



Avaya Solution and Interoperability Test Lab

Application Notes for interoperability between the SYMON Enterprise Software Version 11.0.1 and Avaya Aura® Contact Center Release 6.0 – Issue 1.0

Abstract

These Application Notes describe a solution comprised of Avaya Aura® Contact Center Release 6.0 and SYMON Enterprise Software Real-time Statistic Multicasts Version 11.0.1. During the compliance testing, the SYMON Enterprise Software was able to successfully connect to Contact Center Manager Server's database, monitor all available statistics, and prove that the values collected are accurate and in harmony with the predicted values in Avaya Aura® Contact Center 6.0.

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 compliance test is to validate that SYMON Enterprise Software Version 11.0.1 (hereafter referred as SES) can connect successfully to the database of Avaya Aura® Contact Center Release 6.0 (hereafter AACC), monitor all available statistics, and prove that the values collected are accurate and in harmony with the predicted values from AACC.

2. General Test Approach and Test Results

The General test approach was to verify that the SES was able to integrate with the AACC. It uses the Avaya Aura® RSM Collector (AARC) to connect to the AACC 6.0 Real-Time Statistics Multicast (RSM) Application Program Interface (API) to monitor a wide range of real time statistics that are available from AACC 6.0. The AARC is part of Portal Administrator, which is an application that is part of SES and runs on the same server.

Once Avaya Aura® RSM Collector is logged into AACC, all keys are extracted from the database including Application, Skillset, Agent, and IVR Queue statistics. All statistics can be viewed using a *Portal Data Viewer*, which is a debugging tool that is part of SES.

2.1. Interoperability Compliance Testing

The focus of this testing was to verify that SES can connect to Avaya platform using AACC 6.0 successfully, monitor all available statistics, and prove that the values collected are accurate and in harmony with the predicted values from AACC 6.0.

The scope of the test was to verify that a reliable connection to AACC 6.0 can be established, all available statistics for a specific application, skillset, agent, IVR or Nodal queue can be published, and the real-time statistics collected are verifiably accurate as compared to the data reported by other real-time monitoring devices.

2.2. Test Results

The testing was successful and all objectives were verified and met. All test cases were executed and they all passed.

2.3. Support

Technical for the SYMON Enterprise Software can be reached by contacting email at support@symon.com or phone +1 (877) 789-8324.

3. Reference Configuration

Figure 1 illustrates the network diagram configuration used during the compliance testing between the AACC and the SES.

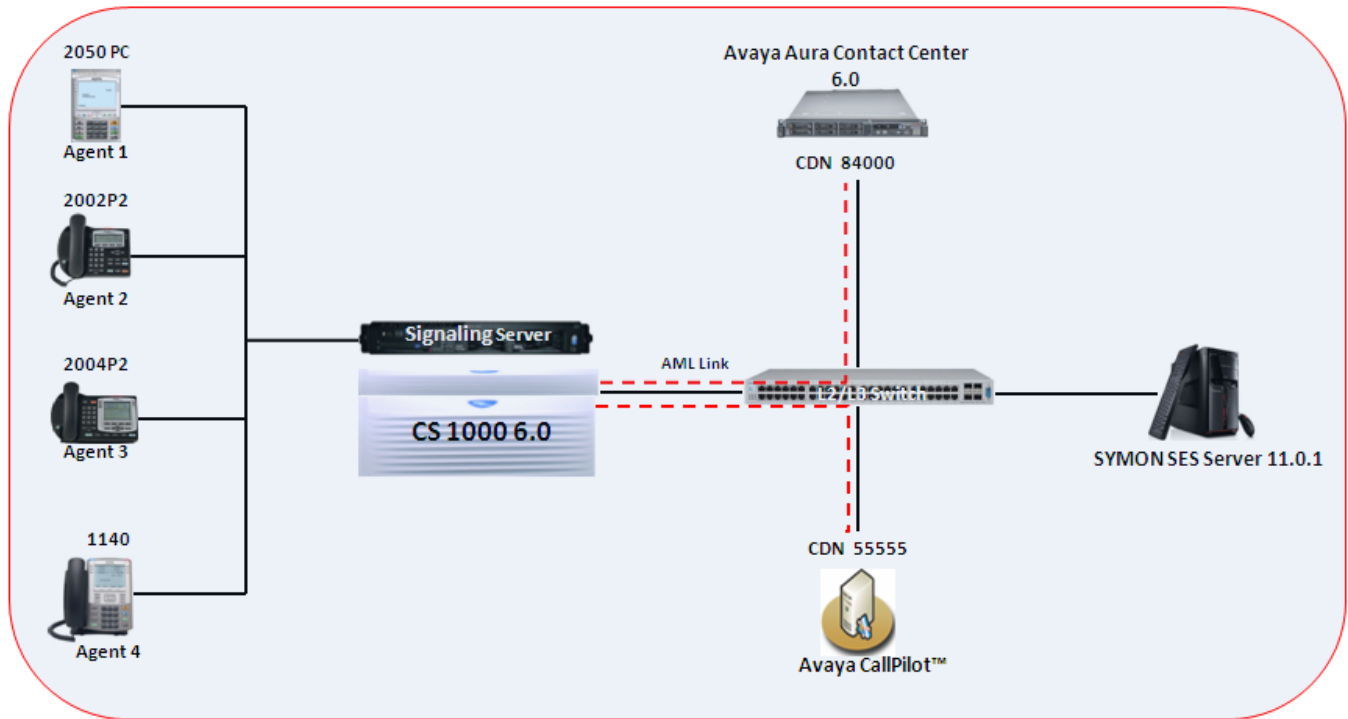


Figure 1 – Network Diagram Configuration

4. Equipment and Software Validated

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

System	Software Version
Avaya CS1000E	Call Server (CPPM): 6.00RJ Signaling Server (CPPM): 6.00.18
Avaya IP Soft Phone 2050	3.04.0003
Avaya IP Phone 1140	0625C6O
Avaya IP Phone 2004P2	0692D93
Avaya IP Phone 2002P2	0604DC5
Avaya CallPilot	5.0
Avaya Aura® Contact Center	6.208
SYMON Enterprise Software	11.0.1

5. Configure Avaya CS1000

This document assumes that the Avaya CS1000 was properly installed and configured as per the product document. For more configuration details about how to install, configure and administer, please refer to **Section 10[1]**.

6. Configure Avaya AACC

This document assumes that the AACC system was properly installed, configured and operated as per the product document, for more information about how to install, configure and administer AACC please refer to **Section 10[2]**. This section provides additional steps in creating a new user name and its password that is used by SES to connect to AACC CCMS's database.

To create new credentials, log in to the CCMS server as administrator where the *System Utility* application installed on it and navigate to **Start > All Programs > Avaya > Contact Center > System Utility**.

The *Server Utility Login* window appears as shown in **Figure 2**. Enter username **sysadmin** and its password to log in to the *Server Utility* application, to obtain the **sysadmin** password please contact the system administrator.

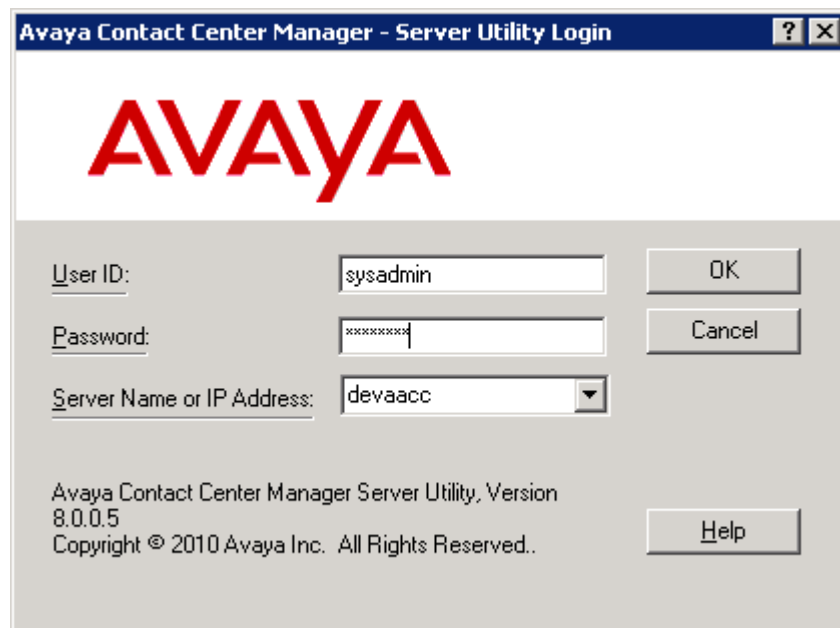


Figure 2 – Server Utility Login window

Figure 3 below shows the *Server Utility* application window. To open the *Users* window, right click the mouse button on the **Users** tab under the **User Administrator** tree menu and select the **Open** options.

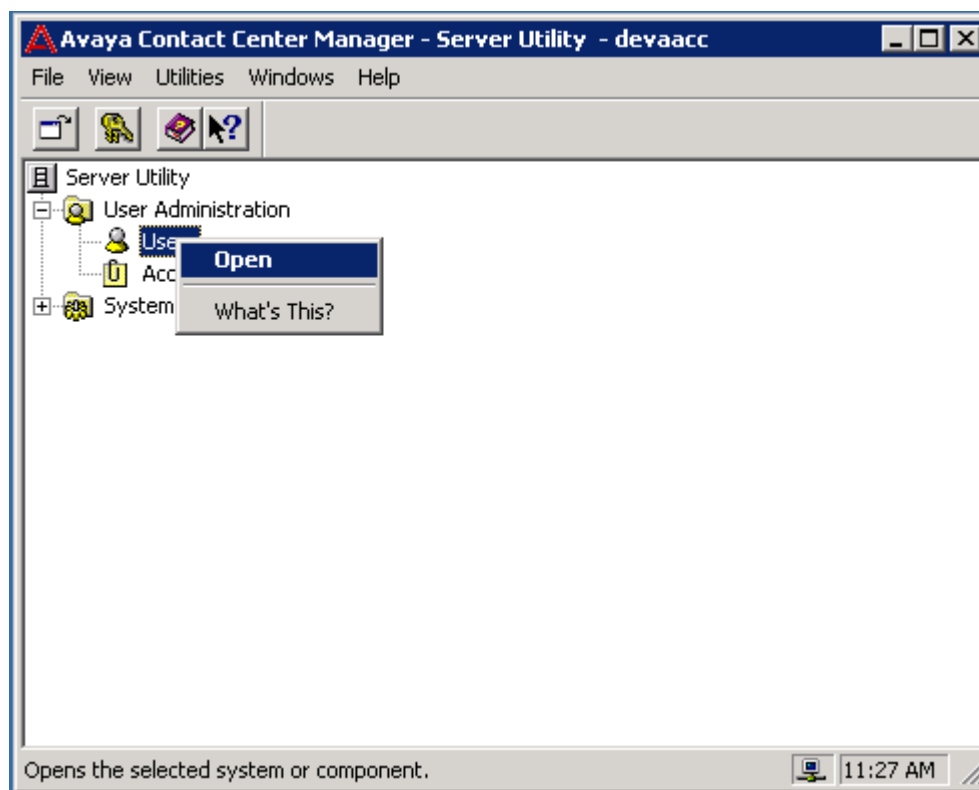


Figure 3 – Server Utility window

The *Users* window appears as shown in **Figure 4**. In the *User* window, navigate to **File > New**,

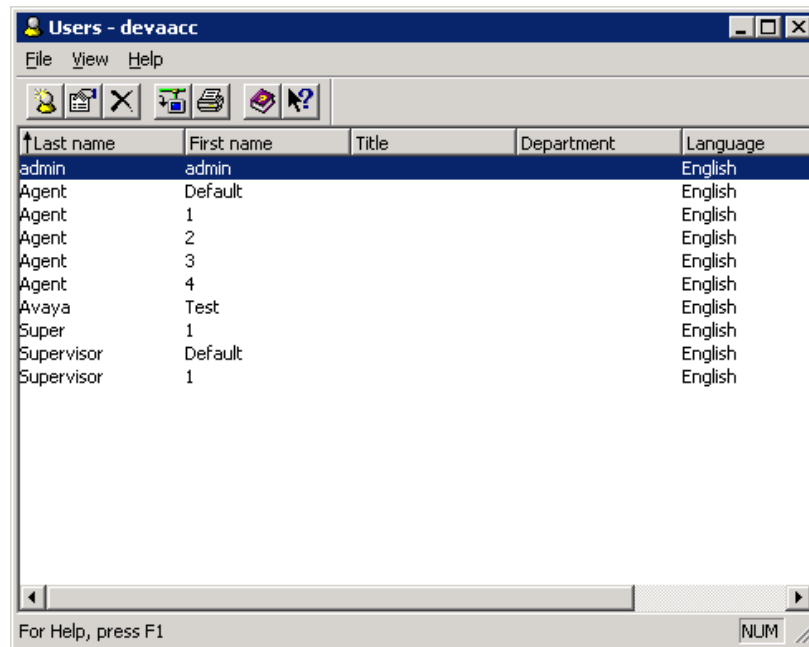


Figure 4 – Users window

Enter user information as shown in **Figure 5** and **6** and click on the **Save** button.

