



Avaya Solution & Interoperability Test Lab

Application Notes for Verint Work Force Management with Avaya IQ – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Verint Work Force Management to interoperate with Avaya IQ via the RTA and historical interfaces. These interfaces, developed by Avaya's Consulting and System Integration organization, provide real-time and historical data related to agents, queues, and routing points. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

The Verint Work Force Management (WFM) solution is designed to integrate seamlessly with contact center systems for obtaining the three primary types of data:

- Real-time agent adherence data
- Direct contact statistics
- Scorecard statistics

The real-time agent adherence statistics consist of actual agent state changes in the ACD. This information is presented within the Verint WFM solution for the purpose of comparing actual real-time agent activities with the scheduled activities.

The direct contact statistics are 15-minute interval queue and routing point level data that are used to track performance of a contact center for forecasting purposes.

The scorecard statistics consists of one-day interval agent data for the purpose of evaluating the performance of agents in terms of percentage of schedule adherence.

Avaya IQ is a uniform reporting engine that reports real-time and historical statistics on contact center and outbound dialing activities provided by the Avaya Call Center and Proactive Contact products. The Verint WFM software integrates with the Avaya IQ via custom adapters developed by the Avaya Consulting and System Integration organization to obtain the above statistics. Specifically, the following adapters were tested in this compliance test:

- Streaming Time Collection Interface (STCI) – a real-time interface for monitoring agent adherence
- Contact Statistics Interface (CSI) for Queue – a historical interface for queue information
- Contact Statistics Interface (CSI) for Routing Point – a historical interface for routing point information
- Agent Scorecards Metrics (ASCM) interface – a historical interface for agent scorecard applications

Figure 1 below shows the compliance test configuration.

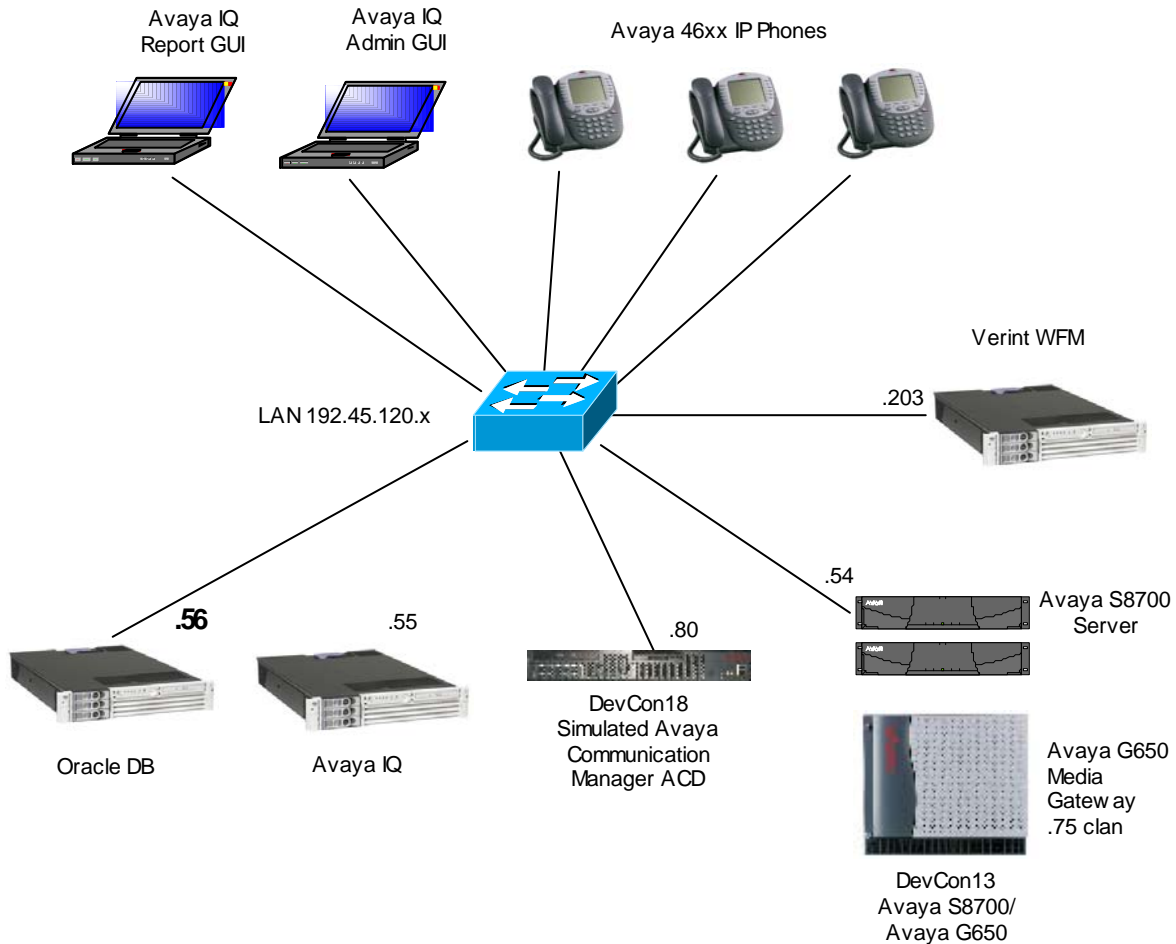


Figure 1: Verint WFM with Avaya IQ

In Avaya Communication Manager, relevant skill/VDN objects are configured to be “measured” for Avaya IQ. When a call travels through a “measured” object on Avaya Communication Manager, the ACD related data are sent to the Avaya IQ. Avaya IQ updates the Verint WFM application periodically with real-time and historical data for agents, queues, and routing points. The real-time data are updated every 30 seconds. The contact historical data are sent to the Verint WFM server every 15 minutes via FTP. The scorecard historical data are sent to the Verint WFM server once a day via FTP. During the compliance testing, the Avaya IQ standard reports and a utility tool of the adapters were used to help validate the accuracy of the data generated by Avaya IQ and displayed by Verint WFM.

2. Equipment and Software Validated

The following equipment and software were used for the test configuration:

Equipment	Software
Avaya S8700 Server	Avaya Communication Manager 4.0, load R014x.00.1.732.1, patch 14300
Avaya G650 Media Gateway <ul style="list-style-type: none">TN799DP C-LAN Circuit Pack	HW01 FW024
Avaya IQ server with adapters provided by the Avaya Consulting and System Integration organization	IQ R4.0 Update 2 Red Hat Enterprise Linux ES V4 Update 5 RTA version: 0.1.13 Historical adapters version: 0.5.9
Oracle Database	10g 2
Verint WFM	7.7.2 Windows 2003 Server

3. Configure Avaya Communication Manager

The detailed administration of contact center objects and connectivity between Avaya Communication Manager and Avaya IQ are not the focus of these Application Notes and will not be described. For administration of contact center objects and connectivity to Avaya IQ, refer to the appropriate documentation listed in **Section 11**.

In order for the data of a queue or a routing point to be collected and forwarded to Avaya IQ, the “measured” field on the corresponding skill and VDN form must be set to “external”. For administration of the “measured” field for a queue and a routing point, refer to the appropriate documentation listed in **Section 11**.

4. Configure Avaya IQ

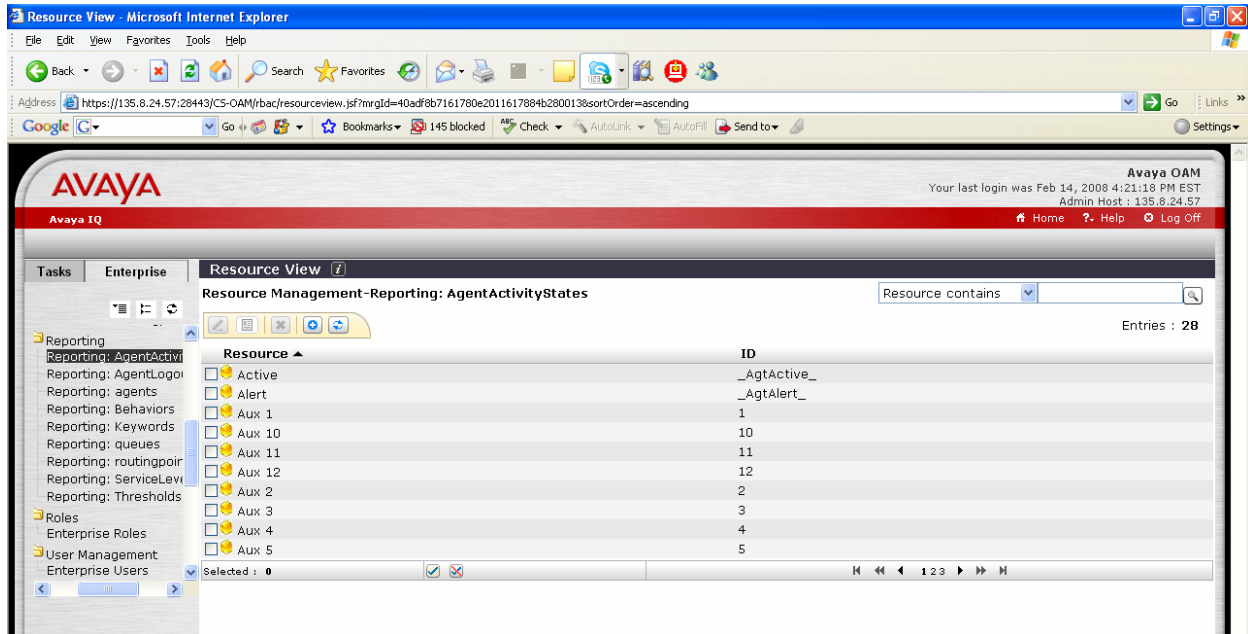
The general configuration of the Avaya IQ is assumed to be in place and will not be described here. This section provides the additional configuration as required for supporting Verint WFM, which includes the following:

- Administer Auxwork codes
- Activate the real-time adapter
- Activate the historical adapters

