



Application Notes for TelStrat Engage Record with Avaya Communication Server 1000 using the TelStrat Application Line Card – Issue 1.0

Abstract

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

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

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

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 (Communication Server 1000) and it behaves like an Avaya Digital Line Card (xDLC). The TALC permits the registration of Avaya digital deskphones to them and when connected to an Engage Record, the Engage Record can record conversations of the Avaya digital deskphones 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 deskphones can be configured on TALC ports. Once the deskphones were configured, the Engage Record Server was tested to see if it can record and playback the conversations of the digital deskphones that were configured using the TALC.

2.1. Interoperability Compliance Testing

The compliance test included configuring the TALC to operate as an xDLC on the Avaya Communication Server 1000. 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 ACD Agents, Dialed Numbers, CLID, Extension, Date & Time, Days of Week, Frequency.
- Recording on demand via On-Demand keys which could be configured and properly operate on the digital deskphones using the TALC Configuration Manager.

2.2. Test Results

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

2.3. Support

Technical support for TelStrat can be obtained by contacting TelStrat via

Email: support@telstrat.com

Phone: +1 972-633-4548

Web: www.telstrat.com

3. Reference Configuration

Figure 1 illustrates the lab test configuration used during the compliant testing event between the Communication Server 1000 and the TALC, Engage Server combination.

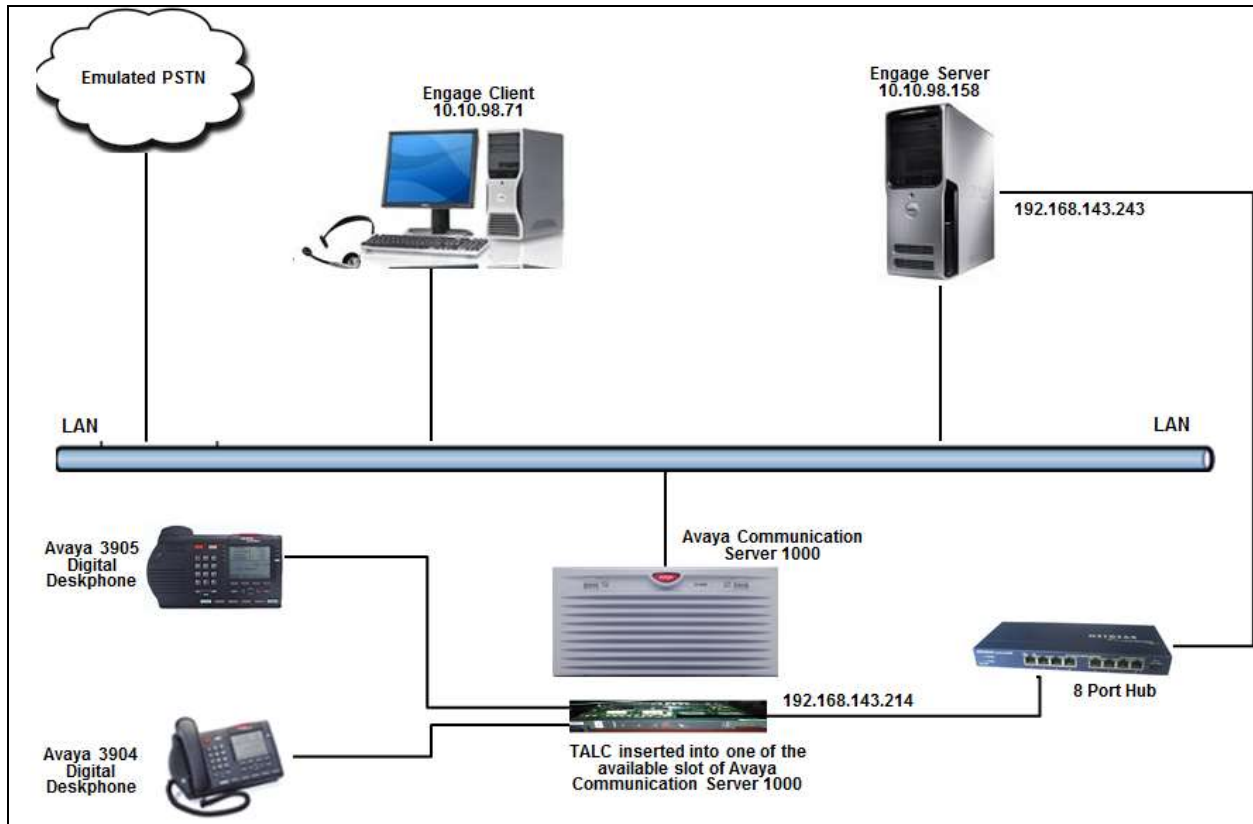


Figure 1: Lab Test Connection Diagram for Communication Server 1000, TALC, Engage Record Server and Engage Client

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Communication Server 1000	7.65
Avaya Digital Telephones: M3905 M3904	N/A
TALC	1_05_02.20
TelStrat Engage Record Server on Windows 2008 Server Standard SP2	5.2.1.4
TelStrat Engage Web Client	5.2.1

5. Configure Avaya CS 1000

This section describes the steps to configure the Communication Server 1000 with the TALC.

