Avaya Solution & Interoperability Test Lab

Application Notes for Resource Software International Shadow Real-Time Dashboard with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Resource Software International (RSI) Shadow Real-Time Dashboard (RTD) to interoperate with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager. RSI Shadow RTD is a computer telephony solution that uses the DMCC interface of Avaya Aura® Application Enablement Services to provide real-time monitoring of skilled hunt groups and agents activities (i.e. calls handled, agent status, wait times, etc). The RSI Shadow RTD Triggers feature can be utilized to deliver event notification messages either to the user's browser window or via email/SMS when specific user defined conditions are met.

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

1. Introduction

These Application Notes describe the configuration steps required for Resource Software International (RSI) Shadow Real-Time Dashboard (RTD) to interoperate with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

RSI Shadow RTD is a CTI application that can monitor one or a complex array of mission-critical communication systems that require uncompromised performance and availability. The solution is a browser based, real-time console that can monitor and analyze skilled Hunt Groups and Agent's call data from an Avaya Aura® Communication Manager telephone system.

Shadow RTD provides supervisors with instantaneous metrics about the health of their communication facilities and offers call center agents immediate feedback. Triggers can be defined to highlight and alert on a system overload, inactivity, or a security breach. Managers can view statistics for multiple communication facilities from one browser or be alerted via email, text message, audible alarm, screen flash, and/or network broadcast.

The Shadow RTD server will operate on any computer running on a Microsoft Windows operating system (Windows XP or greater). The Shadow RTD Server contains its own web server and database. As a result, it does not require Microsoft IIS or MS SQL. Users can connect to the RTD Shadow Server using a browser from any desktop computer connected to the same network.

2. General Test Approach and Test

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 for 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 testing focused on verifying the following:

- Handling of real-time data from Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager, and the use of that data to provide real-time updates within the RSI Shadow RTD widgets via a browser.
- Handling of trigger conditions (i.e. verifying when a trigger criteria was met, the proper alerts were sent).

The serviceability testing focused on verifying the ability of RSI Shadow Real-Time Dashboard Server to recover from adverse conditions, such as disabling/re-enabling the network connection to the RSI Shadow Real-Time Dashboard server.

2.2. Test Results

All test cases were executed and passed with the following observations:

- Only an Expert Agent Selection (EAS) environment is support by RSI Shadow RTD. EAS must be enabled on Avaya Aura® Communication Manager and only skilled hunt groups should be monitored by RSI Shadow RTD.
- The values displayed on the RSI Shadow RTD widgets (such as the number of calls abandoned/waiting/handled, call wait/talk times, agent state durations, etc.) are not values that are computed by or passed from the Avaya Aura® components in the solution. Rather, the widget data values are calculated by RSI based on various event messages that RSI receives from the Avaya Aura® components. Compliance testing focused the interface between Avaya and RSI to ensure RSI was capable of monitoring entities (e.g. hunt groups, VDNs, etc.), and receiving events. While visual checks of the widget data were done by Avaya on very low call volumes during compliance testing, RSI is responsible for ensuring the accuracy of the data shown within the widgets.
    - Since RSI Shadow RTD depends on receiving events for their widget data, any outages, such as a network outage that causes one or more events to not be received, can impact the accuracy of the data. For example, if the connection between Avaya Aura® Application Enablement Services and RSI Shadow RTD is lost, since RSI will not receive any events for calls/Agents during the outage, the widget data cannot be updated to reflect any new calls that occurred during the outage or any changes to existing calls during the outage.

