



Avaya Solution & Interoperability Test Lab

Application Notes for configuring Teleopti WFM and Avaya Contact Center Select R7.0 using the Realtime Interface - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Teleopti WFM to successfully interoperate with Avaya Contact Center Select using the Realtime Data Software Developers Kit (RTD SDK) to access real-time data for agent and queue statistics.

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 Teleopti WFM from Teleopti AB to successfully interoperate with Avaya Contact Center Select using the Realtime Data Software Developers Kit (RTD SDK) to access real-time data for agent and queue statistics.

Teleopti WFM is a Workforce Management application suite from Teleopti AB and is designed to help plan customer contact centers' in optimising customer satisfaction, profitability, and employee satisfaction.

Teleopti WFM uses a real-time adherence module which provides real-time updates from an Avaya Contact Center Select using the Realtime Data Software Developers Kit (RTD SDK). This allows the supervisor to see at a glance both the planned call centre activities overlaid with the actual situation. Coloured text is used to highlight discrepancies between the two situations, and whether these discrepancies are having a positive or negative effect on the performance of the contact center.

The Avaya Contact Center Select Realtime Data (RTD) Application Programming Interface (API) is a Win32 C programming interface that supports the development of third-party status reporting applications, such as readerboard displays and agent desktop applications. The API allows client applications to obtain real-time statistics from Avaya Contact Center Select. The RTD SDK includes the header and library files required to develop RTD applications, plus the LIB and DLL files required to execute those applications. The SDK also includes programmer documentation and a sample application.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying Teleopti WFM's ability to receive real-time data from Avaya Contact Center Select (ACCS) using the ACCS RTD SDK. Calls were made into IP Office to the ACCS agents to generate real-time statistics:

- Agents in various states, e.g. Available, Not Ready, Not Ready with Reason.
- Agents on ACD calls.
- Agents on non-ACD calls.

Using the real-time displays available on ACCS the real-time data was compared to the real-time statistics being displayed on the Teleopti WFM server.

The serviceability test cases were performed manually by forcing solution components to go out of service and come back and verifying Teleopti WFM server's ability to recover.

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 feature testing focused on verifying Teleopti WFM correctly displaying CDN, Skillset, and Agent data from ACCS. A number of call center scenarios including the following were created to provide data to the Contact Center.

- Agent login/logout.
- Agent state changes.
- Incoming skillset calls.
- Incoming private calls to agents.
- Outbound calls from agents.
- Transfer, conference and hold calls.
- Serviceability.

The serviceability testing focused on verifying the ability of the Teleopti WFM server to recover from adverse conditions, such as disconnecting the Teleopti WFM server from the network, and rebooting the Teleopti WFM server.

2.2. Test Results

All test cases passed successfully with no issues.

2.3. Support

For technical support on Teleopti WFM, use the following information.

- Email: support@teleopti.com
- Phone: +46 8 568 950 10

3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of an Avaya IP Office Server Edition connected to the Avaya Contact Center Select. The Avaya Contact Center Select Realtime Data (RTD) Application Programming Interface (API) allows client applications to obtain real-time statistics from Avaya Contact Center Select.

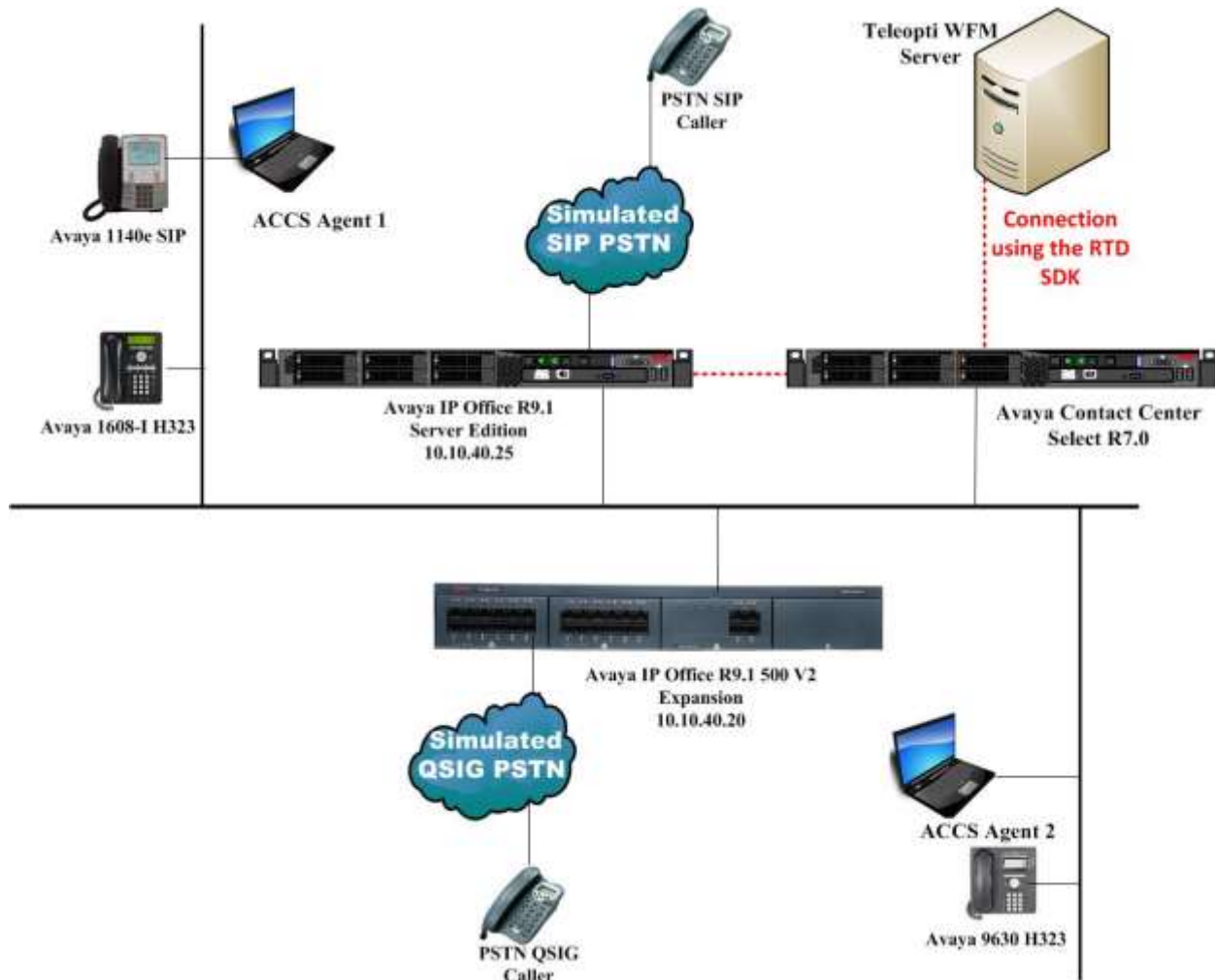


Figure 1: Teleopti WFM with Avaya Contact Center Select R7.0 using the Avaya Contact Center Select Realtime Data SDK

