



**Application Notes for Eastcom Telephone Call Accounting and Audit Package - TelCAAP Version 8.21 with Avaya Communication Server 1000 Release 7.5 – Issue 1.0**

**Abstract**

These Application Notes describe the procedures for configuring Eastcom Telephone Call Accounting & Audit Package TelCAAP application to interoperate with Avaya Communication Server 1000. Eastcom TelCAAP is a web-based integrated billing solution that supports all major Call Detail Recording in PABX systems.

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 procedures for configuring Eastcom Telephone Call Accounting & Audit Package TelCAAP to interoperate with Avaya Communication Server 1000. Eastcom TelCAAP is a web-based integrated billing solution that supports all major Call Detail Recording (CDR). The call charge and billing functionality is facilitated by a CDR interface to Avaya Communication Server 1000. The data link used between Avaya CS 1000 and Eastcom TelCAAP server is RS232 serial cable that connects from the RS232 port of Media Gateway Controller (MGC) card on CS 1000 to serial COM port on the TelCAAP server.

## 2. General Test Approach and Test Results

Feature functionality testing was performed manually. Local, incoming, and PSTN calls were made to the Avaya IP Telephones over T1/PRI and SIP trunks, as well as from other local extensions (analog, digital, and IP Telephone SIP and Unistim).

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute a full product performance or feature testing performed by third party vendors, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a third party solution.

### 2.1. Interoperability Compliance Testing

Interoperability compliance testing focused on Eastcom TelCAAP's ability to work with Avaya Communication Server 1000. Eastcom TelCAAP features and capabilities that were verified included the following:

- Receipt and processing of Call Detail Records: internal, abandon, hold and retrieve, local, incoming, transfer, conference, and tandem calls with charge account code and authorization code.
- Serviceability: Restart and shut down the TelCAAP server.

### 2.2. Test Results

The objectives outlined in the **Section 2.1** were verified and met. All executed test cases were completed successfully. There was an important note below.

- Class of service Call Detail Monitoring Allowed (CDMA) should not be set for CS 1000 phones that are collected by Eastcom TelCAAP application. This is because the TelCAAP application does not process the call records with "D" record.

### 2.3. Support

For technical support on Eastcom Telephone Call Accounting & Audit Package TelCAAP product, contact Eastcom Systems as below:

Eastcom Systems Pte Ltd  
Block 71, Ayer Rajah Crescent  
#04-12 to 16, Ayer Rajah Industrial Estate  
Singapore 139951  
Tel : +65 6323 2822  
Email: [enquiries@eastcom-systems.com](mailto:enquiries@eastcom-systems.com)

### 3. Reference Configuration

Figure 1 below illustrates the test configuration diagram that has a serial cable connected from RS232 port on MGC card to serial com port on the Eastcom server. The diagram also has the SIP trunk between two Avaya CS 1000 systems and the T1 trunk from the main CS 1000 to the simulated PSTN. The SIP and T1 trunks are used for outbound and inbound calls to the main CS 1000 (CS1000 A).