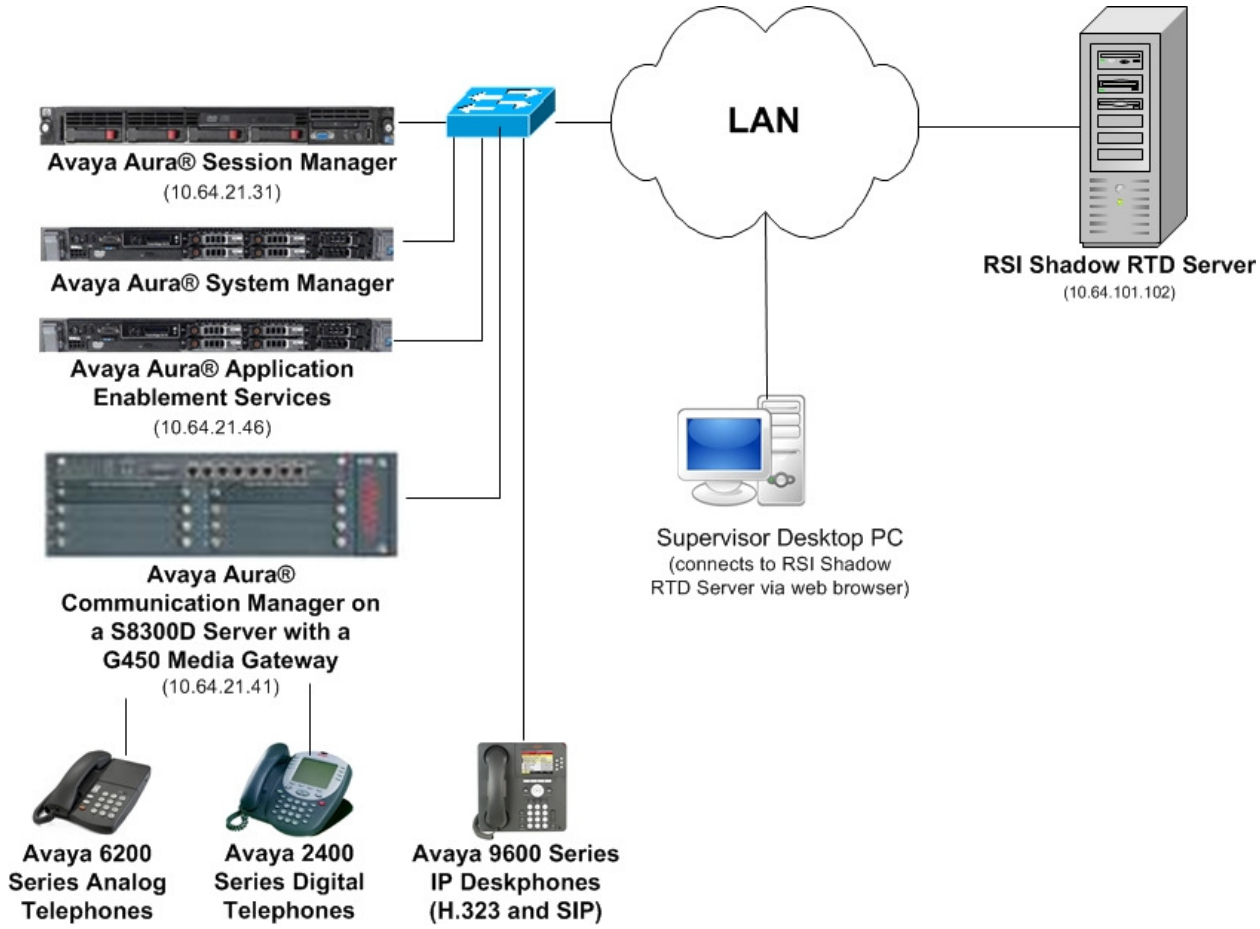
2.3. Support

Technical support on the RSI Shadow Real-Time Dashboard can be obtained through the following:

- **Phone:** (905) 576-4575
- **Email:** support@telecost.com
- **Web:** www.telecost.com

3. Reference Configuration

The RSI Shadow Real-Time Dashboard solution consists of the RSI Shadow Real-Time Server running on a Windows PC / Server (Windows XP or greater). The Shadow RTD Server contains its own web server and database. The Shadow RTD Server uses the DMCC interface of Avaya Aura® Application Enablement Services to provide real-time monitoring of skilled hunt groups and agents activities. Users (such as a Supervisor as shown in the figure below) can connect to the RTD Shadow Server using a browser from any desktop computer connected to the same network.



4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya S8300D Server with an Avaya G450 Media Gateway	Avaya Aura® Communication Manager 6.3 (R016x.03.0.124.0), Patch 20850
Dell™ PowerEdge™ R610 Server	Avaya Aura® System Manager 6.3 FP2 Build No. - 6.3.0.8.5682-6.3.8.1627 Software Update Revision No: 6.3.2.4.1399
Dell™ PowerEdge™ R610 Server	Avaya Aura® Application Enablement Services 6.3 (6.3.0.0.212-0)
HP Proliant DL360 G7	Avaya Aura® Session Manager 6.3.2 (6.3.2.0.632023)
Avaya 9600 Series IP Telephones • 96x0 (H.323) • 96x0 (SIP) • 96x1 (H.323) • 96x1 (SIP)	Avaya one-X® Deskphone Edition 3.2.1 Avaya one-X® Deskphone Edition 2.6.10 Avaya one-X® Deskphone Edition 6.2.2 Avaya one-X® Deskphone Edition 6.3
Avaya 6210 Analog Phone	-
Avaya 2420 Digital Phone	-
Windows Server 2008 R2 Enterprise	RSI Shadow Real-Time Dashboard 2.1.3.28 (Avaya CM Driver 1.0.0.18)

5. Configure Avaya Aura® Communication Manager

The configuration of connectivity between Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services, and the administration of contact center devices (VDNs, hunt groups, Agents, stations) is outside the scope of this document. This document assumes a working environment consisting of Communication Manager and Application Enablement Services is already in place with an established TSAPI CTI link.

Refer to the reference **[1]** in **Section 10** for details on administering Communication Manager.

6. Configure Avaya Aura® Application Enablement Services

This section provides the procedures for configuring Application Enablement Services to enable integration with RSI Shadow RTD.

The procedures in the sections below include the following areas:

