

Avaya Solution & Interoperability Test Lab

Application Notes for TelStrat Engage Record Version 3.3 with Avaya Communication Server 1000, Release 7.5 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the TelStrat Engage Record version 3.3 to successfully interoperate with Avaya Communication Server 1000 Release 7.5.

TelStrat Application Line Card can be used as a digital line card on the Avaya Communication Server 1000 to program Avaya digital telephones. Engage Record v3.3 is able to record and playback any conversation that goes through the Avaya digital telephones that are registered to the TelStrat Application Line Card.

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

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1. Introduction

The objective of this interoperability compliance testing is to verify that the TelStrat Application Line Card (TALC) can be used in Avaya Communication Server 1000 Release 7.5 (CS1000) and it behaves like an Avaya Digital Line Card (xDLC). The TALC should be able to register Avaya digital telephones to them and when connected to an Engage Record v3.3, the Engage Record can record conversations of the Avaya digital telephones and playback the same as required.

2. General Test Approach and Test Results

The general test approach was to verify whether the TALC functions like an xDLC and if Avaya digital telephones can be configured on TALC ports. Once the telephones were configured, the Engage Record Server was tested to see if it can record and playback the conversations of the digital telephones that were built using the TALC.

2.1. Interoperability Compliance Testing

The compliance test included configuring the TALC to operate as an xDLC on the Avaya CS1000. Telephones configured using the TALC were then monitored and conversations recorded using the Engage Record Server. The following areas were covered:

- Recording all calls.
- Schedule Recording based on Agent, Port Numbers, Date & Time, Days of Week, DN, DNIS, CLID.
- Recording on demand via On-Demand keys which could be built and properly operate on the digital telephones using the TALC Configuration Manager.

2.2. Test Results

All executed test cases have passed. Avaya digital telephones can be programmed on TALC and all the keys and features operate correctly. The conversations of these digital telephones can be recorded using the Engage Record Server and can be successfully played back. The On-Demand key features built on the digital telephones also operate correctly.

2.3. Support

Technical support for TelStrat can be obtained by contacting TelStrat via email at support@telstrat.com or by calling **+1 972-633-4548**

3. Reference Configuration

Figure 1 illustrates the lab test configuration used during the compliant testing event between the CS1000 and the TALC, Engage Server combination.

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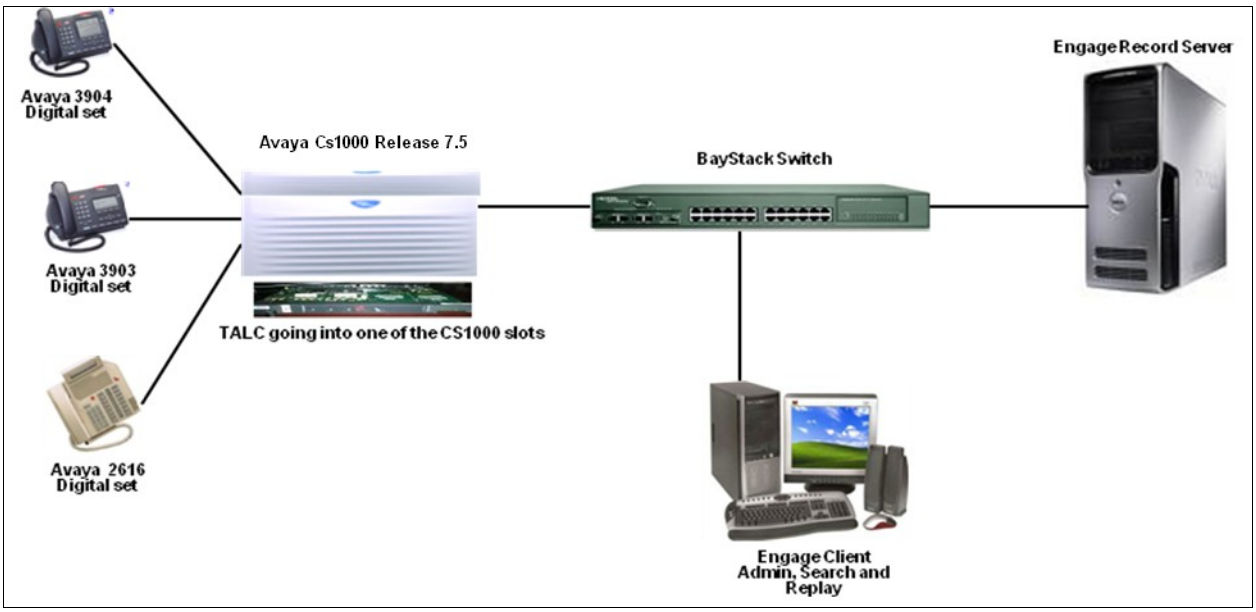


Figure 1: Lab Test Connection Diagram for CS1000, TALC, Engage Record Server and Engage Client

4. Equipment and Software Validated

The following equipment and software was used during the lab testing:

Equipment	Software/Firmware
Avaya CS1000E	Call Server (CPPM): 7.50Q Signaling Server (CPPM): 7.50.17
Avaya Digital Telephones: M3904 M3903 M2616	 Core – 024; Flash - 093 Core – 017; Flash - 052
TALC	version 1_05_02.8
Engage Record Server OS	Windows 2003 Server SP2
Engage Record Server	3.3.0.6
Engage Client OS	Windows XP Pro SP3

5. Configure Avaya CS 1000

This section describes the steps to configure the CS1000 with the TALC.

5.1. Configuring the TALC with CS1000

The TALC is a hardware line card that supports Avaya digital telephones and needs to provide functionalities similar to the xDLC. Insert the TALC in a free slot of the CS1000 that supports the xDLC.

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Log in to the CS1000 and at the command prompt type **LD 32.** In this overlay we are able to get the status of the new hardware. During the compliance testing, the CS1000 command line was accessed via SSH using the PuTTY application.

In **LD 32** type **STAT <l s c u>**; where **l s c u** stands for loop, shelf, card, unit.
The above command provides the status of the new card inserted. When the card is inserted for the first time, the CS1000 will recognize this card and all the units (ports) within this card. The ports are initially in the disabled state.

Program a digital set (M2000 or 3900 series) on one of the ports on the TALC. Refer to **Section 9 [1]** for details as how to configure digital telephones.

6. Configuration for Engage Record

This section describes the steps on how to configure the Engage Record using the Engage Record Client to be able to do recording on the CS1000 digital telephones via the TALC.

6.1. Configure TALC

The TALC can be configured and managed either by command line interface (CLI) or by using a Graphical User Interface (GUI) called TALC Configuration Manager. These Application Notes only describe how to configure the TALC to communicate with the Engage Record Server via the TALC Configuration Manager. It is assumed that the TALC Configuration Manager has been installed successfully. For additional information on TALC installation and administration, refer to **Section 9 [2].**

The TALC Configuration Manager can be accessed by navigating to **Start > All Programs > TALC Configuration Manager > TALC Configuration Manager**. During the compliance testing the TALC Configuration Manager was installed on the Engage Record Server itself.

The login screen of the TALC Configuration Manager is shown in **Figure 2** below. Type the *Login Name* and *Password* and then press **OK**.

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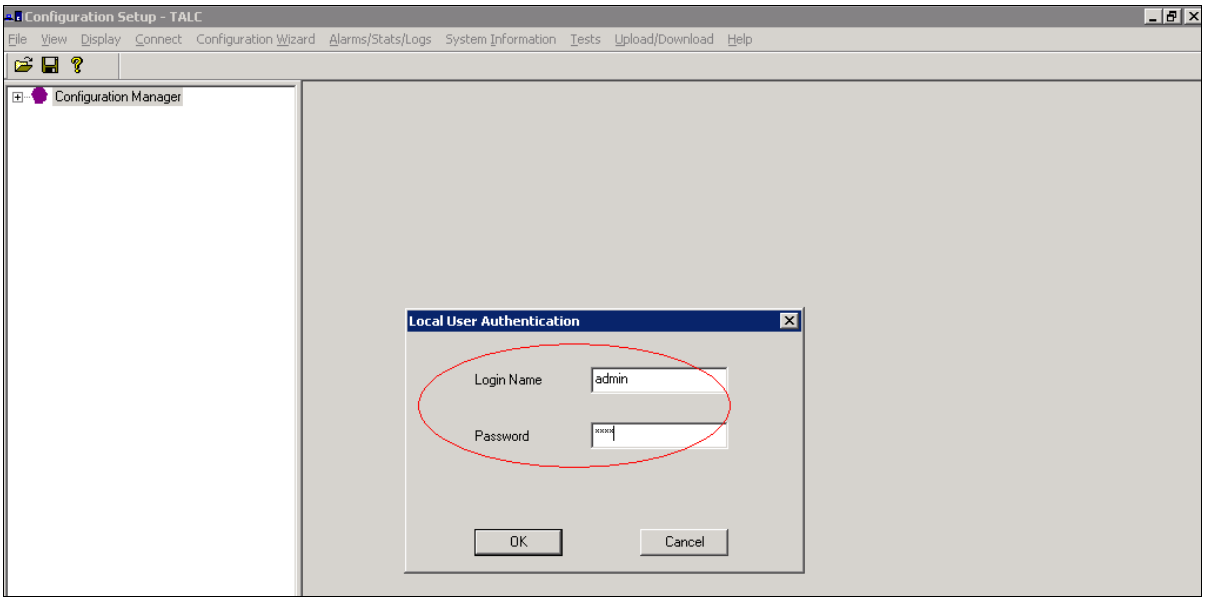


Figure 2: Login Screen of TALC Configuration Manager.

Navigate to **Connect > Logon Unit > Telnet** to get access to the TALC as shown in **Figure 3** below.

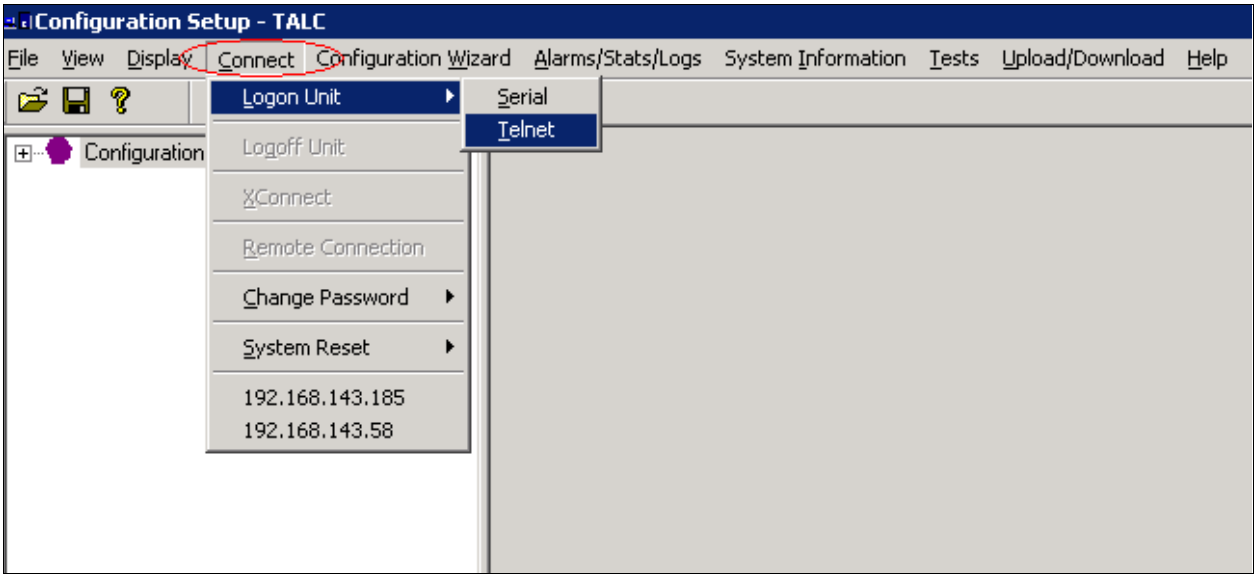


Figure 3: Telnet access to the TALC

In the Telnet Configuration screen as shown in **Figure 4** below, enter the *IP address* of the TALC and then press **OK**.

