Avaya Solution & Interoperability Test Lab

Application Notes for Inova LightLink with Avaya Communication Manager using Avaya Call Management System - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Inova LightLink to successfully interoperate with Avaya Communication Manager using the Historical Socket Interface of Avaya Call Management System. Information in these Application Notes has been obtained through Developer*Connection* compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for Inova LightLink to successfully interoperate with Avaya Communication Manager using the Historical Socket Interface of Avaya Call Management System.

Inova LightLink is a middleware platform that supports integration, management, and delivery of real-time and historical data. The compliance testing focused on obtaining historical data. Inova LightLink utilizes historical call center data from Avaya Communication Manager for Automatic Call Distribution (ACD), Skill, and Vector Directory Number (VDN) and provides the information to applications or contact center organizations for effective management.

Integration with Avaya Communication Manager is achieved through the Avaya Call Management System (CMS). The Historical Socket Interface is use to obtain historical data on ACD/Skill and VDN groups. The Avaya Communication Solutions and Integration (CSI) group within Avaya Global Services provided this interface for use with Inova LightLink.

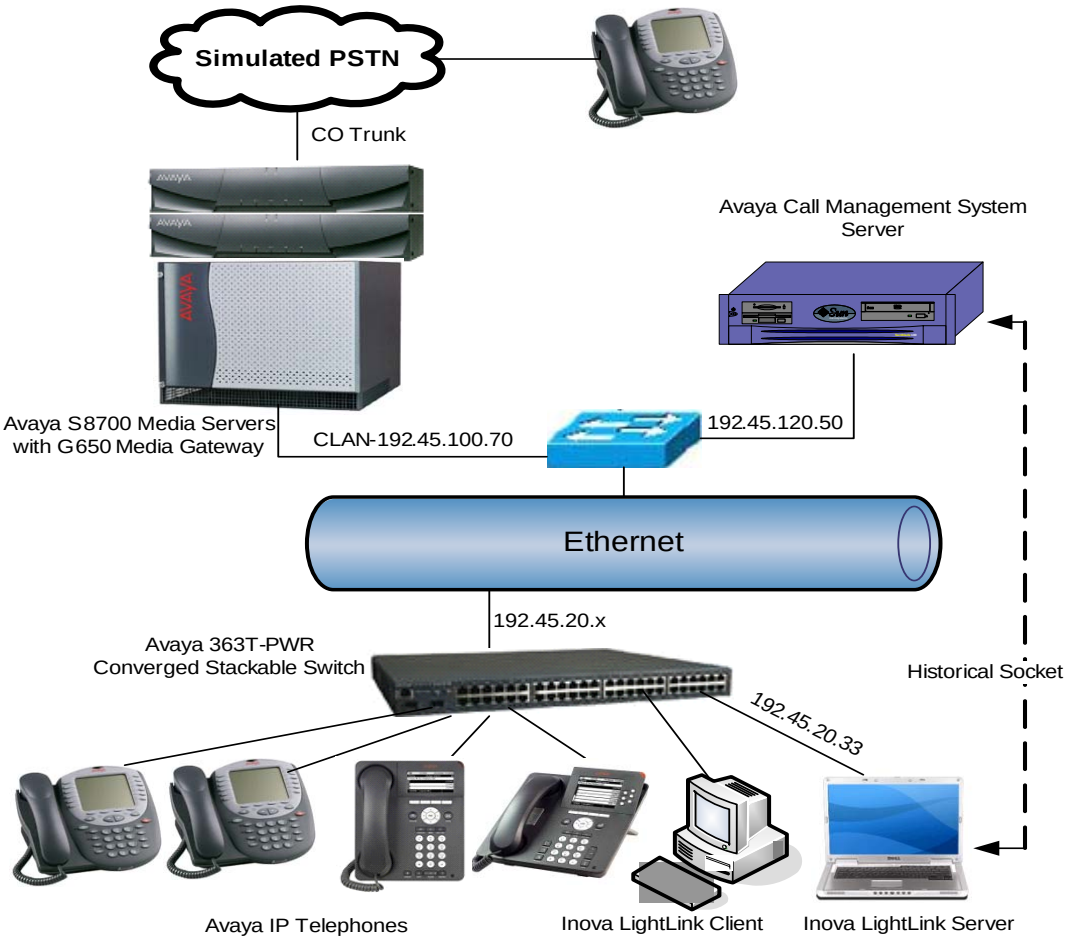


Figure 1: Compliance Test Configuration

Figure 1 displays the network configuration that was utilized for compliance testing. Inova LightLink obtains the data streams of ACD/Skill and VDN historical data from Avaya CMS. A TCP client-server model is use for the connection, with the Avaya CMS server being the "client", and the Inova LightLink server being the "server". The Inova LightLink server runs a TCP "listener" process to accept the data connection from the Avaya CMS server for each of the following interfaces:

- ACD/Skill data
- VDN data

The Avaya CSI group installs and configures these interfaces on the Avaya CMS, and provides the TCP port number associated with each interface to Inova for configuring LightLink.
The LightLink server parses the raw data streams received from the interfaces and makes the data available on various output devices. Customers via customized viewing methods can monitor the historical data.

2. Equipment and Software Validated

The following equipment and software/firmware were used for the test configuration.

Equipment	Software/Firmware
Avaya S8700 Media Servers	Communication Manager 4.0, Load 730.5
Avaya G650 Media Gateway • TN799DP C-LAN Circuit Pack	 HW01 FW024
Avaya Call Management System	R14aa.h
Avaya IP Telephones: • 4610SW • 9620 • 9630	 2.8 1.5 1.5
Inova LightLink Server	5.5
Inova LightLink Client	5.5
Dell Computers: • Inspiron 5150 • Precision 380	Windows XP Professional

3. Configure Avaya Communication Manager

This section provides the procedure for configuring Avaya Communication Manager for this solution. The Avaya System Access Terminal (SAT) was used to issue the commands to the Avaya S8700 Media Server. This configuration covers the following areas:

- Verify Avaya Communication Manager software options
- Administer adjunct CMS release
- Administer IP node name
- Administer IP interface for C-LAN
- Administer data module for C-LAN
- Administer processor interface channel
- Administer measured VDN
- Administer measured Skill

The detailed administration of contact center devices such as VDN, Vector, ACD/Skill, and Agents are assumed to be in place. These Application Notes only cover how to enable VDN, ACD/Skill, and Agent data to be sent to the Avaya CMS server.

3.1. Verify Avaya Communication Manager Software Options

Use the "display system-parameters customer-options" command to verify Avaya Communication Manager is licensed for the features illustrated in these Application Notes. On **Page 1**, verify that the **G3 Version** field is set to "V14" as shown below.

```
display system-parameters customer-options                    Page   1 of  11
                            OPTIONAL FEATURES

    G3 Version: V14
      Location: 1                            RFA System ID (SID): 1
      Platform: 6                            RFA Module ID (MID): 1

                                                          USED
                            Platform Maximum Ports: 44000 617
                                  Maximum Stations: 36000 214
                              Maximum XMOBILE Stations: 0     0
                    Maximum Off-PBX Telephones - EC500: 0     0
                    Maximum Off-PBX Telephones -   OPS: 50    5
                    Maximum Off-PBX Telephones - PBFMC: 0     0
                    Maximum Off-PBX Telephones - PVFMC: 0     0
                    Maximum Off-PBX Telephones - SCCAN: 0     0
```

Navigate to **Page 6**, and verify the **Call Center Release** is set to "4.0" as shown below.

```
display system-parameters customer-options                      Page   6 of  11
                        CALL CENTER OPTIONAL FEATURES

                          Call Center Release: 4.0

                                 ACD? y                        Reason Codes? y
                       BCMS (Basic)? y             Service Level Maximizer? n
          BCMS/VuStats Service Level? y           Service Observing (Basic)? y
  BSR Local Treatment for IP & ISDN? n    Service Observing (Remote/By FAC)? y
                  Business Advocate? y            Service Observing (VDNs)? y
                    Call Work Codes? n                        Timed ACW? y
       DTMF Feedback Signals For VRU? y                  Vectoring (Basic)? y
                  Dynamic Advocate? y               Vectoring (Prompting)? y
        Expert Agent Selection (EAS)? y           Vectoring (G3V4 Enhanced)? y
                            EAS-PHD? y            Vectoring (3.0 Enhanced)? n
                  Forced ACD Calls? n    Vectoring (ANI/II-Digits Routing)? y
                                         Vectoring (G3V4 Advanced Routing)? y
           Lookahead Interflow (LAI)? n                  Vectoring (CINFO)? y
Multiple Call Handling (On Request)? y     Vectoring (Best Service Routing)? y
    Multiple Call Handling (Forced)? y               Vectoring (Holidays)? y
  PASTE (Display PBX Data on Phone)? y               Vectoring (Variables)? n
```

3.2. Administer Adjunct CMS Release

Use the "change system-parameters features" command and navigate to **Page 12**. Set the **CMS (appl mis)** field to the software release of the Avaya CMS, "R14".

```
change system-parameters features                               Page  12 of  17
                       FEATURE-RELATED SYSTEM PARAMETERS

  AGENT AND CALL SELECTION
                         MIA Across Splits or Skills? y
                          ACW Agents Considered Idle? y
                          Call Selection Measurement: current-wait-time
    Service Level Supervisor Call Selection Override? n
                                Auto Reserve Agents: all


  CALL MANAGEMENT SYSTEM
                           REPORTING ADJUNCT RELEASE
                                     CMS (appl mis): R14
                                     CCR (appl ccr):

                                BCMS/VuStats LoginIDs? y
                    BCMS/VuStats Measurement Interval: hour
            BCMS/VuStats Abandon Call Timer (seconds):
                      Validate BCMS/VuStats Login IDs? n
                               Clear VuStats Shift Data: on-login
                  Remove Inactive BCMS/VuStats Agents? n
```

3.3. Administer IP Node Name

Use the "change node-names ip" command, to add node name entries for the C-LAN and the Avaya CMS as shown below.

