



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 Passive Recording over IP - 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 Passive recording using Port Mirroring. 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, passive and active recording. This solution validated the functionality of Passive Recording using Port Mirroring. Passive VoIP recording requires the use of mirroring ("SPAN") sessions.

2. General Test Approach and Test Results

Communication Server 1000E R6.0 (CS1000E), NES Contact Centre 7.0 (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 - Passive VoIP Recording with Port Mirroring.

Note 2: Where appropriate to do so the 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 the setup of NICE Perform and Contact Centre 7.0 Compliance testing. **Passive VoIP Recording** using the **Avaya Communication Server 1000 R6.0**. The NICE Systems Logger is connected to the port mirroring in the LAN switch.

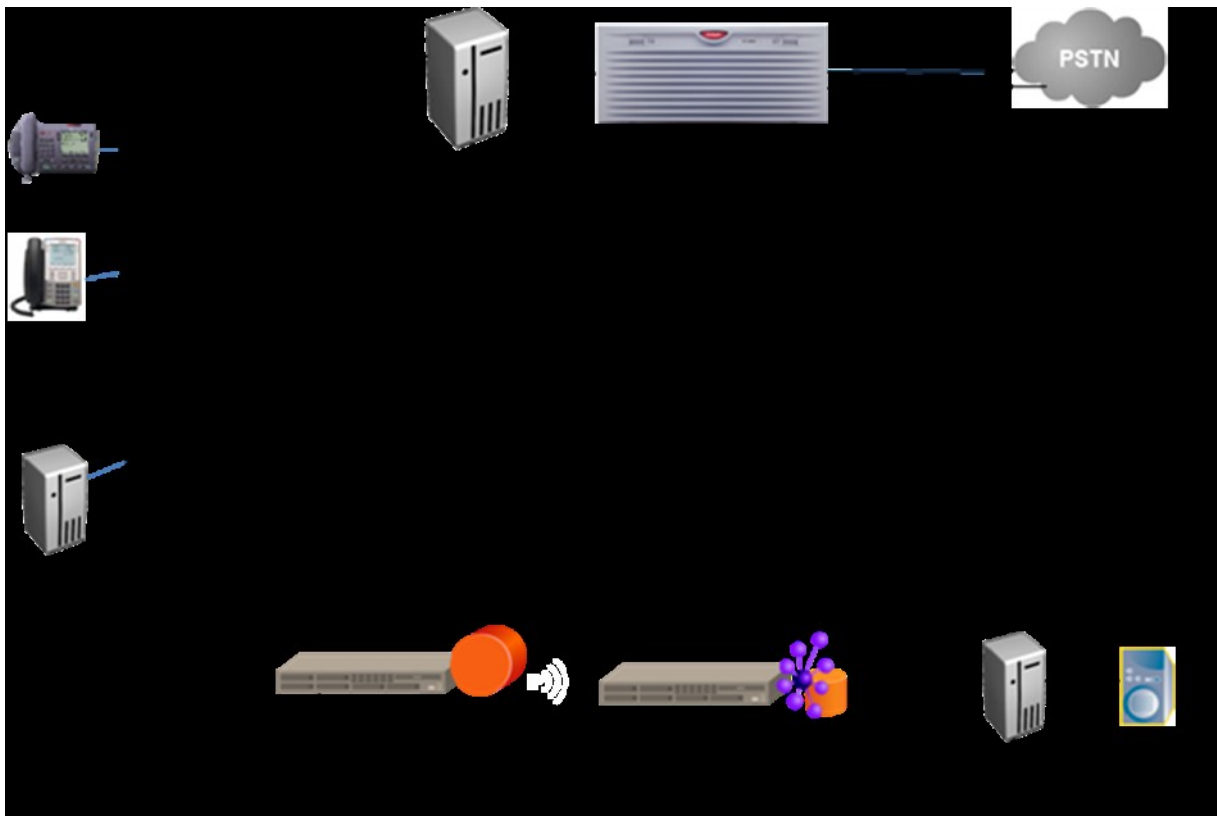


Figure 1: Passive VoIP Recording - Port Mirroring

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 CallPilotServer	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
Passive Logger (software based)	Passive Logger is a component of the NICE Perform R3.2 software

5. Configure Avaya Communication Server 1000E

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

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

5.1. Enable Call Recording Avaya Communication Server 1000E

Using a suitable terminal emulation program such as Putty, login to the CS1000E. 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

5.2. Enable Call Recording for each Avaya Deskphone

Using a suitable terminal emulation program such as Putty, login to the CS1000E. 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.

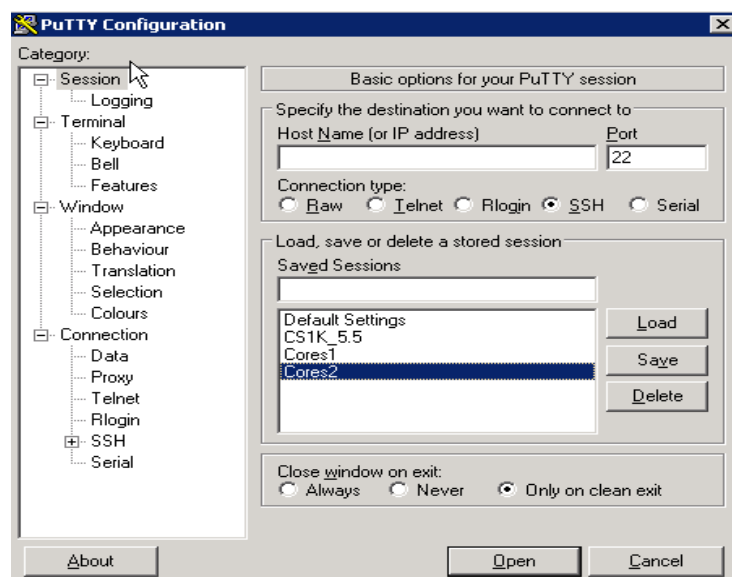
LD 11

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

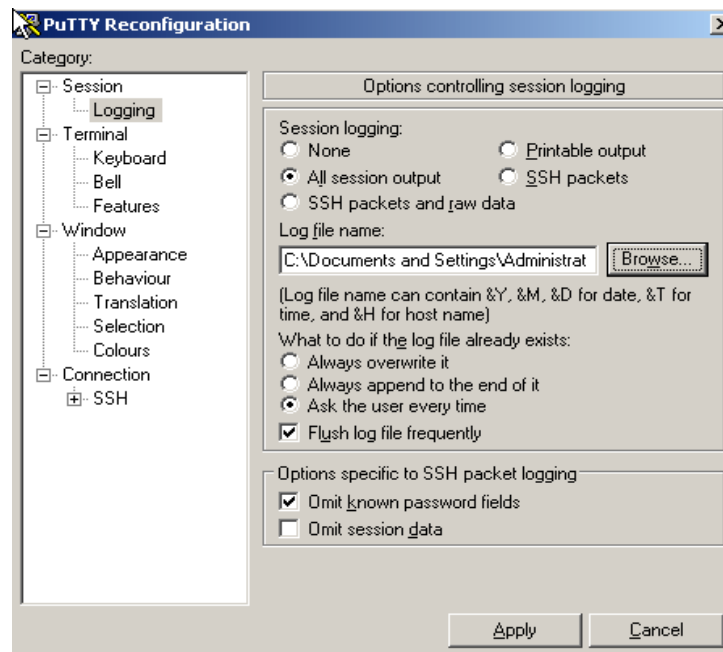
6. Configure Avaya Contact Centre Manager Server and Avaya Communications Control Toolkit

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

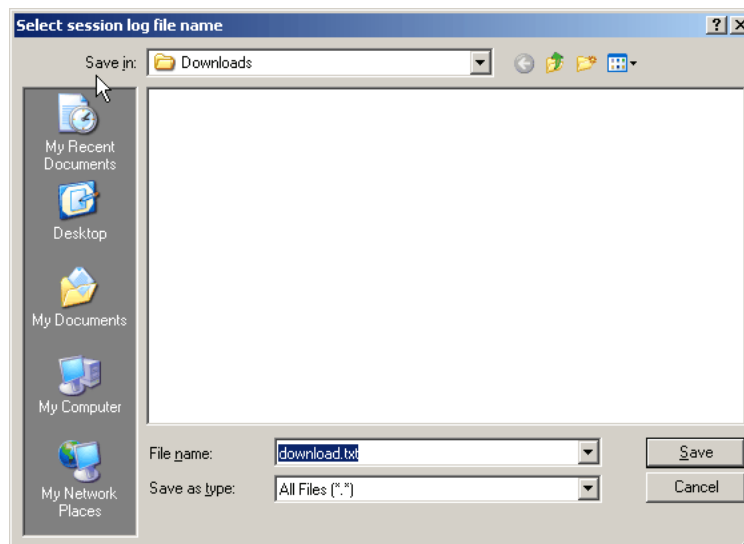
The following configuration changes should be completed with all CCT services shutdown with exception of the NCCT Data Access Layer service. Follow the instructions below: Log on to the Communication Control Toolkit server. Click **Start → Administrative Tools → Services**. Stop the **NCCT SMON** service 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.