New User [?] [X]

General Desktop

First name: Khanh ←

Last name: Pham ←

Comments: For testing

Title: Test Engineer

Department: DevConnect

Language: English ▼

Save Cancel Help

Figure 5 – General tab of the New User window

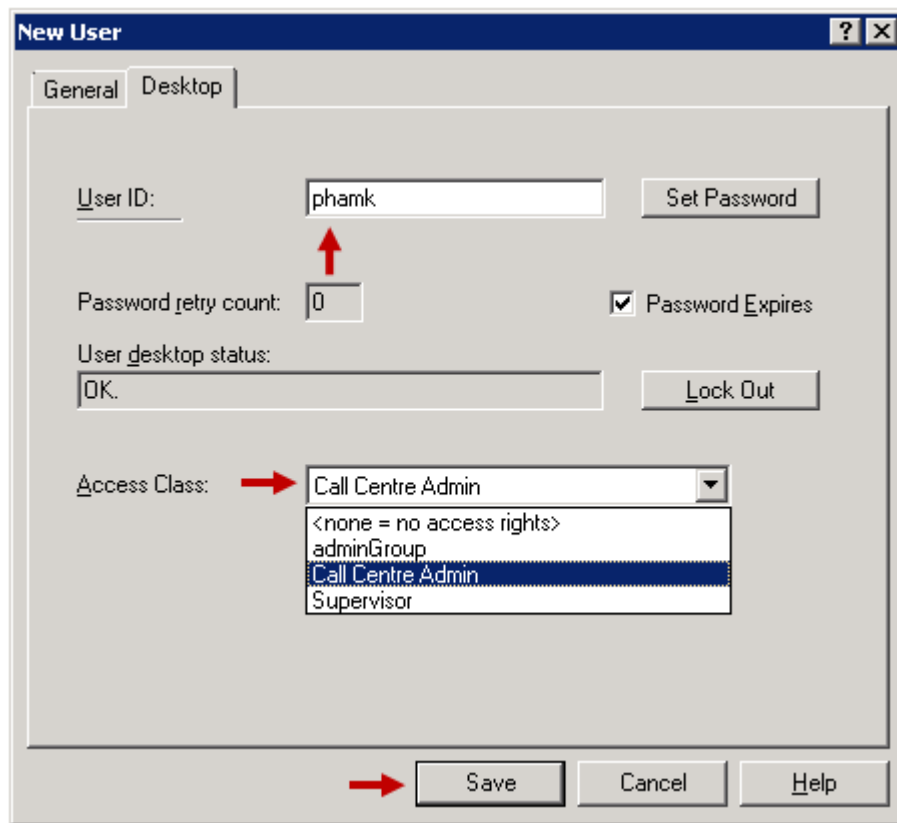


Figure 6 – Desktop tab of the New User window

By default the initial password is expires after first login and must be changed as shown in **Figure 7**. Click on the **Change Password** button as shown in **Figure 8** to change the password.

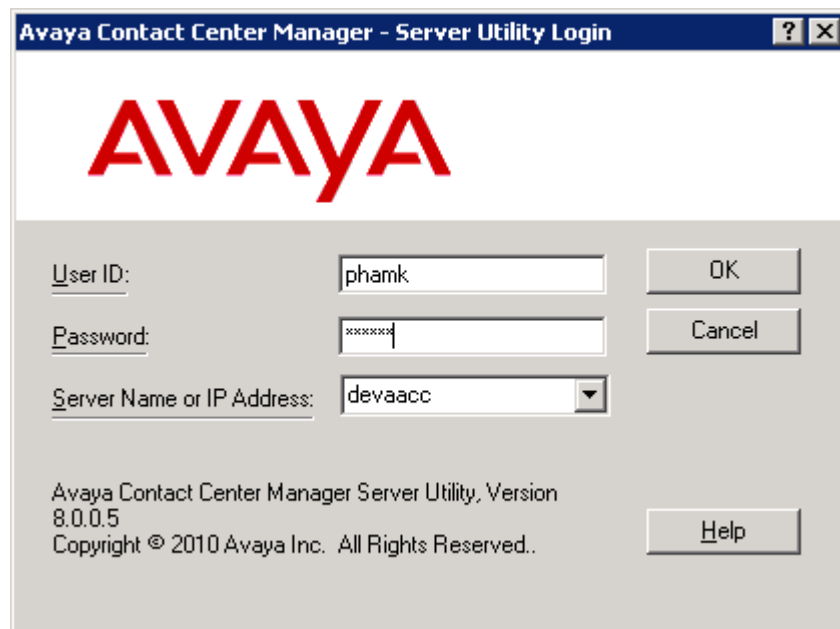


Figure 7 – First login of new user in the Server Utility Login

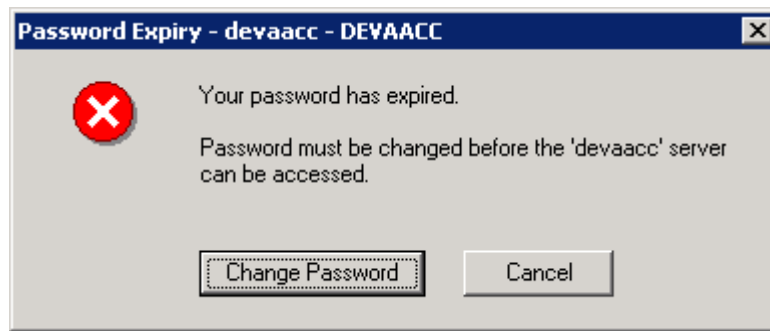


Figure 8 – Password Expiry window

7. Configure SES Server

This document assumes that SES server was properly installed and configured by a SYMON Engineer. This section provides steps on configuring the SES Portal Administrator and Portal Data Viewer to work with AACC system.

7.1. Configure SES PortalAdmin

To configure *PortalAdmin* log in to the SES server as administrator go to: **Start > All Programs > Symon Enterprise Server > Portal Admin**, the *PortalAdmin* window appears as shown in **Figure 9**.

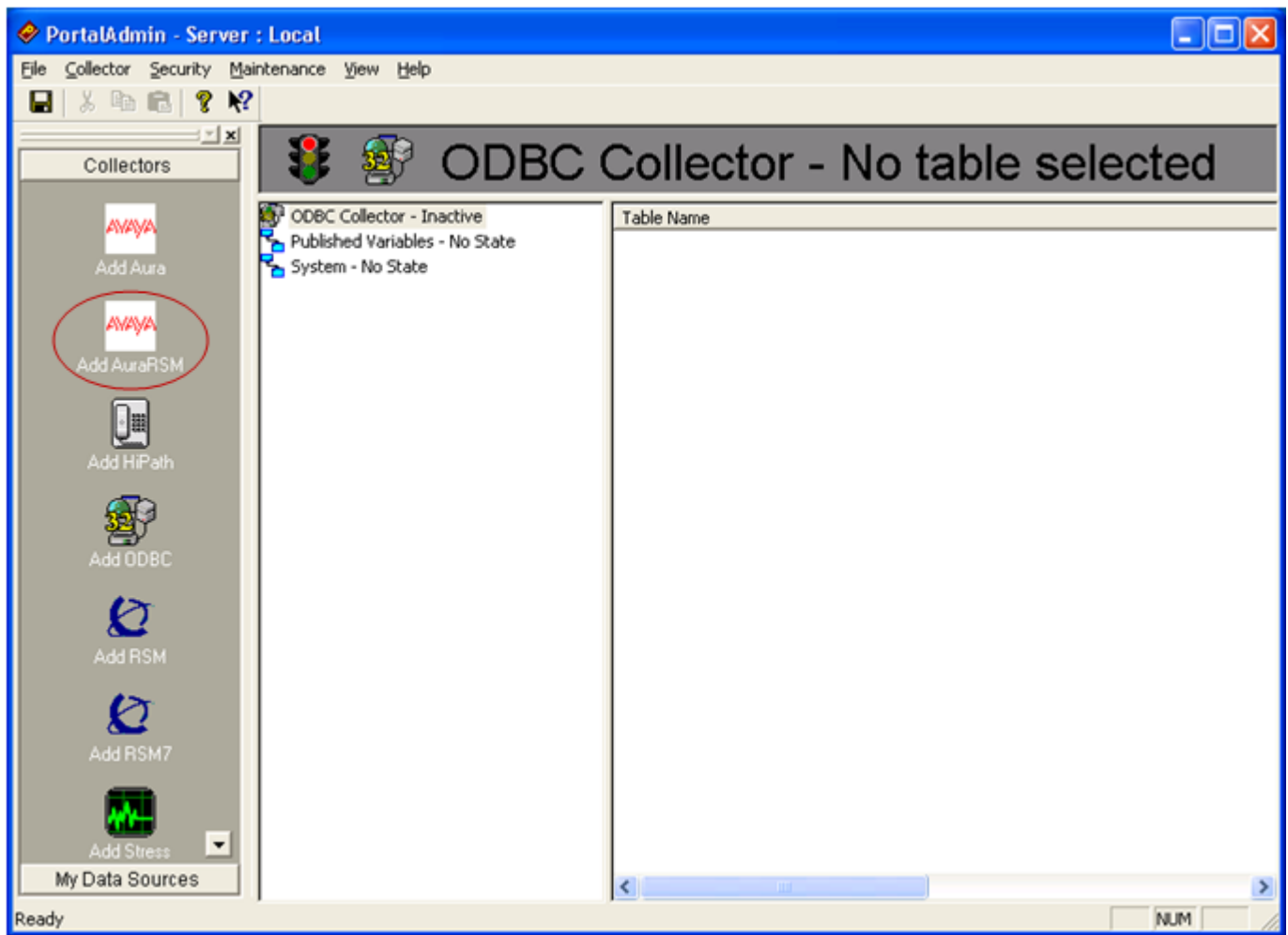


Figure 9 – PortalAdmin window

On the left hand side of the *PortAdmin* window and under the **Collector** column, click on the **Add AuraRSM** icon, the *Add AuraRSM Collector* window displays as shown in **Figure 10**.

Enter a name in the name box as **Aura RSM Data Collector** and click on the **Next** button to continue.

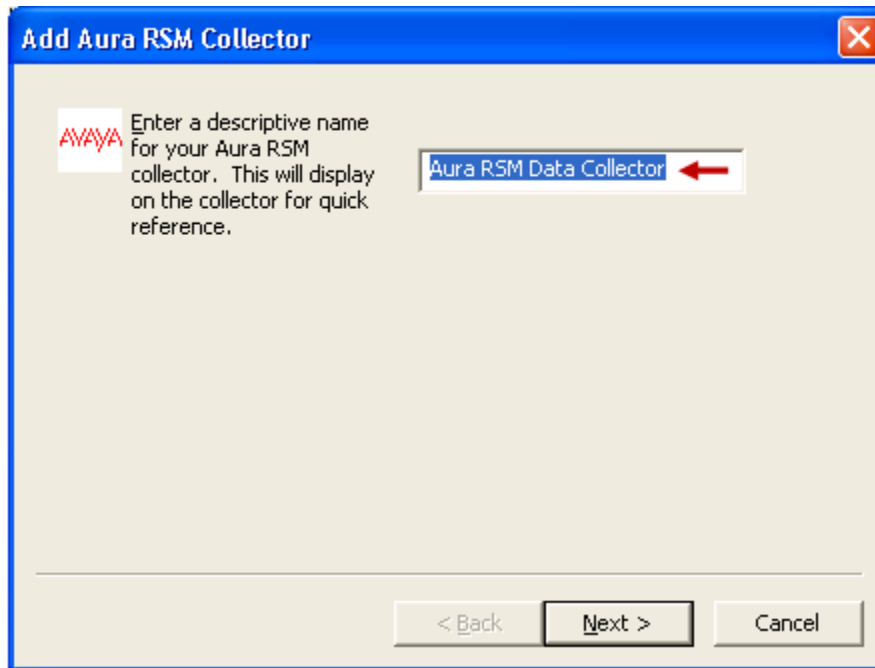


Figure 10 – Add Aura RSM Collector

Enter multicast IP address of CCMS server as shown in **Figure 11** and leave other fields with their default value. For obtaining the multicast IP address of CCMS, please contact network administrator of your organization.

Click the **Next** button to continue.

