

Avaya Solution & Interoperability Test Lab

Application Notes for configuring Tiger Prism from Tiger Communications with Avaya Aura ® Communication 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® Communication Manager. Tiger Prism is a call logging system that records Call Detail Records (CDR) output by Avaya Aura® Communication 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® Communication Manager R7.0.1. These Application Notes show the Call Detail Recording (CDR) capability of Avaya Aura® Communication 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 link in Communication Manager. Tiger Prism collects, stores, and processes the CDR records to provide usage analysis, call costing and billing capabilities. Communication Manager can generate CDR for intra-switch calls, inbound trunk calls and outbound trunk calls. In addition, split records can be generated for transferred calls and conference calls. Tiger Prism creates a custom Communication Manager configuration file to accurately parse the CDR data. For the compliance testing, a customized format was used.

2. General Test Approach and Test Results

The general test approach was to manually place intra-switch calls, inbound trunk, outbound trunk calls, transfer calls and forwarded calls to and from H323 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, logical links were disabled/re-enabled.

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 various types of calls. The source and destination of each call was verified on the Tiger Prism application. 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 except for one call scenario described below. Tiger Prism successfully captured and processed call records from Communication Manager. Tiger Prism also successfully processed the CDR data, performed call costing, and produced call accounting reports, with the following exceptions and observations.

• There are some differences in the call records generated by SIP endpoints compared to Analog, Digital, and H.323 endpoints. As a result in certain scenarios involving SIP endpoints (e.g., two-party call, transfer, or conference), a CDR application may see more

- or less records, or records with condition codes/calling party other than expected. Avaya is investigating the differences and code changes may be made available in a future release pending the outcome of that investigation.
- PSTN calls a SIP endpoint on Communication Manager, SIP endpoint then initiates a consult-transfer to another SIP endpoint, there is no call record being presented other than one that has 0 talk time.
- As shown in Section 5.3, the Communication Manager Reliable Session Protocol (RSP) was disabled for compatibility with Tiger Prism. With RSP disabled, the communication protocol is not as robust and there is a higher chance of loss of CDR records if there is a network failure. In the case that the Tiger Prism application loses network connectivity, there will be loss of call record data until Communication Manager detects the loss of connectivity and it will start buffering the call records. For possible workarounds please reach out to the Tiger Communications support team.

2.3. Support

Support from Avaya is available by visiting the website http://support.avaya.com and a list of product documentation can be found in **Section 9** of these Application Notes. Technical support for the Tiger Prism product can be obtained as follows.

• Tel: +44 (0)1425 891000

• Web: http://www.tigercomms.com/departments

• Email: enquiries@tigercomms.com

3. Reference Configuration

Figure 1 shows an Avaya Aura® Communication Manager R7.0.1 serving H.323 and digital 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. Tiger Prism was configured on the same IP network for the transfer of CDR data from Avaya Aura® Communication Manager.

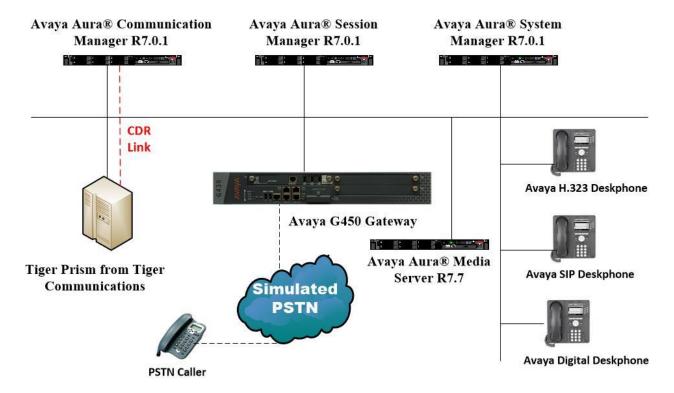


Figure 1: Network solution of Tiger Prism from Tiger Communications and Avaya Aura® Communication Manager R7.0.1

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 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
Avaya 9508 Digital Deskphone	V2.0
Tiger Prism	2016.4.001.5033
Definity.exe	Version: 13.3.6.0
Collection.exe	Version: 13.4.1.0

