Avaya Solution and Interoperability Test Lab

Application Notes for interoperability between VeraSMART Call Accounting Version 9.1.174.05a and Avaya Communication Server 1000 Release 7.5 – Issue 1.1

Abstract

These Application Notes describe a solution comprised of Avaya Communication Server 1000 7.5 and VeraSMART Call Accounting application Version 9.1.174.05a. During the compliance testing, the VeraSMART Call Accounting system was able to utilize the Avaya Data Buffering and Access tool kit version 1.05 to collect the call records from the Communication Server 1000 and then extract these call records from the raw database and generate customer call accounting reports.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

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1. Introduction

The VeraSMART Call Accounting provides traditional call collection, rating, and reporting for any size of businesses. It can interface with most telephone systems, in particular with the Avaya CS 1000, to collect and interpret the detailed records of inbound, outbound, tandem, and internal telephone calls. It then calculates the appropriate charge for local, long distance, international & special calls and allocates them to responsible parties.

The solution comprised of the VeraSMART Call Accounting (hereafter referred to as VeraSMART eCAS), which is running OS Window server 2003 with server pack 2. Co-residency with the VeraSMART eCAS application is the Avaya Data Buffering and Access (DBA) toolkit version 1.05, which is connected to the Communication Server 1000 (hereafter referred to as CS 1000). This DBA tool kit extracts the raw data from the DBA buffer of the CS 1000 and populates it into a database file image ready for processing.

2. General Test Approach and Test Results

The general test approach was to install the Avaya DBA tool kit on the VeraSMART eCAS server which communicates directly to the CS 1000 via network connectivity. Execute the DBA tool kit application to collect the raw CDR (Call Detail Recording) from the DBA buffer of the CS 1000. Run the VeraSMART application to pull the raw call records from the database file and then generate the accounting reports using VeraSMART call rating and report.

2.1. Interoperability Compliance Testing

The focus of this compliance testing was to verify that the VeraSMART eCAS system can interface with an Avaya Communication Server 1000 (CS1000) telephone switching system and process their call records.

This interface will use the CS 1000 Data Buffering and Access (DBA) Toolkit pre-installed in the VeraSMART Server to receive the Call Detail Recording (CDR) from the CS 1000 over the IP network. The VeraSMART application will then use a 'Collect from File' protocol and Avaya Communication Server 1000 call record format 552 to process CDR.

The following areas were covered in this compliant testing:

- CDR collection via Data Buffering and Access.
- Power loss and disconnect from network.
- Add CS 1000 site via CDR Source Wizard.
- Process and report on Incoming, Outgoing, Internal, Conference, Transfer and Tandem calls.

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2.2. Test Results

The objectives outlined in the **Section 2.1** were verified and met. All test cases were executed and they all passed.

2.3. Support

Technical support for the VeraSMART eCAS application can be obtained by contacting the Veramark Technologies Inc via email at tech_support@veramark.com or by calling **+1 585.381.0115**.

3. Reference Configuration

Figure 1 illustrates the network diagram configuration used during the compliant testing between the VeraSMART eCAS application and the Avaya Communication Server 1000 Release 7.5.

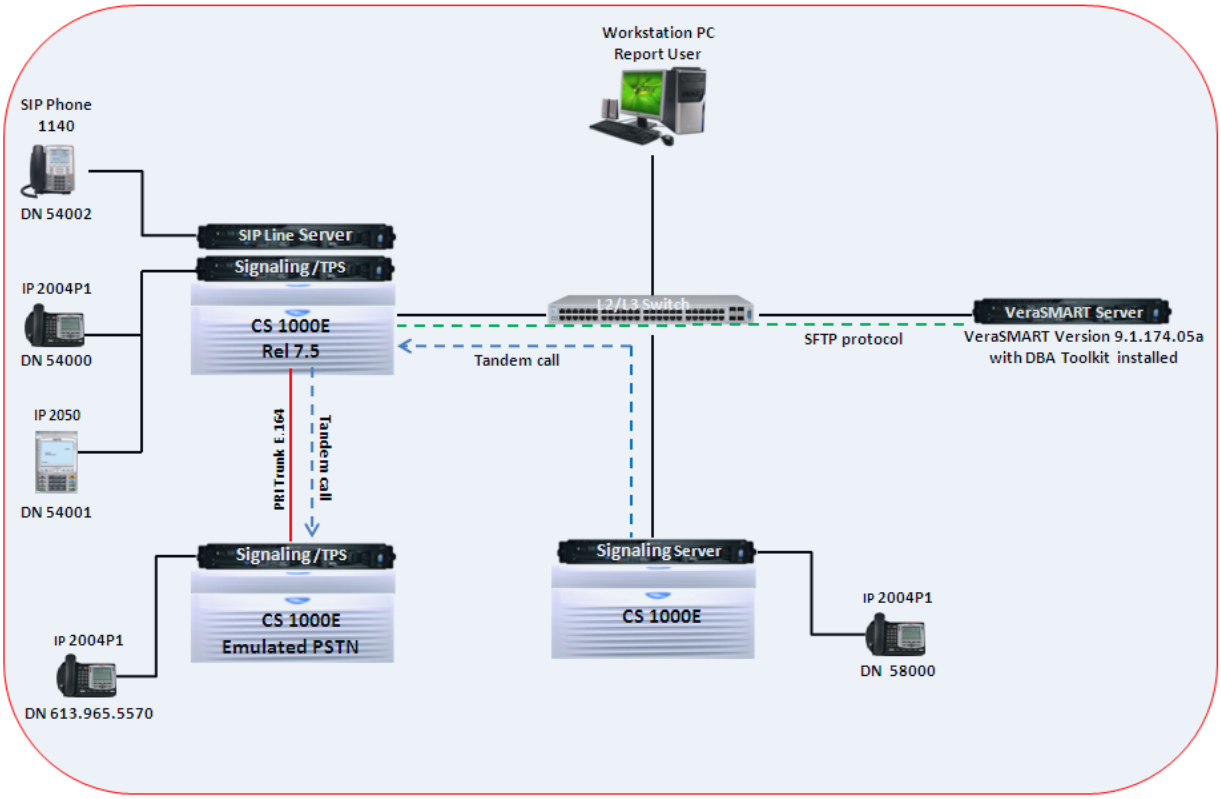

Figure 1: Network Diagram Configuration

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4. Equipment and Software Validated

The following equipment and software were used during the lab testing:

Equipment	Software Version
Avaya CS1000E	Call Server (CPPM): 7.50Q Signaling Server (CPPM): 7.50.17
Avaya IP Soft Phone 2050 Avaya IP Phone 1140 Avaya IP Phone 2004P2 Avaya IP Phone 2002P2	3.04.0003 0625C6O 0692D93 0604DC5
Avaya DBA Toolkit	1.0.5
VeraSMART Call Accounting	9.1.174.05a
VeraSMART Server OS	Windows 2003 Standard Edition SP2 32-bit
Workstation OS	Windows Vista x86

Note that the current version of the DBA Toolkit requires a 32-bit Operating System. For a list of supported Operating Systems see [2].

5. Configure Avaya CS 1000

This document assumes that the Avaya CS 1000 was properly installed and configured as per the product document, for more information about how to install, configure and administer CS 1000 please refer to **Section 10[1].** This section provides steps on how to configure the CDR feature on CS 1000.

To enable and set the password for the DBA FTP user on the CS 1000 Co-res system, log in to the command line interface (CLI) of Linux base of the Call Server as an administrator and issue the two commands below:

- **harden dba on** → to enable DBA SFTP account
- **harden dba passwd** → to set password for NT_S_TM_DBA user.

Figure 2 below shows the example of how these commands were executed in the CS 1000 Co-res system.

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```
admin@cpppm3:~
[admin@cpppm3 ~]$ harden dba on
DBA SFTP account is permitted.
[admin@cpppm3 ~]$
[admin@cpppm3 ~]$
[admin@cpppm3 ~]$ harden dba passwd
Changing password for user NT_S_TM_DBA.
Password Change Utility

Please note that a valid password must contain at least 8 characters,
6 of which are UNIQUE from all 4 character classes (lowercase, uppercase,
digits, other characters) to be considered valid.
Your password should not contain words from any dictionary in any
language or jargon, and should not be based on any personal
or login information.



You can now choose the new password.

A valid password should be a mix of upper and lower case letters,
digits, and other characters.  You can use an 8 character long
password with characters from all of these classes.  An upper
case letter that begins the password and a digit that ends it do
not count towards the number of character classes used.

Enter new password:
Re-type new password:
passwd: all authentication tokens updated successfully.
DBA SFTP account was updated successfully.
[admin@cpppm3 ~]$
```

Figure 2: Enable and set password for DBA FTP account

In order for the Call Server Co-res system to allow the DBA tool kit application to connect to its CDR database, the IP address of the server where DBA Toolkit was installed needs to be added in the **Route** table of the **Base Manager** of the Call server. To do that, launch the **Unified Communication Management** (UCM) webpage where the Call Server Co-res system was registered to and from the UCM webpage launch the **Base Manager** Webpage of the Call Server as shown in **Figures 3 and 4**.

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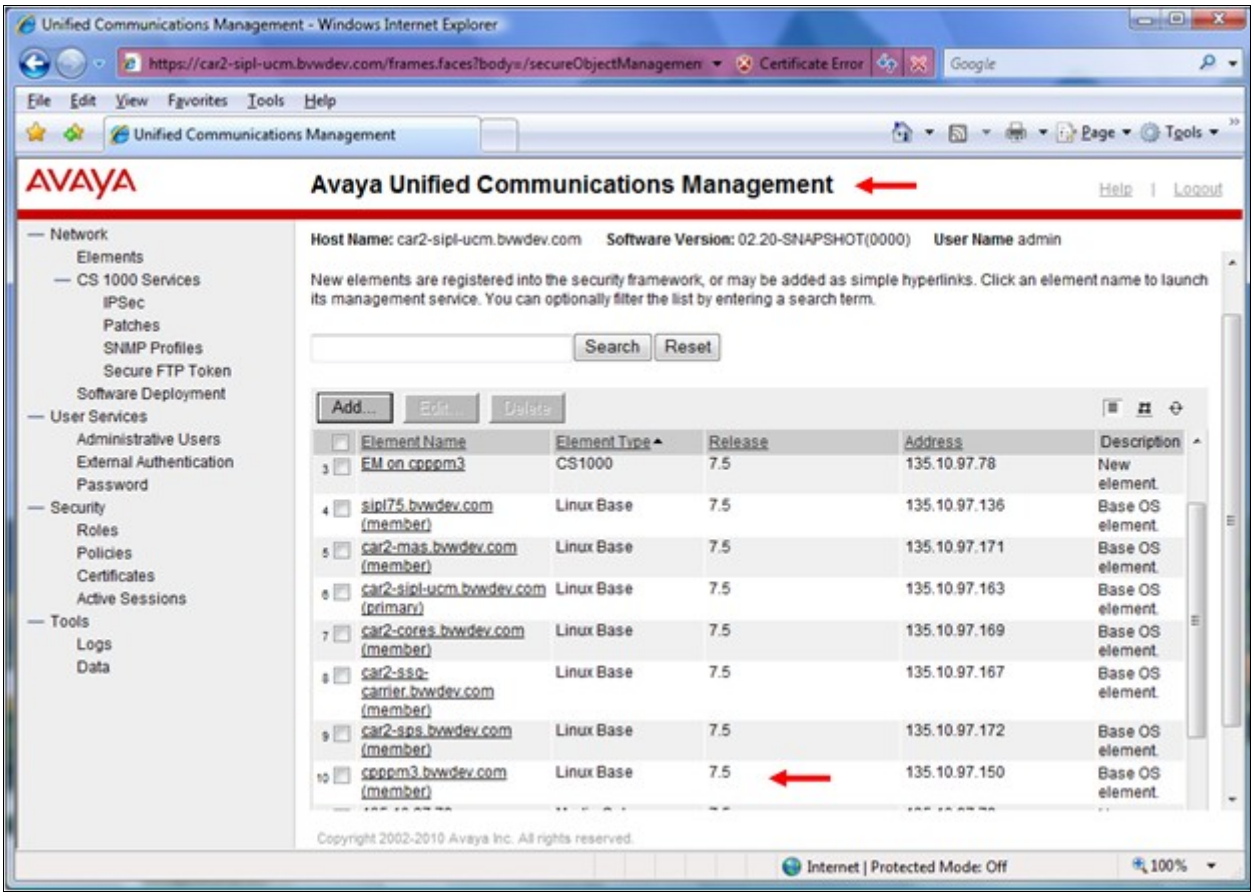

Figure 3: UCM homepage of CS 1000 system

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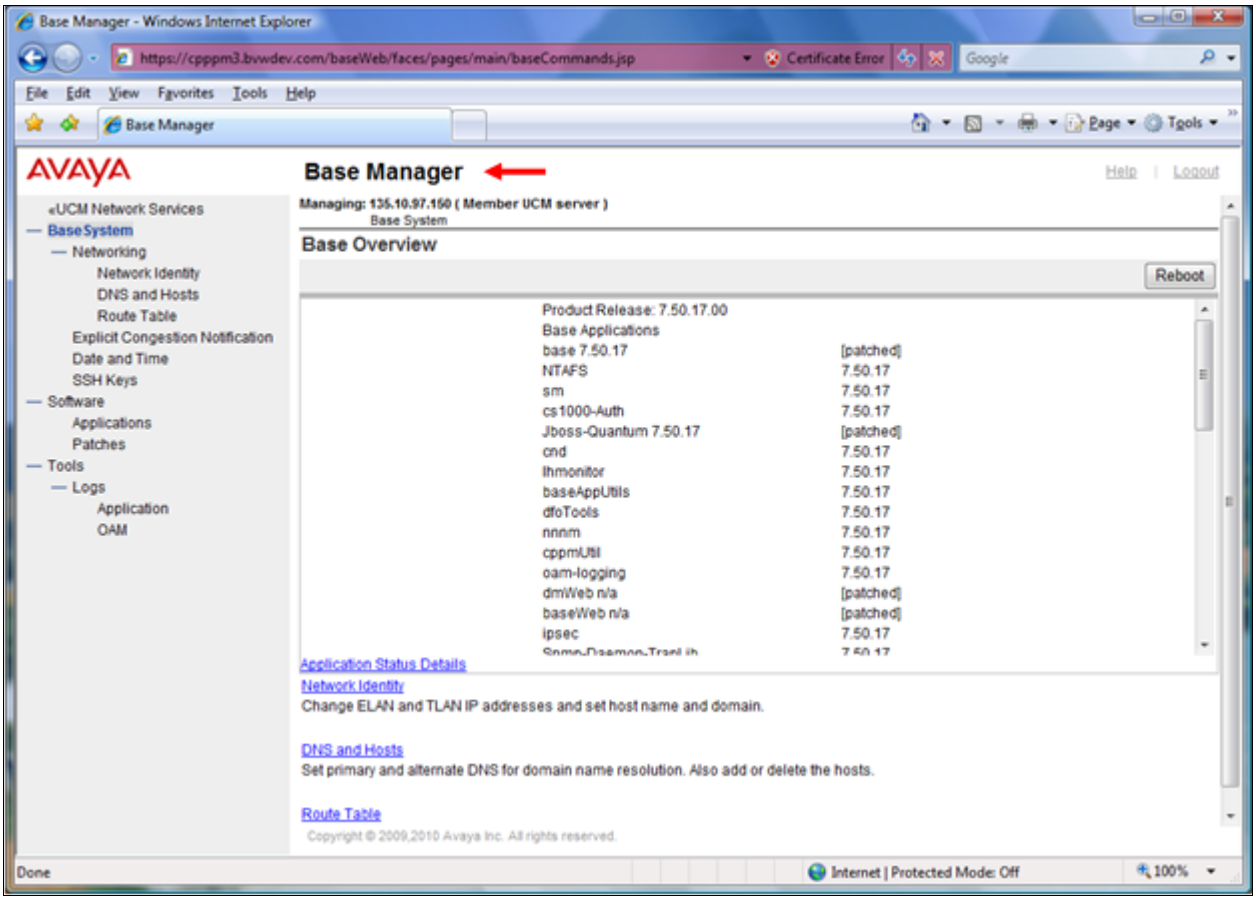

Figure 4: Base Manager Webpage of CS 1000 Co-res system

To add a route for the Call Server Co-res system, on the left menu of the **Base Manager** webpage, navigate to **Base System > Networking >Route Table**, the **Routes** table appears on the right side of the **Base Manager** webpage, click on the **Add** button and enter the IP address of the server where the DBA Toolkit was installed as shown in **Figure 5**.

Click on the **Save** button to save this change.

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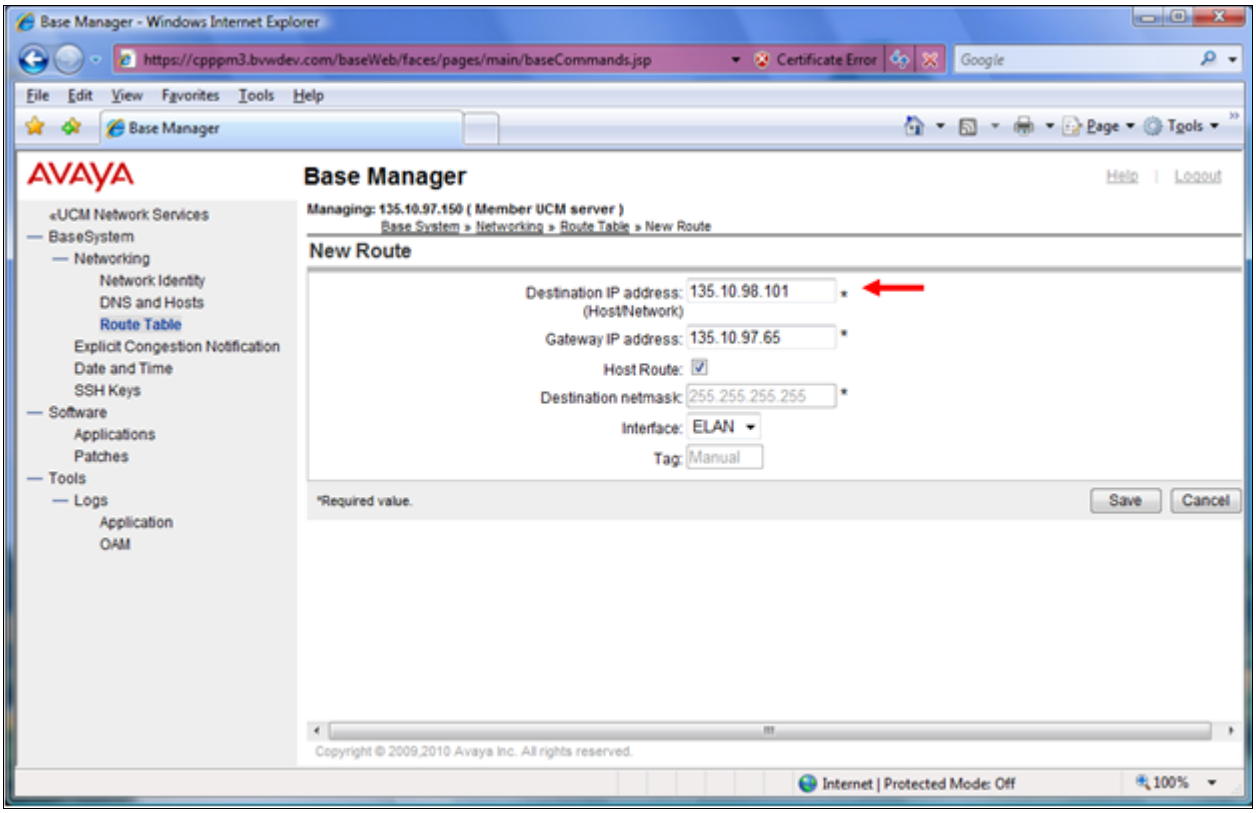

Figure 5: Sample of adding route for Call Server Cores system

To enable the CDR feature, log in to the CLI of the Call Server as an administrator and issue overlay command (**LD**) **15** as shown below.

LD 15
REQ CHG
TYPE CDR_DATA
CDR YES
BDI YES

Figure 6 shows sample of output CDR data set on CS 1000.

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```
admin@cpppm3:~
TYPE: cdr
TYPE CDR_DATA
CUST 0

TYPE CDR_DATA
CUST 00
CDR YES
  IMPH YES
  OMPH YES
  AXID YES
  TRCR NO
  CDPR YES
  ECDR YES
  BDI  YES
  OTCR YES
  PORT 8
  CNI  DGTS
  BCAP NO
CHLN 4
FCAF NO

REQ:
AUD000
```