5.1. Configuring the TALC with Communication Server 1000

The TALC is a hardware line card that supports Avaya digital deskphones and needs to provide functionalities similar to the xDLC. Insert the TALC in a free slot of the Communication Server 1000 that supports the xDLC.

Log in to the Communication Server 1000 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 Communication Server 1000 command line was accessed via SSH using the PuTTY application.

In **LD 32** type **STAT <ls cu>**; where **ls cu** 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 Communication Server 1000 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** for details as how to configure digital deskphones.

6. Configuration for Engage Record

This section describes the steps on how to configure the TALC, the Engage Record Server and the Engage Record Client to be able to record conversations of the digital deskphones on the Communication Server 1000 via the TALC.

6.1. Configure TALC

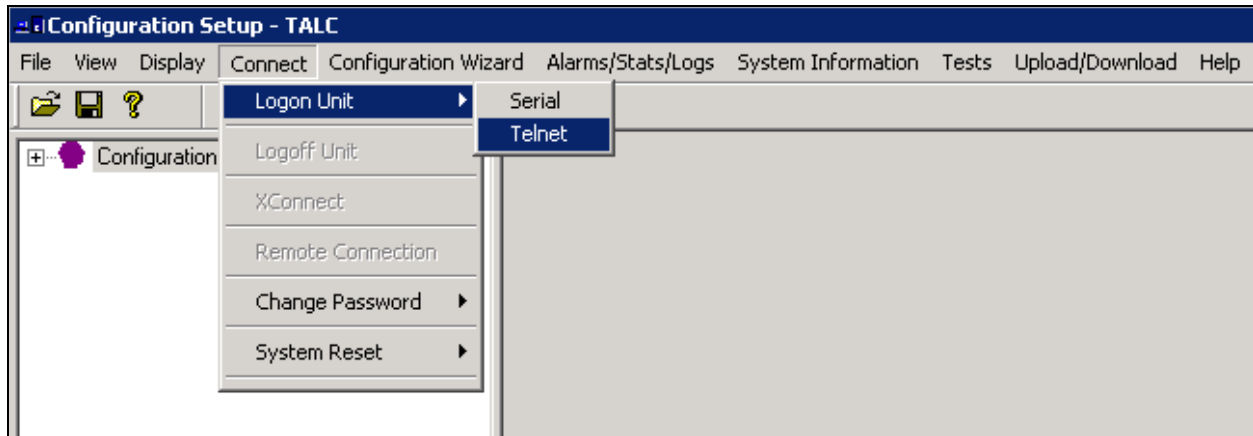
The TALC can be configured and managed either by command line interface (CLI) or by using a Graphical User Interface (GUI) called TALC Configuration Manager. These Application Notes only describe how to configure the TALC to communicate with the Engage Record Server via the TALC Configuration Manager.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

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 as below. Enter the correct credentials in the **Login Name** and **Password** and then press **OK**.

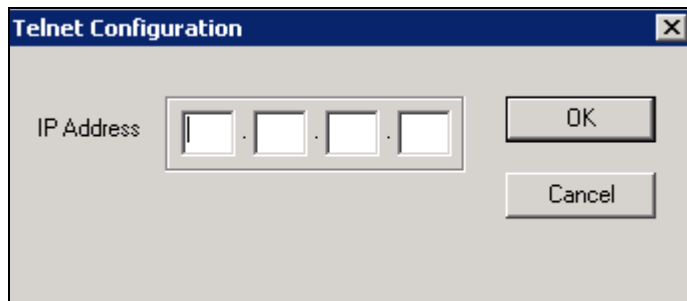
A screenshot of a 'Local User Authentication' dialog box. The dialog has a title bar with the text 'Local User Authentication' and a close button (X). The main area contains two labels, 'Login Name' and 'Password', each followed by a text input field. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

The main screen **Configuration Setup-TALC** is seen as shown below. Navigate to **Connect** → **Logon Unit** → **Telnet** to get access to the TALC.

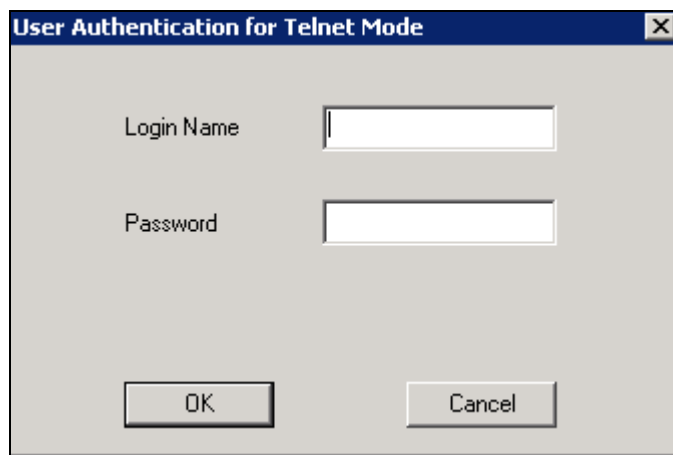


In the **Telnet Configuration** screen as shown in below, enter the **IP address** of the TALC and then press **OK**.