- Launch OAM interface
- Obtain Tlink name
- Administer user
- Edit CTI User

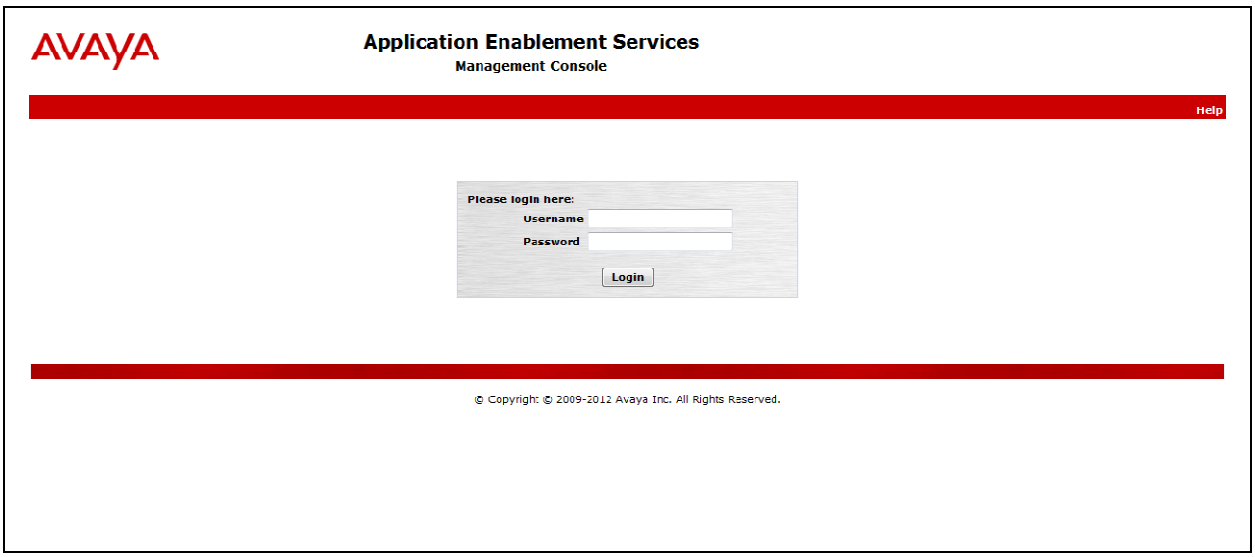
The configuration of connectivity between Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager is outside the scope of this document. This document assumes a working environment consisting of Communication Manager and Application Enablement Services is already in place with an established TSAPI CTI link.

Refer to the reference **[2]** in **Section 10** for details on administering Application Enablement Services.

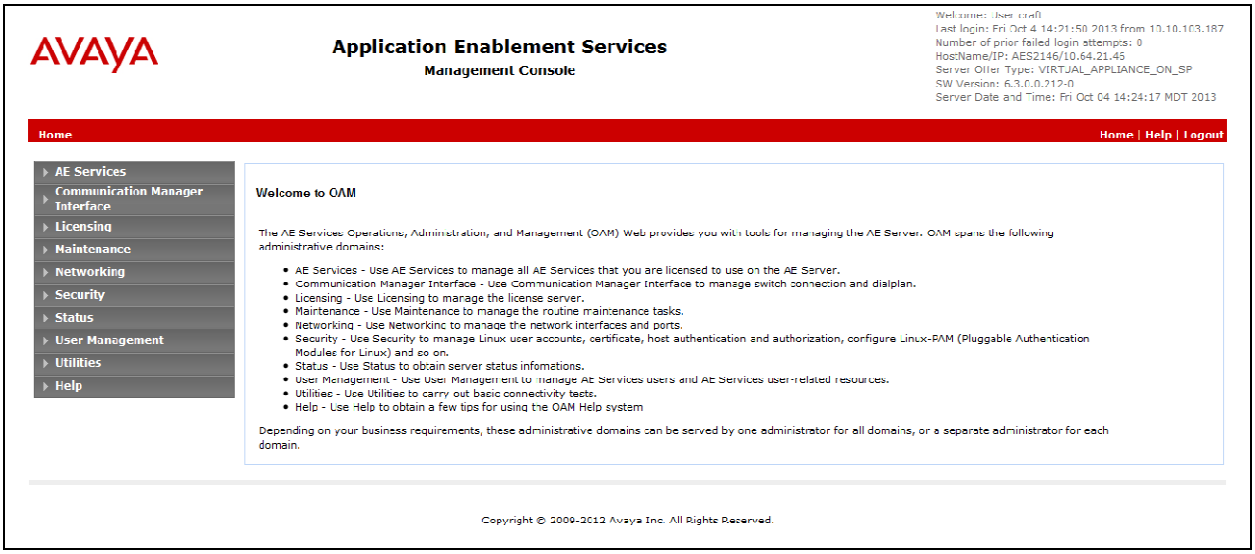
6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL "https://ip-address" in an Internet browser window, where "ip-address" is the IP address of the Application Enablement Services server.

The **Please login here** screen is displayed. Log in using the appropriate credentials.



The **Welcome to OAM** screen is displayed next.