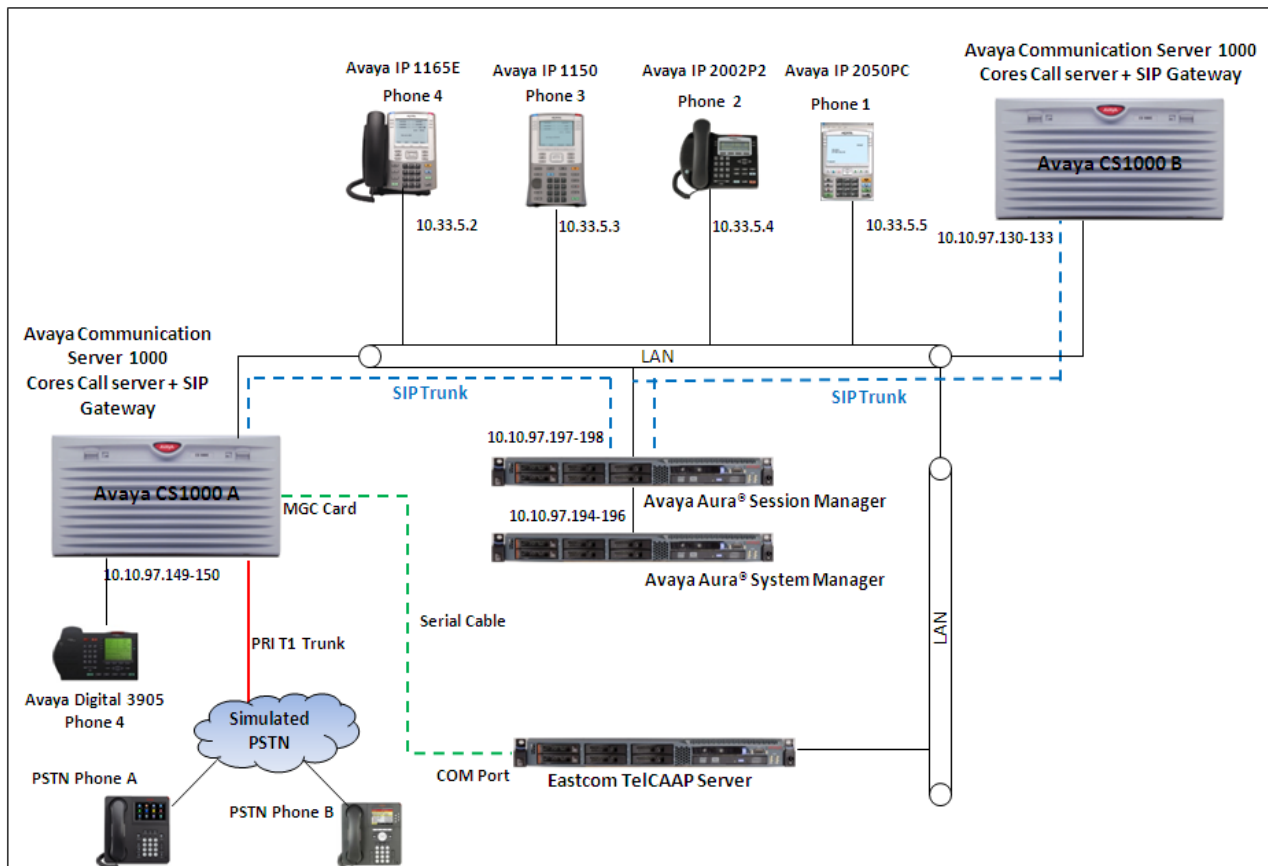


Figure 1: Test Configuration Diagram

## 4. Equipment and Software Validated

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

Equipment	Software
Avaya S8800 server running Avaya Aura® Session Manager Server	6.2 (Build No 6.2.3.0.623006)
Avaya S8800 server running Avaya Aura® System Manager Server	6.2 (Build No: 6.2.0 Software Update Revision No: 6.2.12.1.1822)
Avaya Communication Server 1000E/CPPM	Avaya Communication Server Release 7.5 Q+ Deplist 1 (created: 2012-09-20) and Service Update 1 (Created: Sept 19, 2012)
Avaya IP SIP Phone 1140E	4.3
Avaya IP Unistim Phone 1165E	0x25C8J
Avaya IP Unistim Phone 1150E	0x27C8J
Avaya IP Unistim Phone 2050PC	3.4
Avaya IP Unistim Phone 2002P2	0604DCN
Avaya IP H.323 Phone 9608	6.0.20S
Avaya IP SIP Phone 9620L	6.2
Avaya Digital 3904	-
Eastcom IBM Server x3350	Windows 2008 64-bit R2 Standard SP1
Eastcom TelCAAP Software	8.21

## 5. Configure Avaya Communication Server 1000

This document assumes that the CS 1000 system used for the compliance test was already installed and configured. This section just provides necessary procedure to configure for CS 1000 to work with TelCAAP application. For more detail on how to administer the CS 1000 system, please refer to **Section 9**.

The Call Detail Recording (CDR) feature provides information on incoming and outgoing calls for accounting and administration purposes. The information is assembled by software and sent through Serial Data Interface (SDI) ports to any EIA RS-232 compatible output or storage device. This section provides the steps to configure the Call Detail Recording feature to work with TelCAAP application via serial cable.

1. The CDR feature requires CS1000 to be equipped with required software packages. Use overlay LD 22 to print all software packages and check that all the following software packages are enabled.

```
>ld 22

REQ prt
TYPE pkg
CDR          4 (Call Detail Recording)
CTY          5 (CDR on Teletype Terminal)
CHG          23 (Charge Account for CDR)
BAUT        25 (Basic Authorization Code)
ICDR        108 (Internal CDR)
CDRE        151 (Call Detail Recording Expansion)
FCDR        234 (New Format CDR)
CDRX        259 (Call Detail Recording Enhancement)
```