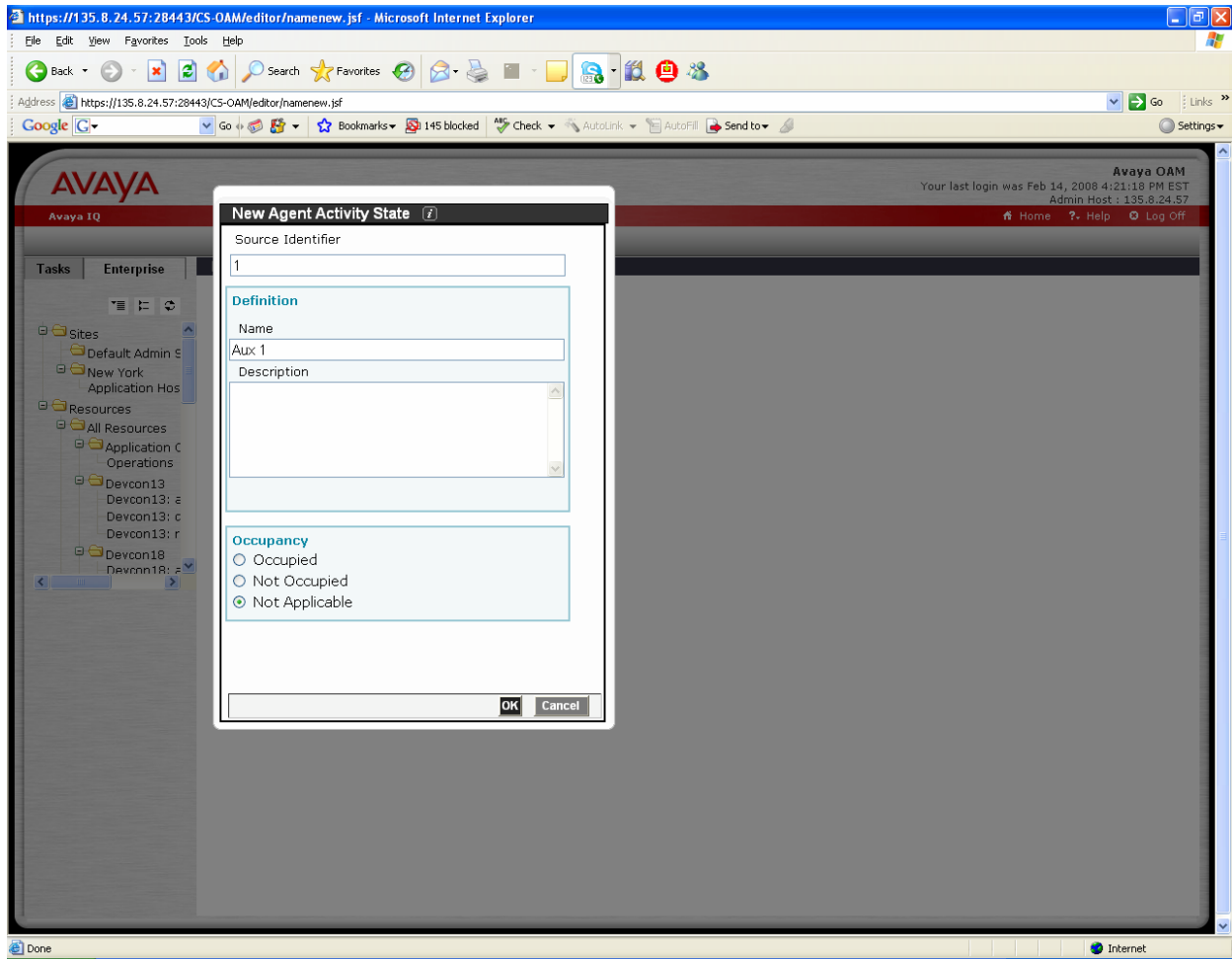
4.1. Administer Auxwork Reason Codes

In Avaya IQ 4.0, the Auxwork Reason Codes need to be added manually. In the 4.1 release, Avaya IQ will automatically create the codes and this manual step will no longer be required.

To manually add the Auxwork reason codes, use a web browser to log in to the Avaya IQ administration interface with the proper credentials. Click the **Enterprise** tab at the upper left corner. Use the expand icon to expand the menu and select **Resources → All Resources → Reporting → Reporting: AgentActivityStates**.



Click the “+” icon. A **New Agent Activity State** screen will pop up. Enter 1 in the **Source Identifier** field and Aux 1 in the **Name** field. Click **OK**.



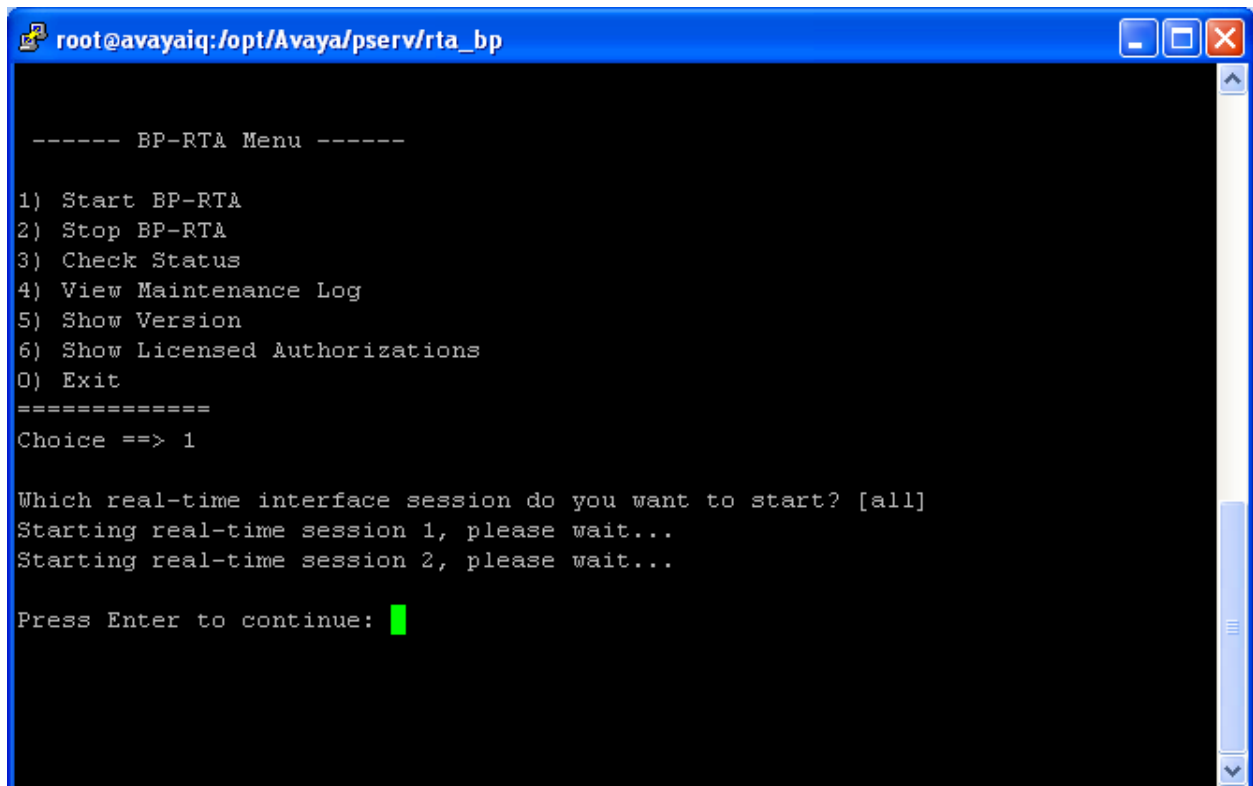
Click the **Refresh** button on the browser. The newly added Auxwork reason code should be displayed. Repeat the procedure for Auxwork reason code 2 to 10. If there are more Auxwork reason codes used in the ACD, create them as well.

4.2. Activate The Real-time Adapter

One real-time adapter is installed in Avaya IQ to support the Verint WFM integration. This adapter supports the Streaming Time Collection Interface (STCI).

Use SSH to log into the Avaya IQ. Change directory to /opt/Avaya/pserv/rta_bp. Run “./menurta”.

From the **BP-RTA Menu** screen, enter **2** then **all** to stop all the sessions. Each session corresponds to an ACD data source. Once all the sessions are stopped, enter **Enter** to continue. Enter **1** then **all** to start all the sessions. Once all the sessions are started, enter **Enter** to continue and **0** to quit. The screen capture below shows that all the sessions have been started.



```
root@avayaiq:/opt/Avaya/pserv/rta_bp

----- BP-RTA Menu -----

1) Start BP-RTA
2) Stop BP-RTA
3) Check Status
4) View Maintenance Log
5) Show Version
6) Show Licensed Authorizations
0) Exit
=====
Choice ==> 1

Which real-time interface session do you want to start? [all]
Starting real-time session 1, please wait...
Starting real-time session 2, please wait...

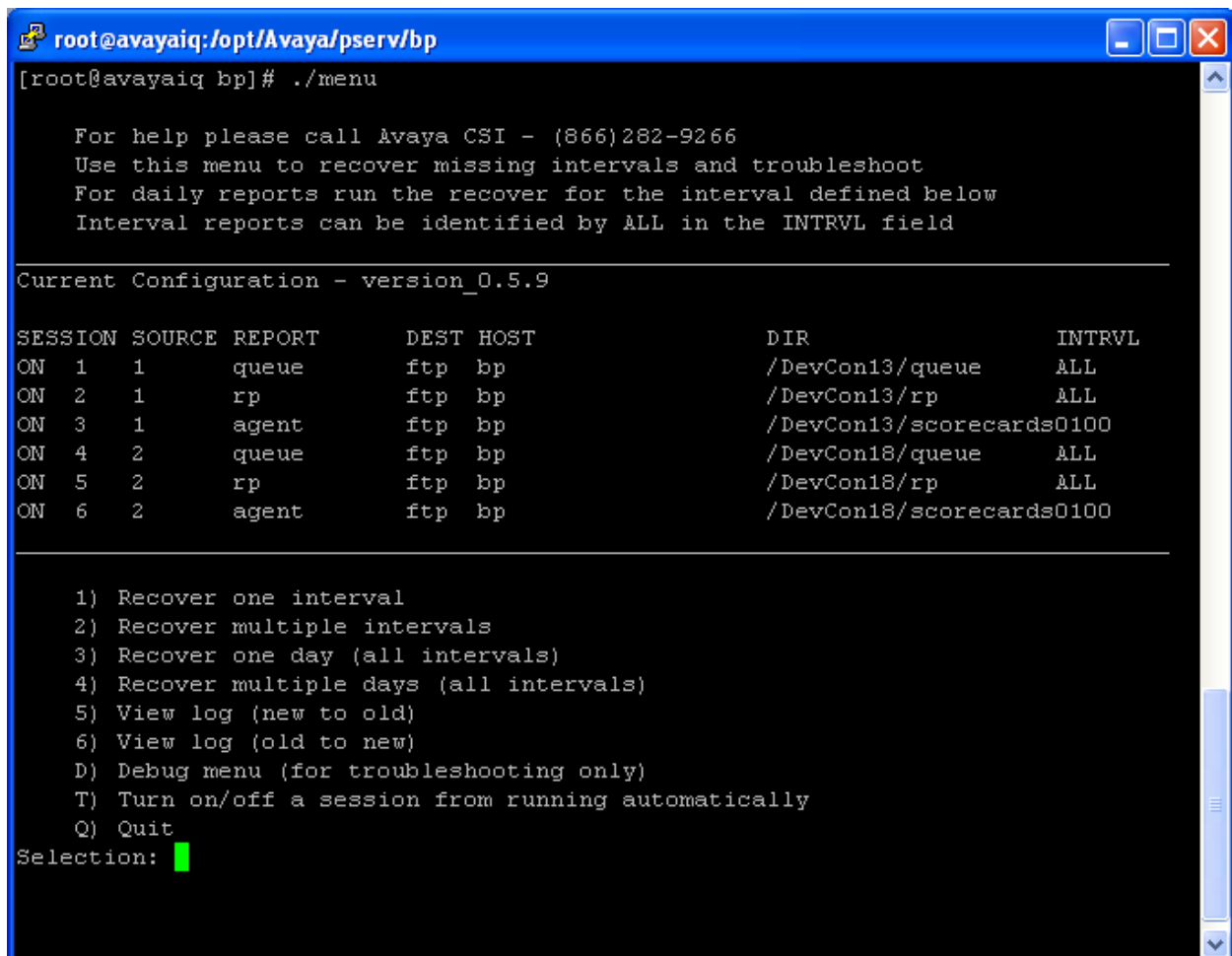
Press Enter to continue: █
```

4.3. Activate The Historical Adapters

Three historical adapters are installed in Avaya IQ to support the Verint WFM integration. These adapters support the Contact Statistics Interface (CSI) for Queue, CSI for Routing Point, and Agent Scorecards Metrics (ASCM) interface.

