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Avaya Solution & Interoperability Test Lab

Application Notes for the Spescom DataVoice Recording Solution for Avaya Proactive Contact using Avaya PG230 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Spescom DataVoice Recording solution to successfully interoperate with Avaya Proactive Contact 4.0 using Avaya PG230 switch. The DataVoice Recording solution is capable of capturing audio from Avaya Communication Manager using a variety of integration mechanism. In this compliance test, the DataVoice Recording solution uses Avaya Proactive Contact Event Services to extract call event information and uses trunk side tapping to get the audio.

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

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1. Introduction

These Application Notes describe a compliance-tested configuration comprised of Avaya Proactive Contact 4.0.1 using Avaya PG230 switch (HardDialer) and the Spescom DataVoice Recording solution. The Spescom DataVoice Recording solution is comprised of the DataVoice Libra Recorder (Libra) version 5.0 and the DataVoice Avaya PC RC (RC) version 2.0. During the testing, these two components resided on the same host. The RC uses the Event Service of Avaya HardDialer to extract call event information that is used to control the recording functionality of the Libra. The Libra uses trunk side tapping to get the audio. The Avaya Proactive Contact using PG230 is a software and hardware solution. Libra Recorder records calls between CallConnected and CallEnded events.

Figure 1 shows the configuration used for this compliance testing.
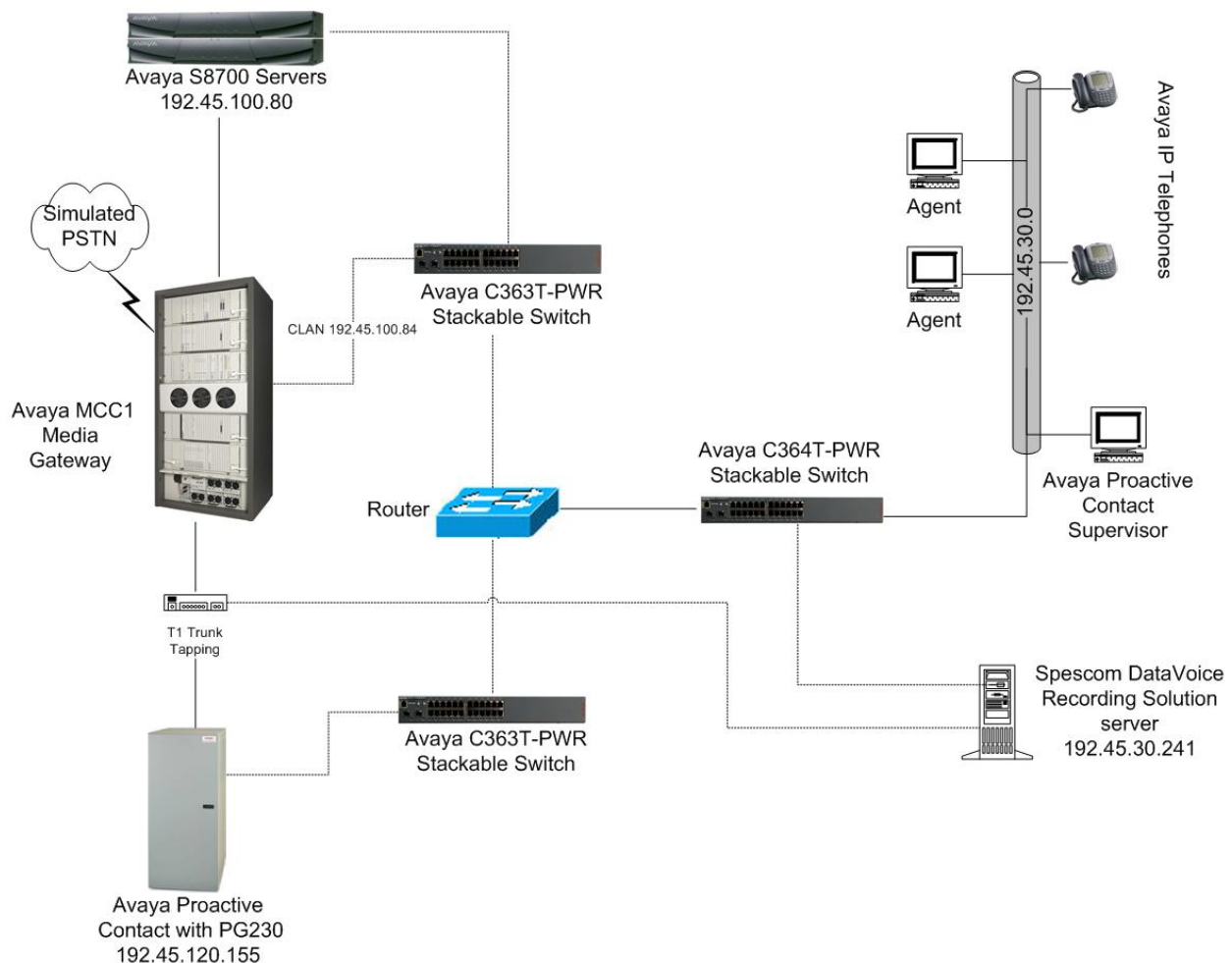
Figure 1: Avaya Proactive Contact, Avaya Communication Manager, and Spescom DataVoice Recording solution Configuration

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2. Equipment and Software Validated

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

Equipment	Software
HP Proliant DL385G2	Avaya Proactive Contact 4.0.1 Build 105
Avaya S8700 Media Server	Avaya Communication Manager 4.0 (R014x.00.0.730.5)
Avaya MCC1 Media Gateway	
TN464 DS1 Interface	HW02, FW019
TN799DP C-LAN Interface	HW01 FW024
TN2302AP IP Media Processor	HW13 FW116
Avaya 4610 (H323)	2.1.3
Avaya C363T-PWR Converged Stackable Switch	4.5.14
Spescom DataVoice Libra Recorder	5.0.0.23
Spescom DataVoice Avaya PC RC	2.0.0.2

3. Configure Avaya Communication Manager

These application notes assume that Avaya Communication Manager is already configured and operational. Only configuration for the T1 link between Avaya Communication Manager and Avaya HardDialer to be tapped for audio recording on Libra Recorder is verified. These steps are performed from the Avaya Communication Manager System Access Terminal (SAT) interface and all changes are saved. Refer to [1, 5] for additional details.

| Step	Description

1.	Enter the **display ds1 xxxxx** command, where **xxxxx** is the location of the DS1 circuit pack and verify the following:
	
	• **Line Coding** – set to **ami-zcs**.
	• **Framing Mode** – set to **d4**.
	
	<pre>display ds1 1a14
	
	                          DS1 CIRCUIT PACK
	
	            Location: 01A14 Name: PDS 1-21-**1**
	            Bit Rate: 1.544 **Line Coding: ami-zcs**
	    Line Compensation: 1 **Framing Mode: d4**
	       Signaling Mode: robbed-bit
	
