



Avaya Solution & Interoperability Test Lab

Application Notes for Avaya NES Contact Center R7.0 and Avaya Communication Server 1000E R6 with NICE Systems NICE Perform® R3.2 using Trunk-Side Recording over TDM - Issue 1.0

Abstract

These Application Notes describe the configuration steps required to enable NICE Systems NICE Perform® R3.2 to successfully interoperate with Avaya NES Contact Centre 7.0 using the Computer Telephony Interface. NICE Perform® R3.2 provides the ability to record voice calls in an Avaya NES Contact Centre 7.0. It is an integrated digital voice recording system.

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 a compliance-tested configuration of the interoperability between NICE Perform® R3.2, Avaya NES Contact Centre 7.0 and Avaya Communication Server 1000E R6.0 for Trunk-Side Recording using Time Division Multiplexing (TDM). NICE Perform® R3.2 is a recording solution that enables recording of voice calls in an Avaya contact centre environment. NICE Perform® R3.2 has been verified to integrate with Avaya Communication Server 1000E R6.0 and Avaya NES Contact Centre 7.0. NICE Perform® R3.2 is a Web based application that works with .NET framework and is used to retrieve recorded telephone conversations from a calls database. The NICE Applications® Suite contains tools for audio retrieval, system control and system status monitoring. NICE Perform® R3.2 can support many methods of recording including distributed, centralized and active recording. This solution validated the functionality of Trunk-Side Recording using TDM.

2. General Test Approach and Test Results

Avaya Communication Server 1000E R6.0 (CS1000E), Avaya NES Contact Centre R7.0 (CC7) and NICE Perform® 3.2(Nice Perform) were successfully tested in Avaya Lab. Test cases were executed jointly by an Avaya and a NICE Systems representative and all results were discussed and agreed following execution. The majority of the test cases were manual test cases with some low level traffic testing also carried out.

Note 1: Test scope - Trunk-Side Recording.

Note2: Where appropriate test cases were performed for DN and for ACD calls.

2.1. Interoperability Compliance testing

The following voice call scenarios were tested:

- Internal / external Calls
- Inbound / outbound calls
- Blind and supervised transfers
- Various conference calls
- Trunk calls, inbound and outbound
- Incomplete calls / abandoned calls
- Call Pickup
- Call Park
- Virtual Login

Serviceability tests were performed by disconnecting the Nice Systems from the network and reconnecting to ensure that the overall call recording and contact centre solution would resume normal service completely and successfully following a Network failure.

2.2. Test Results

All tests that were executed passed successfully. In addition, an overnight traffic test was completed for a small number of callers and agents to observe correct behavior and functionality.

Note 1: All tests were done using Avaya 1100 series VOIP Deskphones

Note 2: VOIP set Avaya 1230 IP Deskphone is not supported by NICE Perform 3.2

Note 3: All test cases that were executed were checked for ACD calls as well as DN calls.

2.3. Support

Technical support for the Avaya products can be obtained from Avaya. See the support link at support.avaya.com for contact information.

Technical support for the NICE Systems products can be obtained from NICE Systems. See the support link at www.nice.com for contact information.

3. Reference Configuration

Figure 1 shows Trunk side Recording using the Avaya Communication Server 1000 R6.0. The NICE Systems Logger is connected to the interconnecting PRI trunks between two Avaya CS1000E PBX's.

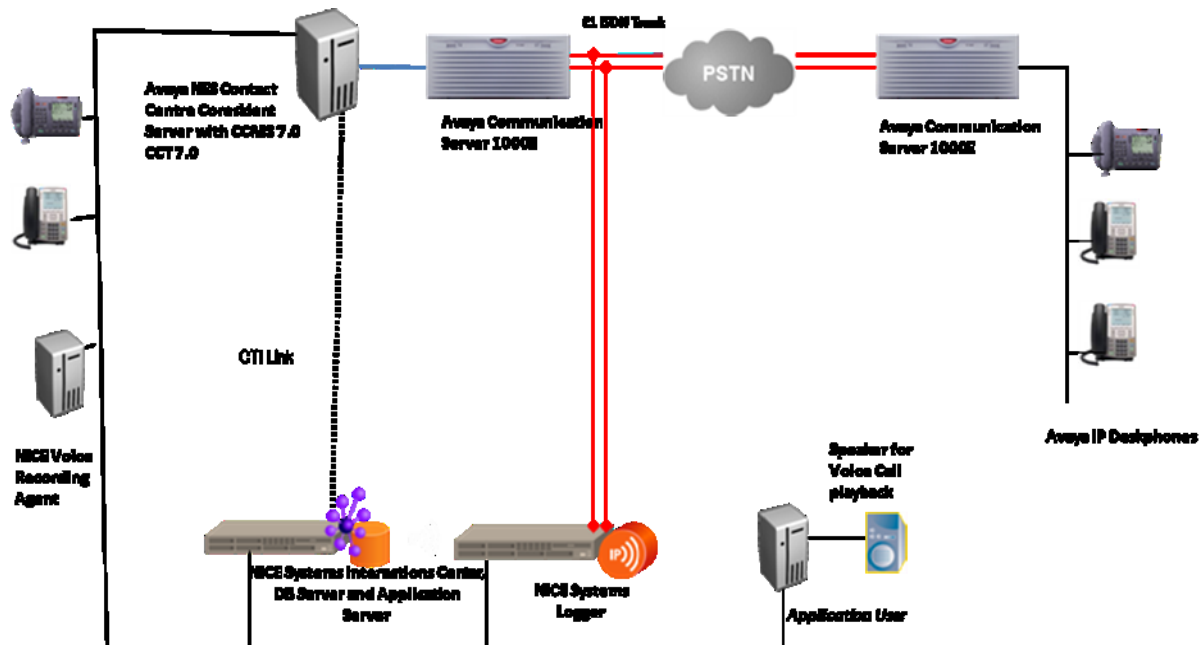


Figure 1: Trunk-side Recording – PRI

4. Equipment and Software Validated

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

Equipment	Software
Avaya Communication Server 1000E	Avaya Communication Server 1000E R6.0 DepList 1 with patches listed in the Appendix
Avaya CallPilot Server	Avaya CallPilot 5.00.41 With the following software patches: CP50041SU06S CP500S06G10S CP500S06G11S CP500S06G12S CP500S06G13C
Avaya NES Contact Centre Server	Avaya Contact Centre Manager Server R7.0 with patch SUS0201 Avaya Contact Centre Manager Administration R7.0 with patch SUS0201 Avaya License Manager with patch SUS0201 Avaya Communication Control Toolkit R7.0 with patch SUS0201
Avaya 1140E series VOIP Deskphones	UNISTim 5.0 (Firmware Version = 0625C8A).
NICE Application Centre and NICE Call Logging System	NICE Interaction Server Software 9.15.7.17 is a component of the NICE Perform 3.2 software
NICE TDM Logger Server	NICE TDM Logger is a component of the NICE Perform 3.2 software

5. Configure Avaya Communication Server 1000E

In order to proceed with call recording on the CS1000E the following step must be carried out.

- Enable call recording on the CS1000E
- Enable call recording for each Avaya Deskphone

Using a suitable terminal emulation program such as Putty, login to the CS1000 Call Server with the appropriate user name and password. Overlays can be accessed by typing **LD** followed by the relevant overlay number (e.g. **LD 17**). LD 17 provides the Enhanced Unsolicited Status Message (USM) IE enable (IPIE) prompt. The IPIE prompt enables or disables IP Call Recording on a system-wide basis. The functionality is disabled by default. When enabled, a modified Application Module Link (AML) message that identifies the IP endpoint is sent for each call. The IPIE prompt is in LD 17 under system parameters (PARM).

IP Call Recording - Prompt Response Description

LD 17

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change
TYPE	PARM	System Parameters
CUST	0	Customer Number as defined in LD15
IPIE	YES	USM IE enable

5.1. Enable Call Recording for each Avaya Deskphone

Using a suitable terminal emulation program such as Putty, login to the CS1000 Call Server with the appropriate user name and password. Overlays can be accessed by typing **LD** followed by the relevant overlay number (e.g. **LD 11**). Digital and VOIP Deskphones are configured in Overlay 11 on the CS1000E. Ensure the following prompts are responded to correctly

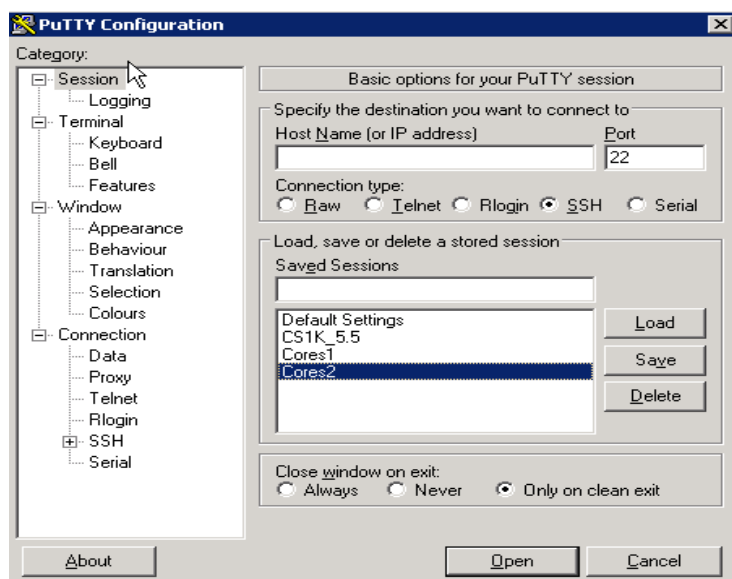
LD 11

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change
TYPE	11xx	Avaya 1100 Series type
CLS	ICRA	Call Recording Allowed
AST	xx yy	Keys xx and yy
IAPG	1	Allow Sending CTI Messages

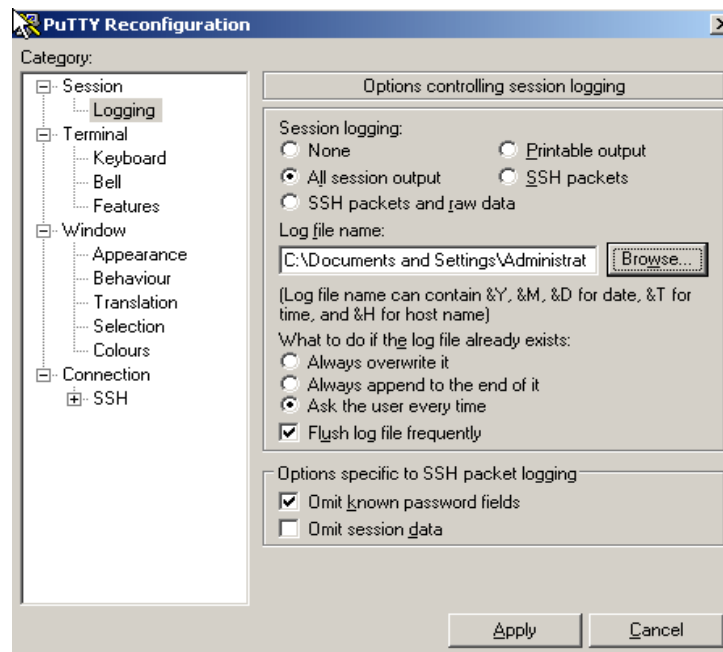
6. Configure Avaya Contact Centre Manager Server and Avaya Communications Control Toolkit

6.1. Import Switch Information into Avaya CCT and Map the Resources

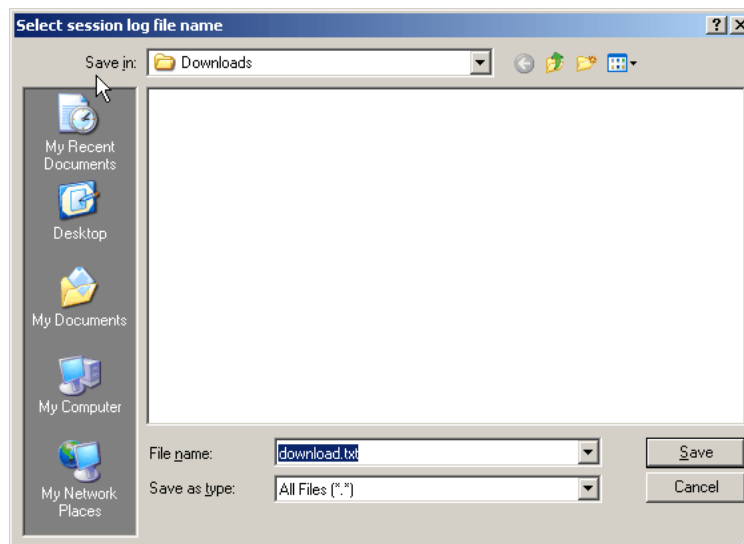
Following configuration changes should be completed with all CCT services shutdown with exception of the NCCT Data Access Layer service. Follow the instructions below: Log on to the Communication Control Toolkit server. Click **Start → Administrative Tools → Services**. Stop the **NCCT SMON** service to stop all of the services on the Communication Control Toolkit server. Start the **NCCT Data Access Layer** service. Create a switch configuration text file to capture the CS1000E data required to configure the Communication Control Toolkit. To do this use a terminal emulation software such as 'Putty' to open a connection to the CS1000E switch. When the connection is open and the login performed please follow the following instructions.