Use SSH to log into Avaya IQ. Change directory to /opt/Avaya/pserv/bp. Run “./menu”.

The first column shows the status of the sessions. Each session corresponds to an interface for an ACD data source. Enter **T** followed by the session number to toggle the status until all the sessions are **ON**. The screen capture below shows that there are three sessions (queue, rp, and agent) for ACD 1 and three other sessions for ACD 2. The first column indicates that all the sessions have been started.



```
root@avayaiq:/opt/Avaya/pserv/bp
[root@avayaiq bp]# ./menu

For help please call Avaya CSI - (866)282-9266
Use this menu to recover missing intervals and troubleshoot
For daily reports run the recover for the interval defined below
Interval reports can be identified by ALL in the INTRVL field

Current Configuration - version_0.5.9

SESSION SOURCE REPORT      DEST HOST      DIR              INTRVL
ON  1    1    queue      ftp  bp      /DevCon13/queue  ALL
ON  2    1    rp        ftp  bp      /DevCon13/rp     ALL
ON  3    1    agent     ftp  bp      /DevCon13/scorecards0100
ON  4    2    queue     ftp  bp      /DevCon18/queue  ALL
ON  5    2    rp        ftp  bp      /DevCon18/rp     ALL
ON  6    2    agent     ftp  bp      /DevCon18/scorecards0100

1) Recover one interval
2) Recover multiple intervals
3) Recover one day (all intervals)
4) Recover multiple days (all intervals)
5) View log (new to old)
6) View log (old to new)
D) Debug menu (for troubleshooting only)
T) Turn on/off a session from running automatically
Q) Quit
Selection: █
```


5. Configure Avaya IQ Adapters

The Avaya IQ adapters are configurable in the following areas to fit into the customer environment.

- Timezone for the reports
- Sliding window size
- Avaya IQ login/password
- FTP server parameters (login, password, naming format, folder, ascii or binary)
- Delimiter
- Data source name
- Report type: agent, queue, or routing point
- Time to run (only for historical report)

However, the adapters are not user configurable and should only be configured by the Avaya Consulting and System Integration organization. Questions about adapter configuration should be directed to Avaya Consulting and System Integration.

6. Configure Verint WFM

This section provides the procedures for configuring Verint WFM. For detailed explanations, please refer to Verint Workforce Management Administration Guide

6.1. Log Into the Verint WFM Server

From a web browser, access the Verint WFM server using the URL <http://servername:7001/wfo/control/signin> where *servername* is the host name of the Verint WFM server. Enter the login/password credential.

6.2. Create Data Source

The data source must be configured before the link to Avaya IQ is created. A data source is required to map activities and reason codes.

To create a data source, click **System** → **Data Sources**. Click the **Create Data Source** button at the bottom of the screen. A small window will pop up. Enter **phone** as the Data Source Type. The **Create Data Source** window will pop up. Enter values into the fields as shown in the diagram below. Click the **Save** button at the bottom of the window. Once a data source is added, the name of the data source will appear in the left pane of the screen. Below is an example of the **Create Data Source** screen.

The screenshot shows the 'Create Data Source' window in the Impact system. The window is titled 'Settings - Microsoft Internet Explorer' and the address bar shows 'http://localhost:7001/wfo/control/gen_datasources_settings_fs'. The main menu includes 'My Home', 'People', 'Tracking', 'Requests', 'Interactions', 'Learning', 'Reports', 'Scorecards', 'App Admin', and 'System'. The 'System' menu is expanded, showing 'Installations', 'Data Sources', 'Integration', 'Scorecards Sources', 'Log', 'Administration', 'Alarms', and 'System'. The 'Data Sources' menu is selected, showing 'Settings', 'Data Source Groups', 'Reason Codes', 'Agents', 'Skill Mapping', and 'Activity Mapping'. The 'Data Source Settings' section is active, showing a list of data sources on the left and a form for creating a new one on the right. The list on the left includes 'Avaya API IQ - Scorecards', 'Avaya IQ Report 4.1', and 'STCI for IQ'. The form on the right is titled 'Create Data Source' and includes the following fields: 'Type' (set to 'Phone'), 'Name' (set to 'STCI for IQ'), 'Description' (empty), 'External Name' (empty), 'Data Source Parent' (set to 'Select Parent'), 'Time Zone' (set to '(GMT-05:00) Eastern Time (US & Canada)'), 'Password-Protected' (checkbox), 'Use ACD Staffing' (checkbox, checked), 'Reason Code Template' (set to 'Select Template'), 'Contacts Viewer Server Name' (empty), 'Contacts Viewer Server Port' (empty), and 'Contacts Viewer URL - override' (empty). The 'Save', 'Cancel', and 'Revert' buttons are at the bottom right of the form.

6.3. Create Data Source Groups

Data Source Groups are used to identify the ACD queue or routing point for which data will be collected from Avaya IQ.

To create a data source group, click **System** → **Data Sources** → **Data Source Groups**. Select the data source from the left pane. Click the **Create Group** button at the bottom of the screen. The **Create Group** window will pop up. Enter values into the fields as shown in the diagram below. Click the **Save** button at the bottom of the window. Below is an example of the **Create Group** screen.

The screenshot shows the 'Data Source Groups' window in the Impact application. The window has a menu bar with 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. Below the menu bar is a toolbar with 'Back', 'Forward', 'Home', 'Search', 'Favorites', and 'Go' buttons. The address bar shows 'http://localhost:7001/wfo/control/gen_datasources_settings_fs'. The main content area has a navigation pane on the left with 'My Home', 'People', 'Tracking', 'Requests', 'Interactions', 'Learning', 'Reports', 'Scorecards', 'App Admin', and 'System'. The 'System' menu is expanded, showing 'Installations', 'Data Sources', 'Integration', 'Scorecards Sources', 'Log', 'Administration', 'Alarms', and 'Settings'. The 'Data Source Groups' sub-menu is selected. The main content area shows a 'Data Source Group: STCI for IQ' section. On the left is a list of 'Data Source Name' items: 'Avaya API IQ - Scorecards', 'Avaya IQ Report 4.1', and 'STCI for IQ'. On the right is a 'Create Group' form with three fields: 'Data Source Group Name' (1250), 'Description' (queue 250), and 'Average Work Time' (0). At the bottom right of the form are 'Save', 'Cancel', and 'Revert' buttons.

6.4. Create Reason Codes

Reason codes are used by the Agent Adherence application. The Verint WFM servers map the Aux reason codes received from Avaya IQ to text strings.

To create reason codes, click **System** → **Data Sources** → **Reason Codes**. Select the data source from the left pane. Click the **Create Reason Code** button at the bottom of the screen. The **Create Reason Code** window will pop up. Enter values into the fields as shown in the diagram below. Click the **Save** button at the bottom of the window. Below is an example of the **Create Reason Code** screen.

The screenshot shows the 'Create Reason Code' window in the Impact application. The window is titled 'Reason Codes - Microsoft Internet Explorer' and the address bar shows 'http://localhost:7001/wfo/control/gen_datasources_settings_fs'. The application interface includes a top navigation bar with 'My Home', 'People', 'Tracking', 'Requests', 'Interactions', 'Learning', 'Reports', 'Scorecards', 'App Admin', and 'System'. Below this is a sub-navigation bar with 'Installations', 'Data Sources', 'Integration', 'Scorecards Sources', 'Log', 'Administration', 'Alarms', and 'System'. The 'Data Sources' section is active, showing a list of data sources on the left: 'Avaya API IQ - Scorecards', 'Avaya IQ Report 4.1', and 'STCI for IQ'. The 'STCI for IQ' data source is selected. The 'Create Reason Code' form on the right has the following fields: 'Reason Code Name' (STCI for IQ+50+1), 'Event Mode' (20), 'Event Reason' (1), and 'Shift Operation' (None). The 'Save' button is at the bottom right of the form.

Data Source Reason Code: STCI for IQ	
Create Reason Code	
Reason Code Name	STCI for IQ+50+1
Event Mode	20
Event Reason	1
Shift Operation	None

Save Cancel Revert

6.5. Configure Queues

Queues are used to define the entity for which ACD queue and routing point related historical data will be collected and reported by the Verint WFM.

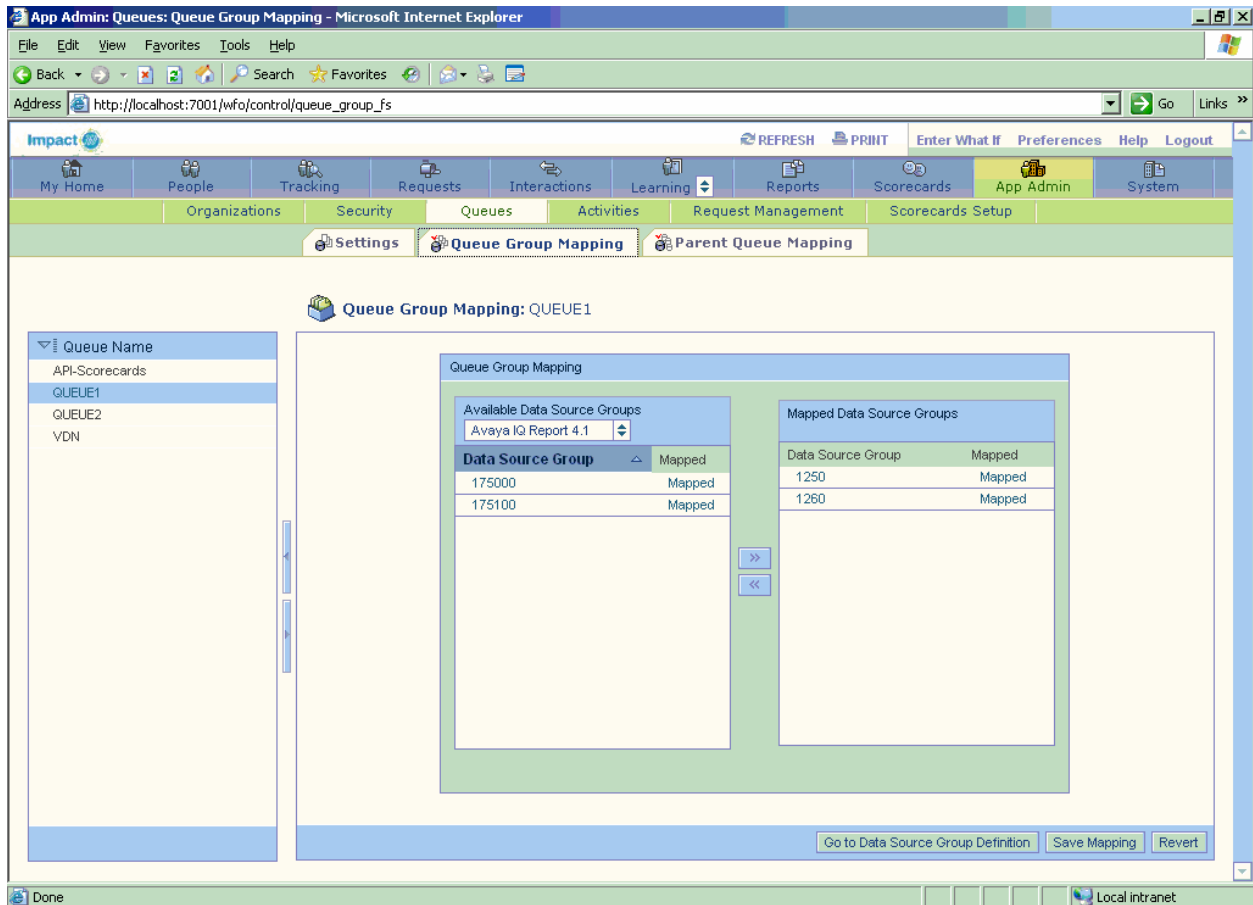
To create a queue, click **App Admin → Queues → Settings**. Click the **Create Queue** button at the bottom of the screen. The **Create Queue** window will pop up. Enter values into the fields as shown in the diagram below. Click the **Save** button at the bottom of the window. Once a queue is added, the name of the queue will appear in the left pane on the screen. Below is an example of the **Create Queue** screen.