Figure 6: Sample of output of CDR data on CS1000

Configuring CS 1000 to generate the CDR with new format, log in to the CLI of the Call Server and issue overlay command (**LD**) **17** as below.

LD 17
REQ CHG
TYPE PARM
FCDR NEW

Figure 7 shows the sample of output of CS 1000 system parameters.

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```
admin@cppm1:~
PCML MU
ALRM YES
ERRM ERR BUG AUD
DTRB 100
ABCD NO
TMRK 128
FCDR NEW
PCDR NO
TPO  NO
TSO  NO
CLID YES
DUR5 NO
MLDN YES
MARP YES
```

Figure 7: Sample of output of CS100 system parameters

To enable buffering for CDR data on the CS 1000, log in to the CLI of the Call Server and issue the overlay command (**LD**) **117** as shown in **Figure 8**.

LD 117
= => ENL BUF CDR

```
admin@cpppm3:~
>ld 117
OAM000

=> enl buf cdr

=> stat buf
CDR     ENL
TRF     DIS
STN     DIS
Storage space is 0.9% full
Connected to 135.10.98.101
```

Figure 8: Sample of enabling buffer for CDR on CS 1000

To configure CDR in the Route Data Block (RDB), log in to the CLI of the Call Server and issue overlay command (**LD**) **16** and enter values in the fields that were highlighted in the red box as shown in **Figure 9**.

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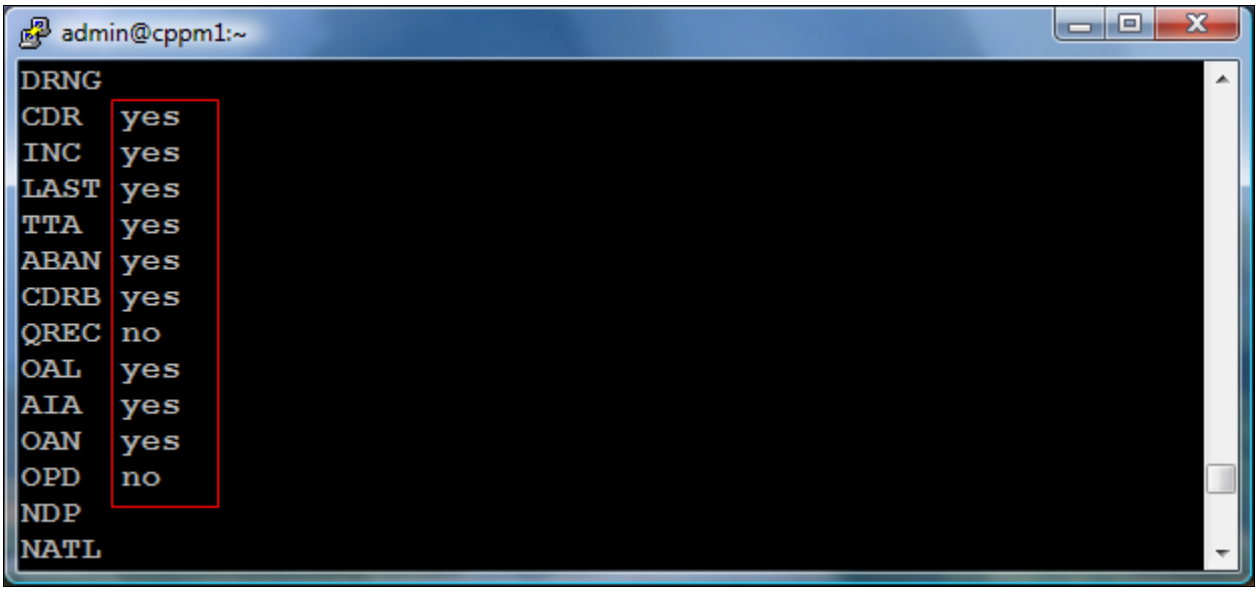

Figure 9: Sample of configuring CDR in the RDB

To enable IP Phone for the CDR feature, log in to the CLI of the CS 1000, issue overlay command (**LD**) **11** and enable the class of services for the CDR feature as shown below:

LD 11
REQ CHG
TYPE <IP Phone Type>
ECHG YES
ITEM CLS ABDA CMDA ICDA

ABDA → Abandoned call record and Time to Answer Allowed
CMDA → Call Detail Monitoring Allowed (Station activity Call Detail Recording)
ICDA → Internal Call Detail Recording Allowed

6. Configure Avaya DBA Toolkit

This document assumes that the DBA Toolkit application was properly installed, this section provides steps on how to configure the DBA Toolkit application which connects to the CS 1000 system.

To open the DBA application, on the server where the DBA Toolkit application was installed, navigate to the folder **C:\Programs File\Avaya Inc\DBA** and double click left mouse on the **dba.exe** to launch the DBA application, the *Data Buffering & Access* window appears as shown in **Figure 10**.

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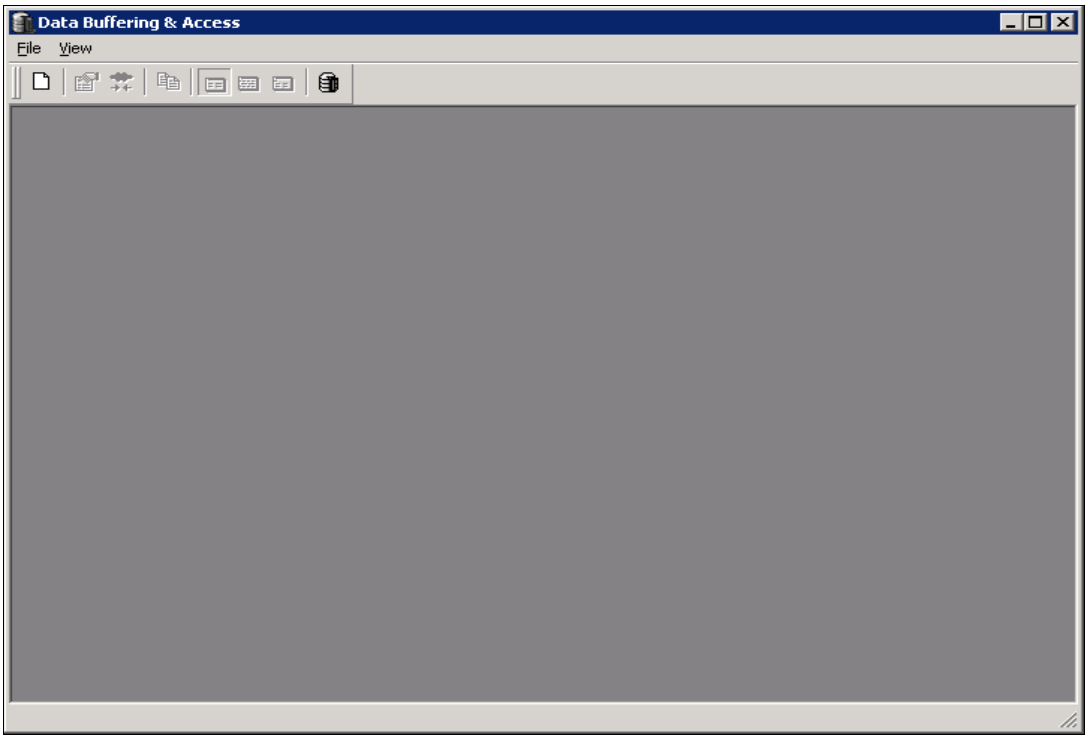

Figure 10: Main window of DBA application

To create new session on the DBA Toolkit application, from the *Data Buffering and Access* window, navigate to the menu **File > New Session,** the *New Session* window appears as shown in **Figure 11**. Enter the IP address of the Call Server system that the DBA application is going to connect to, the CS 1000's **admin** username and password, and the FTP **NT_S_TM_DBA** username and its password that was created in **Section 5**.

Click on the **Connect Now** button to connect to the CS 1000 system.

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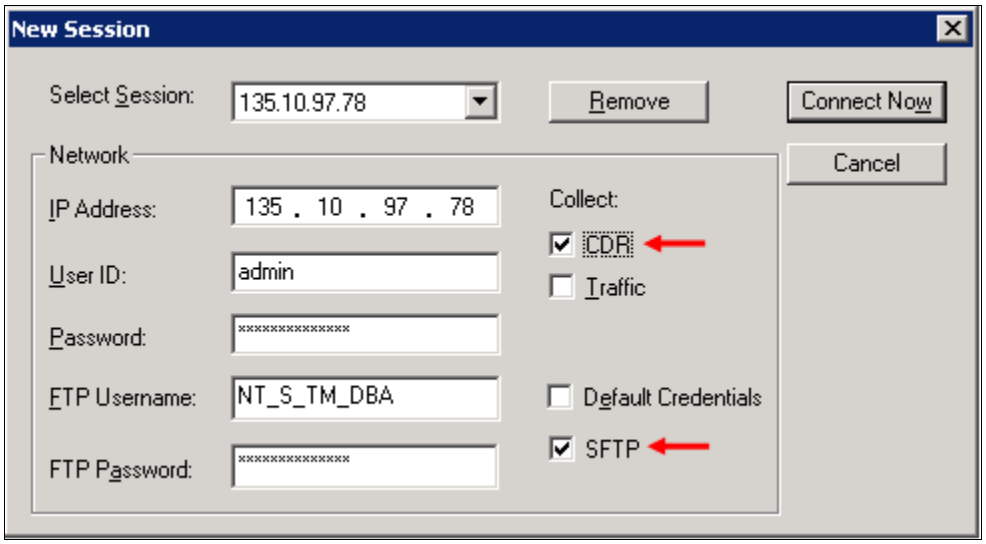

Figure 11: Configure DBA connecting to CS 1000

Figure 12 below shows the DBA application successfully connected to the CS 1000 system.

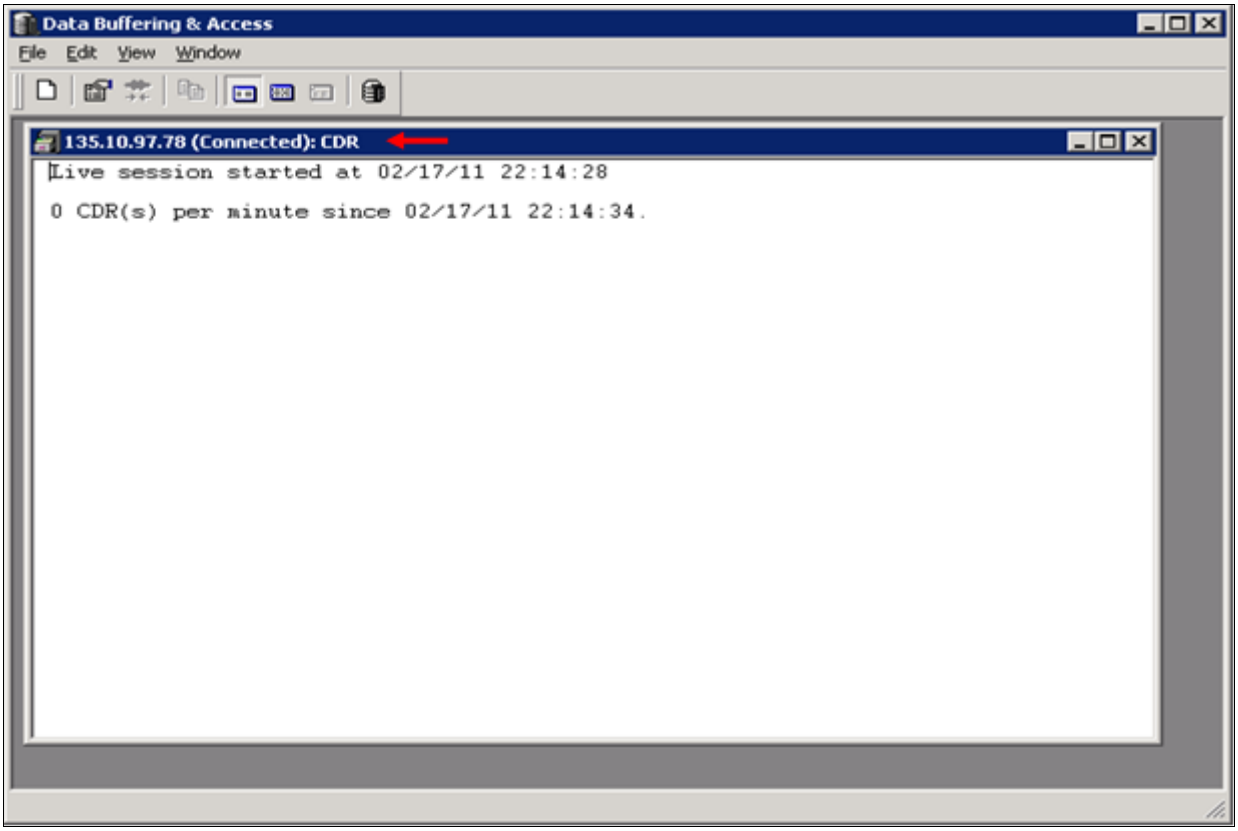

Figure 12: The connection status of DBA with CS 1000

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To verify the CDR feature and call records on the CS 1000 system can be outputted to the DBA Toolkit, place some phone calls, wait at least one minute after polling completes and observe these calls were successfully outputted as shown in **Figure 13** below.