Note: This telnet session will allow user to access the TALC card using local (default) IP address.

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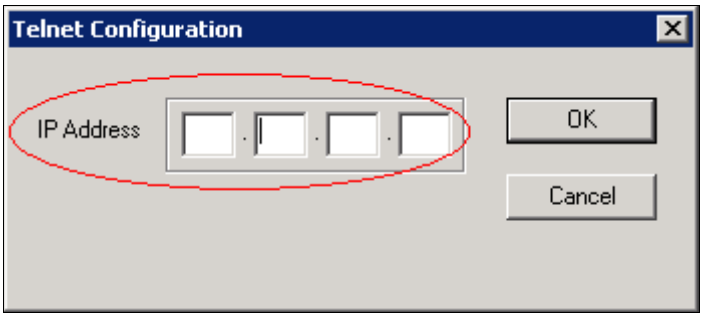


Figure 4: Telnet Configuration

Enter the *Login Name* and *Password* and then press **OK** to pass the authentication for Telnet mode as shown in **Figure 5** below.

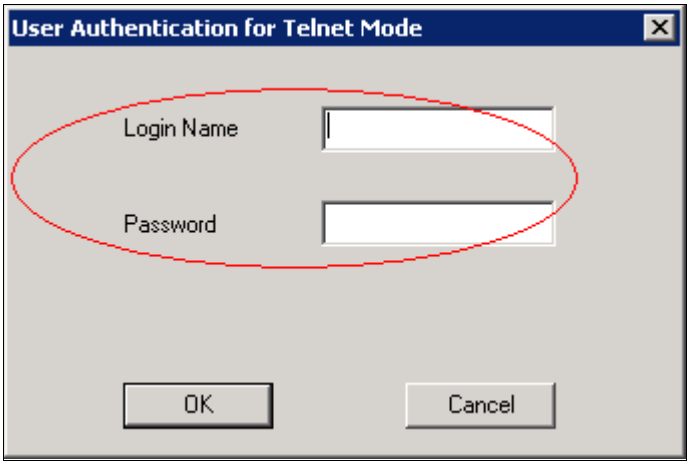


Figure 5: Login Screen for Telnet Mode

Connection to the TALC is now established via Telnet. The Startup Information screen is shown in **Figure 6** below. Press on the **Close** button.

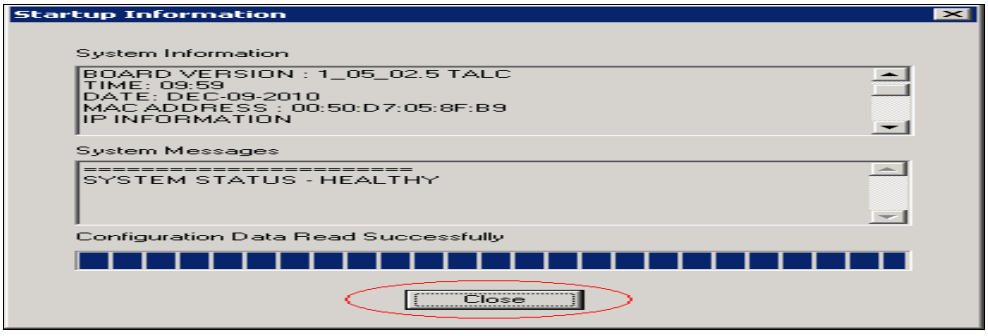


Figure 6: Startup Information

In the TALC Configuration Manager navigate to **Display > TALC System Configuration** as shown in **Figure 7** to access the System Configuration screen.

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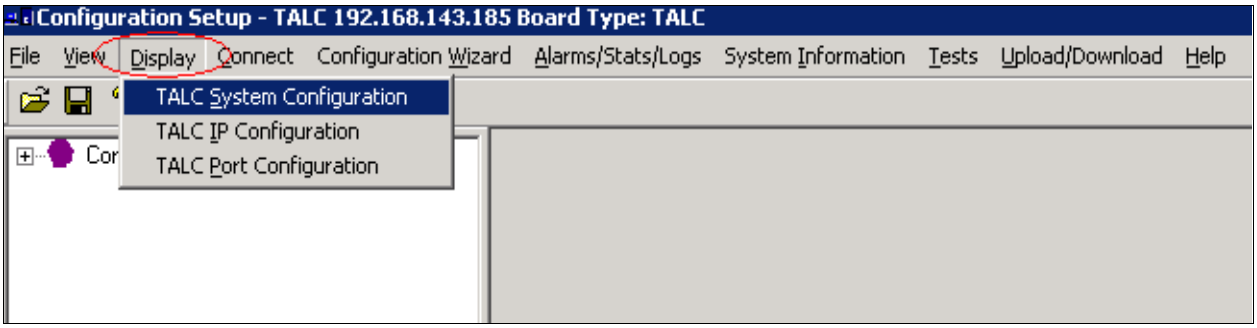


Figure 7: Accessing the TALC System Configuration

In the System Configuration window, the *Unit ID* and the *Engage Server IP Address* can be configured as shown in **Figure 8** below. *Unit ID* value range is between 1 to 254, see[2]. In this particular set up, the *Unit ID* for this testing is 185. At the **DN Discovery Schedule**, check on the **Enable DN Discovery** check box to enable the DN discovery. Select the **Frequency** and click on the **Start DN Discovery** button the frequency, see [2]. In this testing, frequency used is once a day. To send this information to the TALC, press the **Send** button. By configuring this IP address, the TALC is now able to access the Engage Record Server. For additional details on configuring the TALC, see [2].

Note: Customer must set the *Unit ID* for each TALC provisioned/deployed for recording of their CS1000 to the Engage server. Specifically from each TALC, the traffic will be delineated with this *Unit ID*. *The Engage server cannot accept communication from multiple TALCs having the* ***same/identical UnitID*** *because the data could not be differentiated.*

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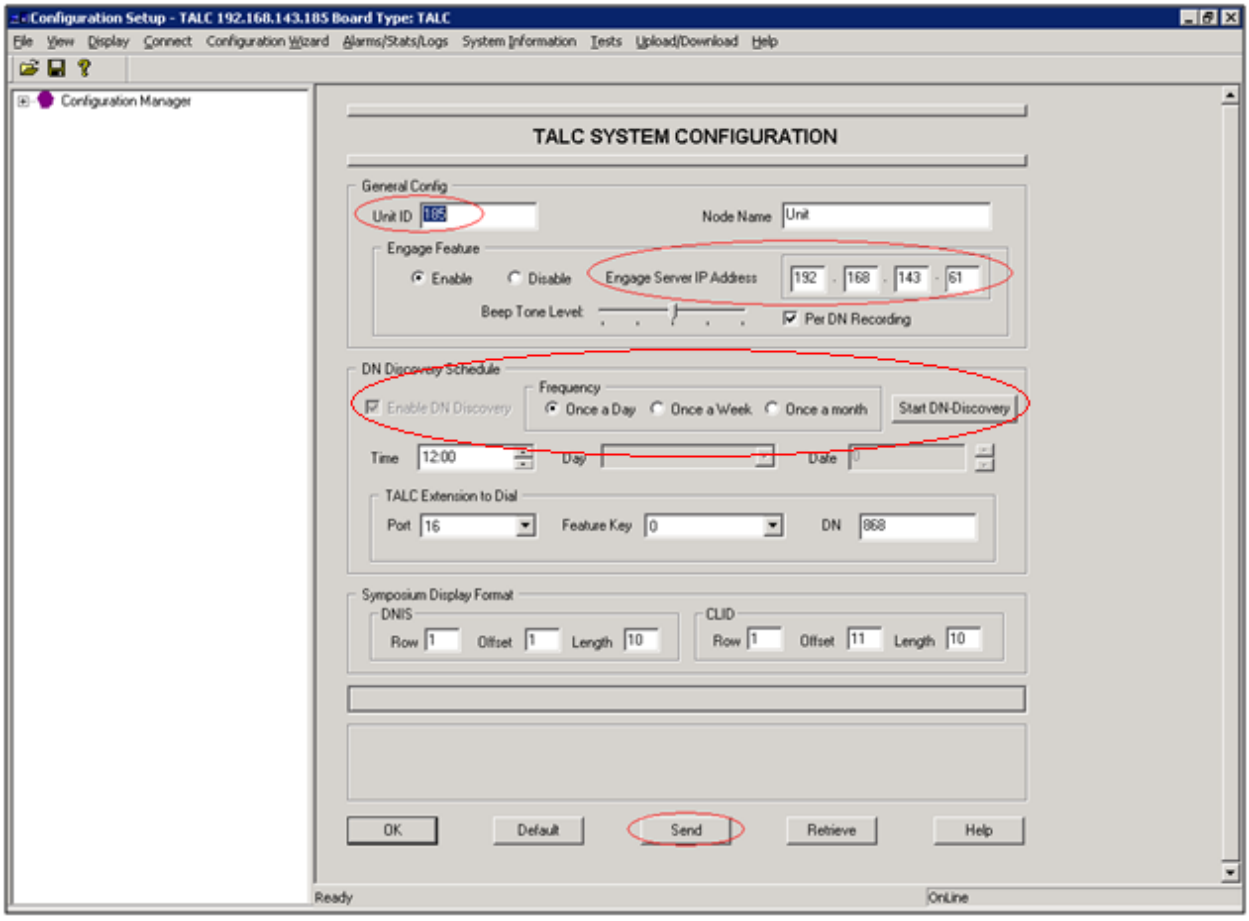


Figure 8: Configuring the Engage Record Server IP and Unit ID on the TALC

Once the Engage Record Server IP and unit ID information has been sent to the TALC, the information needs to be saved on the TALC flash. In the TALC Configuration Manager, navigate to **Upload/Download > Save to Flash** as shown in **Figure 9** below to save the configuration on the TALC flash.

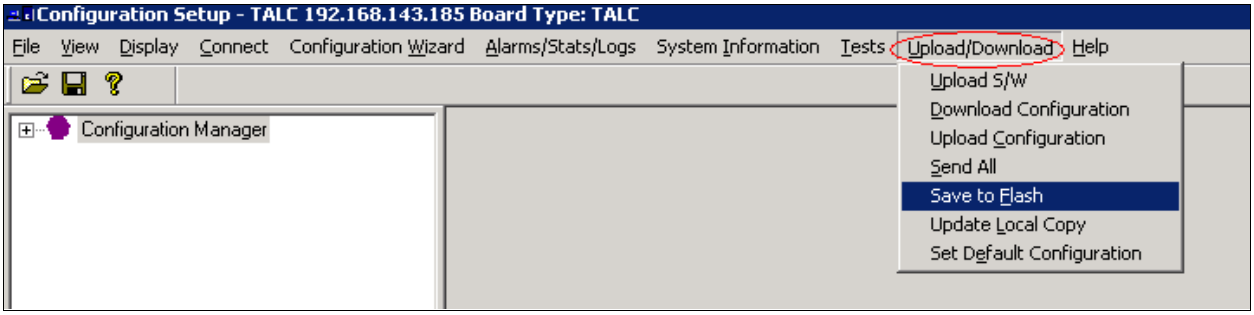


Figure 9: Save to Flash of TALC

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In order for the changes to take effect, the TALC needs to be restarted by navigating to **Connect > System Reset > Restart** in TALC Configuration Manager as shown in **Figure 10**.