- **Name:** Enter a descriptive node name for C-LAN and Avaya CMS.
- **IP Address:** Enter IP address of C-LAN and Avaya CMS in the corresponding IP address field.

```
change node-names ip                                          Page   1 of   2
                                IP NODE NAMES
    Name              IP Address
ESSCLAN             192.45.145.20
ESSCid002Sid003     192.45.145.10
ESSMEDPRO           192.45.145.21
clan2               192.45.100.70
cms                 192.45.120.50
```

3.4. Administer IP Interface for C-LAN

Add the C-LAN to the system configuration using the "add ip-interface n" command, where "n" is the slot number where the C-LAN board is inserted, "02a02". Enter values in the following fields and the default values may be used for the remaining fields. Submit these changes

- **Node Name:** Enter the name assigned for the C-LAN in the **Name** field of **Section 3.3**, "clan2".
- **IP Address:** This field is automatically populated, "192.45.100.70".
- **Subnet Mask:** Enter the proper value for Subnet Mask, "255.255.255.0".
- **Gateway Address:** Enter the proper value for Default Gateway, "192.45.100.1".
- **Enable Ethernet Port:** Set this field to "y".

```
add ip-interface 02a02                                        Page   1 of   1
                                IP INTERFACES


                 Type: C-LAN
                 Slot: 02A02
          Code/Suffix: TN799  D
            Node Name: clan2
           IP Address: 192.45 .100.70
          Subnet Mask: 255.255.255.0
      Gateway Address: 192.45 .100.1
  Enable Ethernet Port? y
        Network Region: 1
                 VLAN: n

 Target socket load and Warning level: 400
       Receive Buffer TCP Window Size: 8320
                              ETHERNET OPTIONS
                 Auto? y
```

3.5. Administer Data Module for C-LAN

Add a new data module using the "add data-module n" command, where "n" is an available extension. Enter the following values, and submit these changes.

- **Name:** Enter a descriptive name.
- **Type:** "ethernet"
- **Port:** Use value for the **Slot** number used in **Section 3.4** concatenated with port "17", 02a0217
- **Link:** An available link number, "2".

```
change data-module 24981                                        Page   1 of   1
                              DATA MODULE

  Data Extension: 24981           Name: Clan2
            Type: ethernet
            Port: 02a0217
            Link: 2




Network uses 1's for Broadcast Addresses? y
```

3.6. Administer Processor Interface Channel

Assign a new processor interface channel with the "change communication-interface processor-channels" command. Add an entry with the following values, and submit these changes.

- **Enable:** Set this field to "y".
- **Appl.:** "mis"
- **Mode:** Set this field to "s" for server mode.
- **Interface Link:** Use value for **Link** defined in **Section 3.5,** "2".
- **Interface Chan:** TCP channel number for Avaya CMS, which is defined as part of the Avaya CMS installation. For the test configuration, the default TCP channel number of "5001" was used.
- **Destination Node:** Use the node name defined for Avaya CMS server for the **Name** field in **Section 3.3**, "cms".
- **Destination Port:** Set this field to "0".
- **Session Local:** Corresponding channel number in **Proc Chan** field. For the testing configuration "1" was used.
- **Session Remote:** Corresponding channel number in **Proc Chan** field. For the testing configuration "1" was used.

```
change communication-interface processor-channels               Page   1 of  24
                      PROCESSOR CHANNEL ASSIGNMENT
Proc                 Gtwy      Interface         Destination      Session   Mach
Chan Enable   Appl.   To  Mode Link/Chan       Node       Port  Local/Remote ID
  1:   y    mis            s    2   5001  cms             0      1     1
  2:   n                                                  0
```

3.7. Administer Measured VDN

Use the “change vdn n” command, where “n” is the extension of the VDN to be measured by Avaya CMS. Set the **Measured** field to “external” to enable measurement data on the VDN to be sent to Avaya CMS. Repeat this step for all VDNs that will be monitored by Avaya CMS.

```
change vdn 37531                                          Page   1 of   2
                          VECTOR DIRECTORY NUMBER

                           Extension: 37531
                               Name*: Inova Historical 1
                      Vector Number: 531

                Meet-me Conferencing? n
                  Allow VDN Override? n
                                COR: 1
                                TN*: 1
                           Measured: external
       Acceptable Service Level (sec): 30
              Service Objective (sec): 20
       VDN of Origin Annc. Extension*:
                           1st Skill*:
                           2nd Skill*:
                           3rd Skill*:
```

3.7. Administer Measured Skill

Use the “change hunt-group n” command, where “n” is the extension of the ACD/Skill group number to be measured by Avaya CMS. Set the **Measured** field to “external” to enable measurement data on the ACD/Skill group to be sent to Avaya CMS. Repeat this step for all ACD/Skill groups that will be measured by Avaya CMS.

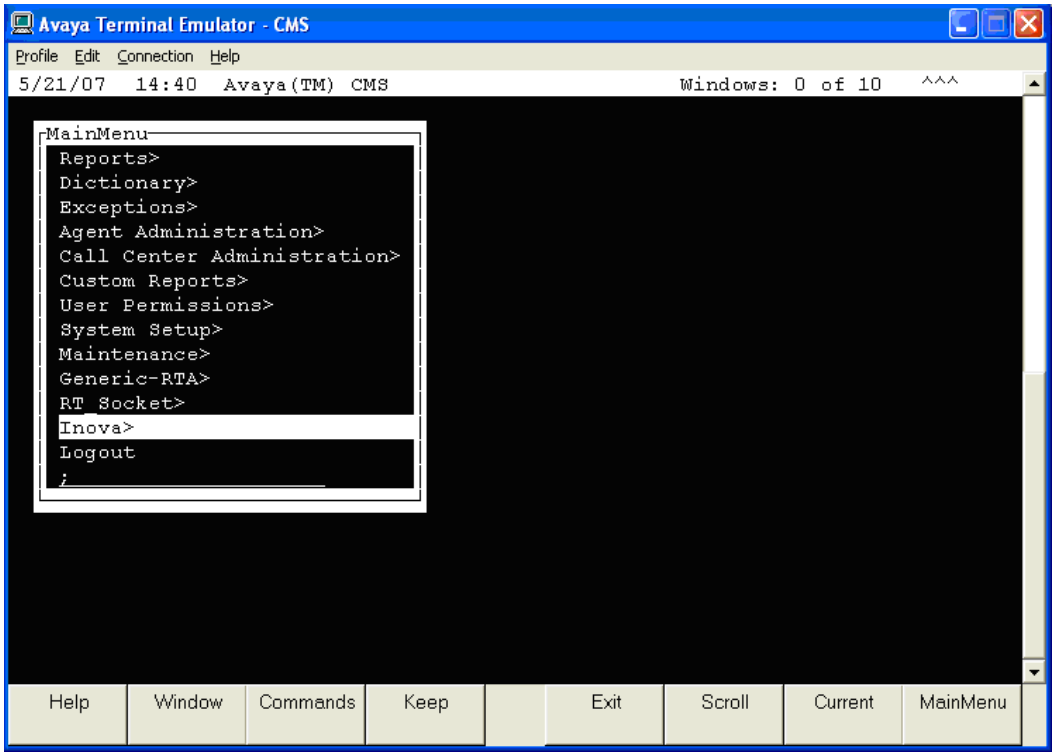
```
change hunt-group 35                                      Page   2 of   3
                                HUNT GROUP

                  Skill? y      Expected Call Handling Time (sec): 180
                    AAS? n        Service Level Target (% in sec): 80 in 30
               Measured: external         Service Objective (sec): 20
    Supervisor Extension:                Service Level Supervisor? n


     Controlling Adjunct: none


       VuStats Objective:
 Timed ACW Interval (sec):                   Dynamic Queue Position? n
   Multiple Call Handling: none



                               Redirect on No Answer (rings):
                                           Redirect to VDN:
                  Forced Entry of Stroke Counts or Call Work Codes? n
```

