



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring NICE Interaction Management R4.1 with Avaya Communication Server 1000E R7.5 and Avaya Aura® Contact Centre R6.2 using the Meridian Link Services Module for Call Recording – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning NICE Interaction Management with Avaya Communication Server 1000E and Avaya Aura® Contact Centre R6.2 for call recording. NICE Interaction Management records the RTP stream coming from the Avaya Communication Server 1000E module using CTI events from the MLSM on Avaya Aura® Contact Centre.

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

1. Introduction

These Application Notes describe the compliance tested configuration required for interoperability between NICE Interaction Management R4.1 and Avaya Aura® Contact Centre R6.2 connected to an Avaya Communication Server 1000E R7.5 (CS1000E) via AML (Application Meridian Link). NICE Interaction Management R4.1 is a software-only solution that offers various recording, playback and archiving features and options. With NICE VoIP logger call recording can be achieved without the use of physical connections to the NICE server other than standard network connections. The NICE solution is fully integrated into a LAN (Local Area Network), and includes Web based applications (i.e. Nice Application) that works with .NET framework and used to retrieve telephone conversations from a comprehensive long-term calls database. These Application Notes focus on recording calls from agent phonesets both on skillset and personal directory number (DN) calls. The NICE VoIP Logger is recording all RTP streams and so NICE Interaction Management's internal scheduling algorithm makes the determination on which calls should be recorded based on the events received from the Meridian Link Service Module (MLSM) of Avaya Aura® Contact Centre.

2. General Test Approach and Test Results

The compliance testing focuses on the recording of Avaya IP phonesets connected to the CS1000E using events from the MLSM interface on Avaya Aura® Contact Centre (Contact Centre). NICE Interaction Management registers as an application on the Contact Centre through the MLSM interface. Interaction Management can then record the call based on the events it receives. When a call is to be recorded, the Interaction Management performs recording using a duplicate RTP stream from the Avaya IP Phone sets.

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

2.1. Interoperability Compliance Testing

The testing focuses on the following types of calls:

- **CS1000E Inbound/Outbound calls** – Test call recording for inbound/outbound calls to the CS1000E from PSTN callers.
- **CS1000E Hold/Transferred/Conference calls** – Test call recording for calls transferred to and in conference with PSTN callers.
- **Contact Centre Agents Inbound/Outbound Calls** - Test call recording for inbound/outbound calls to the AACC Agents from PSTN callers.
- **Contact Centre Agents Hold/Transferred/Conference calls** – Test call recording for calls transferred to and in conference with PSTN callers.
- **Contact Centre Agents Record on demand/Stop on demand (ROD/SOD)** - to break call recording for all call types.
- **Failover testing** - The behaviour of Nice Recording Solution under different simulated LAN failure conditions on the Avaya platform.

2.2. Test Results

All compliance test cases passed successfully. There were no errors observed on the Avaya solution as a result of the addition of Nice Integration Management to the LAN.

2.3. Support

Support from Avaya is available at <http://support.avaya.com> and support from NICE can be obtained as shown below.

Nice International Corporate Headquarters, Israel

Tel: +972 9 775 3800

Email: support@nice.com

www.nice.com

3. Reference Configuration

The diagram below **Figure 1** shows the compliance tested configuration which includes a CS1000E connecting to a Contact Centre via an AML connection. The MLSM interface on the Contact Centre provides CTI events from the CS1000E in order for NICE Interaction Management to identify which calls to keep as NICE Interaction Management is in an “always Record” mode recording all RTP streams.

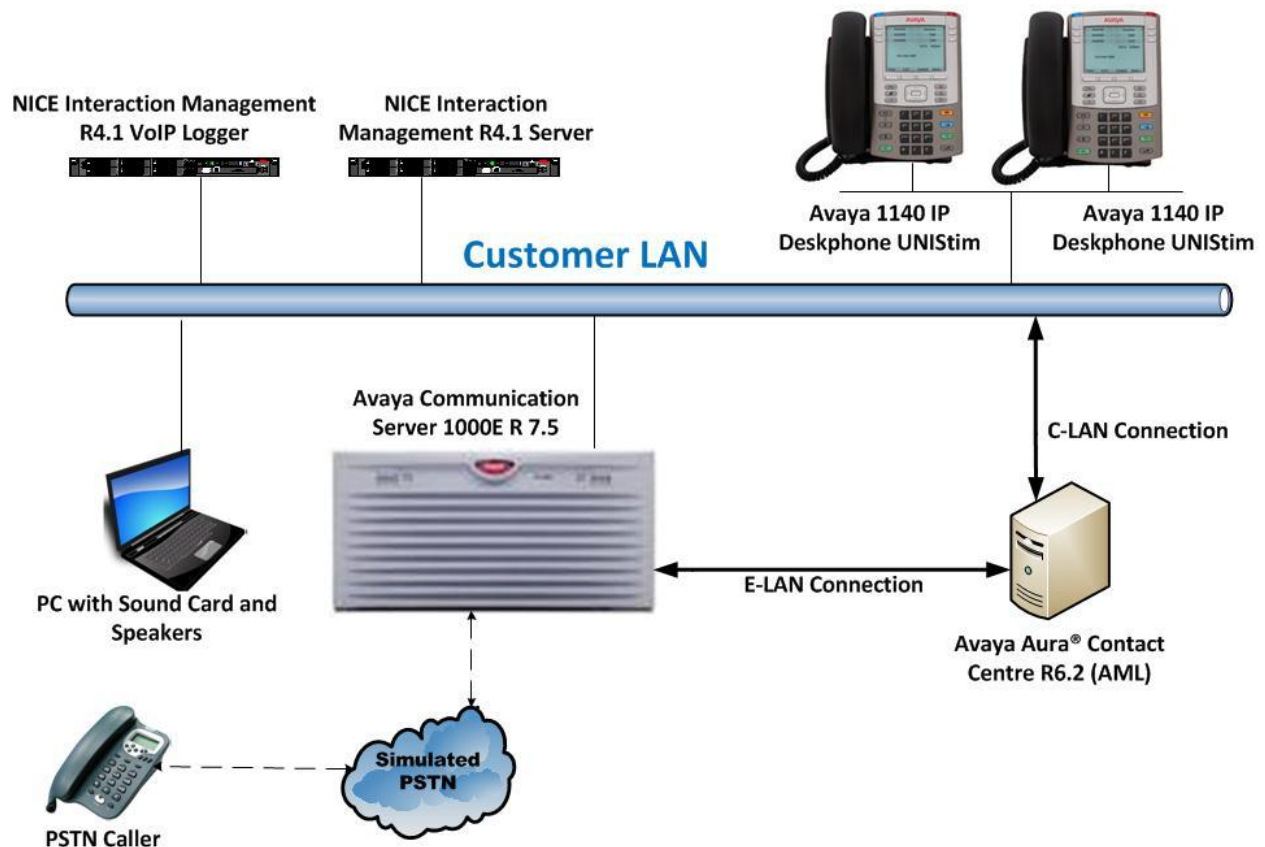


Figure 1: NICE Interaction Management interoperability with Avaya Aura® Contact Centre R6.2 and Avaya Communication Server 1000E R7.5

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Communication Server 1000E running on CPPM	Avaya CS1000E R7.5 (See Appendix A for list of Patches)
Avaya Aura® Contact Centre running on Windows 2008 Server	Avaya Aura® Contact Centre R6.2 SP5 (See Appendix C for Patch versions) CCMS CCMA
Avaya 1140E IP UNISTim Phoneset	0625C8L
Avaya 1120E IP UNISTim Phoneset	0624C8L
NICE Interaction Management 4.1 Server	NICE Interaction Management 4.1 Update Pack 23
NICE Interaction Management VoIP Logger	NICE VoIP Logger 4.1 Update Pack 23

5. Configure Avaya Communication Server 1000E

It is assumed that a fully functioning CS1000E is in place with the necessary licensing and an ELAN connection already established with Contact Centre. For further information on the configuration of the CS1000E and Contact Centre please see **Section 10** of these Application Notes.

It is assumed that the CS1000E is configured with an Automatic Call distribution Queue and agent phonesets; please see Appendix B for a complete printout of these. In order to successfully record the agent phonesets the Class of Service (cls) needs to be altered so allow call recording (RECA). The phoneset must also allow CTI messages be sent to the NICE recorder this is done by setting the AST and IAPG as shown below.

Enter overlay 20 to change the IP phonesets by typing **LD 20** at the > prompt. Type **CHG** to make a change to the agent's terminal number (TN) and change **AST** to the keys that need to be recorded i.e., the incoming calls key 00 and the outgoing personal directory number key 03 (see Appendix B for the key assignments used in compliance testing). Ensure that **IAPG** is set to **1** to allow all CTI messages get sent. Change the **CLS** to **RECA** to allow the set be recorded.

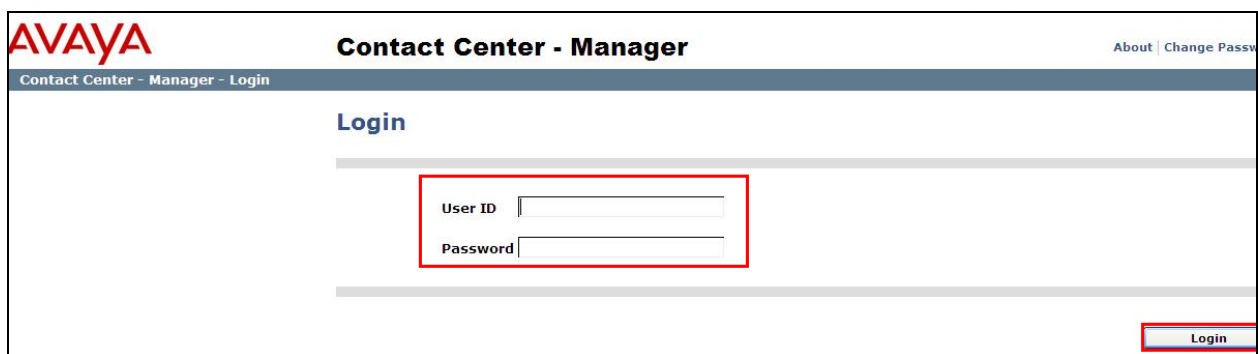
LD 20

Prompt	Response	Description
>	LD 20	Enter Overlay 20
REQ	CHG	New Data
CHG	TN	Terminal Number
TN	L S C U	Loop Shelf Card Unit
CUST	0	Customer Number
CLS	RECA	Recording Allowed
AST	00 03	Keys 00 and 03 to be recorded
IAPG	1	(1) Send all CTI messages

6. Configure Avaya Aura® Contact Centre

There is no specific configuration required on the Contact Centre for NICE Interaction Management to receive CTI events. The setup of agents and phonesets are only required to demonstrate the recording of skillset calls into the Contact Centre. Contact Centre must be installed in order to allow NICE Interaction Management connect to the MLSM interface, however the only configuration required to allow NICE Interaction Management receive CTI events is done on the CS1000E as outlined in **Section 5**.

Please note that the Contact Centre installation and its setup are outside the scope of these Application Notes, for more information on the installation and configuration of Contact Centre please refer to **Section 10**. Login using the appropriate credentials.



6.1. Configure Contact Centre Agents

The following sections outline the steps necessary to add a new agent and phoneset to Contact Centre. Select **Contact Centre Management** from the main page (not shown) called **Launchpad**.



Once the **Contact Center Management** window opens, click on **Add** and **Agent** as highlighted below.



Fill in the agents credentials in the window as shown in the example below.

AVAYA **Contact Center Management** Logged in user: webadm

View/Edit Add Status Launchpad Help

CCM Servers (Supervisors)

- AAACC62
 - Supervisor Default
 - Supervisor Paul
 - Agent1 Smile Agent Main

User Details

First Name: *
 Last Name: *
 Title:
 Department:
 Language:
 Comment:

User Type:
 Login ID: *
 Personal DN:
 ACD Queue:
 ACD Queue Error:

Account Type:
☐ Create CCT Agent

Agent Information

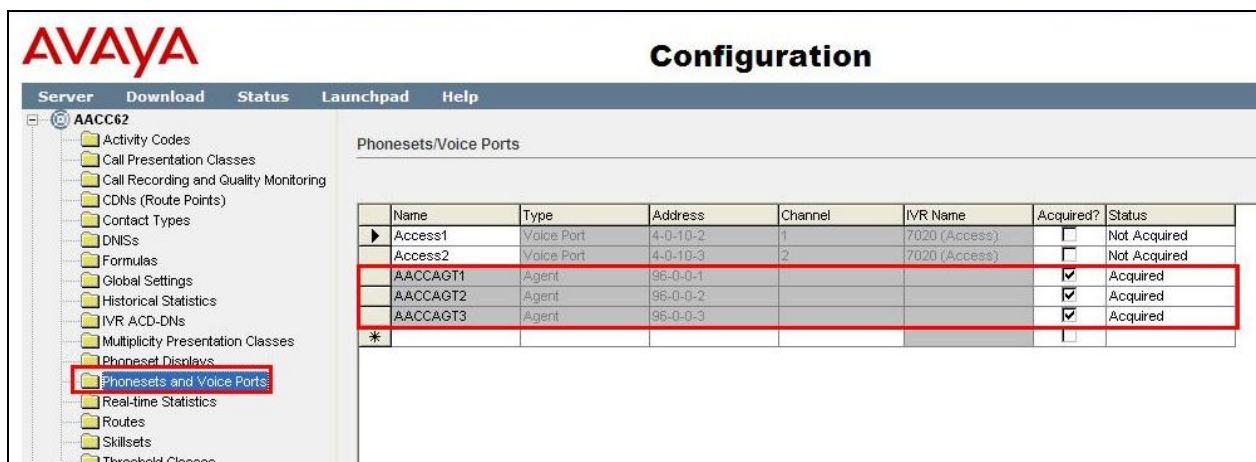
Primary Supervisor: *
 Agent Key:
 Login Status:
 Call Presentation:
 Multiplicity Presentation Class:
 Threshold:
 Tn Name:

6.2. Configuring phone sets

Select **Configuration** from the **Launchpad** window.



Select **Phonesets and Voice Ports** and add each phoneset entering a suitable name under the **Name** column and the Terminal Number (TN) under the **Address** column. Ensure that **Type** is set to Agent and the **Acquired** box is ticked.