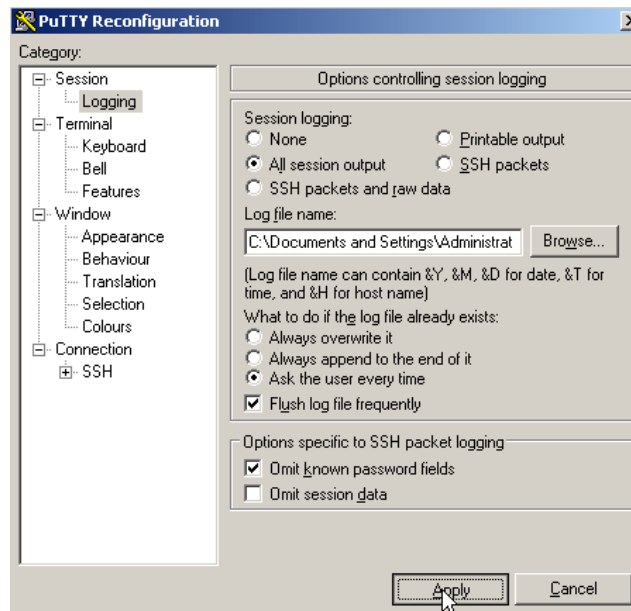
Create a **new text file** called **download.txt** and **direct** the download data to this file. Click on **Session** → **Logging** as shown. Select **All session output** radio button in the **Session logging** section. Accept all other default values. Click on **Browse**.