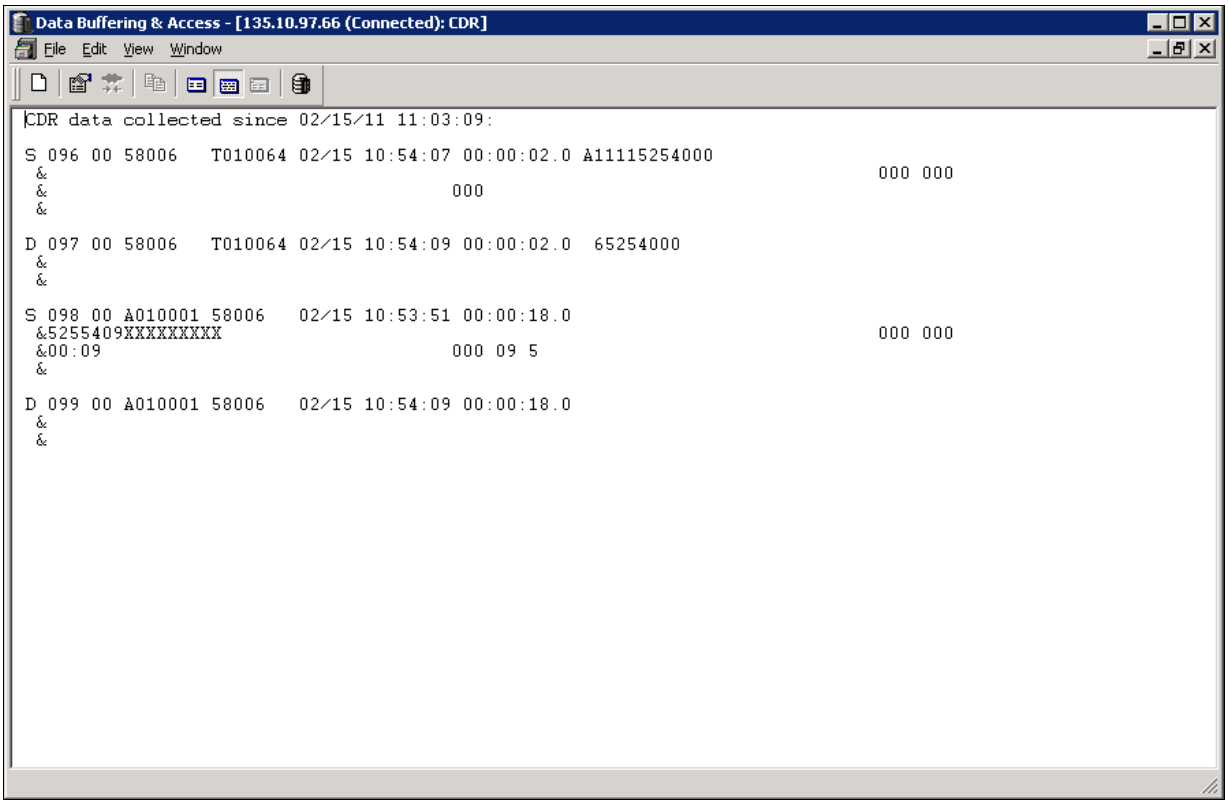

Figure 13: Sample of call records outputted to DBA Toolkit

7. Configure VeraSMART Call Accounting

This document assumes that the VeraSMART eCAS application was properly installed and configured by a Veramark engineer. This section provides steps on how to configure the CDR source, Call Rating, Strip Leading Digits, and creating Reports.

To launch the VeraSMART eCAS application, log in to the VeraSMART Server as an administrator and navigate to the menu **Start > All Programs > VeraSMART > VeraSMART**, the login page of the VeraSMART eCAS application appears as shown in **Figure 14**.

Enter user name **admin** and its password and then click on the **Login** button to log in to VeraSMART.

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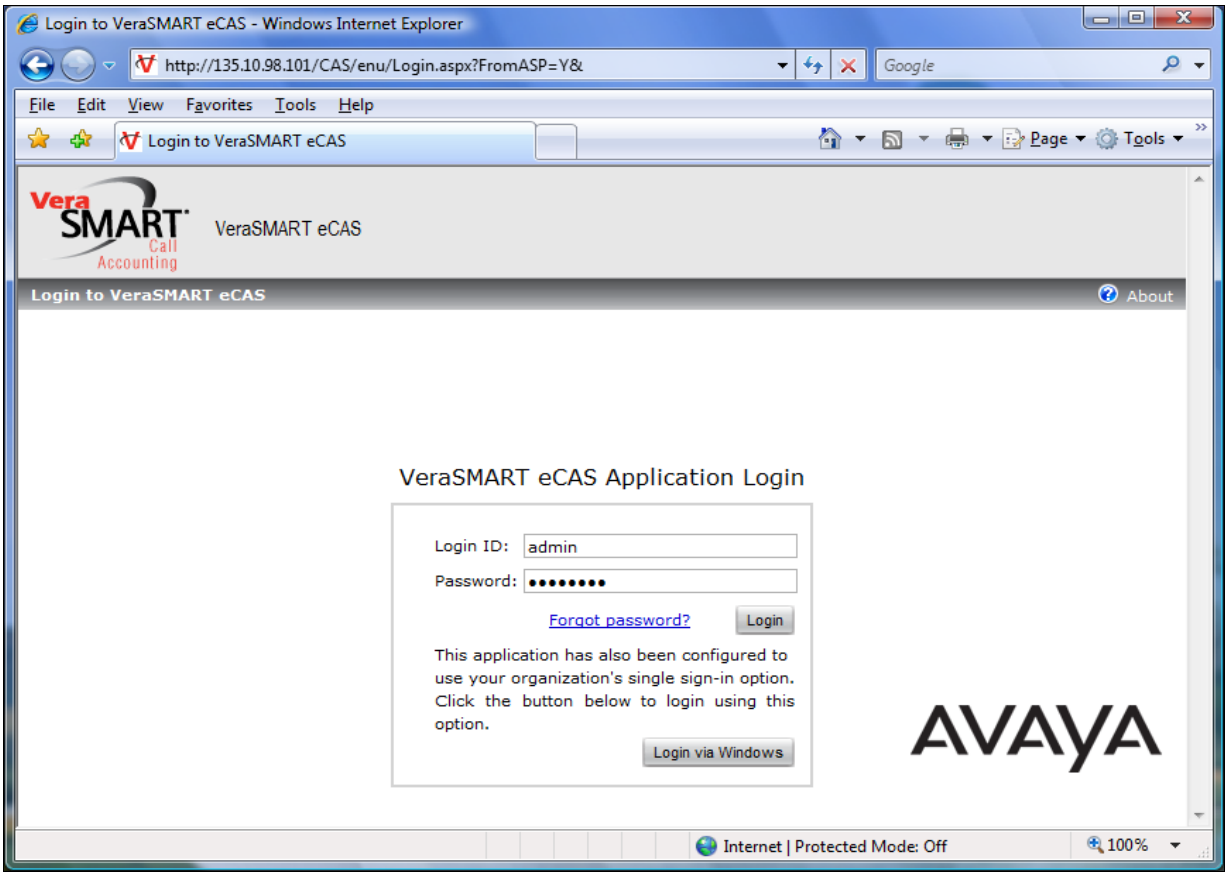

Figure 14: Login webpage of VeraSMART eCAS application

7.1. Create CDR Source

To create a CDR Source for the CS 1000 system on VeraSMART, from homepage of VeraSMART, navigate to the menu **Call Accounting > Call Collection > CDR Source** as shown in **Figure 15**.

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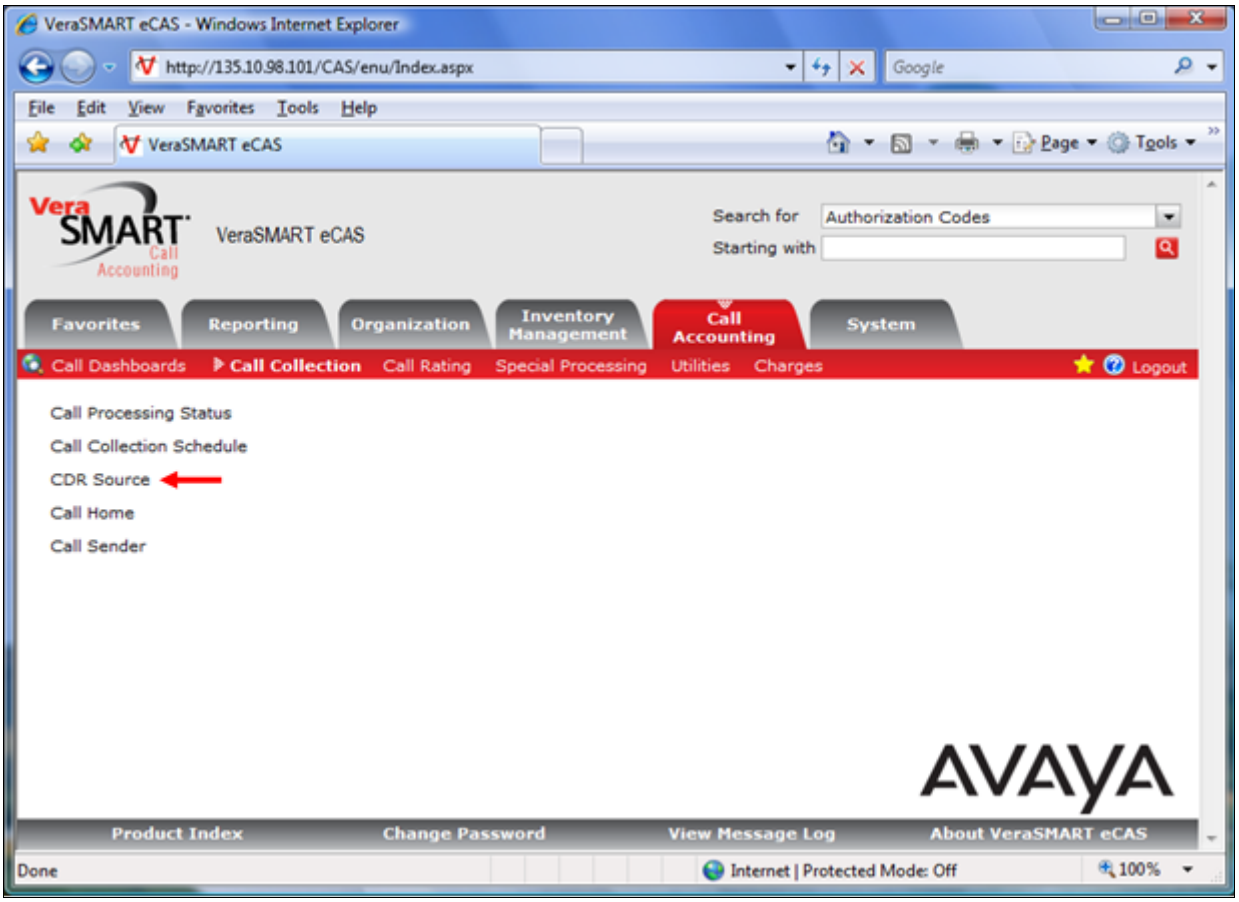

Figure 15: Sample of adding a CDR Source

The "**Welcome**" page of the *CDR Source Wizard* window appears as shown in **Figure 16**, click on the **Next** link to go to next page.

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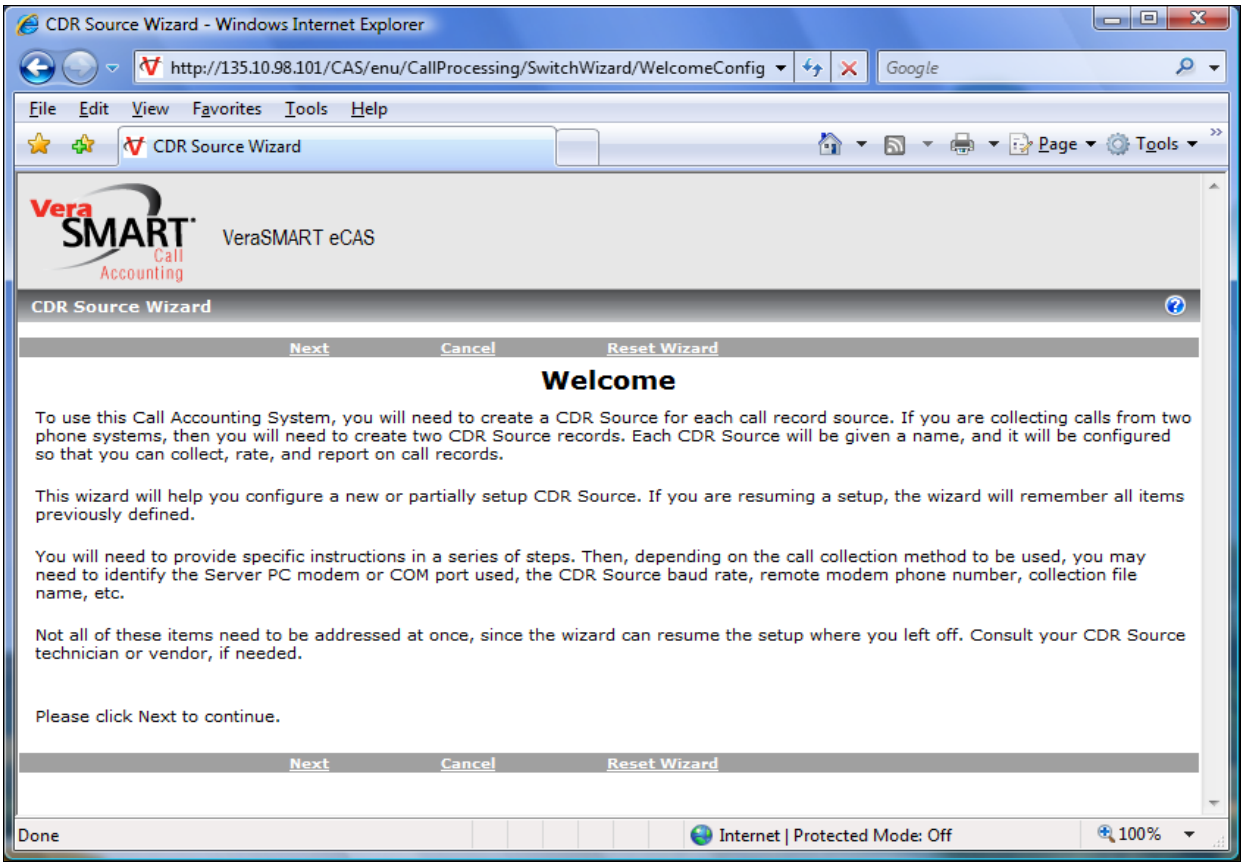

Figure 16: Sample of adding a CDR Source (cont)

In this page, the "**Identify the source of call records"** page, enter a name in the **CDR Source name** (Test1), **Area code** (613), **Local exchange** (825), **Local rate method (**None**)**, and select **Store** options for **Internal** and **Incoming** calls as shown in **Figure 17**.

Click on the **Next** link to go to next page.

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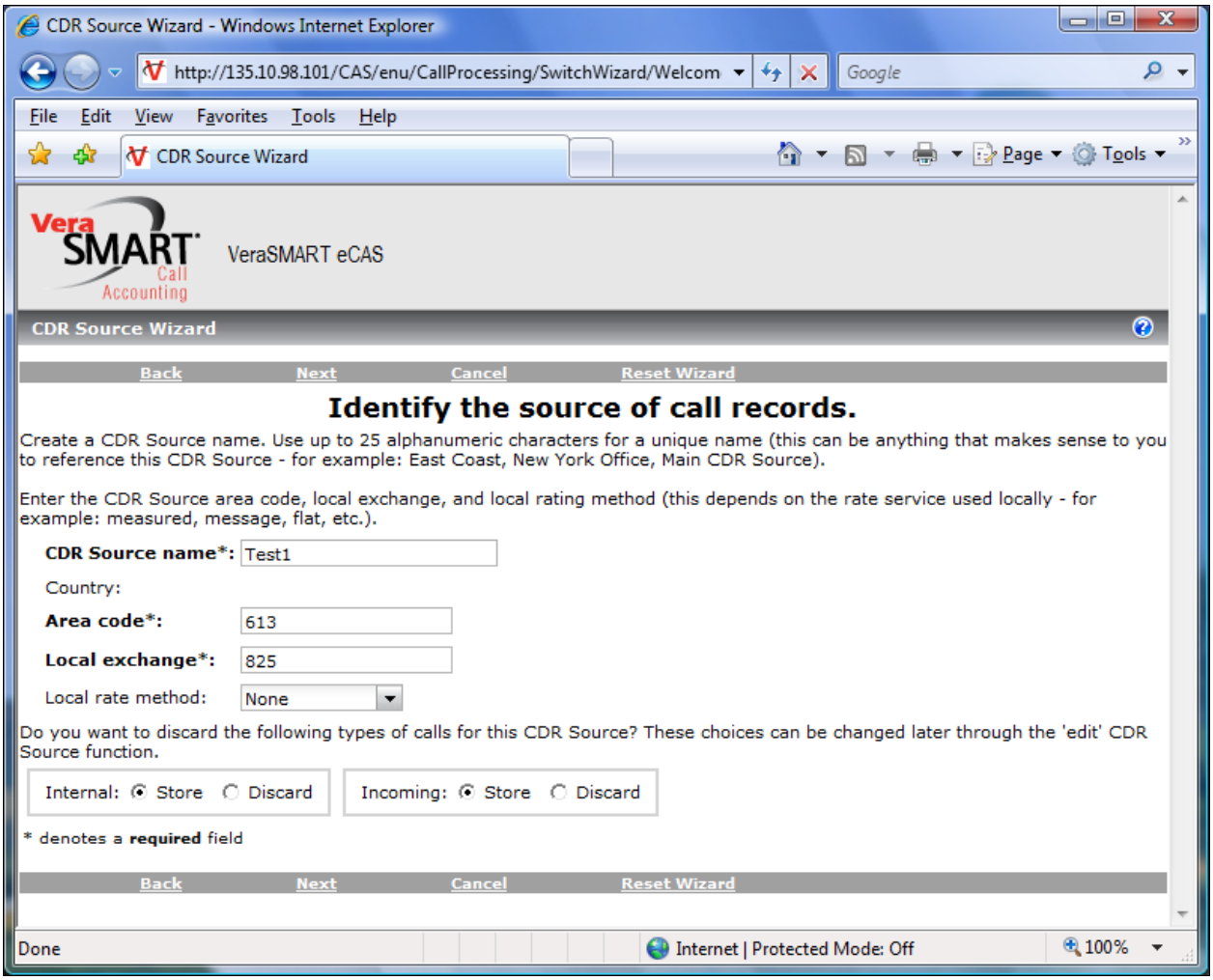

Figure 17: Sample of adding a CDR Source (cont)

Figure 18 below shows list of the CDR Source manufacturer; select the **Avaya (formerly Nortel)** manufacturer in the list.

Click on the **Next** link to go to next page.

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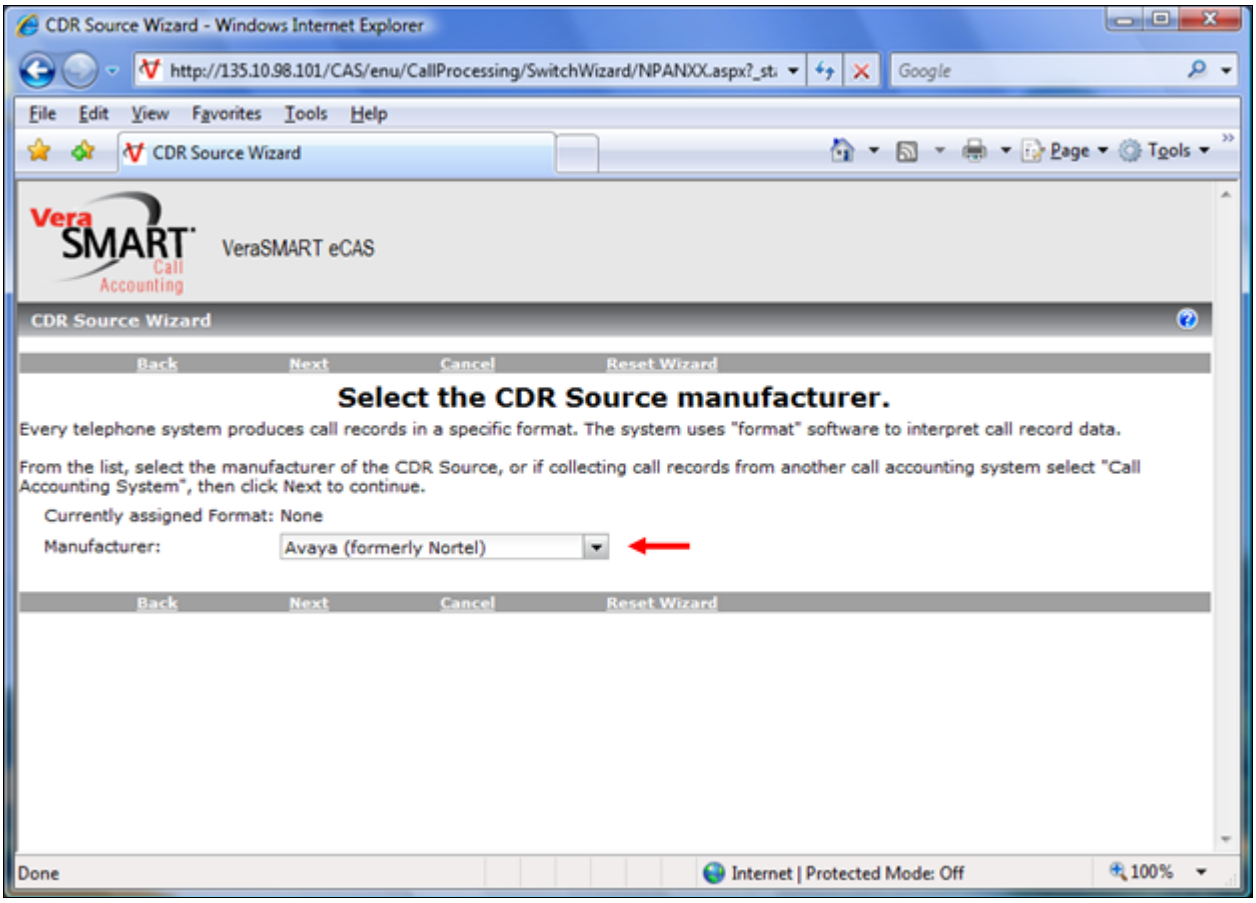

Figure 18: Sample of adding a CDR Source (cont)

In this page, the "**Select the call format"** page, select the **Avaya (Nortel formerly) Communication Server 1000** format name which has respectively the format number is **552** as shown in **Figure 19**.

Click on the **Next** link to go to next page.

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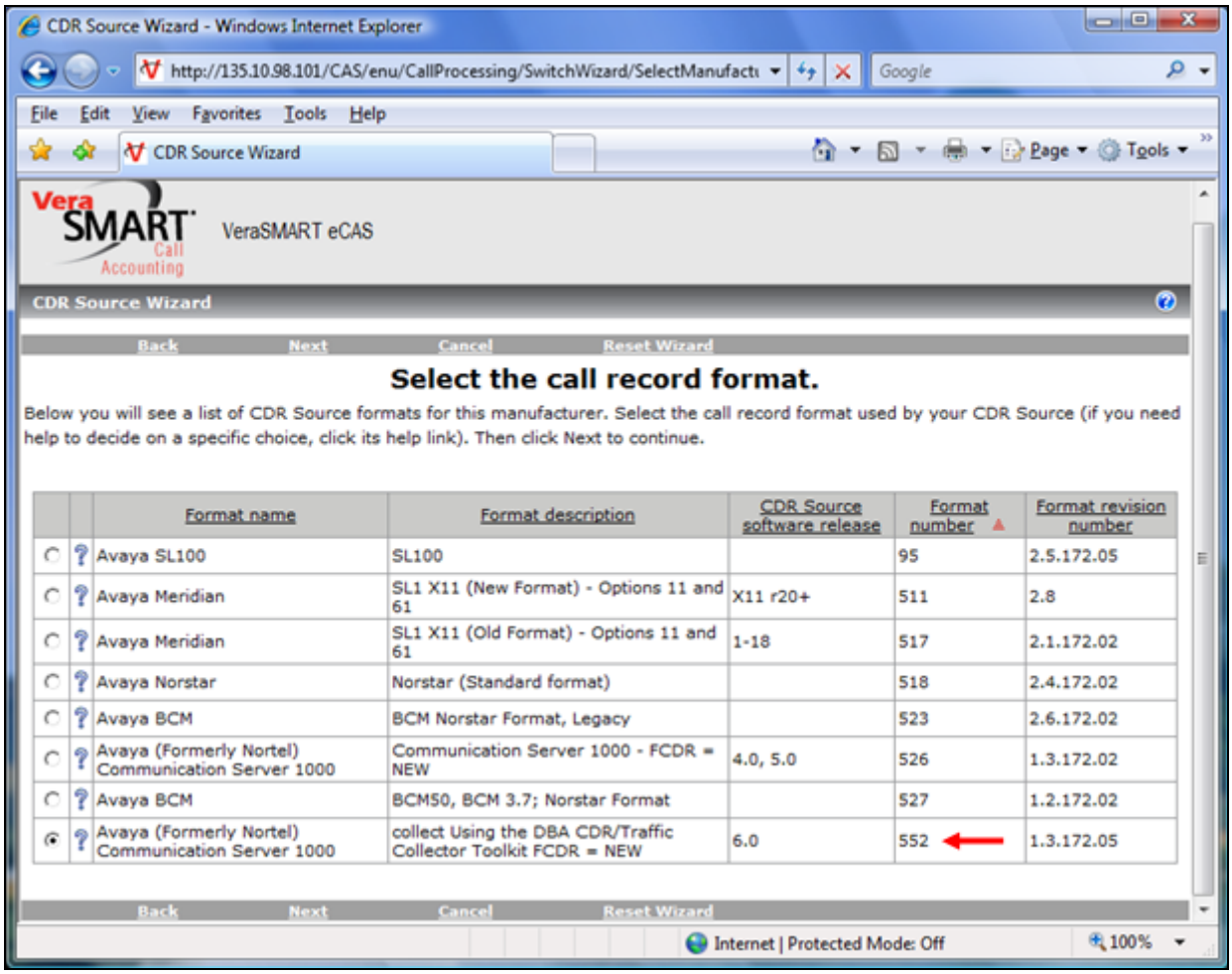

Figure 19: Sample of adding a CDR Source (cont)

In this page, at the **collection file name and path** line click on thesearch button symbol to browse to file **detail1.img** of the DBA Toolkit application as shown in **Figure 20**.

Click on the **Next** link to go to next page.

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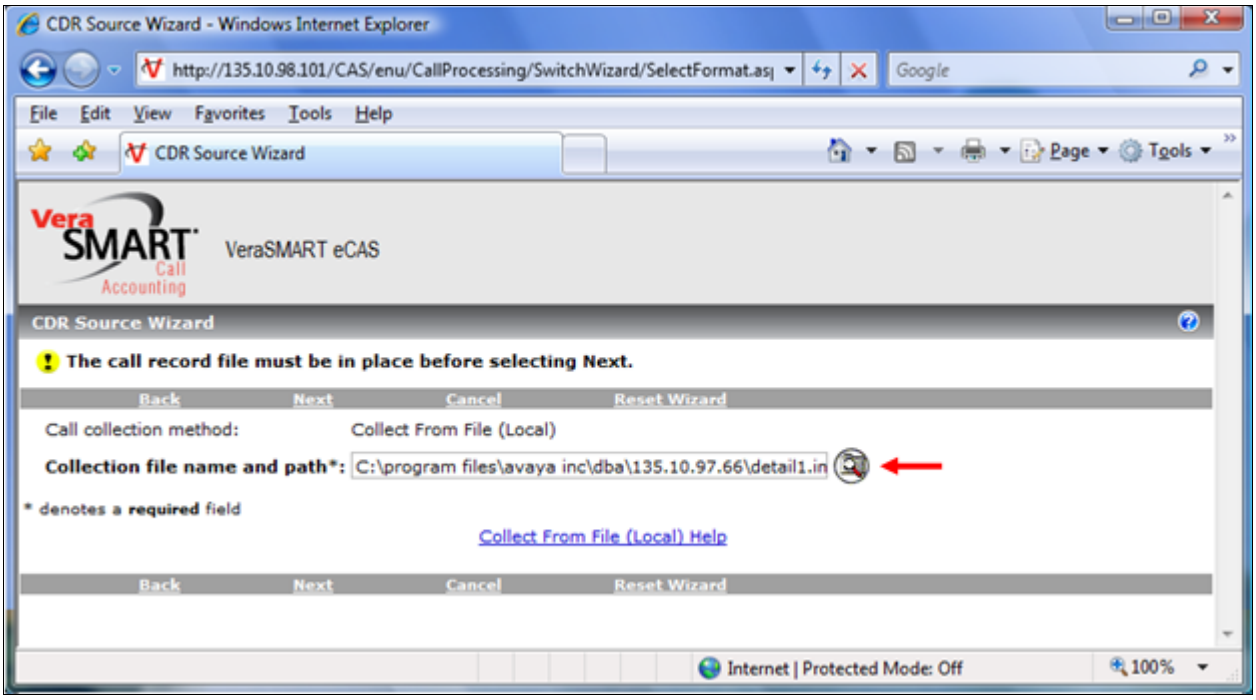

Figure 20: Sample of adding a CDR Source (cont)

Figures 21, **22,** and **23** below show call records being retrieved from the **detail1.img**, the **Raw Call Record Viewer** and the **Formatted Call Record Viewer** by the VeraSMART.

Click on the **Next** button to go to next page.

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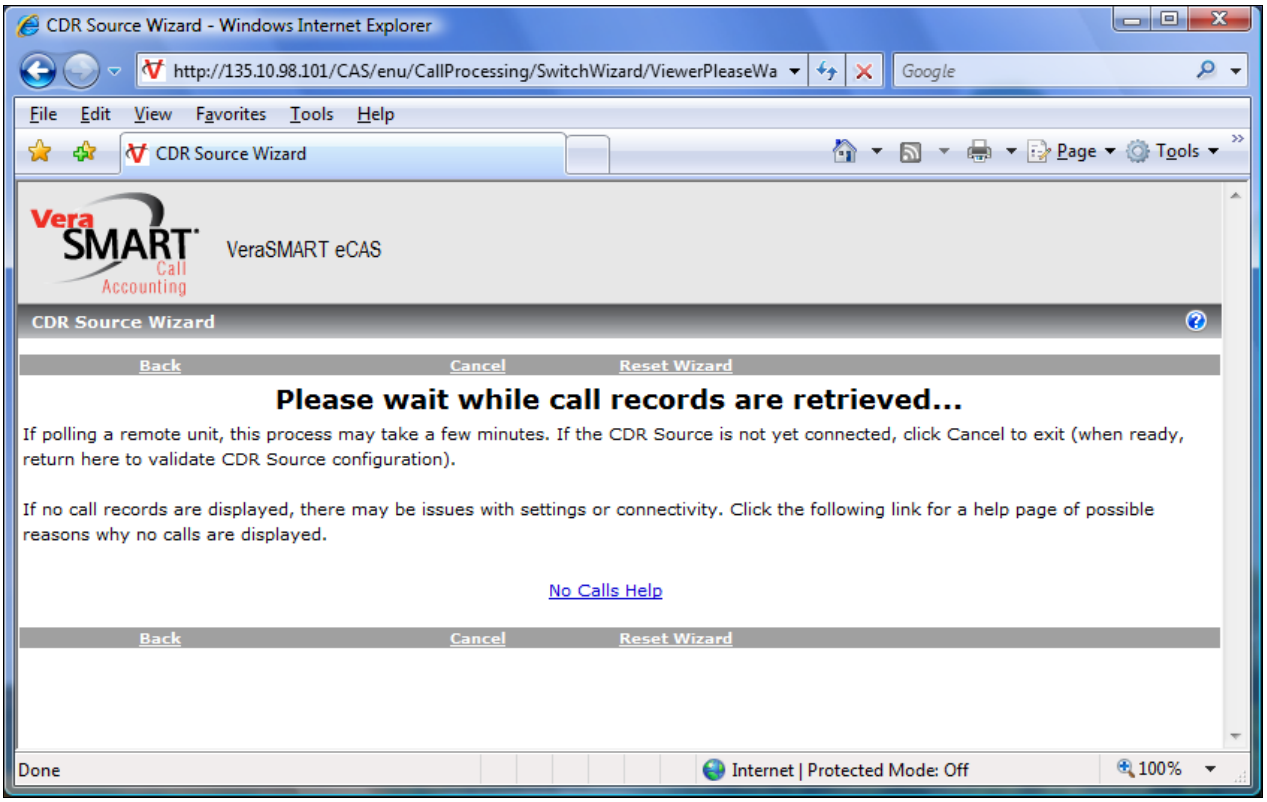

Figure 21: Sample of adding a CDR Source (cont)

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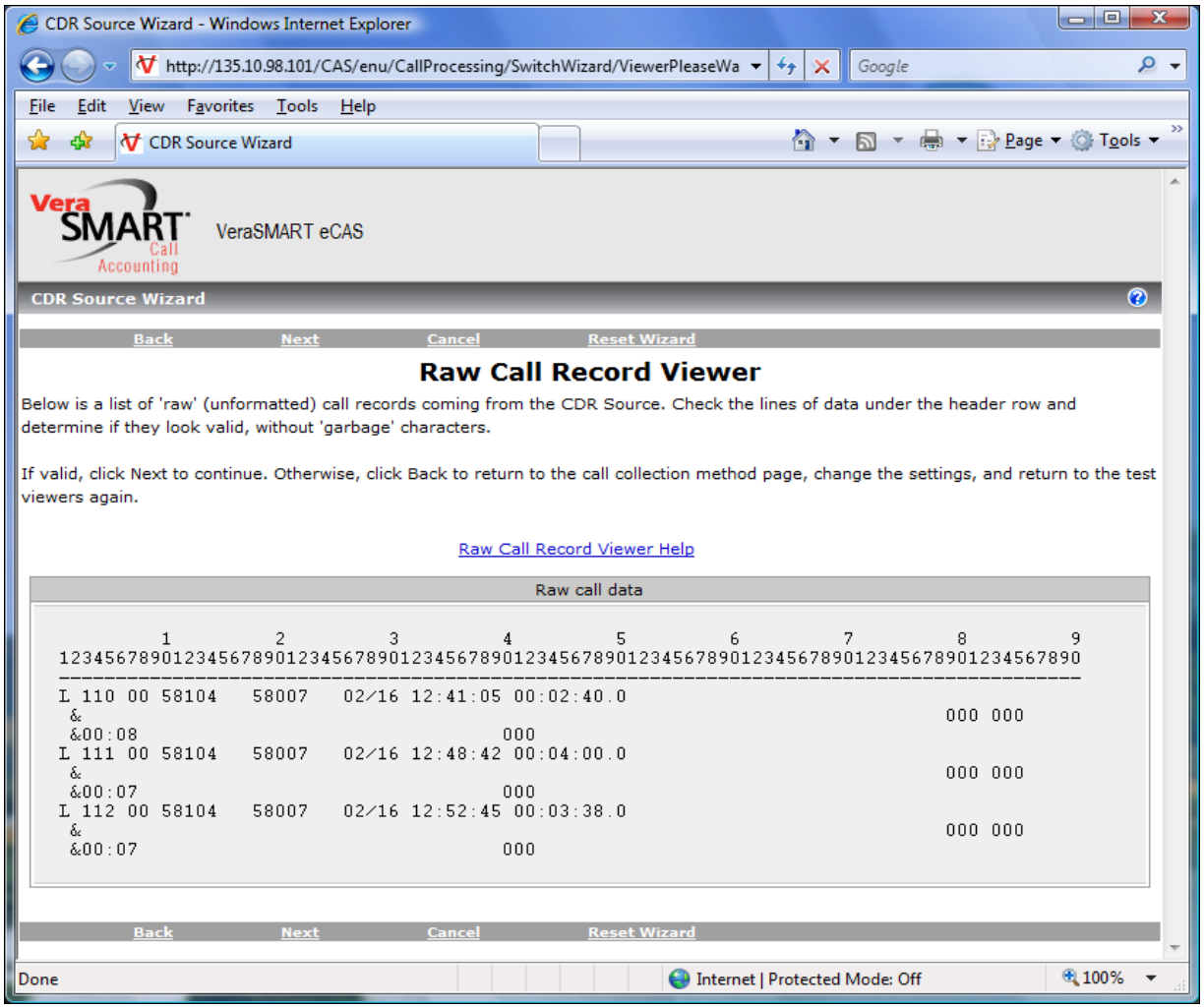