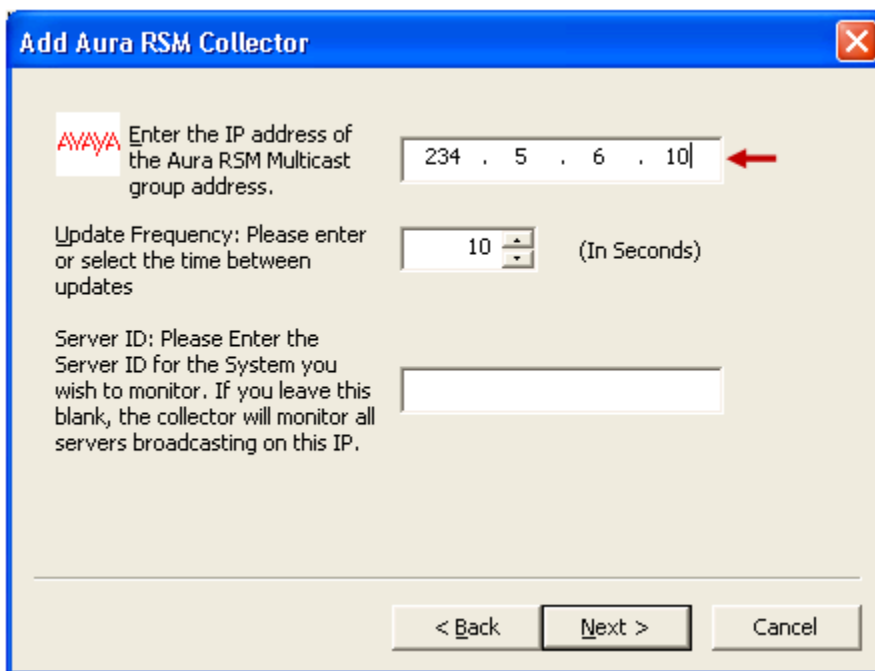
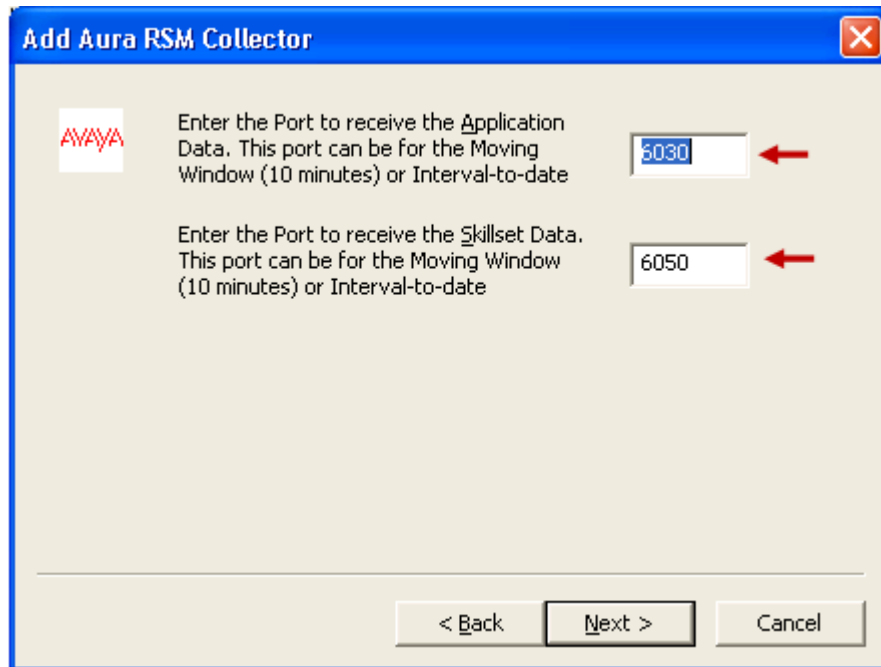


Figure 11 – Enter multicast IP address of CCMS server

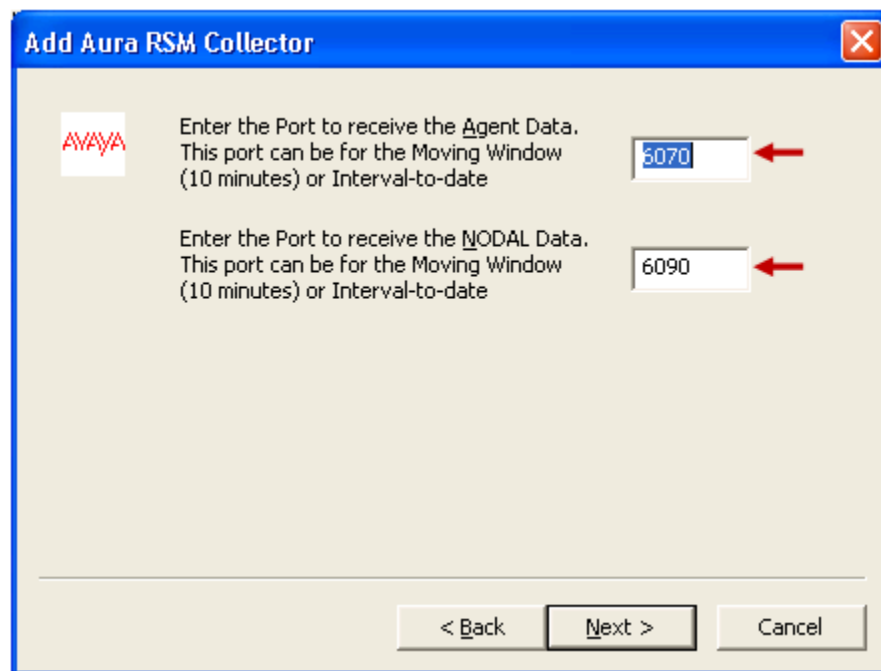
Leave default port numbers for the *Application Data*, *Skillset Data*, *Agent Data*, *NODAL Data*, *IVR Data* and *Route Data* as shown in **Figure 12**, **13**, and **14** below.

Click on **Finish** button to complete adding **Aura RSM** collector.



The screenshot shows a dialog box titled "Add Aura RSM Collector" with the Avaya logo. It contains two input fields with red arrows pointing to them. The first field is labeled "Enter the Port to receive the Application Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "6030". The second field is labeled "Enter the Port to receive the Skillset Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "6050". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 12 – Port number of Application Data and Skillset Data



The screenshot shows a dialog box titled "Add Aura RSM Collector" with the Avaya logo. It contains two input fields with red arrows pointing to them. The first field is labeled "Enter the Port to receive the Agent Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "6070". The second field is labeled "Enter the Port to receive the NODAL Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "6090". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 13 – Port number of Agent Data and NODAL Data

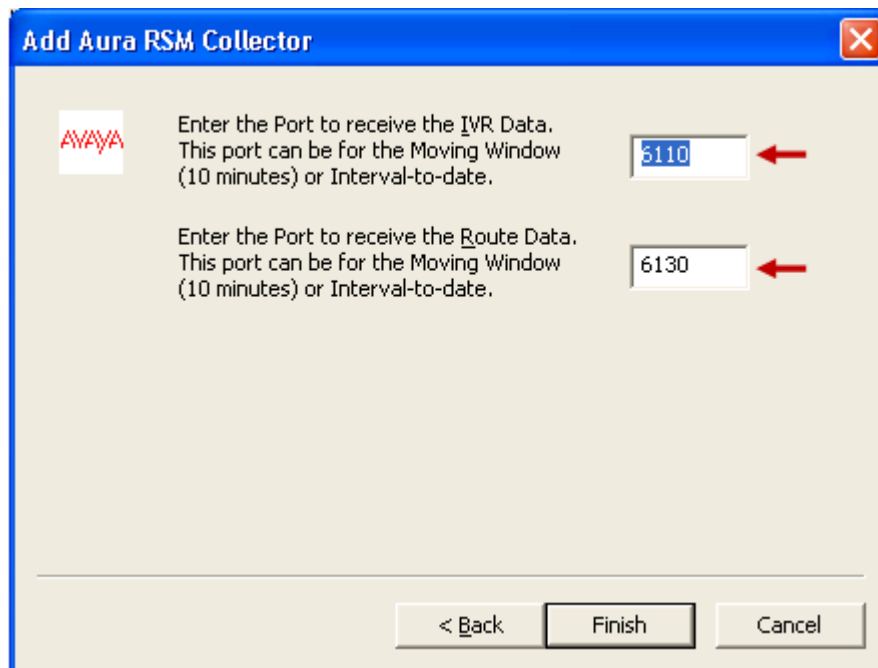


Figure 14 – Port of IVR Data and Route Data

Right click on the **Aura RSM Data** collector that has been created and select the **Properties...** option from context menu as shown in **Figure 15**.

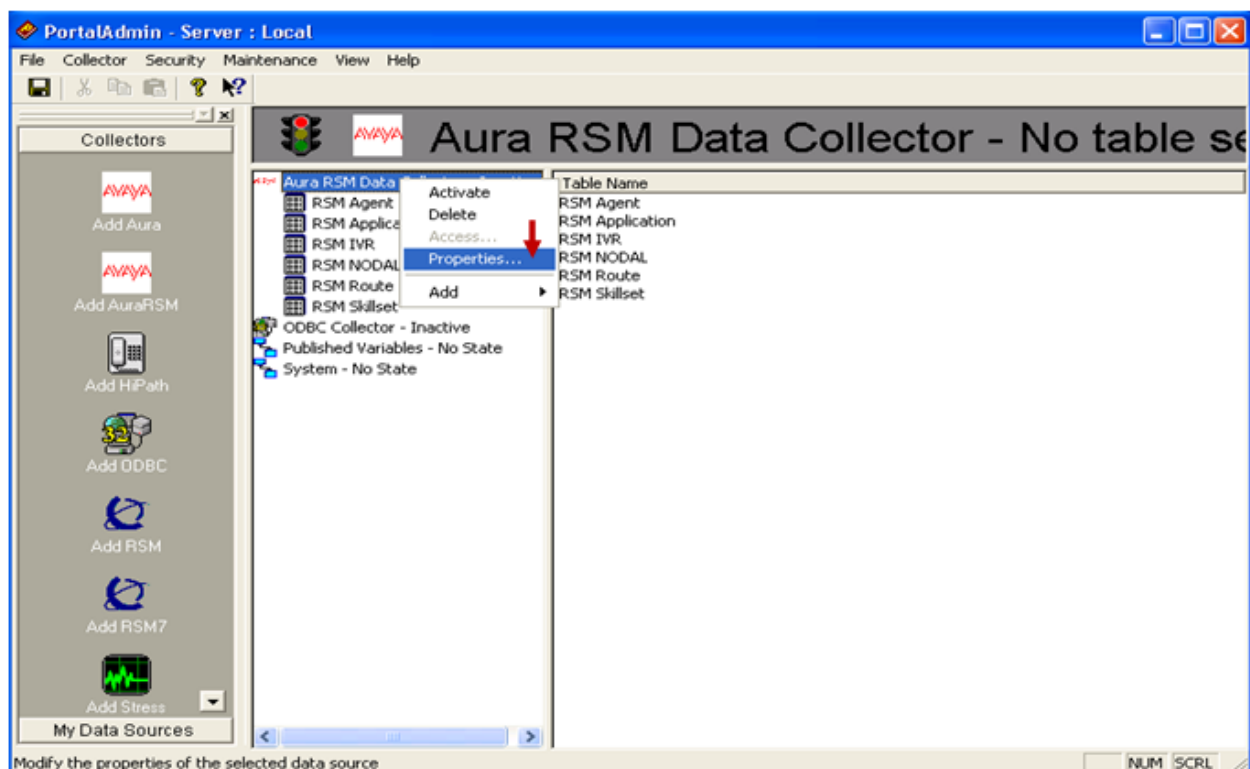


Figure 15 – Aura RSM Data Collector created

On the *Aura RSM Collector Properties* window, select the **Database Settings** button as shown in **Figure 16** below.

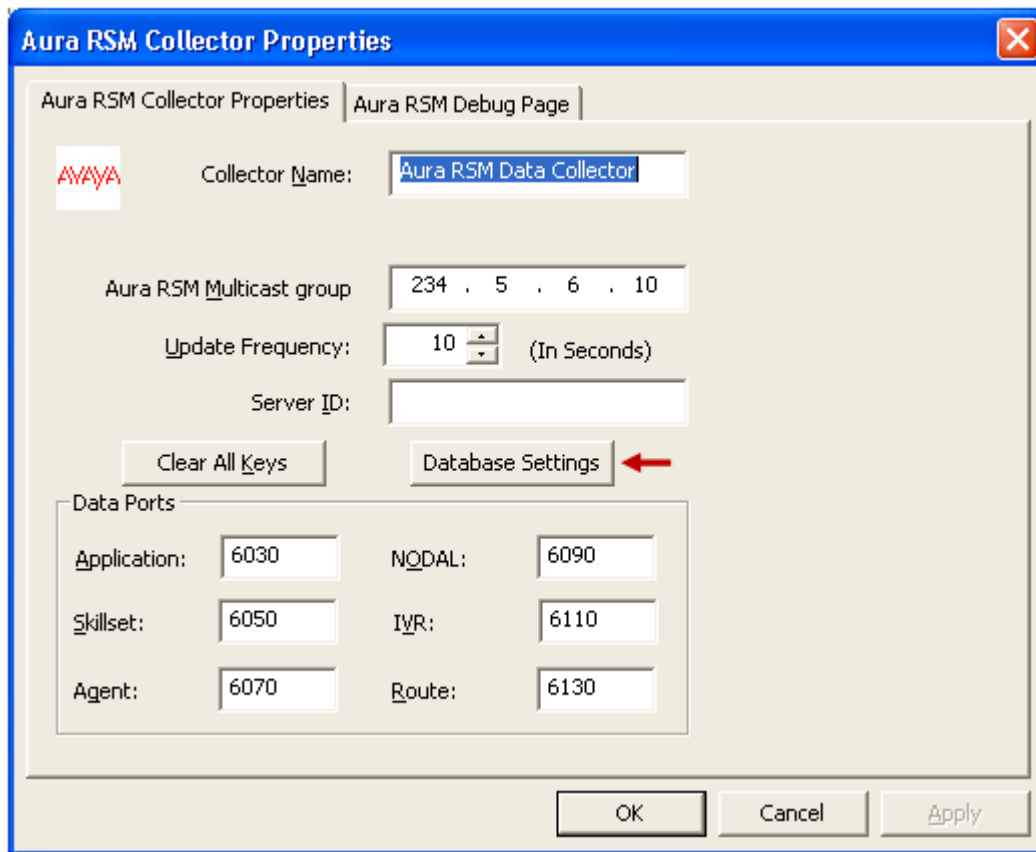


Figure 16 – Aura RSM Collector Properties window

On the *Database Settings* window, click on **Select DSN** button as shown in **Figure 17** to open *Select Data Source* window.