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
```

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

LD 20

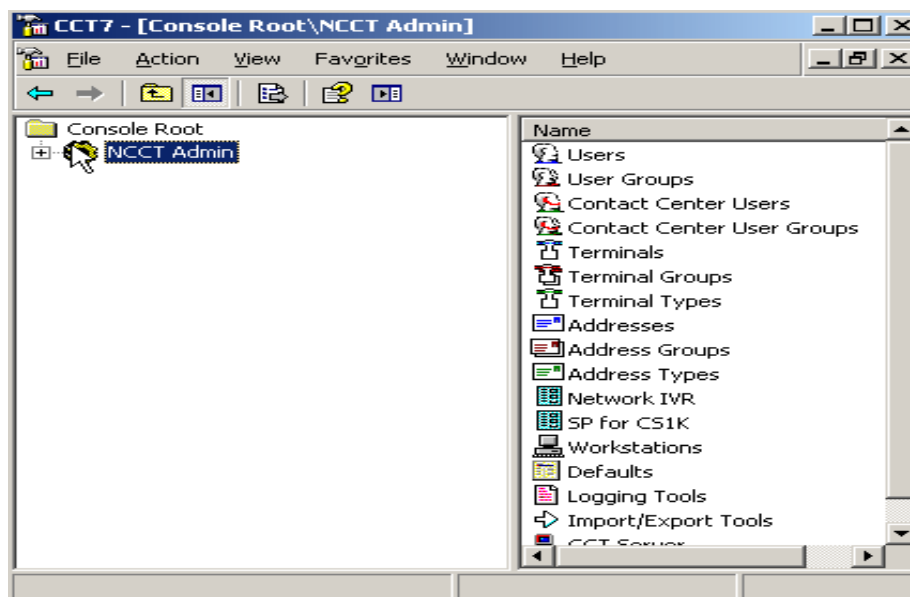
Prompt	Response	Description
>	LD 20	Enter Overlay 20
REQ	PRT	Print
TYPE	TNB	Terminal Number Block
CUST	0	Customer Number as defined in LD15
TNB	[Press return]	Return through rest of commands

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

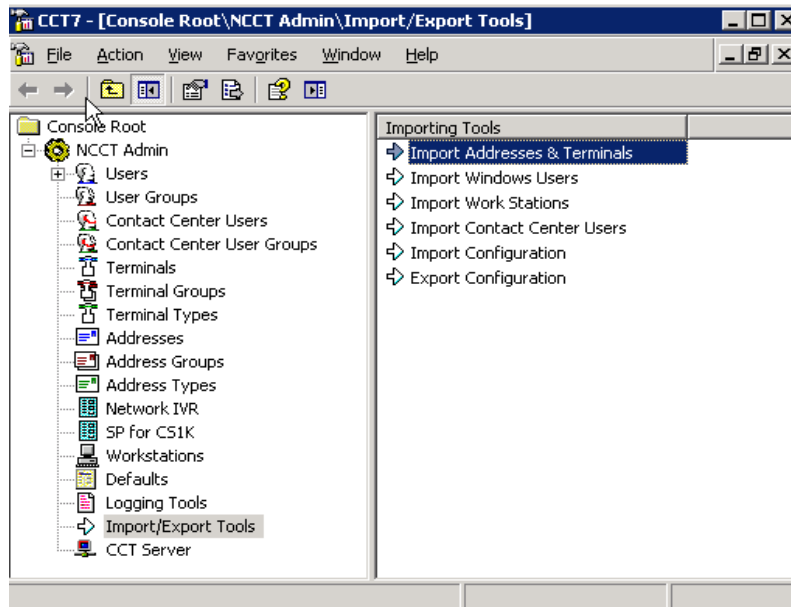
LD 23

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

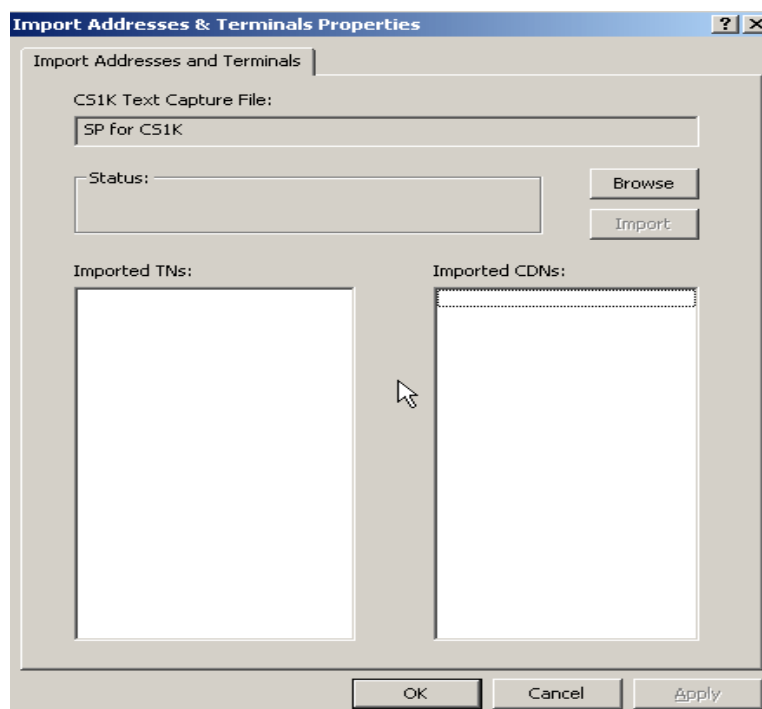
The information is downloaded and is available in the download file. Type **logo** and press **Enter**. Copy the text file **download.txt** that was captured to the CCT server. Click **Start → All Programs → Nortel → Communication Control Toolkit 7.0 → CCT Console**. Expand **NCCT Admin**.



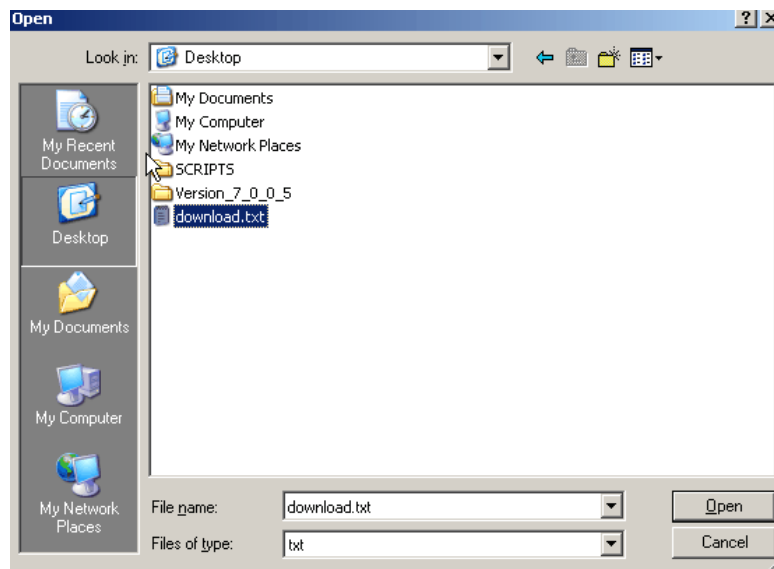
In the left pane of the **CCT7** console, click **Import/Export Tools**. In the right pane of the **CCT7** console, double-click **Import Addresses & Terminals**.



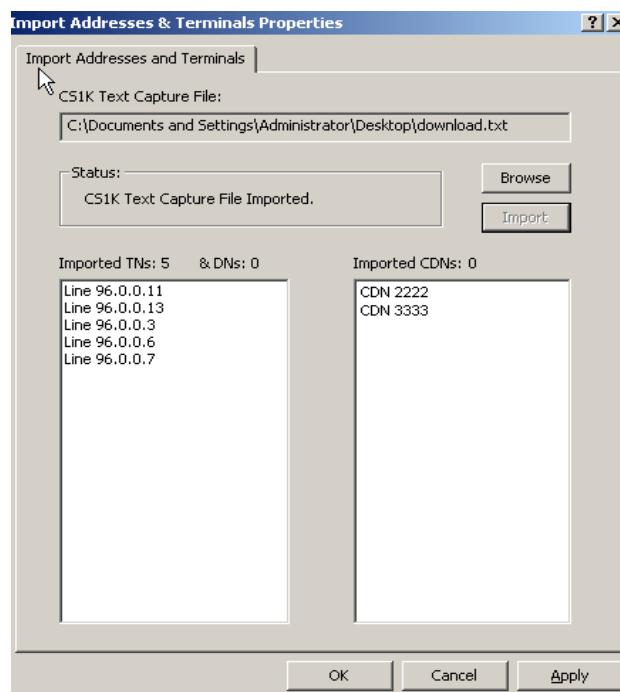
Click **Browse** to find the text file that was created in earlier.



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

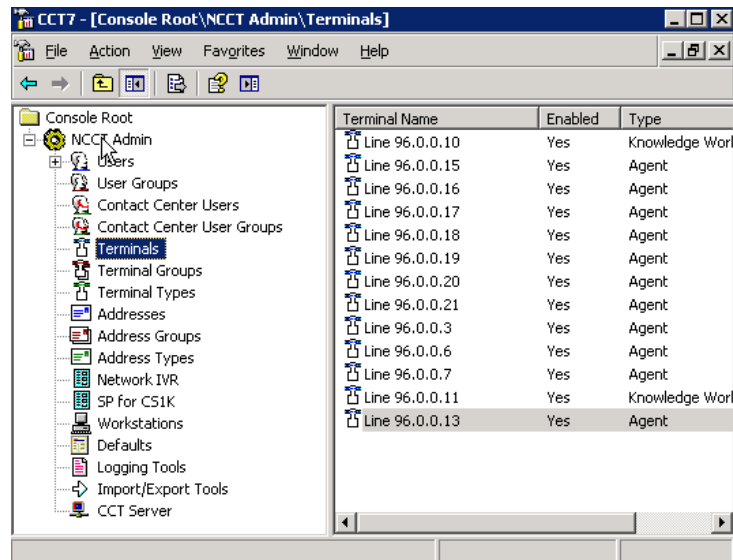


Click **Apply** to save changes. Click **OK**.

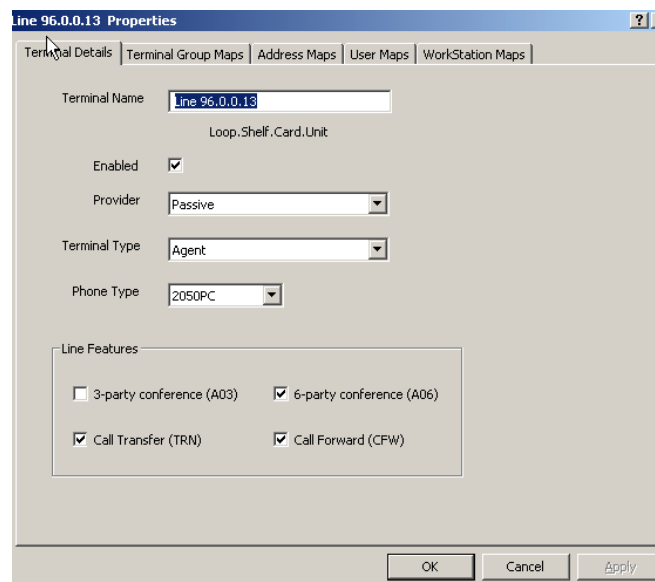


6.2. Mapping Resources

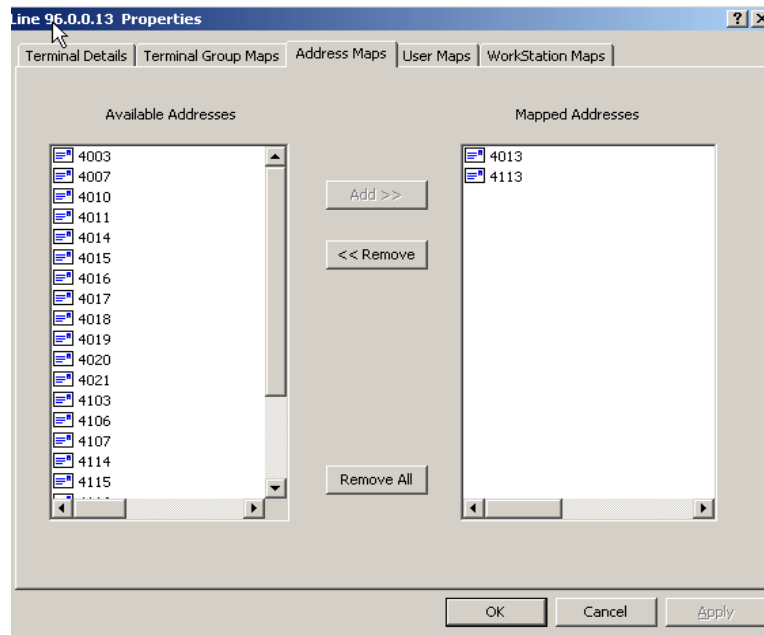
Map one resource to another in the Communication Control Toolkit administration tool to associate the resources with groups or other types of resources. Log on to the Communication Control Toolkit server. Click **Start → All Programs → Nortel → Contact Center → Communication Control Toolkit → CCT Console** 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.



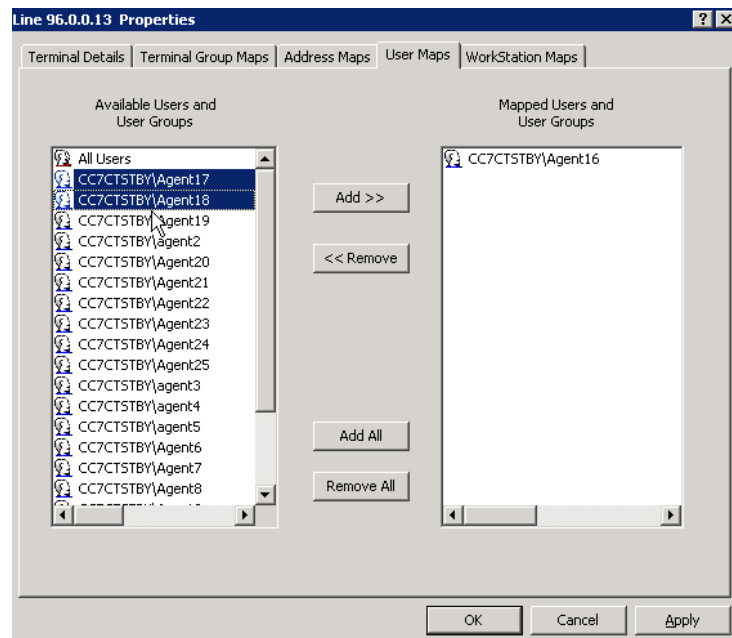
Click the tab that represents the resource to be mapped to the current resource.



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.

7. Configuration of NICE Perform® R3.2 for Integration with Avaya NES Contact Centre R7.0 and Avaya Communication Server 1000E R6.0 using Port Mirroring for Passive VoIP Recording

In Passive VoIP Recording the NICE VoIP Logger is defined as a destination port of a mirroring session on a LAN Switch, or as an output port/s of a tap device, similar to the connectivity of a network sniffer thus receiving sniffed (or mirrored) audio packets. The Logger receives a copy of the original RTP packet including the original source and destination IP addresses. The Logger needs to filter the received packets according to the IP addresses of the sets that are to be recorded. The following is a summary of the integration steps necessary to enable Perform Systems passive call recording to function in an Avaya NES Contact Centre 7.0 environment. For more detailed instruction please refer to Perform official documentation.

- Configure the Passive VOIP Logger
- Configuring a CTI Connection
- Verifying the CTI Integration
- Starting the Integration Services
- Configuring the Passive VoIP Logger in the System Administrator
- Connecting to Avaya NES Contact Centre

