

Avaya Solution & Interoperability Test Lab

Application Notes for configuring Tiger Prism from Tiger Communications with Avaya Aura ® Session Manager R7.0.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Tiger Prism from Tiger Communications to interoperate with Avaya Aura® Session Manager R7.0.1. Tiger Prism is a call logging system that records Call Detail Records (CDR) outputted by Avaya Aura® Session Manager over an IP network connection.

Readers should pay particular attention to the scope of testing as outlined in Section 2.1, as well as 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 compliance-tested configuration of Tiger Prism from Tiger Communications to interoperate with Avaya Aura® Session Manager R7.0.1. These Application Notes show the Call Detail Recording (CDR) capability of Avaya Aura® Session Manager and the ability of Tiger Prism to report on the CDR it receives.

Tiger Prism is a call accounting and billing package that utilizes the CDR output from Session Manager. Tiger Prism collects, stores, and processes the CDR records to provide usage analysis, call costing and billing capabilities. Session Manager can generate CDRs for intra-switch calls, inbound trunk calls and outbound trunk calls. Tiger Prism connects to Session Manager over the local or wide area network using Secure File Transfer Protocol (SFTP). Session Manager is configured to generate CDR into files, in XML format, and save them to a specific folder on the Session Manager server. Tiger Prism using SFTP connects to the server, to access the folder and downloads XML files generated by Session Manager to the local Tiger Prism server for reports. For the compliance testing, the "Enhanced XML file" format was used as the Data File Format on Session Manager.

2. General Test Approach and Test Results

The general test approach was to manually place intra-switch calls, inbound trunk, outbound trunk calls to and from H.323 telephones controlled by Communication Manager and SIP endpoints registered to Session Manager and verify that Tiger Prism collects the CDR records and properly classifies and reports the attributes of the call. For serviceability testing LAN failures were simulated.

Session Manager R7.0.x contains interface changes related to the security of the CDR login, used to download CDR records from a Session Manager server. These changes were not backward compatible with the Avaya recommended CDR retrieval procedure of deleting CDR files once they had been retrieved. A patch was created that reverts the operation of the CDR_User back to what it was in Session Manager R6.3 and earlier. This patch was used in this configuration. Additional details on the patch and how to obtain it are available at support.avaya.com, under PSN004893u.

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 feature and serviceability testing. The feature testing evaluated the ability of Tiger Prism to collect and process CDR records for calls over SIP trunks. The source and destination of each call was verified on the Tiger Prism application. The interoperability compliance testing includes the following cases.

- Calls between H.323 and SIP phones over SIP Trunk.
- Inbound and outbound calls to/from H.323 phones over SIP trunks to simulated PSTN.
- Inbound and outbound calls to/from SIP phones over SIP trunks to simulated PSTN.

The serviceability testing introduced failure scenarios to see if Tiger Prism could resume CDR collection after failure recovery

2.2. Test Results

All feature and performance tests passed with the following observation.

• Session Manager CDR was designed to cover calls between 2 parties, where at least one leg of the call traverses Session Manager. Calls that involve Communication Manager invoking call features (such as transfer, conference, call-forward, etc.) may not yield the expected call records by Session Manager. This design may change in future versions of Session Manager.

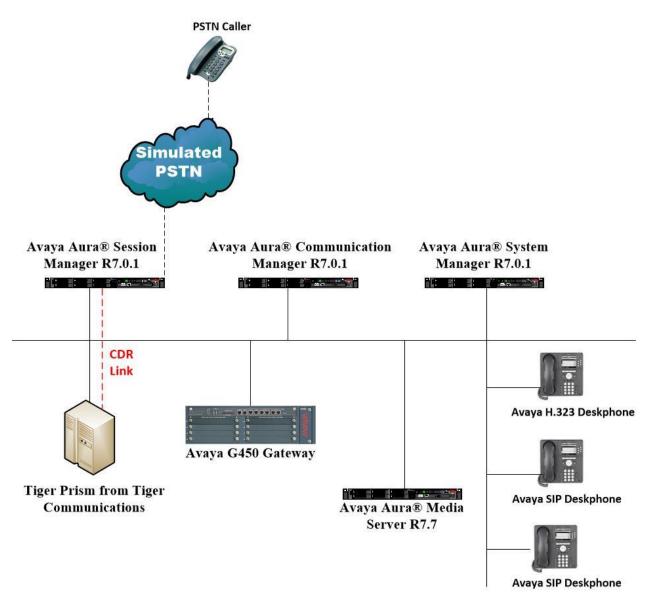
2.3. Support

Support from Avaya is available by visiting the website <u>http://support.avaya.com</u> and a list of product documentation can be found in **Section 10** of these Application Notes. Technical support for the Tiger Prism product can be obtained as follows.

- Tel: +44 (0)1425 891000
- Web : <u>http://www.tigercomms.com/departments</u>
- Email: <u>enquiries@tigercomms.com</u>

3. Reference Configuration

Figure 1 shows an Avaya Aura® Communication Manager R7.0.1 serving H.323 endpoints with an Avaya G450 Media Gateway and an Avaya Aura® Media Server R7.7 with an Avaya Aura® Session Manager R7.0.1 providing SIP endpoints and a SIP trunk to the PSTN. Tiger Prism was configured on the same IP network for the transfer of CDR data from Avaya Aura® Session Manager.





4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® System Manager running on a virtual server	System Manager 7.0.1.2 Build No 7.0.0.0.16266 Software Update Revision No: 7.0.1.2.086007 Service Pack 2
Avaya Aura® Session Manager running on a virtual server	Session Manager R7.0 SP2 Build No. – 7.0.1.2.701230
Avaya Aura® Communication Manager running on a virtual server	R7.0.1 R017x.00.0.441.0 00.0.441.0-23523
Avaya G450 Gateway	37.19.0 /1
Avaya Aura® Media Server running on a virtual server	Media Server SYSTEM R7.7.0.21 Media Server R7.7.0.350
Avaya 9608 H323 Deskphone	96x1 H323 Release 6.6.028
Avaya 9608 SIP Deskphone	96x1 SIP Release 7.0.0.39
Tiger Prism from Tiger Communications	2016.4.001.5033
CallExtractionService.exe	Version: 1.0.62.0
AvayaAuraSM.exe	Version: 13.3.5.0
Collection.exe	Version: 13.4.1.0

5. Configure Avaya Aura® Communication Manager

There is no specific configuration necessary on Communication Manager for the collection of CDR from Session Manager. It is assumed that the SIP trunk to Session Manager is already setup. The following is a quick overview of the SIP trunk that was used during compliance testing. The steps are performed through the System Access Terminal (SAT) interface. Some screens in this section have been abridged and highlighted for brevity and clarity in presentation.

