AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for the ISI Telemanagement Solutions Infortel Select with Avaya Communication Manager - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the ISI Telemanagement Solutions Infortel Select call account software to successfully interoperate with Avaya Communication Manager. Infortel Select is call account software that interoperates with an Avaya Media Server over a Call Detail Record (CDR) link running the Avaya Reliable Session Protocol (RSP). Call records will then be generated for various types of calls and collected by Infortel Select. Serviceability and performance tests were conducted to assess the reliability of the solution.

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

1. Introduction

Infortel Select is call account software that interoperates with an Avaya Media Server over a Call Detail Record (CDR) link running the Avaya Reliable Session Protocol (RSP). Call records will then be generated for various types of calls and collected by Infortel Select. Serviceability and performance tests were conducted to assess the reliability of the solution.

The ISI Telemanagement Solutions Infortel Select is comprised of two components – the NetLink II Secure CDR Recorder and the Infortel Select Call Account Software. The NetLink II Secure CDR Recorder is a hardware buffer that terminates the RSP protocol, collects the call records from Avaya Communication Manager and periodically pushes the collected call records to Infortel Select via FTP or SFTP. Infortel Select Call Account server parses the received data from the NetLink II Secure CDR Recorder and provides the reporting capabilities.

Figure 1 illustrates the network configuration used to verify the ISI Telemanagement Solutions solution. The configuration details provided in these Application Notes focus on the interfaces between Avaya Communication Manager and the ISI Telemanagement Solutions Infortel Select. **Figure 1** shows two separate communication systems each running Avaya Communication Manager on separate media servers. Site A is comprised of a S8700 Media Server and a G650 Media Gateway, and has connections to the following: Avaya 4600 Series IP Telephones, Avaya 6400 Series Digital Phones and a PRI trunk to the PSTN. Site B is comprised of a S8300 Media Server with a G700 Media Gateway, and has connections to Avaya 4600 Series IP Telephones and connected to the first system via an IP trunk.
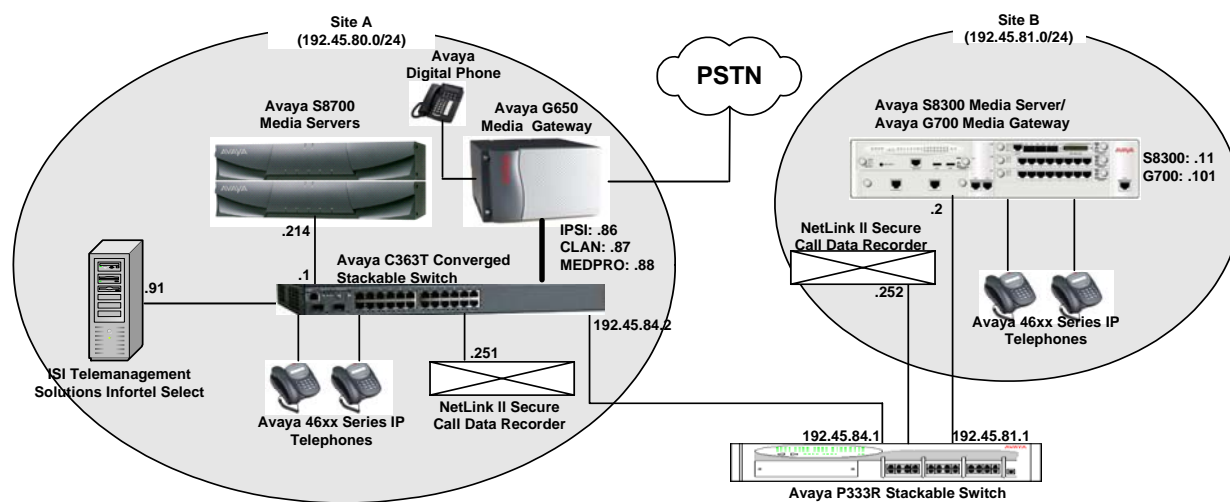