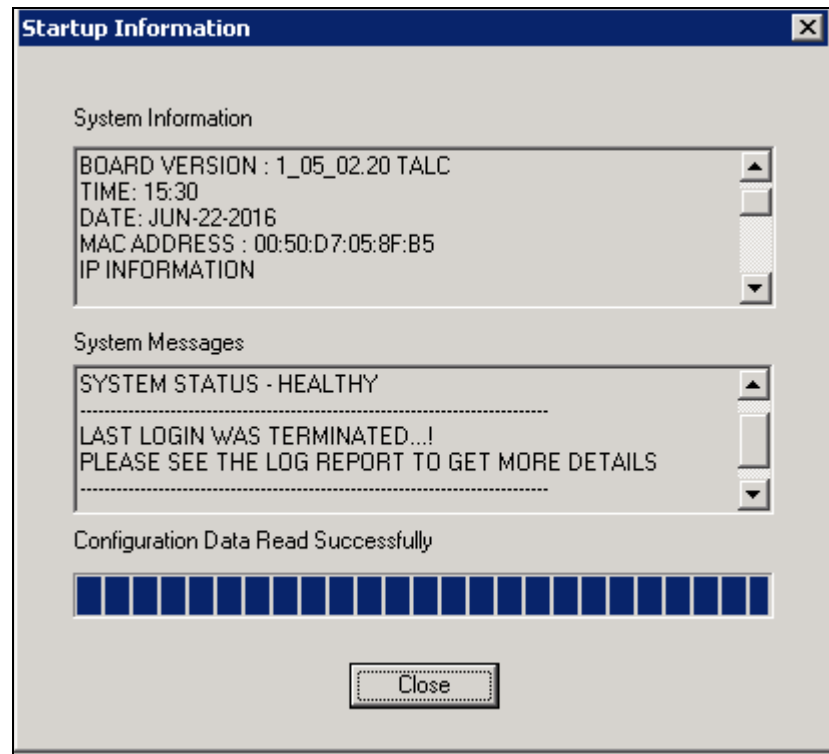
Note: This telnet session will allow user to access the TALC card using local (default) IP address.



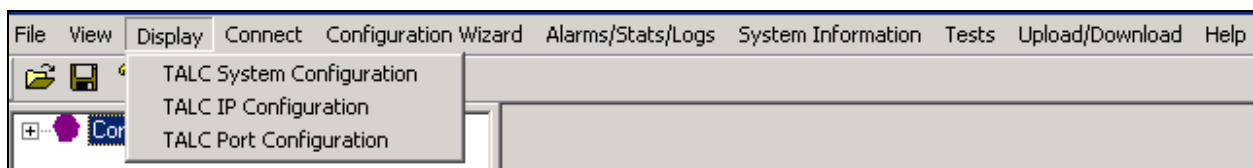
Enter the required credentials in the **Login Name** and **Password** and then press **OK** to pass the authentication for Telnet mode as shown below.



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



From the **Configuration Setup-TALC** screen navigate to **Display → TALC System Configuration** as shown below to access the System Configuration screen.



In the **TALC System Configuration** screen as shown below configure the following:

- **Unit ID:** 214. This value can range from 1 to 254.
- **Node Name:** A descriptive name.
- **Engage Server IP Address:** 192.168.143.243. During compliance testing the server had 2 NIC and one of the NIC had the above IP address configured.
- **Enable DN Discovery:** Select this box.
- **Port:** 0
- **Feature Key:** 3
- **DN:** 54007. This was the DN configured during compliance testing for Port 0.

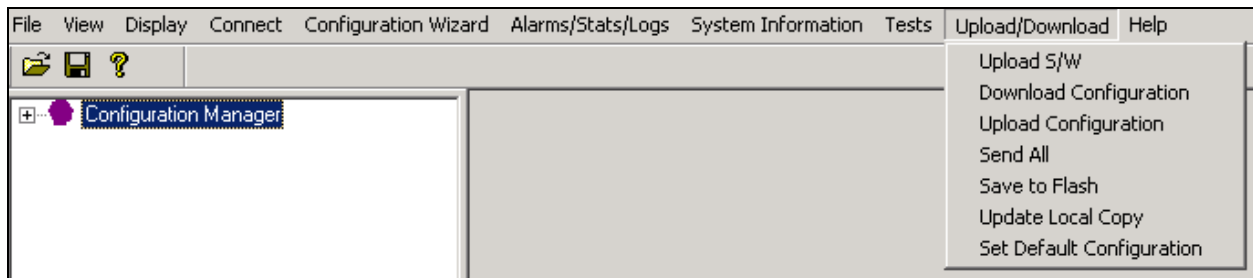
During compliance testing rest of the values were left at default.