	Interface Companding: mulaw
	           Idle Code: 11111111
	
	       Slip Detection? n Near-end CSU Type: other</pre>

4. Configure Avaya Proactive Contact
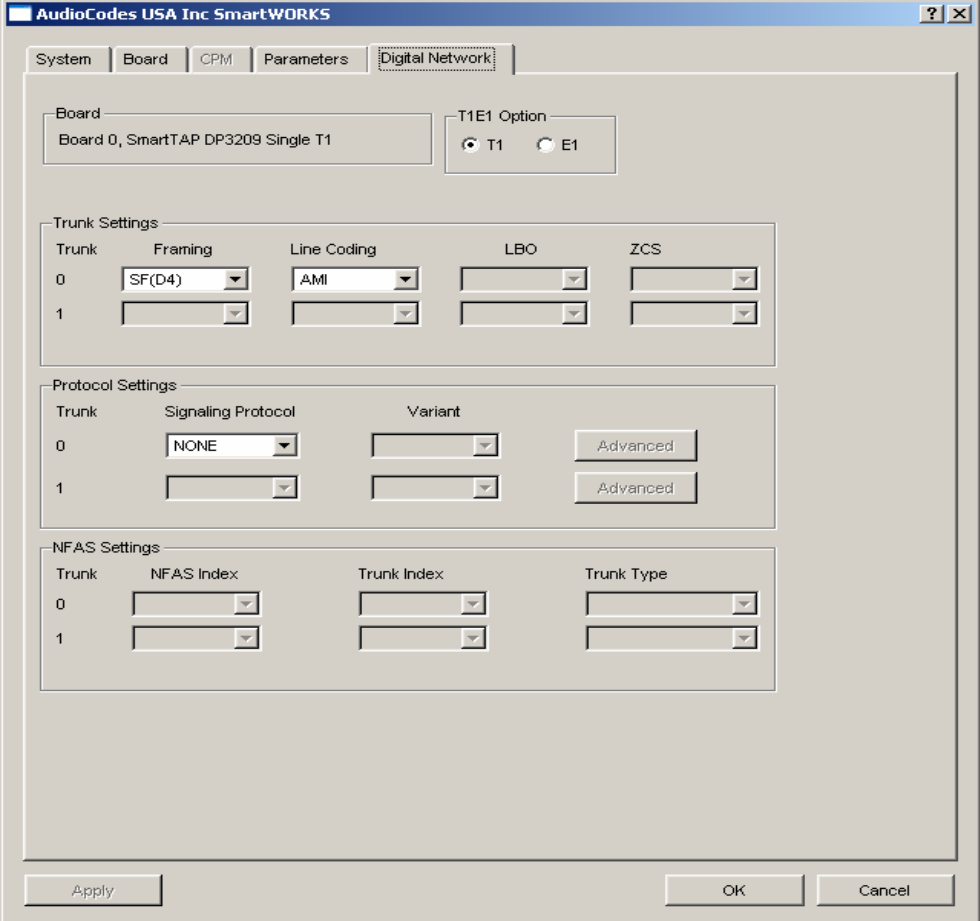
These Application Notes assume that the interfaces between the Avaya Proactive Contact and Avaya Communication Manager have been configured and are operational, and that a calling list has been successfully downloaded to Avaya HardDialer. Following configuration was verified on Avaya HardDialer.

Step	Description

1.	Edit **config/dgswitch.cfg** file on Avaya HardDialer and verify that Headset Ports are defined. Values **1-8** are port/trunk ids and **264-271** are the timeslots to be used in **Section 5.2**, **Step 13**.
	
	<pre>#Headset Ports
	H:**1:264**:0::#H:15:1:1-1-21-1-1
	H:**2:265**:0::#H:15:1:1-1-21-1-2
	H:**3:266**:0::#H:15:1:1-1-21-1-3
	H:**4:267**:0::#H:15:1:1-1-21-1-4
	H:**5:268**:0::#H:15:1:1-1-21-1-5
	H:**6:269**:0::#H:15:1:1-1-21-1-6
	H:**7:270**:0::#H:15:1:1-1-21-1-7
	H:**8:271**:0::#H:15:1:1-1-21-1-8</pre>
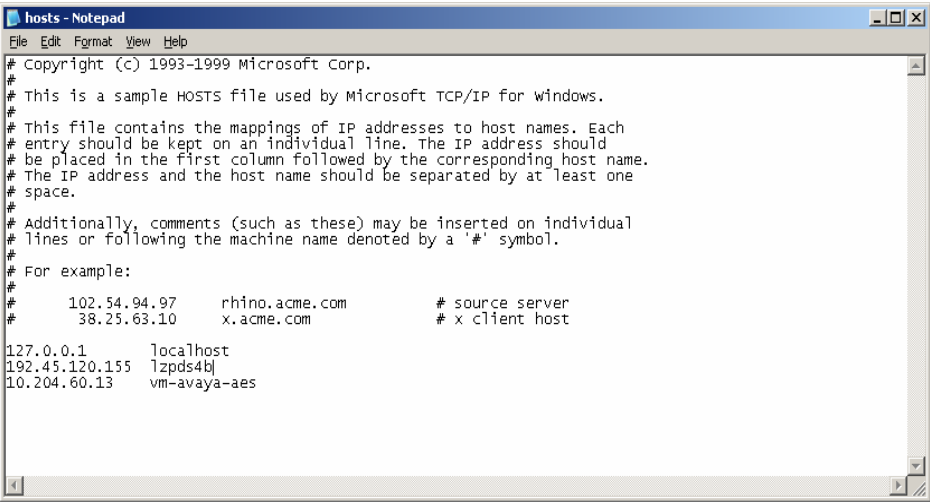
5. Configure DataVoice Libra Recorder

The following steps describe the configuration to integrate DataVoice Libra Recorder with Avaya HardDialer. Configuration in the following sections is only for the fields where a value needs to be entered or modified. Default values are used for all other fields. Refer to [7] for additional details.

