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Avaya Solution & Interoperability Test Lab

Application Notes for TONE Software ReliaTel with Avaya Aura® Communication Manager Using CDR – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for TONE Software ReliaTel to interoperate with Avaya Aura® Communication Manager using Call Detail Recording (CDR).

TONE Software ReliaTel is a monitoring and management solution that can monitor and maintain groups of telephone switches, PBX systems, and other devices from a single control point. In the compliance testing, TONE Software ReliaTel used the CDR interface from Avaya Aura® Communication Manager to provide reporting on call detail records.

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

These Application Notes describe the configuration steps required for TONE Software ReliaTel to interoperate with Avaya Aura® Communication Manager using Call Detail Recording (CDR). TONE Software ReliaTel is a monitoring and management solution that can monitor and maintain groups of telephone switches, PBX systems, and other devices from a single control point.

In the compliance testing, TONE Software ReliaTel used the CDR interface from Avaya Aura® Communication Manager to provide call detail reporting on incoming and outgoing calls for configured trunk groups and stations.

2. General Test Approach and Test Results

The feature test cases were performed manually. Different types of calls were made along with different actions initiated from the user telephones, to verify proper parsing and displaying of received CDR data by TONE Software ReliaTel.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet cable to the TONE Software ReliaTel server.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing included call scenarios for internal, inbound PSTN, outbound PSTN, transfer, conference, park, forward, account codes, and authorization codes.

The serviceability testing focused on verifying the ability of TONE Software ReliaTel to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to the TONE Software ReliaTel server.

2.2. Test Results

All test cases were executed and verified. The one observation from the compliance testing is that all call records associated with an internal conference call will be reported as "Internal".
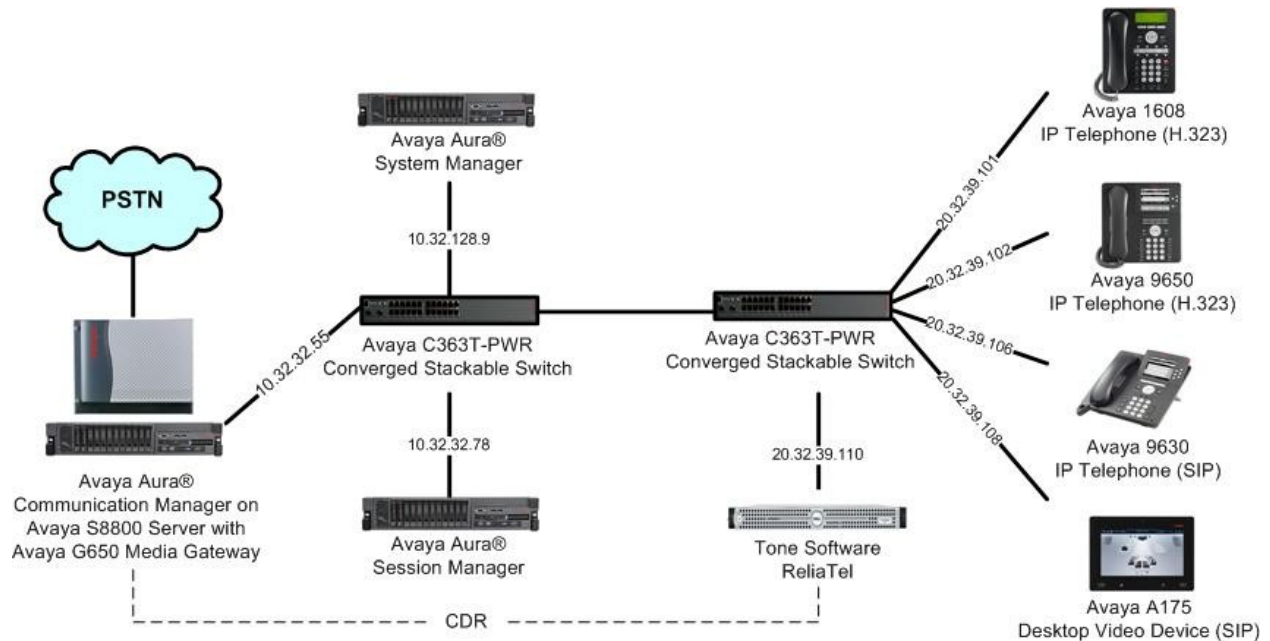
2.3. Support

Technical support on TONE Software ReliaTel can be obtained through the following:

- **Phone:** (800) 833-8663
- **Email:** info@tonesoft.com
- **Web:**   http://www.tonesoft.com/Support_and_Services/

3. Reference Configuration

The configuration used for the compliance testing is shown below. The Avaya Aura® Session Manager and Avaya Aura® System Manager were used in the configuration to support the Avaya SIP endpoints.