Click on the **Send** button to send this information to the TALC. Once the information has been sent, click on the **Start-DN Discovery** button to start detecting DN/Extension on each TN. The **Start-DN Discovery** button need not be clicked if TALC is going to be restarted since restarting TALC will automatically detect DN since **Enable DN Discovery** is selected.

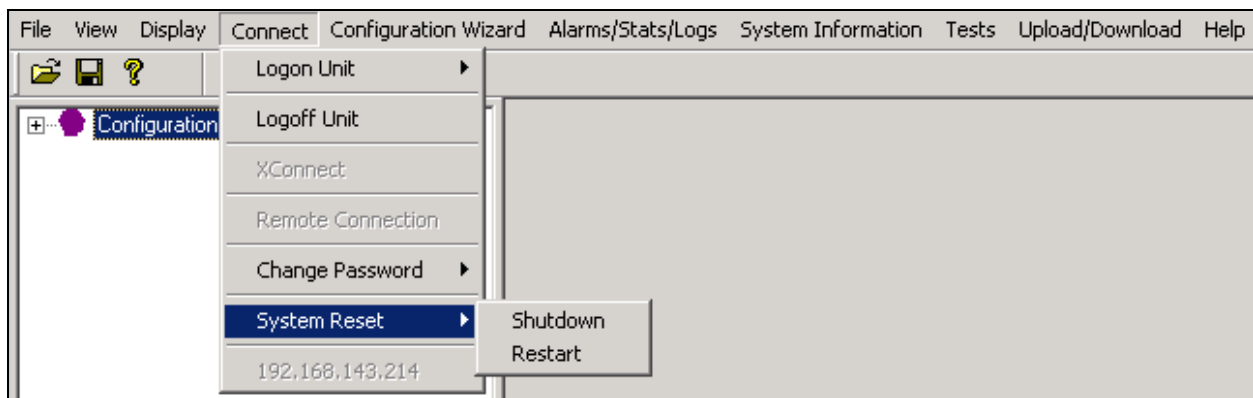
Note: User must set the Unit ID for each TALC provisioned/deployed for recording of their Communication Server 1000 to the Engage server. Traffic from each TALC will be delineated with this Unit ID. The Engage server cannot accept communication from multiple TALCs having the same/identical UnitID because the data could not be differentiated.

The screenshot displays the 'TALC SYSTEM CONFIGURATION' window. The 'General Config' section includes 'Unit ID' set to 214 and 'Node Name' set to TALC 214. The 'Engage Feature' section shows 'Enable' selected and 'Engage Server IP Address' as 192.168.143.243. The 'DN Discovery Schedule' section has 'Enable DN Discovery' checked, with frequency set to 'Once a month' and a 'Start DN-Discovery' button. The 'TALC Extension to Dial' section shows 'Port' as 0, 'Feature Key' as 3, and 'DN' as 54007. The 'Symposium Display Format' section includes settings for DNIS and CLID. The bottom of the window features buttons for OK, Default, Send, Retrieve, and Help.

Once the above information has been sent to the TALC, the information needs to be saved on the TALC flash. From the **TALC System Configuration** screen, navigate to **Upload/Download** → **Save to Flash** as shown below to save the configuration on the TALC flash.



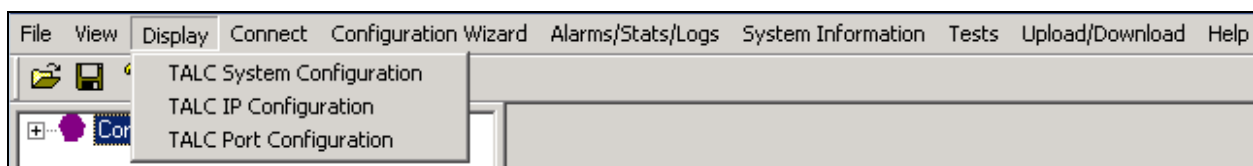
In order for the changes to take effect, the TALC needs to be restarted by navigating to **Connect** → **System Reset** → **Restart** from the **TALC System Configuration** screen as shown below.



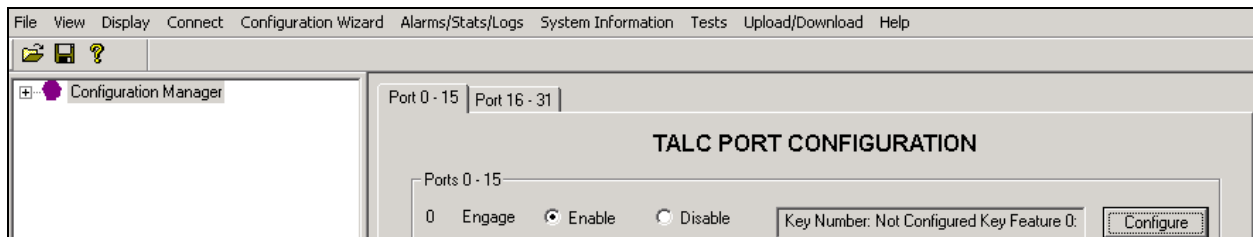
6.2. Configure On-Demand Keys

This section describes how On-Demand keys can be built on the digital deskphones. Examples of On-Demand keys are Record Key, Conversation Save Key etc. These keys can be pressed on the digital deskphones to record a conversation or save a conversation. These keys are built on the digital deskphones 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 Communication Server 1000.