4. Configure Avaya Call Management System

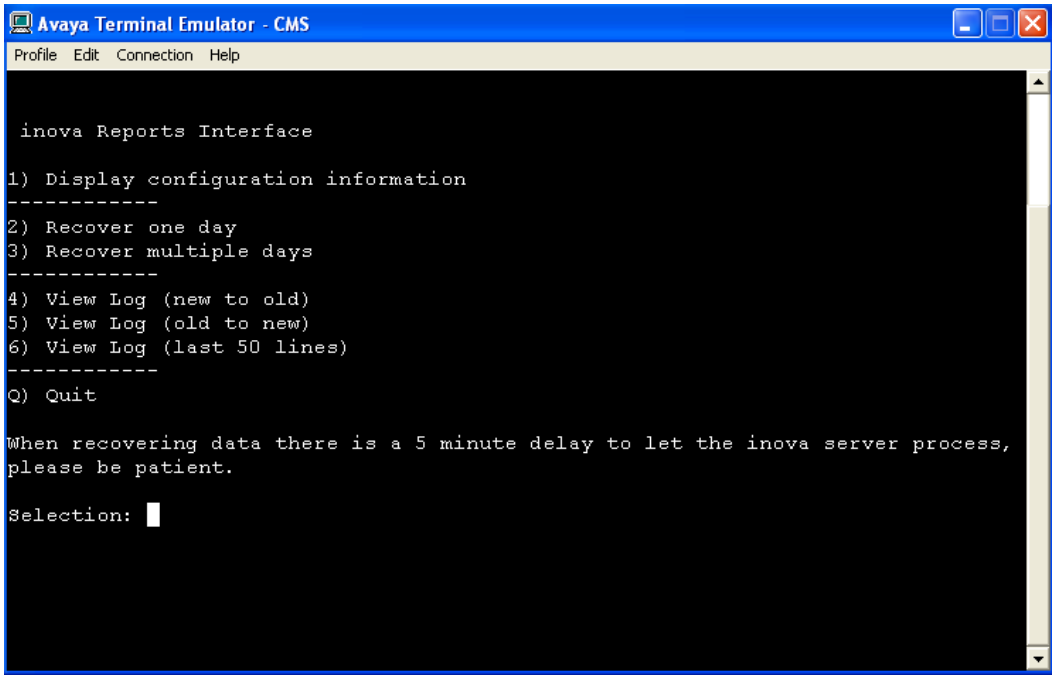
Configuration of the Historical Socket Interface is performed by the Avaya CSI group and outside the scope of these Application Notes.

The Historical Socket Interface is always enabled, if it is monitoring any Skill or VDN.

To verify what Skill or VDN is being monitored, use a terminal emulator to connect to Avaya CMS server, and log in with the proper credentials. In the **Main Menu** that appears, select the Historical Socket interface. The Historical Socket Interface name may vary. In this example, it is named "Inova".

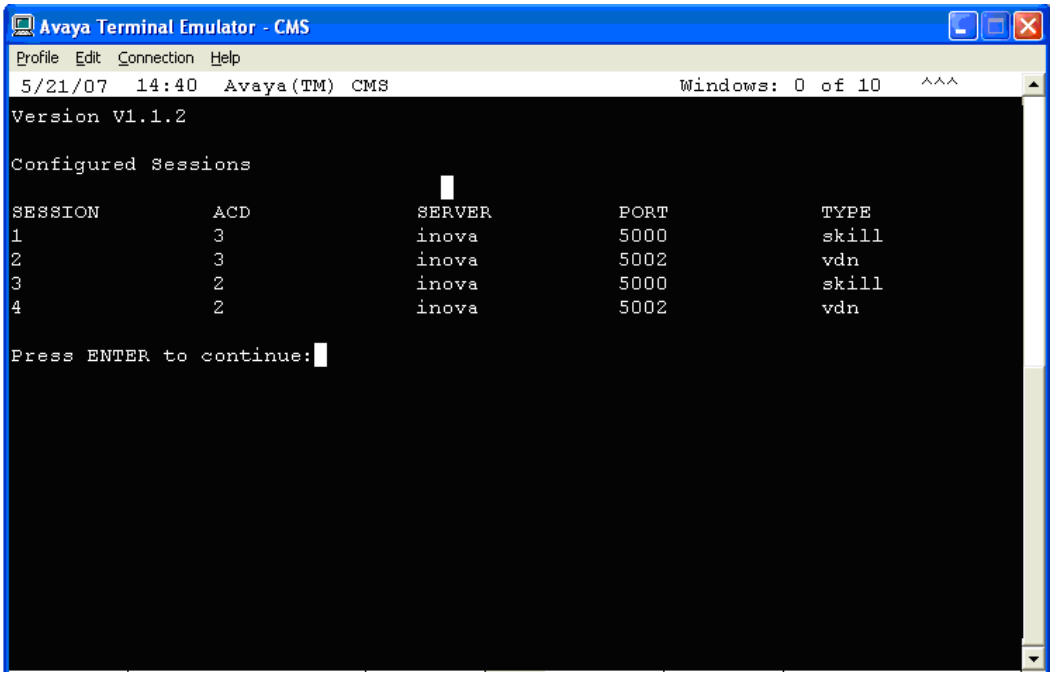


The **inova Reports Interface** menu appears as shown below.



Enter “1” to display the configuration information. The **Configured Sessions** screen appears. A description of the screen shot fields follows.

- **SESSION:** Each session defines a connection that Avaya CMS server makes with Inova LightLink server.
- **ACD:** This column displays the number for Avaya Communication Manager as configured on Avaya CMS server.
- **SERVER:** It always displays “inova” as the name for Inova LightLink server.
- **PORT:** It shows the TCP port that will be utilized to transfer data during each session.
- **TYPE:** This column defines what type of data will be transferred during each session.



Press “Enter” to return to the **inova Interface Reports** menu, and then enter “Q” to quit.

5. Configure Inova LightLink

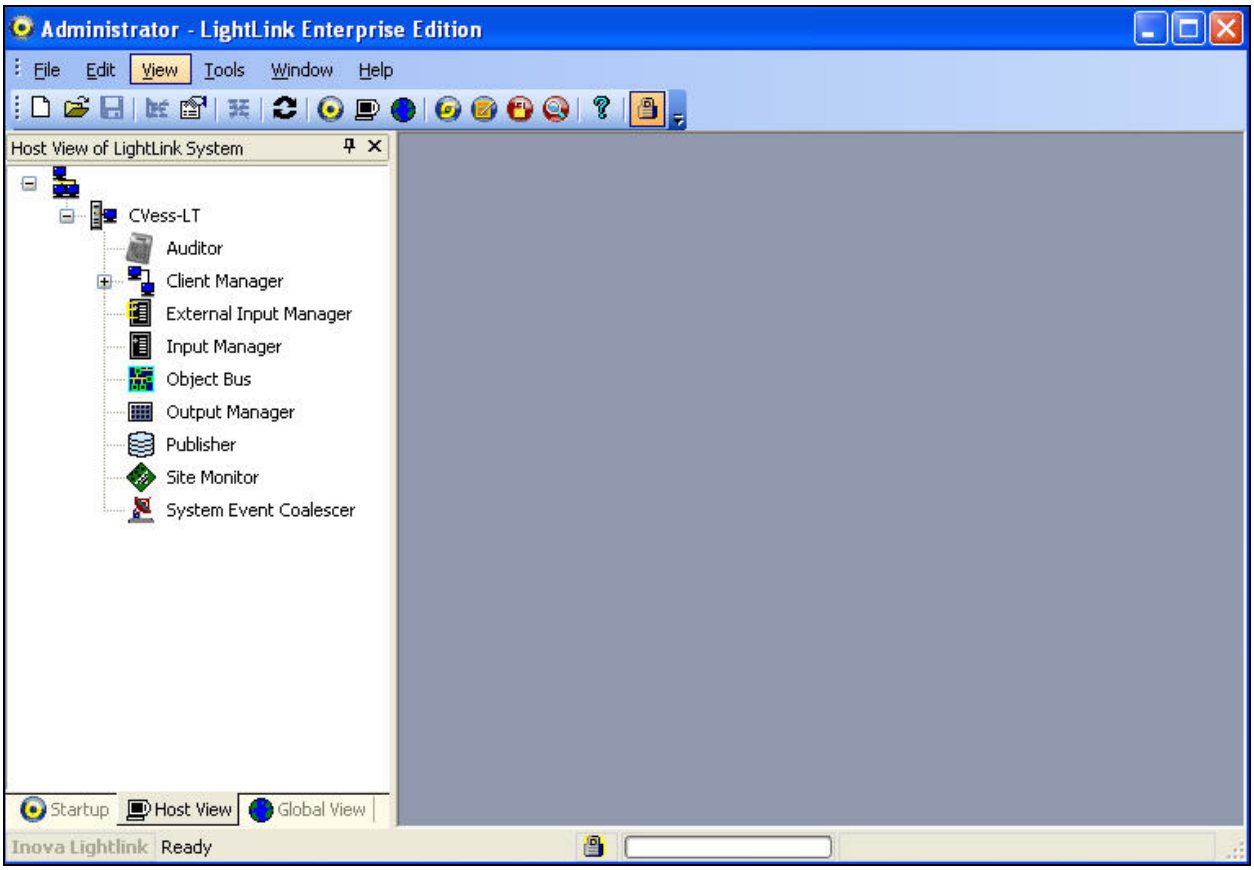
This section provides the procedures for configuring Inova LightLink for the following areas:

- Administer historical socket interface for VDN data
- Administer historical socket interface for Skill data

Configuration of LightLink is typically performed by Inova technicians. The procedural steps are presented in these Application Notes for informational purposes.