The screenshot displays the 'Queue Settings' window within the Verint WFM application. The window is titled 'App Admin: Queues: Settings - Microsoft Internet Explorer'. The address bar shows 'http://localhost:7001/wfo/control/queue_fs'. The application's navigation bar includes tabs for My Home, People, Tracking, Requests, Interactions, Learning, Reports, Scorecards, App Admin, and System. The 'App Admin' tab is active, and the 'Queues' sub-tab is selected. The 'Queue Settings' section is divided into two panes. The left pane, titled 'Queue Name', contains a list of queue names: API-Scorecards, QUEUE1, QUEUE2, and VDN. The right pane, titled 'Queue Details', contains a form with the following fields: Name (QUEUE1), Description (ACD Devcon13), Media (Phone), and Type (Normal). At the bottom right of the form are buttons for Save, Cancel, and Revert. The status bar at the bottom of the window shows 'Done' and 'Local intranet'.

6.6. Configure Queue Data Source Group Mapping

Queue Data Source Group Mapping is used to map data source groups to Queue.

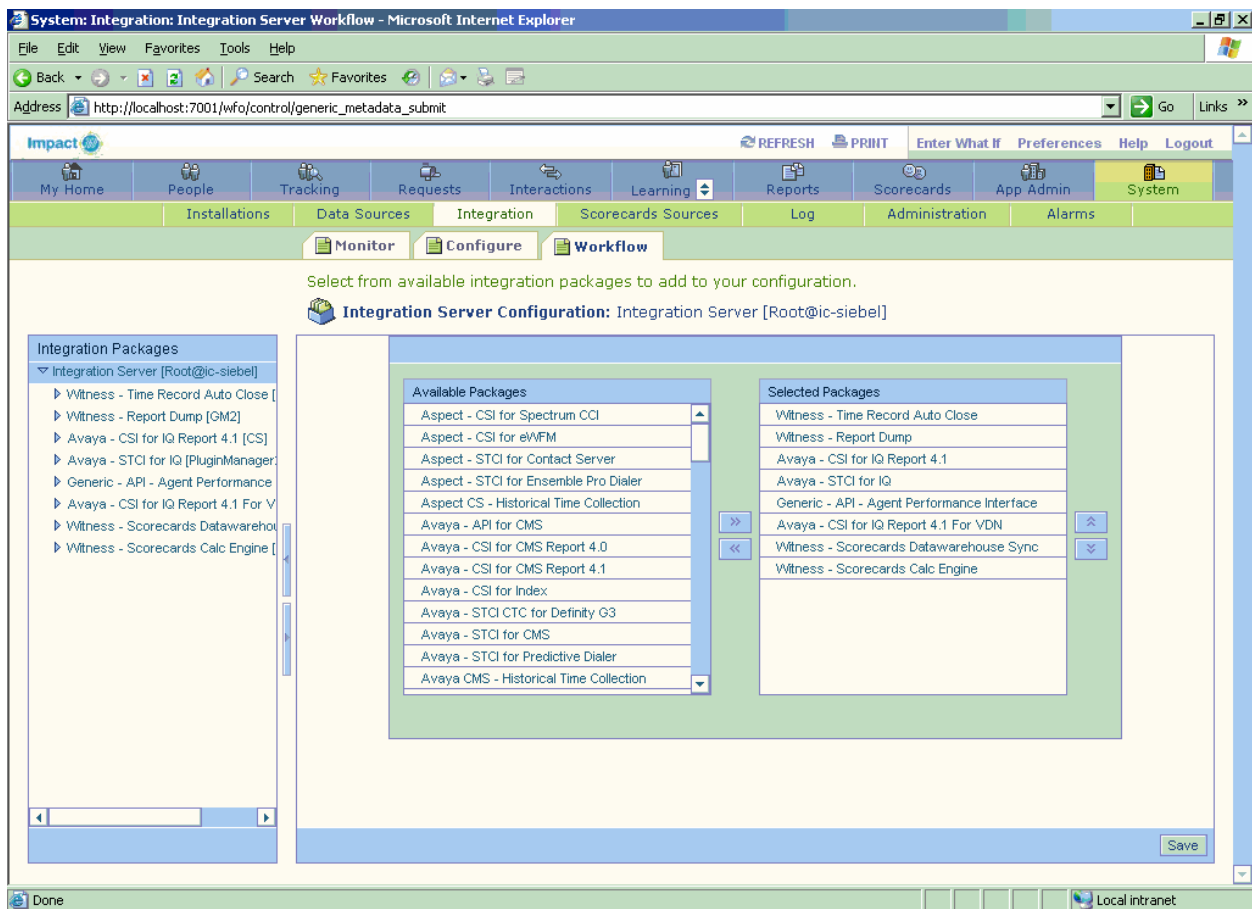
To configure the mapping, click **App Admin** → **Queues** → **Queue Group Mapping**. Select the Queue from the left pane of the screen. A list of **Available Data Source Groups** will be displayed in the left side box. Select groups and use the double arrow buttons to move to the **Mapped Data Source Groups** box. Click the **Save Mapping** button at the bottom of the window to save the mapping. Below is an example of the **Create Queue** screen.



6.7. Add Packages to the Integration Server

The Verint WFM Integration Packages serve as the adapters between Avaya IQ and Verint WFM. Integration Packages corresponding to the four data feeds from Avaya IQ must be configured in order for Verint WFM to receive data from those data feeds.

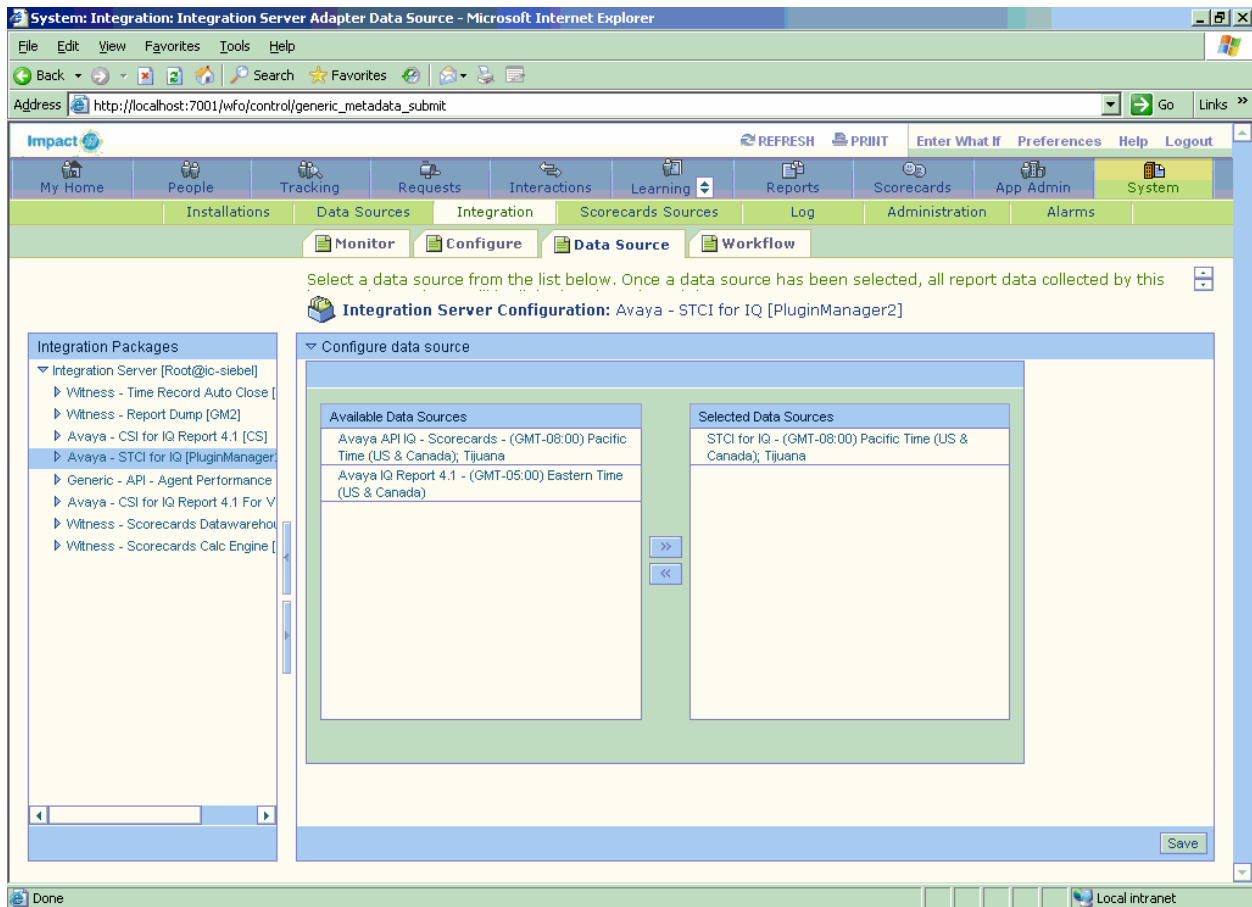
To add Integration Packages to the Integration Server, click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select the **Integration Server [Root]** and then click the **Workflow** tab. Select the Integration Packages from the **Available Packages** box. Use the double arrow button to move them to the **Selected Packages** box. Click the **Save** button at the bottom of the window. Once the Integration Packages are saved, they will appear in the left pane of the screen. Below is an example of the **Integration Package Configuration** screen.



6.8. Configure the Integration Packages

The Integration Packages need to be configured to be associated with particular data sources.

To configure an Integration Package, click **System** → **Integration**. Double click the displayed Integration Server. In the left pane, select the Integration Package and then click the **Data Source** tab. Select data sources from the **Available Data Sources** box. Use the double arrow button to move them to the **Selected Data Sources** box. Click the **Save** button at the bottom of the window. Below is an example of the **Configure Data Source for Integration Package** screen.



6.9. Configure Report Definition

For the historical interfaces, the report definition needs to be configured to match the interface definition so the data can be extracted correctly.

To configure report definition, click **System** → **Integration**. Double click the displayed Integration Server. In the left pane, select the Integration Package and expand. Click **Converter**. In the right pane, click **Configuration** → **Report Definition**. Select **Delimited Report**. Populate the Column Name, Column Position, and Data Type fields based upon the definition of the adapter interface. Click the **Save** button at the bottom of the window. Below are the **Configure Report Definition** screens for the CSI for Queue, CSI for Routing Point, and ASCM interfaces, respectively.