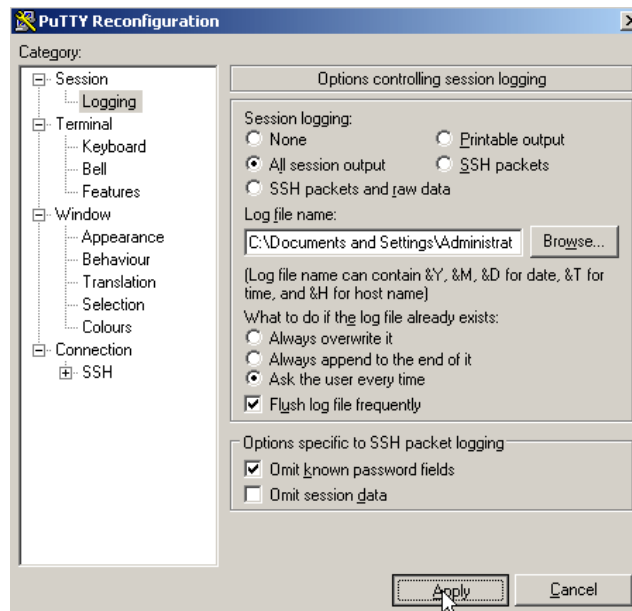
Create a **new text file** called **download.txt** and **direct** the download data to this file. Click on **Session → Logging** as shown. Select **All session output** radio button in the **Session logging** section. Accept all other default values. Click on **Browse**.



Type the name of the download file and click **Save**.



Click **Apply**.



The terminal session window appears.

```
nortel@cores2:~  
user then do not try to login. This system may be  
operational purposes at any time.  
nortel@47.166.92.197's password:  
Last login: Wed Sep  1 17:32:13 2010 from 47.166.  
[nortel@cores2 ~]$ cslogin  
  
SEC054 A device has connected to, or disconnected  
hentica  
ting  
  
OVL111 000 IDLE  
  
TTY 10 SCH MTC BUG    17:43  
  
OVL111 000 IDLE  
  
TTY 10 SCH MTC BUG    17:43
```

Following information in Overlay 20 and Overlay 23 is required to capture for inputting into the CCT server.

LD 20

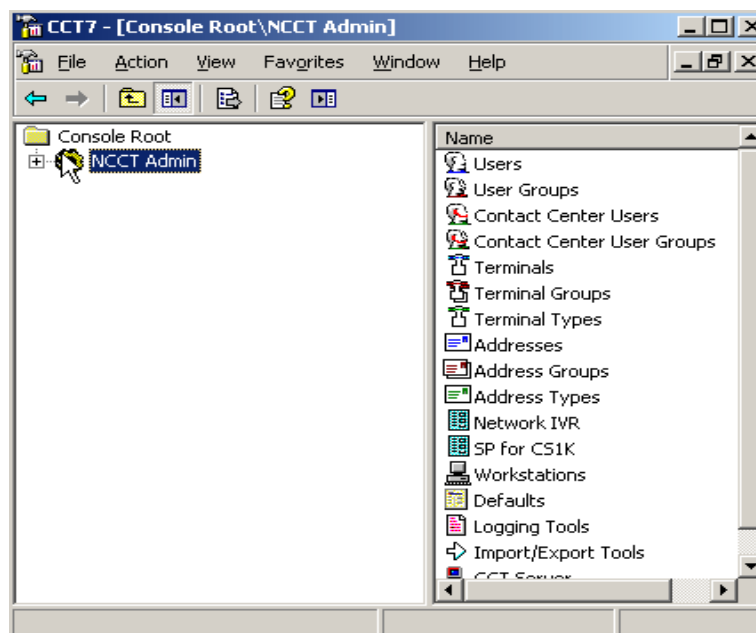
Prompt	Response	Description
>	LD 20	Enter Overlay 20
REQ	PRT	Print
TYPE	TNB	Terminal Number Block
CUST	0	Customer Number as defined in LD15
TNB	[Press return]	Return through rest of commands

To return to the initial prompt, enter **** (Shift + 8888) and press **Enter**. Type the following commands in **overlay 23**:

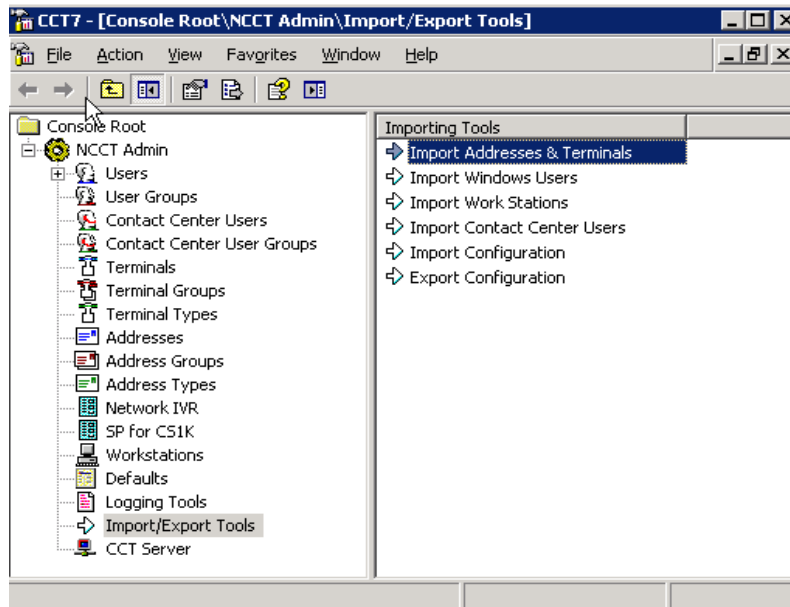
LD 23

Prompt	Response	Description
>	LD 23	Enter Overlay 23
REQ	PRT	Print
TYPE	CDN	Control DN
CUST	0	Customer Number as defined in LD15
CDN	[Press return]	Return through rest of commands

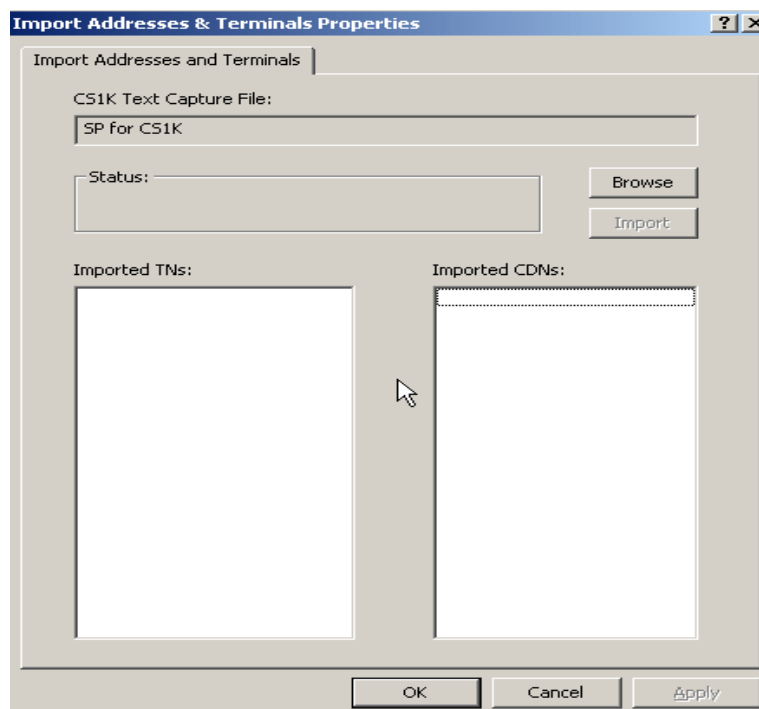
The information is downloaded and is available in the download file. Type **logo** and press **Enter**. Copy the text file **download.txt** that was captured to the CCT server. Click **Start → All Programs → Nortel → Communication Control Toolkit 7.0 → CCT Console**. Expand **NCCT Admin**.



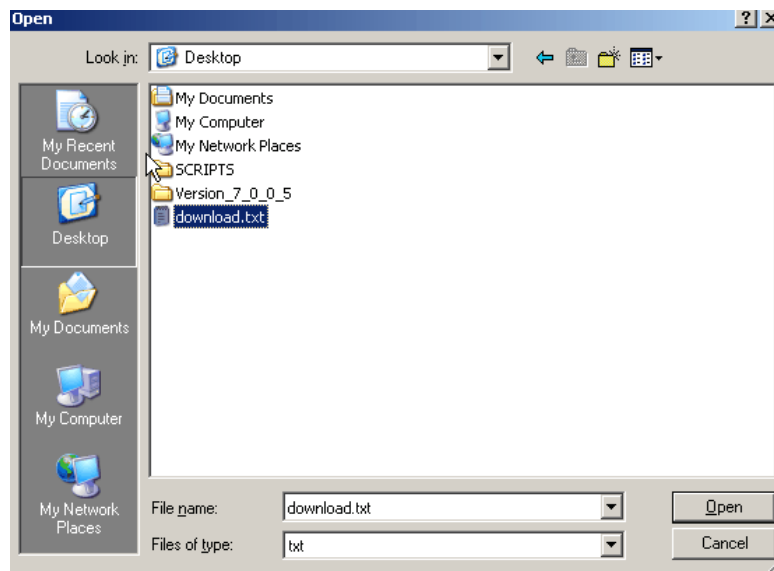
In the left pane of the **CCT7** console, click **Import/Export Tools**. In the right pane of the **CCT7** console, double-click **Import Addresses & Terminals**.