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition running on a Virtual Platform	R9.1.5.0 Build 145
Avaya IP Office 500 V2	R9.1.5.0 Build 145
Avaya IP Office Manager running on a Windows 7 PC	R9.1.5.0 Build 145
Avaya Contact Center Select running on a Virtual Platform	R7.0
Avaya 1608-I H323 Deskphone	1608UA1_350B.bin
Avaya 9630 H323 Deskphone	R6.4014U
Avaya 1140e SIP Deskphone	R04.03.12.00
Teleopti WFM Server running on a Windows 2012 Virtual Server	8.3.442.39663

5. Configure Avaya IP Office

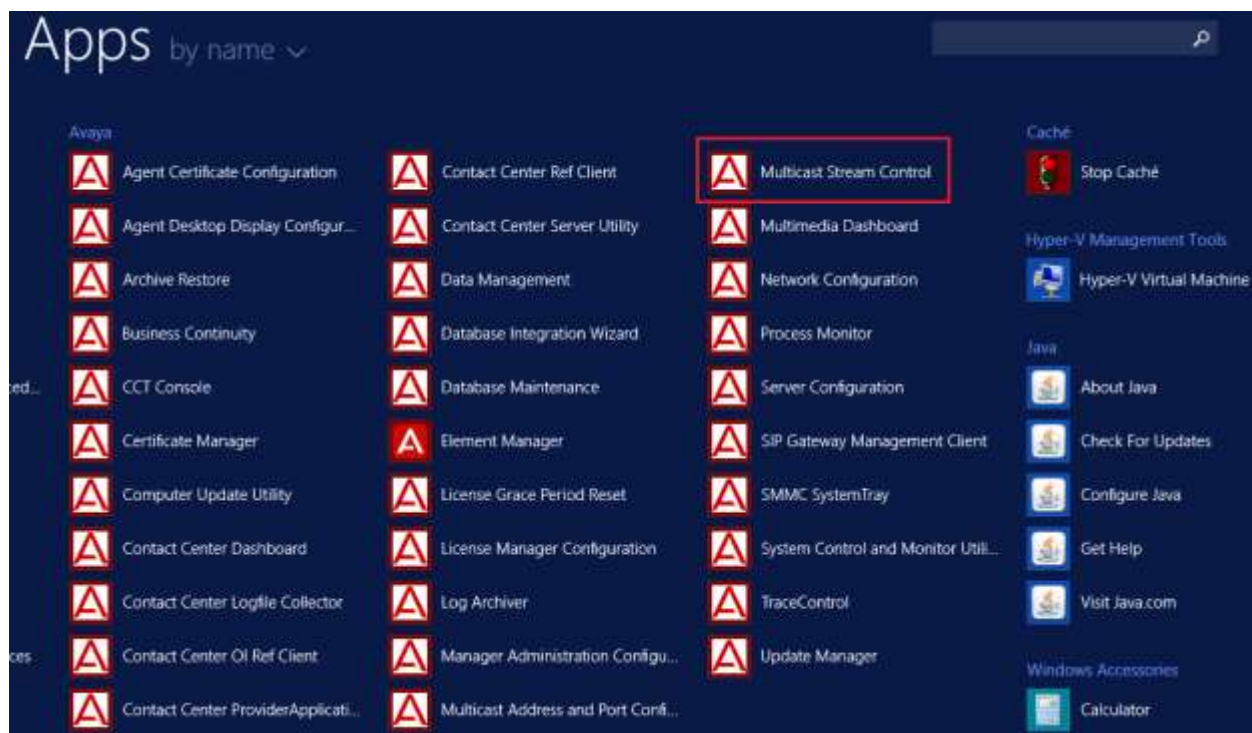
It is assumed that Avaya IP Office is already configured and running properly with all the necessary licenses on board. The configuration steps required to connect Avaya Contact Center Select with Avaya IP Office are outside the scope of these Application Notes and will therefore not be covered in this section.

There is no extra configuration required on IP Office for the connection of Teleopti WFM to Avaya Contact Center Select.

6. Configure Avaya Contact Center Select

It is implied that a working Contact Center is already in place and that the connections to IP Office are already configured. There is only one module that needs to be checked on Avaya Contact Center Select and that is Multicast Stream Control on the ACCS server.

From the ACCS server open the **Multicast Stream Control** application as shown below.



Ensure that all the statistics boxes are ticked as shown below. Ensure that neither **RTD Compression** nor **RSM Compression** is ticked. Click on **Apply** or **OK** to finish.