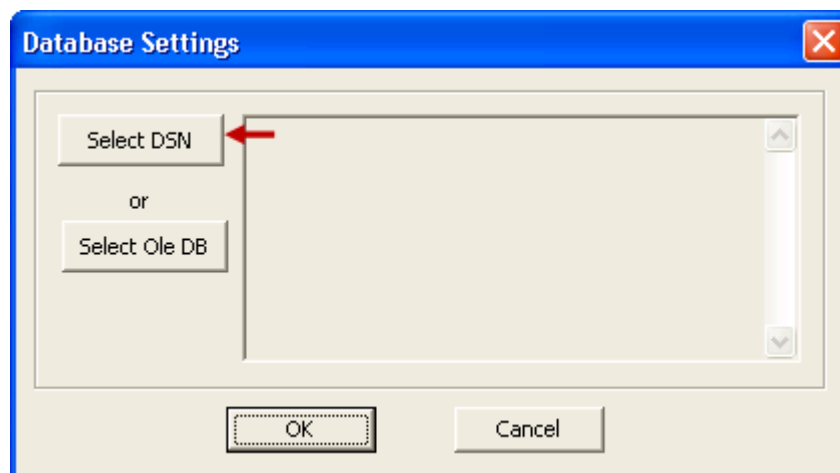


Figure 17 – Database Settings window

The *Select Data Source* window appears as shown in **Figure 18**, click on the **Machine Data Source** tab and click on the **New...** button to create the new database.

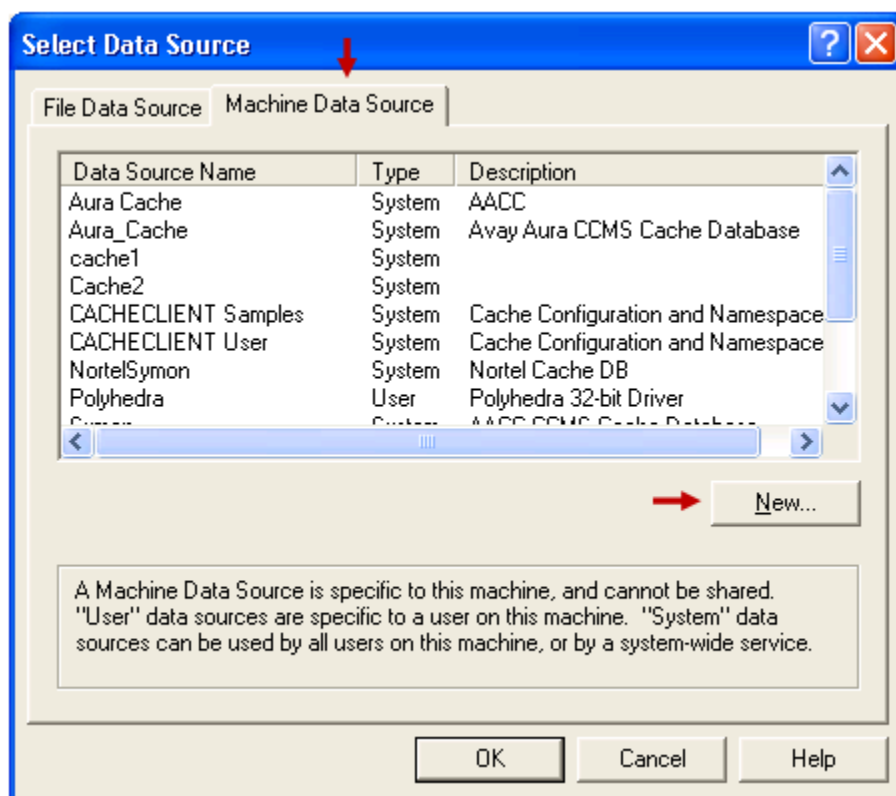


Figure 18 – Select Data Source window

On the *Create New Data Source* window as shown in **Figure 19**, select the **System Data Source** option and click on the **Next** button to continue.

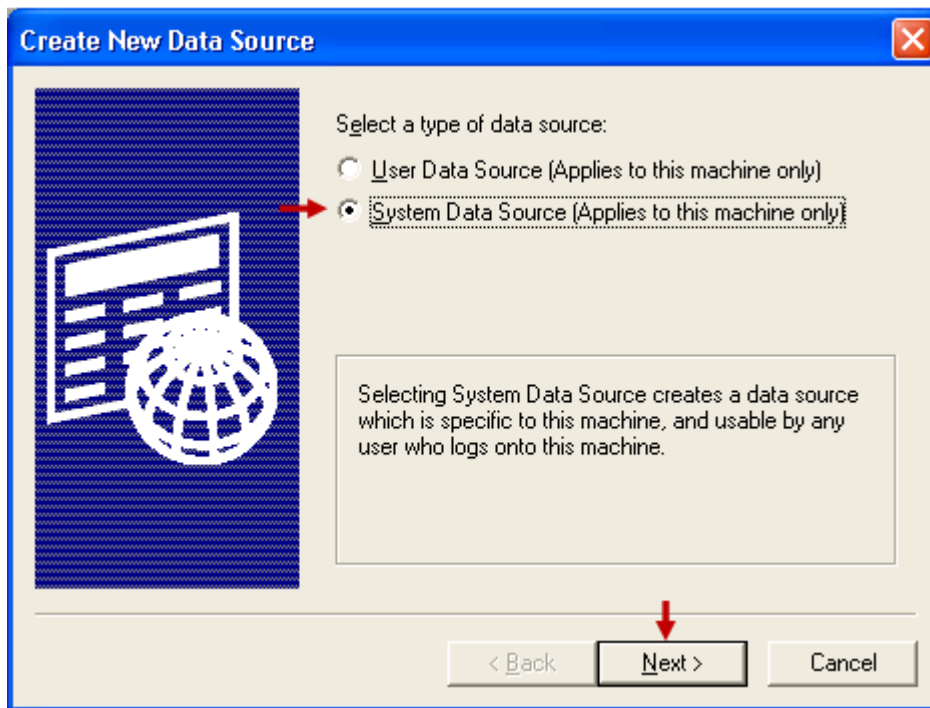


Figure 19 – Create New Data Source window

Select **InterSystems ODBC35** in the list of database as shown in **Figure 20** and click on the **Next** button to continue.

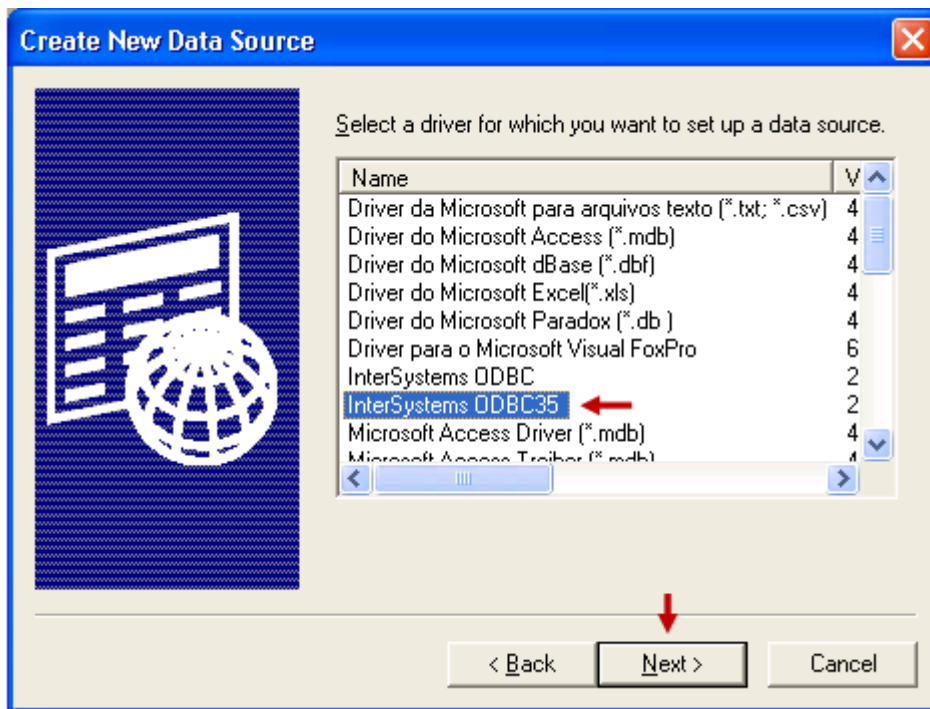


Figure 20 – Create New Data Source window

The summary database window appears as shown in **Figure 21**. Click the **Finish** button to complete adding new database and go to the detail of *InterSystem Cache ODBC Data Source Setup* window.

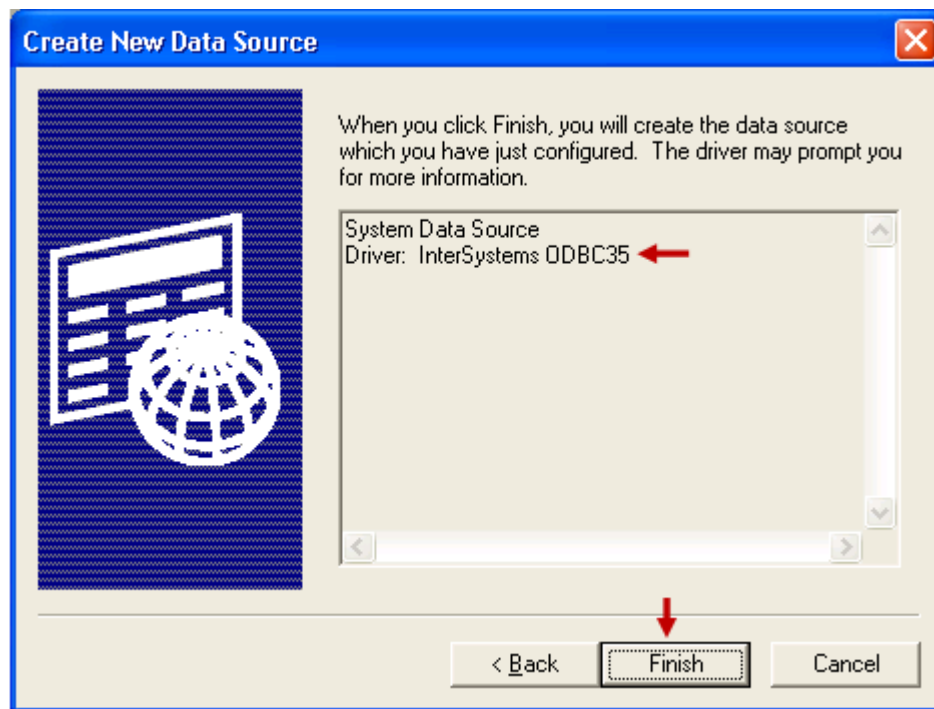
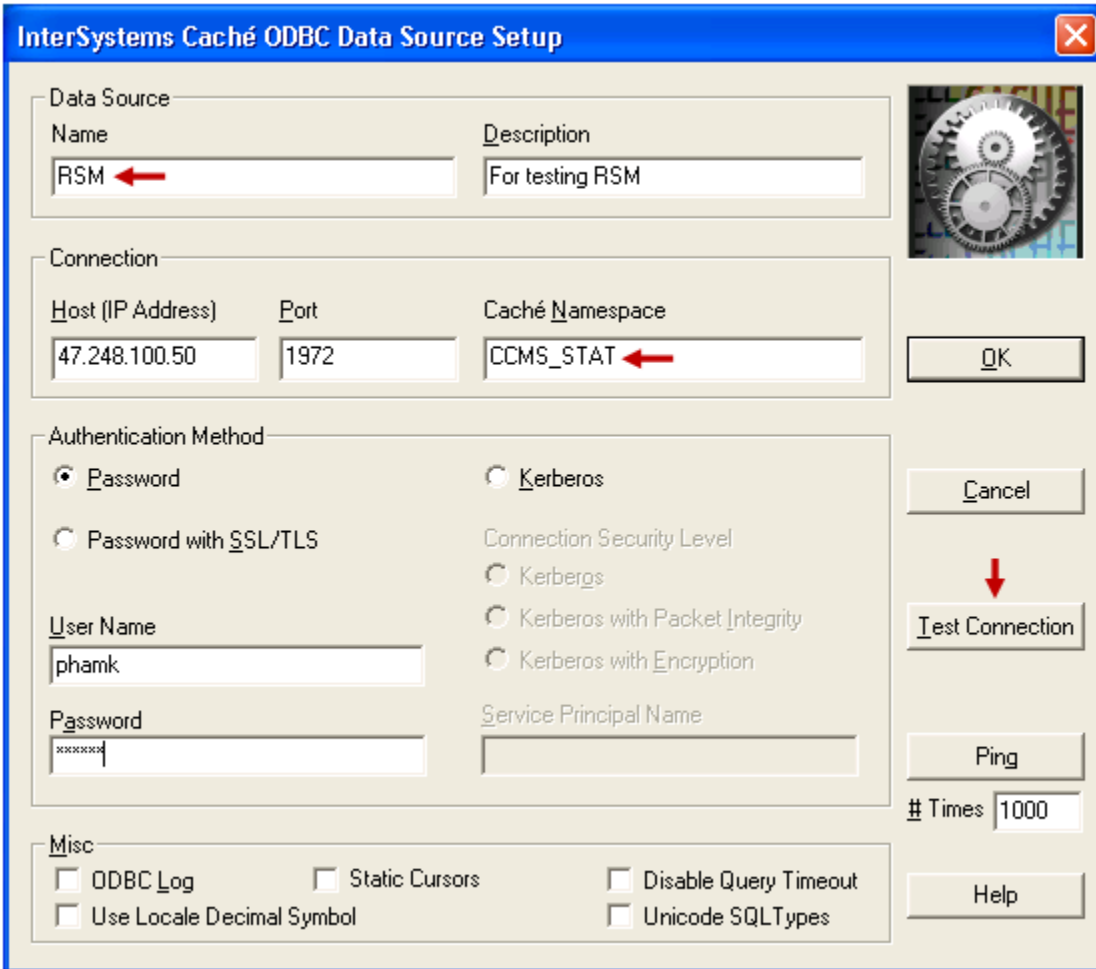


Figure 21 – Data Source selected

In the *InterSystem Cache ODBC Data Source Setup* window, enter database information as shown in **Figure 22** below.