5.1. Libra Recorder T1 Configuration

Step	Description
1.	Navigate from **Start->Control Panel->Smart Control** to display the following screen by selecting **Digital Network** tab and configure T1 parameters as follows: • **Trunk Settings (Framing)** – Set to **SF(D4)**, similar to the configuration in **Section 3.1, Step 1.** • **Trunk Settings (Line Coding)** – Set to **AMI**, similar to the configuration in **Section 3.1, Step 1**.
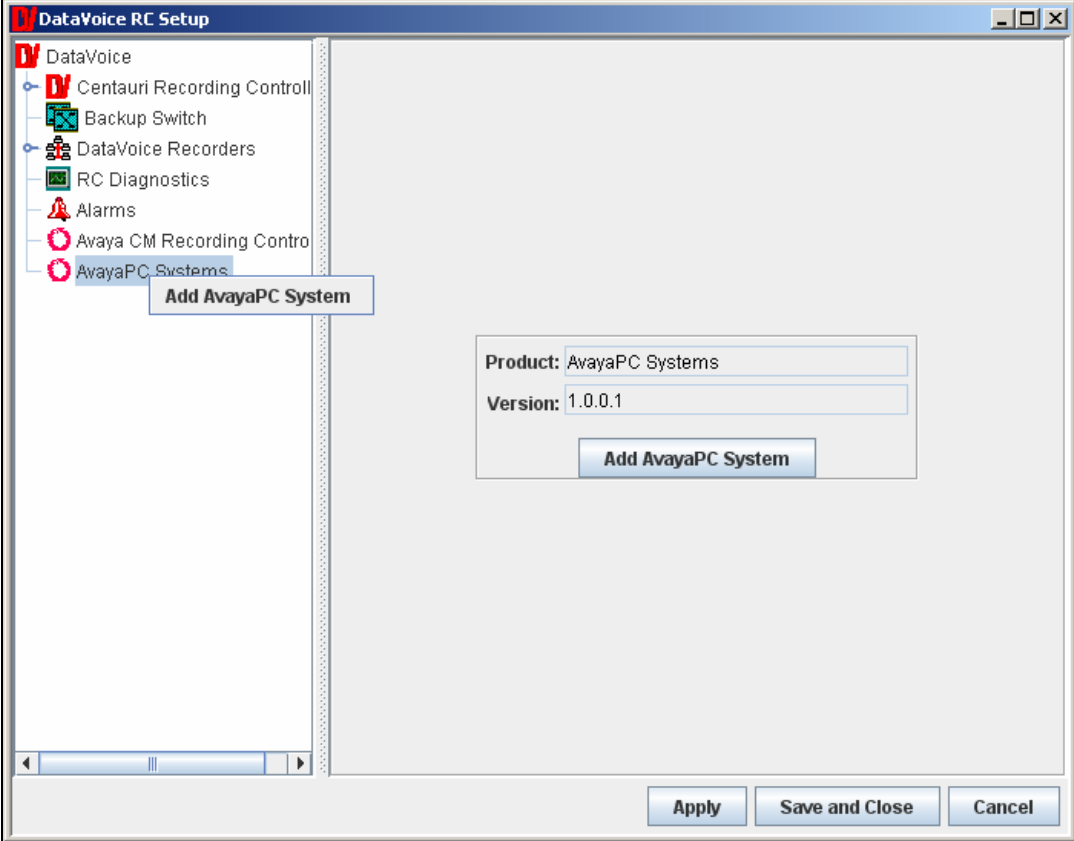
5.2. Libra Recorder System Administration
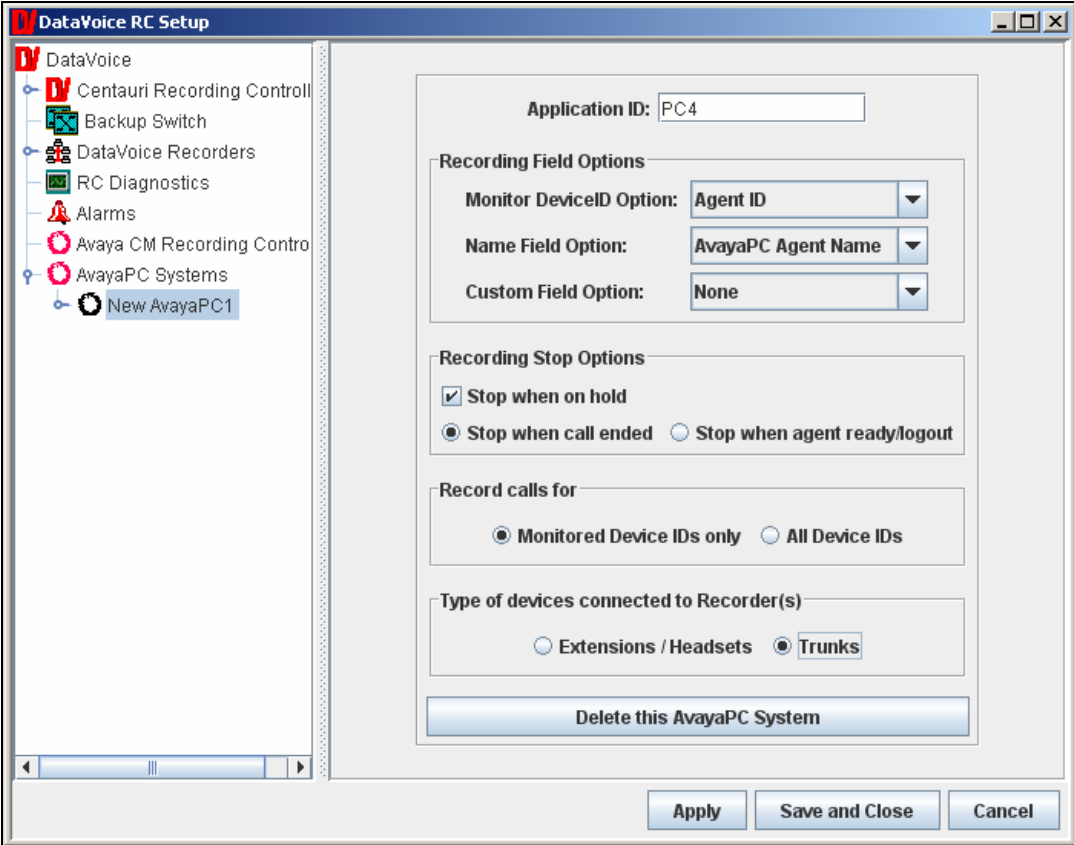
Step	Description
1.	Verify the hosts file on the Libra Recorder to make sure that the Avaya HardDialer hostname entry exists.
	![hosts - Notepad screenshot showing the Windows hosts file] **Note: The hostname of the Avaya HardDialer is case sensitive and must be the exact name of the dialer.**