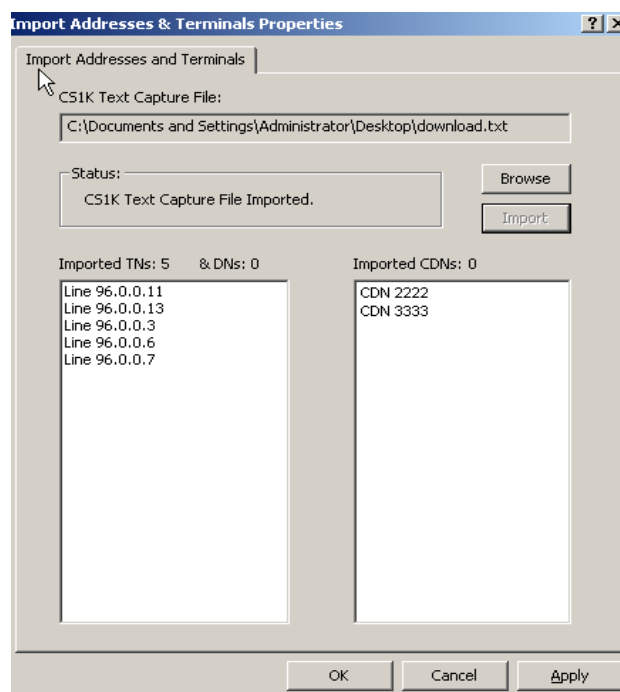
Click **Browse** to find the text file that was created in earlier.



Click **Open** to import the configuration data.

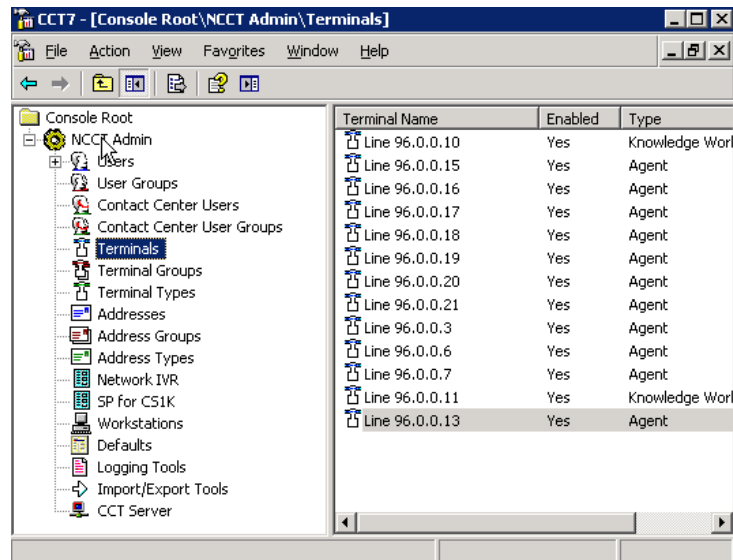


Click **Apply** to save changes. Click **OK**.

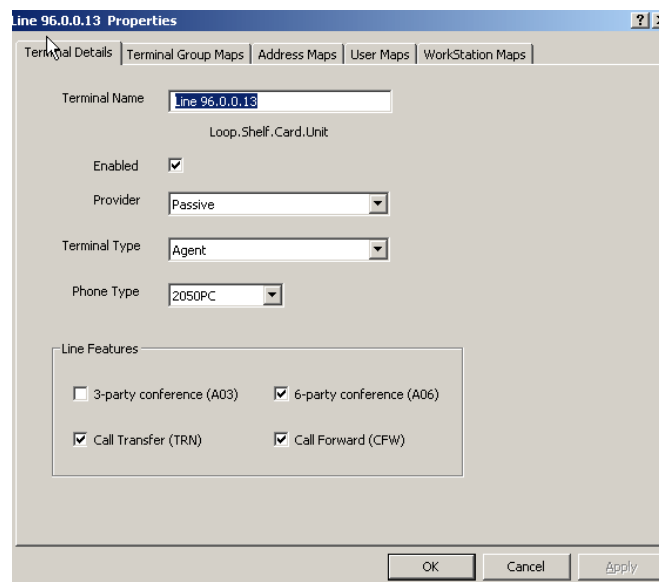


6.2. Mapping Resources

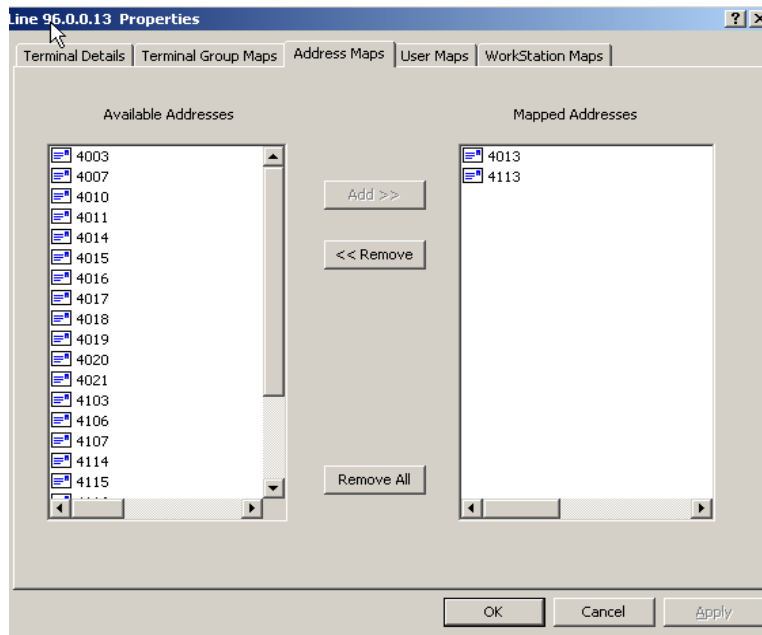
Map one resource to another in the Communication Control Toolkit administration tool to associate the resources with groups or other types of resources. Log on to the Communication Control Toolkit server. Click **Start→ All Programs→ Nortel→ Contact Center→ Communication Control Toolkit→ CCT Console** and expand **NCCT Admin**. In the left pane of the CCT console, click the name of the resource to be mapped. In the right pane of the CCT7 console, double-click the single resource that needs to be configured.



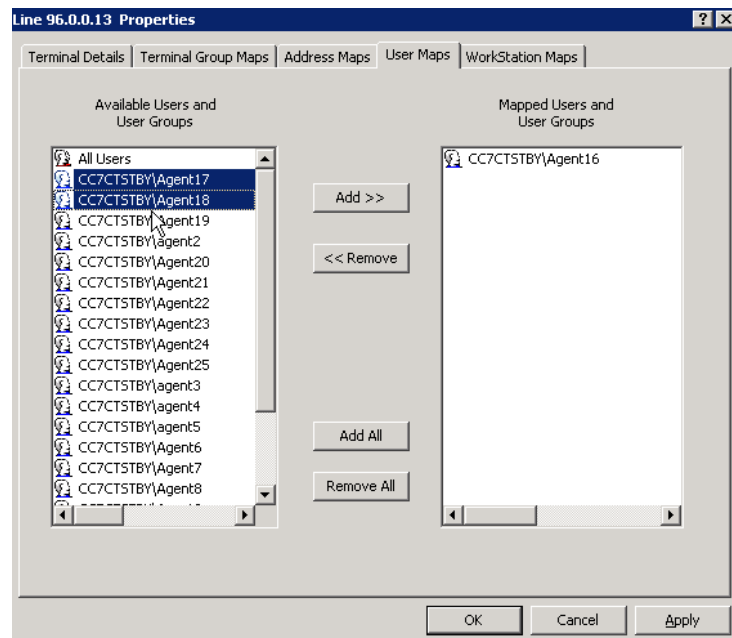
Click the tab that represents the resource to be mapped to the current resource.



Select the appropriate resource and resource groups from those in the **Available Addresses** column. Click **OK**.



Press **CTRL** and click users to select more than one user or user group. Click **Add** to move the selected resource to the **Mapped Users and User Groups** column. Click **OK**.



Note: The Contact Center Users map to a Windows user and the Windows user maps to the Contact Center users. The mapping can be verified by looking at the User properties window on the CC User Maps tab.

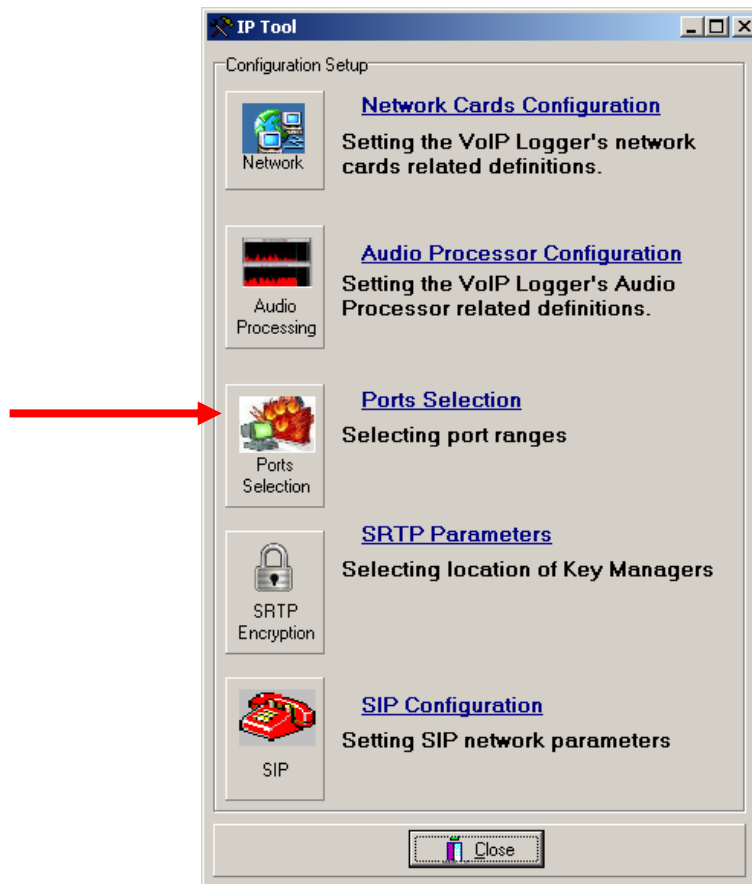
The following sections describe the required configuration for TDM Trunk-side Recording.

The only additional set-up that is required for TDM trunk recording is the inclusion of the coupler that is connected in line with the trunk cabling, thereby enabling recording of any calls passing over the TDM trunk channels. The PRI trunk cards on each of the switches are attached to the NICE Systems Multi Coupler II using PRI to RJ45 cables. The coupler is then connected to the Logger using a cyntronix cable to the ETAI3 interface card on the logger. The CTI connection must be configured and verified in the same way as is described in the previous sections for Passive / Active recording.

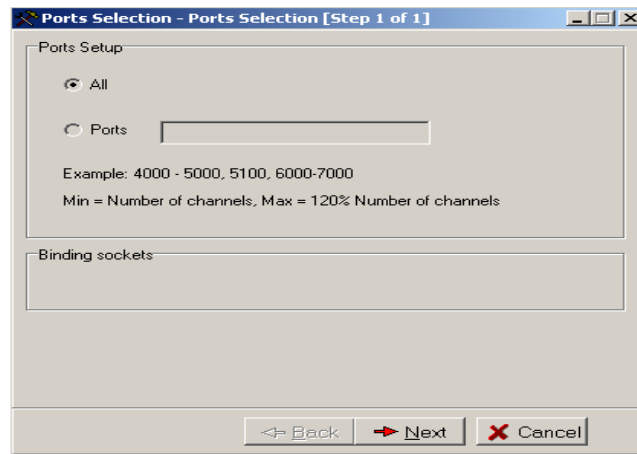


7.1.1. Configuring the Ports

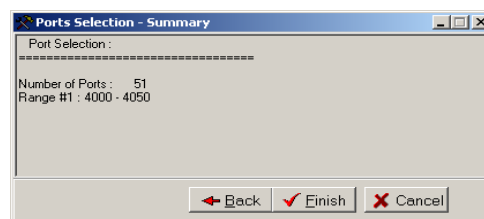
A pair of ports are used by each VoIP Deskphone to send the Rx and Tx voice streams towards the VoIP Logger's IP address. In the **IP Tool** window click **Ports Selection**.