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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 Avaya S8800 Server	6.0.1 SP5.01 (R016x.00.1.510.1-19303)

Avaya G650 Media Gateway
    • TN799DP C-LAN Circuit Pack
    • TN2302AP IP Media Processor
	HW01 FW038
	HW20 FW122

Avaya Aura® Session Manager	6.1 SP5
Avaya Aura® System Manager	6.1 SP5
Avaya 1608 IP Telephone (H.323)	1.3
Avaya 9650 IP Telephone (H.323)	3.1
Avaya 9630 IP Telephone (SIP)	2.6.4
Avaya A175 Desktop Video Device (SIP)	1.0.2
TONE Software ReliaTel	3.1.0.145

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Avaya Aura® Communication Manager. The procedures include the following areas:

- Administer IP node names
- Administer IP services
- Administer system parameters CDR
- Administer trunk groups
- Administer intra switch CDR

5.1. Administer IP Node Names

Use the "change node-names ip" command, and add an entry for TONE Software ReliaTel. In this case, "CDR-ReliaTel" and "20.32.39.110" are entered as **Name** and **IP Address**. The actual node name and IP address may vary.

Note the **Name** of an existing C-LAN circuit pack that will be used for connectivity to TONE Software ReliaTel, in this case "Clan-1".

```
change node-names ip                                      Page   2 of   2
                             IP NODE NAMES
    Name               IP Address
Clan-1             10.32.32.12
CDR-ReliaTel       20.32.39.110
```

5.2. Administer IP Services

Use the "change ip-services" command to add an entry for CDR connectivity to TONE Software ReliaTel. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Service Type:**   "CDR1"
- **Local Code:**   Node name of the C-LAN circuit pack from **Section 5.1**.
- **Local Port:**   "0"
- **Remote Node:**   Node name of the TONE Software ReliaTel server from **Section 5.1**.
- **Remote Port:**   An available port in the range of 5000-64500.

```
change ip-services                                          Page   1 of   4

                               IP SERVICES
 Service      Enabled      Local         Local        Remote        Remote
  Type                     Node          Port         Node          Port
AESVCS       y       Clan-1          8765
CDR1                 Clan-1          0       CDR-ReliaTel    9002
```

Navigate to **Page 3**, locate the automatically created "CDR1" entry, and enter "n" for **Reliable Protocol**. Retain the default values in the remaining fields.

```
change ip-services                                          Page   3 of   4

                           SESSION LAYER TIMERS
  Service     Reliable  Packet Resp   Session Connect  SPDU  Connectivity
   Type       Protocol    Timer       Message Cntr     Cntr    Timer

  CDR1          n          30              3            3        60
```

5.3. Administer System Parameters CDR

Enter the "change system-parameters cdr" command to modify CDR related system parameters. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Primary Output Format:** "unformatted"
- **Primary Output Endpoint:** CDR service type from **Section 5.2**.
- **Use Legacy CDR Formats:** "n"
- **Intra-switch CDR:** "y"
- **Record Outgoing Calls Only:** "n"
- **Outg Trk Call Splitting:** "y"

```
change system-parameters cdr                              Page   1 of   1
                          CDR SYSTEM PARAMETERS

 Node Number (Local PBX ID): 1                     CDR Date Format: month/day
      Primary Output Format: unformatted    Primary Output Endpoint: CDR1
    Secondary Output Format:
           Use ISDN Layouts? n                  Enable CDR Storage on Disk? n
       Use Enhanced Formats? n     Condition Code 'T' For Redirected Calls? n
      Use Legacy CDR Formats? n                 Remove # From Called Number? n
Modified Circuit ID Display? n                            Intra-switch CDR? y
              Record Outgoing Calls Only? n      Outg Trk Call Splitting? y
  Suppress CDR for Ineffective Call Attempts? y       Outg Attd Call Record? y
     Disconnect Information in Place of FRL? n       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? n
  Record Non-Call-Assoc TSC? n          Call Record Handling Option: warning
      Record Call-Assoc TSC? n    Digits to Record for Outgoing Calls: dialed
   Privacy - Digits to Hide: 0               CDR Account Code Length: 15
```