RTD Multicast Controller

Skillset

- ☒ Moving Window
- ☒ Interval To Date

Nodal

- ☒ Moving Window
- ☒ Interval To Date

Application

- ☒ Moving Window
- ☒ Interval To Date

IVR

- ☒ Moving Window
- ☒ Interval To Date

Agent

- ☒ Moving Window
- ☒ Interval To Date

Route

- ☒ Moving Window
- ☒ Interval To Date

Compression

- ☐ RTD Compression
- ☐ RSM Compression

Version

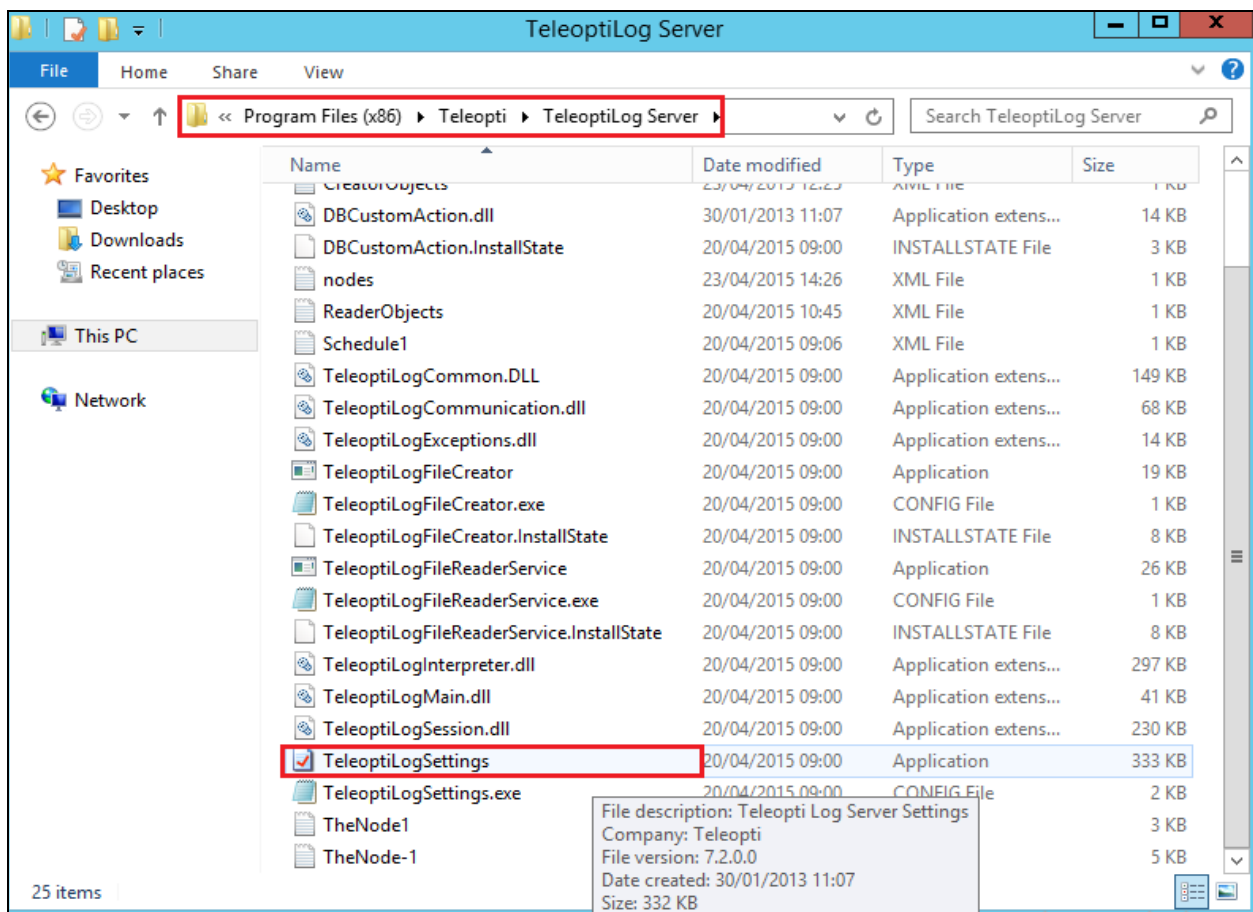
Release 6.4

Get Current States OK Cancel Apply

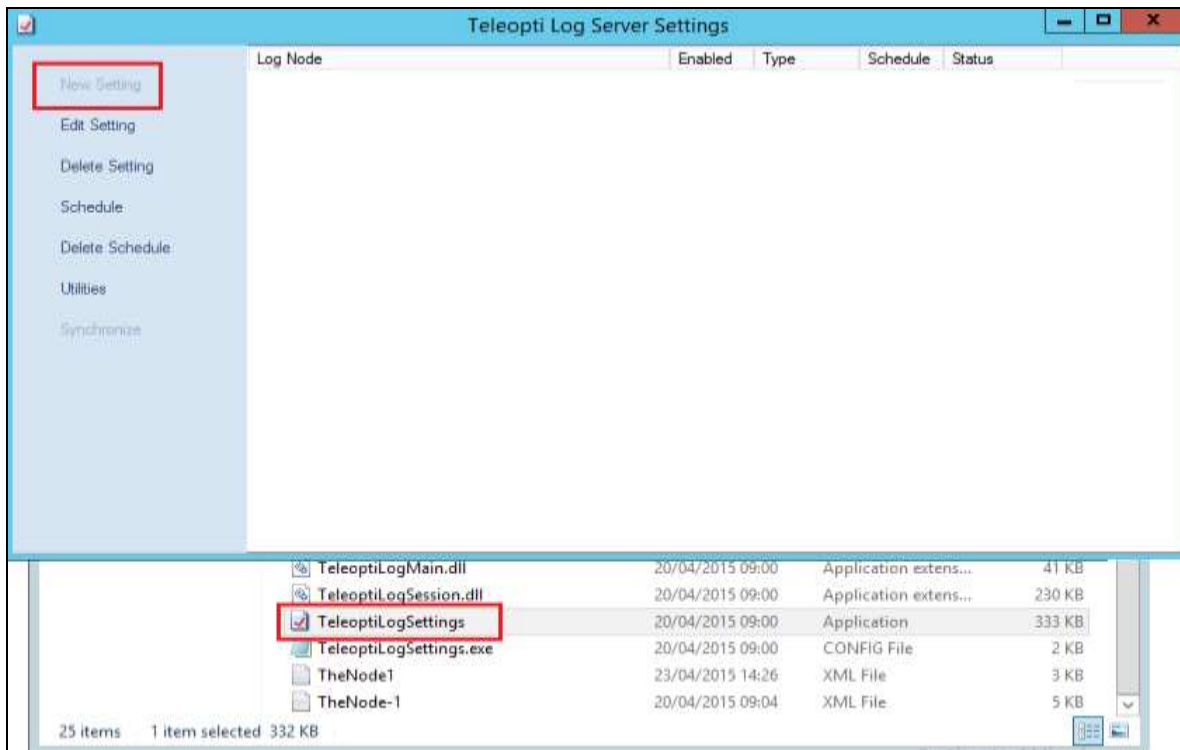
7. Configure Teleopti WFM Server

The following sections describe the steps required to configure the base configuration required to enable Teleopti WFM listen for real-time data given out from the Avaya CMS via the Generic-RTA adapter. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 10**.