2. Use overlay (LD) 17 to create a TTY port number for a CDR connection on the MGC card of CS 1000. This TTY port was used to connect to the COM port on TelCAAP server via a serial cable. Note that the TTY port should be in the range from 0 to 15 and the Port on MGC card for output CDR record should be in the range 0 to 2.

```
>ld 17
Req chg
Type adan
ADAN new tty 12 (Create new TTY port number, port 12)
CTYP MGC (Card type is MGC)
  IPMG 4 0 (the logical position of the MGC card in the IPMG)
  DNUM 12 (Device number of I/O ports it must be the same as the
TTY port above)
  PORT 1 (port 1 in the MGC card)
  DES CDR (Designator)
  BPS 9600 (Baud rate)
  BITL 8 (Bits per second)
  STOP 1 (Number of Stop bits)
  PARY NONE (Parity Type)
  FLOW NO (Flow control)
  USER CTY (Output message type)
```

3. Use overlay (LD) 15 to enable the CDR feature on the customer data block of the CS 1000 system.

```
>ld 15
CDB000
MEM AVAIL: (U/P): 36345352      USED U P: 8362512 172005      TOT:
44879869
DISK SPACE NEEDED: 157 KBYTES
REQ: chg
TYPE: CDR

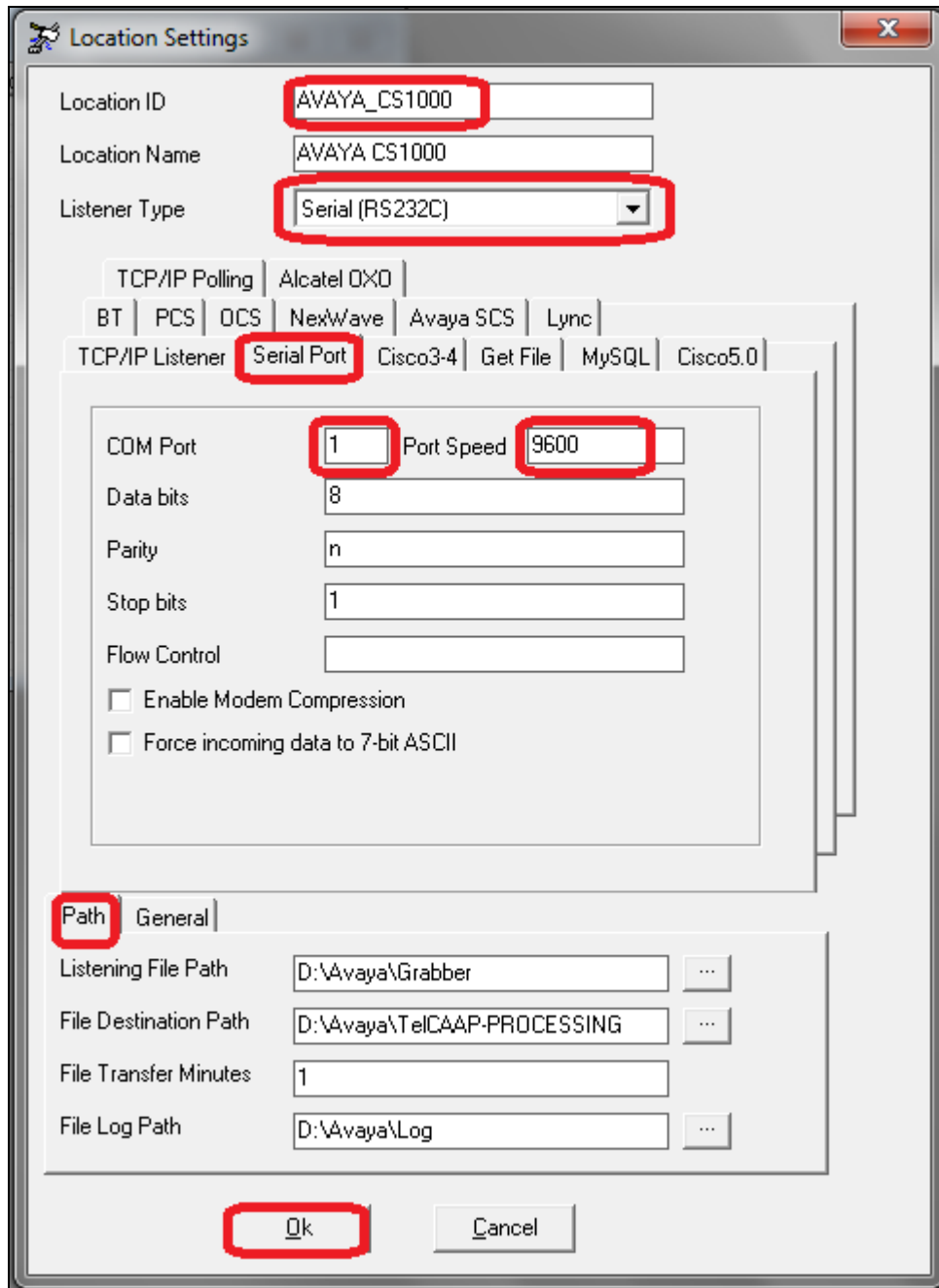
TYPE CDR_DATA
CUST 0
IMPH YES
  OMPH YES
  AXID YES
  TRCR NO
  CDPR YES
  ECDR YES
  BDI YES
  OTCR YES
  PORT 12 --> The TTY port 12 as configured above
  CNI DGTS
  BCAP NO
CHLN 4
FCAF NO
```

