Avaya Solution & Interoperability Test Lab

Application Notes for configuring NICE Engage Platform R6.3 to interoperate with Avaya Proactive Contact R5.1 and Avaya Aura® Application Enablement Services R6.3 using DMCC Service Observe and Single Step Conference to record calls - Issue 1.0

Abstract

These Application Notes describe the configuration steps for the NICE Engage Platform to interoperate with the Avaya solution consisting of Avaya Proactive Contact R5.1, Avaya Aura® Communication Manager R6.3, Avaya Aura® Session Manager R6.3, and Avaya Aura® Application Enablement Services R6.3.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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 configuration steps required for NICE Engage Platform to interoperate with the Avaya solution consisting of Avaya Proactive Contact R5.1, Avaya Aura® Communication Manager R6.3, Avaya Aura® Session Manager R6.3, and Avaya Aura® Application Enablement Services R6.3using Device Media Call Control Service Observation and Single Step Conference to record telephone calls from various jobs running on Proactive Contact.

The Avaya Proactive Contact system is an enterprise outbound solution software application that consists of software, hardware, and network components. The system is comprised of a system cabinet, supervisor workstation, agent workstations with a hardware connection to Avaya Aura® Communication Manager using an ISDN trunk to engage Elite agents on Communication Manager.

The NICE Engage Platform is setup to use Device Media Call Control Service Observation and/or Single Step Conference to record the voice calls of Communication Manager agents on various Proactive Contact Jobs, inbound, outbound and blended. Device Media Call Control (DMCC) works by allowing software vendors to create soft phones, in memory on a recording server, and use them to monitor and record other phones. This is purely a software solution and does not require telephony boards or any wiring beyond a typical network infrastructure.

The NICE Engage Platform is fully integrated into a LAN (Local Area Network), and includes easy-to-use 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. The NICE Engage Platform uses the Communication Manager feature “Service Observe” to observe a call on an extension this way the call is recorded and can be played back at a later time. NICE can also conference into the call and record the call using this method. Both methods of call recording use virtual stations on Communication Manager in order to observe or conference into existing calls in order to record them.

The NICE Engage Platform contains tools for audio retrieval, centralized system security authorization, system control, and system status monitoring. Also included is a call parameters database (Nice Application Server) that tightly integrates via CTI link PABXs and ACD’s including optional advanced audio archive database management, search tools, a wide variety of Recording-on-Demand capabilities, and comprehensive long-term call database for immediate retrieval.

2. General Test Approach and Test Results

The interoperability compliance testing evaluated the ability of the NICE Engage Platform to carry out call recording in a variety of scenarios using DMCC Service Observation and/or Single Step Conference with Proactive Contact and AES. The NICE Engage Platform registers with the event server on Proactive Contact in order to receive call and agent events to stop and start call recording.

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 interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on placing and recording calls in different call scenarios with good quality audio recordings and accurate call records. The tests included:
The testing focuses on the following types of calls:

- **Proactive Contact Outbound job** – Recording of all calls types for agents on an outbound job on Proactive Contact, including transfer, conference and forward work.
- **Proactive Contact Managed job** - Recording of all calls types for agents on a preview outbound job on Proactive Contact, including transfer, conference and forward work.
- **Proactive Contact Inbound Job-** Recording of all calls types for agents on an inbound job on Proactive Contact, including transfer, conference and forward work.
- **Proactive Contact Agent Blending (PAB)** - Recording of agents on a blended job where the agent is switching between answering VDN calls and outbound calls.
- **Proactive Contact Intelligent Call Blending (ICB)** - Recording of agents on a blended job where the agent is switching between answering inbound calls and outbound calls.
- **Failover testing** - The behaviour of the NICE Engage Platform under different simulated LAN failure conditions on the Avaya solution.

2.2. Test Results

Most functionality and serviceability test cases were completed successfully. The following issues and observations were noted.

The NICE recorder was setup during the testing to record in "Selective" mode only. This is because the recordings cannot be played back when the Proactive Contact is connected to the "headset" i.e., the agent's hard phone when recording in "Total" mode.

Issue 1: Using “Selective” mode with Service Observe will introduce a 5 second delay at the beginning of every conversation due to the Service Observe being initiated for each phone call that is being recorded and this Service Observe tone will overwrite any conversation that takes place. This issue has been documented as a limitation on the NICE Engage Platform Integration Description Document. Please note that calls in Selective mode can be recorded using Single Step Conference or Multiple Registration without introducing a delay.

Issue 2: “Forward Work - Supervised Transfer” [Note Forward Work is when Agent 1 transfers/conferences the call to Agent 2 using the Proactive Contact method “Forward Work”]. When a call is transferred in a supervised fashion using Forward Work, there are two recordings present - Recording 1 has the whole conversation from Agent 1 out to PSTN and the transferred call to agent 2 talking to the PSTN. Recording 2 should contain the “consultation” between agents but there is nothing present to playback. This issue was reproduced in the NICE labs and a hot fix is available from NICE to resolve this issue, note this fix was produced after the completion of compliance testing and was therefore not compliance tested.

Issue 3: “Forward Work - Conference” - PSTN hangs up the call. There are two recordings present; recording 1 has the whole conversation from Agent 1 out to PSTN and the transferred call to agent 2 talking to the PSTN. Recording 2 should contain the “consultation” between agents but there is nothing present to playback. This issue has been documented as a limitation on NICE Engage Platform Integration Description Document.

Issue 4: “Forward Work - Conference” - Agent 1 hangs up the call. The “conference” part of the call is not fully recorded, the recorded portion only starts when agent 1 hangs up the call as the NICE omits the conversation when all three are in conference. The initial conference is viewed as if the call was on hold. This issue has been documented as limitation on NICE Engage Platform Integration Description Document.

Issue 5: “Forward Work - Conference” - Agent 2 hangs up the call. There are two recordings present. The initial call between agent 1 and the PSTN, the recording on the second call is only as long as when Agent 2 hangs up the call. The Conversation between Agent 1 and the PSTN is not recorded after Agent 2 hangs up. This issue has been documented as limitation on NICE Engage Platform Integration Description Document.

Observation 1: “Ordinary Conference” with PSTN hanging up – With a call up between Proactive Contact Agent and a PSTN customer and when there is a conference (either blind or supervised) with a supervisor (ordinary office phone that is also monitored). When the PSTN hangs up the call, all calls are automatically dropped (this is what happens on the Proactive Contact/Communication Manager when the PSTN drops the call). The first leg of the call i.e., the initial call between Agent 1 and PSTN only appears when Agent 1 releases the line.

Observation 2: For an inbound job only, the playback does not contain the consult bit in the main screen, this needs to be played by the segments. This is only happens for inbound jobs and supervised transfer to the PSTN or a Monitored phone.

Observation 3: There is a 7 second delay before the recording stops after CTRL + F7 is pressed. This is the same if F8 is pressed, basically any "release line" event.

2.3. Support

Technical support can be obtained for NICE Engage Platform from the website http://www.nice.com/support-and-maintenance

3. Reference Configuration

The configuration in **Figure 1** was used during the compliance test of the NICE Engage Platform with Avaya Proactive Contact using DMCC Service Observation and/or Single Step Conference to record calls. The NICE Application Server is setup for DMCC Service Observation mode and connects to both the AES and Proactive Contact Event Manager.

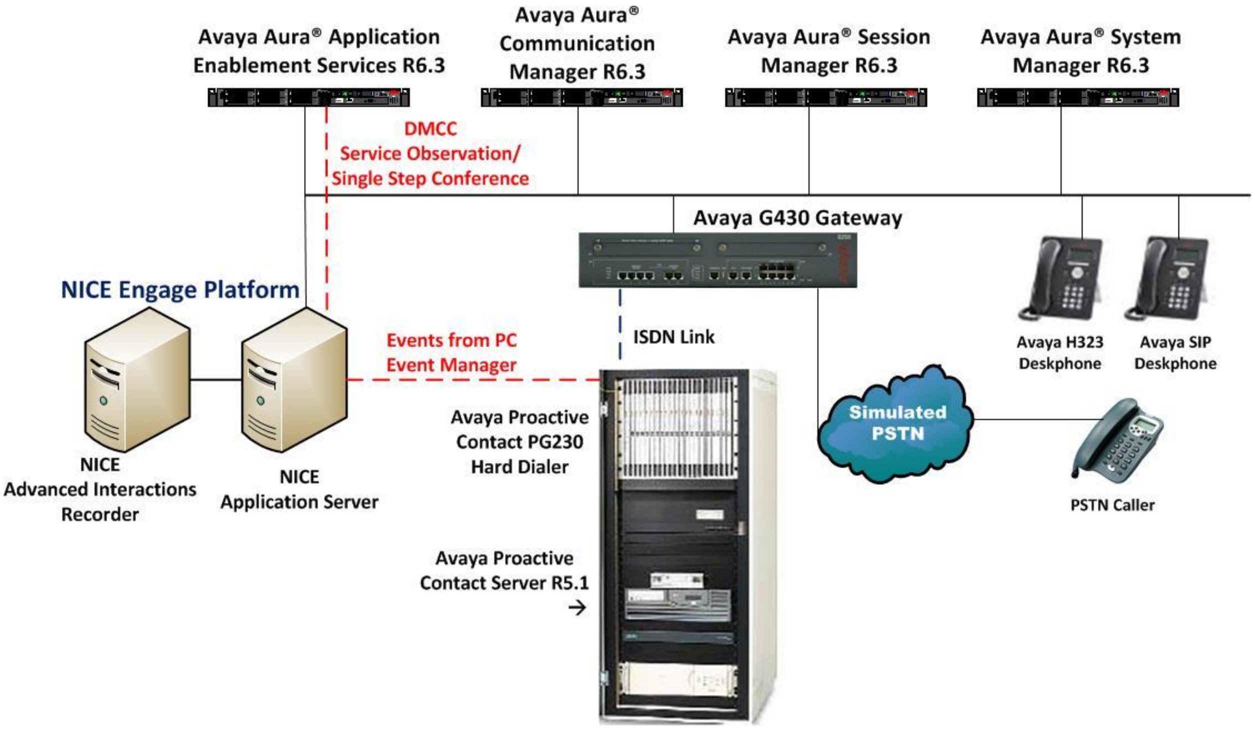

Avaya Aura® Application Enablement Services R6.3
Avaya Aura® Communication Manager R6.3
Avaya Aura® Session Manager R6.3
Avaya Aura® System Manager R6.3
DMCC Service Observation/ Single Step Conference
Avaya G430 Gateway
NICE Engage Platform
Events from PC Event Manager
ISDN Link
Avaya H323 Deskphone
Avaya SIP Deskphone
Avaya Proactive Contact PG230 Hard Dialer
Simulated PSTN
NICE Advanced Interactions Recorder
NICE Application Server
PSTN Caller
Avaya Proactive Contact Server R5.1 →

Figure 1: Connection of NICE Engage Platform R6.3 with Avaya Proactive Contact R5.1, Avaya Aura® Communication Manager R6.3 and Avaya Aura® Application Enablement Services R6.3

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Proactive Contact	R5.1
Avaya Proactive Contact PG230 Hard Dialer	R5.1
Avaya Aura® System Manager running on Virtual Server	R6.3.10 [Build 6.3.0.8.5682-6.3.8.4514] [SW Update Rev 6.3.10.7.2656]
Avaya Aura® Session Manager running on Virtual Server	R6.3 (SP9) 6.3.9.0.639011
Avaya Aura® Communication Manager running on Virtual Server	R6.3 SP8 R016x.03.0.124.0 03.0.124.0-21588
Avaya Aura® Application Enablement Services running on Virtual Server	R6.3 Build No - 6.3.3.1.10-0
Avaya G430 Gateway	33.12.0 /1
Avaya 9630 H323 Deskphone	R3.186A
Avaya 9640 SIP Deskphone	R2.6.12.1
NICE Engage Platform - Application Server - Advanced Interactions Recorder - NDM Server	R6.3

5. Configure Avaya Aura® Communication Manager

The information provided in this section describes the configuration of Communication Manager relevant to this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 11**.

The configuration illustrated in this section was performed using Communication Manager System Administration Terminal (SAT).

5.1. Verify System Features

Use the **display system-parameters customer-options** command to verify that Communication Manager has permissions for features illustrated in these Application Notes. On **Page 3**, ensure that **Computer Telephony Adjunct Links?** is set to **y** as shown below.

```
display system-parameters customer-options                      Page   3 of  11
                                OPTIONAL FEATURES

    Abbreviated Dialing Enhanced List? y           Audible Message Waiting? y
        Access Security Gateway (ASG)? n               Authorization Codes? y
        Analog Trunk Incoming Call ID? y                        CAS Branch? n
 A/D Grp/Sys List Dialing Start at 01? y                          CAS Main? n
Answer Supervision by Call Classifier? y                 Change COR by FAC? n
                                  ARS? y  Computer Telephony Adjunct Links? y
                 ARS/AAR Partitioning? y   Cvg Of Calls Redirected Off-net? y
          ARS/AAR Dialing without FAC? y                       DCS (Basic)? y
          ASAI Link Core Capabilities? n                 DCS Call Coverage? y
          ASAI Link Plus Capabilities? n                DCS with Rerouting? y
       Async. Transfer Mode (ATM) PNC? n
  Async. Transfer Mode (ATM) Trunking? n    Digital Loss Plan Modification? y
              ATM WAN Spare Processor? n                           DS1 MSP? y
                                 ATMS? y             DS1 Echo Cancellation? y
                  Attendant Vectoring? y
```

5.2. Note procr IP Address for Avaya Aura® Application Enablement Services Connectivity

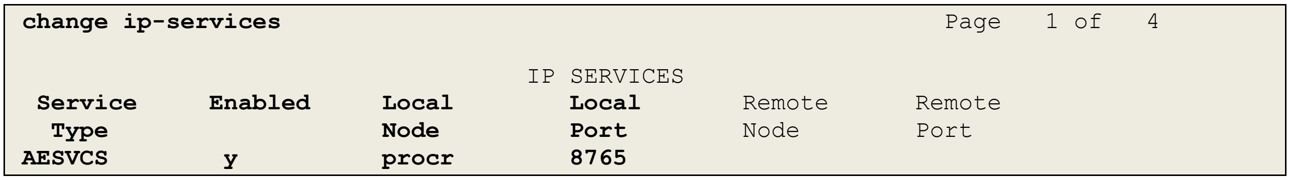
Display the procr IP address by using the command **display node-names ip** and noting the IP address for the **procr** and AES (**aes63vmpg**).

```
display node-names ip                                            Page   1 of   2
                                  IP NODE NAMES
    Name              IP Address
SM100               10.10.40.34
aes63vmpg           10.10.40.30
default             0.0.0.0
g430                10.10.40.15
procr               10.10.40.31
```

5.3. Configure Transport Link for Avaya Aura® Application Enablement Services Connectivity

To administer the transport link to AES use the **change ip-services** command. On **Page 1** add an entry with the following values:

- **Service Type:** Should be set to **AESVCS**.
- **Enabled:** Set to **y**.
- **Local Node:** Set to the node name assigned for the procr in **Section 5.2**
- **Local Port:** Retain the default value of **8765**.

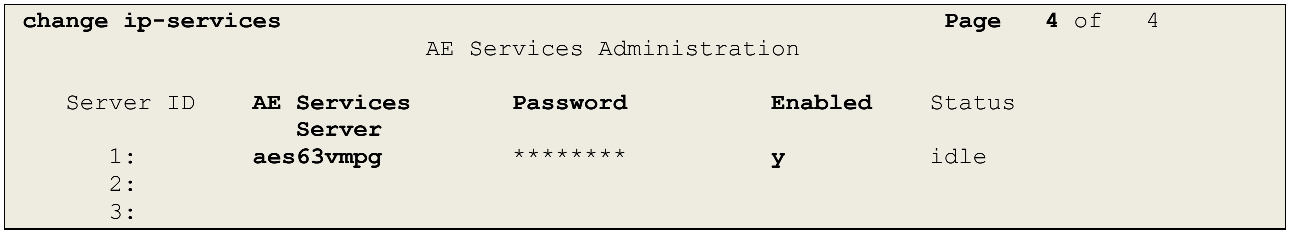


```
change ip-services                                              Page   1 of   4

                                   IP SERVICES
 Service     Enabled     Local        Local       Remote      Remote
  Type                   Node         Port        Node        Port
AESVCS        y          procr        8765
```

Go to **Page 4** of the **ip-services** form and enter the following values:

- **AE Services Server:** Name obtained from the AES server, in this case **aes63vmpg**.
- **Password:** Enter a password to be administered on the AES server.
- **Enabled:** Set to **y**.

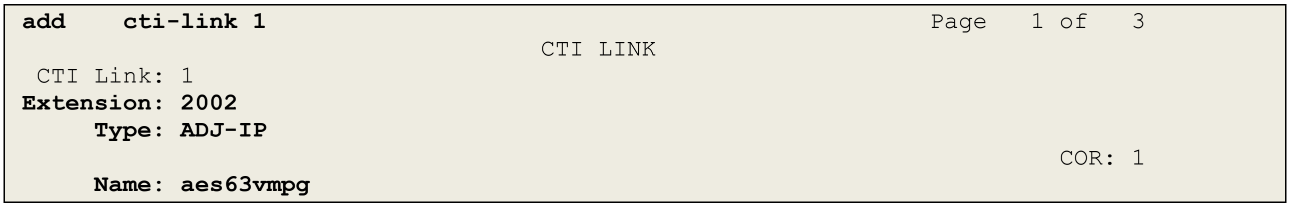
Note: The password entered for **Password** field must match the password on the AES server in **Section 6.2**. The **AE Services Server** should match the administered name for the AES server; this is created as part of the AES installation, and can be obtained from the AES server by typing **uname –n** at the Linux command prompt.



```
change ip-services                                              Page   4 of   4
                            AE Services Administration

   Server ID    AE Services       Password          Enabled    Status
                   Server
      1:        aes63vmpg         ********          y          idle
      2:
      3:
```

5.4. Configure CTI Link for TSAPI Service

Add a CTI link using the **add cti-link n** command. Enter an available extension number in the **Extension** field. Enter **ADJ-IP** in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields.



```
add    cti-link 1                                              Page   1 of   3
                                    CTI LINK
 CTI Link: 1
Extension: 2002
     Type: ADJ-IP
                                                                        COR: 1
     Name: aes63vmpg
```

5.5. Configure Communication Manager for Service Observation

Type display cor x, where x is the COR number in the screen above, to check the existing Class of Restriction. Ensure that **Can be Service Observed** is set to **y**, if not type **change cor x** to make a change to the Class or Restriction. This value needs to be enabled in order for Service Observe to work for call recording.

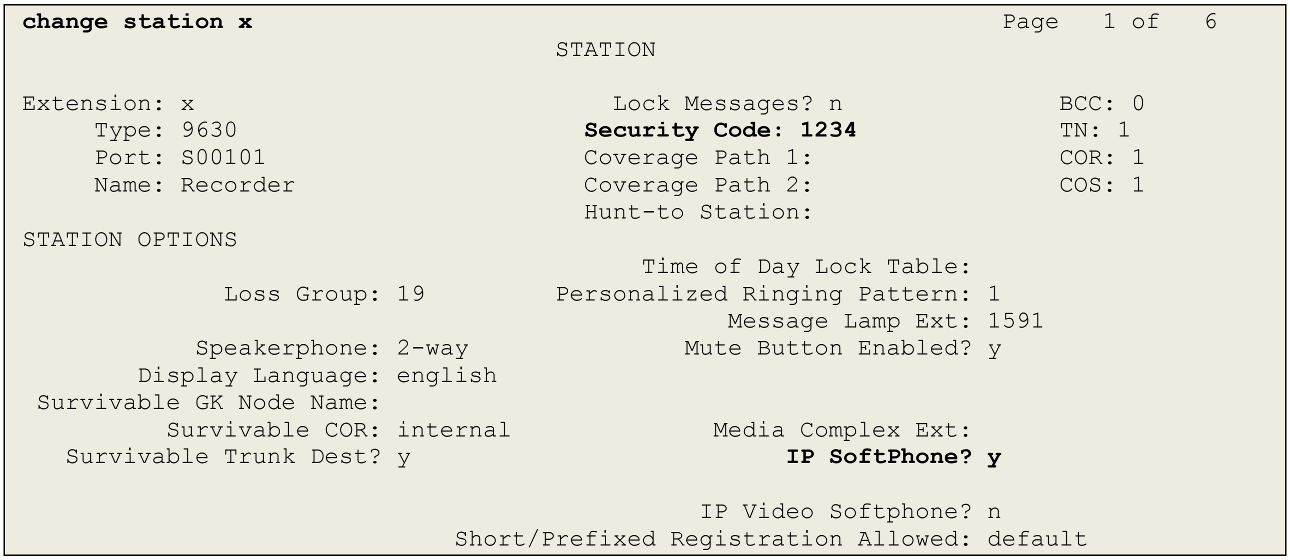
```
display cor 1                                                 Page 1 of 23
                             CLASS OF RESTRICTION
              COR Number: 1
         COR Description:

                     FRL: 0                               APLT? y
  Can Be Service Observed? y          Calling Party Restriction: all-toll
Can Be A Service Observer? y           Called Party Restriction: none
        Time of Day Chart: 1       Forced Entry of Account Codes? n
         Priority Queuing? n                Direct Agent Calling? y
     Restriction Override: all        Facility Access Trunk Test? n
     Restricted Call List? n                 Can Change Coverage? n
   Unrestricted Call List: 1
            Access to MCT? y           Fully Restricted Service? n
Group II Category For MFC: 7           Hear VDN of Origin Annc.? n
         Send ANI for MFE? n            Add/Remove Agent Skills? n
            MF ANI Prefix:             Automatic Charge Display? n
Hear System Music on Hold? y   PASTE (Display PBX Data on Phone)? n
                        Can Be Picked Up By Directed Call Pickup? y
                                    Can Use Directed Call Pickup? y
                                    Group Controlled Restriction: inactive
```

Type **change feature-access-codes** to access the feature codes on Communication Manager. Scroll to **Page 5** in order to view or change the **Service Observing** access codes. Note the **Service Observing Listen Only Access Code** is **#43**; this will be required in **Section 7.1** during the setup of the NICE Engage Platform.

```
change feature-access-codes                                  Page   5 of  10
                               FEATURE ACCESS CODE (FAC)
                                 Call Center Features
  AGENT WORK MODES
                           After Call Work Access Code: #36
                                    Assist Access Code:
                                   Auto-In Access Code: #38
                                  Aux Work Access Code: #39
                                     Login Access Code: #40
                                    Logout Access Code: #41
                                 Manual-in Access Code: #42
  SERVICE OBSERVING
             Service Observing Listen Only Access Code: #43
             Service Observing Listen/Talk Access Code: #44
                 Service Observing No Talk Access Code:
   Service Observing Next Call Listen Only Access Code:
 Service Observing by Location Listen Only Access Code:
 Service Observing by Location Listen/Talk Access Code:

  AACC CONFERENCE MODES
                     Restrict First Consult Activation:      Deactivation:
                    Restrict Second Consult Activation:      Deactivation:
```

5.6. Configure H323 Stations for Service Observation

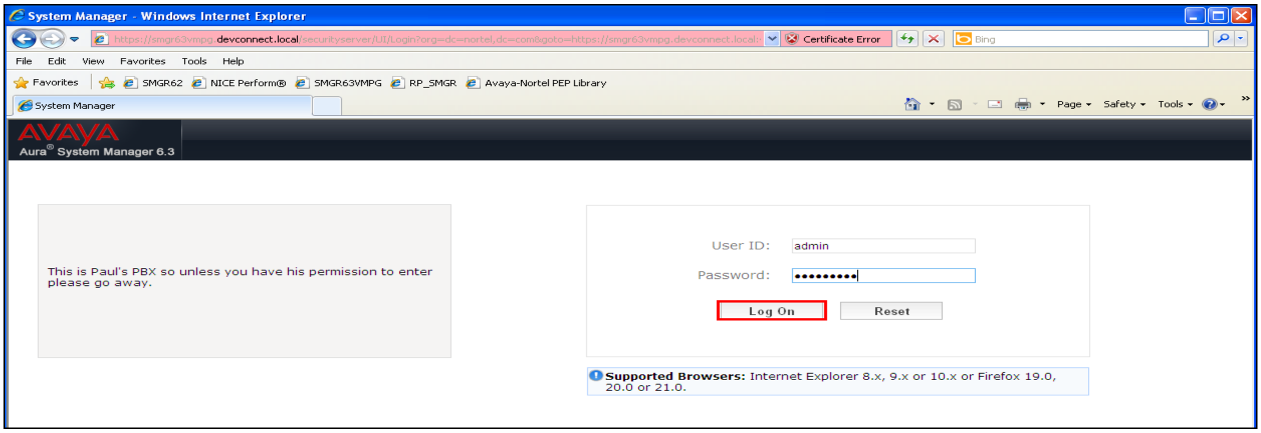
All endpoints that are to be monitored by NICE will need to have IP Softphone set to Y. IP Softphone must be enabled in order for DMCC Service Observe and Single Step Conference to work. Type **change station x** where x is the extension number of the station to be monitored also note this extension number for configuration required in **Section 7.1.** Note the **Security Code** and ensure that **IP SoftPhone** is set to **y**.



```
change station x                                                    Page   1 of   6
                                     STATION

Extension: x                             Lock Messages? n               BCC: 0
     Type: 9630                        Security Code: 1234              TN: 1
     Port: S00101                      Coverage Path 1:                 COR: 1
     Name: Recorder                    Coverage Path 2:                 COS: 1
                                       Hunt-to Station:
STATION OPTIONS
                                           Time of Day Lock Table:
              Loss Group: 19         Personalized Ringing Pattern: 1
                                                 Message Lamp Ext: 1591
            Speakerphone: 2-way               Mute Button Enabled? y
        Display Language: english
 Survivable GK Node Name:
          Survivable COR: internal              Media Complex Ext:
   Survivable Trunk Dest? y                          IP SoftPhone? y

                                               IP Video Softphone? n
                              Short/Prefixed Registration Allowed: default
```

5.7. Configure SIP Stations for Service Observation

The configuration of SIP phones on Communication Manager must be carried out from System Manager. Access the System Manager using a Web Browser by entering **http://<FQDN >/SMGR**, where **<FQDN>** is the fully qualified domain name of System Manager or **http://<IP Address >/SMGR**. Log in using appropriate credentials.


System Manager - Windows Internet Explorer
Certificate Error
File Edit View Favorites Tools Help
Favorites SMGR62 NICE Perform® SMGR63VMPG RP_SMGR Avaya-Nortel PEP Library
System Manager
Page Safety Tools
AVAYA
Aura® System Manager 6.3

This is Paul's PBX so unless you have his permission to enter please go away.

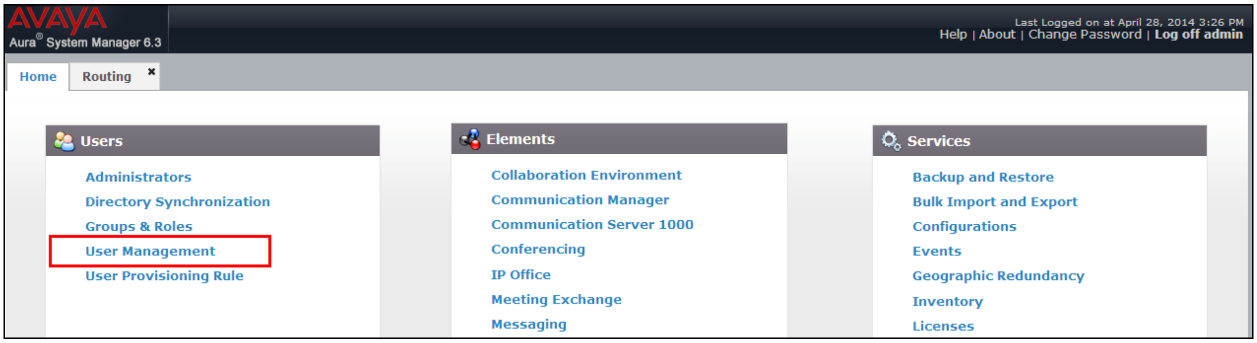
User ID: admin

Password: •••••••••

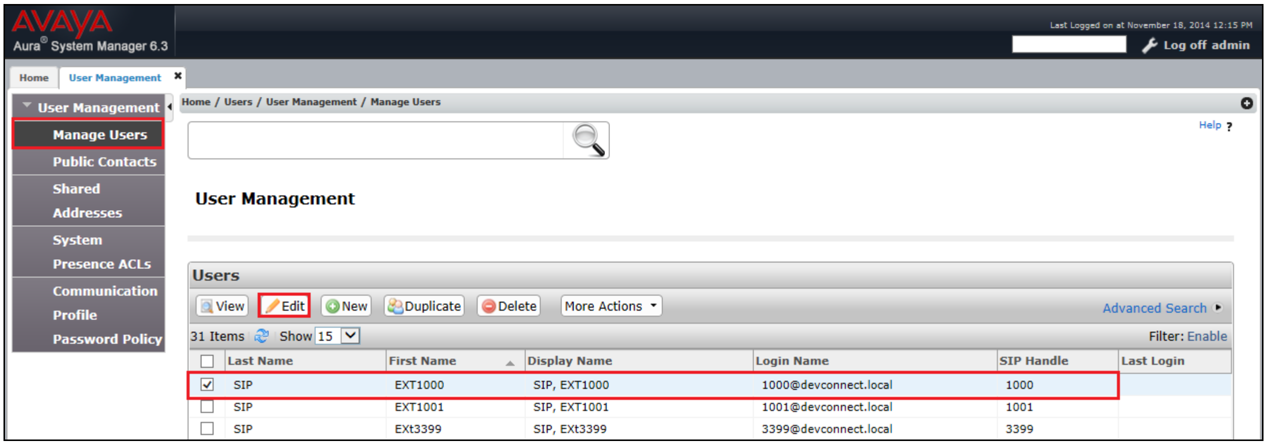
Log On | Reset

Supported Browsers: Internet Explorer 8.x, 9.x or 10.x or Firefox 19.0, 20.0 or 21.0.

From the home page click on **User Management** highlighted below.

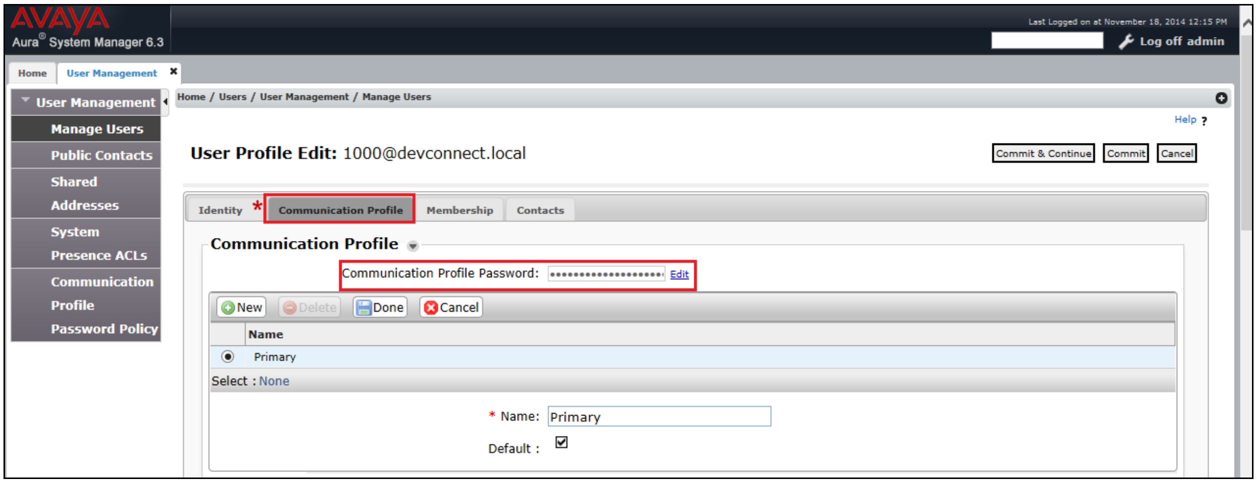


Click on **Manager Users** in the left window. Select the station to be edited and click on **Edit**.



	Last Name	First Name	Display Name	Login Name	SIP Handle	Last Login
☑	SIP	EXT1000	SIP, EXT1000	1000@devconnect.local	1000	
□	SIP	EXT1001	SIP, EXT1001	1001@devconnect.local	1001	
□	SIP	EXt3399	SIP, EXt3399	3399@devconnect.local	3399	

Click on the **Communication Profile** tab. Ensure that the **Communication Profile Password** is known and if not click on edit to change it.



User Profile Edit: 1000@devconnect.local

Communication Profile

Communication Profile Password: •••••••••••••••••• Edit

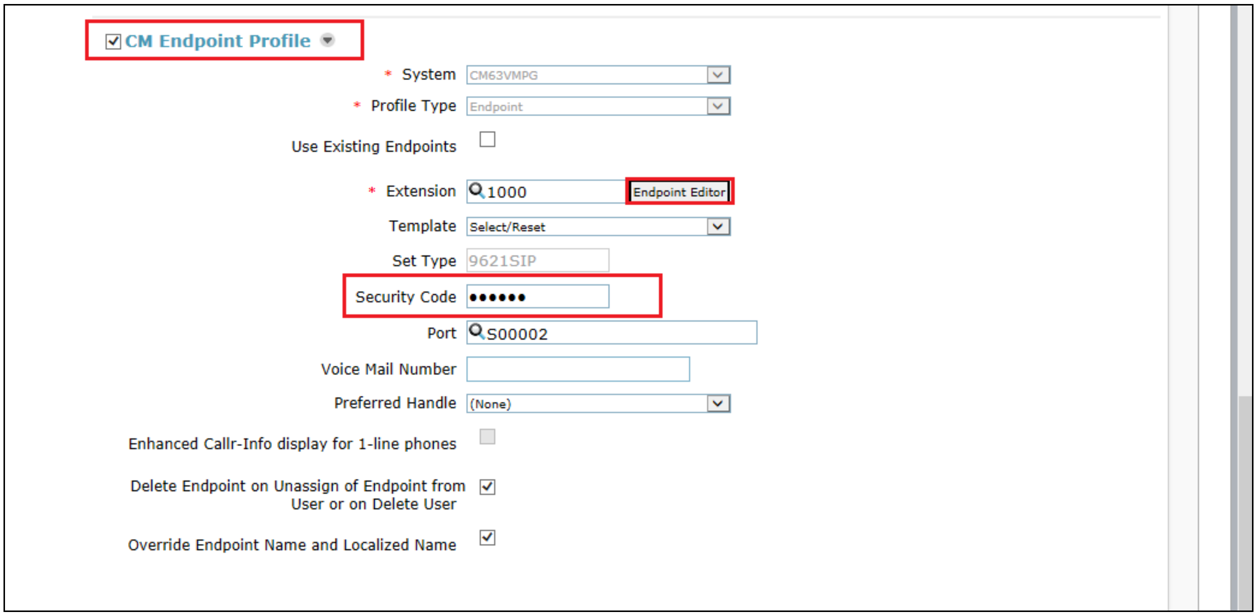
	Name
●	Primary

Select : None

* Name: Primary

Default : ☑

From the same page scroll down to **CM Endpoint Profile** and enter the **Security Code**, note this should be the same as the password above and will be required again in **Section 7.1** during the configuration of the NICE Engage Platform. Click on **Endpoint Editor** to make further changes.



☑ CM Endpoint Profile

* System: CM63VMPG

* Profile Type: Endpoint

Use Existing Endpoints: □

* Extension: 1000

Template: Select/Reset

Set Type: 9621SIP

Security Code: ••••••

Port: S00002

Voice Mail Number:

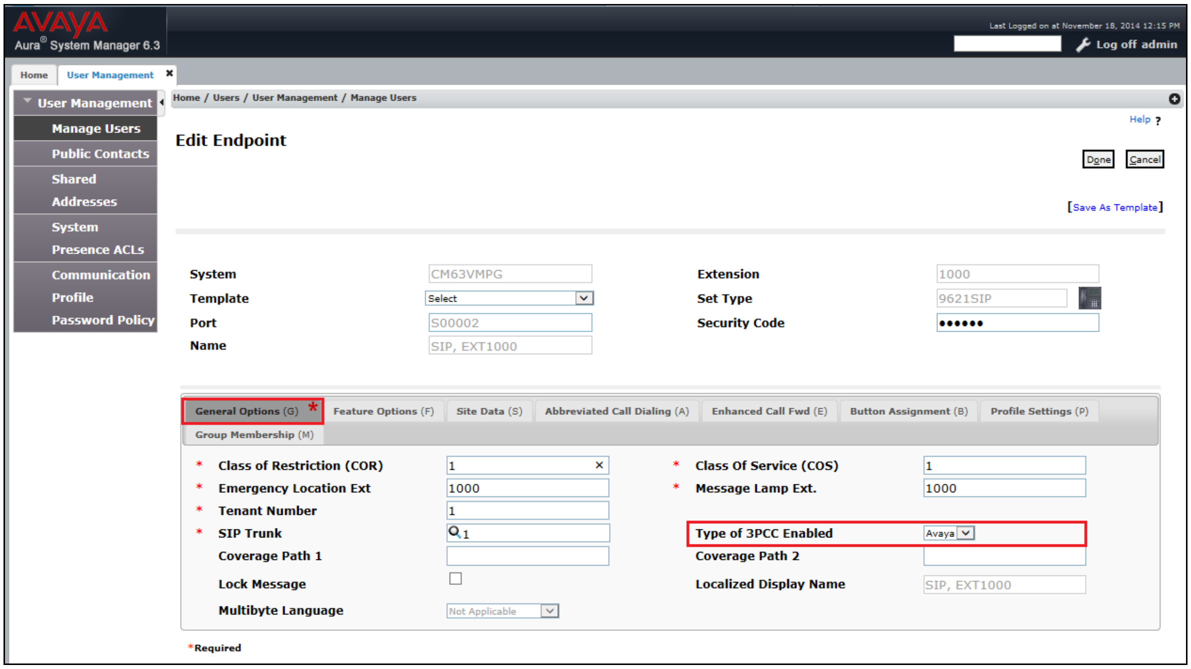
Preferred Handle: (None)

Enhanced Callr-Info display for 1-line phones: □

Delete Endpoint on Unassign of Endpoint from User or on Delete User: ☑

Override Endpoint Name and Localized Name: ☑

In the **General Options** tab ensure that **Type of 3PCC Enabled** is set to **Avaya** as is shown below. Also that Class of Restriction is set to that configured in **Section 5.5**.



AVAYA Aura® System Manager 6.3

Last Logged on at November 18, 2014 12:15 PM

Log off admin

Home | User Management

User Management: Manage Users, Public Contacts, Shared Addresses, System Presence ACLs, Communication Profile, Password Policy

Home / Users / User Management / Manage Users

Help ?

Edit Endpoint

Done | Cancel

[Save As Template]

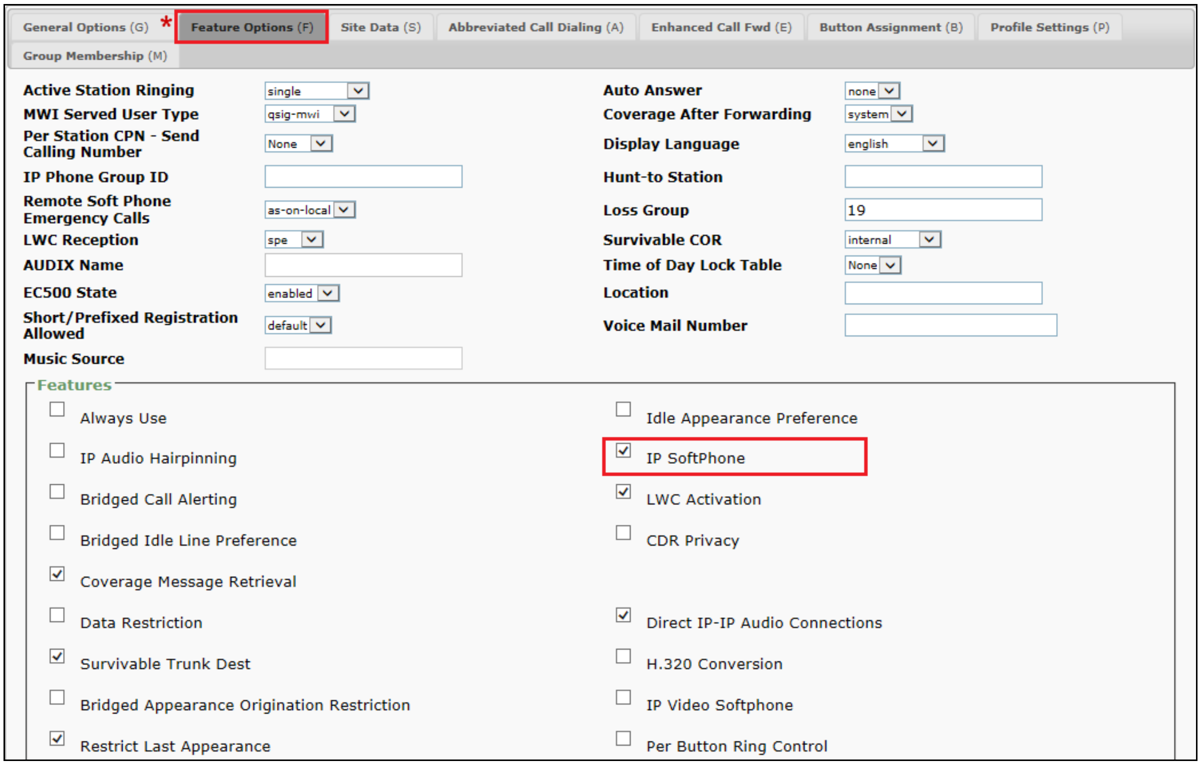
System	CM63VMPG	Extension	1000
Template	Select	Set Type	9621SIP
Port	S00002	Security Code	••••••
Name	SIP, EXT1000		

General Options (G) * | Feature Options (F) | Site Data (S) | Abbreviated Call Dialing (A) | Enhanced Call Fwd (E) | Button Assignment (B) | Profile Settings (P) | Group Membership (M)

* Class of Restriction (COR)	1	* Class Of Service (COS)	1
* Emergency Location Ext	1000	* Message Lamp Ext.	1000
* Tenant Number	1		
* SIP Trunk	1	Type of 3PCC Enabled	Avaya
Coverage Path 1		Coverage Path 2	
Lock Message	□	Localized Display Name	SIP, EXT1000
Multibyte Language	Not Applicable		

*Required

Click on the **Feature Options** tab and ensure that **IP Softphone** is ticked as shown. Click on **Done** once this is set (not shown).



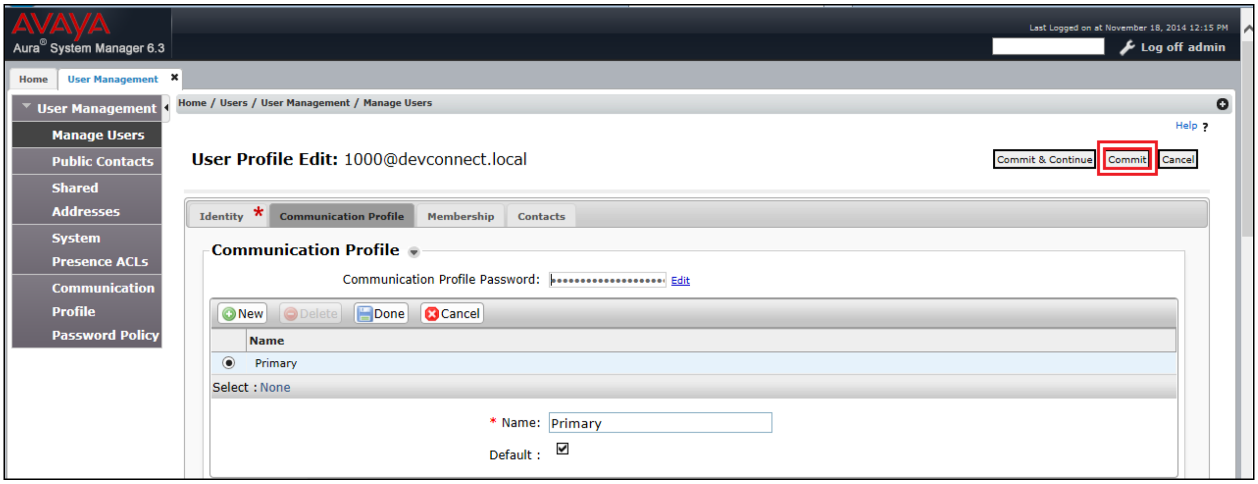
General Options (G) * | Feature Options (F) | Site Data (S) | Abbreviated Call Dialing (A) | Enhanced Call Fwd (E) | Button Assignment (B) | Profile Settings (P) | Group Membership (M)

Active Station Ringing	single	Auto Answer	none
MWI Served User Type	qsig-mwi	Coverage After Forwarding	system
Per Station CPN - Send Calling Number	None	Display Language	english
IP Phone Group ID		Hunt-to Station	
Remote Soft Phone Emergency Calls	as-on-local	Loss Group	19
LWC Reception	spe	Survivable COR	internal
AUDIX Name		Time of Day Lock Table	None
EC500 State	enabled	Location	
Short/Prefixed Registration Allowed	default	Voice Mail Number	
Music Source			

Features

□ Always Use	□ Idle Appearance Preference
□ IP Audio Hairpinning	☑ IP SoftPhone
□ Bridged Call Alerting	☑ LWC Activation
□ Bridged Idle Line Preference	□ CDR Privacy
☑ Coverage Message Retrieval	
□ Data Restriction	☑ Direct IP-IP Audio Connections
☑ Survivable Trunk Dest	□ H.320 Conversion
□ Bridged Appearance Origination Restriction	□ IP Video Softphone
☑ Restrict Last Appearance	□ Per Button Ring Control

Click on **Commit** once this is done to save the changes.