Figure 1. Test configuration of Infortel Select with Avaya Communication Manager

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8700 Media Server with Avaya G650 Media Gateway • TN2312BP IP Server Interface (IPSI) • TN799DP C-LAN Interface (C-LAN) • TN2302AP IP Media Processor (MEDPRO)	Communication Manager 3.0.1 (R013x.00.1.346.0) HW 03 FW 22 HW 01 FW 16 HW 20 FW 108
Avaya S8300 Media Server with Avaya G700 Media Gateway	Communication Manager 3.0.1 (R013x.00.1.346.0)
Avaya 46xx Series IP Telephones • 4620 • 4625	 2.2.3 2.5
Avaya Digital Phones	-
Avaya C363T Converged Stackable Switch (Layer 3)	4.5.14
Avaya P330R Stackable Switch (Layer 3)	4.0.8

ISI Telemanagement Solutions Infortel Select
    Call Account Software
    NetLink Secure CDR Recorder (Buffer)
	
	7.2
	1.02a

3. Configure Avaya Communication Manager

This section provides the procedures for configuring the Call Detail Record (CDR) feature in Avaya Communication Manager. All the configuration changes in Avaya Communication Manager are performed through the System Access Terminal (SAT). These steps describe the procedure used for the Avaya S8700 Media Server. All steps are the same for the other media servers unless otherwise noted. Avaya Communication Manager will be configured to generate CDR records using RSP over TCP/IP to the IP address of the NetLink II Secure Call Data Recorder.

The highlights in the following screens indicate the value used during the compliance test.

Use the **change node-names ip** command to create a new node name, called **Buffer**. This is the IP Address of the NetLink II Secure Call Data Recorder, located at Site A.

```
change node-names ip                                           Page   1 of   1
                              IP NODE NAMES
    Name              IP Address              Name              IP Address
Buffer            192.45 .80 .251                             .   .   .
CLAN              192.45 .80 .87                              .   .   .
MEDPRO            192.45 .80 .88                              .   .   .
S8300             192.45 .81 .11                              .   .   .
default           0  .0  .0  .0                               .   .   .
procr             192.45 .80 .214                             .   .   .
```

Use the **change ip-services** command to define the CDR link to use RSP over TCP/IP. The following information should be provided:
- **Service Type**: CDR1 [If needed, a secondary link can be defined by setting Service Type to CDR2.]
- **Local Node**: CLAN [For the Avaya S8700 Media Server, the Local Node is set to the node name of the C-LAN board. If the Avaya S8300 Media Server was utilized, set the Local Node to "procr".]
- **Local Port**: 0 [The Local Port is fixed to 0.]
- **Remote Node**: Buffer [The Remote Node is set to the node name that was created in the previous step for the NetLink II Secure Call Data Recorder.]
- **Remote Port**: 9000 [The Remote Port may be set to a value between 5000 and 64500 inclusive and must match the port configured in the NetLink II Secure Call Data Recorder. During the compliance test, the remote port 9000, which was the default port value for the NetLink II Secure Call Data Recorder, was used.]

```
change ip-services                                          Page   1 of   4

                              IP SERVICES
 Service       Enabled      Local        Local       Remote       Remote
  Type                      Node         Port         Node         Port
 CDR1                       CLAN          0          Buffer        9000
```

On Page 3 of the **change ip-services** command, enable the Reliable Session Protocol (RSP) for the CDR link by setting the **Reliable Protocol** field to **y**. Default values can be used for the other 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            y          30             3             3        60
```

Enter the **change system-parameters cdr** command from the SAT to set the parameters for the type of calls to record. The example below shows the settings used for the compliance test.

- **Node Number:** 1 [The CDR report associates with multiple Avaya Communication Managers, the Node Number differentiates between different Avaya Communication Managers. During the compliance test, the Node Number (Local PBX ID) is set to 1.]
- **CDR Data Format:** month/day
- **Primary Out Format:** expanded
- **Primary Output Endpoint:** CDR1

The remaining parameters define the type of calls that will be recorded and what data will be included in the call detail record. See reference [2] for a full explanation of each field. The test configuration used some of the more common fields described below. Default values can be used for the other fields.

- **Intra-switch CDR:** y [Allows call records for internal calls involving specific stations. Those stations must be specified in the INTRA-SWITCH CDR form.]
- **Record Outgoing Calls Only?**:n [Allows incoming trunk calls to appear in the CDR records along with the outgoing trunk calls.]
- **Outg Trk Call Splitting?** y [Allows a separate call record for any portion of an outgoing call that is transferred or conferenced.]
- **Inc Trk Call Splitting?** y [Allows a separate call record for any portion of an incoming call that is transferred or conferenced.]