4. Use overlay (LD) 16 to configure CDR in the route data block for PRI and SIP routes.

```
>ld 16
RDB000
MEM AVAIL: (U/P): 36345352      USED U P: 8362512 172005      TOT:
44879869
DISK SPACE NEEDED: 157 KBYTES
RAN RTE          AVAIL:   512      USED:      0      TOT:   512
REQ  chg
TYPE RDB
CUST 0
ROUT 1
CDR  YES
INC  YES
LAST YES
TTA  YES
ABAN YES
CDRB YES
QREC NO
OAL  YES
AIA  YES
OAN  YES
OPD  YES
```



**Port Speed, Data bits, Parity & Stop bits** field. In the **Path Details** tab, set the corresponding path details by using the browse button. Click **Ok**.

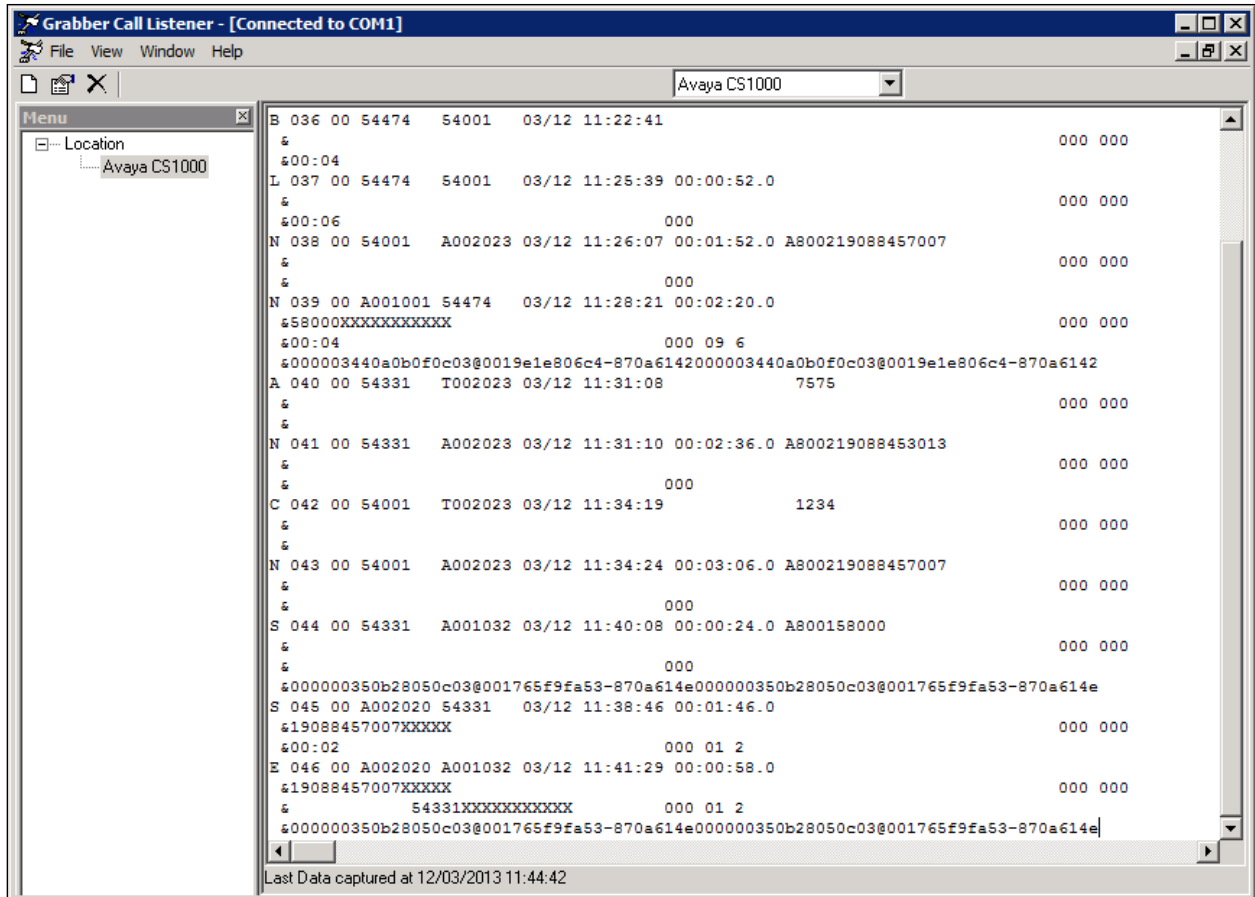


## 7. Verification Steps

The following steps are used to verify the serial connection between Avaya CS 1000 switch and Eastcom TelCAAP application and the configuration.



- To verify CDR records are outputted successfully to the Eastcom Grabber Listener terminal console, make different type of calls such as incoming, local, abandon, transfer, PSTN calls, and etcetera from/to the switch and ensure that CDR records are displayed in the terminal console as shown on the screen below.



- These calls then are processed by Eastcom TelCAAP Processing application as shown on the screen below.

**Automatic Data Processing...**

Extension	User Name	Call Start Time	Tel Number	Area / Country	Duration	Call Charge	File Name
54001	John Smith	12-Mar-2013 11:05:00	1000		00:00:06	0.000	AVAYA_CS1000_20130
54001	John Smith	12-Mar-2013 11:10:00	1001		00:05:09	0.000	AVAYA_CS1000_20130
54001	John Smith	12-Mar-2013 11:22:00	54474		00:00:04	0.000	AVAYA_CS1000_20130
54474	Frank Hulk	12-Mar-2013 11:25:00	54001		00:00:52	0.000	AVAYA_CS1000_20130
54001	John Smith	12-Mar-2013 11:26:00	19088457007		00:01:52	0.032	AVAYA_CS1000_20130
54474	Frank Hulk	12-Mar-2013 11:28:00	58000		00:02:20	0.000	AVAYA_CS1000_20130
54331	John Smith	12-Mar-2013 11:31:00	19088453013		00:02:36	0.048	AVAYA_CS1000_20130
54001	John Smith	12-Mar-2013 11:34:00	19088457007		00:03:06	0.056	AVAYA_CS1000_20130