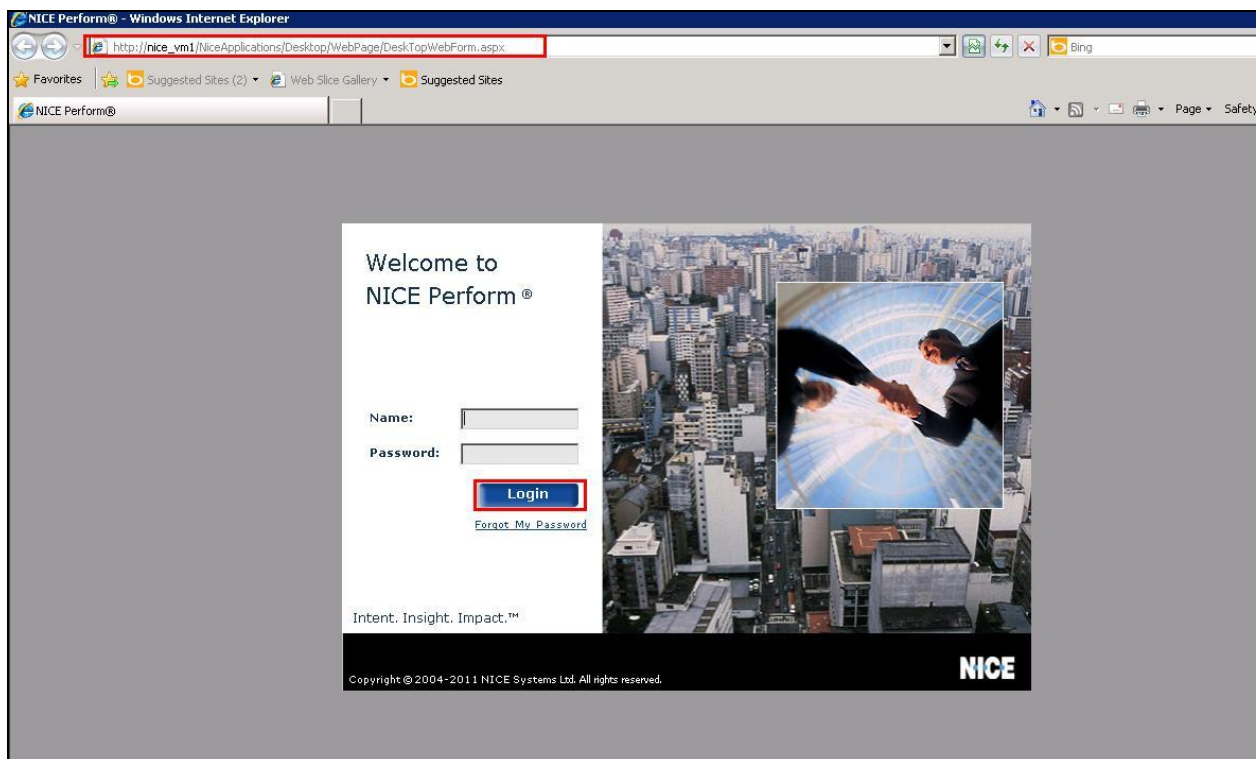


7. Configure NICE Integration Management

This section outlines the steps necessary to configure NICE Integration Management to connect successfully to the Avaya Solution outlined in **Section 3**. The NICE Solution connects to the MLSM of Contact Centre registering as an Application in order to receive CTI events from the CS1000E via the Contact Centre. All telephony events from the CS1000E pass through the MLSM module of Contact Centre and are picked up by NICE.

7.1. Configure NICE Interaction Management to connect to Avaya Aura® Contact Centre

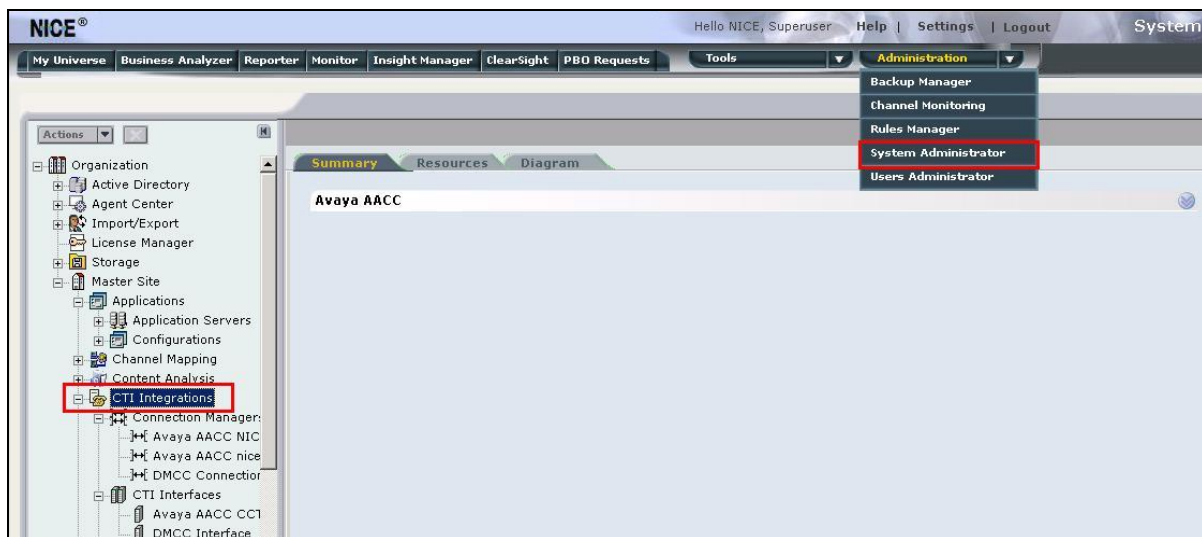
Open a web browser, navigate to <http://<NICE Interaction machine name>>. Enter the appropriate credentials and click **Login**.



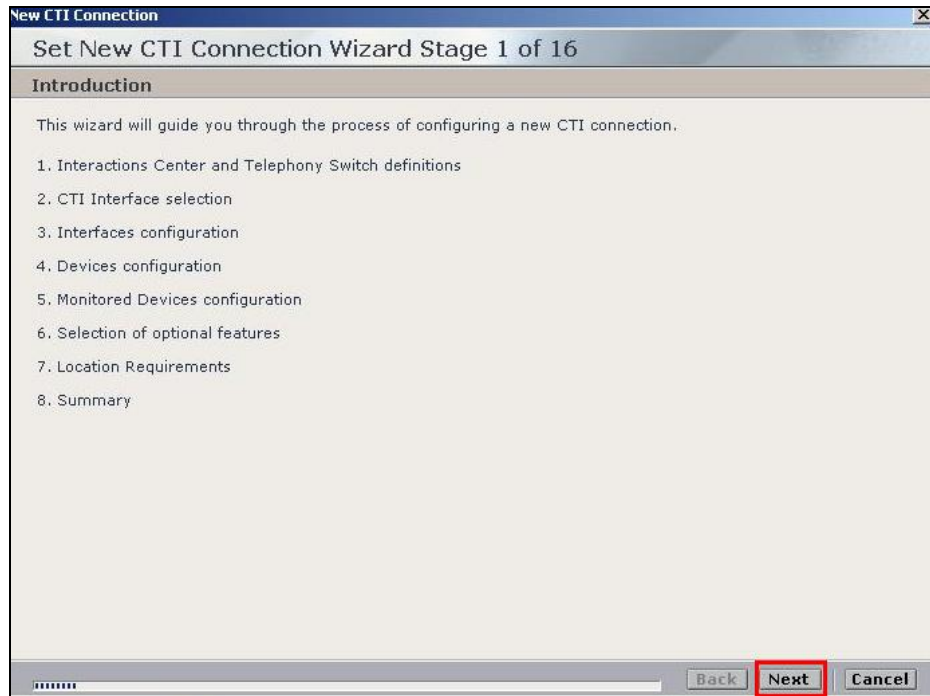
After logging in click on **Settings** highlighted below and choose **Technician Mode**.



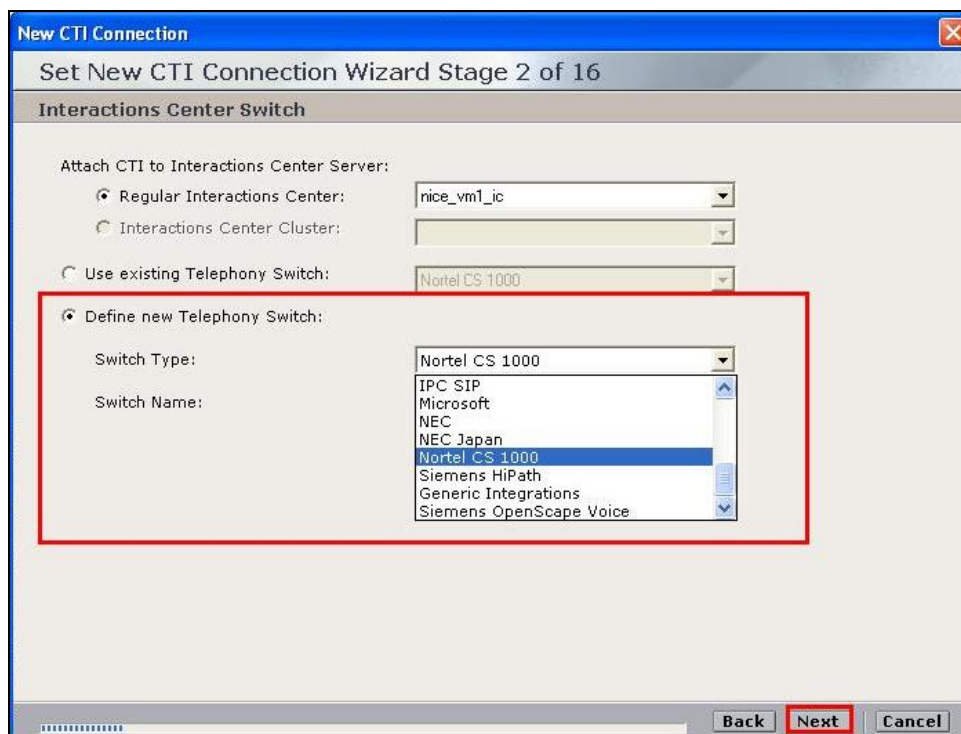
Under **Administration** at the top right select **System Administrator**. Right click on CTI integrations and select **add New CTI Connection** (see below).



The **New CTI Connection** window opens as shown below click **Next** to continue.



Select **Define new Telephony Switch** and ensure **Nortel CS 1000** is picked from the dropdown menu. Click **Next** to continue.



Ensure **MLS/CCMS** is chosen for both **Nortel CS 1000 CTI Interface** and **Active Recording** as shown below. Click **Next** to continue.

The screenshot shows the 'Set New CTI Connection Wizard Stage 3 of 16' window. Under the 'Interface Type' section, the 'CTI Interface Type' is set to 'Nortel CS 1000 CTI Interface:'. A dropdown menu is open, showing options: 'AACC', 'CDR', 'Genesys', and 'MLS / CCMS' (which is highlighted). Below this, the 'VolIP Mapping' checkbox is unchecked. The 'Active Recording' checkbox is checked. A second dropdown menu is also set to 'MLS / CCMS'. At the bottom, the 'Next' button is highlighted in red.

Enter the connection details by double clicking on **CTIServerIPAddress** highlighted, this opens the **Interface Connection Parameter** window and enter the IP Address of the Contact Centre. Click **OK** and **Next**.

The screenshot shows the 'Set New CTI Connection Wizard Stage 4 of 16' window. The 'Interface Parameters' section is active. A table lists parameters: 'CTIServerIPAddress' (highlighted with a red box), 'CTIServerPortId' (value: 3000), and 'UseWarmStandbyFeature' (value: no). A dialog box titled 'Interface Connection Parameter' is open, showing the 'Name' as 'CTIServerIPAddress' and the 'Value' as '192.168.10.95' (highlighted with a red box). The 'OK' button in the dialog is highlighted in red. At the bottom of the wizard, the 'Next' button is highlighted in red.

Enter the **Media Provider Controllers – Location**; this will be the IP address of the NICE VoIP logger server. Click **Next** to continue.

New CTI Connection

Set New CTI Connection Wizard Stage 8 of 16

Active Recording

Media Provider Controllers - Location

Media Provider Location

Server IP/Hostname: 192.168.30.72

Connection Manager Port: 62094

Media Provider Controllers:

IP/Hostname	CM Port

Back Next Cancel

Add **Telephony Switch Devices** in order to record phonesets. Each **Device** or extension can be added singly or in a **Range** of extensions. Click on **Add** highlighted below. Choose **Position** as the **Device Type** and enter the Position ID for **Device Number**. Click **OK** and **Next**.

New CTI Connection

Set New CTI Connection Wizard Stage 10 of 16

Devices

Available Devices

Provide telephony switch available devices

0 devices

Add Add Range Add From Switch

Device Number/IP	Unique Device ID/CTI Trunk ID	Type

Back Next Cancel

Available Device

Add Device

Name

Device Type: * Position

Device Number: 6001

Unique Device ID:

IP:

Advanced Device Parameters

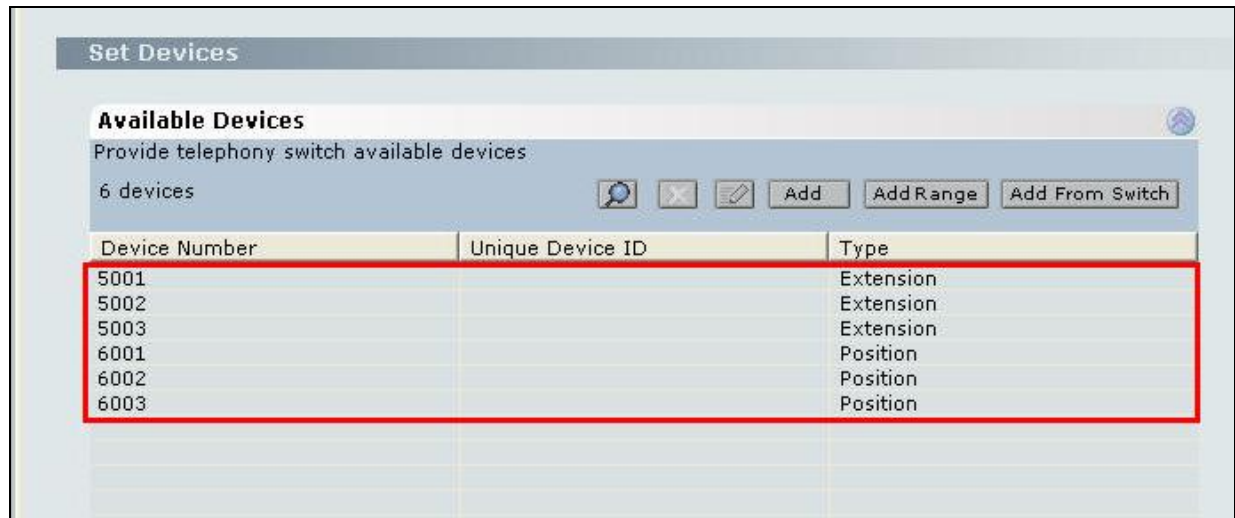
Display Read Only Information

Name	Value

Description:

OK Cancel

See below an example of the **Device Numbers** and **Type** used in the compliance testing.