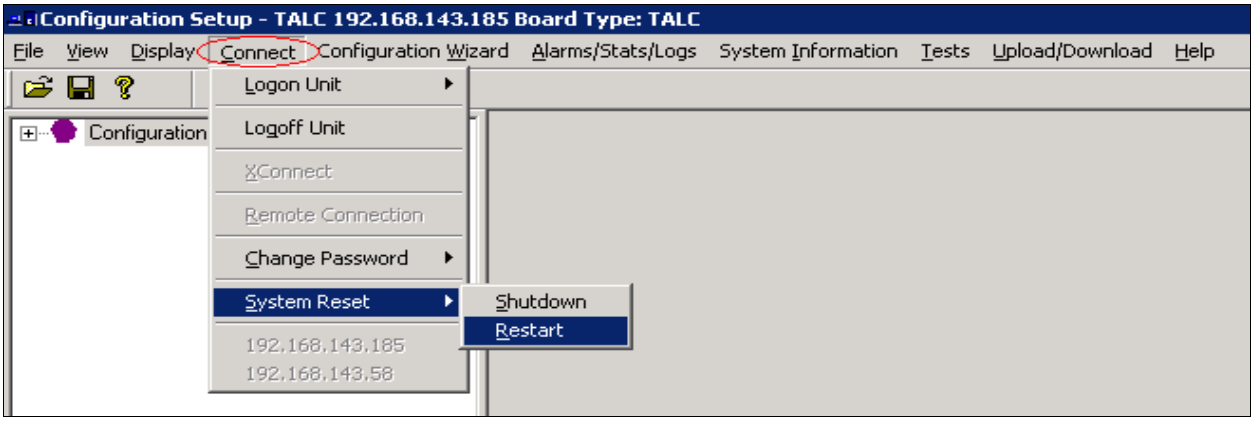


Figure 10: Restart TALC

Note: The following will allow user to change the TALC default IP address to the network IP address which is the same network of the Engage Record Server.

The IP address of the TALC can be configured by navigating in the TALC Configuration Manager to **Display > TALC IP Configuration** as shown in **Figure 11** below.

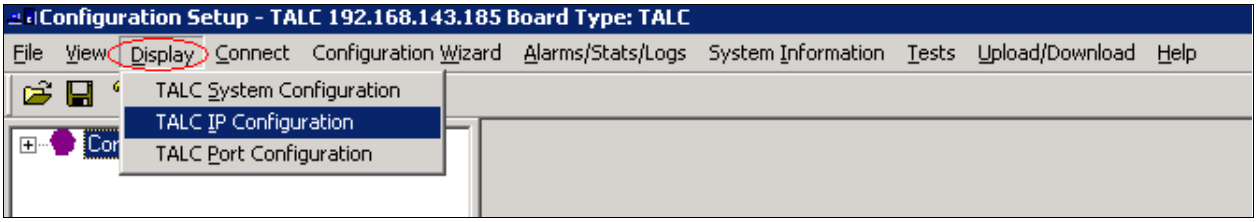


Figure 11: Accessing the TALC IP Configuration

Figure 12 below shows the TALC IP Configuration window. Enter the TALC *IP address, IP Network Mask and IP Gateway*. The *Management* field is disabled by selecting the *Disable* box. Press the **Send** button to forward this configuration to the TALC. Once the configuration has been received by the TALC, the configuration needs to be saved in the TALC flash as shown in **Figure 9** and the card needs to be restarted as shown in **Figure 10**.

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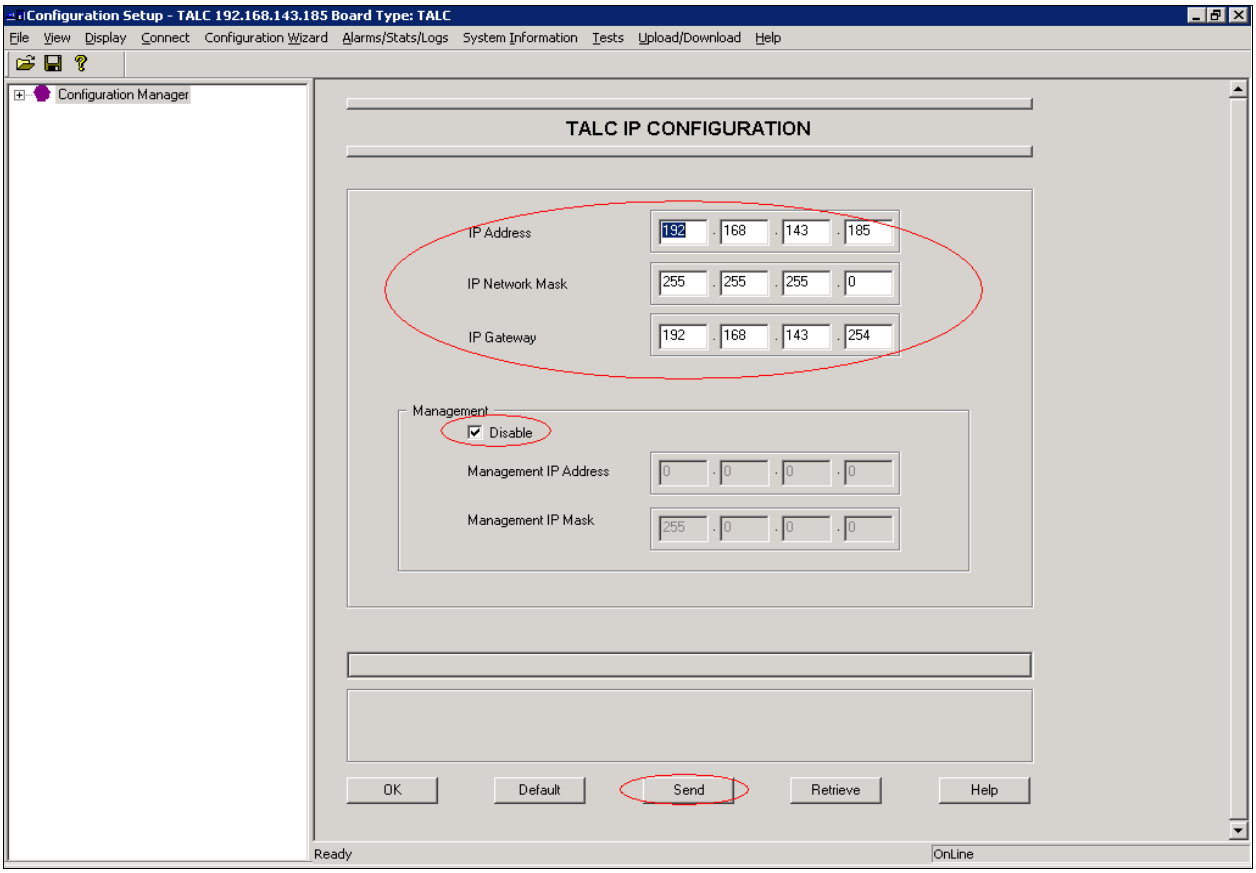


Figure 12: Configuring the TALC IP

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6.2. Configure Engage Record

This section explains the configuration using the Engage Record Client to add digital telephones and ports that will be monitored for recording. These digital telephones are built on the TALC that resides on the CS1000. For the compliance testing some of the digital telephones are configured to behave as an Automatic Call Distribution (ACD) Agent telephone.

It is assumed that the Engage Record Server has been successfully installed and the required recording services are running on it. Assumption is also made that the Engage Record Client has been successfully installed. For additional information on Engage Record suite installation and configuration refer to **Section 9 [3] and [4]**.

To access the Engage Client, navigate to **Start > All Programs > TelStrat Engage > Engage Client** from the equipment it is installed on. During compliance testing the client was installed on a PC.

The TelStrat Engage login screen is seen as in **Figure 13** below. Enter the *UserID*, *Password* and the *Server Name*. The server name is the IP address or the server name of the Engage Record Server. Press **OK** once the above information has been entered.

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Figure 13: Login Screen of Engage Client

To add the ACD telephones that the Engage Record Server need to record, navigate to **Engage > Configuration > ACD Agents**. On the right hand window pane under the column *ACD Agents*, right click the mouse button and select the *Create* option provided as seen in **Figure 14** below.

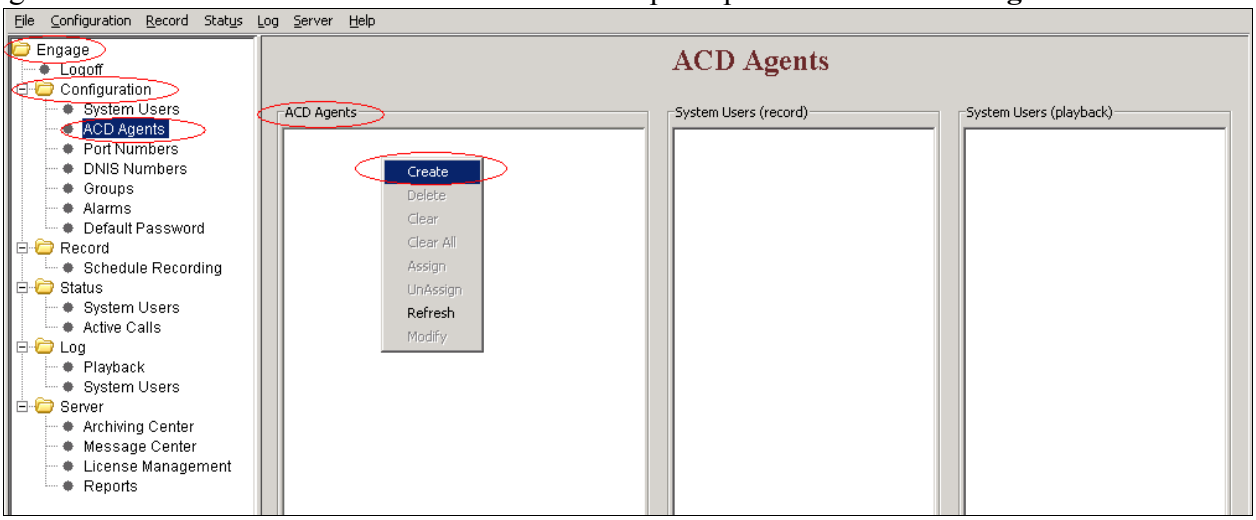


Figure 14: Adding ACD Agents

Type the *ACD Agent* information that needs to be added and press **OK** as shown in **Figure 15**. The information in *Name* field is optional.

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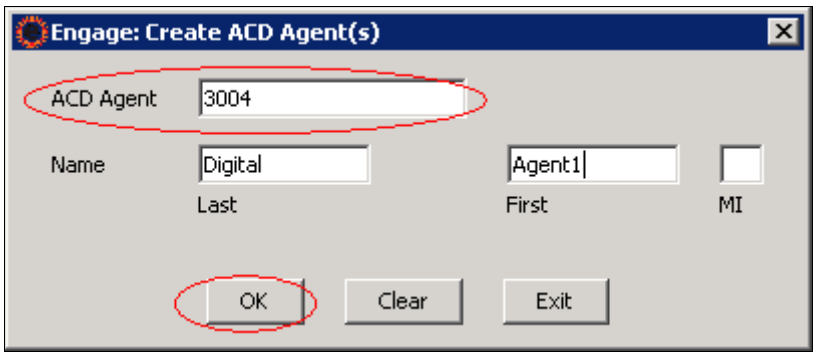


Figure 15: Create ACD Agents

Figure 16 below shows the confirmation screen that the ACD Agent has been added successfully. Press **OK** to exit this window. The above steps as explained in **Figures 15** and **16** can be repeated to add more ACD Agents as required.