User Profile Edit: 1000@devconnect.local

Communication Profile

Communication Profile Password: •••••••••••••••••• Edit

Name

● Primary

* Name: Primary

Default : ☑

5.8. Configure Virtual Stations for Single Step Conference and Service Observation

Add virtual stations to allow NICE Engage Platform record calls using Single Step Conference and Service Observe. Type **add station x** where x is the extension number of the station to be configured also note this extension number for configuration required in **Section 7.1.** Note the **Security Code** and ensure that **IP SoftPhone** is set to **y**. Note also the **COR** for the stations, this will be set to that configured in **Section 5.5**.

```
add station 28902                                             Page   1 of   6
                                     STATION

Extension: 28902                       Lock Messages? n                BCC: 0
     Type: 4624                        Security Code: 1234              TN: 1
     Port: S00101                      Coverage Path 1:                COR: 1
     Name: Recorder                    Coverage Path 2:                COS: 1
                                       Hunt-to Station:
STATION OPTIONS
                                           Time of Day Lock Table:
              Loss Group: 19         Personalized Ringing Pattern: 1
                                                 Message Lamp Ext: 28902
            Speakerphone: 2-way                Mute Button Enabled? y
        Display Language: english
 Survivable GK Node Name:
          Survivable COR: internal               Media Complex Ext:
   Survivable Trunk Dest? y                           IP SoftPhone? y

                                               IP Video Softphone? n
                              Short/Prefixed Registration Allowed: default
```

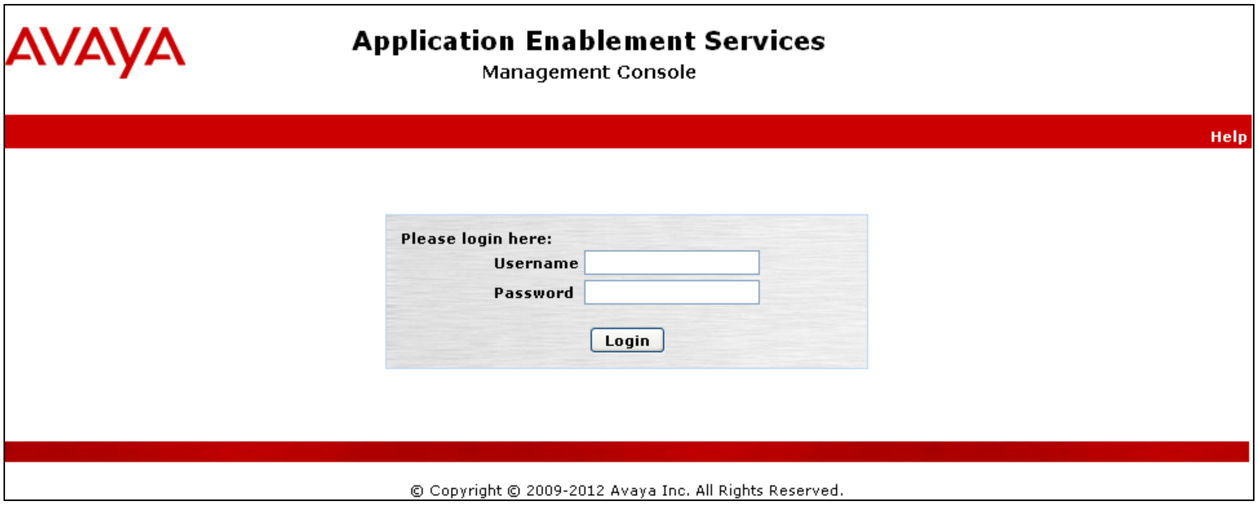
6. Configure Avaya Aura® Application Enablement Services

This section provides the procedures for configuring Application Enablement Services. The procedures fall into the following areas:

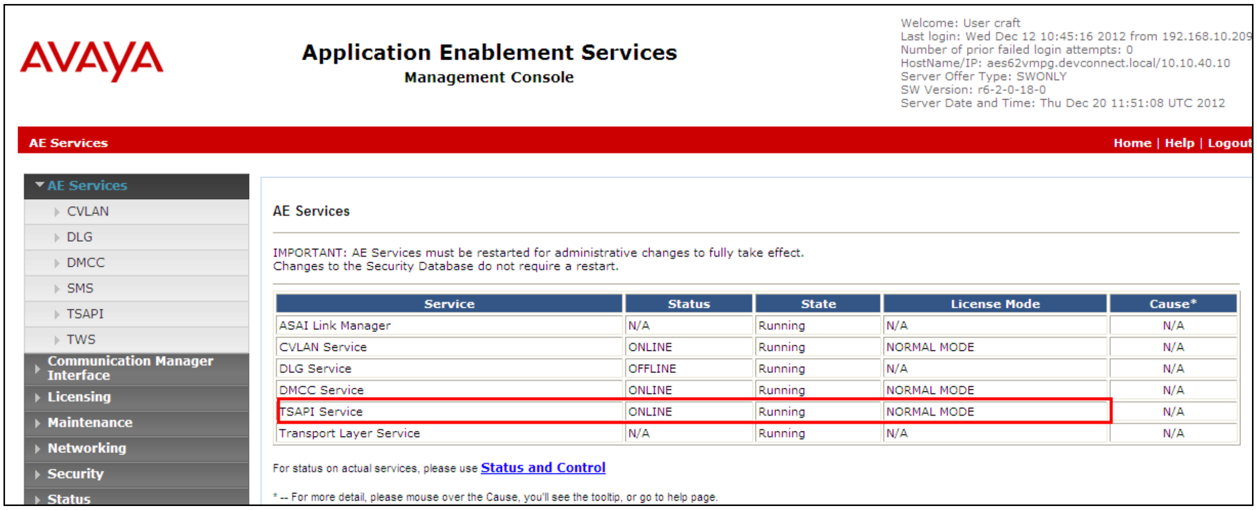
- Verify Licensing
- Create Switch Connection
- Administer TSAPI link
- Identify Tlinks
- Enable TSAPI Ports
- Create CTI User
- Set Up Security Database on AES
- Associate Devices with CTI User

6.1. Verify Licensing

To access the AES Management Console, enter **https://<ip-addr>** as the URL in an Internet browser, where <ip-addr> is the IP address of AES. At the login screen displayed, log in with the appropriate credentials and then select the **Login** button.


AVAYA
Application Enablement Services
Management Console
Help
Please login here:
Username
Password
Login
© Copyright © 2009-2012 Avaya Inc. All Rights Reserved.

The Application Enablement Services Management Console appears displaying the **Welcome to OAM** screen (not shown). Select **AE Services** and verify that the TSAPI Service is licensed by ensuring that **TSAPI Service** is in the list of **Services** and that the **License Mode** is showing **NORMAL MODE**. If not, contact an Avaya support representative to acquire the proper license for your solution.



Application Enablement Services
Management Console

Welcome: User craft
Last login: Wed Dec 12 10:45:16 2012 from 192.168.10.209
Number of prior failed login attempts: 0
HostName/IP: aes62vmpg.devconnect.local/10.10.40.10
Server Offer Type: SWONLY
SW Version: r6-2-0-18-0
Server Date and Time: Thu Dec 20 11:51:08 UTC 2012

AE Services

IMPORTANT: AE Services must be restarted for administrative changes to fully take effect.
Changes to the Security Database do not require a restart.

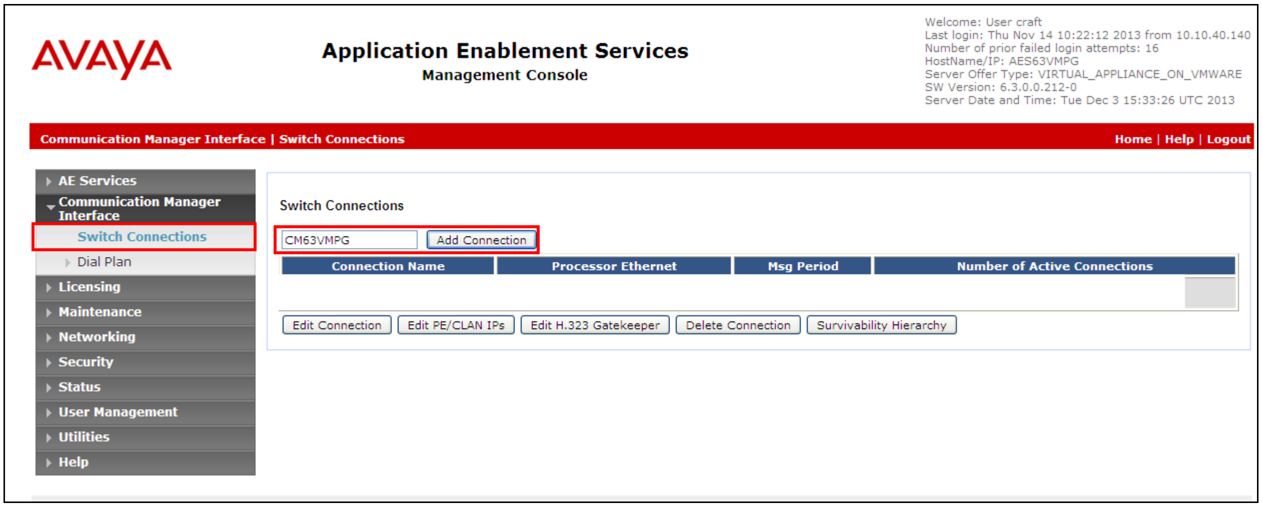
Service	Status	State	License Mode	Cause*
ASAI Link Manager	N/A	Running	N/A	N/A
CVLAN Service	ONLINE	Running	NORMAL MODE	N/A
DLG Service	OFFLINE	Running	N/A	N/A
DMCC Service	ONLINE	Running	NORMAL MODE	N/A
TSAPI Service	ONLINE	Running	NORMAL MODE	N/A
Transport Layer Service	N/A	Running	N/A	N/A

For status on actual services, please use Status and Control

* -- For more detail, please mouse over the Cause, you'll see the tooltip, or go to help page.

6.2. Create Switch Connection

From the AES Management Console navigate to **Communication Manager Interface → Switch Connections** to set up a switch connection. Enter a name for the Switch Connection to be added and click the **Add Connection** button.



Application Enablement Services
Management Console

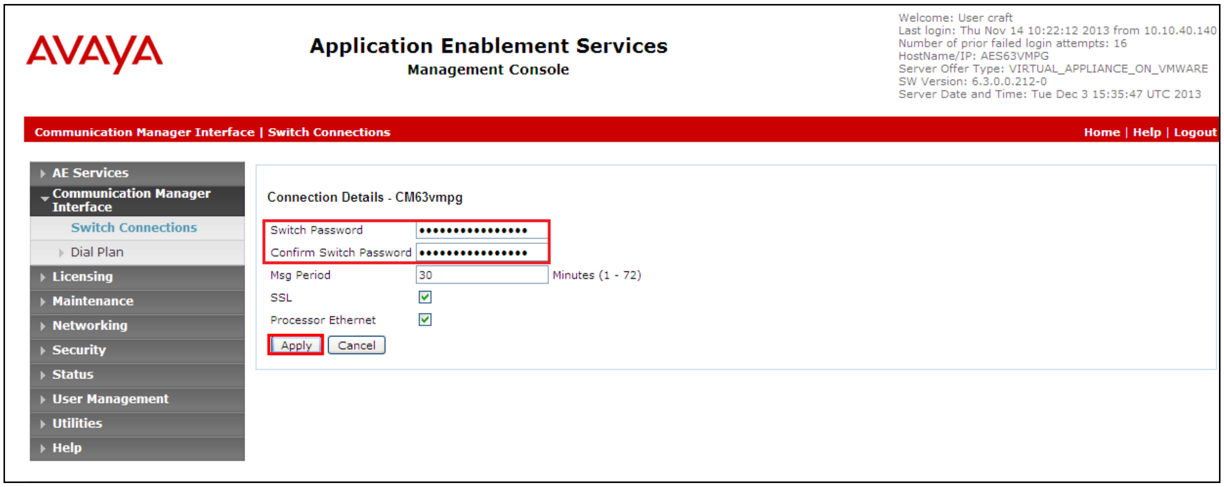
Welcome: User craft
Last login: Thu Nov 14 10:22:12 2013 from 10.10.40.140
Number of prior failed login attempts: 16
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Tue Dec 3 15:33:26 UTC 2013

Switch Connections

CM63VMPG

Connection Name	Processor Ethernet	Msg Period	Number of Active Connections

In the resulting screen enter the **Switch Password**; the Switch Password must be the same as that entered into Communication Manager AE Services Administration screen via the **change ip-services** command, described in **Section 5.3**. Default values may be accepted for the remaining fields. Click **Apply** to save changes.

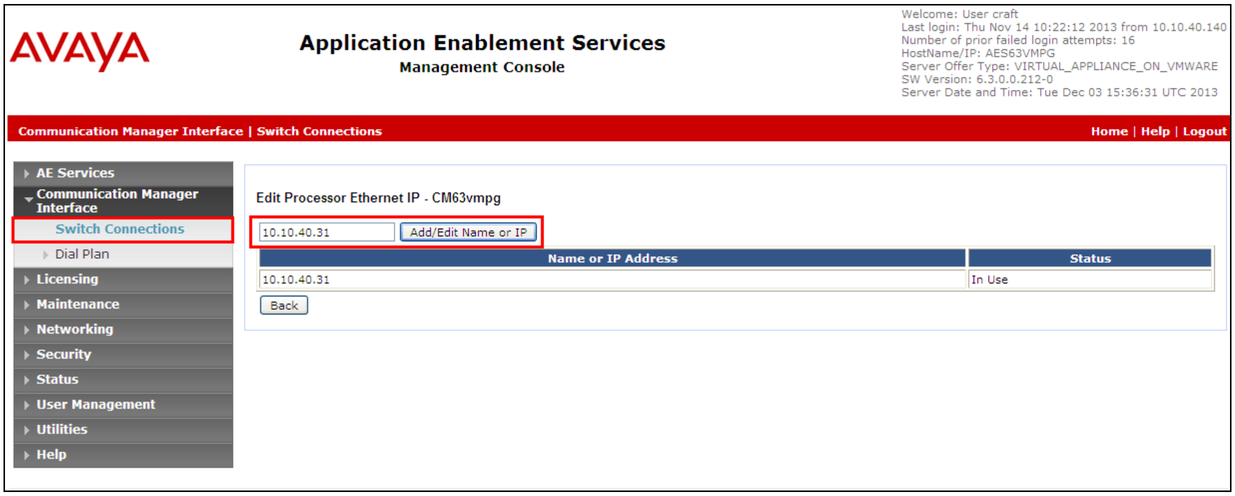


Welcome: User craft
Last login: Thu Nov 14 10:22:12 2013 from 10.10.40.140
Number of prior failed login attempts: 16
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Tue Dec 3 15:35:47 UTC 2013

Connection Details - CM63vmpg

Switch Password	••••••••••••••••
Confirm Switch Password	••••••••••••••••
Msg Period	30 Minutes (1 - 72)
SSL	☑
Processor Ethernet	☑

From the **Switch Connections** screen, select the radio button for the recently added switch connection and select the **Edit PE/CLAN IPs** button (not shown, see screen at the bottom of page 10). In the resulting screen, enter the IP address of the procr as shown in **Section 5.2** that will be used for the AES connection and select the **Add/Edit Name or IP** button.



Welcome: User craft
Last login: Thu Nov 14 10:22:12 2013 from 10.10.40.140
Number of prior failed login attempts: 16
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Tue Dec 03 15:36:31 UTC 2013

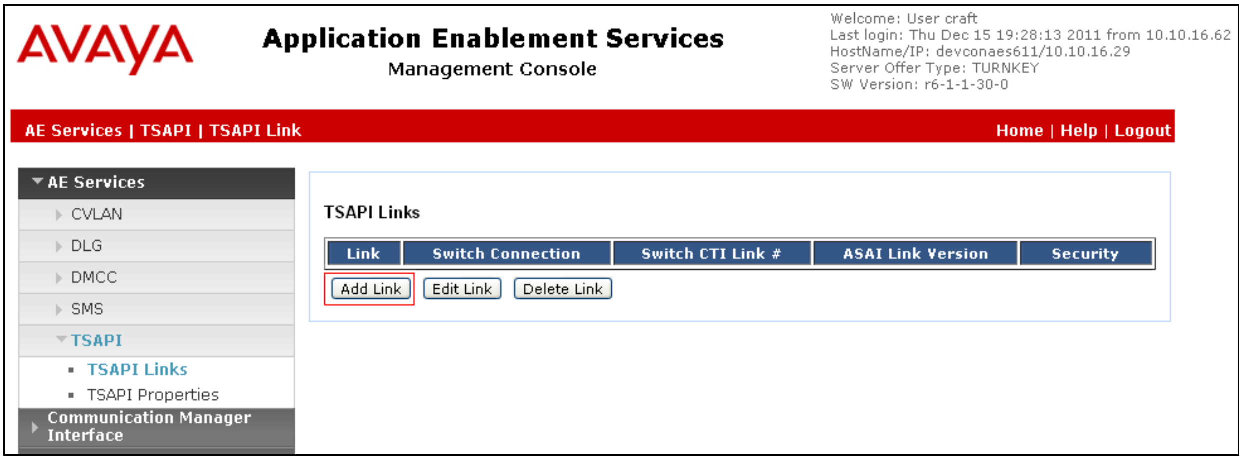
Edit Processor Ethernet IP - CM63vmpg

10.10.40.31

Name or IP Address	Status
10.10.40.31	In Use

6.3. Administer TSAPI link

From the Application Enablement Services Management Console, select **AE Services → TSAPI → TSAPI Links**. Select **Add Link** button as shown in the screen below.



Welcome: User craft
Last login: Thu Dec 15 19:28:13 2011 from 10.10.16.62
HostName/IP: devconaes611/10.10.16.29
Server Offer Type: TURNKEY
SW Version: r6-1-1-30-0

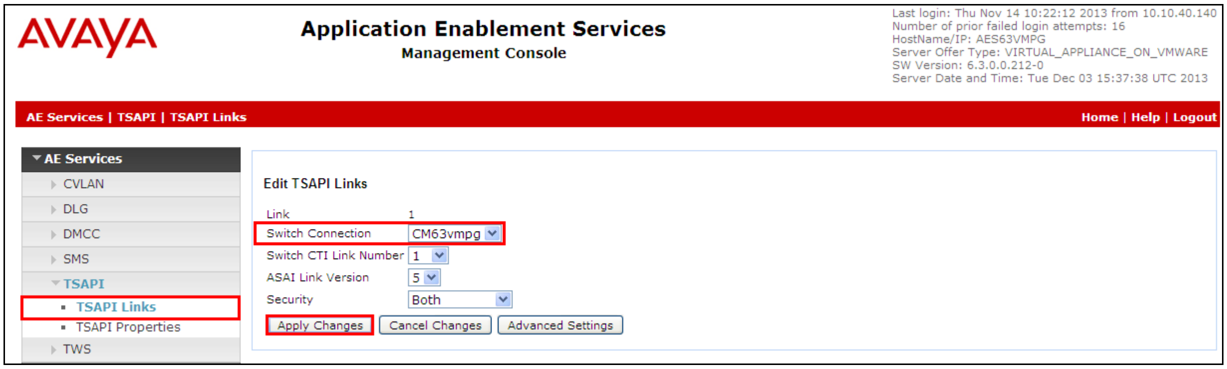
TSAPI Links

Link	Switch Connection	Switch CTI Link #	ASAI Link Version	Security

On the **Add TSAPI Links** screen (or the **Edit TSAPI Links** screen to edit a previously configured TSAPI Link as shown below), enter the following values:

- **Link:** Use the drop-down list to select an unused link number.
- **Switch Connection:** Choose the switch connection **CM63vmpg**, which has already been configured in **Section 6.2** from the drop-down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 5.4** which is **1**.
- **ASAI Link Version:** This can be left at the default value of **5**.
- **Security:** This can be left at the default value of **Both**.

Once completed, select **Apply Changes**.

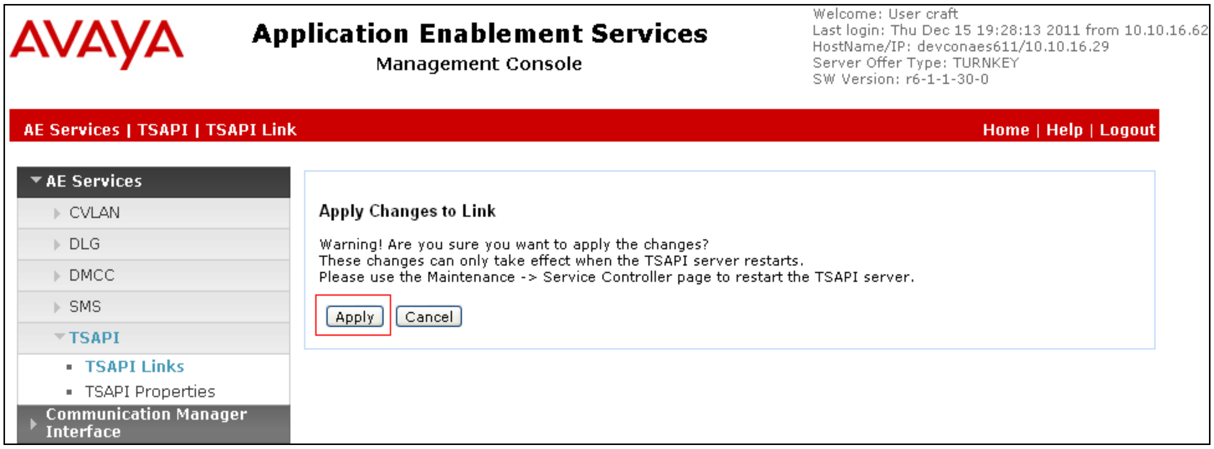


Last login: Thu Nov 14 10:22:12 2013 from 10.10.40.140
Number of prior failed login attempts: 16
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Tue Dec 03 15:37:38 UTC 2013

Edit TSAPI Links

Link	1
Switch Connection	CM63vmpg
Switch CTI Link Number	1
ASAI Link Version	5
Security	Both

Another screen appears for confirmation of the changes made. Choose **Apply**.

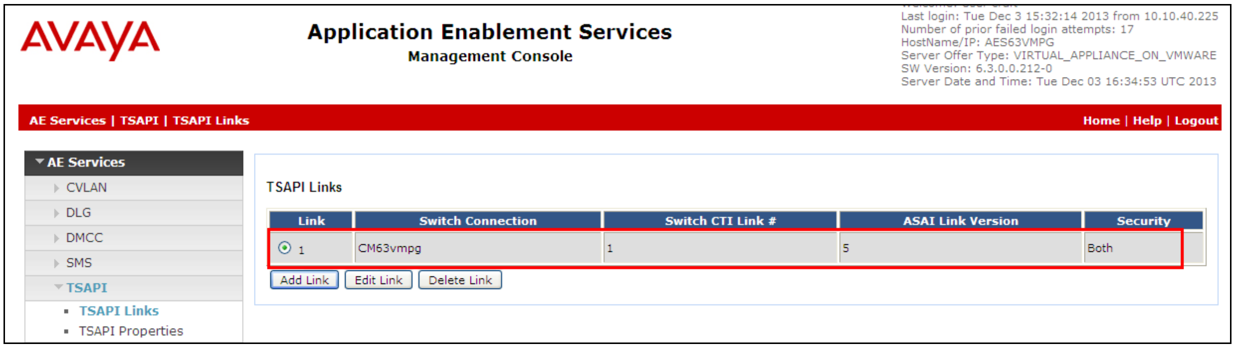


Welcome: User craft
Last login: Thu Dec 15 19:28:13 2011 from 10.10.16.62
HostName/IP: devconaes611/10.10.16.29
Server Offer Type: TURNKEY
SW Version: r6-1-1-30-0

Apply Changes to Link

Warning! Are you sure you want to apply the changes?
These changes can only take effect when the TSAPI server restarts.
Please use the Maintenance -> Service Controller page to restart the TSAPI server.

When the TSAPI Link is completed, it should resemble the screen below.

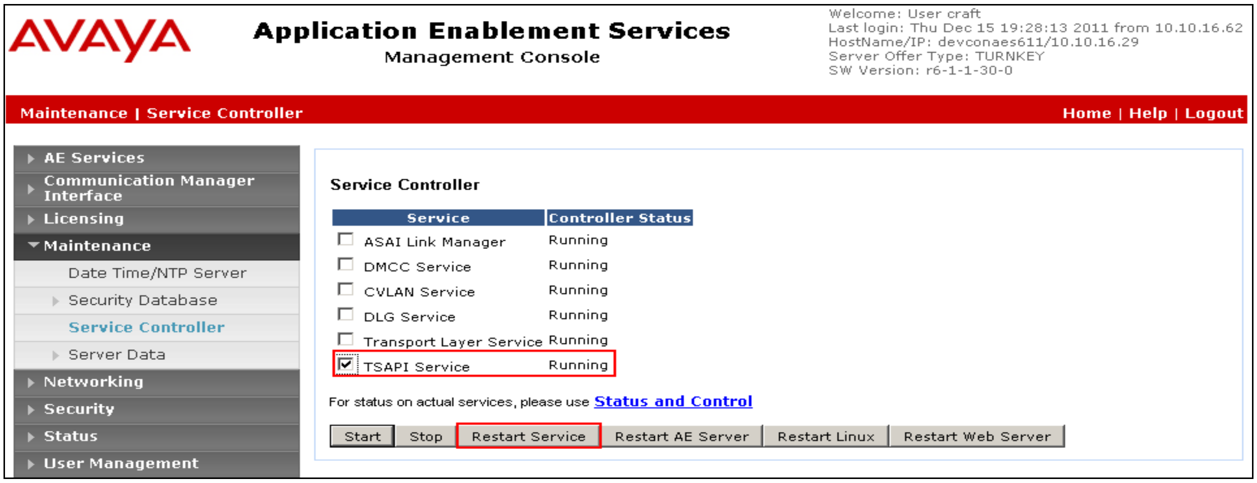


Last login: Tue Dec 3 15:32:14 2013 from 10.10.40.225
Number of prior failed login attempts: 17
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Tue Dec 03 16:34:53 UTC 2013

TSAPI Links

Link	Switch Connection	Switch CTI Link #	ASAI Link Version	Security
● 1	CM63vmpg	1	5	Both

The TSAPI Service must be restarted for the changes made in this section to take effect. From the Management Console menu, navigate to **Maintenance → Service Controller**. On the Service Controller screen, tick the **TSAPI Service** and select **Restart Service**.



Welcome: User craft
Last login: Thu Dec 15 19:28:13 2011 from 10.10.16.62
HostName/IP: devconaes611/10.10.16.29
Server Offer Type: TURNKEY
SW Version: r6-1-1-30-0

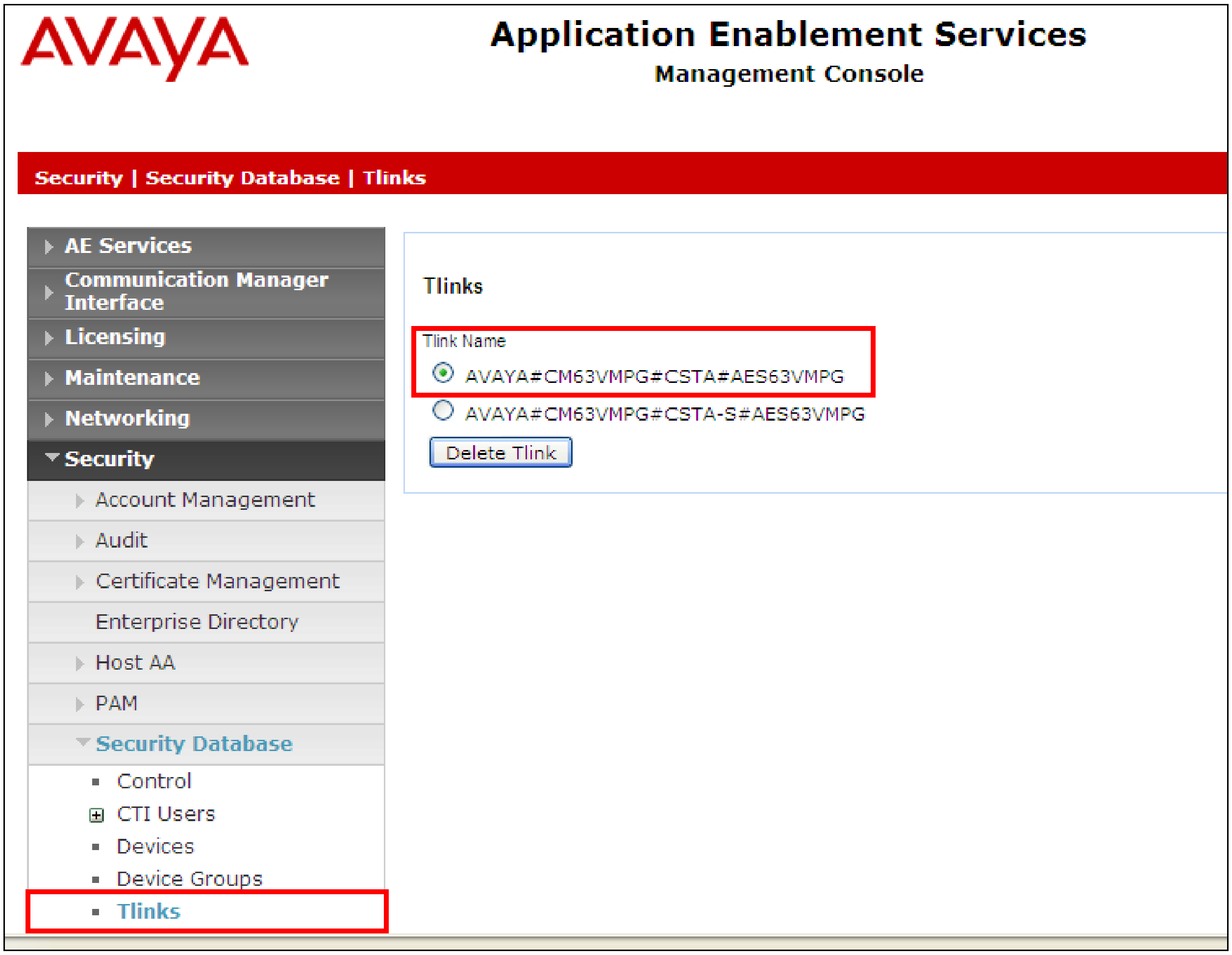
Service Controller

Service	Controller Status
☐ ASAI Link Manager	Running
☐ DMCC Service	Running
☐ CVLAN Service	Running
☐ DLG Service	Running
☐ Transport Layer Service	Running
☑ TSAPI Service	Running

For status on actual services, please use Status and Control

6.4. Identify Tlinks

Navigate to **Security** → **Security Database** → **Tlinks**. Take note of the value of the **Tlink Name**, it will be needed later to configure the NICE CTI Connection in **Section 8.1**.



Tlinks

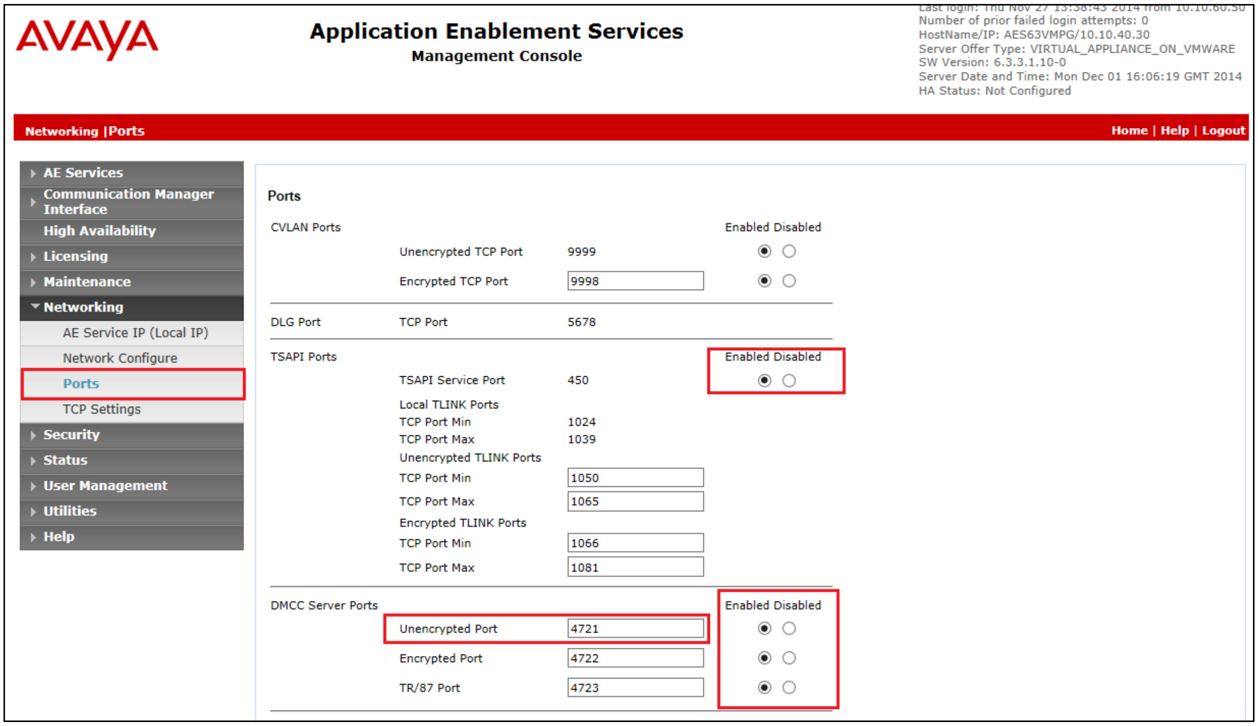
Tlink Name

● AVAYA#CM63VMPG#CSTA#AES63VMPG

○ AVAYA#CM63VMPG#CSTA-S#AES63VMPG

6.5. Enable TSAPI Ports

To ensure that TSAPI ports are enabled, navigate to **Networking → Ports**. Ensure that the TSAPI ports are set to **Enabled** as shown below. Ensure that the **DMCC Server Ports** are also **Enabled** and take note of the **Unencrypted Port 4721** which will be used later in **Section 8.1**.



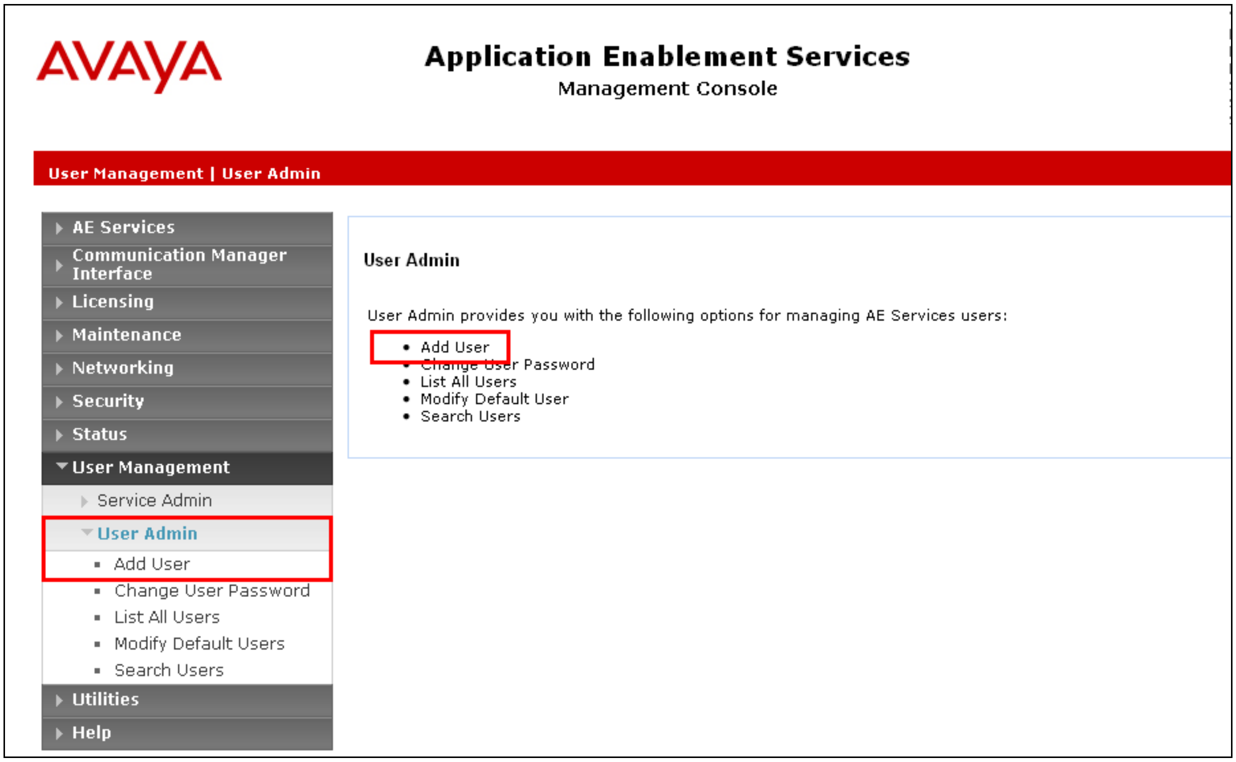
Last login: Thu Nov 27 13:38:43 2014 from 10.10.60.50
Number of prior failed login attempts: 0
HostName/IP: AES63VMPG/10.10.40.30
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.1.10-0
Server Date and Time: Mon Dec 01 16:06:19 GMT 2014
HA Status: Not Configured

Ports

			Enabled	Disabled
CVLAN Ports	Unencrypted TCP Port	9999	●	○
	Encrypted TCP Port	9998	●	○
DLG Port	TCP Port	5678		
TSAPI Ports	TSAPI Service Port	450	●	○
	Local TLINK Ports			
	TCP Port Min	1024		
	TCP Port Max	1039		
	Unencrypted TLINK Ports			
	TCP Port Min	1050		
	TCP Port Max	1065		
	Encrypted TLINK Ports			
	TCP Port Min	1066		
	TCP Port Max	1081		
DMCC Server Ports	Unencrypted Port	4721	●	○
	Encrypted Port	4722	●	○
	TR/87 Port	4723	●	○

6.6. Create CTI User

A User ID and password needs to be configured for the NICE Engage Platform to communicate with the Application Enablement Services server. Navigate to the **User Management → User Admin** screen then choose the **Add User** option.



User Admin

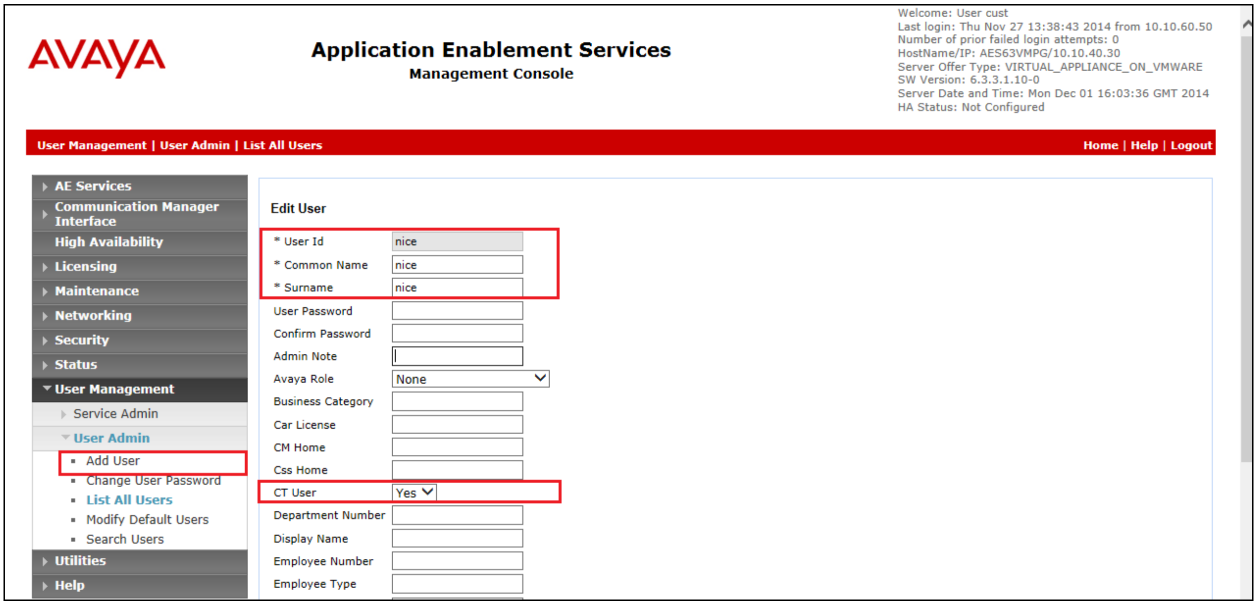
User Admin provides you with the following options for managing AE Services users:

- Add User
- Change User Password
- List All Users
- Modify Default User
- Search Users

In the **Add User** screen shown below, enter the following values:

- **User Id -** This will be used by the NICE Engage Platform setup in **Section 8.1**.
- **Common Name** and **Surname -** Descriptive names need to be entered.
- **User Password** and **Confirm Password -** This will be used with NICE Engage Platform setup in **Section 8.1**.
- **CT User -** Select **Yes** from the drop-down menu.

Complete the process by choosing **Apply Changes** at the bottom of the screen (not shown).



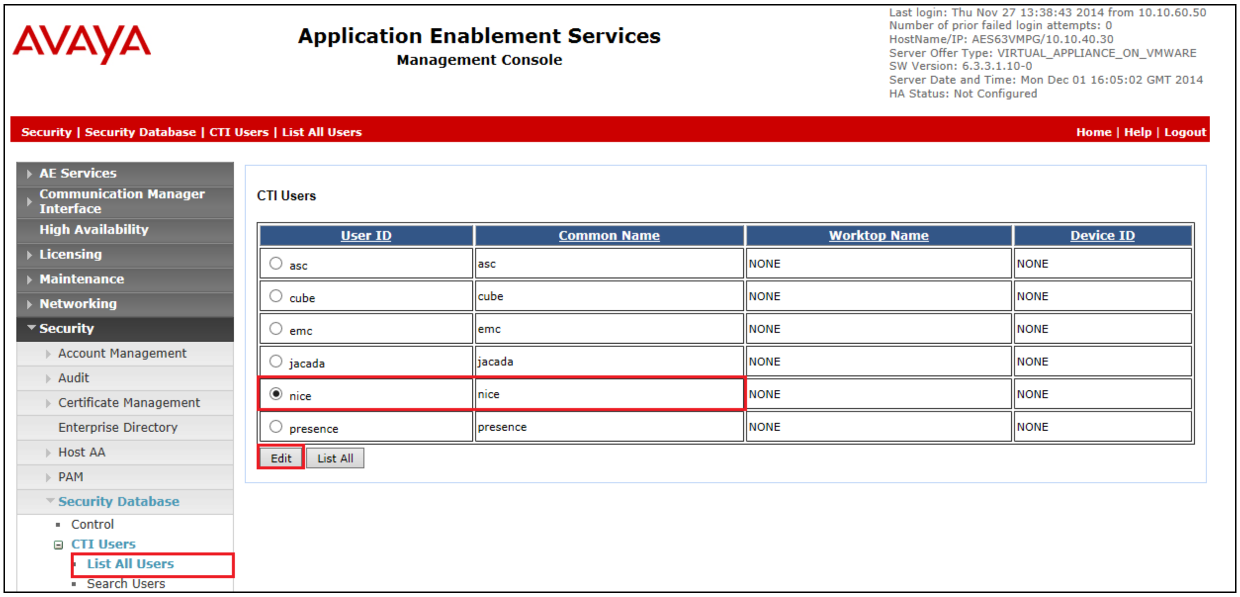
Welcome: User cust
Last login: Thu Nov 27 13:38:43 2014 from 10.10.60.50
Number of prior failed login attempts: 0
HostName/IP: AES63VMPG/10.10.40.30
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.1.10-0
Server Date and Time: Mon Dec 01 16:03:36 GMT 2014
HA Status: Not Configured

Edit User

* User Id	nice
* Common Name	nice
* Surname	nice
User Password	
Confirm Password	
Admin Note	
Avaya Role	None
Business Category	
Car License	
CM Home	
Css Home	
CT User	Yes
Department Number	
Display Name	
Employee Number	
Employee Type	

6.7. Associate Devices with CTI User

Navigate to **Security → Security Database → CTI Users → List All Users**, select **nice** under **User ID,** and click on **Edit**.