System: Integration: Converter Configuration - Microsoft Internet Explorer

Address: http://localhost:7001/wfo/control/generic_metadata_submit

My Home People Tracking Requests Interactions Learning Reports Scorecards App Admin System

Installations Data Sources Integration Scorecards Sources Log Administration Alarms

Configure

Configure: Converter [Converter]

Configuration

Report Definition

☒ Delimited Report ☐ Fixed Width Report

Field Delimiter: ,

Column Name	Column Position	Data Type
Group	1	Number
Calls	2	Number
ASA	3	Interval in sec
ATT	4	Interval in sec
ACW	5	Interval in sec
Abandons	6	Number
Agent	7	Number
SL	8	Number
ATTwHold	9	Interval in sec
CallsOfrd2	10	Number
SL2	11	Number
bkupCalls	12	Number
ACDcalls	13	Number
Abncalls1	14	Number

Show Report Save

System: Integration: Converter Configuration - Microsoft Internet Explorer

Address: http://localhost:7001/wfo/control/generic_metadata_submit

Impact

My Home People Tracking Requests Interactions Learning Reports Scorecards App Admin System

Installations Data Sources Integration Scorecards Sources Log Administration Alarms

Configure

Configure: Converter [Converter4]

Integration Packages

- Integration Server [Root@ic-siebel]
 - Witness - Time Record Auto Close [GM2]
 - Witness - Report Dump [GM2]
 - Avaya - CSI for IQ Report 4.1 [CS]
 - Converter [Converter]
 - Timer [Timer]
 - Avaya - STCI for IQ [PluginManager]
 - Avaya IQ Adapter [ContinuousEx]
 - Generic - API - Agent Performance
 - Converter [Converter3]
 - Timer [Timer5]
 - Avaya - CSI for IQ Report 4.1 For V
 - Converter [Converter4]
 - Timer [Timer6]
 - Witness - Scorecards Datawarehouse
 - Witness - Scorecards Calc Engine

Configuration

Report Definition

Delimited Report ☒ Fixed Width Report ☐

Field Delimiter: ,

Column Name	Column Position	Data Type
Group	1	Number
Calls	2	Number
ASA	3	Interval in sec
ATT	4	Interval in sec
ACW	5	Interval in sec
Abandons	6	Number
SL	7	Number
ATTwHold	8	Interval in sec
CallsOfrd2	9	Number
SL2	10	Number
bkupCalls	11	Number
ACDcalls	12	Number
Abncalls1	13	Number
Busycalls	14	Number

Show Report Save

Done

System: Integration: Converter Configuration - Microsoft Internet Explorer

Address: http://localhost:7001/wfo/control/generic_metadata_submit

Impact

My Home People Tracking Requests Interactions Learning Reports Scorecards App Admin System

Installations Data Sources Integration Scorecards Sources Log Administration Alarms

Configure

Configure: Converter [Converter3]

Integration Packages

- Integration Server [Root@ic-siebel]
 - Witness - Time Record Auto Close [GM2]
 - Witness - Report Dump [GM2]
 - Avaya - CSI for IQ Report 4.1 [CS]
 - Converter [Converter]
 - Timer [Timer]
 - Avaya - STCI for IQ [PluginManager]
 - Avaya IQ Adapter [ContinuousEx]
 - Generic - API - Agent Performance
 - Converter [Converter3]
 - Timer [Timer5]
 - Avaya - CSI for IQ Report 4.1 For V
 - Converter [Converter4]
 - Timer [Timer6]
 - Witness - Scorecards Datawarehouse
 - Witness - Scorecards Calc Engine

Configuration

Report Definition

Delimited Report ☒ Fixed Width Report ☐

Field Delimiter: ,

Column Name	Column Position	Data Type
AGENT_ID	1	String
DATE	2	Date
ORG_ID	3	String
LoginTime	4	Number
TalkTime	5	Number
AfterCallWorkTime	6	Number
HoldTime	7	Number
TotalCallsHandled	8	Number
TotalCallsAbandoned	9	Number
AuxTime	10	Number
AuxInTime	11	Number
AuxOutTime	12	Number
IdleTime	13	Number
ActualCalls	14	Number

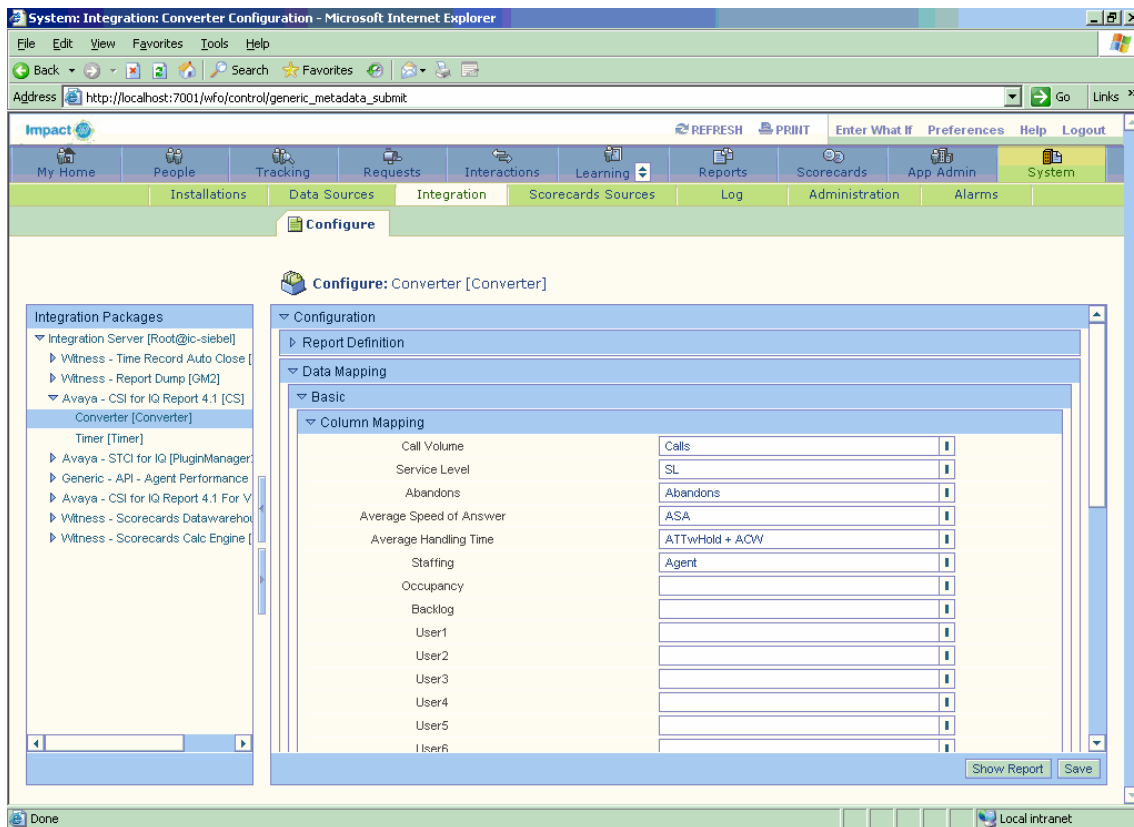
Show Report Save

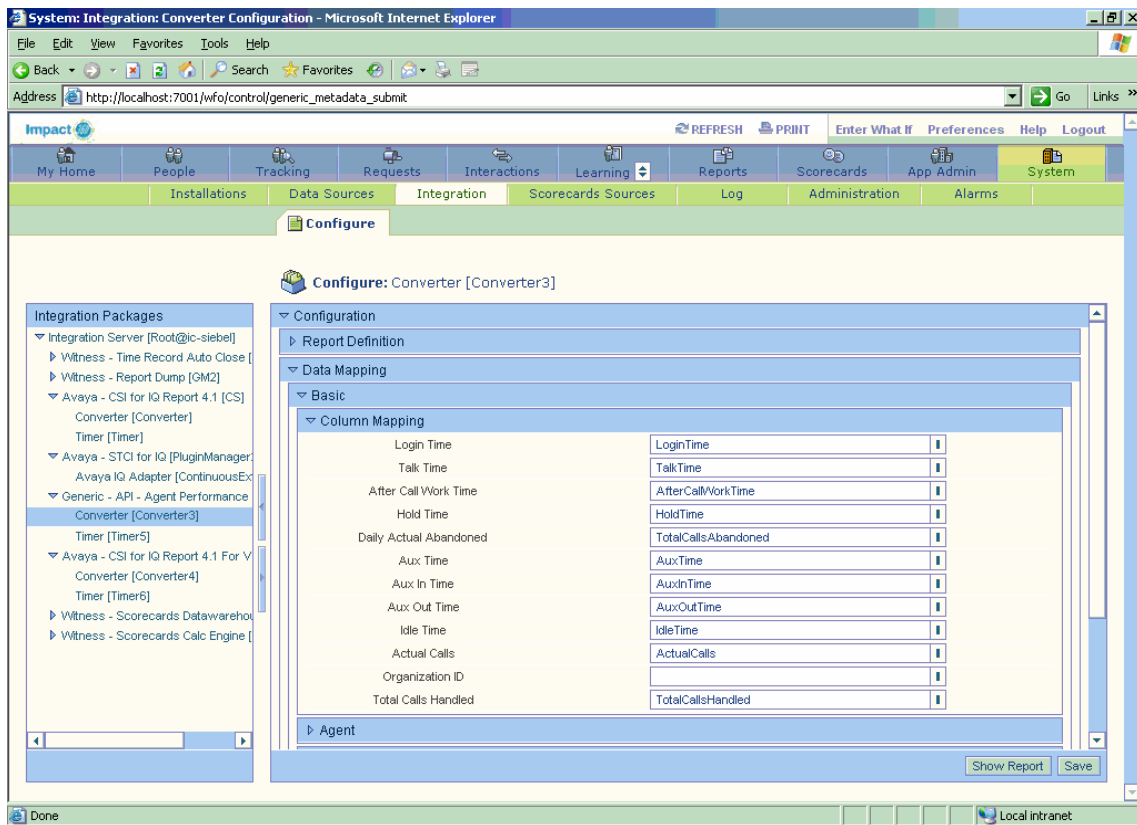
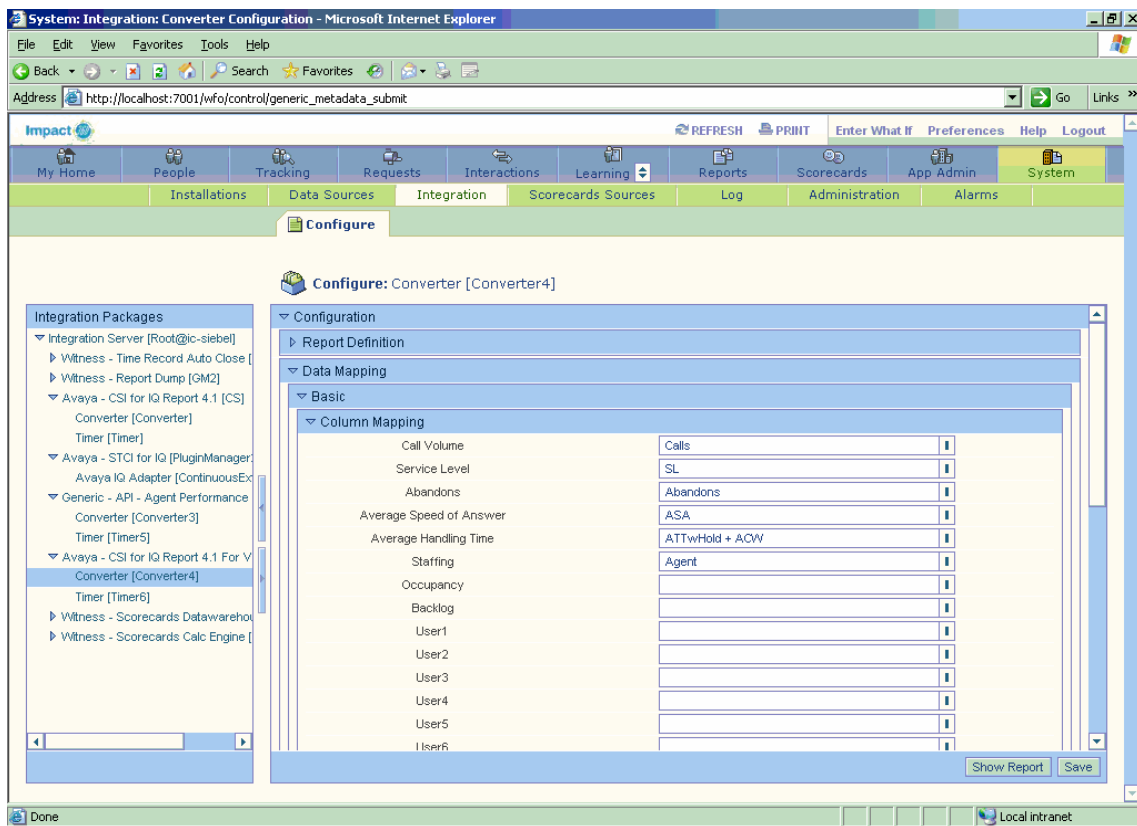
Done

6.10. Configure Data Mapping

For the historical interfaces, Verint WFM provides the data mapping functions to map data from the Avaya IQ format to the Verint report format.

