Avaya Solution & Interoperability Test Lab

Application Notes for IVS Enterprise Server by RMG Networks with Avaya IQ 5.2 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for IVS Enterprise Server by RMG Networks to interoperate with Avaya IQ via rt_socket interfaces. The rt_socket interfaces, developed by the Avaya Professional Services organization, provide real-time data related to agents, queues, and routing points.

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 compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

IVS Enterprise Server (SES) integrates with an Avaya Aura® Communication Manager, functioning as an Automatic Call Distributor (ACD), via Avaya IQ. The integration is done using the TCP/IP Collector on SES and custom adapters on Avaya IQ. IVS Enterprise Server can monitor real time statistics that are available from Avaya IQ. The TCP/IP Collector on IVS Enterprise Server is configured via Portal Administrator which can run on SES or as a remote client.

The rt_socket adapters on Avaya IQ, developed by the Avaya Professional Services organization, open custom reports that contain the statistics IVS Enterprise Server uses for real time monitoring (e.g. wallboard). All statistics received by IVS Enterprise Server can be viewed using the Portal Data Viewer, a debugging tool provided as part of IVS Enterprise Server.

The following rt_socket adapters covered in this compliance test included:

- Agent Adherence Interface
- Agent Performance Interface
- Queue Performance Interface
- Routing Point Performance Interface

2. General Test Approach and Test Results

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature test cases were performed manually. Incoming calls were made to the measured routing points, queues, and agents to generate data to the IVS Enterprise Server. Manual call control functions such as answer, hold, resume, and disconnect, along with agent work mode changes including 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 IVS Enterprise Server, rebooting IVS Enterprise Server, and by restarting the Avaya IQ adapters.

For each field in the tested interfaces, the displayed data was compared between the Avaya IQ standard reports, the data generated by the Avaya IQ adapters, and the data displayed at IVS Enterprise Server.

The data generated by the Avaya IQ adapters was monitored using a utility provided with the rt_socket adapters. SES was monitored using its portal data viewer.

2.2. Test Results

The IVS Enterprise Server successfully passed the compliance test. All the four rt_socket interfaces including Agent Adherence Interface, Agent Performance Interface, Queue Performance Interface, and Routing Point Performance Interface were verified.

The following observations were made during the compliance test:

- All data sent by the Avaya IQ rt_socket adapters is sent as ASCII text.

  Note: *This event does not have any service impact on data collection.*

All the fields in the above rt_socket interfaces refer to the data received by SES from Avaya IQ.

2.3. Support

Technical support from IVS Enterprise Server can be obtained through the following:

- **Phone:** 877-789-TECH (8324)
- **Email:** support@rmgnetworks.com

3. Reference Configuration

Figure 1 below shows the compliance test configuration. The Avaya IQ, Oracle database server for Avaya IQ, Communication Manager ACD, telephones, user PCs and IVS Enterprise Server all reside in the same network.

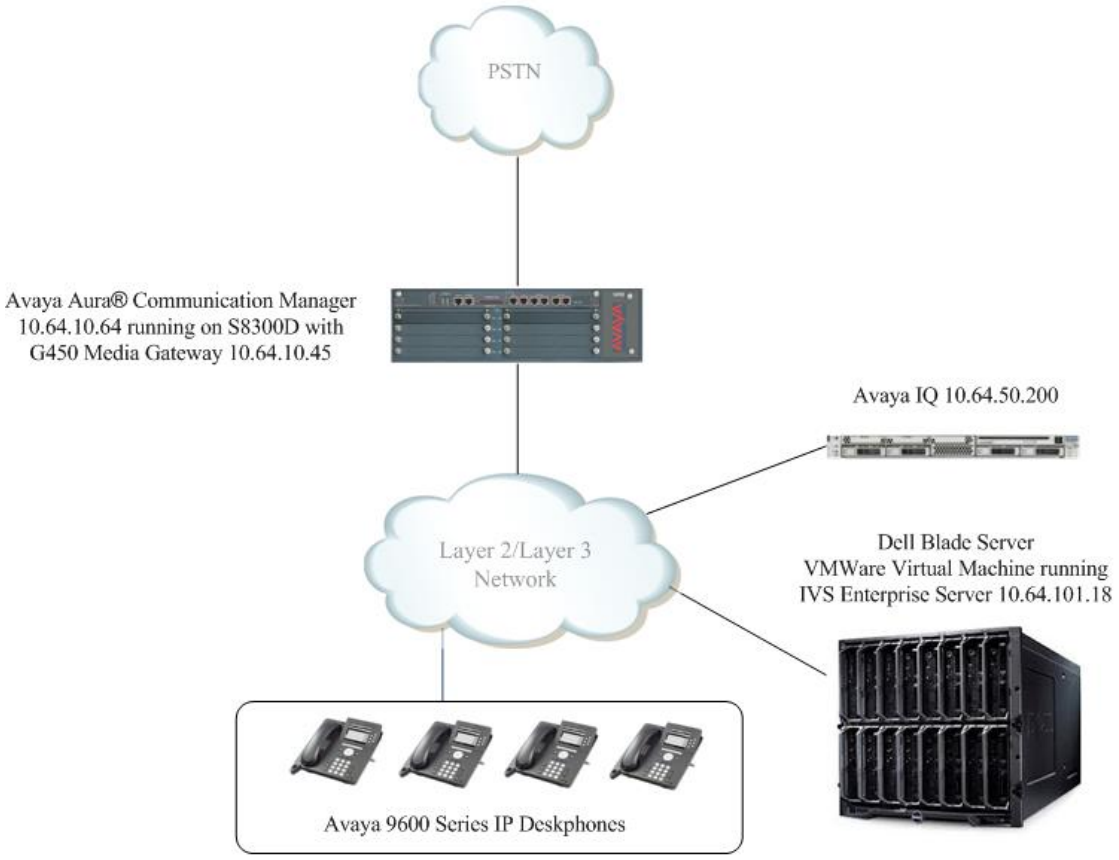


Figure 1: IVS Enterprise Server with Avaya IQ

On Communication Manager, relevant skills and Vector Directory Number (VDN) objects are configured to be "measured" for Avaya IQ. When a call travels through a "measured" object on Communication Manager, the ACD related data is sent to the Avaya IQ. Avaya IQ sends updates for agents, queues, and routing points to IVS Enterprise Server periodically. During compliance testing data was sent every 5 seconds. The Avaya IQ standard reports and a utility tool included with the Avaya adapter software were used to validate the accuracy of data generated by Avaya IQ and displayed by SES.

4. Equipment and Software Validated

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

Equipment	Software
Avaya S8300D Server running Avaya Aura® Communication Manager	Release 6.3 (R016x.03.0.124.0)
Avaya G450 Media Gateway MGP	31.20.0
Dell R610 running Avaya IQ All-In-One server	5.2 Service Pack 5 Patch 6
IVS Enterprise Server	12
Avaya 96xx H.323 Telephones	3.2.2
Avaya 96x1 H.323 Telephones	6.3.1

5. Configure Avaya Aura® Communication Manager

The detailed administration of contact center objects and connectivity between Communication Manager and Avaya IQ are not the focus of these Application Notes and are not described here. 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 forms must be set to "external". For administration of the "measured" field for a skill and a VDN, refer to the appropriate documentation listed in **Section 11**.