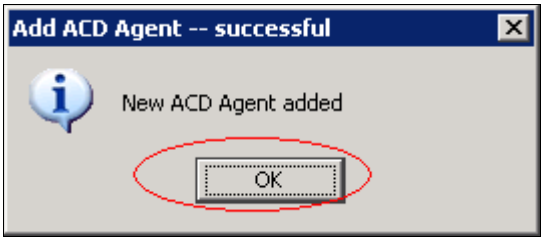


Figure 16: Add ACD Agent Successful

Figure 17 shows the added ACD agent under the *ACD Agents* column of the Engage Client.

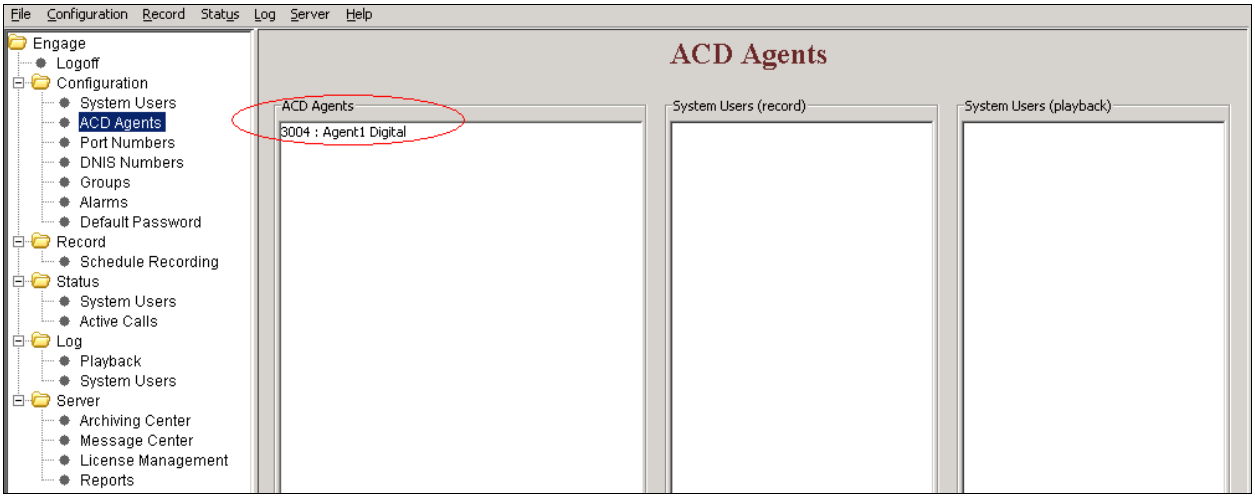


Figure 17: Engage Client showing added ACD Agent

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The port numbers can be added by navigating to **Engage > Configuration > Port Numbers**. On the right hand window pane under the column *Port Numbers*, right click the mouse button and select the *Create* option provided as seen in **Figure 18** below.

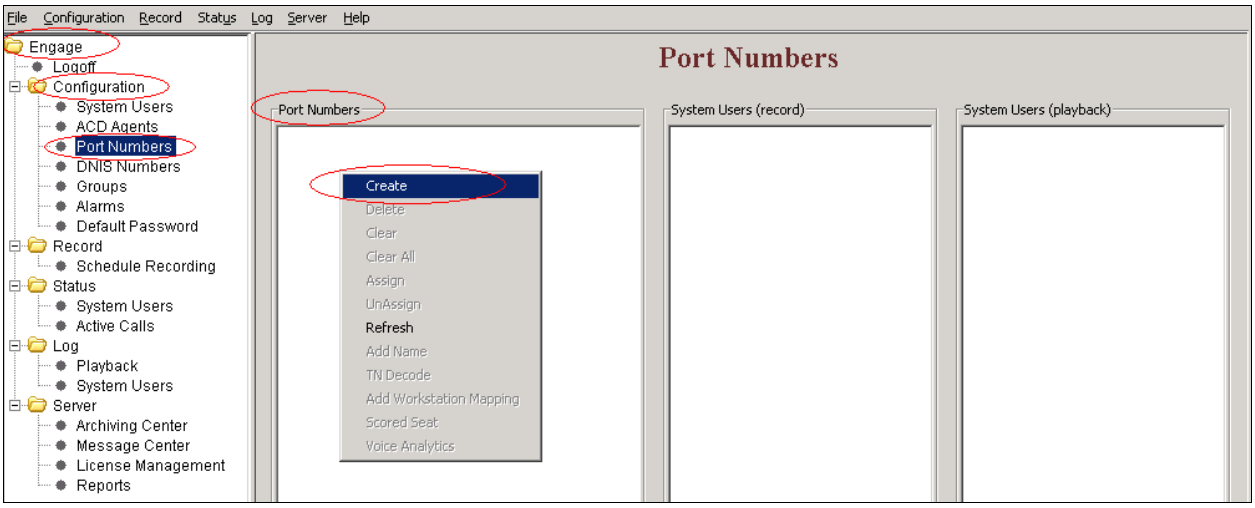


Figure 18: Adding Port Numbers

To add a port for digital telephones, select the *TDM* radio button, type the port number (example 0185, which was configured as the Unit ID for the TALC as shown in **Figure 8**), select the *Channel numbers to add* and press **OK** as shown in **Figure 19** below.

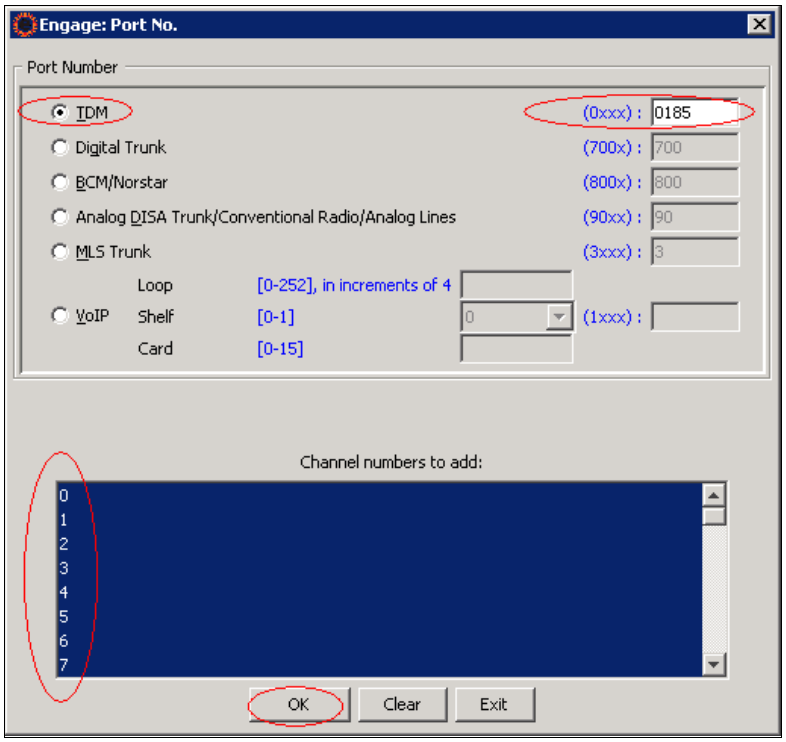


Figure 19: Configuring Port Number and Selecting Channels

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Figure 20 below shows the confirmation screen that the Port Numbers has been added successfully. Press **OK** to exit this window. The above steps as explained in **Figures 19** and **20** can be repeated to add more Port Numbers as required.

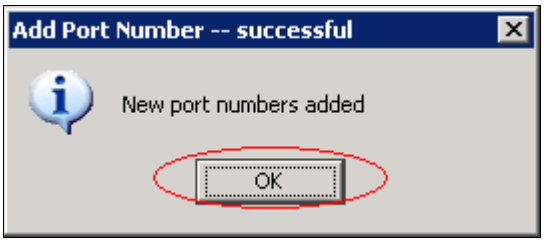


Figure 20: Add Port Number Successful

Figure 21 shows the added Port Numbers and its channels under the *Port Numbers* column of the Engage Client.

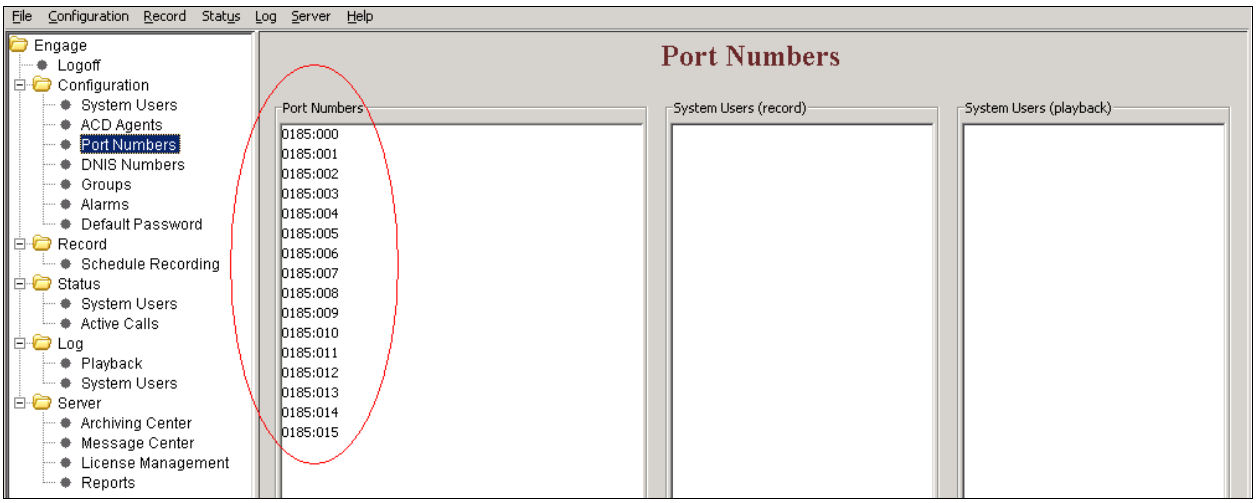


Figure 21: Engage Client showing added Port Numbers

6.3. Configure Recording Criteria

This section describes the recording criteria that can be built using the Engage Record Client to record calls going on the digital telephones. Example criteria discussed in this section are Global recording (record all calls), Selective recording (record calls as per filters set) and Quality monitor recording (recording calls based on frequency of calls).

To create a recording criteria navigate to **Engage > Record > Schedule Recording**. On the right hand window pane under the column *Schedule Recording Criteria*, right click the mouse button and select the *Create* option provided as seen in **Figure 22** below.