5.4. Administer Trunk Groups

For every trunk group for which CDR records are desired, enter the "change trunk-group n" command where "n" is the trunk group number. Make certain that **CDR Reports** is enabled, as shown below. Note that "y" is the default value for **CDR Reports**.

```
change trunk-group 10                                       Page   1 of  21
                            TRUNK GROUP

Group Number: 10                  Group Type: isdn         CDR Reports: y
  Group Name: PSTN 613-771-7521,2      COR: 1      TN: 1        TAC: 1010
   Direction: two-way       Outgoing Display? n       Carrier Medium: PRI/BR
 Dial Access? n             Busy Threshold: 255  Night Service:
Queue Length: 0
Service Type: tie                    Auth Code? n          TestCall ITC: rest
                       Far End Test Line No:
TestCall BCC: 4
```

In the compliance testing, two trunk groups were enabled for CDR records, as shown below.

```
list trunk-group                                           Page   1

                            TRUNK GROUPS

Grp                                         No.                 Out Que
No.   TAC   Group Type   Group Name         Mem TN  COR CDR Meas Dsp Len

5     1005 sip          SIP Trunk to SM/IPC  10  1   1   y   none n   0
10    1010 isdn         PSTN 613-771-7521,2  23  1   1   y   none n   0
```

5.5. Administer Intra Switch CDR

The CDR feature generally records calls originating or terminating outside of Communication Manager. To record calls between local station users on Communication Manager, use the "change intra-switch-cdr" command and add an entry for each local station extension desired to be recorded.

In the compliance testing, calls to and from four existing local station extensions shown below were recorded.

```
change intra-switch-cdr                                    Page   1 of   3
                     INTRA-SWITCH CDR

                          Assigned Members:   0    of 5000   administered
  Extension        Extension         Extension         Extension
  65001
  65002
  66006
  66008
```

# 6.   Configure TONE Software ReliaTel

This section provides the procedures for configuring TONE Software ReliaTel. The procedures include the following areas:

- Launch web interface
- Administer entities
- Administer CDR collectors

The configuration of ReliaTel is typically performed by TONE Software technicians. The procedural steps are presented in these Application Notes for informational purposes.

6.1. Launch Web Interface

Access the ReliaTel web interface by using the URL "http://ip-address:8080/ems/app" in an Internet browser window, where "ip-address" is the IP address of the ReliaTel server. Log in using the appropriate credentials.
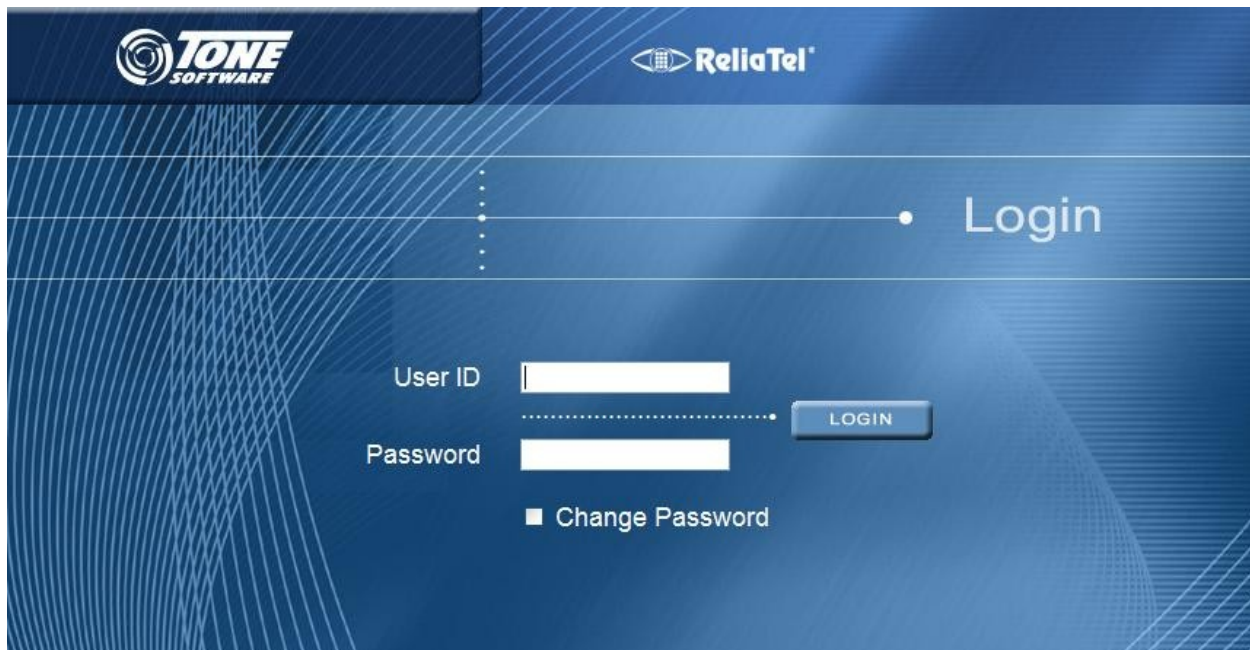
The **ReliaTel** screen is displayed. Select **Administration > General Administration** from the top menu.