The **Ports Selection** window appears. Define the Logger ports or port range that will be used for capturing the audio. Choose all and click **Next**.



Click **Finish**.



The IP Tool window reappears.

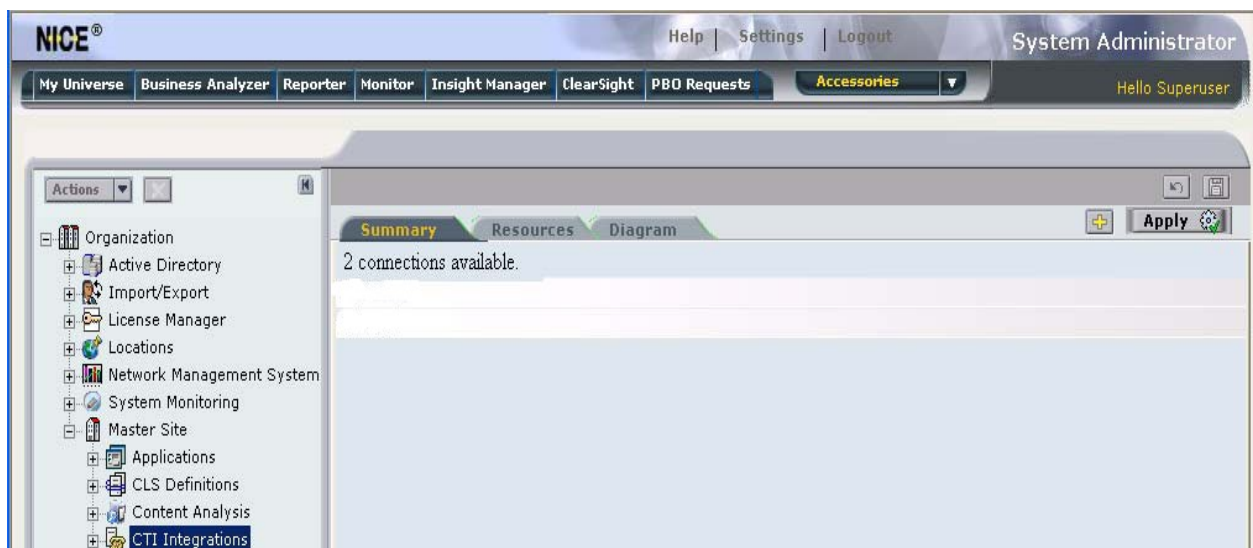


7.1.2. Configuring a CTI Connection

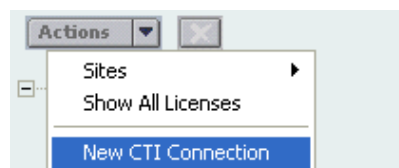
The CTI connection defines the actual CTI server with which the system integrates. Follow the procedure below. From the **Settings** menu, select **Technician Mode**.



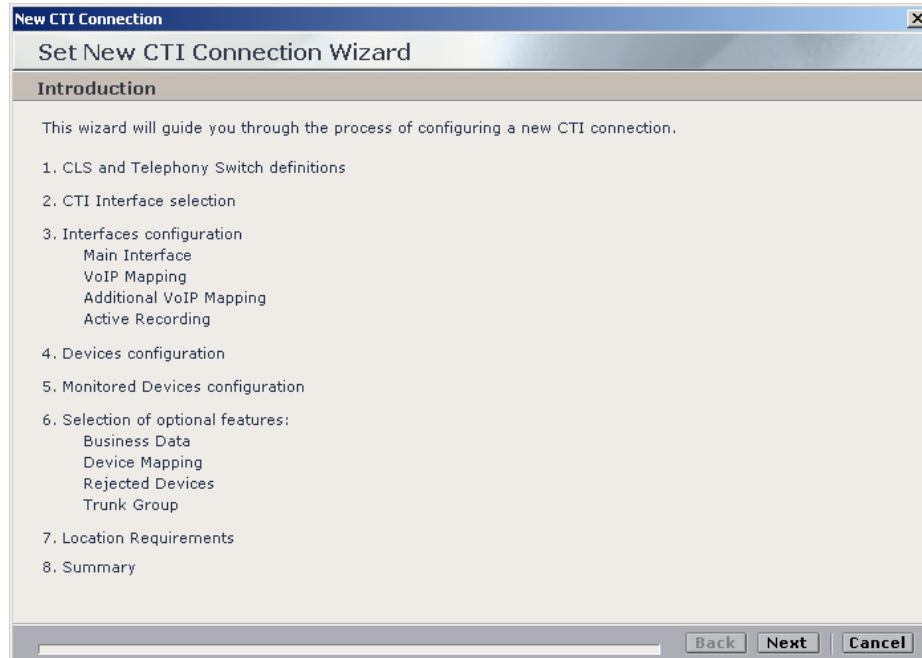
In the **Organization** tree, select **CTI Integrations**.



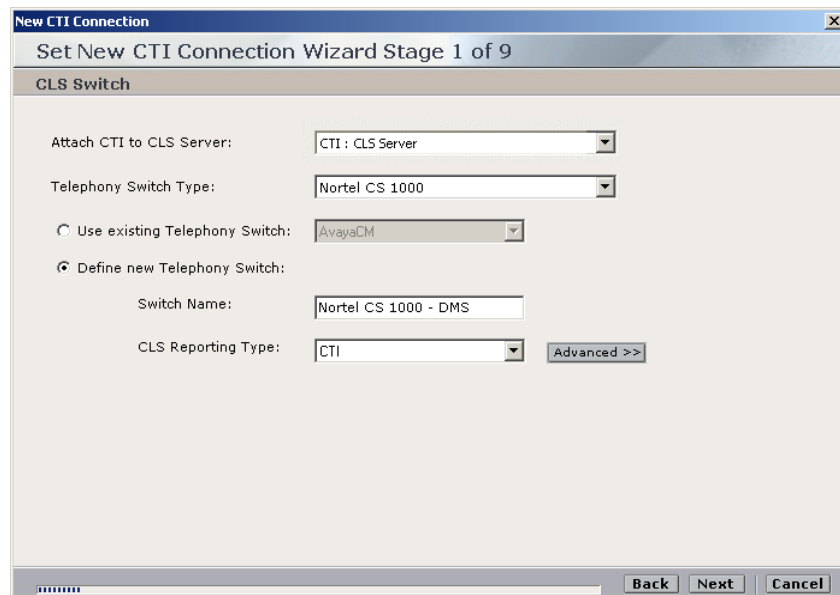
From the **Actions** drop down menu, select **New CTI Connection**.



The **Set New CTI Connection Wizard** starts. Click **Next**.



The **Set New CTI Connection Wizard** displays the **CLS and Telephony Switch** definitions section. From the **Attach CTI to CLS Server** drop-down list, select **CTI: CLS Server**. From the **Telephony Switch Type** drop-down list, select **Nortel CS 1000**. The telephony switch name appears in the **Switch Name** field. Select **Define new Telephony Switch**. Leave the default **CLS Reporting Type** selection as **CTI**. Click **Next**.



The **Set New CTI Connection Wizard** window displays the **Interface Type** section. In the **Telephony switch and CTI Interface Type** area, click the drop-down list and select **MLS / CCMS**. Tick the **Active Recording** checkbox. The drop-down list becomes enabled. Click the **Active Recording** drop-down list and select **MLS/CCMS**. Go to next screen.

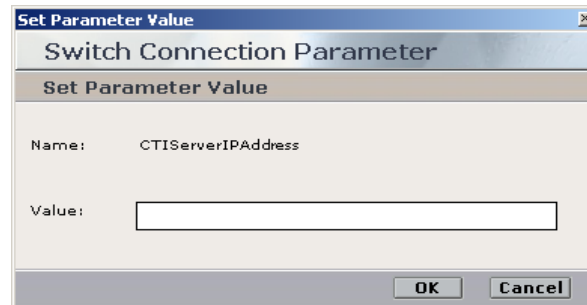
The screenshot shows the 'Set New CTI Connection Wizard Stage 2 of 9' window. The 'Interface Type' section is active. Under 'Telephony switch and CTI Interface Type', the 'Nortel CS 1000 CTI Interface:' dropdown is set to 'MLS / CCMS'. Below it, the text 'Nortel Communication Server 1000 (formerly Meridian1)' and 'Meridian Link Services / Contact Center Manager Server (formerly Symposium)' is visible. The 'VolP Mapping:' checkbox is unchecked, and its dropdown is also set to 'MLS / CCMS'. The 'Active Recording:' checkbox is checked, and its dropdown is set to 'MLS / CCMS'. Below this, the same text about Nortel Communication Server 1000 is visible. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

The **Set New CTI Connection Wizard** window displays the **Interface Parameters** section. Double-click the **CTIServerIPAddress** parameter.

The screenshot shows the 'Set New CTI Connection Wizard Stage 3 of 9' window. The 'Interface Parameters' section is active. The 'Show only required parameters' checkbox is checked. Under 'Interface Connection Details', a table lists parameters. The 'CTIServerIPAddress' parameter is highlighted with a double-click. The 'CTIServerPortId' parameter has a value of '3000'. Below the table is a 'Description:' field. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

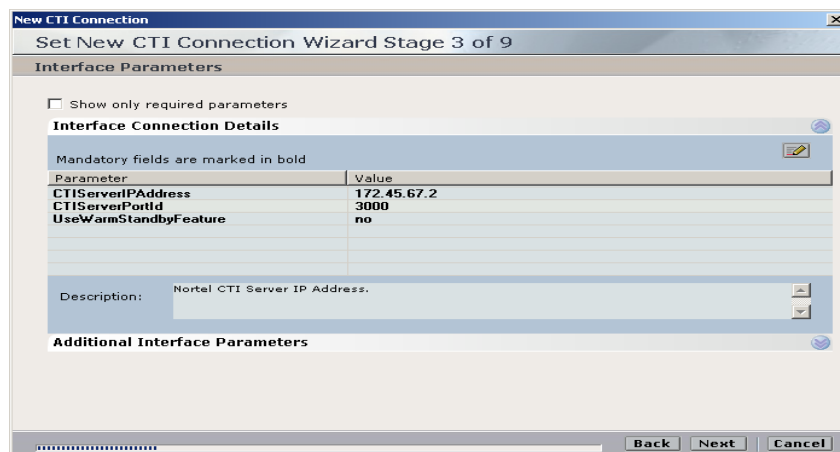
Parameter	Value
CTIServerIPAddress	
CTIServerPortId	3000

The **Switch Connection Parameter** Window appears. In the **Value** field, enter the **IP address** of the CTI Server. Click **OK**.



The dialog box is titled "Set Parameter Value" and "Switch Connection Parameter". It contains a "Name" field with the value "CTIServerIPAddress" and a "Value" field which is empty. At the bottom are "OK" and "Cancel" buttons.

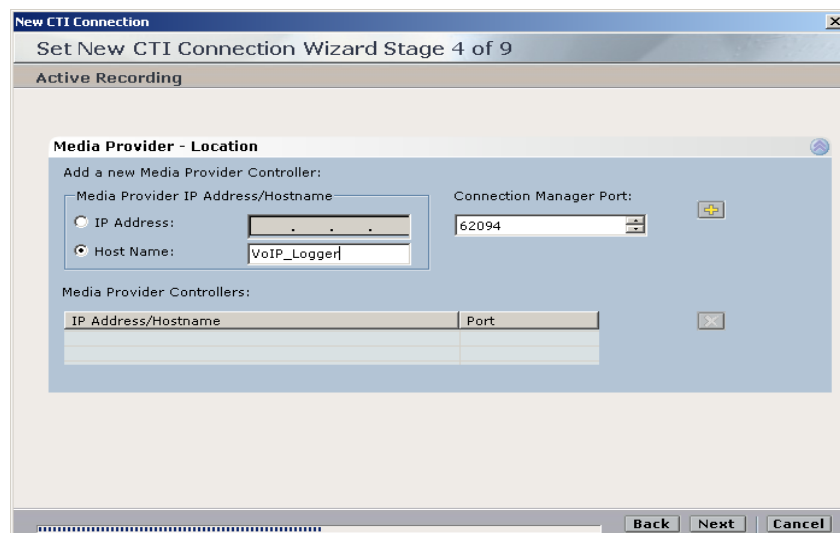
The Set New CTI Connection Wizard appears again. Click **Next**.