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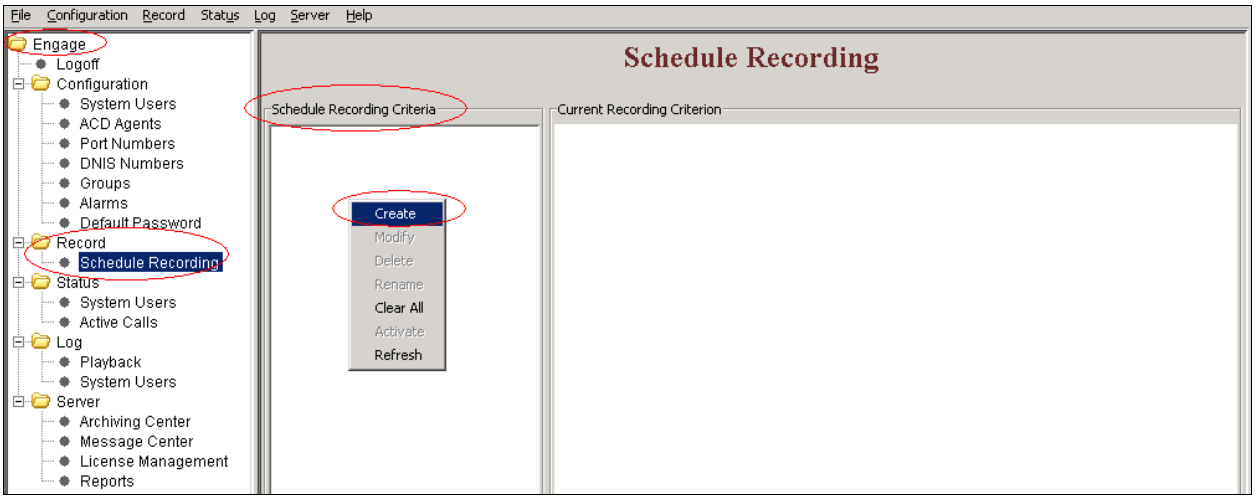


Figure 22: Creating Recording Criteria

In the New Criteria window type the *Criteria Name* and press **OK** as shown in **Figure 23** below.

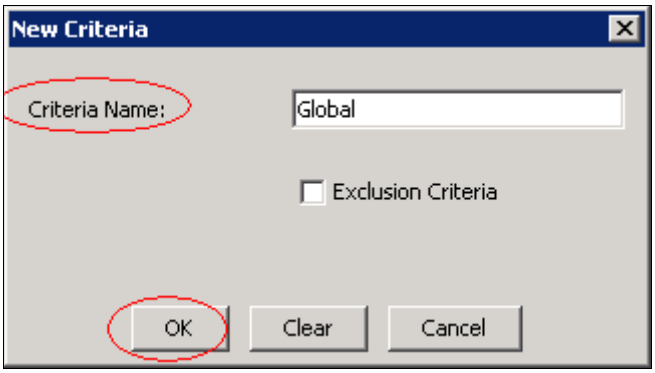
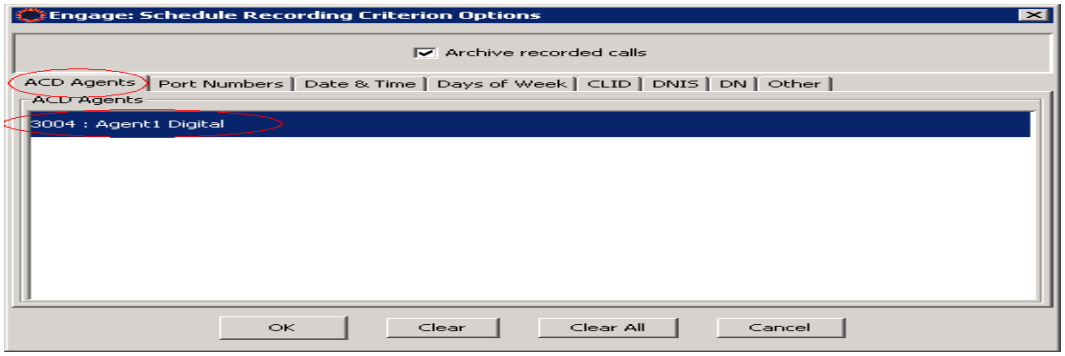


Figure 23: Creating New Criteria

The *Global* criteria rule is built to record all calls. **Figure 24** shows the ACD Agent being selected so that all incoming/outgoing calls made to/from this ACD Agent set are recorded.



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Figure 24: ACD Agent set being added to the Global Criteria

Figure 25 shows all the Port Numbers being selected so that all incoming/outgoing calls made through these channels are recorded.

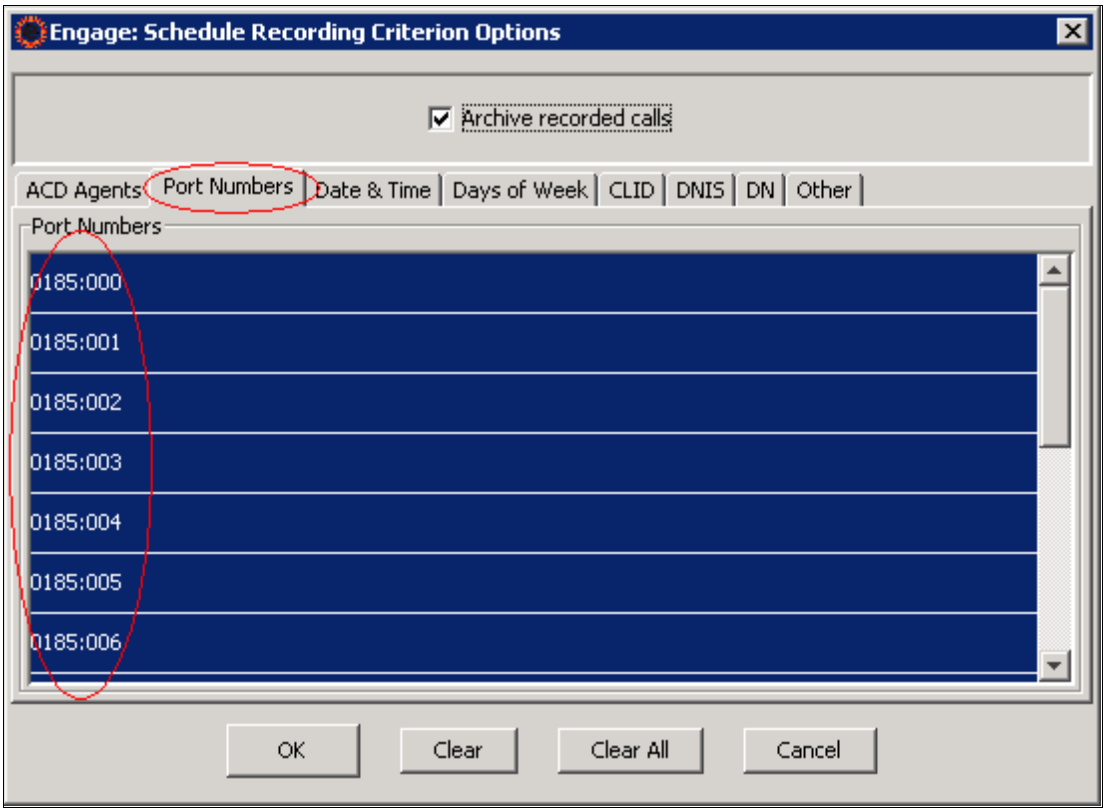


Figure 25: Port Numbers being added to the Global Criteria

If DN/s need to be added to this criteria then go to the *DN* tab of the criteria and right click the mouse button and select the *Add* option presented as shown in **Figure 26**.

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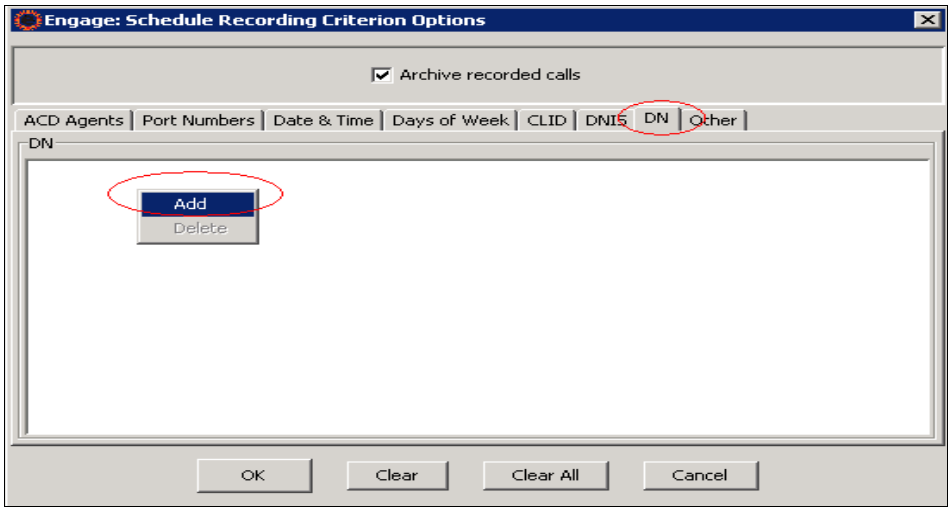


Figure 26: Adding DN to Criteria

Add a DN, for example 4389 as shown in **Figure 27** below.

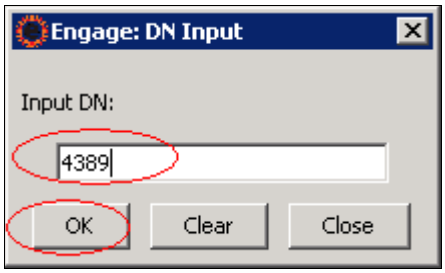


Figure 27: DN Input Screen

Figure 28 shows that the DN has been added successfully. Press **OK**. To add more DN/s, repeat steps as described in **Figures 26** through **28**.



Figure 28: DN added successfully

Now the required DN/s can be selected as shown in **Figure 29** and included into the *Global* criteria. Press **OK** to complete configuring the *Global* criteria.

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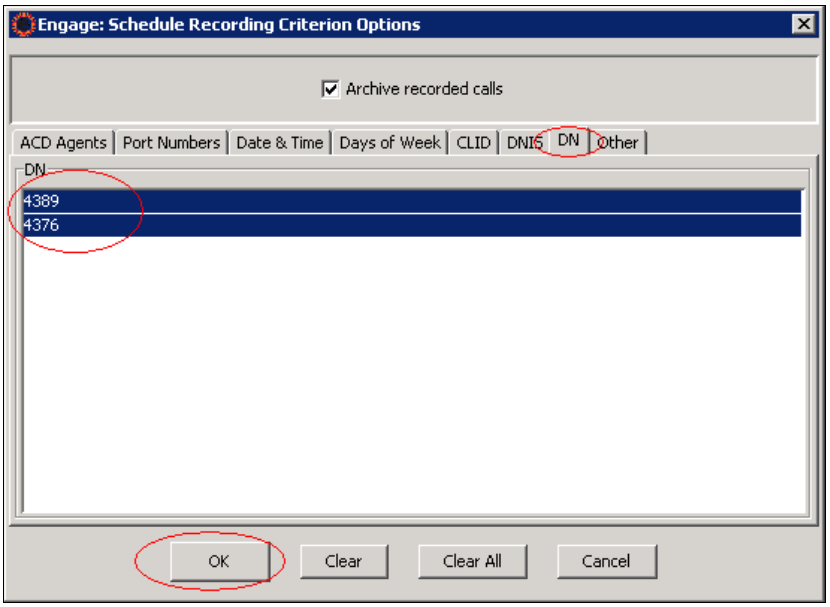


Figure 29: DN/s being added to the Global Criteria

Figure 30 shows the criteria have been built successfully. Press **OK**.