6. Configure Avaya IQ

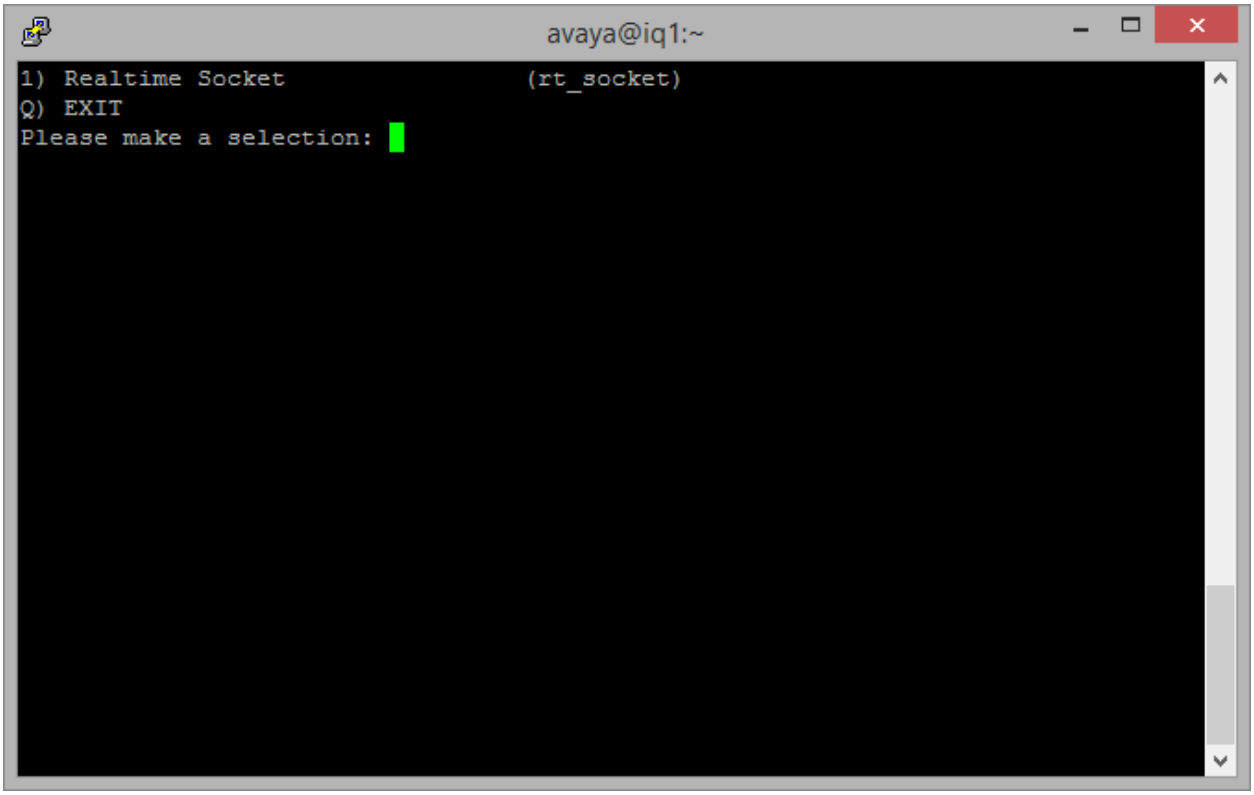
The administration of Avaya IQ to support its normal functions is not the focus of these Application Notes and is not described here. This section provides the additional configuration as required for supporting IVS Enterprise Server integration, which includes activating the real-time socket adapter.

6.1. Activate Real-Time Socket Adapter

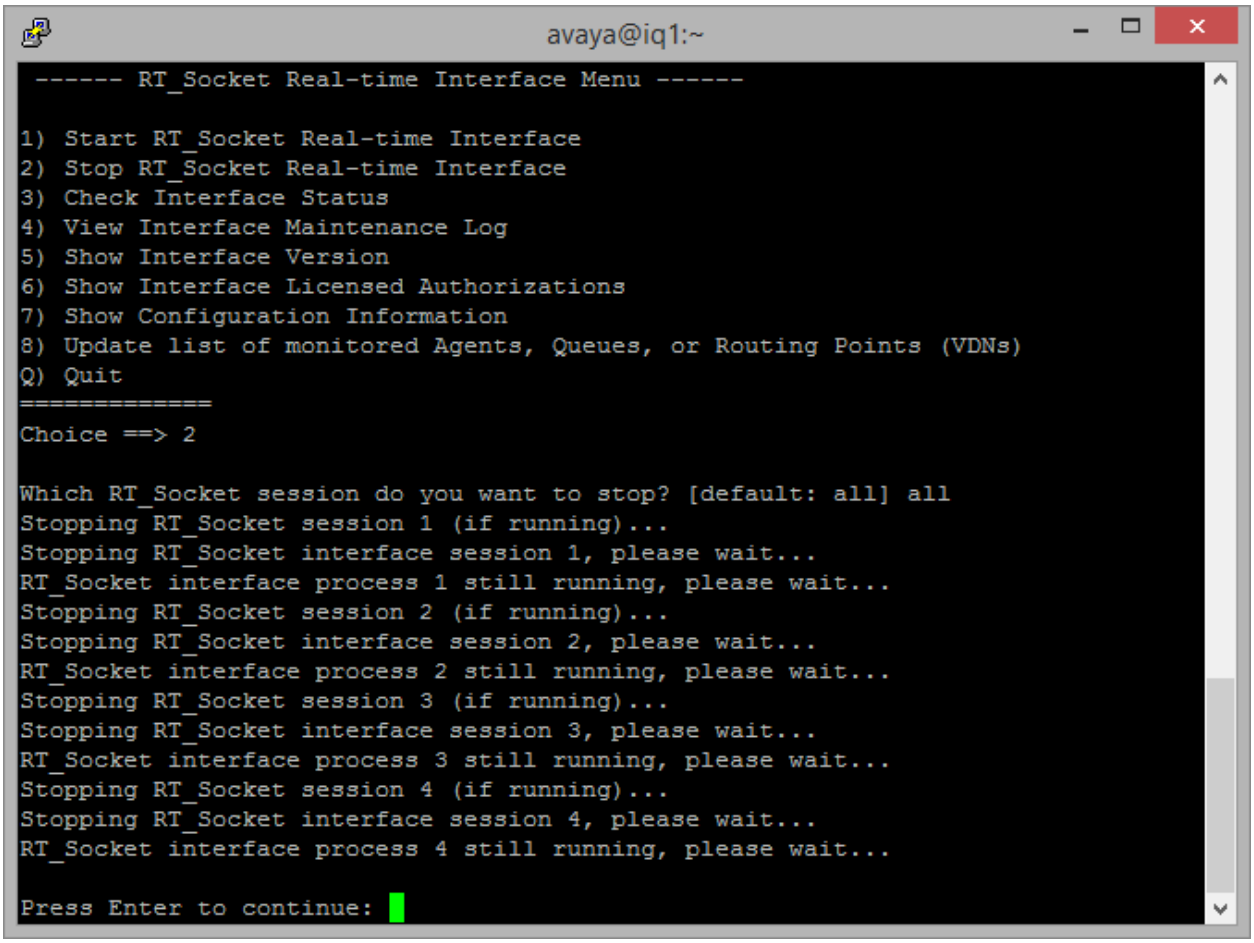
Four rt_socket real-time adapters are installed in Avaya IQ to support SES integration.

Activate adapters:

- Start the APS Interfaces Menu by logging in to Avaya IQ as "psadmin" using an SSH client.
- Select **1** for the Realtime Socket Menu

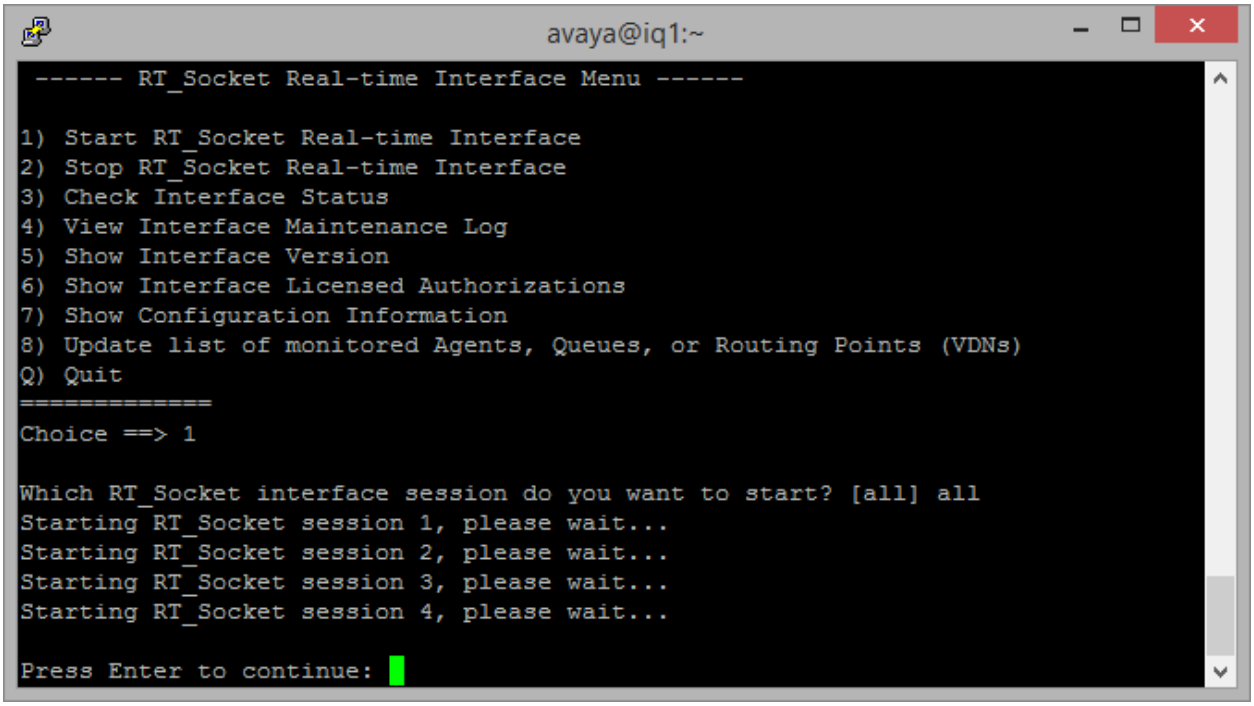


From the **RT_Socket Real-time Interface Menu** screen, choose **2** to stop all sessions. Each session corresponds to one real-time interface for an ACD data source.