The diagram in **Figure 2** shows the configuration layout for Passive Recording using Port Mirroring over IP.

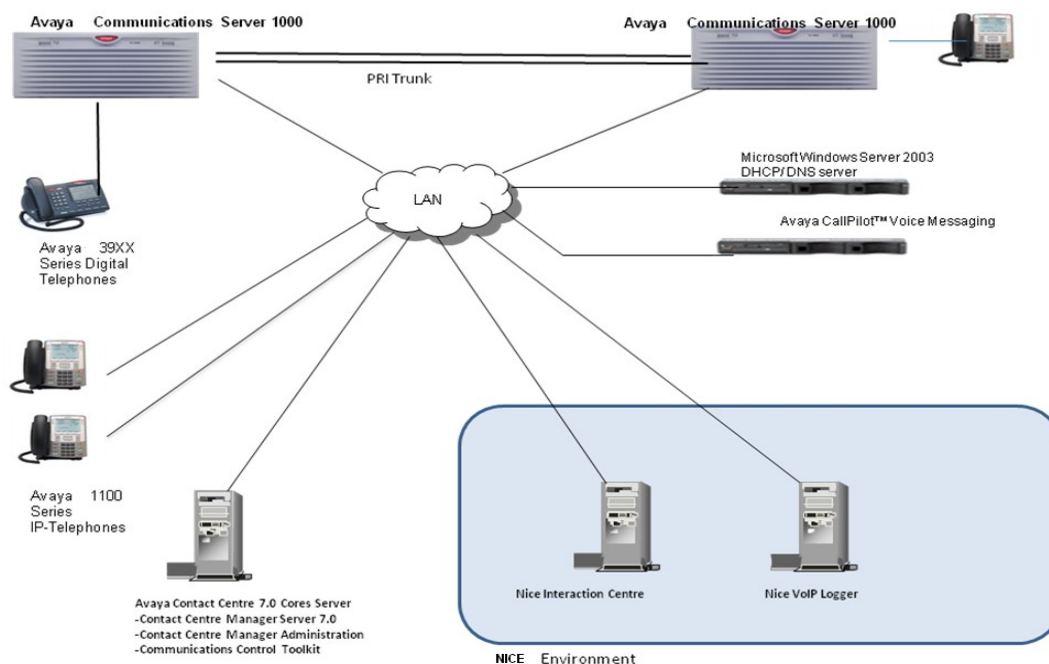


Figure 2: Passive Recording Configuration with Avaya NES Contact Centre and Avaya Communication Server 1000E

- **NICE Interactions Center**

The NICE Interactions Center communicates with the Avaya NES Contact Centre Server using the CTI Link. In this way, the NICE Interactions Center receives the call status, monitors call events, and stores them in its databases for other system functions such as queries, reports, etc. and uses them when interaction-based recordings are implemented to determine whether to record a call.

- **NICE VoIP Logger: (Passive VoIP Recording)**

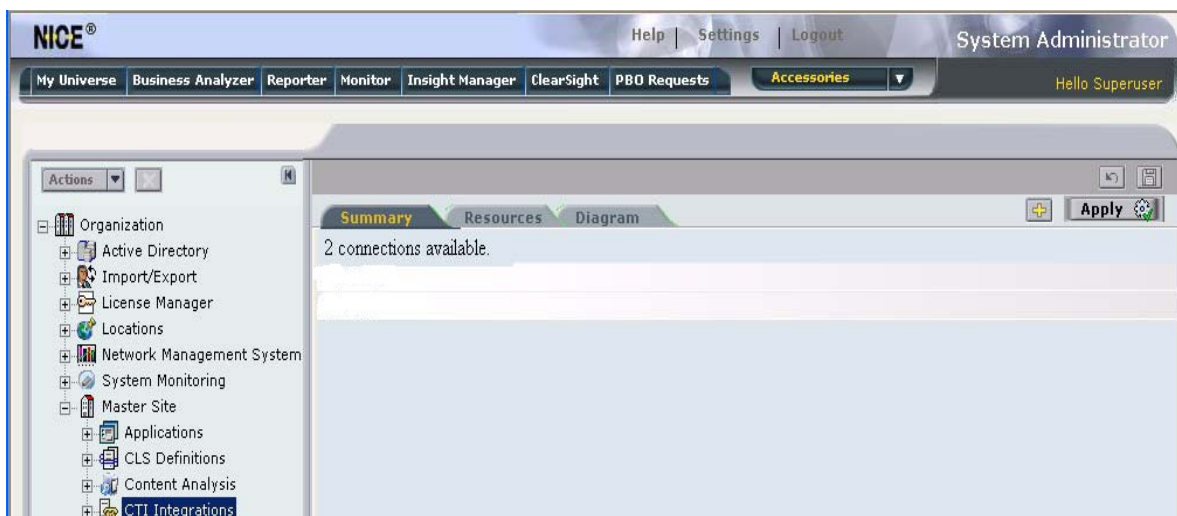
The physical port where the NICE VoIP Logger is connected, is defined as a destination port of a mirroring session on a LAN Switch or as an output port/s of a tap device. Its connectivity is similar to a network sniffer in the way it receives sniffed (or mirrored) audio packets. The VoIP Logger connects directly to the LAN switch and listens to the RTP stream.

7.1. Configuring a CTI Connection

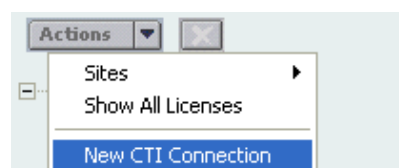
The CTI connection defines the actual CTI server with which the system integrates. Follow the procedure below. From the **Settings** menu, select **Technician Mode**.



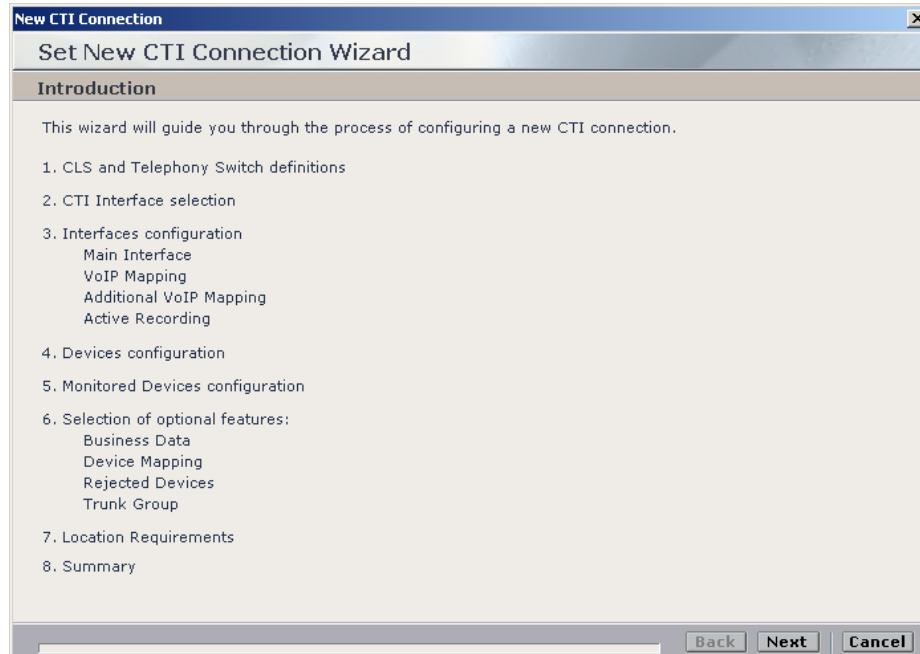
In the **Organization** tree, select **CTI Integrations**.



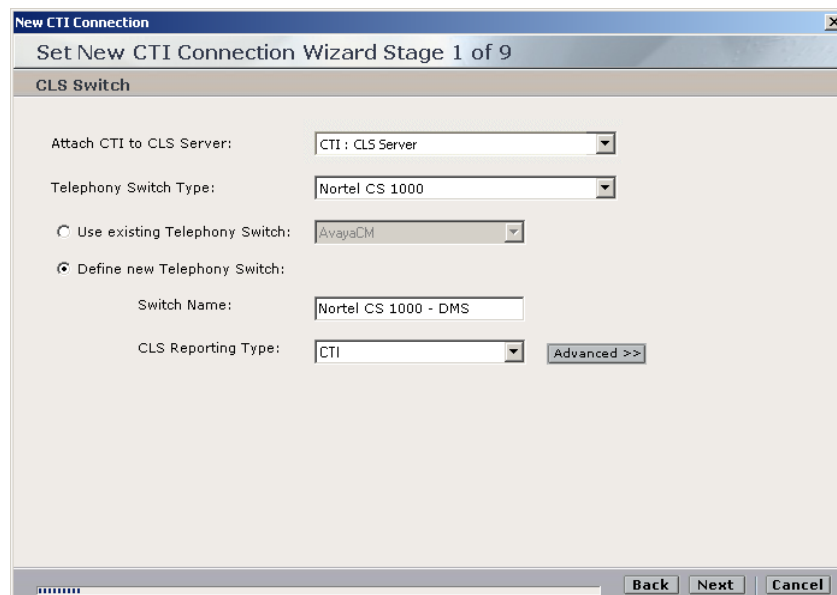
From the **Actions** drop down menu, select **New CTI Connection**.



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**. Do NOT select **Active Recording**. Click **Next**.

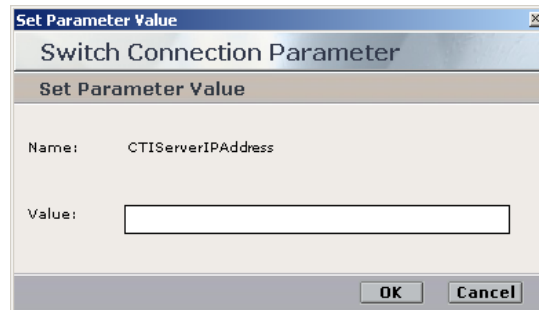
The screenshot shows the 'Set New CTI Connection Wizard Stage 2 of 9' window. The 'Interface Type' section is active. Under 'Telephony switch and CTI Interface Type', the 'Nortel CS 1000 CTI Interface:' dropdown is set to 'MLS / CCMS'. Below it, the text reads 'Nortel Communication Server 1000 (formerly Meridian1)' and 'Meridian Link Services / Contact Center Manager Server (formerly Symposium)'. There are two checkboxes: 'VolP Mapping:' and 'Active Recording:', both with 'MLS / CCMS' selected in their respective dropdowns. At the bottom 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. A checkbox 'Show only required parameters' is checked. Under 'Interface Connection Details', a table lists parameters. The 'CTIServerIPAddress' parameter is highlighted. Below the table is a 'Description:' field. At the bottom are 'Back', 'Next', and 'Cancel' buttons.

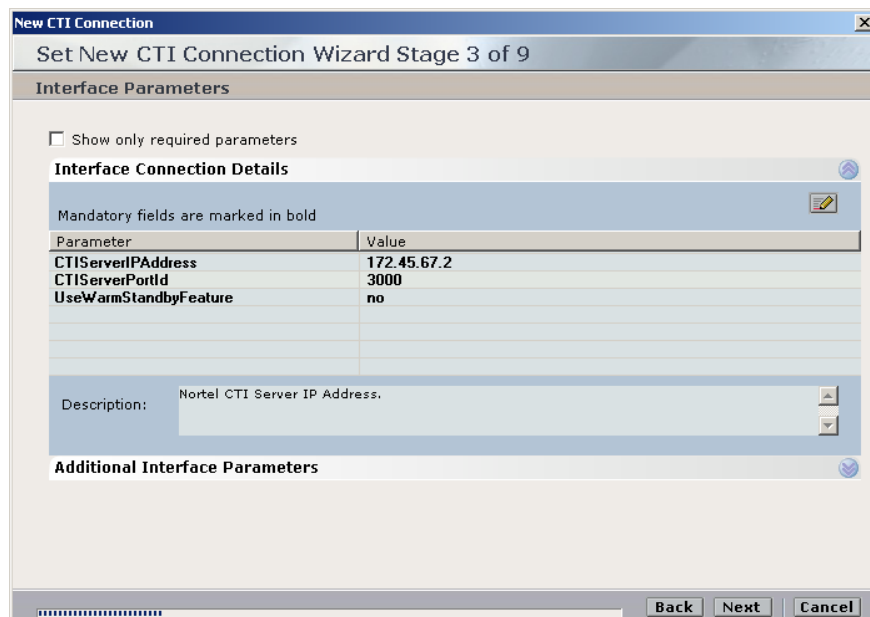
Parameter	Value
CTIServerIPAddress	
CTIServerPortId	3000

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



The image shows a 'Set Parameter Value' dialog box. It has a title bar 'Set Parameter Value' and a subtitle 'Switch Connection Parameter'. Below the subtitle is another 'Set Parameter Value' label. The 'Name' field is set to 'CTIServerIPAddress'. The 'Value' field is an empty text box. At the bottom are 'OK' and 'Cancel' buttons.

The **CTI Connection wizard** presents the **Interface Parameters** window. Expand the **Additional Interface Parameters**.