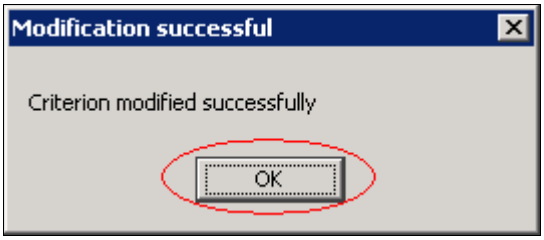


Figure 30: Recording Criteria successful

Figure 31 shows the summary of the *Global* criteria showing the ACD Agents, Port Numbers and DN that will be included as part of the Engage Record.

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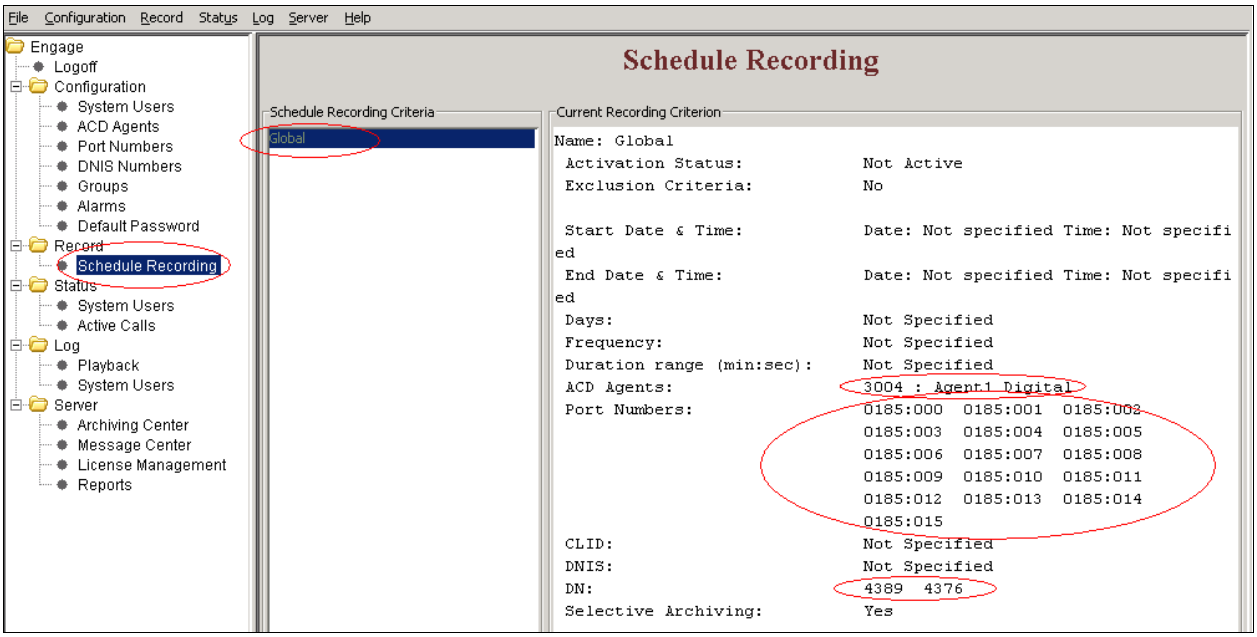


Figure 31: Global Criteria Details

Selective recording is where incoming/outgoing calls are recorded of selected components of ACD Agents, DN and Port Numbers etc.

To create a Selective recording criterion, navigate to **Engage > Record > Schedule Recording**. On the right hand window pane under the column *Schedule Recording Criteria*, right click the mouse button and select the *Create* option provided as seen in **Figure 22**.

In the New Criteria window type the *Criteria Name* as *Smart* and press **OK** as shown in **Figure 23**.

The *Smart* recording criteria rule is built to record selective calls. **Figure 32** shows the ACD Agent being selected so that all incoming/outgoing calls made to/from this ACD Agent set is recorded.

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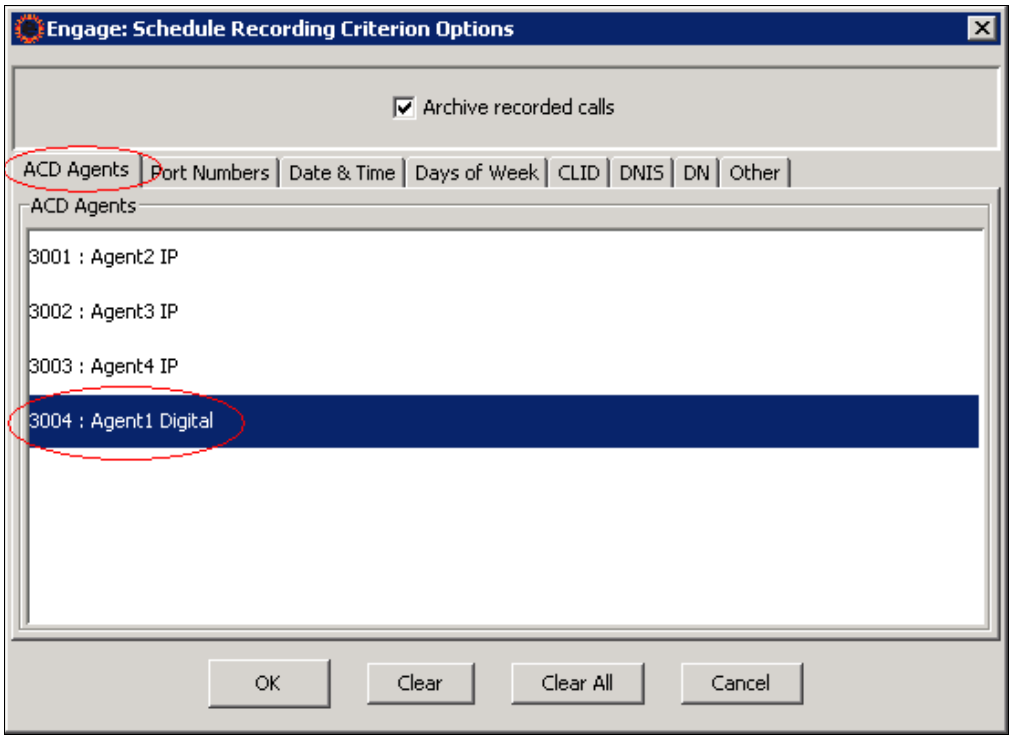


Figure 32: Selected ACD Agent set being added to the Smart Criteria

Now the required DN is selected as shown in **Figure 33** and included into the *Smart* criteria. Press **OK** to complete configuring the *Smart* criteria.

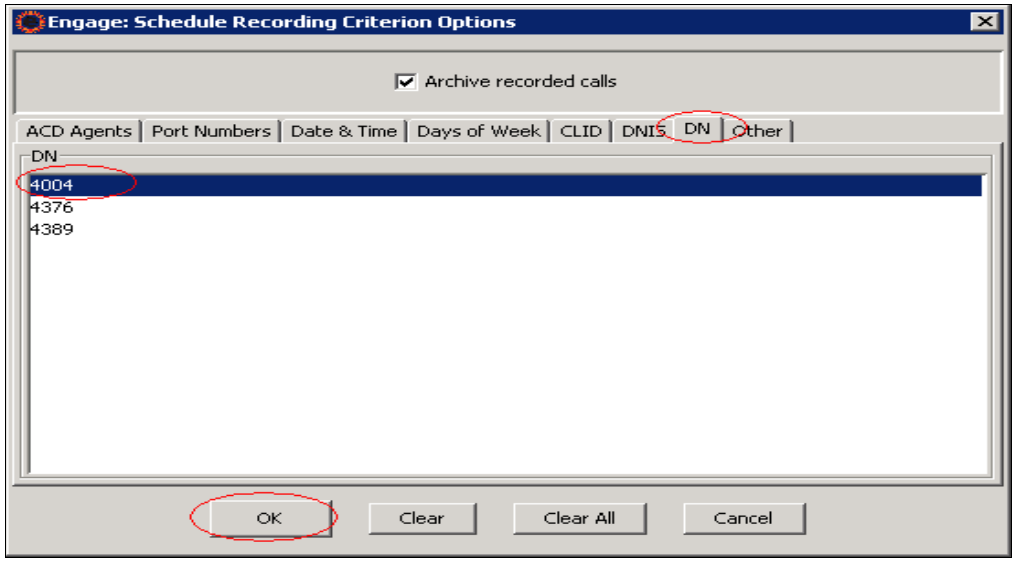


Figure 33: Selected DN being added to the Smart Criteria

Figure 34 shows the summary of the *Smart* criteria showing the selected ACD Agent and DN that will be included as part of the Engage Record.

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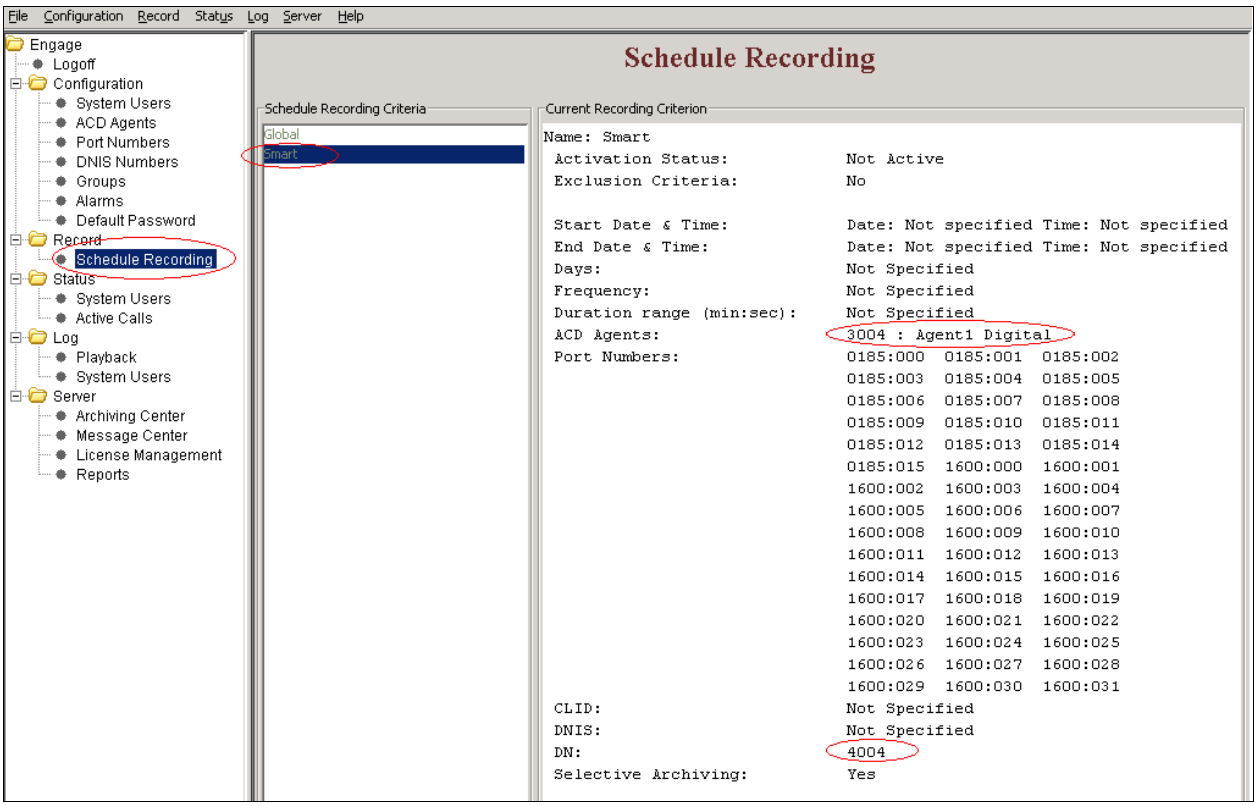


Figure 34: Smart Criteria Details

Quality monitor recording is where for example 1 out of 3 calls are recorded. The frequency of calls that need to be recorded can be configured in these criteria.