Figure 22: Sample of adding a CDR Source (cont)

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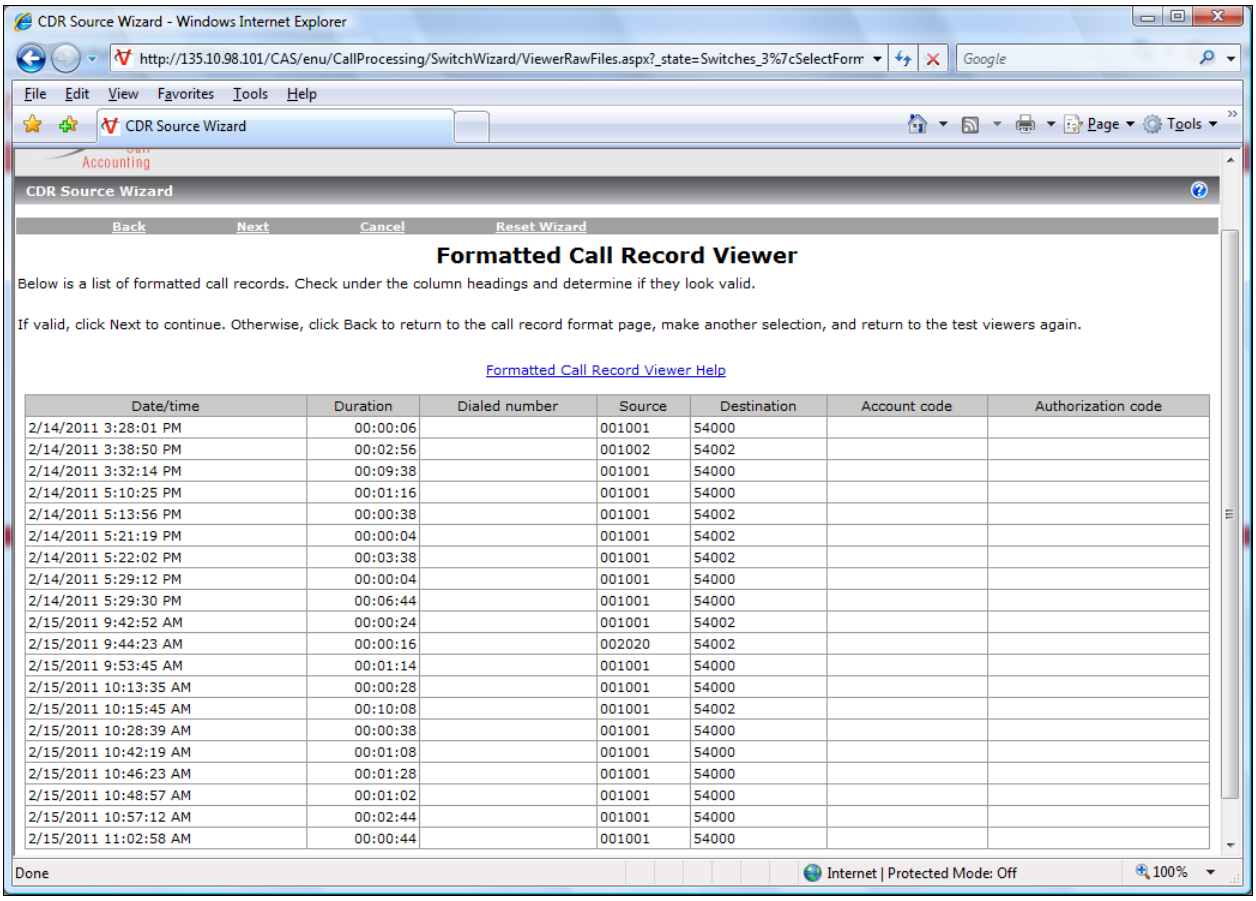

Date/time	Duration	Dialed number	Source	Destination	Account code	Authorization code
2/14/2011 3:28:01 PM	00:00:06		001001	54000		
2/14/2011 3:38:50 PM	00:02:56		001002	54002		
2/14/2011 3:32:14 PM	00:09:38		001001	54000		
2/14/2011 5:10:25 PM	00:01:16		001001	54000		
2/14/2011 5:13:56 PM	00:00:38		001001	54002		
2/14/2011 5:21:19 PM	00:00:04		001001	54002		
2/14/2011 5:22:02 PM	00:03:38		001001	54002		
2/14/2011 5:29:12 PM	00:00:04		001001	54000		
2/14/2011 5:29:30 PM	00:06:44		001001	54000		
2/15/2011 9:42:52 AM	00:00:24		001001	54002		
2/15/2011 9:44:23 AM	00:00:16		002020	54002		
2/15/2011 9:53:45 AM	00:01:14		001001	54000		
2/15/2011 10:13:35 AM	00:00:28		001001	54000		
2/15/2011 10:15:45 AM	00:10:08		001001	54002		
2/15/2011 10:28:39 AM	00:00:38		001001	54000		
2/15/2011 10:42:19 AM	00:01:08		001001	54000		
2/15/2011 10:46:23 AM	00:01:28		001001	54000		
2/15/2011 10:48:57 AM	00:01:02		001001	54000		
2/15/2011 10:57:12 AM	00:02:44		001001	54000		
2/15/2011 11:02:58 AM	00:00:44		001001	54000		

Figure 23: Sample of adding a CDR Source (cont)

Figure 24 below shows the basic setup for the CDR Source has been successfully completed. Click on the **Finish** link to exit the CDR Source wizard and go back to the **Call Accounting** page.

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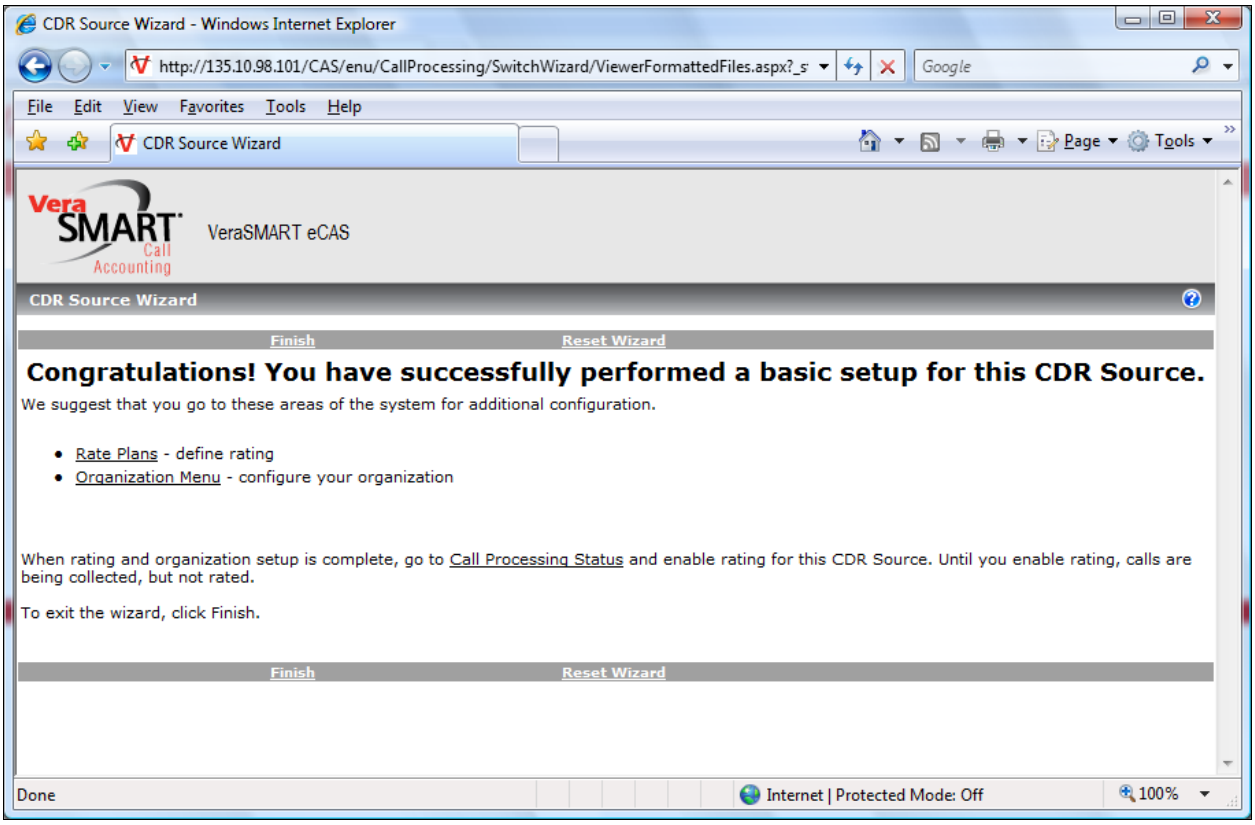

Figure 24: Basic setup of CDR Source finished

7.2. Configure Strip Leading Digits

To remove trunk access codes that were included in the call records which were recorded by the DBA Toolkit application, navigate to the menu **Call Accounting > Special Processing > Strip Leading Digits**, the **Strip Leading Digits** page appears as shown in **Figure 25**.

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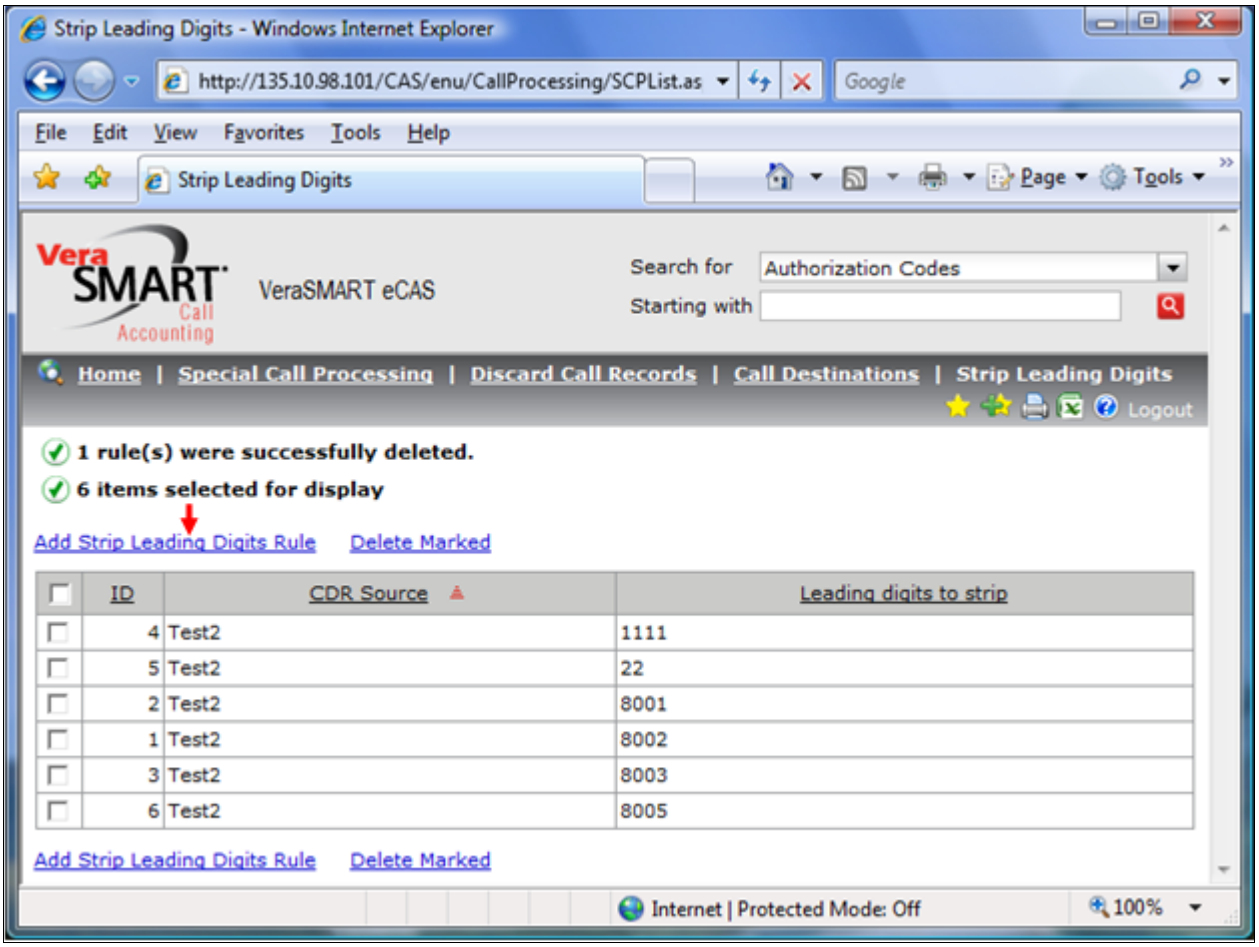

Figure 25: Strip Leading Digits page

Click on the **Add Strip Leading Digits Rule** link on the **Strip Leading Digits** page, the **Add Strip Leading Digits Rule** page appears as shown in **Figure 26**.

Enter a trunk access code in the field **Leading digits to strip from dialed numbers** and click on the **Select CDR Source** link to select the *Test1* CDR Source in the field **For CDR Source**.

Click on the **Save** button to save this change.

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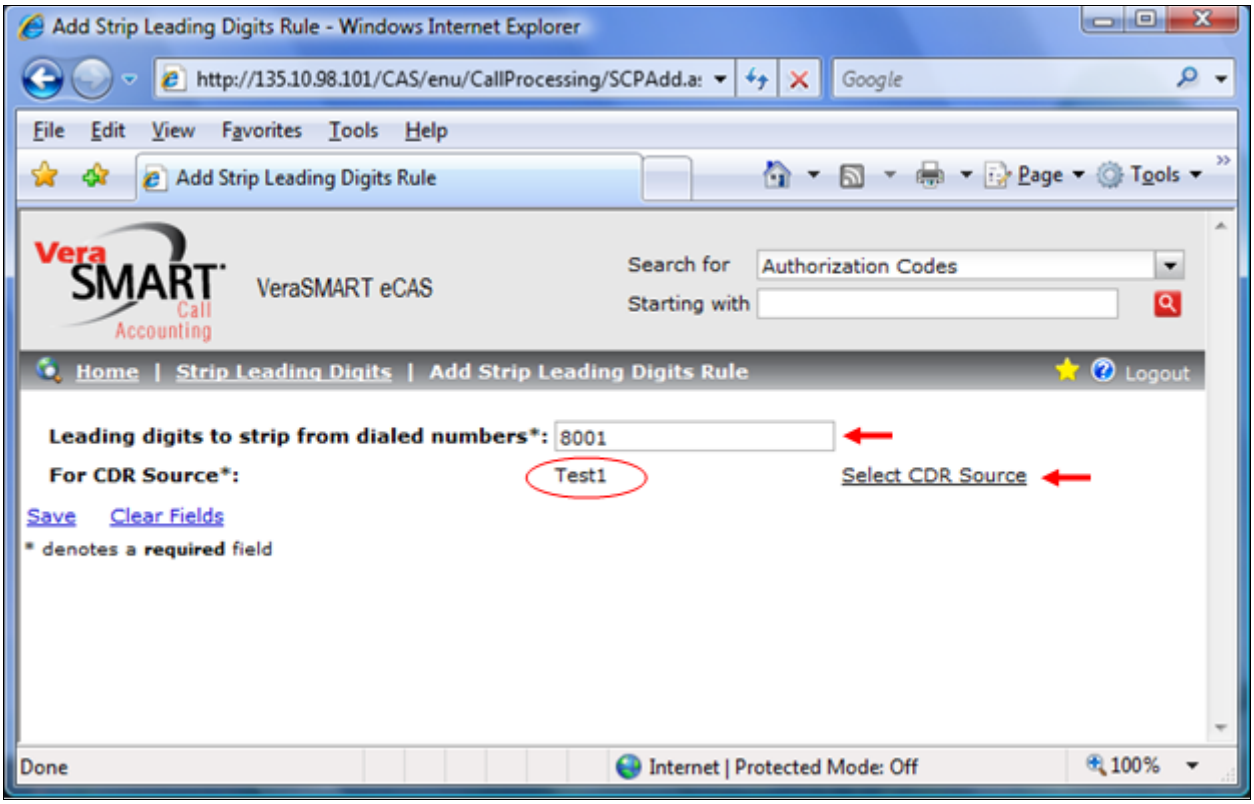

Figure 26: Add Strip Leading Digits Rule page

7.3. Enable Call Rating

To enable the **Call Rating** for the CDR source that has been created above, navigate to the menu **Call Accounting > Call Rating > Call Processing Status**, the list of CDR Source name appears as shown in **Figure 27**.

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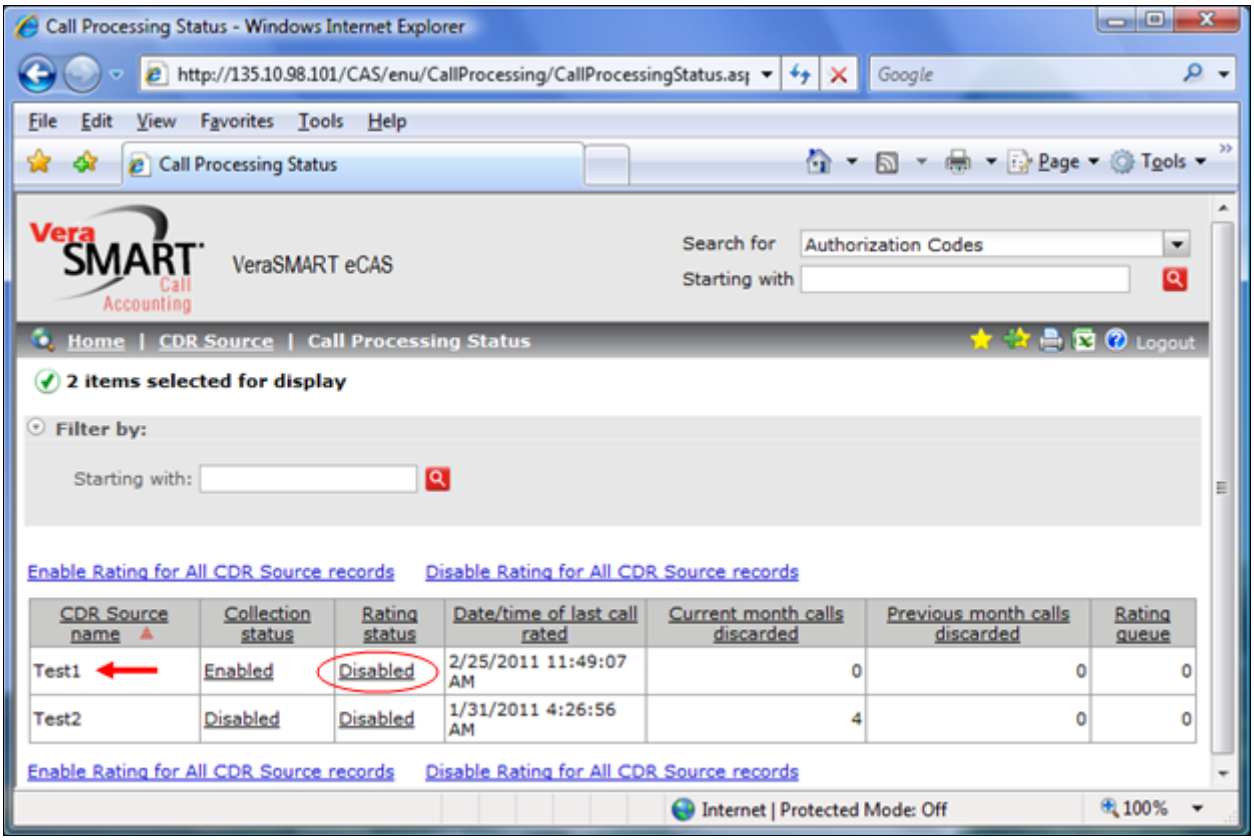

Figure 27: Sample of enabling Call Rating for a CDR Source

In the **Rating status** column, click on the **Disabled** link of the *Test1* CDR Source name to edit call processing status as shown in **Figure 28**. In the **Rating status** line, select the **Enable** checkbox and then click on the **Save** link to save this change.

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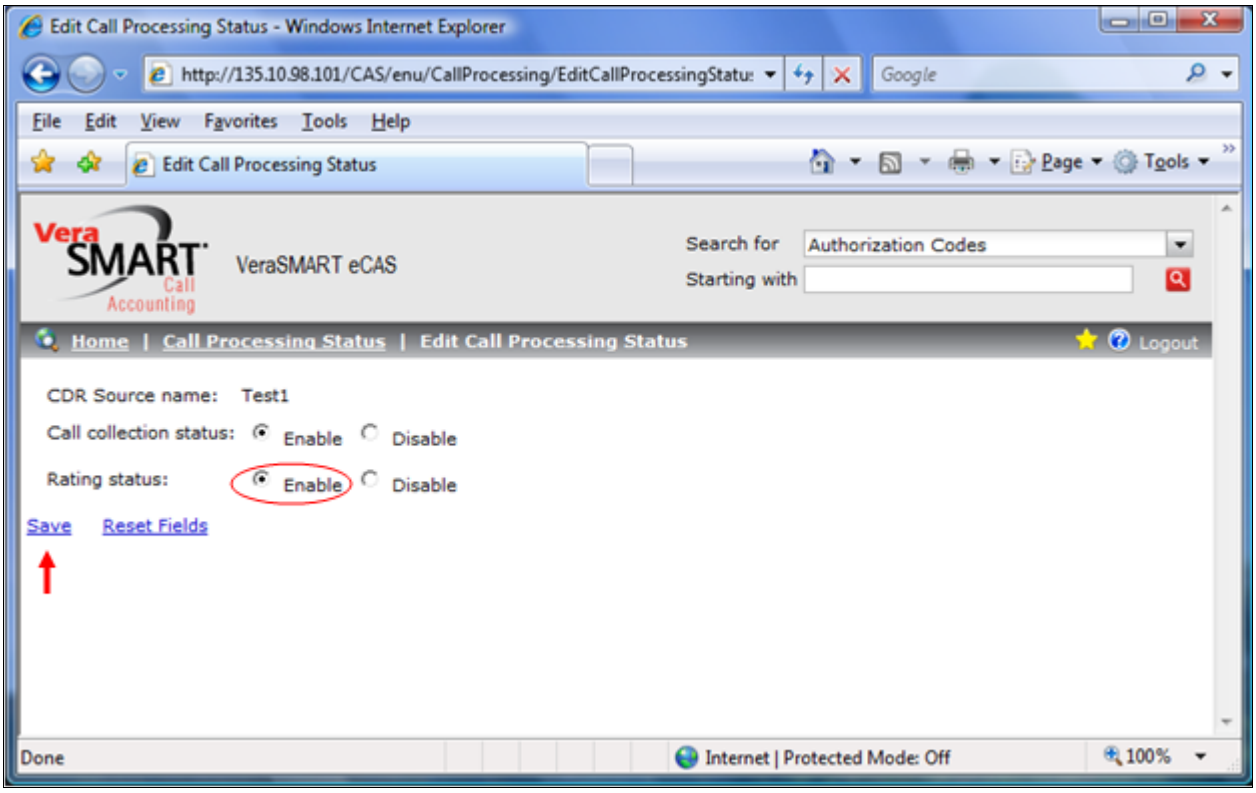

Figure 28: Sample of enabling Call Rating for a CDR Source (cont)

Figure 29 shows the Call Rating of the *Test1* CDR Source has been successfully enabled.

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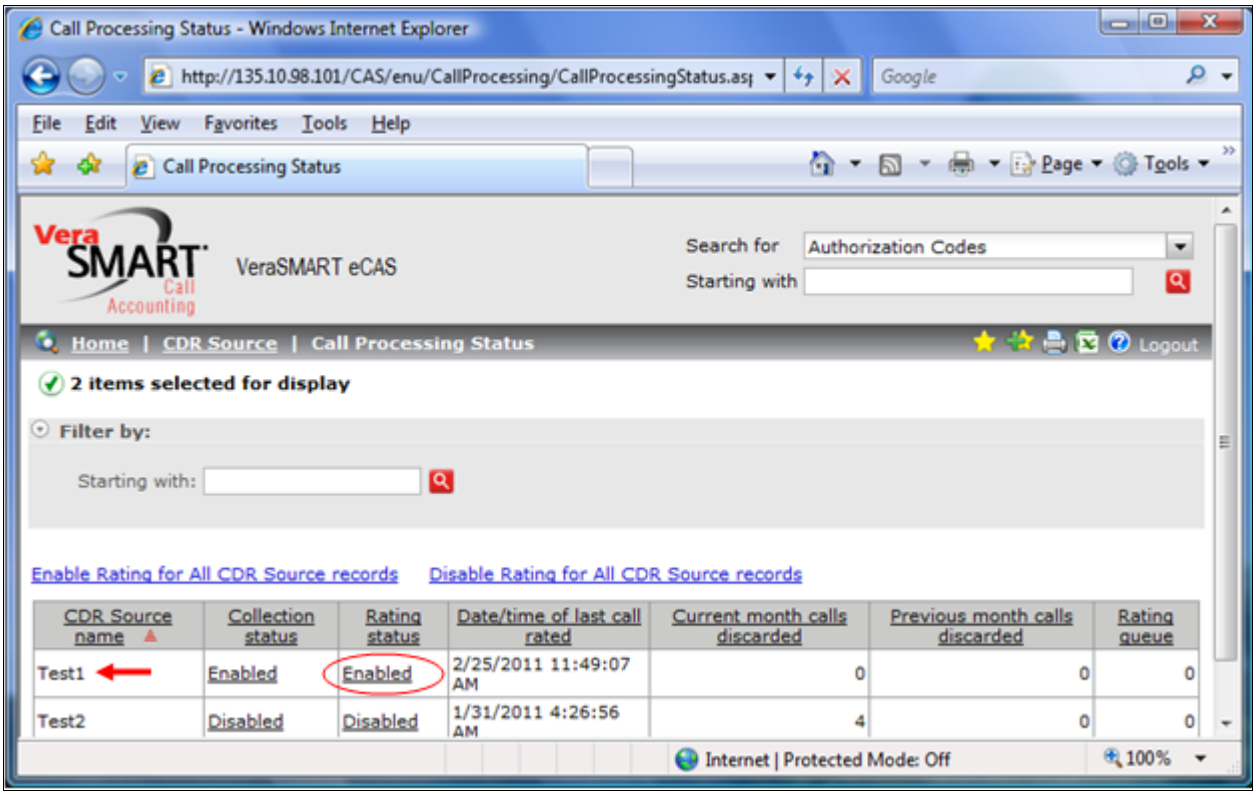

