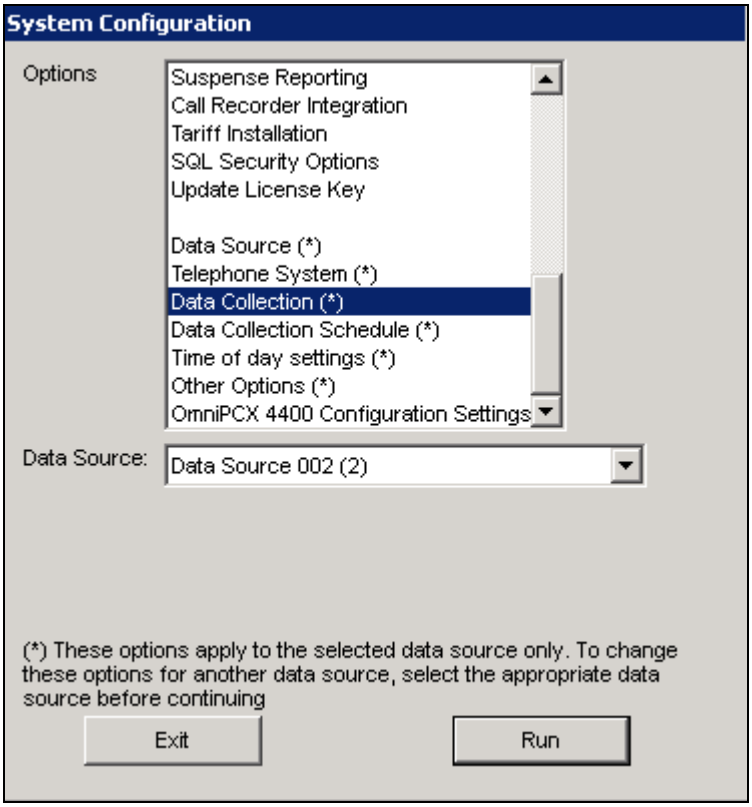
From the **System Configuration** screen, scroll down and select **Data Collection (*)** and select the **Data Source 002 (2)** on the **Data Source** field.

Click on **Run**.



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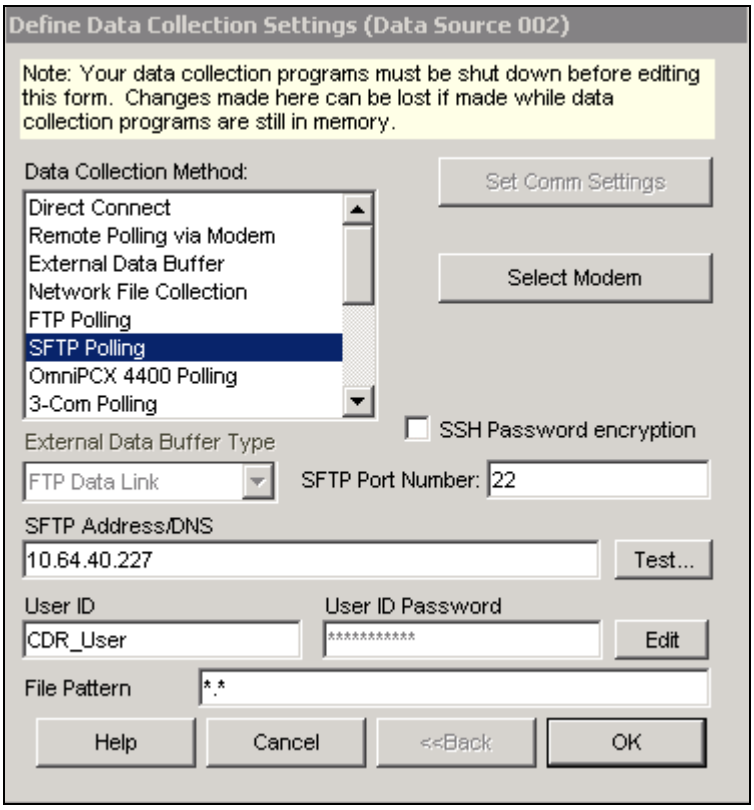
On the **Define Data Collection Settings (Data Source 002)** page, choose **SFTP Polling** and provide IP address of Session Manager (Management). Enter the **User ID** and **User ID Password**, created in **Section 5**.