To create a Quality monitoring recording criteria, navigate to **Engage > Record > Schedule Recording**. On the right hand window pane under the column *Schedule Recording Criteria*, right click the mouse button and select the *Create* option provided as seen in **Figure 22**.

In the New Criteria window type the *Criteria Name* as *Quality 1 of 3* and press **OK** as shown in **Figure 23**.

Quality 1 of 3 criteria is built by selecting the frequency of calls that need to be recorded from the *Other* tab as shown in **Figure 35** below. In this example 1 out of 3 calls will be recorded for Quality monitoring. Other components like ACD Agents, Port Numbers, and DN etc can also be selected as explained previously.

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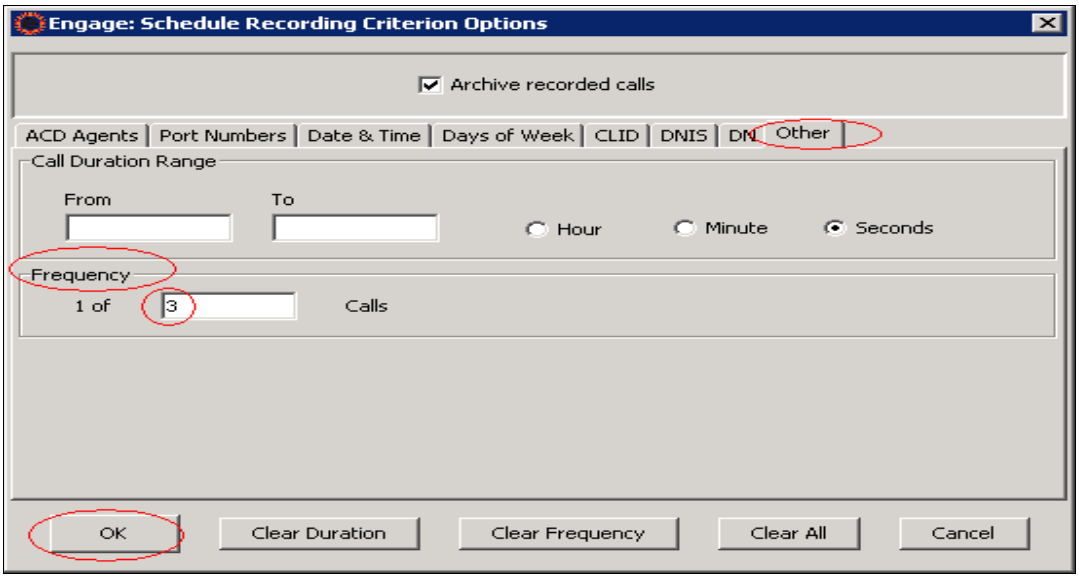


Figure 35: Selecting Frequency of Calls to be recorded for Quality Monitoring

Figure 36 shows the summary of the *Quality 1 of 3* criteria showing the selected frequency of calls that needs to be recorded for Quality monitoring along with the ACD Agents, Port Numbers and DN.

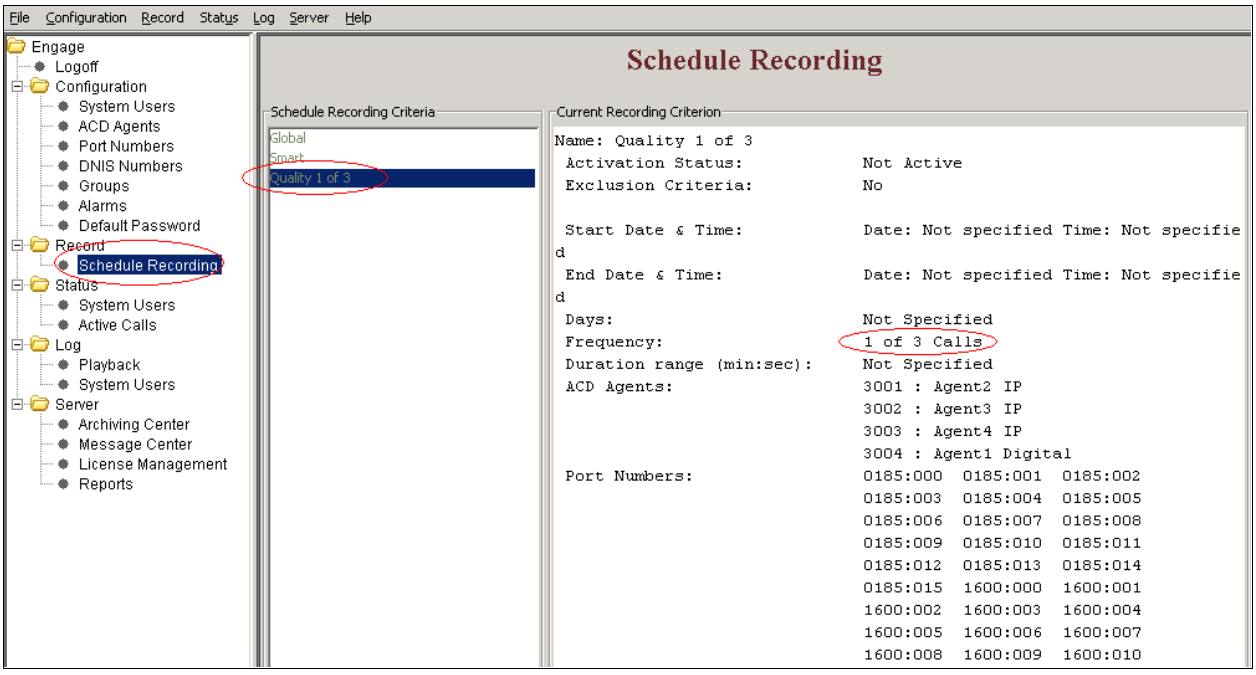


Figure 36: Quality 1 of 3 Criteria Details

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Once the criteria are built, they need to be activated before the calls can be recorded. In the example shown in **Figure 37**, the *Global* criteria can be activated by highlighting the **Global** criteria, right click the mouse button and press **Activate**.

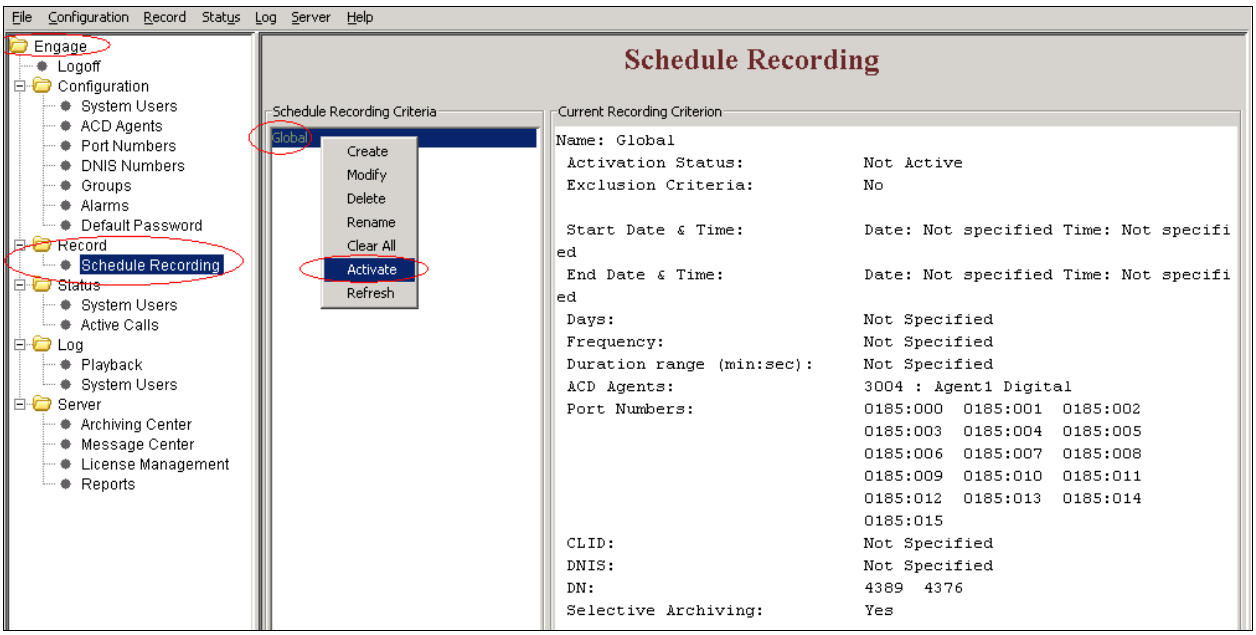
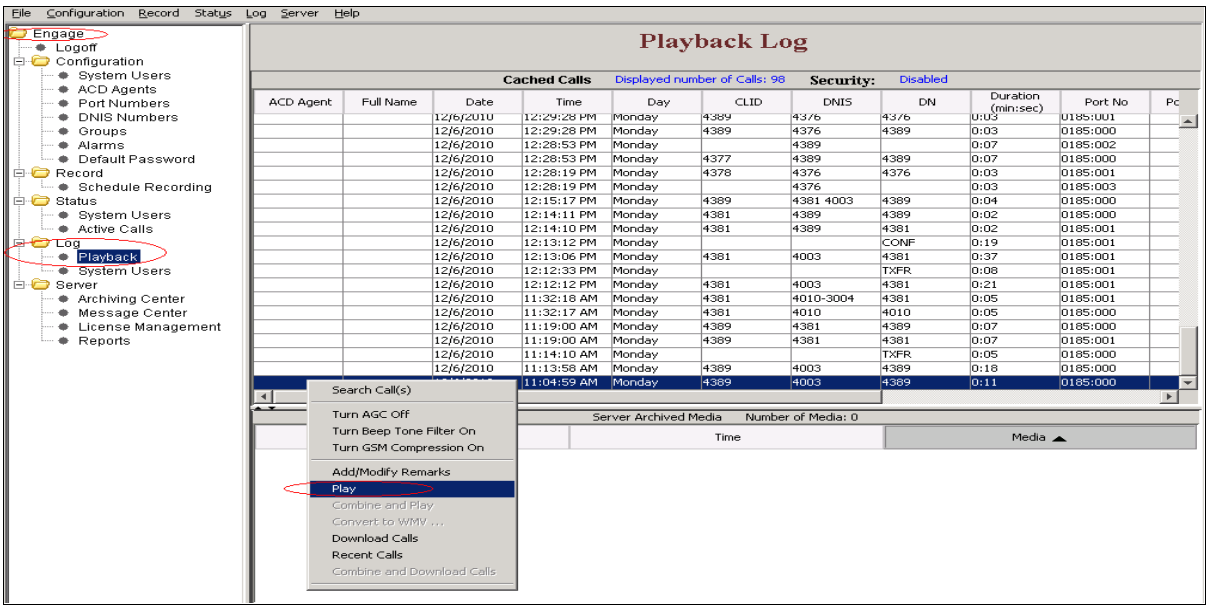


Figure 37: Example showing Global criteria being activated

Recorded calls can be play backed by navigating to **Engage > Log > Playback**, selecting an item from the Playback log, right click on the mouse button and press **Play** as shown on **Figure 38** below.