Once connected to the TALC via the TALC Configuration Manager, from **TALC System Configuration** screen navigate to **Display → TALC Port Configuration** as shown below to access the Port Configuration screen.



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



Under the **Key Feature** field select the required On-Demand key feature from the drop down option and from the **Key Number** field select the keys where this feature needs to be built. In the example as shown below, *Record Key* and *Conversation Save Key* are built on keys 4 and 5 respectively of the digital set that is on port 0. Optionally you can also enter the Agent ID under the Agent ID section. Retain default values for other fields. Click on **OK** after all required configuration has been completed.

TALC Feature Key Configuration

Feature Key Configuration

Key Feature	Key Number
Record Key	4
Conversation Save Key	5
Not Configured	NC

Compression Rate: G.723.1

TAPI Support: ☐ Enable ☒ Disable

2250 Support: ☐ Enable ☒ Disable

2250 Secondary Port No.:

Agent ID

☒ Configure Agent ID

Enter Agent ID: 3904

Beep Tone: ☐ Enable ☒ Disable

Virtual Phone Recording: ☐ Enable ☒ Disable

OK Cancel Help

Perform the **Send** and **Save to Flash** (not shown) actions as explained in **Section 6.1** for the above changes to be sent to the TALC and saved to the TALC flash.

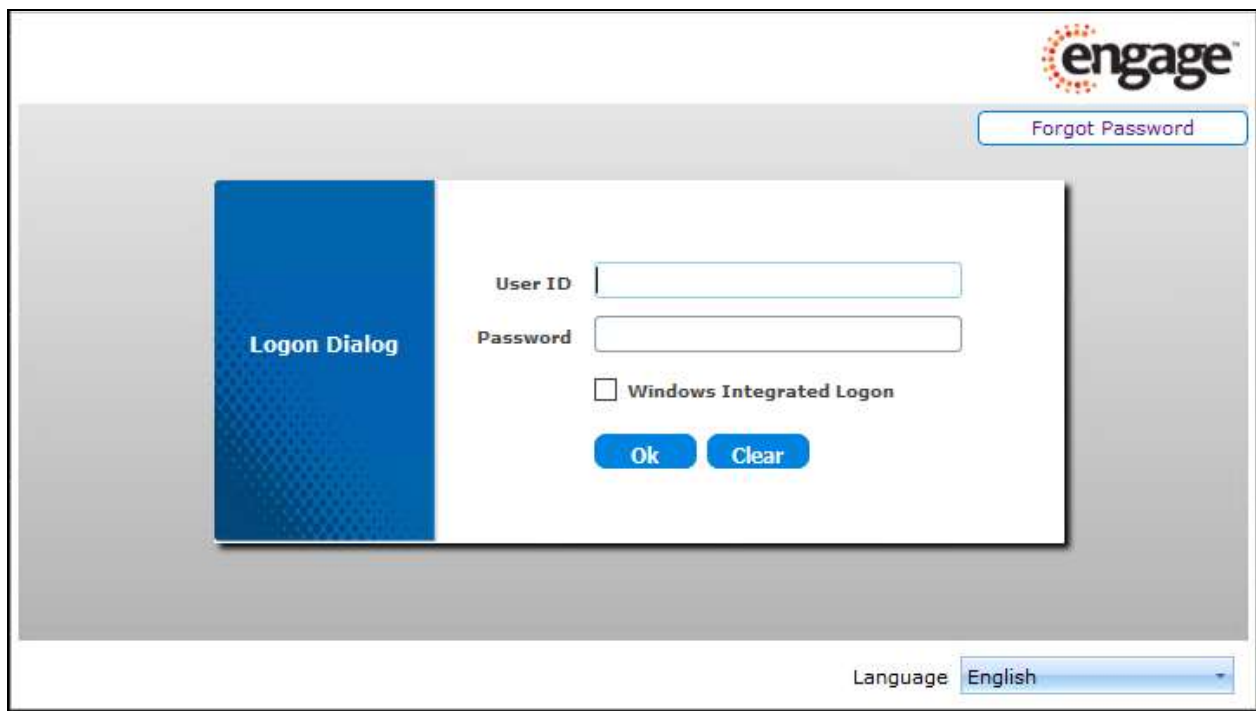
6.3. Configure Engage Record Web Client

This section only explains the configuration using the Engage Record Web Client to add User and schedule recording.