5. Configure Avaya Aura® Communication Manager

This section describes the steps for configuring Call Detail Recording (CDR) links, CDR system parameters, and intra-switch CDR extensions on Communication Manager. 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 Special Applications

SA8201 provides the user with the capability to customize the CDR using five new keywords. These five new keywords allow the user to add start date and end date in one of two formats either DDMMYY or DDMMYYYY format and to add start time and end time in HHMMSS format. Five new keywords are added to the second page of the "system-parameters cdr" form. This page is dynamically created when the user selects custom as the "Primary Output Format" on the first page of the "system-parameters cdr" form. Prior to this feature start time, start date, four digit start date and four digit end date were not available for customizing the CDR. In the standard version the date and time are end date and time. Time is displayed in HHMM without seconds in the standard version. This feature will add seconds to the start and end times along with adding seconds to the duration time.

For ease of implementation, special application (SA8202) Intra-Switch CDR by COS is an optional feature that allows customers to enable intra-switch CDR for extensions that are assigned a COS with intra-switch CDR activated. The customer does not have to manually add individual extensions in the intra-switch-cdr form. The SA8202 feature also removes the 5000 extension limit for the Avaya S8500 Media Server, allowing CDR records to be generated for as many extensions as are administered on the switch.

Type change system-parameters special-applications and navigate to (SA8201) - Start Time and 4-Digit Year CDR Custom Fields and (SA8202) - Intra-switch CDR by COS, ensure that both are set to y.

```
change system-parameters special-applications
                                                             Page
                                                                    3 of 10
                             SPECIAL APPLICATIONS
                   (SA8141) - LDN Attendant Queue Priority? n
       (SA8143) - Omit Designated Extensions From Displays? n
            (SA8146) - Display Update for Redirected Calls? n
              (SA8156) - Attendant Priority Queuing by COR? n
               (SA8157) - Toll Free Vectoring until Answer? n
  (SA8201) - Start Time and 4-Digit Year CDR Custom Fields? y
                        (SA8202) - Intra-switch CDR by COS? y
                    (SA8211) - Prime Appearance Preference? n
                      (SA8240) - Station User Admin of FBI? n
                                 (SA8312) - Meet-Me Paging? n
                   (SA8323) - Idle Call Preference Display? n
                         (SA8339) - PHS X-Station Mobility? n
                  (SA8348) - Map NCID to Universal Call ID? n
               (SA8428) - Station User Button Ring Control? n
             (SA8434) - Delay PSTN Connect on Agent Answer? n
```

5.2. Configure IP Node Names

Enter the **change node-names ip** command. Create a new node name and IP address for the Tiger Prism server used to collect the call detail records from Communication Manager. The node name configured below will be used in the ip-services form to specify the remote node of the CDR links.

change node-names	ip			Page	1 of	2
		IP NODE	NAMES			
Name	IP Address					
AES70vmpg	10.10.40.26					
AMS77vmpg	10.10.40.17					
BSMRedundancy	10.10.41.182					
CMS18vmpg	10.10.40.36					
IPO500V2	10.10.40.20					
IPOSE	10.10.40.25					
NovaTax	10.10.40.44					
PGDECT	10.10.40.50					
RDTT	10.10.40.222					
SMRedundancy	10.10.40.162					
TigerCDR	10.10.40.128					
default	0.0.0.0					
procr	10.10.40.13					
procr6	::					
sm70vmpg	10.10.40.12					

5.3. Configure IP Services

Enter the **change ip-services** command. On **Page 1** of the **IP SERVICES** screen, define a primary CDR link by setting the **Service Type** to **CDR1**. Set **Local Node** to **procr** and **Remote Node** to **tiger** as configured above. The **Local Port** is fixed at "0" and the **Remote Port** may be set to a value between 5000 and 64500, inclusive, but must match the port configured on the Tiger Prism, in this case **9000**.

change ip-s	services				Page 1 of	4
			IP SERVICES			
Service	Enabled	Local	Local	Remote	Remote	
Type		Node	Port	Node	Port	
AESVCS	У	procr	8765			
CDR1		procr	0	TigerCDR	9000	
CDR2		procr	0	RDTT	9001	