5.3. Avaya PC RC Configuration
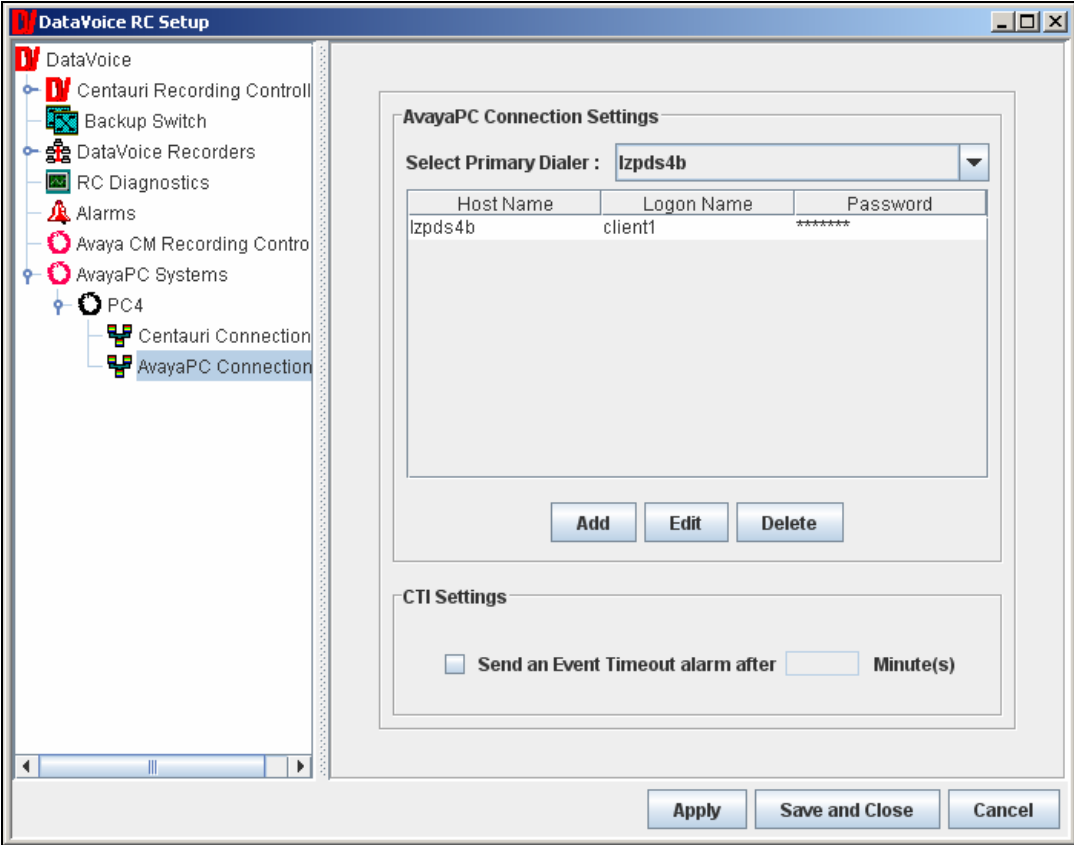
Step	Description
1.	At the Desktop, click on DVSetup to display the following screen.
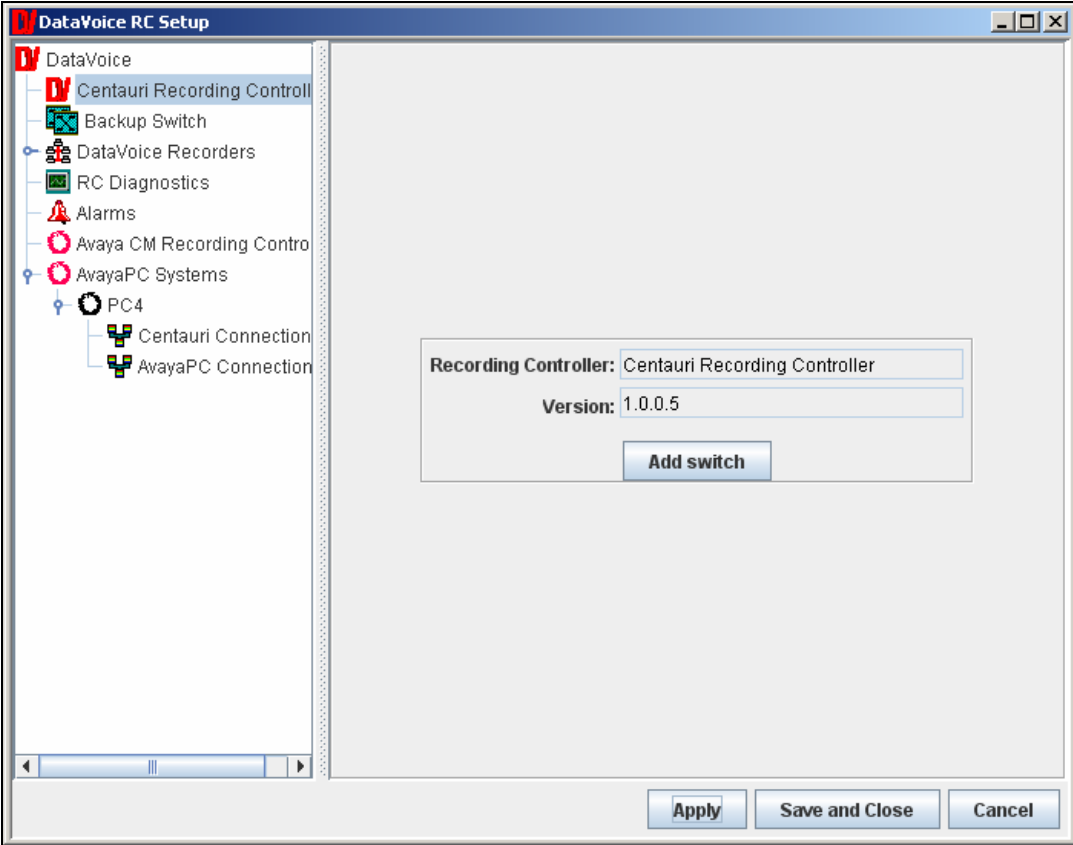
Step	Description
2.	Select **AvayaPC Systems**, then right click and select **Add AvayaPC System** and click **Apply**.
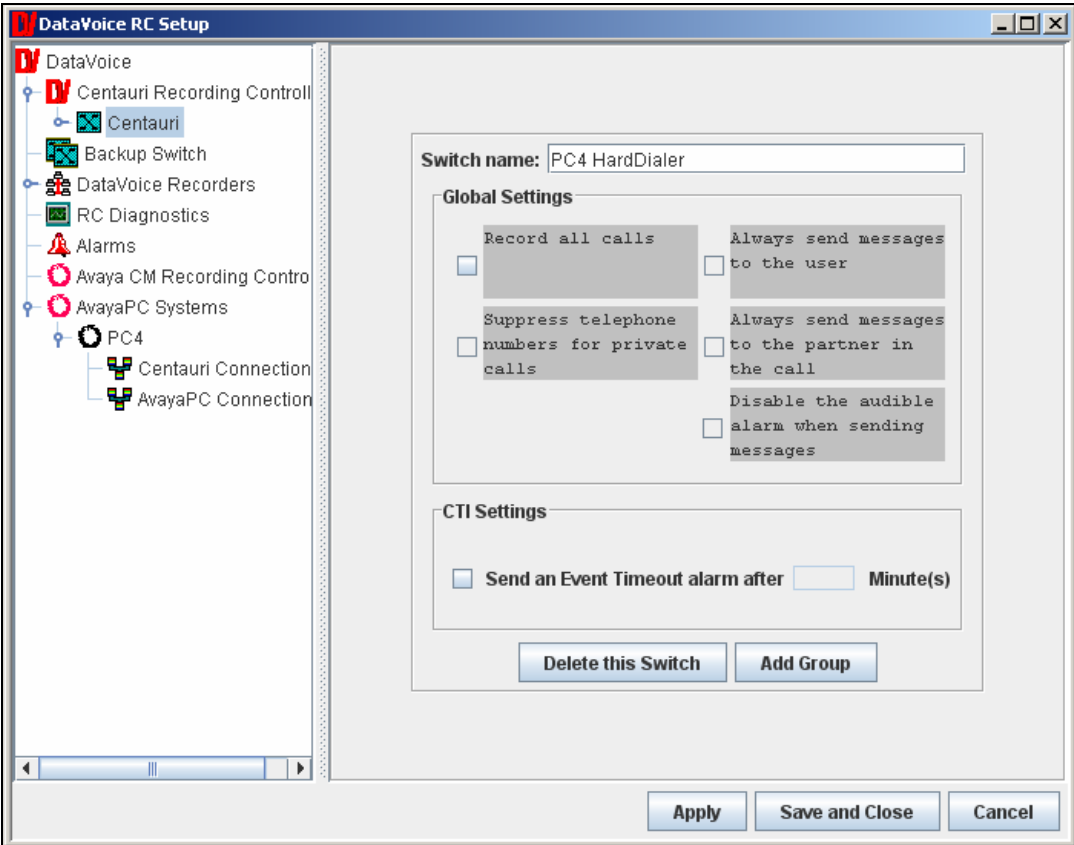
Step	Description
3.	Select **New AvayaPC1** in the left panel and configure as follows: • **Application ID** - Enter any descriptive name. • **Type of devices connected to Recorder(s)** – Set to **Trunks**.
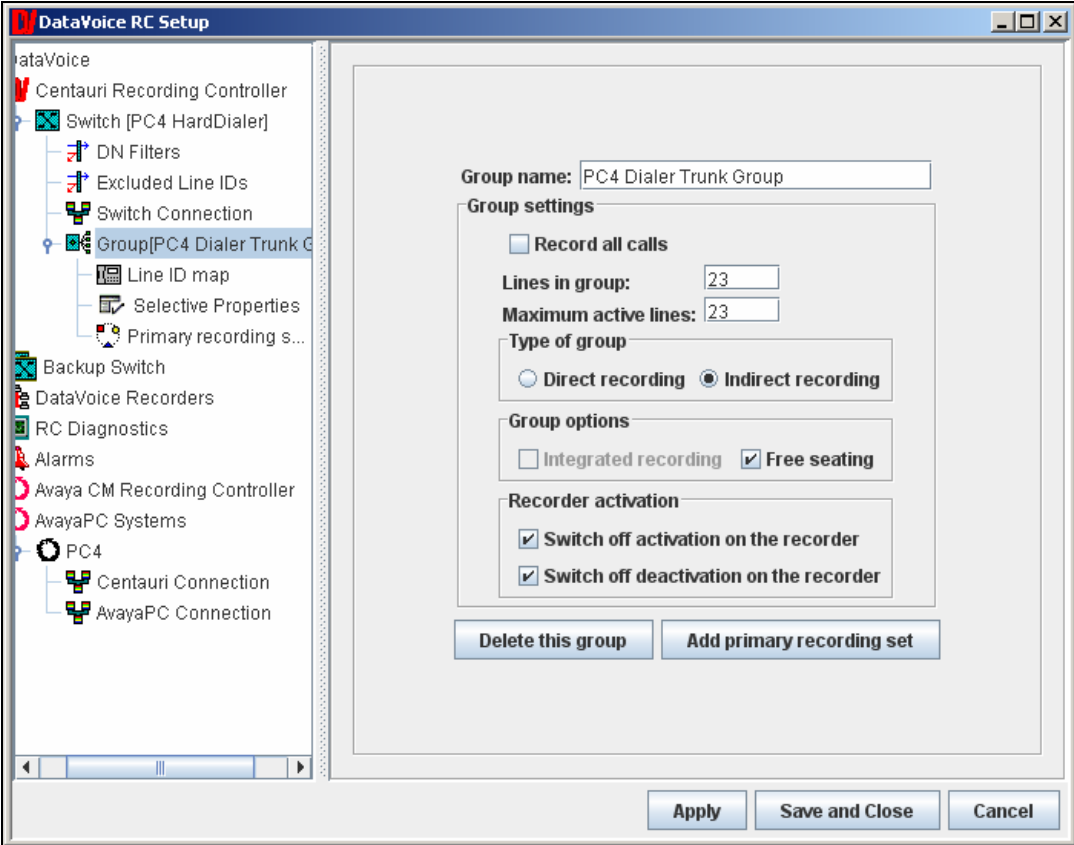
Step	Description
4.	Click on the **PC4** node to expand it, then select **AvayaPC Connection** and click **Add**.
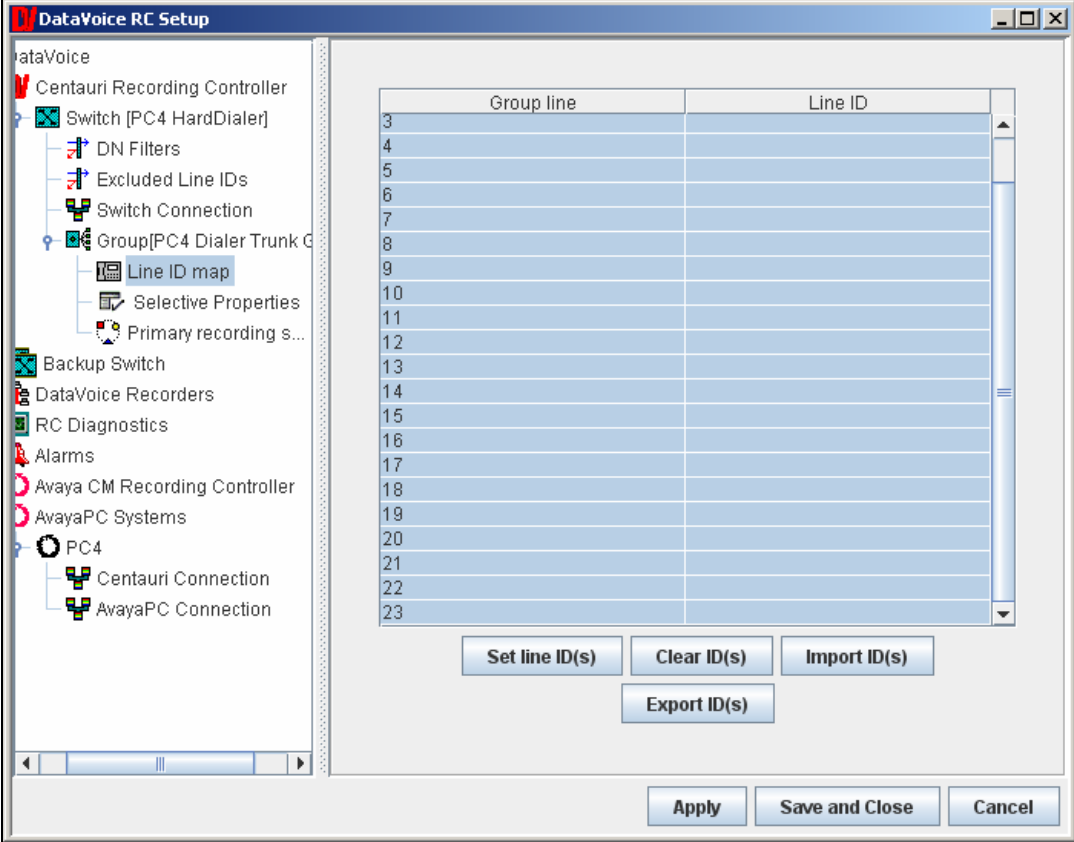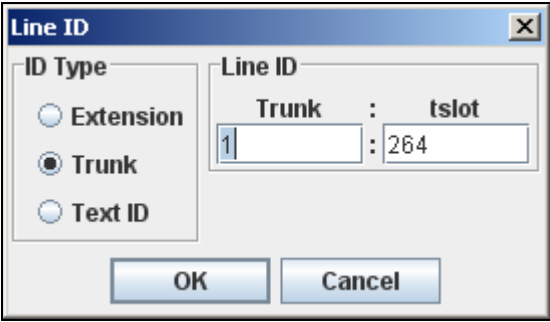
| Step	Description