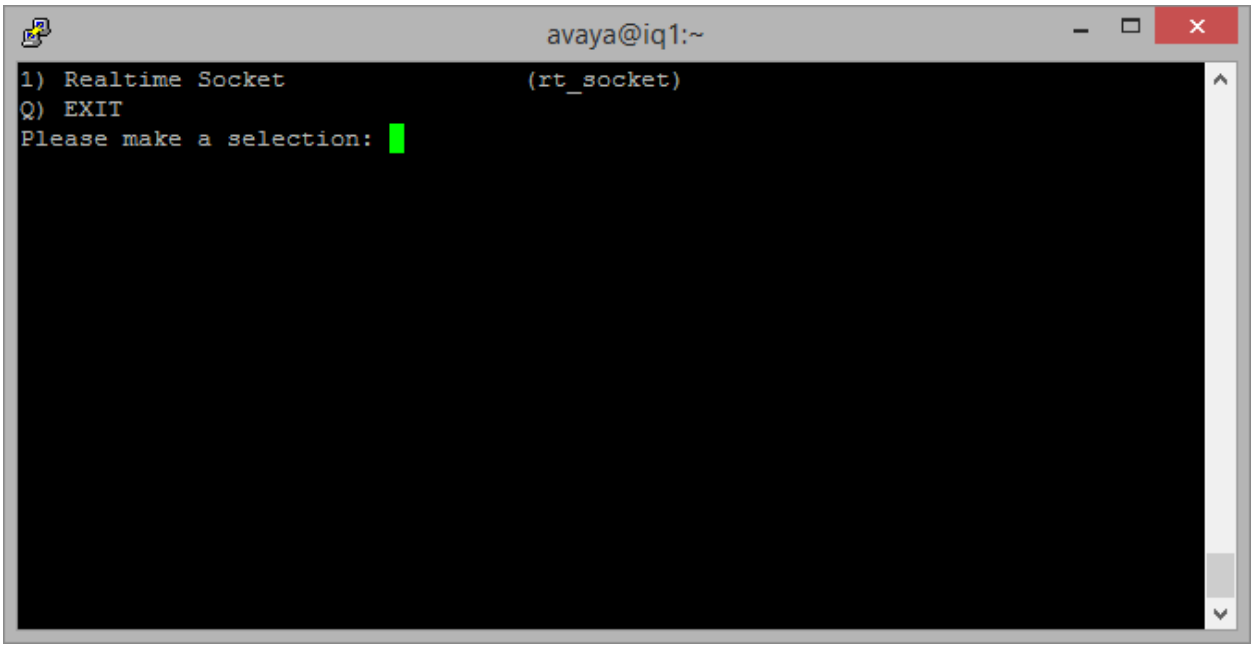


Once all sessions are stopped, press **Enter** to continue.

From the **RT_Socket Real-time Interface Menu** screen, choose **1** to start all sessions.



Once all sessions are started, press **Enter** to continue and then **Q** to quit and return to the APS Interfaces Menu.



7. Configure Avaya IQ Adapters

The following parameters are configurable for the Avaya IQ adapters and are customized for each different environment :

- Timezone for the reports
- Sliding window size
- Avaya IQ login/password
- Delimeter
- Data source name
- Report type : agent, queue, or routing point
- IP address and port of the application

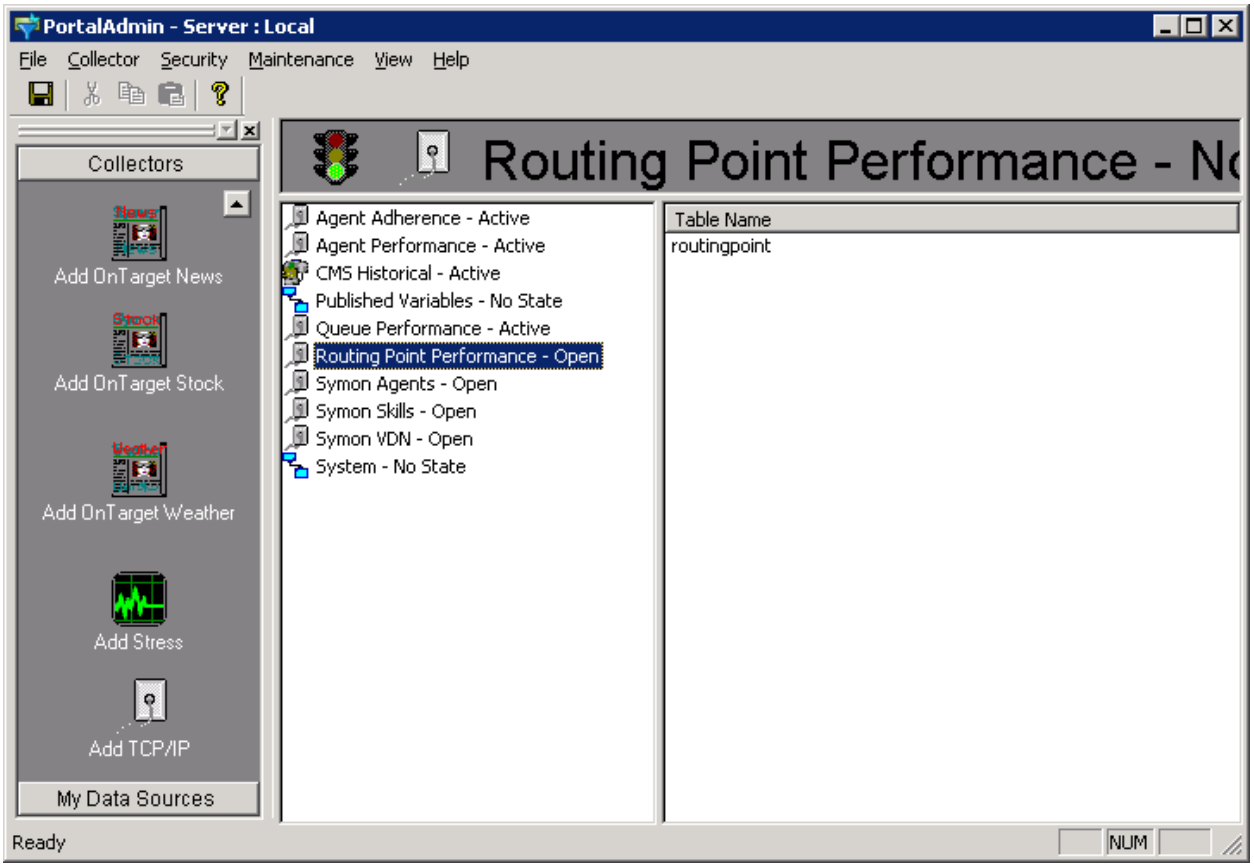
Avaya IQ adapter configuration should only be performed by the Avaya Professional Services organization. Please refer any questions about adapter configuration to Avaya Professional Services.

8. Configure IVS Enterprise Server

This section describes how to configure IVS Enterprise Server.