It is assumed that the Engage Record Server has been successfully installed and the required recording services are running.

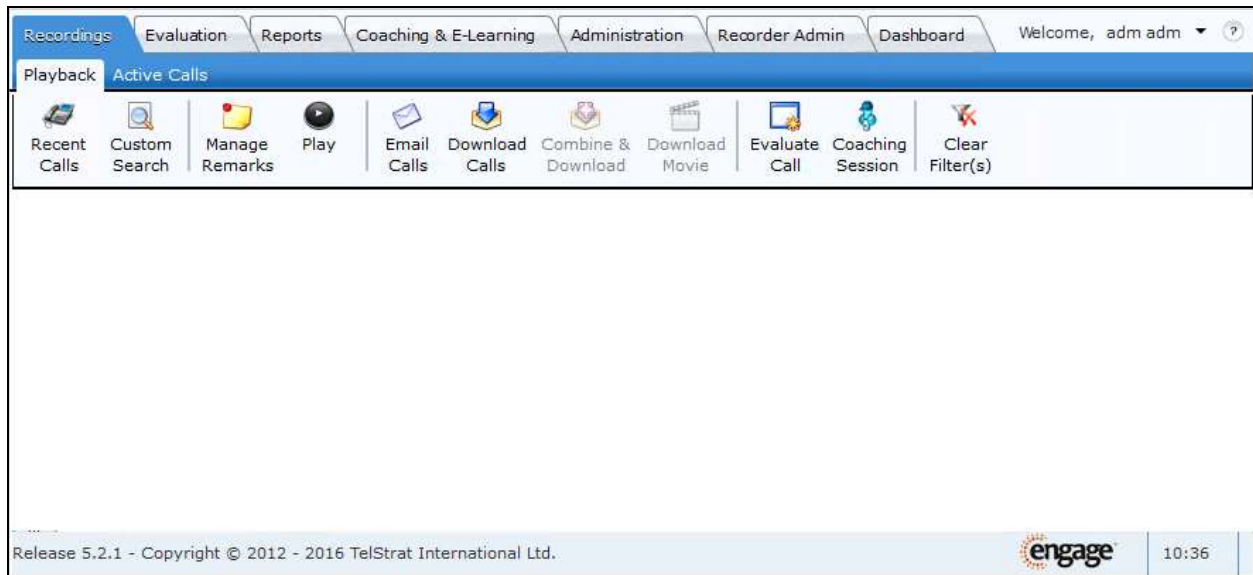
To access the Engage Record Web Client, open a web browser and type the following URL: *<IP Address>/Engage*, where IP Address is the IP address of the Engage Server.

Screen below shows the Login screen for the web client. Enter the appropriate **User ID**, **Password** and then click on the **OK** button.



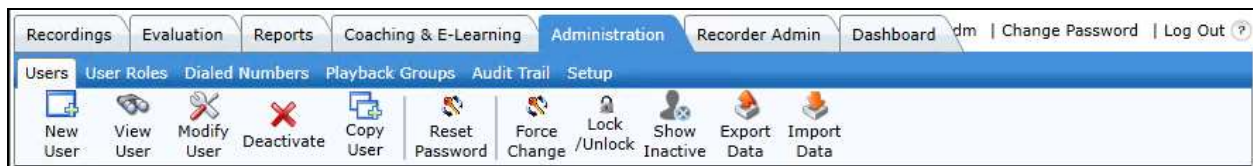
The image shows a web browser window displaying the Engage Record Web Client login interface. The Engage logo is in the top right corner. Below it is a "Forgot Password" link. The main content area features a "Logon Dialog" box with a blue header. Inside the dialog, there are input fields for "User ID" and "Password". Below these fields is a checkbox labeled "Windows Integrated Logon". At the bottom of the dialog are "Ok" and "Clear" buttons. In the bottom right corner of the browser window, there is a "Language" dropdown menu currently set to "English".

Screen below shows the main window of Engage Record Web Client.



6.4. Adding Users

To add a user that Engage Record can use to provide details of the recording, navigate to **Administration → Users → New User** as shown in the screen below for the web client.



A **Create User Account** window is seen as shown below. Enter the following configuration:

- **First Name:** Enter an appropriate first name.
- **Last Name:** Enter an appropriate first name.
- **Agent ID:** During compliance testing 3904 was configured.
- **Extension(s):** During compliance testing 54007 was used.
- Select the **User Cannot Logon** radio button.

Retain default value for all other fields and click on **OK** to complete the configuration. Note that the information provided here for the user is only used to show additional details for the recording.

Create User Account

Settings | **Member Of** | Permissions To | View Features

User Status: ☒ Active ☐ Inactive Start Date: 6/23/2016 10:43 AM

First Name: Digital Last Name: Agent1 ☐ Evaluation License

User ID:

Agent ID: 3904

Extension(s): 54007 Use ',' to separate

Email 1: Email 2: Email 3:

☐ Local Authentication ☐ Windows Authentication ☒ **User Cannot Logon**

Password: ***** Confirm Password: *****

OK Clear Clear All Exit

Screen below shows the successful addition of users.