On **Page 3** of the **ip-services** screen, disable the Reliable Session Protocol (RSP) for the CDR link by setting **Reliable Protocol** to **n**.

change ip-se	rvices				Page 3 of	4
Service Type	Reliable Protocol	SESSION Packet Resp Timer	N LAYER TIMERS Session Connect Message Cntr	SPDU Cntr	Connectivity Timer	
CDR1	n	30	3	3	60	

5.4. Configure CDR System Parameters

Enter the **change system-parameters cdr** command and set the following:

- **CDR Date Format**: Set to **day/month**. The date format will be used for the date stamp that begins each new day of call records or in the customized CDR output formats (see below).
- Primary Output Format: Set to customized.
- Primary Output Endpoint: Set to CDR1.
- Use Enhanced Formats: Set to n
- **Intra-switch CDR**: Set to **y** so that CDR records will be generated for calls to/from extensions that are assigned intra-switch CDR.
- Outg Trk Call Splitting / Inc Trk Call Splitting: Set to y if a separate CDR record is desired for any portion of an outgoing/incoming call that is transferred or conferenced.

```
change system-parameters cdr
                                                                           Page
                                  CDR SYSTEM PARAMETERS
 Node Number (Local PBX ID):
                                                              CDR Date Format: day/month
       Primary Output Format: customized Primary Output Endpoint: CDR1
     Secondary Output Format: customized Secondary Output Endpoint: CDR2
        Use ISDN Layouts? y

Enable CDR Storage on Disk? y

Use Enhanced Formats? n

Condition Code 'T' For Redirected Calls? n
                                               Remove # From Called Number? y
       Use Legacy CDR Formats? n
Modified Circuit ID Display? n
  Record Outgoing Calls Only? n
Suppress CDR for Ineffective Call Attempts? n
Disconnect Information in Place of FRL? n

Outg Trk Call Splitting? y
Outg Attd Call Record? y
Interworking Feat-flag? n
 Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n
                                     Calls to Hunt Group - Record: member-ext
Record Called Vector Directory Number Instead of Group or Member? n
Record Agent ID on Incoming? n Record Agent ID on Outgoing? y
  Inc Trk Call Splitting? y

Record Non-Call-Assoc TSC? n

Record Call-Assoc TSC? n

Digits to Record for Outgoing Calls: dialed
   Privacy - Digits to Hide: 0
                                                      CDR Account Code Length: 4
Remove '+' from SIP Numbers? y
```

As Primary Output Format is set to customized, Page 2 of the CDR SYSTEM

PARAMETERS screen must be configured according to requirements defined by the Tiger Prism Implementation Engineer. Enter the data items in the order and length shown below. Each **Data Item length** is taken from the **CM6_SA8201.conf** file on Tiger Prism (Refer to **Section 6.1** for specific information). For example sec-dur below is length 5 and this comes from the following entry in the **CM6_SA8201.conf** file SEC_DUR=1:14.5,I.

char	nge system-parame		Page 2 of 2								
	CDR SYSTEM PARAMETERS										
Data Item - Length Data Item - Length Data Item - Length											
4		_		_		Data Item - Length					
	date		17: attd-console			-					
	end-time		18: bcc			-					
	space		19: clg-pty-cat	- 2	35 :	-					
4:	sec-dur	- 5	20: feat-flag	- 1	36:	_					
5:	cond-code	- 1	21: node-num	- 2	37:	_					
6:	code-dial	- 4	22: vdn	- 8	38:	_					
7:	code-used	- 4	23: bandwidth	- 2	39:	_					
8:	dialed-num	- 18	24: tsc ct	- 4	40:	_					
9:	clg-num/in-tac	- 15	25: return	- 1	41:	_					
10:	auth-code	- 7	26: line-feed	- 1	42:	_					
11:	in-crt-id	- 3	27:	-	43:	_					
12:	out-crt-id	- 3	28:	_	44:	_					
13:	isdn-cc	- 11	29:	_	45:	_					
14:	ppm	- 5	30:	_	46:	_					
15:	acct-code	- 15	31:	-	47:	_					
16:	in-trk-code	- 4	32:	-	48:	_					
			Record length =	: 135							