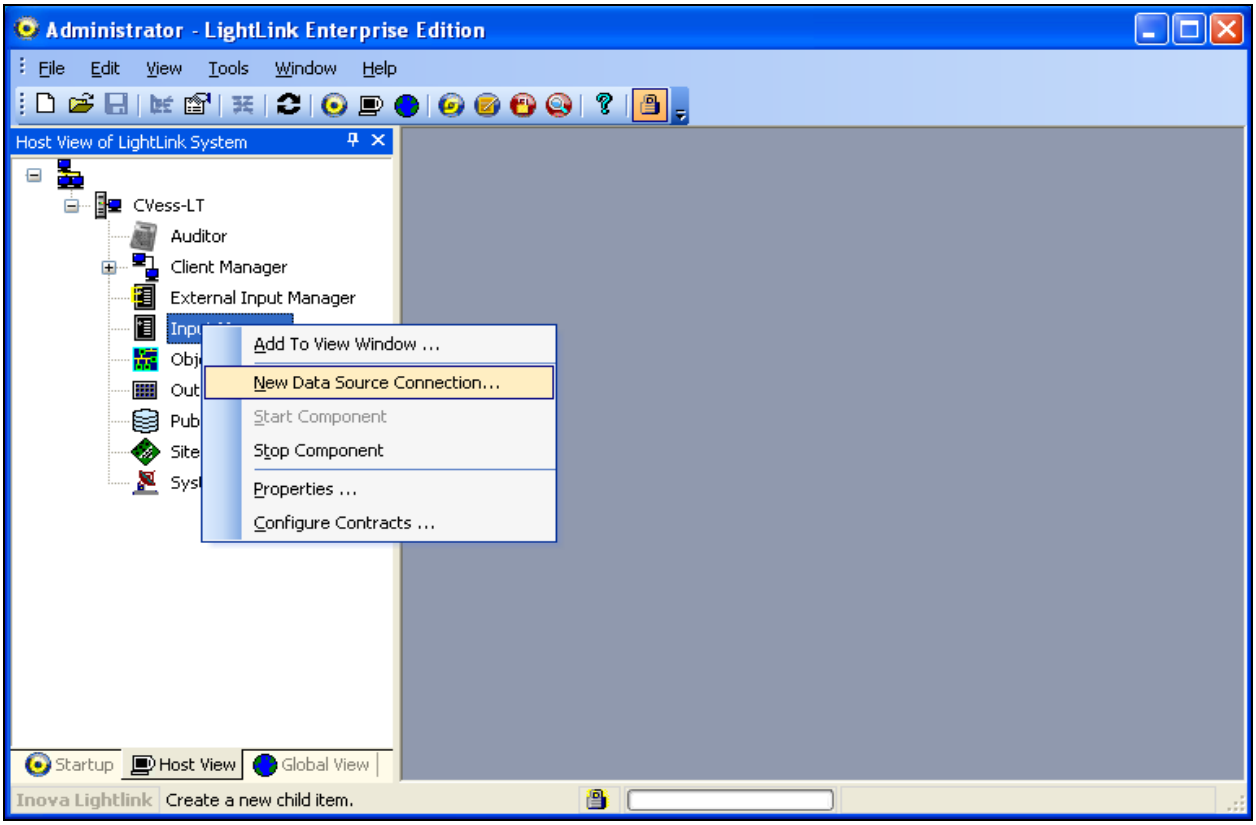
5.1. Administer Historical Socket Interface for VDN data

From the LightLink server, start the administrator interface by launching **Programs → Inova LightLink → Administrator**. The **Administrator** screen appears, as shown below.

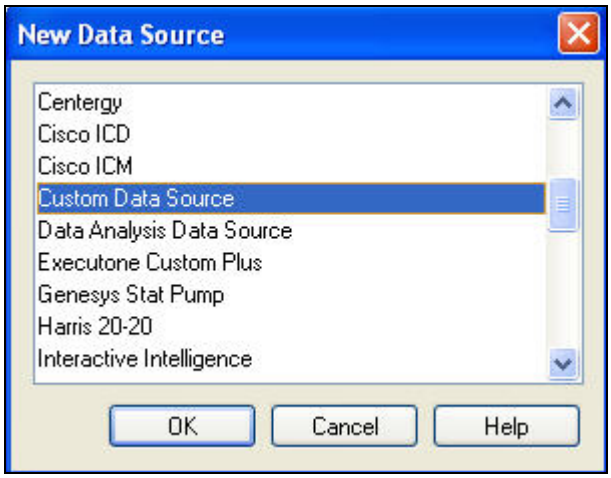


5.1.1. Administer New Custom Data Source

Right click on **Input Manager** in the left pane to get a drop down list. Select **New Data Source Connection…** from the list.

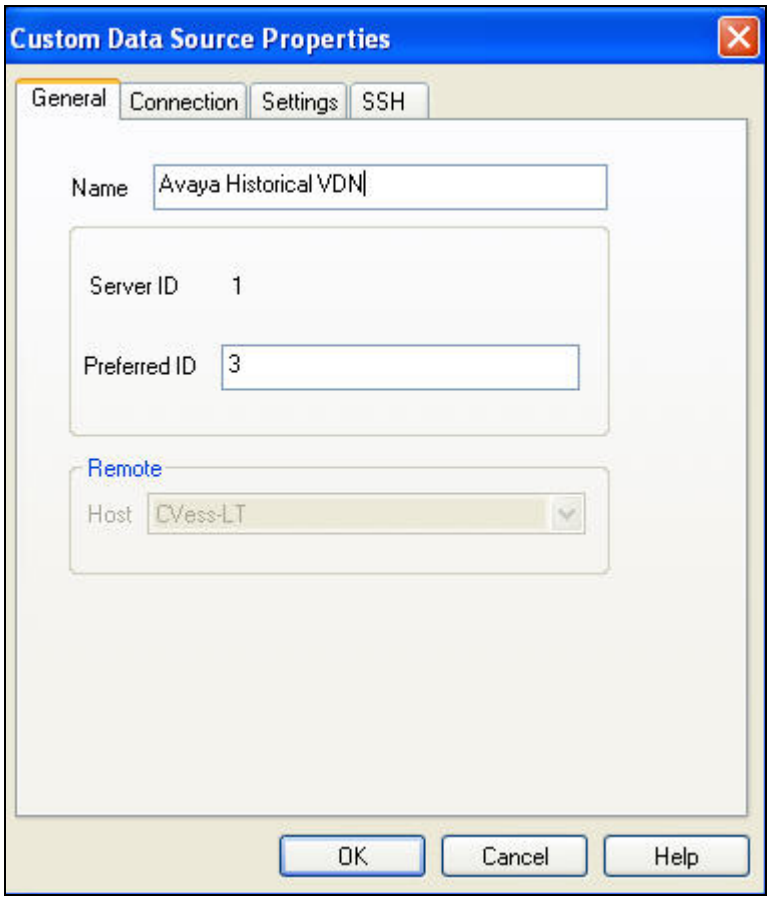


The **New Data Source** screen appears. Scroll down the window and select **Custom Data Source**. Click **OK**.



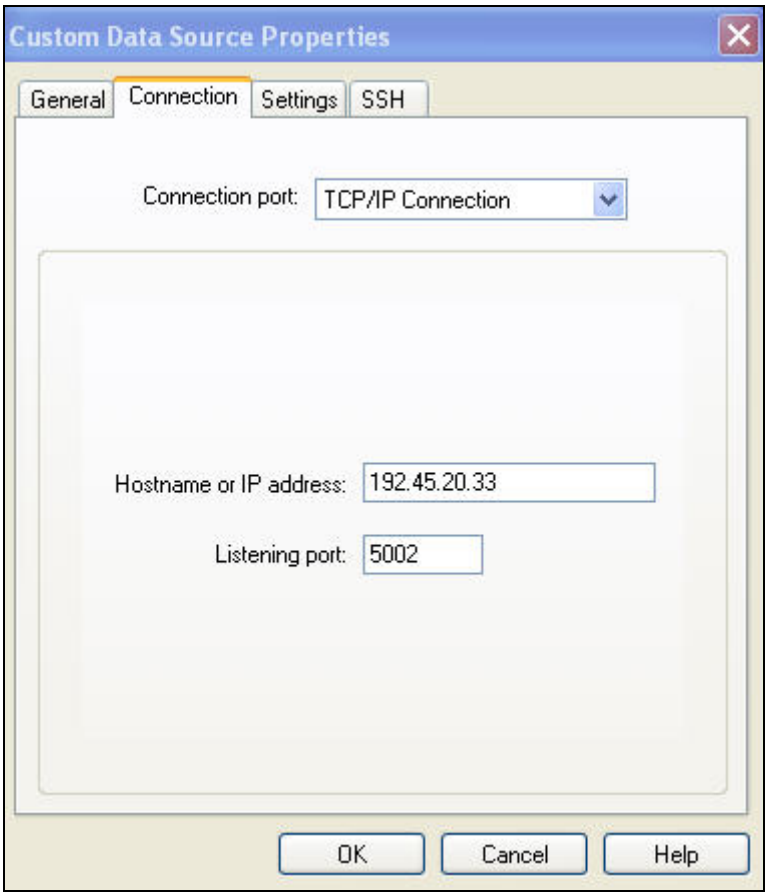
5.1.2. Administer Custom Data Source General Tab

In the **Custom Data Source Properties** screen that appears, select the **General** tab. For the **Name** field enter a descriptive name for the new data source. In the test configuration, "Avaya Historical VDN" was used. Retain the default value for the **Preferred ID** field.