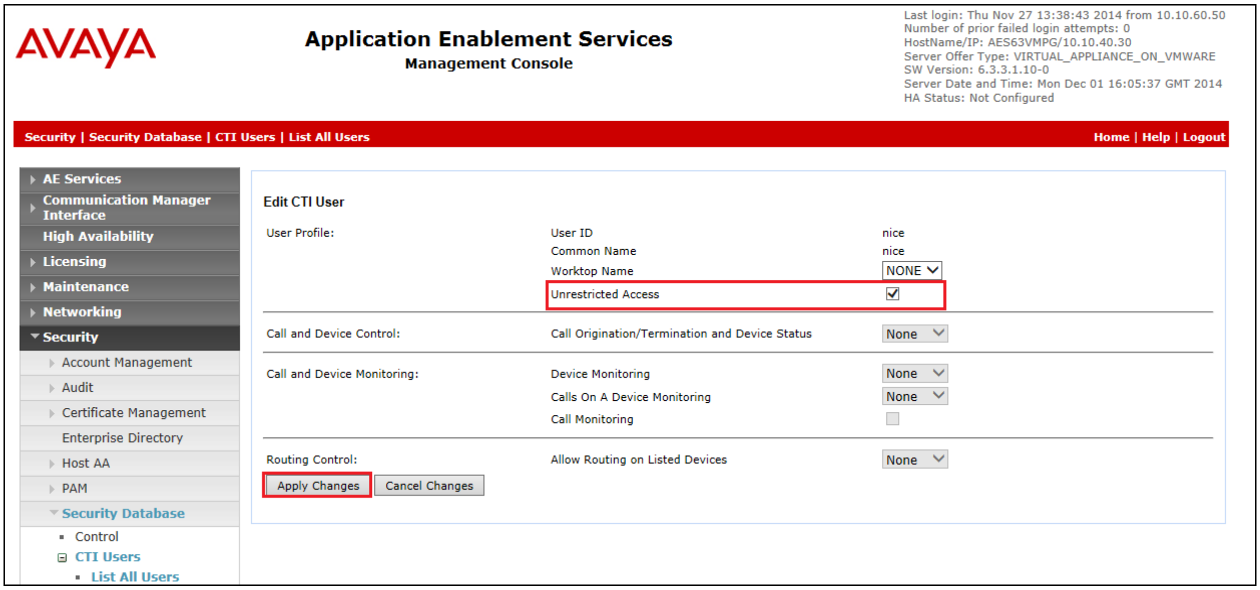


Last login: Thu Nov 27 13:38:43 2014 from 10.10.60.50
Number of prior failed login attempts: 0
HostName/IP: AES63VMPG/10.10.40.30
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.1.10-0
Server Date and Time: Mon Dec 01 16:05:02 GMT 2014
HA Status: Not Configured

CTI Users

User ID	Common Name	Worktop Name	Device ID
○ asc	asc	NONE	NONE
○ cube	cube	NONE	NONE
○ emc	emc	NONE	NONE
○ jacada	jacada	NONE	NONE
● nice	nice	NONE	NONE
○ presence	presence	NONE	NONE

In the main window ensure that **Unrestricted Access** is ticked. Once this is done click on **Apply Changes**.



Last login: Thu Nov 27 13:38:43 2014 from 10.10.60.50
Number of prior failed login attempts: 0
HostName/IP: AES63VMPG/10.10.40.30
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.1.10-0
Server Date and Time: Mon Dec 01 16:05:37 GMT 2014
HA Status: Not Configured

Edit CTI User

User Profile:	User ID	nice
	Common Name	nice
	Worktop Name	NONE
	Unrestricted Access	☑
Call and Device Control:	Call Origination/Termination and Device Status	None
Call and Device Monitoring:	Device Monitoring	None
	Calls On A Device Monitoring	None
	Call Monitoring	□
Routing Control:	Allow Routing on Listed Devices	None

7. Configure Avaya Proactive Contact

It is assumed that a fully operational Proactive Contact is in place and the connection is made to Communication Manager in order to acquire agents. Documentation on the Installation and Configuration of Proactive Contact may be found in **Section 11** of these Application Notes.

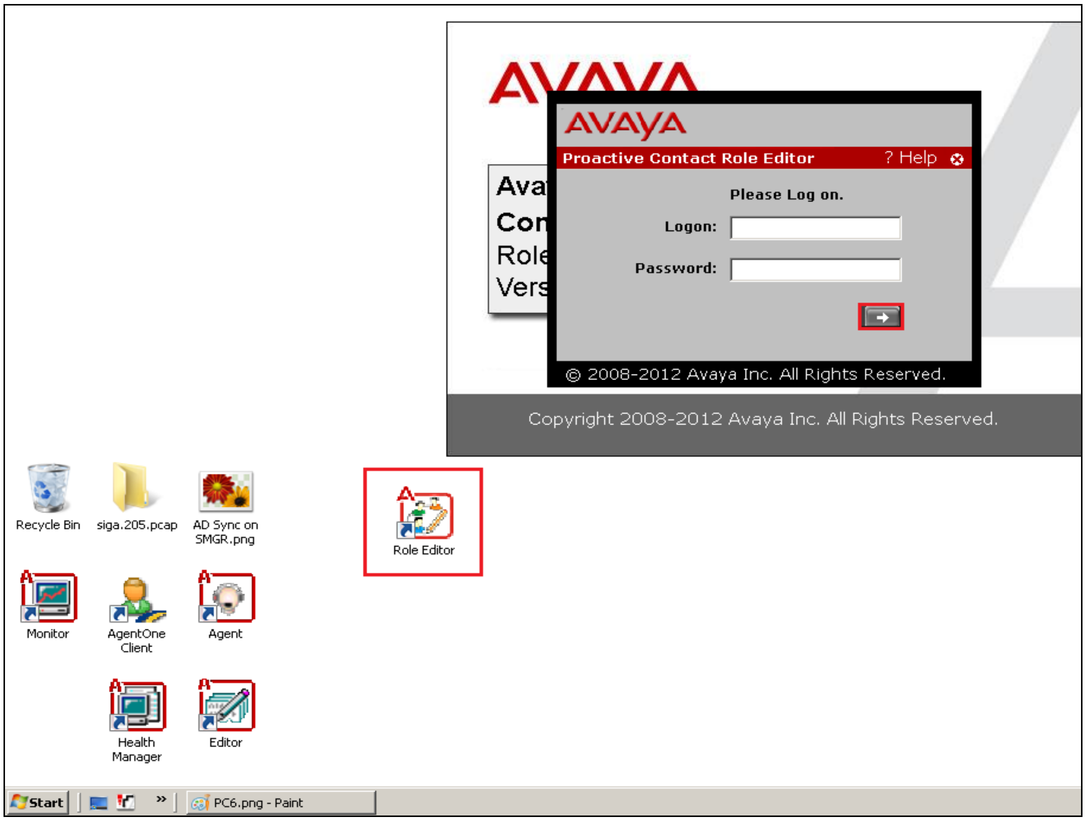
7.1. Obtain Proactive Contact Certificates

NICE Engage Platform is required to register certificates from Avaya Proactive Contact and these certificates can be obtained as follows:

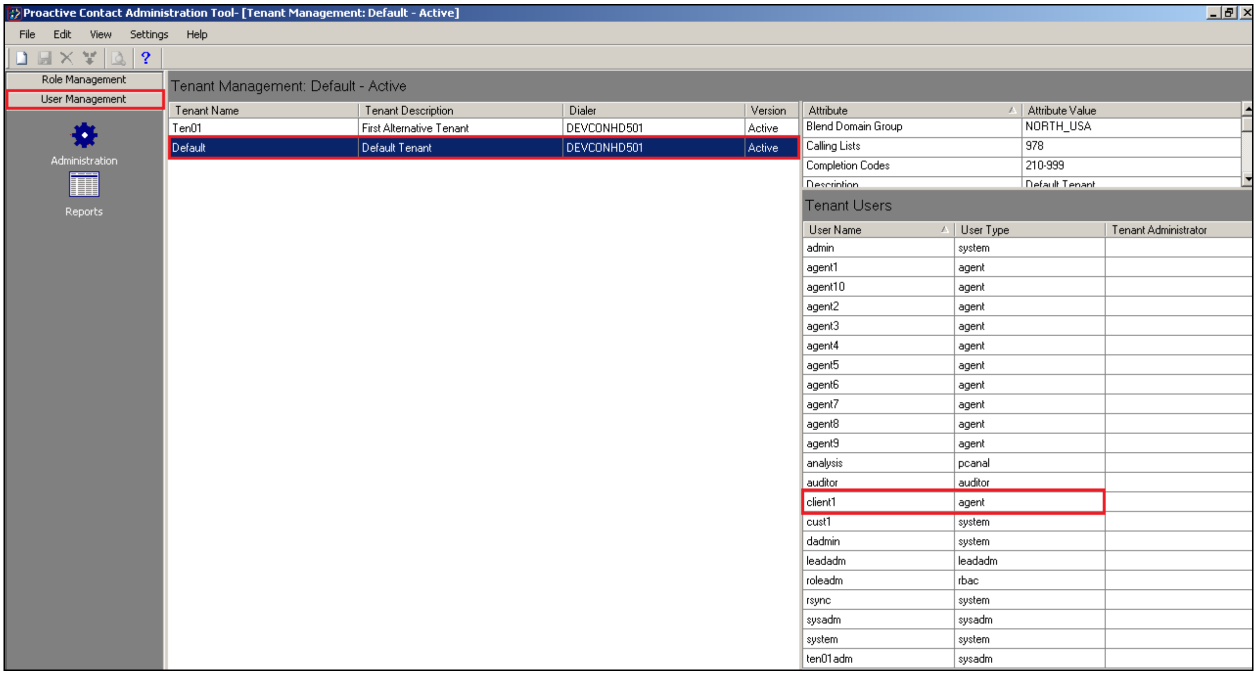
1. On the Proactive Contact server, go to **/opt/avaya/pds/openssl**
2. Copy the following files
   /private/**corbaServer_key.pem**
   /certificate/**corbaServer_cert.pem**
   /cacertificate/**ProactiveContactCA.pem**
3. Paste the above three files into the **C:\Certificates** folder on the NICE Engage Platform.

7.2. Check Proactive Contact Event User Details

Proactive Contact is installed with 10 pre-configured agents Agent 01-10 with corresponding passwords. The default client1 was used to register for events from Proactive Contact. To check on these users open Proactive Contact **Role Editor**, enter the correct credentials and click on the login icon highlighted.



Click on **User Management** at the top left of the screen and select the correct **Tenant** from the main window. A list of **Tenant Users** is then displayed in the right window with **Client1** highlighted as shown. If this user is not present a different user may be used to monitor events. Note this Client1 user will be used later in **Section 8.3**.


Proactive Contact Administration Tool- [Tenant Management: Default - Active]
File
Edit
View
Settings
Help
Role Management
User Management
Administration
Reports

Tenant Management: Default - Active

Tenant Name	Tenant Description	Dialer	Version
Ten01	First Alternative Tenant	DEVCONHD501	Active
Default	Default Tenant	DEVCONHD501	Active

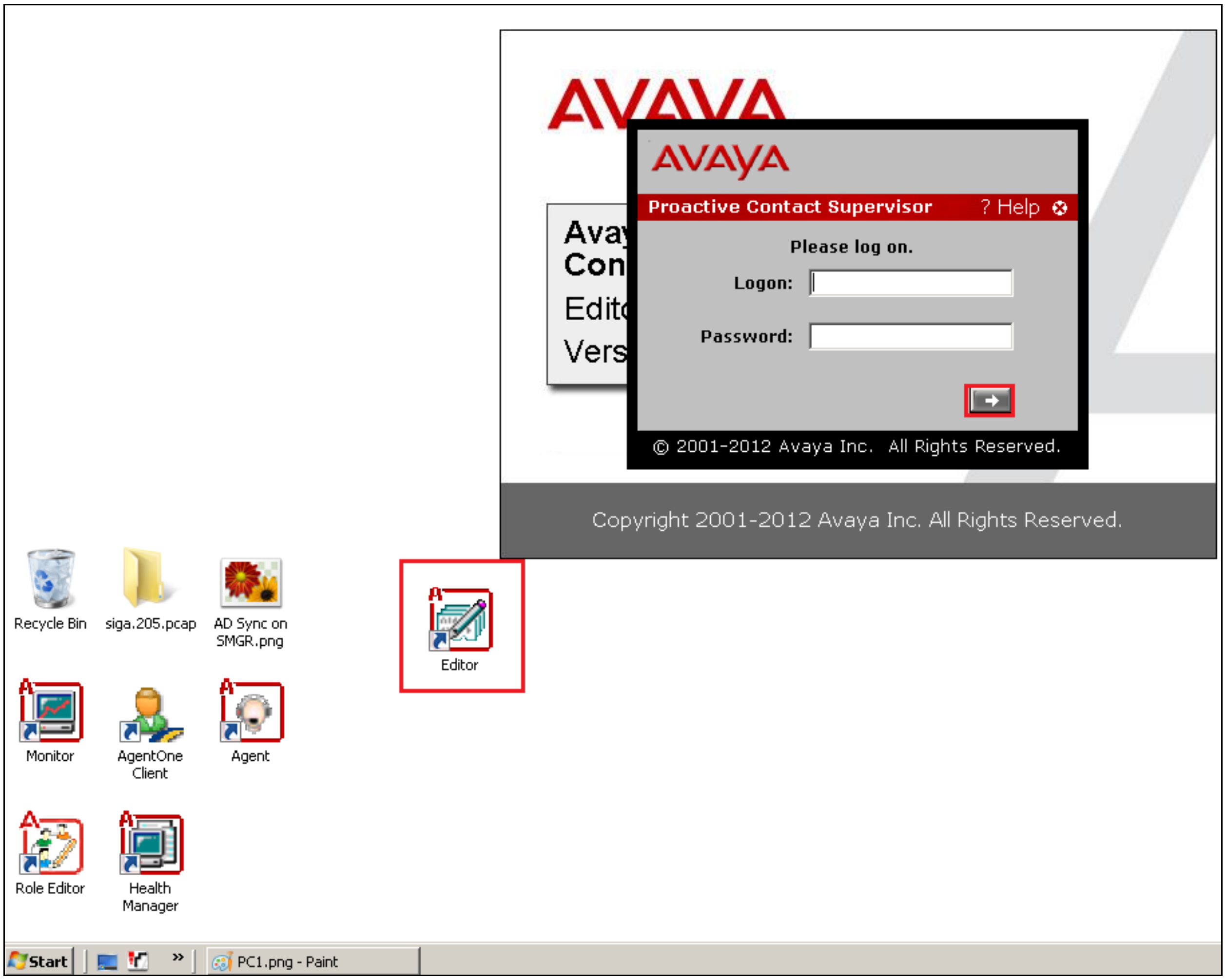
Attribute	Attribute Value
Blend Domain Group	NORTH_USA
Calling Lists	978
Completion Codes	210-999
Description	Default Tenant

Tenant Users

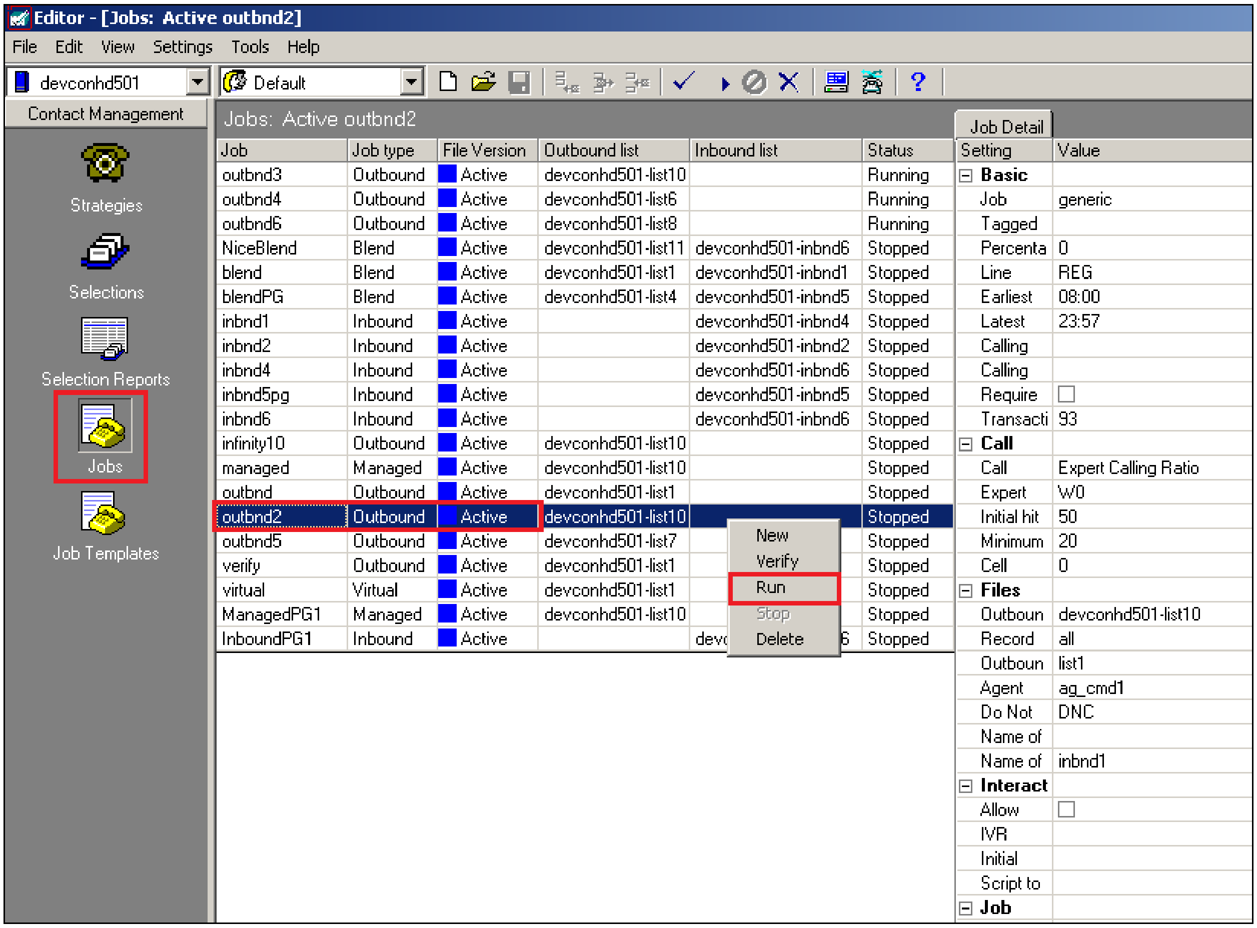
User Name	User Type	Tenant Administrator
admin	system	
agent1	agent	
agent10	agent	
agent2	agent	
agent3	agent	
agent4	agent	
agent5	agent	
agent6	agent	
agent7	agent	
agent8	agent	
agent9	agent	
analysis	pcanal	
auditor	auditor	
client1	agent	
cust1	system	
dadmin	system	
leadadm	leadadm	
roleadm	rbac	
rsync	system	
sysadm	sysadm	
system	system	
ten01adm	sysadm	

7.3. Start Proactive Contact Jobs running

To start a job on Proactive Contact open Proactive Contact **Editor**, enter the correct credentials and click on the login icon highlighted.



Once logged in click on any job that requires starting for example **outbnd2** as is highlighted below and right-click on that job and select **Run**. That will start that particular job and allow the Proactive Contact agents to join that job.



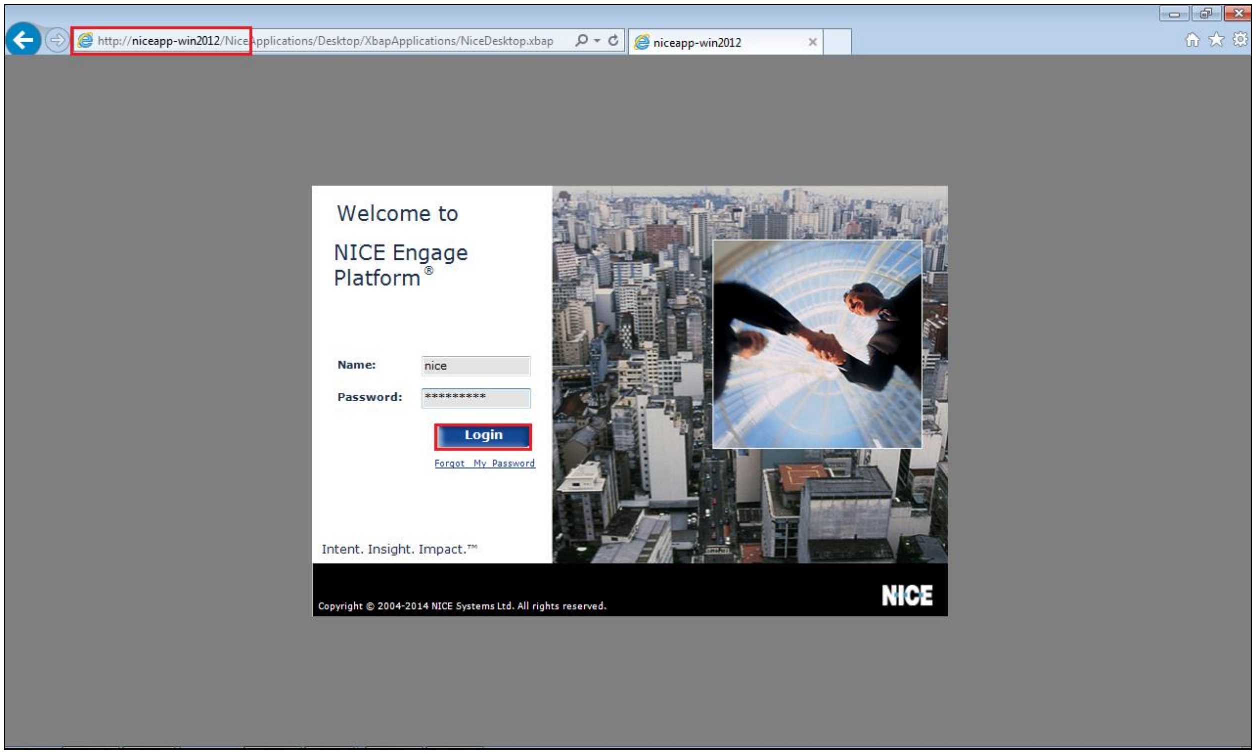
Job	Job type	File Version	Outbound list	Inbound list	Status
outbnd3	Outbound	■ Active	devconhd501-list10		Running
outbnd4	Outbound	■ Active	devconhd501-list6		Running
outbnd6	Outbound	■ Active	devconhd501-list8		Running
NiceBlend	Blend	■ Active	devconhd501-list11	devconhd501-inbnd6	Stopped
blend	Blend	■ Active	devconhd501-list1	devconhd501-inbnd1	Stopped
blendPG	Blend	■ Active	devconhd501-list4	devconhd501-inbnd5	Stopped
inbnd1	Inbound	■ Active		devconhd501-inbnd4	Stopped
inbnd2	Inbound	■ Active		devconhd501-inbnd2	Stopped
inbnd4	Inbound	■ Active		devconhd501-inbnd6	Stopped
inbnd5pg	Inbound	■ Active		devconhd501-inbnd5	Stopped
inbnd6	Inbound	■ Active		devconhd501-inbnd6	Stopped
infinity10	Outbound	■ Active	devconhd501-list10		Stopped
managed	Managed	■ Active	devconhd501-list10		Stopped
outbnd	Outbound	■ Active	devconhd501-list1		Stopped
outbnd2	Outbound	■ Active	devconhd501-list10		Stopped
outbnd5	Outbound	■ Active	devconhd501-list7		Stopped
verify	Outbound	■ Active	devconhd501-list1		Stopped
virtual	Virtual	■ Active	devconhd501-list1		Stopped
ManagedPG1	Managed	■ Active	devconhd501-list10		Stopped
InboundPG1	Inbound	■ Active		devc 6	Stopped

Setting	Value
⊟ **Basic**	
Job	generic
Tagged	
Percenta	0
Line	REG
Earliest	08:00
Latest	23:57
Calling	
Calling	
Require	□
Transacti	93
⊟ **Call**	
Call	Expert Calling Ratio
Expert	W0
Initial hit	50
Minimum	20
Cell	0
⊟ **Files**	
Outboun	devconhd501-list10
Record	all
Outboun	list1
Agent	ag_cmd1
Do Not	DNC
Name of	
Name of	inbnd1
⊟ **Interact**	
Allow	□
IVR	
Initial	
Script to	
⊟ **Job**	

8. Configure NICE Engage Platform

The installation of NICE Engage Platform is usually carried out by an engineer from NICE and is outside the scope of these Application Notes. For information on the installation of the NICE Engage Platform contact NICE as per the information provided in **Section 2.3**.

The following sections will outline the process involved in connecting the NICE Engage Platform to the Avaya Solution. All configuration of the NICE Engage Platform for connection with the AES is performed using a web browser connecting to the NICE Engage Application Server. Open a web browser as shown navigate to http://<NICEEngageApplicationServerIP>/Nice as shown below and enter the proper credentials and click on **Login**.

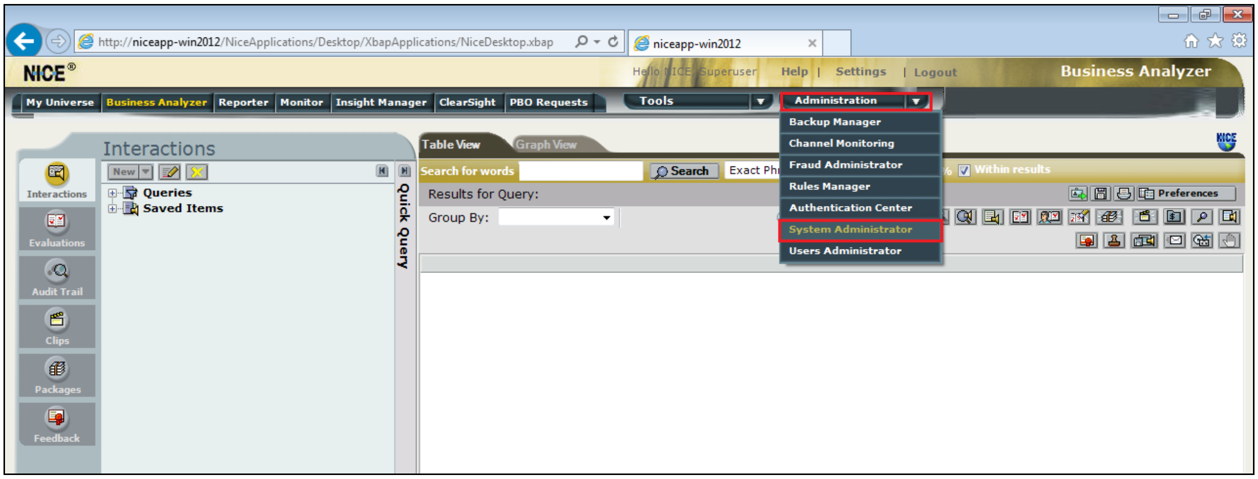

http://niceapp-win2012/NiceApplications/Desktop/XbapApplications/NiceDesktop.xbap

niceapp-win2012
Welcome to
NICE Engage Platform®
Login
Forgot My Password
Intent. Insight. Impact.™
Copyright © 2004-2014 NICE Systems Ltd. All rights reserved.
NICE

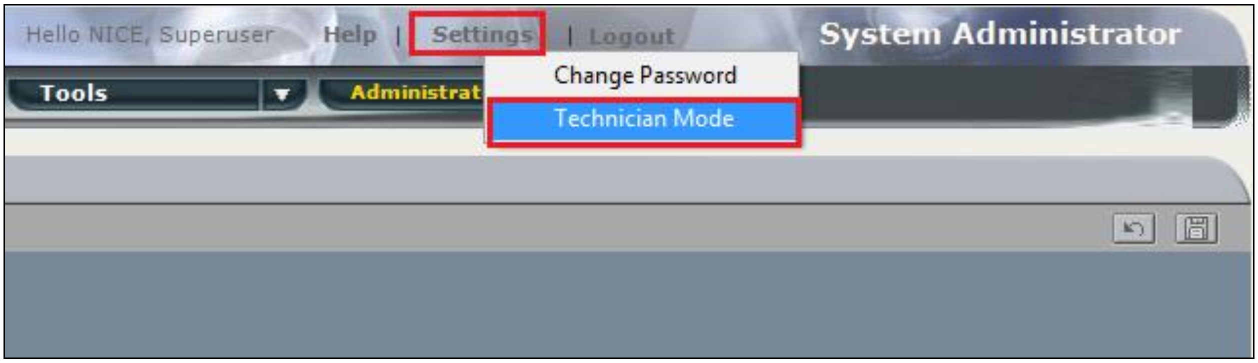
Name: nice

Password: *********

Once logged in expand the **Administration** dropdown menu and click on **System Administrator** as highlighted.

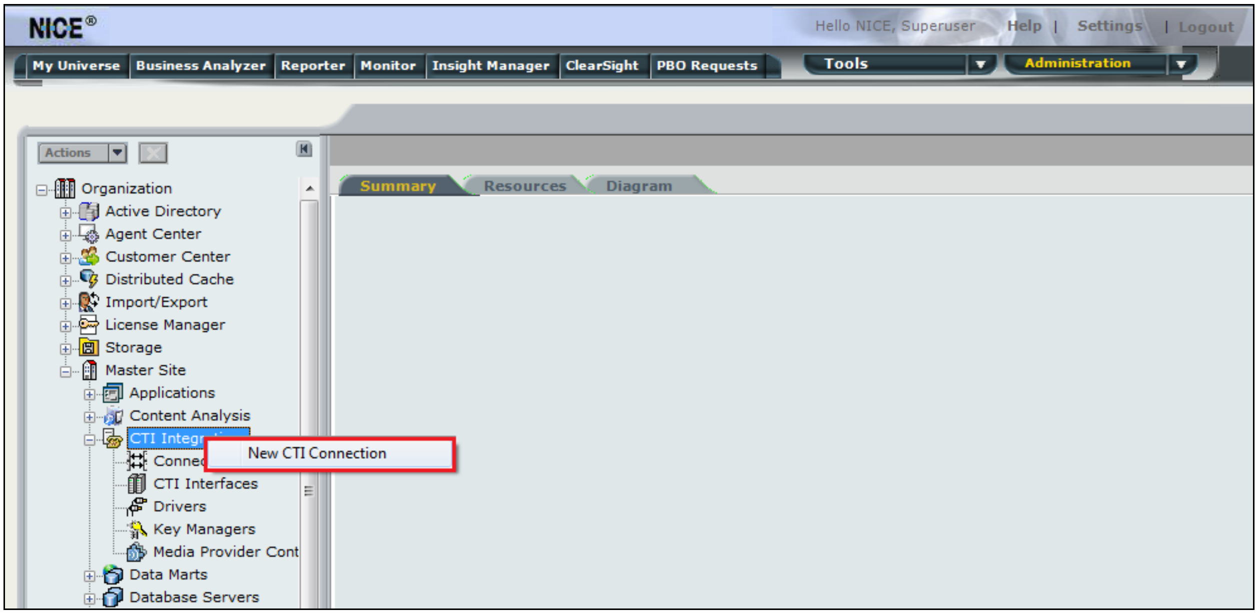


Before any changes can be made, switch to **Technician Mode** by clicking into **Settings** at the top of the screen as shown below.

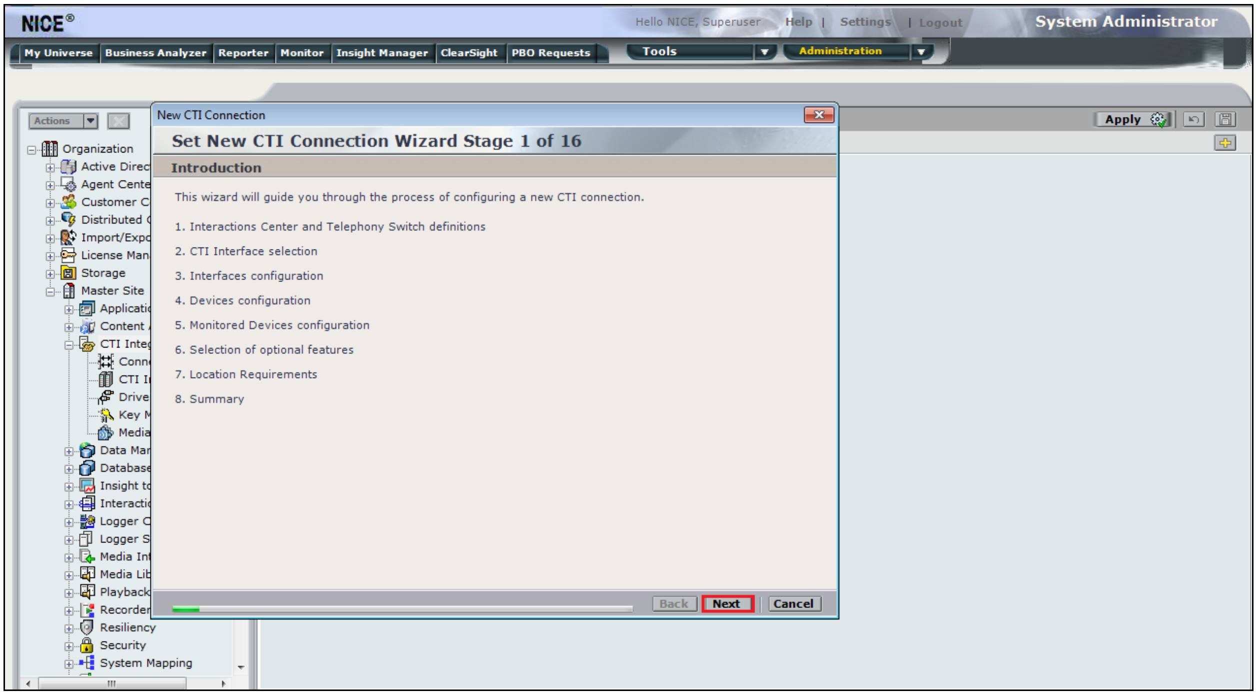


8.1. New CTI Connection

Navigate to **Master Site → CTI Integration** in the left window then right-click on CTI Integration and select **New CTI Connection** as shown below.



The **New CTI Connection Wizard** is opened and this will go through the 16 steps required to setup the connection to the AES for DMCC Service Observation and Single Step Conference type of call recording. Click on **Next** to continue.



Set New CTI Connection Wizard Stage 1 of 16

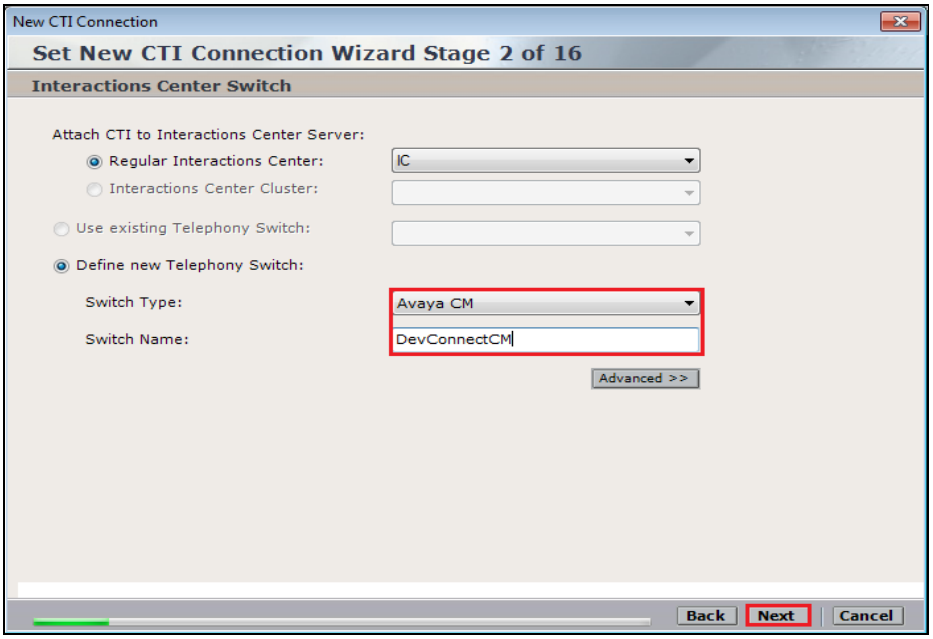
Introduction

This wizard will guide you through the process of configuring a new CTI connection.

1. Interactions Center and Telephony Switch definitions
2. CTI Interface selection
3. Interfaces configuration
4. Devices configuration
5. Monitored Devices configuration
6. Selection of optional features
7. Location Requirements
8. Summary

The value for Regular Interactions Center is a value that was already created during the installation of the NICE Engage platform. This value is therefore pre-chosen for the CTI connection being created below.

The **Telephony Switch** must be selected, under **Switch Type** select **Avaya CM** from the dropdown menu. Enter a suitable name for this **Switch Name**. Click on **Next** to continue.


New CTI Connection

Set New CTI Connection Wizard Stage 2 of 16

Interactions Center Switch

Attach CTI to Interactions Center Server:

● Regular Interactions Center: IC

○ Interactions Center Cluster:

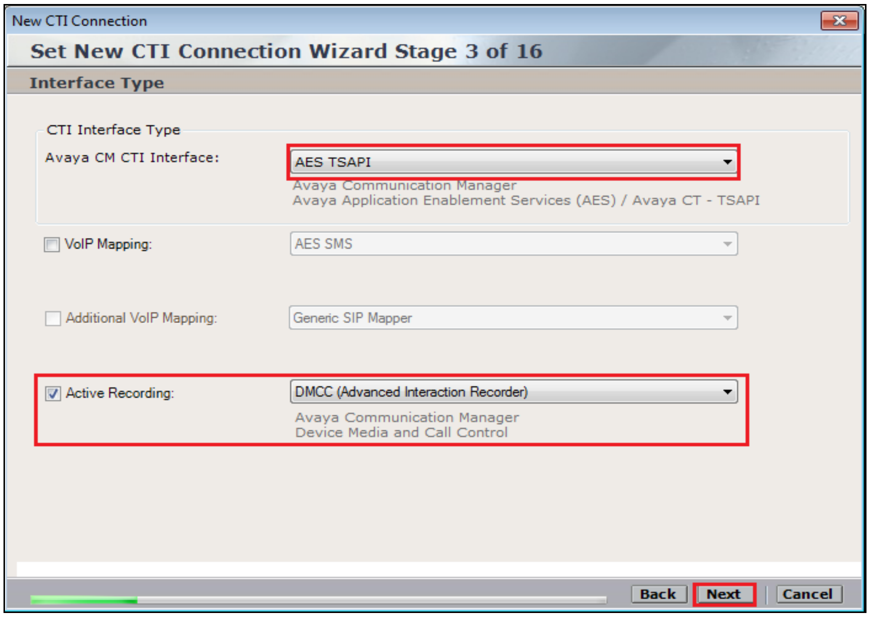
○ Use existing Telephony Switch:

● Define new Telephony Switch:

Switch Type: Avaya CM

Switch Name: DevConnectCM

Select **AES TSAPI** for the **Avaya CM CTI Interface**, ensure that **Active Recording** is ticked and select the **DMCC (Advanced integration Recorder)** from the dropdown menu. Click on **Next** to continue.


New CTI Connection

Set New CTI Connection Wizard Stage 3 of 16

Interface Type

CTI Interface Type

Avaya CM CTI Interface: AES TSAPI

Avaya Communication Manager
Avaya Application Enablement Services (AES) / Avaya CT - TSAPI

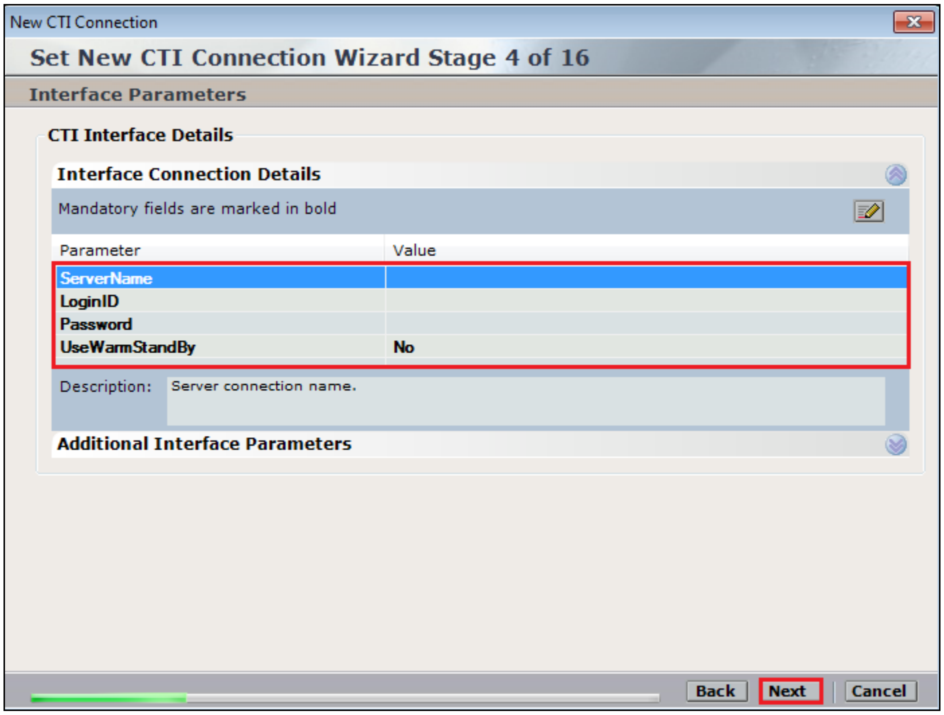
□ VoIP Mapping: AES SMS

□ Additional VoIP Mapping: Generic SIP Mapper

☑ Active Recording: DMCC (Advanced Interaction Recorder)

Avaya Communication Manager
Device Media and Call Control

Each of the values below must be filled in. Double-click on each **Parameter** to enter a value for that parameter.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

Interface Connection Details

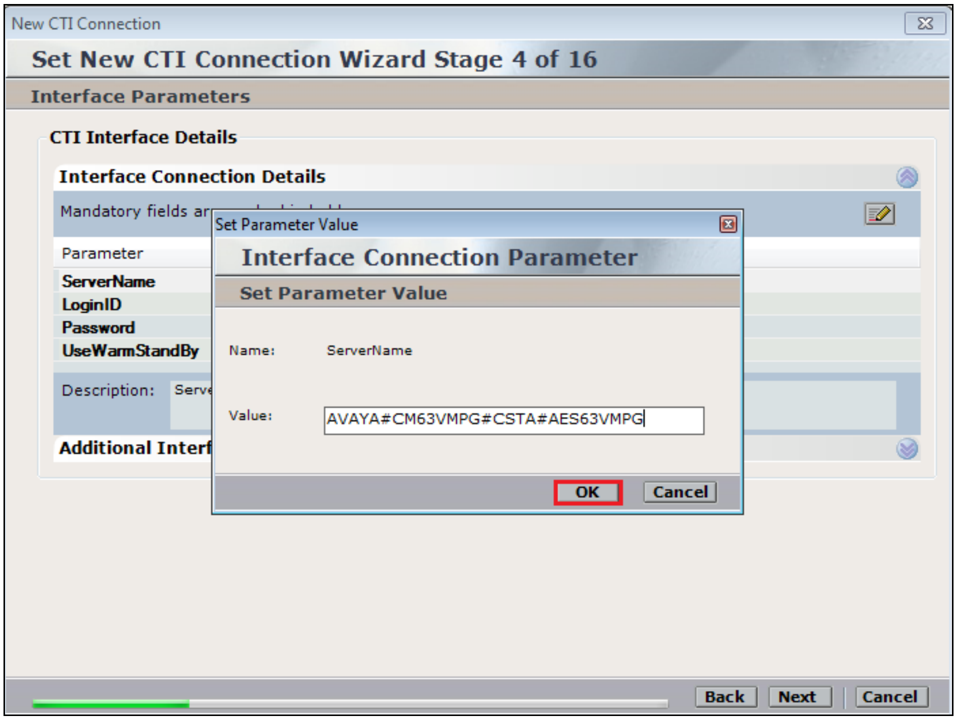
Mandatory fields are marked in bold

Parameter	Value
ServerName	
LoginID	
Password	
UseWarmStandBy	**No**

Description: Server connection name.