The wizard is titled "Set New CTI Connection Wizard Stage 3 of 9" and "Interface Parameters". It has a checkbox "Show only required parameters" which is unchecked. Below is a section "Interface Connection Details" with a table of parameters. The table has columns "Parameter" and "Value". The parameters are: "CTIServerIPAddress" with value "172.45.67.2", "CTIServerPortId" with value "3000", and "UseWarmStandbyFeature" with value "no". Below the table is a "Description" field with the text "Nortel CTI Server IP Address." and an "Additional Interface Parameters" section. At the bottom are "Back", "Next", and "Cancel" buttons.

Parameter	Value
CTIServerIPAddress	172.45.67.2
CTIServerPortId	3000
UseWarmStandbyFeature	no

The **Active Recording** section appears In the **Add a new Media Provider Controller** area, in the **Media Provider IP Address/Hostname** field, enter the correct **IP Address / Host name** of the VoIP Logger. In the **Connection Manager Port** field, enter the **port number**. Click **+**.



The wizard is titled "Set New CTI Connection Wizard Stage 4 of 9" and "Active Recording". It has a section "Media Provider - Location" with a sub-section "Add a new Media Provider Controller:". This section has two radio buttons: "IP Address:" and "Host Name:". The "Host Name:" radio button is selected, and the text "VoIP_Logger" is entered in the adjacent field. To the right is a "Connection Manager Port:" field with the value "62094" and a "+" button. Below this is a table "Media Provider Controllers:" with columns "IP Address/Hostname" and "Port". At the bottom are "Back", "Next", and "Cancel" buttons.

The Media Provider Controller is now added to the **Media Provider Controllers** list. Go to next screen.

The screenshot shows the 'Set New CTI Connection Wizard Stage 4 of 9' window with the 'Media Provider - Location' tab selected. The window title is 'New CTI Connection'. The subtitle is 'Set New CTI Connection Wizard Stage 4 of 9'. The main section is 'Media Provider - Location'. It contains a sub-section 'Add a new Media Provider Controller:' with two radio buttons: 'IP Address:' and 'Host Name:'. The 'IP Address:' radio button is selected. To the right of these radio buttons is a 'Connection Manager Port:' field with a dropdown menu showing '62094'. Below this is a table titled 'Media Provider Controllers:' with two columns: 'IP Address/Hostname' and 'Port'. The table contains one row with the values 'VoIP_Logger' and '62094'. At the bottom of the window are 'Back', 'Next', and 'Cancel' buttons.

IP Address/Hostname	Port
VoIP_Logger	62094

The **Available Devices** window appears. Set **devices** by following the relevant procedures below. Select **Add** or **Add Range**.

The screenshot shows the 'Set New CTI Connection Wizard Stage 4 of 9' window with the 'Devices' tab selected. The window title is 'New CTI Connection'. The subtitle is 'Set New CTI Connection Wizard Stage 4 of 9'. The main section is 'Devices'. It contains a sub-section 'Available Devices' with the text 'Please provide telephony switch available devices (Extension, Position)'. Below this is a section with '0 devices' and an 'Import from:' label with a 'File' button. To the right of these are buttons for 'Add', 'Add Range', a search icon, a delete icon, an edit icon, and 'Export to file'. Below this is a table with two columns: 'Device' and 'Type'. The table is empty. At the bottom of the window are 'Back', 'Next', and 'Cancel' buttons.

Device	Type
--------	------

To add a single device: Click **Add**. The **Add Devices** window appears. In the **Device number** field, enter the number to be assigned to the device. (For **Extension** enter the **device number**. For **Position** - enter the **position number**). From the **Device Type** drop-down list, select a device type. Click **OK**.

Available Device

Add Device

Device number: * 2566

Device Type * Position

Unique Device ID:

Advanced Device Parameters

☐ Display Read Only Information

Name	Value

Description:

To add a range of devices select **Available Devices Add Range** window appears. In the **Start at device number** field, enter the number of the first device. (For **Extension** enter the **device number**. For **Position** enter the **position number**) In the **Number of devices to add** field, enter the number of devices to be added. From the **Device Type** drop-down list, select a device type. Click **OK**.

Available Devices Add Range

Devices Range

Start at device number: * 2567

Number of devices to add: 3

Device Type * Position

Prefix or Suffix

☐ Prefix

☐ Suffix

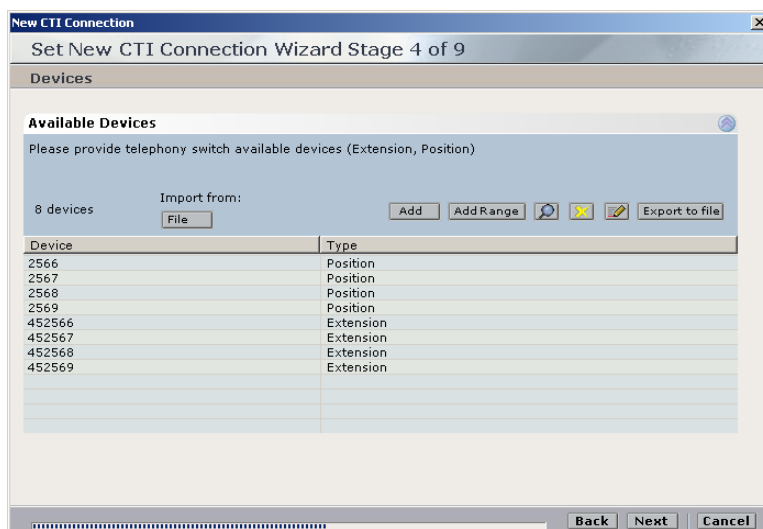
Advanced Device Parameters

☐ Display Read Only Information

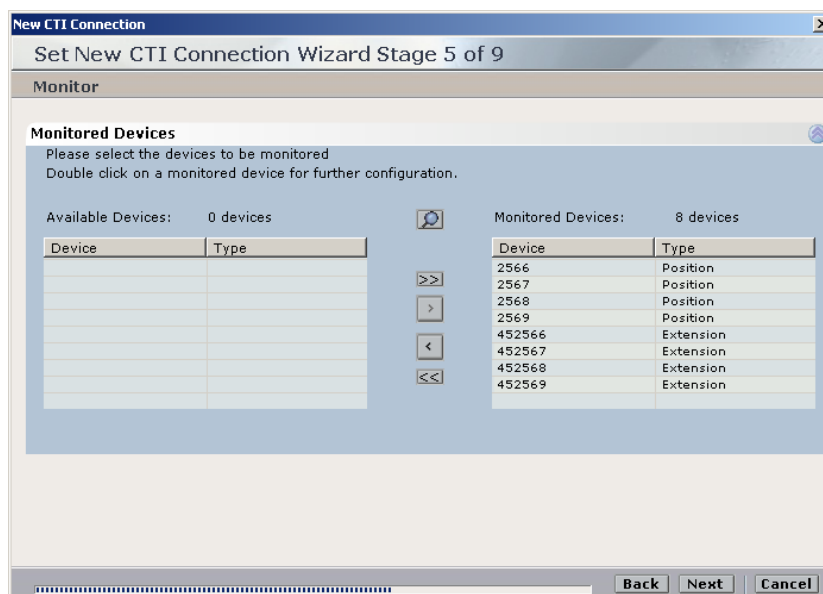
Name	Value

Description:

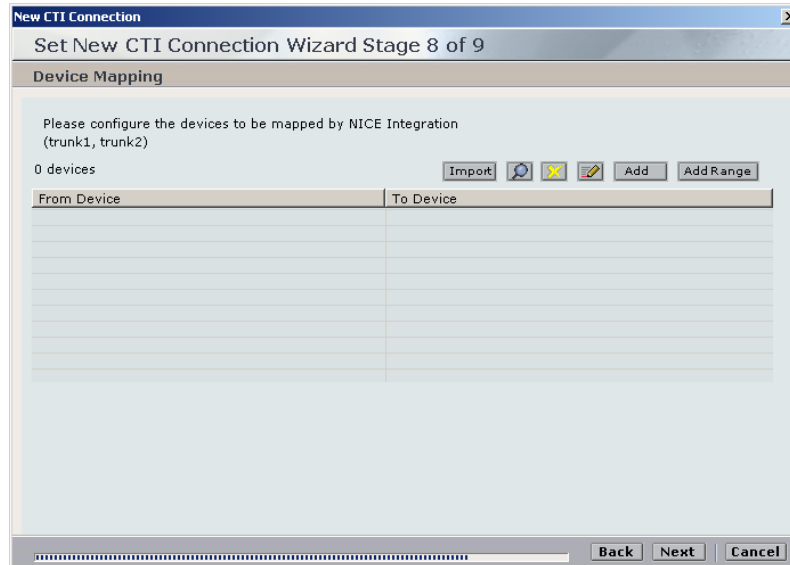
The **Set New CTI Wizard** window reappears displaying all the devices that have been added. Click **Next**.



The Set New CTI Connection Wizard window displays all **Monitored Devices**. All devices are automatically monitored. Click **Next**.



The Device Mapping section appears. Click **Add**.

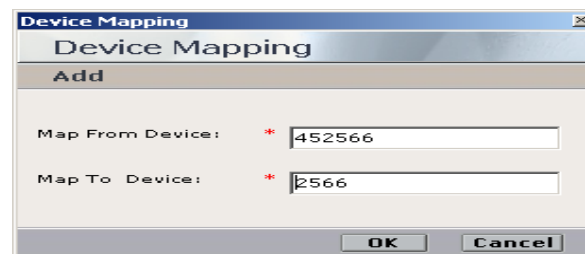


The screenshot shows the 'New CTI Connection' wizard at Stage 8 of 9, titled 'Set New CTI Connection Wizard Stage 8 of 9'. The 'Device Mapping' section is active, with the instruction: 'Please configure the devices to be mapped by NICE Integration (trunk1, trunk2)'. It shows '0 devices' and buttons for 'Import', 'Add', and 'Add Range'. Below is a table with two columns: 'From Device' and 'To Device'.

From Device	To Device

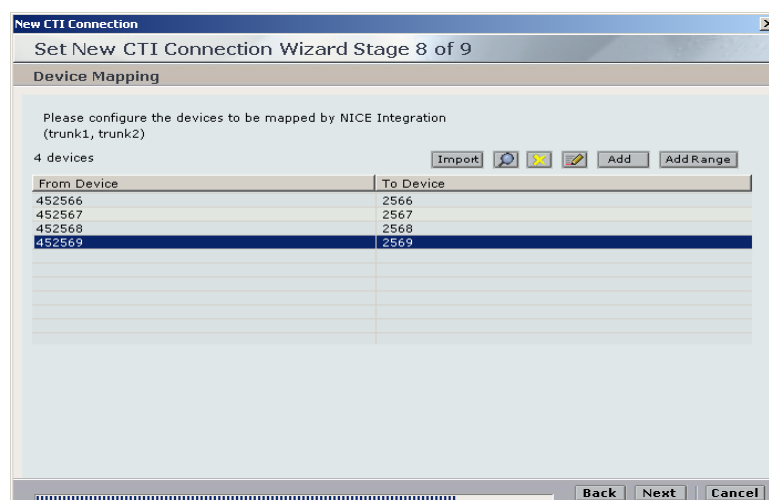
At the bottom are 'Back', 'Next', and 'Cancel' buttons.