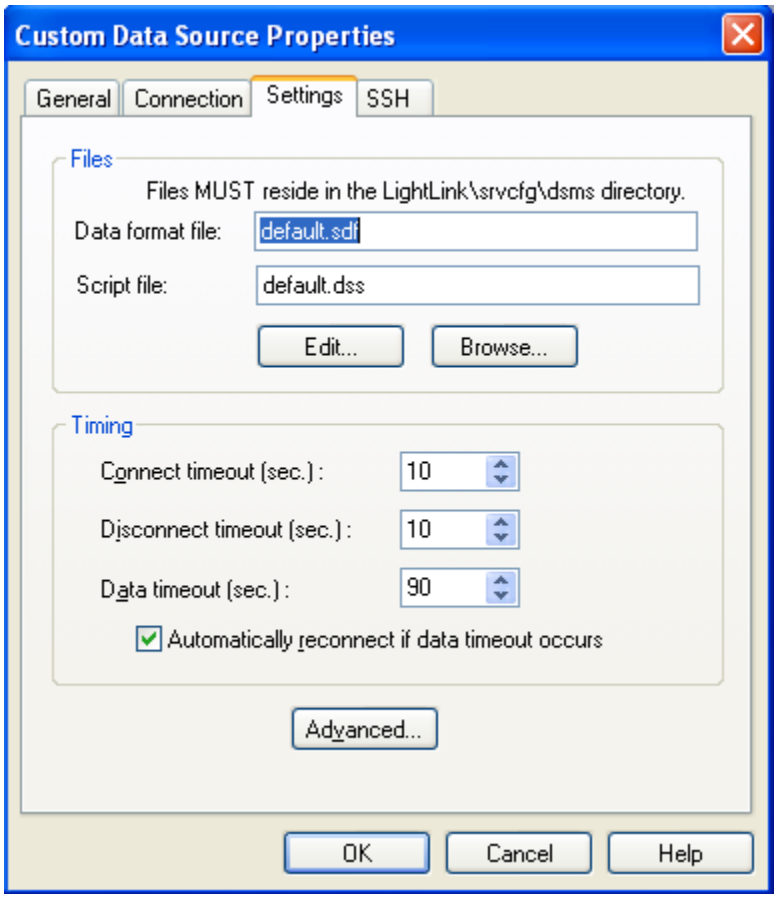
5.1.3. Administer Custom Data Source Connection Tab

Select the **Connection** tab. For the **Connection port** field, select "TCP/IP Connection" from the drop down list. Enter the IP address of the LightLink server in the **Hostname or IP address** field. For the **Listening port** field, enter the TCP port number displayed for the VDN data from the **Configured Session** screen in **Section 4**, "5002". This TCP port number was configured by the Avaya CSI group.

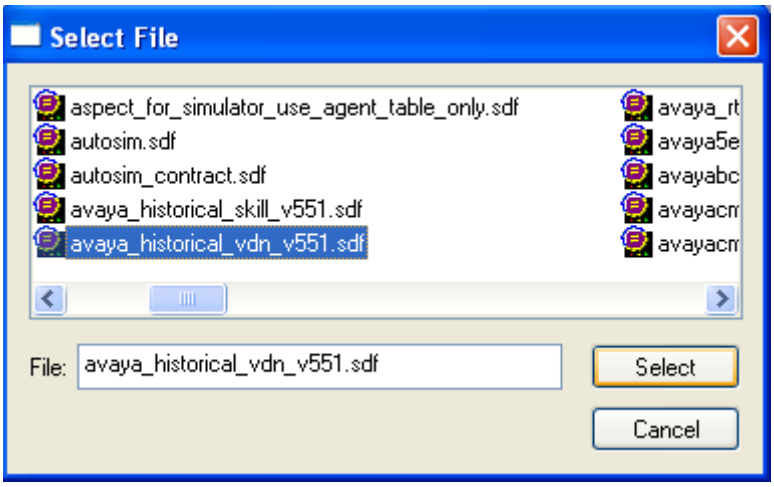


5.1.4. Administer Custom Data Source Settings Tab

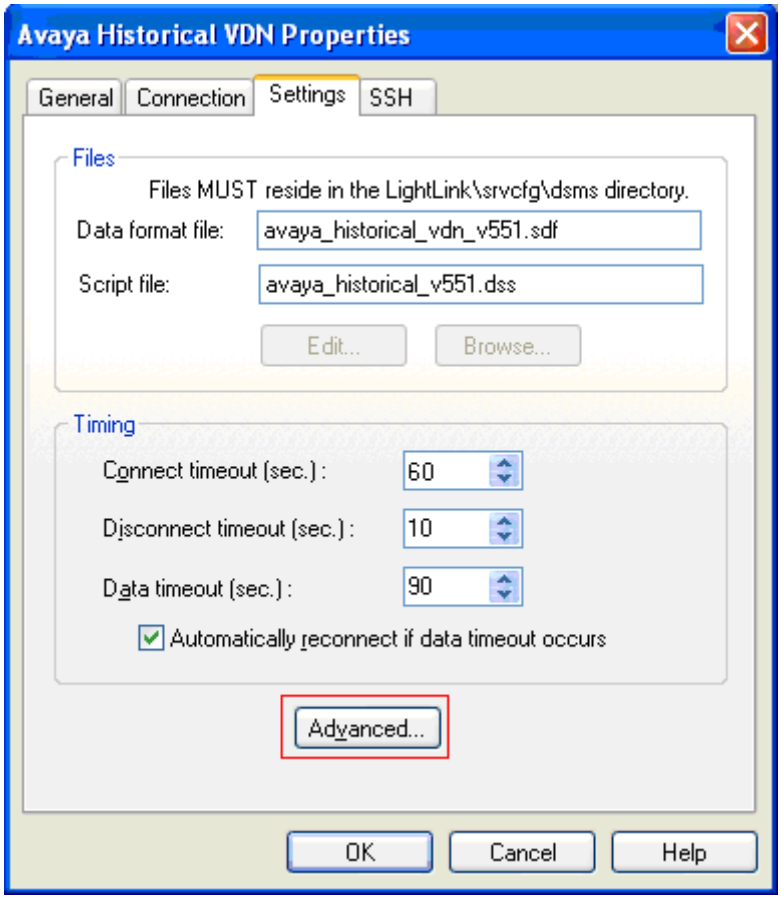
Select the **Settings** tab. Select the **Data format file** field, and click the **Browse…** button.



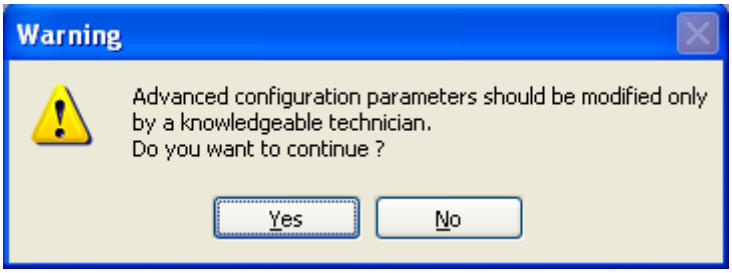
In the **Select File** screen that appears, select "avaya_historical_vdn_v551.sdf" from the list, and click **Select**.



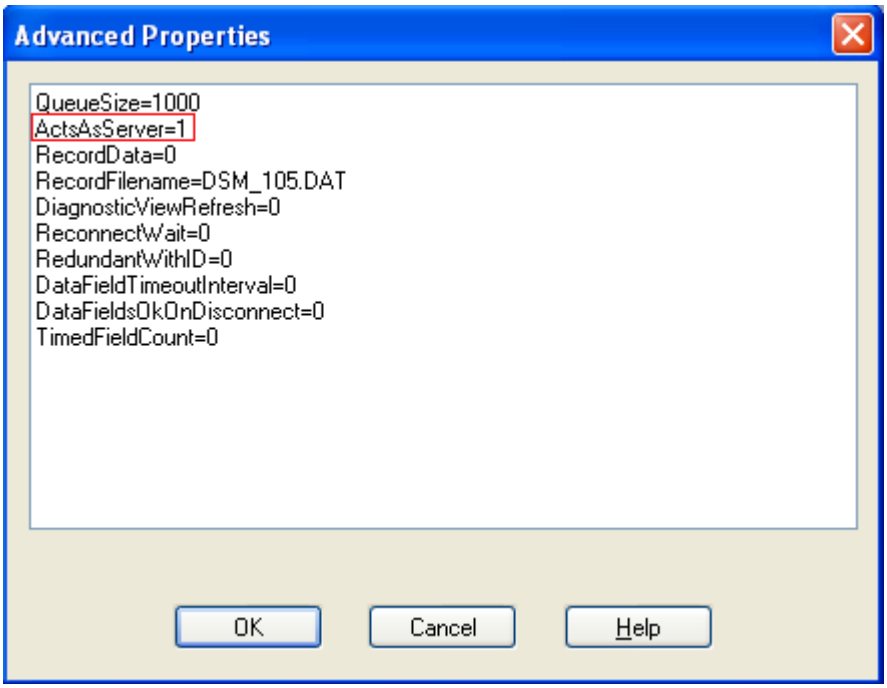
Repeat the same procedure to select “avaya_historical_v551.dss” for the **Script file** field. For the **Connect timeout (sec.)** field, increase the value to “60” seconds, as shown below. This allows sufficient time for the link recovery. Retain the default values for the remaining fields, and click on **Advanced**.