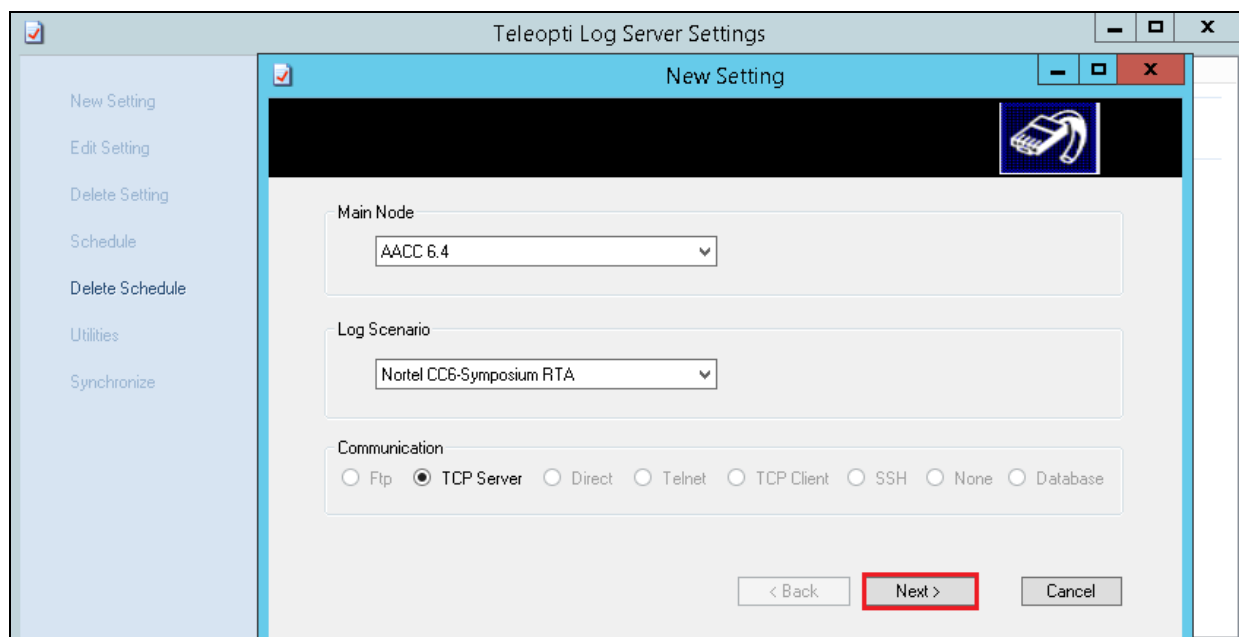
To configure the Teleopti WFM Server navigate to the **TeleoptiLogSettings** application, the location of this file may be different on different systems but in the example below this was located at **Program Files (x86) → Teleopti → TeleoptiLog Server** as shown on the screen below.



Double Click on the **TeleoptiLogSettings** application. This will bring up the Teleopti Log Server Settings window. In the left column of this window, click on **New Setting**.



Enter the data for the **Main Node** and **Log Scenario** from the drop-down menus as is shown below. Ensure that **TCP Server** is chosen and click on **Next** to continue.



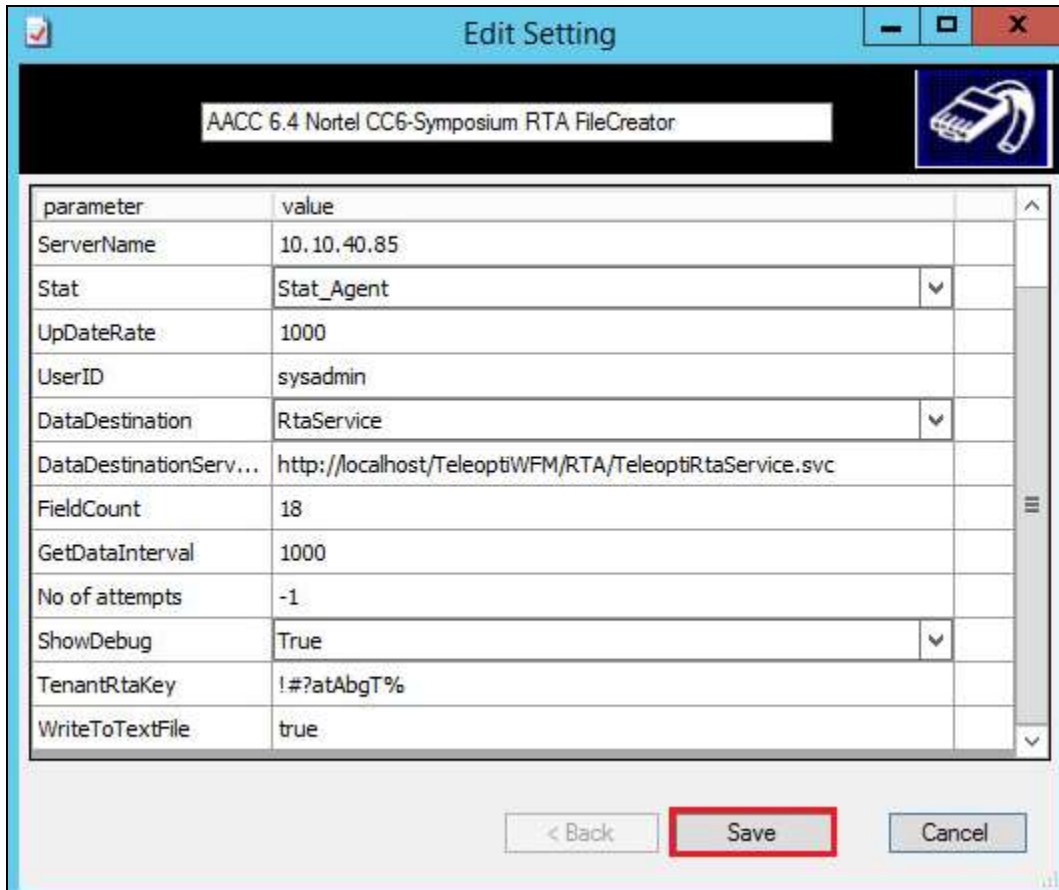
In the resulting window select the following parameters need to be set. These are the parameters that were set for compliance testing, taking note of the following:

- **Password** Set to **avaya1** which is used for the RTD interface
- **ServerName** Set to that of ACCS IP Address
- **UserID** Set to **sysadmin**, which is used for the RTD interface

All other field can be left as default and should display like in the example below. Scroll down to observe the other fields.

parameter	value
Mode	LoginMode_Agent
Password	avaya1
ServerName	10.10.40.85
Stat	Stat_Agent
UpDateRate	1000
UserID	sysadmin
DataDestination	RtaService
DataDestinationServ...	http://localhost/TeleoptiWFM/RTA/TeleoptiRtaService.svc
FieldCount	18
GetDataInterval	1000
No of attempts	-1
ShowDebug	True