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Figure 38: Example of a recorded conversation selected to be Played back

6.4. Configure On-Demand Keys

This section describes how On-Demand keys can be built on the digital telephones. Examples of On-Demand keys are Record Key, Conversation Save Key etc. These keys can be pressed on the digital telephones to record a conversation or save a conversation. These keys are built on the digital telephones using the TALC Configuration Manager. Note that when On-Demand key is configured then the associated feature key for the selected port of the digital set must not be configured (i.e. - NUL) on the CS1000.

Login to the TALC Configuration Manager and connect to the TALC as explained in **Figures 2** to **6** of **Section 6.1**.

Once connected to the TALC via the TALC Configuration Manager, navigate to **Display > TALC Port Configuration** as shown in **Figure 39** below to access the Port Configuration screen.

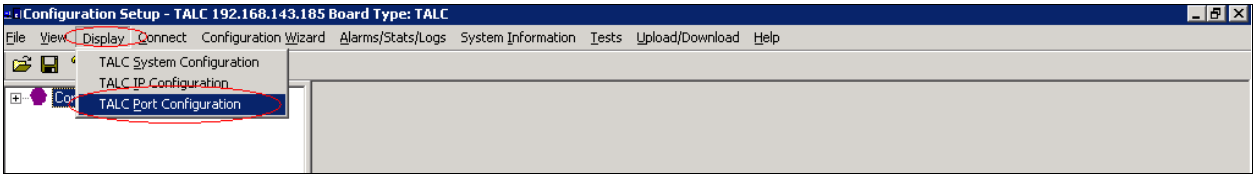


Figure 39: Accessing the TALC Port Configuration

In the TALC Port Configuration screen as shown in **Figure 40**, select a port and press on **Configure** to start configuring an On-Demand key. In the example below, port 0 is selected.

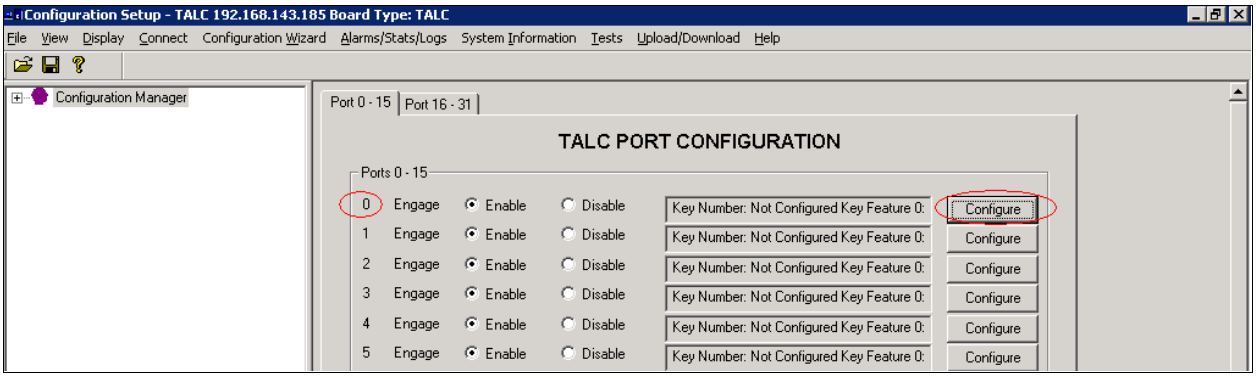


Figure 40: Selecting Port to Configure On-Demand Key

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Under the *Key Feature* field select the required On-Demand key feature from the scroll down option and from the *Key Number* field select the keys where this feature needs to be built. In the example as shown in **Figure 41** below, *Record Key* and *Conversation Save Key* are built on keys *7* and *8* respectively of the digital set that is on port 0. Press **OK** after all required configuration has been completed.

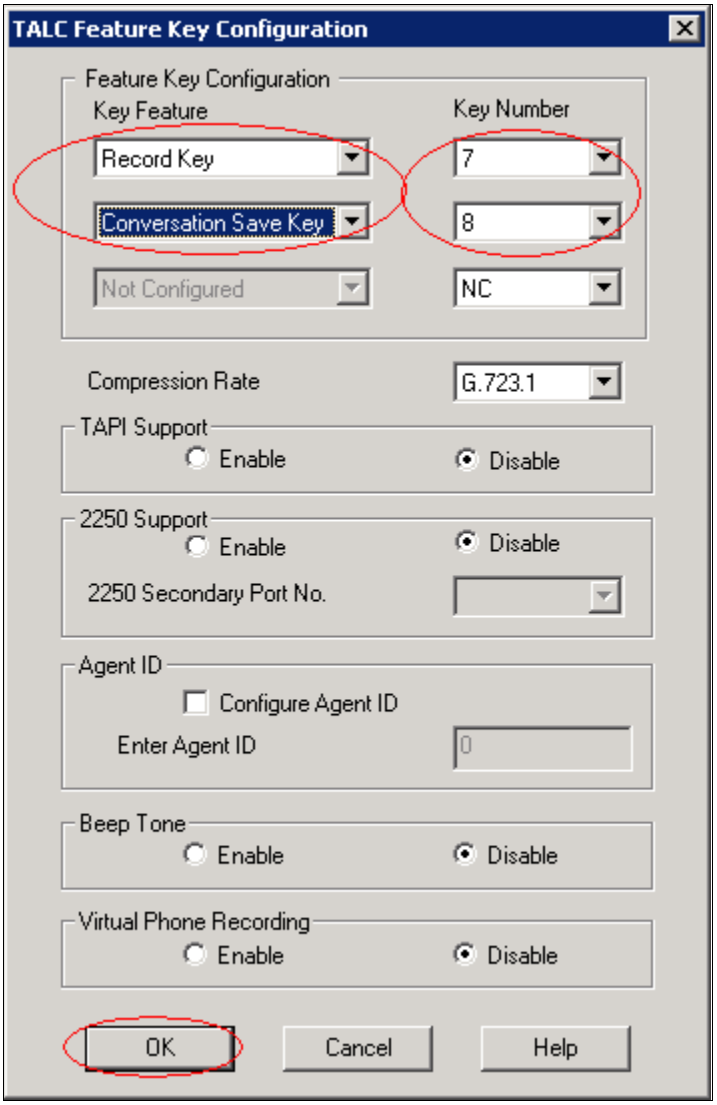


Figure 41: TALC On-Demand Feature key Configuration

Press **Send** as shown in **Figure 42** to send the On-Demand Key Features to the TALC.

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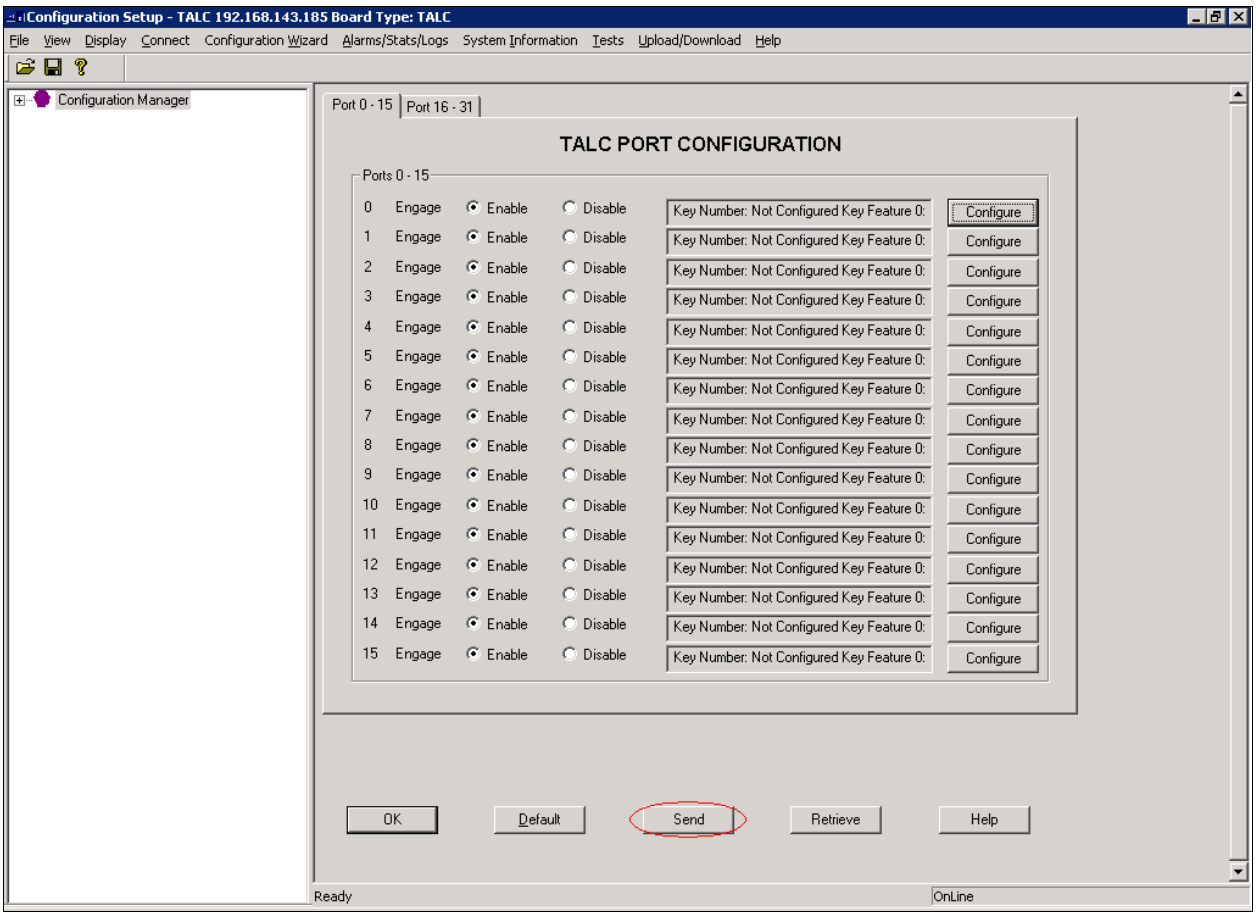


Figure 42: Sending On-Demand Key Features to the TALC

After the configuration has been sent to the TALC, follow steps as explained in **Figures 9** and **10** of **Section 6.1** to save this configuration on the TALC flash and to restart the TALC.

7. Verification Steps

This section includes some steps that can be followed to verify the solution is working.

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Insert the TALC into one of the CS1000 slots that support xDLC and test the following,

- Avaya digital telephones can be built on the TALC.
- All keys and features of the digital telephones function correctly.

Configure the recording criteria using Engage Record Client and test the following,

- Various recording criteria can be built and conversations recorded.
- Recorded conversations can be played back, searched and viewed.

Configure the On-Demand feature key using TALC Configuration Manager and test the following,

- On-Demand keys are active on the digital telephones they are built.
- Feature keys built function correctly and conversations recorded and saved.

8. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2**. The combination of TelStrat Application Line Card and Engage Record Server v 3.3 is considered compliant with Avaya Communication Server 1000 Release 7.5.

9. Additional References

Product documentation for Avaya products may be found at:
https://support.avaya.com/css/Products/

Product documentation for Telstrat may be found at:
http://www.telstrat.com/content/view/276/310/

[1] Software Input Output Reference — Administration.
Avaya Communication Server 1000. (NN43001-611).

[2] TelStrat Application Line Card Installation and Administration Guide.

[3] Engage Contact Center Suite Installation Guide

[4] Engage Contact Center Suite System Administration Guide

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