```
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: expanded      Primary Output Endpoint: CDR1
     Secondary Output Format:
           Use ISDN Layouts? n
        Use Enhanced Formats? n      Condition Code 'T' For Redirected Calls? n
Modified Circuit ID Display? n                  Remove # From Called Number? n
                    Record Outgoing Calls Only? n            Intra-switch CDR? y
   Suppress CDR for Ineffective Call Attempts? y      Outg Trk Call Splitting? y
      Disconnect Information in Place of FRL? n         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


    Inc Trk Call Splitting? y                      Inc Attd Call Record? y
  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: 6
```

If the **Intra-switch CDR** field is set to **y** in the CDR SYSTEM PARAMETERS form, use the **change intra-switch-cdr** command to define the extensions that will be subject to call detail records. In the Assigned Members field, enter a specific extension whose usage will be recorded on the CDR. Add an entry for each additional extension of interest.

```
change intra-switch-cdr                                      Page   1 of   2
                          INTRA-SWITCH CDR

Assigned Members:   3    of 5000    administered
  1: 50001    19:         37:         55:         73:         91:
  2: 50002    20:         38:         56:         74:         92:
  3:          21:         39:         57:         75:         93:
  4:          22:         40:         58:         76:         94:
  5:          23:         41:         59:         77:         95:
  6:          24:         42:         60:         78:         96:
  7:          25:         43:         61:         79:         97:
```

For each trunk group for which CDR records are desired, verify that CDR reporting is enabled. Use the **change trunk-group** *n* command, where *n* is the trunk group number, to verify that the **CDR Reports** field is set to **y**. This applies to all types of trunk groups.

```
change trunk-group 80                                              Page   1 of  20
                                  TRUNK GROUP

Group Number: 80                      Group Type: isdn       CDR Reports: y
  Group Name: OUTSIDE CALL                    COR: 1      TN: 1        TAC: 103
   Direction: two-way        Outgoing Display? y        Carrier Medium: PRI/BRI
 Dial Access? y                   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
TRUNK PARAMETERS
         Codeset to Send Display: 6     Codeset to Send National IEs: 6
         Max Message Size to Send: 260   Charge Advice: none
  Supplementary Service Protocol: a     Digit Handling (in/out): enbloc/enbloc


            Trunk Hunt: cyclical
                                                  Digital Loss Group: 13
Incoming Calling Number - Delete:     Insert:                 Format:
            Bit Rate: 1200          Synchronization: async    Duplex: full
 Disconnect Supervision - In? y  Out? y
 Answer Supervision Timeout: 0
```

4. Configure Infortel Select

This section describes the configuration of the ISI Telemanagement Solutions Infortel Select.
Infortel Select is comprised of the following:
   - NetLink II Secure CDR Recorder (Buffer)
   - Infortel Select Call Account Software
In this section the installation procedures for the Infortel Select Call Account Software are not
covered. For installation procedures for the Infortel Select Call Account Software, please refer
to the Infortel Select 7.2 Documentation CD [3].

The following describes the configuration steps for the above-mentioned devices to interoperate
with Avaya Communication Manager.

4.1. Configure the NetLink II Secure CDR Recorder

This section describes how to configure the NetLink II Secure CDR Recorder to transfer CDR
records to the Infortel Select Call Account Software via FTP. The NetLink II Secure CDR
recorder must be configured before the configuration of the Infortel Select Call Account
Software.

The NetLink II Secure CDR Recorder can be accessed through a terminal emulator using the
serial port on the back of the NetLink II Secure CDR Recorder.
Use the following settings on the terminal emulator:
   - 9600 Bits/second
   - 8 Data Bits
   - No Parity
   - 1 Stop Bit
   - No Flow Control

Once the connection is established, the Main Menu screen should appear, as shown below. Navigate to the **Main Menu → Port Configuration** page by selecting **22**.