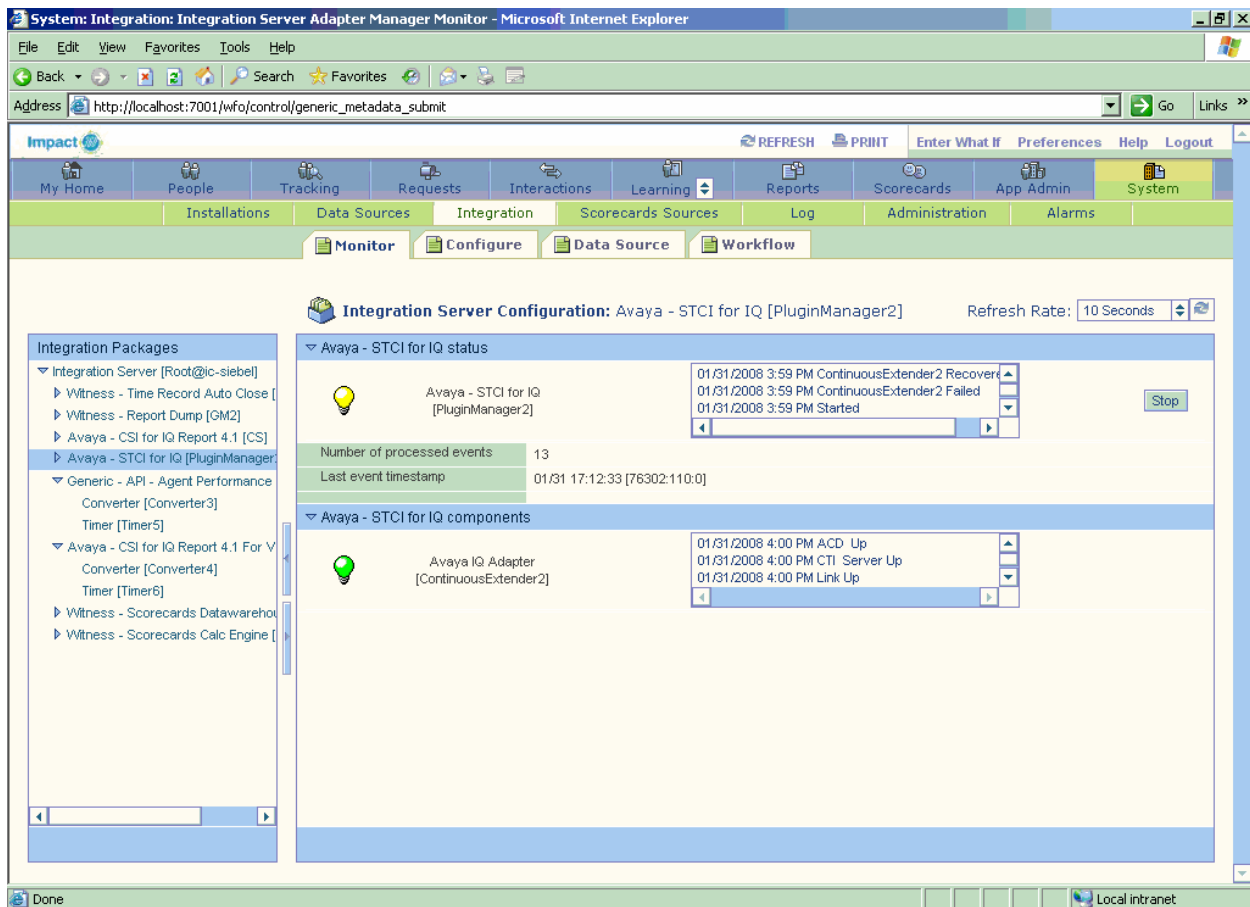
To perform the data mapping, click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select the Integration Package and expand. Click **Converter**. In the right pane, click **Configuration** → **Data Mapping** → **Basic** → **Column Mapping**. In the right hand side column, enter the source objects and calculation needed to derive the WFM objects. Click the **Save** button at the bottom of the window. Below are the **Configure Data Mapping** screens for the CSI for Queue, CSI for Routing Point, and ASCM interfaces, respectively.





6.11. Connect to the Real-time Interface

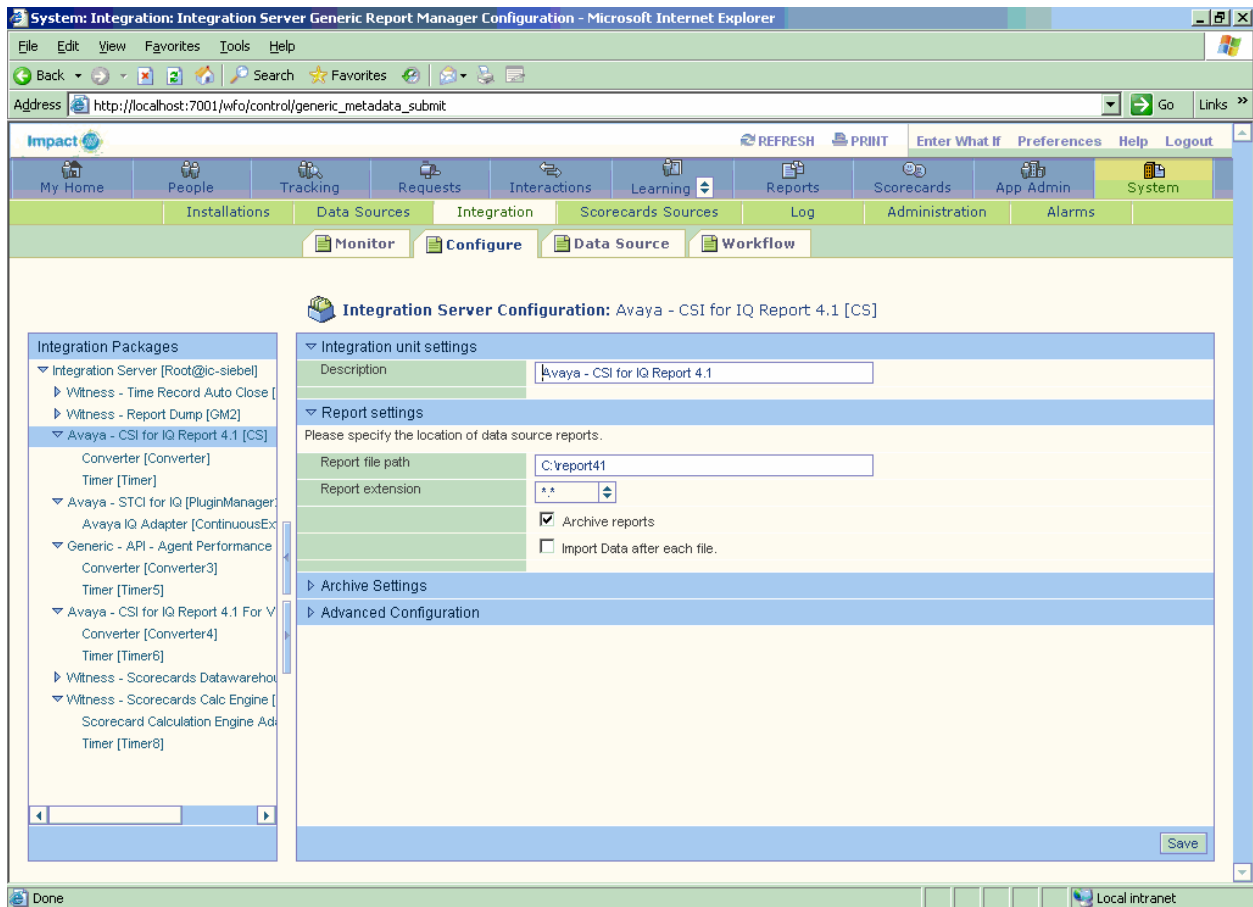
To connect Verint WFM to the real-time STCI interface, click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select **Avaya – STCI for IQ**. In the right pane, click the **Monitor** tab. Click the **Import Now** button. Wait until the **Avaya IQ Adapter** lamp turns green. Below is an example of the screen.