5.	At the **AvayaPC Connection Settings** popup, configure as follows: • **Host Name** – Enter the host name of the dialer displayed in host file of the Libra Recorder in **Step 1**, **Section 5.2**. **Note: The host name of the dialer is case sensitive. Enter the exact name of the dialer.** • **Logon Name** – Login id created on Avaya HardDialer. • **Password** – Password for the Login id created on Avaya HardDialer. • Click **OK**.
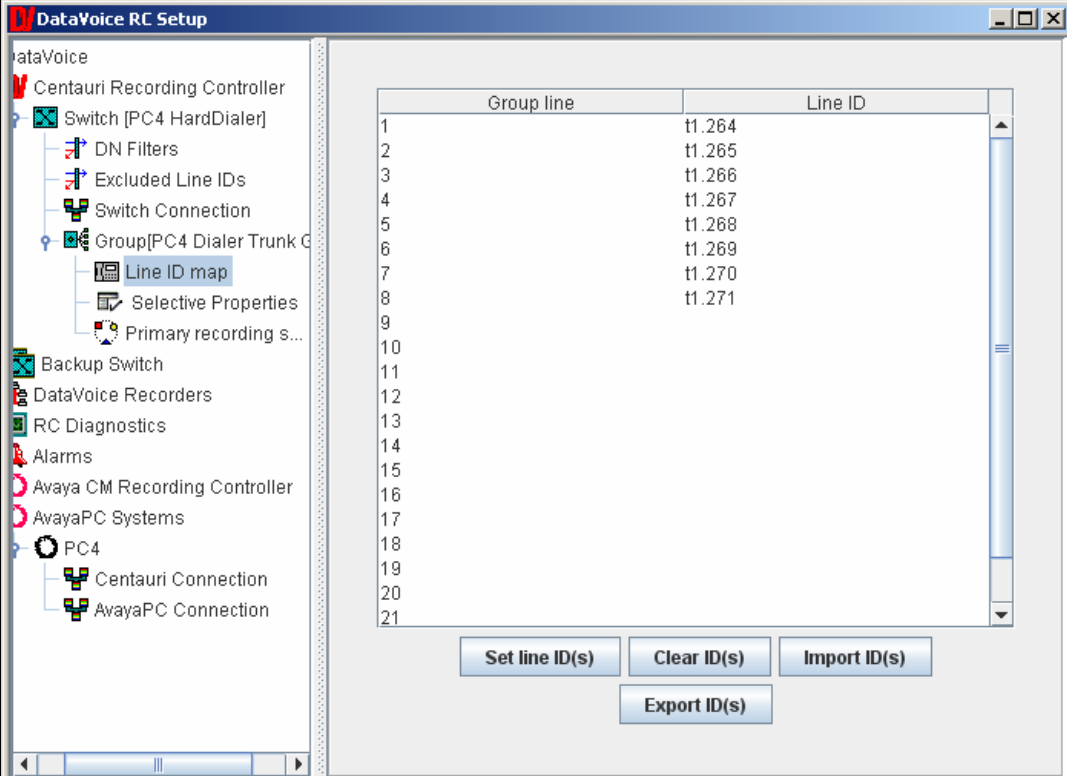
Step	Description
6.	Following screen is displayed after the connection to Avaya HardDialer is added.
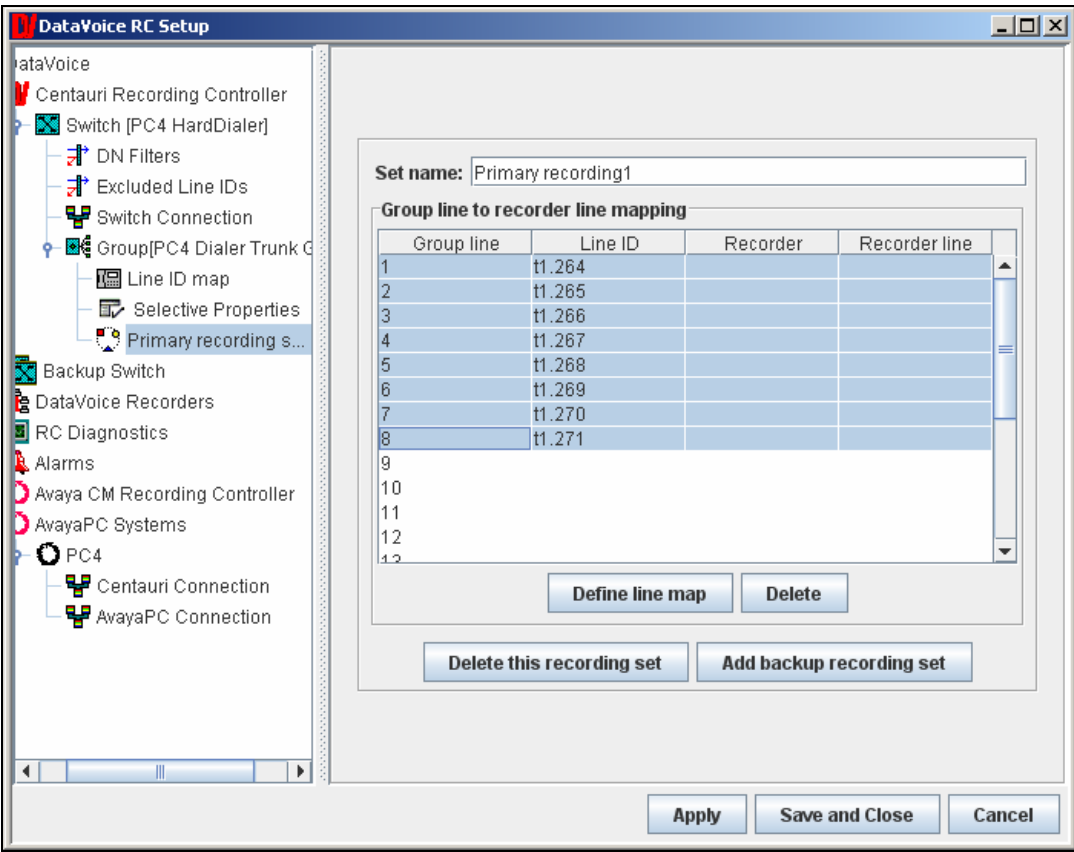
Step	Description
7.	Select **Centauri Recording Controller** in the left pane and click **Add Switch**.
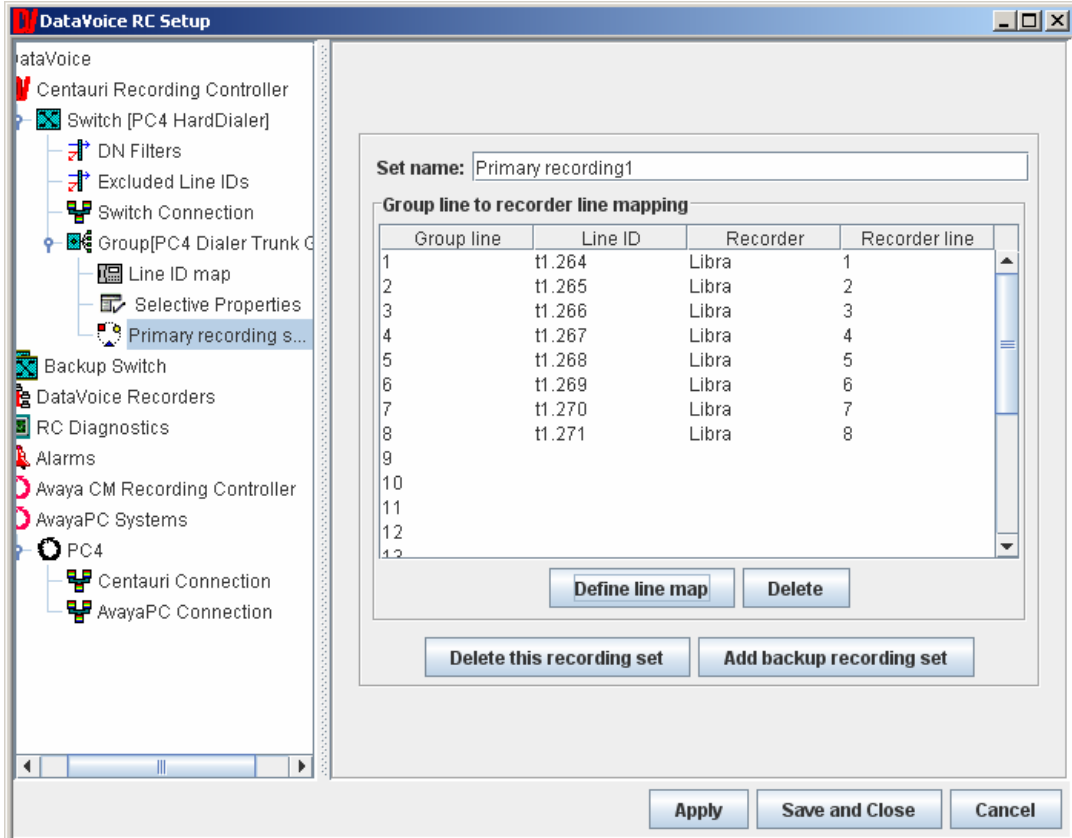
Step	Description
8.	Click on **Centauri** under **Centauri Recording Controller** in the left pane and configure as follows: • **Switch name** - Enter any descriptive name. • Click **Add Group**.