Note: The *Cache Namespace* must be **CCMS_STAT** which is the name defined in the CCMS server, using another name would result in a failure of connecting to CCMS database.



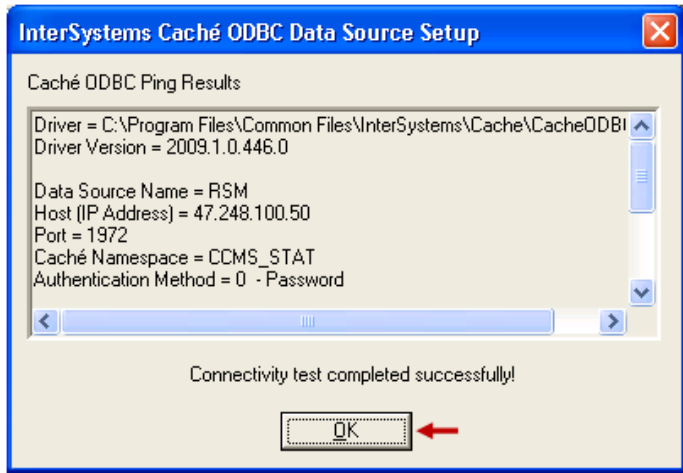
The window is titled "InterSystems Caché ODBC Data Source Setup". It contains several sections:

- Data Source:**
 - Name: RSM (indicated by a red arrow)
 - Description: For testing RSM
- Connection:**
 - Host (IP Address): 47.248.100.50
 - Port: 1972
 - Caché Namespace: CCMS_STAT (indicated by a red arrow)
- Authentication Method:**
 - ☒ Password
 - ☐ Password with SSL/TLS
 - ☐ Kerberos
 - ☐ Kerberos with Packet Integrity
 - ☐ Kerberos with Encryption
 - User Name: phamk
 - Password: [masked]
 - Service Principal Name: [empty]
- Misc:**
 - ☐ ODBC Log
 - ☐ Static Cursors
 - ☐ Disable Query Timeout
 - ☐ Use Locale Decimal Symbol
 - ☐ Unicode SQL types

Buttons on the right side include OK, Cancel, Test Connection (indicated by a red arrow), Ping, and a # Times field set to 1000.

Figure 22 – InterSystems Cache ODBC Data Source Setup window

Click on the **Test Connection** button to test connectivity with CCMS server. If everything is correct, another window appears as shown in **Figure 23** to state that “*Connectivity test completed successfully*”.



The window is titled "InterSystems Caché ODBC Data Source Setup" and displays "Caché ODBC Ping Results".

Driver = C:\Program Files\Common Files\InterSystems\Cache\CacheODBI
 Driver Version = 2009.1.0.446.0

Data Source Name = RSM
 Host (IP Address) = 47.248.100.50
 Port = 1972
 Caché Namespace = CCMS_STAT
 Authentication Method = 0 - Password

Connectivity test completed successfully!

OK (indicated by a red arrow)

Figure 23 – Test connectivity window

Click on the **OK** button to go back to the main window of *InterSystems Cache ODBC Source Setup*. Click on the **OK** button of the *InterSystems Cache ODBC Source Setup* window to go back to the **Select Data Source** window as shown in **Figure 24**.

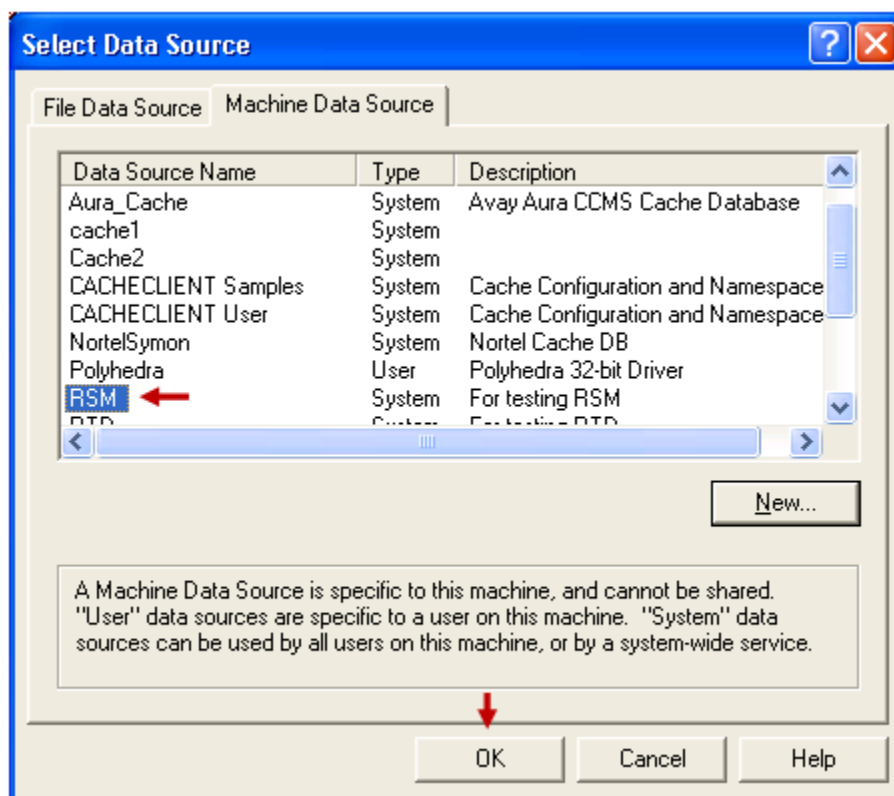


Figure 24 – RSM database created

Click on the **OK** button of the *Select Data Source* window to return to the **Database Settings** window as shown in **Figure 25**.

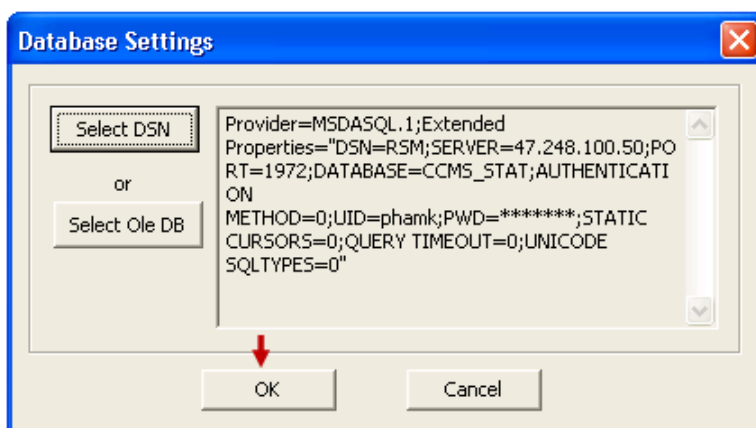


Figure 25 – Database Settings with new data created

Click on the **OK** button to return to the *Aura RSM Collector Properties* window as shown in Figure 26.

Aura RSM Collector Properties

Aura RSM Collector Properties | Aura RSM Debug Page

AYAYA Collector Name: Aura RSM

Aura RSM Multicast group: 234 . 5 . 6 . 10

Update Frequency: 10 (In Seconds)

Server ID:

Clear All Keys Database Settings

Data Ports

Application:	6030	NODAL:	6090
Skillset:	6050	IVR:	6110
Agent:	6070	Route:	6130

OK Cancel Apply

Figure 26 – Aura RSM Collector Properties with data created

Click on the **OK** to complete the process of creating new database and connecting to CCMS database and return to the *PortalAdmin* window as shown in **Figure 27**.

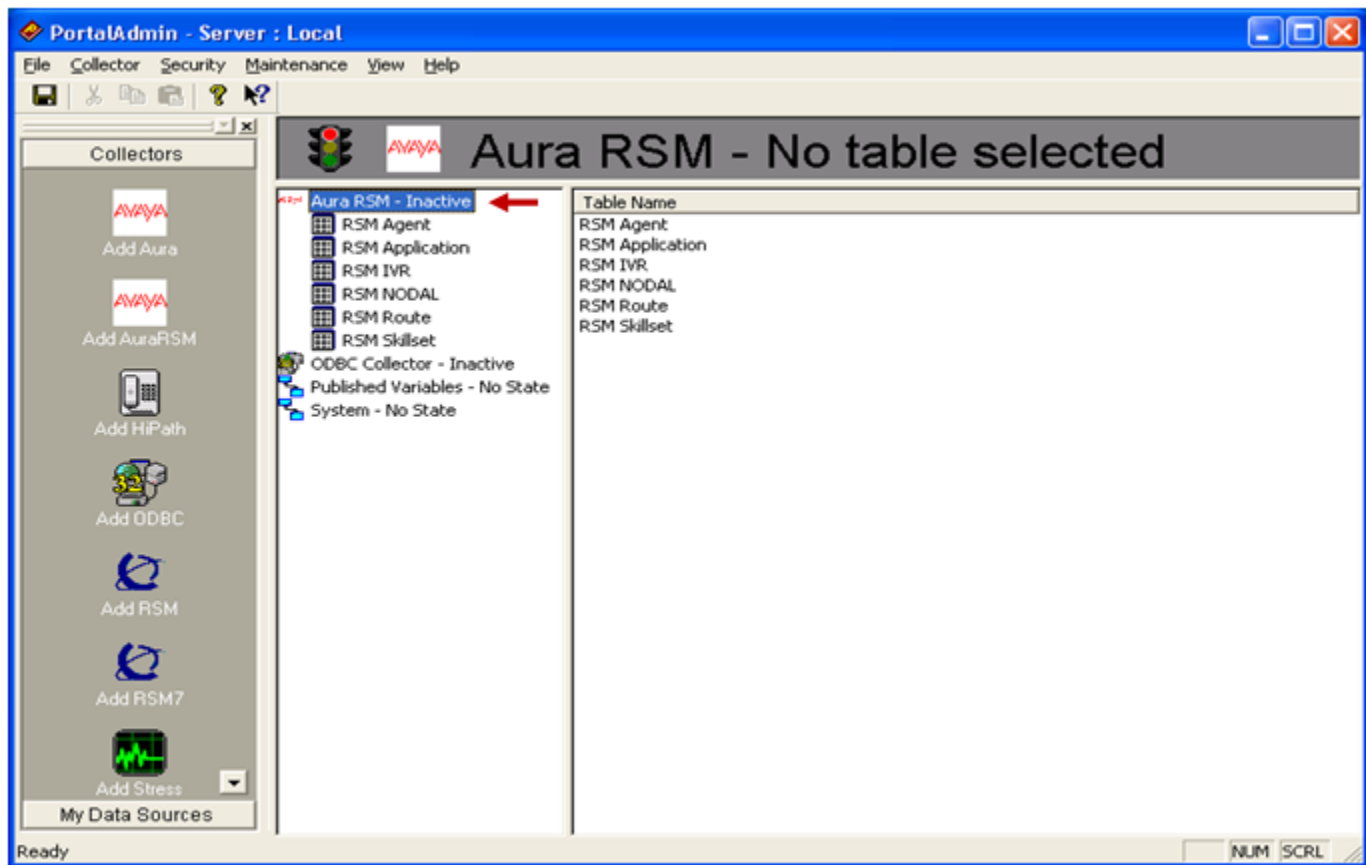


Figure 27 – PortalAdmin window with Aura RSM configured

To publish the **Agent** application table, click on the **Agent** application tab under the **Aura RSM** collector that has been created above. All keys of **Agent** application are listed under the **Available Fields** column of **Fields** window.

Select all fields of **Available Fields** column and click **Add** button as shown in **Figure 28**.