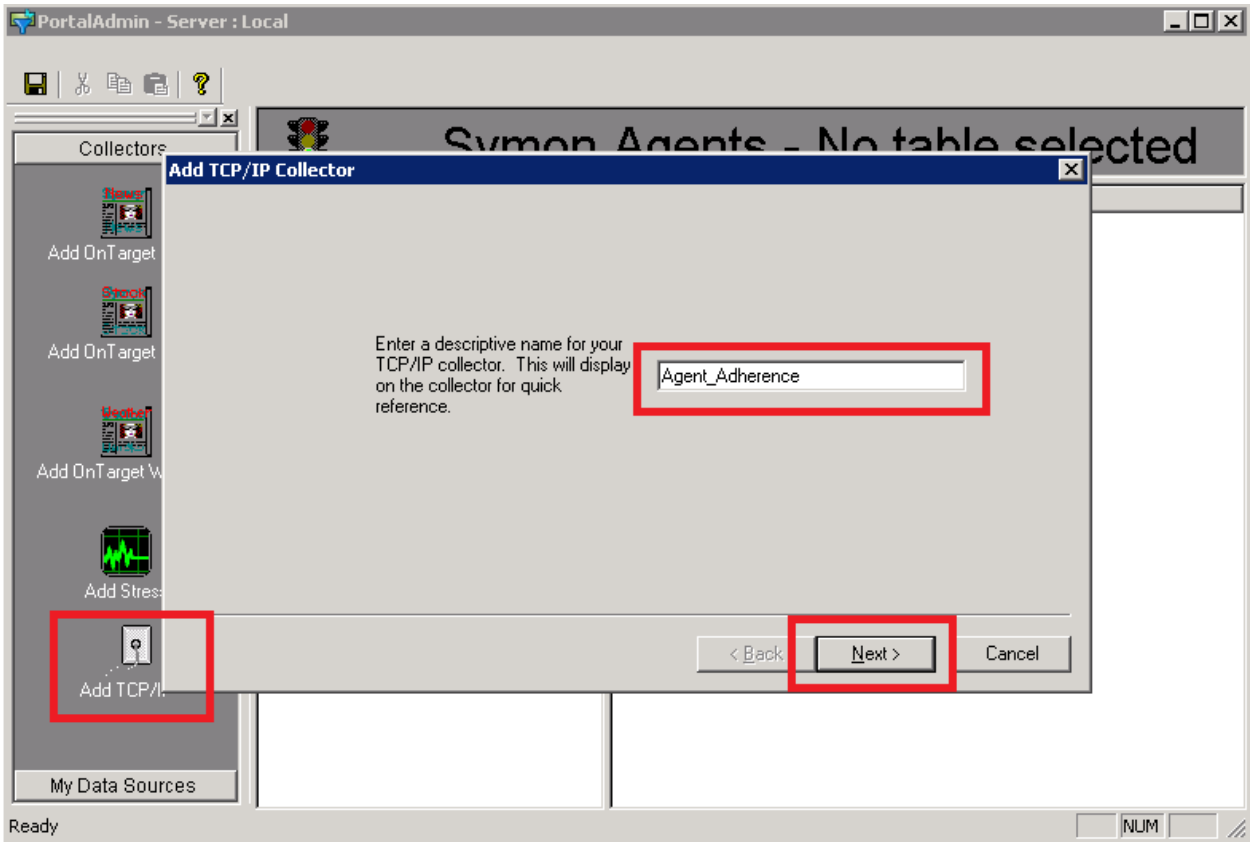
8.1. Launch IVS Portal Administrator

Start **IVS Portal Administrator** by clicking **Start → All Programs → RMG Networks → IVS Portal Administrator**. The **PortalAdmin – Server : Local** page is displayed.

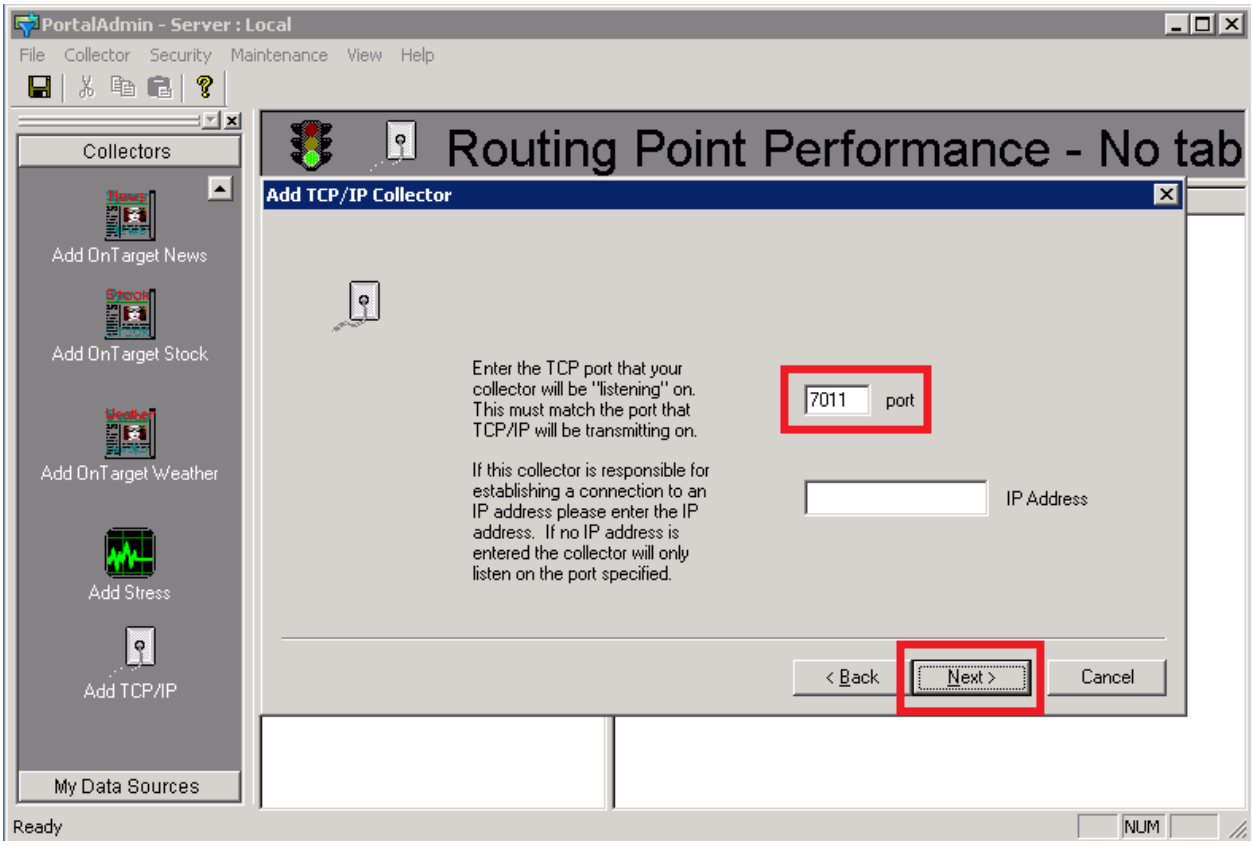


8.2. Configure TCP/IP Collector

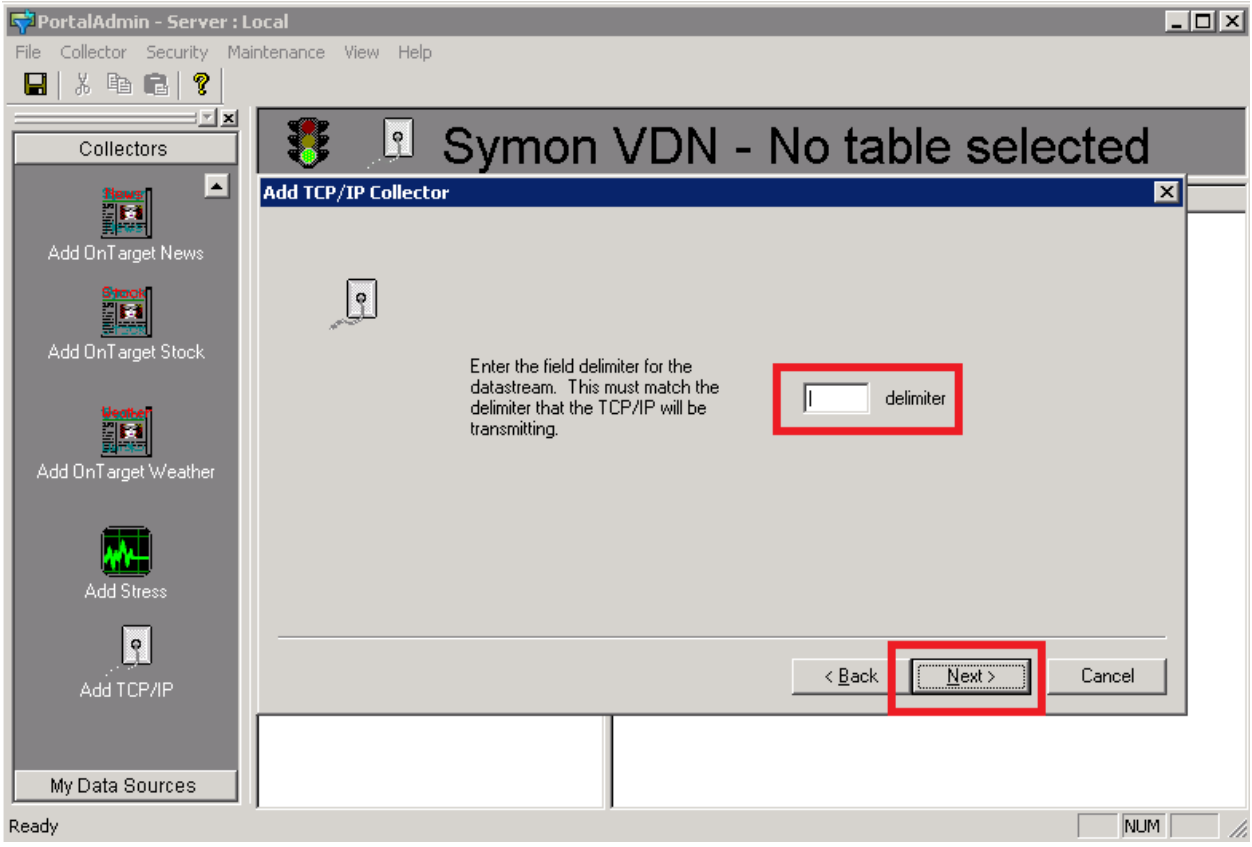
IVS Enterprise Server uses three data feeds from Avaya IQ. Each data feed needs a TCP/IP Collector defined in IVS Enterprise Server. To create a TCP/IP collector, click the **Add TCP/IP** icon in the **Collectors** section of the left pane. After the **Add TCP/IP Collector** screen pops up, enter the name of the collector, in this case "Agent Adherence", and click **Next**.