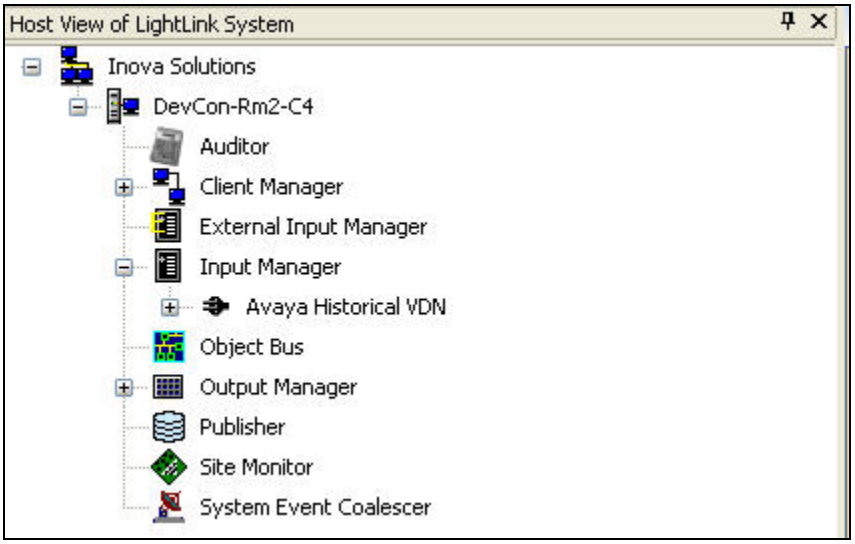
In the **Warning** pop up that appears, click **Yes** to continue.



In the **Advanced Properties** screen that appears, set the **ActsAsServer** parameter value to "1" by typing over the default value of "0", as shown below. This will enable the LightLink server to take on the role of the "server" in communicating with Avaya CMS. Click **OK** to save the changes for the **Advanced Properties** screen. Click **OK** on the **Custom Data Source Properties** screen to save the changes for that screen.



In the **Administrator** screen that appears, the newly created custom data source "Avaya Historical VDN" is shown.



5.2. Administer Historical Socket Interface for Skill data

The procedures for administering the Skill data source are the same as the procedures described for administering the VDN data source. Refer to **Section 5.1** for detailed descriptions of the procedures and make the following changes:

- **Section 5.1.2** Use different **Name** for the Skill data source.
- **Section 5.1.3** Use the corresponding TCP port number for the **Listening Port** field as displayed in **Configured Session** screen in **Section 4**, "5000". **Note**: Avaya CSI group configured this port number.
- **Section 5.1.4** Select "avaya_historical_skill_v551.sdf" for the **Data format file** field.
- **Section 5.1.4** Select "avaya_historical_v551.dss" for the **Script file** field.

6. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. Feature testing focused on verifying Inova LightLink receiving and displaying ACD/Skill and VDN historical data from Avaya CMS. Testing also included rainy day scenarios to verify situations in the absence of data or receiving data from more than one Avaya Communication Manager for multiple Skills and VDNs.

Serviceability testing focused on verifying the ability of Inova LightLink and Avaya CMS to recover from adverse conditions, such as rebooting Inova LightLink server or Avaya CMS server, disconnecting the Ethernet cable of Inova LightLink server, and generating events at the last minute of the interval to have the data change in Avaya CMS server.

6.1. General Test Approach

Feature and serviceability test cases were performed manually. Incoming calls were made to the monitored Skills and VDN groups to enable data streams to be sent to LightLink. Manual call controls and work mode changes from the Agent telephones were exercised as necessary to populate specific fields in the data streams.

The verification of all tests included checking for proper display of historical data at the LightLink server, and comparing the displayed data with the Avaya CMS server.

Serviceability test cases were executed manually by rebooting Inova LightLink server, rebooting Avaya CMS server, and disconnecting Ethernet cable from Inova LightLink server.

6.2. Test Results

All feature and serviceability test cases were completed successfully.

- During testing, it was observed that DataLink display did not update automatically. Inova is aware of this issue and working to resolve it.

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya Communication Manager, Avaya Call Management System, and Inova LightLink.

7.1. Verify Avaya Communication Manager

Verify the status of the processor interface channel by using the "status processor-channels n" command, where "n" is the **Proc Chan** number configured in **Section 3.6**. Verify that the **Session Layer Status** is "In Service" and that the **Socket Status** is "TCP connected" as shown below.

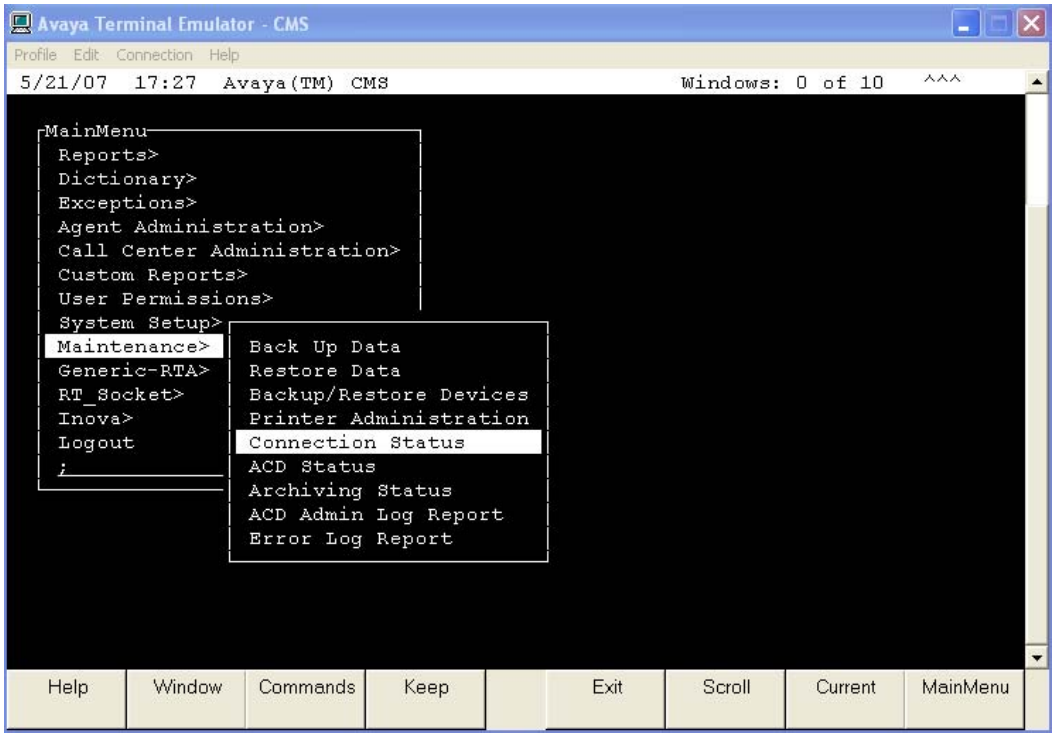
```
status processor-channels 1
                        PROCESSOR-CHANNEL STATUS

          Channel Number: 1
    Session Layer Status: In Service
           Socket Status: TCP connected
             Link Number: 2
               Link Type: ethernet
   Message Buffer Number: 0

            Last Failure: Far end sent disconnect messag
                      At: 05/18/07 13:04
```

Verify the status of the TCP/IP link number by using the "status link n" command, where "n" is value assigned to **Link** field in **Section 3.5**. Verify that the **Link Status** is "connected", and that the **Service State** is "in-service/active", as shown below.

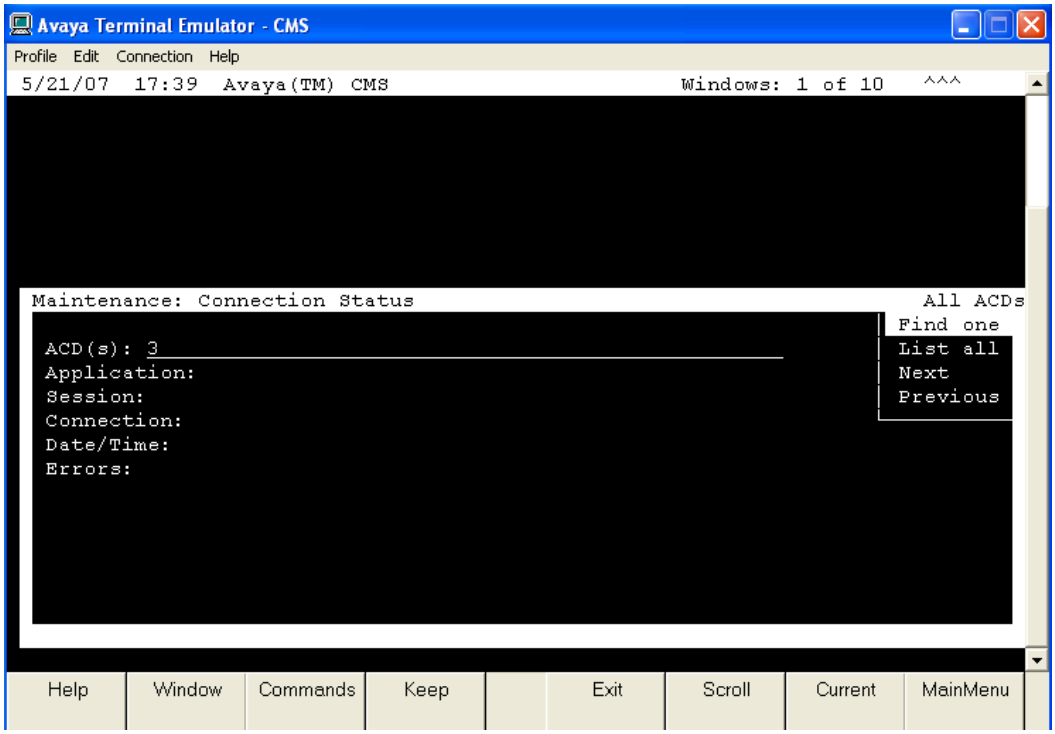
```
status link 2                                                Page   1 of   5
                              LINK/PORT STATUS

                 Link Number: 2
                 Link Status: connected
                   Link Type: ethernet
                   Link Name: Clan2
       Service Port Location: 02A0217
 Service Port Data Extension: 24981
                Service State: in-service/active
                    Node Name: clan2
           Source IP Address: 192.45.100.70
                 Subnet Mask: 255.255.255.0
           Broadcast Address: 192.45.100.255
            Physical Address: 00:04:0d:4b:28:08
                     Enabled? yes
            Maintenance Busy? no
             Active Channels: 1
```