The Add Device Mapping window appears. In the **Map from Device** field, enter the device number from which has to be mapped. In the **Map to Device** field, enter the device number to which has to be mapped. Click **OK**.



The screenshot shows the 'Device Mapping' window with the 'Add' tab selected. It contains two input fields: 'Map From Device:' with the value '452566' and 'Map To Device:' with the value '2566'. Both fields have a red asterisk indicating a required field. 'OK' and 'Cancel' buttons are at the bottom.

The **Device Mapping Window** reappears showing the mapped devices. Click **Next**.



The screenshot shows the 'New CTI Connection' wizard at Stage 8 of 9, titled 'Set New CTI Connection Wizard Stage 8 of 9'. The 'Device Mapping' section is active, with the instruction: 'Please configure the devices to be mapped by NICE Integration (trunk1, trunk2)'. It now shows '4 devices' and buttons for 'Import', 'Add', and 'Add Range'. Below is a table with two columns: 'From Device' and 'To Device'.

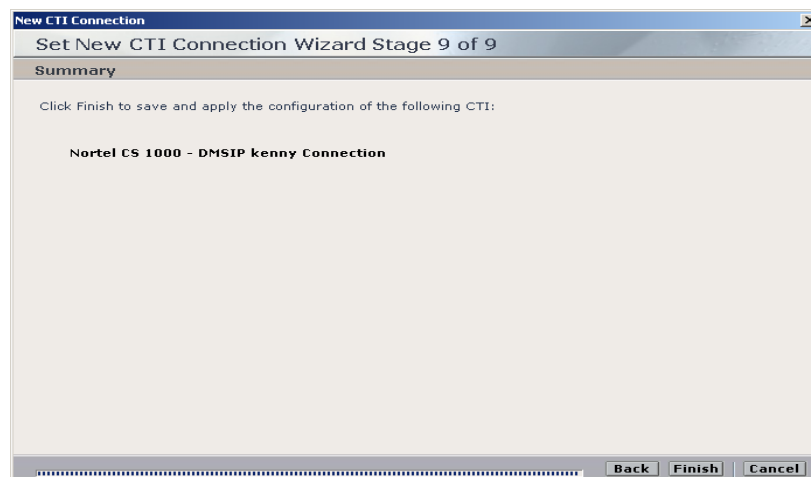
From Device	To Device
452566	2566
452567	2567
452568	2568
452569	2569

At the bottom are 'Back', 'Next', and 'Cancel' buttons.

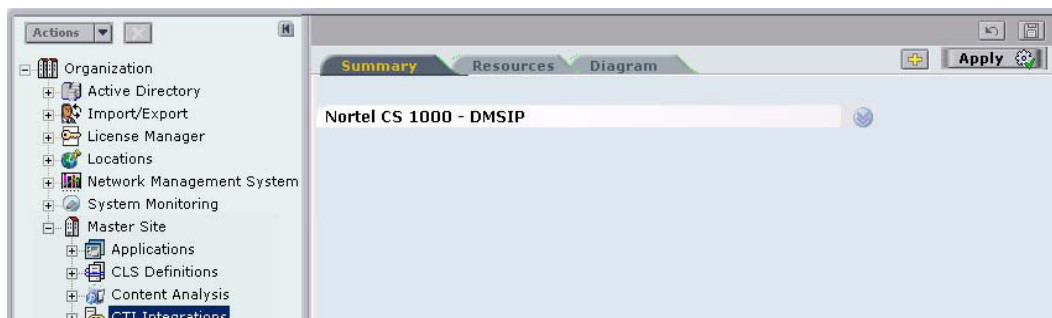
The Set New CTI Connection Wizard window displays the **Requirements** section. In this window choose **Select available Connection Manager** and then **Next**.



The Set New CTI Connection Wizard window displays the **Summary** section. Click **Finish**.

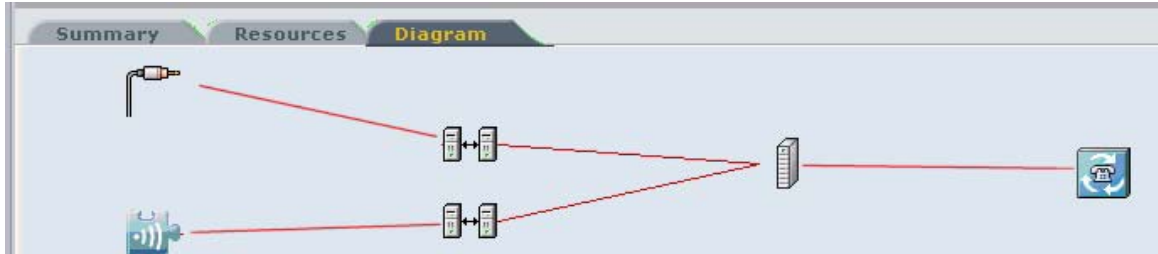


The new CTI Connection appears on the **CTI Integrations - Summary** tab.



7.1.3. Verifying the CTI Integration

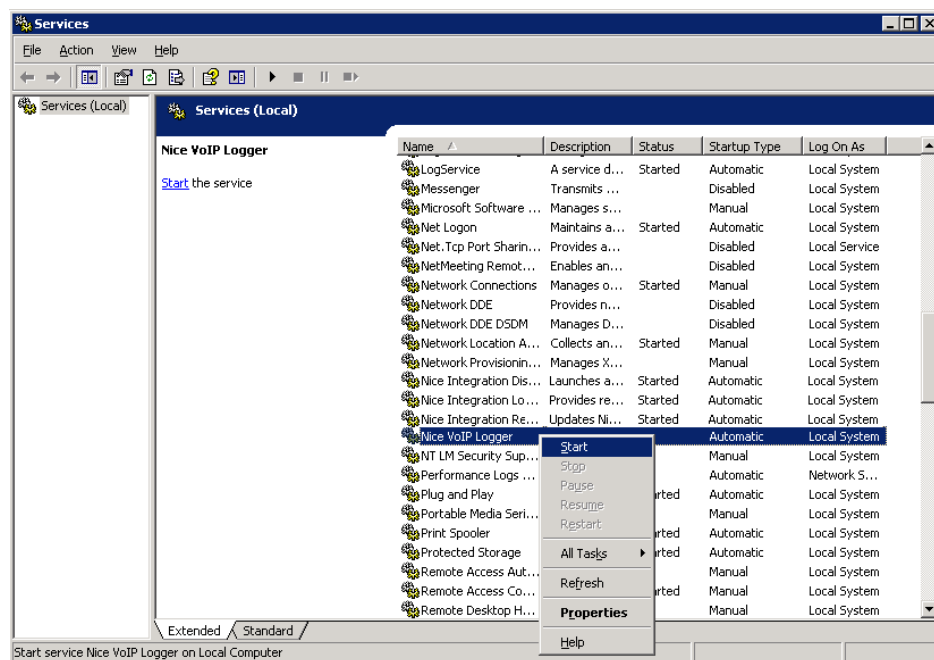
This procedure describes how to verify that all the relevant system components have been attached. In the System Administrator, in the **Organization** tree, navigate to **Master Site → CTI Integrations**. Click the **Diagram** tab. A diagram of the integration appears.



Verify the CTI Connection components; the CTI Interface, Connection Manager, Driver, etc. are properly configured.

7.1.4. Starting the Integration Services on the VoIP Logger

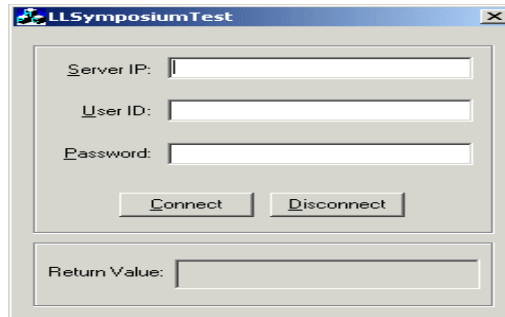
On the VoIP Logger click **Start → Run**. Type **services.msc** and click **OK**. The Services window appears.



Select and right-click **NICE VoIP Logger**. From the pop-out menu, select **Start**. The NICE VoIP Logger's Service **Status** changes to **Started**. The NICE Integration services should now start automatically. Verify that all three Integration services start.

7.1.5. Using the RTD SDK Connection Tester

The **RTD SDK Connection Tester** checks the connection with Avaya NES contact Centre Server. Run the RTD SDK Connection Tester. The **LLSymposiumTest** window appears.

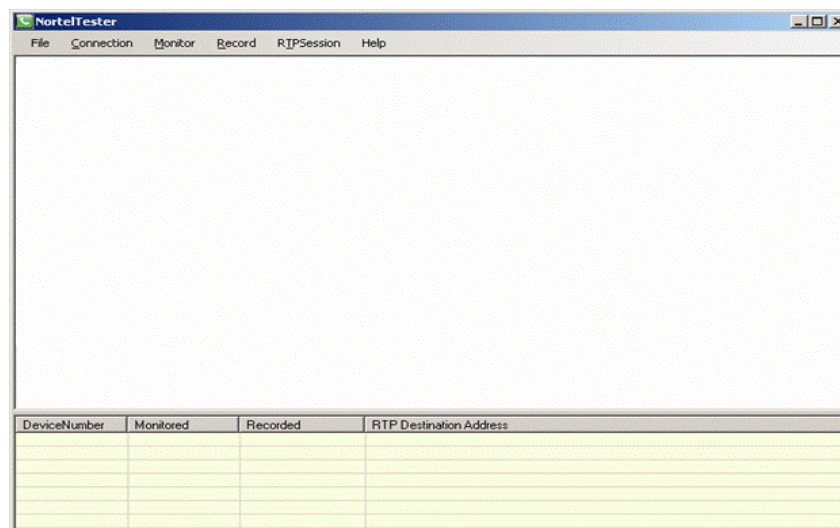


The screenshot shows a window titled "LLSymposiumTest". Inside, there are three input fields: "Server IP:", "User ID:", and "Password:". Below these fields are two buttons: "Connect" and "Disconnect". At the bottom of the window is a larger input field labeled "Return Value:".

In the **Server IP** field enter the Avaya NES Contact Centre server IP. In the **User ID** field, enter the RTD user name. In the **Password** field, enter the password. Click **Connect**. The result appears in the **Return Value** area.

7.1.6. Connecting to Avaya NES Contact Centre

Open the **NortelTester** tool. The **NortelTester** window appears. From the **Connection** menu, select **Connect**.



The screenshot shows a window titled "NortelTester" with a menu bar containing "File", "Connection", "Monitor", "Record", "RTPSession", and "Help". The main area is a large empty space. At the bottom is a table with the following columns: "DeviceNumber", "Monitored", "Recorded", and "RTP Destination Address". The table has several empty rows below the header.