```
PollCat NetLink II  Main Menu:        Administrator Mode

FUNCTIONS:                            CONFIGURATION:

1. Status Displays                    21. Reboot System (Default)
2. Buffer Functions                   22. Port Configuration
3. System Functions                   23. System Parameters
4. System Diagnostics                 24. Scheduled Action Parameters
5. ^Bxx Command Help                  25. Alarm Configuration
6. Recall Parameters                  26. Data Filter Configuration
7. Save Parameters
8. Exit Command Mode

WARNING: Parameters have been changed
         but not saved to permanent memory.
         Changes will be discarded if power is lost.


Enter selection ... 22
```

The following screen shows the PORT CONFIGURATION page. All the configuration changes are done on this page. For the compliance test, the following fields are modified:

- Network Port
- PBX IP port
- Push

Navigate to the Network Port page by selecting **23,** and configure the Network parameters of the NetLink II Secure CDR Recorder.

```
PORT CONFIGURATION:

PBX SERIAL INPUT PORTS              COMMAND PORTS
1.   PBX Port                       21. Console Port
                                    22. Modem Port
                                    23. Network Port

PBX IP INPUT PORTS                  POLLING PORTS
11. PBX IP Port                     31. Push
                                    32. Server



Enter selection,
Press <ESC> to return to previous menu ... 23
```

The following screen shows the NETWORK PORT page. From the NETWORK PORT page, the following fields should be configured:

- **IP Address**: 192.45.80.251 [This is the IP Address of the NetLink II Secure CDR Recorder.]
- **Subnet Mask**: 255.255.255.0

- **Gateway Addr**: 192.45.80.1 [This is the default gateway of the NetLink II Secure CDR Recorder.]

To configure the IP address of the NetLink II Secure CDR Recorder, select **1** for the IP Address field.

```
NETWORK PORT:

COMMUNICATION SETTINGS                    OUTPUT PARAMETERS
1.   IP Address:      10.3.1.13           21. Output Mode:    ASCII Record
2.   Subnet Mask:     255.255.255.0       22. Data on ^B01:   On
3.   Gateway Addr:    10.3.1.1            23. Hold End Data:  On
4.   DHCP:            Off                 24. Line # Tag:     Off
5.   IP Security:     Off                 25. Send Compress:  Off
                                          26. Auto Delete:    Off

                                          SERVERS AND CLIENTS
                                          31. Telnet Access:  On
GENERAL PARAMETERS                        32. SSH Access:     On
11. Command Echo:   On                    33. SYSLOG IP Addr: (undefined)
12. Response Type:  Inhibit Menu          34. SNMP Access:    Off
13. "Sure" Prompt:  On                    35. SNMP Trap:      Off
14. CMD Timeout:    15 Mins               36. TACACS:         Off
15. Audit Trail:    Off                   37. RADIUS:         Off
                                          38. Email/Txt Msg
ACTION PARAMETERS                         39. PPP Dialout     Off
16. Action Delay:   10 Secs

Enter selection,
Press <ESC> to return to previous menu ... 1
```

Provide the **IP Address** of the NetLink II Secure CDR Recorder, and press the **<Enter>** key to change the IP address of the NetLink II Secure CDR Recorder.

```
IP ADDRESS:192.45.80.251

Enter the IP Address of this unit.

Type: <SPACE><Enter> to clear,
      <text><Enter> to change,
      <ESC> for previous screen,
```

Repeat the previous step and change the **Subnet Mask** and **Gateway Addr** fields. The following screen shows the results after the NetLink II Secure CDR Recorder Network Port configuration is completed. After the completion of the Network Port configuration, Press the **<ESC>** key to return to the Port Configuration page.