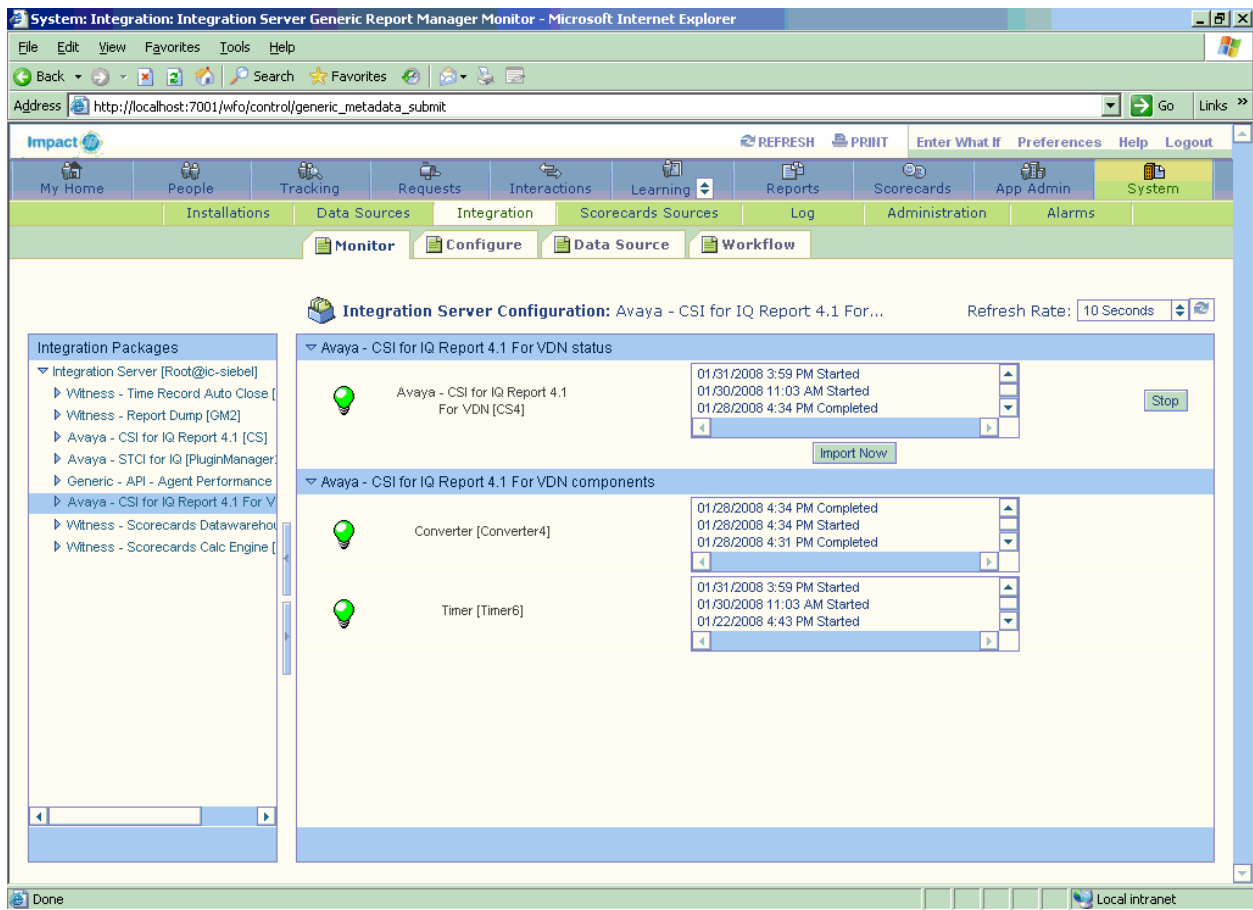
6.12. Import Historical Files

The data for the historical interfaces are forwarded to Verint WFM via FTP. After the files arrive at the Verint WFM server, the user needs to import the file manually to the database.

To perform the data import, the user has to configure where to get the file. Click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select the Integration Package. In the right pane, click **Configure**. Specify the **Report file path** and **Report extension** fields. Click the **Save** button at the bottom of the window. Below is an example of the **Configure** screen.

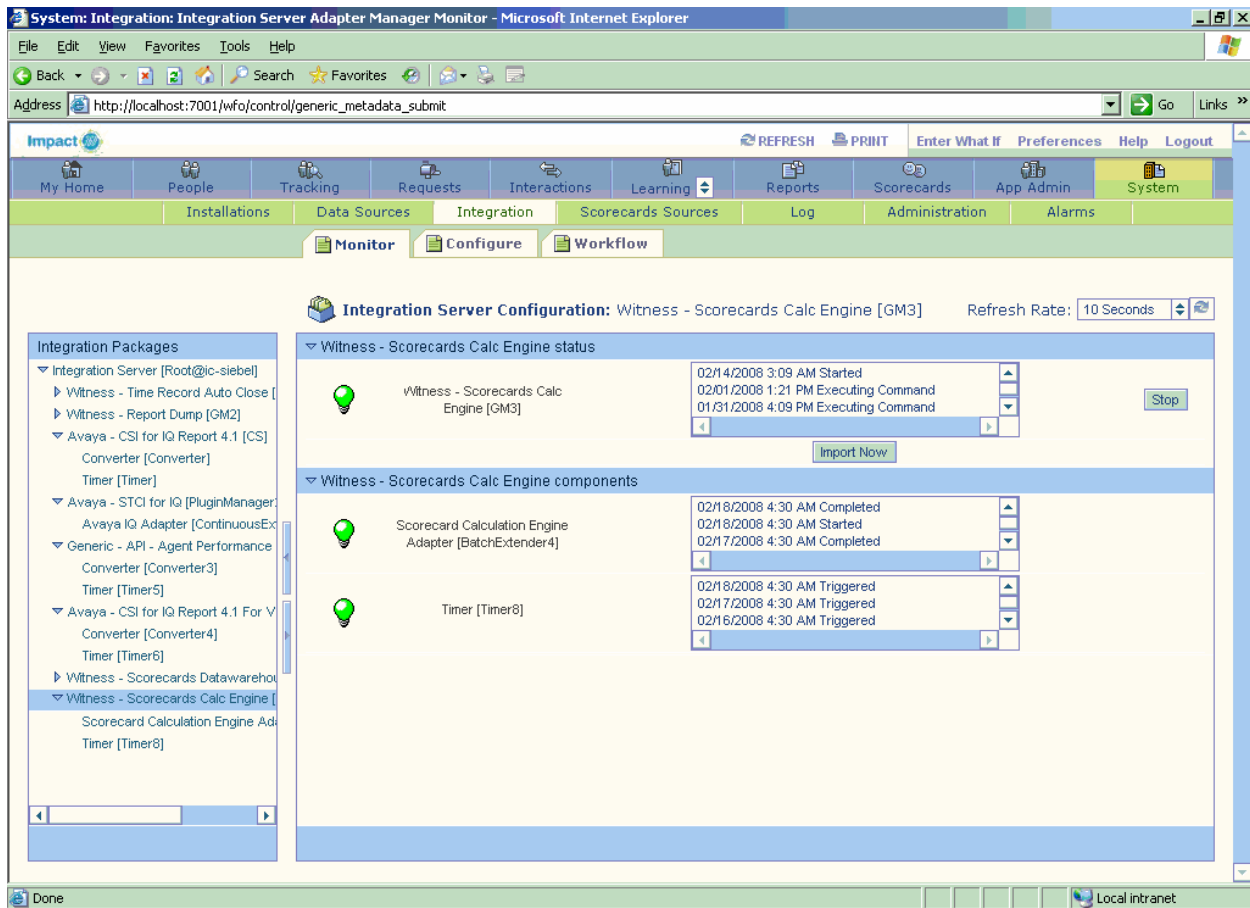


After the file location is configured, click the **Monitor** tab. Click the **Import Now** button. Wait until the Converter lamp turns green. Below is an example of the **Import Now** screen.



6.13. Run the Scorecard Calculation

After the historical file is imported, there is an extra configuration step for the Scorecard application which is to run the scorecard calculation. The user needs to click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select the **Witness – Scorecards Calc Engine** package. In the right pane, click the **Monitor** tab. Click the **Import Now** button. Wait until the Converter lamp turns green. Below is the **Import Now** screen for the **Witness – Scorecards Calc Engine** package.



7. Interoperability Compliance Testing

The interoperability compliance test included features and serviceability testing.

The feature testing focused on verifying Verint WFM processing and displaying of agent, queue, and routing point data from Avaya IQ.

The serviceability testing focused on verifying the ability of Verint WFM to recover from adverse conditions, such as disconnecting the Ethernet cables to the Verint WFM server and restarting the Avaya IQ adapters.

7.1. General Test Approach

The feature test cases were performed manually. Incoming calls were made to the measured routing points, queues, and agents to generate data to the Verint WFM. Manual call controls such as answer, hold, unhold, and disconnect and work mode changes from the agent phones such as login, auto-in, manual-in, after call work, auxwork, and logout were exercised as necessary to populate specific fields in the reports.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cable to Verint WFM and stopping and restarting the Avaya IQ adapters.

For the data that are currently used by Verint in its applications, the data displayed by the Verint applications was compared against the source data including the data in the Avaya IQ standard reports, the data generated by the Avaya IQ adapters, and the data calculated based upon the test scenarios. The proper display of data by the Verint WFM applications was also checked.

For the data not currently used by Verint in its applications, the data generated by the Avaya IQ adapters was compared against the source data including the data in the Avaya IQ standard reports and the data calculated based upon the test scenarios.

The data generated by the Avaya IQ adapters can be monitored using a utility provided with the adapters.

7.2. Test Results

Verint WFM successfully passed the compliance test. The four interfaces - Streaming Time Collection Interface (STCI), Contact Statistics Interface (CSI) for Queue, Contact Statistics Interface (CSI) for Routing Point, and Agent Scorecards Metrics (ASCM) interface - were verified in the compliance test.

The following observations were made during the compliance test:

- CSI Interface for Queue
 - ANS_Time and ASA are calculated with abandoned calls included. In the upcoming Avaya IQ 4.1 release, the two items will be calculated without abandoned calls included.
 - Busy_Calls field does not display a value when a busy call scenario is exercised.

- CSI Interface for Routing Points
 - ANS_Time and ASA are calculated with abandoned calls included. In Avaya IQ 4.1, the two items will be calculated without abandoned calls included.
- The Scorecards showed incorrect values in the average hold time and average wrap-up time fields. A database script was provided to solve the issue. The issue will be addressed in the Verint WFM 7.7.3 release.

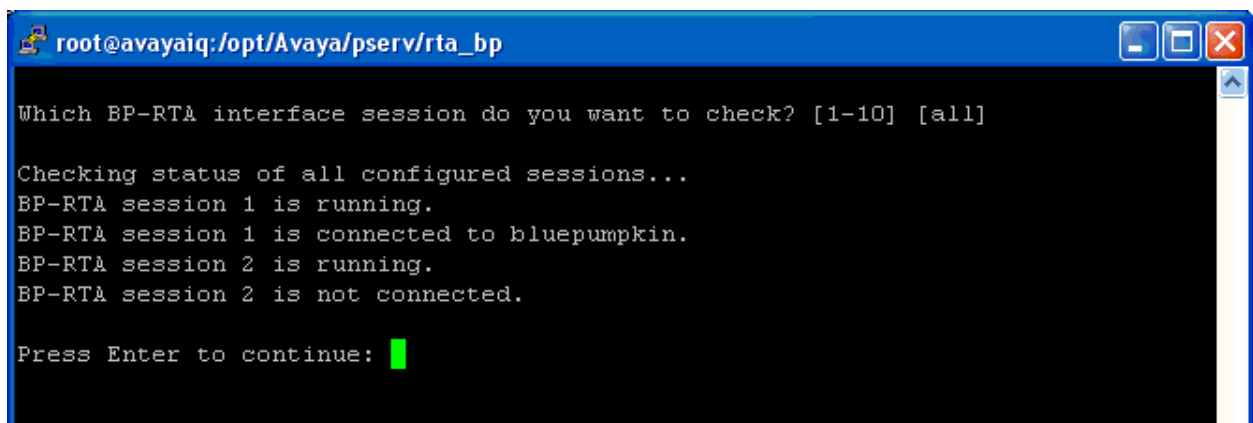
8. Verification Steps

This section describes the steps to use to verify proper configuration of Avaya IQ and Verint WFM.

8.1. Verify Avaya IQ Adapters

To verify the real-time interface, use SSH to log in to the Avaya IQ. Change directory to /opt/Avaya/pserv/rta_bp. Run “./menurta”.

