



Avaya Solution & Interoperability Test Lab

Application notes for RMG Networks Intelligent Visual Solutions v12.0.2 with Avaya Aura® Contact Center's Contact Center Manager Server module Release 6.4 for Real Time Statistics Multicasts– Issue 1.0

Abstract

These Application Notes describe the configuration steps required for RMG Networks Intelligent Visual Solutions v12.0.2 to interoperate with Avaya Aura® Contact Center's Contact Center Manager Server (CCMS) 6.4, using Real Time Statistics Multicasts (RSM). Intelligent Visual Solutions collects Real Time Statistics from Contact Center Manager Server 6.4 and publishes this data to clients.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions with Inova. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. 1. Introduction

The purpose of this document is to explain the configuration steps required for Intelligent Visual Solutions (IVS) v12.0.2 to interoperate with Avaya Aura® Contact Center's Contact Center Manager Server (CCMS) 6.4. IVS interfaces with the CCMS and its internal database, collects and sorts the real time statistics, and prepares it for display on a variety of media using Real Time Statistics Multicasts (RSM) toolkit.

2. General Test Approach and Test Results

The General test approach was to verify that the IVS was able to integrate with Avaya Aura® Contact Center. IVS uses the Avaya Aura RSM Collector (AARC) to connect to the Avaya Aura® Contact Center (Contact Center) RSM API to monitor a wide range of real time statistics that are available from Contact Center. The AARC is part of Portal Administrator, which is an application that is part of IVS and runs on the same server.

Once AARC is logged into Contact Center, 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 IVS.

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 testing focused on verifying IVS for the following:

- Connection to the CCMS is established and stays connected.
- Publishing all the available real-time statistics information based on the CCMS script.
- Making test calls to invoke changes in the values of the published statistics.
- Comparing the values with the CCMS statistics and making sure they match with the IVS published output.

2.2. Test Results

The objectives outlined in **Section 2.1** were verified and met. All tests were executed and passed.

2.3. Support

For technical support on IVS, please contact RMG Networks technical support team:

- **Telephone:** 1.877.789.8324 (North America)/+44 (0) 1442 275200 (International)
- **Email:** support@rmgnetworks.com
- **Web Site:** www.rmgnetworks.com/contact

3. Reference Configuration

Figure 1 illustrates the test configuration used during the compliance testing between Avaya Contact Center Manager Server and IVS.

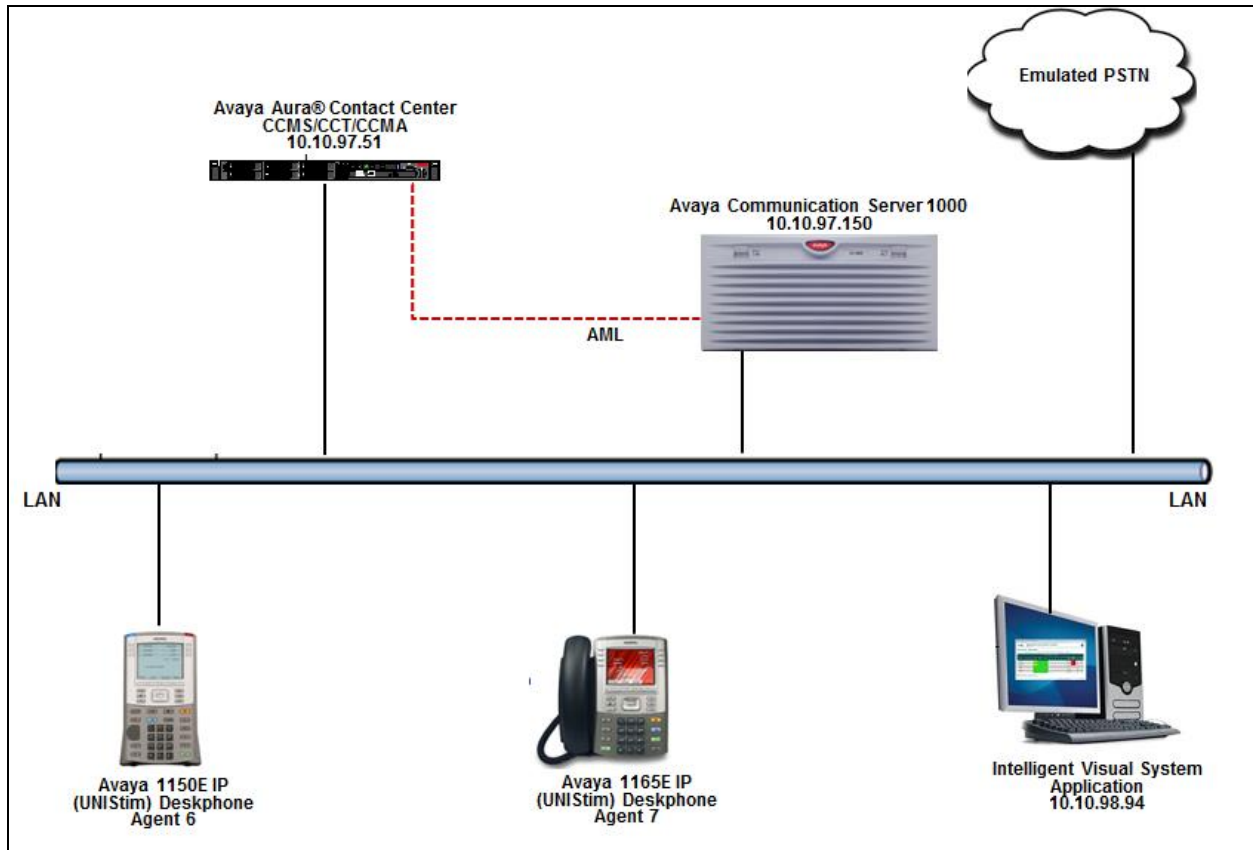


Figure 1: Test Solution Configuration.

4. Equipment and Software Validated

Equipment	Software/Firmware
Avaya Communication Server 1000	7.65
Avaya Contact Center Manager Server OS	Win2008 Server R2 Standard SP1
Avaya Aura® Contact Center Manager Server	6.4.212.0
Avaya Aura® RSM SDK	6.4
Avaya IP Deskphones as Agents: <ul style="list-style-type: none"> ○ 1150E (UNISTim) ○ 1165E (UNISTim) 	0x27C8V 0x25C8V
IVS Server OS IVS Application	Win2008 Server R2 Standard SP1 12.0.2

5. Configuring the Avaya Contact Center Manager Server

This section describes the steps to configure the CCMS so that the IVS is able to connect to it. Assumption is made that the CCMS is installed successfully and all the required scripts are running. Assumption is also made that the CCMS is interfaced and working successfully with the Avaya Communication Server 1000 (Communication Server 1000). For additional information on CCMS and Communication Server 1000 installation and configuration refer to **Section 9**.

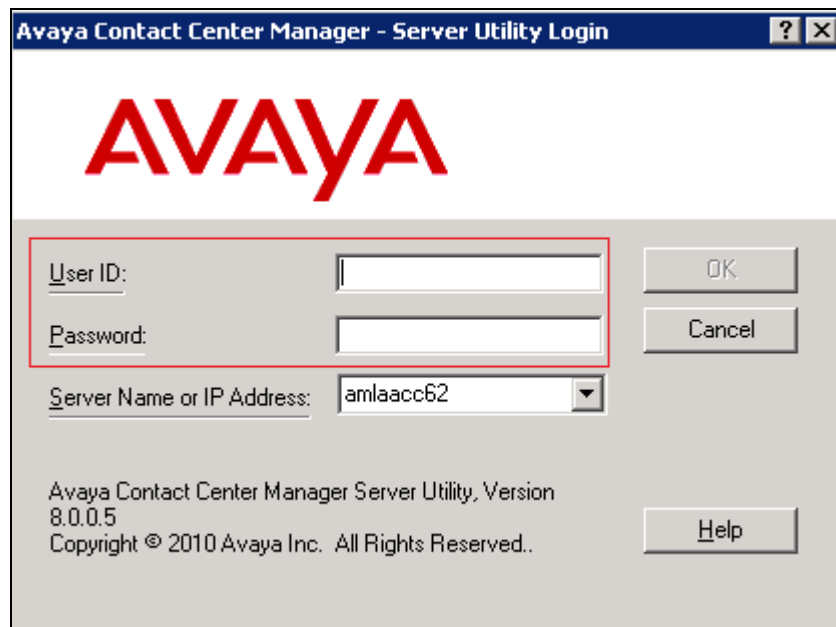
Here is a summary of CCMS Configuration:

- Creating new user to interface with IVS.

5.1. Configuring a New User

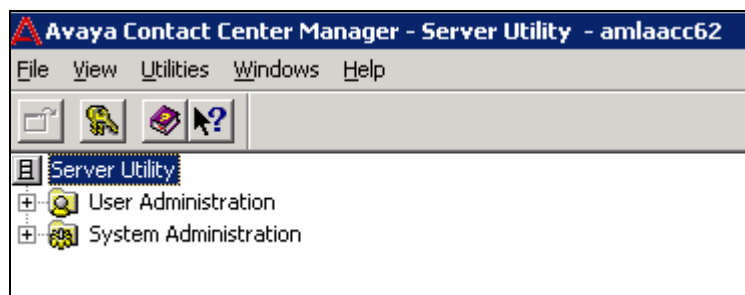
This section explains the steps to add a new user that is required to interface and connect to the IVS system. To add a new user, navigate through **Start → All Programs → Avaya → Server Utility** on the server the CCMS is installed on (not shown).

Screen below shows the **Server Utility Login** screen. Enter the administrator **User ID** and **Password**. Click on **OK** to continue.

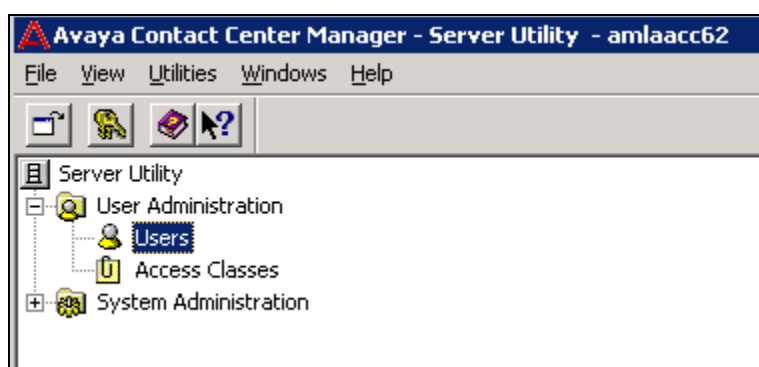


The image shows a Windows-style dialog box titled "Avaya Contact Center Manager - Server Utility Login". At the top center is the red "AVAYA" logo. Below the logo are three input fields: "User ID:" with an empty text box, "Password:" with an empty text box, and "Server Name or IP Address:" with a dropdown menu showing "amlaacc62". A red rectangular box highlights the "User ID" and "Password" fields. To the right of the input fields are three buttons: "OK", "Cancel", and "Help". At the bottom left, there is text: "Avaya Contact Center Manager Server Utility, Version 8.0.0.5" and "Copyright © 2010 Avaya Inc. All Rights Reserved..".