5.1. Configure SIP Trunk

In the Node Names IP form, note the IP Address of the **procr** and the Session Manager (**SM70vmpg**). The host names will be used throughout the other configuration screens of Communication Manager and Session Manager. Type **display node-names ip** to show all the necessary node names.

display node-names	ip		Page	1 of	2
		IP NODE NAMES			
Name	IP Address				
AES63VMPG	10.10.40.30				
PGDECT	10.10.40.50				
SM70vmpg	10.10.40.12				
default	0.0.0.0				
procr	10.10.40.31				
procr6	::				

In the **IP Network Region** form, the **Authoritative Domain** field is configured to match the domain name configured on Session Manager. In this configuration, the domain name is **devconnect.local**. The **IP Network Region** form also specifies the **IP Codec Set** to be used. This codec set will be used for calls routed over the SIP trunk to Session manager as **ip-network region 1** is specified in the SIP signaling group.

```
display ip-network-region 1
                                                               Page 1 of 20
                              TP NETWORK REGION
  Region: 1
             Authoritative Domain: devconnect.local
Location: 1
   Name: Default region
MEDIA PARAMETERS
                              Intra-region IP-IP Direct Audio: yes
     Codec Set: 1
                              Inter-region IP-IP Direct Audio: yes
   UDP Port Min: 2048
                                          IP Audio Hairpinning? n
  UDP Port Max: 3329
DIFFSERV/TOS PARAMETERS
 Call Control PHB Value: 46
       Audio PHB Value: 46
       Video PHB Value: 26
802.1P/Q PARAMETERS
Call Control 802.1p Priority: 6
       Audio 802.1p Priority: 6
       Video 802.1p Priority: 5 AUDIO RESOURCE RESERVATION PARAMETERS
H.323 IP ENDPOINTS
                                                       RSVP Enabled? n
 H.323 Link Bounce Recovery? y
Idle Traffic Interval (sec): 20
  Keep-Alive Interval (sec): 5
           Keep-Alive Count: 5
```

PG; Reviewed: SPOC 6/26/2017 In the **IP Codec Set** form, select the audio codec's supported for calls routed over the SIP trunk to Communications Portal. The form is accessed via the **change ip-codec-set n** command. Note that IP codec set 1 was specified in IP Network Region 1 shown above. Multiple codecs may be specified in the **IP Codec Set** form in order of preference; the example below includes **G.729**, **G.711MU** (mu-law) and **G.711A** (a-law), which are supported by Communications Portal.

```
change ip-codec-set 1
                                                                   Page
                                                                          1 of
                                                                                  2
                           IP Codec Set
    Codec Set: 1
AudioSilenceFramesPacketCodecSuppressionPer PktSize(ms)1: G.729n220
                 n 2
2: G.711MU
3: G.711A
                                2
                                           20
                      n
                                2
                                           20
                      n
 4:
 5:
```

Prior to configuring a SIP trunk group for communication with Session Manager, a SIP signaling group must be configured. Configure the Signaling Group form shown below as follows:

- Set the **Group Type** field to **sip**.
- Set the **Transport Method** to the desired transport method, for compliance testing this was set to **tls**.
- The **Peer Detection Enabled** field should be set to **y** allowing the Communication Manager to automatically detect if the peer server is a Session Manager.
- Set the Near-end Node Name to procr. This value is taken from the IP Node Names form shown above.
- Set the **Far-end Node Name** to the node name defined for the Session Manager (node name **SM70vmpg**), as per **Section 5.1**.
- Ensure that the recommended TLS port value of **5061** is configured in the **Near-end** Listen Port and the **Far-end Listen Port** fields.
- In the **Far-end Network Region** field, enter the IP Network Region configured above. This field logically establishes the **far-end** for calls using this signaling group as network region 1.
- Leave the **Far-end Domain** field blank to allow Communication Manager to accept any domain.
- The **Direct IP-IP Audio Connections** field is set to **y**.
- The **Initial IP-IP Direct Media** field is set to **n**.
- The default values for the other fields may be used.

```
Page 1 of
change signaling-group 1
                                                                          2
                              SIGNALING GROUP
Group Number: 1
                           Group Type: sip
 IMS Enabled? n
                      Transport Method: tls
       O-SIP? n
    IP Video? n
                                                Enforce SIPS URI for SRTP? n
 Peer Detection Enabled? y Peer Server: SM
  Near-end Node Name: procr
                                          Far-end Node Name: SM70vmpg
Near-end Listen Port: 5061
                                        Far-end Listen Port: 5061
                                     Far-end Network Region: 1
Far-end Domain:
                                          Bypass If IP Threshold Exceeded? n
Incoming Dialog Loopbacks: eliminate
                                           RFC 3389 Comfort Noise? n
        DTMF over IP: rtp-payload
                                          Direct IP-IP Audio Connections? y
Session Establishment Timer(min): 3
                                           IP Audio Hairpinning? n
       Enable Layer 3 Test? y
                                               Initial IP-IP Direct Media? n
H.323 Station Outgoing Direct Media? n
                                               Alternate Route Timer(sec): 6
```

Configure the **Trunk Group** form as shown below. This trunk group is used for calls to and from Communications Portal. Enter a descriptive name in the **Group Name** field. Set the **Group Type** field to **sip**. Enter a **TAC** code compatible with the Communication Manager dial plan. Set the **Service Type** field to **public-ntwrk**. Specify the signaling group associated with this trunk group in the **Signaling Group** field, and specify the **Number of Members** supported by this SIP trunk group. Accept the default values for the remaining fields.

change trunk-group 1	Page 1 of 21
	TRUNK GROUP
Group Number: 1	Group Type: sip CDR Reports: r
Group Name: SIP TRK	COR: 1 TN: 1 TAC: *801
Direction: two-way	Outgoing Display? y
Dial Access? n	Night Service:
Queue Length: 0	
Service Type: public-ntw	Auth Code? n
	Member Assignment Method: auto
	Signaling Group: 1
	Number of Members: 10

On **Page 2** of the trunk-group form the **Preferred Minimum Session Refresh Interval (sec)** field should be set to a value mutually agreed with Presence to prevent unnecessary SIP messages during call setup. Session refresh is used throughout the duration of the call, to check the other side has not gone away, for the compliance test a value of **1800** was used.

```
change trunk-group 1

Group Type: sip

TRUNK PARAMETERS

Unicode Name: auto

Redirect On OPTIM Failure: 5000

SCCAN? n

Digital Loss Group: 18

Preferred Minimum Session Refresh Interval (sec): 1800

Disconnect Supervision - In? y Out? y

XOIP Treatment: auto Delay Call Setup When Accessed Via IGAR? N
```