5.5. Configure Intra-Switch CDR

If (SA8202) - Intra-switch CDR by COS is set to n (see **Section 5.1**), enter the command **change intra-switch-cdr** and enter the **Extension** numbers for which intra-switch calls will generate CDR data, in this case extensions in the 7xxx and 71xx region.

change intra-swit	ch-cdr		Page 1 of 3							
	Assigned Members: 9 of									
Extension	Extension	Extension	Extension							
7000										
7001										
7010										
7020										
7021										
7050										
7100										
7102										

If (SA8202) - Intra-switch CDR by COS is set to y then the COS will dictate of the CDR will be displayed of not. Type **change cos-group x** where x is the COS group to be changed and ensure that **Intra-switch CDR** is set to **y** for the COS group used by the Communication Manager extensions.

change cos-group 1											Pá	age	-	Loi	Ē	2
CLASS OF SERVICE COS G	rou	p:	1	CO	S N	ame	: D	efa:	ılt	PG	3					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Auto Callback	n	У	У	n	У	n	У	n	У	n	У	n	У	n	У	n
Call Fwd-All Calls	n	У	У	У	У	n	n	У	У	n	n	У	У	n	n	У
Data Privacy	n	У	n	n	n	У	У	У	У	n	n	n	n	У	У	У
Priority Calling	n	У	У	n	n	n	n	n	n	У	У	У	У	У	У	У
Console Permissions	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Off-hook Alert	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Restrict Call Fwd-Off Net	У	n	У	У	У	У	У	У	У	У	У	У	У	У	У	У
Call Forwarding Busy/DA	n	У	У	n	n	n	n	n	n	n	n	n	n	n	n	n
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding All	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding B/DA	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Trk-to-Trk Transfer Override	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n
QSIG Call Offer Originations	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Contact Closure Activation	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Intra-switch CDR	n	У	n	n	n	n	n	n	n	n	n	n	n	n	n	n

5.6. Configure Trunk Group CDR Flag

For each trunk group for which CDR records are desired, enter the command **change trunk-group n**, where **n** is the trunk group number, and set **CDR Reports** to **r**.

The example below depicts the trunk group connected to the Session Manager in the sample configuration. Configure similarly for other trunk groups as required e.g. PSTN.

```
Page 1 of 22
change trunk-group 1
                              TRUNK GROUP
 roup Number: 1
Group Name: SIPTRK
                          Group Type: sip
COR: 1
                                                CDR Reports: r
Group Number: 1
                                                 TN: 1 TAC: *801
  Direction: two-way

Outgoing Display? n
Dial Access? n
                                              Night Service:
Queue Length: 99
Service Type: public-ntwrk Auth Code? n
                                           Member Assignment Method: auto
                                                   Signaling Group: 1
                                                 Number of Members: 10
```

5.7. Configure Off-PBX-Telephone Configuration Set

Because the Avaya SIP endpoints are administered as off-pbx-telephone stations, the configuration-set used by the SIP endpoints should be changed. Enter the command **change off-pbx-telephone configuration-set 1** where 1 is the default configuration-set assigned to the SIP EC500 stations. Set the value of **CDR for Origination** to **none** and **CDR for Calls to EC500 Destination** to **n**.