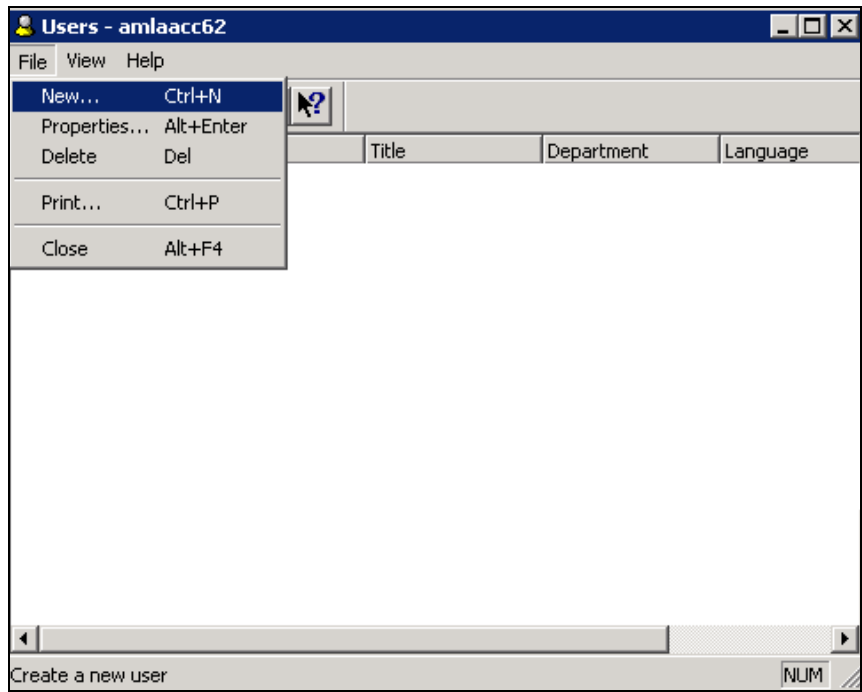
Screen below shows the **Server Utility** main screen.



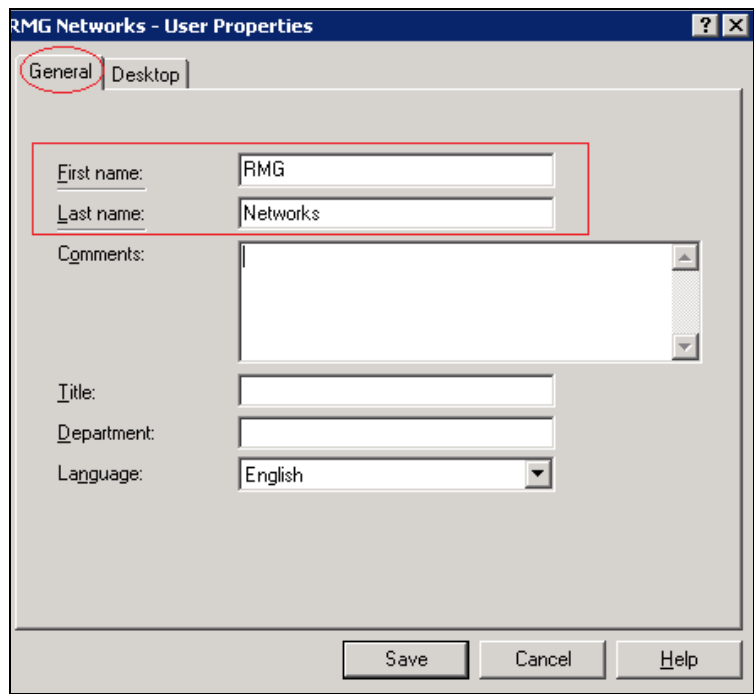
To add a new user, expand the **User Administration** tree and double-click on **Users** as shown in the screen below.



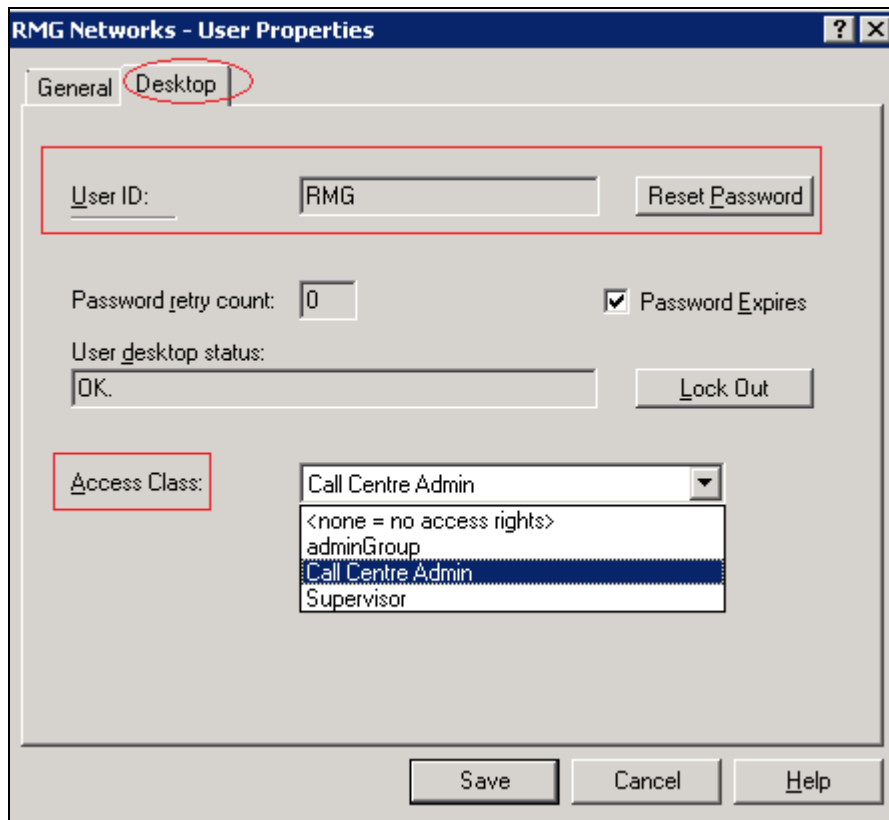
Screen below shows the **Users** screen. Click on File and select New.



Screen below shows the New User being configured. Populate the **First name** and **Last name** fields that is seen under the **General** tab.

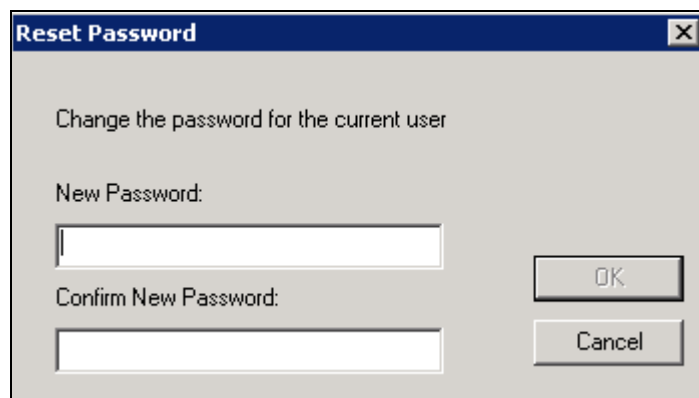


From the **Desktop** tab populate the **User ID** field and select **Call Centre Admin** under **Access Class** field as shown in the screen below. Click on **Reset Password** to continue.



The image shows a Windows-style dialog box titled "RMG Networks - User Properties". It has two tabs: "General" and "Desktop". The "Desktop" tab is selected and highlighted with a red circle. Inside the "Desktop" tab, there is a red rectangular box around the "User ID:" label, the text "RMG" in the input field, and the "Reset Password" button. Below this, there is a "Password retry count:" label with a value of "0" in a small box, and a checked checkbox labeled "Password Expires". Underneath, the "User desktop status:" label is followed by a text box containing "OK." and a "Lock Out" button. Further down, the "Access Class:" label is next to a dropdown menu. The dropdown menu is open, showing a list of options: "<none = no access rights>", "adminGroup", "Call Centre Admin" (which is highlighted in blue), and "Supervisor". At the bottom of the dialog box are three buttons: "Save", "Cancel", and "Help".

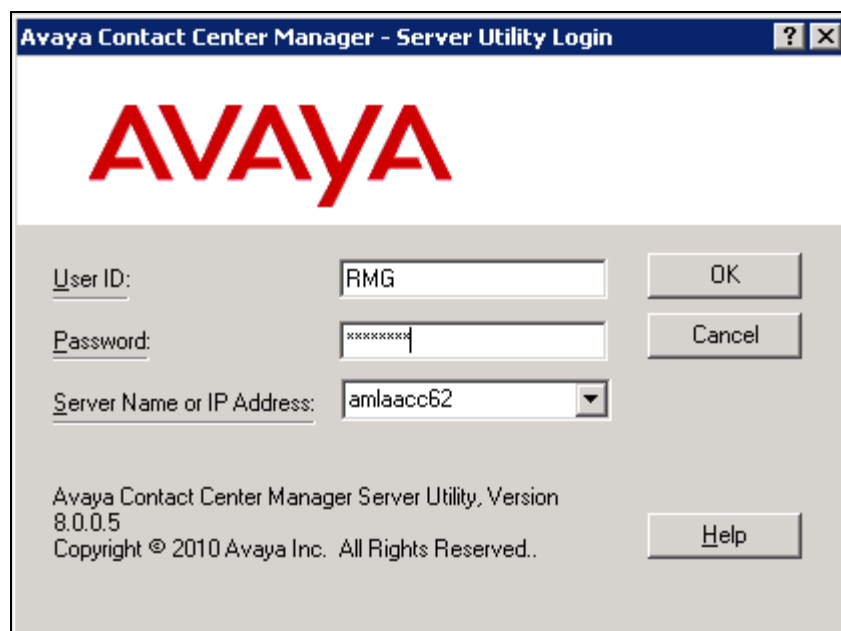
Configure the password and click on **OK** to continue as shown in below. Click on the **Save** button that is seen in the screen above to complete the configuration of New User.



The image shows a "Reset Password" dialog box. It contains the instruction "Change the password for the current user". Below this, there are two input fields. The first is labeled "New Password:" and the second is labeled "Confirm New Password:". To the right of these fields are two buttons: "OK" and "Cancel".

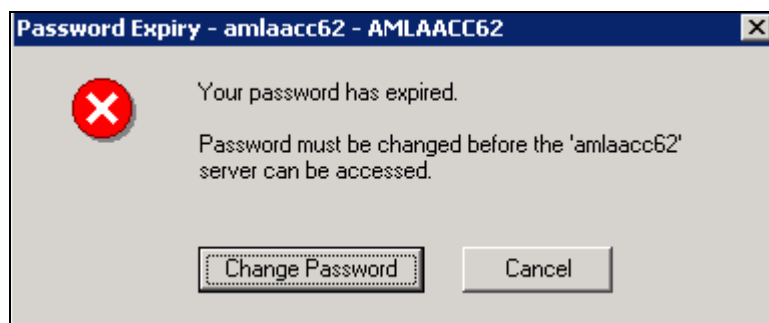
To confirm the configuration of the New User created, exit from the Server Utility application and navigate back to it as explained in **Section 5.1**.

Screen below shows the **Server Utility Login** screen. Populate the **User ID** and **Password** fields with the values that were configured above. Click on **OK** to continue.