Settings on **Page 3** can be left as shown below.

change trunk-group 1		Page	3 of	21
TRUNK FEATURES				
ACA Assignment? n	Measured:	none		
		Maintenance	Tests?	У
Numbering For	mat: private			
		UUI Treatment: shared		
		Replace Restricted N	umbers?	n
		Replace Unavailable N	umbers?	n
Мо	odify Tandem Ca	lling Number: no		
Show ANSWERED BY on Display? y				

Settings on **Page 5** are as follows.

change trunk-group 1	Page	5 of	22
PROTOCOL VARIATIONS			
Mark Users as Phone? Prepend '+' to Calling/Alerting/Diverting/Connected Number? Send Transferring Party Information? Network Call Redirection? Build Refer-To URI of REFER From Contact For NCR? Send Diversion Header? Support Request History? Telephone Event Payload Type:	n y y n y y		
Convert 180 to 183 for Early Media? Always Use re-INVITE for Display Updates? Identity for Calling Party Display: Block Sending Calling Party Location in INVITE? Accept Redirect to Blank User Destination? Enable Q-SIP?	n P-Asserte n n	d-Ident	lity
Interworking of ISDN Clearing with In-Band Tones: Request URI Contents: may-ha	-		ive

6. Configure Avaya Aura® Session Manager

Note: For the compliance testing, the "Enhanced XML file" format of CDR was used as the Data File Format on Session Manager.

In order to make changes in Session Manager a web session is established to System Manager. Log into System Manager by opening a web browser and navigating to http://<System Manager IP Address>/SMGR. Enter the appropriate credentials for the **User ID** and **Password** and click on **Log On** highlighted below.

AVAVA	
Aura [©] System Manager 7.0	
Recommended access to System Manager is via FQDN.	
Go to central login for Single Sign-On	User ID: admin
If IP address access is your only option, then note that authentication will fail in the following cases:	Password:
 First time login with "admin" account Expired/Reset passwords 	Log On Cancel
Use the "Change Password" hyperlink on this page to change the password manually, and then login.	Change Password
Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.	Supported Browsers: Internet Explorer 11.x or Firefox 43.0, 44.0 and 45.0.
This system is restricted solely to authorized users for legitimate business purposes only. The actual or attempted unauthorized access, use, or modification of this system is strictly prohibited.	
Basically this is Pauls PBX so please go away if you are not Paul.	

Once logged in click on Session Manager highlighted below.

AVAVA Aura [®] System Manager 7.0		Last Logged on at April 11, 2017 10:38 AM
🍇 Users	st Elements	O _o Services
Administrators Directory Synchronization Groups & Roles User Management User Provisioning Rule	Avaya Breeze [™] Communication Manager Communication Server 1000 Conferencing Device Services Equinox Conference IP Office Media Server Meeting Exchange Messaging Presence Routing	Backup and Restore Bulk Import and Export Configurations Events Geographic Redundancy Inventory Licenses Replication Reports Scheduler Security Shutdown
	Session Manager Web Gateway Work Assignment	Solution Deployment Manager Templates Tenant Management

The Session Manager tab is displayed. In the left navigation pane select **Session Manager Administration**. When the **Session Manager Administration** page is displayed select the **Session Manager Instances** tab and then select the Session Manager instance e.g., **sm70vmpg** and click on **Edit** button to edit.

AVAYA Aura [®] System Manager 7.0	Communication*		0	Las	t Logged on at April 25, 2017 11:00 AM
Home Session Manager	×		0		
Session Manager	Home / Elements / Session Ma	nager / Session Manager Admin	istration		0
 Dashboard					Help ?
Session Manager	Session Manager	Administration			
Administration	This page allows you to administer global settings.	Session Manager instances and con	figure their		
Communication Profile Editor	Communication Global Settings Session Manager Instances Branch Session Manager Instances				
Network	Session Manager Ins	ances			
Configuration	Configuration New View Edit Delete				
Device and Location Configuration	1 Item 💝				Filter: Enable
Application	Name License Mode	Primary Communication Profiles	Secondary Communication Profiles	Maximum Active Communication Profiles	Description
Configuration	sm70vmpg Normal	24	0	24	Rel 7.0 Session Manager
Applications	Select : None				>
Application	Select Hone				

The Edit Session Manager page is displayed. Scroll down to the CDR section, check on the check box Enable CDR to enable the CDR feature and enter a password in the Password and Confirm Password box for the CDR_User. Ensure that both Include User to User Calls and Include Incomplete Calls are both ticked as shown. Click the Commit button at the end of the page to commit the changes.

CDR 💿		
Enable CDR	\checkmark	
User	CDR_User	
Password	•••••	
Confirm Password	******	
Data File Format	Enhanced XML File 🗸	
Include User to User Calls	\checkmark	
Include Incomplete Calls	\checkmark	
-Personal Profile Manager (PPM) - Conne	ection Settings 👳	
Limited PPM Client Connection	\checkmark	
*Maximum Connection per PPM Client	3	
PPM Packet Rate Limiting	v	
*PPM Packet Rate Limiting Threshold	200	
Event Server 💿		
Clear Subscription on Notification Failure	No 🔽	
*Required		Commit Cancel

Each SIP Entity must have their CDR enabled as well; in order to make changed to SIP Entities select **Routing** from the main page.

Aura [®] System Manager 7.0		Last Logged on at April 11, 2017 10:38 AV
a Users	telements	Q, Services
Administrators	Avaya Breeze™	Backup and Restore
Directory Synchronization	Communication Manager	Bulk Import and Export
Groups & Roles	Communication Server 1000	Configurations
User Management	Conferencing	Events
User Provisioning Rule	Device Services	Geographic Redundancy
	Equinox Conference	Inventory
	IP Office	Licenses
	Media Server	Replication
	Meeting Exchange	Reports
	Messaging	Scheduler
	Presence	Security
	Routing	Shutdown
	Session Manager	Solution Deployment Manager
	Web Gateway	Templates
	Work Assignment	Tenant Management

Click on **SIP Entities** in the left window and select the Communication Manager SIP Entity from the main window.

	Communication*		0
Home Session Manager *	Routing ×		
▼ Routing 4	Home / Elements / Routing / SIP Entit	ies	
Domains			
Locations	SIP Entities		
Adaptations	New Edit Delete Duplicate	More Actions	
SIP Entities	New Edit Delete Dupicate	More Actions •	
	21 Items 🝣		
Entity Links	Name	FQDN or IP Address	Туре
Time Ranges	aacc64SIPvmpg	10.10.40.55	SIP Trunk
Routing Policies	AACC70vmpg	10.10.40.80	SIP Trunk
Dial Patterns	ASBCE PG	10.10.40.151	SIP Trunk
Regular Expressions		10.10.40.75	SIP Trunk
Defaults	BTS	10.10.40.131	SIP Trunk
Delaules	Capita	10.253.160.206	SIP Trunk
	cm63vmpg	10.10.40.31	CM
	CM70Redundancy	10.10.40.165	СМ
	<u>cm70vmpg</u>	10.10.40.13	CM
		10.10.40.251	SIP Trunk
	CS1000E	10.10.40.111	Other
	EnghouseCP	10.10.40.106	SIP Trunk

Change **Call Detail Recording** to **both** as shown below from the drop-down menu and click on **Commit** once finished.