The 'Set Devices' dialog box contains a section titled 'Available Devices' with the instruction 'Provide telephony switch available devices'. It shows '6 devices' and includes buttons for 'Add', 'Add Range', and 'Add From Switch'. A table lists the devices, with a red box highlighting the first six rows.

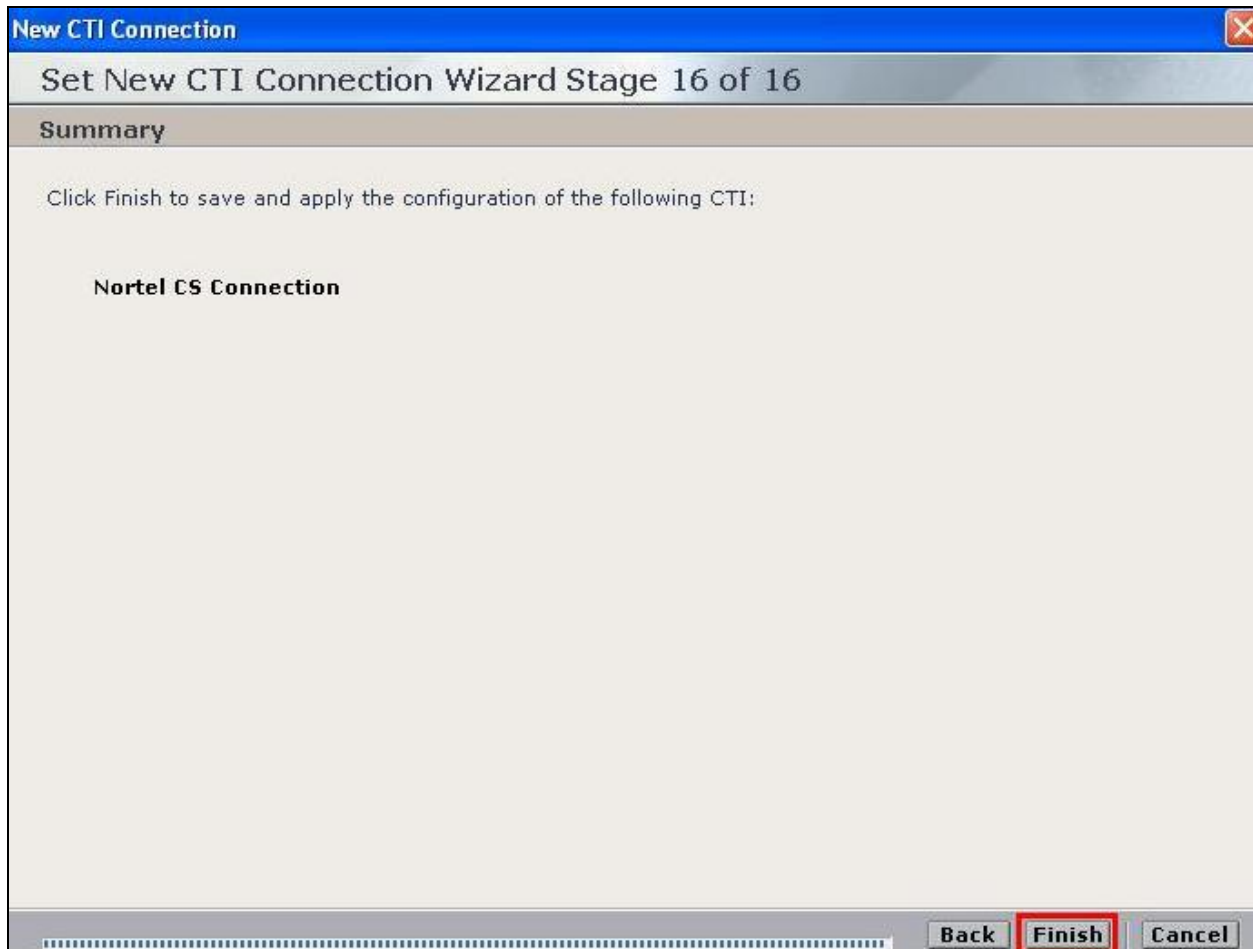
Device Number	Unique Device ID	Type
5001		Extension
5002		Extension
5003		Extension
6001		Position
6002		Position
6003		Position

Note: If the new Connection Manager resides on the same physical machine as the Media Provider Controller, configured above, then a unique port must be used if they are installed on separate machines as was done for compliance testing then select **Create a new Connection Manager** use the default port. Click **Next** to pass to the summary window (shown below).

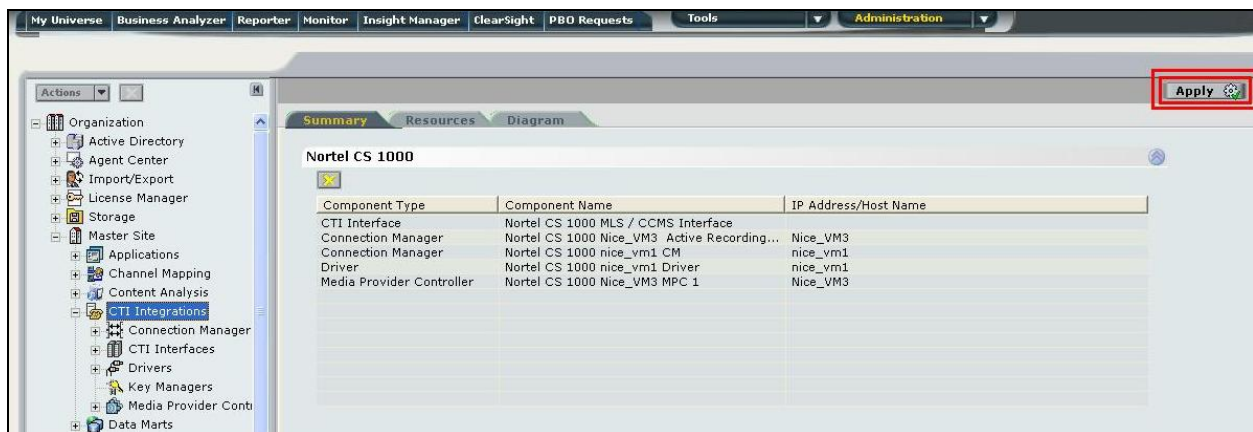


The 'New CTI Connection Wizard Stage 15 of 16' window shows the 'Requirements' section. It states: 'The Interactions Center server selected already has a Connection Manager. Create a new Connection Manager, or select an existing one.' Two options are presented: 'Create a new Connection Manager' (selected) and 'Select available Connection Manager'. The 'Create a new Connection Manager' option has a red box around it and a 'Port' field set to '62094'. The 'Select available Connection Manager' option shows a list of ports: 62094, 62095, and 62096. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons, with 'Next' highlighted by a red box.

Click on **Finish** to submit the new connection and complete the setup.



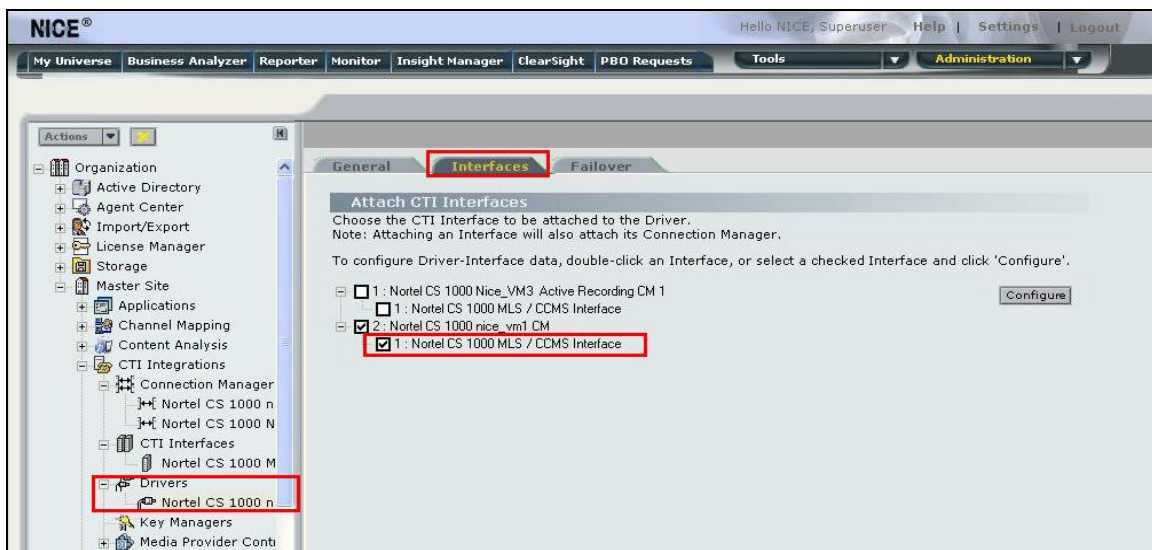
Once all the details are entered correctly click on **Apply** as highlighted below to update the NICE components.



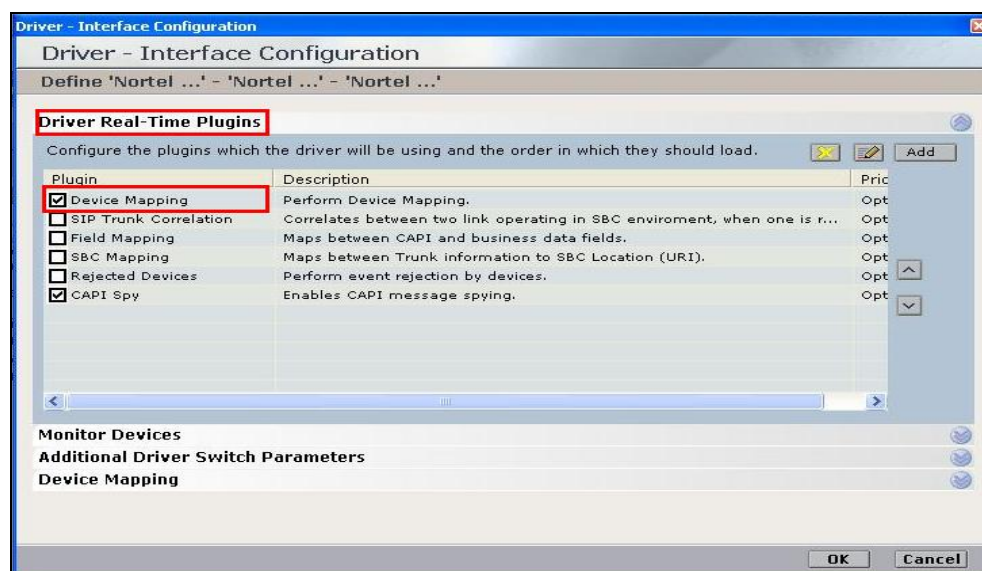
7.2. Configure Device Mapping on NICE Interaction Management

Device Mapping is used to map the position to the extension. NICE records the position ID for each agent and in order to successfully record an extension of a phoneset this extension number is mapped against the position ID that is being recorded.

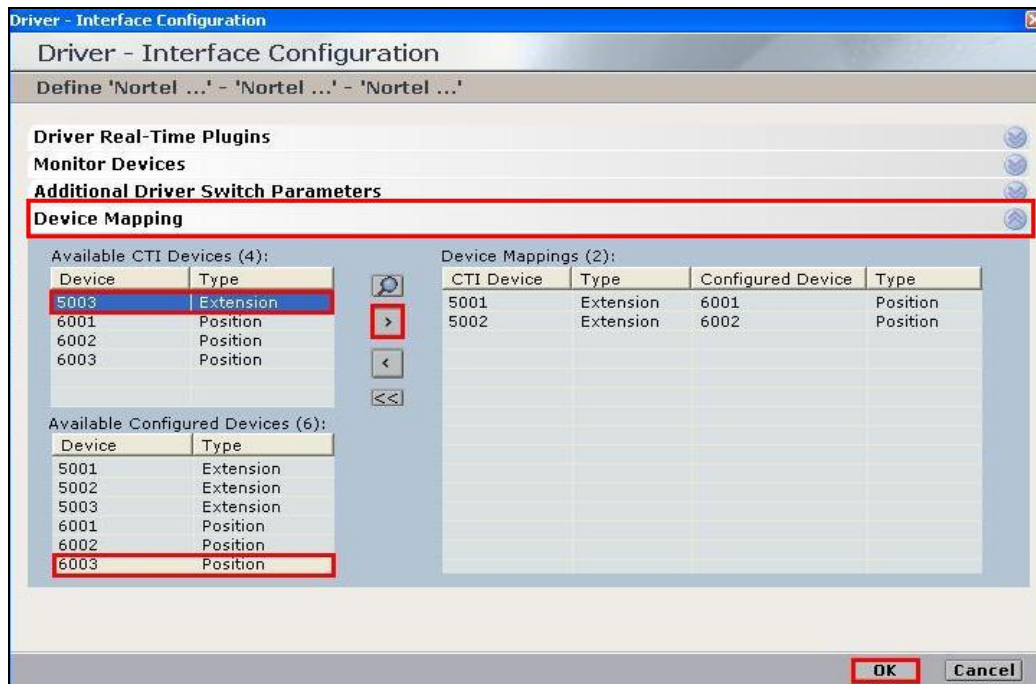
Select **Drivers** in the left column and select the Nortel Driver as highlighted. Select the **Interfaces** tab in the right window and double-click on **Nortel CS 1000MLS/CCMS Interface** highlighted below. Please ensure that the **Nortel CS1000 nice_vm1 CM** and **Nortel CS1000 MLS/CCMS interface** are both ticked as shown below.