```
NETWORK PORT:

COMMUNICATION SETTINGS                  OUTPUT PARAMETERS
1.  IP Address:     192.45.80.251       21. Output Mode:    ASCII Record
2.  Subnet Mask:    255.255.255.0       22. Data on ^B01:   On
3.  Gateway Addr:   192.45.80.1         23. Hold End Data:  On
4.  DHCP:           Off                 24. Line # Tag:     Off
5.  IP Security:    Off                 25. Send Compress:  Off
                                        26. Auto Delete:    Off

                                        SERVERS AND CLIENTS
                                        31. Telnet Access:  On
GENERAL PARAMETERS                      32. SSH Access:     On
11. Command Echo:   On                  33. SYSLOG IP Addr: (undefined)
12. Response Type:  Inhibit Menu        34. SNMP Access:    Off
13. "Sure" Prompt:  On                  35. SNMP Trap:      Off
14. CMD Timeout:    15 Mins             36. TACACS:         Off
15. Audit Trail:    Off                 37. RADIUS:         Off
                                        38. Email/Txt Msg
ACTION PARAMETERS                       39. PPP Dialout     Off
16. Action Delay:   10 Secs




Enter selection,
Press <ESC> to return to previous menu ...
```

From the PORT CONFIGURATION page, configure the PBX IP Port field to receive the CDR
data from Avaya Communication Manager. This port should match with Avaya Communication
Manager CDR port setting, as shown on the IP SERVICES form. To configure the PBX IP Port
field, select **11**.

```
PORT CONFIGURATION:

PBX SERIAL INPUT PORTS              COMMAND PORTS
1.  PBX Port                        21. Console Port
                                    22. Modem Port
                                    23. Network Port


PBX IP INPUT PORTS                  POLLING PORTS
11. PBX IP Port                     31. Push
                                    32. Server



Enter selection,
Press <ESC> to return to previous menu ... 11
```

The following screen shows the PBX IP PORT page. The default Port Number was set to 9000
for the NetLink II Secure CDR Recorder. By selecting **2** for the Port Number field, the port
number can be modified. After the completion of the PBX IP PORT configuration, press the
<ESC> key to return to the Port Configuration page.

```
PBX IP PORT:

COMMUNICATION SETTINGS                    INPUT PARAMETERS
1. Service:         On                    11. Time/Date Stmp: Long
2. Port Number:     9000                  12. Serial No Stmp: Off
3. Window Size:     6                     13. Strip Non-Prnt: On
4. Keep Alive Send: 60 Secs               14. End Character:  ^J
5. Keep Alive Resp: 60 Secs               15. Alarm Filter:   Off
6. SDM Resp:        30 Secs               16. Store Alm Data: Both
                                          17. Data Filter:    Off
                                          18. PBX Inact Alm:  Off
MISCELLANEOUS
21. Disconnect
22. Last Status


Enter selection,
Press <ESC> to return to previous menu ... 2
```

From the PORT CONFIGURATION page, configure the Push field to send the CDR data,
received from Avaya Communication Manager, to the Infortel Select Call Account Software. To
configure the Push field, select **31.**

```
PORT CONFIGURATION:

PBX SERIAL INPUT PORTS              COMMAND PORTS
1.  PBX Port                        21. Console Port
                                    22. Modem Port
                                    23. Network Port


PBX IP INPUT PORTS                  POLLING PORTS
11. PBX IP Port                     31. Push
                                    32. Server


Enter selection,
Press <ESC> to return to previous menu ... 31
```

The following screen shows the initial PUSH FILE CONFIGURATION page. In this page, the
configuration to push the CDR data to the Infortel Select Call Account Software is
accomplished. The following fields need to be configured.

- **Server Address**: 192.45.80.91 [IP Address of the PC that the Infortel Select Call
  Account Software is installed. The FTP application software resides in the same PC]
- **UserName**: administrator
- **File Name**: 8700
- **File Mode**: Append
- **Password** [FTP Password]
- **Push Action**: FTP
- **Periodic Push**: 2 Mins

To configure the Server Address, select **1.**

```
PUSH FILE CONFIGURATION:

SERVER PARAMETERS                         ACTION PARAMETERS
1.   Server Address: (undefined)          31. Read Session
2.   UserName:       (undefined)          32. Push Action:    Off
3.   File Name:      (undefined)          33. Periodic Push:  1440 Mins
4.   Directory:      (undefined)          34. Xmit Attempts:  5
     (Cont.):                             35. Xmit Delay:     5 Mins
     (Cont.):                             36. Auto Delete:    Off
5.   File Mode:      ---                  37. Start Time:     (undefined)
6.   File Ext Inc:   ---
                                          MISCELLANEOUS
FTP SERVER PARAMETERS                     41. Force Push
11. Password:        (undefined)          42. Test Push
12. Account:         (undefined)          43. Stop Push

SFTP SERVER PARAMETERS
21. SFTP Server Key

22. SFTP Client Key


Enter selection,
Press <ESC> to return to previous menu ... 1
```

Provide the IP Address of the Infortel Select Call Account Software, and click the **<Enter>** key
to change.