SIP Entity Details	Commit Cancel
General	
* Name:	cm70vmpg
* FQDN or IP Address:	10.10.40.13
Туре:	CM
Notes:	
Adaptation:	V
Location:	PGLAB
Time Zone:	Europe/Dublin
* SIP Timer B/F (in seconds):	4
Credential name:	
Securable:	
Call Detail Recording:	both 🔽

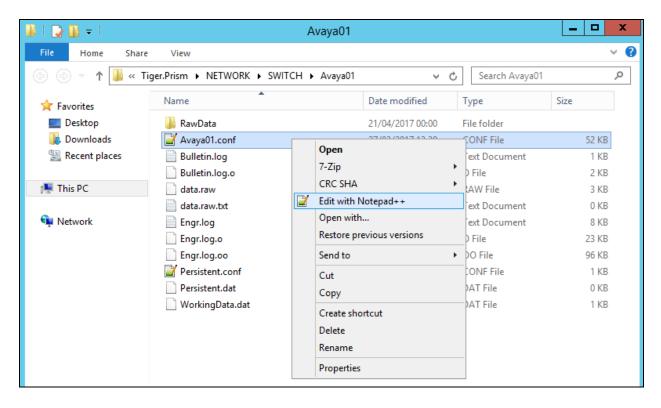
Note: Repeat the same procedure for other SIP Entities if needed

7. Configure Tiger Prism

The configuration information provided in this section describes the setup of Tiger Prism to collect CDR records generated by Session Manager via SFTP.

7.1. Configure Configuration file

On the Tiger Prism server, modify the configuration file; in this case it is called D: $Tiger.Prism\network\\Switch\\Avaya01\\Avaya01.conf.$



In the **[Switch]** section ensure the **Type** field is set to **AvayaAuraSM**. In the **[Input]** section the type=file, see the full details for this section below. The **[FieldDefsFile]** section should point to the location of the field definition file. This was named **AvayaAuraSM_7_XML.conf** and this file is displayed in full in **Appendix A** of these Application Notes.

[Switch]	
Type=AvayaAuraSM	
Revision=7.0	
MaxCallHoldTime=60000	
MaxTandemHoldOn=30000	
MaxSectionHoldOn=60000	
RecordDiscardBlacklistHoldOn=3600000	
MaxLineLength=2000	
BreakYear=1980	
CustomerId=	
NodeId=2	
DiscardDuplicateRecords=1	
DiscardOutgoingWithNoCalledDigits=0	
RecordTenant=0	
PassTrunkGroupLength=1	
CallTimeType=0	
SequenceNumberDays=7	
SequenceNumbersHeld=7	
DefaultLatency=0	
DiversionChargedPartyRule=0	
TransferChargedPartyRule=0	
QueueDeviceIsUnanswered=0	
SkipHostNameLookup=1	
ForwardNoAnswerAfterMS=15000	
IsolatedSwitch=0	
[Input]	
Name=D:\Tiger.Prism\Network\Switch\Avaya01\Da	ta.raw
Type=file	
Direction=input	
ExitAtEof=0	
DeleteOnCompletion=1	
WaitForFileCreation=1	
BufferSize=1024	
TimeOut=200	
Sharing=none	
CascadeDisable=1	
[FieldDefsFile]	
Name=D:\Tiger.Prism\Network\SwitchConf\AvayaA	uraSM_7_XML.conf

7.2. Configure Data Collection

On the Tiger Prism server, open **dcmon.exe** (this was done from a shortcut on the desktop as shown below). On the main Data Collection Monitor screen toolbar, click on **Options** \rightarrow **Configure**.

	<u>8</u>	Data Collection Service Monitor	_ D X
	File Monitor/Contr	ol Options Help	
dcmon -	Monitors:	Configure Monitoring: "Collection" - Version: "13.3.6.0"	
Shortcut	L D	oad Save Settings On Exit id 289 ("009") on switch id 4 ("3")	<u>^</u>
		oaded 1 trunks for trunk group id 305 ("016") on switch id 4 ("3") oaded 1 trunks for trunk group id 291 ("020") on switch id 4 ("3")	
		oaded 3 trunks for trunk group id 288 ("022") on switch id 4 ("3")	
	L	oaded 36 extensions for switch "3"	

There are two types of monitor types to be configured - one for the collection which interfaces with the Tiger Prism database and one for the switch which interfaces with Session Manager. In the **Configure Monitors** dialog box click the **Add** button. Below shows the addition of the interface to Session Manager.

Configure Monitors						
Monitor Configuration	<u>A</u> dd <u>R</u> emove	Configuration Label: Conf <u>F</u> ile Location: Monitor Type: Switch	Update			
Display Pause Level : 15						
Quit File Location : DCN	Ion.QIT		Save			
Location of Programs : D:V	ſiger.Prism\NET₩	ORK\bin\	<u>C</u> ancel			

In the **Label** field enter a descriptive name for the switch monitor type. In the **Conf File Location** field enter or browse to the location of the **Avaya02.conf** file created in **Section 6.1**. The **Avaya01.conf** file for this compliance testing was located at

D:\Tiger.Prism\network\Switch\Avaya01\. For the **Monitor Type** select **Switch** from the drop-down list. The rest of the parameters can be left with their default values. Click **Save**.

Configure Monitors						
Monitor Configuration Collection Avaya CM Avaya IP500 Avaya SM	<u>A</u> dd <u>R</u> emove	Configuration Label: Avaya SM Conf <u>F</u> ile Location: RK\SWITCH\Avaya01\Avaya01 conf Monitor Type: Switch <u>L</u> pdate				
Display Pause Level : 15						
Quit File Location : DCM	on.QIT	<u>S</u> ave				
Location of Programs : D:\T	iger.Prism\NETW	ORK\bin\ Cancel				

7.3. Configure Call Extraction Service

On the Tiger Prism server, open D:\Tiger.Prism\CallExtractionService.exe.