54331	Khanh Pham	12-Mar-2013 11:40:00	58000		00:00:24	0.008	AVAYA_CS1000_20130
54331	Khanh Pham	12-Mar-2013 11:38:00	19088457007		00:01:46	0.000	AVAYA_CS1000_20130
54331	Khanh Pham	12-Mar-2013 11:41:00	58000(T)		00:00:58	0.016	AVAYA_CS1000_20130

Status : File Name : File Start Time : 01/08/2003 11:45 PM

- As soon as the call records are processed by TelCAAP-Processing it is ready to be shown in the report.

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**Detail Report for the period 12-MAR-2013 to 12-MAR-2013**

Date	Time	Extn From	Called / Calling Number	Area / Country	Duration (HH:MM:SS)	Charges
<b>COMPANY : AVAYA DevConnect</b>						
:						
:						
<b>Extn # : 54001 User Name : John Smith</b>						
<b>LOCAL</b>						
12/03/2013	11:26		19088457007		00:01:52	0.032
12/03/2013	11:34		19088457007		00:03:06	0.056
<b>Sub Total:LOCAL</b>					<b>00:04:58</b>	<b>0.088</b>
<b>Abandon</b>						
12/03/2013	11:05		1000		00:00:06	0.000
12/03/2013	11:10		1001		00:05:09	0.000
12/03/2013	11:22		54474		00:00:04	0.000
<b>Sub Total:Abandon</b>					<b>00:05:19</b>	<b>0.000</b>
<b>Sub Total for Extn # : 54001 User Name : John Smith</b>					<b>00:10:17</b>	<b>0.088</b>

## 8. Conclusion

These Application Notes describe the procedures for configuring Eastcom TelCAAP to interoperate with Avaya Communication Server 1000. All interoperability compliance test cases executed against such a configuration were completed successfully.

## 9. Additional References

Product documentation for Avaya products may be found at <http://support.avaya.com>

[1] Avaya Communication Server 1000 Hospitality Features Fundamentals, Release 7.0, Issue 04.01, Date June 2010.

[2] Avaya Communication Server 1000 Call Detail Recording Fundamentals, Release 7.5, Issue 05.03, date Sep 2011.

Product documentation for Eastcom TelCAAP products may be found at [http://www.eastcom-systems.com/products\\_telcaap.html](http://www.eastcom-systems.com/products_telcaap.html)

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