```
FTP SERVER IP ADDRESS:

Enter FTP server IP address.

Type: <SPACE><Enter> to clear,
      <text><Enter> to change,
      <ESC> for previous screen,


(undefined)
--------------
192.45.81.91
```

Repeat the previous step and change the other fields in the PUSH FILE CONFIGURATION
page. The following screen shows the results after the NetLink II Secure CDR Recorder PUSH
FILE CONFIGURATION page is completed. Press the **<ESC>** key until the Main Menu page
appears.

```
PUSH FILE CONFIGURATION:

SERVER PARAMETERS                    ACTION PARAMETERS
1.  Server Address: 192.45.80.91     31. Read Session
2.  UserName:       administrator    32. Push Action:    FTP
3.  File Name:      8700             33. Periodic Push:  2 Mins
4.  Directory:      (undefined)      34. Xmit Attempts:  5
    (Cont.):                         35. Xmit Delay:     5 Mins
    (Cont.):                         36. Auto Delete:    Off
5.  File Mode:      Append           37. Start Time:     (undefined)
6.  File Ext Inc:   Off
                                     MISCELLANEOUS
FTP SERVER PARAMETERS                41. Force Push
11. Password:       (defined)        42. Test Push
12. Account:        (undefined)      43. Stop Push

SFTP SERVER PARAMETERS
21. SFTP Server Key

22. SFTP Client Key

Enter selection,
Press <ESC> to return to previous menu ... 1
```

From the Main Menu page, select **7** to save parameters.

```
PollCat NetLink II  Main Menu:       Administrator Mode

FUNCTIONS:                           CONFIGURATION:

1. Status Displays                   21. Reboot System (Default)
2. Buffer Functions                  22. Port Configuration
3. System Functions                  23. System Parameters
4. System Diagnostics                24. Scheduled Action Parameters
5. ^Bxx Command Help                 25. Alarm Configuration
6. Recall Parameters                 26. Data Filter Configuration
7. Save Parameters
8. Exit Command Mode

WARNING: Parameters have been changed
         but not saved to permanent memory.
         Changes will be discarded if power is lost.