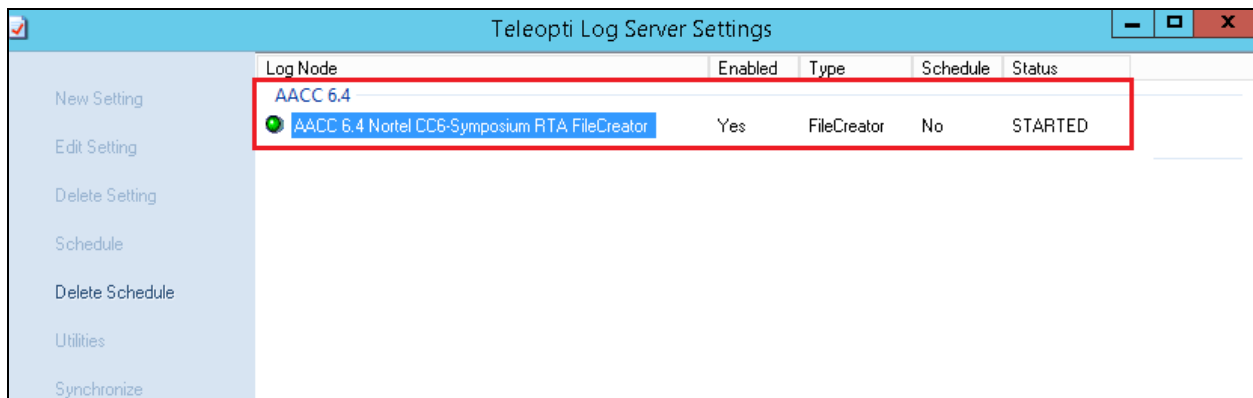
The last two remaining fields are now visible after scrolling down to the end, click on **Save** at the bottom of the screen as shown below.



parameter	value
ServerName	10.10.40.85
Stat	Stat_Agent
UpDateRate	1000
UserID	sysadmin
DataDestination	RtaService
DataDestinationServ...	http://localhost/TeleoptiWFM/RTA/TeleoptiRtaService.svc
FieldCount	18
GetDataInterval	1000
No of attempts	-1
ShowDebug	True
TenantRtaKey	!#?atAbgT%
WriteToTextFile	true

< Back **Save** Cancel

The new Avaya real-time collector is now created and is shown below.



Log Node	Enabled	Type	Schedule	Status
AACC 6.4				
• AACC 6.4 Nortel CC6-Symposium RTA FileCreator	Yes	FileCreator	No	STARTED

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of ACCS and Teleopti WFM.

8.1. Verify Avaya Contact Center Select Real-Time Reporting

Log in to ACCS by navigating to the IP Address of the ACCS server from a web browser such as Internet Explorer as shown below and click on **Login**.



Once logged in click on **Real-Time Reporting**.



Select the appropriate display, for example **Standard_Agent_Display** is chosen below, click on **Launch Display** from the main window. A number of displays can be opened at the same time to show various real-time statistics for the Contact Center.

AVAYA Real-Time Reporting

Displays Filters Status Launchpad Help

Public Tabular Displays: **Standard_Agent_Display**

Launch Display

Launch the Standard_Agent_Display.

Make Private Copy

Type the name of your private display:

CC_Standard_Agent_Display

(Note: Each of your private displays must have a unique name.)

The following three displays show a call active for the **Sales** skillset and answered by the agent ID **5101**, called **Russell**.

Standard Skillset Display (CC) - Internet Explorer

Skillset	Avg Ans Dly	Sev Lvl %	Ans	Wait	Agt Staff	Agt Active	Agt Not Bdy	Agt Idle
Default Skillset	0	100	0	0	1	0	0	0
Sales	13	100	1	0	1	1	0	0
Sales1	0	100	0	0	1	0	0	0
Sales2	0	100	0	0	1	0	0	0
Support	0	100	0	0	1	0	0	0

Moving Window, refreshing every 2 seconds
Page 1 of 1
Information as of 16/03/2016 11:03:25

Standard Agent Display (CC) - Internet Explorer

Agt ID	Agt First Name	Agt Last Name	Supr First Name	Supr Last Name	Ans Skillset	In Contacts Status	DN In	DN Out	Time In State
5101	DPD	Russell	Default	Supervisor	Sales	Active			00:36

Moving Window, refreshing every 2 seconds
Page 1 of 1
Information as of 16/03/2016 11:03:25

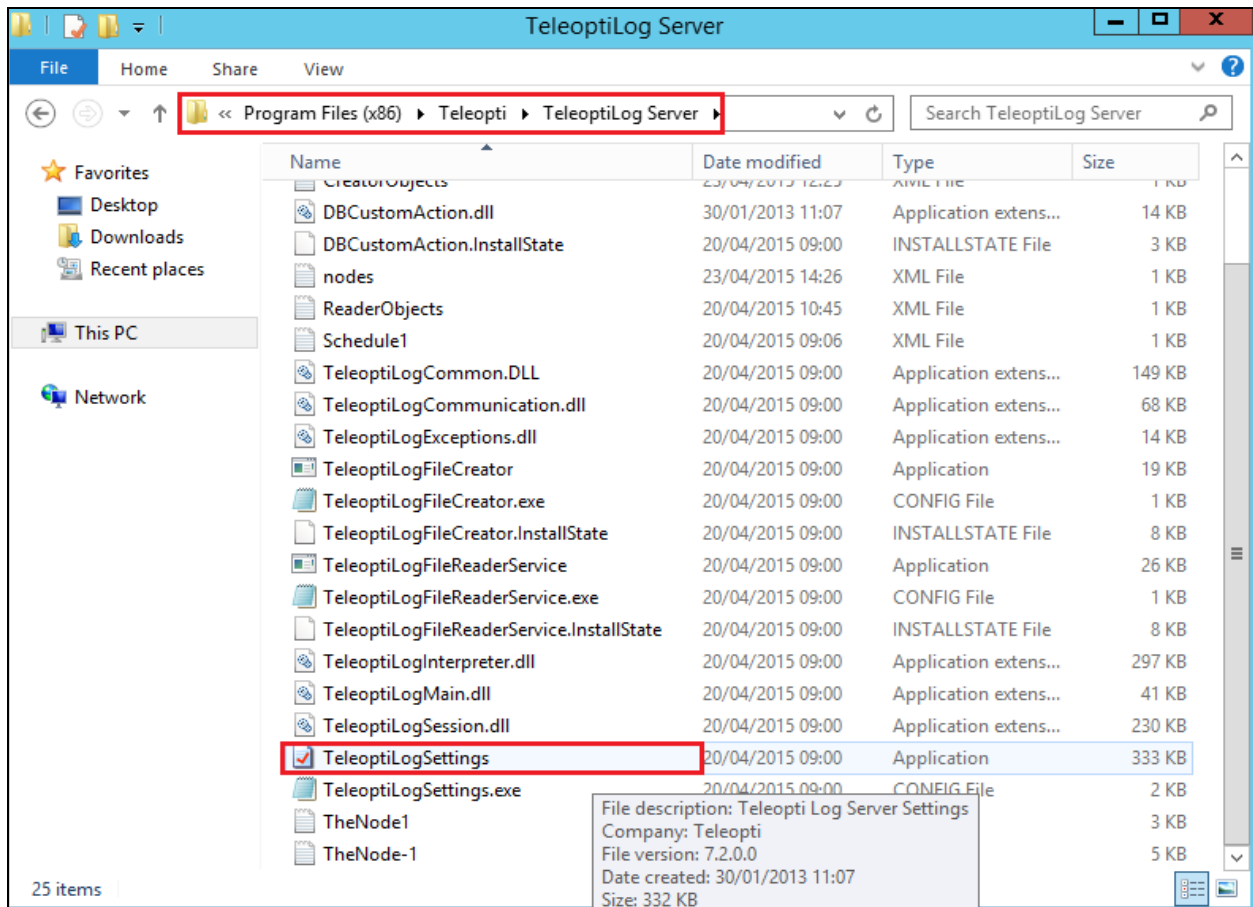
Standard Nodal Display (CC) - Internet Explorer