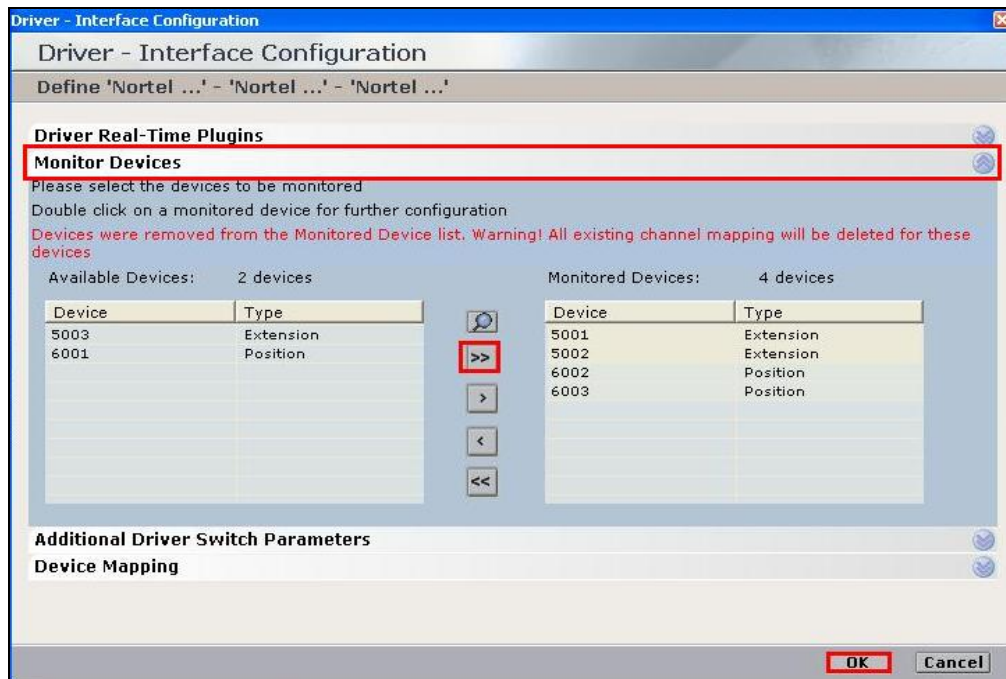
Select the **Driver Real-Time Plugins** tab and ensure that **Device Mapping** is ticked as shown below. Select **OK** when done.



Select the **Device Mapping** tab and highlight the **Extension** from the **Available CTI Devices** window and the **Position** from the **Available Configured Devices** window. Each device mapping is done using this method. Click **OK** once all Extensions and Positions are mapped.



Select the **Monitor Devices** Tab and ensure that all devices are monitored by clicking the arrows highlighted below. Click **OK** once completed.



8. Verification Steps

The following steps can be taken to ensure that connections between the Contact Centre and NICE Interaction Management are configured correctly.

8.1. Verify Avaya Communication Server 1000E ELAN link is up

Verify the status of the administered AML link by using the **stat elan** command in overlay 48. Verify the Service State is **ENABLED** for the elan link number as shown below. Type **LD 48** at the > prompt to enter overlay 48. Type **stat elan** to display the link status as shown.

LD 48

Prompt	Response	Description
>	LD 48	Enter Overlay 48
.	stat elan	Get status of ELAN link
.	SERVER TASK: ENABLED	Enabled
.	ELAN #: 017 DES: AACC	
.	APPL_IP_ID: 192.168.0.95 LVR7: ACTIVE EMPTY APPL ACTIVE	

8.2. Verify Avaya Aura® Contact Centre MLSM is up

From the Contact Centre Server go to start and select System Control and Monitor Utility. This opens a new window shown below. Click on the CCMS tab and ensure all services are up including the **MLSM service** highlighted.



To check and see that NICE has registered to MLSM correctly and is receiving the CTI messages from the MLSM open a log file called CCMS_MLSM, this log file can be found in the **D:/Avaya/Logs /CCMS** folder. Note that backup log files will be labelled 1, 2, 3 etc. Note below that we have many **StartRecord** and **StopRecord** messages being sent confirming that NICE is registered to MLSM correctly.

```

ff 0a 00 16 02 00 c2 10 1f 00 36 08 00 00 35 31 30 30 3f 04 60 04
2012-09-05 16:40:51.245: to host Assoc ID::2 SF_StopRecord_Resp
ff 0a 00 22 02 80 c2 10 20 00 36 08 00 00 35 31 30 30 71 03 01 78 04 20 1e 3f 04 60 04 5f 05 10 28 30
2012-09-05 16:40:53.157: from host Assoc ID::2 SF_StartRecord
ff 0a 00 2b 02 00 c3 10 1d 00 36 08 00 81 35 31 30 30 3f 04 60 04 b1 09 04 a4 17 c0 a8 0a 49 b2 09 04 a4 16 c0 a8 0a 49 b7 03 00
2012-09-05 16:40:53.166: to host Assoc ID::2 SF_StartRecord_Resp
ff 0a 00 22 02 80 c3 10 1e 00 36 08 00 81 35 31 30 30 3f 04 60 04 71 03 01 78 04 20 1e 5f 05 10 28 33
2012-09-05 16:40:53.167: from host Assoc ID::2 SF_StopRecord
ff 0a 00 16 02 00 c4 10 1f 00 36 08 00 00 35 31 30 30 3f 04 60 04
2012-09-05 16:40:53.266: to host Assoc ID::2 SF_StopRecord_Resp
ff 0a 00 22 02 80 c4 10 20 00 36 08 00 00 35 31 30 30 71 03 01 78 04 20 1e 3f 04 60 04 5f 05 10 28 33
2012-09-05 16:40:55.168: from host Assoc ID::2 SF_StartRecord
ff 0a 00 2b 02 00 c5 10 1d 00 36 08 00 81 35 31 30 30 3f 04 60 04 b1 09 04 a4 17 c0 a8 0a 49 b2 09 04 a4 16 c0 a8 0a 49 b7 03 00
2012-09-05 16:40:55.178: to host Assoc ID::2 SF_StartRecord_Resp
ff 0a 00 22 02 80 c5 10 1e 00 36 08 00 81 35 31 30 30 3f 04 60 04 71 03 01 78 04 20 1e 5f 05 10 28 34
2012-09-05 16:40:55.179: from host Assoc ID::2 SF_StopRecord
ff 0a 00 16 02 00 c6 10 1f 00 36 08 00 00 35 31 30 30 3f 04 60 04
2012-09-05 16:40:55.278: to host Assoc ID::2 SF_StopRecord_Resp
ff 0a 00 22 02 80 c6 10 20 00 36 08 00 00 35 31 30 30 71 03 01 78 04 20 1e 3f 04 60 04 5f 05 10 28 34
2012-09-05 16:40:57.185: from host Assoc ID::2 SF_StartRecord
ff 0a 00 2b 02 00 c7 10 1d 00 36 08 00 81 35 31 30 30 3f 04 60 04 b1 09 04 a4 17 c0 a8 0a 49 b2 09 04 a4 16 c0 a8 0a 49 b7 03 00
2012-09-05 16:40:57.207: to host Assoc ID::2 SF_StartRecord_Resp
ff 0a 00 22 02 80 c7 10 1e 00 36 08 00 81 35 31 30 30 3f 04 60 04 71 03 01 78 04 20 1e 5f 05 10 28 37
2012-09-05 16:40:57.208: from host Assoc ID::2 SF_StopRecord
ff 0a 00 16 02 00 c8 10 1f 00 36 08 00 00 35 31 30 30 3f 04 60 04
2012-09-05 16:40:57.296: to host Assoc ID::2 SF_StopRecord_Resp
ff 0a 00 22 02 80 c8 10 20 00 36 08 00 00 35 31 30 30 71 03 01 78 04 20 1e 3f 04 60 04 5f 05 10 28 37
2012-09-05 16:40:59.203: from host Assoc ID::2 SF_StartRecord
ff 0a 00 2b 02 00 c9 10 1d 00 36 08 00 81 35 31 30 30 3f 04 60 04 b1 09 04 a4 17 c0 a8 0a 49 b2 09 04 a4 16 c0 a8 0a 49 b7 03 00
2012-09-05 16:40:59.213: to host Assoc ID::2 SF_StartRecord_Resp
ff 0a 00 22 02 80 c9 10 1e 00 36 08 00 81 35 31 30 30 3f 04 60 04 71 03 01 78 04 20 1e 5f 05 10 28 39
2012-09-05 16:40:59.214: from host Assoc ID::2 SF_StopRecord
ff 0a 00 16 02 00 ca 10 1f 00 36 08 00 00 35 31 30 30 3f 04 60 04
2012-09-05 16:40:59.313: to host Assoc ID::2 SF_StopRecord_Resp

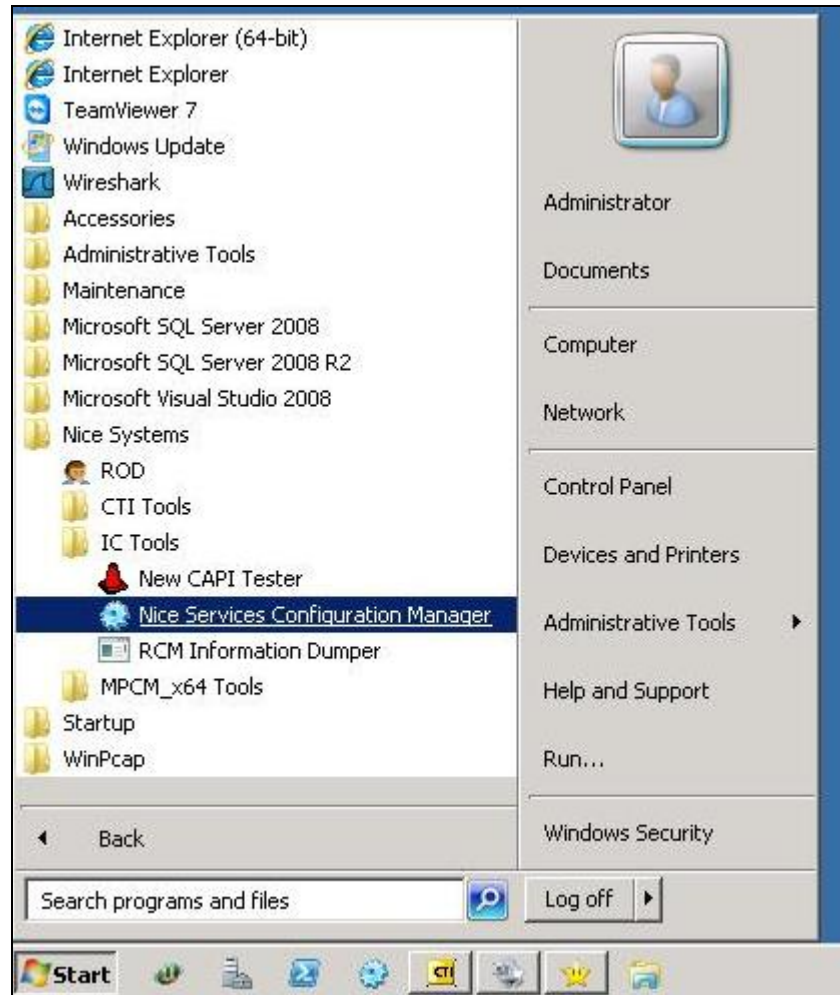
```

8.3. Verify the Phoneset's Recording State on Avaya Communication Server 1000E

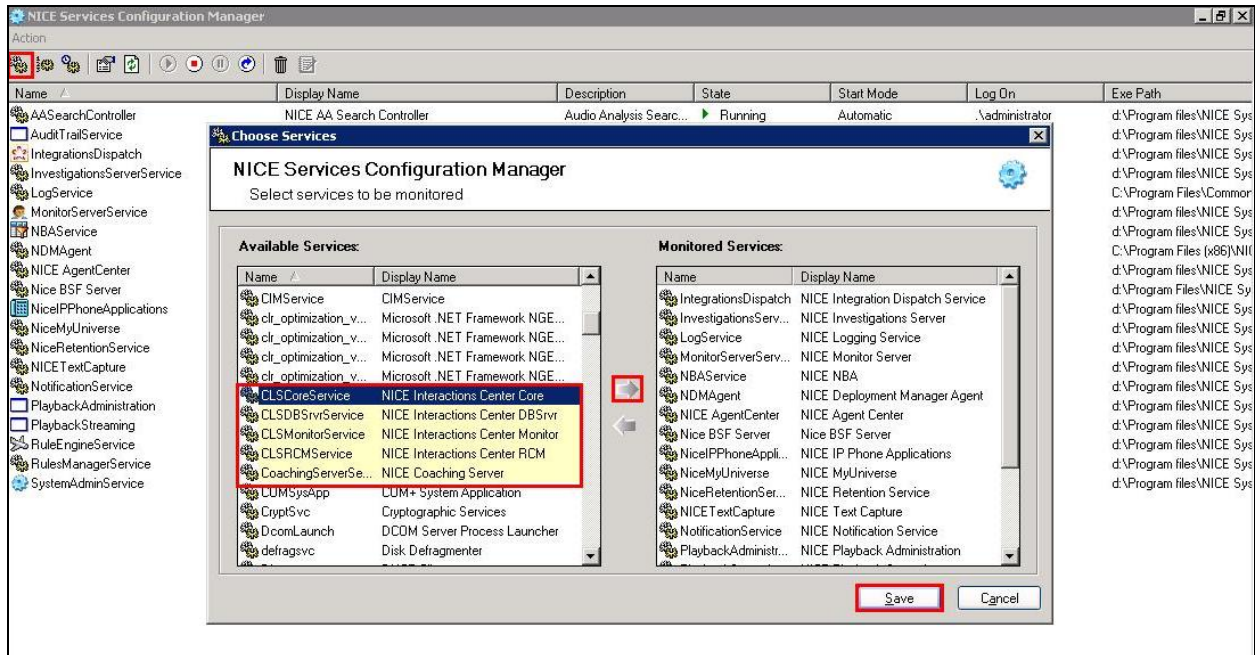
To verify the Phonesets recording state on the CS1000E, make a call. During the call, run **crShowCRParam** on the CS1000E (not shown). Verify that the **underRecording** equals **1** (1 indicates that the phone sends the RTP stream).