🏭 l 💽 🔝 = l	Application Tools	Tiger.Prism	_ D X
File Home Share	View Manage		~ ()
🔄 🍥 🝷 🕆 📕 🕨 T	his PC 🔸 New Volume (D:) 🕨 Tiger.Prism 🔸	✓ C Search Tig	er.Prism 🔎
🚖 Favorites	Name	Date modified Type	Size
Desktop		10/03/2017 12:03 File folder	
🐌 Downloads	docs	14/03/2017 15:22 File folder	
🖳 Recent places	\mu Engineering	10/03/2017 12:00 File folder	
	퉬 ETL Service	10/03/2017 14:58 File folder	
🌉 This PC	퉬 FireDaemon	15/03/2017 15:08 File folder	
	퉬 Install Files	10/03/2017 12:00 File folder	
📬 Network	퉬 LogFiles	28/04/2017 16:11 File folder	
	🐌 NETWORK	10/03/2017 12:06 File folder	
	퉬 Portal	10/03/2017 12:03 File folder	
	퉬 Schedulers	10/03/2017 12:04 File folder	
	퉬 Scripts	10/03/2017 13:27 File folder	
	퉬 temp	27/03/2017 16:48 File folder	
	퉬 Utility	10/03/2017 12:06 File folder	=
	CallExtractionClient.exe	02/02/2017 14:50 Application	464 KB
	CallExtractionService.exe	02/02/2017 14:50 Application	1,146 KB
	C_CAIIManager.exe	05/06/2015 16:09 Application	1,045 KB
	regex2.dll	24/10/2007 11:10 Application ex	
	unins000.dat	10/03/2017 12:08 DAT File	511 KB
	💐 unins000.exe	10/03/2017 11:59 Application	722 KB

In the menus select Edit \rightarrow Add \rightarrow New Avaya Session Manager.

8	Tiger Call Extraction Service	_ _ ×
File Edit Help		
Add 🕨	VCX New 3COM VCX	
Call	A New Avaya Communications Manager	
Nam X Delete	A New Avaya Session Manager	d Details
	ntl: New Centrex	
	delle New Cisco Billing and Measurements Server	
	and New Cisco Unified Communications Manager	
	* New ININ Interaction Centre	
<	🗢 New IP Buffer	>
	🔀 New IPFX	
Details For Call Extraction D File Retrieval Events		Collection Transfer File Status
File Metheval Events	🦉 New Nortel BCM	Last Transfer File Created
	Ø New Alcatel Ticket Collector	Total Transfer File Size 0 Bytes
	S New Siemens Bureau Sentinel	
	🛕 New Siemens Hipath 4000	
	A New Siemens Hipath 8000, Openscape Voice/Branch	
	Latest File Processed -	
	Total Size Of Processed 0 Bytes	
	Chebra Descritor	Chabur Descension
	> Status Processing	Status Processing
Stopped		

Enter the following information:

Name	Enter a suitable name.
Host	Enter the Session Managers IP Address.
User Name	This should be CDR_User .
Password	This will be the password configured in Section 6 .
Target directory	D:\Tiger.Prism\Network\Switch\Avaya01\

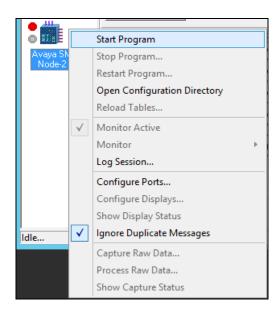
		New Avaya S	ession Manager	x
<u>N</u> ame: Avayas	5M1		1	
Connection Set	tings		File Retrieval Settings	
M <u>o</u> de:	O FTP	SFTP	Download a <u>m</u> aximum of 10 🗲 files at a time.	
<u>H</u> ost:	10.10.40.11		After attempting to download or remove a file 3 🚔 times ignore i	t.
<u>U</u> ser Name:	CDR_User		🔲 Pause checking for files between 23:45:00 🚔 and 01:00:00 🚔	I
Password:	******		Sleep for 00:30 🚔 when no new files are found.	
<u>R</u> emote Director	y:			
🔲 Site File Prefi	ix:			
Private <u>K</u> ey file:				
		<u>I</u> est Connection		
Repository Setti	ngs		Collection Transfer File Settings	
Duplicate to:			Iarget directory: D:\Tiger.Prism\NETWORK\SWITCH\Avaya01]
☐ Delete <u>R</u> epo	sitory files older th	han 100 🚔 days.	Target <u>fi</u> le name: data.raw	
,			OK Can	cel

Select **Test Connection** to confirm the login details have been entered correctly. A new window should pop up showing the SFTP connection being **established** correctly as shown below.

		New Avaya S			
<u>N</u> ame: AvayaSM	11		S	Test Connection	_ □
Connection Settin Mode: Host: User Name: Password: Remote Directory: Site File Prefix: Private Key file: Repository Setting Duplicate to: Delete Reposit	C FTP	ection	Authentication succeeds SFTP connection establ Retrieving list of availabl File 01: cleanup.log tot File 02: .bash_logout (18 File 03: .bash_profile (17	03eb9b162fb6aa6d91b79d) n d shed 57, 28/04/2017 02:14:03,) ,01/10/2014 19:51:31,) ,01/10/2014 19:51:31,) 70428-16_10_1.xml (1835, 2i 10/2014 19:51:31,) 40.11	
					Ū
	on by clicking	in the to			
the Extracti	on by clicking	in the to	olbar. traction Service		_ 0
8		in the to			
File Edit Help ■ Ξ■ Ξ▶ ☑ Call Extraction Status	□ □ × □	in the to Tiger Call E		Details 1 Collection Transfer Directo	
File Edit Help	□ □ × □	in the to Tiger Call E	traction Service		
File Edit Help	Status Status	in the to Tiger Call E	Last Processed 05:01 28/04/2017 16:05:1		
File Edit Help Edit Help Call Extraction Status Name A Representation Status Name A 	Status Status	in the to	Last Processed 05:01 28/04/2017 16:05:1	Collection Transfer Direct	ory: 'D:\Tiger.Pris

7.4. Start Data Collection

In the main **Data Collection Monitor** screen, right click on the collection monitor icon labeled **Collection** and select **Start Program**. Do the same for the switch monitor icon labeled **Avaya SM**.



Start the **Tiger: AvayaAuraSM** node as shown below. From the same screen start the **Tiger:Collection** also.

G Fi	reDaemoi	n Pro OEM	3.13.274	17		_ □	x
File Service Help							
New Edit Uninstall Start Stop		art All Stop All	Restart All	Uninst All Ref	resh Filter	Session0	Exit
Service	Description	Status	Process	Startup Type	User		emory
🚺 Tiger: AvayaAuraSM_Avaya01_Node2	Tiger Ava	Stopped		Automatic	. \Adminis		/a
🧿 Tiger: Collection	Tiger Coll	Stopped		Automatic	.\Adminis		/a
🗿 Tiger: Definity_Avaya02_Node1	Tiger Defi			Manual	.\Adminis		/a
Tiger: IPOffice_Avaya03_Node3	Tiger IPO	Stopped		Manual	. \Adminis	trator n	/a
<	III						>

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8. Verification

The following steps may be used to verify the configuration.