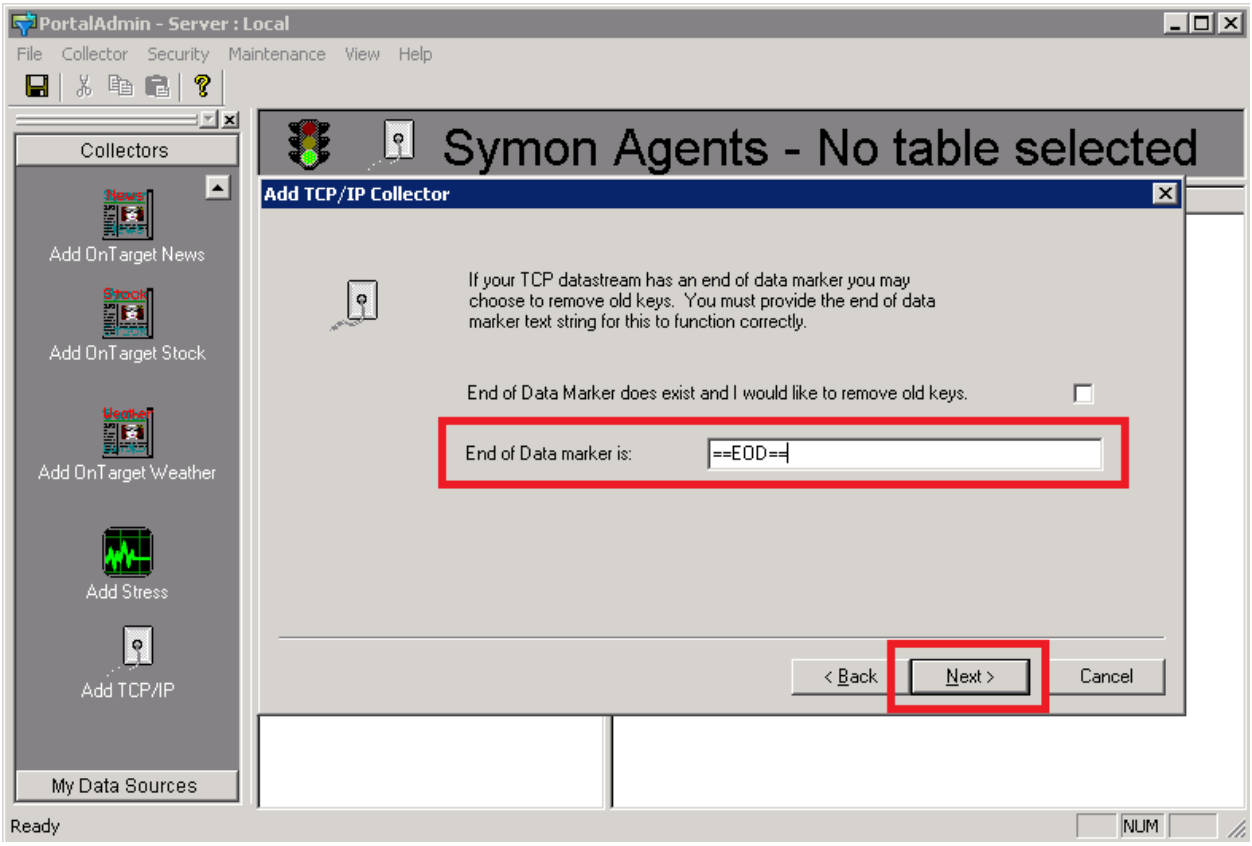
On the next screen enter the port number that will be used to receive rt_socket data.



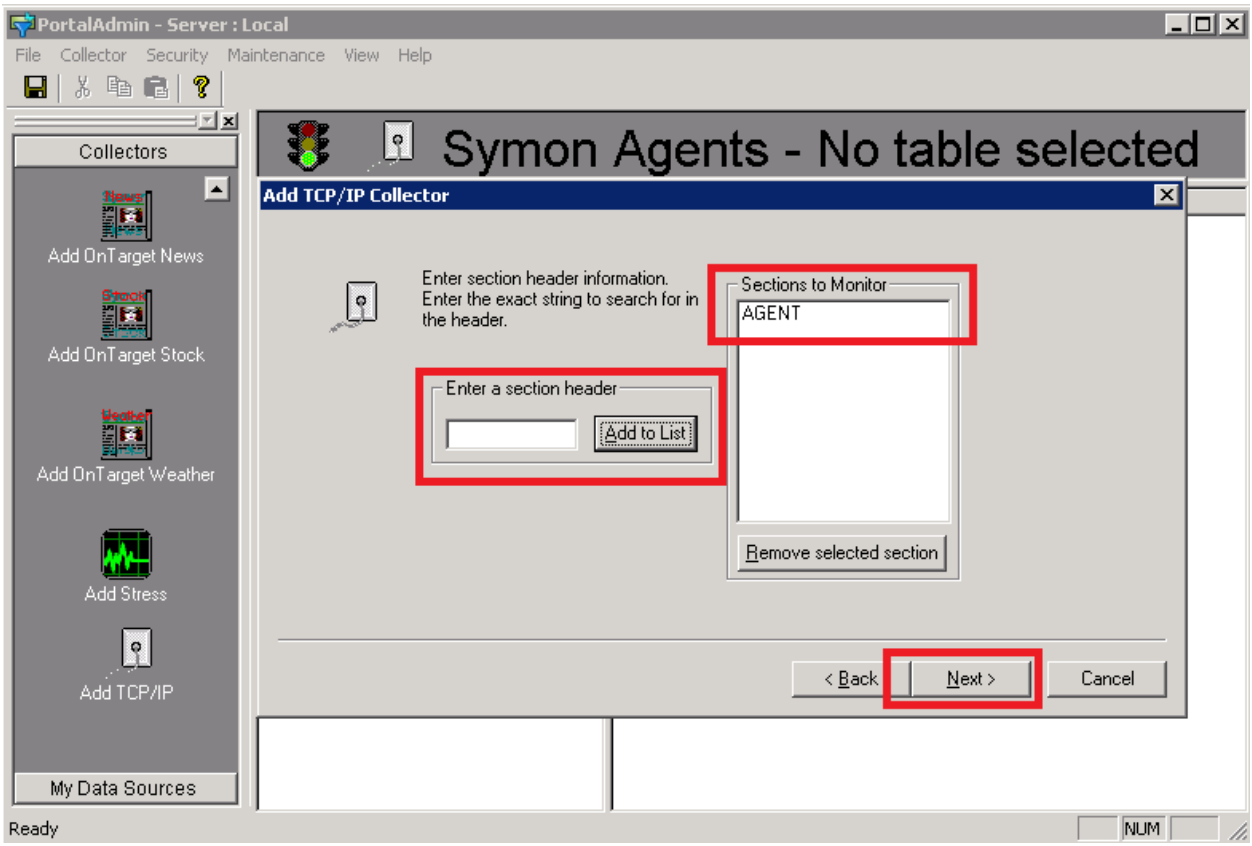
On the next screen enter the delimiter ("|") and click **Next**.



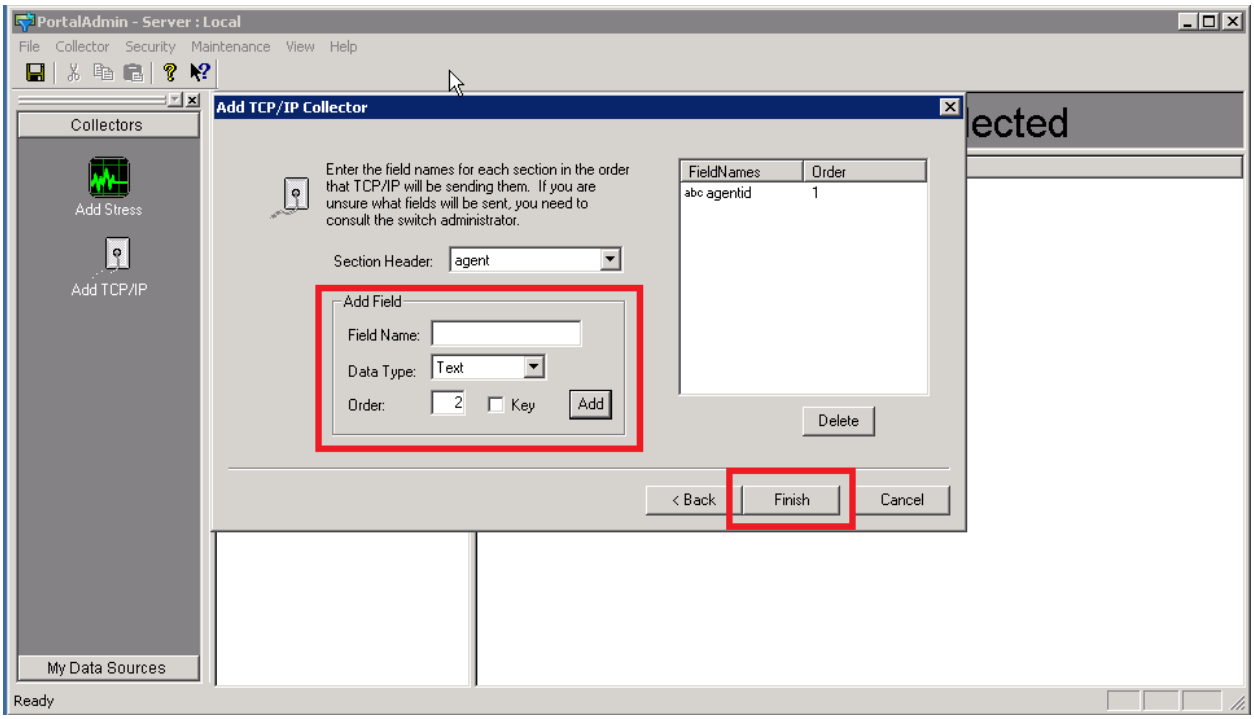
On the next screen enter the **End of Data marker** and click **Next**. In this compliance test "==EOD==" is sent as the **End of Data marker** by the rt_socket adapters.