7.2. Verify Avaya Call Management System

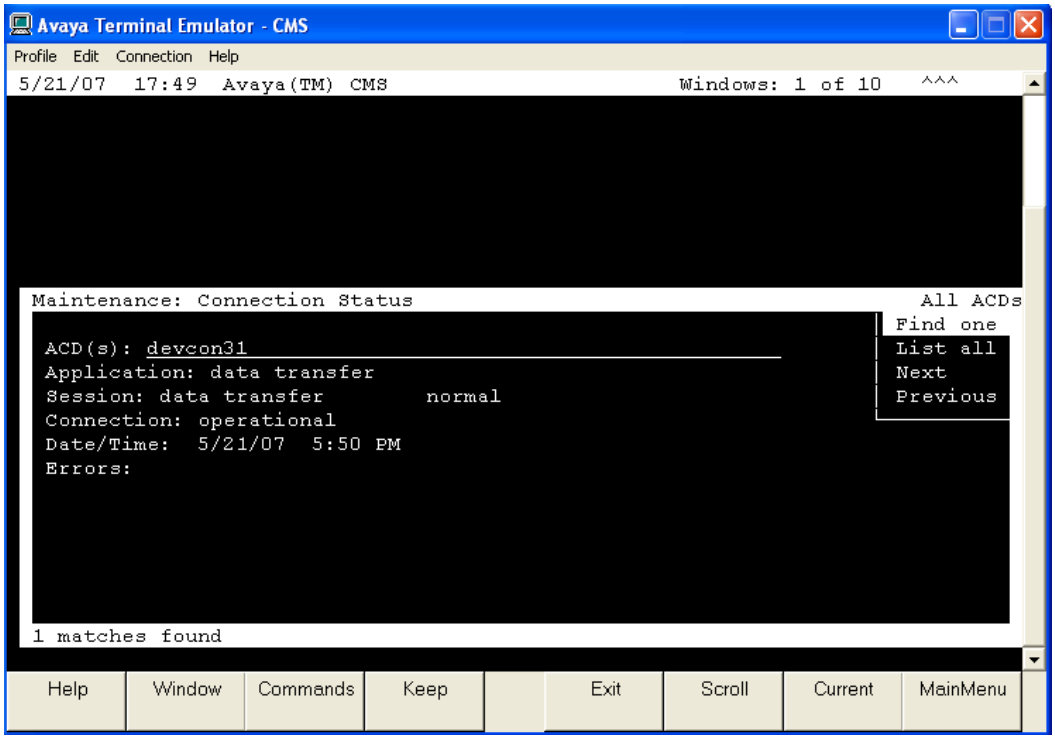
From the **Main Menu**, verify the status of the connection to Avaya Communication Manager by selecting **Maintenance → Connection Status**, as shown below.



Next, enter the corresponding **ACD(s)** number displayed in **Configured Session** screen in **Section 4**, "3". Tab over to **Find one** and press **Enter**.

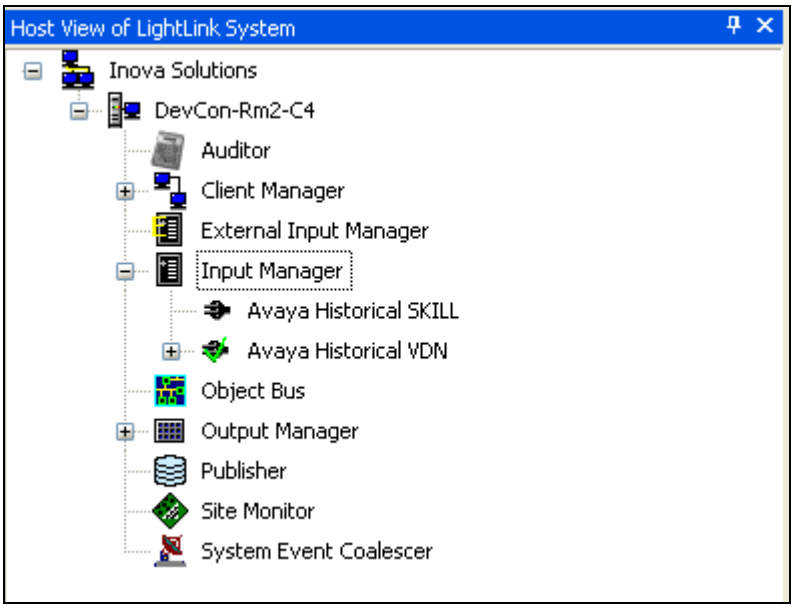


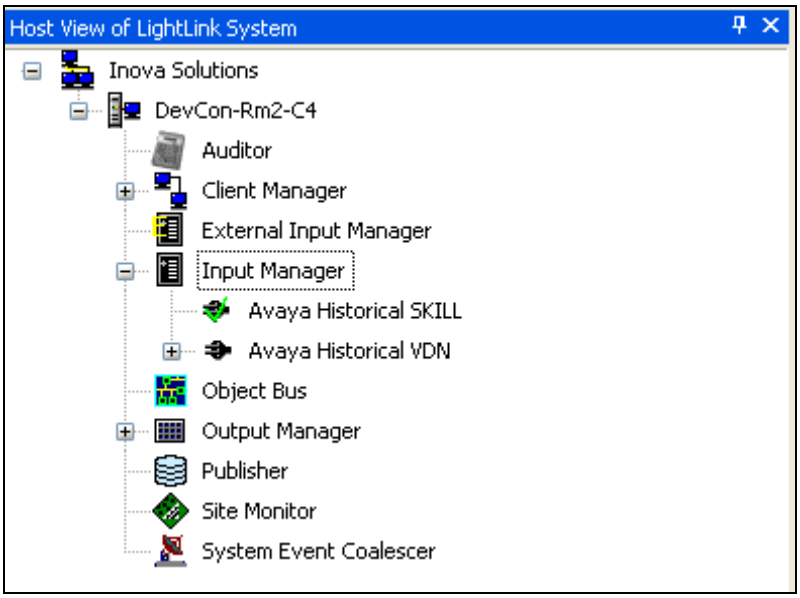
The switch connection status appears. Check the status in the **Session** and **Connection** fields, as shown below.