Click on **OK**.



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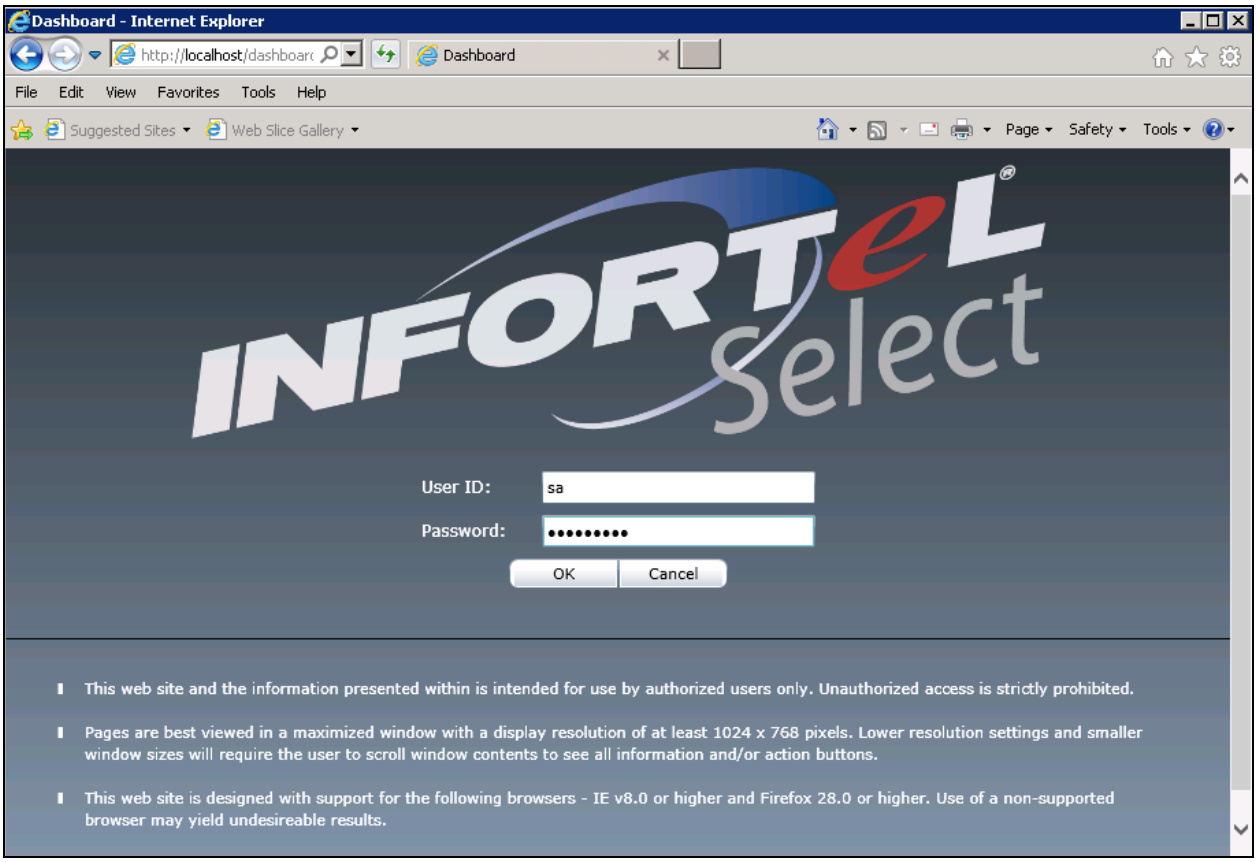
6.2. View ISI Infortel Select Report

To view the CDR report, launch a web browser. Enter **http://<IP address of ISI Infortel Select>/dashboard** in the URL, and log in with appropriate credentials.