On the next screen set the **Section Header**. The **Section Header** is the first field in each data record. It will be used to identify a group of fields to be monitored, "AGENT" in this case. Click **Add to List**, and then click **Next**.



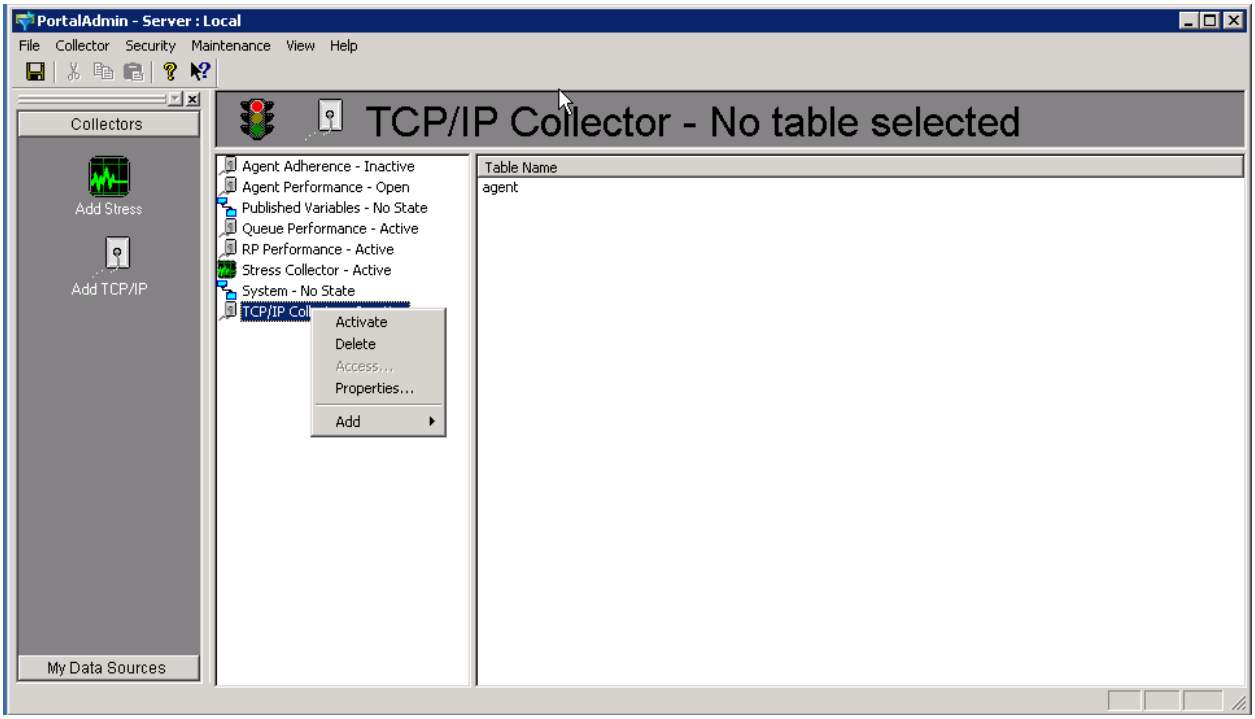
On the next screen add the fields that will be monitored in the section. Select the **Section Header** for this field, enter a **Field Name**, select a **Data Type**, define the **order**, and click **Add.**



Note: *Check the Key box if this field will be used by the collector to associate incoming data with this report. At least one key is required for each section.*

Click **Finish** after all of your fields have been added. You should see the newly configured collector show up in the pane right of the Collectors bar**.**

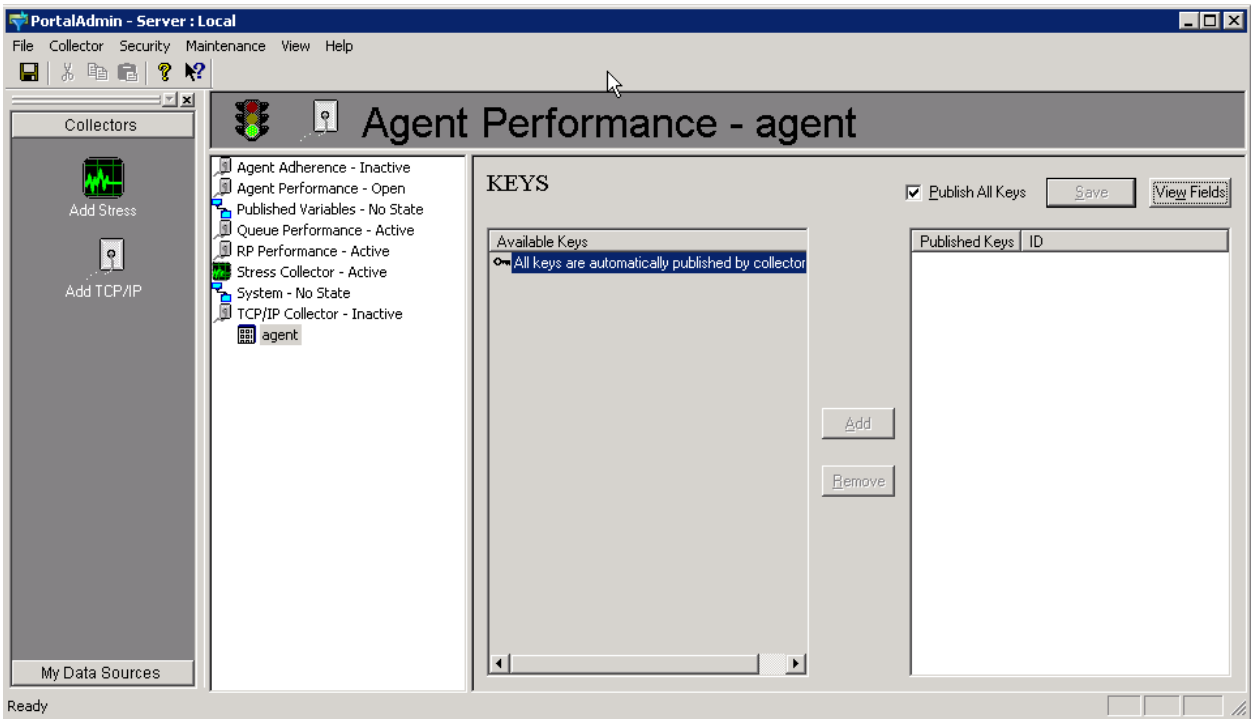
Right-click on “TCP/IP Collector” and select “Activate”.



In this compliance test 4 collectors were configured and verified. See **Section 9** for verification steps.

8.3. Publish Keys for TCP/IP Collector

From the list of collectors double click "TCP/IP Collector" and highlight the section. In this example the section name is agent. From the right most pane click "View Keys" button, (Not Shown). The KEYS window shown below is displayed. Check the Publish All Keys box, and click "Save".