Step	Description
9.	Select **Group** in the left pane and configure as follows: • **Group Name** – Set to any descriptive name. • **Group options** – Select the **Free seating** option.
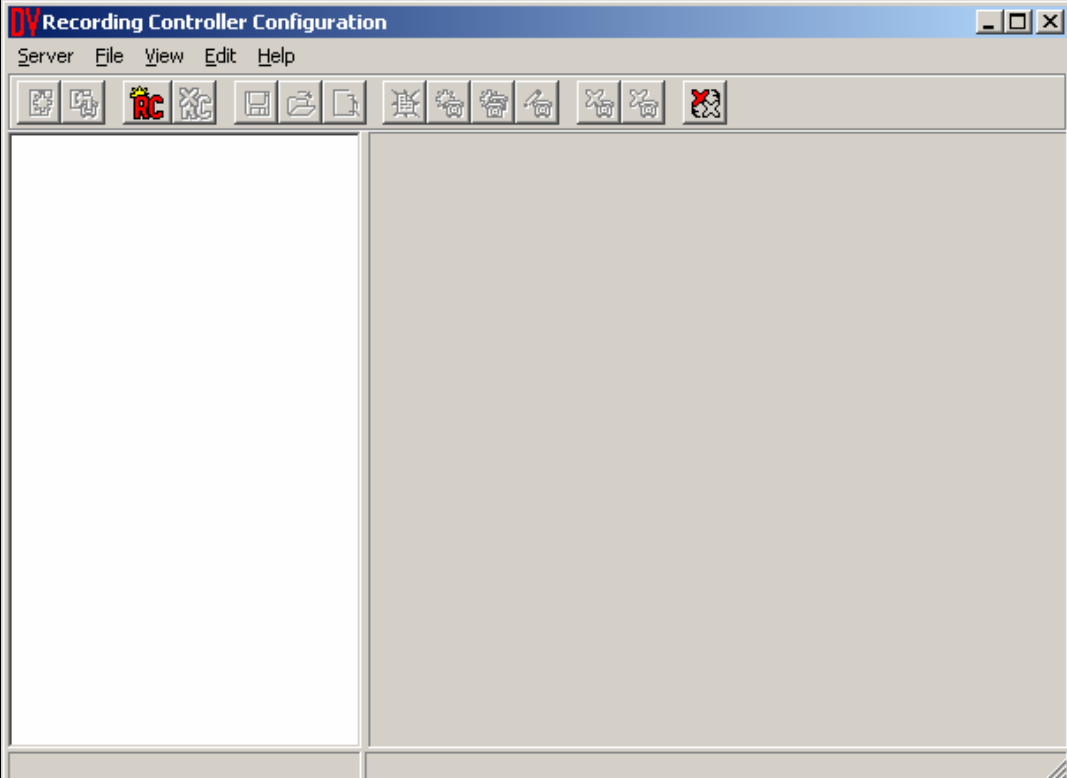
Step	Description
10.	Select **Line ID map** in the left pane and click **Set line ID(s)**.
11.	At **Line ID** popup screen, configure as follows: • **ID Type** – Select **Trunk**. • **Line ID (Trunk)** – Set to the port/trunk id in **Section 4**, **Step1**. • **Line ID (tslot)** – Set to the timeslot in **Section 4**, **Step 1**. • Click OK.
12.	Repeat Steps **11-12** to configure additional time slots.
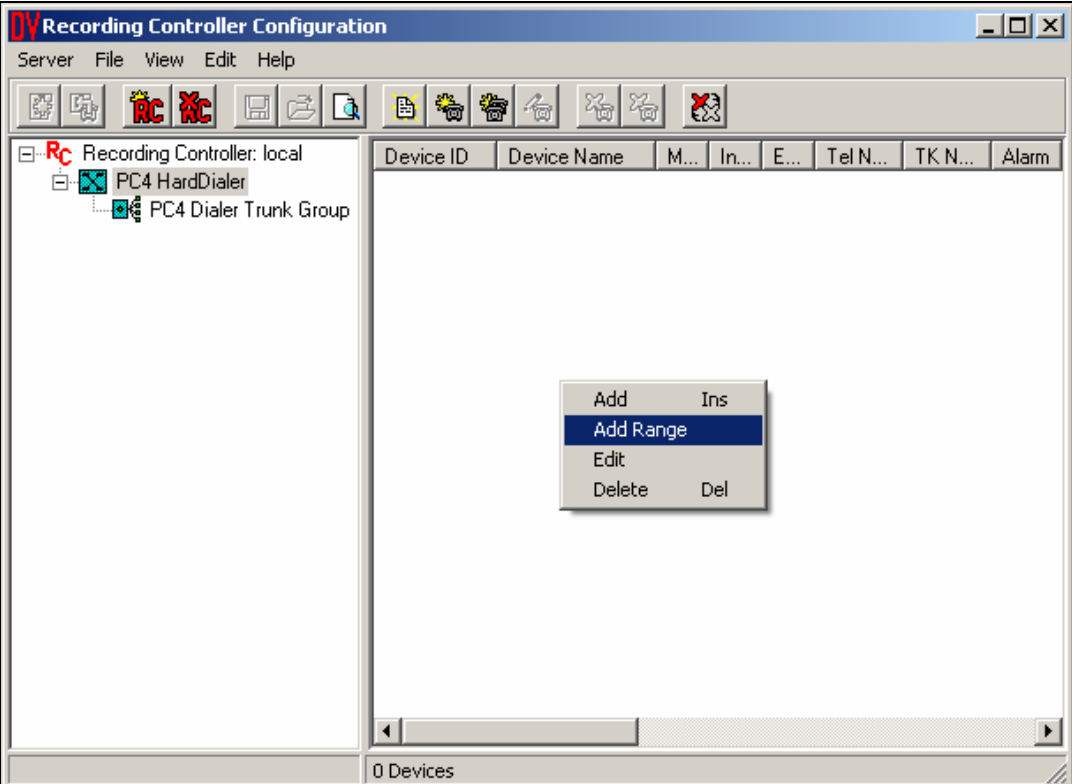
Step	Description
13.	The following confirmation screen appears after all the timeslots are configured. For this compliance test, only **8** timeslots were configured to match the number of headset extensions configured on Avaya HardDialer and displayed in **Section 4**, **Step 1**.