Offer	Ans	Wait	Ntwk In Offer	Ntwk In Ans	Ntwk In Wait
1	1	0	0	0	0

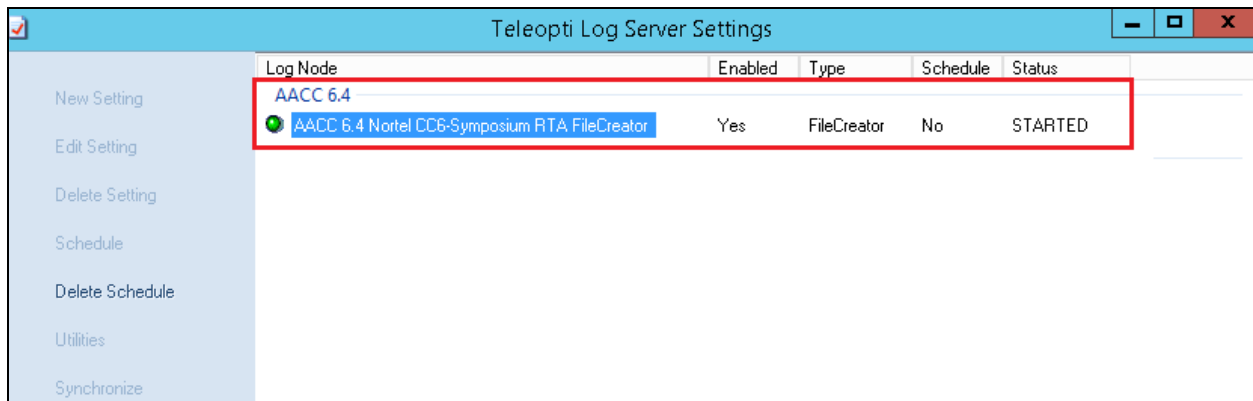
Moving Window, refreshing every 2 seconds
Page 1 of 1
Information as of 16/03/2016 11:03:25

8.2. Verify real-time data is being received by Teleopti

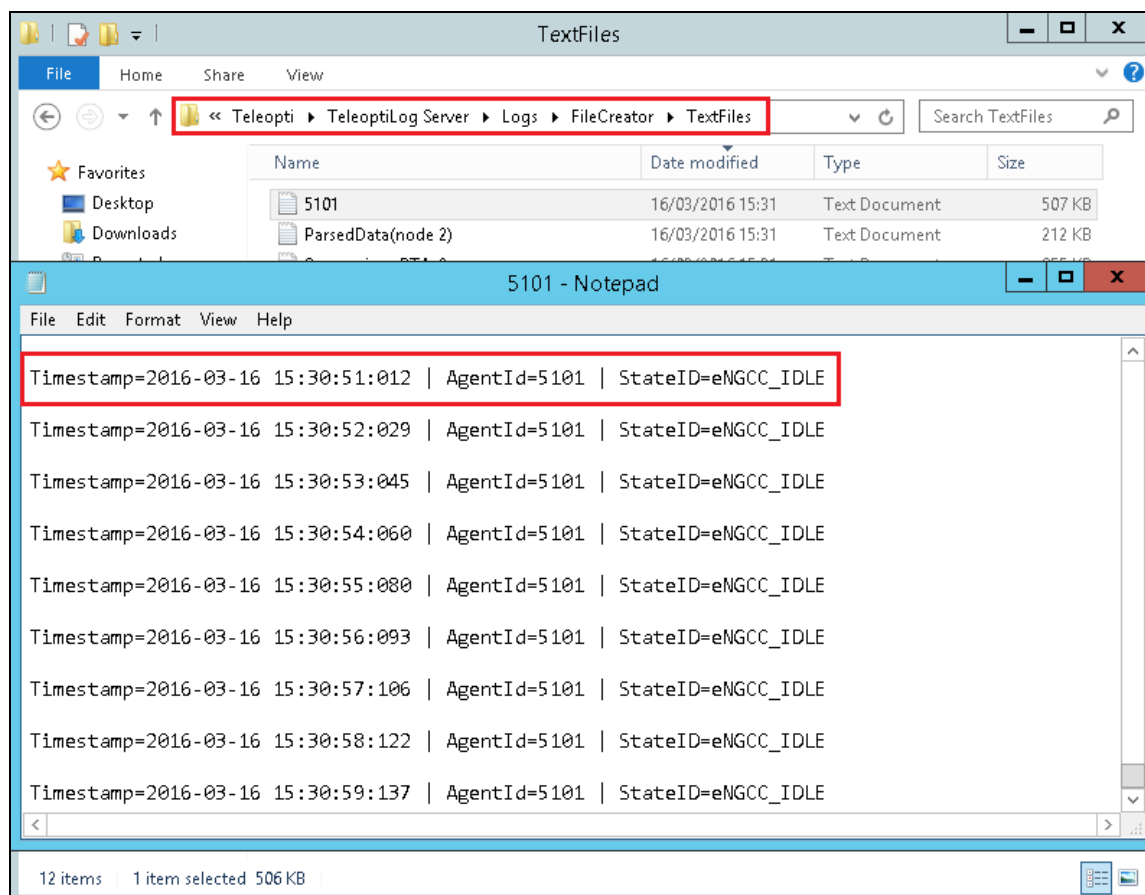
Navigate to the **TeleoptiLogSettings** application, the location of this file may be different on different systems but in the example below this was located at **Program Files (x86) → Teleopti → TeleoptiLog Server** as shown on the screen below.