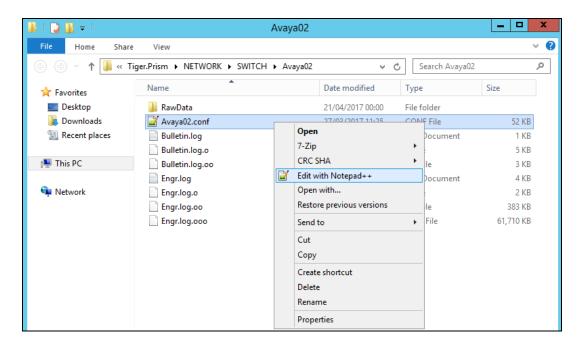
```
change off-pbx-telephone configuration-set 1
                                                             Page 1 of
                                    CONFIGURATION SET: 1
                       Configuration Set Description:
                                 Calling Number Style: network
                                  CDR for Origination: none
                   CDR for Calls to EC500 Destination? n
                         Fast Connect on Origination? n
                         Post Connect Dialing Options: dtmf
                        Cellular Voice Mail Detection: timed (seconds): 4
                                       Barge-in Tone? n
                         Calling Number Verification? y
           Call Appearance Selection for Origination: primary-first
                                    Confirmed Answer? n
Use Shared Voice Connections for Second Call Answered? n
Use Shared Voice Connections for Second Call Initiated? n
               Provide Forced Local Ringback for EC500? n
                    Apply Ringback upon Receipt of: Call-Proceeding
          Location to Route Incoming Overlap Calls: station-location-if-set
```

6. Configure Tiger Prism

The configuration information provided in this section describes the setup of Tiger Prism to collect CDR records generated by Communication Manager over a TCP/IP link.

6.1. Configure Configuration file

On the Tiger Prism server, modify the configuration file; in this case it is called D:\Tiger.Prism\network\Switch\Avaya02\Avaya02.conf.

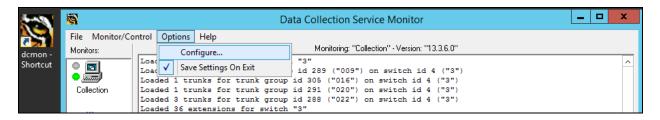


In the [Switch] section ensure the Type field is set to Definity. In the [Input] section enter the Address of the Communication Manager procr interface in this case 10.10.40.13 and the Port number 9000 configured in Section 5.3. The CreateAs field is set to Server. The [FieldDefsFile] section should point to the location of the field definition file. This was named CM6_SA8201.conf and this file is displayed in full in Appendix A of these Application Notes.

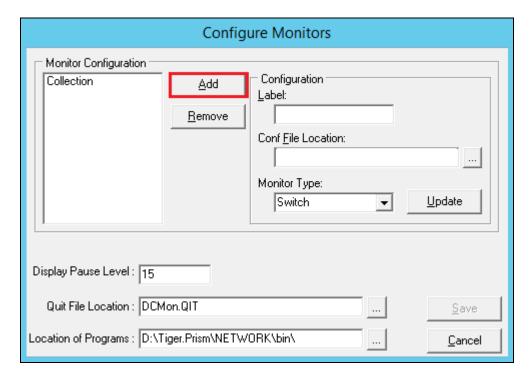
[Switch] Type=Definity Revision=7.0 MaxCallHoldTime=120000 MaxTandemHoldOn=30000 MaxSectionHoldOn=7200000 RecordDiscardBlacklistHoldOn=3600000 MaxLineLength=2000 BreakYear=1980 CustomerId= NodeId=1 DiscardDuplicateRecords=1 DiscardOutgoingWithNoCalledDigits=0 RecordTenant=0 PassTrunkGroupLength=1 CallTimeType=0 SequenceNumberDays=7 SequenceNumbersHeld=7 DefaultLatency=0 [Input] Name=Avaya CM 02 Socket Input Type=Socket Direction=Input Protocol=TCP Address=10.10.40.13 Port=9000 CreateAs=server Mode=Stream Sharing=readwrite BufferSize=1024 TimeOut=200 Sharing=none Blocking=0 DummyWriteInterval=5000 NormalReadResetInterval=1200000 InitialReadResetInterval=3600000 KeepAliveDelay=5000 [FieldDefsFile] Name=D:\Tiger.Prism\NETWORK\SwitchConf\Definity\CM6 SA8201.conf

6.2. 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**.