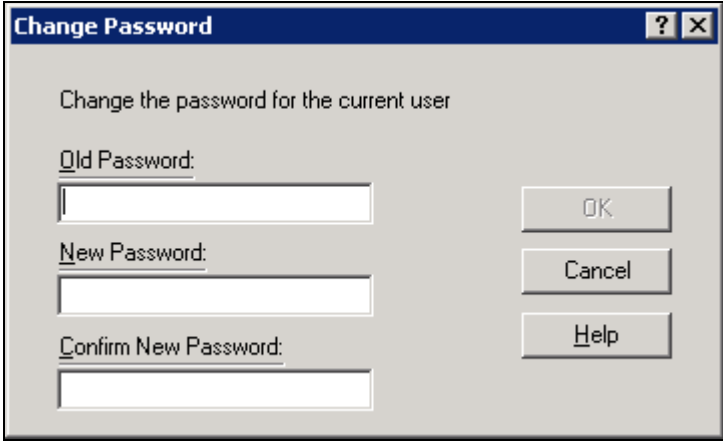
The image shows a Windows-style dialog box titled "Avaya Contact Center Manager - Server Utility Login". It features the Avaya logo in red at the top. Below the logo, there are three input fields: "User ID:" with the text "RMG", "Password:" with masked characters "xxxxxxx", and "Server Name or IP Address:" with a dropdown menu showing "amlaacc62". To the right of these fields are "OK" and "Cancel" buttons. At the bottom left, there is text: "Avaya Contact Center Manager Server Utility, Version 8.0.0.5" and "Copyright © 2010 Avaya Inc. All Rights Reserved..". At the bottom right is a "Help" button.

While logging in for the first time using the new user, the system forces the password to be changed. Click on **Change Password** as shown in the screen below.



The image shows a Windows-style dialog box titled "Password Expiry - amlaacc62 - AMLAACC62". It features a red circle with a white 'X' icon on the left. To the right of the icon, the text reads: "Your password has expired." and "Password must be changed before the 'amlaacc62' server can be accessed." At the bottom, there are two buttons: "Change Password" and "Cancel".

Configure the required fields and click on **OK** to complete the changing of the password as shown in the screen below.



A screenshot of a 'Change Password' dialog box. The title bar is blue with the text 'Change Password' and standard window controls. The main area is light gray and contains the instruction 'Change the password for the current user'. Below this are three input fields: 'Old Password:', 'New Password:', and 'Confirm New Password:'. To the right of these fields are three buttons: 'OK', 'Cancel', and 'Help'.

Change Password

Change the password for the current user

Old Password:

New Password:

Confirm New Password:

OK

Cancel

Help

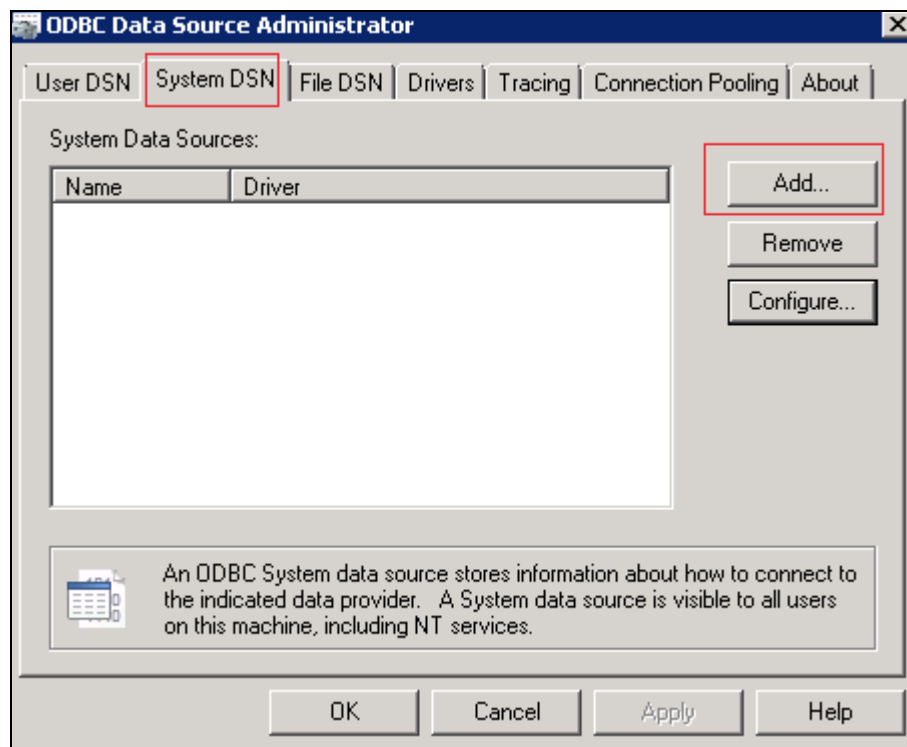
6. Configure Intelligent Visual Solutions Server

This document assumes that IVS server was properly installed and configured by a RMG Networks Engineer. This section provides steps on configuring the **IVS Portal Administrator** and **IVS Portal Data Viewer** to work with Contact Center system.

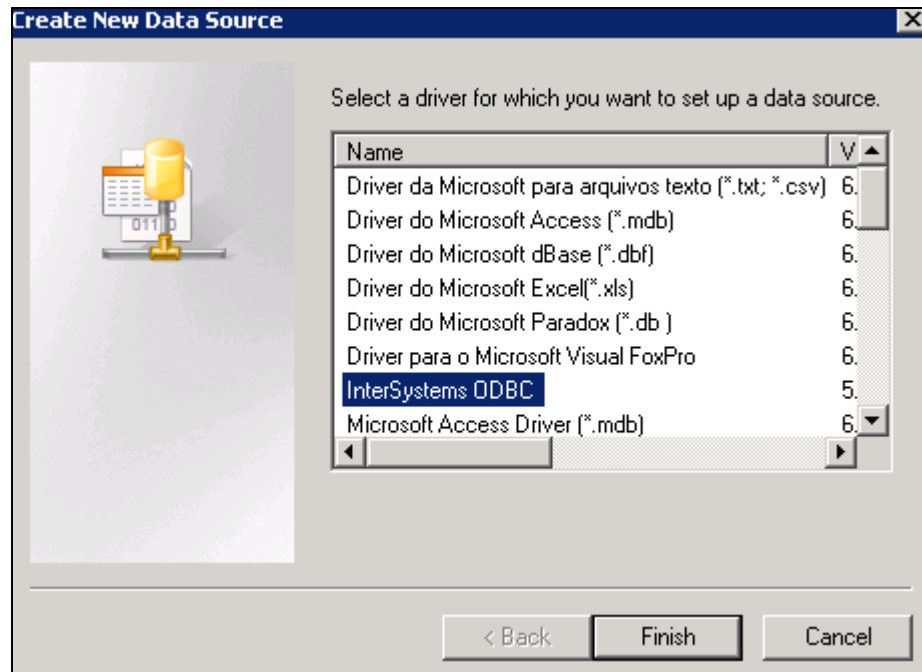
6.1. Creating a Data Source

To create a Data Source, run the **odbcad32.exe** file. During compliance testing this file was found under **C:\Windows\SysWOW64** path.

The **ODBC Data Source Administrator** window is seen as shown below. Select the **System DSN** tab and click on the **Add** button.



The **Create New Data Source** window is seen as shown below. Select **InterSystems ODBC** driver and click on the **Finish** button.



The **InterSystems Cache ODBC Data Source Setup** window is seen as shown below.

Configure the following values,

- In the **Name** field found under **Data Source**, type a name. During compliance testing **Cache** was used.
- Under the **Connection** section,
Host (IP Address): This is the IP address of the Contact Center Server
Port: 1972
Cache Namespace: During compliance testing **ccms_stat** was used. Note that this is the same name defined in the Contact Center Server (in CCMS module) and therefore using any other name would result in a failure of connecting to the CCMS database.
- Under the **Login** section,
User Name: Enter the User Name as configured in **Section 5.1**
Password: Enter the password as configured in **Section 5.1**

Retain default values for all other fields.

Before clicking on the **OK** button, click on the **Test Connection** button to verify the connectivity.

InterSystems Cache ODBC Data Source Setup

Data Source

Name: Description:

Connection

Host (IP Address): Port: Cache Namespace:

Login

User Name: Password:

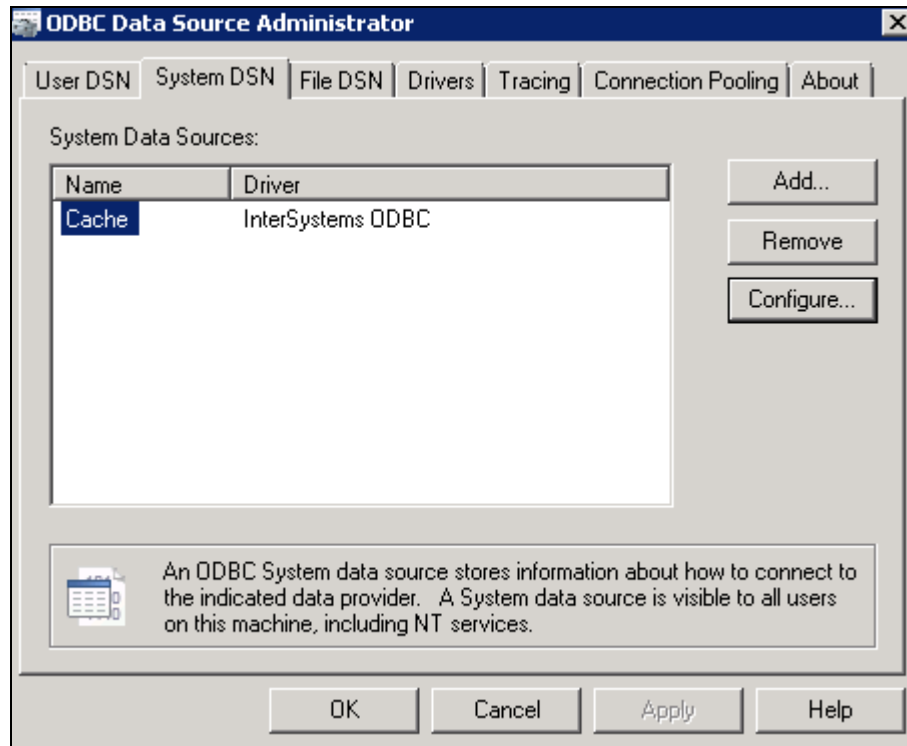
Misc:

☐ ODBC Log ☐ Static Cursors ☐ Disable Query Timeout
☐ Use Locale Decimal Symbol ☐ Unicode SQLTypes