8.4. Verify NICE Interaction Management services are running

Go to **Start** → **Nice Systems** → **IC Tools**, click on **Nice Services Configuration Manager**. A window is opened that contains a list of the NICE services running.



Click on the icon highlighted at the top left of the screen, this will open up a new window where all the NICE services can be selected to be viewed. In the example below a list of services are highlighted and added to the existing list of NICE services to be displayed. Click on **Save** once all the NICE services are selected.

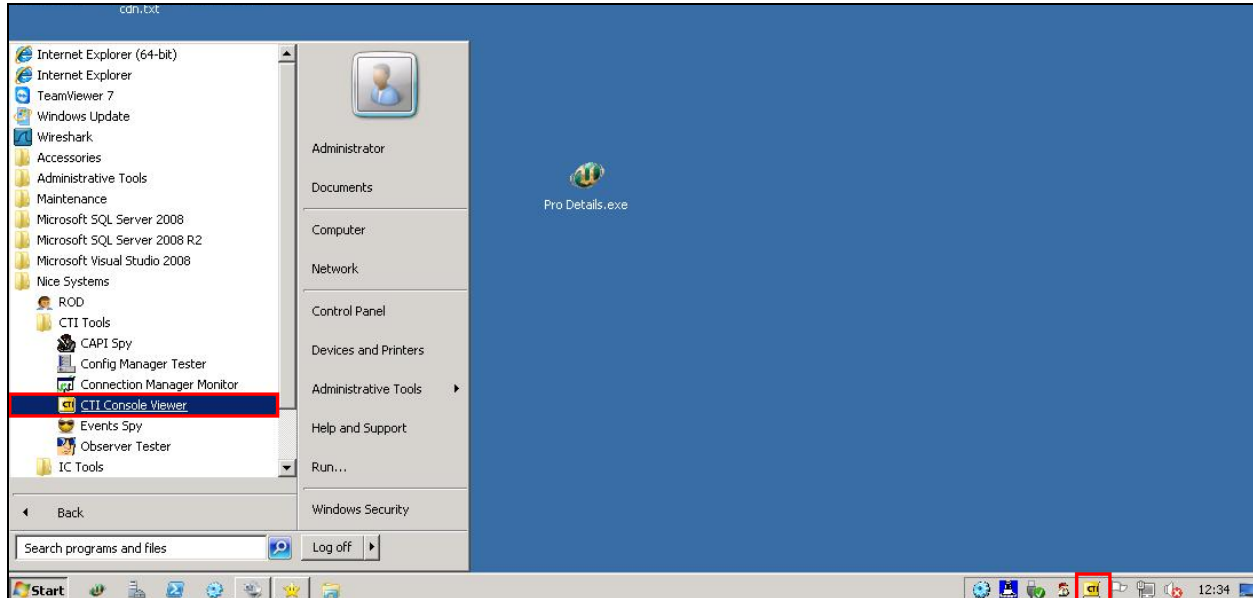


It is easy to see all the services are running correctly.

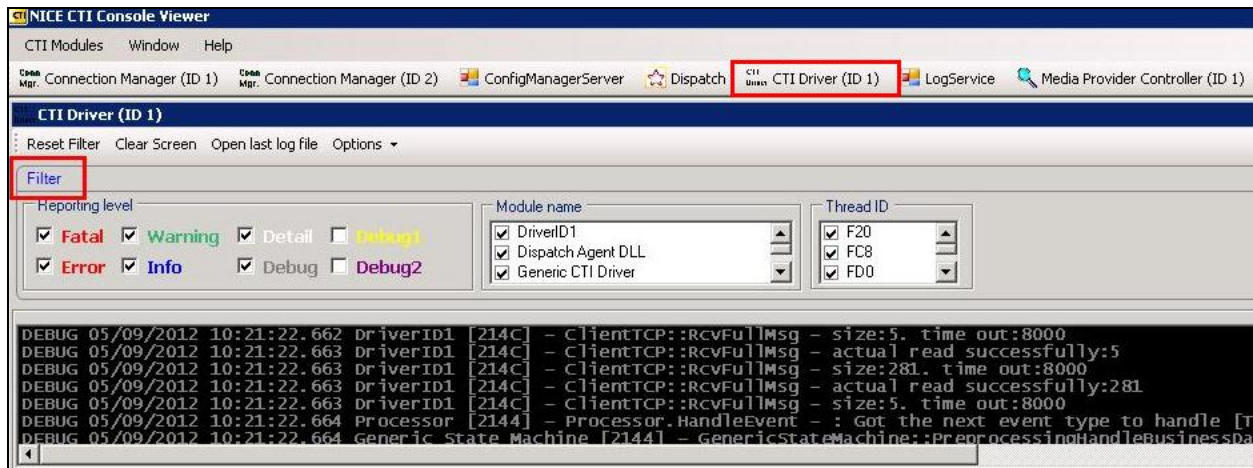
Name	Display Name	Description	State	Start Mode	Log On	Exe Path
AASearchController	NICE AA Search Controller	Audio Analysis Search...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
AuditTrailService	NICE Audit Trail Service	Enables adding mes...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
CLSCoreService	NICE Interactions Center Core	Acts as the entrance...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
CLSDBSrvrService	NICE Interactions Center DBSrvr	Manages the Interac...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
CLSMonitorService	NICE Interactions Center Monitor	Report fallover/OK ...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
CLSRCMSService	NICE Interactions Center RCM	Responsible for alloc...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
CoachingServerService	NICE Coaching Server	Manages Coaching i...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
EvaluationServerService	NICE Evaluation Forms Server	Manages Evaluation...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
FLM	NICE Media Provider Control Manager	An online repository f...	Running	Automatic	LocalSystem	d:\Program files\NICE Sys
FTFQueryServerService	NICE FTF Query Server	Performs queries for ...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
IntegrationsCTILogService	NICE Integration Log Services	Level Dumper, Log ...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
IntegrationsDispatch	NICE Integration Dispatch Service	Launches and maint...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
InvestigationsServerService	NICE Investigations Server	Manages and perfor...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
LogService	NICE Logging Service	A service designated...	Running	Automatic	.\administrator	C:\Program Files\Commor
MonitorServerService	NICE Monitor Server	Performs playback a...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NBAService	NICE NBA	Performs queries and...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NDMAgent	NICE Deployment Manager Agent	NICE Deployment M...	Running	Automatic	.\administrator	C:\Program Files\NICE
NICE AgentCenter	NICE Agent Center	Monitors and report...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
Nice BSF Server	Nice BSF Server	Enables the APIs to i...	Running	Automatic	LocalSystem	d:\Program Files\NICE Sys
NiceIPPhoneApplications	NICE IP Phone Applications	Performs IP Phone o...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NiceMyUniverse	NICE MyUniverse	Host for MyUniverse ...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NiceRetentionService	NICE Retention Service	Performs retention u...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NICETextCapture	NICE Text Capture	A service designated...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
NotificationService	NICE Notification Service	Generates Notificatio...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
PlaybackAdministration	NICE Playback Administration	Manages Admin task...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
PlaybackStreaming	NICE Playback Streaming	Manage Media Strea...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
RuleEngineService	NICE Rule Engine	Perform rules, accor...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
RulesManagerService	NICE RulesManager Service	Manages writing and...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
SystemAdminService	NICE SystemAdministrator	Perform Nice applica...	Running	Automatic	.\administrator	d:\Program files\NICE Sys
TRSService	NICE Interactions Center TRS	Insert missing calls to...	Running	Automatic	.\administrator	d:\Program files\NICE Sys

8.5. Verify NICE Interaction Management is receiving CTI Events

To verify that NICE is receiving CTI events from the MLSM interface on Contact Centre, click on the CTI Icon in the bottom right of the screen or open the **CTI Console Viewer** highlighted.



Click on the **CTI Driver (ID1)** tab highlighted and note the messages being received from MLSM. Open the filter tab highlighted to ensure that all important messages are being reported on.



The **opening compound** and **closing compound** messages that are received is an example of successful monitoring of events from MLSM.

```

iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
iverID1 [214C] - ClientTCP::RcvFullMsg - size:345, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:345
iverID1 [214C] - ClientTCP::RcvFullMsg - size:5, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
iverID1 [214C] - ClientTCP::RcvFullMsg - size:345, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:345
iverID1 [214C] - ClientTCP::RcvFullMsg - size:5, time out:8000
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_START_CALL].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
197 Generic State Machine [2144] - EVENT - PreprocessingStartEvent callid=34933 add missing participant 5001
neric State Machine [2144] - Driver - Opening Compound 5784620331352260642 for callid=34933
197 Generic State Machine [2144] - EVENT - Established callid=34933 From 5001 To 5002
vice Mapping Plug-in [2144] - MapParticipant - phone number map from 5001 to 6001.
vice Mapping Plug-in [2144] - MapParticipant - phone number map from 5002 to 6002.
PISpy Plug-in [2144] - CAPI Message START_INTERACTION was not sent to CAPISpy
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_START_CALL].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
201 Generic State Machine [2144] - EVENT - PreprocessingStartEvent callid=34933 add missing participant 5001
201 Generic State Machine [2144] - EVENT - Established callid=34933 From 5001 To 5002
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
iverID1 [214C] - ClientTCP::RcvFullMsg - size:281, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:281
iverID1 [214C] - ClientTCP::RcvFullMsg - size:5, time out:8000
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_CONNECTION_CLEARED].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
465 Generic State Machine [2144] - NortelStateMachine - EVENT - ConnectionCleared entered
465 Generic State Machine [2144] - NortelStateMachine - EVENT - ConnectionCleared Found interaction 34933. Network CallId is
neric State Machine [2144] - Driver - Closing Compound 5784620331352260642 for callid=34933
466 Generic State Machine [2144] - EVENT - ConnectionCleared callid=34933 deviceid 5001
PISpy Plug-in [2144] - CAPI Message STOP_INTERACTION was not sent to CAPISpy
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
  
```

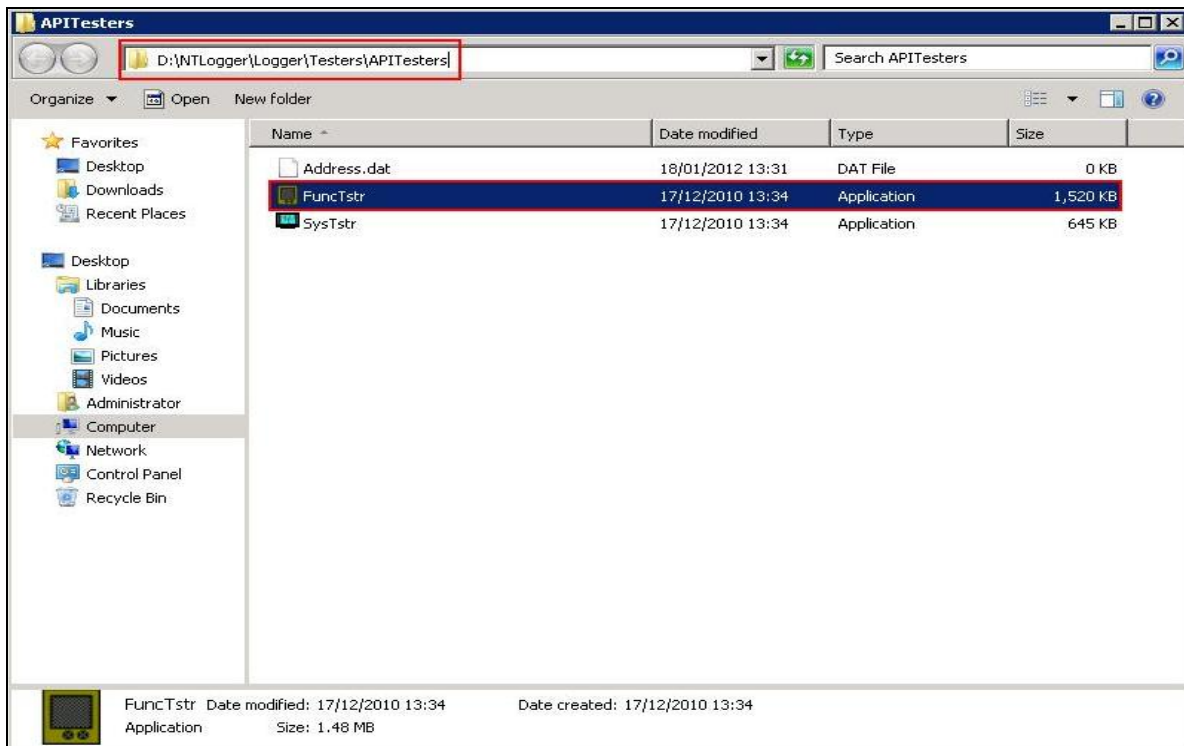
An example of error in monitoring is highlighted below.

```

iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
iverID1 [214C] - ClientTCP::RcvFullMsg - size:343, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:343
iverID1 [214C] - ClientTCP::RcvFullMsg - size:5, time out:8000
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_START_CALL].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
070 Generic State Machine [2144] - EVENT - PreprocessingStartEvent callid=34934 add missing participant 5001
neric State Machine [2144] - Driver - opening Compound 5784619210365796384 for callid=34934
070 Generic State Machine [2144] - EVENT - Established callid=34934 From 5001 To 5002
vice Mapping Plug-in [2144] - MapParticipant - phone number map from 5001 to 6001.
vice Mapping Plug-in [2144] - MapParticipant - phone number map from 5002 to 6002.
PISpy Plug-in [2144] - CAPI Message START_INTERACTION was not sent to CAPISpy
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_START_CALL].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
074 Generic State Machine [2144] - EVENT - PreprocessingStartEvent callid=34934 add missing participant 5001
074 Generic State Machine [2144] - EVENT - Established callid=34934 From 5001 To 5002
PICconnector #47 [2104] - HandleResponse - Call server disconnected - trying to reconnect!!!
CAPICconnector #47 [2104] - SendCommandToCAPI - An exception has been raised: Server disconnected!
CAPICconnector #47 [2104] - SendCommand - Failed to send command to CAPI for 1 times, resetting the CAPI connection, and retrying
082 CAPICconnector #47 [2104] - SendCommand - CAPI disconnected - trying to reset the connection.
ICconnector #47 [2104] - ResetCAPIConnection - Reset the CAPI connection...
ICconnector #47 [2104] - CAPIHandler.CloseCAPIConnection - Unregister CAPI client
ICconverter [2104] - CapiConverterFactory::Set CapiVersion Property - Got the next CAPI version: 4.1.5.0
ICconverter [2104] - CapiConverterFactory::CapiToPerformVersion(): Using the given CAPI version '4.1' as default.
ICconverter [2104] - CapiConverterFactory::Set CapiVersion Property - CapiPerformVersion was set to: 4.1
095 CAPICconnector #47 [2104] - OpenCAPIConnection - CAPI connection started on nice_vml:62051
095 CAPIDispatcher [2104] - CAPIFailureNotifier.HandleCLSCConnectionEvent - send SNMP CONNECTION_TO_CAPI_IS_UP
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:5
iverID1 [214C] - ClientTCP::RcvFullMsg - size:281, time out:8000
iverID1 [214C] - ClientTCP::RcvFullMsg - actual read successfully:281
iverID1 [214C] - ClientTCP::RcvFullMsg - size:5, time out:8000
ocessor [2144] - Processor.HandleEvent - : Got the next event type to handle [Type: EVENT_CONNECTION_CLEARED].
neric State Machine [2144] - GenericStateMachine::PreprocessingHandleBusinessData(): Canceling operation [Reason: State Machine
491 Generic State Machine [2144] - NortelStateMachine - EVENT - ConnectionCleared : checking hash table
491 Generic State Machine [2144] - NortelStateMachine - EVENT - ConnectionCleared entered
  