From the **BP-RTA Menu** screen, enter **3** to check the status of the sessions. Each session corresponds to an ACD data source. Ensure that each session required is running and connected to the Verint WFM application. The screen capture below shows that session 1 is up and connected to bluepumpkin (the host name of the Verint WFM server) but session 2 is not.



```
root@avayaiq:/opt/Avaya/pserv/rta_bp

Which BP-RTA interface session do you want to check? [1-10] [all]

Checking status of all configured sessions...
BP-RTA session 1 is running.
BP-RTA session 1 is connected to bluepumpkin.
BP-RTA session 2 is running.
BP-RTA session 2 is not connected.

Press Enter to continue: █
```

To verify that the historical interfaces are up and running, use SSH to log in to the Avaya IQ. Change directory to /opt/Avaya/pserv/bp. Run “./menu”. Ensure that the first column of the menu screen shows ON for all the sessions, as shown in the screen capture below.

```
root@avayaiq:/opt/Avaya/pserv/bp
[root@avayaiq bp]# ./menu

For help please call Avaya CSI - (866)282-9266
Use this menu to recover missing intervals and troubleshoot
For daily reports run the recover for the interval defined below
Interval reports can be identified by ALL in the INTRVL field

Current Configuration - version_0.5.9

SESSION SOURCE REPORT      DEST HOST      DIR              INTRVL
ON  1    1    queue    ftp  bp      /DevCon13/queue  ALL
ON  2    1    rp      ftp  bp      /DevCon13/rp     ALL
ON  3    1    agent   ftp  bp      /DevCon13/scorecards0100
ON  4    2    queue   ftp  bp      /DevCon18/queue  ALL
ON  5    2    rp      ftp  bp      /DevCon18/rp     ALL
ON  6    2    agent   ftp  bp      /DevCon18/scorecards0100

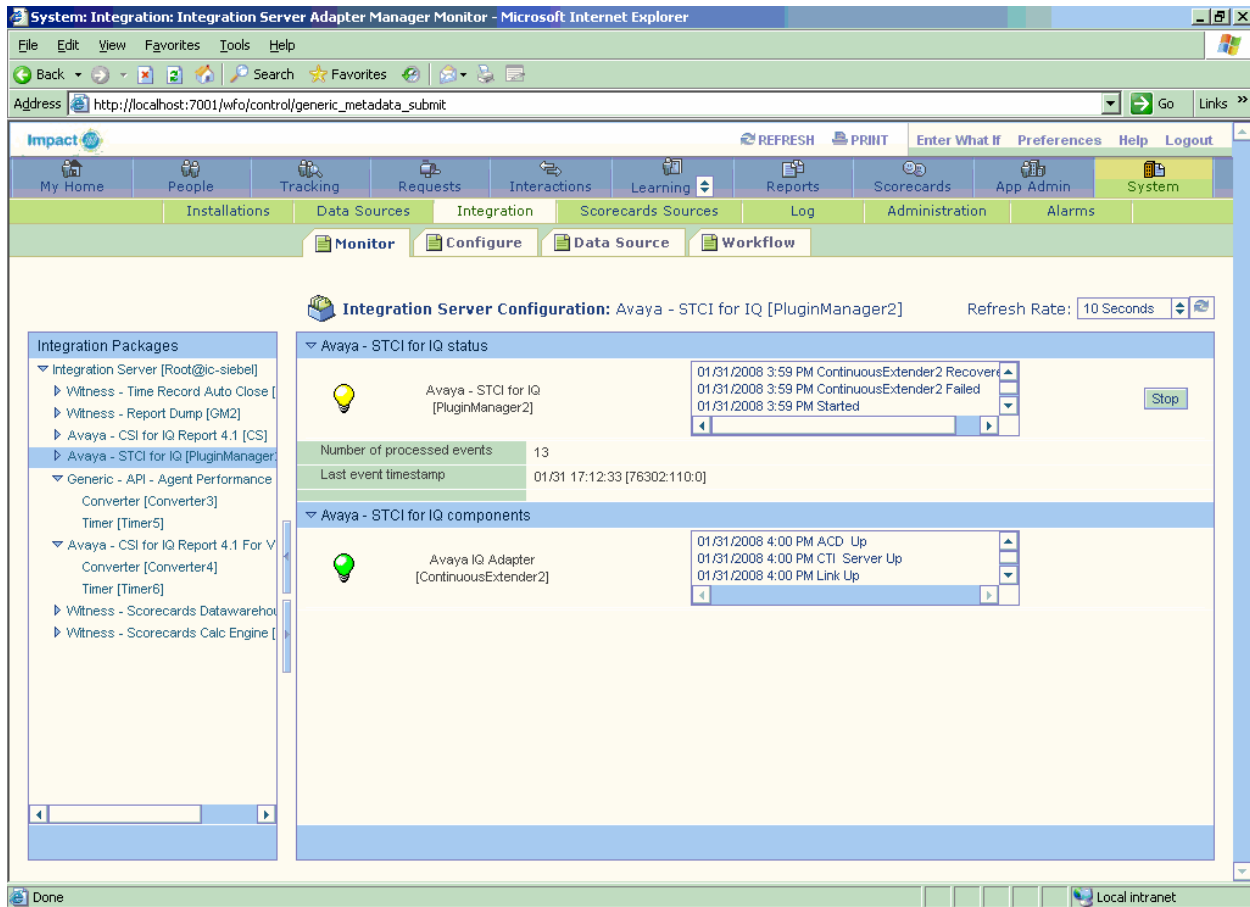
1) Recover one interval
2) Recover multiple intervals
3) Recover one day (all intervals)
4) Recover multiple days (all intervals)
5) View log (new to old)
6) View log (old to new)
D) Debug menu (for troubleshooting only)
T) Turn on/off a session from running automatically
Q) Quit
Selection: █
```

8.2. Verify Verint WFM

Verint WFM needs to be verified at the interface level.

8.2.1. Verify the STCI Interface

Click **System** → **Integration**. Double click on the displayed Integration Server. In the left pane, select **Avaya – STCI for IQ**. In the right pane, click the **Monitor** tab. Verify that the **Avaya IQ Adapter** lamp is green as shown in the screen shot below.



8.2.2. Verify the CSI for Queue Interface

Make sure that in the FTP directory (e.g. /Inetpub/ftproot/report41/Devcon13/queue), there is a new file FTP'd over for the interface every 15 minutes. The naming convention of the file is configurable at the Avaya IQ side (see **Section 5**). Use the procedure in **Section 6.12** to import the latest file and click **Tracking** → **Pulse**. In the left pane, select a queue that uses the CSI for Queue Interface. In the right pane, enter the date of the FTP file. Verify that data are shown for the time slot that matches the time slot in the FTP file.

The screenshot shows the Impact Pulse web application in a Microsoft Internet Explorer browser. The address bar shows `http://localhost:7001/wfo/control/pulse_fs_view`. The application has a top navigation bar with tabs: My Home, People, Tracking, Requests, Interactions, Learning, Reports, Scorecards, App Admin, and System. Below this is a sub-navigation bar with tabs: Adherence, Pulse, Alert Rules, and Application Analysis. The main content area is titled "Pulse" and "History". On the left, there is a "Queue Name" list with options: Combined - Phone, API-Scorecards, QUEUE1, QUEUE2, and VDN. The "Campaign" is set to "All Queues" and "Media" is empty. The main display area shows data for "QUEUE1" for the date "01/24/2008". It includes a table with columns: Cont..., Servi..., Aban..., Aver..., and Aver... for QUEUE1. The table shows data for various time slots from 12:45 PM to 6:30 PM. The bottom status bar indicates "Applet com.bluepumpkin.web.fs.swing.pulse.PulseApplet started" and "Local intranet".

Time Slot	Cont...	Servi...	Aban...	Aver...	Aver...
12:45 PM					
1:00 PM					
1:15 PM					
1:30 PM	3	0	1	27	82
1:45 PM	2	0	1	27	82
2:00 PM					
2:15 PM					
2:30 PM	3	0	1	27	82
2:45 PM	2	0	1	27	82
3:00 PM					
3:15 PM					
3:30 PM					
3:45 PM					
4:00 PM					
4:15 PM					
4:30 PM					
4:45 PM					
5:00 PM					
5:15 PM					
5:30 PM					
5:45 PM					
6:00 PM					
6:15 PM					
6:30 PM					

8.2.3. Verify the CSI for Routing Point Interface

Make sure that in the FTP directory (e.g. /Inetpub/ftproot/report41/Devcon13/rp), there is a new file FTP'd over for the interface every 15 minutes. Use the procedure in **Section 6.12** to import the latest file and click **Tracking → Pulse**. In the left pane, select a queue that uses the CSI for Routing Point Interface. In the right pane, enter the date of the FTP file. Verify that data are shown for the time slot that matches the time slot in the FTP file.

Tracking: Pulse: Pulse - Microsoft Internet Explorer

Address: http://localhost:7001/wfo/control/pulse_fs_view

Impact Pulse

My Home People Tracking Requests Interactions Learning Reports Scorecards App Admin System

Adherence Pulse Alert Rules Application Analysis

Campaign: All Queues

Media: bpfx 01/28/2008 - 01/28/2008

Queue Name

- Combined - Phone
 - API-Scorecards
 - QUEUE1
 - QUEUE2
 - VDN

VDN

Mon 01/28

Act 23*

Period 23*

Mon 01/28

Act 4*

Period 4*

Mon 01/28

Act 11*

Period 11*

Cont... VDN	Servi... VDN	Aban... VDN	Aver... VDN	Aver... VDN
Act	Act	Act	Act	Act
3	0	1	29	6
2	0	1	29	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	0	1	29	82
5	0	3	35	34
6	0	3	825	23
4	25	2	33	38

Create View Edit View Reforecast Configure Trends Export

Applet com.bluepumpkin.web.fs.swing.pulse.PulseApplet started

Local intranet

8.2.4. Verify the Scorecard Interface

Make sure that in the FTP directory (e.g. /Inetpub/ftproot/report41/Devcon13/scorecards), there is a new file FTP'd over for the interface every day. Use the procedure in **Section 6.12** to import the latest file and the procedure in **Section 6.13** to perform the calculation. To access your scorecard, click the **My Home** Module tab, and then click the **My Scorecards** Section tab.

Name of KPI	Actual	Goal	Score	Peer	Assessment	Notes
% Hold Time	9%	50%	😊 ↑	0%	No Rating	✉
% Hold Time (Including Hold Time)	8%	50%	😊 ↑	0%	No Rating	✉
% Wrap-up time	12%	50%	😊 ↑	0%	No Rating	✉
% Wrap-up time (Including Hold Time)	11%	50%	😊 ↑	0%	No Rating	✉
Average Hold Time	0:05:50	0:05:00	😞 ↑	0%	No Rating	✉
Average Wrap Time	0:08:20	0:02:30	😞 ↑	0%	No Rating	✉
Calls per Staffed Hour Adjusted	4	30	😞 ↑	0%	No Rating	✉
Employee AHT	0:00:41	0:01:45	😊 ↑	0%	No Rating	✉
Employee AHT (Including Hold Time)	0:00:44	0:02:45	😊 ↑	0%	No Rating	✉
Total			😊			

9. Support

Technical support from Verint can be obtained through the following:

- **Phone:** 800-494-8637
- **Email:** support@verint.com

10. Conclusion

These Application Notes describe the configuration steps required for Verint WFM to interoperate with Avaya IQ Release via custom developed real-time and historical interfaces. Compliance testing using such steps has been completed successfully.

11. Additional References

This section references the product documentation relevant to these Application Notes.

- *Avaya IQ Standard Reports, Release 4.0*, August 2007, available at <http://support.avaya.com>
- *Avaya IQ Administration, Release 4.0*, August 2007, available at <http://support.avaya.com>
- *Verint Avaya_STCI_for_CMS_Guide*, Release 7.0, July 2007, available on the Verint WFM documentation CD
- *Verint Avaya_CSI_for_CMS_Report_Guide*, Release 7.0, July 2007, available on the Verint WFM documentation CD

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