Buttons: OK, Cancel, Test Connection, Ping, Help

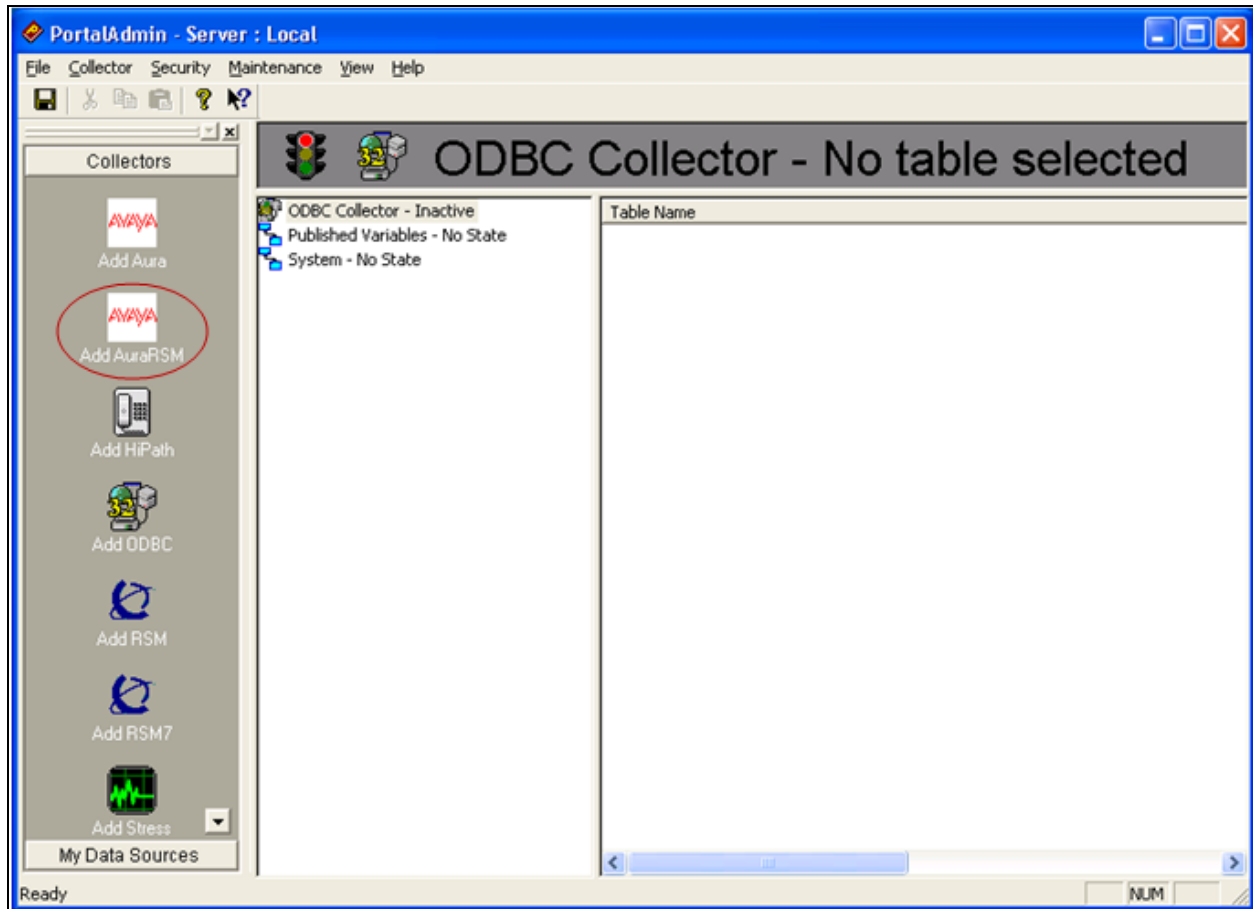
Times:

Screen below shows the newly added Data Source. Click on **OK** button.



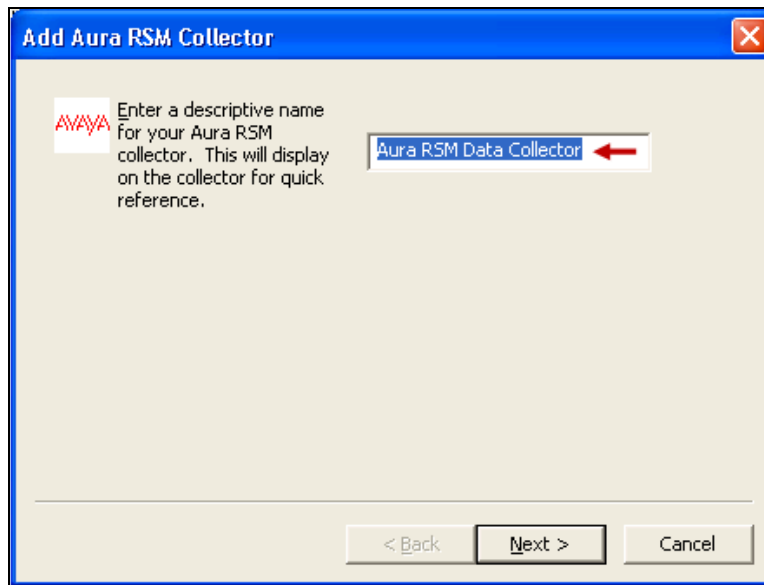
6.2. Configure IVS Portal Admin

To configure **PortalAdmin** log in to the IVS server as an administrator and navigate to **Start → All Programs → RMG Networks → IVS Portal Administrator**, the **PortalAdmin** window appears as shown below.



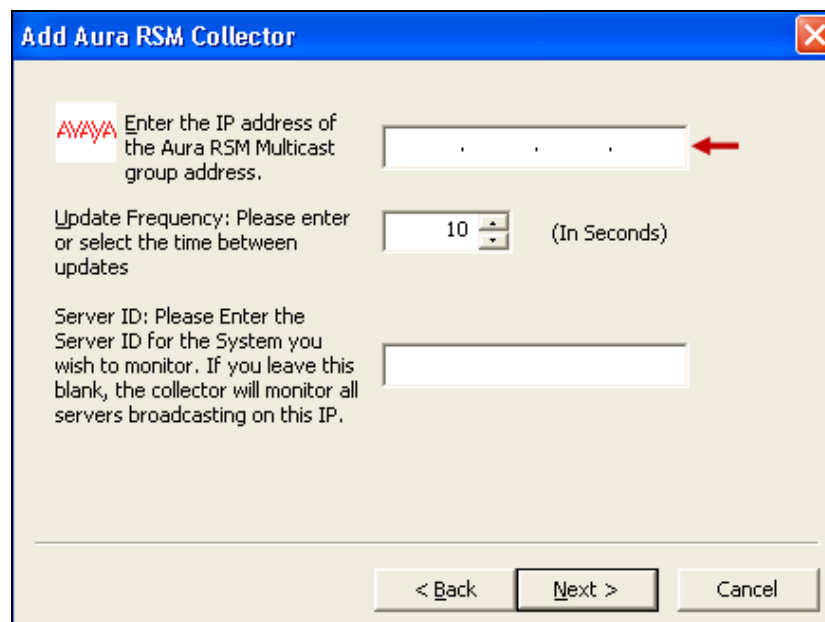
On the left hand side of the **PortalAdmin** window seen above, click on the **Add AuraRSM** icon to add a Collector as shown below.

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



Enter multicast IP address of CCMS server as shown below 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.



Leave default port numbers for the **Application Data**, **Skillset Data**, **Agent Data**, **NODAL Data**, **IVR Data** and **Route Data** as shown in the next three windows.

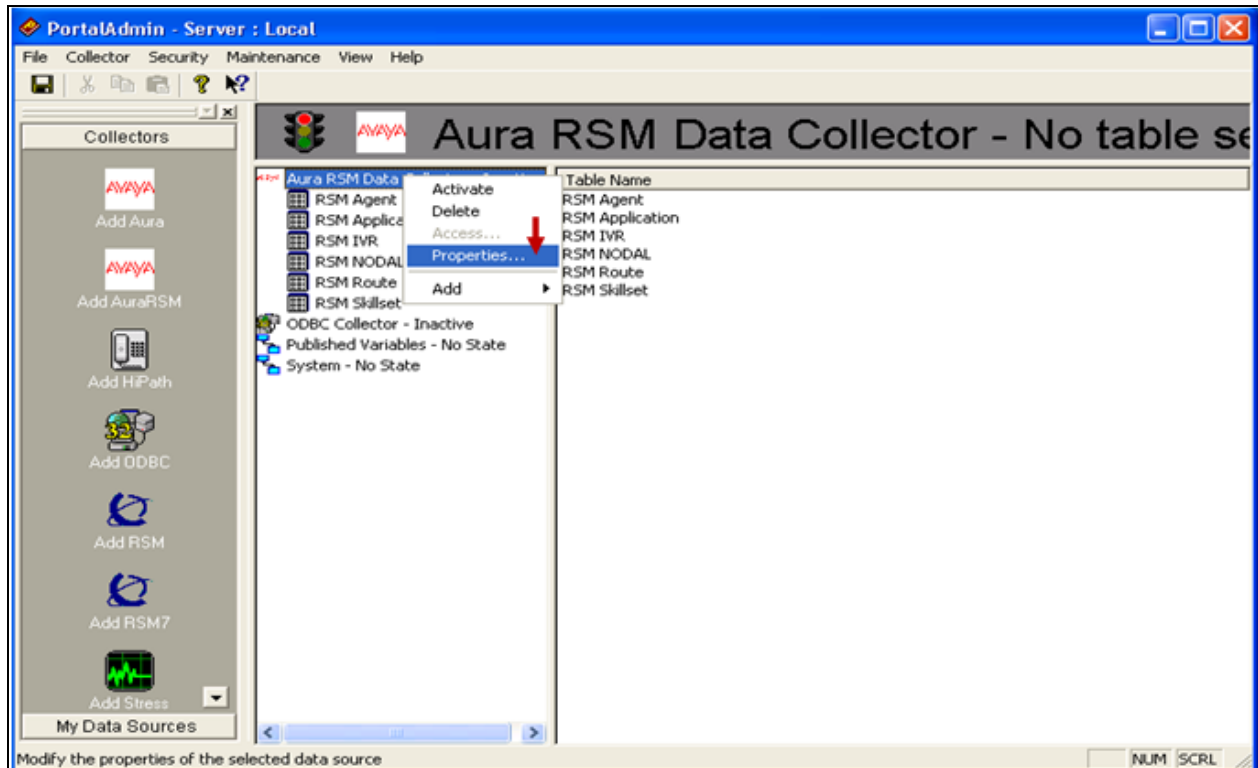
Click on **Finish** button to complete adding **Aura RSM Data Collector**.

The dialog box is titled "Add Aura RSM Collector" and features 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 "5030". 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 are buttons for "< Back", "Next >", and "Cancel".

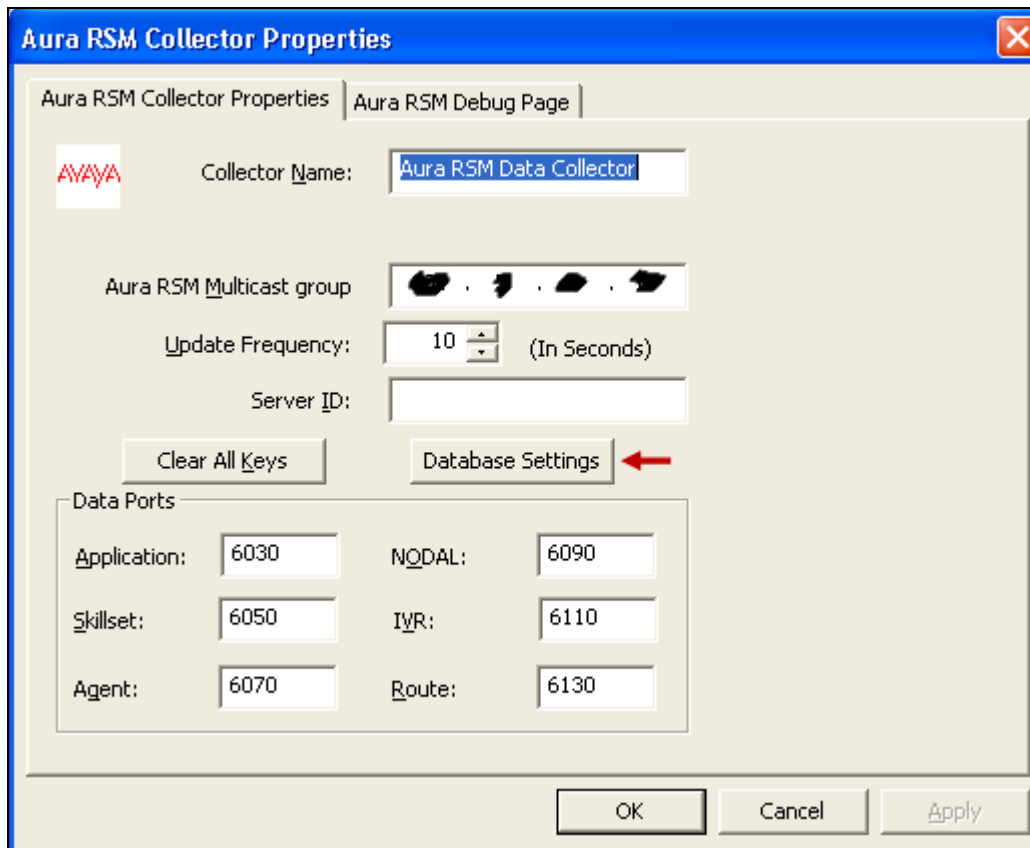
The dialog box is titled "Add Aura RSM Collector" and features the Avaya logo. It contains two input fields with red arrows pointing to them. The first field is labeled "Enter the Port to receive the Agent Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "5070". 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 are buttons for "< Back", "Next >", and "Cancel".