Additional Interface Parameters

Double-click on **ServerName** and enter the TSAPI link **Value** from **Section 6.4**. Click on **OK**.



Set Parameter Value

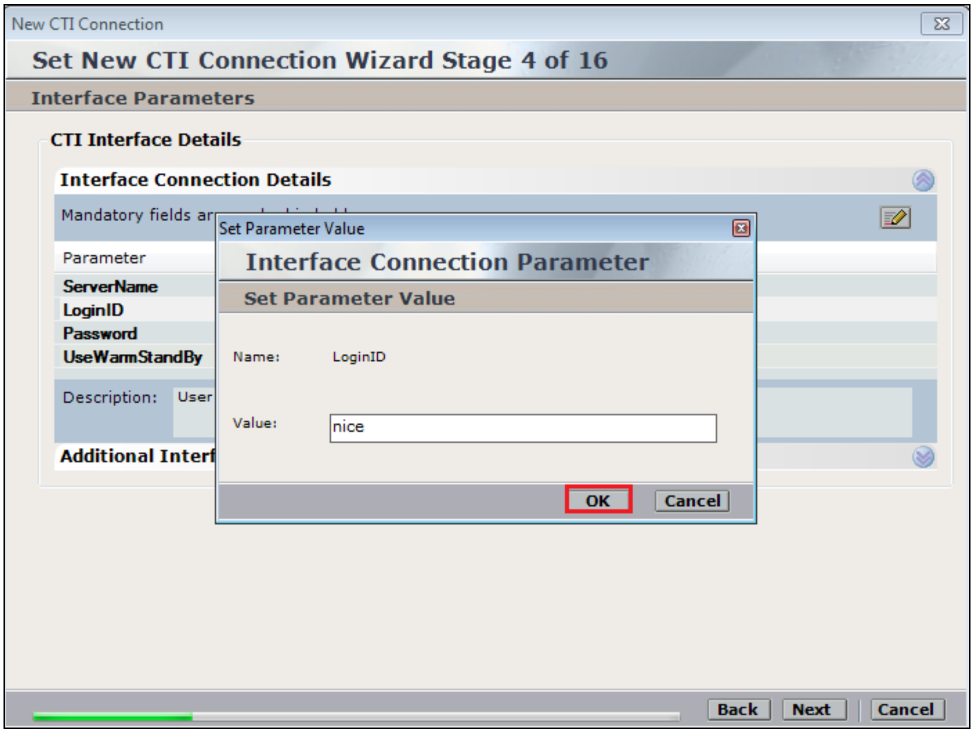
Interface Connection Parameter

Set Parameter Value

Name: ServerName

Value: AVAYA#CM63VMPG#CSTA#AES63VMPG

Double-click on LoginID and enter the username that was created in **Section 6.6**. Click on **OK**.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

Interface Connection Details

Set Parameter Value

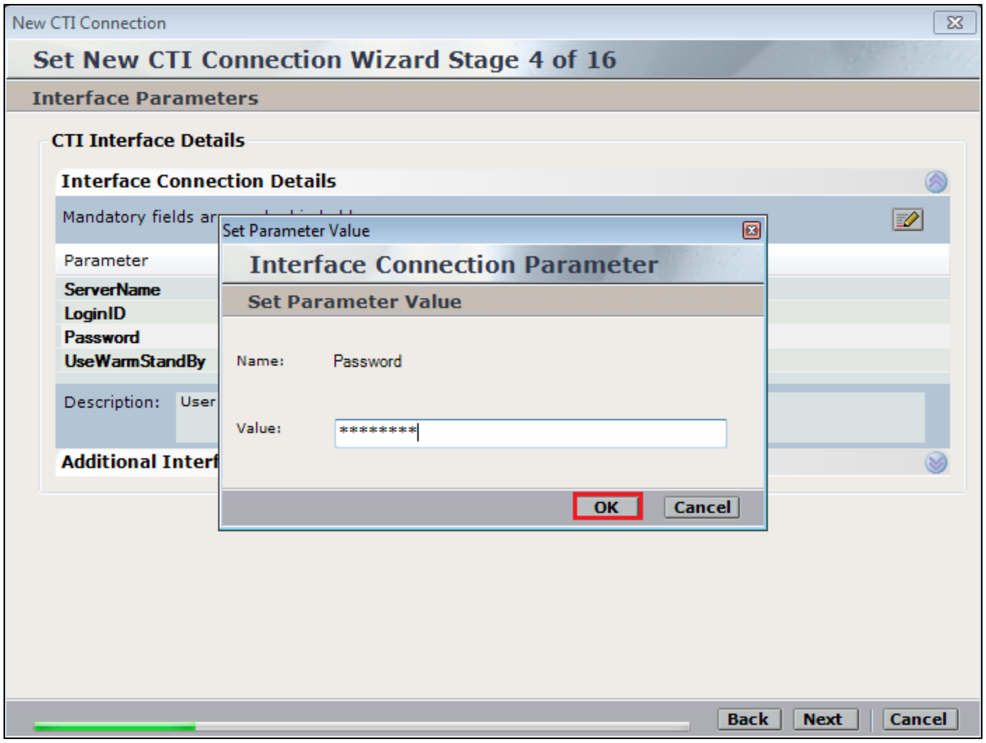
Interface Connection Parameter

Set Parameter Value

Name: LoginID

Value: nice

Double-click on **Password** and enter the value for the password that was created in **Section 6.6**. Click on **OK** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

Interface Connection Details

Set Parameter Value

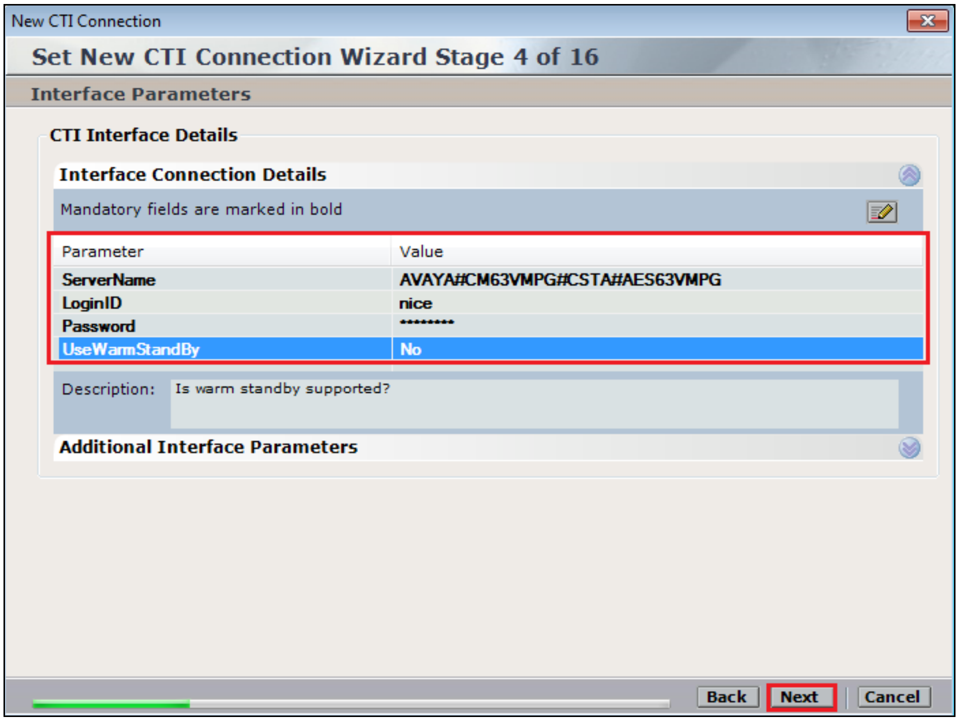
Interface Connection Parameter

Set Parameter Value

Name: Password

Value: *********

Click on **Next** once all values have been filled in.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

Interface Connection Details

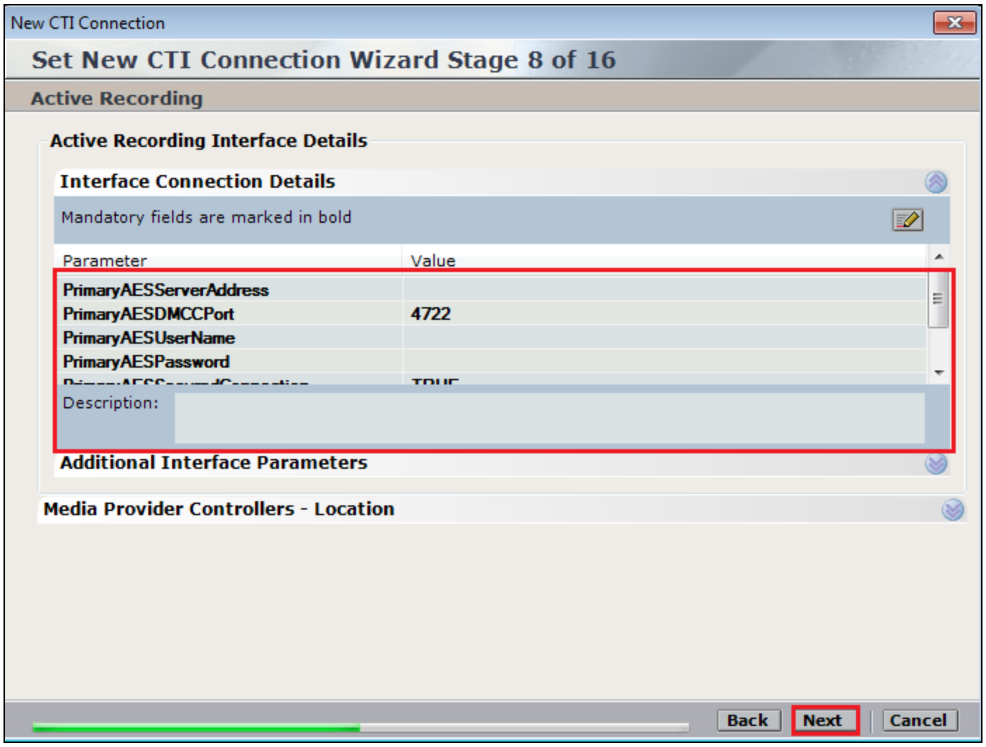
Mandatory fields are marked in bold

Parameter	Value
ServerName	**AVAYA#CM63VMPG#CSTA#AES63VMPG**
LoginID	**nice**
Password	************
UseWarmStandBy	**No**

Description: Is warm standby supported?

Additional Interface Parameters

The values below must be filled in by double-clicking on each **Parameter**.



New CTI Connection

Set New CTI Connection Wizard Stage 8 of 16

Active Recording

Active Recording Interface Details

Interface Connection Details

Mandatory fields are marked in bold

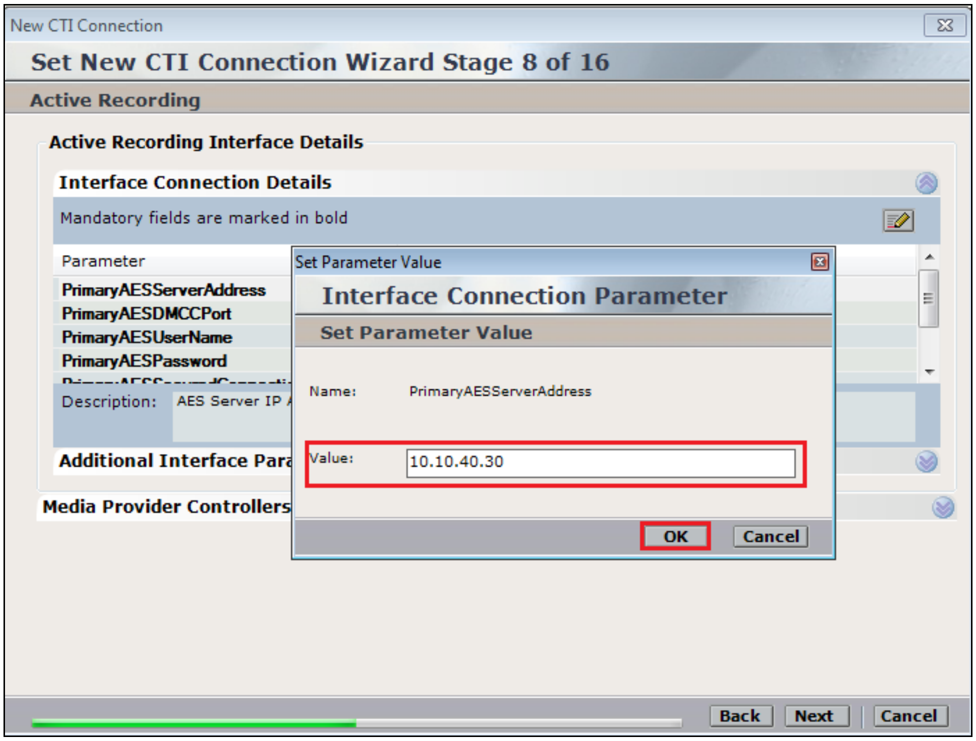
Parameter	Value
PrimaryAESServerAddress	
PrimaryAESDMCCPort	**4722**
PrimaryAESUserName	
PrimaryAESPassword	
PrimaryAESSecuredConnection	**TRUE**

Description:

Additional Interface Parameters

Media Provider Controllers - Location

Enter the **Value** for the **AESServerAddress**. Click on **OK**.


New CTI Connection

Set New CTI Connection Wizard Stage 8 of 16

Active Recording

Active Recording Interface Details

Interface Connection Details

Mandatory fields are marked in bold

Parameter
PrimaryAESServerAddress
PrimaryAESDMCCPort
PrimaryAESUserName
PrimaryAESPassword

Description: AES Server IP

Additional Interface Para

Media Provider Controllers

Set Parameter Value

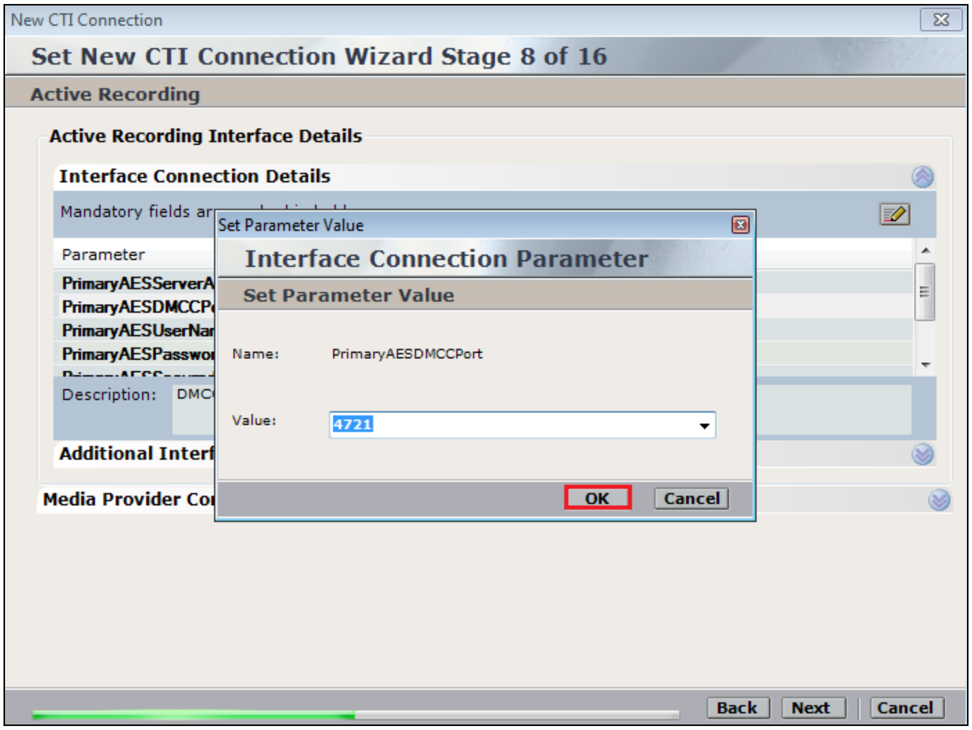
Interface Connection Parameter

Set Parameter Value

Name: PrimaryAESServerAddress

Value: 10.10.40.30

Enter the **Value** for the **AESDMCCPort**, note this will be the same port that was configured in **Section 6.5**. In this example the unencrypted port **4721** is entered.


New CTI Connection

Set New CTI Connection Wizard Stage 8 of 16

Active Recording

Active Recording Interface Details

Interface Connection Details

Mandatory fields ar

Parameter
PrimaryAESServerA
PrimaryAESDMCCP
PrimaryAESUserNar
PrimaryAESPasswo

Description: DMC

Additional Interf

Media Provider Co

Set Parameter Value

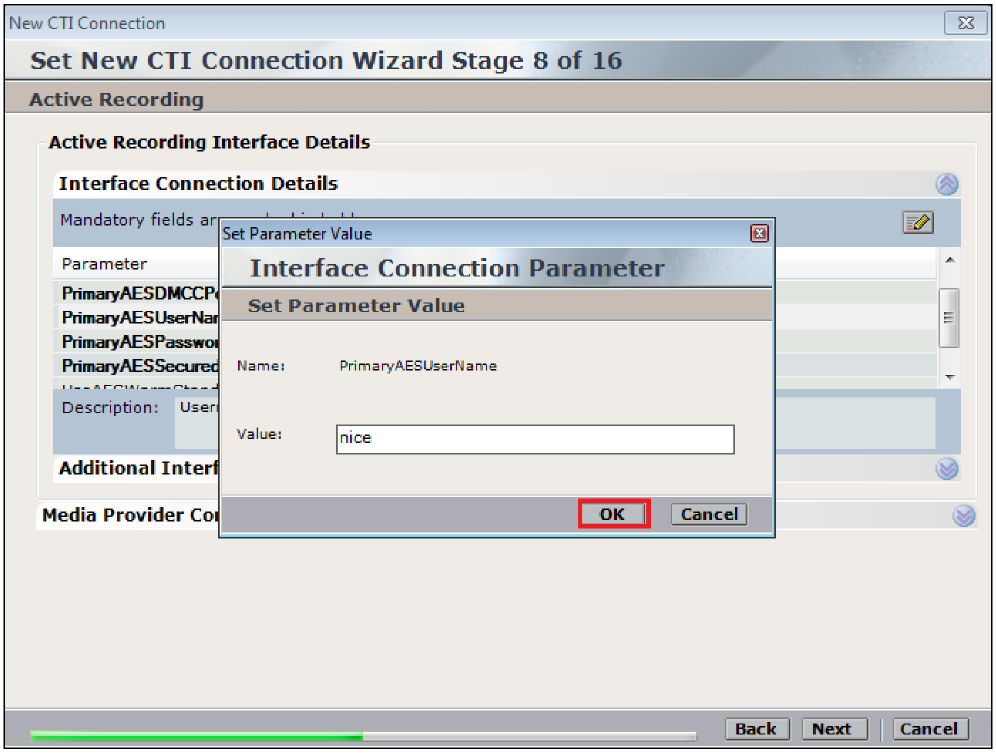
Interface Connection Parameter

Set Parameter Value

Name: PrimaryAESDMCCPort

Value: 4721

As before enter the username that was created in **Section 6.6** and click on **OK**.



Set Parameter Value

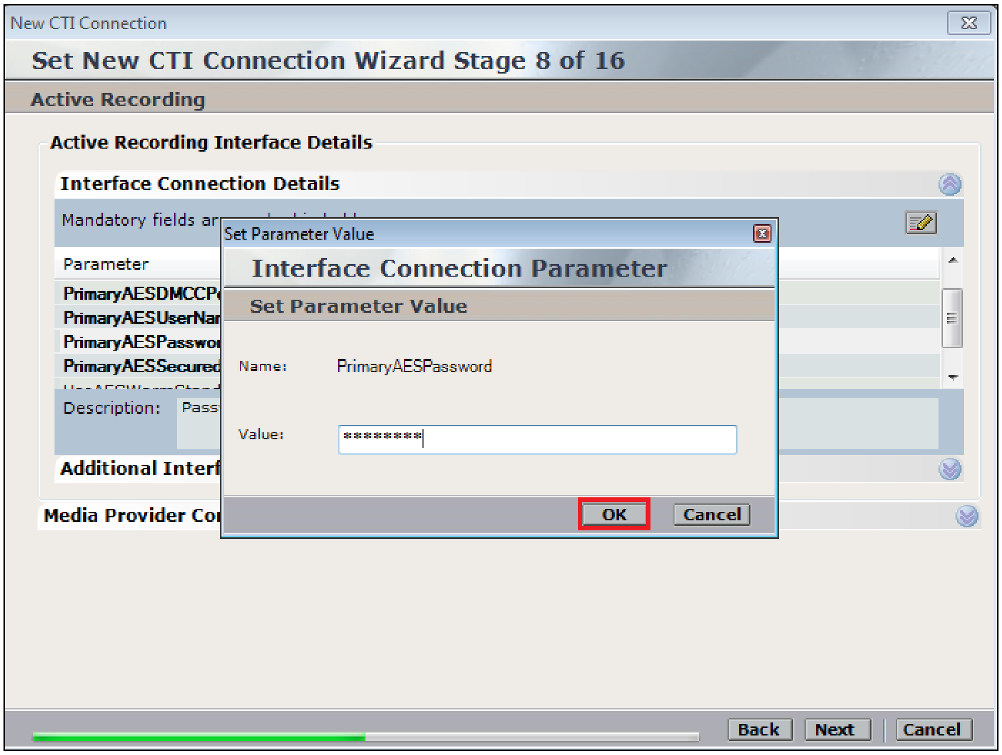
Interface Connection Parameter

Set Parameter Value

Name: PrimaryAESUserName

Value: nice

Enter the password that was created in **Section 6.6** and click on **OK**.



Set Parameter Value

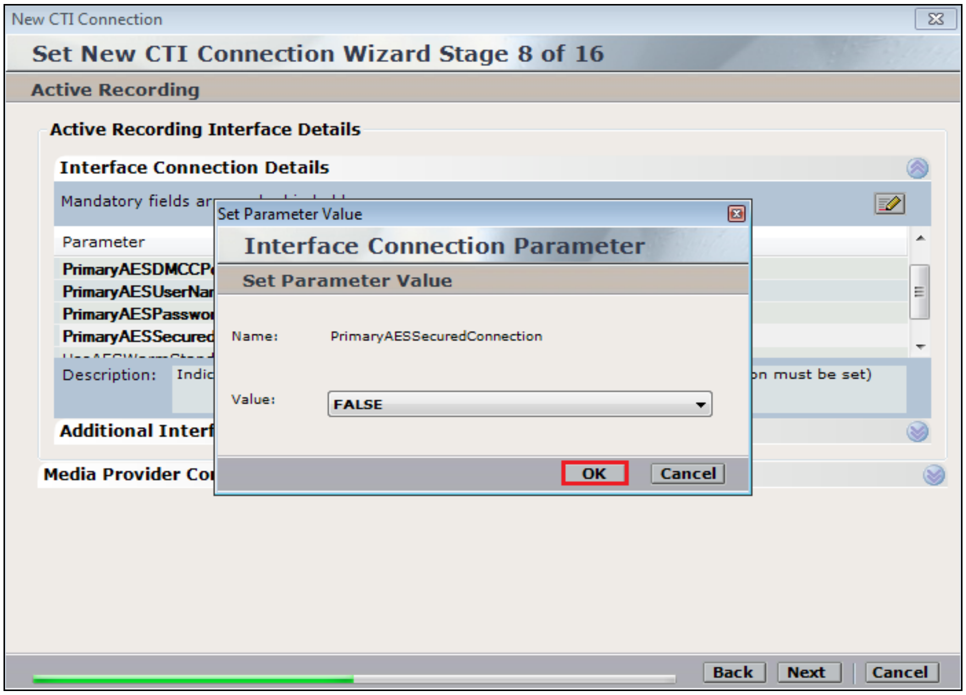
Interface Connection Parameter

Set Parameter Value

Name: PrimaryAESPassword

Value: *********

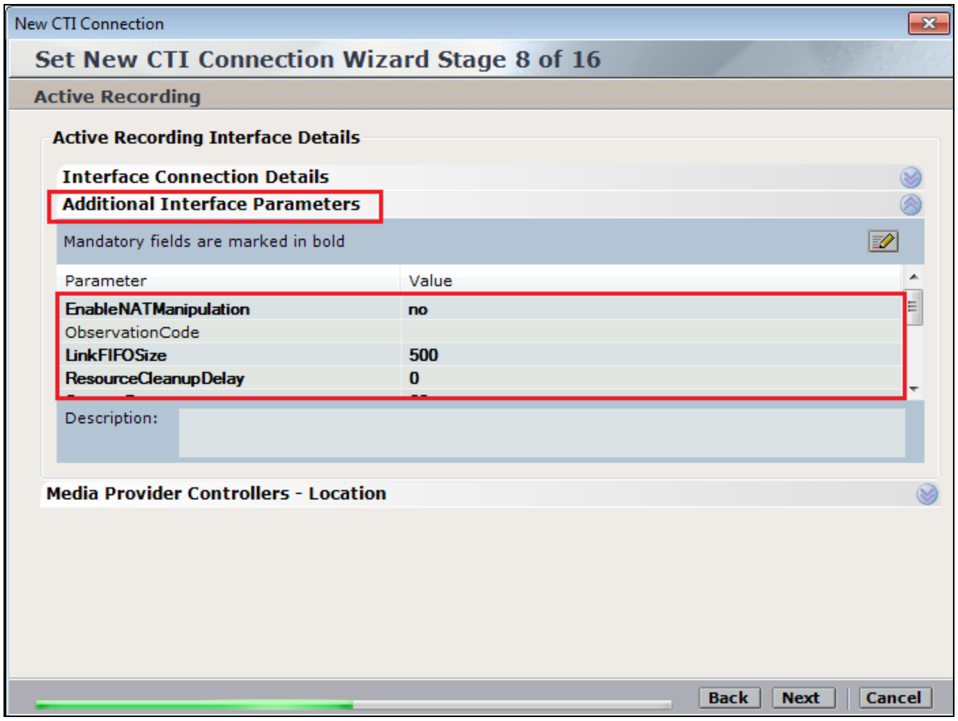
Since unencrypted port was chosen, select **False** for the **PrimaryAESSecuredConnection**. Click on **OK** and then **Next** (not shown) to continue.



Name: PrimaryAESSecuredConnection

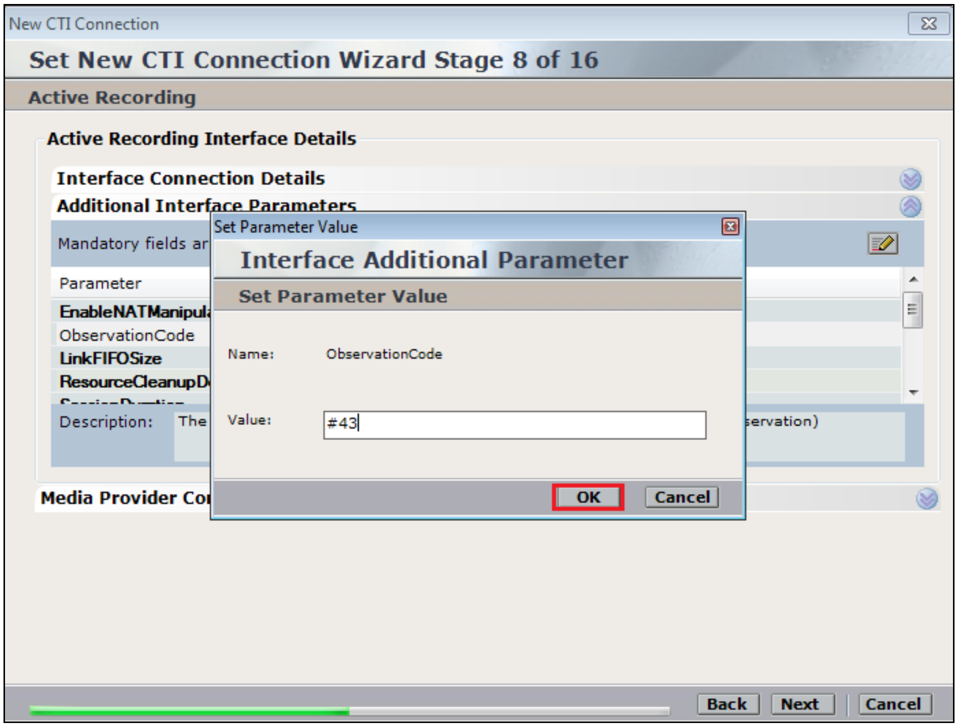
Value: FALSE

Click on **Additional Interface Parameters**, then to change the Service Observation Code double-click on **ObservationCode**.


New CTI Connection
Set New CTI Connection Wizard Stage 8 of 16
Active Recording
Active Recording Interface Details
Interface Connection Details
Additional Interface Parameters
Mandatory fields are marked in bold
Description:
Media Provider Controllers - Location
Back
Next
Cancel

Parameter	Value
EnableNATManipulation	**no**
ObservationCode	
LinkFIFOSize	**500**
ResourceCleanupDelay	**0**

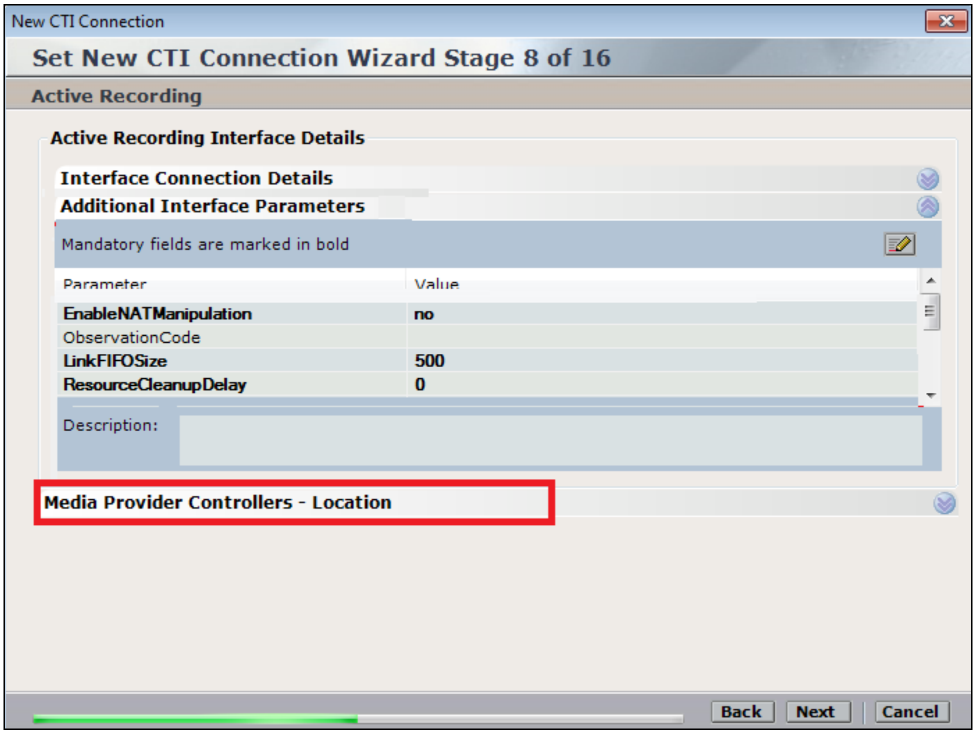
Enter the **Value** that was created in **Section 5.5**. This was the Service Observing Listen Only Access Code **#43**. Click on **OK** to continue.



Name: ObservationCode

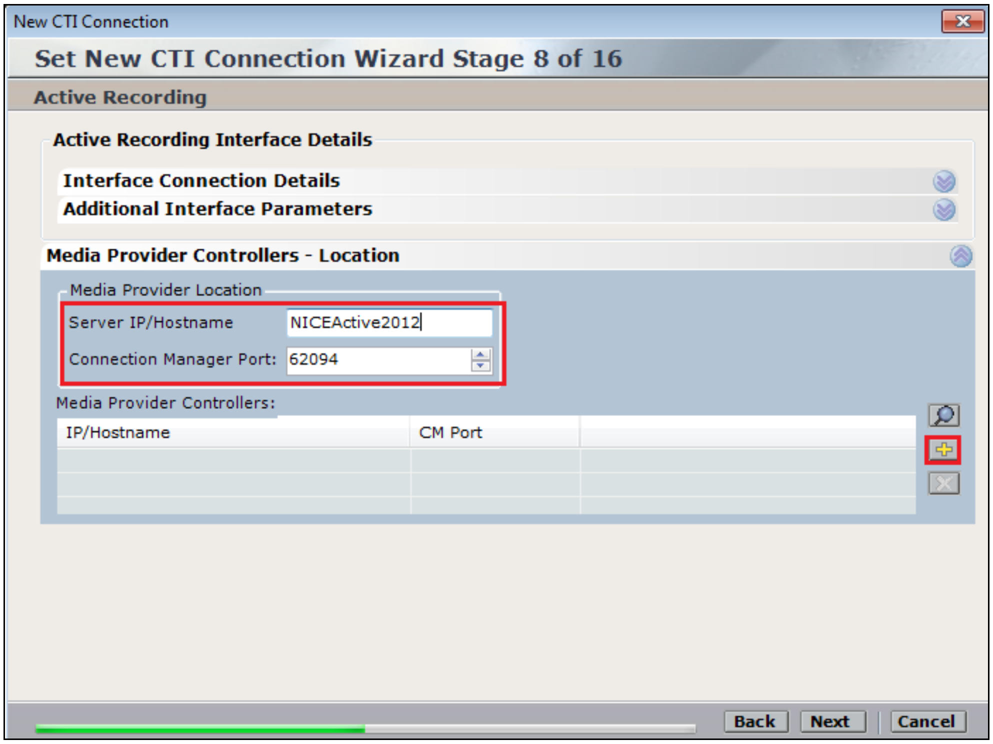
Value: #43

Click on **Media Provider Controllers – Location** to expand this field.


New CTI Connection
Set New CTI Connection Wizard Stage 8 of 16
Active Recording
Active Recording Interface Details
Interface Connection Details
Additional Interface Parameters
Mandatory fields are marked in bold
Description:
Media Provider Controllers - Location
Back
Next
Cancel

Parameter	Value
EnableNATManipulation	**no**
ObservationCode	
LinkFIFOSize	**500**
ResourceCleanupDelay	**0**

Enter the **Server IP/Hostname** of the Nice Active Server. Click on the **+** icon to add this entry. The **Connection Manager Port** should already be filled in with the value shown below.

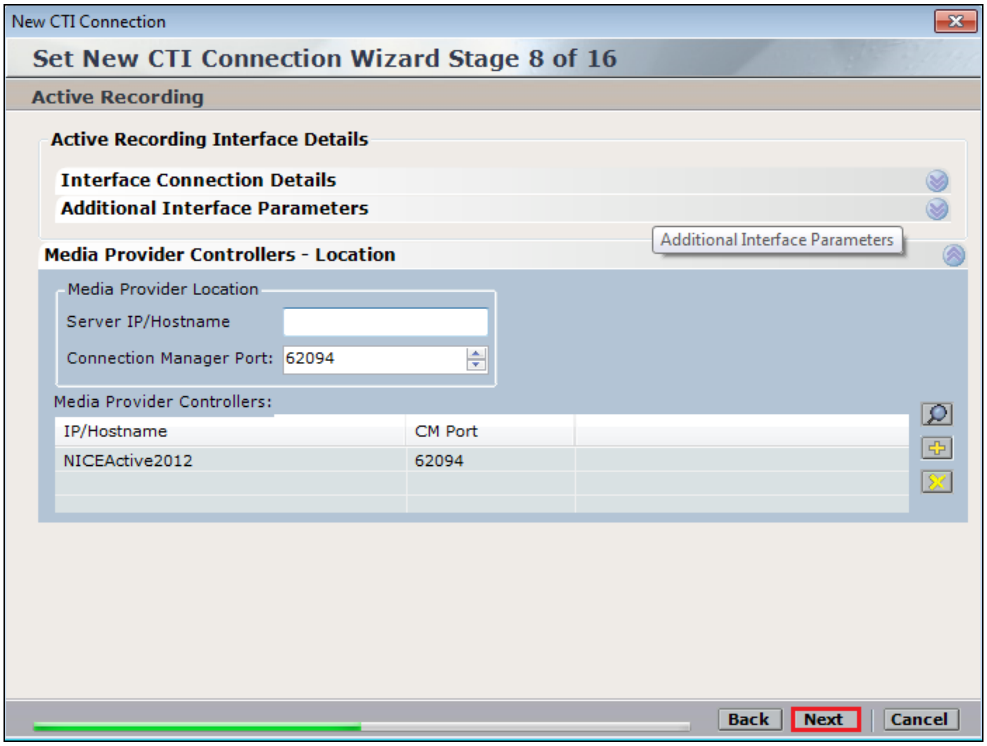

New CTI Connection
Set New CTI Connection Wizard Stage 8 of 16
Active Recording
Active Recording Interface Details
Interface Connection Details
Additional Interface Parameters
Media Provider Controllers - Location
Media Provider Location
Media Provider Controllers:
Back
Next
Cancel

Server IP/Hostname: NICEActive2012

Connection Manager Port: 62094

IP/Hostname	CM Port

Click on **Next** to continue.

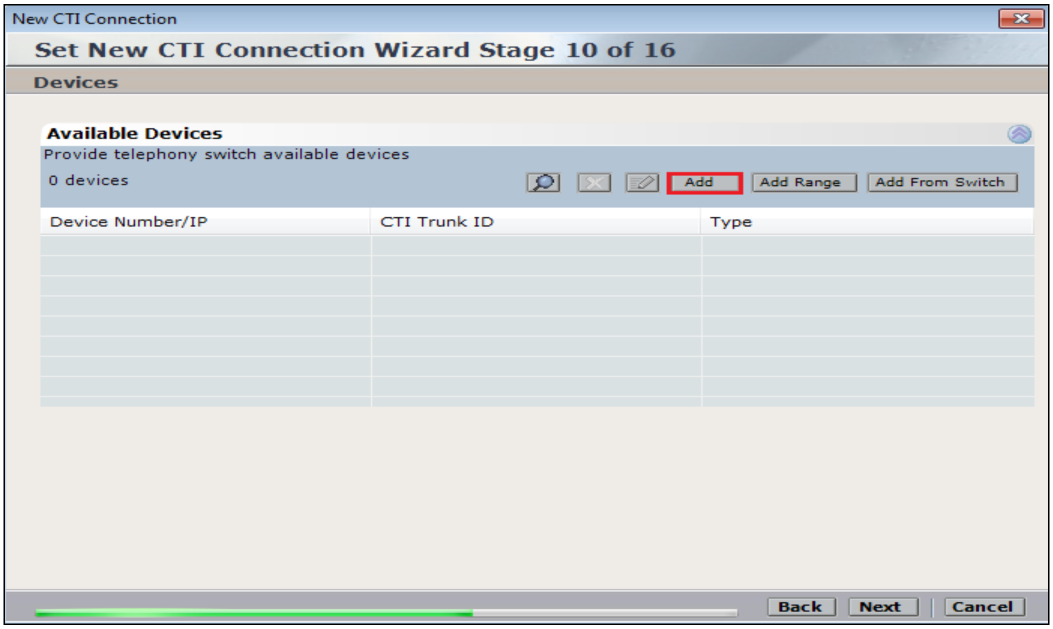

New CTI Connection
Set New CTI Connection Wizard Stage 8 of 16
Active Recording
Active Recording Interface Details
Interface Connection Details
Additional Interface Parameters
Additional Interface Parameters
Media Provider Controllers - Location
Media Provider Location
Media Provider Controllers:
Back
Next
Cancel

Server IP/Hostname:

Connection Manager Port: 62094

IP/Hostname	CM Port
NICEActive2012	62094

On the following screen, click on **Add,** to add the Communication Manager devices.


New CTI Connection

Set New CTI Connection Wizard Stage 10 of 16

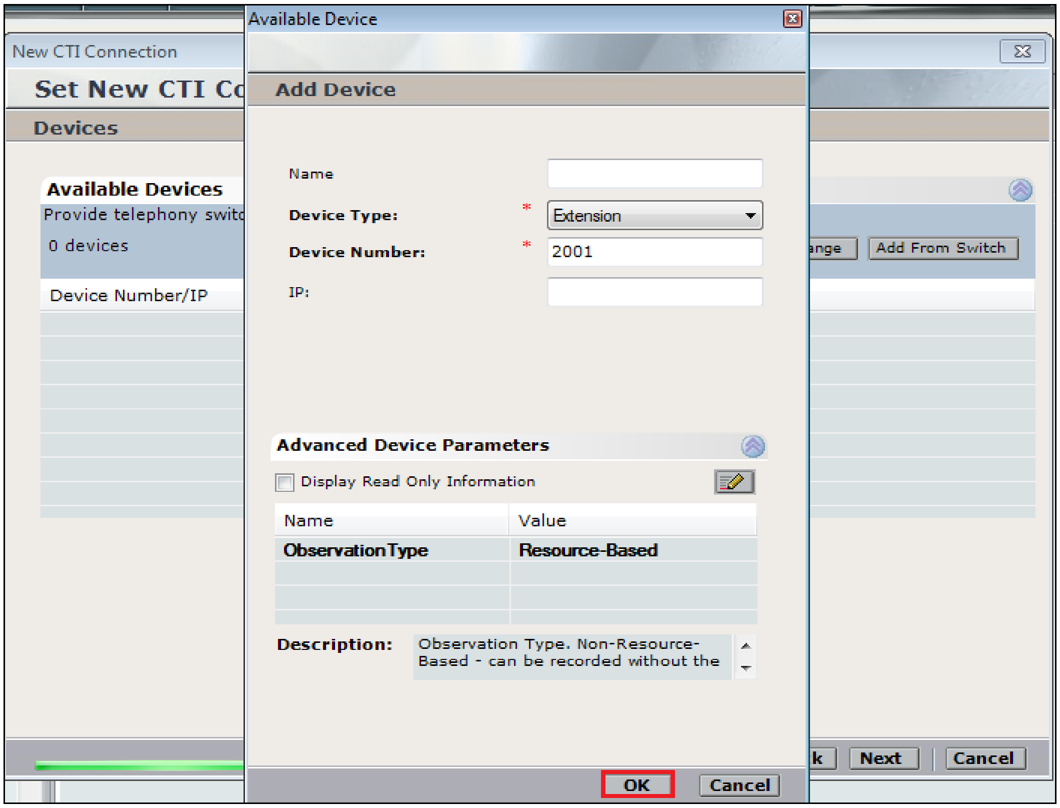
Devices

Available Devices

Provide telephony switch available devices

0 devices

The **Device Type** should be **Extension** and insert the correct extension number, this is the station number configured in **Section 5.6**. Expand **Advanced Device Parameters** and ensure that the **Value** for **Observation Type** is set to **Resourced-Based**. Click on **OK** to continue.