Double-click on the **TeleoptiLogSettings** Application in the screen shot above. This opens the **Teleopti Log Server Settings** window as shown and the **AACC 6.4 Nortel CC6-Symposium RTA FileCreator** is showing up and active as this green button appears, as is highlighted below.

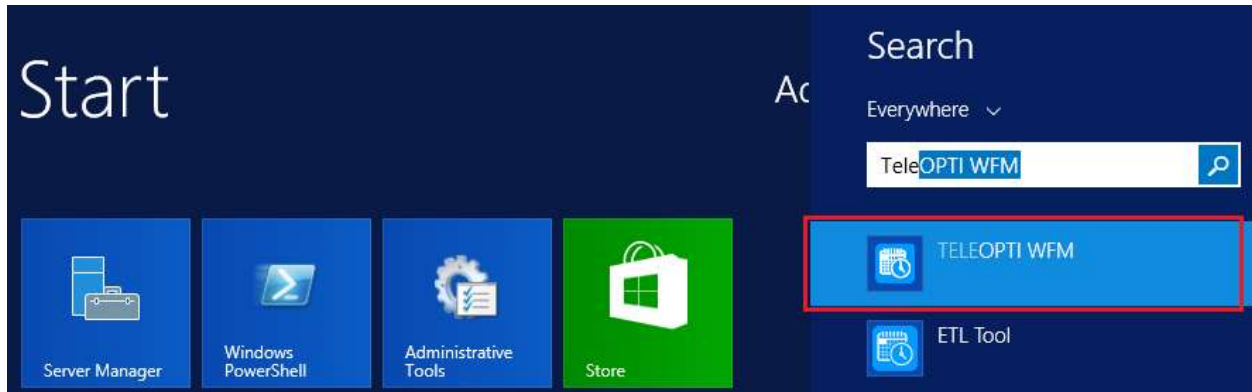


Navigate to where the raw text files for real-time data are stored. This may be different depending on the installation but in the example below these files are located at **Program Files (x86) → Teleopti → TeleoptiLog Server → Logs → FileCreator → TextFiles**. The file present in this folder called **5101** should contain real-time information for agent ID 5101.



8.3. Verify a Real-Time Report is being displayed correctly

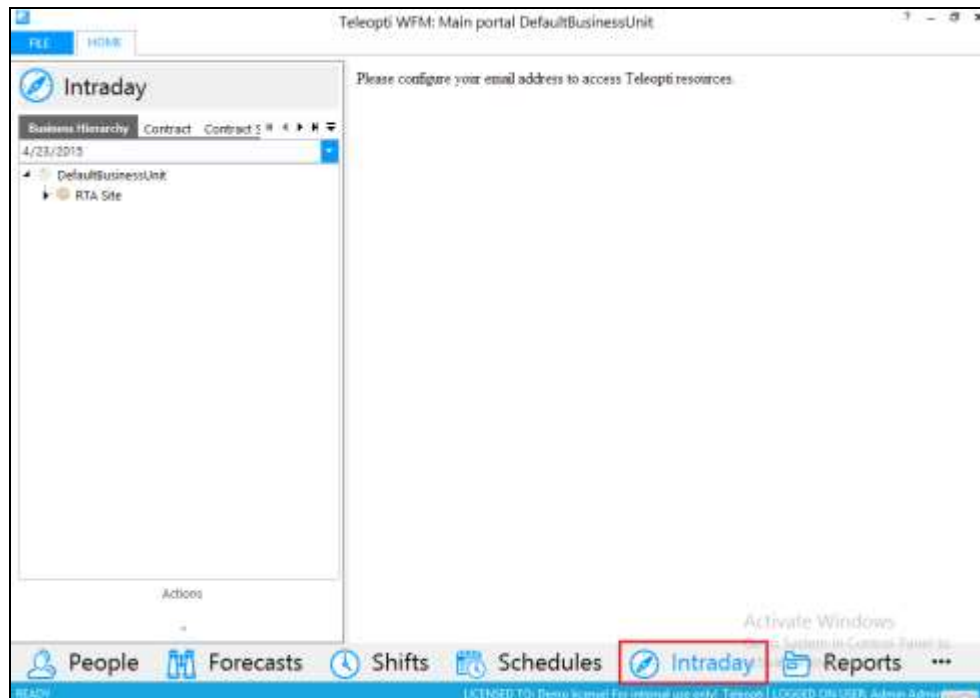
Open the **Teleopti WFM** client as follows.



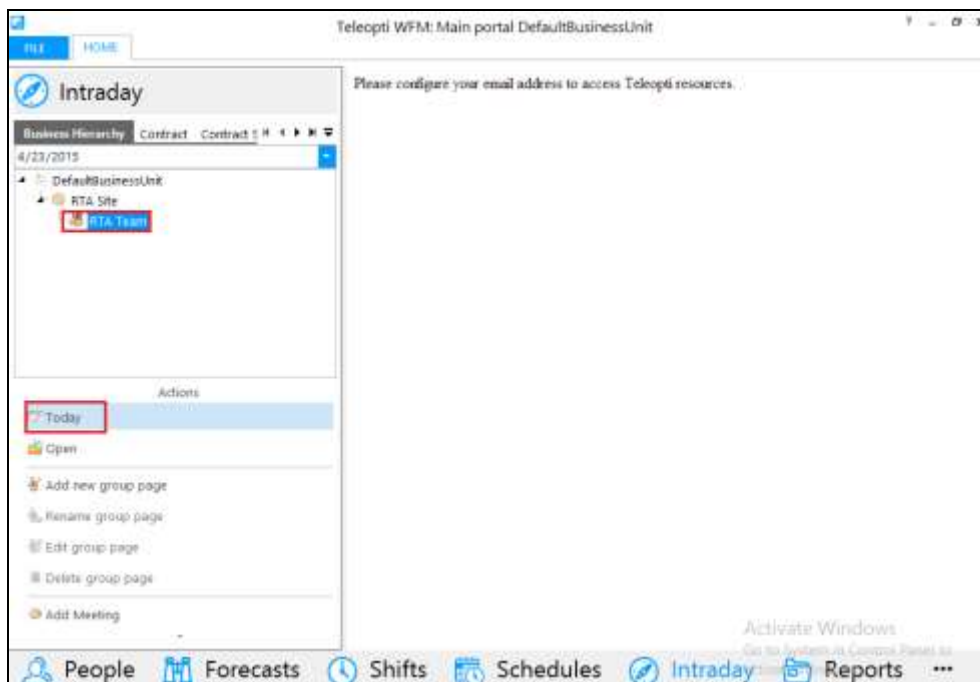
The following login window is displayed; choose the Windows log on by clicking in **Windows** below.