Figure 29: Sample of enabling Call Rating for a CDR Source (cont)

7.4. Create and Run Reports

To create and run a report, navigate to the menu **Reporting > Reporting > Create/Run Reports**, the **Create/Run Reports** appears as shown in **Figure 30**.

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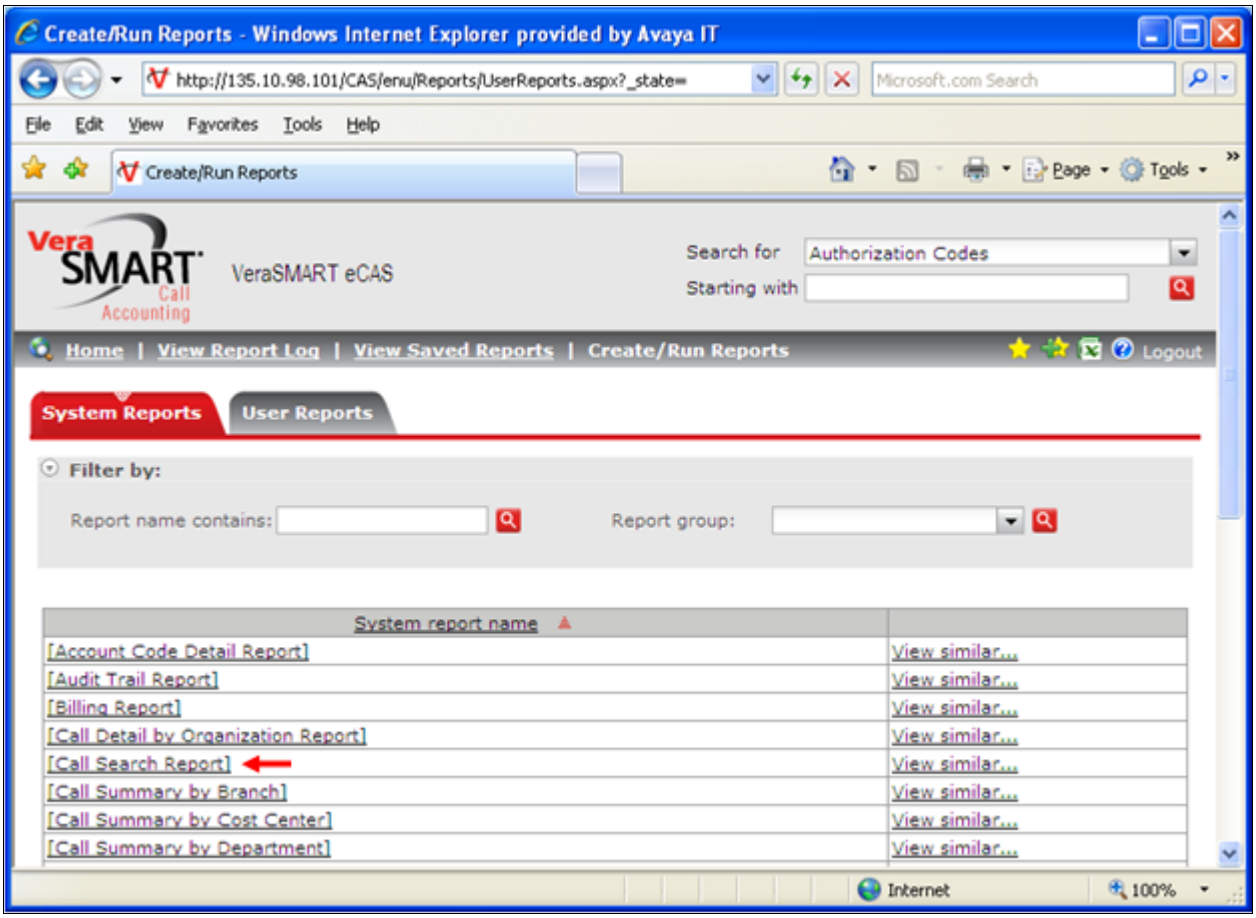

Figure 30: Create/Run Reports page

On the **Create/Run Reports** page and under the **System Reports** tab, click on the **[Call Search Report]** link, the **Report Criteria** page appears as shown in **Figure 31**. To customize the report, click on the **Advanced Criteria** link.

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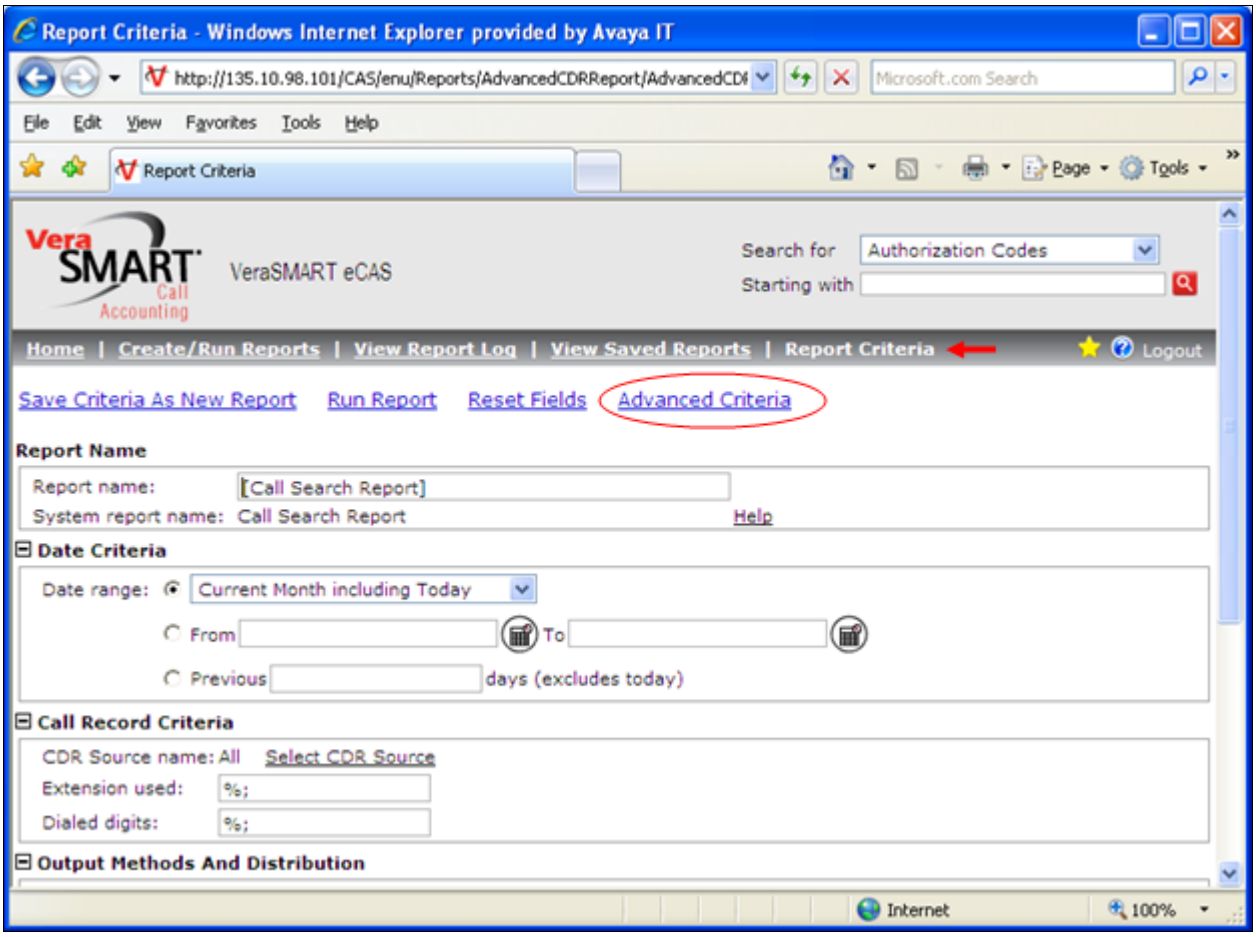

Figure 31: Basic Report Criteria page

Enter a name in the **Report name** field, for example *Report1IncomingCalls*, leave other values as default in the **Reporting Database**, **Currency Criteria**, **Date Criteria**, **Organization Selection Criteria**, **Invention Item Criteria** sections as shown in **Figure 32**.

In the **Call Record Criteria** section, select the *Test1* in the **CDR Source name** field and the **Incoming** in the **Call Direction** field, and leave other fields as default as shown in **Figure 33**.

In the **Details to Include in Reports** section and under the **Available fields (Call Details)** as shown in **Figure 34**, select fields that need to be displayed on the report and click on the forward arrow to add these fields to **Selected fields (Call Details).**

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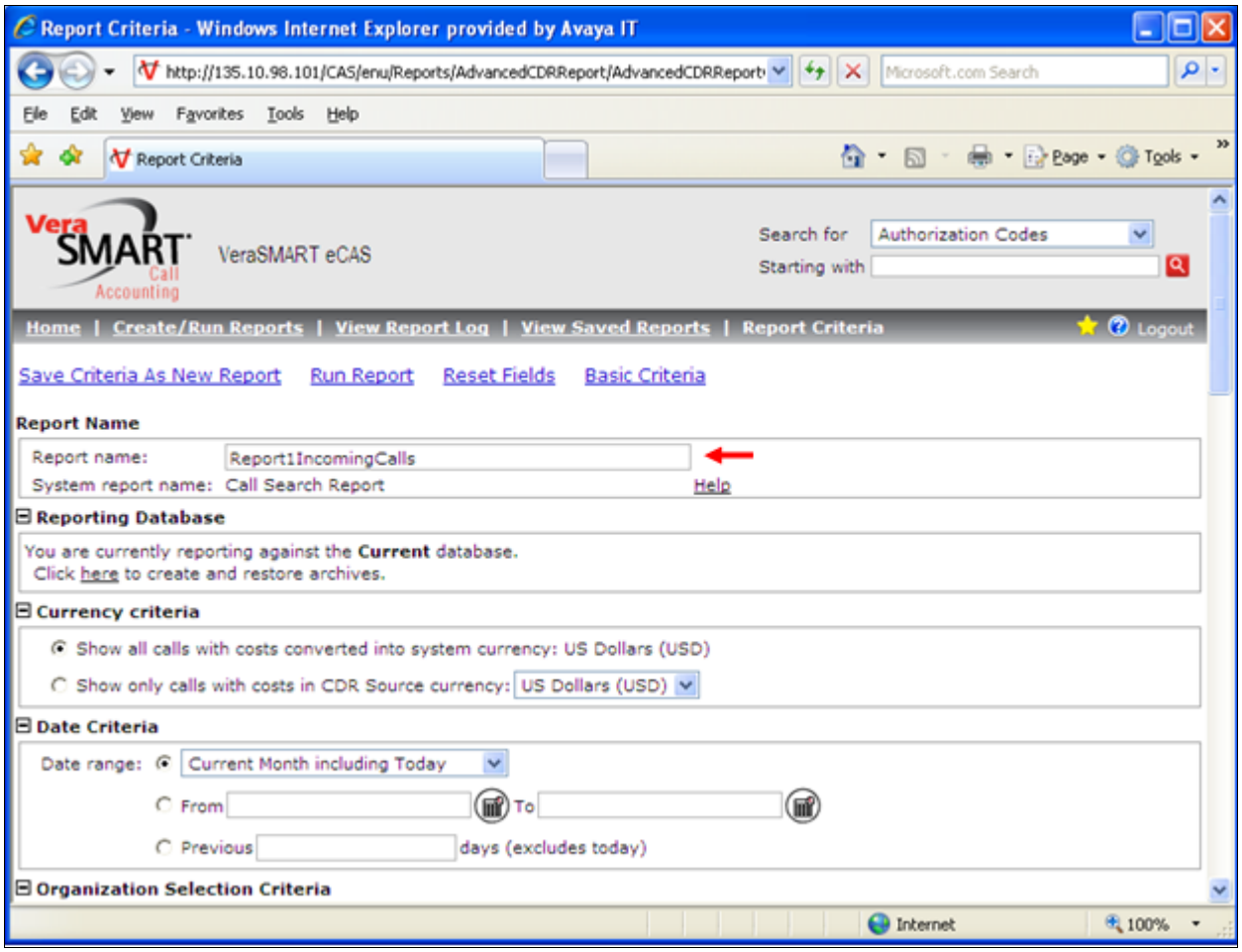

Figure 32: Advanced Report Criteria

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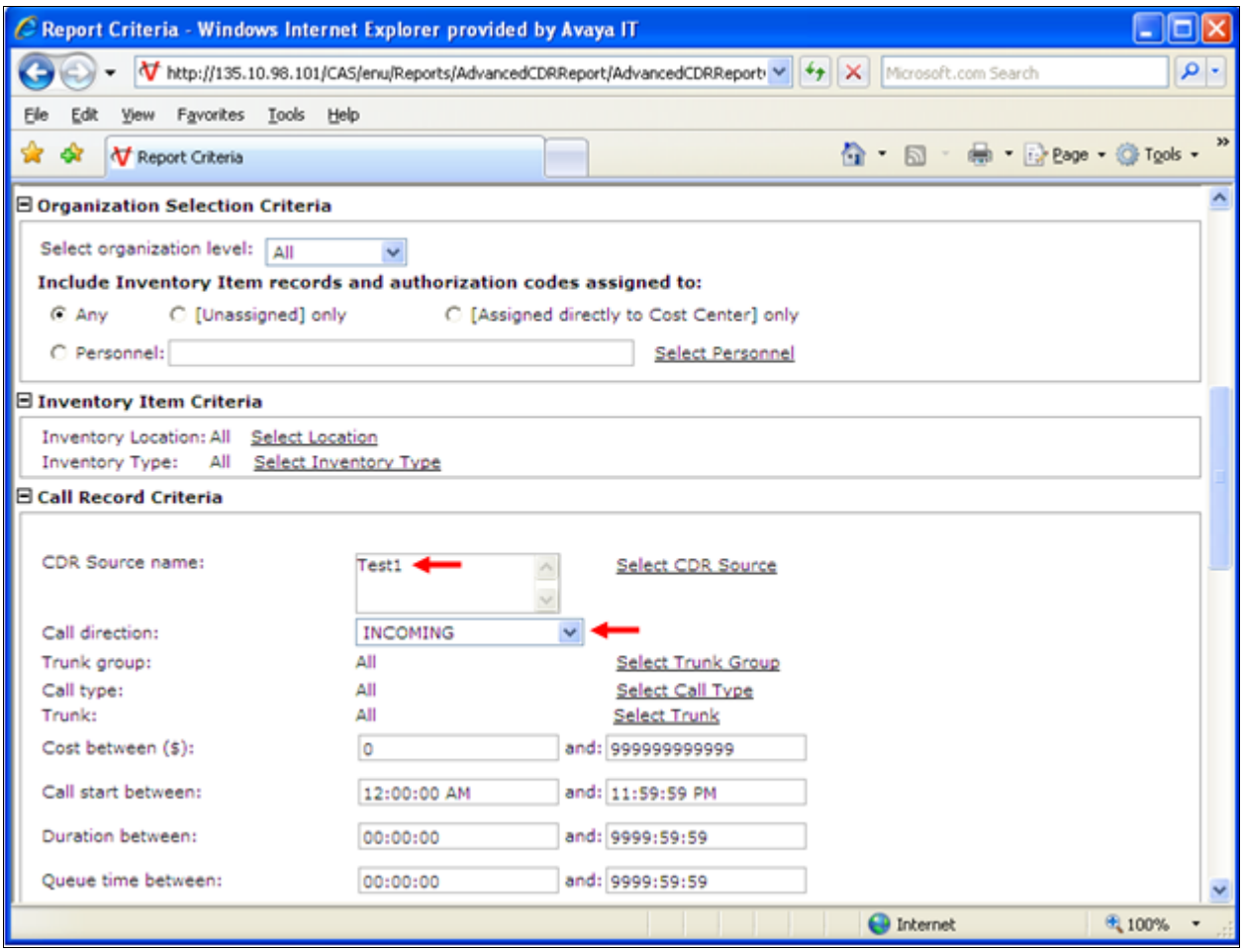

Figure 33: Advanced Report Criteria (cont)

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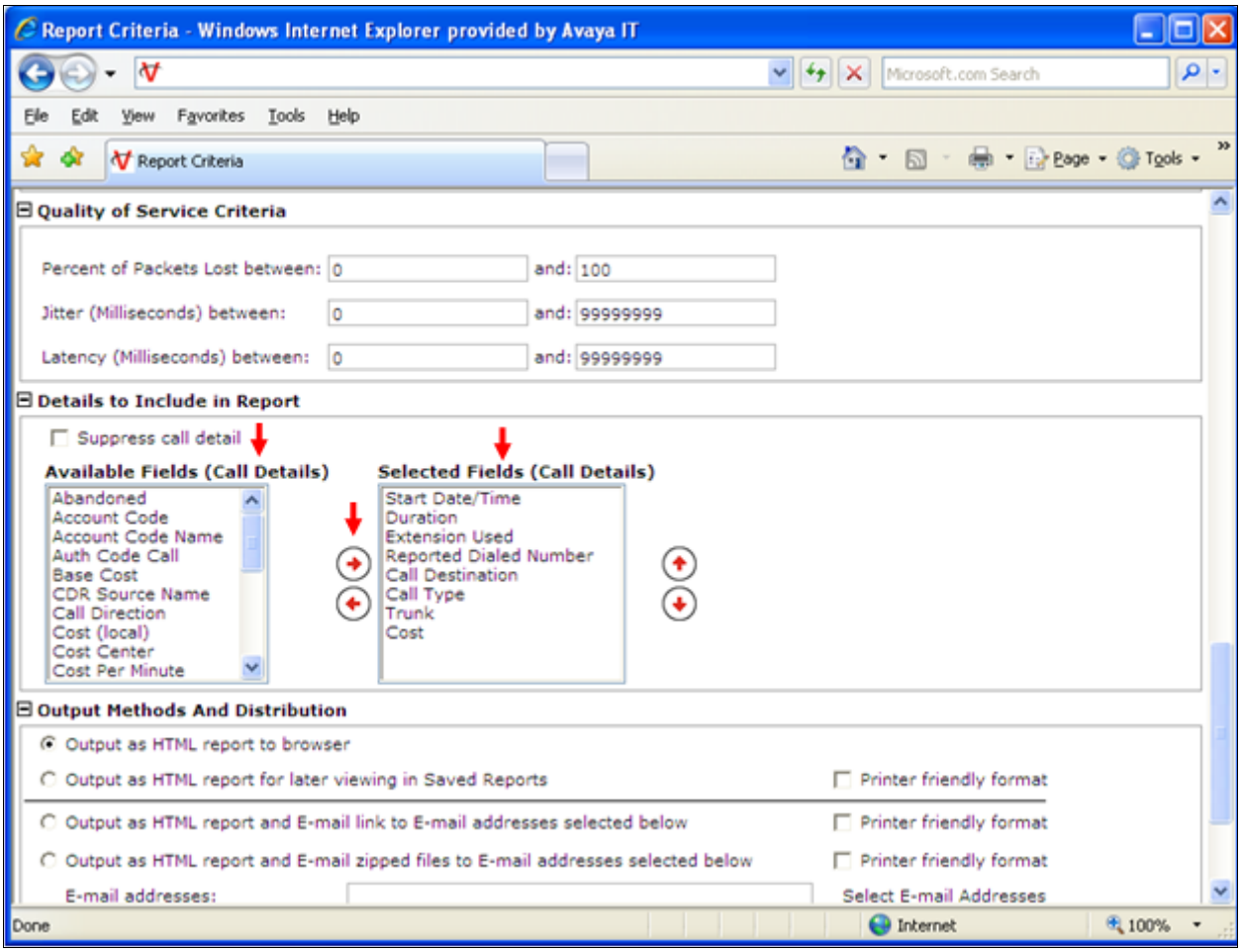

Figure 34: Advanced Report Criteria (cont)

Click on the **Run Report** link to run report, the new report window appears as shown in **Figure 35**.

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Report1IncomingCalls - Windows Internet Explorer

http://135.10.98.101/CASReport/enu/Reports/ReportPage.aspx?runReportID=121&idUserReport=7

File Edit View Favorites Tools Help

Report1IncomingCalls

Excel

Report1IncomingCalls

Avaya Search Criteria **2/16/2011 2:04:16 PM**

Page 1 of 1

Start Date/Time	Duration	Extension Used	Reported Dialed Number	Call Destination	Call Type	Trunk	Abandoned	Account Code	Auth Code Call	Cost
2/15/2011 10:10:20 AM	0:00:42	58000	613-965-5570	TRENTON, ON	Incoming	002012	No		No	$0.00
2/15/2011 10:28:29 AM	0:01:25	58007	613-965-5570	TRENTON, ON	Incoming	002011	No		No	$0.00
2/15/2011 10:39:03 AM	0:00:00	58006	613-965-5570	TRENTON, ON	Incoming	002010	No		No	$0.00
2/15/2011 10:43:08 AM	0:00:00	58006	613-965-5570	TRENTON, ON	Incoming	002009	No		No	$0.00
2/15/2011 10:45:37 AM	0:00:00	58006	613-965-5570	TRENTON, ON	Incoming	002008	No		No	$0.00
2/15/2011 10:51:00 AM	0:00:00	58006	725-4002	OTTAWAHULL, ON	Incoming	010001	Yes		No	$0.00
2/15/2011 10:51:37 AM	0:00:00	58006	725-4002	OTTAWAHULL, ON	Incoming	010001	Yes		No	$0.00
2/15/2011 10:53:51 AM	0:00:00	58006	525-5409	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 10:59:25 AM	0:01:16	58000	525-5408	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 11:17:14 AM	0:01:38	58000	55570		Incoming	010001	No		No	$0.00
2/15/2011 12:14:18 PM	0:00:02	58006	525-5570	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 12:24:39 PM	0:00:00	58006	525-5884	ALEXANDRIA, ON	Incoming	010001	Yes		No	$0.00