7.3. Verify Inova LightLink

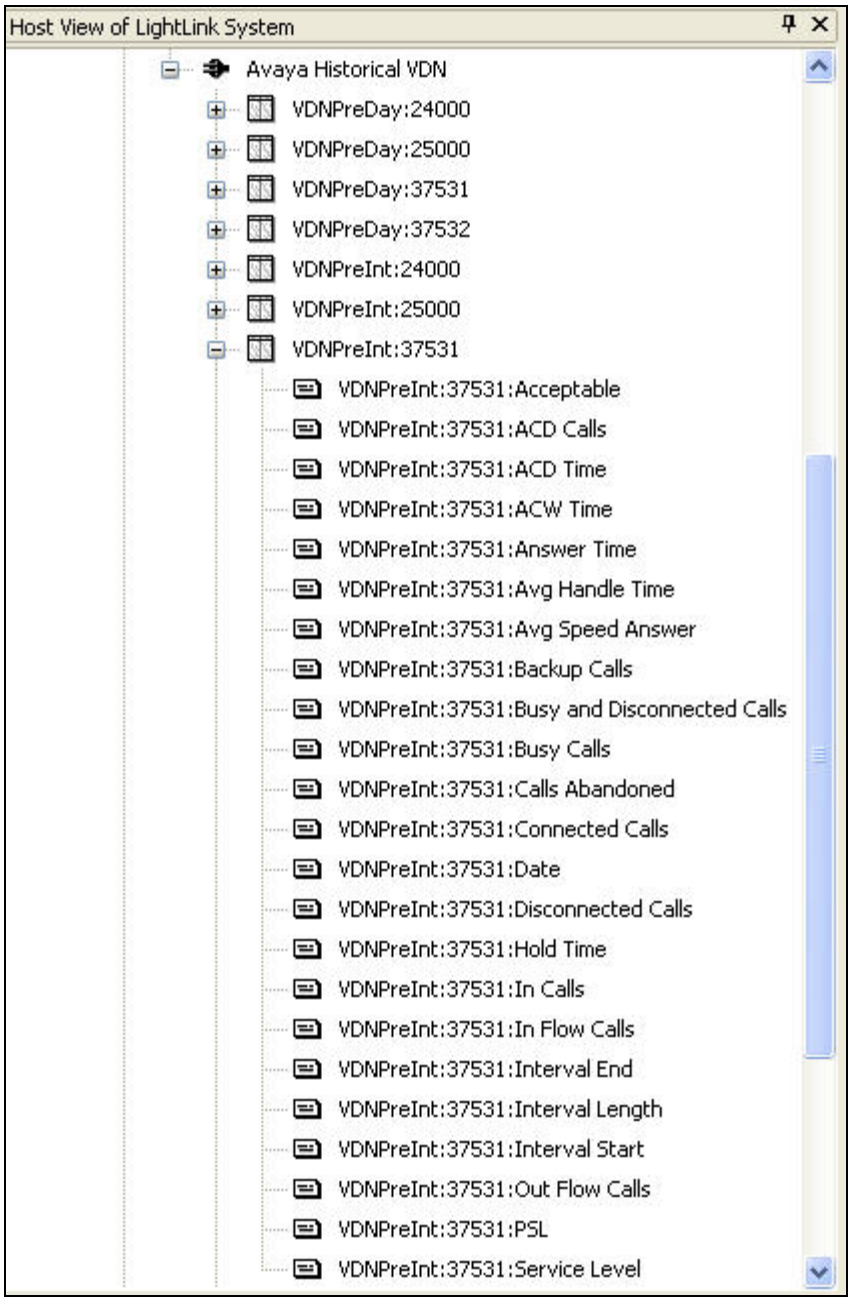
From the **Administrator** screen, verify that **Avaya Historical VDN** and **Avaya Historical Skill** under **Input Manager** in the left pane displays green check mark when the Avaya CMS server is sending data for the custom data source, as shown below. Note that the Avaya CMS server sends data to one custom data source at a time for each VDN and ACD/Skill.



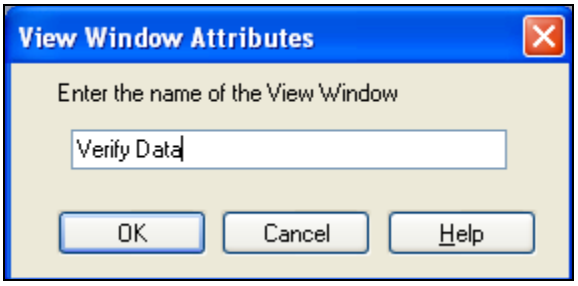


7.3.1. Verify Historical VDN Data

From the **Administrator** screen, expand on **Avaya Historical VDN** under **Input Manager** then expand on desired VDN. For description purposes, the example shows expanding **VDNPreInt:37531**, which displays data for previous interval for VDN 37531. A list of fields that can be viewed from the Skill data streams was displayed, as shown below.



Click on **File** from the top left of the **Administrator** screen, and select **New** to create a new window for viewing. The **View Window Attributes** screen appears on top of the **Administrator** screen. Enter a descriptive name for the view window and click **OK**.



An empty **Verify Data** screen appears (not shown here). Click and drag data fields under desired VDN from the left pane into the new **Verify Data** window in the right pane. Data values from subsequent data streams will then be displayed into the right pane as shown below.

Verify Data

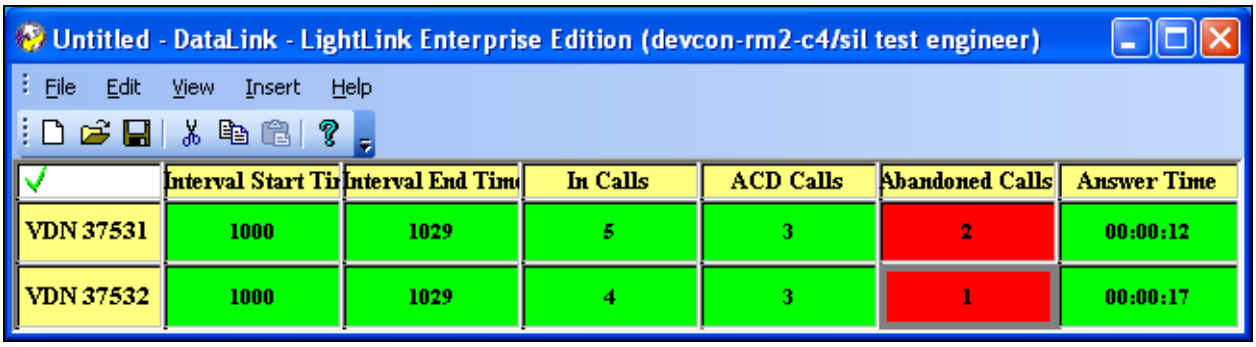
Item Name	Item ID	Field Value	Field...
VDNPreInt:37531:Acceptable	/SRV=1/SRC=101/FLD=236	3	INT16
VDNPreInt:37531:ACD Calls	/SRV=1/SRC=101/FLD=237	3	INT16
VDNPreInt:37531:ACD Time	/SRV=1/SRC=101/FLD=238	0:00:32	TIME
VDNPreInt:37531:ACW Time	/SRV=1/SRC=101/FLD=239	0:00:00	TIME
VDNPreInt:37531:Answer Time	/SRV=1/SRC=101/FLD=240	0:00:12	TIME
VDNPreInt:37531:Avg Handle Time	/SRV=1/SRC=101/FLD=248	0:00:10	TIME
VDNPreInt:37531:Avg Speed Answer	/SRV=1/SRC=101/FLD=247	0:00:04	TIME
VDNPreInt:37531:Backup Calls	/SRV=1/SRC=101/FLD=252	0	INT16
VDNPreInt:37531:Busy and Disconnected Calls	/SRV=1/SRC=101/FLD=250	0	INT16
VDNPreInt:37531:Busy Calls	/SRV=1/SRC=101/FLD=241	0	INT16
VDNPreInt:37531:Calls Abandoned	/SRV=1/SRC=101/FLD=235	2	INT16
VDNPreInt:37531:Connected Calls	/SRV=1/SRC=101/FLD=251	0	INT16
VDNPreInt:37531:Date	/SRV=1/SRC=101/FLD=231	05/17/2007	STRING
VDNPreInt:37531:Disconnected Calls	/SRV=1/SRC=101/FLD=253	0	INT16
VDNPreInt:37531:Hold Time	/SRV=1/SRC=101/FLD=245	0:00:00	TIME
VDNPreInt:37531:In Calls	/SRV=1/SRC=101/FLD=242	5	INT16
VDNPreInt:37531:In Flow Calls	/SRV=1/SRC=101/FLD=243	0	INT16
VDNPreInt:37531:Interval End	/SRV=1/SRC=101/FLD=234	1029	INT16
VDNPreInt:37531:Interval Length	/SRV=1/SRC=101/FLD=232	30	INT16
VDNPreInt:37531:Interval Start	/SRV=1/SRC=101/FLD=233	1000	INT16
VDNPreInt:37531:Out Flow Calls	/SRV=1/SRC=101/FLD=244	0	INT16
VDNPreInt:37531:PSL	/SRV=1/SRC=101/FLD=249	60	DOUBLE
VDNPreInt:37531:Service Level	/SRV=1/SRC=101/FLD=246	20	INT16

7.3.2. Verify Historical VDN Data

Follow the procedures in **Section 7.3.1**, to expand **Avaya Historical Skill** and create a new window to view desired Skill data.

7.3.3. Sample Monitoring Using DataLink

Customers can use the DataLink component to customize the viewing and monitoring of historical data. Below is the sample screen that displays historical data for the VDN that Inova LightLink server receives from the Avaya CMS server. If the data is not updated for the next interval, click and drag the data in the **Verify Data** window as described in **Section 7.3.1**. This allows DataLink display to be updated.



	Interval Start Tir	Interval End Time	In Calls	ACD Calls	Abandoned Calls	Answer Time
VDN 37531	1000	1029	5	3	2	00:00:12
VDN 37532	1000	1029	4	3	1	00:00:17

8. Support

Technical support on Inova LightLink can be obtained through the following:

- **Web:** www.inovasupport.com
- **Phone:** (888) 637-1080
- **Email:** support@inovasolutions.com

9. Conclusion

These Application Notes describe the configuration steps required for Inova LighLink to successfully interoperate with Avaya Communication Manager using the Historical Socket Interface of Avaya Call Management System. All feature and serviceability test cases were completed successfully.

10. Reference

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

- *Administrator Guide for Avaya Communication Manager*, Document 03-300509, Issue 3.1, Feb 2007, available at http://support.avaya.com
- *Avaya Call Management System Switch Connections, Administration, and Troubleshooting*, Document 07-601582, February 2007, available at http://support.avaya.com
- *Inova LightLink 5.5 Quick Start Guide*, available with the installation CD.
- *Inova LightLink 5.5 DataLink Reference Manual*, available with the installation CD.

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.