```


8.6. Verify that NICE VoIP Logger is receiving the duplicate RTP Stream

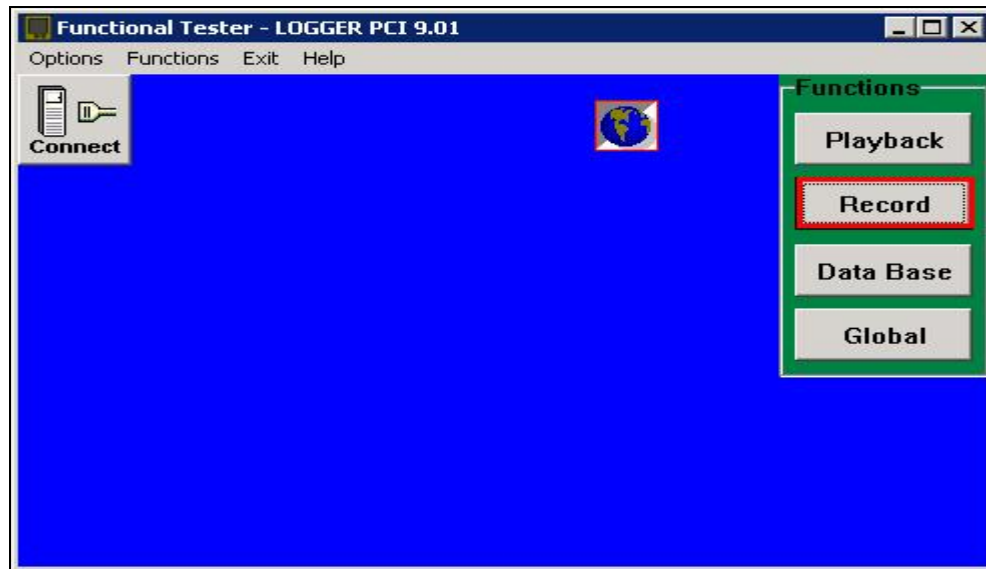
Locate and run the **FuncTstr** Application as shown below.



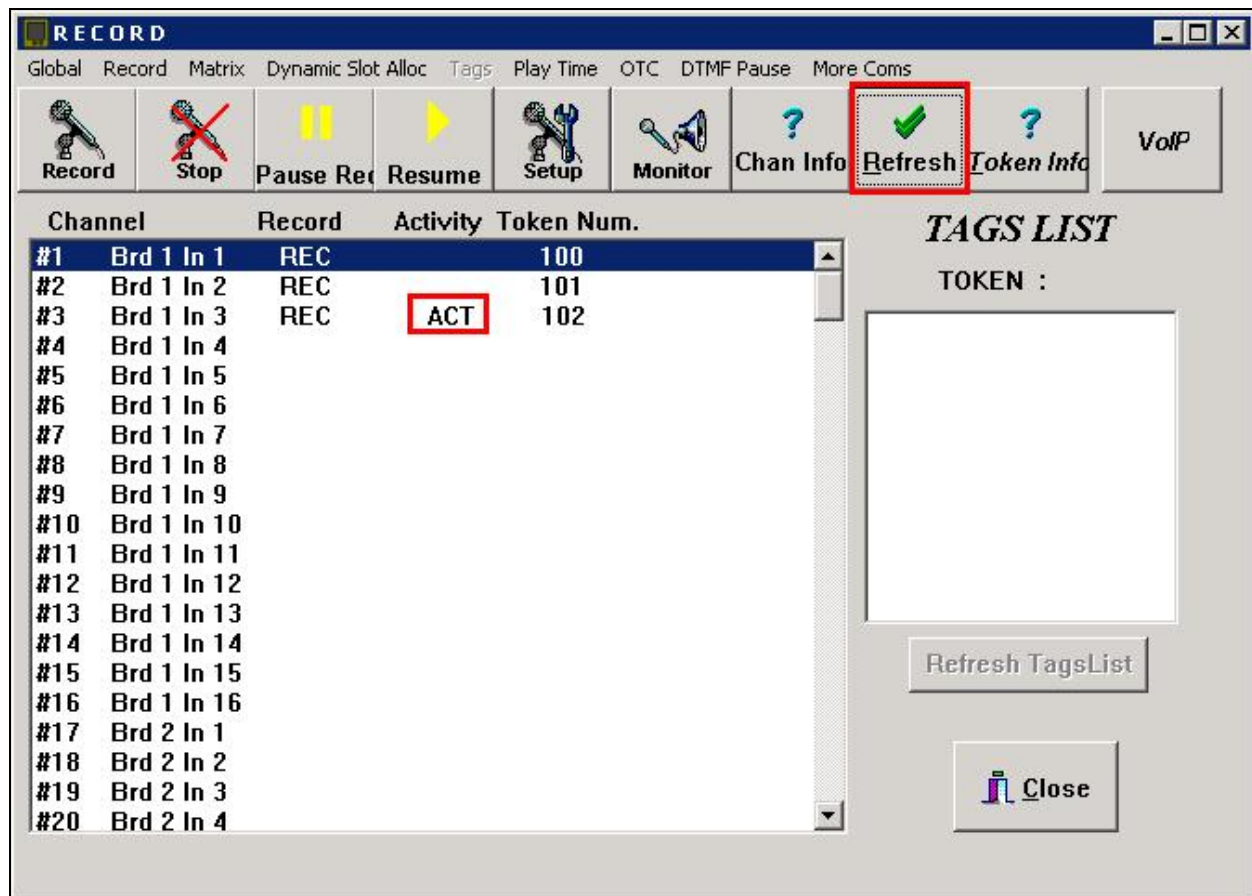
This opens the **Functional Tester – Logger PCI** application as shown. Click on the **Connect** icon and enter the **Logger Address**. This will be the localhost (**127.0.0.1**) in all cases. Select **OK**.



Click on **Record** highlighted.



Note there are three devices that are being recorded and there is activity **ACT** on **Token Num 102**.



8.7. Verify calls are begin recorded NICE Interaction Management

Recordings are stored on the NICE Interaction Management server and can be replayed using **Business Analyzer** as shown below. Log in to NICE Interaction Management as shown in **Section 8.1**, click on the **Business Analyzer** tab. Select the Interactions tab on the left column and under **Queries** → **Public**, press on the query required.

The screenshot shows the NICE Business Analyzer interface. The top navigation bar includes 'My Universe', 'Business Analyzer' (highlighted with a red box), 'Reporter', 'Monitor', 'Insight Manager', 'ClearSight', 'PBD Requests', 'Tools', and 'Administration'. The left sidebar shows 'Interactions' (highlighted with a red box) and 'Queries' (highlighted with a red box). The main area displays a table of interactions with columns: Type, Flag, Full Name, Complete Start, Complete Stop Time, Complete Duration, Score, Complete ID, Segments Compound ID, and Participa. The table contains 14 records of interactions, all from 'Unmapped, User'.

Type	Flag	Full Name	Complete Start	Complete Stop Time	Complete Duration	Score	Complete ID	Segments Compound ID	Participa
2504, lyncuser5		27/03/2012 11:14:07	27/03/2012 11:14:23	00:00:16		5724502651937292333	5724502651937292333		
Unmapped, User		27/03/2012 10:58:32	27/03/2012 10:58:38	00:00:06		572449673092543531	572449673092543531		
Unmapped, User		27/03/2012 10:53:36	27/03/2012 10:56:46	00:03:11		5724497377717452840	5724497377717452840		
Unmapped, User		27/03/2012 10:53:06	27/03/2012 10:53:13	00:00:07		5724497235983532069	5724497235983532069		
Unmapped, User		27/03/2012 10:52:27	27/03/2012 10:52:31	00:00:03		5724497089954644002	5724497089954644002		
Unmapped, User		26/03/2012 15:06:02	26/03/2012 15:06:36	00:00:34		5724191369887547423	5724191369887547423		
Unmapped, User		26/03/2012 14:49:14	26/03/2012 14:49:34	00:00:20		5724187044855480348	5724187044855480348		
Unmapped, User		26/03/2012 14:41:36	26/03/2012 14:43:05	00:01:30		5724185073465491481	5724185073465491481		
Unmapped, User		26/03/2012 14:22:45	26/03/2012 14:23:07	00:00:22		5724180198677610518	5724180198677610518		
Unmapped, User		26/03/2012 14:09:50	26/03/2012 14:10:23	00:00:34		5724176887257825299	5724176887257825299		
Unmapped, User		26/03/2012 14:08:20	26/03/2012 14:08:25	00:00:04		5724176505005735952	5724176505005735952		
Unmapped, User		26/03/2012 13:47:16	26/03/2012 13:47:21	00:00:05		5724171071872106509	5724171071872106509		
Unmapped, User		26/03/2012 13:45:42	26/03/2012 13:45:50	00:00:08		5724170672440147978	5724170672440147978		
Unmapped, User		26/03/2012 13:42:45	26/03/2012 13:42:47	00:00:02		5724169890756100102	5724169890756100102		

Double click on any interaction in the table above to play it back. An example is shown below.

The screenshot shows the NICE Business Analyzer playback interface. The top bar displays 'Start: 27/03/2012 11:14:07', 'End: 11:14:23', 'Duration: 00:00:15', and 'Error occurred: Output allocated- pla'. The main area shows a timeline with a waveform and a list of participants: 'Customer' and 'Agent'. The 'Customer' participant is highlighted, showing a timeline from 11:14:07 to 11:14:22. The 'Agent' participant is also highlighted, showing a timeline from 11:14:07 to 11:14:22. The interface includes playback controls at the bottom.

9. Conclusion

These Application Notes describe the configuration steps required for NICE Interaction Management R4.1 to successfully interoperate with Avaya Communication Server R7.5 and Avaya Aura® Contact Centre R6.2 using Meridian Link Services Module (MLSM) to receive CTI events. All test cases were completed successfully. Please refer to **Section 2.2** for test results and observations.

10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com> where the following documents can be obtained.

- [1] *Software Input Reference Administration Avaya Communication Server 1000, Release 7.5*; Document No. NN43001-611_05.02
- [2] *Avaya Aura ® Contact Centre Planning and Engineering*, Doc # NN44400-210, Issue 3.03 Release 6.2
- [3] *Avaya Aura ® Contact Centre Installation*, Doc # NN44400-311, Issue 3.02 Release 6.2

All information on the product installation and configuration of NICE Interaction Management can be found at <http://www.nice.com>

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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 DevConnect Program at devconnect@avaya.com.