6.2. Administer Entities

The **ReliaTel** screen is updated as shown below. Select **General > Entities** from the left pane to display a list of entities in the right pane. Click **New** to add a new entity.
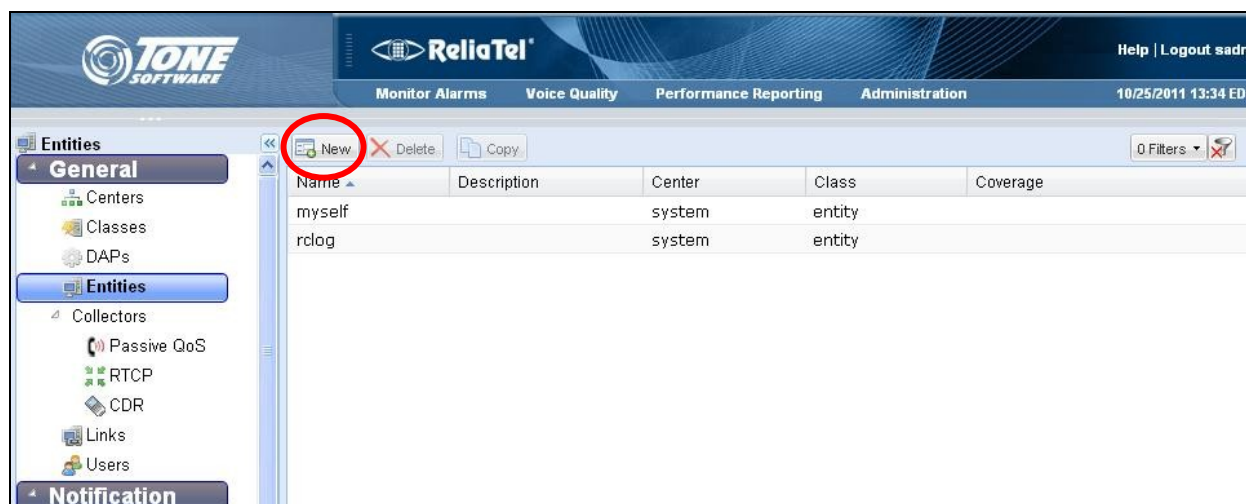
In the lower portion of the screen, select the **General** tab. Enter a descriptive **Name**. Select the appropriate pre-configured **Center** from the drop-down list, in this case "production". For **Class**, select "definity".
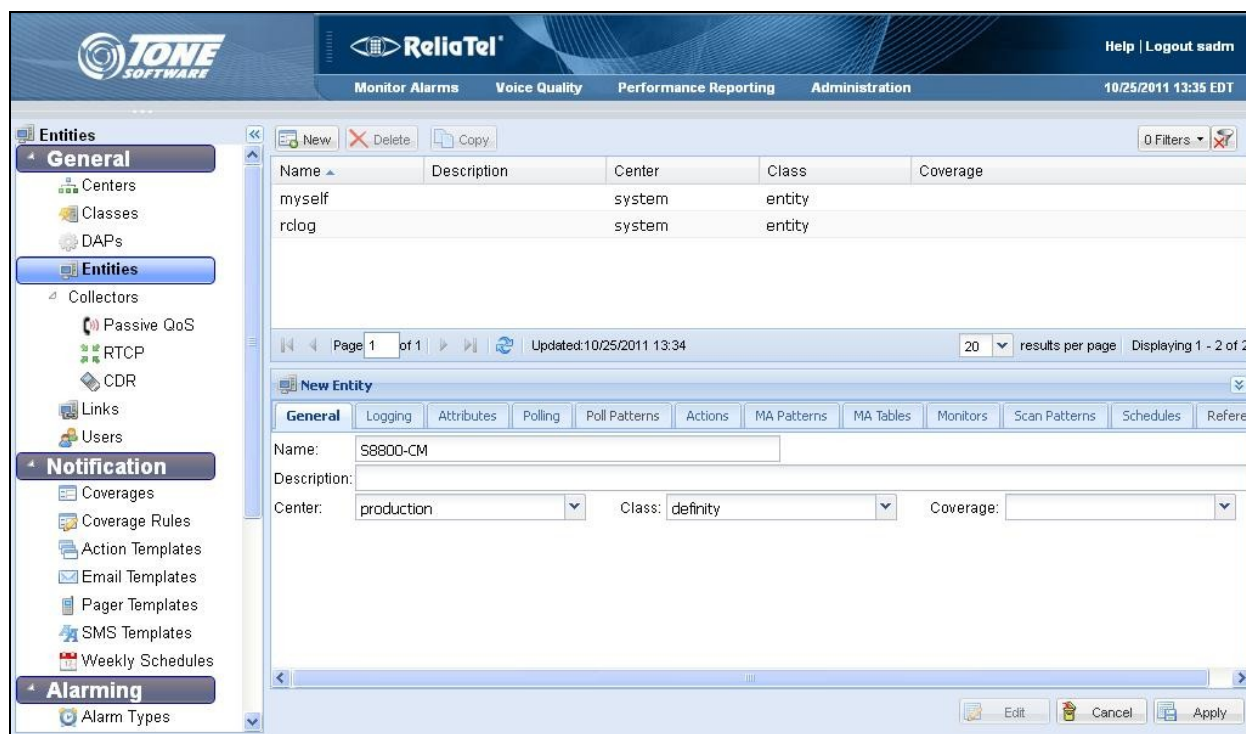
6.3. Administer CDR Collectors