Step	Description
14.	Select **Primary recording…** in the left pane and configure as follows: • **Set name** – Enter any descriptive name. • Click **Define line map**. • At the next popup screen [not shown], click **OK**.

| Step	Description
15.	At the following confirmation screen, click **Save and Close** to save the configuration.

5.4. Avaya PC Recording Controller Configuration
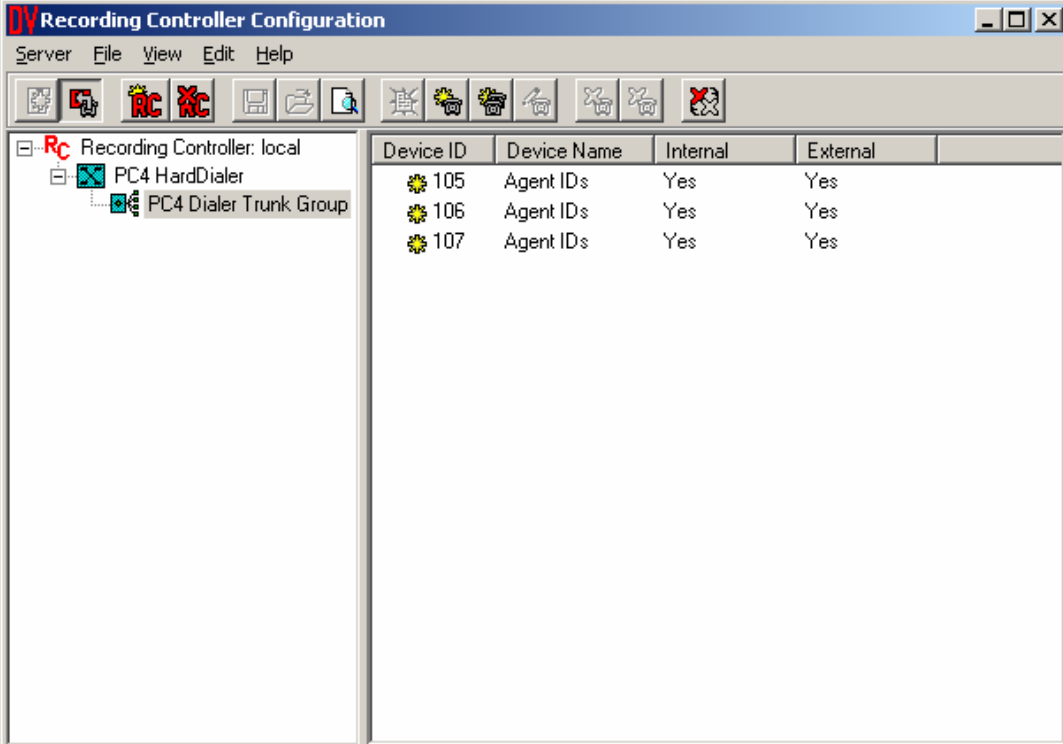
Step	Description
1.	Navigate to **All Programs->DataVoice->CentauriRC->DV Recording Controller Configuration** to display the following screen and click on the red **RC** button. At the next popup screen [not displayed] click **OK**.

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Step	Description
2.	Select **PC4 HardDialer** from the left pane, then right click in the right pane to display the popup screen and select **Add Range**.

Step	Description
3.	At the **Add New Range of Devices** popup window, configure as follows: • **Device ID From:** - Enter the starting agent id configured on Avaya HardDialer to be recorded. • **To:** - Enter the ending agent id configured on Avaya HardDialer to be recorded. • **Device Name** – Set to any descriptive name. • Click **OK**.