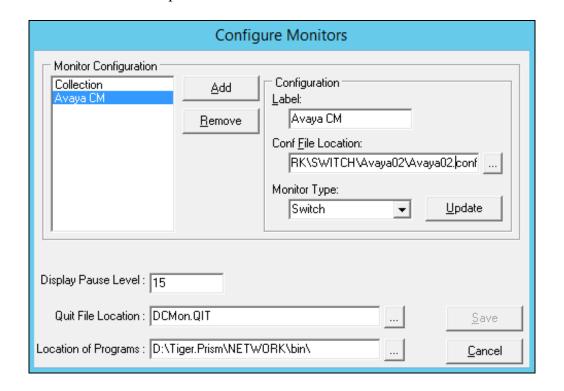


There are two types of monitor types to be configured - one for the collection which interfaces with the Tiger Prism database and one for the switch which interfaces with Communication Manager. In the **Configure Monitors** dialog box click the **Add** button. Below shows the addition of the interface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



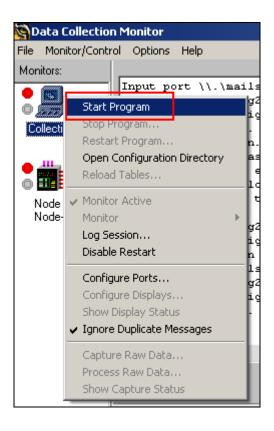
In the **Label** field enter a descriptive name for the switch monitor type. In the **Conf File Location** field enter or browse to the location of the **Avaya02.conf** file created in **Section 6.1**.

The **Avaya02.conf** file for this compliance testing was located at **D:\Tiger.Prism\network\Switch\Avaya02**. 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**.



6.3. 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 CM**.



7. Verification

The following steps may be used to verify the configuration.

7.1. Verify Avaya Aura® Communication Manager CDR Link Status

On the SAT, enter the **status cdr-link** command to verify that the **Primary** CDR **Link State** is **up**.

```
CDR LINK STATUS

Primary

Link State: up

Number of Retries:
Date & Time: 2017/04/21 15:56:59

Forward Seq. No: 0

Backward Seq. No: 0

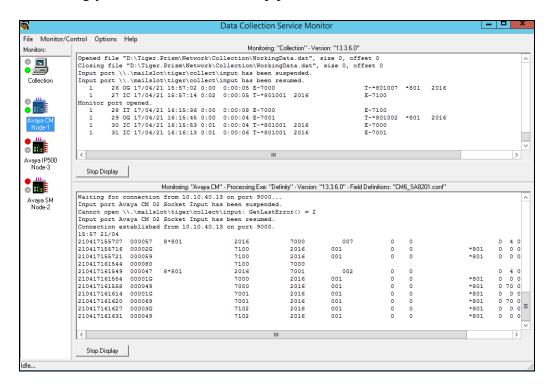
CDR Buffer % Full: 0.00

Reason Code: OK

CDR CDR CORNECTION IS Closed
```

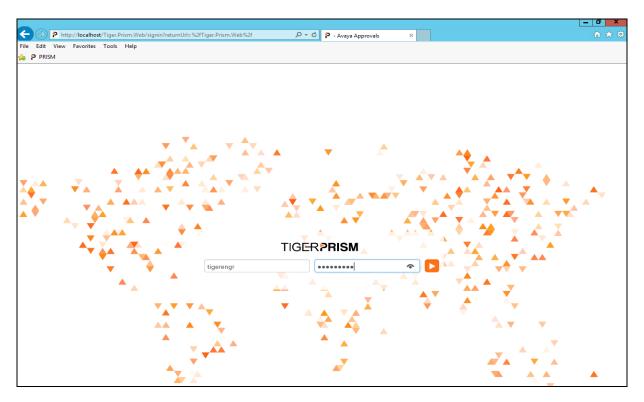
7.2. Verify Data Collection Monitor Status

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 CM** 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.