Select **General > Collectors > CDR** from the left pane to display a list of CDR collectors in the right pane. Click **New** to add a new CDR collector.

In the lower portion of the screen, select the **General** tab. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Center:** Select the same center from **Section 6.2**.
- **DAP:** Select the appropriate pre-configured data acquisition point.
- **Parser:** "Unformatted – Avaya CM 4.X"
- **Port:** Enter the CDR port from **Section 5.2**.
- **Entity (PBX):** Select the entity name from **Section 6.2**.
- **Class:** "CdrCollector"
- **IP Address:** Enter the IP address of the ReliaTel server.
- **TimeZone:** Select the applicable time zone.

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7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Aura® Communication Manager and TONE Software ReliaTel.

Prior to verification, place and complete a call involving a CDR enabled trunk group and/or station.

From the **ReliaTel** screen, select **Performance Reporting** from the top menu to display the screen below. Select **Base Reports > Call Detail Records Reports** from the left pane.

In the left pane of the subsequent screen, select "All Call Detail Records" for **Standard Report List**, and select the collector from **Section 6.3** for **CDR Collector**. Select "Today" for **Date Range**, and click **Run Report**.

Verify the screen is updated with entries, and that the reported values for the entries are appropriate for the last call.

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8. Conclusion

These Application Notes describe the configuration steps required TONE Software ReliaTel to successfully interoperate with Avaya Aura® Communication Manager using CDR.   All feature and serviceability test cases were completed with one observation noted in **Section 2.2**.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *Administering Avaya Aura*^{TM} *Communication Manager*, Document 03-300509, Issue 6.0, Release 6.0, June 2010, available at http://support.avaya.com.

2. *ReliaTel Monitoring and Management Solution Installation and Configuration Guide*, Version 3 Release 1 Modification 0, contact ReliaTel support at info@tonesoft.com.

3. *ReliaTel Monitoring and Management Solution User's Guide*, Version 3 Release 1 Modification 0, contact ReliaTel support at info@tonesoft.com.

4. *ReliaTel Avaya Call Detail Reporting Operator Guide*, Version 3 Release 1 Modification 0, contact ReliaTel support at info@tonesoft.com.

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