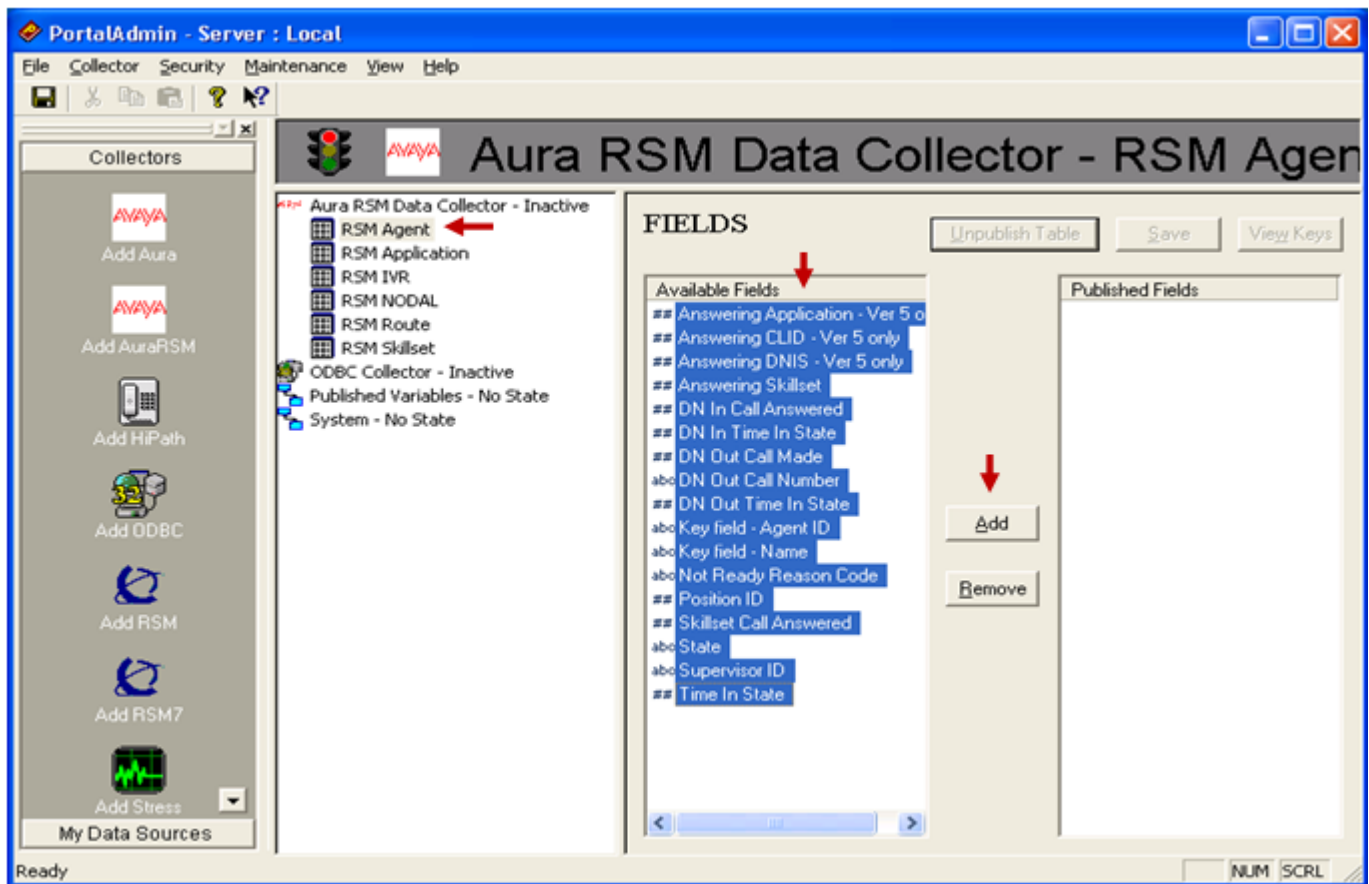


Figure 28 – RSM Agent application configuration

All fields are now moved to **Published Fields** column as shown in **Figure 28** and then click on the **Save** button to save it.

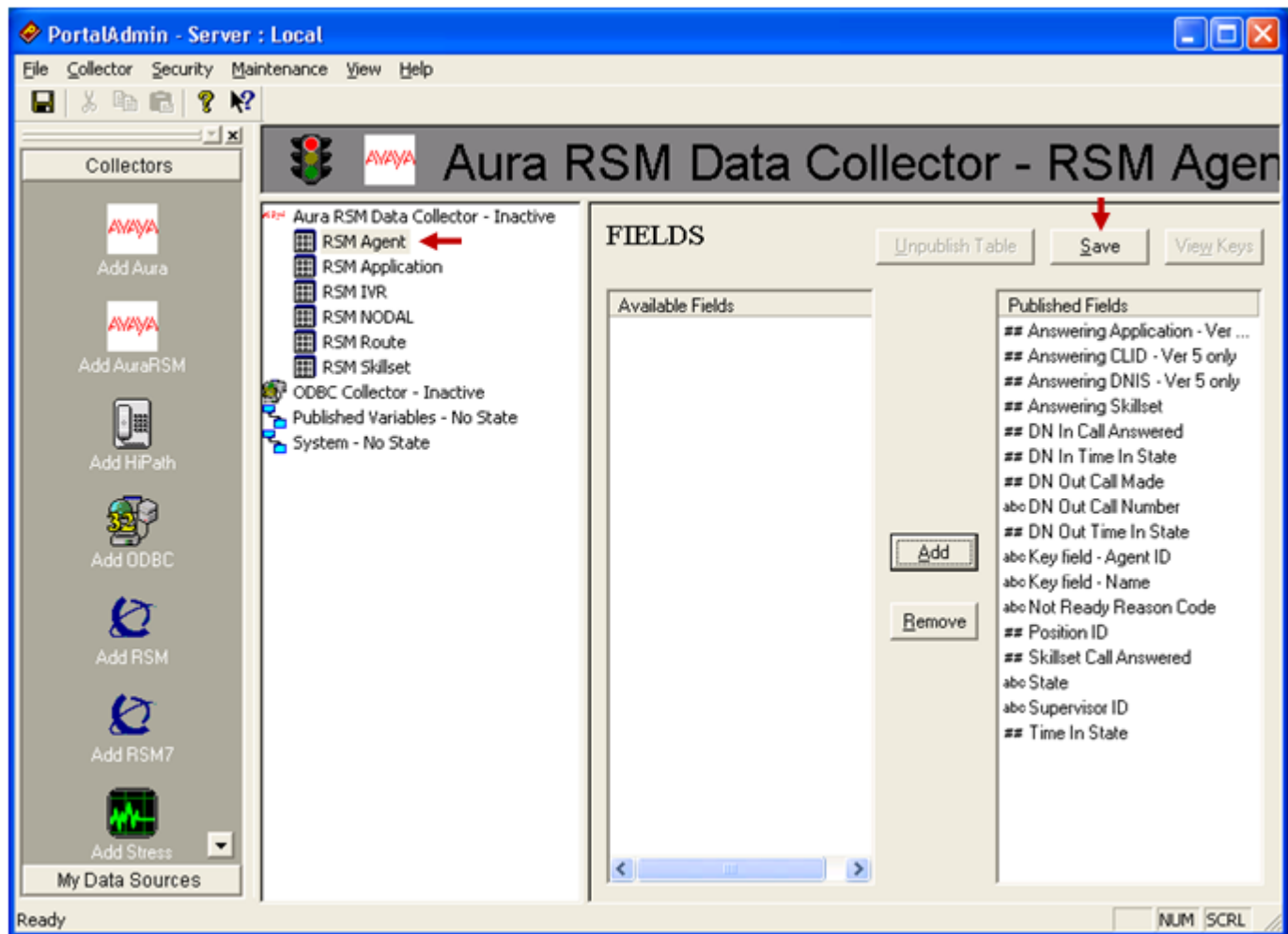


Figure 28 – RSM Agent application configuration (cont)

The **View Keys** now becomes available as shown in **Figure 29**.

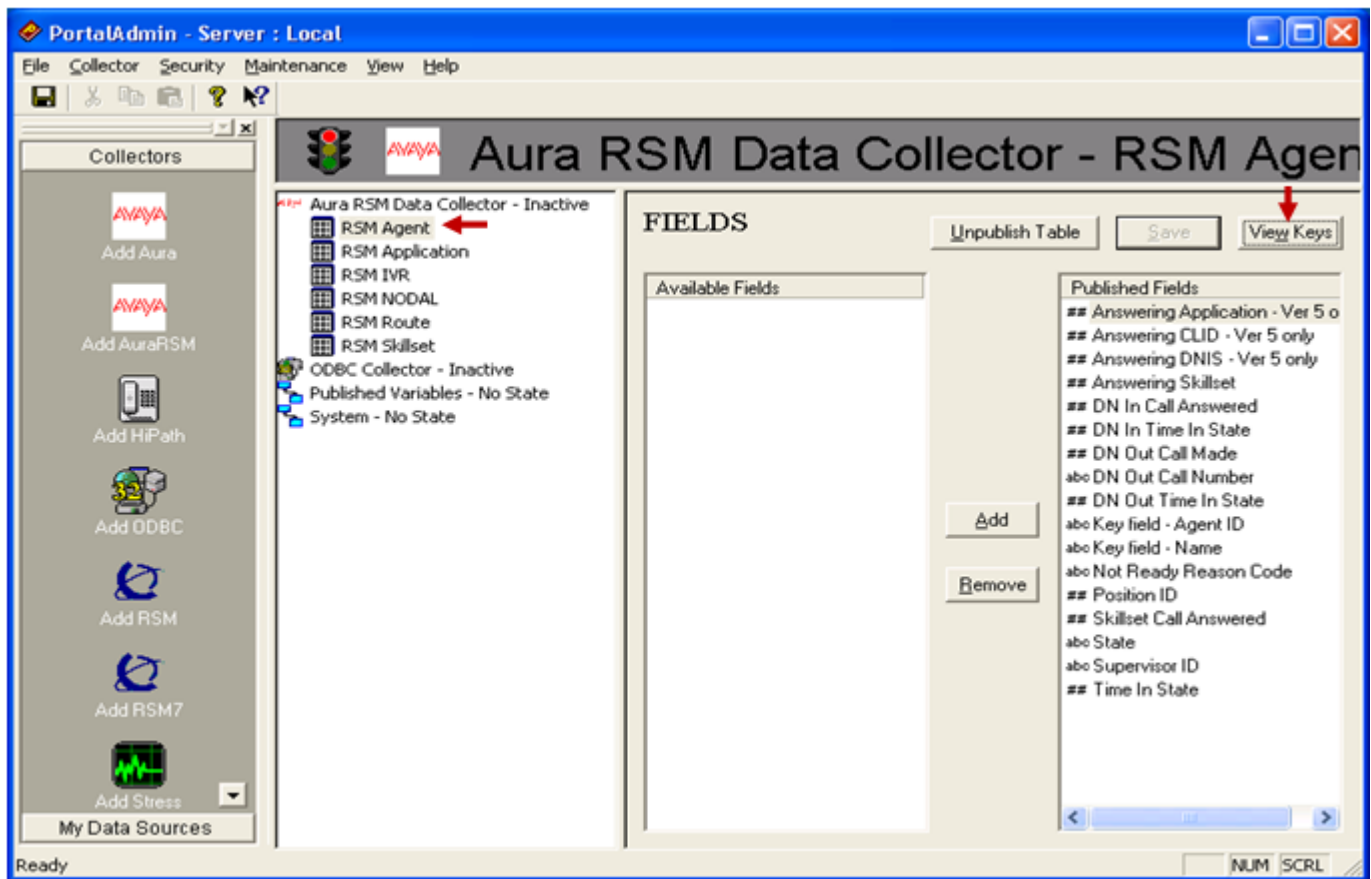


Figure 29 – RSM Agent application configuration (cont)

Click on the **View Keys** button, the **Agent** keys will display on the **Available Keys** column of **KEYS** window as shown in **Figure 30**.