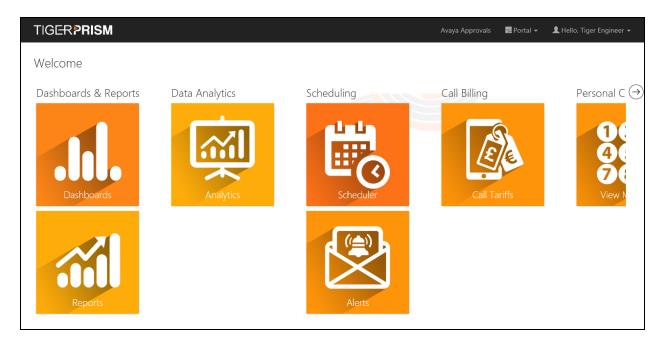


7.3. Verify Report/Billing Information Accuracy

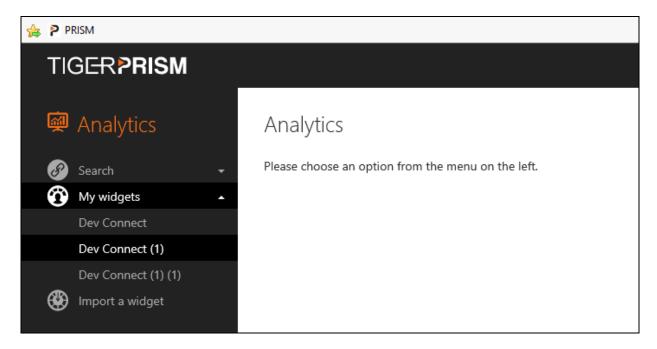
Open a web browser to the Tiger Prism server as shown below. Enter the appropriate credentials and click on the login icon.



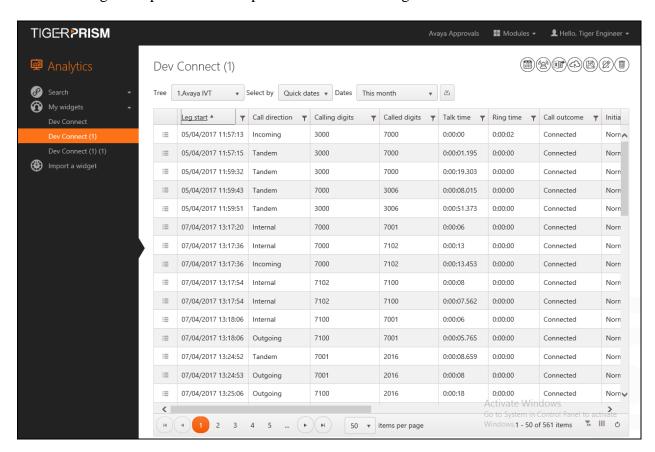
Once logged in, click on **Analytics**.



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.



8. Conclusion

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

9. Additional References

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

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

- Administering Avaya Aura® Communication Manager, Release 7.0.1
- Administering Avaya Aura® Session Manager, Release 7.0.1