8.1. CDR information is being collected by Session Manager

Use a secure FTP application, e.g., WinSCP to connect to Session Manager by using the CDR_User and password to access the special folder that store the CDR files.

WinSCP Login			? 🛛
Session Stored sessions Environment Directories SSH Preferences	Session <u>H</u> ost name: 10.10.40.11 <u>U</u> ser name: CDR_User Private <u>k</u> ey file: Protocol <u>F</u> ile protocol:	Password:	Po <u>r</u> t number: 22 (*) CP fallback Select color
Advanced options			
About Langu	lages	Login Save.	Close

Place some different kinds of call; wait some minutes for Session Manager to generate the CDR files. There should be a list of files present as shown below.

/- CDR User@10.10	0.40.33 - WinSCP				
Local Mark Eiles Comma	nands Session Options Remote Help				
		· · ·			
My documents	- 🔄 🗠> - 📧 🔯 🖨 🚱 🧞	🗁 / <root> 🔹 🗠</root>			
:\Documents and Settings\/	\Paul Greaney\My Documents	/	Root directory (Ctrl+\)		
Name – Ext	Size Type Changed Attr	Name 🔶 Ext	Size Changed	Rights	Owner
t)	Parent directory 05/04/201 r	۲	08/04/2014 16:34:00	rwxrwx	0
		i bin	24/03/2009 19:36:11	rwxr-xr-x	0
		Current Contract	15/04/2013 15:58:28	rwxrwx	0
		C dev	06/04/2014 04:28:01	rwxr-xr-x	0
		etc	15/04/2009 23:24:00	rwxr-xr-x	0
		ib 🗀 ib	15/04/2009 19:05:29	rwxr-xr-x	0
		🚞 usr	15/04/2009 18:30:24	rwxr-xr-x	0
		.bash_logout	18 27/01/2011 14:41:02	rw-rr	0
		.bash_profile	176 27/01/2011 14:41:02	rw-rr	0
		.bashrc	124 27/01/2011 14:41:02	rw-rr	0
		E cleanup.log	68,207 09/04/2014 04:31:01	rw-rr	0
		5000A0A-2821-140407-14_23	925 07/04/2014 15:23:24	rwxrw	0
		5000A0A-2821-140408-08_48	469 08/04/2014 09:48:24	rwxrw	0
		5000A0A-2821-140408-08_53	925 08/04/2014 09:53:24	rwxrw	0
		5000A0A-2821-140408-08_58	697 08/04/2014 09:58:24	rwxrw	0
		5000A0A-2821-140408-09_03	241 08/04/2014 10:03:24	rwxrw	0
		5000A0A-2821-140408-11_23	925 08/04/2014 12:23:24	rwxrw	0
		5000A0A-2821-140408-11_28	469 08/04/2014 12:28:24	rwxrw	0
		5000A0A-2821-140408-12_43	241 08/04/2014 13:43:24	rwxrw	0
		5000A0A-2821-140408-12_48	469 08/04/2014 13:48:24	rwxrw	0
		5000A0A-2821-140408-12_53	241 08/04/2014 13:53:24	rwxrw	0
		5000A0A-2821-140408-12_58	241 08/04/2014 13:58:24	rwxrw	0
		5000A0A-2821-140408-13_28	241 08/04/2014 14:28:24	rwxrw	0
		5000A0A-2821-140408-13_33	469 08/04/2014 14:33:24	rwxrw	0
		5000A0A-2821-140408-14_03	241 08/04/2014 15:03:24	rwxrw	0
		5000A0A-2821-140408-14_13	241 08/04/2014 15:13:24	rwxrw	0
		5000A0A-2821-140408-14_48	241 08/04/2014 15:48:25	rwxrw	0
		5000A0A-2821-140408-14_53	241 08/04/2014 15:53:25 241 08/04/2014 15:58:25	rwxrw	0

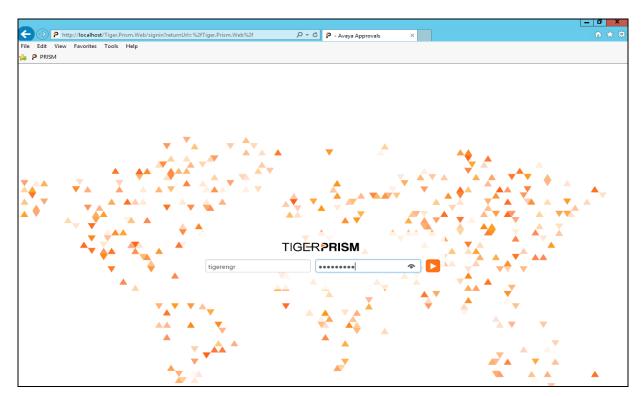
8.2. Verify Data Collection Monitor Status

Place a call and verify that Tiger Prism received the CDR record for the call and then processed the call. Compare the values of data fields in the CDR record with the expected values and verify that the values match as shown below. Verify that the **Collection** and **Avaya SM** display a green status symbol indicating they are online. Confirm that the raw data in the bottom pane is tabulated accordingly for the database in the top pane.

<u> </u>				Data Collection Se	rvice Moni	tor				-	. 🗖	x
File Monitor/Co	ontrol Options I	Help										
Monitors:				Monitoring: "C	ollection" - Vers	ion: "13.3.6.0"						
Collection	Opened file "D:\Tiger.Prism\Network\Collection\WorkingData.dat", size 0, offset 0 Closing file "D:\Tiger.Prism\Network\Collection\WorkingData.dat", size 0, offset 0 Input port \\.\mailslot\tiger\collect\input has been suspended. Input port \\.\mailslot\tiger\collect\input has been resumed.									^		
Collection	1 26 C 1 27 I	G 17/04/2 C 17/04/2	1 15:57:02 0:00	0:00:05 E-7000 0:00:05 T-*801001			T-*801007 E-7100	*801	2016			
Avaya SM Node-2	1 29 0 1 30 I	T 17/04/2 G 17/04/2 C 17/04/2	1 16:15:45 0:00 1 16:15:53 0:01	0:00:08 E-7000 0:00:04 E-7001 0:00:04 T-*801002 0:00:06 T-*801002			E-7100 T-*801002 E-7000 E-7001	*801	2016			
8		.0 1770472	1 16.16.13 0.01		2016		2-7001					~
Avaya IP500 Node-3	Stop Display]		ш								>
				4'' - Processing Exe: "Defin	ity" · Version: "	13.3.6.0'' - Field	Definitions: "Ch	46_SA82	01.conf"			
Avaya CM Node-1	Waiting for connection from 10.10.40.13 on port 9000 Input port Avaya CM 02 Socket Input has been suspended. Cannot open \\mailslottiqer\collectinput: GetLastError() = 2										^	
Node-1												
	Input port Avaya CM 02 Socket Input has been resumed.											
	Connection established from 10.10.40.13 on port 9000.											
	15:57 21/04 210417155707	000057	8*801	2016	7000	007	0	0			0 4	1 0
	210417155716		0-001	7100	2016	001	ő	0		*801		0 0
	210417155721			7100	2016	001	0	0		+801		
	210417161544	000080		7100	7000							
	210417161549	000047	8*801	2016	7001	002	0	0			0 4	1 0
	210417161554	00001G		7000	2016	001	0	0		*801	0 0	0 0
	210417161558			7000	2016	001	0	0		*801	0 70	0 0
	210417161614			7001	2016	001	0	0		*801	0 0	0 0
	210417161620			7001	2016	001	0	0		*801	0 70	
	210417161627			7102	2016	001	0	0		*801		0 0 =
	210417161631	000049		7102	2016	001	0	0		*801	0 0	
	<											>
	Stop Display											
Idle												11.