Enter selection ... 7
```

4.2. Configure the Report from the Infortel Select Call Account Software

The following section describes the steps for generating the CDR reports. Navigate to **Start** ➔ **Programs** ➔**Infortel Select** ➔**Control Center** to access the Control Center page. The following screen shows the Control Center page. From the Control Center page, select **Call Account Reports** under the Reports menu.
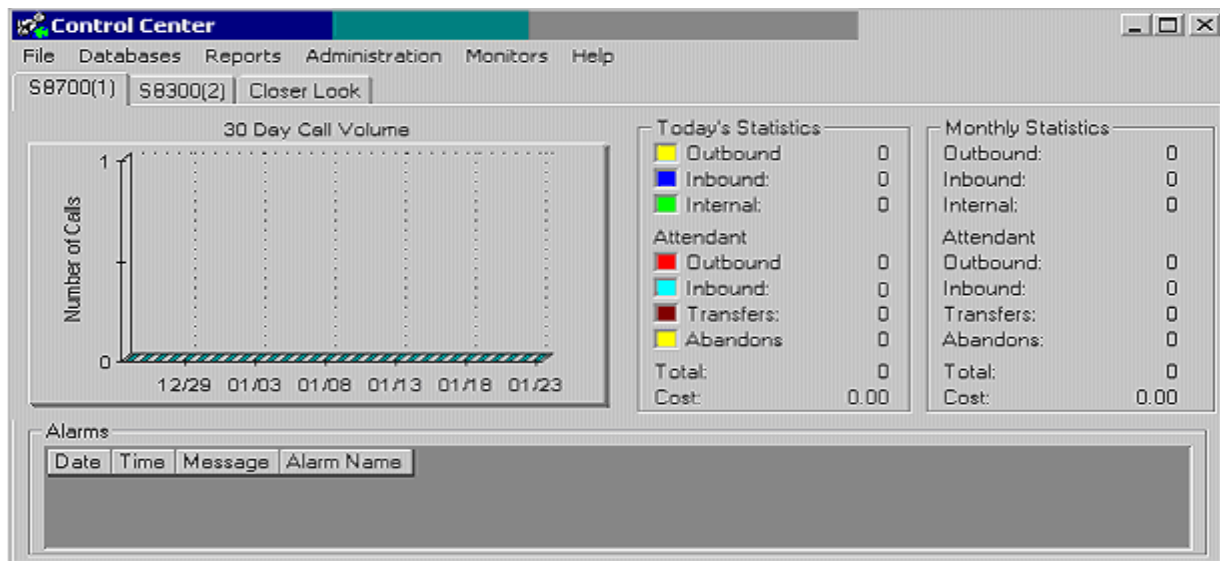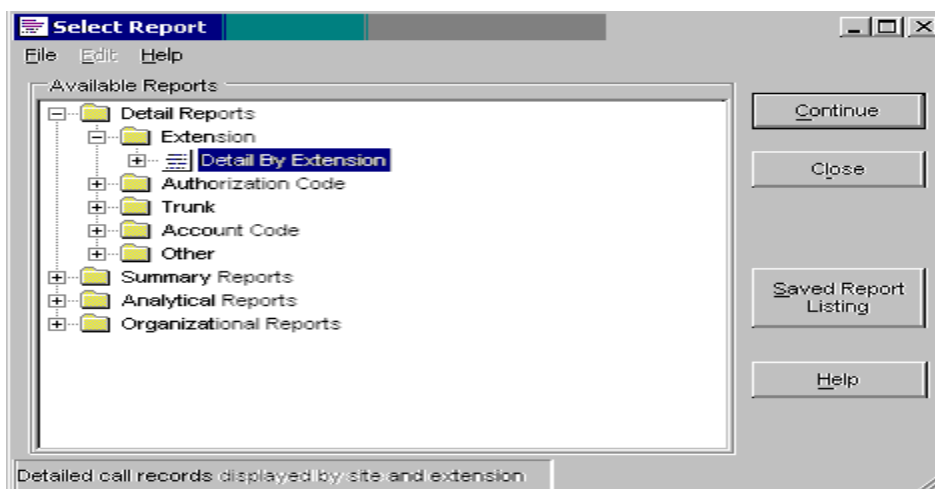
On the **Login to Infortel** screen, provide the proper User Name and Password and click **OK** button.

On the Select Report screen, navigate to **Detail Reports → Extension → Detail by Extension.** Click the Continue button.

On the Report Parameters page, provide the following information:

- **From**: The start date for the report collection.
- **To**: The end date for the report collection.
- Select **Continuous** for Time Range.

Click the **Preview** button to view the report.

The following screen shows a sample report.   The highlighted section on the report describes a call made from Site B to Site A, and the CDR report was generated from Site A.

- **Data Source**: S8700 [This data came from Avaya S8700 Media Server]
- **Extension**: 50001 [This extension is the call received extension.]
- **Date**: 01/27/2006 [Local PBX date.]
- **Time**: 15:53 [Local PBX time.]
- **Duration**: 12 seconds call.
- **Call Type**: INB [indicates an Inbound call to S8700 Media Server.]
- **Phone Number**: 908-856-0001[Telephone that Initiating the call.]
- **Call Count:** 1

Detail Report by Extension   From 1/27/2006 through 1/27/2006

Date	Time	Duration	Cost	Facility	Call Type	Phone Number	Location	Account / Matter

Data Source: S8700 (1)
Extension: 50001 – Undefined, Extension 50001

Date	Time	Duration	Cost	Facility	Call Type	Phone Number	Location	Account / Matter
01/27/2006	15:53	0:00:12	0.00	IP	INB	908-856-0001	PLAINFIELD, NJ	

Extension Total   0:00:12   0.00   Call Count 1

Extension: 50005 – Undefined, Extension 50005

01/27/2006	14:39	0:02:54	0.00	Internal	INT	50001	INTERNAL	

Extension Total   0:02:54   0.00   Call Count 1

Call Type Summary for Data Source : S8700 (1)

	Total Calls	Total Duration	Total Cost	Average Duration	Average Cost
Inbound	1	0:00:12	0.00	0:00:12	0.00
Internal	1	0:02:54	0.00	0:02:54	0.00
	2	0:03:06	0.00	0:01:33	0.00

Call Type Summary for Grand Total

	Total Calls	Total Duration	Total Cost	Average Duration	Average Cost
Inbound	1	0:00:12	0.00	0:00:12	0.00
Internal	1	0:02:54	0.00	0:02:54	0.00
	2	0:03:06	0.00	0:01:33	0.00

1/27/2006 at 4:10 PM   1   ISI - www.isiinfo.com

5. Interoperability Compliance Testing

Interoperability compliance testing included feature, serviceability and performance tests. The feature testing evaluated the ability of Infortel Select to collect and process CDR records for various types of calls. The serviceability testing introduced failure scenarios to see if Infortel Select can resume CDR collection after failure recovery. The performance testing produced bulk call volumes to generate a substantial amount of CDR records.

5.1. General Test Approach