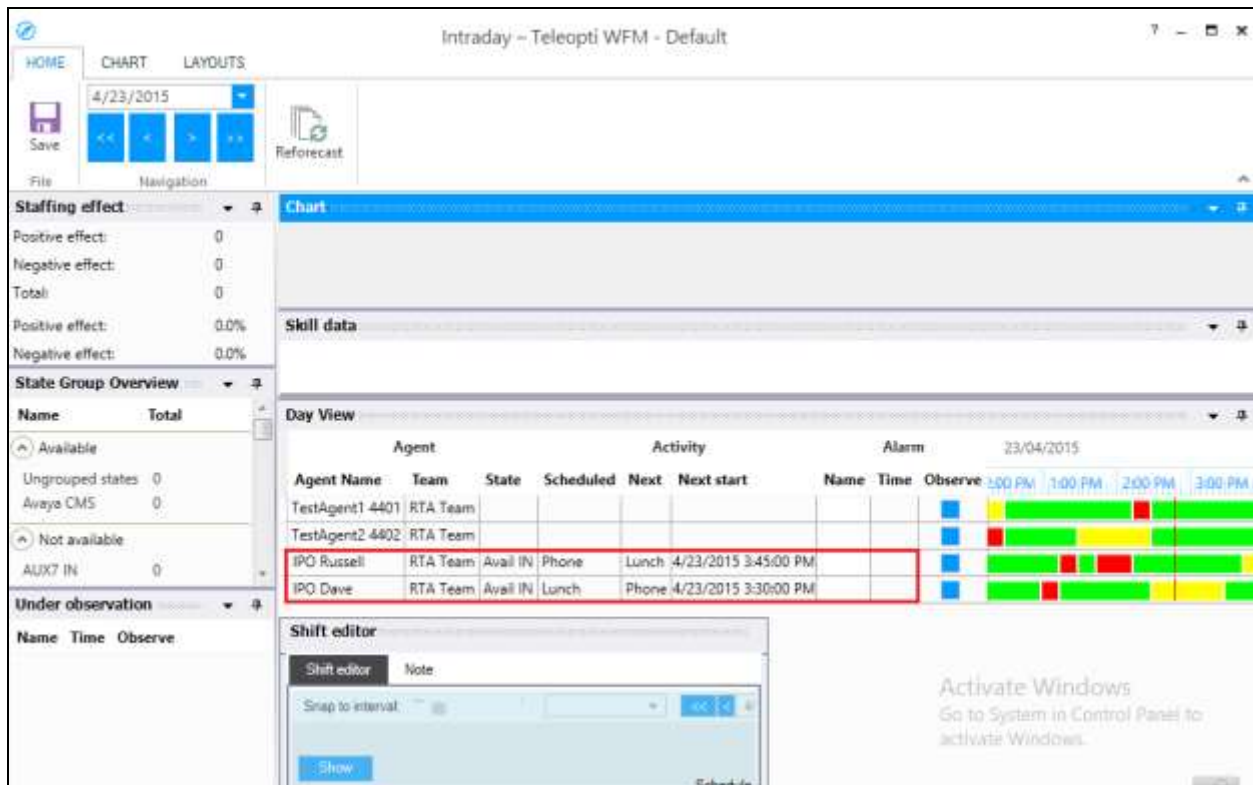
Click on the **Intraday** icon at the bottom of the screen. This will bring up the **Business Hierarchy** in the left window.



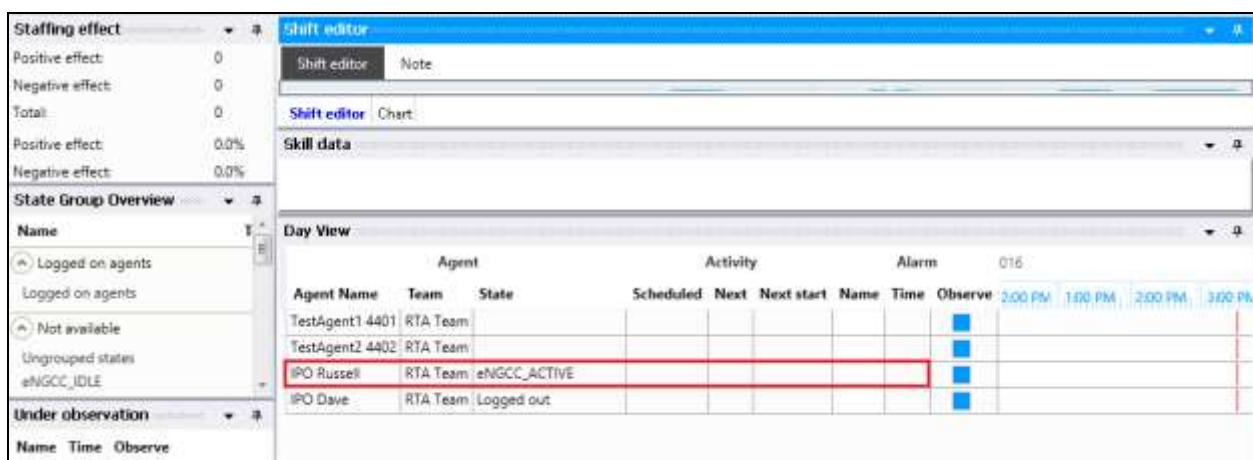
Expand on the **DefaultBusinessUnit** → **RTA Site** → **RTA Team**. Click on **Today** under **Actions** as highlighted below.



The following window is opened displaying real-time information on various agents configured on ACCS and IP Office.



After making a call to the Sales skillset the screen is updated to show **IPO Russell** as being **ACTIVE**.



9. Conclusion

These Application Notes describe the configuration steps required for Teleopti WFM from Teleopti AB to successfully interoperate with Avaya Contact Center Select R7.0 and IP Office R9.1.5 using the Generic Real-Time Adherence module on Teleopti WFM to access real-time data for agent and queue statistics. A full and comprehensive set of feature and functional test cases were performed during compliance testing. All test cases passed with any issues and observations outlined in **Section 2.2**.

10. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from <http://support.avaya.com> or from your Avaya representative.

- [1] *Administering Avaya IP Office™ Platform with Manager*, Release 9.1.0.
- [2] *Deploying Avaya Contact Center Select DVD*, Release 7.0.
- [3] *Real-time Data API Programmer's Guide* NN44400-214 Product release: Release 6.0.
- [4] *Avaya Contact Center Select Release 7.0 Release Notes*.

Teleopti WFM documentation can be found using the contact details listed in **Section 2.3**.

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