8.3. Verify Report/Billing Information Accuracy

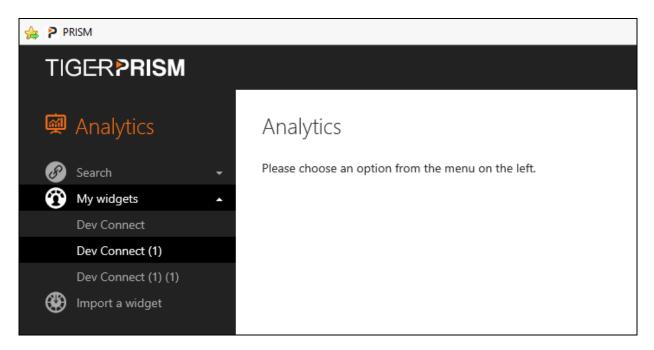
Open a web browser to the Tiger Prism server as shown below. Enter the appropriate credentials and click on the login icon.



Once logged in, click on Analytics.

TIGER PRISM			Avaya Approvals 🛛 📰 Portal	✓ L Hello, Tiger Engineer ✓
Welcome				
Dashboards & Reports	Data Analytics	Scheduling	Call Billing	Personal C \ominus
Dashboards	Analytics	Scheduler	Call Tariffs	1 4 7 View N
Reports		Alerts		

PG; Reviewed: SPOC 6/26/2017 Solution & Interoperability Test Lab Application Notes ©2017 Avaya Inc. All Rights Reserved. 24 of 32 Prism_SM701 From the left-hand menu select **Search** \rightarrow **Legs** (not shown). This will display the calls for the current day. For the testing a widget was created; this is a custom saved report with the required fields for verification testing added to the displayed. In the example below **DevConnect** (1) was created and selected to be displayed.



The following is a report run for the previous month showing all the data for calls for that month.

TIGERPRISM					Av	aya Approvals	📕 Modules 🕇	L Hello, Tiger E	ngineer 🔻
🖗 Analytics	Dev	Connect (1)						P () () () () () () () () () (Ø.
Search Search My widgets	Tree	1.Avaya IVT 🔹 🔻	Select by Quick da	ates v Dates This r	nonth v	ľ			
Dev Connect		Leg start *	Call direction	Calling digits	Called digits 🔫	Talk time 🛛 🔻	Ring time 🛛 🔻	Call outcome	Initia
Dev Connect (1)	:=	05/04/2017 11:57:13	Incoming	3000	7000	0:00:00	0:00:02	Connected	Norn
Dev Connect (1) (1)	:=	05/04/2017 11:57:15	Tandem	3000	7000	0:00:01.195	0:00:00	Connected	Norn
Import a widget	:=	05/04/2017 11:59:32	Tandem	3000	7000	0:00:19.303	0:00:00	Connected	Norn
	:=	05/04/2017 11:59:43	Tandem	7000	3006	0:00:08.015	0:00:00	Connected	Norn
	:=	05/04/2017 11:59:51	Tandem	3000	3006	0:00:51.373	0:00:00	Connected	Norn
	:=	07/04/2017 13:17:20	Internal	7000	7001	0:00:06	0:00:00	Connected	Norn
	:=	07/04/2017 13:17:36	Internal	7000	7102	0:00:13	0:00:00	Connected	Norn
	:=	07/04/2017 13:17:36	Incoming	7000	7102	0:00:13.453	0:00:00	Connected	Norn
	:=	07/04/2017 13:17:54	Internal	7102	7100	0:00:08	0:00:00	Connected	Norn
	:=	07/04/2017 13:17:54	Internal	7102	7100	0:00:07.562	0:00:00	Connected	Norn
	:=	07/04/2017 13:18:06	Internal	7100	7001	0:00:06	0:00:00	Connected	Norn
	:=	07/04/2017 13:18:06	Outgoing	7100	7001	0:00:05.765	0:00:00	Connected	Norn
	:=	07/04/2017 13:24:52	Tandem	7001	2016	0:00:08.659	0:00:00	Connected	Norn
	:=	07/04/2017 13:24:53	Outgoing	7001	2016	0:00:08	0:00:00	Connected	Norn
	:=	07/04/2017 13:25:06	Outgoing	7100	2016	0:00:18	0:00:00	Connected	Norn
	<					/	ctivate Win	dows Control Panel to act	>

9. Conclusion

These Application Notes describe the required configuration steps for Avaya Aura® Session Manager R7.0.1 and Tiger Prism from Tiger Communications to collect Call Detail records from Avaya Aura® Session Manager. All test cases completed successfully with the observations and exceptions noted in **Section 2.2**.

10. Additional References

This section references the product documentations that are relevant to these Application Notes.