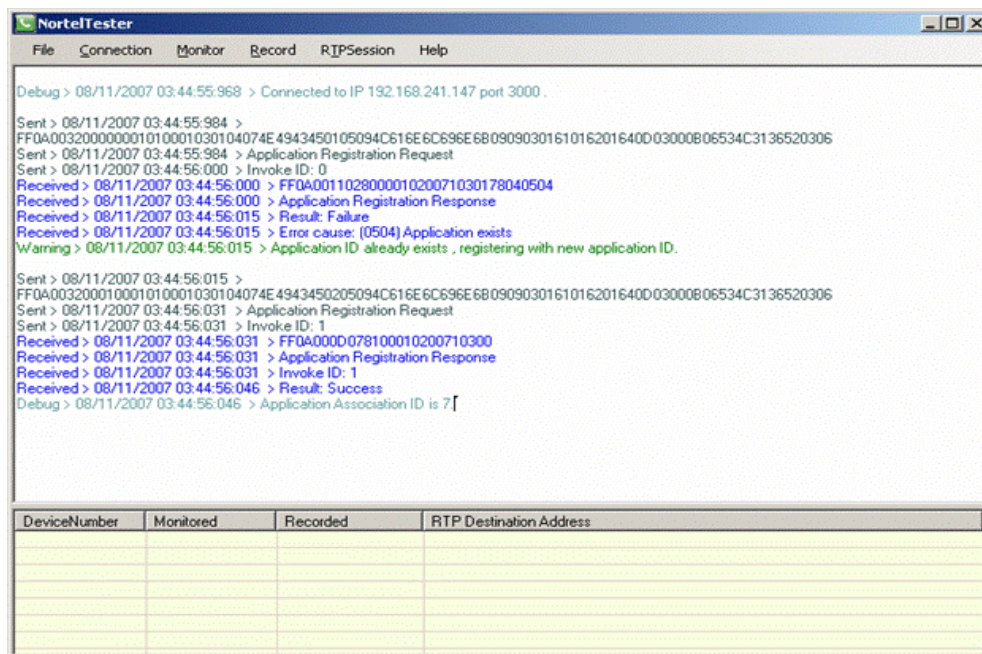
DeviceNumber	Monitored	Recorded	RTP Destination Address

The **Connect** window appears. Enter the Avaya NES Contact Centre Management Server IP address in the **Symposium IP** field and the port number in the **Nortel switch port** field.



A dialog box titled "Connect" with a green icon. It contains two input fields: "Symposium IP" with the value "192.168.241.147" and "Nortel switch port" with the value "3000". Below the fields are two buttons: "Connect" and "Cancel".

Click **Connect**. The NortelTester opens the TCP connection with Avaya Contact Centre Management Server and attempts to register the application by sending application registration requests and checking the responses. It continues to do this until it succeeds. This flow can be seen in the log window.



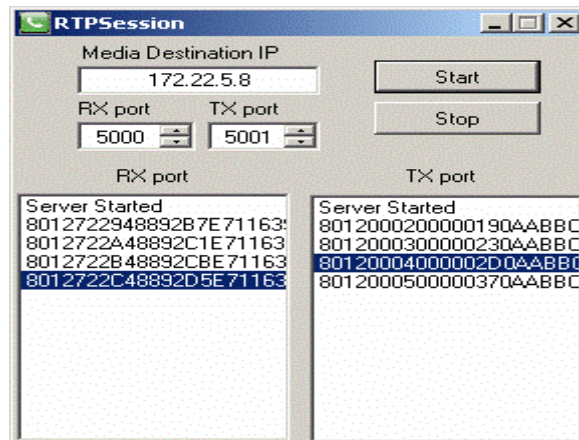
A screenshot of the NortelTester application window. The title bar says "NortelTester". The menu bar includes "File", "Connection", "Monitor", "Record", "RTPSession", and "Help". The main area displays a log of network traffic. The log shows a successful connection to IP 192.168.241.147 on port 3000. It details several "Application Registration Request" and "Application Registration Response" messages. The first attempt fails with the error "(0504) Application exists". The second attempt succeeds, resulting in "Application Association ID is 7". At the bottom, there is a table with four columns: "DeviceNumber", "Monitored", "Recorded", and "RTP Destination Address".

DeviceNumber	Monitored	Recorded	RTP Destination Address

From the **File** menu, select **Save to log file** in order to be able to collect log files.

7.1.7. RTP Session Listener

Start the RTP Session Listener. In the **Media Destination IP** field, enter the IP address or leave the default (the local IP address). Click **Start**. When there is activity in ports, received packets are printed to the sub-windows.



7.1.8. Verify the Deskphone's Recording State on the Avaya Communication Server 1000E

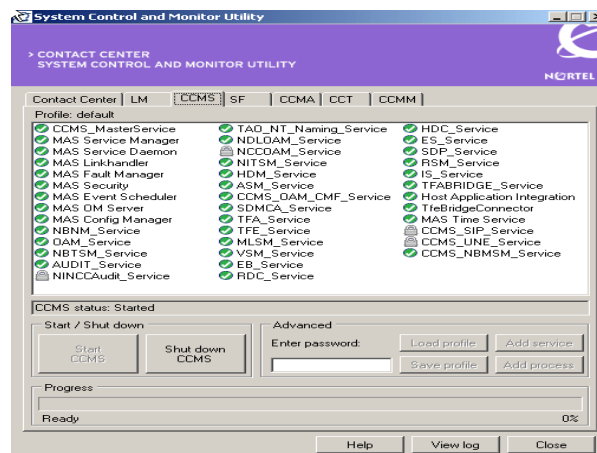
To verify the Deskphone's recording state on the CS1000E. Make a call. During the call, run **crShowCRParam** on the CS1000E. Verify that the **underRecording** equals **1**. (1 indicates that the Deskphone sends the RTP stream.)

8. Verification Steps

8.1. Verifying Contact Centre Manager Server services are running

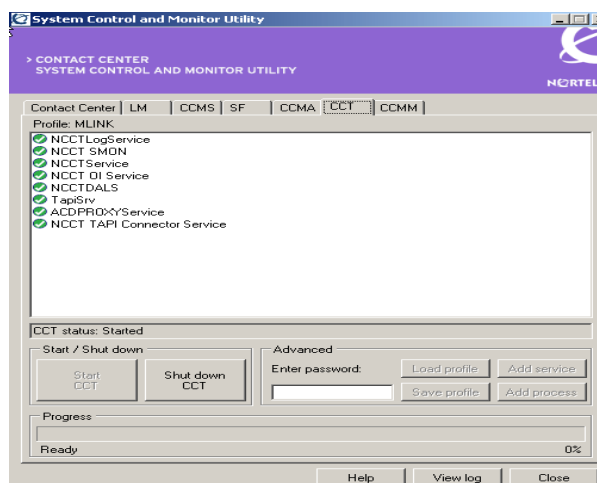
Click **Start**→**All Programs**→**Nortel**→**Contact Center**→**Common Components**→**System Control Monitor Utility**. All CCMS services with a green icon are running. The icons will turn red if there is a problem with the installation.

Note: Greyed out icons are features that require keycodes to activate them and are not required for this installation.



8.2. Verifying Avaya Communication Control Toolkit services are running

All CCT services with a green icon are running. The icons will turn red if there is a problem with the installation.



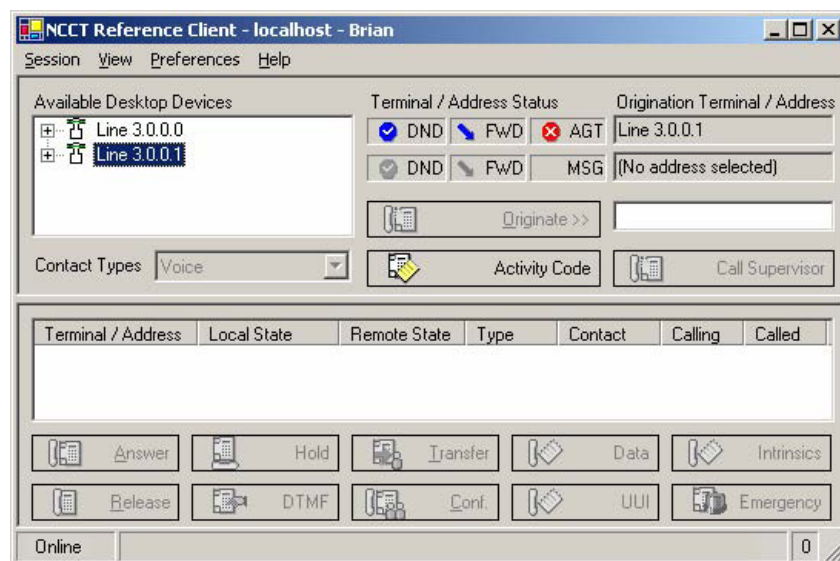
8.3. Verifying Avaya Communication Control Toolkit using the Reference Client

If this test is successful then it will ensure that all Avaya Contact Centre Management Server and Avaya Communication Control Toolkit services are up. Ensure that Communication Control Toolkit is functioning correctly by using the Avaya Reference Client to ensure that all resources are available and accessible to route contacts for Contact Center Manager. The Reference Client functions as an installation test tool and is not deployed for production call center use. Any user ID can log on to the Reference Client to make calls between them to test connections, perform transfers, and other call functions.

- 1) Click **Originate**.
- 2) Click **Answer**.

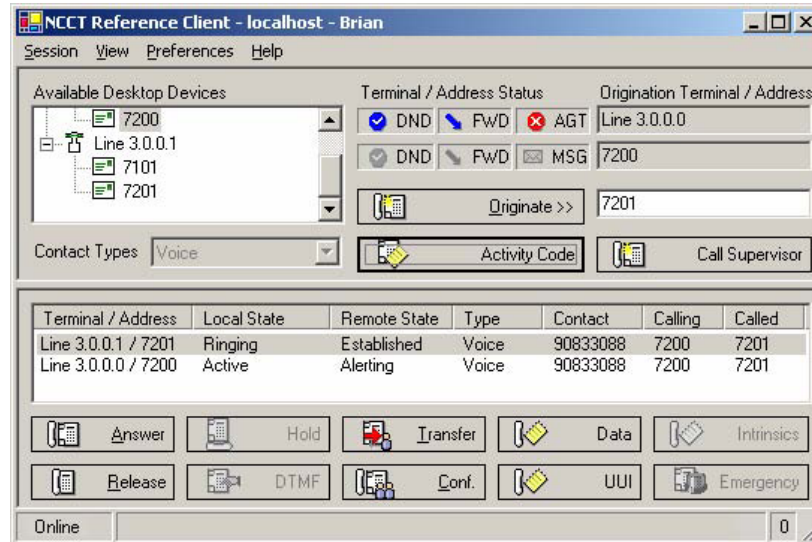
The following example demonstrates how to use the Reference Client to test call completion.

- 1) Log on to the Communication Control Toolkit server.
- 2) Click **Start, All Programs, Nortel→Contact Center→Communication Control Toolkit→Ref Client**.
- 3) On the **Server Settings** dialog box, click **OK**.
- 4) From the **Session** menu, choose **Connect**.
- 5) In the **User Credentials** dialog box, select either the **Current Windows User** or specify a **User ID, Domain and Password**.
- 6) Click **OK**. The following window is presented.

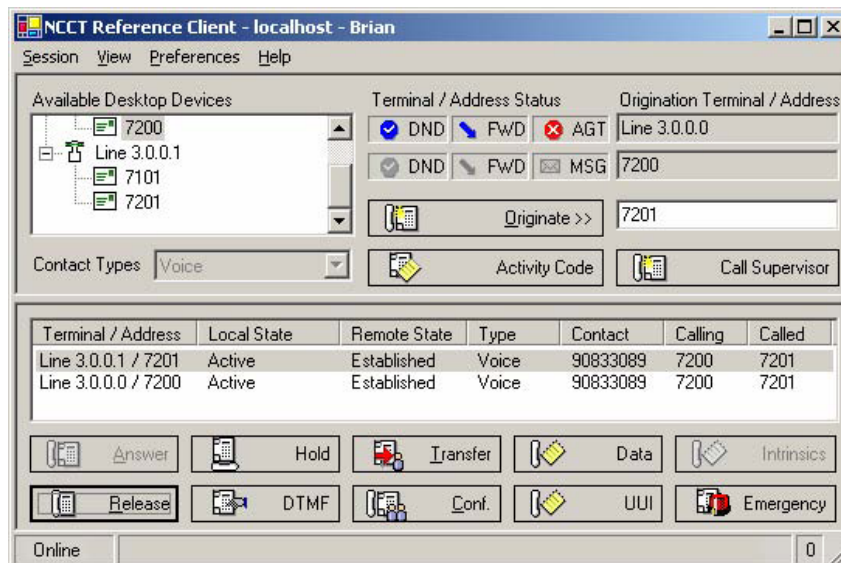


- 7) In the **Available Devices** box, select a Basic type of address from which to make a test call.
- 8) Enter the Destination Address in the text box to the right of the Originate button.
- 9) Click **Originate**. The destination address shows a Local State of Ringing in the Reference Client.