The image shows the 'New CTI Connection' wizard, Stage 3 of 9, titled 'Set New CTI Connection Wizard Stage 3 of 9'. The main section is 'Interface Parameters'. There is a checkbox 'Show only required parameters' which is unchecked. Below it is 'Interface Connection Details' with a note 'Mandatory fields are marked in bold'. A table lists parameters: 'CTIServerIPAddress' (172.45.67.2), 'CTIServerPortId' (3000), and 'UseWarmStandbyFeature' (no). Below the table is a 'Description' field with the text 'Nortel CTI Server IP Address.' and a dropdown arrow. At the bottom is 'Additional Interface Parameters' with a dropdown arrow. The bottom of the window has 'Back', 'Next', and 'Cancel' buttons.

Parameter	Value
CTIServerIPAddress	172.45.67.2
CTIServerPortId	3000
UseWarmStandbyFeature	no

The **Additional Interface Parameters** window appears. Click **Next**.

The screenshot shows the 'Set New CTI Connection Wizard Stage 3 of 9' window. The 'Interface Parameters' section is active. It includes a checkbox for 'Show only required parameters' which is unchecked. Below this is the 'Interface Connection Details' section, which contains the 'Additional Interface Parameters' table. A note states 'Mandatory fields are marked in bold'. The table lists several parameters with their values. At the bottom of the table is a 'Description:' text area. The window has 'Back', 'Next', and 'Cancel' buttons at the bottom right.

Parameter	Value
CustomerNumber	0
PollingInterval	30
ReadTN2DN	Yes
RegisterToHostRouting	Yes
ReplaceCallId	No
Report IP Information Only	No
SymposiumSupport	No

The Set New CTI Wizard window displays the **Devices** section. Set **devices** by following the relevant procedure/s below. Select **Add** or **Add Range**.

The screenshot shows the 'Set New CTI Connection Wizard Stage 4 of 9' window. The 'Devices' section is active. It features an 'Available Devices' area with the instruction 'Please provide telephony switch available devices (Extension, Position)'. Below this, it shows '0 devices' and an 'Import from:' section with a 'File' button. To the right of the 'Import from:' section are buttons for 'Add', 'Add Range', a search icon, a delete icon, a refresh icon, and an 'Export to file' button. Below these is a table with two columns: 'Device' and 'Type'. The table is currently empty. The window has 'Back', 'Next', and 'Cancel' buttons at the bottom right.

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:

OK Cancel

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

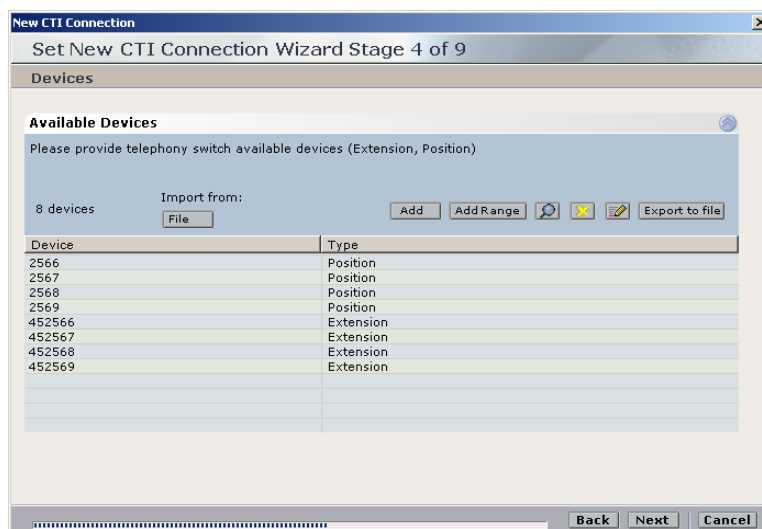
☐ Display Read Only Information

Name	Value

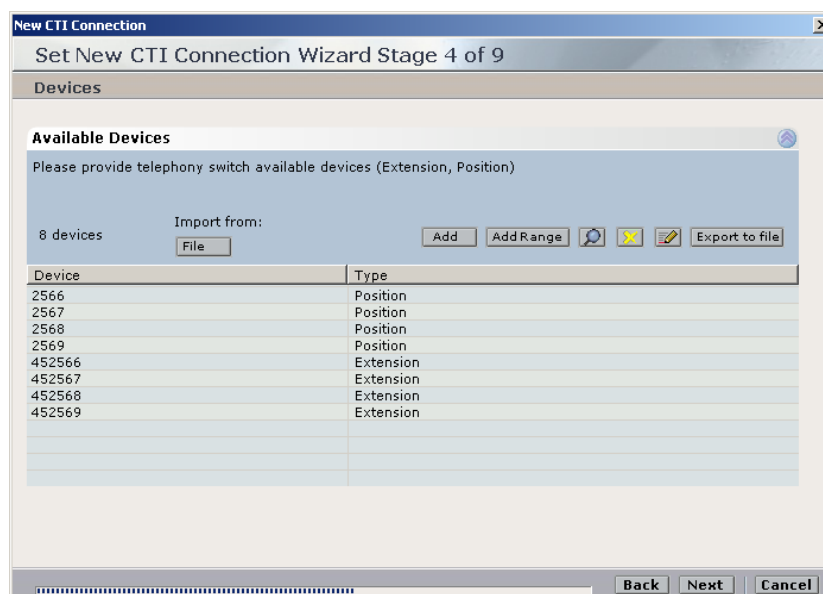
Description:

OK Cancel

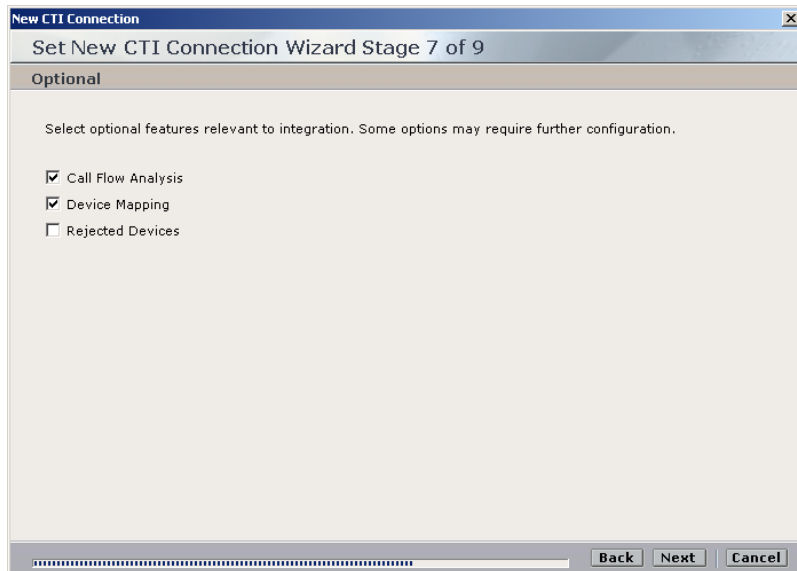
The **Set New CTI Wizard** window reappears displaying all the devices that have been added. Click **Next**.



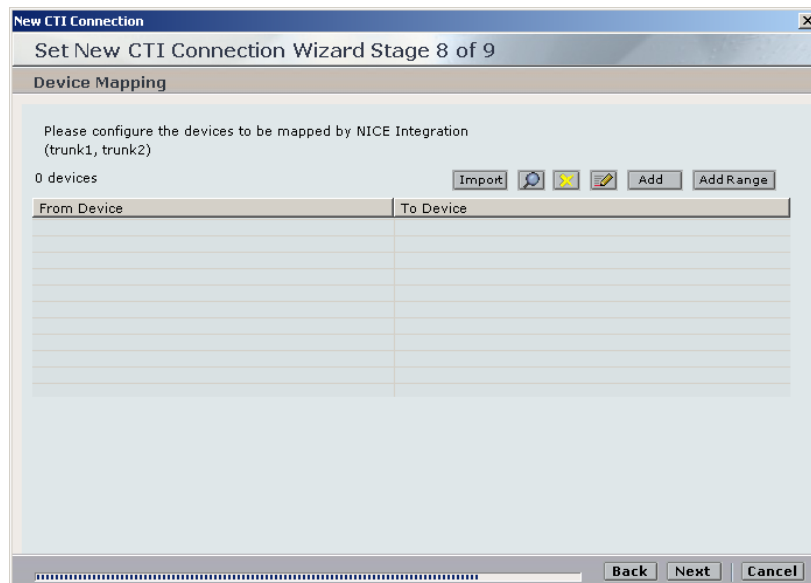
The Set New CTI Connection Wizard window displays all **Monitored Devices**. All devices are automatically monitored. Click **Next**.



The Set New CTI Connection Wizard window displays the **Optional** area. Select **Device Mapping** and click **Next**.