Recordings | Evaluation | Reports | Coaching & E-Learning | **Administration** | Recorder Admin | Dashboard | Welcome, adm adm | Change Password | Log Out

Users | User Roles | Dialed Numbers | Playback Groups | Audit Trail | Setup

New User View User Modify User Deactivate Copy User Reset Password Force Change Lock /Unlock Show Inactive Export Data Import Data

User Accounts Clear Filter(s) Evaluation License: 14 (0 in use) Results: 17

User ID	First Name	Last Name	Extension(s)	Agent ID	Evaluation License	User Role(s)	Email Account(s)	Status	Last Logon
	Digital	Agent1	54007	3904					
	Digital	Agent2	54390	3905					
	Digital	Agent3	54008	3903					

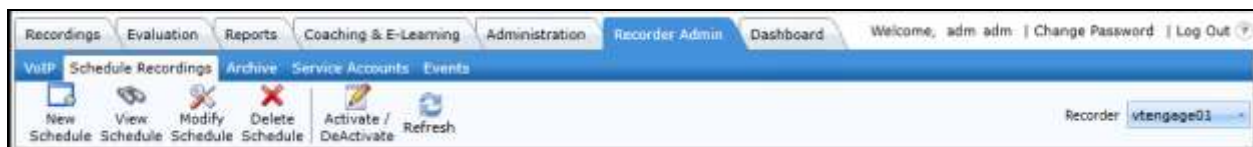
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6.5. Adding Schedule Recordings

This section describes the recording criteria that can be built using the Engage Record Client to record calls. Different recording criteria can be configured, for example,

- Record All, where no filters are set and all options are included for recording.
- Selective Recording, where user can select which components of the phone need to be recorded like a particular agent, a particular DN etc.
- Quality monitor, where a certain frequency of calls can be selected to be recorded.

To add schedule recordings that Engage Record needs to record, navigate to **Recorder Admin** → **Schedule Recordings** → **New Schedule** as shown in the screen below.



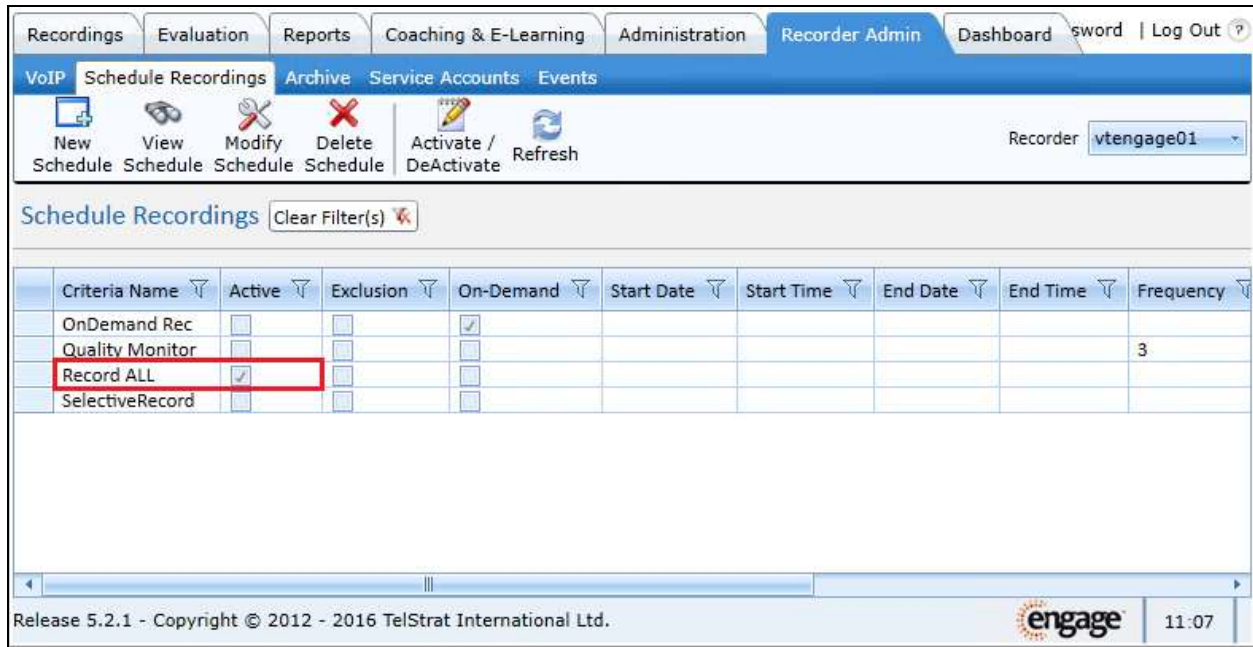
A **Create Schedule Recording Criteria** window is seen as shown below. Enter the following configuration:

- **Criteria Name**: Enter a descriptive name.
- Setup the criteria based on **ACD Agents**, **Dialed Numbers**, **CLID** and **Extension** tabs and also using any other values seen in the window below.