10) Select the Ringing Address on the Reference Client, and click **Answer**.



11) Release the call.

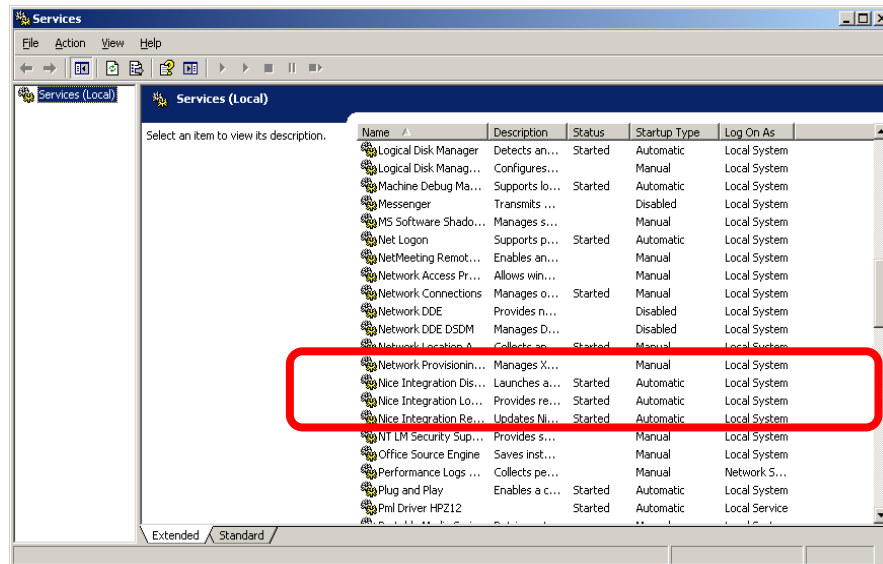


8.4. Verifying the Integration Services on the NICE Systems NICE Interactions Center Server

After starting the NICE VoIP Logger services on the VoIP Logger, the Integration Services on the NICE Interactions Center server should start automatically. Verify that all three services are operating.

To verify the Integration Services on the NICE Interactions Center server:

1. On the NICE Interactions Center, click **Start → Run**. The Run window appears.
2. In the **Open** field, enter **services.msc** and click **OK**. The Services window appears.



Verify that the three NICE Integration services display with their status as **Started**.

8.5. Verify the Deskphone's Recording State on Avaya Communication Server 1000E

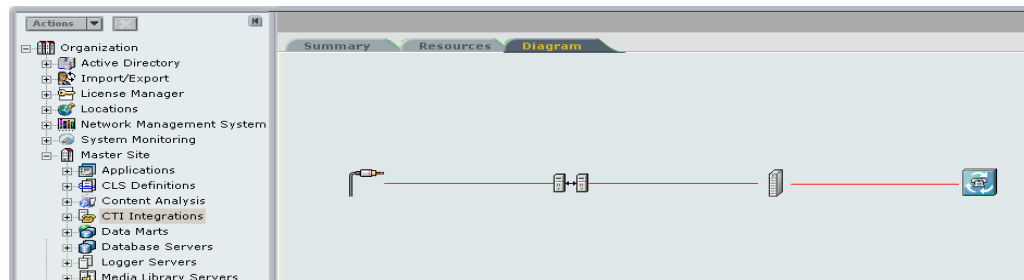
To verify the Deskphone's recording state on the CS1K

1. Make a call.
2. During the call, on the CS1K, run **crShowCRParam** [TN in Hex].
3. Verify that the **underRecording** equals **1**. (1 indicates that the Deskphone sends the RTP stream.)

8.6. Verifying the CTI Integration for Passive VOIP Recording

To verify that all system components have been attached:

1. In the System Administrator, in the Organization tree, navigate to **Master Site** → **CTI Integrations** and select **CTI Integrations**.
2. Click the **Diagram** tab. A diagram of the integration appears. Verify the CTI Connection components - the CTI Interface, Connection Manager, Driver, etc. are properly configured.



9. Conclusion

These application notes describe the configuration steps required to successfully integrate the two products NICE Perform R3.2 and Avaya NES Contact Centre 7.0. All feature and serviceability tests carried out indicate successful interoperability between the two products.

10. Additional References

This section references the Avaya Contact Centre and NICE Systems documentation that are relevant to these Application Notes.

Product documentation for Avaya products are available on the Official Avaya Contact Centre 7.0 DVD and alternatively may be found at <http://support.avaya.com>

- [1] *Contact Centre Fundamentals, Document No. NN44400-110, May 2010*
- [2] *Contact Centre Overview, Document No. NN44400-111, April 2010*
- [3] *Contact Centre 7.0 Installer Roadmap Document No. NN44400-310, May 2020*
- [4] *Contact Centre Installation Document No. NN44400-311, Jan 2010*
- [5] *Contact Centre Commissioning- Document No. 44400-312*

Product documentation for NICE Perform is available on the Official NICE Systems DVD

- [1] *NiceLog High Density Logger Hardware Guide*
- [2] *NICE VoIP Logger Hardware Guide*
- [3] *Site Installation Workflow Guide*
- [4] *Integration with Nortel CS1000 and Duplicate Media Stream over IP (DMS-IP)*
- [5] *Interactions Guide*
- [6] *System Administrator's Guide*
- [7] *Users Administrator Guide*
- [8] *NICE Perform Solution Overview Release 3.2*

Appendix

The following patched were in service on the Avaya Communication Server 1000E during testing.

VERSION 4121

RELEASE 6

ISSUE 00 R +

DepList 1: core Issue: 02

IN-SERVICE PEPS

PAT#	CR #	PATCH REF #	NAME	DATE	FILENAME	SPECINS
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004	Q02093188	ISS1:1OF1	p29352_1	14/10/2010	p29352_1.cpl	NO
005	Q02097405	ISS1:1OF1	p24463_1	14/10/2010	p24463_1.cpl	NO
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019	Q02038440	ISS1:1OF1	p28674_1	14/10/2010	p28674_1.cpl	NO
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047	Q01782930-01	ISS1:1OF1	p24964_1	14/10/2010	p24964_1.cpl	NO
048	Q02031323-01	ISS1:1of1	p28546_1	14/10/2010	p28546_1.cpl	NO
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114	Q02071739	ISS1:1OF1	p29096_1	14/10/2010	p29096_1.cpl	NO
115	Q02058669-01	ISS1:1OF1	p30124_1	14/10/2010	p30124_1.cpl	NO
116	Q02153672	ISS1:1OF1	p30146_1	14/10/2010	p30146_1.cpl	NO
117	Q02088715-02	ISS3:1OF1	p29077_3	14/10/2010	p29077_3.cpl	NO
118	Q02140914-02	ISS1:1OF1	p30004_1	14/10/2010	p30004_1.cpl	NO
119	Q01982233-06	ISS1:1OF1	p28172_1	14/10/2010	p28172_1.cpl	NO
120	Q02057782-01	ISS1:1OF1	p29215_1	14/10/2010	p29215_1.cpl	NO
121	Q01974578-04	ISS1:1OF1	p27329_1	14/10/2010	p27329_1.cpl	NO
122	Q02052184-01	ISS1:1OF1	p30288_1	14/10/2010	p30288_1.cpl	NO
123	Q02150271	ISS1:1OF1	p30104_1	14/10/2010	p30104_1.cpl	NO
124	Q02151971	ISS1:1OF1	p30156_1	14/10/2010	p30156_1.cpl	NO
125	Q02111317	ISS1:1OF1	p29844_1	14/10/2010	p29844_1.cpl	NO

126	Q01959958-02	ISS1:1OF1	p29706_1	14/10/2010	p29706_1.cpl	YES
127	Q02083397-02	ISS1:1OF1	p29295_1	14/10/2010	p29295_1.cpl	NO
128	Q02007724-04	ISS1:1OF1	p29681_1	14/10/2010	p29681_1.cpl	YES
129	Q02040038-03	ISS1:1OF1	p28647_1	14/10/2010	p28647_1.cpl	NO
130	Q02158724	ISS1:1OF1	p30210_1	14/10/2010	p30210_1.cpl	NO
131	Q02103392-01	ISS1:1OF1	p29480_1	14/10/2010	p29480_1.cpl	NO
132	Q02061039-04	ISS1:1OF1	p28927_1	14/10/2010	p28927_1.cpl	NO
133	Q02039403-01	ISS1:1OF1	p29378_1	14/10/2010	p29378_1.cpl	NO
134	Q02108821-01	ISS1:1OF1	p29529_1	14/10/2010	p29529_1.cpl	NO
135	Q02109705-04	ISS1:1OF1	p29701_1	14/10/2010	p29701_1.cpl	NO
136	Q02131549	ISS1:1OF1	p30065_1	14/10/2010	p30065_1.cpl	NO
137	Q02066737-05	ISS1:1OF1	p29537_1	14/10/2010	p29537_1.cpl	NO
138	Q01925518-06	ISS2:1OF1	p29491_2	14/10/2010	p29491_2.cpl	NO
139	Q02077764-04	ISS1:1OF1	p29174_1	14/10/2010	p29174_1.cpl	NO
140	Q02075949-04	ISS1:1OF1	p29667_1	14/10/2010	p29667_1.cpl	NO
141	Q02125731	ISS1:1OF1	p29802_1	14/10/2010	p29802_1.cpl	NO
142	Q01873266-02	ISS1:1OF1	p25747_1	14/10/2010	p25747_1.cpl	NO
143	Q02110455-03	ISS1:1OF1	p29670_1	14/10/2010	p29670_1.cpl	NO
144	Q00350041-01	ISS1:1OF1	p16376_1	14/10/2010	p16376_1.cpl	NO
145	Q02095619-04	ISS2:1OF1	p29376_2	14/10/2010	p29376_2.cpl	NO
146	Q02113482	ISS1:1OF1	p30294_1	14/10/2010	p30294_1.cpl	NO
147	Q02071694-04	ISS1:1OF1	p29679_1	14/10/2010	p29679_1.cpl	NO
148	Q01974383-02	ISS1:1OF1	p27378_1	14/10/2010	p27378_1.cpl	NO
149	Q02104745-01	ISS1:1OF1	p29495_1	14/10/2010	p29495_1.cpl	NO
150	Q02147768	ISS1:1OF1	p30085_1	14/10/2010	p30085_1.cpl	NO
151	Q02157668	ISS1:1OF1	p30204_1	14/10/2010	p30204_1.cpl	NO
152	Q02110441-01	ISS1:1OF1	p29577_1	14/10/2010	p29577_1.cpl	NO
153	Q02144165	ISS1:1OF1	p30036_1	14/10/2010	p30036_1.cpl	NO
154	Q02112375-02	ISS1:1OF1	p29671_1	14/10/2010	p29671_1.cpl	NO
155	Q02019660-04	ISS2:1OF1	p28252_2	14/10/2010	p28252_2.cpl	NO
156	Q02108873-02	ISS1:1OF1	p29590_1	14/10/2010	p29590_1.cpl	NO

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