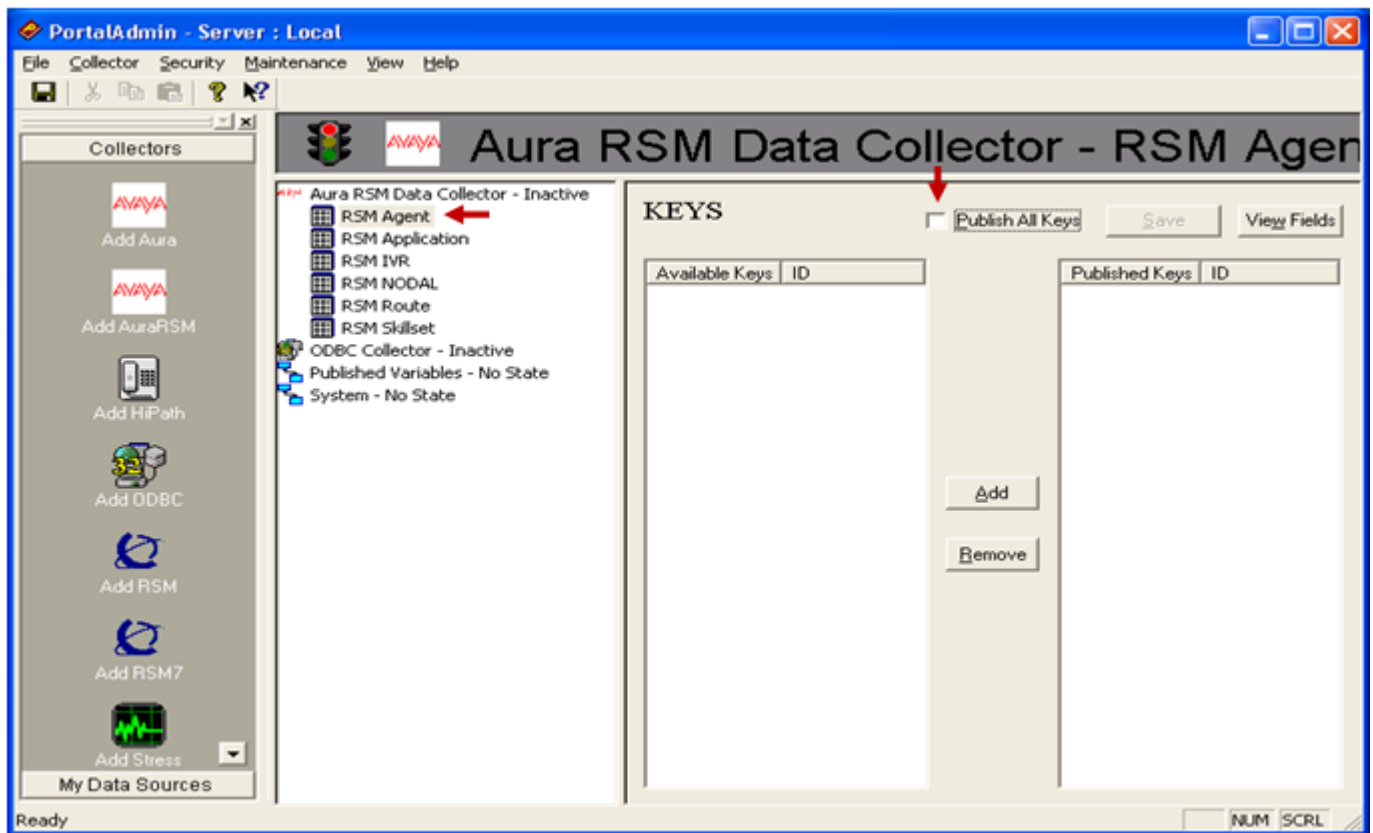


Figure 30 – RSM Agent application configuration (cont)

Click on the **Publish All Keys** to publish all Agent keys as shown in **Figure 31**.

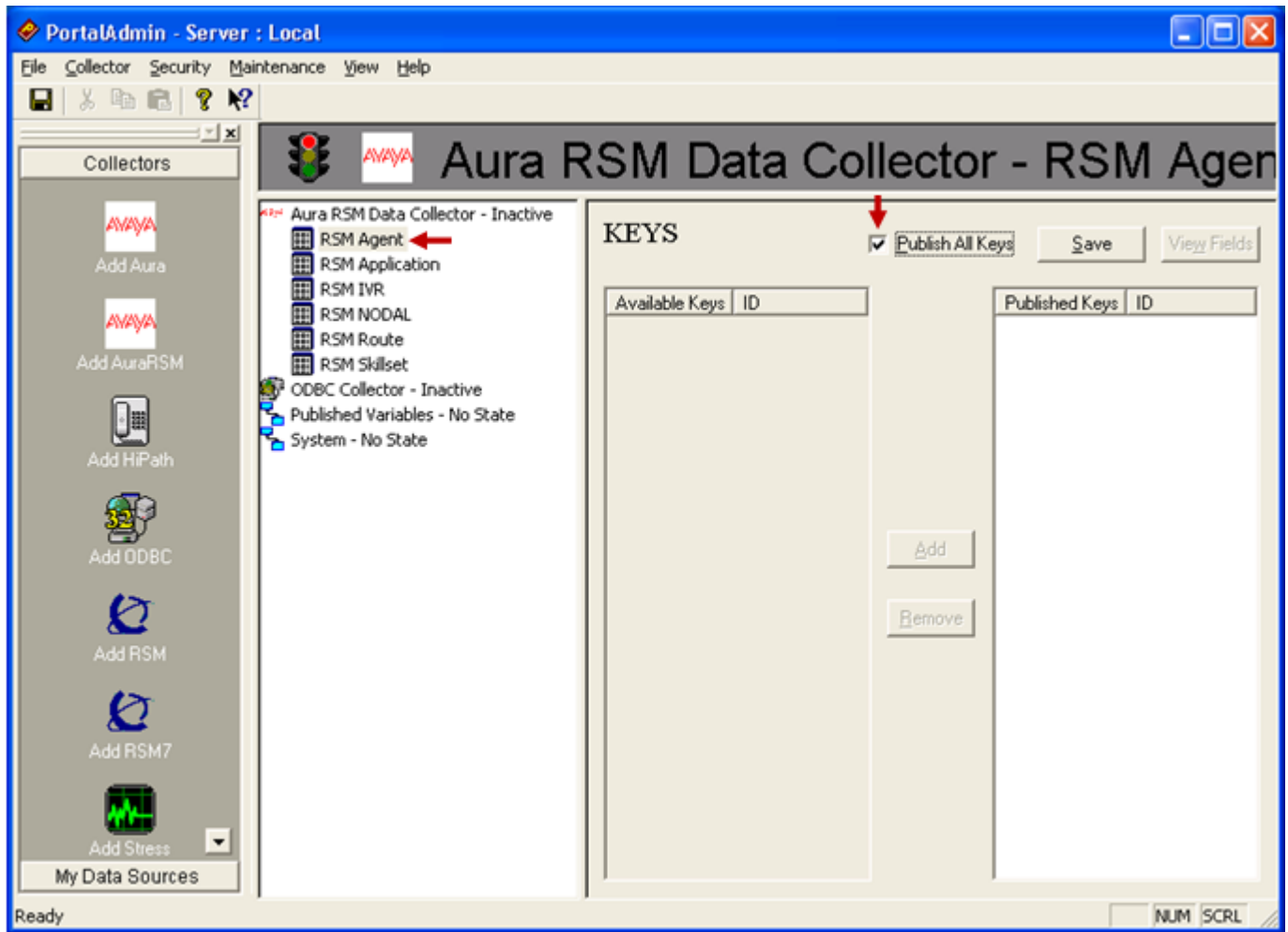


Figure 31 – RSM Agent application configuration (cont)

All Agent Keys are now automatically published as shown in **Figure 32**.

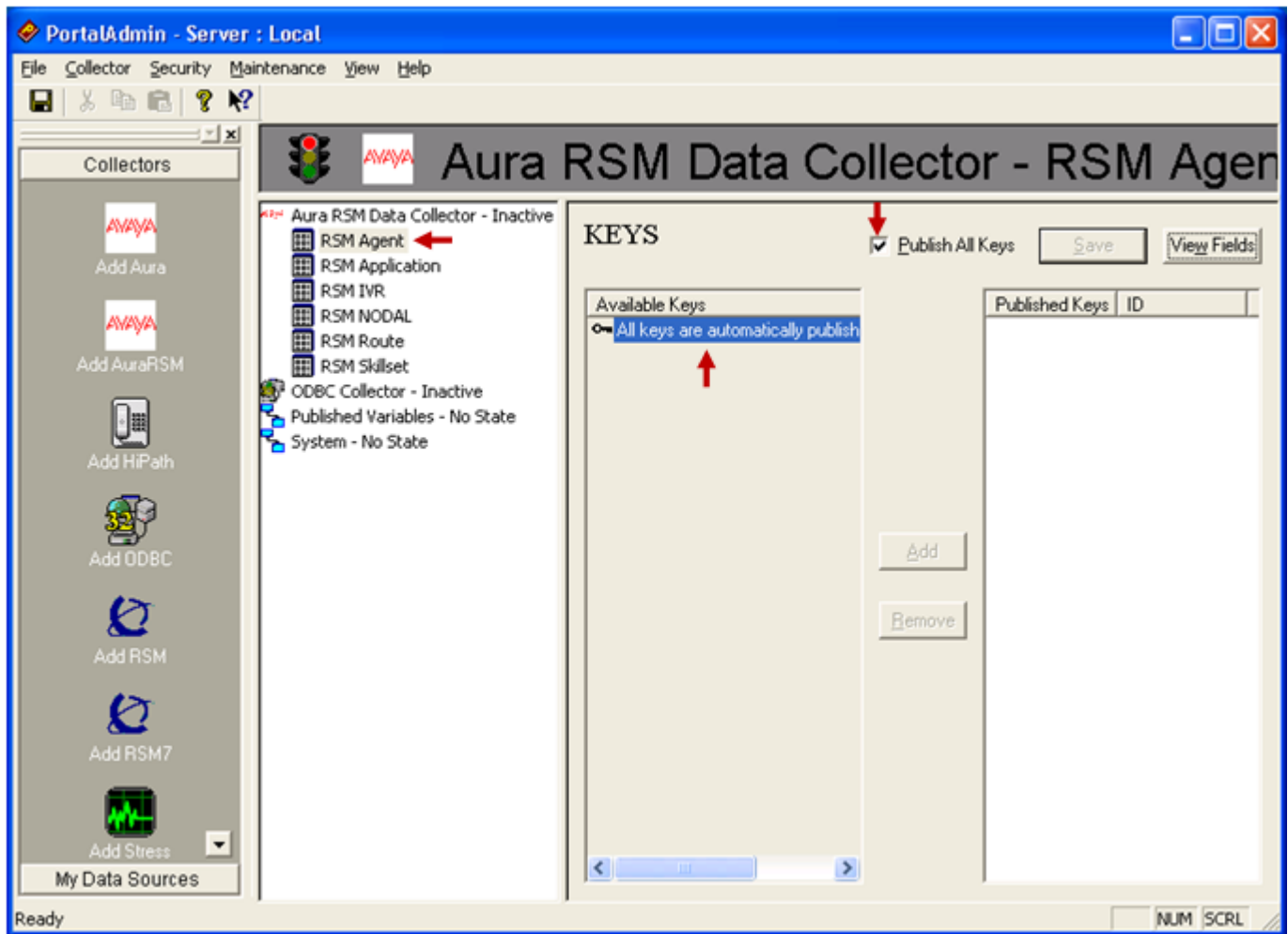


Figure 32 – RSM Agent application configuration (cont)

Click on the **Save** button to save the configuration and complete the publishing of all keys of the Agent application.

Repeat all the above steps for publishing all keys of the RSM Agent application for the **RSM Application**, **RSM IVR**, **RSM Nodal**, and **RSM Skillset** applications.

To activate the **Aura RSM** collector, right click on the **Aura RSM** and select **Activate** option of menu as shown in **Figure 33**.

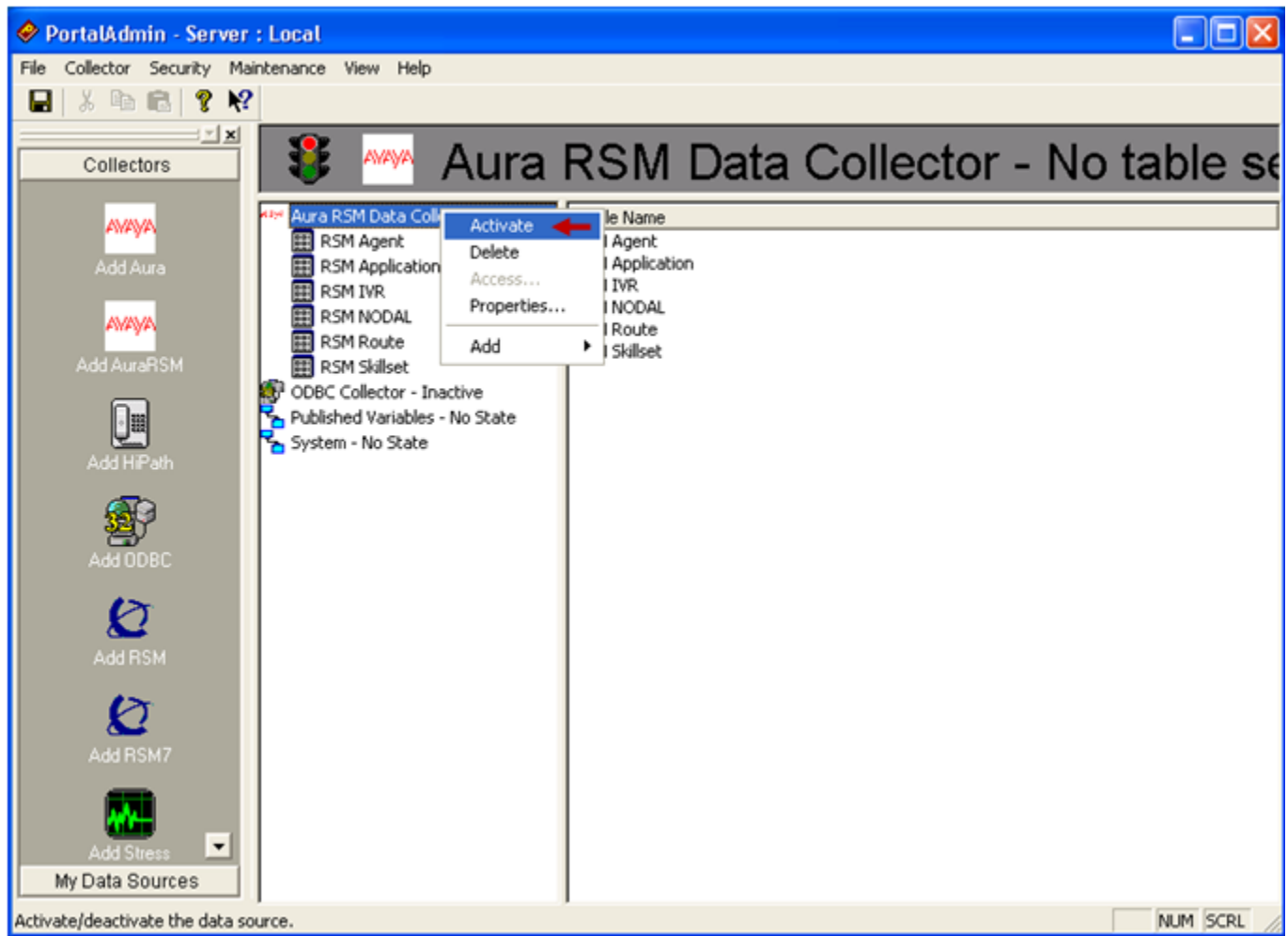


Figure 33 – Activating for the Aura RSM

The **Aura RSM** collector is now active as shown in **Figure 34**.