The dialog box is titled "Add Aura RSM Collector" and features 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 IVR Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "5110". The second field is labeled "Enter the Port to receive the Route Data. This port can be for the Moving Window (10 minutes) or Interval-to-date" and contains the value "6130". At the bottom are buttons for "< Back", "Finish", and "Cancel".

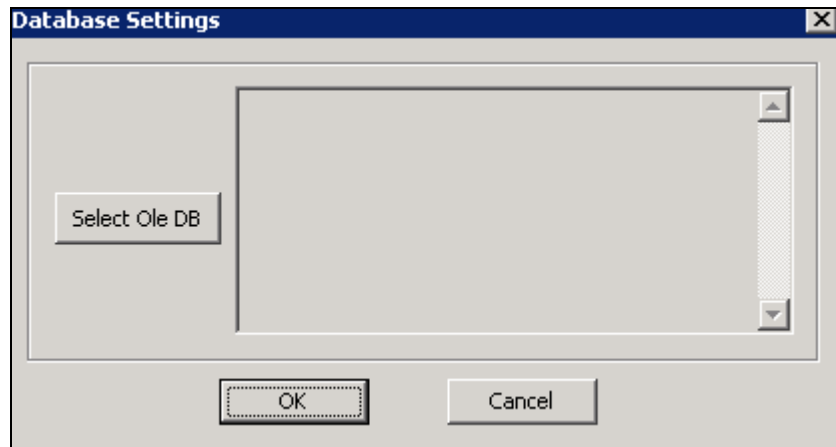
Right click on the **Aura RSM Data Collector** that has been created and select the **Properties** option from context menu as shown below.



On the **Aura RSM Collector Properties** window, click the **Database Settings** button as shown below.



The **Database Settings** window is seen as shown below. Click on the **Select Ole DB** button to open the **Data Link Properties** window.

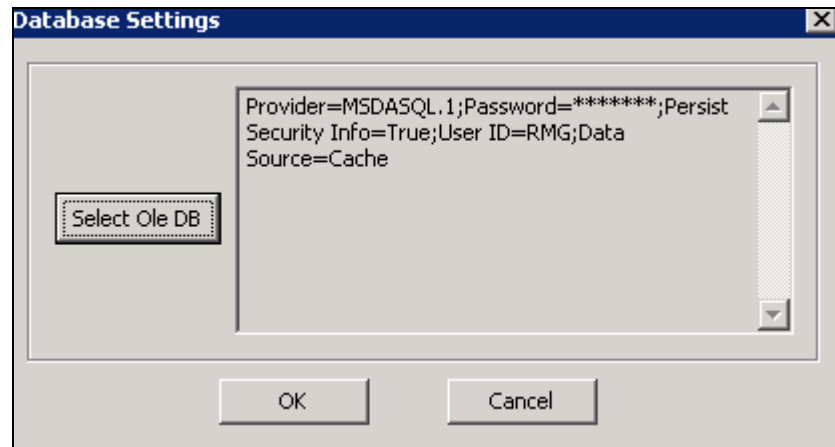


From the **Data Link Properties** window as shown below, select the **Connection** tab and configure the following,

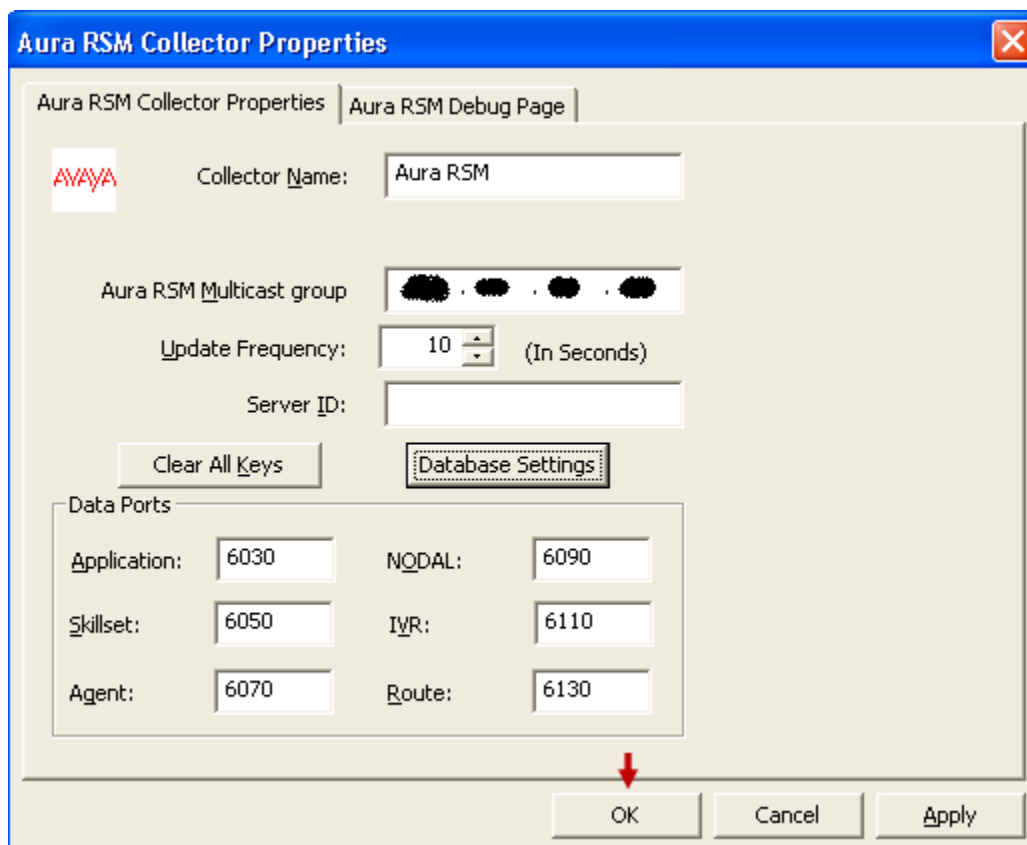
- Select the **Use data source name** radio button and from the drop down menu select the data source. During compliance testing **Cache** was selected and **Section 6.1** explains the creation of this data source.
- Enter the **User name** and **Password** information as configured in **Section 5.1**
- Check the **Allow saving password** box.
- Before clicking on **OK** to complete the configuration, click on the **Test Connection** button to verify the connectivity.

The screenshot shows the 'Data Link Properties' dialog box with the 'Connection' tab selected. The dialog is titled 'Data Link Properties' and has four tabs: 'Provider', 'Connection', 'Advanced', and 'All'. The 'Connection' tab is active. The text 'Specify the following to connect to ODBC data:' is displayed. There are three sections: 1. 'Specify the source of data:' with two radio buttons. The first, 'Use data source name', is selected and highlighted with a red box. Below it is a dropdown menu showing 'Cache', also highlighted with a red box, and a 'Refresh' button. The second radio button, 'Use connection string', is unselected. Below it is a 'Connection string:' label and an empty text box with a 'Build...' button. 2. 'Enter information to log on to the server' with two text boxes. The 'User name:' box contains 'RMG' and is highlighted with a red box. The 'Password:' box contains nine dots and is also highlighted with a red box. Below these are two checkboxes: 'Blank password' (unchecked) and 'Allow saving password' (checked, highlighted with a red box). 3. 'Enter the initial catalog to use:' with an empty dropdown menu. At the bottom right of the main area is a 'Test Connection' button, highlighted with a red box. At the very bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

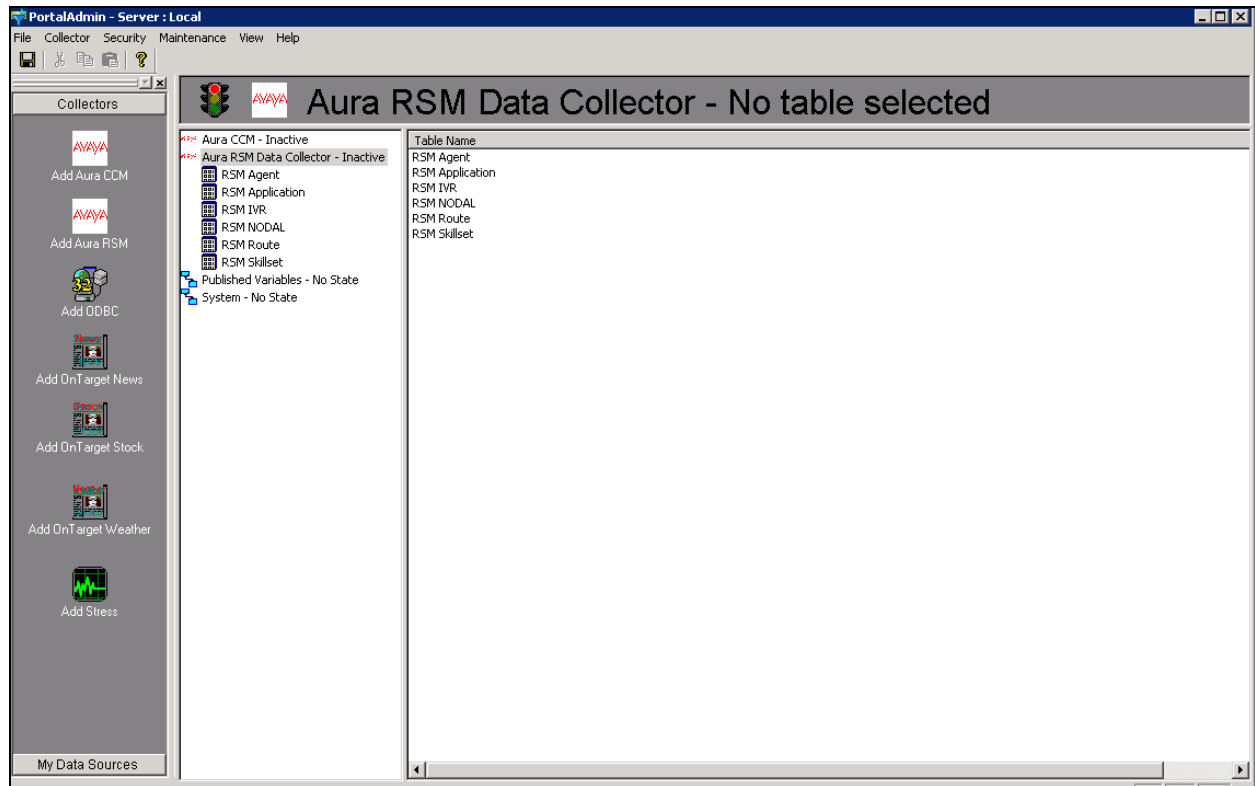
The **Database Settings** window is shown as below. Click on **OK** button to return to the **Aura RSM Collector Properties** window.