Available Device

Add Device

Name:

Device Type: * Extension

Device Number: * 2001

IP:

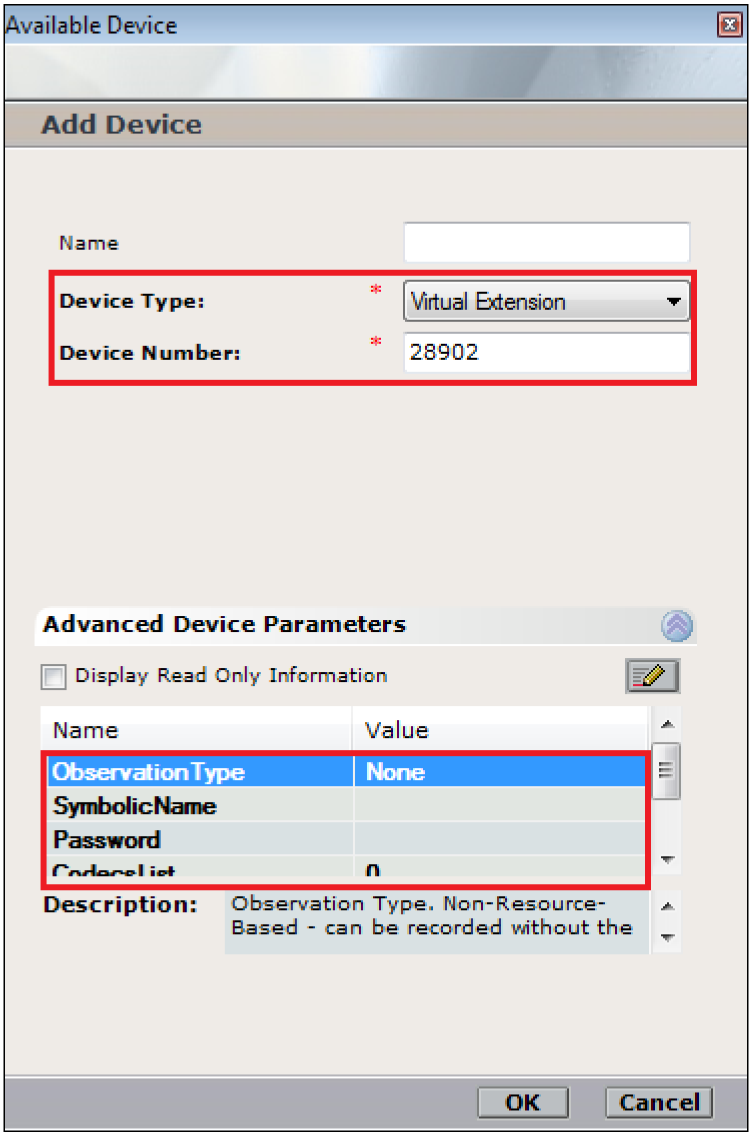
Advanced Device Parameters

□ Display Read Only Information

Name	Value
Observation Type	Resource-Based

Description: Observation Type. Non-Resource-Based - can be recorded without the

For Service Observe and Single Step Conference virtual extensions need to be added. These are the virtual extensions that were created in **Section 5.7**. Ensure that **Device Type** is set to **Virtual Extension** and add the correct extension for **Device Number**. Each of the **Parameters** highlighted at the bottom of the screen need to be configured and these are done by double-clicking on each parameter.



Available Device

Add Device

Name

Device Type: * Virtual Extension

Device Number: * 28902

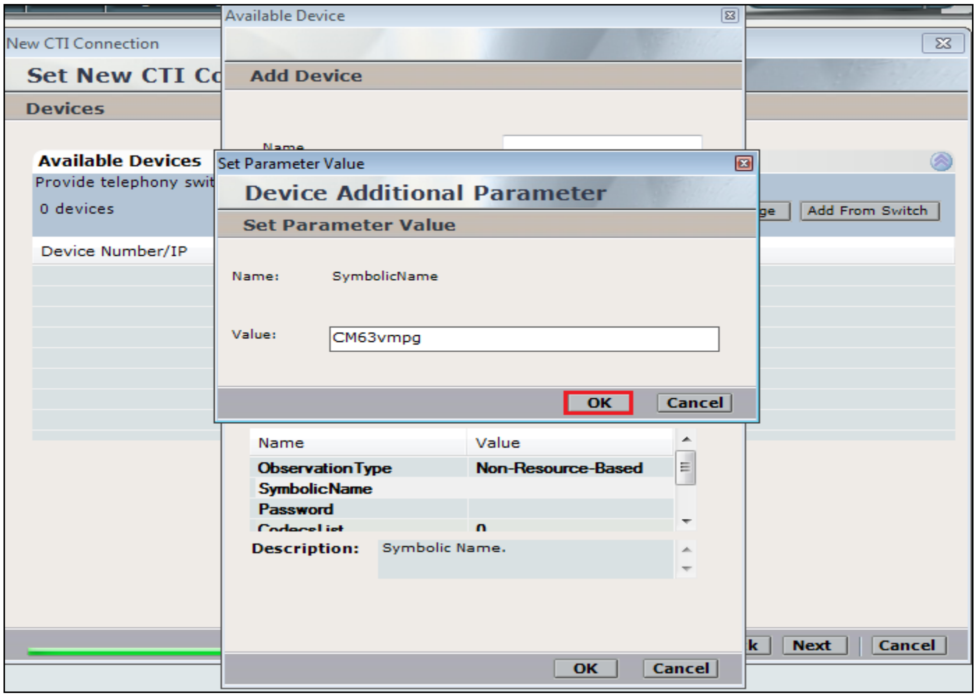
Advanced Device Parameters

□ Display Read Only Information

Name	Value
ObservationType	None
SymbolicName	
Password	
CodecsList	0

Description: Observation Type. Non-Resource-Based - can be recorded without the

Enter the correct **Value** for **SymbolicName**. Double-click on **SymbolicName** to set the value. This should be the same as the switch name entered in **Section 6.2**.



Set Parameter Value

Device Additional Parameter

Set Parameter Value

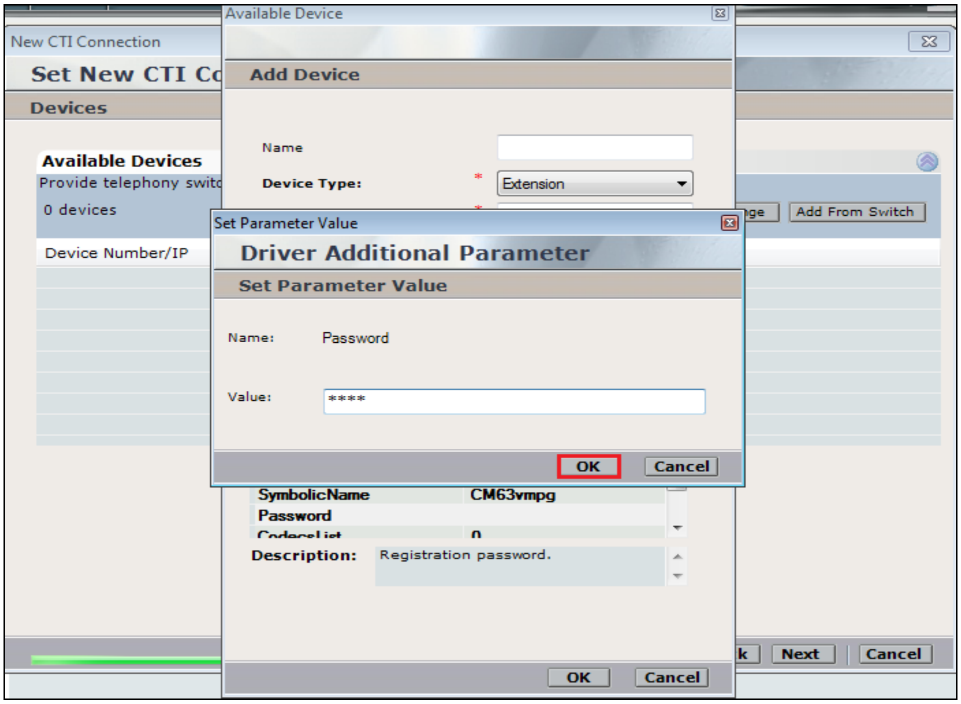
Name: SymbolicName

Value: CM63vmpg

Name	Value
ObservationType	Non-Resource-Based
SymbolicName	
Password	
CodecsList	0

Description: Symbolic Name.

Enter the correct **Password**. This is the station password which was entered during the creation of the station. A printout of an extension can be found in **Section 5.6** and **Section 5.7** of these Application Notes.



Name

Device Type: * Extension

Set Parameter Value

Driver Additional Parameter

Set Parameter Value

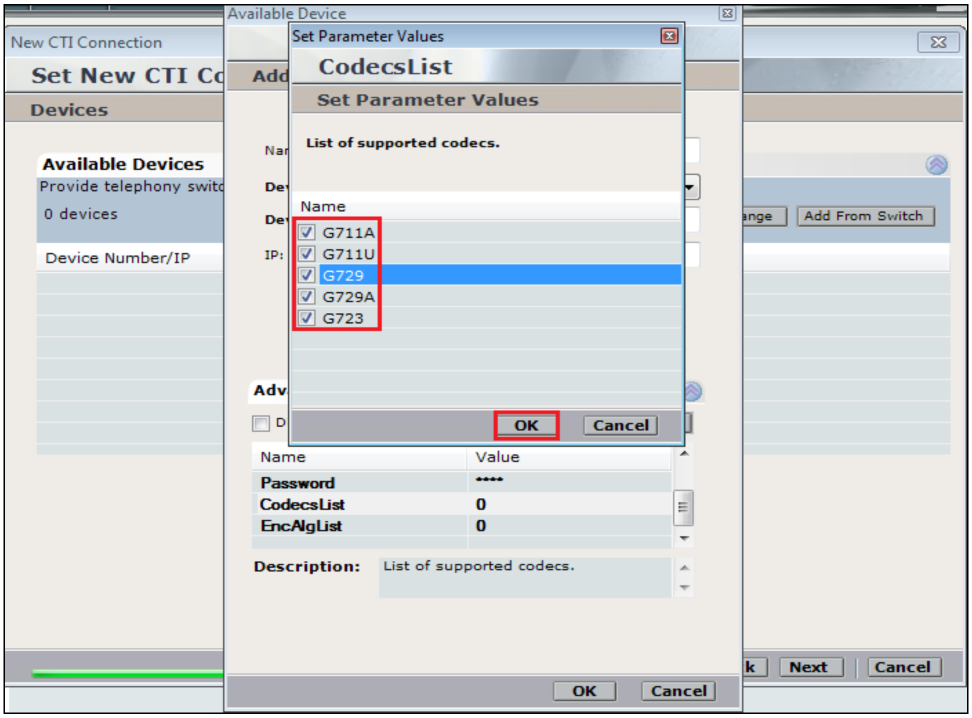
Name: Password

Value: ****

SymbolicName	CM63vmpg
Password	
CodecsList	0

Description: Registration password.

Double-click on **CodecsList** and ensure that all the values are ticked as shown below. Click on **OK** to continue.


Set Parameter Values

CodecsList

Set Parameter Values

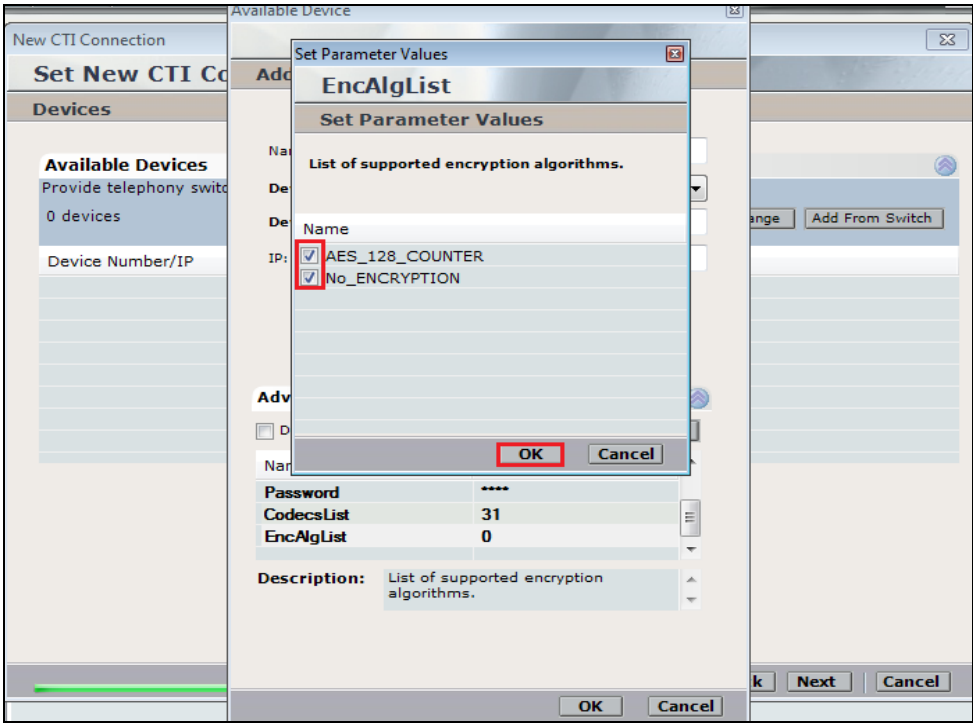
List of supported codecs.

Name
☑ G711A
☑ G711U
☑ G729
☑ G729A
☑ G723

Name	Value
Password	****
CodecsList	0
EncAlgList	0

Description: List of supported codecs.

Double-click on **EncAlgList** and ensure both options are ticked as shown below. Click on **OK** to continue.


Set Parameter Values

EncAlgList

Set Parameter Values

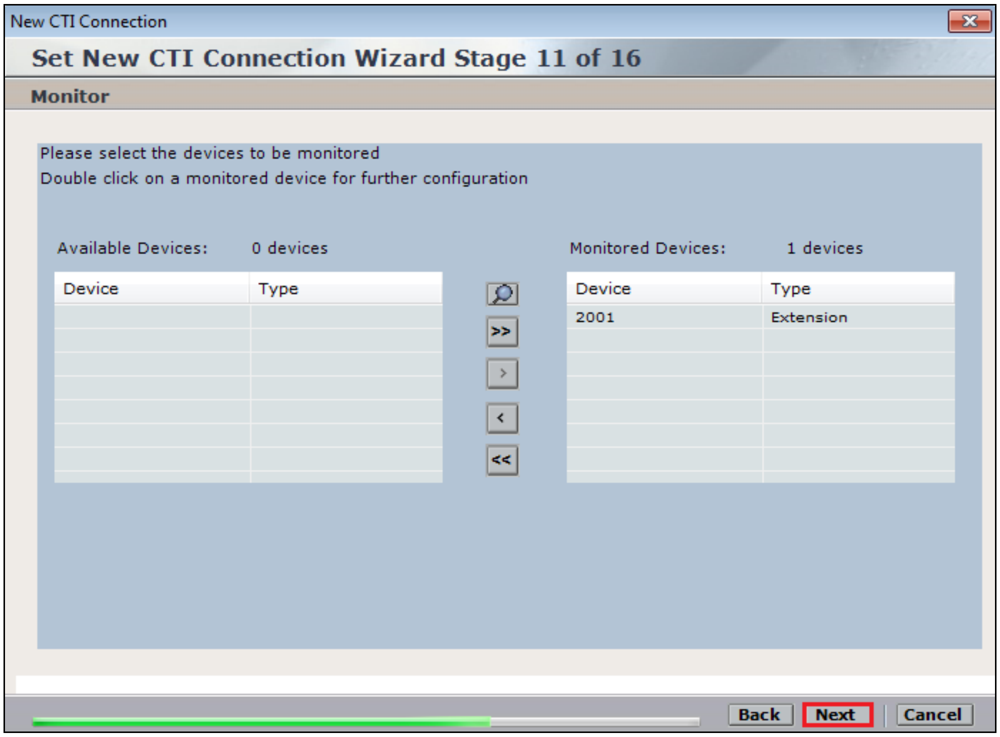
List of supported encryption algorithms.

Name
☑ AES_128_COUNTER
☑ No_ENCRYPTION

Name	Value
Password	****
CodecsList	31
EncAlgList	0

Description: List of supported encryption algorithms.

Under **Available Devices**, select the new extension and click on the >> icon as shown. Click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 11 of 16

Monitor

Please select the devices to be monitored
Double click on a monitored device for further configuration

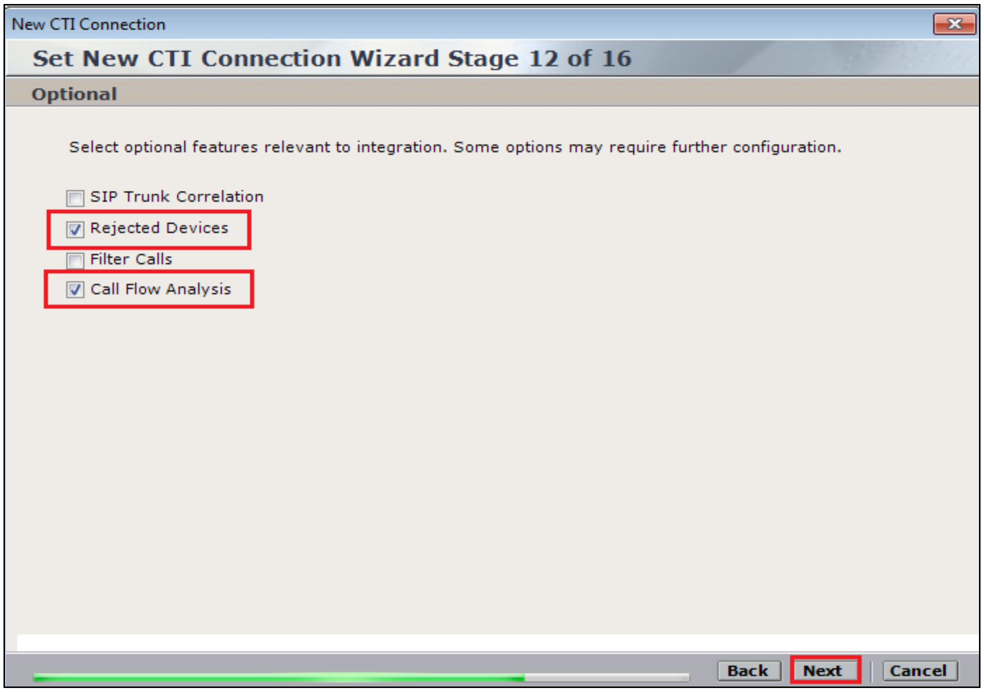
Available Devices: 0 devices

Device	Type

Monitored Devices: 1 devices

Device	Type
2001	Extension

This is optional, but for better analysis tick on **Call Flow Analysis**. For the connection to Proactive Contact **Rejected Devices** must also be ticked, then click on **Next** to continue.



New CTI Connection

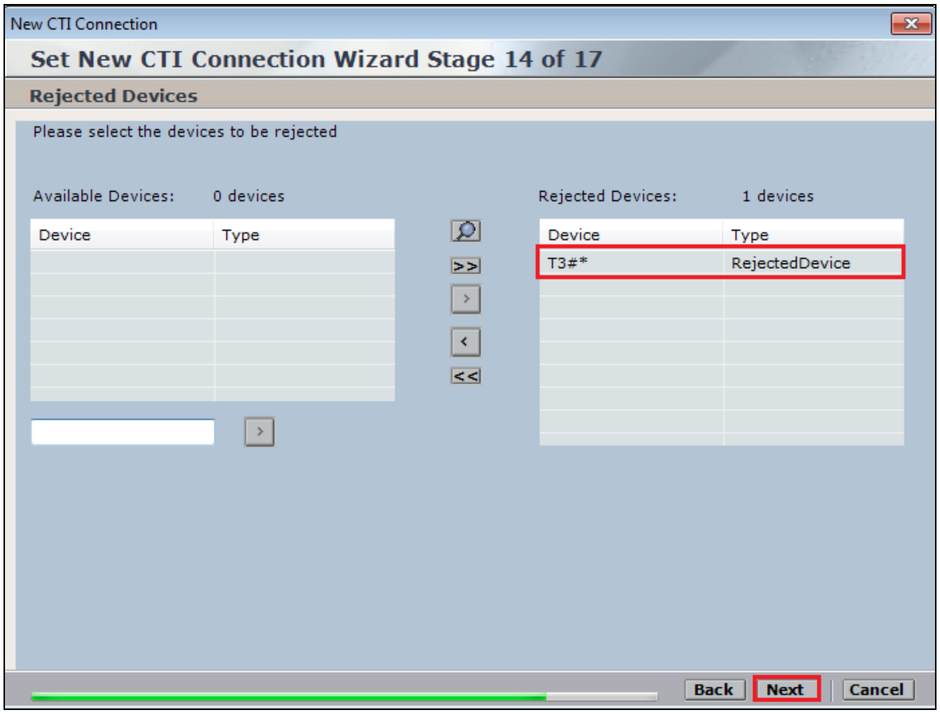
Set New CTI Connection Wizard Stage 12 of 16

Optional

Select optional features relevant to integration. Some options may require further configuration.

□ SIP Trunk Correlation
☑ Rejected Devices
□ Filter Calls
☑ Call Flow Analysis

Enter the trunk number of the trunk that connects the Proactive Contact to Communication Manager. In the example below this is 3 so **T3#*** (Trunk 3 all channels) is added and selected. Click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 14 of 17

Rejected Devices

Please select the devices to be rejected

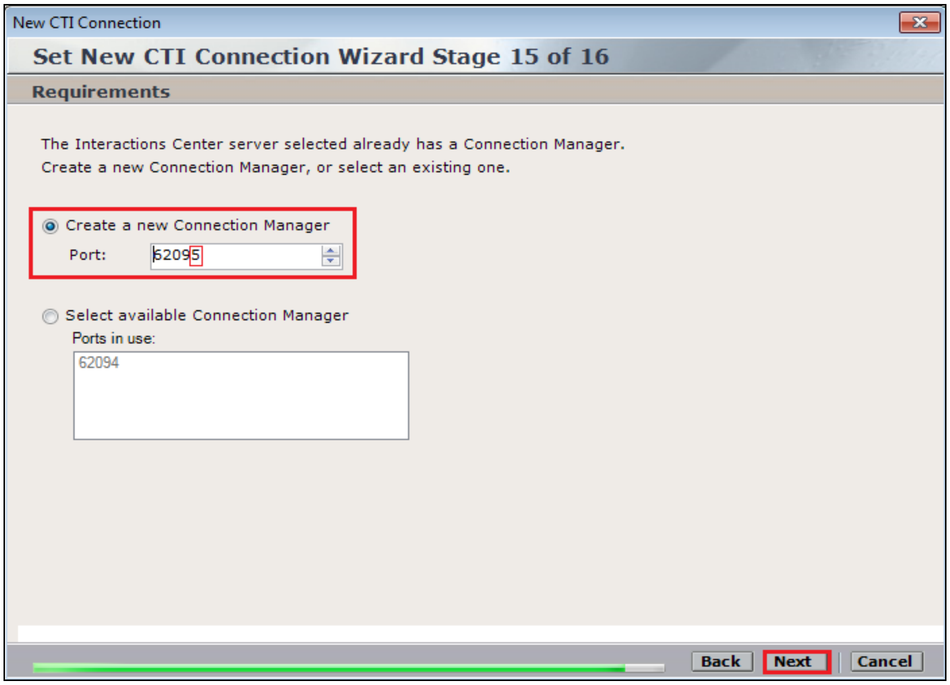
Available Devices: 0 devices

Device	Type

Rejected Devices: 1 devices

Device	Type
T3#*	RejectedDevice

Select a different **Port** number as shown below **62095** is chosen simply because **62094** was already in use.



New CTI Connection

Set New CTI Connection Wizard Stage 15 of 16

Requirements

The Interactions Center server selected already has a Connection Manager.
Create a new Connection Manager, or select an existing one.

● Create a new Connection Manager

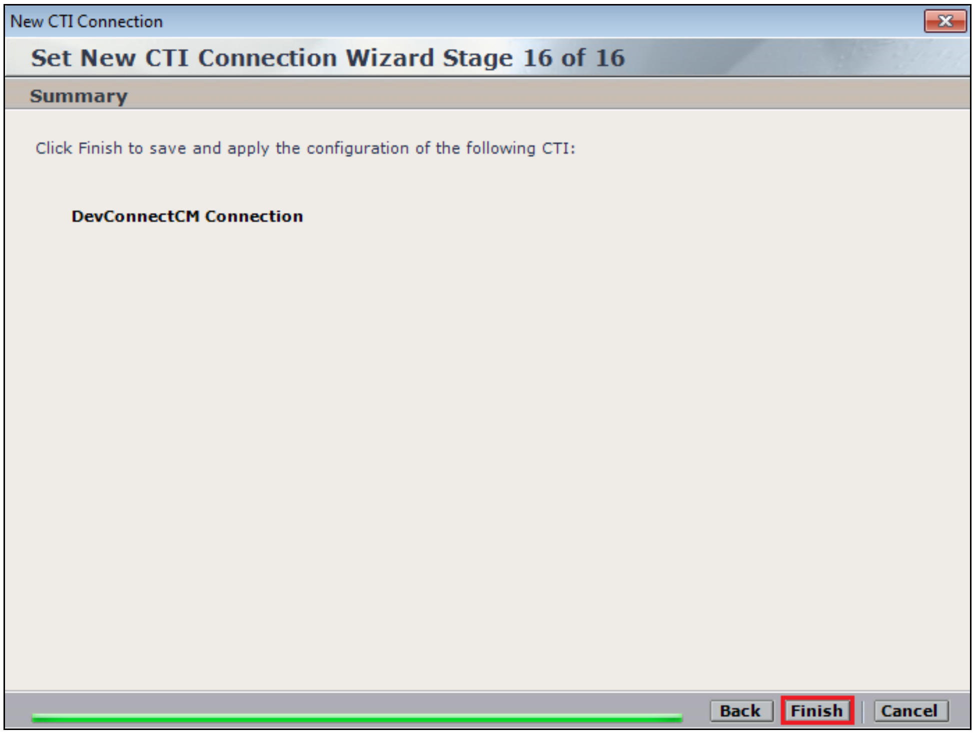
Port: 62095

○ Select available Connection Manager

Ports in use:

62094

Click on **Finish** to complete the **New CTI Wizard**.



New CTI Connection

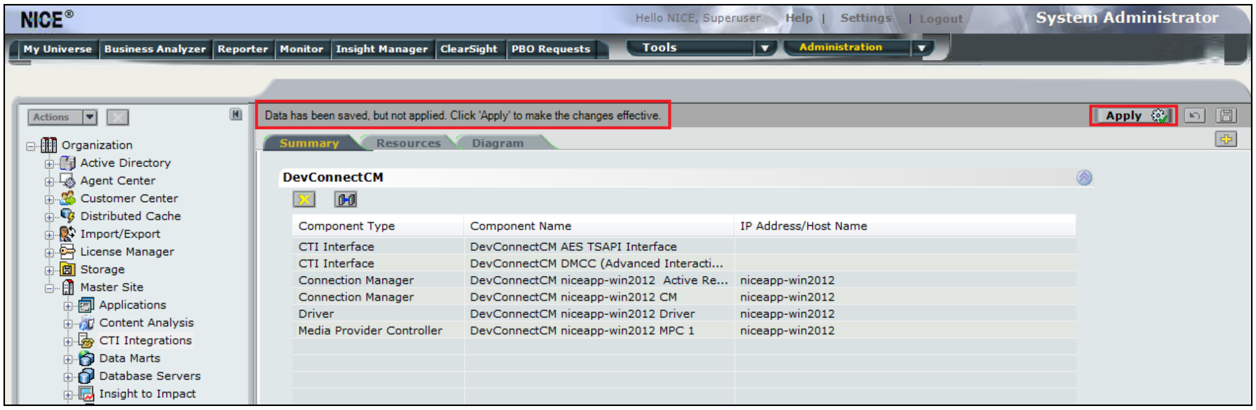
Set New CTI Connection Wizard Stage 16 of 16

Summary

Click Finish to save and apply the configuration of the following CTI:

DevConnectCM Connection

Click on **Apply** at the top right of the screen to save the new connection.

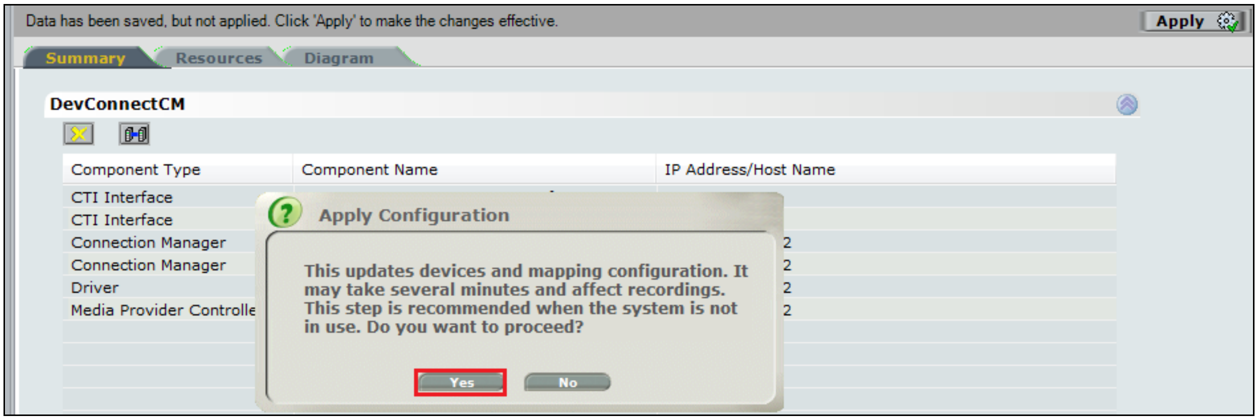


Data has been saved, but not applied. Click 'Apply' to make the changes effective.

DevConnectCM

Component Type	Component Name	IP Address/Host Name
CTI Interface	DevConnectCM AES TSAPI Interface	
CTI Interface	DevConnectCM DMCC (Advanced Interacti...	
Connection Manager	DevConnectCM niceapp-win2012 Active Re...	niceapp-win2012
Connection Manager	DevConnectCM niceapp-win2012 CM	niceapp-win2012
Driver	DevConnectCM niceapp-win2012 Driver	niceapp-win2012
Media Provider Controller	DevConnectCM niceapp-win2012 MPC 1	niceapp-win2012

Click on **Yes** to proceed.



Data has been saved, but not applied. Click 'Apply' to make the changes effective.

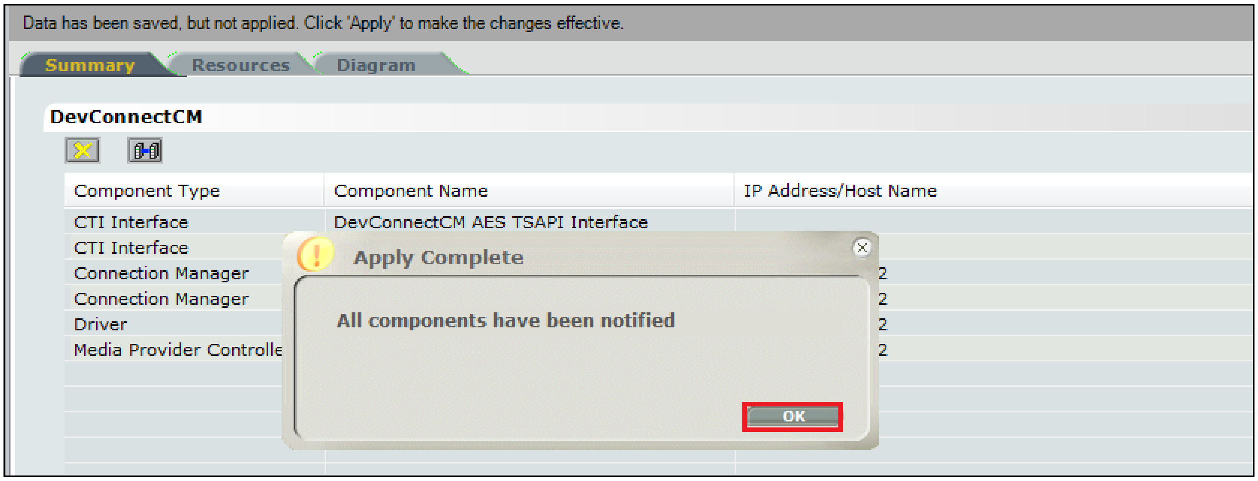
DevConnectCM

Component Type	Component Name	IP Address/Host Name
CTI Interface		
CTI Interface		
Connection Manager		2
Connection Manager		2
Driver		2
Media Provider Controlle		2

Apply Configuration

This updates devices and mapping configuration. It may take several minutes and affect recordings. This step is recommended when the system is not in use. Do you want to proceed?

The following shows that the save was successful. Click on **OK** to continue.



Data has been saved, but not applied. Click 'Apply' to make the changes effective.

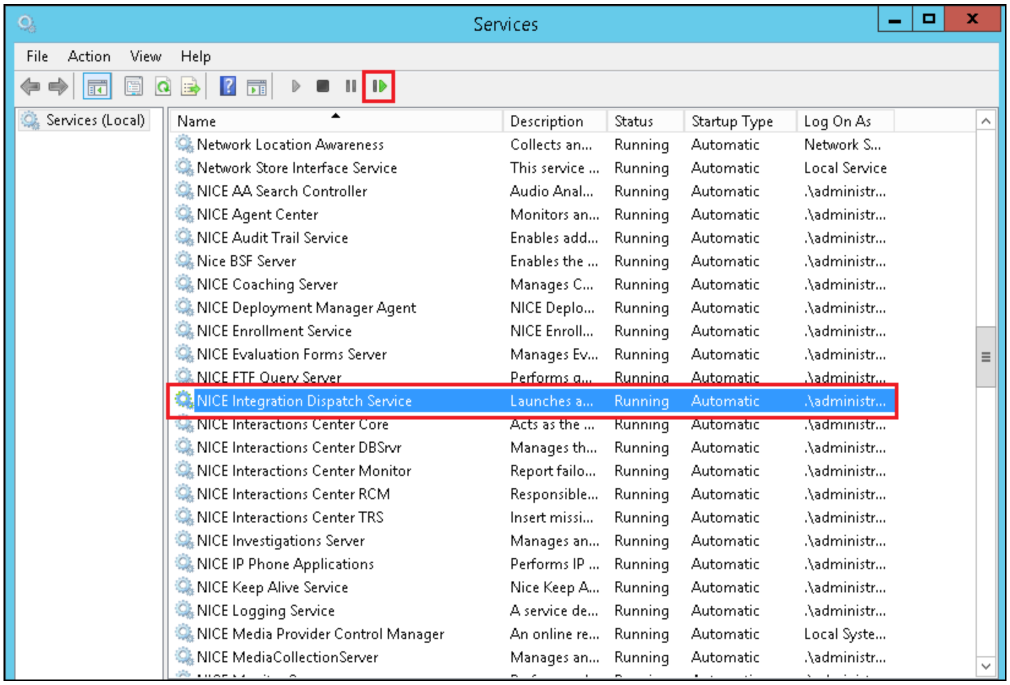
DevConnectCM

Component Type	Component Name	IP Address/Host Name
CTI Interface	DevConnectCM AES TSAPI Interface	
CTI Interface		
Connection Manager		2
Connection Manager		2
Driver		2
Media Provider Controlle		2

Apply Complete

All components have been notified

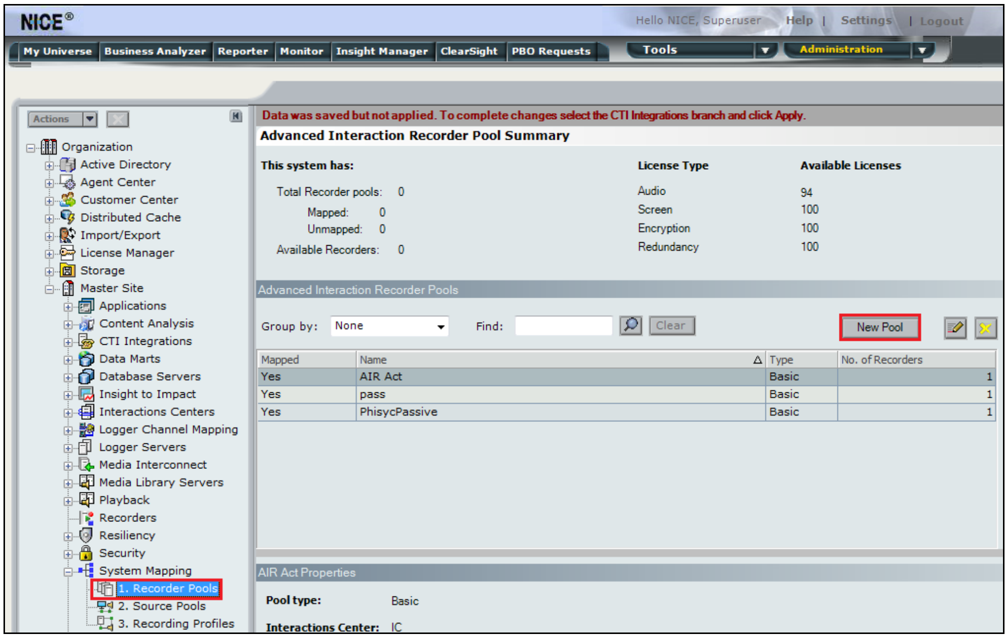
From the NICE Application Server, open **Services** and restart the **NICE Integration Dispatch Service**.



Name	Description	Status	Startup Type	Log On As
Network Location Awareness	Collects an...	Running	Automatic	Network S...
Network Store Interface Service	This service ...	Running	Automatic	Local Service
NICE AA Search Controller	Audio Anal...	Running	Automatic	.\administr...
NICE Agent Center	Monitors an...	Running	Automatic	.\administr...
NICE Audit Trail Service	Enables add...	Running	Automatic	.\administr...
Nice BSF Server	Enables the ...	Running	Automatic	.\administr...
NICE Coaching Server	Manages C...	Running	Automatic	.\administr...
NICE Deployment Manager Agent	NICE Deplo...	Running	Automatic	.\administr...
NICE Enrollment Service	NICE Enroll...	Running	Automatic	.\administr...
NICE Evaluation Forms Server	Manages Ev...	Running	Automatic	.\administr...
NICE FTF Query Server	Performs q...	Running	Automatic	.\administr...
NICE Integration Dispatch Service	Launches a...	Running	Automatic	.\administr...
NICE Interactions Center Core	Acts as the ...	Running	Automatic	.\administr...
NICE Interactions Center DBSrvr	Manages th...	Running	Automatic	.\administr...
NICE Interactions Center Monitor	Report failo...	Running	Automatic	.\administr...
NICE Interactions Center RCM	Responsible...	Running	Automatic	.\administr...
NICE Interactions Center TRS	Insert missi...	Running	Automatic	.\administr...
NICE Investigations Server	Manages an...	Running	Automatic	.\administr...
NICE IP Phone Applications	Performs IP ...	Running	Automatic	.\administr...
NICE Keep Alive Service	Nice Keep A...	Running	Automatic	.\administr...
NICE Logging Service	A service de...	Running	Automatic	.\administr...
NICE Media Provider Control Manager	An online re...	Running	Automatic	Local Syste...
NICE MediaCollectionServer	Manages an...	Running	Automatic	.\administr...

8.2. System Mapping

From the web browser navigate to **Master Site → System Mapping → Recorder Pools**. In the main window click on **New Pool**.



Data was saved but not applied. To complete changes select the CTI Integrations branch and click Apply.

Advanced Interaction Recorder Pool Summary

This system has:		License Type	Available Licenses
Total Recorder pools:	0	Audio	94
Mapped:	0	Screen	100
Unmapped:	0	Encryption	100
Available Recorders:	0	Redundancy	100

Advanced Interaction Recorder Pools

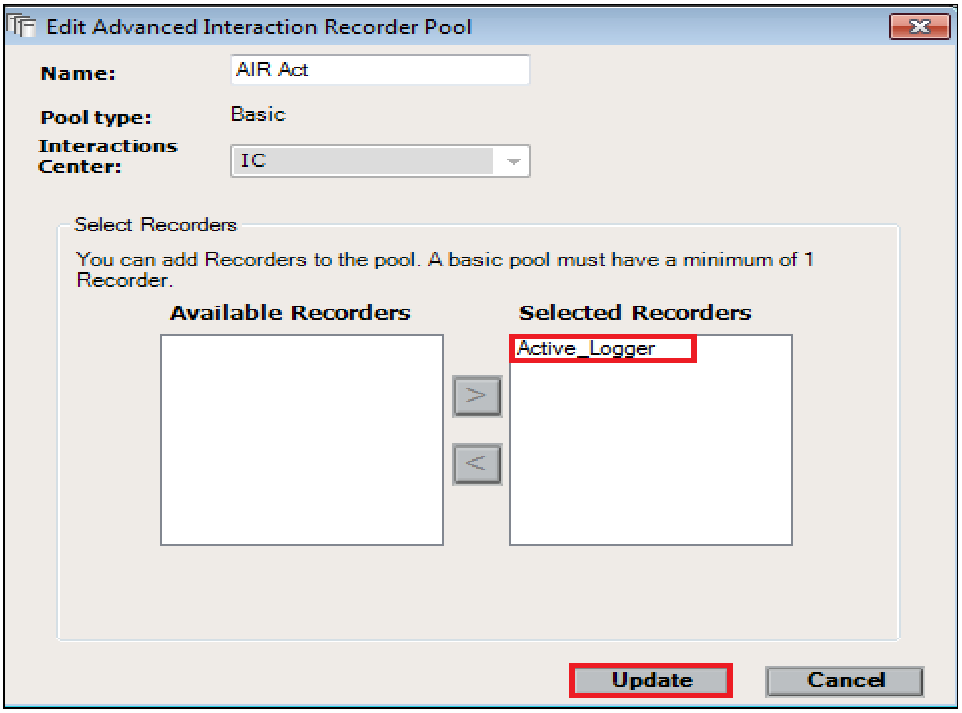
Mapped	Name	Type	No. of Recorders
Yes	AIR Act	Basic	1
Yes	pass	Basic	1
Yes	PhisycPassive	Basic	1

AIR Act Properties

Pool type: Basic

Interactions Center: IC

Enter a suitable **Name** for the **Recorder Pool** and select the **Active_Logger** from the list of **Available Recorders** and click on **Update** to continue.



Name: AIR Act

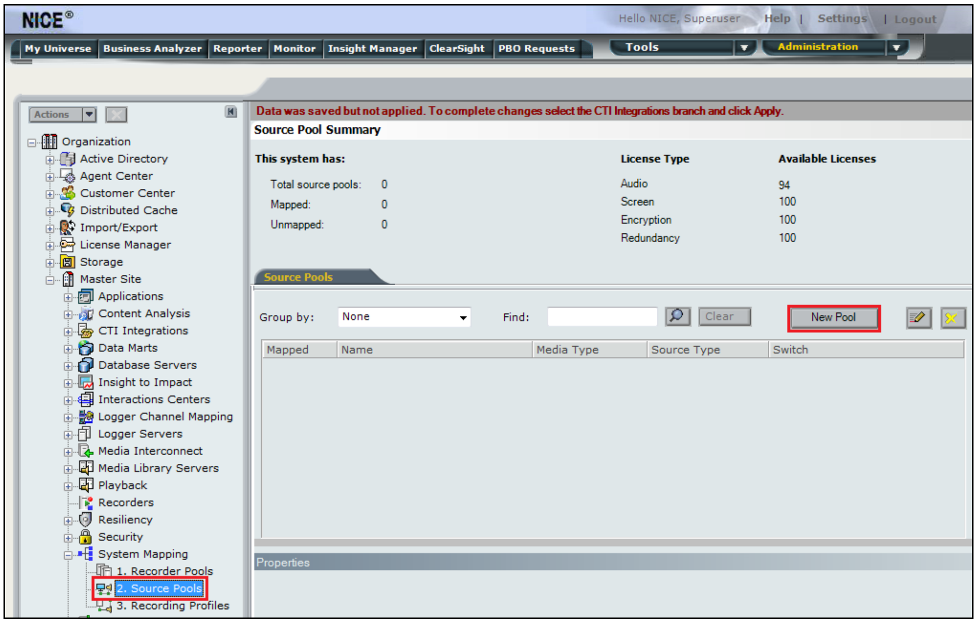
Pool type: Basic

Interactions Center: IC

You can add Recorders to the pool. A basic pool must have a minimum of 1 Recorder.

Selected Recorders: Active_Logger

From the left navigation window select **Source Pools** and from the main window click on **New Pool**.



Data was saved but not applied. To complete changes select the CTI Integrations branch and click Apply.