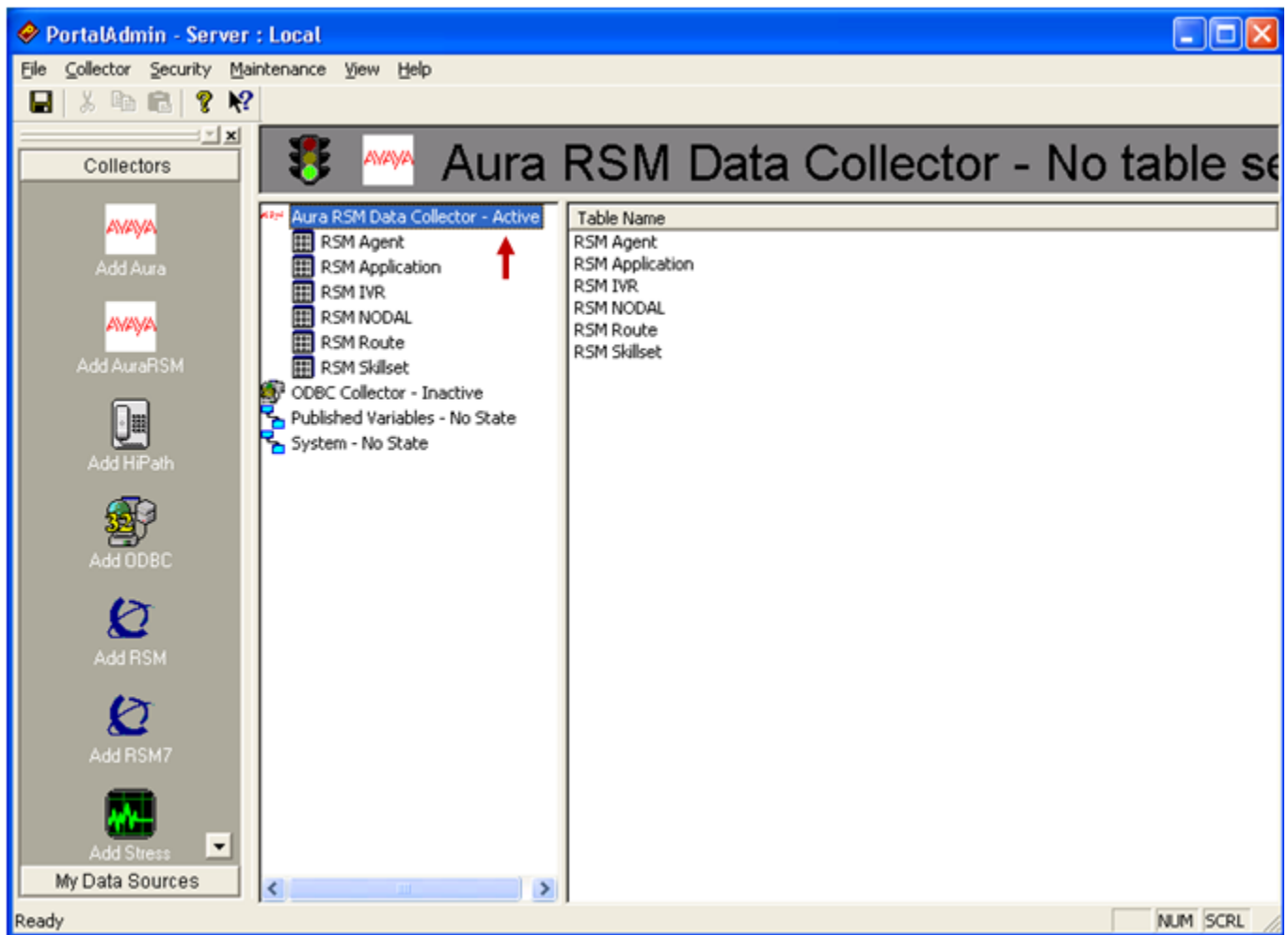


Figure 34 – Aura RSM is activated

7.2. Configure SES Portal Data Viewer

To open *Portal Data Viewer*, log in the SES server as administrator and navigate to **Start > All Programs > Symon Enterprise Software > Portal Data Viewer**, the *Portal Data Viewer* window appears as shown in Figure 35.

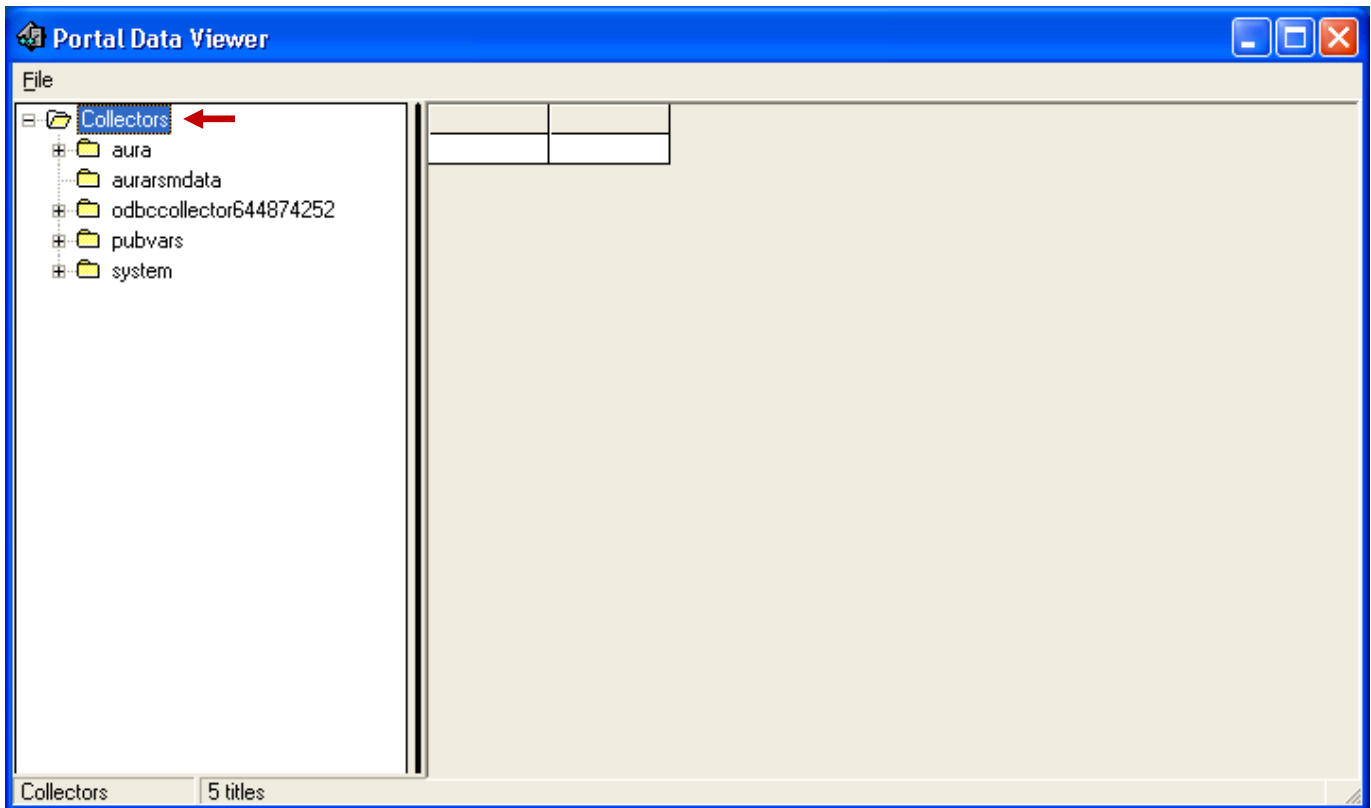


Figure 35 – Portal Data Viewer window

Under **Collectors** tree menu, expand **aurarsmdata** folder and then expand **Aura RSM Data Collector** folder and click on the **aurarsmdata_rsmagent** tab to display real time data of **Agent** application streamed from the CCMS server as shown in **Figure 36**.

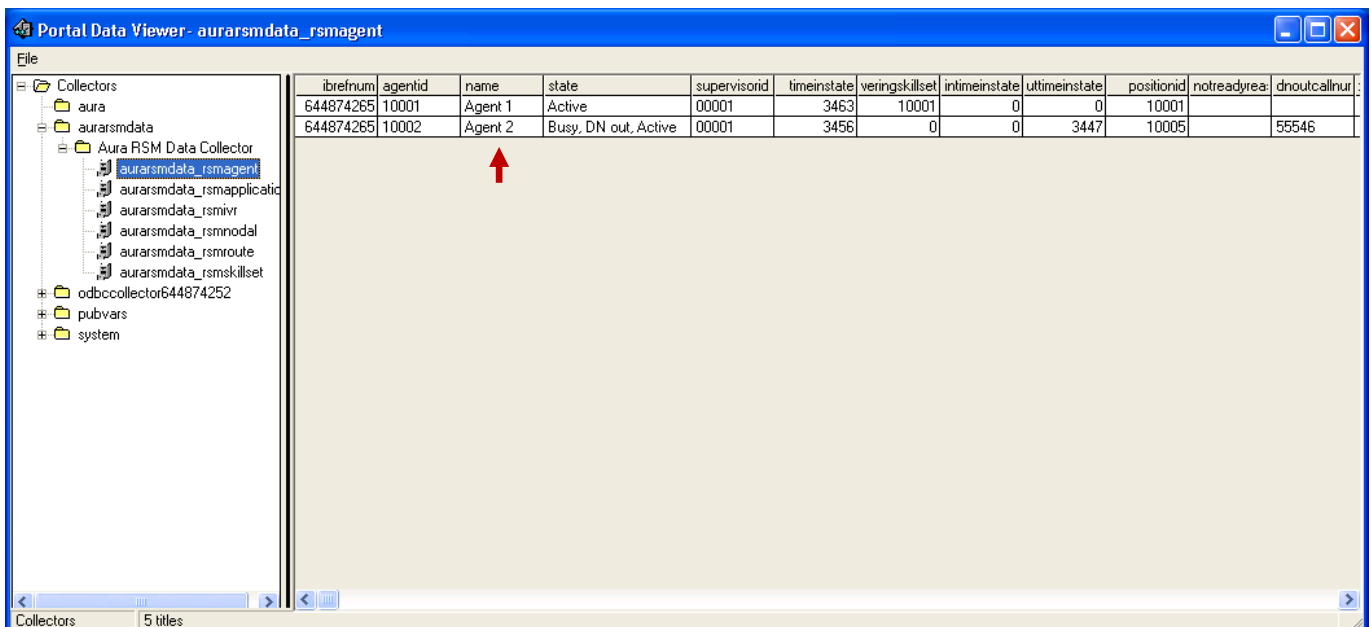


Figure 36 – Keys of RSM Agent displayed

Continue to click on the **rsmapplication**, **rsmivr**, **rsmnodal**, **rsmroute** and **rsmskillset** tabs to display its real time data streamed from CCMS server.

8. Verification Steps

The following are typical steps to verify the interoperability between the SES 11.0.1 and AACC 6.0.

- Create 4 ACD IP Phone agents in CS1000 system
- Acquire these agents by AACC.
- Log these agents in.
- Make a call to controlled DN (CDN) of AACC.
- Answer incoming call on agent phone.
- Open the SES Portal Data Viewer and check the RSM data, it should be accurate and matched with RSM data on the AACC.

9. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2**. SYMON's SES v11.0.1 is considered compliant with Avaya Aura® Contact Center Release 6.0.

10. Additional References

Product documentation for Avaya products may be found at:

<https://support.avaya.com/css/Products/>

Product documentation for SYMON products may be found at:

<http://www.symon.com/support.shtml>

[1] Avaya CS1000 Documents:

[Avaya Communication Server 1000E Installation and Commissioning](#)
[Avaya CS 1000 Co-resident Call Server and Signaling Server Fundamentals](#)
[Avaya CS 1000 Element Manager System Reference - Administration](#)

[2] Avaya Aura® CC 6.0 documents:

[Avaya Aura™ Contact Center Planning and Engineering](#)
[Avaya Aura™ Contact Center Installation](#)
[Avaya Aura™ Contact Center Server Administration](#)
[Avaya Aura™ Contact Center Overview](#)
[Avaya Aura™ Contact Center Fundamentals](#)
[Avaya Aura™ Contact Center Manager Administration – Client Administration](#)

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