2/15/2011 12:29:40 PM	0:00:12	58006	525-5408	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 12:30:14 PM	0:00:12	58007	525-5408	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 12:35:48 PM	0:00:02	58006	725-4000	OTTAWAHULL, ON	Incoming	010001	No		No	$0.00
2/15/2011 2:24:31 PM	0:00:06	58006	725-4000	OTTAWAHULL, ON	Incoming	010001	No		No	$0.00
2/15/2011 2:26:28 PM	0:00:02	58006	525-5570	ALEXANDRIA, ON	Incoming	010001	No		No	$0.00
2/15/2011 3:43:23 PM	0:00:04	58004	54001		Incoming	010001	No		No	$0.00
2/15/2011 3:43:51 PM	0:00:00	58006	54001		Incoming	010001	Yes		No	$0.00
2/15/2011 4:17:25 PM	0:00:00	58006	613-965-5570	TRENTON, ON	Incoming	002006	Yes		No	$0.00
2/15/2011 4:17:41 PM	0:00:02	58000	613-965-5570	TRENTON, ON	Incoming	002005	No		No	$0.00
2/15/2011 4:35:05 PM	0:00:04	58006	613-965-5570	TRENTON, ON	Incoming	002004	No		No	$0.00
2/15/2011 4:36:56 PM	0:00:02	58006	613-965-5570	TRENTON, ON	Incoming	002003	No		No	$0.00
2/15/2011 4:37:09 PM	0:00:00	58000	613-965-5570	TRENTON, ON	Incoming	002002	No		No	$0.00
2/15/2011 4:48:21 PM	0:00:02	58000	613-965-5570	TRENTON, ON	Incoming	002001	No		No	$0.00
2/15/2011 4:48:54 PM	0:00:04	58006	613-965-5570	TRENTON, ON	Incoming	002023	No		No	$0.00
2/15/2011 4:49:26 PM	0:00:16	58000	613-965-5570	TRENTON, ON	Incoming	002022	No		No	$0.00
2/15/2011 4:50:23 PM	0:00:06	58000	613-955-4000	TRENTON, ON	Incoming	010001	No		No	$0.00
2/15/2011 4:52:22 PM	0:00:02	58000	613-965-5570	TRENTON, ON	Incoming	002021	No		No	$0.00

Total Calls	**29**
Total Duration	**0:06:19**
Total Cost (USD)	**$0.00**

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Figure 35: Sample of report for Incoming Call Records

Figures 36, 37, and **38** show a sample of the reports for **Internal**, **Outgoing** and **Tandem** call records.

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Report2InternalCalls - Windows Internet Explorer

http://135.10.98.101/CASReport/enu/Reports/ReportPage.aspx?runReportID=119&idUserReport=7

File Edit View Favorites Tools Help

Report2InternalCalls

Excel

Report2InternalCalls

Avaya Search Criteria **2/16/2011 2:03:02 PM**

Page 1 of 1

Start Date/Time	Duration	Extension Used	Reported Dialed Number	Call Destination	Call Type	Trunk	Abandoned	Account Code	Auth Code Call	Cost
2/15/2011 10:29:05 AM	0:00:02	58006	58007		Internal		No		No	$0.00
2/15/2011 10:31:04 AM	0:00:04	58006	58007		Internal		No		No	$0.00
2/15/2011 10:31:04 AM	0:00:18	58006	58000		Internal		No		No	$0.00
2/15/2011 10:31:52 AM	0:00:04	58000	58007		Internal		No		No	$0.00
2/15/2011 11:01:54 AM	0:00:00	58006	58006		Internal		Yes		No	$0.00
2/15/2011 11:02:41 AM	0:00:42	58006	58000		Internal		No		No	$0.00
2/15/2011 11:02:41 AM	0:00:26	58000	58007		Internal		No		No	$0.00
2/15/2011 11:03:45 AM	0:00:08	58000	58006		Internal		No		No	$0.00
2/15/2011 11:05:20 AM	0:00:58	58006	58000		Internal		No		No	$0.00
2/15/2011 11:05:20 AM	0:00:40	58000	58007		Internal		No		No	$0.00
2/15/2011 11:07:36 AM	0:01:34	58000	58006		Internal		No		No	$0.00
2/15/2011 11:07:38 AM	0:00:22	58000	58007		Internal		No		No	$0.00
2/15/2011 11:08:38 AM	0:00:04	58006	58007		Internal		No		No	$0.00
2/15/2011 11:08:38 AM	0:00:12	58000	58006		Internal		No		No	$0.00
2/15/2011 11:09:38 AM	0:01:00	58000	58007		Internal		No		No	$0.00
2/15/2011 11:15:30 AM	0:00:04	58103	58006		Internal		No		No	$0.00
2/15/2011 11:18:00 AM	0:00:10	58103	58006		Internal		No		No	$0.00
2/15/2011 11:20:01 AM	0:00:00	58103	58006		Internal		Yes		No	$0.00
2/15/2011 11:20:15 AM	0:00:32	58006	58000		Internal		No		No	$0.00