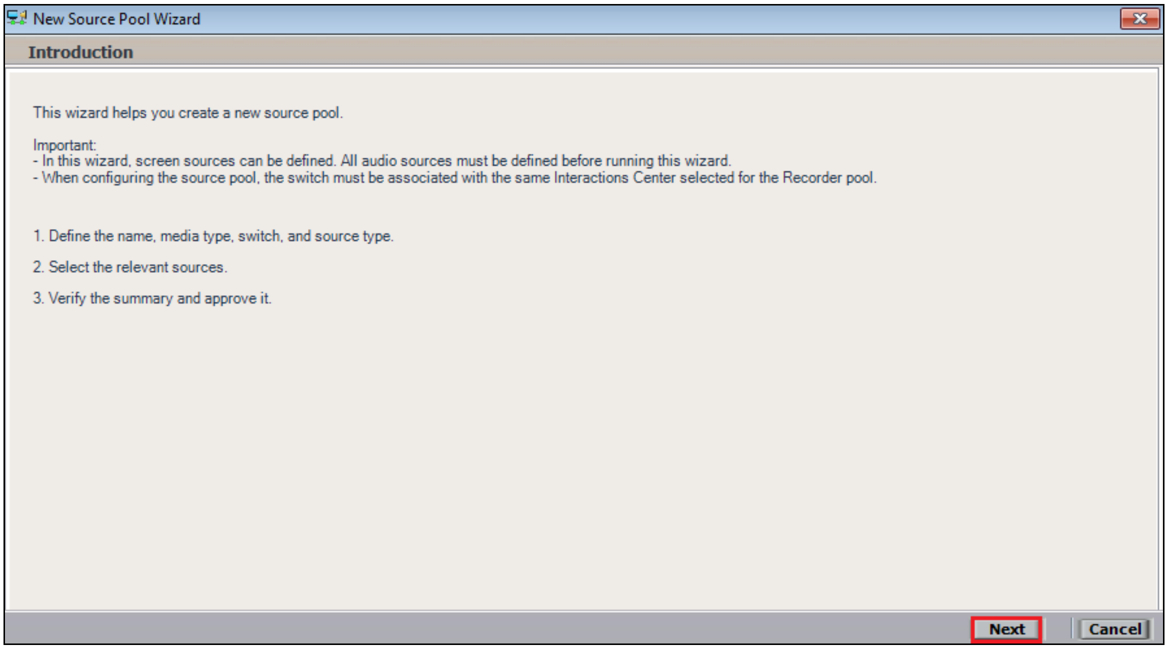
Source Pool Summary

This system has:

		License Type	Available Licenses
Total source pools:	0	Audio	94
Mapped:	0	Screen	100
Unmapped:	0	Encryption	100
		Redundancy	100

Mapped	Name	Media Type	Source Type	Switch

Click on **Next** to continue to add a new **Source Pool**.



This wizard helps you create a new source pool.

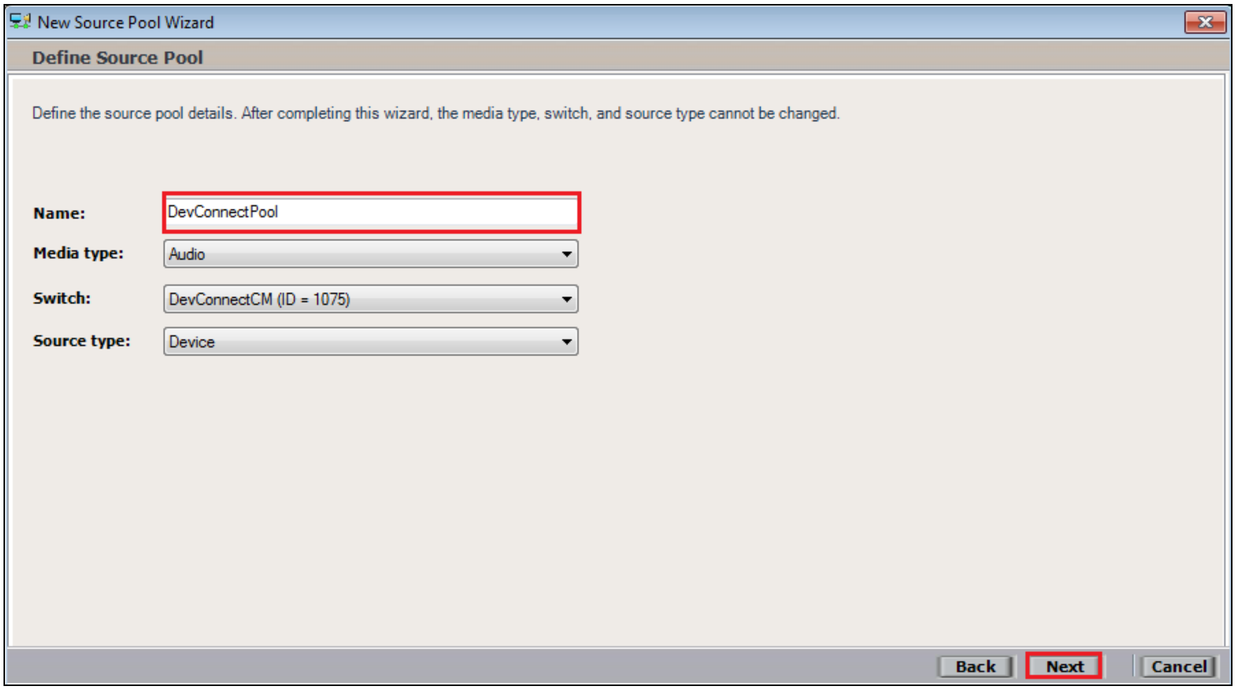
Important:
- In this wizard, screen sources can be defined. All audio sources must be defined before running this wizard.
- When configuring the source pool, the switch must be associated with the same Interactions Center selected for the Recorder pool.

1. Define the name, media type, switch, and source type.

2. Select the relevant sources.

3. Verify the summary and approve it.

Enter a suitable **Name**, remaining values were left as default. Click on **Next** to continue.



New Source Pool Wizard

Define Source Pool

Define the source pool details. After completing this wizard, the media type, switch, and source type cannot be changed.

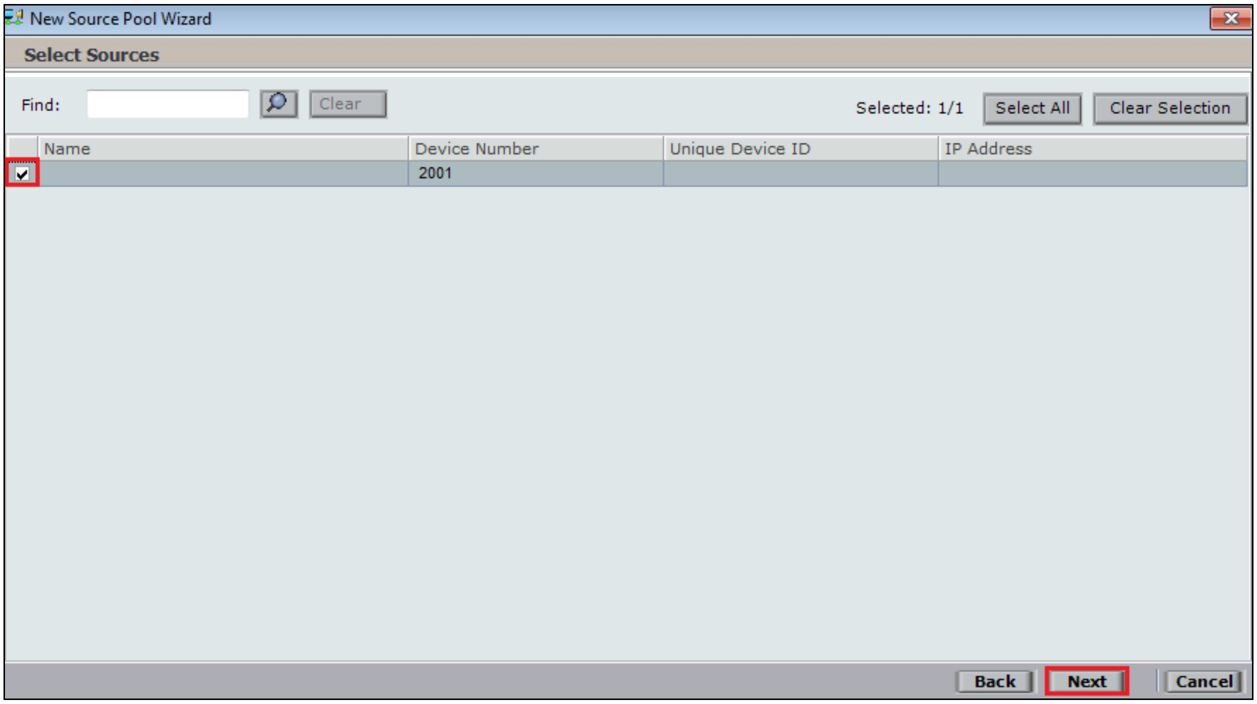
Name: DevConnectPool

Media type: Audio

Switch: DevConnectCM (ID = 1075)

Source type: Device

Select the extensions that were created in **Section 8.1**, note only one extension number is shown in the example below but this is not typical. Click on **Next** to continue.



New Source Pool Wizard

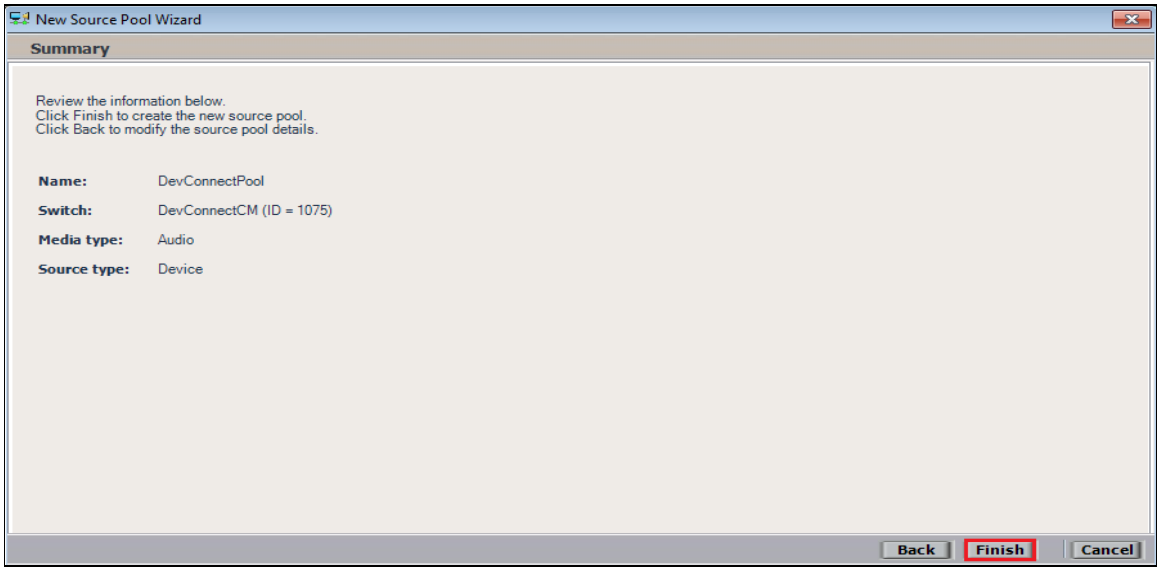
Select Sources

Find:

Selected: 1/1

	Name	Device Number	Unique Device ID	IP Address
☑		2001		

Click on **Finish** to complete the **New Source Pool Wizard**.


New Source Pool Wizard

Summary

Review the information below.
Click Finish to create the new source pool.
Click Back to modify the source pool details.

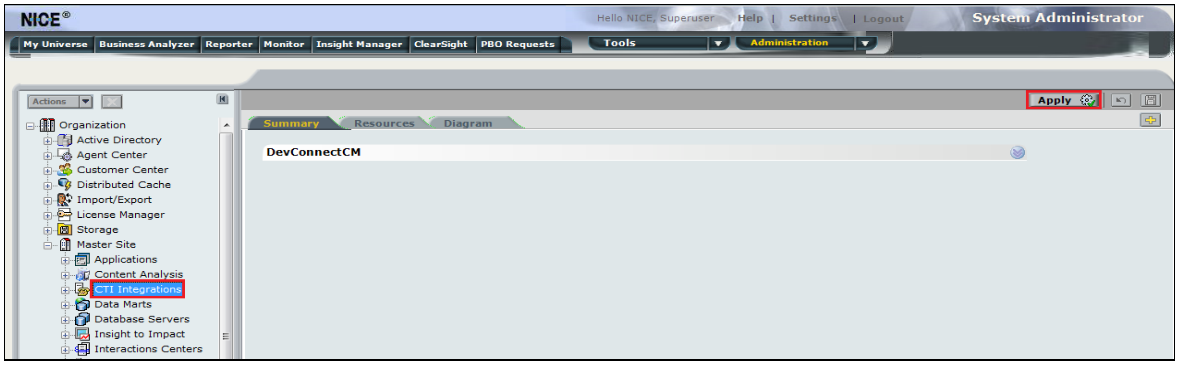
Name: DevConnectPool

Switch: DevConnectCM (ID = 1075)

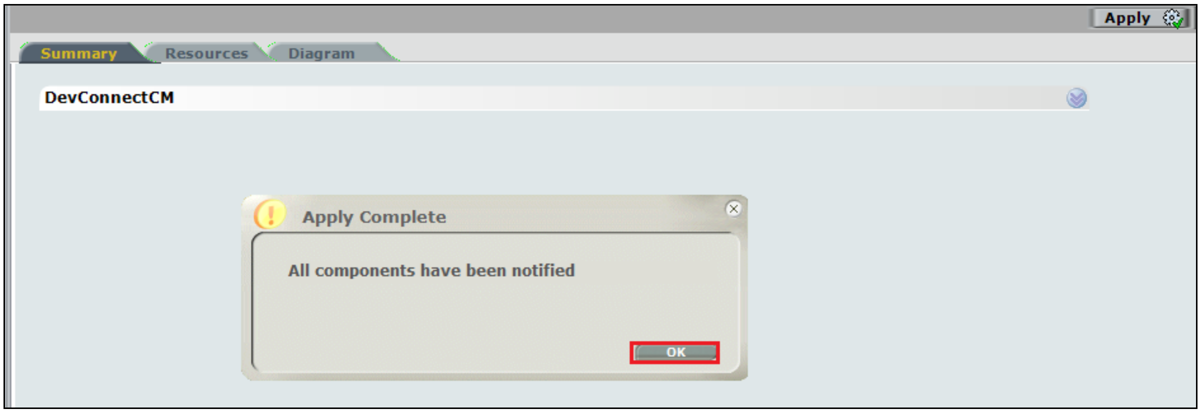
Media type: Audio

Source type: Device

To implement these new changes, navigate to **Master Site → CTI Integrations** in the left window and in the main window click on **Apply** at the top right of the window.



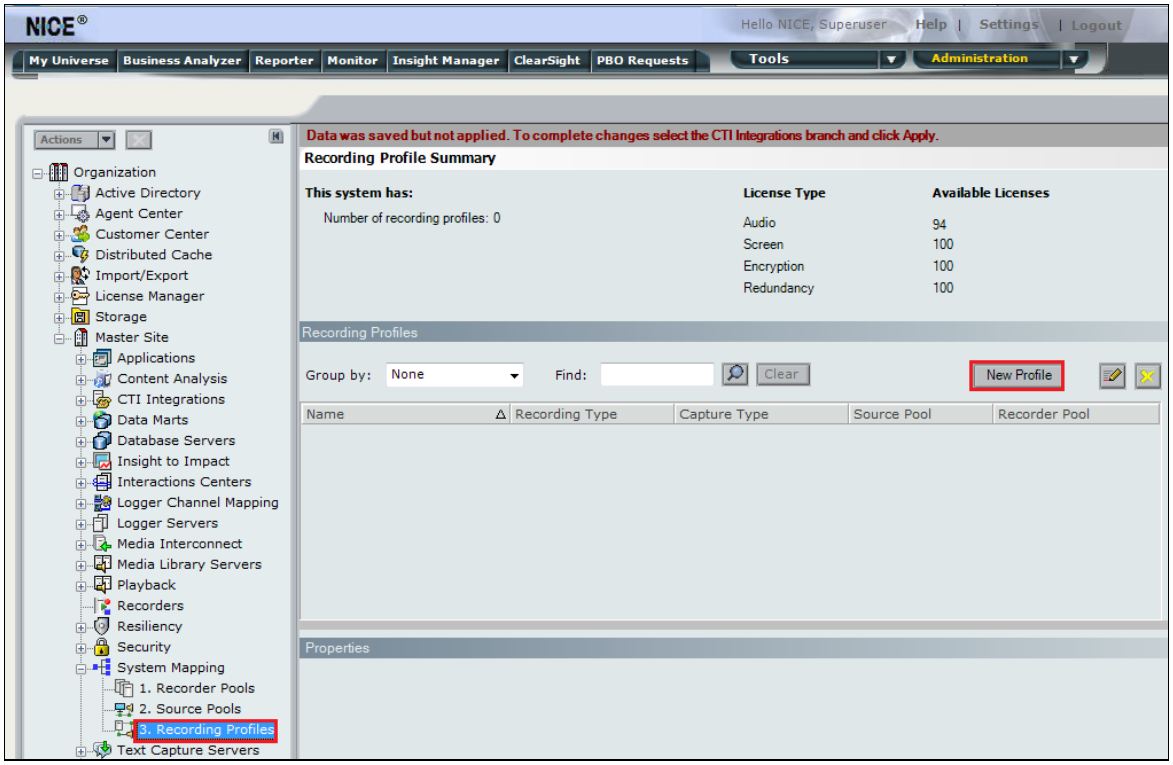
The following screen shows the changes were saved correctly. Click on **OK** to continue.



Apply Complete

All components have been notified

From the left window navigate to **Master Site → System Mapping → Recording Profiles** and in the main window click on **New Profile**.



Data was saved but not applied. To complete changes select the CTI Integrations branch and click Apply.

Recording Profile Summary

This system has:

Number of recording profiles: 0

License Type	**Available Licenses**
Audio	94
Screen	100
Encryption	100
Redundancy	100

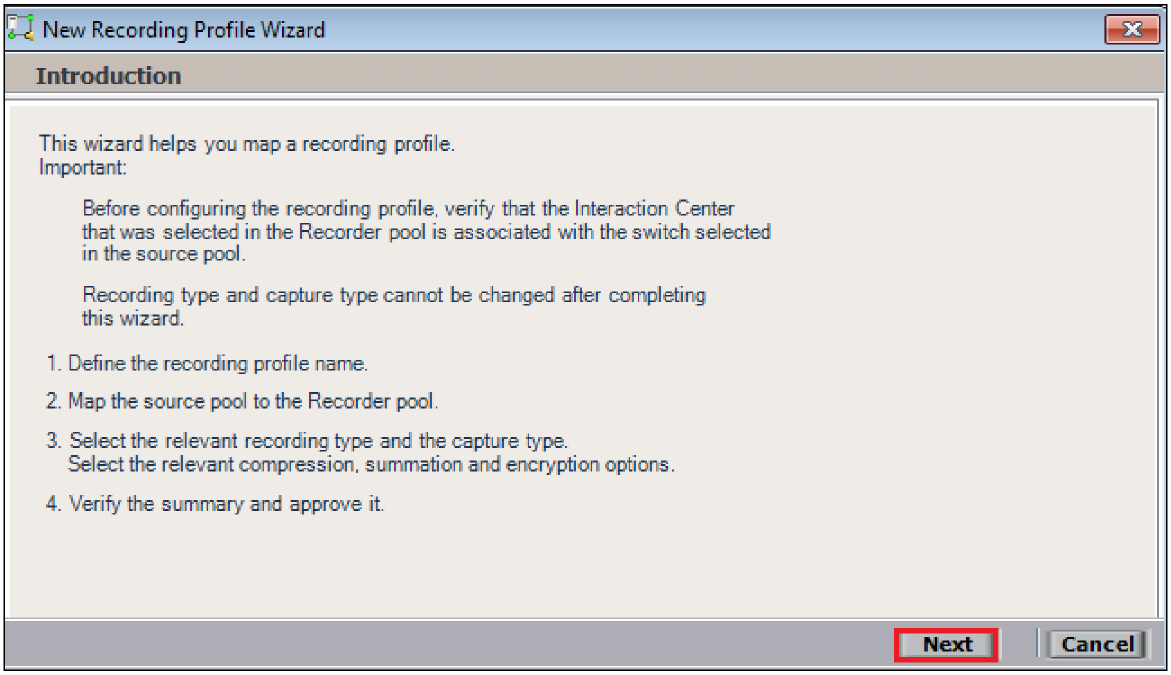
Recording Profiles

Group by: None   Find:

Name	Recording Type	Capture Type	Source Pool	Recorder Pool

Properties

Click on **Next** to continue with the **New Recording Profile Wizard**.



Introduction

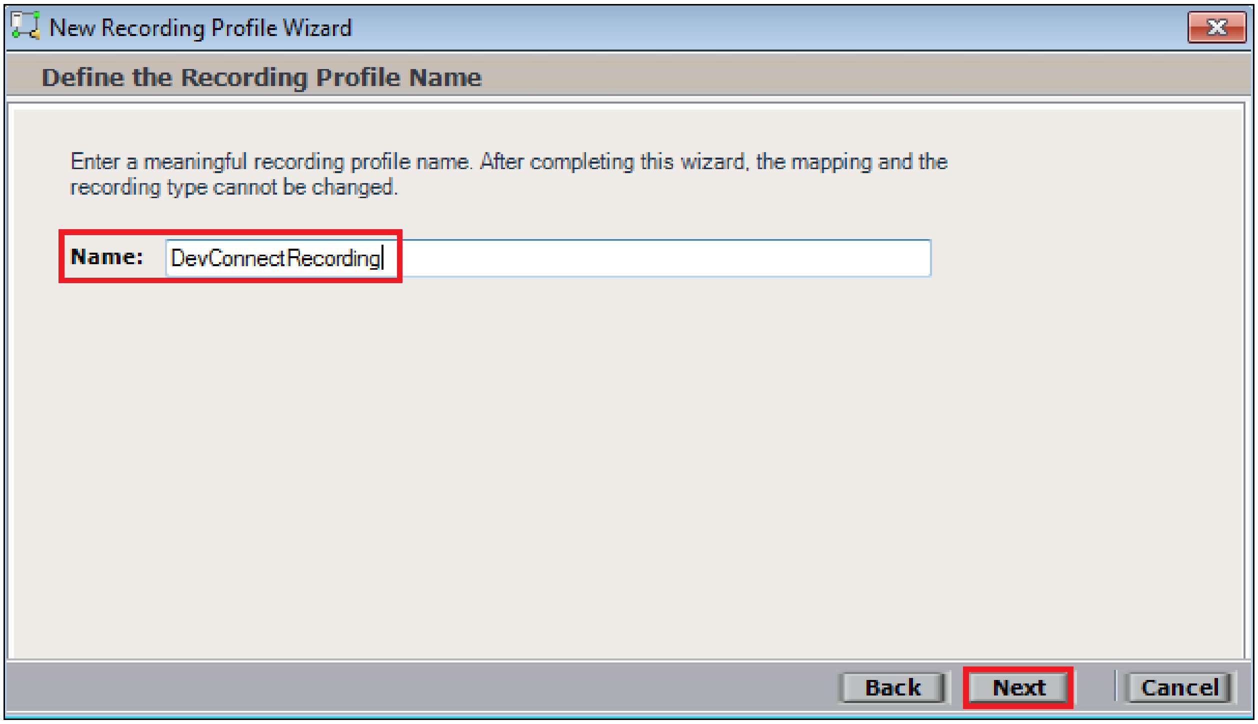
This wizard helps you map a recording profile.
Important:

Before configuring the recording profile, verify that the Interaction Center that was selected in the Recorder pool is associated with the switch selected in the source pool.

Recording type and capture type cannot be changed after completing this wizard.

1. Define the recording profile name.
2. Map the source pool to the Recorder pool.
3. Select the relevant recording type and the capture type.
   Select the relevant compression, summation and encryption options.
4. Verify the summary and approve it.

Enter a suitable **Name** for the Recording profile.



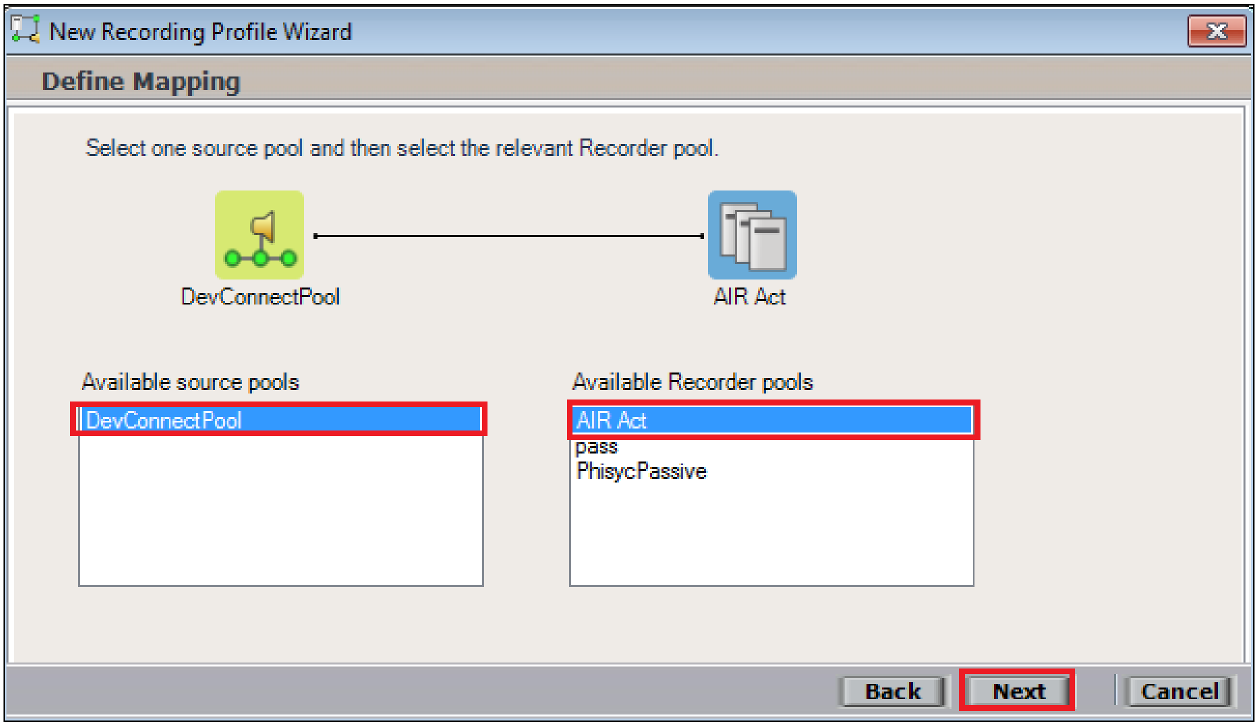
New Recording Profile Wizard

Define the Recording Profile Name

Enter a meaningful recording profile name. After completing this wizard, the mapping and the recording type cannot be changed.

Name: DevConnectRecording

Select the correct **source pool** and **Recorder pool**, then click **Next** to continue.



New Recording Profile Wizard

Define Mapping

Select one source pool and then select the relevant Recorder pool.

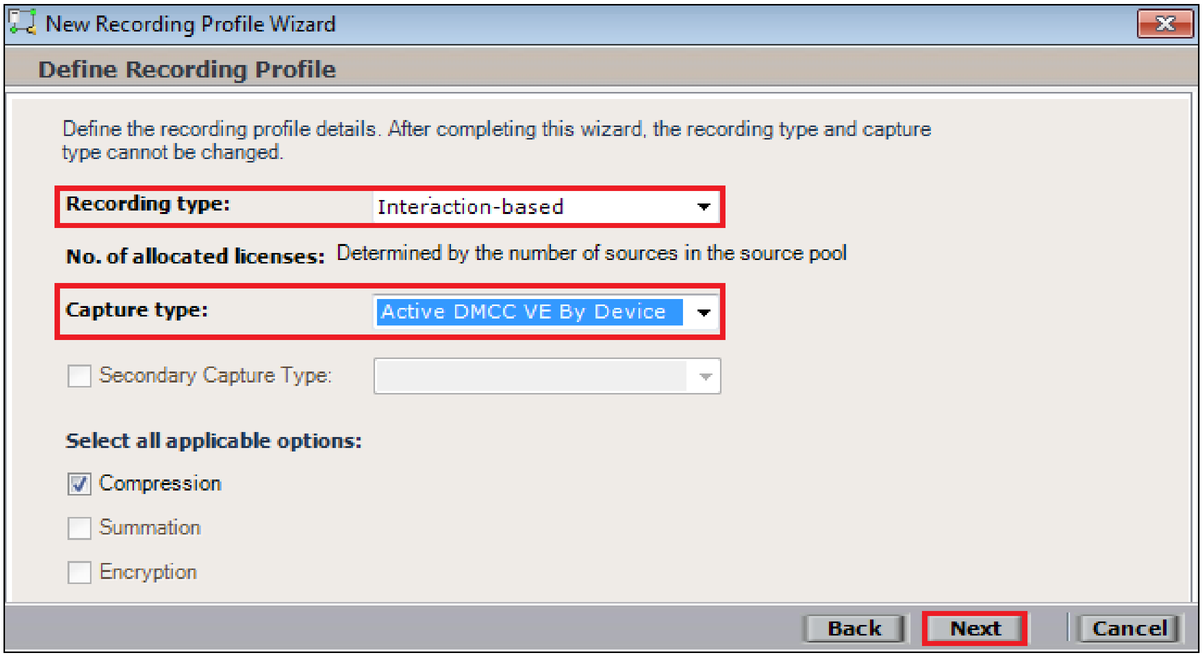
Available source pools

- DevConnectPool

Available Recorder pools

- AIR Act
- pass
- PhisycPassive

For recording with Proactive Contact, select **Interaction-based** as the **Recording type**. For Service Observation the **Capture type** used is **Active DMCC VE By Device**, selected this from the drop-down box. Compression is selected as default and can be left like this. Click on **Next** to continue.



Define Recording Profile

Define the recording profile details. After completing this wizard, the recording type and capture type cannot be changed.

Recording type: Interaction-based

No. of allocated licenses: Determined by the number of sources in the source pool

Capture type: Active DMCC VE By Device

☐ Secondary Capture Type:

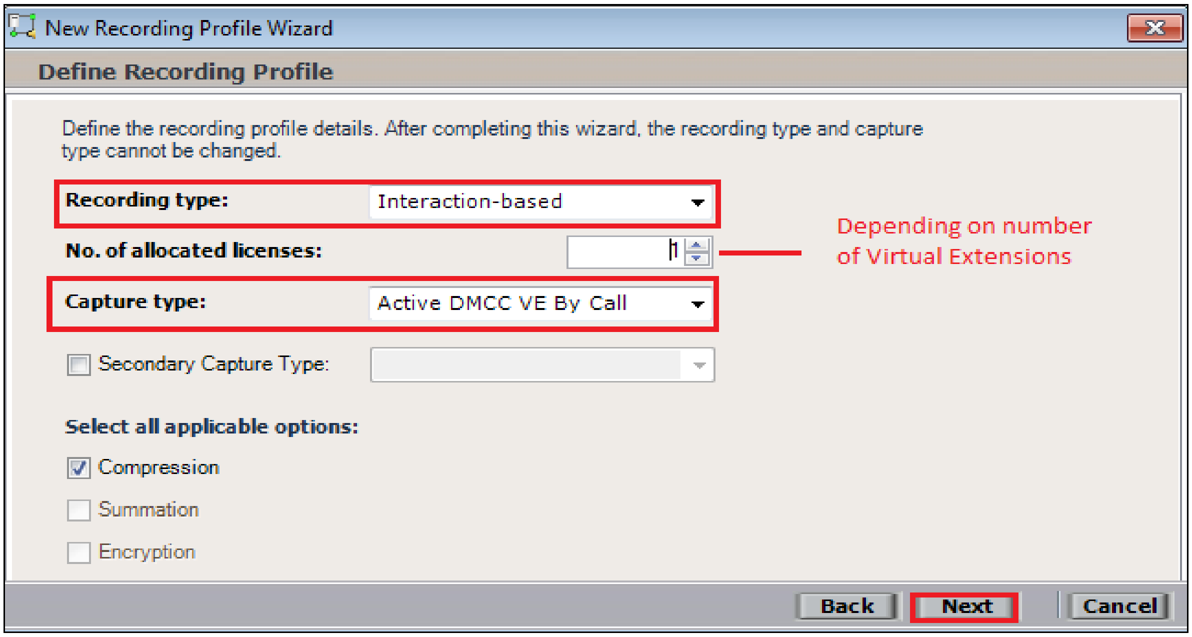
Select all applicable options:

☑ Compression

☐ Summation

☐ Encryption

Note: The only difference in the setup for Single Step Conference is with both the choice of **Recording type** which is set to **Interaction-based** and **Capture type** which will be **Active DMCC VE By Call** as shown below. The **No. of allocated licenses** is directly correlated to the number of virtual extensions that are configured for the system as per **Section 5.8**.



Define Recording Profile

Define the recording profile details. After completing this wizard, the recording type and capture type cannot be changed.

Recording type: Interaction-based

No. of allocated licenses: 1

Depending on number of Virtual Extensions

Capture type: Active DMCC VE By Call

☐ Secondary Capture Type:

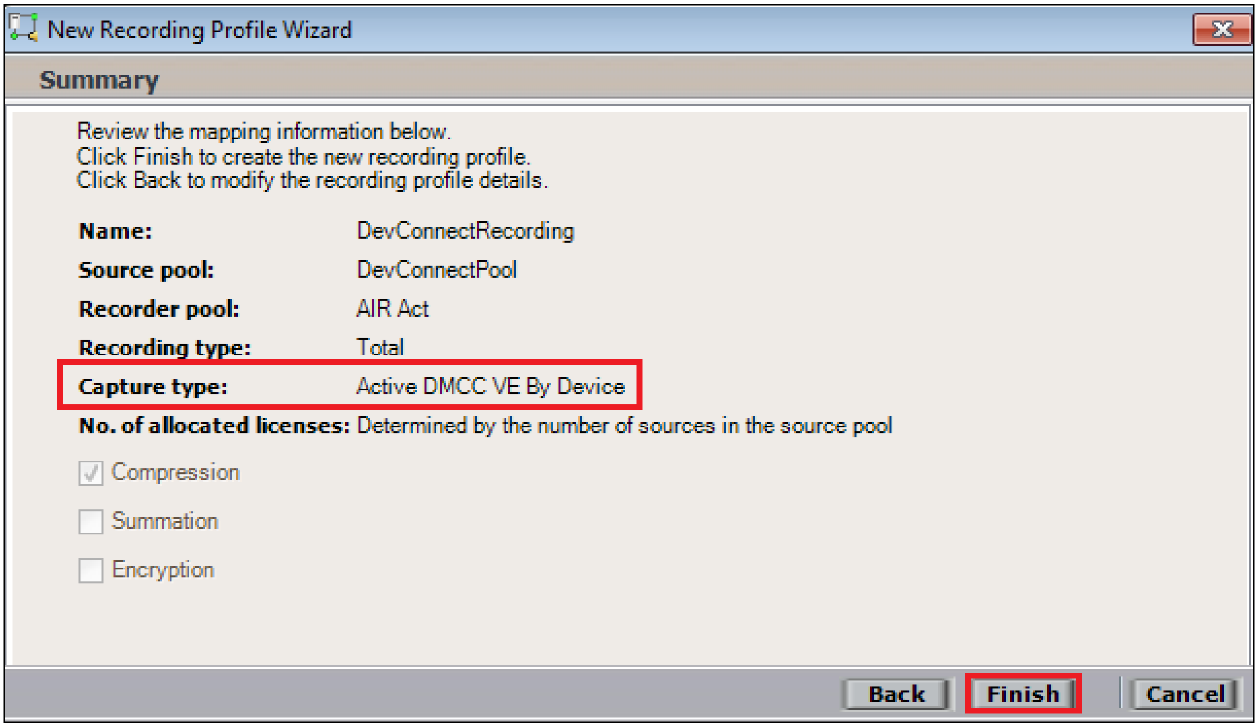
Select all applicable options:

☑ Compression

☐ Summation

☐ Encryption

Click on **Finish** to complete the **New Recording Profile Wizard**.



New Recording Profile Wizard

Summary

Review the mapping information below.
Click Finish to create the new recording profile.
Click Back to modify the recording profile details.

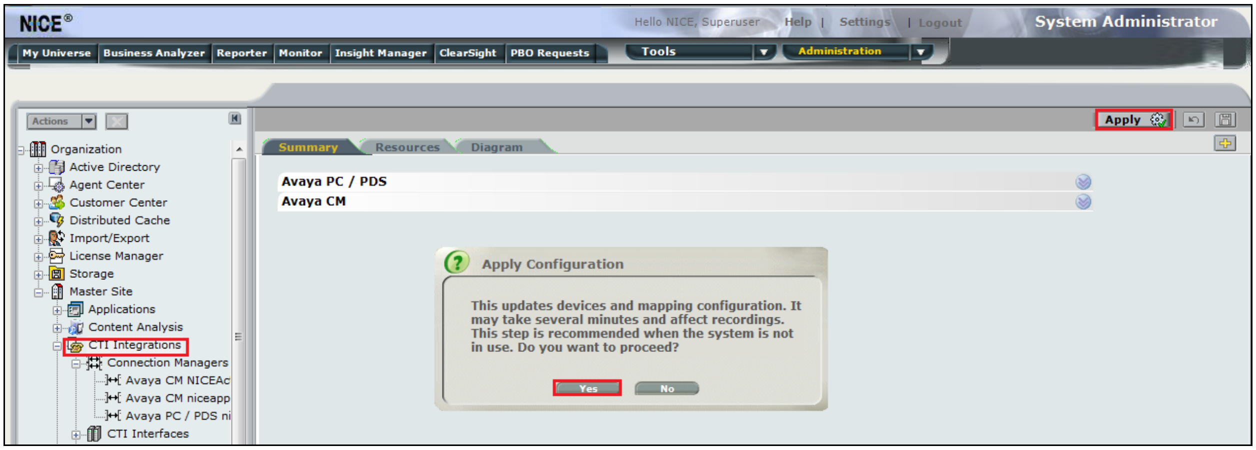
Name: DevConnectRecording
Source pool: DevConnectPool
Recorder pool: AIR Act
Recording type: Total
Capture type: Active DMCC VE By Device
No. of allocated licenses: Determined by the number of sources in the source pool

☑ Compression

☐ Summation

☐ Encryption

Navigate to **Master Site → CTI Integrations** and from the main window click on **Apply**. Then click on **Yes** to proceed.



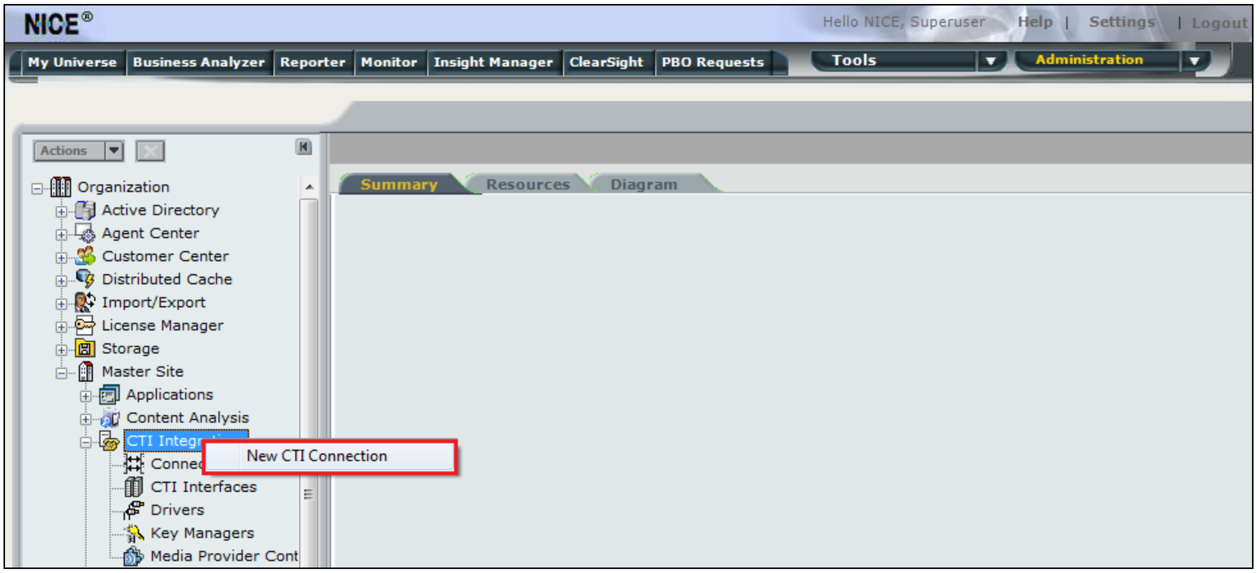
Apply Configuration

This updates devices and mapping configuration. It may take several minutes and affect recordings. This step is recommended when the system is not in use. Do you want to proceed?

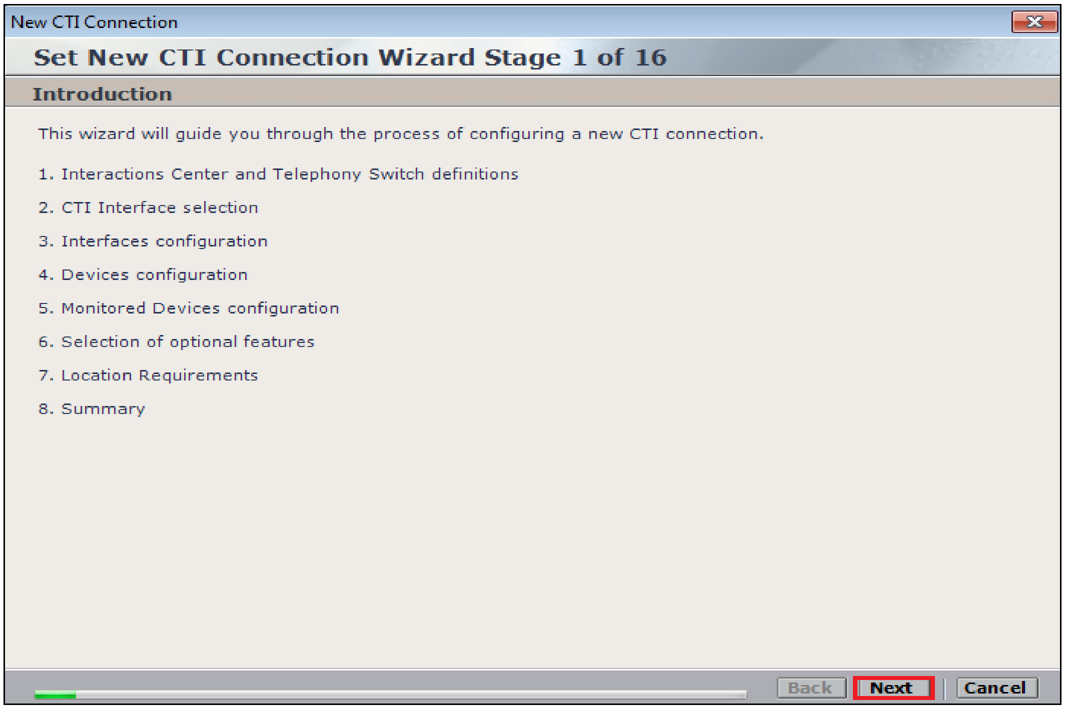
This concludes the setup of the NICE Application Server for DMCC Service Observe and Single Step Conference recording. The following sections show the extra steps required to setup the Proactive Contact connection in order to obtain events from Proactive Contact in order to start and stop call recordings for Proactive Contact calls.

8.3. Add CTI Connection for Proactive Contact

Another New CTI Connection is required for Proactive Contact. From the left window navigate to **Master Site → CTI Integrations** and right-click on CTI Integrations and select **New CTI Connection**.



Click on **Next** to continue.