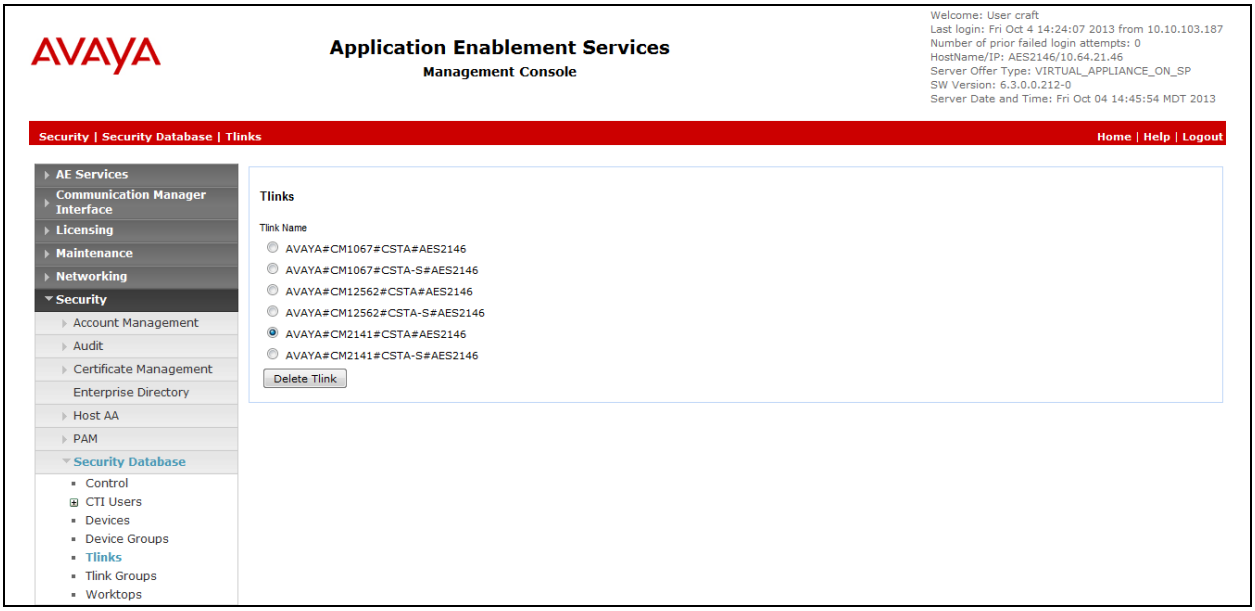


6.2. Obtain Tlink Name

A Tlink represents a link between an Application Enablement Services server and a Communication Manager. When a communication channel (i.e. switch connection) is provisioned between Application Enablement Services and Communication Manager, a Tlink is created dynamically by the TSAPI service running on the Application Enablement Services server.

To view the list of Tlinks available, select **Security → Security Database → Tlinks** from the left pane. The **Tlinks** screen shows a list of the Tlink names. Locate the relevant Tlink, and make a note of the switch connection name (the second field delimited by **#**).

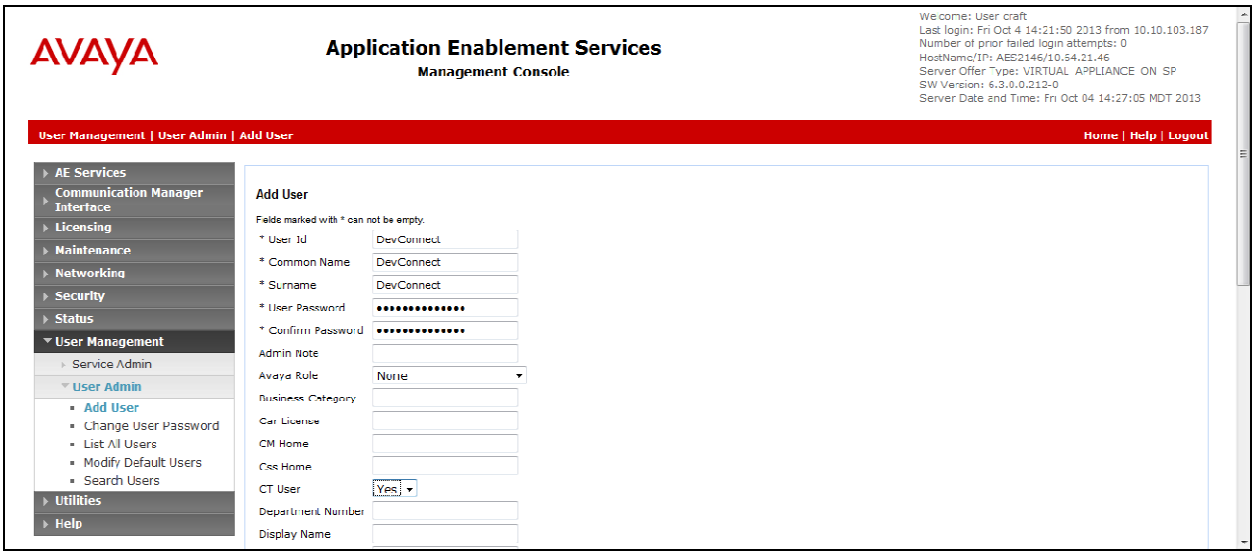
For example, the Tlink name "AVAYA#**CM2141**#CSTA#**AES2146**" below represents the link used during compliance testing and the switch connection name is **CM2141**. The switch connection name as well as the IP address of the Application Enablement Services server (the IP address for **AES2146** from the Tlink name) will be used during the configuration of RSI Shadow RTD.



6.3. Administer User

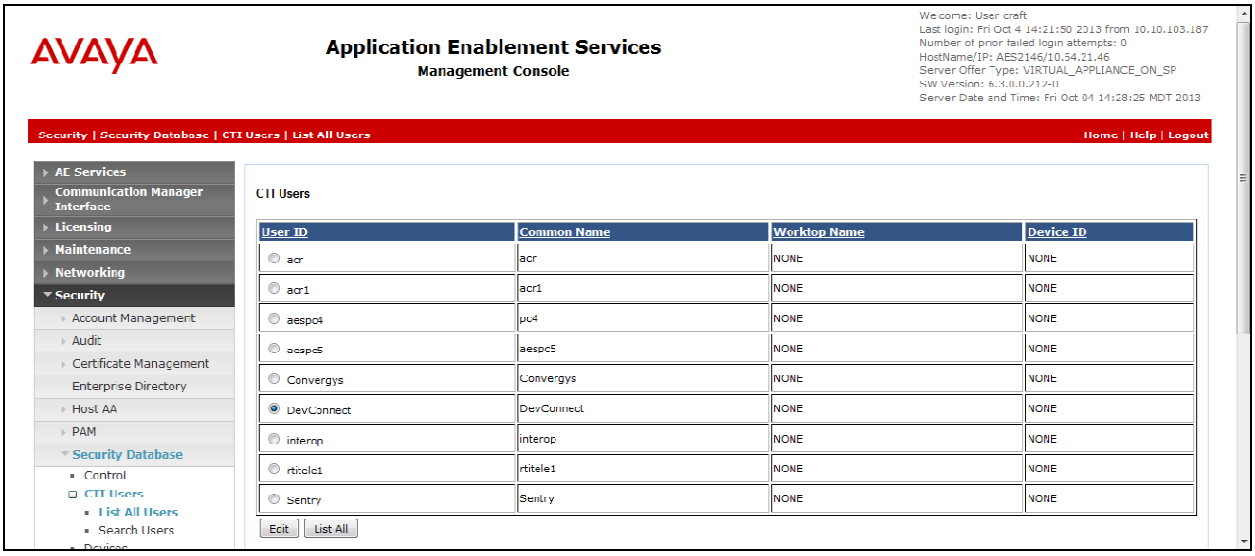
Create a CTI user for the RSI Shadow RTD application. Select **User Management → User Admin → Add User** from the left pane, to display the **Add User** screen in the right pane.

Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select "Yes" from the drop-down list. Retain the default value in the remaining fields. Click **Apply** at the bottom of the screen (not shown below).

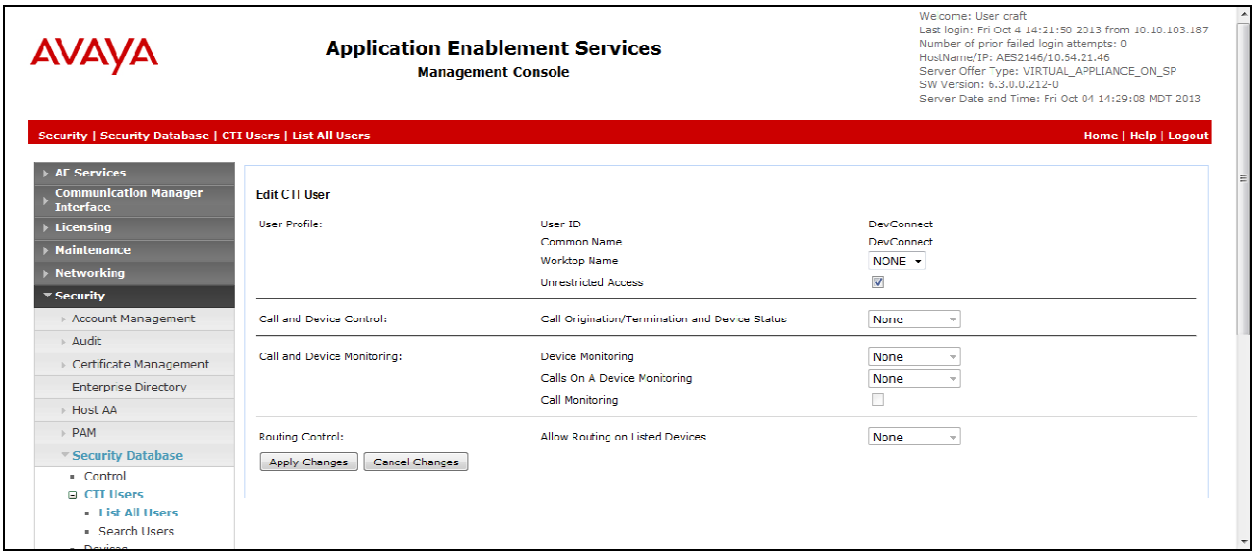


6.4. Edit CTI User

Provide the newly created user with unrestrictive access (note, more restrictive configurations are possible, but not shown). Select **Security Database → CTI Users → List All Users** from the left pane, to display the **CTI Users** screen in the right pane. Select the CTI User configured in the previous section and click **Edit**.



Check the box for **Unrestricted Access** and then click **Apply Changes**.



7. Configure RSI Shadow Real-Time Dashboard

This section provides the procedures for configuring the RSI Shadow Real-Time Dashboard Server. The procedures include the following areas:

- RSI Shadow RTD Configuration Console
- Administer Shadow RTD Server

7.1. RSI Shadow RTD Configuration Console

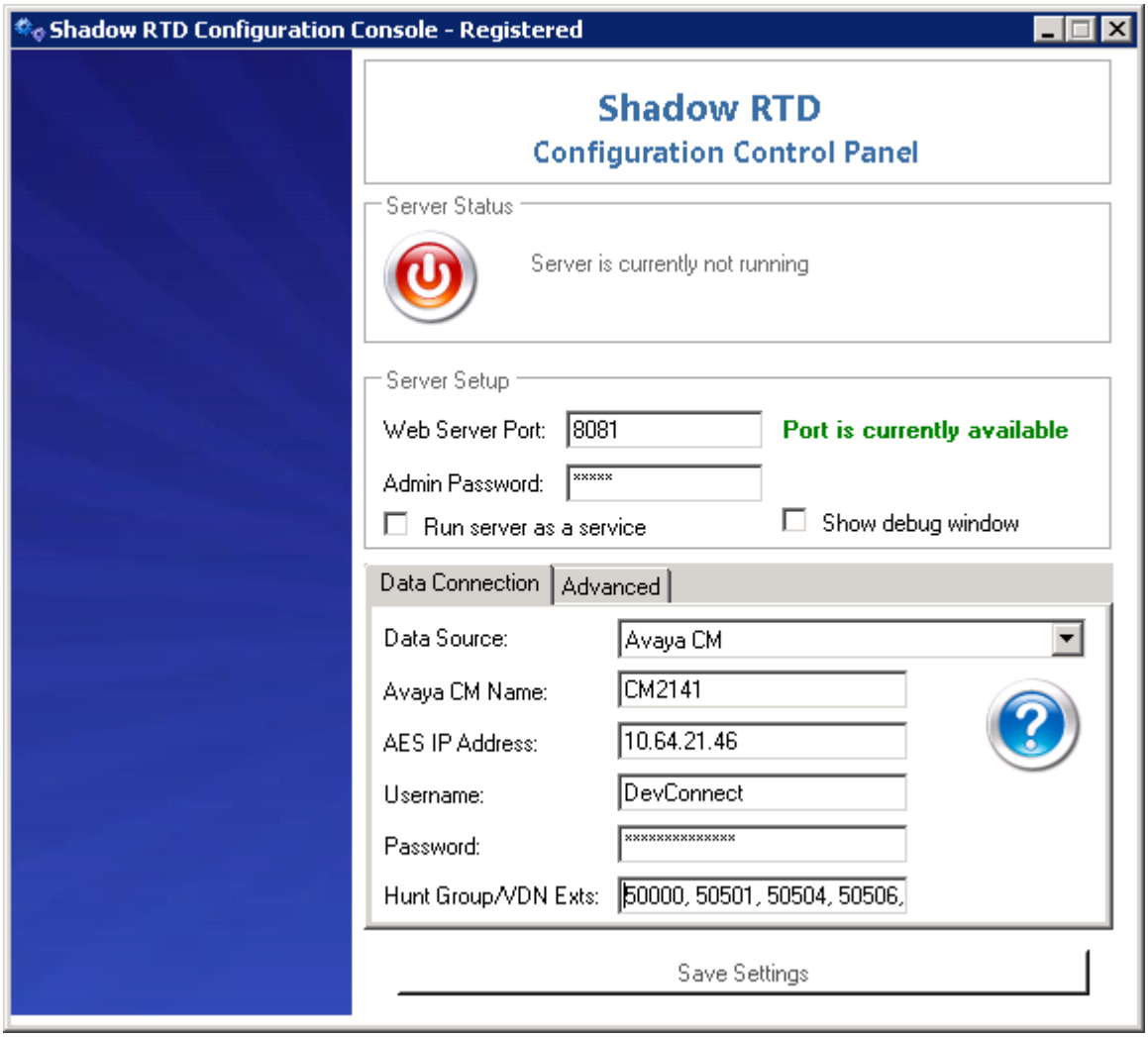
From the PC where RSI Shadow Real-Time Dashboard is installed, select **Start → All Programs → RSI → SHADOW RTD → SHADOW RTD Console**. The SHADOW RTD Configuration Control Panel is displayed. Enter the following values for the fields specified below:

Under the **Server Setup** section:

- **Web Server Port**: "8081"
- **Admin Password**: enter appropriate credentials for the Shadow RTD "admin" user

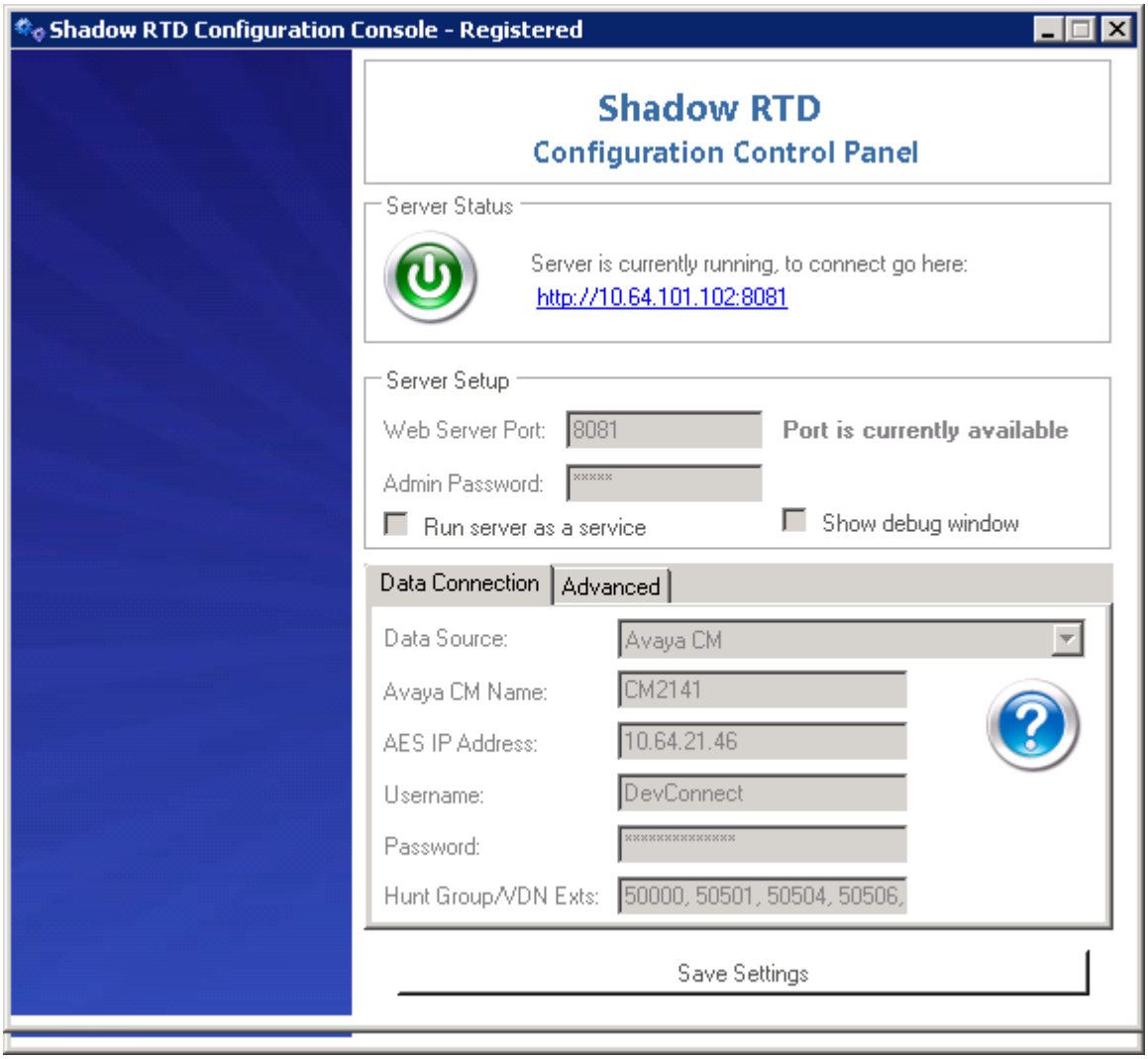
Under the **Data Connection** tab:

- **Data Source**: select "Avaya CM" from the drop-down menu
- **Avaya CM Name**: enter the name for the appropriate "Switch Connection" configured on Avaya Aura® Application Enablement Services (refer to **Section 6.2**).
- **IP Address**: enter the IP address of Avaya Aura® Application Enablement Services (e.g. "10.64.21.46").
- **Username**: enter the CTI User name configured on Avaya Aura® Application Enablement Services (refer to **Section 6.3**).
- **Password**: enter the CTI User password configured on Avaya Aura® Application Enablement Services (refer to **Section 6.3**).
- **Hunt Groups/VDNs Exts**: enter the skilled hunt group and VDN extensions to be monitored by Shadow RTD.



Under **Server Status** at the top, click the red button to start the Server.

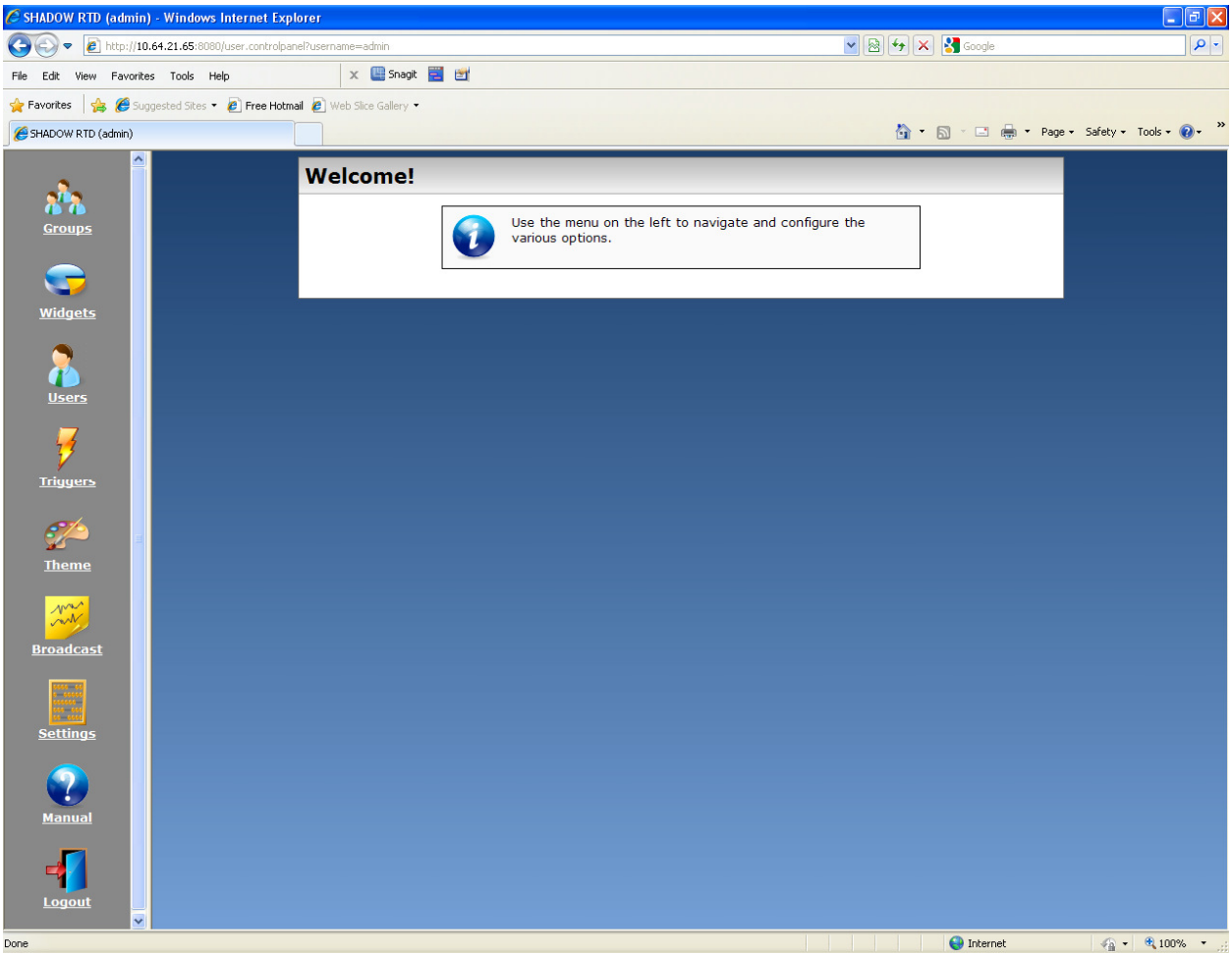
The button will turn green (as shown below), and a link will be provided to connect to the server. Click the link.