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



The Add Range 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. In the example below the Position ID **2345** is matched to the extension number **52345**. Then click **OK**.

Devices Mapping

Device Mapping

Add Range

Enter a range of devices to be mapped and a 'MapTo' device, to start mapping the range to. Note that you can use the range map only for numeric devices.

Start 'MapFrom' device: * 2345

Number of devices to be mapped: 5

Start 'Map to' device: * 52345

OK Cancel

The Set New CTI Connection Wizard displays the Device Mapping section Click **Next**.

New CTI Connection

Set New CTI Connection Wizard Stage 8 of 9

Device Mapping

Please configure the devices to be mapped by NICE Integration (trunk1, trunk2)

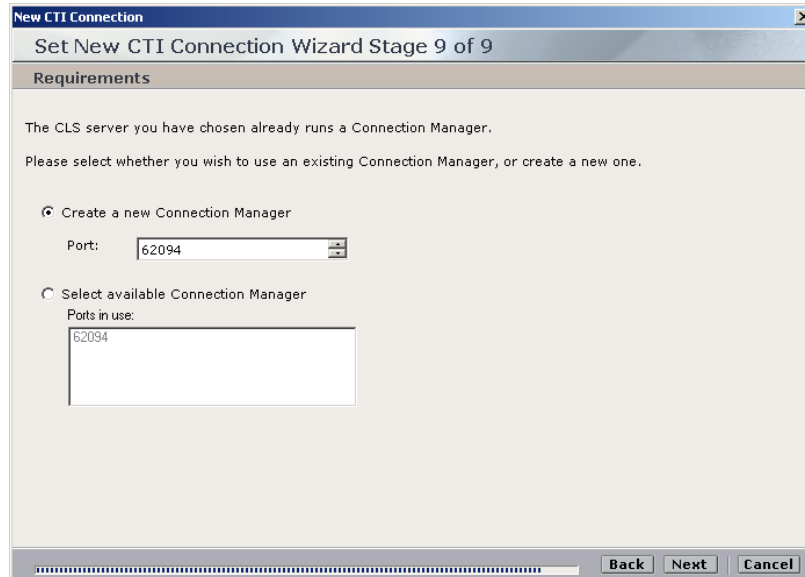
4 devices

Import [Refresh] [Yellow Star] [Pencil] Add Add Range

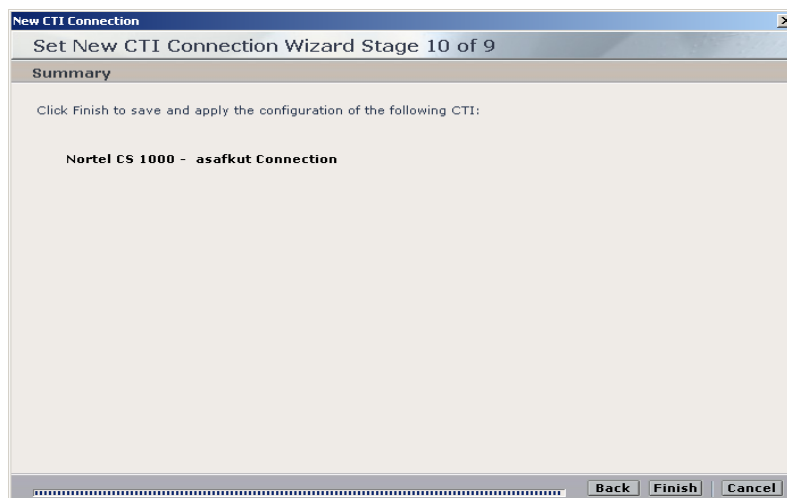
From Device	To Device
452566	2566
452567	2567
452568	2568
452569	2569

Back Next Cancel

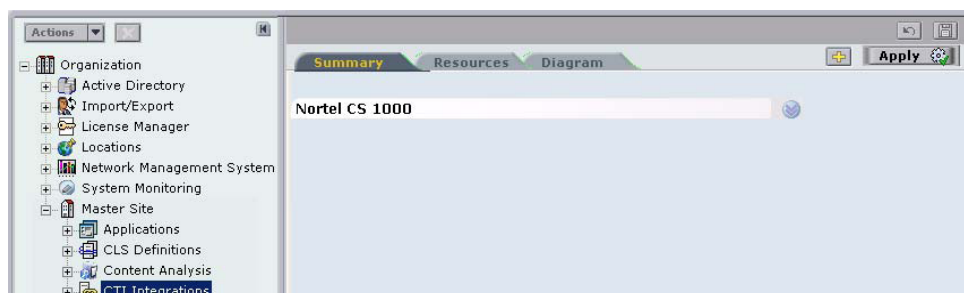
The Set New CTI Connection Wizard window displays the **Requirements** section. Click **Next**.



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

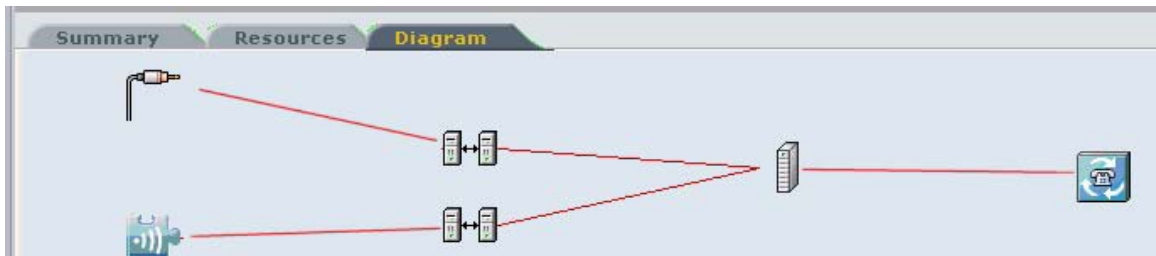


The new CTI Connection appears on the **CTI Integrations - Summary** tab.



7.2. Verifying the CTI Integration

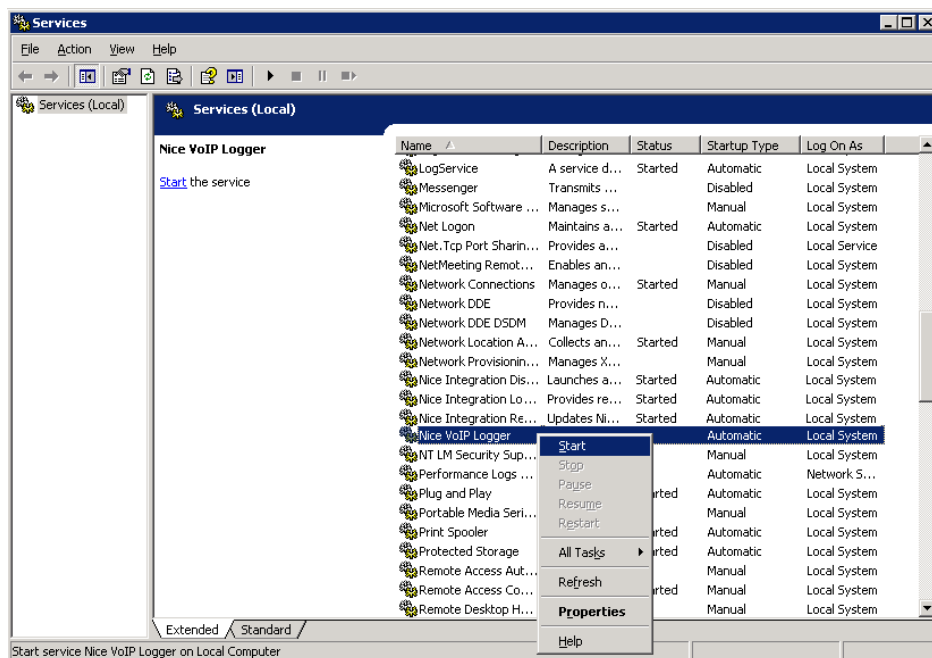
This procedure describes how to verify that all the relevant system components have been attached. In the System Administrator, in the **Organization** tree, navigate to **Master Site → CTI Integrations**. Click the **Diagram** tab. A diagram of the integration appears.



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

7.3. Starting the Integration Services on the VoIP Logger

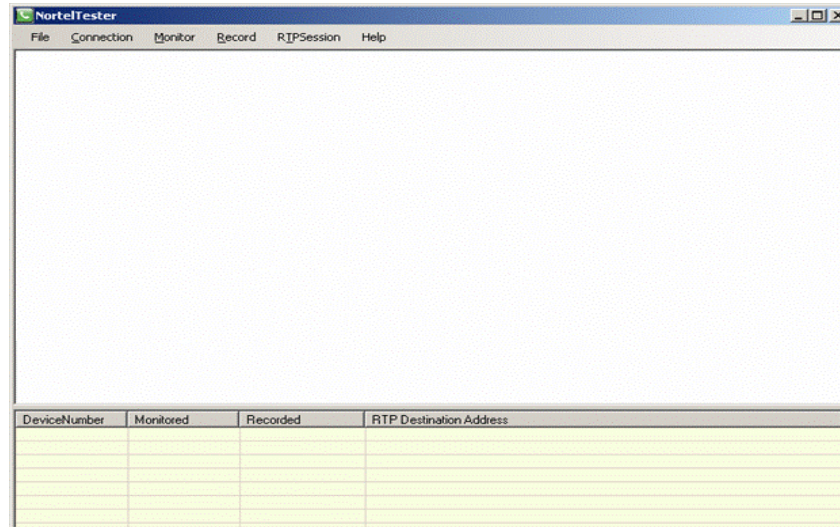
On the VoIP Logger click **Start → Run**. Type **services.msc** and click **OK**. The Services window appears.



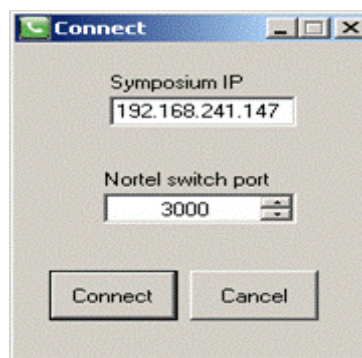
Select and right-click **NICE VoIP Logger**. From the pop-out menu, select **Start**. The NICE VoIP Logger's Service **Status** changes to **Started**. The NICE Integration services should now start automatically. Verify that all three Integration services start.

7.4. Connecting to Avaya NES Contact Centre

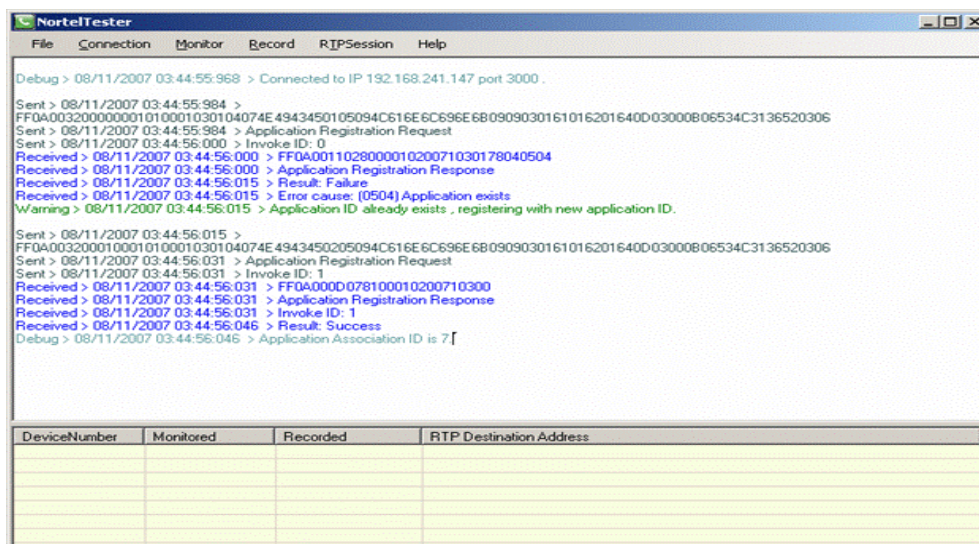
Open the **NortelTester** tool. The **NortelTester** window appears. From the **Connection** menu, select **Connect**.



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. Click **Connect**.



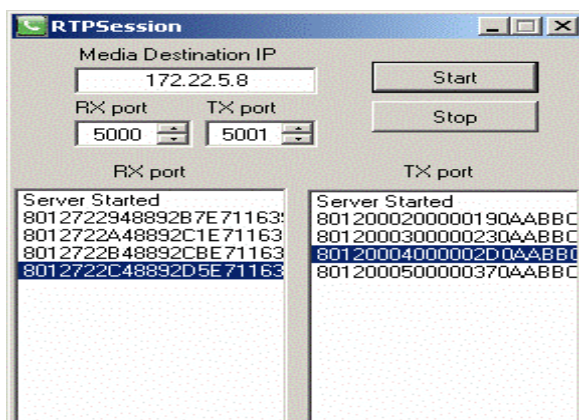
The NortelTester opens the TCP connection with Avaya Contact Centre Management Server and attempts to register the application by sending application registration requests and checking the responses. It continues to do this until it succeeds. This flow can be seen in the log window.



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

7.5. 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.



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

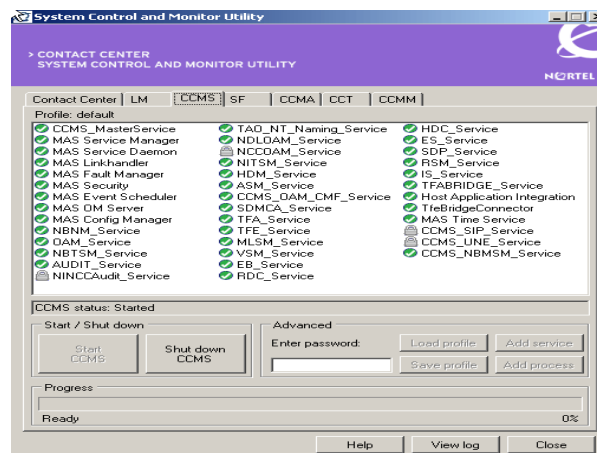