New CTI Connection

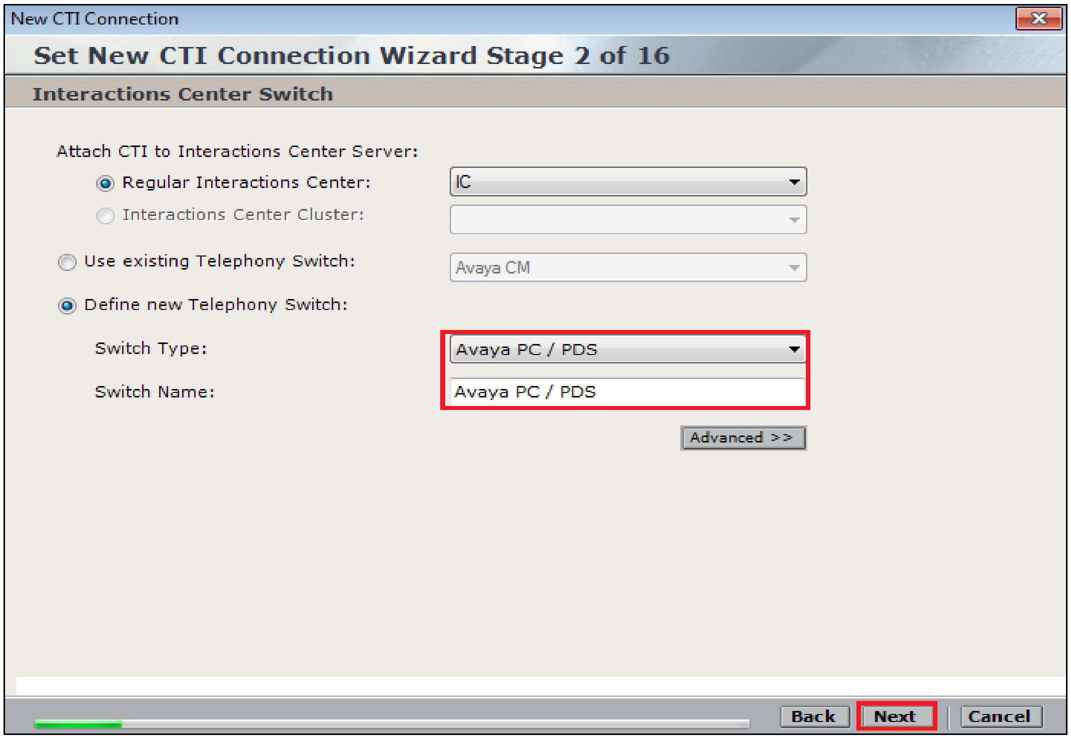
Set New CTI Connection Wizard Stage 1 of 16

Introduction

This wizard will guide you through the process of configuring a new CTI connection.

1. Interactions Center and Telephony Switch definitions
2. CTI Interface selection
3. Interfaces configuration
4. Devices configuration
5. Monitored Devices configuration
6. Selection of optional features
7. Location Requirements
8. Summary

As with the previous CTI Connection there is only one **Interactions Center** available for selection, this was created during the initial installation. Select **Avaya PC/PDS** as the **Switch Type** and enter a suitable **Switch Name**. Click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 2 of 16

Interactions Center Switch

Attach CTI to Interactions Center Server:

● Regular Interactions Center: IC

○ Interactions Center Cluster:

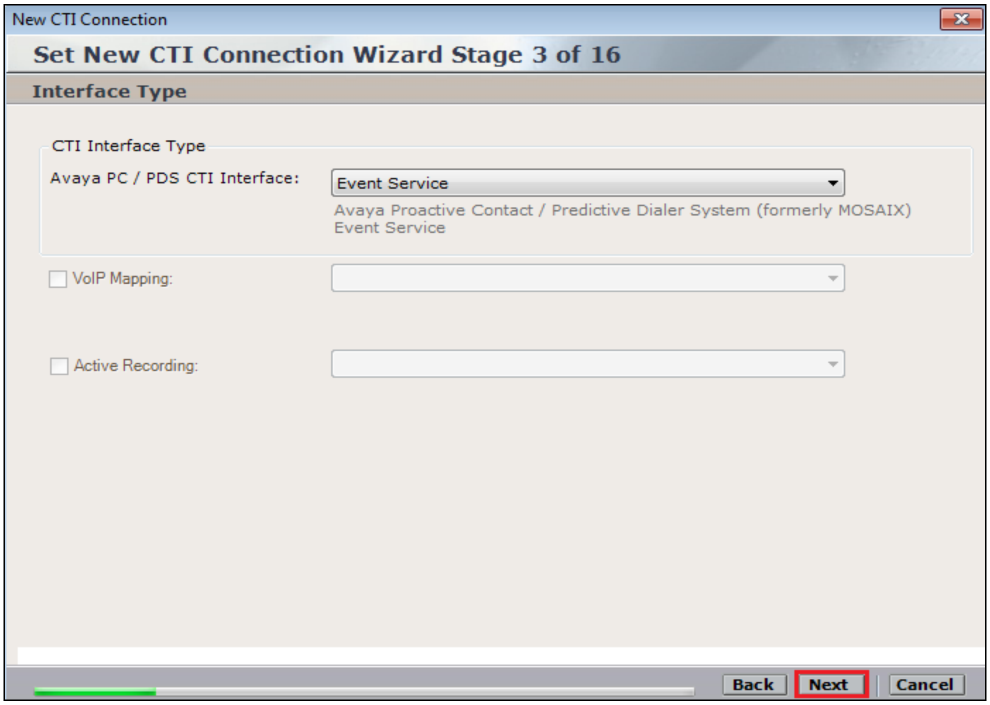
○ Use existing Telephony Switch: Avaya CM

● Define new Telephony Switch:

Switch Type: Avaya PC / PDS

Switch Name: Avaya PC / PDS

Event Service should already be chosen by default, verify that this is the case and click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 3 of 16

Interface Type

CTI Interface Type

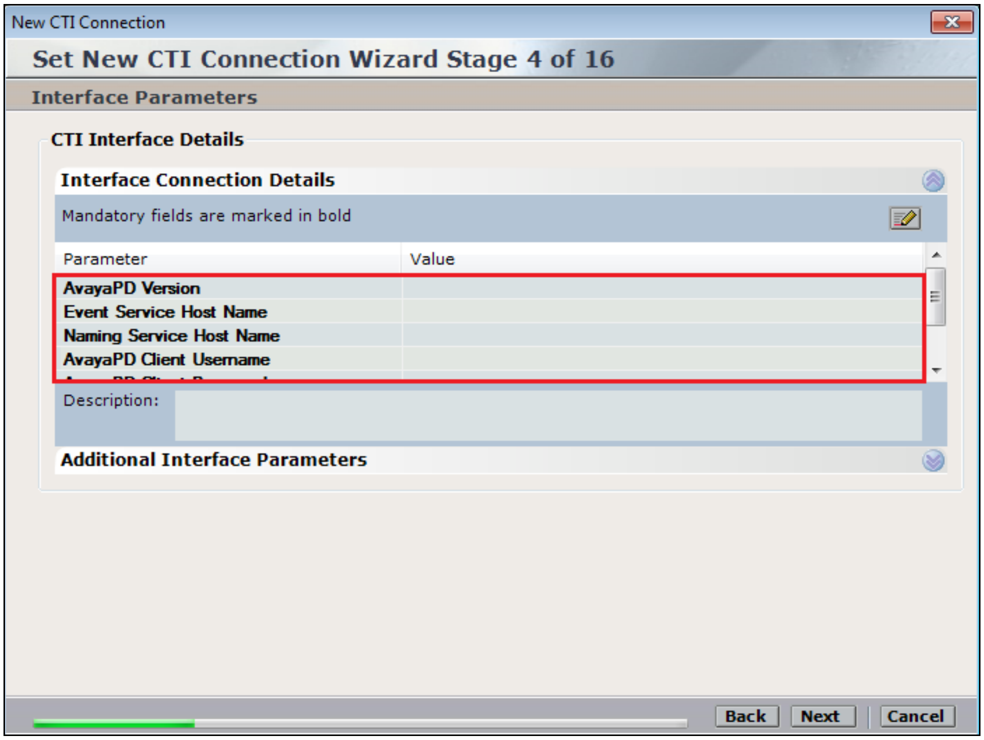
Avaya PC / PDS CTI Interface: Event Service

Avaya Proactive Contact / Predictive Dialer System (formerly MOSAIX) Event Service

□ VoIP Mapping:

□ Active Recording:

The following parameters need to be set for the connection to Proactive Contact, each of these values are set by double-clicking on each individual parameter.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

Interface Connection Details

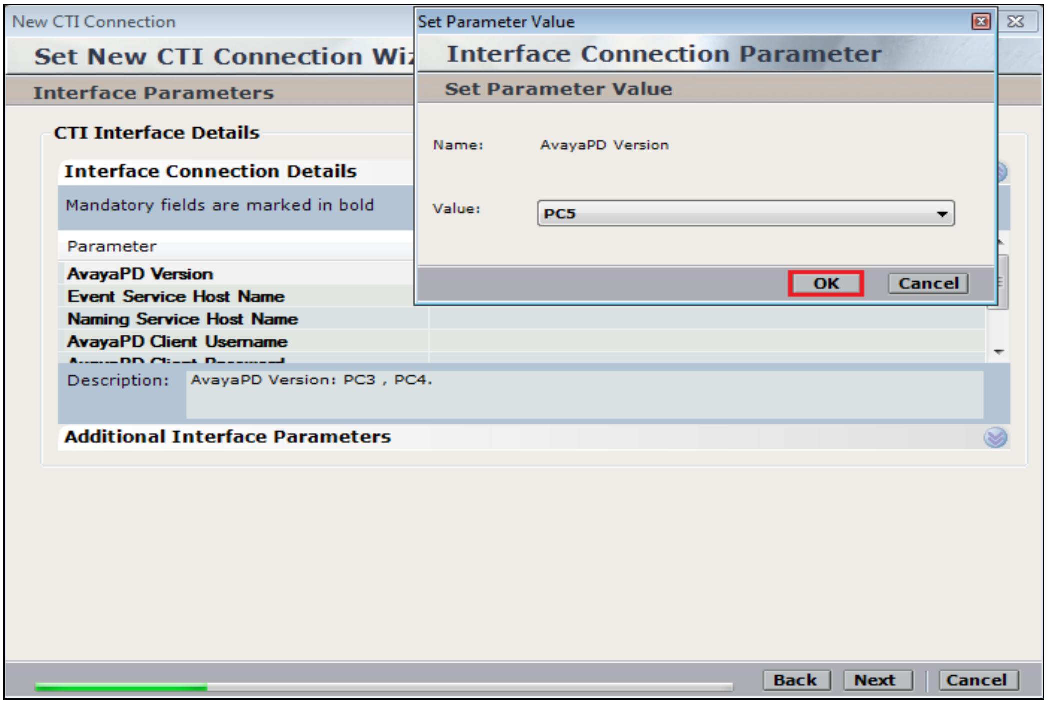
Mandatory fields are marked in bold

Parameter	Value
AvayaPD Version	
Event Service Host Name	
Naming Service Host Name	
AvayaPD Client Username	

Description:

Additional Interface Parameters

Select the version of the Proactive Contact from the drop-down box and click on **OK** to continue.

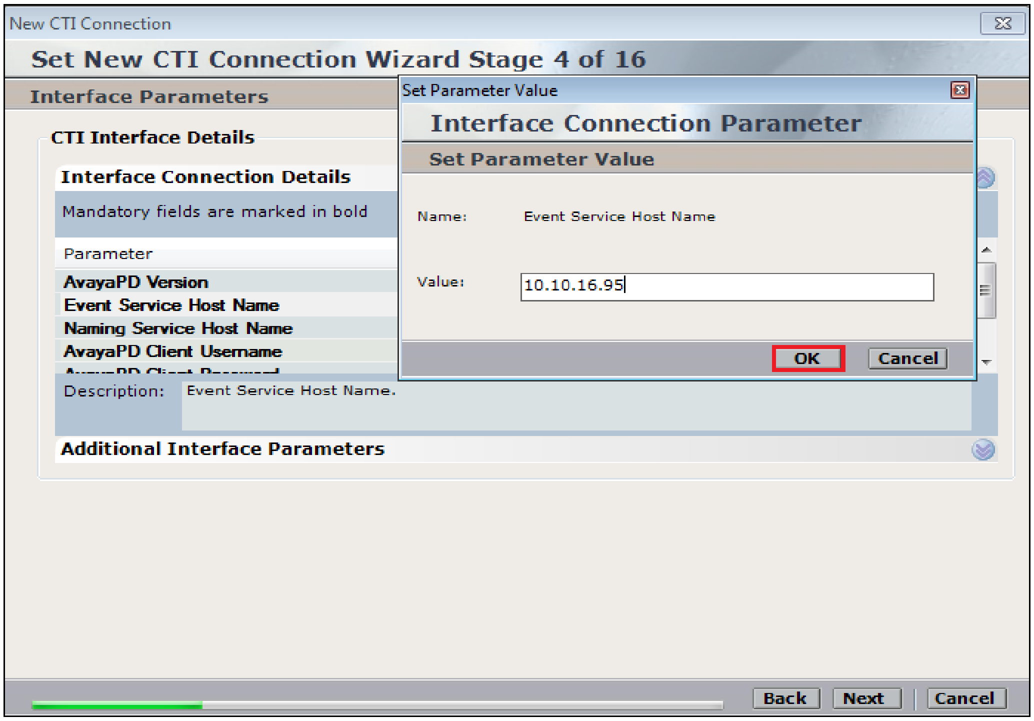


Name: AvayaPD Version

Value: PC5

Description: AvayaPD Version: PC3 , PC4.

Enter the IP address or hostname of the Proactive Contact for the **Event Service Host Name**. Click on **OK** to continue.

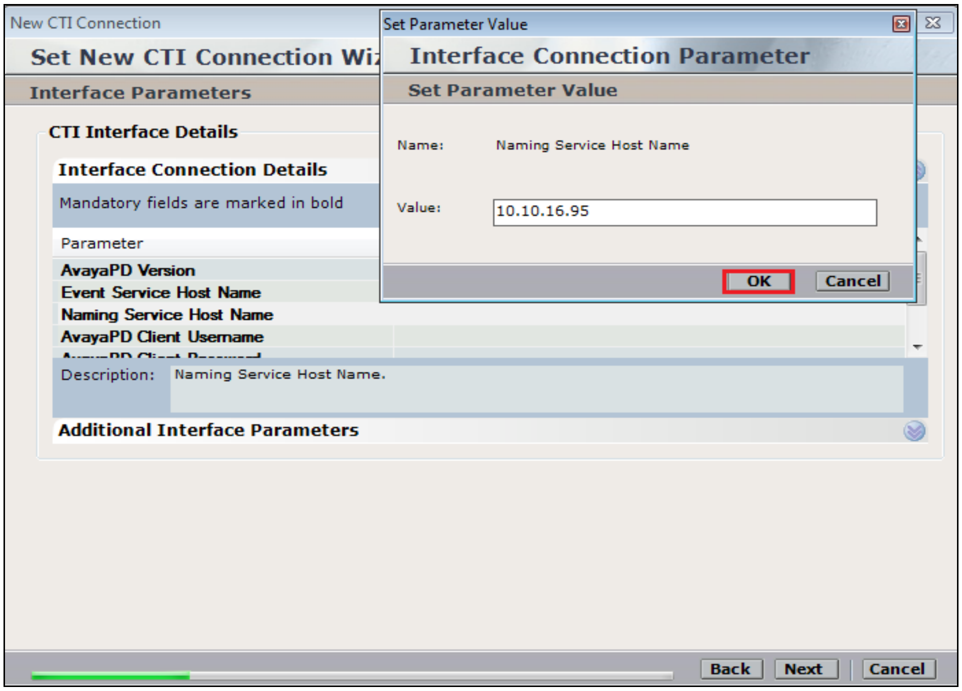


Name: Event Service Host Name

Value: 10.10.16.95

Description: Event Service Host Name.

Enter the IP address or hostname of the Proactive Contact for the **Naming Service Host Name**. Click on **OK** to continue.

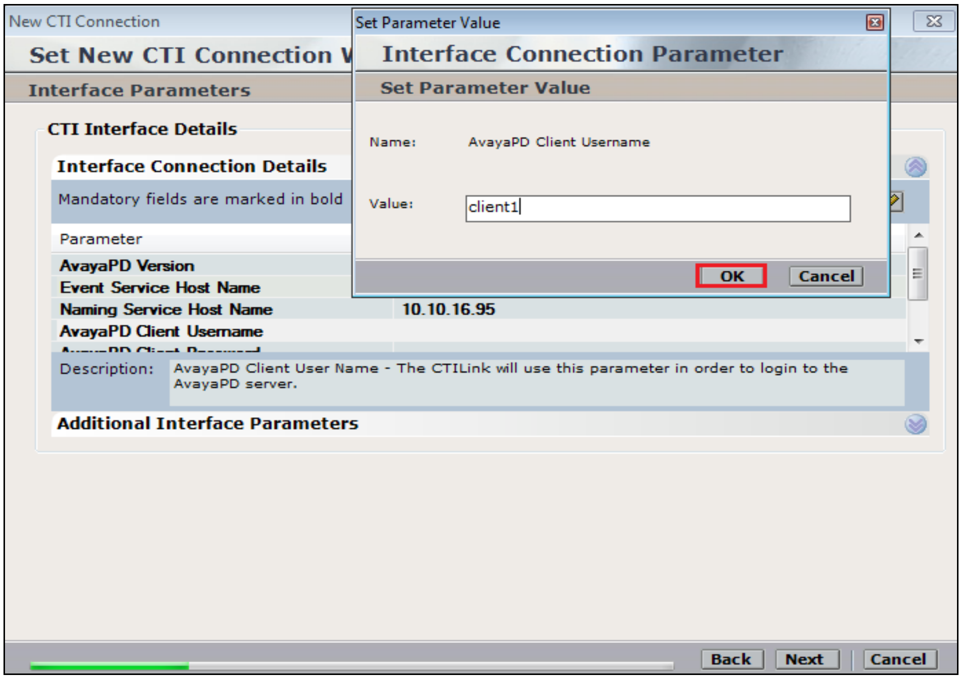


Name: Naming Service Host Name

Value: 10.10.16.95

Description: Naming Service Host Name.

Enter the **AvayaPD Client Username**. This user that will be used to monitor events from Proactive Contact and this will be the same username that was displayed in **Section 7.2**. Click on **OK** to continue.



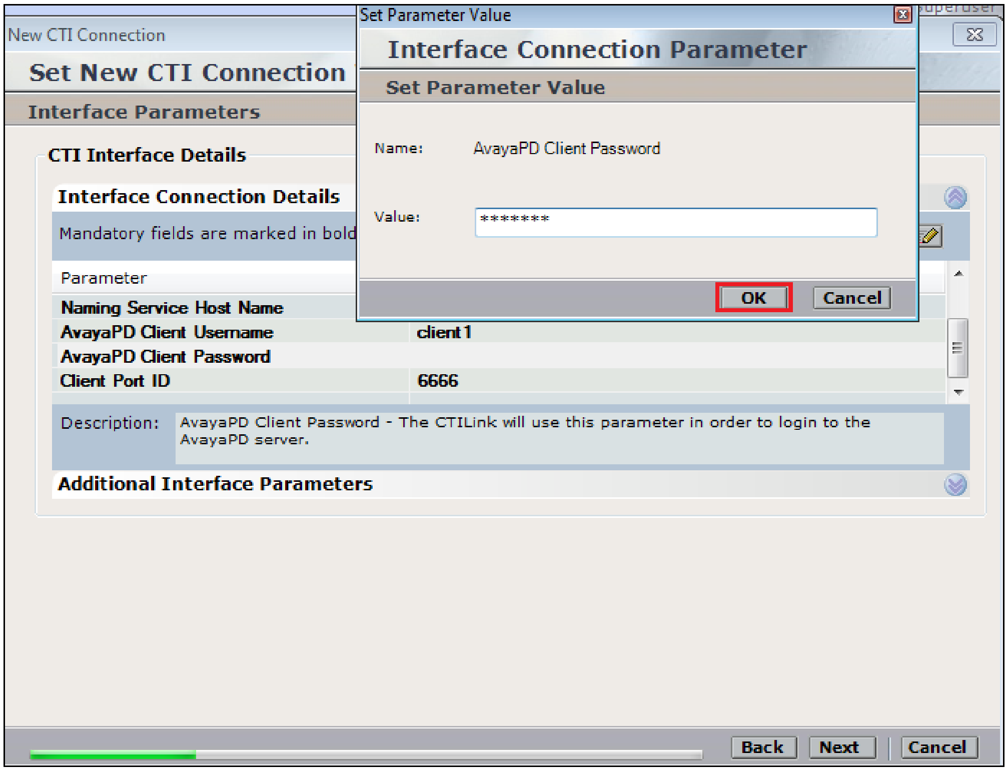
Name: AvayaPD Client Username

Value: client1

Naming Service Host Name: 10.10.16.95

Description: AvayaPD Client User Name - The CTILink will use this parameter in order to login to the AvayaPD server.

Enter the **AvayaPD Client Password**. This will be the same password that was displayed in **Section 7.2**. Click on **OK** to continue.



Set Parameter Value

Interface Connection Parameter

Set Parameter Value

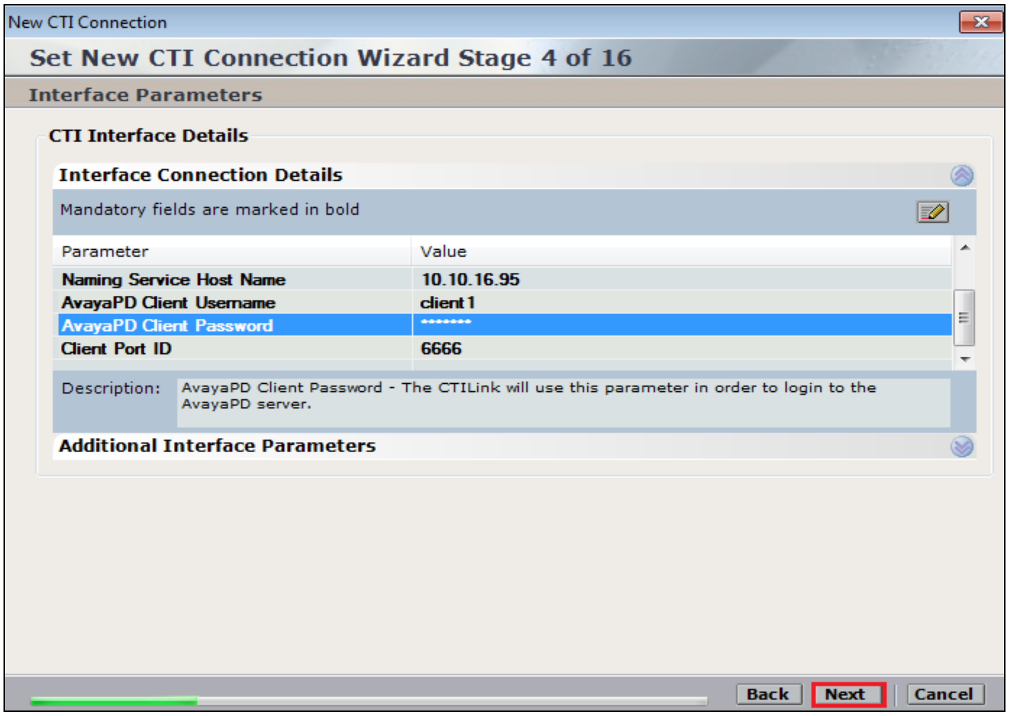
Name: AvayaPD Client Password

Value: ********

Parameter	
Naming Service Host Name	
AvayaPD Client Username	client1
AvayaPD Client Password	
Client Port ID	6666

Description: AvayaPD Client Password - The CTILink will use this parameter in order to login to the AvayaPD server.

With this information correctly filled in click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 4 of 16

Interface Parameters

CTI Interface Details

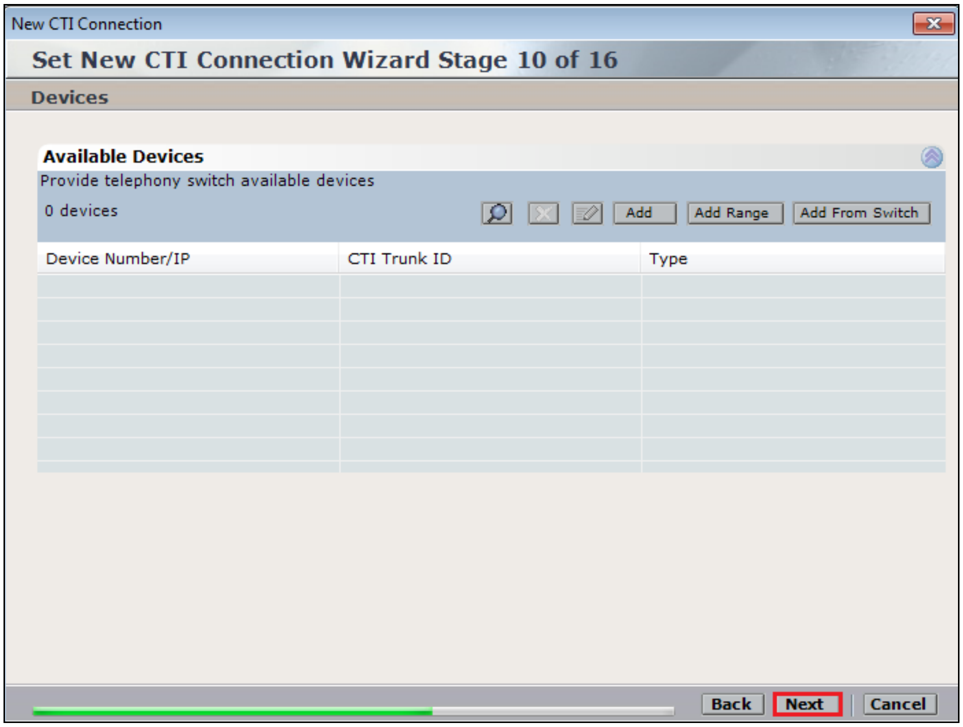
Interface Connection Details

Mandatory fields are marked in bold

Parameter	Value
Naming Service Host Name	10.10.16.95
AvayaPD Client Username	client1
AvayaPD Client Password	*******
Client Port ID	6666

Description: AvayaPD Client Password - The CTILink will use this parameter in order to login to the AvayaPD server.

The actual devices to be monitored were already added in **Section 8.1**. Click on **Next** to continue.



New CTI Connection

Set New CTI Connection Wizard Stage 10 of 16

Devices

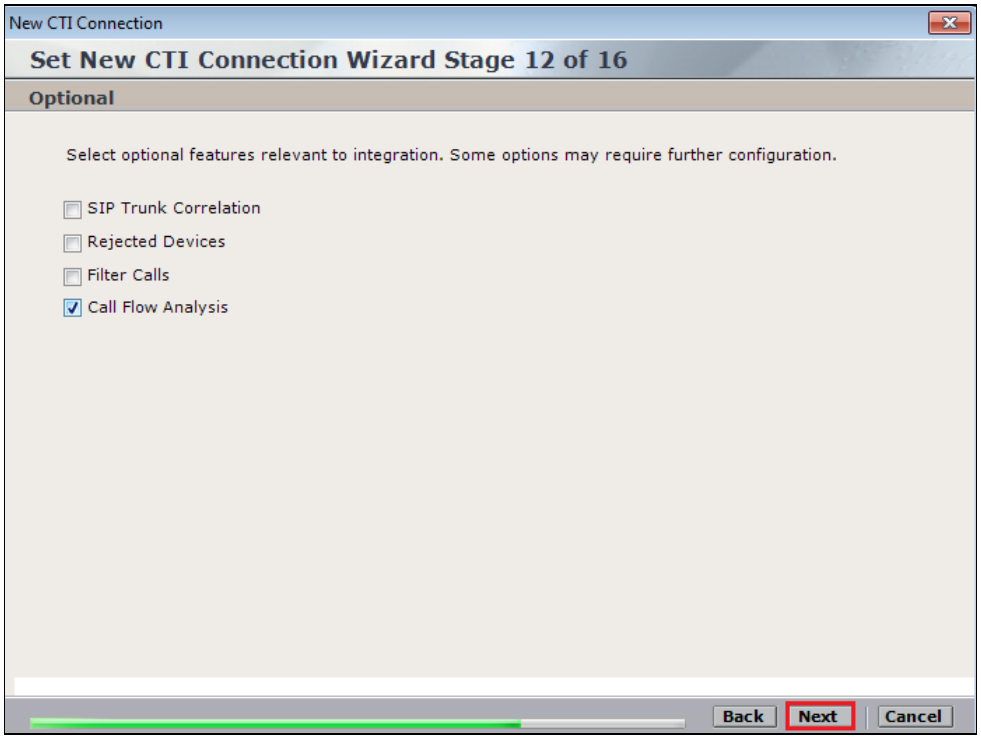
Available Devices

Provide telephony switch available devices

0 devices

Device Number/IP	CTI Trunk ID	Type

Call Flow Analysis can be added as an option, click on **Next** to continue.



New CTI Connection

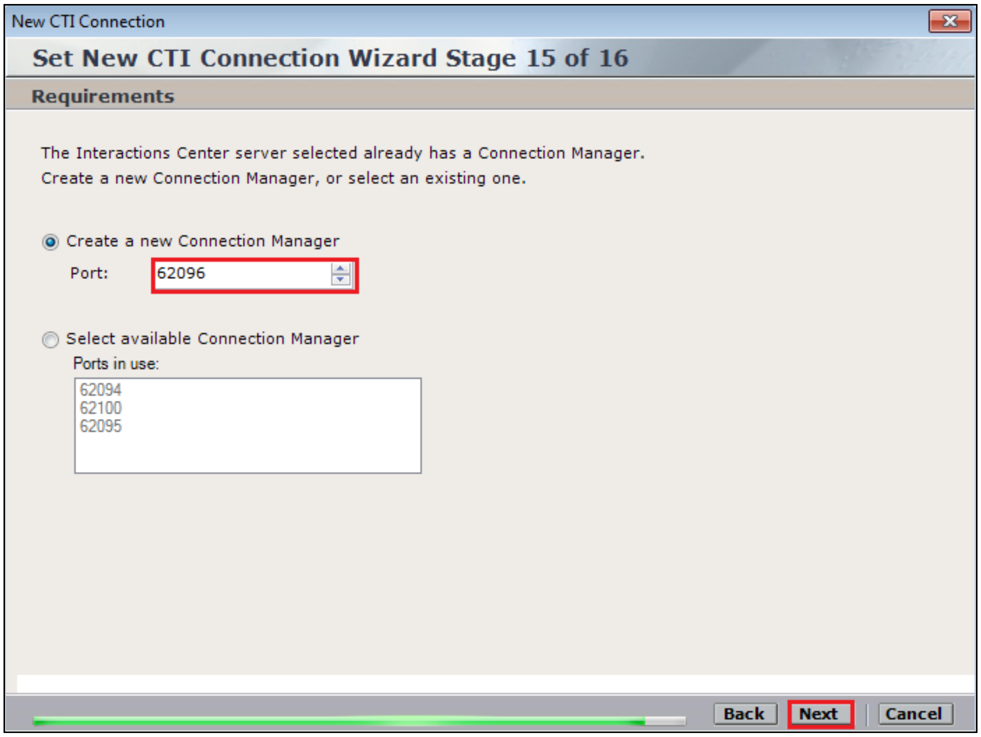
Set New CTI Connection Wizard Stage 12 of 16

Optional

Select optional features relevant to integration. Some options may require further configuration.

□ SIP Trunk Correlation
□ Rejected Devices
□ Filter Calls
☑ Call Flow Analysis

Ensure that a unique **Port** is set for the **new Connection Manager**, then click on **Next** to continue.



Set New CTI Connection Wizard Stage 15 of 16

Requirements

The Interactions Center server selected already has a Connection Manager.
Create a new Connection Manager, or select an existing one.

● Create a new Connection Manager

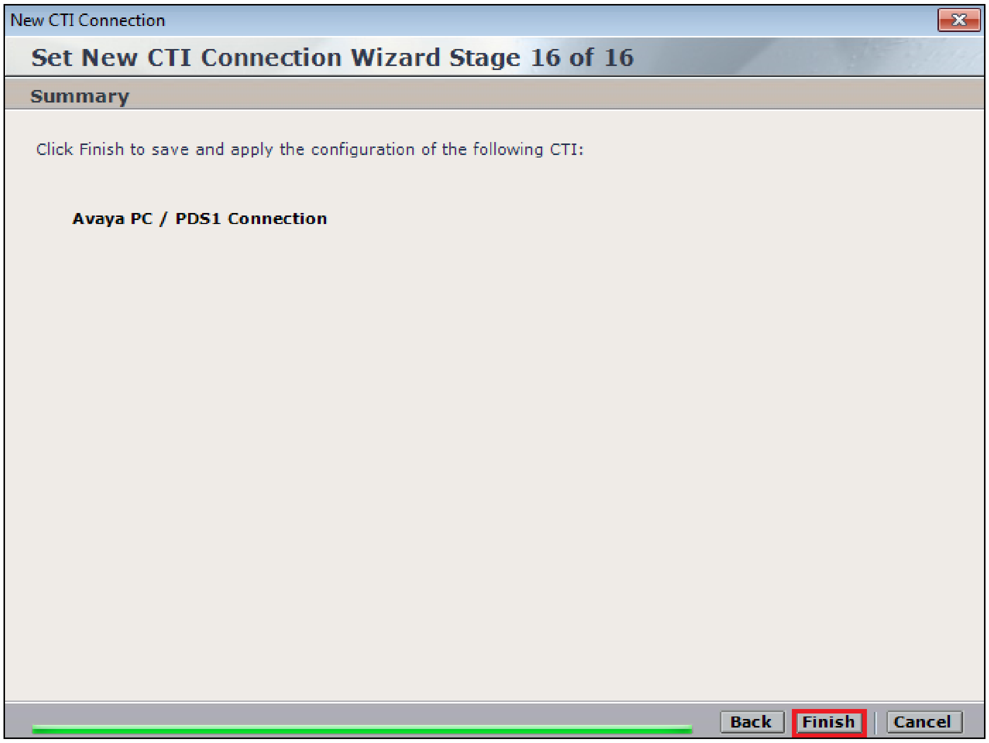
Port: 62096

○ Select available Connection Manager

Ports in use:

62094
62100
62095

Click on **Finish** to complete the Proactive Contact CTI connection.



Set New CTI Connection Wizard Stage 16 of 16

Summary

Click Finish to save and apply the configuration of the following CTI:

Avaya PC / PDS1 Connection

9. Verification Steps

This section provides the steps that can be taken to verify correct configuration of the NICE Engage Platform and both Avaya Proactive Contact and Avaya Aura® Application Enablement Services.

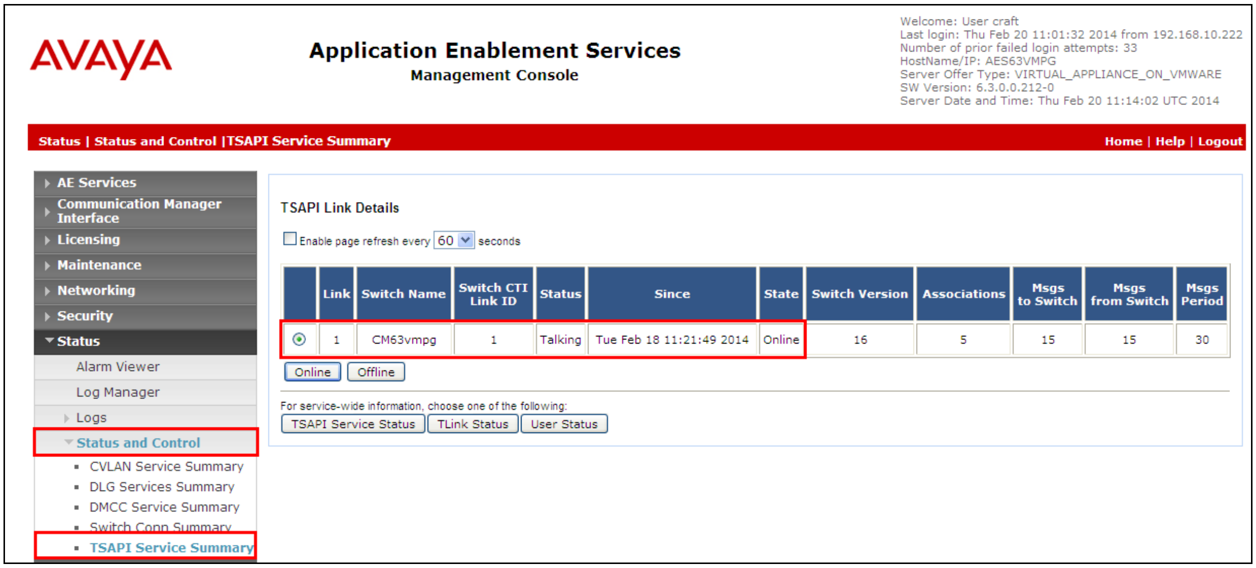
9.1. Verify Avaya Aura® Communication Manager CTI Service State

Before the connection between the NICE Engage Platform and the AES is check the connection between Communication Manager and AES can be check to ensure it is functioning correctly. Check the AESVCS link status by using the command **status aesvcs cti-link**. Verify the **Service State** of the CTI link is **established**.

```
status aesvcs cti-link

                          AE SERVICES CTI LINK STATUS

CTI   Version      Mnt   AE Services       Service      Msgs      Msgs
Link               Busy     Server          State       Sent      Rcvd

1          4       no      aes63vmpg       established  18        18
```

9.2. Verify TSAPI Link

On the AES Management Console verify the status of the TSAPI link by selecting **Status → Status and Control → TSAPI Service Summary** to display the **TSAPI Link Details** screen. Verify the status of the TSAPI link by checking that the **Status** is **Talking** and the **State** is **Online**.



Welcome: User craft
Last login: Thu Feb 20 11:01:32 2014 from 192.168.10.222
Number of prior failed login attempts: 33
HostName/IP: AES63VMPG
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.0.0.212-0
Server Date and Time: Thu Feb 20 11:14:02 UTC 2014

TSAPI Link Details

☐ Enable page refresh every 60 seconds

	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
●	1	CM63vmpg	1	Talking	Tue Feb 18 11:21:49 2014	Online	16	5	15	15	30

For service-wide information, choose one of the following:

9.3. Verify Proactive Contact services are running

Using putty open an SSH connection to Proactive Contact and **login** using the appropriate credentials as shown below.

```
login as: admin
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

                               ***  WARNING NOTICE  ***

This system is restricted solely to Avaya authorized users for legitimate
business purposes only. The actual or attempted unauthorized access, use,
or modification of this system is strictly prohibited by Avaya. Unauthorized
users are subject to Company disciplinary proceedings and/or criminal and
civil penalties under state, federal, or other applicable domestic and
foreign laws. The use of this system may be monitored and recorded for
administrative and security reasons. Anyone accessing this system expressly
consents to such monitoring and is advised that if monitoring reveals possible
evidence of criminal activity, Avaya may provide the evidence of such activity
to law enforcement officials. All users must comply with Avaya Security
Instructions regarding the protection of Avaya's information assets.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Using keyboard-interactive authentication.
Password:
```

Once logged in correctly type **check_pds** as shown below.

```
======================================================================================
==========================================
    #  ID           Sev       Short Text                        Enabled   First
Instance       Last Instance      Count  State
 -------------------------------------------------------------------------------------
-------------------------------------------
    3  QPC000D0001  Info      Services started  - PDS           Yes       2012-03-01
16:06:48  2012-03-01 16:06:48    1  ACTIVE
    4  QPC000D0002  Info      Services started  - MTS           Yes       2012-02-29
16:31:39  2012-02-29 16:31:39    1  ACTIVE
    5  QPC000D0003  Info      Services started  - DB            Yes       2012-02-29
16:30:30  2012-02-29 16:30:30    1  ACTIVE
   25  QPC000D0023  Warning   Illegal agent logoff              Yes       2011-05-24
18:48:20  2012-03-01 16:25:58  431  ACTIVE

======================================================================================
==========================================
  Found '4' ACTIVE or RETIRED alarms.

DEVCONHD(admin)@/opt/avaya/pds [992]
$ check_pds
```

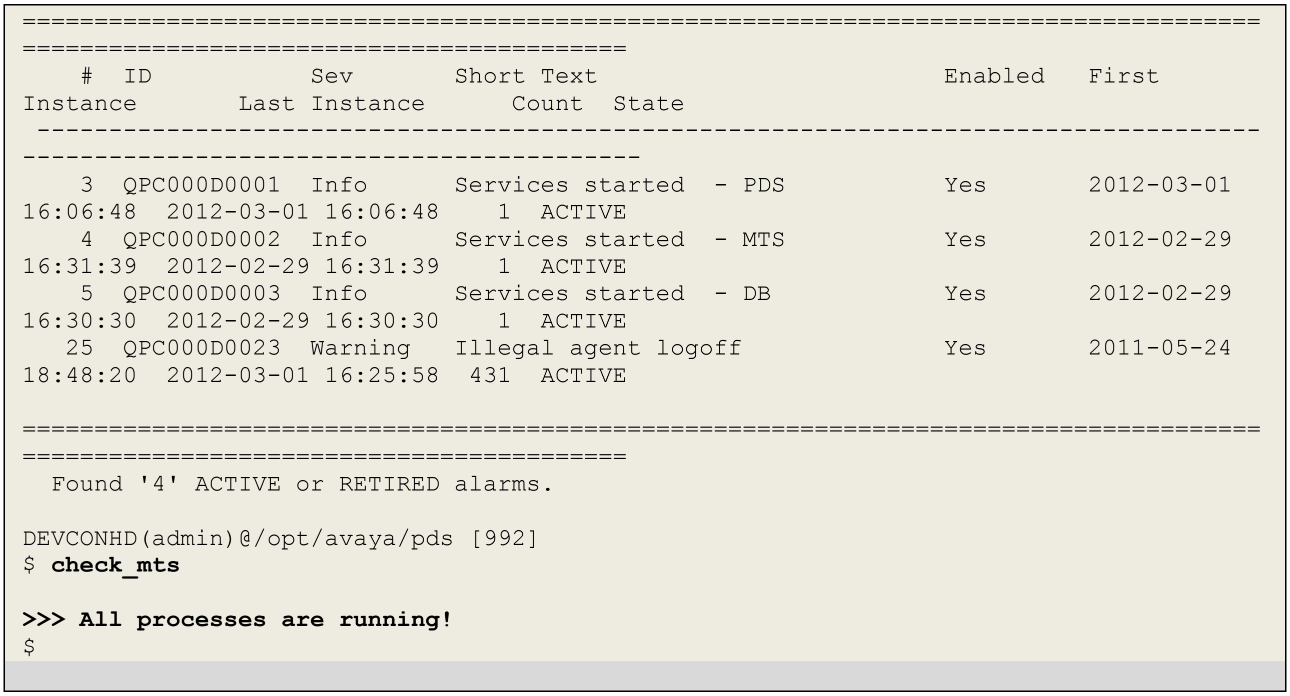
The following screen should show **All processes running!**.

```
root     28532     1  0 Mar01 ?        00:00:00 agent -d
admin    28543     1  0 Mar01 ?        00:00:00 ao_recall
admin    28539     1  0 Mar01 ?        00:00:00 recall_rmp
admin    28529     1  0 Mar01 ?        00:00:00 listserver
admin    28216     1  0 Mar01 ?        00:00:00 opmon
root     28238     1  0 Mar01 ?        00:00:00 evmon
root     28125 28116  0 Mar01 ?        00:00:00 /opt/avaya/pds/bin/enforcer -ORB
root     28106     1  0 Mar01 ?        00:00:00 bridgeSmEnf -ORBSvcConf /opt/ava
admin    28101     1  0 Mar01 ?        00:00:00 switcher
admin    28069     1  0 Mar01 ?        00:00:00 job_strter
root     28054     1  0 Mar01 ?        00:00:00 agentcount
root     28037     1  0 Mar01 ?        00:04:00 enserver -ORBSvcConf /opt/avaya/
root     28565     1  0 Mar01 ?        00:01:20 dccserver -ORBSvcConf /opt/avaya
admin    28044     1  0 Mar01 ?        00:00:08 datamgr
admin    28025     1  0 Mar01 ?        00:00:00 soe_routed
admin    28027 28025  0 Mar01 ?        00:00:00 soe_routed
root     28062     1  0 Mar01 ?        00:00:00 signalit
admin    28030     1  0 Mar01 ?        00:00:00 conn_mgr
root     28571     1  0 Mar01 ?        00:01:08 hdsc -ORBSvcConf /opt/avaya/pds/

>>> All processes running!

DEVCONHD(admin)@/opt/avaya/pds [993]
$
```

Check the database is running correctly by typing **check_db** as shown. **All processes are running and the database is opened to the users!** should be returned.

```
DEVCONHD(admin)@/opt/avaya/pds [993]
$ check_db

Checking for required database processes...
Found:
oracle   29897     1  0 Feb29 ?        00:00:21 ora_smon_orastd
oracle   29893     1  0 Feb29 ?        00:00:54 ora_lgwr_orastd
oracle   29885     1  0 Feb29 ?        00:00:12 ora_pmon_orastd
oracle   29895     1  0 Feb29 ?        00:00:56 ora_ckpt_orastd
oracle   29891     1  0 Feb29 ?        00:00:11 ora_dbw0_orastd
oracle   29899     1  0 Feb29 ?        00:00:00 ora_reco_orastd
oracle   29913     1  0 Feb29 ?        00:00:00 ora_qmnc_orastd
oracle   29901     1  0 Feb29 ?        00:01:34 ora_cjq0_orastd
oracle   29907     1  0 Feb29 ?        00:00:00 ora_d000_orastd
oracle   29889     1  0 Feb29 ?        00:00:00 ora_mman_orastd
oracle   29909     1  0 Feb29 ?        00:00:00 ora_s000_orastd
oracle   29903     1  0 Feb29 ?        00:00:20 ora_mmon_orastd
oracle   29905     1  0 Feb29 ?        00:00:10 ora_mmnl_orastd
admin    29881     1  0 Feb29 ?        00:00:00 /opt/dbase/OraHome1/bin/tnslsnr

Verifying Database availability...

>>> All processes are running and the database is opened to the users!

DEVCONHD(admin)@/opt/avaya/pds [994]
$
```

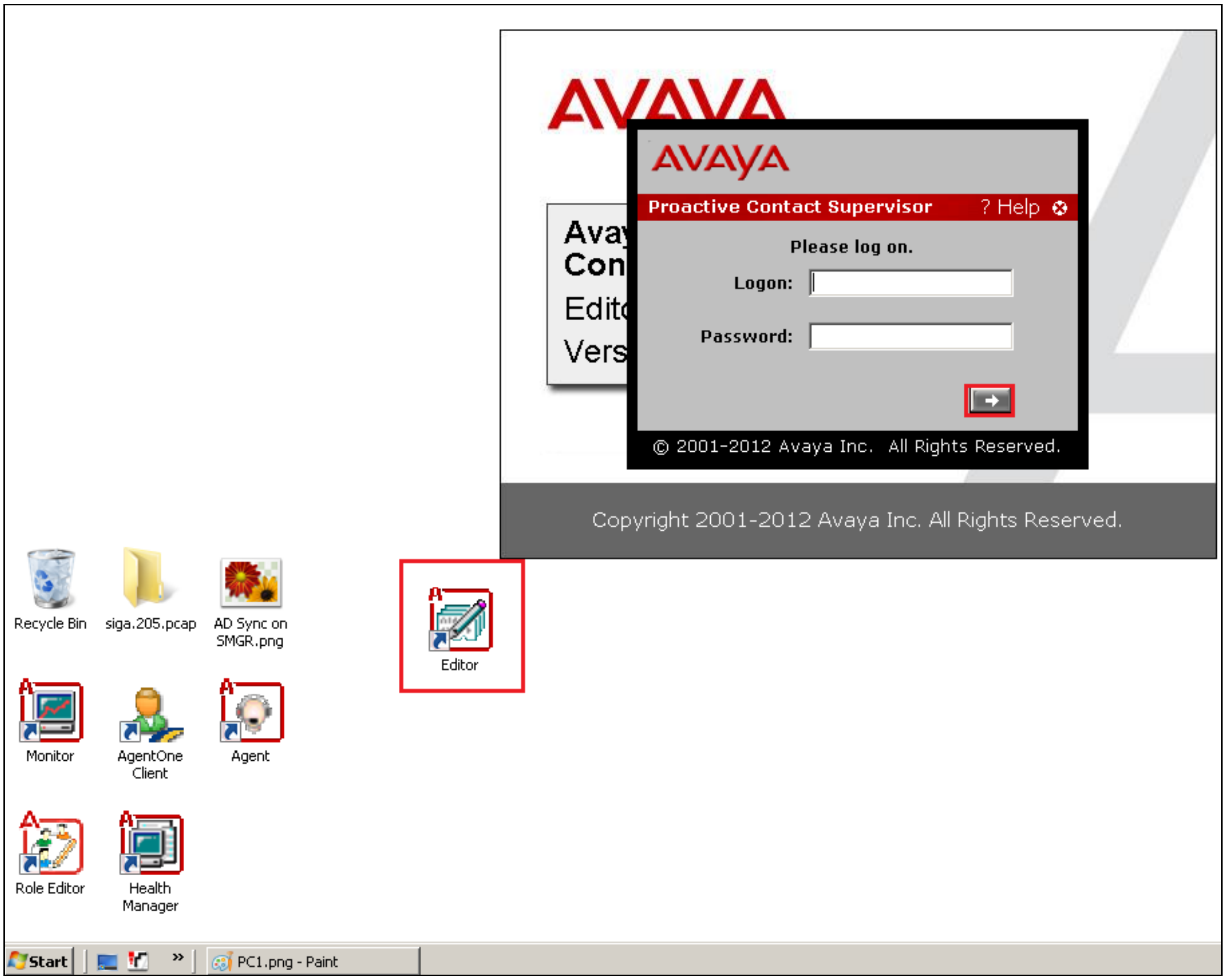
Type **check_mts**, this should return **All processes are running** as shown.