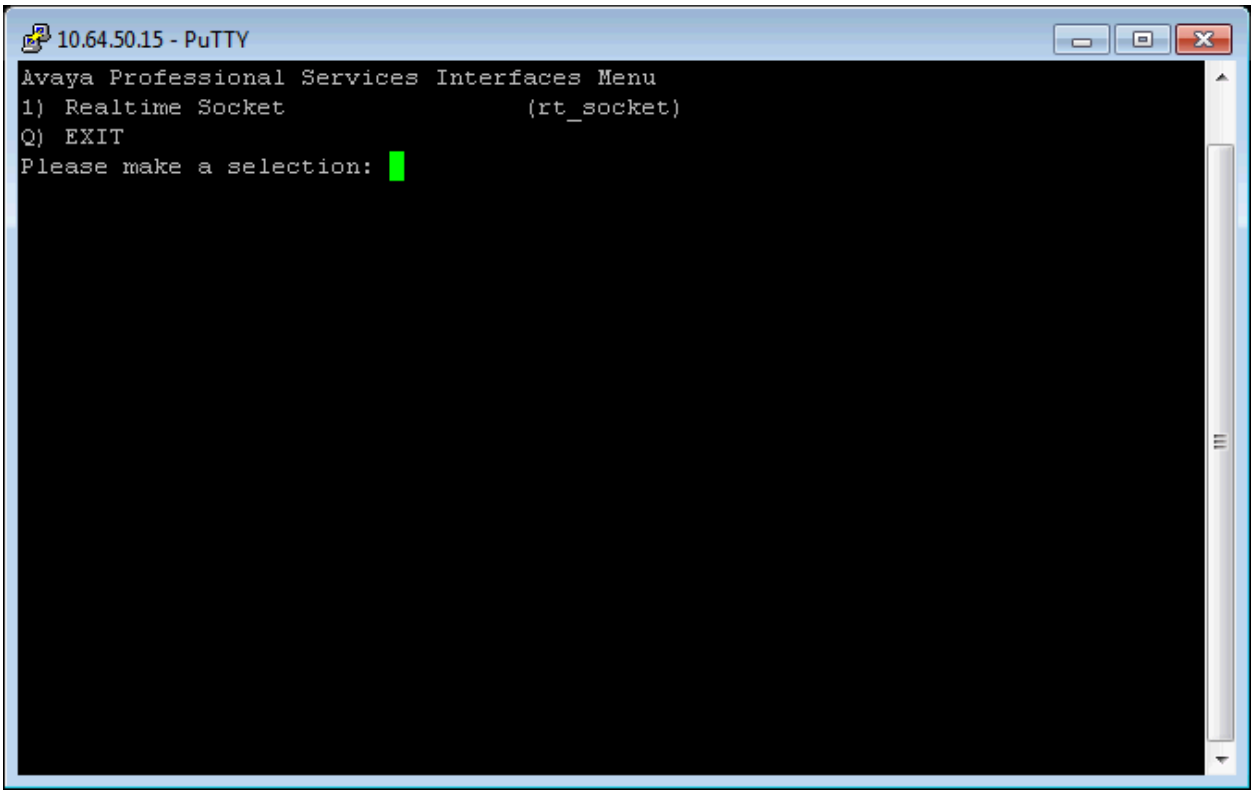
Note : All *keys are now automatically published by the collector.*

9. Verification Steps

This section describes the steps to use to verify proper configuration of Avaya IQ and the IVS Enterprise Server.

9.1. Verify Avaya IQ Adapters

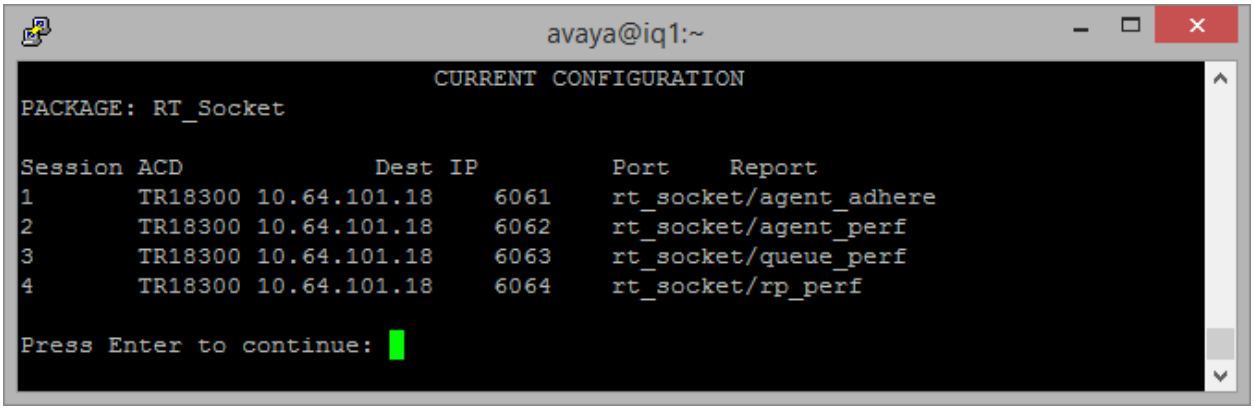
Use an SSH client o verify the real-time interface, Start the APS Interfaces Menu by logging in to Avaya IQ as the "psadmin" user.



Select **1** for the Realtime Socket Menu

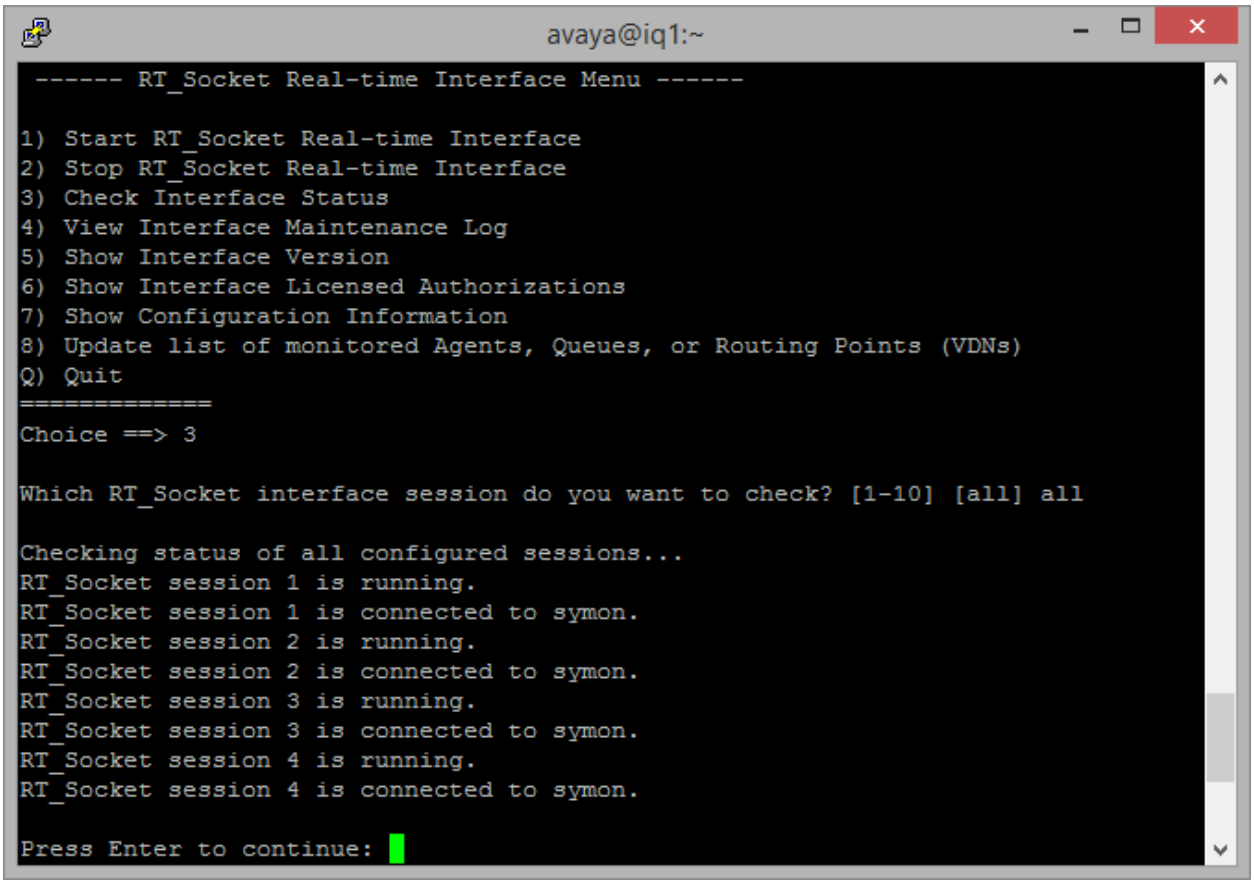
9.2. Verify Avaya IQ Adapters

From the **RT_Socket Menu** screen (not shown), choose **7** to verify each of the rt_sockets is configured to connect to SES. Validate the IP address, port, and report for each connection. The screen capture below shows each of the four sessions used in this compliance test.



Press **Enter** to continue. From the **RT_Socket Real-time Interface Menu** screen, choose **3** to check the status of the sessions. Each session corresponds to an interface for an ACD data source. Ensure that each session required is running and connected to the IVS Enterprise Server application.

The screen capture below shows sessions one through four running and connected to IVS Enterprise Server.



9.3. Verify IVS Enterprise Server

This section describes how to verify proper functionality of SES.