The general test approach was to manually place intra-switch calls, inter-switch calls, inbound and outbound PSTN trunk calls to and from telephones, and verify that Infortel Select collects the CDR records. For serviceability testing, logical links were disabled and re-enabled, and media servers were reset. For performance testing, a call generator was used to place calls over an extended period of time.

5.2. Test Results

All executed test cases were passed. Infortel Select successfully collected the CDR records from Avaya Communication Manager via a RSP connection for all types of calls generated including intra-switch calls, inbound/outbound PSTN trunk calls, inbound/outbound inter-switch IP trunk calls, transferred calls, and conferenced calls. For serviceability testing, Infortel Select was able to resume collecting CDR records after failure recovery including buffered CDR records for calls that were placed during the outages. Performance tests verified that Infortel Select could collect call records during a period with high call volume.

6. Verification Steps

The following steps can be used to verify the configuration:

- Use the **ping** command, to verify IP communication between Infortel Select and Avaya Communication Manager. For the Avaya S8700 Media Server, ping the media server IP Address from Infortel Select. For the Avaya S8300 Media Server, ping the IP address of the local media server (with node-name – "procr") from Infortel Select.
- On the SAT of each Avaya Media Server, enter the **status cdr-link** command and verify that the CDR link state is up.
- Place a call and verify that Infortel Select received the CDR record for the call. Compare the values of data fields in the CDR record with the expected values and verify that they match.
- Place internal, inbound trunk, and outbound trunk calls to and from various telephones. Generate an appropriate report in Infortel Select, and verify the reports accuracy.

7. Support

Technical support for Infortel Select can be obtained by contacting ISI Telemanagement Solutions via the support link at http://www.isi-info.com.

8. Conclusion

These Application Notes describe the procedures for configuring the ISI Telemanagement Solutions Infortel Select to collect call detail records from Avaya Communication Manager running on Avaya Media Servers. Infortel Select successfully passed all compliance tests.

9. References

This section references Avaya and ISI Telemanagement Solutions documentation that are relevant to these Application Notes.

The following Avaya product documentation can be found at http://support.avaya.com .
[1] Feature Description and Implementation For Avaya Communication Manager, Release 3.0, Issue 3.0, June 2005, Document Number 555-245-205.

[2] Administrator Guide for Avaya Communication Manager, Release 3.0, Issue 1.0, June 2005, Document Number 03-300509

The following Infortel Select documentation is provided by ISI Telemanagement Solutions.
[3] Infortel Select 7.2 Documentation CD.

©2006 Avaya Inc. All Rights Reserved.
Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya Developer*Connection* Program at devconnect@avaya.com.