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From the **Dashboard** page, select **Report/Exports** icon, , at the bottom of the screen.

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Select **Report Publisher** on the **Report/Export**s page.

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Select **Call Detail Record Search** on the **Report Publisher** page.

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On the **Execute/Define Reports** page, enter the specific date or dates to list the call detail data. Click the **Run Now** button at the top and select the review type, either **Preview PDF** or **Preview HTML**.

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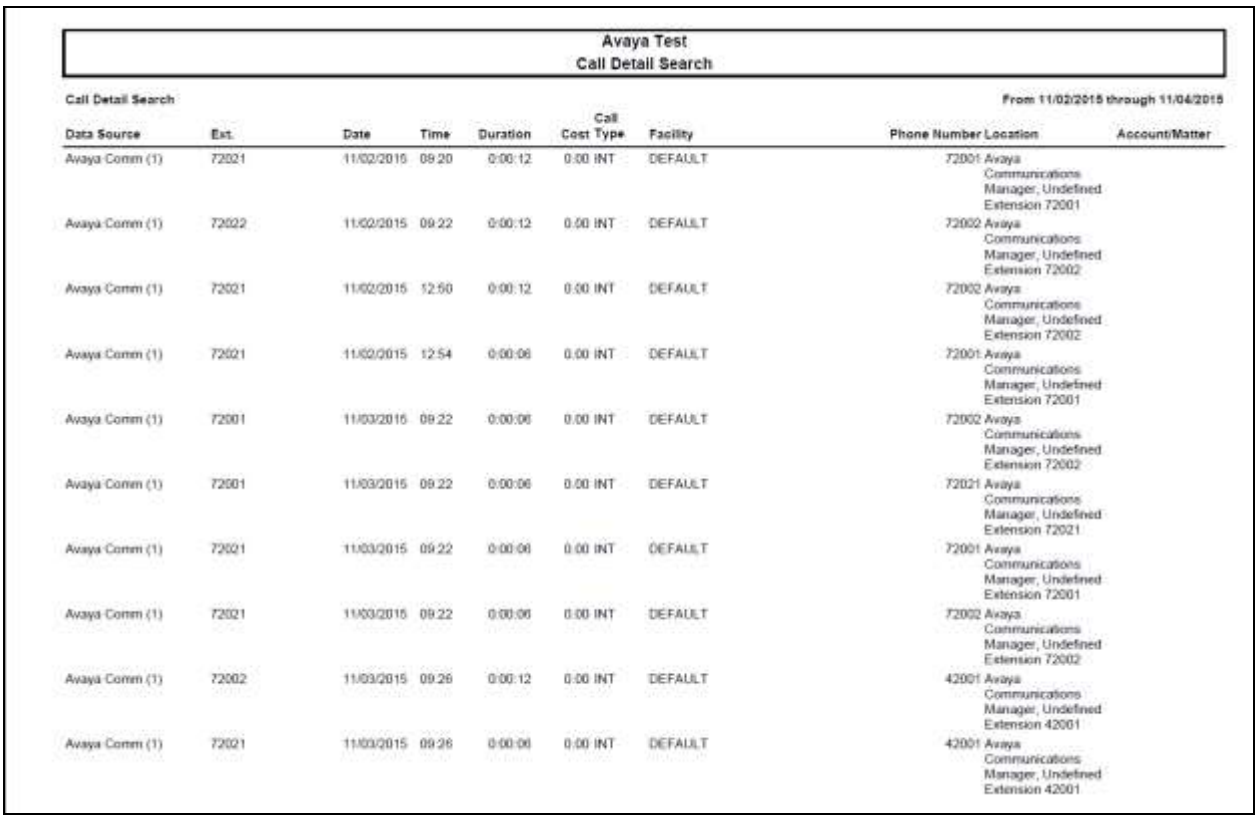
The following screen shows the final report that was generated on a specific date.