9.3.1. Verify Collector State

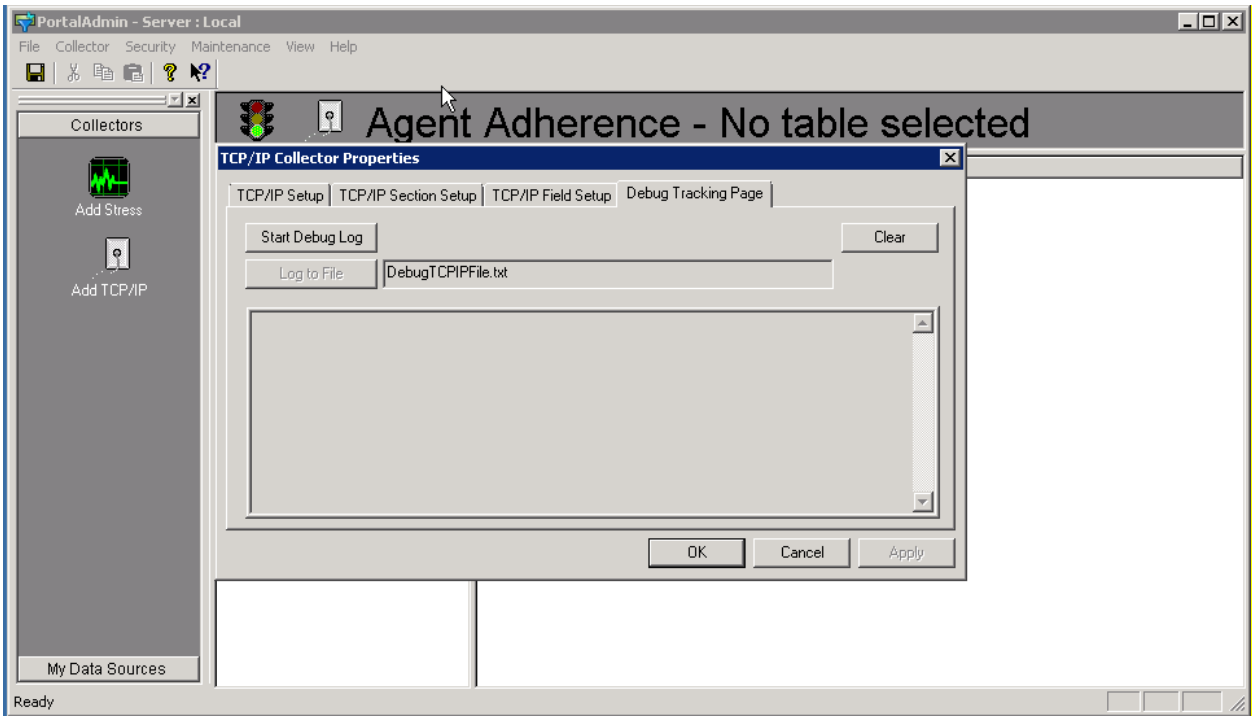
The Collectors can have the following states:

- Inactive – Collector is administratively inactive.
- Open – Collector is administratively active but not receiving data.
- Active - Collector is administratively active and receiving data.
- No State – Collector has no state.

Note: *For proper functionality Collector should be in Active state.*

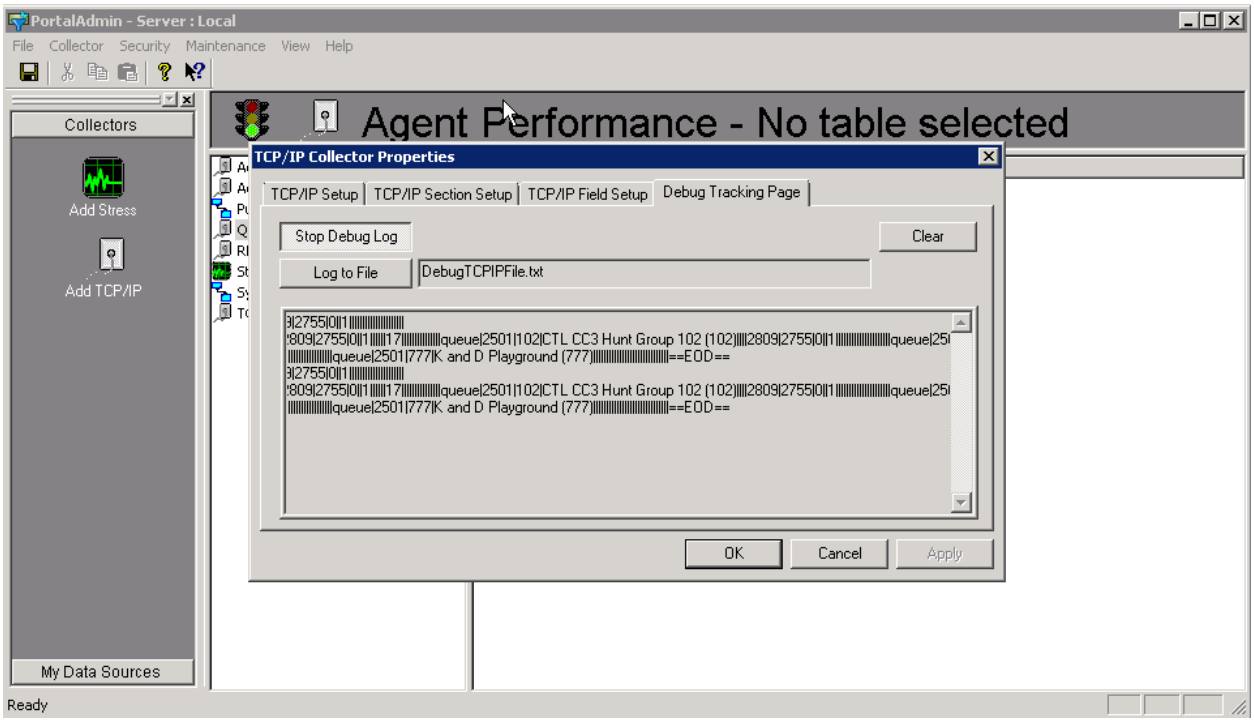
9.3.2. Verify Collector Data Using Debug

Right-click on the "TCP/IP Collector" (Not Shown) to display the "TCP/IP Collector Properties" screen, and select the "Debug Tracking Page" tab.



Click the "Start Debug Log" button to verify the data coming from Avaya IQ.

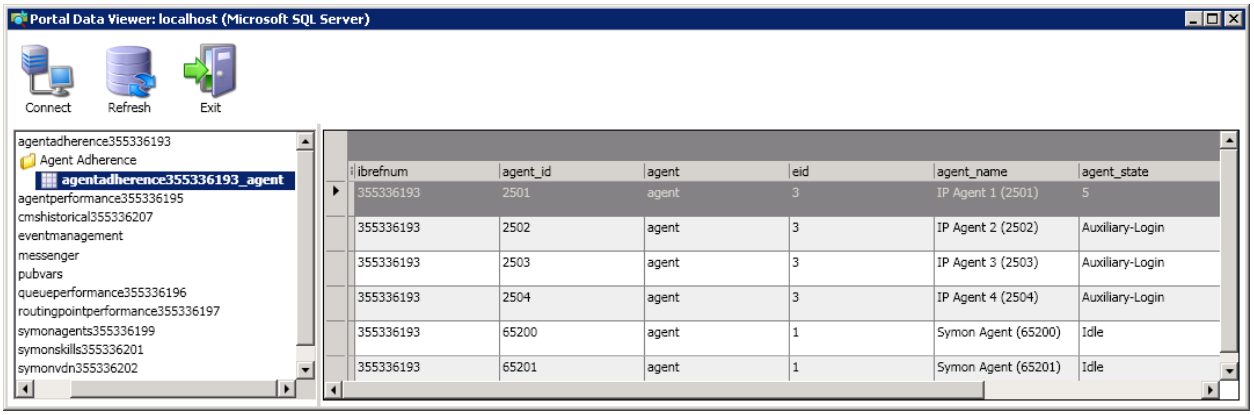
Note: *This example shows data received from the Avaya IQ rt_socket adapters. The pipe symbol, field names, and ==EOD== were set earlier in the IVS Enterprise Server TCP/IP Collector configuration to match what is being sent by Avaya IQ.*



9.3.3. Verify Collector Data Using Portal Data Viewer

Start the Portal Data Viewer by clicking **Start → All Programs → RMG Networks → IVS Portal Data Viewer**. Open the appropriate folders for viewing data.

The following example displays the agent adherence values.



10. Conclusion

These Application Notes describe the configuration steps required for IVS Enterprise Server Version 12 to interoperate with Avaya IQ Release 5.2 via custom developed real-time rt_socket interfaces. Compliance testing based upon the specified configuration has been completed successfully.

11. Additional References

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

[1] *Administering Avaya Aura® Communication Manager*, Release 6.3, Issue 10, June 2014, Document Number 03-300509, available at http://support.avaya.com.
[2] *Avaya IQ Standard Reports*, Release 5.2, March 2014, available at http://support.avaya.com.
[3] *Administering Avaya IQ*, Release 5.2, July 2013, available at http://support.avaya.com.

Documentation related to IVS Enterprise Server may be directly obtained from RMG Networks.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.