To verify the Deskphone's recording state on the CS1000E. Make a call. During the call, run **crShowCRParam** on the CS1000E. Verify that the **underRecording** equals **1**. (1 indicates that the Deskphone sends the RTP stream).

8. Verification Steps

8.1. Verifying Contact Centre Manager Server services are running

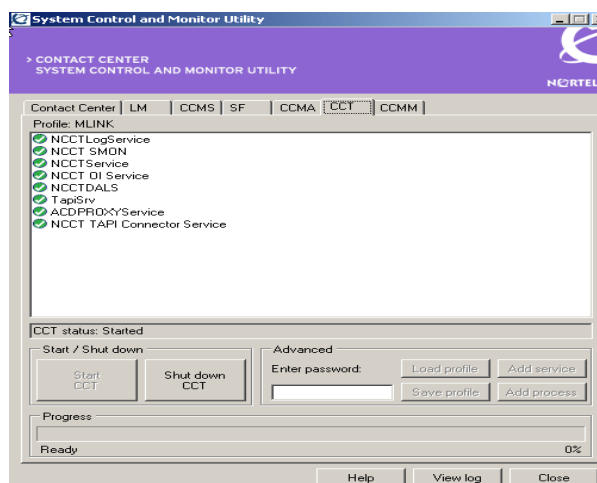
Click **Start**→**All Programs**→**Nortel**→**Contact Center**→**Common Components**→**System Control Monitor Utility**. All CCMS services with a green icon are running. The icons will turn red if there is a problem with the installation.

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.



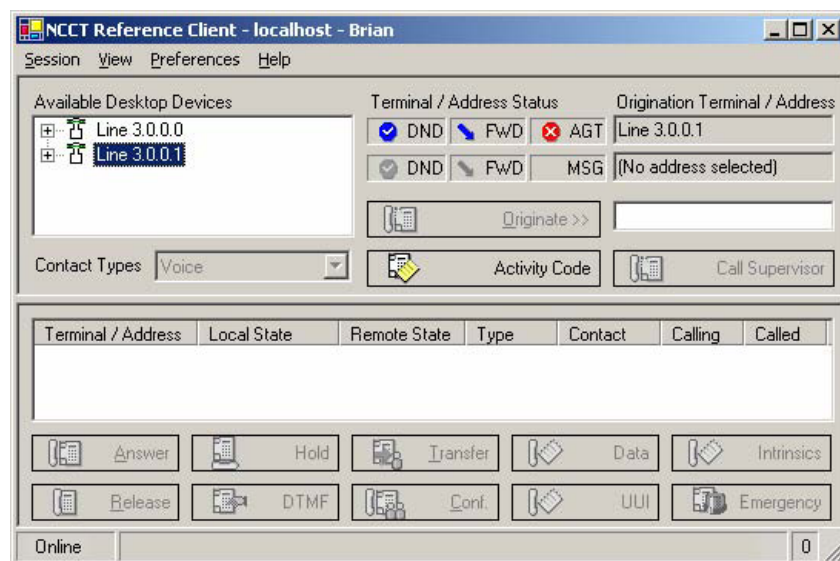
8.3. Verifying Avaya Communication Control Toolkit using the Reference Client

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**.

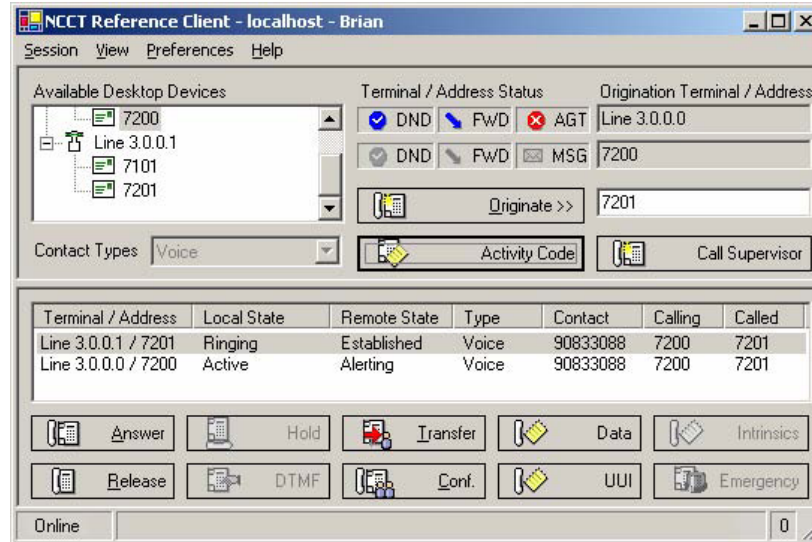
The following example demonstrates how to use the Reference Client to test call completion.

- 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.

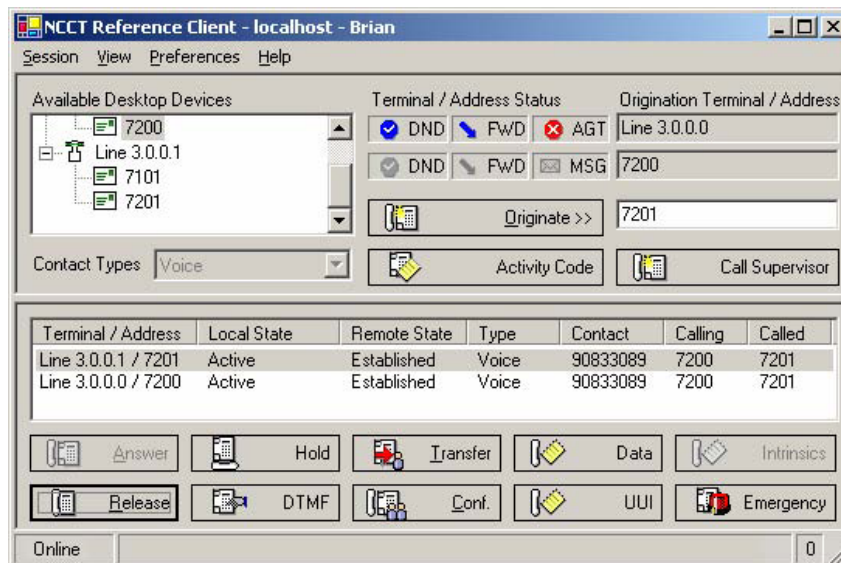


- 7) In the **Available Devices** box, select a Basic type of address from which to make a test call.
- 8) Enter the Destination Address in the text box to the right of the Originate button.
- 9) Click **Originate**. The destination address shows a Local State of Ringing in the Reference Client.

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



11) Release the call.

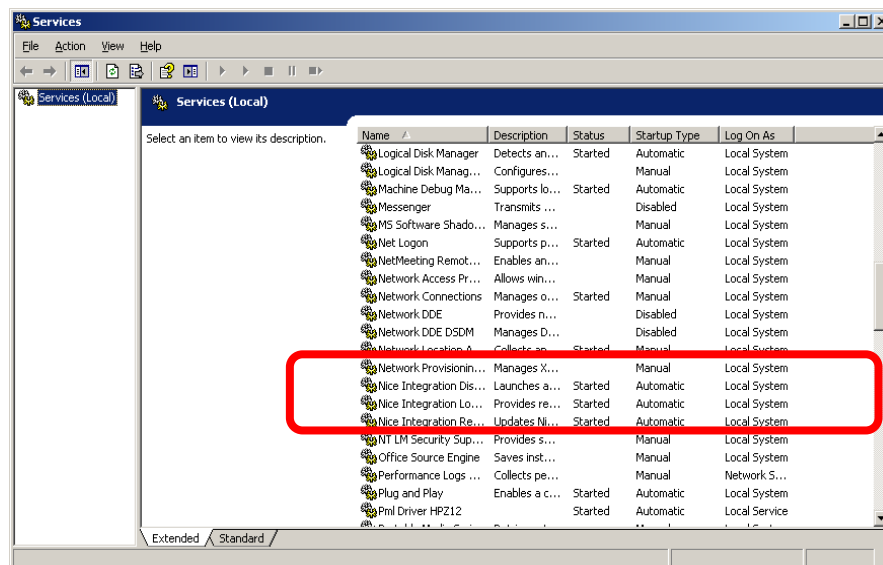


8.4. Verifying the Integration Services on the NICE Systems NICE Interactions Center Server

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

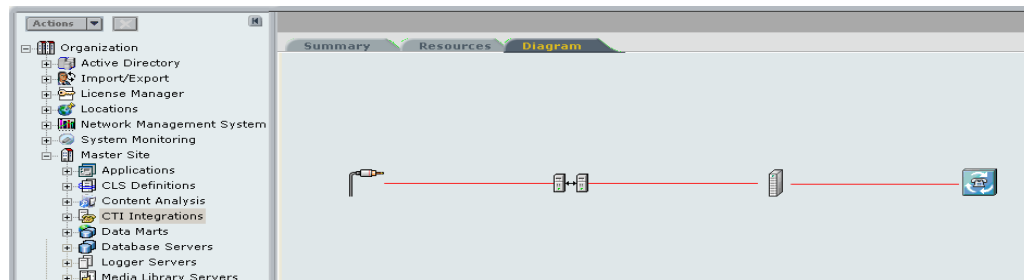
To verify the Deskphone's recording state on the CS1K

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
000	Q02033000	ISS1:1of1	p28736_1	14/10/2010	p28736_1.cpl	NO
001	Q02071451	ISS1:1OF1	p29164_1	14/10/2010	p29164_1.cpl	NO
002	Q02129706	ISS1:1OF1	p29842_1	14/10/2010	p29842_1.cpl	NO
003	Q02012100-06	ISS1:1OF1	p29368_1	14/10/2010	p29368_1.cpl	NO
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
006	Q01987279-02	ISS1:1OF1	p28416_1	14/10/2010	p28416_1.cpl	NO
007	Q02076740	ISS1:1OF1	p29154_1	14/10/2010	p29154_1.cpl	NO
008	Q02029209	ISS1:1OF1	p28469_1	14/10/2010	p28469_1.cpl	NO
009	Q02024455-01	ISS1:1OF1	p28717_1	14/10/2010	p28717_1.cpl	NO
010	Q01983521-04	ISS1:1OF1	p27616_1	14/10/2010	p27616_1.cpl	NO
011	Q02035822-01	ISS1:1OF1	p29212_1	14/10/2010	p29212_1.cpl	NO
012	Q01986974-05	ISS1:1OF1	p28821_1	14/10/2010	p28821_1.cpl	YES
013	Q02049121-01	ISS1:1OF1	p28819_1	14/10/2010	p28819_1.cpl	NO
014	Q02097631	ISS1:1OF1	p28328_1	14/10/2010	p28328_1.cpl	NO
015	Q02064793-06	ISS1:1OF1	p27947_1	14/10/2010	p27947_1.cpl	NO
016	Q01976701-01	ISS1:1OF1	p28211_1	14/10/2010	p28211_1.cpl	NO
017	Q02092223	ISS1:1OF1	p29343_1	14/10/2010	p29343_1.cpl	NO
018	Q02043398	ISS1:1OF1	p28869_1	14/10/2010	p28869_1.cpl	NO
019	Q02038440	ISS1:1OF1	p28674_1	14/10/2010	p28674_1.cpl	NO
020	Q02100965	ISS1:1OF1	p29450_1	14/10/2010	p29450_1.cpl	NO
021	Q02040015	ISS1:1OF1	p28657_1	14/10/2010	p28657_1.cpl	NO
022	Q02102219-01	ISS1:1OF1	p29464_1	14/10/2010	p29464_1.cpl	NO
023	Q02035396	ISS1:1OF1	p28675_1	14/10/2010	p28675_1.cpl	NO