Appendix A

CS1000E Call Server Patch list

```

VERSION 4121
RELEASE 7
ISSUE 50 Q +
DepList 1: core Issue: 01 (created: 2012-07-04 12:32:45 (est))

IN-SERVICE PEPS
PAT# CR #          PATCH REF #    NAME          DATE          FILENAME        SPECINS
000 wi00960809      ISS1:1OF1      p31564_1    03/09/2012    p31564_1.cpl    NO
001 wi00931028      ISS1:1OF1      p31354_1    03/09/2012    p31354_1.cpl    YES
002 wi00896394      ISS1:1OF1      p30807_1    03/09/2012    p30807_1.cpl    NO
003 wi00894443      ISS1:1OF1      p31093_1    03/09/2012    p31093_1.cpl    NO
004 wi00938555      ISS1:1OF1      p30881_1    03/09/2012    p30881_1.cpl    YES
005 wi00865477      ISS1:1OF1      p30894_1    03/09/2012    p30894_1.cpl    YES
006 wi00905600      ISS1:1OF1      p31201_1    03/09/2012    p31201_1.cpl    NO
007 wi00841980      ISS1:1OF1      p30618_1    03/09/2012    p30618_1.cpl    NO
008 wi00980476      ISS1:1OF1      p31387_1    03/09/2012    p31387_1.cpl    NO
009 WI00839794      ISS1:1OF1      p28647_1    03/09/2012    p28647_1.cpl    NO
010 wi00879322      ISS1:1OF1      p30954_1    03/09/2012    p30954_1.cpl    NO
011 wi00909476      ISS1:1OF1      p31340_1    03/09/2012    p31340_1.cpl    NO
012 wi00958776      ISS1:1OF1      p31542_1    03/09/2012    p31542_1.cpl    YES
013 wi00906350      ISS1:1OF1      p31219_1    03/09/2012    p31219_1.cpl    NO
014 wi00937114      ISS1:1OF1      p31310_1    03/09/2012    p31310_1.cpl    NO
015 wi00897082      ISS1:1OF1      p31124_1    03/09/2012    p31124_1.cpl    NO
016 wi00979414      ISS1:1OF1      p31748_1    03/09/2012    p31748_1.cpl    YES
017 wi00839255      ISS1:1OF1      p30591_1    03/09/2012    p30591_1.cpl    NO
018 wi00973241      ISS1:1OF1      p31715_1    03/09/2012    p31715_1.cpl    NO
019 wi00907707      ISS1:1OF1      p31228_1    03/09/2012    p31228_1.cpl    NO
020 wi00891626      ISS1:1OF1      p31051_1    03/09/2012    p31051_1.cpl    YES
021 wi00852365      ISS1:1OF1      p30707_1    03/09/2012    p30707_1.cpl    NO
022 wi00932204      ISS2:1OF1      p31305_2    03/09/2012    p31305_2.cpl    NO
023 wi00962211      ISS1:1OF1      p31580_1    03/09/2012    p31580_1.cpl    NO
024 wi00921295      ISS1:1OF1      p31265_1    03/09/2012    p31265_1.cpl    NO
025 wi00984652      ISS1:1OF1      p31792_1    03/09/2012    p31792_1.cpl    NO
026 wi00936714      ISS1:1OF1      p31379_1    03/09/2012    p31379_1.cpl    NO
027 wi00907697      ISS1:1OF1      p31227_1    03/09/2012    p31227_1.cpl    NO
028 wi00968353      ISS1:1OF1      p31412_1    03/09/2012    p31412_1.cpl    NO
029 wi00903437      ISS1:1OF1      p31167_1    03/09/2012    p31167_1.cpl    NO
030 wi00993377      ISS1:1OF1      p31860_1    03/09/2012    p31860_1.cpl    NO
031 WI00889786      ISS1:1OF1      p30750_1    03/09/2012    p30750_1.cpl    NO
032 wi00985760      ISS1:1OF1      p31913_1    03/09/2012    p31913_1.cpl    NO
033 wi00840590      ISS1:1OF1      p30767_1    03/09/2012    p30767_1.cpl    NO
034 wi00900668      ISS1:1OF1      p30456_1    03/09/2012    p30456_1.cpl    NO
035 wi00956788      ISS1:1OF1      p31638_1    03/09/2012    p31638_1.cpl    NO
036 wi00906163      ISS1:1OF1      p31205_1    03/09/2012    p31205_1.cpl    NO
037 WI00854150      ISS1:1OF1      p30468_1    03/09/2012    p30468_1.cpl    NO
038 wi00858335      ISS1:1OF1      p30819_1    03/09/2012    p30819_1.cpl    NO
039 wi00948931      ISS1:1OF1      p31407_1    03/09/2012    p31407_1.cpl    NO
040 wi00836182      ISS1:1OF1      p30450_1    03/09/2012    p30450_1.cpl    NO
041 wi00945997      ISS1:1OF1      p31641_1    03/09/2012    p31641_1.cpl    NO
042 wi00949273      ISS1:1OF1      p31411_1    03/09/2012    p31411_1.cpl    NO
043 wi00856702      ISS1:1OF1      p30573_1    03/09/2012    p30573_1.cpl    NO
044 wi00857566      ISS1:1OF1      p30766_1    03/09/2012    p30766_1.cpl    NO
045 wi00881777      ISS1:1OF1      p25747_1    03/09/2012    p25747_1.cpl    NO
046 wi00883007      ISS1:1OF1      p31778_1    03/09/2012    p31778_1.cpl    YES
047 wi00969208      ISS1:1OF1      p31656_1    03/09/2012    p31656_1.cpl    NO

```

048	WI00836292	ISS1:1OF1	p30554_1	03/09/2012	p30554_1.cpl	NO
049	wi00967509	ISS1:1OF1	p31294_1	03/09/2012	p31294_1.cpl	NO
050	wi00908598	ISS1:1OF1	p31235_1	03/09/2012	p31235_1.cpl	NO
051	wi00895181	ISS1:1OF1	p31106_1	03/09/2012	p31106_1.cpl	NO
052	wi00951427	ISS1:1OF1	p31478_1	03/09/2012	p31478_1.cpl	NO
053	wi00960133	ISS2:1OF1	p31557_2	03/09/2012	p31557_2.cpl	NO
054	wi00894243	ISS1:1OF1	p31087_1	03/09/2012	p31087_1.cpl	NO
055	wi00869243	ISS1:1OF1	p30848_1	03/09/2012	p30848_1.cpl	NO
056	wi00865477	ISS1:1OF1	p30893_1	03/09/2012	p30893_1.cpl	YES
057	wi00856991	ISS1:1OF1	p17588_1	03/09/2012	p17588_1.cpl	NO
058	wi00968157	ISS1:1OF1	p31637_1	03/09/2012	p31637_1.cpl	NO
059	WI00928455	ISS1:1OF1	p31297_1	03/09/2012	p31297_1.cpl	NO
060	wi00860279	ISS1:1OF1	p30789_1	03/09/2012	p30789_1.cpl	NO
061	wi00975659	ISS1:1OF1	p31707_1	03/09/2012	p31707_1.cpl	NO
062	wi00977436	ISS1:1OF1	p31834_1	03/09/2012	p31834_1.cpl	NO
063	wi00959463	ISS1:1OF1	p31528_1	03/09/2012	p31528_1.cpl	NO
064	wi00865477	ISS1:1OF1	p30892_1	03/09/2012	p30892_1.cpl	YES
065	wi00997559	ISS1:1OF1	p31898_1	03/09/2012	p31898_1.cpl	NO
066	wi00859123	ISS1:1OF1	p30648_1	03/09/2012	p30648_1.cpl	NO
067	wi00998121	ISS1:1OF1	p31897_1	03/09/2012	p31897_1.cpl	NO
068	wi00965838	ISS1:1OF1	p31623_1	03/09/2012	p31623_1.cpl	NO
069	wi00978883	ISS1:1OF1	p31770_1	03/09/2012	p31770_1.cpl	NO
070	wi00850521	ISS1:1OF1	p30709_1	03/09/2012	p30709_1.cpl	YES
071	wi00886321	ISS1:1OF1	p31009_1	03/09/2012	p31009_1.cpl	NO
072	wi00862574	iss1:1of1	p30870_1	03/09/2012	p30870_1.cpl	NO
073	wi00835294	ISS1:1OF1	p30565_1	03/09/2012	p30565_1.cpl	NO
074	wi00983505	ISS1:1OF1	p31758_1	03/09/2012	p31758_1.cpl	NO
075	wi00969581	ISS1:1OF1	p31661_1	03/09/2012	p31661_1.cpl	YES
076	wi00969890	ISS1:1OF1	p31664_1	03/09/2012	p31664_1.cpl	YES
077	wi00968531	ISS1:1OF1	p31645_1	03/09/2012	p31645_1.cpl	NO
078	wi00991523	ISS1:1OF1	p31603_1	03/09/2012	p31603_1.cpl	NO
079	wi00841273	ISS1:1OF1	p30713_1	03/09/2012	p30713_1.cpl	NO
080	wi00880836	ISS1:1OF1	p30976_1	03/09/2012	p30976_1.cpl	NO
081	wi00882293	ISS1:1OF1	p31010_1	03/09/2012	p31010_1.cpl	NO
082	wi00981711	ISS1:1OF1	p31766_1	03/09/2012	p31766_1.cpl	NO
083	wi00950575	ISS1:1OF1	p31724_1	03/09/2012	p31724_1.cpl	NO
084	wi00961267	ISS1:1OF1	p30288_1	03/09/2012	p30288_1.cpl	NO
085	wi00890475	p30952	p31048_1	03/09/2012	p31048_1.cpl	NO
086	wi00884699	ISS1:1OF1	p31000_1	03/09/2012	p31000_1.cpl	YES
087	wi00959284	ISS1:1OF1	p31531_1	03/09/2012	p31531_1.cpl	NO
088	wi00865477	ISS1:1OF1	p30896_1	03/09/2012	p30896_1.cpl	YES
089	wi00925208	ISS1:1OF1	p30986_1	03/09/2012	p30986_1.cpl	NO
090	wi00927321	ISS1:1OF1	p31286_1	03/09/2012	p31286_1.cpl	YES
091	wi00982566	ISS1:1OF1	p31774_1	03/09/2012	p31774_1.cpl	NO
092	wi01003999	ISS1:1OF1	p31946_1	03/09/2012	p31946_1.cpl	YES
093	wi00964006	ISS1:1OF1	p31595_1	03/09/2012	p31595_1.cpl	YES
094	wi00930649	ISS1:1OF1	p31570_1	03/09/2012	p31570_1.cpl	NO
095	wi00877367	ISS1:1OF1	p30534_1	03/09/2012	p30534_1.cpl	NO
096	wi00946558	ISS1:1OF1	p31358_1	03/09/2012	p31358_1.cpl	NO
097	wi00905297	ISS1:1OF1	p31195_1	03/09/2012	p31195_1.cpl	NO
098	wi00946477	ISS1:1OF1	p31426_1	03/09/2012	p31426_1.cpl	NO
099	wi00852389	ISS1:1OF1	p30641_1	03/09/2012	p30641_1.cpl	NO
100	wi00942734	ISS1:1OF1	p31409_1	03/09/2012	p31409_1.cpl	NO
101	wi00877592	ISS1:1OF1	p30880_1	03/09/2012	p30880_1.cpl	NO
102	wi00986337	ISS1:1OF1	p31803_1	03/09/2012	p31803_1.cpl	NO
103	wi00854415	ISS1:1OF1	p30593_1	03/09/2012	p30593_1.cpl	NO
104	wi00924886	ISS1:1OF1	p31062_1	03/09/2012	p31062_1.cpl	YES
105	wi00827950	ISS2:1OF1	p30471_2	03/09/2012	p30471_2.cpl	NO
106	wi00898327	ISS1:1OF1	p31136_1	03/09/2012	p31136_1.cpl	NO
107	wi00895090	ISS1:1OF1	p31105_1	03/09/2012	p31105_1.cpl	NO
108	wi00868729	ISS1:1OF1	p31163_1	03/09/2012	p31163_1.cpl	NO
109	wi00905660	ISS1:1OF1	p27968_1	03/09/2012	p27968_1.cpl	NO

110	wi00900766	ISS1:1OF1	p31159_1	03/09/2012	p31159_1.cpl	NO
111	wi00925218	ISS1:1OF1	p30675_1	03/09/2012	p30675_1.cpl	NO
112	wi00897176	ISS1:1OF1	p30418_1	03/09/2012	p30418_1.cpl	NO
113	wi00898200	ISS1:1OF1	p31274_1	03/09/2012	p31274_1.cpl	NO
114	wi00824257	ISS1:1OF1	p30447_1	03/09/2012	p30447_1.cpl	NO
115	wi00979591	ISS1:1OF1	p31746_1	03/09/2012	p31746_1.cpl	NO
116	wi00976209	ISS1:1OF1	p31717_1	03/09/2012	p31717_1.cpl	YES
117	wi00955753	ISS1:1OF1	p31733_1	03/09/2012	p31733_1.cpl	NO
118	wi00974635	ISS1:1OF1	p31695_1	03/09/2012	p31695_1.cpl	YES
119	wi00993648	ISS1:1OF1	p31867_1	03/09/2012	p31867_1.cpl	NO
120	wi00896420	ISS1:1OF1	p30867_1	03/09/2012	p30867_1.cpl	NO
121	wi00937672	ISS1:1OF1	p31276_1	03/09/2012	p31276_1.cpl	NO
122	WI00836334	ISS1:1OF1	p30481_1	03/09/2012	p30481_1.cpl	NO
123	wi00880386	ISS1:1OF1	p30977_1	03/09/2012	p30977_1.cpl	NO
124	wi00965285	ISS1:1OF1	p31476_1	03/09/2012	p31476_1.cpl	NO
125	wi00875701	ISS1:1OF1	p30942_1	03/09/2012	p30942_1.cpl	NO
126	wi00949410	ISS1:1OF1	p31248_1	03/09/2012	p31248_1.cpl	NO
127	wi00856410	ISS1:1OF1	p30749_1	03/09/2012	p30749_1.cpl	NO
128	wi00959820	ISS1:1OF1	p31562_1	03/09/2012	p31562_1.cpl	NO
129	wi00943748	ISS1:1OF1	p31516_1	03/09/2012	p31516_1.cpl	NO
130	wi00936935	ISS1:1OF1	p31362_1	03/09/2012	p31362_1.cpl	NO
131	wi00969039	ISS1:1OF1	p31643_1	03/09/2012	p31643_1.cpl	NO
132	wi00944019	ISS1:1OF1	p31874_1	03/09/2012	p31874_1.cpl	NO
133	wi00987424	ISS1:1OF1	p31815_1	03/09/2012	p31815_1.cpl	NO
134	wi00990993	ISS1:1OF1	p31825_1	03/09/2012	p31825_1.cpl	NO
135	wi00957252	ISS1:1OF1	p31530_1	03/09/2012	p31530_1.cpl	NO
136	wi00975133	ISS1:1OF1	p31731_1	03/09/2012	p31731_1.cpl	NO
137	wi00871739	ISS1:1OF1	p30856_1	03/09/2012	p30856_1.cpl	NO
138	wi00883604	ISS1:1OF1	p30973_1	03/09/2012	p30973_1.cpl	NO
139	wi00929140	ISS1:1OF1	p31284_1	03/09/2012	p31284_1.cpl	NO
140	wi00854130	ISS1:1OF1	p30443_1	03/09/2012	p30443_1.cpl	NO
141	wi00956885	ISS1:1OF1	p31489_1	03/09/2012	p31489_1.cpl	NO
142	wi00859499	ISS1:1OF1	p30694_1	03/09/2012	p30694_1.cpl	NO
143	wi00925141	ISS1:1OF1	p30802_1	03/09/2012	p30802_1.cpl	NO
144	wi00932948	ISS1:1OF1	p31077_1	03/09/2012	p31077_1.cpl	NO
145	wi00973270	ISS1:1OF1	p31751_1	03/09/2012	p31751_1.cpl	NO
146	wi00991892	ISS1:1OF1	p31853_1	03/09/2012	p31853_1.cpl	NO
147	wi00984888	ISS1:1OF1	p31795_1	03/09/2012	p31795_1.cpl	NO
148	wi00873382	ISS1:1OF1	p30832_1	03/09/2012	p30832_1.cpl	NO
149	wi00967510	ISS1:1OF1	p31147_1	03/09/2012	p31147_1.cpl	NO
150	wi00903381	ISS1:1OF1	p30421_1	03/09/2012	p30421_1.cpl	NO
151	wi00996630	ISS1:1OF1	p31789_1	03/09/2012	p31789_1.cpl	NO
152	wi00863876	ISS1:1OF1	p30787_1	03/09/2012	p30787_1.cpl	NO
153	wi00832106	ISS1:1OF1	p30550_1	03/09/2012	p30550_1.cpl	NO
154	WI00853473	ISS1:1OF1	p30625_1	03/09/2012	p30625_1.cpl	NO
155	wi00865477	ISS1:1OF1	p30898_1	03/09/2012	p30898_1.cpl	YES
156	wi00971209	ISS1:1OF1	p31750_1	03/09/2012	p31750_1.cpl	NO
157	wi00842409	ISS1:1OF1	p30621_1	03/09/2012	p30621_1.cpl	NO
158	wi00974272	ISS1:1OF1	p31690_1	03/09/2012	p31690_1.cpl	YES
159	wi00971029	ISS1:1OF1	p31794_1	03/09/2012	p31794_1.cpl	NO
160	wi00974856	ISS1:1OF1	p31823_1	03/09/2012	p31823_1.cpl	NO
161	wi00853178	ISS1:1OF1	p30719_1	03/09/2012	p30719_1.cpl	NO
162	wi00977978	ISS1:1OF1	p31831_1	03/09/2012	p31831_1.cpl	NO
163	wi00887744	ISS2:1OF1	p31026_2	03/09/2012	p31026_2.cpl	NO
164	wi00903369	ISS1:1OF1	p31165_1	03/09/2012	p31165_1.cpl	NO
165	wi00984178	ISS1:1OF1	p31786_1	03/09/2012	p31786_1.cpl	NO
166	wi00953900	ISS1:1OF1	p31494_1	03/09/2012	p31494_1.cpl	NO
167	wi00981928	ISS1:1OF1	p31869_1	03/09/2012	p31869_1.cpl	NO
168	wi00908933	ISS1:1OF1	p31239_1	03/09/2012	p31239_1.cpl	NO
169	wi00906022	ISS1:1OF1	p31202_1	03/09/2012	p31202_1.cpl	NO
170	wi00896680	ISS1:1OF1	p30357_1	03/09/2012	p30357_1.cpl	NO
171	wi00968448	ISS1:1OF1	p31648_1	03/09/2012	p31648_1.cpl	YES