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

• Administering Avaya Aura® Session Manager, Release 7.0.1

Tiger Prism product information is available from http://www.tigercomms.com

Appendix A

 $AvayaAuraSM_7_XML.conf$

```
***********
   Configuration file for the Avaya Aura Session Manager switch for Release
#
   6.3.4 XML format output.
#
   Created by: I.D.Hay on 6th December 2016
#
   $Revision: 4158 $
#
#
   $Author: ihay $
   $Date: 2017-02-03 15:27:48 +0000 (Fri, 03 Feb 2017) $
#
#
   (c) 2017 Tiger Communications plc
*************
*************
# Format of entries is "N:S.L,T" or "S.L", where:
   "N" is the line number
#
   "S" is the offset of the field's starting position in the line
#
   "L" is the length of the field
#
   "T" is the field type, with valid values
#
       "I" is interpreted as a decimal integer
#
       "i" is blank or interpreted as a decimal integer
#
       "X" is interpreted as a hexadecimal integer
#
#
       "x" is blank or interpreted as a hexadecimal integer
       "C" is an interpreted character string
#
       "B" is blank space
#
       "F=value" is the fixed character string "value"
#
       "f=value" is blank or the fixed character string "value"
#
       "V=value" is a variable length string, terminated by the string "value"
#
#
       "v=value" is blank or a variable length string, terminated by the string
"value"
#
       "W=value" is a variable length decimal integer, terminated by the string
"value"
       "w=value" is blank or a variable length decimal integer, terminated by the
#
string "value"
       "H=value" is a variable length hexadecimal integer, terminated by the string
#
"value"
       "h=value" is blank or a variable length hexadecimal integer, terminated by the
#
string "value"
**************
[SwitchInfo]
SwitchName=Avaya Aura Session Manager
SwitchVersion=6.3.4
ProgramName=AvayaAuraSM
ProgramVersion=13.2.2.0
[Description]
O=This is the field definitions for the Avaya Aura Session Manager Release 6.3.4 XML
[SampleData]
     <?xml version="1.0" encoding="UTF-8"?>
\Omega =
1=
      <calls xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
2=
            <call>
3=
                  <call time>2002-05-30T09:30:10Z</call time>
4 =
                  <duration>PT3H27M1.246S</duration>
```

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```
5=
                     <condition code>4</condition_code>
6=
                     <parties>
7=
                            <dialed number>3035389999</dialed number>
8=
                            <calling number>9702251234</calling number>
9 =
                     </parties>
10 =
                     <sip entities>
11=
                            <terminating>cm4</terminating>
12 =
                            <originating>cm7</originating>
1.3 =
                     </sip entities>
14 =
                     <feature flag>4</feature flag>
15=
                     <bcc>M</bcc>
16=
                     <ma uui>0</ma uui>
17 =
                     <resource flag>0</resource flag>
18=
                     <bandwidth>31</bandwidth>
19=
                     <av gsid>f652e050-a876-11e2-b585-00145e3e9b22</av gsid>
20=
                     <ip addresses>
21=
                            <calling>10.42.35.111</calling>
22=
                            <called>123.43.1.76</called>
23=
                     </ip addresses>
24=
                     <usage>
25=
                            <voice>Y</voice>
26=
                            <video>N</video>
27=
                            <fax>N</fax>
                            <text>N</text>
2.8 =
29=
                           <other>N</other>
30=
                     </usage>
31=
                     <codec>1</codec>
32=
                     <tenant ids>
33=
                            <calling>Joe's Bar and Grill</calling>
34=
                            <called>One Hour Dry Cleaning</called>
35=
                     </tenant ids>
36=
              </call>
37=
      </calls>
[FieldDefs]
XML HEADER START=3:0.15, F='<?xml version="'
XML HEADER MAJOR VERSION=3:15.1, W='.'
XML_HEADER_MINOR_VERSION=3:17.1,W='"'
XML_HEADER_ENCODING=3:-1.1, V='">'
# XML_HEADER_MINOR_VERSION=3:17.1,W='" encoding="'
# XML_HEADER_ENCODING=3:29.1, V='">'
XML LINE=4:0.200,C
DATE_TIME_YEAR=5:0.4,W-'-'
DATE TIME MONTH=5:5.2, W-'-'
DATE TIME DAY=5:8.2,W-'T'
DATE TIME HOUR=5:11.2, W-':'
DATE_TIME_MINUTE=5:14.2,W-':'
DATE TIME SECOND=5:17.2, I
DATE TIME TIMEZONE=5:19.6,C
DATE TIME TZ DIRECTION=6:0.1,C
DATE TIME TZ HOUR=6:1.2, W=':'
DATE TIME TZ MINUTE=6:4.2, I
# Unused fields
END HOUR=1:-1.2, I
END MINUTE=1:-1.2, I
DUR HOUR=1:-1.1, I
DUR MINUTE=1:-1.2, I
DUR TENTH MINUTE=1:-1.1, I
CONDITION CODE=1:-1.1,C
DIALLED NUMBER=1:-17.15,C
CALLING NUMBER=1:-12.10, C
```

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TERM SIP ENTITY=1:-18.7,C ORIG SIP ENTITY=1:-17.7,C FEATURE FLAG=1:-13.1,C BCC=1:-12.1,C MA UUI=1:-13.1, C RESOURCE FLAG=1:-14.1,C BANDWIDTH=1:-104.2, I AV GSID=1:-108.36,C CALLING PARTY IP=1:-170.15,C CALLED PARTY IP=1:-111.15,C CALL TIME=1:-1.2,C DURATION=1:-1.2, I CODEC=1:-1.2,C VOICE=1:-1.2,C VIDEO=1:-1.2,C FAX=1:-1.2,C TEXT=1:-1.2,C OTHER=1:-1.2,C CALLING TENANT=1:-1.2,C CALLED TENANT=1:-1.2,C DATEREC HOUR=2:-1.2, W=':' DATEREC MINUTE=2:-1.2, W=' ' DATEREC_MONTH=2:-1.2,W='/' DATEREC DAY=2:-1.2, I ************* # Format of [XmlSections] entries is "<XML section>=<configuration section>" ***** [XmlSections] calls=CallsTags call=CallTags parties=PartiesTags sip entities=SipEntitiesTags ip addresses=IpAddressesTags usage=UsageTags tenant ids=TenantIdsTags **** ################ # Format of [*Tags] entries is "<FieldName>=<XML tag>,T", where # "T" is any of the non-blank field types mentioned above **** ################### [CallsTags] # No tags in this section [CallTags] CALL TIME=call_time,C DURATION=duration, C CONDITION CODE=condition code, C FEATURE FLAG=feature_flag,C BCC=bcc,C MA UUI=ma uui,C RESOURCE FLAG=resource flag,C BANDWIDTH=bandwidth, I AV_GSID=av_gsid,C CODEC=codec,C [PartiesTags] DIALLED NUMBER=dialed number, C CALLING NUMBER=calling number, C

[SipEntitiesTags] TERM_SIP_ENTITY=terminating,C ORIG_SIP_ENTITY=originating,C

[UsageTags] VOICE=voice,C VIDEO=video,C FAX=fax,C TEXT=text,C OTHER=other,C

[TenantIdsTags] CALLING_TENANT=calling,C CALLED_TENANT=called,C

[IpAddressesTags] CALLING_PARTY_IP=calling,C CALLED_PARTY_IP=called,C

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