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

Appendix A

D:\Tiger.Prism\NETWORK\SwitchConf\Definity\CM6_SA8201.conf

```
Configuration file for the Avaya Communications Manager 6 switch
   Tiger customised format (with Special Application SA8201)
  Created by: Ian D Hay on 26th March 2013
  $Revision: 3796 $
  $Author: ihay $
   $Date: 2013-03-20 10:59:45 +0000 (Wed, 20 Mar 2013) $
   (c) 2013 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"
[SwitchInfol
SwitchName=Avaya Communication Manager 6
SwitchVersion=N/A
ProgramName=definity
ProgramVersion=7.7.1.0
[Description]
0=This is the field definitions for the Avaya Communication Manager 6.
1=This defines the fields used in the extended customized output format specified by
2=Tiger when Special Application SA8201 has been installed on the switch.
# Call Detail Record Format
                 2
                        3
                                 4
67890123456789012345678901234567890123456789012
```

```
# DDMMYYHHMMSS <Dur>C<CD><CU>< Dialled number ><CLI/TAC
                                                                                    ><Auth >I/CO/G<Call
chrg><PPM><Account code >ICTG<AC>BCCFNN<VDN >BW<PC>
                                                           35001
                                                                                                001
# 251002135501 00012G
                                                                       07788780678
                              790
                                     0 0 3
                                                    37002 0 0
      Ω
# 251002135513 000039
                                                           35001
                                                                       07788780678
                                                                                                001
                             790 0 70 3 37002 0 0
# 251002142303 000127 9 790 07788780678
                                                                                30004
                                                                                                    010
                                       0 4 3
      Ω
                                                           0 0
# 251002142313 000140
                                                           30004
                                                                                35001
# 251002142315 000127 9 790
                                                07788780678
                                                                                30004
                                                                                                    010
    0
                                      0 4 3
                                                        0 0
[FieldDefs]
DATE END DAY=1:0.2, I
                                    # Day part of End Date
DATE_END_DAY=1:0.2,I  # Day part of End Date
DATE_END_MONTH=1:2.2,I  # Month part of End Date
DATE_END_YEAR=1:4.2,I  # Year part of End Date
TIME_END_HOUR=1:6.2,I  # Hour part of End Time
TIME_END_MIN=1:8.2,I  # Minute part of End Time
TIME_END_SEC=1:10.2,I  # Second part of End Time
SEC_DUR=1:14.5,I  # Duration in seconds
COND_CODE=1:19.1,C  # Condition Code
CODE_DIAL=1:20.4,C
CODE_USED=1:24.4,C
                                  # Access Code Dialled
CODE_USED=1:24.4,C  # Access Code Used DIALED_NUM=1:28.18,C  # Dialed digits
CLG NUM IN TAC=1:46.15,C # Calling Number or Incoming Trunk Group Access Code
AUTH_CODE=1:61.7,C  # Authorisation Code
IN_CRT_ID=1:68.3,C  # Incoming Circuit Id
OUT_CRT_ID=1:71.3,C  # Outgoing Circuit Id
ISDN_CC=1:74.11,C  # ISDN Call Charge
ISDN CC=1:74.11,C
PPM=1:85.5,C
                                   # Meter Units
ACCT_CODE=1:90.15,C  # Account Code
IN_TRK_CODE=1:105.4,C  # Incoming Trunk Code
ATTD_CONSOLE=1:109.4,C  # Console Number
BCC=1:113.1,C
                                  # ISDN Bearer Capability Class
CLG_PTY_CAT=1:114.2,C  # Calling Party Category
FEAT_FLAG=1:116.1,C  # ISDN Feature Flag
NODE NUM=1:117.2,C  # Node Number
VDN=1:119.8,C
                                   # Vector Directory Number
BANDWIDTH=1:127.2,C
                                  # Number of 64Kbps channels used
TSC CT=1:129.4,C
                                    # Packet count
#Fields unused in this configuration which are supported by this switch
CALLING NUM=1:-1.1,C
DURATION=1:-1.1,C
FMT CODE=1:-1.1,C
FRL=1:-1.1,C
INS=1:-1.1, C
IXC CODE=1:-1.1, C
MA UUI=1:-1.1,C
RES FLAG=1:-1.1,C
TSC FLAG=1:-1.1,C
CALLTYPE=1:-1.1,C
CONTACT URI=1:-1.1,C
COUNTRY_FROM=1:-1.1,C
COUNTRY TO=1:-1.1, C
FROM URI=1:-1.1, C
INTERNAL CODEC=1:-1.1,C
LOCATION FROM=1:-1.1,C
LOCATION TO=1:-1.1,C
TIMEZONE FROM=1:-1.1,C
TIMEZONE TO=1:-1.1,C
```

```
TO URI=1:-1.1,C
DATE START DAY=1:-1.1,C
DATE_START_MONTH=1:-1.1,C
DATE_START_YEAR=1:-1.1,C
SEQ NUM=1:-1.1, C
TIME START HOUR=1:-1.1,C
TIME START MIN=1:-1.1,C
TIME START SEC=1:-1.1,C
\overline{\text{TRUNK}}_{\text{CODEC}} = 1:-1.1, C
UCID=\overline{1}:-1.1,C
TIME_IN_QUEUE=1:-1.2,I
# Date Record Format
# 01234567890
# HH:MM DD/MM
# 13:45 25/10
DATEREC_HOUR=2:0.2,I  # Hour part of time
DATEREC_HMSEP=2:2.1,F=: # Time separator
DATEREC_MIN=2:3.2,I  # Minute part of time DATEREC_DAY=2:6.2,I  # Day part of date
DATEREC DMSEP=2:8.1,F=/ # Date separator
DATEREC MONTH=2:9.2,I  # Month part of date
```

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