2/15/2011 11:20:46 AM	0:00:08	58103	58006		Internal		No		No	$0.00
2/15/2011 11:31:24 AM	0:00:06	58103	58006		Internal		No		No	$0.00
2/15/2011 11:38:02 AM	0:00:08	58103	58006		Internal		No		No	$0.00
2/15/2011 11:39:51 AM	0:00:08	58006	58103		Internal		No		No	$0.00
2/15/2011 11:54:02 AM	0:00:56	58004	58000		Internal		No		No	$0.00
2/15/2011 11:55:25 AM	0:00:00	58000	58001		Internal		Yes		No	$0.00
2/15/2011 11:57:23 AM	0:00:18	58103	58006		Internal		No		No	$0.00

Total Calls	**26**
Total Duration	**0:09:04**
Total Cost (USD)	**$0.00**

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Done Internet | Protected Mode: Off 100%

Figure 36: Sample of the report for Internal Call Records

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Report3OutgoingCalls - Windows Internet Explorer

http://135.10.98.101/CASReport/enu/Reports/ReportPage.aspx?runReportID=123&idUserReport=7

File Edit View Favorites Tools Help

Report3OutgoingCalls

Excel

Report3OutgoingCalls

Avaya Search Criteria **2/16/2011 2:06:12 PM**

Page 1 of 1

Start Date/Time	Duration	Extension Used	Reported Dialed Number	Call Destination	Call Type	Trunk	Abandoned	Account Code	Auth Code Call	Cost
2/15/2011 9:49:21 AM	0:00:10	58000	613-965-5570	TRENTON, ON	CANADA	002016	No		No	$1.19
2/15/2011 9:49:50 AM	0:02:08	58000	613-965-5570	TRENTON, ON	CANADA	002015	No		No	$3.57
2/15/2011 9:50:44 AM	0:01:14	58000	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$2.38
2/15/2011 10:10:34 AM	0:00:28	58000	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$1.19
2/15/2011 10:12:25 AM	0:10:49	58006	613-965-5570	TRENTON, ON	CANADA	002014	No	12345	Yes	$13.09
2/15/2011 10:12:43 AM	0:10:13	58006	725-4002	OTTAWAHULL, ON	CANADA	010064	No		No	$13.09
2/15/2011 10:25:20 AM	0:00:00	58006	525-5570	ALEXANDRIA, ON	CANADA	010064	No		No	$0.00
2/15/2011 10:25:20 AM	0:00:00	58006	525-5570	ALEXANDRIA, ON	CANADA	010063	No		No	$0.00
2/15/2011 10:39:03 AM	0:00:00	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$0.00
2/15/2011 10:43:08 AM	0:00:00	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$0.00
2/15/2011 10:45:37 AM	0:00:00	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$0.00
2/15/2011 10:53:51 AM	0:00:00	58006	525-4000	ALEXANDRIA, ON	CANADA	010064	No		No	$0.00
2/15/2011 10:59:57 AM	0:00:44	58000	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$1.19
2/15/2011 11:58:05 AM	0:00:02	58006	525-5570	ALEXANDRIA, ON	CANADA	010064	No		No	$1.19
2/15/2011 11:58:22 AM	0:00:04	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$1.19
2/15/2011 12:13:54 PM	0:00:04	58006	525-5570	ALEXANDRIA, ON	CANADA	010064	No		No	$1.19
2/15/2011 12:23:48 PM	0:00:18	58006	525-5884	ALEXANDRIA, ON	CANADA	010064	No		No	$1.19
2/15/2011 12:26:26 PM	0:00:28	58006	525-5884	ALEXANDRIA, ON	CANADA	010064	No		No	$1.19
2/15/2011 12:36:10 PM	0:00:02	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$1.19
2/15/2011 1:42:58 PM	0:00:22	55010	525-5884	ALEXANDRIA, ON	CANADA	010064	No		No	$1.19
2/15/2011 2:25:23 PM	0:00:18	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$1.19
2/15/2011 2:26:47 PM	2:06:48	58006	725-4000	OTTAWAHULL, ON	CANADA	010064	No		No	$151.13
2/15/2011 4:17:55 PM	0:00:02	58000	613-965-5570	TRENTON, ON	CANADA	002013	No		No	$1.19
2/15/2011 4:36:04 PM	0:00:02	58006	54000		Unknown	010064	No		No	$0.00
2/15/2011 4:49:50 PM	0:00:04	58000	613-965-5570	TRENTON, ON	CANADA	002012	No		No	$1.19
2/15/2011 4:50:08 PM	0:00:02	58000	613-955-4000	TRENTON, ON	CANADA	002011	No		No	$1.19

Total Calls	**26**
Total Duration	**2:34:22**
Total Cost (USD)	**$199.92**