172	wi00897096	ISS1:1OF1	p30676_1	03/09/2012	p30676_1.cpl	NO
173	wi00891621	ISS1:1OF1	p31037_1	03/09/2012	p31037_1.cpl	NO
174	wi00930864	ISS1:1OF1	p31325_1	03/09/2012	p31325_1.cpl	NO
175	wi00996639	ISS1:1OF1	p31886_1	03/09/2012	p31886_1.cpl	NO
176	wi00985153	ISS1:1OF1	p31859_1	03/09/2012	p31859_1.cpl	NO
177	WI00927300	ISS1:1OF1	p30999_1	03/09/2012	p30999_1.cpl	NO
178	wi00951837	ISS1:1OF1	p31485_1	03/09/2012	p31485_1.cpl	NO
179	wi00962955	ISS1:1OF1	p31585_1	03/09/2012	p31585_1.cpl	NO
180	wi00923899	ISS1:1OF1	p31270_1	03/09/2012	p31270_1.cpl	NO
181	wi00948274	ISS1:1OF1	p31365_1	03/09/2012	p31365_1.cpl	NO
182	wi00977393	ISS1:1OF1	p31744_1	03/09/2012	p31744_1.cpl	YES
183	wi00967512	ISS1:1OF1	p31384_1	03/09/2012	p31384_1.cpl	NO
184	wi00989828	ISS1:1OF1	p31836_1	03/09/2012	p31836_1.cpl	NO
185	wi00834382	ISS1:1OF1	p30548_1	03/09/2012	p30548_1.cpl	NO
186	wi00839821	ISS1:1OF1	p30619_1	03/09/2012	p30619_1.cpl	NO
187	wi00857362	ISS1:1OF1	p30782_1	03/09/2012	p30782_1.cpl	NO
188	wi00875425	ISS1:1OF1	p30943_1	03/09/2012	p30943_1.cpl	NO
189	wi00838073	ISS1:1OF1	p30588_1	03/09/2012	p30588_1.cpl	NO
190	wi00943172	ISS1:1OF1	p31402_1	03/09/2012	p31402_1.cpl	NO
191	wi00946876	ISS1:1OF1	p31430_1	03/09/2012	p31430_1.cpl	NO
192	wi00839134	ISS1:1OF1	p30698_1	03/09/2012	p30698_1.cpl	YES
193	wi00843623	ISS1:1OF1	p30731_1	03/09/2012	p30731_1.cpl	YES
194	wi00946282	ISS1:1OF1	p31204_1	03/09/2012	p31204_1.cpl	NO
195	wi00932958	ISS1:1OF1	p31115_1	03/09/2012	p31115_1.cpl	NO
196	wi00949627	ISS1:1OF1	p31462_1	03/09/2012	p31462_1.cpl	NO
197	wi00871969	ISS1:1OF1	p30768_1	03/09/2012	p30768_1.cpl	NO
198	wi00987089	ISS1:1OF1	p31809_1	03/09/2012	p31809_1.cpl	NO
199	wi00826075	ISS1:1OF1	p30452_1	03/09/2012	p30452_1.cpl	NO
200	wi00879526	ISS1:1OF1	p31007_1	03/09/2012	p31007_1.cpl	NO
201	wi00978064	ISS1:1OF1	p31760_1	03/09/2012	p31760_1.cpl	NO
202	wi00982243	ISS1:1OF1	p31797_1	03/09/2012	p31797_1.cpl	YES
203	wi00992921	ISS1:1OF1	p31878_1	03/09/2012	p31878_1.cpl	NO
204	wi00994044	ISS1:1OF1	p31871_1	03/09/2012	p31871_1.cpl	NO
205	wi00855423	ISS1:1OF1	p31328_1	03/09/2012	p31328_1.cpl	YES
206	wi00869695	ISS1:1OF1	p30654_1	03/09/2012	p30654_1.cpl	NO
207	wi00959457	ISS1:1OF1	p31551_1	03/09/2012	p31551_1.cpl	NO
208	wi00900096	ISS1:1OF1	p31006_1	03/09/2012	p31006_1.cpl	NO
209	wi00992974	ISS1:1OF1	p31889_1	03/09/2012	p31889_1.cpl	NO
210	WI00843571	ISS1:1OF1	p30627_1	03/09/2012	p30627_1.cpl	NO
211	wi00688381	ISS1:1OF1	p30104_1	03/09/2012	p30104_1.cpl	NO
212	wi00988285	ISS1:1OF1	p31824_1	03/09/2012	p31824_1.cpl	NO
213	wi00899584	ISS1:1OF1	p30809_1	03/09/2012	p30809_1.cpl	NO
214	wi00957235	ISS1:1OF1	p31798_1	03/09/2012	p31798_1.cpl	NO

MDP>LAST SUCCESSFUL MDP REFRESH :2012-07-04 18:11:59(Local Time)

MDP>USING DEPLIST ZIP FILE DOWNLOADED :2012-07-04 12:32:45(est)

Appendix B

Phonaset, ACD Queue and CDN Information

Agent phonaset

```
DES AGENT
TN 096 0 00 01 VIRTUAL
TYPE 1140
CDEN 8D
CTYP XDLC
CUST 0
NUID
NHTN
CFG_ZONE 00001
CUR_ZONE 00001
MRT
ERL 0
ECL 0
FDN
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 5
SCI 0
SSU

LNRS 16
XLST 0
SCPW 1234
SFLT NO
CAC_CIS 0
CAC_MFC 0
CLS UNR FBD WTA LPR PUA MTD FND HTD TDD HFD CRPD
MWD LMPN RMMD SMWD AAD IMD XHD IRA NID OLD VCE DRG1
POD SLKD CCSD SWD LNA CNDD
CFTD SFD MRD DDV CNID CDCA MSID DAPA BFED RCBF
ICDD CDMD LLCN MCTD CLBD AUTU
GPUD DPUD DNDD CFXD ARHD CNTD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID DNAA RDLA BUZZ AGRD MOAD
UDI RCC HBTD AHA IPND DDGA NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USMD USRD ULAD CCBF RTDD RBDD RBHD PGND OCBF FLXD FTTC DNDY DNO3 MCBN
FDSD NOVD VOLA VOUA CDMR PRED RECA MCDD T87D SBMD
KEM3 MSNV FRA PKCH MUTA MWTD DVLD CROD ELCD
CPND_LANG ENG
HUNT 5002
LHK 0
LPK 0
PLEV 02
PUID
UPWD
DANI NO
SPID NONE
AST 00 03
IAPG 1
AACS YES
ACQ AS: TN,AST-DN,AST-POSID
```

```

ASID 17
SFNB 1 2 3 4 5 6 7 8 9 10 11 12 13 15 16 17 18 19 22 24 25 26
28 29 31 33 34 35 36 37 38 39
SFRB 1 2 15 32 33
USFB 1 2 3 4 5 6 7 9 10 11 12 13 14 15
CALB 0 1 3 4 5 6 8 9 10 11 12
FCTB
ITNA NO
DGRP
PRI 01
MLWU_LANG 0
MLNG ENG
DNDR 0
KEY 00 ACD 6600 0 6001
AGN
    ANIE 0
    01 NRD
    02 MSB
    03 SCR 5001 0 MARP
    ANIE 0
    04
    05 RNP 5
    06
    07
    08
    09
    10
    11
    12
    13
    14
    15
    16
    17 TRN
    18 AO6
    19 CFW 16 5002
    20 RGA
    21 PRK
    22 RNP
    23
    24 PRS
    25 CHG
    26 CPN
    27
    28
    29
    30
    31
DATE 7 SEP 2012

```

ACD (Automatic Call Distribution) Queue

```
TYPE acd
CUST 0
ACDN 6600
TYPE ACD
CUST 0
ACDN 6600
MWC NO
DSAC NO
MAXP 10
SDNB NO
BSCW NO
ISAP NO
AACQ NO
RGAI NO
ACAA NO
FRRT
SRRT
NRRT
FROA NO
CALP POS
ICDD NO
NCFW
FNCF NO
CWTT NONE
HMSB NO
ACPQ NO
FORC NO
RTQT 0
SPCP NO
OBTN NO
RAO NO
CWTH 1
NCWL NO
BYTH 0
OVTH 2047
TOFT NONE
HPQ NO
OCN NO
OVDN
IFDN
OVBU LNK LNK LNK LNK
EMRT
MURT
RTPC NO
NRAC NO
RAGT 4
DURT 30
RSND 4
FCTH 20
CRQS 100
CCBA NO
SIPQ NO
IVR NO
OBSC NO
OBPT 5
CWNT NONE
```

CDN (Controlled Directory Number)

```
TYPE  CDN
CUST  0
CDN    5500
FRRT
SRRT
FROA  NO
UII    NO
MURT
CDSQ  NO
DFDN  6600
NAME  NO
CMB    NO
CEIL  2047
CLRO  NO
OVFL  NO
TDNS  NO
AACQ  YES
ASID  17
SFNB  3  4  29  33  35  36  37  38  39
USFB  1  3  4  5  6  7  9  10  11  12  13  14  15
CALB  0  1  2  3  4  5  6  8  9  10  11  12
CNTL  YES
VSID
HSID
CWTH  1
BYTH  0
```

Appendix C

Avaya Aura® Contact Centre Patches

CCMS Patch Level

The screenshot shows the Avaya Contact Center Patch Manager application window. The title bar reads "Contact Center Patch Manager". The menu bar includes "File", "View", "Actions", and "About". The Avaya logo is displayed on the left, and the text "Contact Center Patch Manager" is on the right. Below this is a navigation bar with tabs: "Contact Center", "CCCC", "CCLM", "CCMA", "CCMM", "CCMS", "CCMSU", "CCT", and "CCWS". The "CCMS" tab is selected. The main area is divided into two sections. The top section, "General Information", shows "Component Name" as "Manager Server" and "Version 6.0 (Build 8.0.0.152)". The bottom section, "Installed Updates", has a "Select All" checkbox and a table of installed updates.

Update	Type	Version	Date Installed	Status
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.0-0474_ServicePack	Service Pack	6.2.205.0 (Build 0474)	16/04/2012 16:22:50	Active
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.50-0301_RollupPatch	Patch	6.2.205.50 (Build 0301)	17/04/2012 08:18:22	Active
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.100-0034_RollupPatch	Patch	6.2.205.100 (Build 0034)	17/04/2012 08:46:29	Active
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.300-0083_RollupPatch	Patch	6.2.205.300 (Build 0083)	17/04/2012 09:43:47	Active
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.301-0432_Patch	Patch	6.2.205.301 (Build 0432)	17/04/2012 09:49:38	Active
<input type="checkbox"/> AvayaAura_CCMS_6.2.205.303-0446_Patch	Patch	6.2.205.303 (Build 0446)	17/04/2012 09:51:17	Active

CCMA Patch Level

The screenshot shows the Avaya Contact Center Patch Manager application window. The title bar reads "Contact Center Patch Manager". The menu bar includes "File", "View", "Actions", and "About". The Avaya logo is displayed on the left, and the text "Contact Center Patch Manager" is on the right. Below this is a navigation bar with tabs: "Contact Center", "CCCC", "CCLM", "CCMA", "CCMM", "CCMS", "CCMSU", "CCT", and "CCWS". The "CCMA" tab is selected. The main area is divided into two sections. The top section, "General Information", shows "Component Name" as "Manager Administration" and "Version 6.0 (Build 8.0.0.206)". The bottom section, "Installed Updates", has a "Select All" checkbox and a table of installed updates.

Update	Type	Version	Date Installed	Status
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.0-0509_ServicePack	Service Pack	6.2.205.0 (Build 0509)	16/04/2012 16:05:32	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.50-0282_RollupPatch	Patch	6.2.205.50 (Build 0282)	17/04/2012 08:10:05	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.100-0041_RollupPatch	Patch	6.2.205.100 (Build 0041)	17/04/2012 08:36:44	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.300-0087_RollupPatch	Patch	6.2.205.300 (Build 0087)	17/04/2012 09:24:13	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.301-0363_Patch	Patch	6.2.205.301 (Build 0363)	17/04/2012 09:27:03	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.303-0372_Patch	Patch	6.2.205.303 (Build 0372)	17/04/2012 09:29:33	Active
<input type="checkbox"/> AvayaAura_CCMA_6.2.205.307-0393_Patch	Patch	6.2.205.307 (Build 0393)	17/04/2012 09:31:53	Active

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