Step	Description
4.	Following confirmation screen is displayed.

Step	Description
5.	Select **PC4 Dialer Trunk Group** in the left pane, then right click in the right pane and select **Add Ins**.
6.	Select all the agent ids and click **OK**.

Step	Description
7.	This is the confirmation screen. Click the 2nd button from the left to save the configuration.

6. Interoperability Compliance Testing

This interoperability compliance test covered feature functionality, serviceability and basic load testing. Feature functionality focused on verifying that the DataVoice Recording solution could successfully record calls when using events from Avaya HardDialer Event Service. Serviceability testing verified that the DataVoice Recording solution recovered from adverse conditions, such as rebooting, power failure and network disconnect. Basic load testing verified that the recording solution could successfully record calls for an extended period of time.

6.1. General Test Approach

Serviceability and basic functionality test cases were performed manually. During the manual tests, outbound calls were placed by Avaya HardDialer and routed to an available agent. The agent accepted the call and the conversation between the customer and the agent was recorded. The recordings were viewed using Libra Recorder web interface. During the basic load testing, Avaya HardDialer executed a calling list which delivered calls to the agents for sustained periods.

6.2. Test Results

Libra Recorder successfully recorded, stored and played back the calls between the agents and the customers. For serviceability testing, Libra Recorder resumed recording calls after restoration of connectivity to the Avaya HardDialer, after network disconnect/re-connect, and after reset of Libra Recorder. For stability testing, Libra Recorder successfully recorded calls for a sustained period of time.

Following observations were made during testing:

- When Stop on Hold feature is disabled and call is transferred, recording of that call does not stop until another call by same agent is initiated. A workaround is to not disable Stop on Hold feature.
- Calls put on hold have two separate recordings.
- Libra Recorder has two separate recordings for Work Transfer in Intelligent Call Blending campaign.
- Libra Recorder only records the first part of the call for transfers if the party that was transferred to is not an agent on the dialer.

7. Verification

7.1. Avaya Communication Manager

| Step	Description
1.	Execute the **test board** *slot_no*, where *slot_no* is the location of the DS1 card on Avaya Communication Manager gateway. Verify that all the following tests pass after the trunk has been tapped to connect to Libra Recorder.
	test board 1a14 Page 1 TEST RESULTS Port Mtce Name Alt. Name Test No. Result Error Code 01A14 UDS1-BD 138 PASS 01A14 UDS1-BD 139 PASS 01A14 UDS1-BD 140 PASS 01A14 UDS1-BD 141 PASS 01A14 UDS1-BD 142 PASS 01A14 UDS1-BD 143 PASS 01A14 UDS1-BD 144 PASS 01A14 UDS1-BD 145 PASS 01A14 UDS1-BD 146 PASS
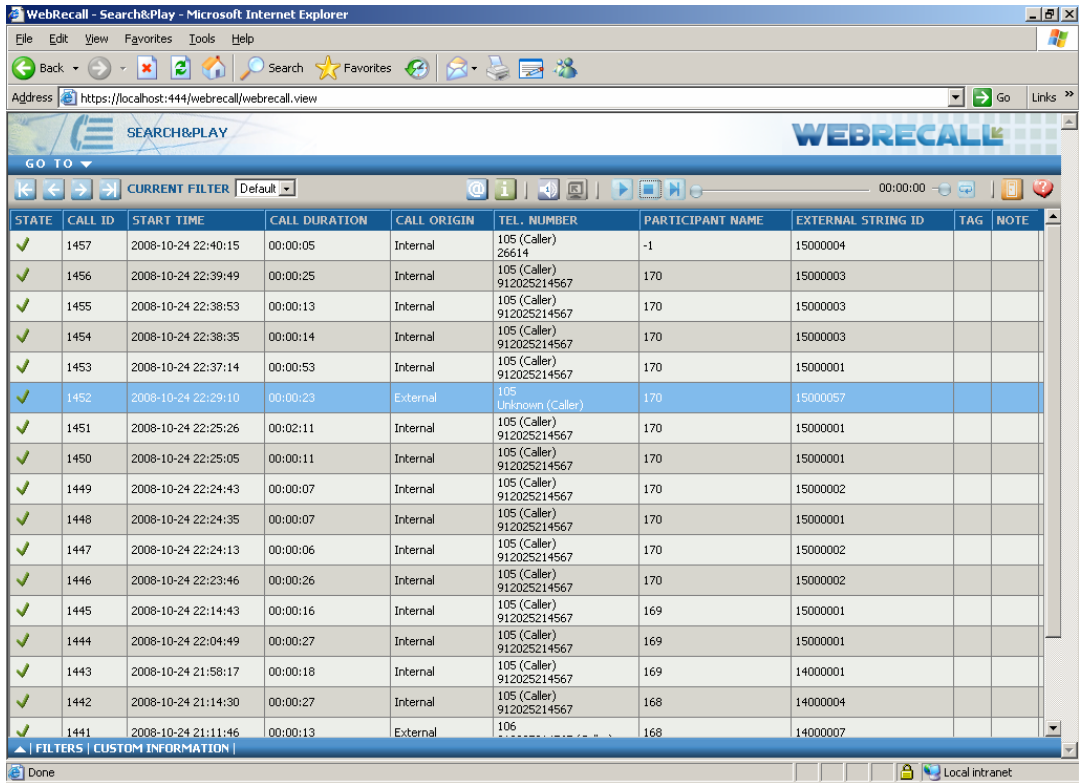
7.2. Avaya Proactive Contact

Step	Description
1.	Execute the **netstat –a** at Avaya HardDialer server command prompt to verify the communication between Avaya HardDialer and the DataVoice Recording solution server. The result below shows that Libra Recorder at 192.45.30.241 is connected to the Avaya HardDialer (lzpds4b).
	$ netstat –a Active Internet connections (including servers) Proto Recv-Q Send-Q Local Address Foreign Address (state) **tcp 0 0 lzpds4b:enserver_ssl 192.45.30.241:39875 ESTABLISHED** **tcp 0 0 lzpds4b:NameService_ssl 192.45.30.241:39874 ESTABLISHED**

7.3. Libra Recorder T1 Connectivity

Verify that the light is green on the T1 card on the Libra Recorder which taps into the T1 link between Avaya Communication Manager and Avaya HardDialer.

7.4. Libra Recorder Recording Playback

Step	Description
1.	Following screen is a sample screen shot of the recordings using the web interface of the Libra Recorder. Each recording can be individually played to verify its quality and accuracy.

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8. Support

For technical support on any Spescom product, contact Spescom Customer Support at +27 (11) 266 1500. Technical support email may be sent to info@za.spescom.com.

9. Conclusion

These Application Notes describe the configuration steps required for Spescom DataVoice Recording solution to successfully interoperate with the Avaya HardDialer. All feature functionality and serviceability test cases were completed successfully.

10. Additional References

The following documents may be found at http://support.avaya.com:

[1]   *Administrator Guide for Avaya Communication Manager*, Document ID 03-300509, Issue 4.0, February 2007

[2]   *Implementing Proactive Contact 4.0*, May, 2008

[3]   *Administering Avaya Proactive Contact* (Linux-based Interface), January 2008

[4]   *Sample Avaya Proactive Contact 3.0 with CTI Installation and Configuration*, Issue 1.0

[5]   *Sample Avaya Proactive Contact 3.0 Intelligent Call Blending Configuration*, Issue 1.0

Spescom DataVoice Documentation:

[6]   *DataVoice RC Server*, Document ID RCL-RC0-HBT-13, Issue 1.3, April 2008

[7]   DataVoice *Avaya Proactive Contact Recording Controller (RC),* Document ID RCL-APC-HBT-01, Issue 1.2, April 2008

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