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Internet | Protected Mode: Off 100%

Figure 37: Sample of the report for Outgoing Call Records

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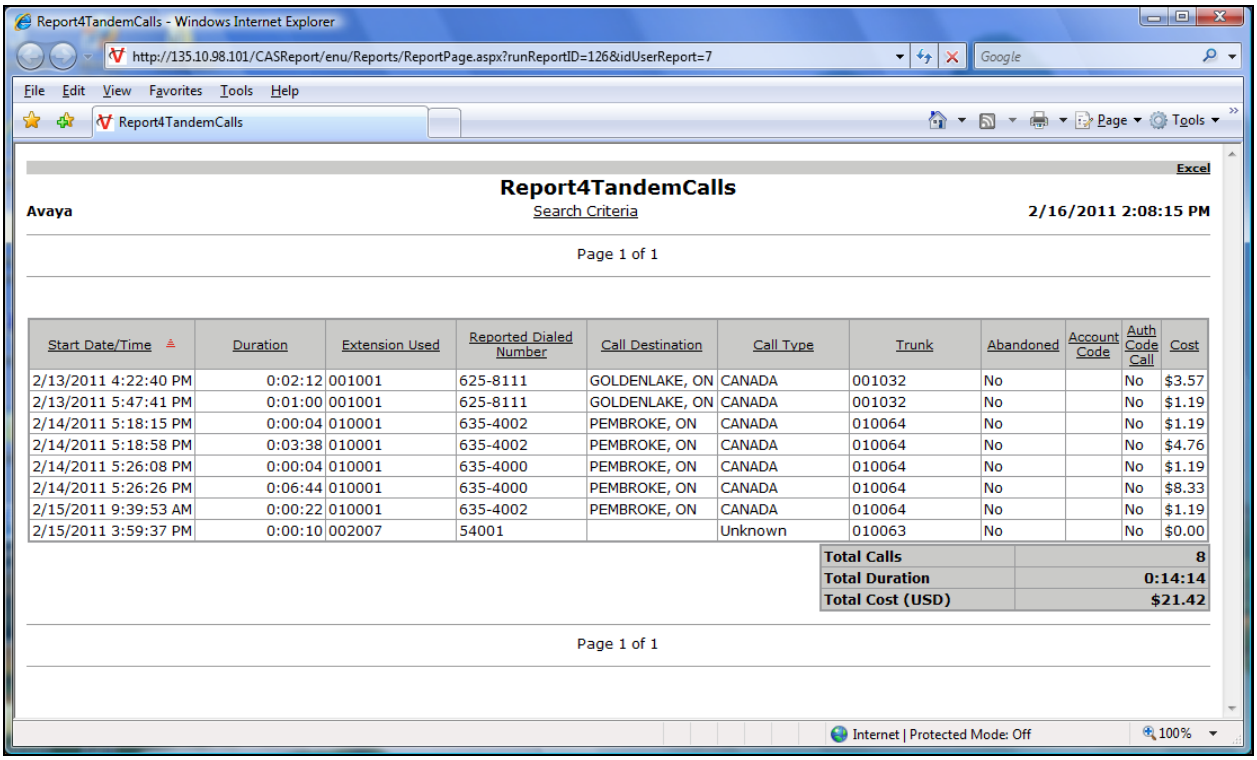

Report4TandemCalls - Windows Internet Explorer

http://135.10.98.101/CASReport/enu/Reports/ReportPage.aspx?runReportID=126&idUserReport=7

File Edit View Favorites Tools Help

Report4TandemCalls

Excel

Report4TandemCalls

Avaya Search Criteria **2/16/2011 2:08:15 PM**

Page 1 of 1

Start Date/Time	Duration	Extension Used	Reported Dialed Number	Call Destination	Call Type	Trunk	Abandoned	Account Code	Auth Code Call	Cost
2/13/2011 4:22:40 PM	0:02:12	001001	625-8111	GOLDENLAKE, ON	CANADA	001032	No		No	$3.57
2/13/2011 5:47:41 PM	0:01:00	001001	625-8111	GOLDENLAKE, ON	CANADA	001032	No		No	$1.19
2/14/2011 5:18:15 PM	0:00:04	010001	635-4002	PEMBROKE, ON	CANADA	010064	No		No	$1.19
2/14/2011 5:18:58 PM	0:03:38	010001	635-4002	PEMBROKE, ON	CANADA	010064	No		No	$4.76
2/14/2011 5:26:08 PM	0:00:04	010001	635-4000	PEMBROKE, ON	CANADA	010064	No		No	$1.19
2/14/2011 5:26:26 PM	0:06:44	010001	635-4000	PEMBROKE, ON	CANADA	010064	No		No	$8.33
2/15/2011 9:39:53 AM	0:00:22	010001	635-4002	PEMBROKE, ON	CANADA	010064	No		No	$1.19
2/15/2011 3:59:37 PM	0:00:10	002007	54001		Unknown	010063	No		No	$0.00

Total Calls	**8**
Total Duration	**0:14:14**
Total Cost (USD)	**$21.42**

Page 1 of 1

Internet | Protected Mode: Off 100%

Figure 38: Sample of report for Tandem Call Records

8. Verification Steps

The following are typical steps used to verify the interoperability between the VeraSMART eCAS application and the Avaya CS 1000.

- Connect the DBA Toolkit application to the CS 1000 system.
- Configure the VeraSMART eCAS application to retrieve call records from the DBA Toolkit application.
- Place various call types such as internal, outgoing, incoming, PSTN and tandem calls from/to the CS 1000 system which has the CDR feature enabled and verify that call records are outputted to the DBA Toolkit.
- After each call has been completed, observe on the DBA Toolkit application whether the call was correctly outputted.
- From the VeraSMART application, create a report based on system report name templates, for example *[Call Search Report],* customize criteria for the report such as time of data range, CDR source, call direction, call details, etc and then run the report.
- Verify the report, it should show correct information of call records such as Date/Time, Duration, Extension used, Report Dialled Number, Call Type, Auth Call Code, Account Code, etc.

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9. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2**. The VeraSMART Call Accounting Version 9.1.175.05a is considered compliant with the Avaya Communication Server Release 7.5.

10. Additional Reference

Product documentation for the Avaya CS 1000 products may be found at:
https://support.avaya.com/css/Products/

Data Buffering Toolkit is available at: //www.avaya.com/DevConnect
Product documentation for the VeraSMART Call Accounting products may be found at:
http://www.veramark.com/Call-Accounting/eCAS/

[1] Avaya CS1000 Documents:
Avaya Communication Server 1000E Installation and Commissioning
Avaya CS 1000 Co-resident Call Server and Signaling Server Fundamentals
Avaya CS 1000 Element Manager System Reference – Administration
Avaya Call Detail Recording Fundamentals Communication Server 1000

[2] Installation Guide – CS 1000 Data Buffereing and Access CDR/Traffic Collector

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