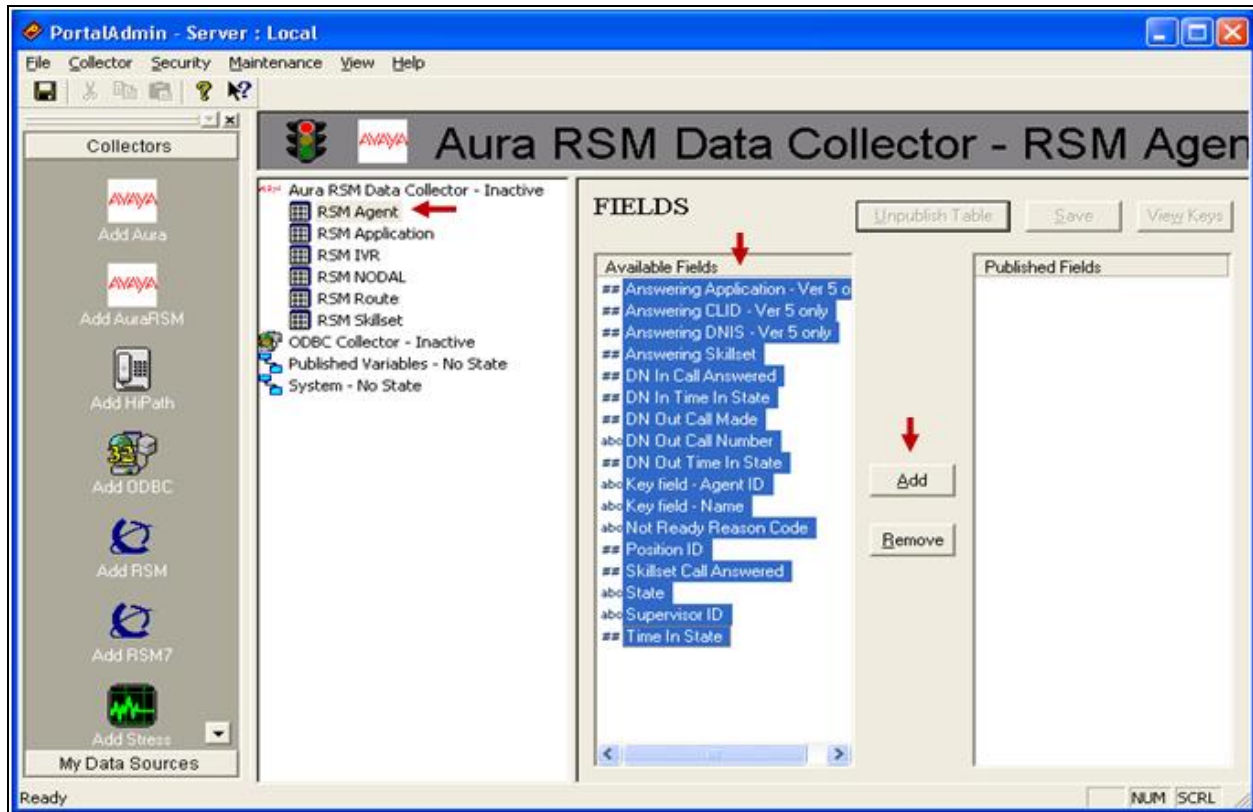
Click on **OK** to complete the process of creating new database and connecting to CCMS database as shown below.



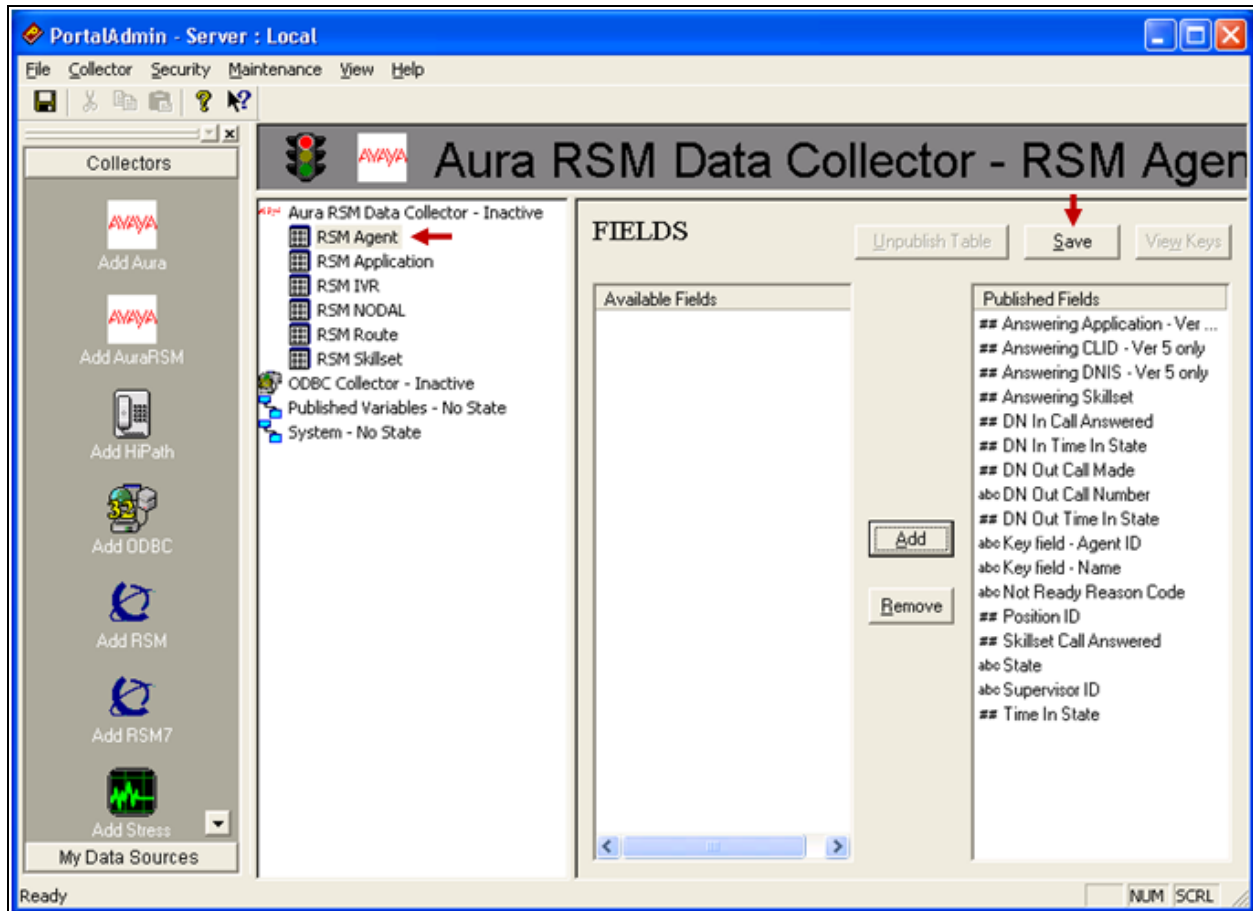
Screen below shows the **PortalAdmin** window with the **Aura RSM Data Collector** created.



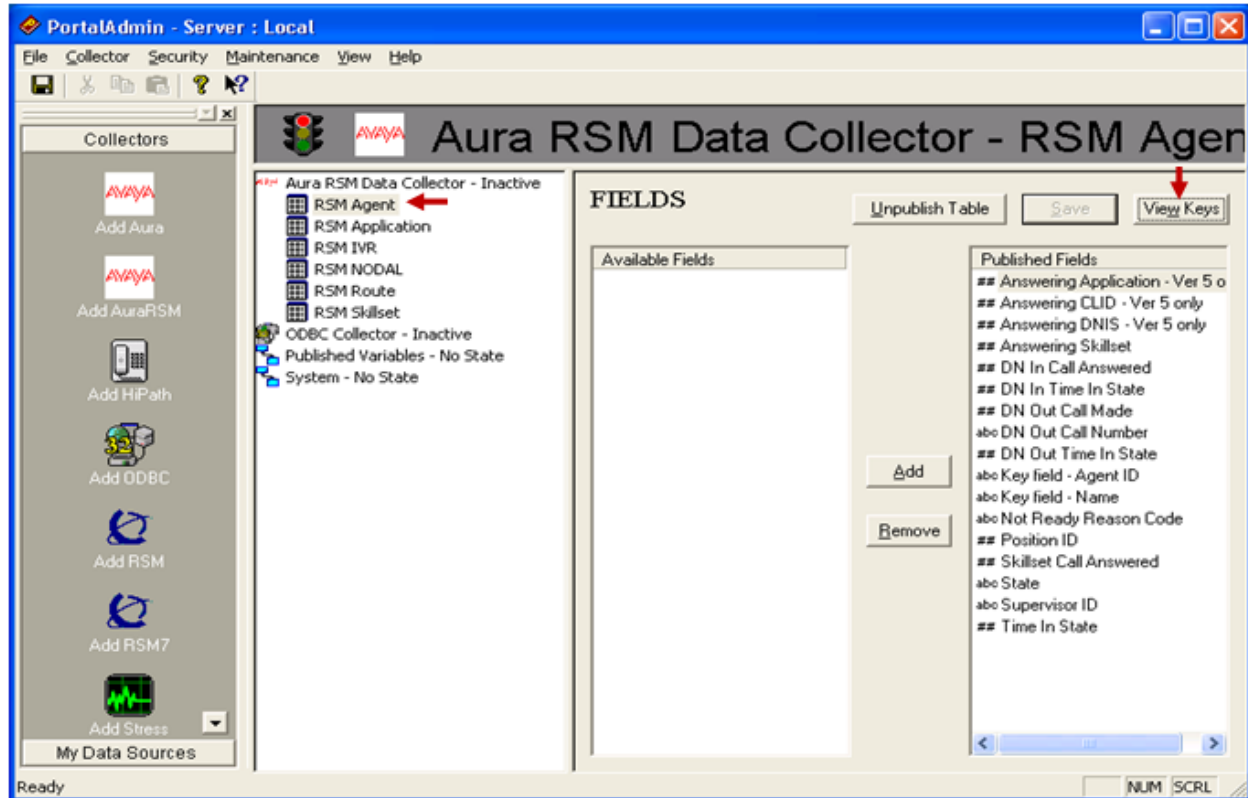
To publish the **Agent** application table, click on the **Agent** application tab under the **Aura RSM Collector** that has been created as shown below. All keys of **Agent** application are listed under the **Available Fields** column of **Fields** window. Select all fields of **Available Fields** column and click **Add** button as shown.