Avaya Test
Call Detail Search

Call Detail Search — **From 11/02/2015 through 11/04/2015**

Data Source	Ext.	Date	Time	Duration	Call Cost	Type	Facility	Phone Number	Location	Account/Matter
Avaya Comm (1)	72021	11/02/2015	09:20	0:00:12	0.00	INT	DEFAULT	72001	Avaya Communications Manager, Undefined Extension 72001	
Avaya Comm (1)	72022	11/02/2015	09:22	0:00:12	0.00	INT	DEFAULT	72002	Avaya Communications Manager, Undefined Extension 72002	
Avaya Comm (1)	72021	11/02/2015	12:50	0:00:12	0.00	INT	DEFAULT	72002	Avaya Communications Manager, Undefined Extension 72002	
Avaya Comm (1)	72021	11/02/2015	12:54	0:00:06	0.00	INT	DEFAULT	72001	Avaya Communications Manager, Undefined Extension 72001	
Avaya Comm (1)	72001	11/03/2015	09:22	0:00:06	0.00	INT	DEFAULT	72002	Avaya Communications Manager, Undefined Extension 72002	
Avaya Comm (1)	72001	11/03/2015	09:22	0:00:06	0.00	INT	DEFAULT	72021	Avaya Communications Manager, Undefined Extension 72021	
Avaya Comm (1)	72021	11/03/2015	09:22	0:00:06	0.00	INT	DEFAULT	72001	Avaya Communications Manager, Undefined Extension 72001	
Avaya Comm (1)	72021	11/03/2015	09:22	0:00:06	0.00	INT	DEFAULT	72002	Avaya Communications Manager, Undefined Extension 72002	
Avaya Comm (1)	72002	11/03/2015	09:26	0:00:12	0.00	INT	DEFAULT	42001	Avaya Communications Manager, Undefined Extension 42001	
Avaya Comm (1)	72021	11/03/2015	09:26	0:00:06	0.00	INT	DEFAULT	42001	Avaya Communications Manager, Undefined Extension 42001	

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7. Verification Steps

The following steps may be used to verify the configuration:

- Check the CDR data, by accessing the CDR directory in Session Manager (Management).

```
 [root@avaya-asm7x cust]# cd /var/home/ftp/CDR
[root@avaya-asm7x CDR]# ls -l
total 56
-rw-r--r-- 1 root     root     16155 Dec  7 03:34 cleanup.log
drwxrwx--- 2 CDR_User CDR_User  4096 Sep 18 12:18 current
-rwxrw---- 1 root     CDR_User   241 Dec  2 10:44 S000A40-28E3-151202-10_44
-rwxrw---- 1 root     CDR_User   241 Dec  4 11:19 S000A40-28E3-151204-11_19
-rwxrw---- 1 root     CDR_User   241 Dec  4 11:24 S000A40-28E3-151204-11_24
-rwxrw---- 1 root     CDR_User   241 Dec  4 12:09 S000A40-28E3-151204-12_09
-rwxrw---- 1 root     CDR_User  1153 Dec  4 12:14 S000A40-28E3-151204-12_14
-rwxrw---- 1 root     CDR_User   469 Dec  4 12:19 S000A40-28E3-151204-12_19
-rwxrw---- 1 root     CDR_User   241 Dec  4 12:44 S000A40-28E3-151204-12_44
-rwxrw---- 1 root     CDR_User   697 Dec  4 12:49 S000A40-28E3-151204-12_49
-rwxrw---- 1 root     CDR_User   469 Dec  4 15:09 S000A40-28E3-151204-15_09
[root@avaya-asm7x CDR]#
```

- Verify from Infortel Select in **Section 6.2**, whether CDR data is reported.

8. Conclusion

These Application Notes describe the procedures for configuring Infortel Select to collect call detail records from Avaya Aura® Session Manager. Please refer to **Section 2.2** for test results and observation if any.

9. References

This section references the Avaya and ISI documentation that are relevant to these Application Notes.

[1] *Avaya Aura® Session Manager Call Detail Recording Interface,* Issue 1.3.1, October2013, available at http://support.avaya.com.

The Infortel Selection and Product information are available from ISI. Visit http://www.isi-info.com/solutions/call-accounting-and-reporting/infortel-select

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