024	Q02020734-02	ISS1:1OF1	p28668_1	14/10/2010	p28668_1.cpl	NO
025	Q02077909	ISS1:1of1	p29272_1	14/10/2010	p29272_1.cpl	NO
026	Q02064503	ISS1:1OF1	p29196_1	14/10/2010	p29196_1.cpl	NO
027	Q02041981	p28695_1	p28719_1	14/10/2010	p28719_1.cpl	NO
028	Q02122052	ISS1:1OF1	p29726_1	14/10/2010	p29726_1.cpl	NO
029	Q02135191	ISS1:1OF1	p29935_1	14/10/2010	p29935_1.cpl	NO
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033	Q02077848-01	ISS1:1OF1	p29320_1	14/10/2010	p29320_1.cpl	NO
034	Q02034783-01	p28596	p28594_1	14/10/2010	p28594_1.cpl	YES
035	Q02156053	ISS1:1OF1	p30176_1	14/10/2010	p30176_1.cpl	NO
036	Q02007476	ISS1:1OF1	p28031_1	14/10/2010	p28031_1.cpl	NO
037	Q02128131	ISS1:1OF1	p29830_1	14/10/2010	p29830_1.cpl	NO
038	Q02017013-01	ISS1:1OF1	p28313_1	14/10/2010	p28313_1.cpl	NO
039	Q02114752	ISS1:1OF1	p29718_1	14/10/2010	p29718_1.cpl	NO
040	Q02110973	ISS1:1OF1	p29690_1	14/10/2010	p29690_1.cpl	NO
041	Q02107402	ISS1:1of1	p29512_1	14/10/2010	p29512_1.cpl	NO
042	Q02100914	ISS1:1OF1	p28597_1	14/10/2010	p28597_1.cpl	NO

043	Q02036885-02	ISS1:1OF1	p28857_1	14/10/2010	p28857_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
049	Q02100456-01	ISS1:1 OF 1	p29755_1	14/10/2010	p29755_1.cpl	NO
050	Q02033139	ISS1:1OF1	p28582_1	14/10/2010	p28582_1.cpl	NO
051	Q02032955-02	ISS1:1OF1	p28529_1	14/10/2010	p28529_1.cpl	NO
052	Q02043226-02	ISS1:1OF1	p29125_1	14/10/2010	p29125_1.cpl	NO
053	Q02039427-02	ISS1:1OF1	p28849_1	14/10/2010	p28849_1.cpl	NO
054	Q02095838	ISS1:1OF1	p28852_1	14/10/2010	p28852_1.cpl	NO
055	Q02119261	ISS2:1OF1	p29613_2	14/10/2010	p29613_2.cpl	NO
056	Q02058567-01	ISS1:1OF1	p28965_1	14/10/2010	p28965_1.cpl	NO
057	Q02027777	ISS1:1OF1	p28471_1	14/10/2010	p28471_1.cpl	NO
058	Q02034835	ISS1:1OF1	p28569_1	14/10/2010	p28569_1.cpl	YES
059	Q02038482	ISS1:1OF1	p28682_1	14/10/2010	p28682_1.cpl	NO
060	Q02077171	ISS1:1OF1	p29169_1	14/10/2010	p29169_1.cpl	NO
061	Q02028560-04	ISS1:1OF1	p28564_1	14/10/2010	p28564_1.cpl	NO
062	Q02039217-01	ISS1:1OF1	p28760_1	14/10/2010	p28760_1.cpl	NO
063	Q02129264	ISS1:1OF1	p29827_1	14/10/2010	p29827_1.cpl	NO
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075	Q02065521	ISS1:1OF1	p29218_1	14/10/2010	p29218_1.cpl	NO
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097	Q02039994	ISS1:1OF1	p28690_1	14/10/2010	p28690_1.cpl	NO

098	Q02073690	ISS1:1OF1	p29208_1	14/10/2010	p29208_1.cpl	NO
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100	Q02030977	ISS1:1OF1	p28507_1	14/10/2010	p28507_1.cpl	NO
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103	Q02103928	ISS1:1OF1	p29486_1	14/10/2010	p29486_1.cpl	NO
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112	Q02077977-01	ISS1:1OF1	p29177_1	14/10/2010	p29177_1.cpl	NO
113	Q02109731-02	ISS1:1OF1	p29694_1	14/10/2010	p29694_1.cpl	YES
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
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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
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124	Q02151971	ISS1:1OF1	p30156_1	14/10/2010	p30156_1.cpl	NO
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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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