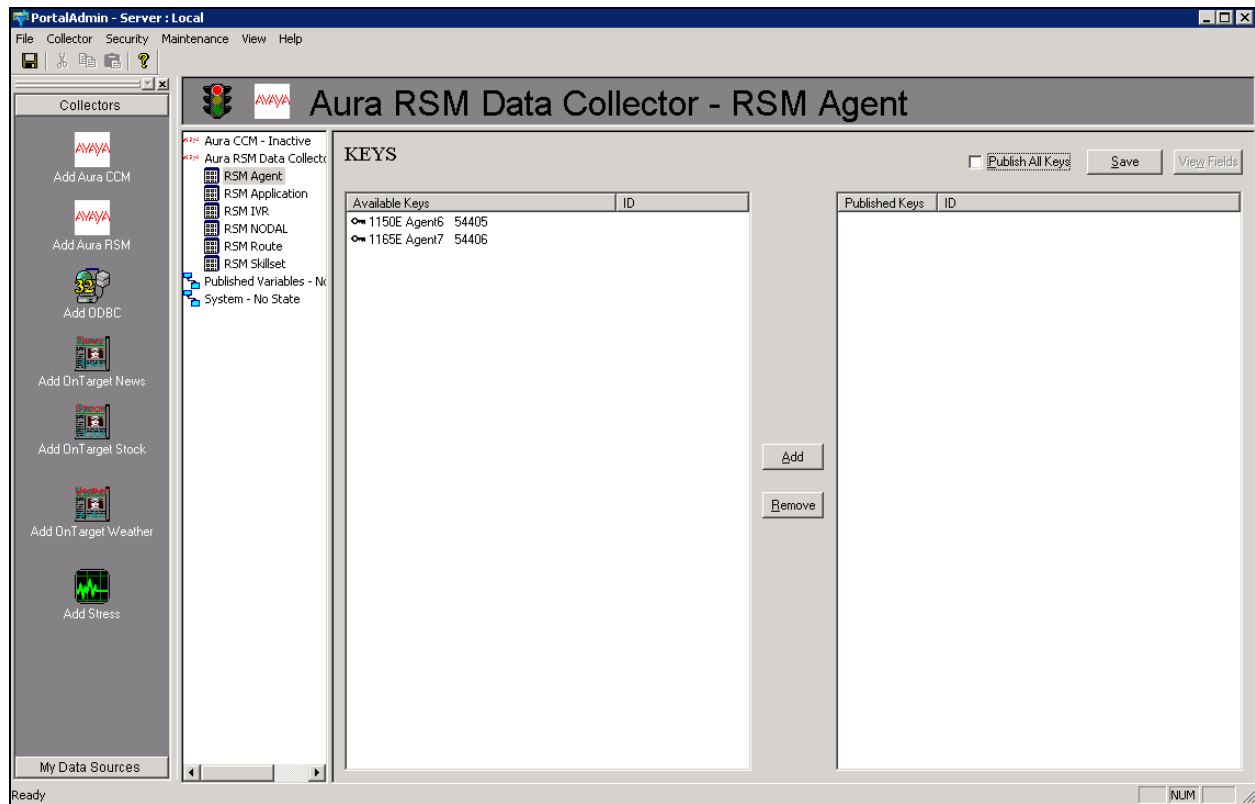
All fields are now moved to **Published Fields** column as shown below. Then click on the **Save** button to save it.



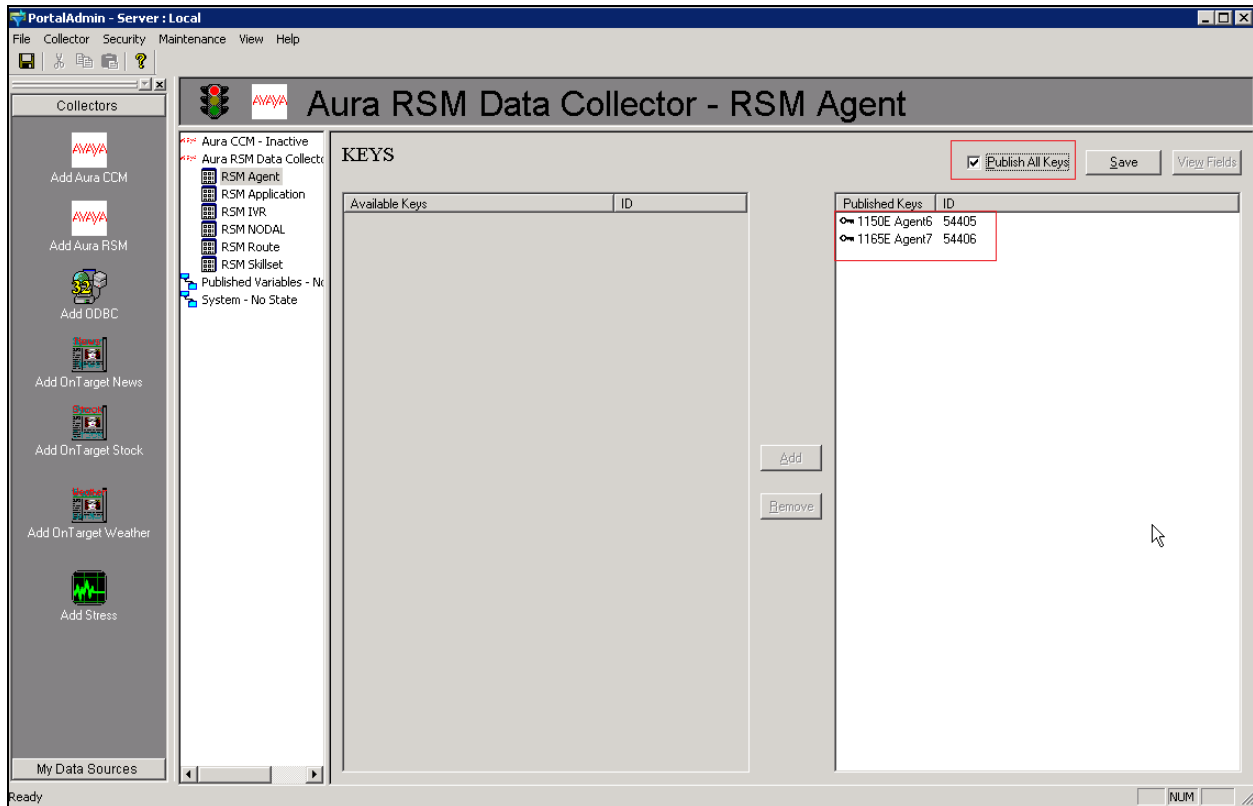
The **View Keys** button now becomes available as shown below.



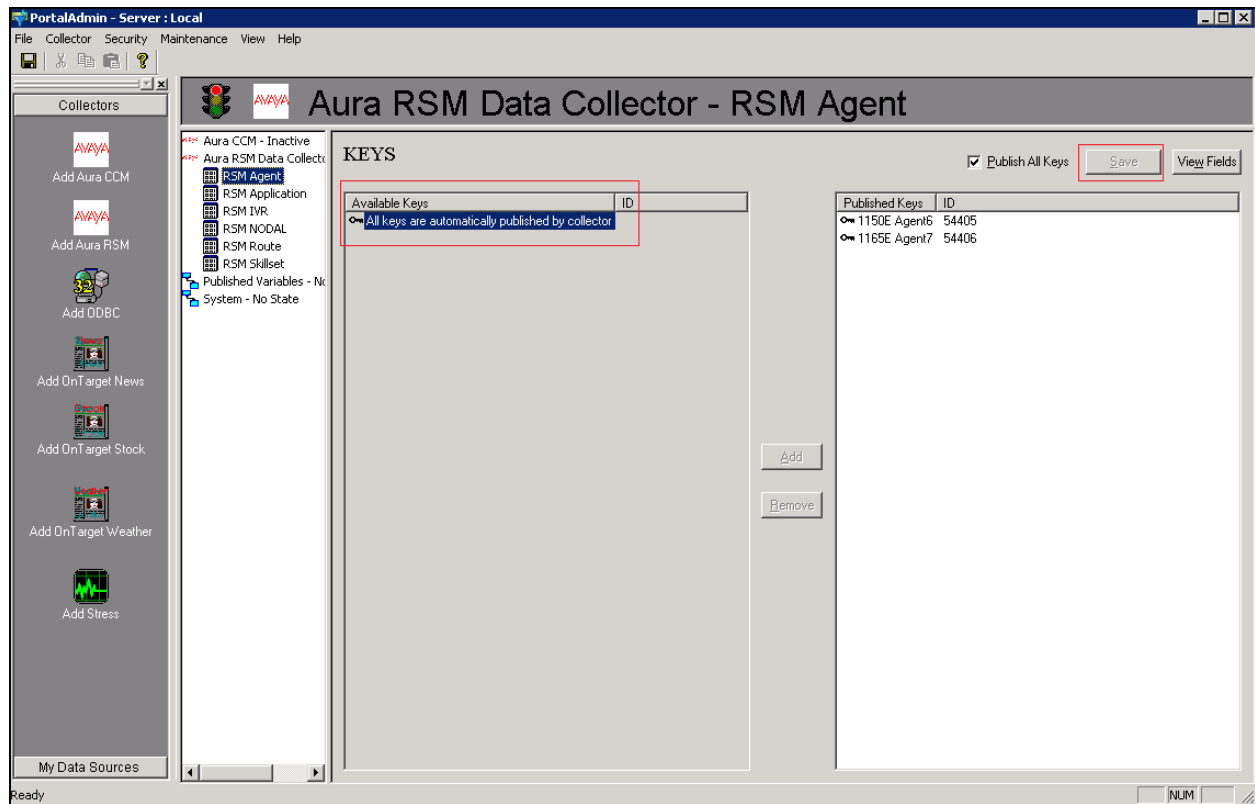
Click on the **View Keys** button from the above window, the Agent keys will display on the **Available Keys** column of **KEYS** window as shown below.



To publish all keys of **Agent** application, check the **Publish All Keys** box and all keys will be published and moved to the **Published Keys** column as shown below.

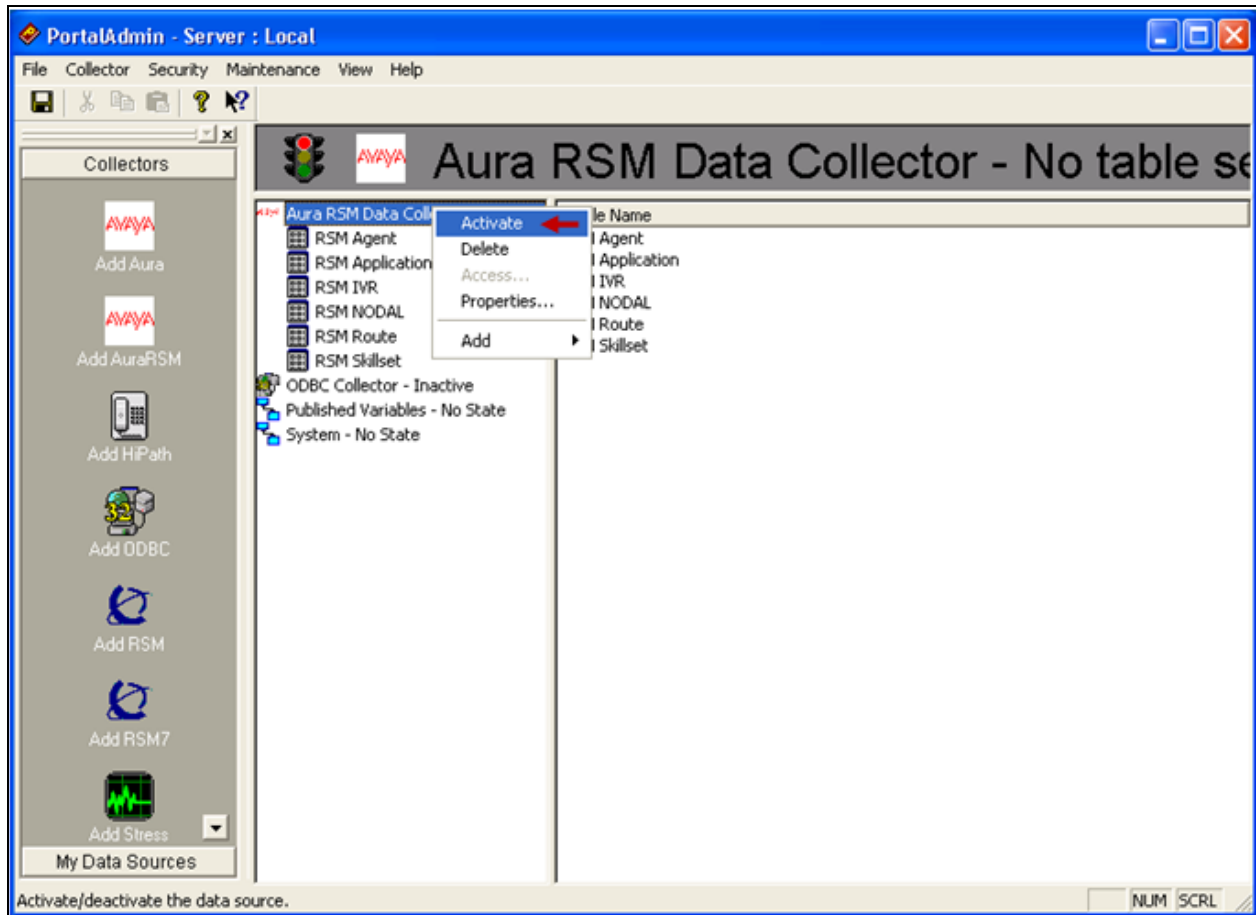


Click on the **Save** button to save the configuration and complete the publishing of all keys in the **Agent** application as shown below.