Click on **OK** to complete the configuration.

A screenshot of the 'Create Schedule Recording Criteria' dialog box. The 'Settings' tab is selected, with other tabs being 'ACD Agents', 'Dialed Numbers', 'CLID', and 'Extension'. The form includes: a 'Criteria Name' text field; radio buttons for 'Active' (selected) and 'Inactive'; an 'On-Demand' section with an 'On-Demand' checkbox and a 'Mode' dropdown set to 'Record'; checkboxes for 'Exclusion Criteria' and 'Archive Recorded Calls to' with a dropdown; a 'Date and Time' section with 'Start Date' and 'End Date' date pickers, 'Clear Dates' button, 'Start Time' and 'End Time' time pickers, and 'Clear Times' button; a 'Frequency' section with '1 of' and 'Calls' text; a 'Screen Capture' section with an 'Enable Screen Capture' checkbox and a 'Wrap Up Duration' spinner set to 10:00:00 minutes; a 'Specific Duration' section with 'Minimum' and 'Maximum' time pickers and a 'Seconds' dropdown; and a 'Days' section with checkboxes for Sunday through Saturday. At the bottom are 'Ok', 'Clear', 'Clear All', and 'Cancel' buttons.

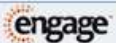
Screen below shows some of the schedule recordings configured during compliance testing. To activate or deactivate any of these schedule recordings, select a schedule and click on the **Activate/Deactivate** button from the menu. In the screen below, the *RecordALL* schedule recording is active.



The screenshot shows the Engage Recorder Admin interface. The top navigation bar includes tabs for Recordings, Evaluation, Reports, Coaching & E-Learning, Administration, Recorder Admin, Dashboard, and Log Out. The 'Schedule Recordings' tab is selected. Below the navigation bar, there are icons for New Schedule, View Schedule, Modify Schedule, Delete Schedule, Activate / DeActivate, and Refresh. The 'Recorder' dropdown is set to 'vtengage01'.

The 'Schedule Recordings' table is displayed with the following columns: Criteria Name, Active, Exclusion, On-Demand, Start Date, Start Time, End Date, End Time, and Frequency. The 'Record ALL' row is highlighted with a red box, indicating it is active.

Criteria Name	Active	Exclusion	On-Demand	Start Date	Start Time	End Date	End Time	Frequency
OnDemand Rec	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
Quality Monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					3
Record ALL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
SelectiveRecord	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

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7. Verification Steps

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

Insert the TALC into one of the Communication Server 1000 slots that support xDLC and test the following,

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

Configure the recording criteria using Engage Record Web 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 deskphones they are built.
- Feature keys built function correctly and conversations recorded and saved.

To playback a recording, from the main screen of Engage web client navigate to **Recordings** → **Playback** as shown in the screen below. Select the required recording and double click to play it or right click and select the **Play** option (not shown). Users can also verify which calls are being recorded by navigating to **Recordings** → **Active Calls** as shown in the screen below.

Playback Log

Date	Start Time	End Time	Status	Rec Duration	Hold Duration	User First	User Last	Agent ID	Extension	CLID	Dialed Number	Direction	Remarks
6/22/2016	8:50:07 AM	8:58:54 AM		88:07		Digital	Agent1	3904	54901	19088453108	54901	In	
6/22/2016	9:57:05 AM	9:57:59 AM		59:32		Digital	Agent1		54007	54007	54007	Out	
6/22/2016	9:58:19 AM	9:57:59 AM		59:11		Digital	Agent1		54007	54007	54007	In	
6/22/2016	3:05:30 PM	3:05:44 PM		59:55		Digital	Agent1		54901	19088453108	54901	In	
6/22/2016	3:59:07 PM	3:59:13 PM		59:04		Digital	Agent1		54007	54007	54007	Out	

Active Calls

Call Status	Direction	User First	User Last	Agent ID	Dialed Number	CLID	Extension	Start Time	Recording Status	Video Status	Stream Status	Call Duration
Busy	In	Digital	Agent1	3904	54901	19088453108	54901	6/23/2016 2:10:49 PM	Scheduled			00:01:20

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 is considered compliant with Avaya Communication Server 1000.

9. Additional References

This section references the product documentation relevant to these Application Notes. Product documentation for Avaya products may be found at <http://support.avaya.com>.

Avaya:

- *Avaya Communication Server 1000 Software Input Output Reference — Administration*, NN43001-611.
- *Avaya Communication Server 1000 Automatic Call Distribution Fundamentals*, NN43001-551.

Product documentation for Telstrat may be found at <http://www.telstrat.com/index.php>

Telstrat:

- *Install - TelStrat Application Line Card (TALC), Release 5.2*
- *Install – Setup Engage Server, Release 5.2*
- *Recorder Administration Guide, Release 5.2*

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