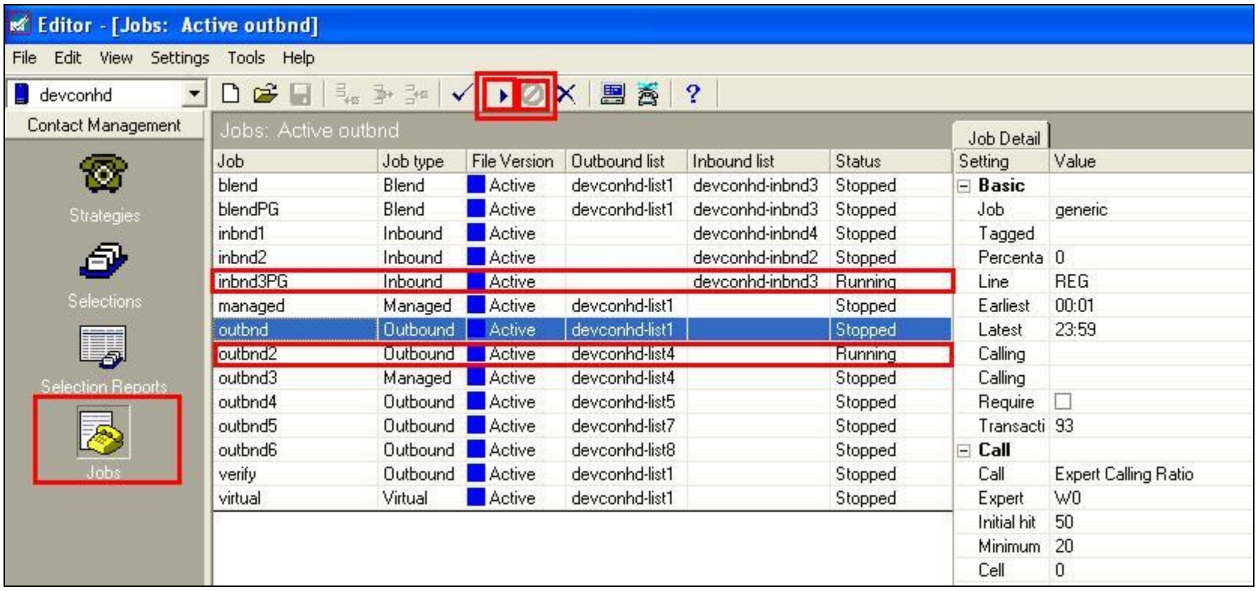
```
======================================================================================
==========================================
    #  ID           Sev       Short Text                        Enabled   First
Instance       Last Instance      Count  State
 -------------------------------------------------------------------------------------
-------------------------------------------
    3  QPC000D0001  Info      Services started  - PDS           Yes       2012-03-01
16:06:48  2012-03-01 16:06:48    1  ACTIVE
    4  QPC000D0002  Info      Services started  - MTS           Yes       2012-02-29
16:31:39  2012-02-29 16:31:39    1  ACTIVE
    5  QPC000D0003  Info      Services started  - DB            Yes       2012-02-29
16:30:30  2012-02-29 16:30:30    1  ACTIVE
   25  QPC000D0023  Warning   Illegal agent logoff              Yes       2011-05-24
18:48:20  2012-03-01 16:25:58  431  ACTIVE

======================================================================================
==========================================
  Found '4' ACTIVE or RETIRED alarms.

DEVCONHD(admin)@/opt/avaya/pds [992]
$ check_mts

>>> All processes are running!
$
```

9.4. Verify Avaya Proactive Contact jobs are running

Before an agent is logged into a job verify that the correct jobs are running. Open Proactive Contact **Editor**.



Once logged in click on jobs as shown below and ensure that the correct jobs are up and running. **Jobs** cab be started and stopped using the icons highlighted in the screen shot below.



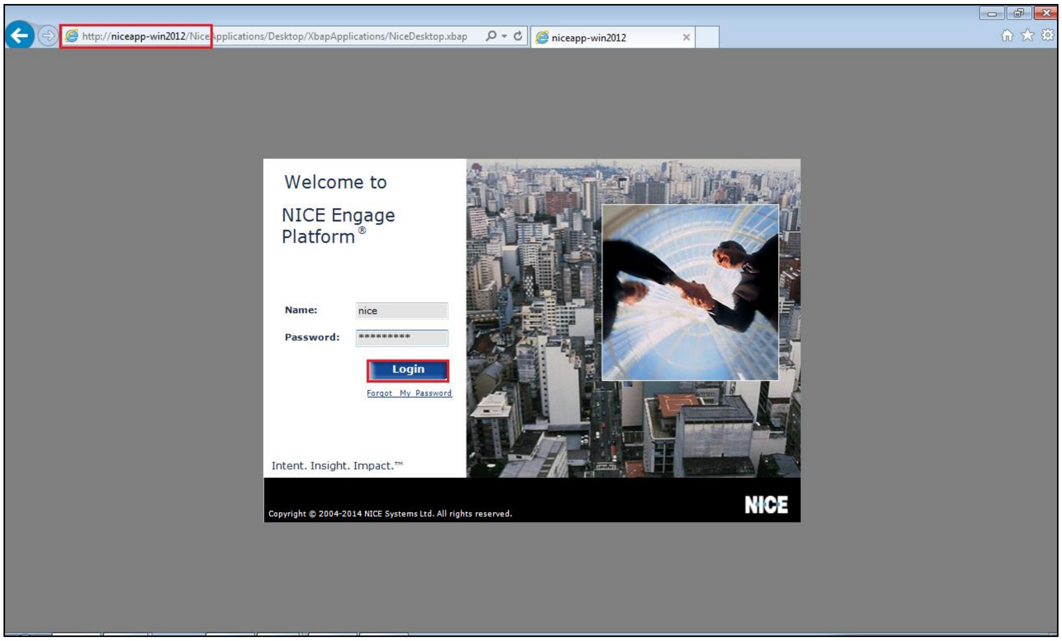
Job	Job type	File Version	Outbound list	Inbound list	Status
blend	Blend	Active	devconhd-list1	devconhd-inbnd3	Stopped
blendPG	Blend	Active	devconhd-list1	devconhd-inbnd3	Stopped
inbnd1	Inbound	Active		devconhd-inbnd4	Stopped
inbnd2	Inbound	Active		devconhd-inbnd2	Stopped
inbnd3PG	Inbound	Active		devconhd-inbnd3	Running
managed	Managed	Active	devconhd-list1		Stopped
outbnd	Outbound	Active	devconhd-list1		Stopped
outbnd2	Outbound	Active	devconhd-list4		Running
outbnd3	Managed	Active	devconhd-list4		Stopped
outbnd4	Outbound	Active	devconhd-list5		Stopped
outbnd5	Outbound	Active	devconhd-list7		Stopped
outbnd6	Outbound	Active	devconhd-list8		Stopped
verify	Outbound	Active	devconhd-list1		Stopped
virtual	Virtual	Active	devconhd-list1		Stopped

Setting	Value
⊟ **Basic**	
Job	generic
Tagged	
Percenta	0
Line	REG
Earliest	00:01
Latest	23:59
Calling	
Calling	
Require	□
Transacti	93
⊟ **Call**	
Call	Expert Calling Ratio
Expert	W0
Initial hit	50
Minimum	20
Cell	0

9.5. Verify calls are being recorded

From any of the monitored Avaya endpoints make a series of inbound and outbound calls. Once these calls are completed they should be available for playback through a web browser to the NICE Application Server.

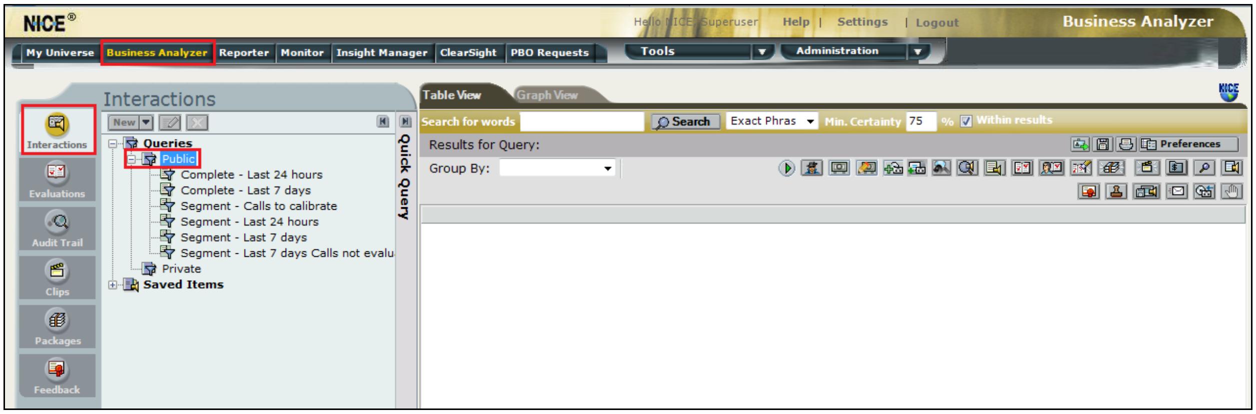
Open a browser session to the NICE Application Server as is shown below. Enter the proper credentials and click on **Login**.


http://niceapp-win2012/NiceApplications/Desktop/XbapApplications/NiceDesktop.xbap
niceapp-win2012
Welcome to
NICE Engage Platform®
Login
Forgot My Password
Intent. Insight. Impact.™
Copyright © 2004-2014 NICE Systems Ltd. All rights reserved.
NICE

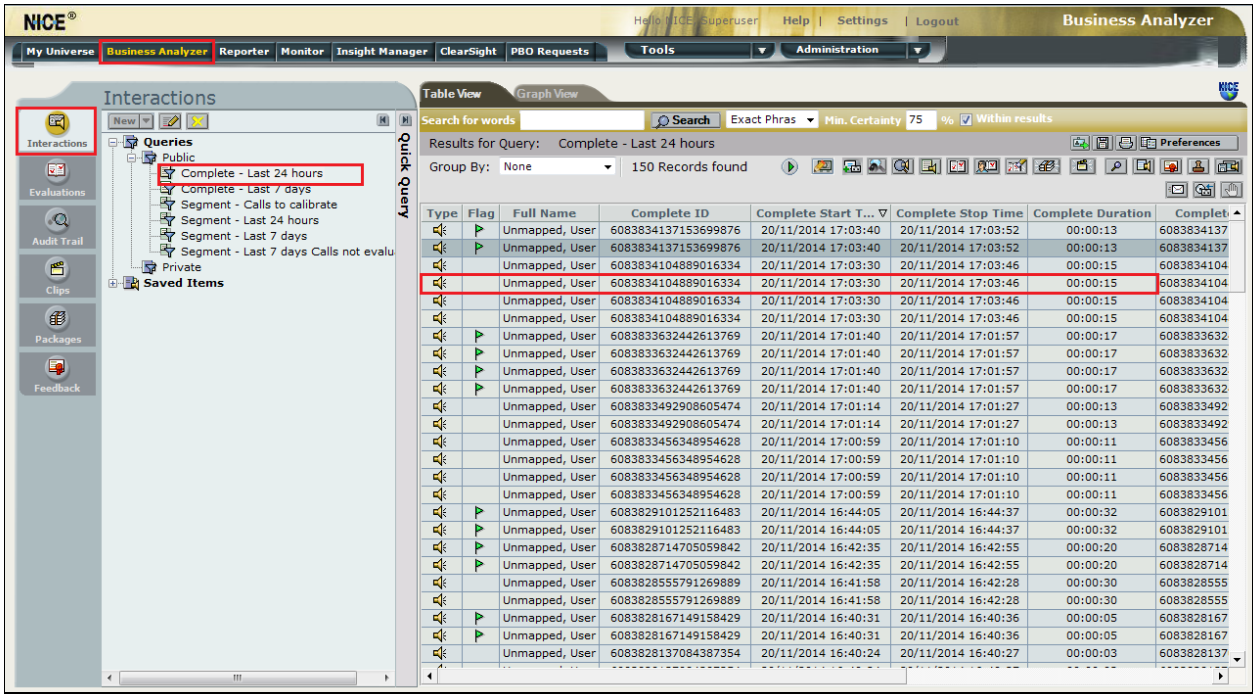
Name: nice

Password: *********

Click on **Business Analyser** at the top of the screen. Select **Interactions** from the left window and then navigate to **Queries → Public**.



Click on **Complete – Last 24 hours**. This should reveal all the recordings that took place over the previous 24 hours. Select the required recording from the list and double-click on this to play the recording.

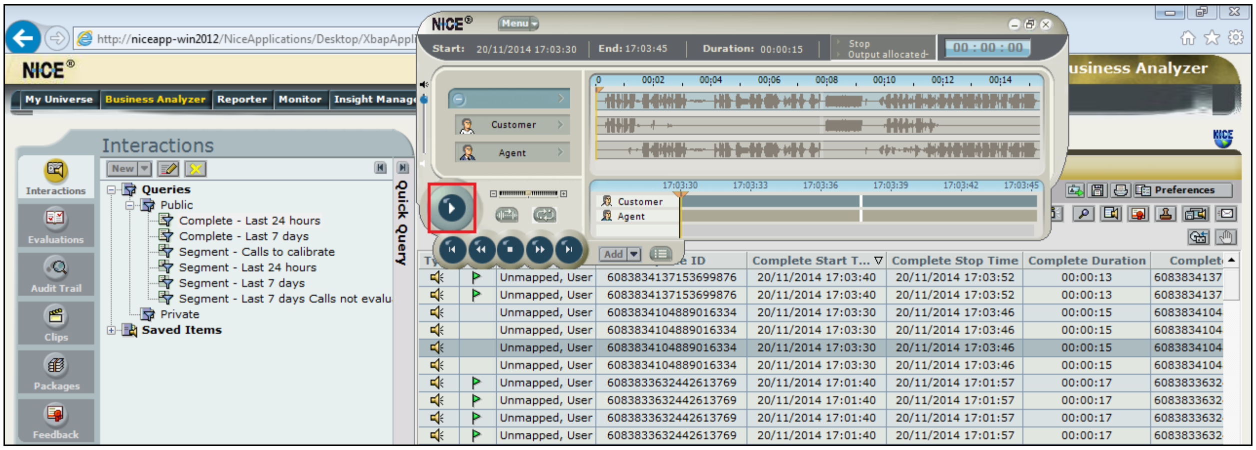


Results for Query: Complete - Last 24 hours

Group By: None   150 Records found

Type	Flag	Full Name	Complete ID	Complete Start T... ∇	Complete Stop Time	Complete Duration	Complet
🔈	⚑	Unmapped, User	6083834137153699876	20/11/2014 17:03:40	20/11/2014 17:03:52	00:00:13	6083834137
🔈	⚑	Unmapped, User	6083834137153699876	20/11/2014 17:03:40	20/11/2014 17:03:52	00:00:13	6083834137
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈	⚑	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	⚑	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	⚑	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	⚑	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈		Unmapped, User	6083833492908605474	20/11/2014 17:01:14	20/11/2014 17:01:27	00:00:13	6083833492
🔈		Unmapped, User	6083833492908605474	20/11/2014 17:01:14	20/11/2014 17:01:27	00:00:13	6083833492
🔈		Unmapped, User	6083833456348954628	20/11/2014 17:00:59	20/11/2014 17:01:10	00:00:11	6083833456
🔈		Unmapped, User	6083833456348954628	20/11/2014 17:00:59	20/11/2014 17:01:10	00:00:11	6083833456
🔈		Unmapped, User	6083833456348954628	20/11/2014 17:00:59	20/11/2014 17:01:10	00:00:11	6083833456
🔈		Unmapped, User	6083833456348954628	20/11/2014 17:00:59	20/11/2014 17:01:10	00:00:11	6083833456
🔈	⚑	Unmapped, User	6083829101252116483	20/11/2014 16:44:05	20/11/2014 16:44:37	00:00:32	6083829101
🔈	⚑	Unmapped, User	6083829101252116483	20/11/2014 16:44:05	20/11/2014 16:44:37	00:00:32	6083829101
🔈	⚑	Unmapped, User	6083828714705059842	20/11/2014 16:42:35	20/11/2014 16:42:55	00:00:20	6083828714
🔈	⚑	Unmapped, User	6083828714705059842	20/11/2014 16:42:35	20/11/2014 16:42:55	00:00:20	6083828714
🔈		Unmapped, User	6083828555791269889	20/11/2014 16:41:58	20/11/2014 16:42:28	00:00:30	6083828555
🔈		Unmapped, User	6083828555791269889	20/11/2014 16:41:58	20/11/2014 16:42:28	00:00:30	6083828555
🔈	⚑	Unmapped, User	6083828167149158429	20/11/2014 16:40:31	20/11/2014 16:40:36	00:00:05	6083828167
🔈	⚑	Unmapped, User	6083828167149158429	20/11/2014 16:40:31	20/11/2014 16:40:36	00:00:05	6083828167
🔈		Unmapped, User	6083828137084387354	20/11/2014 16:40:24	20/11/2014 16:40:27	00:00:03	6083828137

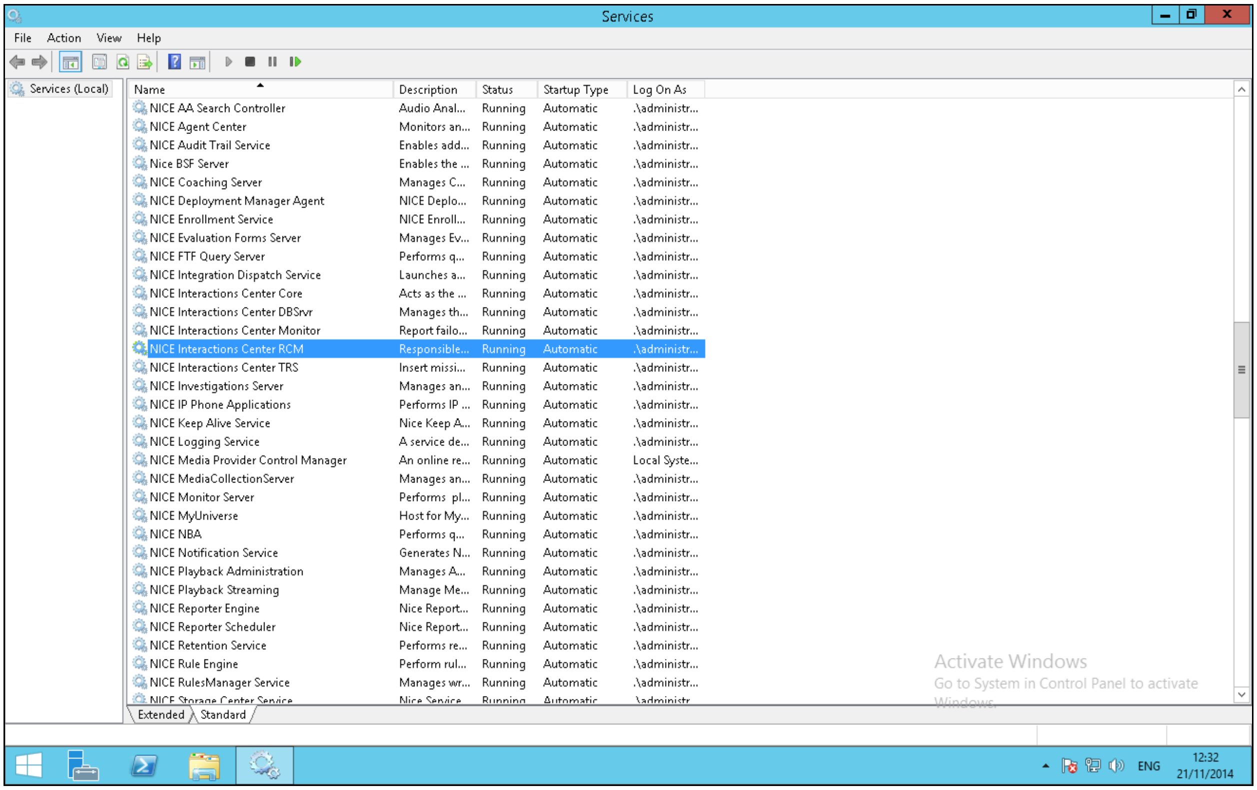
The NICE player is opened and the recording is presented for playback. Click on the **Play** icon highlighted below to play back the recording.



Ty			e ID	Complete Start T... ▽	Complete Stop Time	Complete Duration	Complet
🔈	▶	Unmapped, User	6083834137153699876	20/11/2014 17:03:40	20/11/2014 17:03:52	00:00:13	6083834137
🔈	▶	Unmapped, User	6083834137153699876	20/11/2014 17:03:40	20/11/2014 17:03:52	00:00:13	6083834137
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈		Unmapped, User	6083834104889016334	20/11/2014 17:03:30	20/11/2014 17:03:46	00:00:15	6083834104
🔈	▶	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	▶	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	▶	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632
🔈	▶	Unmapped, User	6083833632442613769	20/11/2014 17:01:40	20/11/2014 17:01:57	00:00:17	6083833632

9.6. Verify NICE Services

If these recordings are not present or cannot be played back the NICE services may not be running or may need to be restarted. There are two separate servers as a part of this NICE Engage Platform. The NICE Application Server and the NICE Active Logger, both servers can be logged into and checked to ensure all services beginning with NICE are running correctly. As a last resort both servers may need a reboot after the initial configuration.



Name	Description	Status	Startup Type	Log On As
NICE AA Search Controller	Audio Anal...	Running	Automatic	.\administr...
NICE Agent Center	Monitors an...	Running	Automatic	.\administr...
NICE Audit Trail Service	Enables add...	Running	Automatic	.\administr...
Nice BSF Server	Enables the ...	Running	Automatic	.\administr...
NICE Coaching Server	Manages C...	Running	Automatic	.\administr...
NICE Deployment Manager Agent	NICE Deplo...	Running	Automatic	.\administr...
NICE Enrollment Service	NICE Enroll...	Running	Automatic	.\administr...
NICE Evaluation Forms Server	Manages Ev...	Running	Automatic	.\administr...
NICE FTF Query Server	Performs q...	Running	Automatic	.\administr...
NICE Integration Dispatch Service	Launches a...	Running	Automatic	.\administr...
NICE Interactions Center Core	Acts as the ...	Running	Automatic	.\administr...
NICE Interactions Center DBSrvr	Manages th...	Running	Automatic	.\administr...
NICE Interactions Center Monitor	Report failo...	Running	Automatic	.\administr...
NICE Interactions Center RCM	Responsible...	Running	Automatic	.\administr...
NICE Interactions Center TRS	Insert missi...	Running	Automatic	.\administr...
NICE Investigations Server	Manages an...	Running	Automatic	.\administr...
NICE IP Phone Applications	Performs IP ...	Running	Automatic	.\administr...
NICE Keep Alive Service	Nice Keep A...	Running	Automatic	.\administr...
NICE Logging Service	A service de...	Running	Automatic	.\administr...
NICE Media Provider Control Manager	An online re...	Running	Automatic	Local Syste...
NICE MediaCollectionServer	Manages an...	Running	Automatic	.\administr...
NICE Monitor Server	Performs pl...	Running	Automatic	.\administr...
NICE MyUniverse	Host for My...	Running	Automatic	.\administr...
NICE NBA	Performs q...	Running	Automatic	.\administr...
NICE Notification Service	Generates N...	Running	Automatic	.\administr...
NICE Playback Administration	Manages A...	Running	Automatic	.\administr...
NICE Playback Streaming	Manage Me...	Running	Automatic	.\administr...
NICE Reporter Engine	Nice Report...	Running	Automatic	.\administr...
NICE Reporter Scheduler	Nice Report...	Running	Automatic	.\administr...
NICE Retention Service	Performs re...	Running	Automatic	.\administr...
NICE Rule Engine	Perform rul...	Running	Automatic	.\administr...
NICE RulesManager Service	Manages wr...	Running	Automatic	.\administr...
NICE Storage Center Service	Nice Service...	Running	Automatic	.\administr...

10. Conclusion

These Application Notes describe the configuration steps required for NICE Engage Platform to successfully interoperate with Avaya Proactive Contact R5.1 using Avaya Aura® Application Enablement Services R6.3 to connect to using DMCC Service Observation and Single Step Conference to record calls. All feature functionality and serviceability test cases were completed successfully with some issues and observations noted in **Section 2.2**.

11. Additional References

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

Product documentation for Avaya products may be found at *http://support.avaya.com*

[1] *Administering Avaya Aura® Communication Manager,* Document ID 03-300509

[2] *Avaya Aura® Communication Manager Feature Description and Implementation,* Document ID 555-245-205

[3] *Avaya Aura® Application Enablement Services Administration and Maintenance Guide Release 6.3*

[4] *Avaya Aura® Session Manager Overview*, Doc # *03603323Avaya Aura ® Contact Centre SIP Commissioning, Doc # NN44400-511, Release 6.3*

[5] *Implementing Avaya Proactive Contact R5.1*

Product documentation for NICE products may be found at: http://www.nice.com

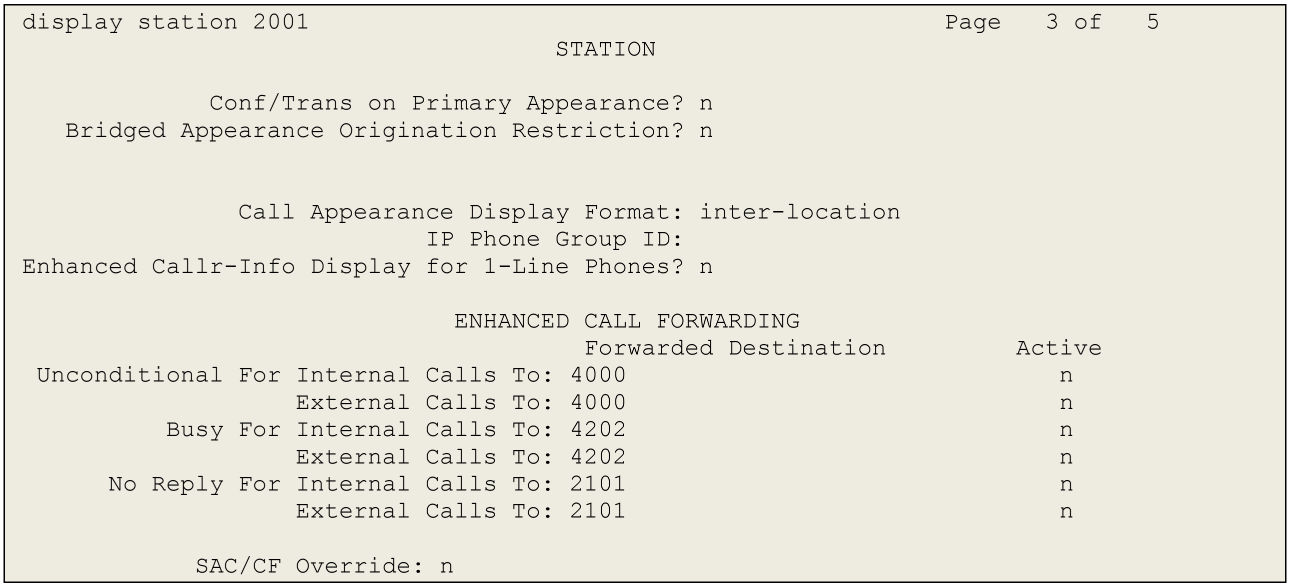
Appendix

Avaya 9620 H.323 Deskphone

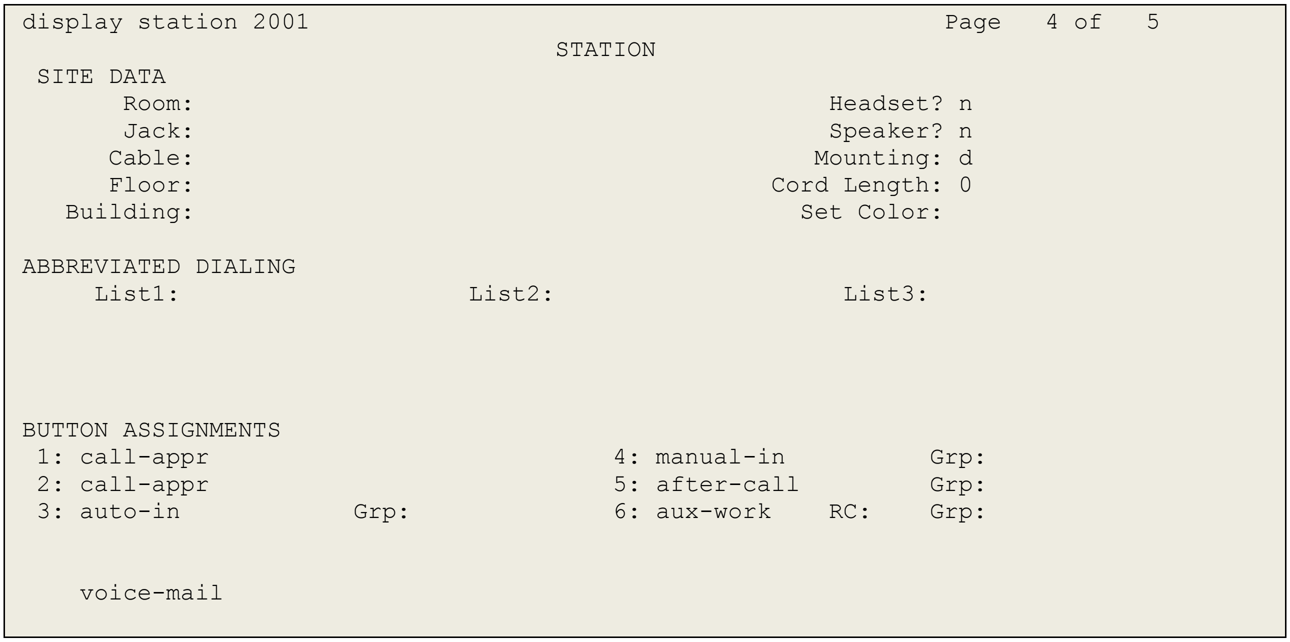
This is a printout of the Avaya 9620 H.323 Deskphone used during compliance testing.

```
display station 2001                                            Page   1 of   5
                                     STATION

Extension: 2001                          Lock Messages? n               BCC: 0
     Type: 9620                          Security Code: *                TN: 1
     Port: S00000                      Coverage Path 1: 2               COR: 1
     Name: Paul 2001                   Coverage Path 2:                 COS: 1
                                       Hunt-to Station:               Tests? y
STATION OPTIONS
                Location:                  Time of Day Lock Table:
              Loss Group: 19         Personalized Ringing Pattern: 1
                                                 Message Lamp Ext: 2001
            Speakerphone: 2-way               Mute Button Enabled? y
        Display Language: english
 Survivable GK Node Name:
          Survivable COR: internal              Media Complex Ext:
   Survivable Trunk Dest? y                          IP SoftPhone? y

                                                         IP Video? n
                              Short/Prefixed Registration Allowed: default

                                              Customizable Labels? y
```

```
display station 2001                                            Page   2 of   5
                                     STATION
FEATURE OPTIONS
           LWC Reception: spe              Auto Select Any Idle Appearance? n
          LWC Activation? y                         Coverage Msg Retrieval? y
  LWC Log External Calls? n                                    Auto Answer: none
             CDR Privacy? n                               Data Restriction? n
   Redirect Notification? y                     Idle Appearance Preference? n
 Per Button Ring Control? n                   Bridged Idle Line Preference? n
   Bridged Call Alerting? n                       Restrict Last Appearance? y
  Active Station Ringing: single
                                                         EMU Login Allowed? n
        H.320 Conversion? n          Per Station CPN - Send Calling Number? y
       Service Link Mode: as-needed                    EC500 State: enabled
         Multimedia Mode: enhanced                 Audible Message Waiting? n
    MWI Served User Type:                       Display Client Redirection? n
              AUDIX Name:                      Select Last Used Appearance? n
                                                 Coverage After Forwarding? s
                                                   Multimedia Early Answer? n
                                               Direct IP-IP Audio Connections? y
  Emergency Location Ext: 2000          Always Use? n IP Audio Hairpinning? n
```



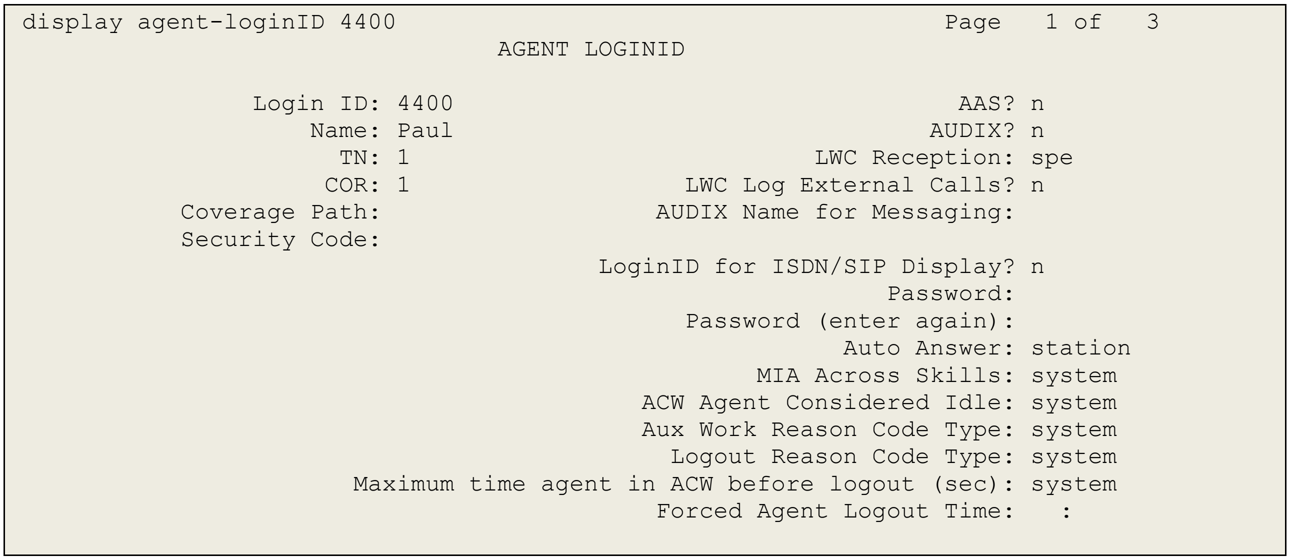
```
display station 2001                                            Page   3 of   5
                                     STATION

             Conf/Trans on Primary Appearance? n
   Bridged Appearance Origination Restriction? n


               Call Appearance Display Format: inter-location
                            IP Phone Group ID:
Enhanced Callr-Info Display for 1-Line Phones? n

                              ENHANCED CALL FORWARDING
                                       Forwarded Destination         Active
 Unconditional For Internal Calls To: 4000                              n
                   External Calls To: 4000                              n
          Busy For Internal Calls To: 4202                              n
                   External Calls To: 4202                              n
      No Reply For Internal Calls To: 2101                              n
                   External Calls To: 2101                              n

            SAC/CF Override: n
```



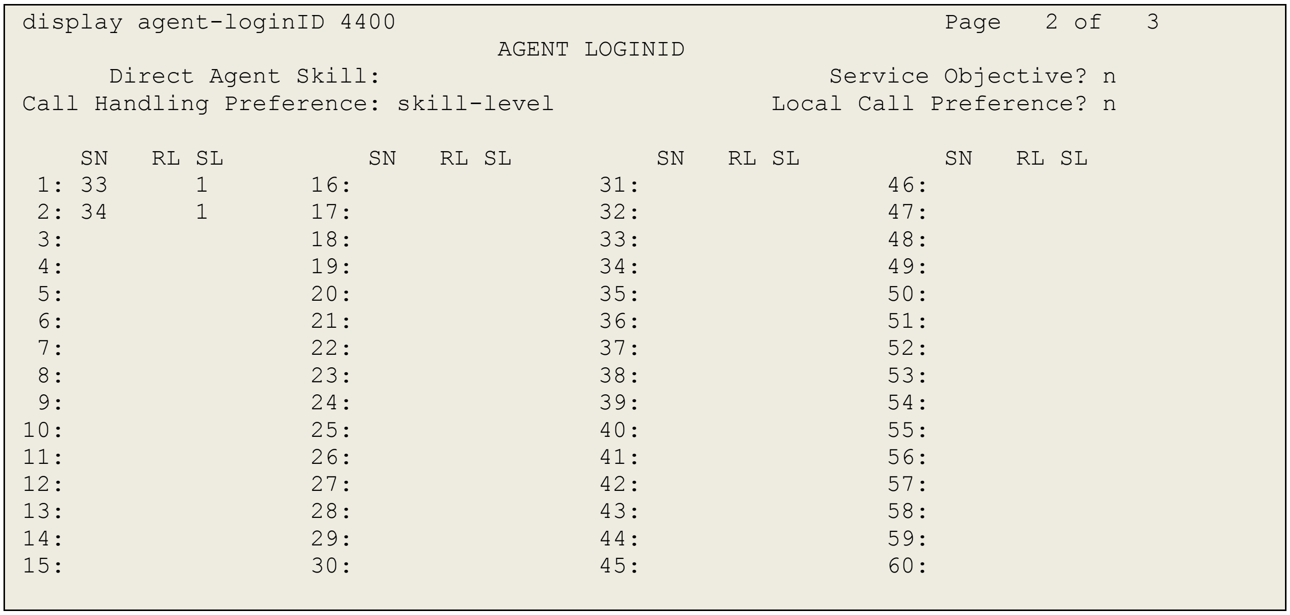
```
display station 2001                                            Page   4 of   5
                                     STATION
 SITE DATA
       Room:                                            Headset? n
       Jack:                                            Speaker? n
      Cable:                                           Mounting: d
      Floor:                                        Cord Length: 0
   Building:                                          Set Color:

ABBREVIATED DIALING
     List1:                    List2:                    List3:




BUTTON ASSIGNMENTS
 1: call-appr                            4: manual-in          Grp:
 2: call-appr                            5: after-call         Grp:
 3: auto-in            Grp:              6: aux-work    RC:    Grp:


    voice-mail
```

Avaya Agent LoginID

This is a printout of one of the agents used during compliance testing.



```
display agent-loginID 4400                                      Page   1 of   3
                                 AGENT LOGINID

                Login ID: 4400                                    AAS? n
                    Name: Paul                                  AUDIX? n
                      TN: 1                             LWC Reception: spe
                     COR: 1                   LWC Log External Calls? n
           Coverage Path:                   AUDIX Name for Messaging:
           Security Code:
                                        LoginID for ISDN/SIP Display? n
                                                            Password:
                                              Password (enter again):
                                                         Auto Answer: station
                                                   MIA Across Skills: system
                                           ACW Agent Considered Idle: system
                                           Aux Work Reason Code Type: system
                                             Logout Reason Code Type: system
                       Maximum time agent in ACW before logout (sec): system
                                            Forced Agent Logout Time:   :
```



```
display agent-loginID 4400                                      Page   2 of   3
                                 AGENT LOGINID
      Direct Agent Skill:                                Service Objective? n
Call Handling Preference: skill-level               Local Call Preference? n

    SN   RL SL          SN   RL SL          SN   RL SL          SN   RL SL
 1: 33      1       16:                 31:                 46:
 2: 34      1       17:                 32:                 47:
 3:                 18:                 33:                 48:
 4:                 19:                 34:                 49:
 5:                 20:                 35:                 50:
 6:                 21:                 36:                 51:
 7:                 22:                 37:                 52:
 8:                 23:                 38:                 53:
 9:                 24:                 39:                 54:
10:                 25:                 40:                 55:
11:                 26:                 41:                 56:
12:                 27:                 42:                 57:
13:                 28:                 43:                 58:
14:                 29:                 44:                 59:
15:                 30:                 45:                 60:
```

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.