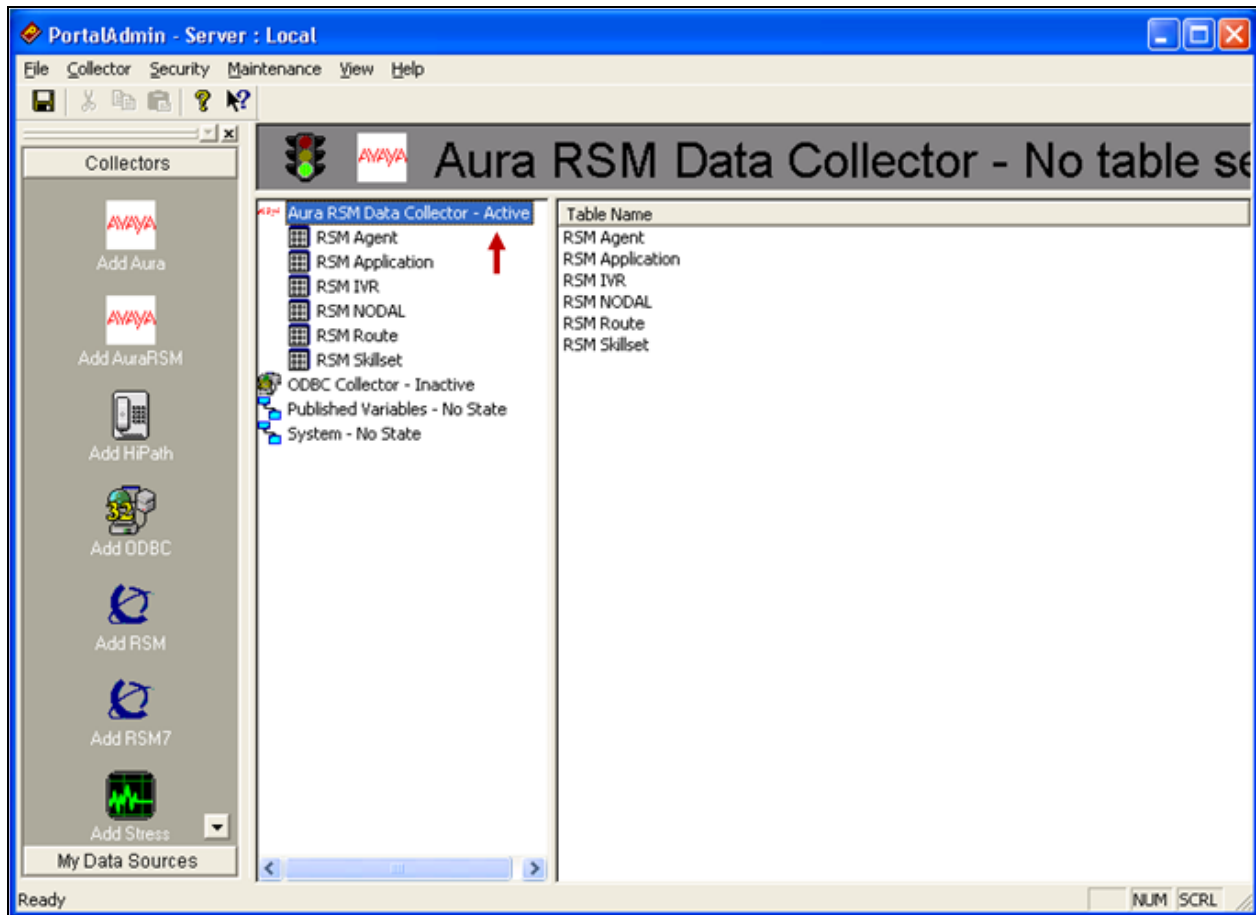


Apply the above steps of publishing **Agent** application for remaining applications of **Aura RSM Data Collector** such as **Application**, **IVR**, **Nodal**, **Route** and **SkillSet**.

To activate the **Aura RSM Data Collector**, right click on the **Aura RSM Data Collector** and select the **Activate** option on the menu as shown below.

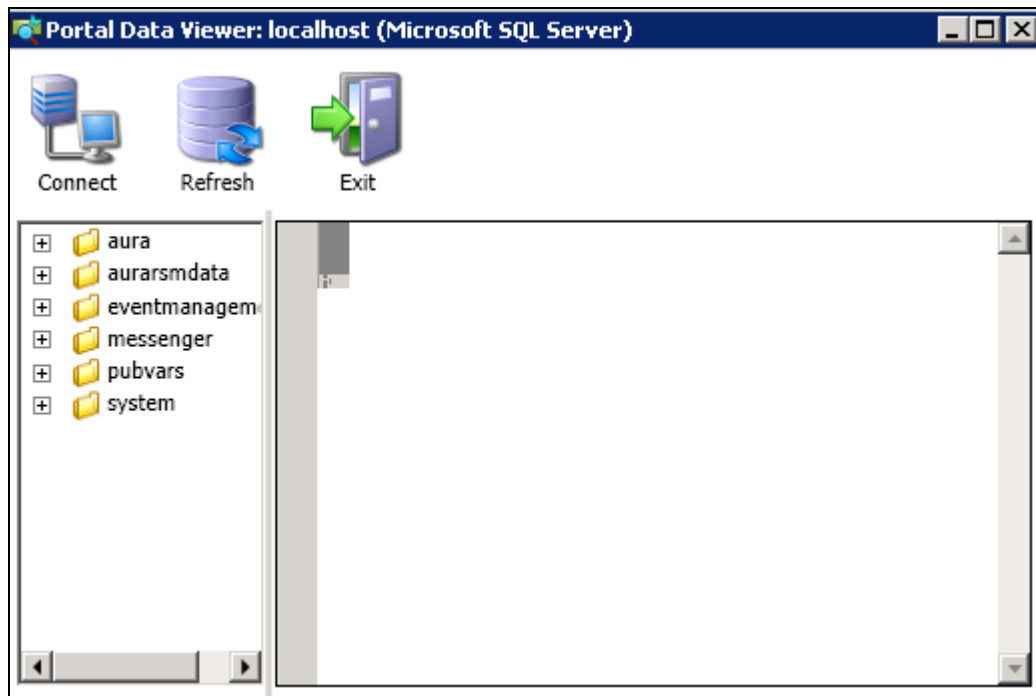


The **Aura RSM Data Collector** is successfully activated as shown below.

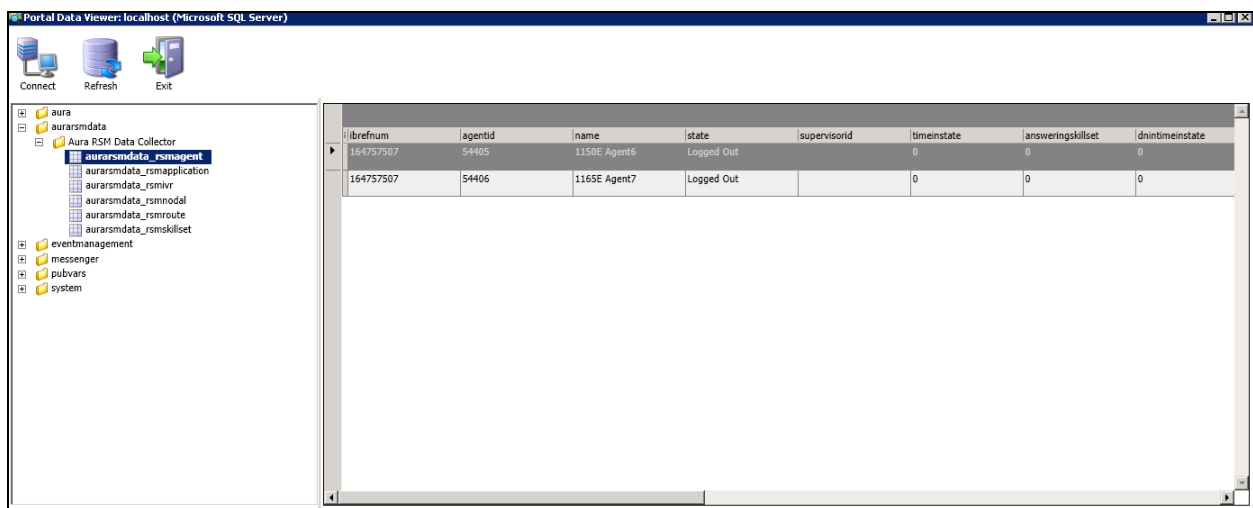


6.3. Configure IVS Portal Data Viewer

To open **Portal Data Viewer**, log in the IVS server as administrator and navigate to **Start → All Programs → RMG Networks → IVS Portal Data Viewer**, the **Portal Data Viewer** window appears as shown below.



Expand the **aurarsmdata** folder and then expand the **Aura RSM Data Collector** folder and click on **aurarsmdata_rsmagent** to display real time data of Agent application streamed from the Contact Center server as shown below.



Similarly click on the **aurarsmdata_rsmapplication**, **aurarsmdata_rsmivr**, **aurarsmdata_rsmnodal**, **aurarsmdata_rsmroute** and **aurarsmdata_rsmskillset** to display (not shown) its real time data streamed from the Contact Center server.

7. Verification Steps

The following are typical steps to verify the interoperability between the IVS and Contact Center.

- Create ACD IP Phone agents in Communication Server 1000.
- Acquire these agents by Contact Center.
- Log these agents in.
- Make a call to the Controlled DN (CDN) of Contact Center.
- Answer incoming call on agent phone.
- Open the IVS Portal Data Viewer and check the RSM data, it should be accurate and matched with RSM data on Contact Center.

8. Conclusion

All of the executed test cases have passed and met the objectives outlined in **Section 2**. RMG Networks Intelligent Visual Solutions v12.0.2 is considered compliant with Avaya Aura® Contact Center's Contact Center Manager Server Release 6.4 for Real Time Statistics Multicasts.

9. Additional References

[1] Product documentation for Avaya products may be found at:

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

Avaya Aura® Contact Center Planning and Engineering (NN44400-210)

Avaya Aura® Contact Center Installation (NN44400-311)

Avaya Aura® Contact Center Server Administration (NN44400-610)

Avaya Aura® Contact Center Overview (NN44400-111)

Avaya Aura® Contact Center Fundamentals (NN44400-110)

Avaya Aura® Contact Center Manager Administration – Client Administration (NN44400-611)

[2] Product documentation for RMG Networks IVS may be found by contacting Customer Service.

©2014 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

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.