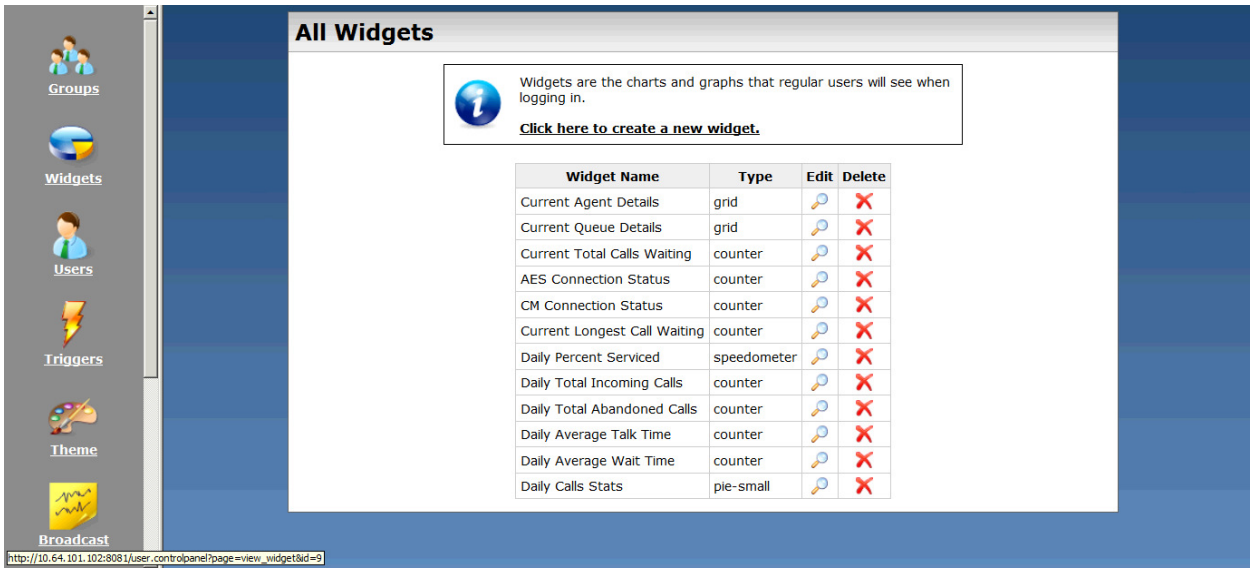
7.2. Administer Shadow RTD Server

Continuing from the previous section, enter the "admin" user credentials for the Shadow RTD Server, at the login screen.

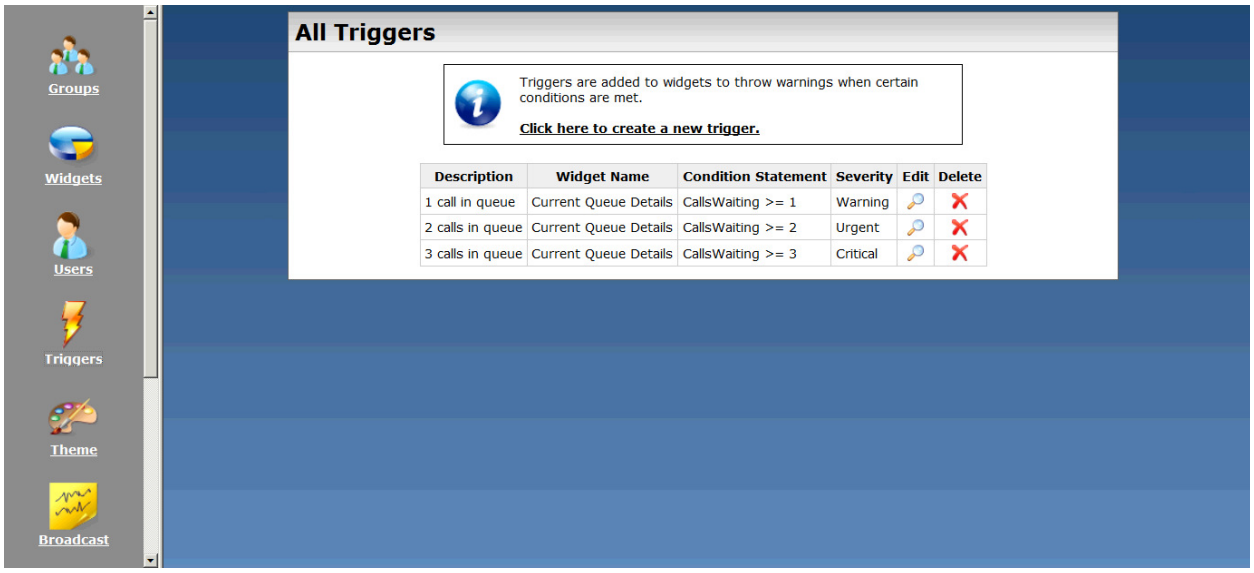
The following **Welcome** screen is displayed.



Configure Shadow RTD as desired. Refer to the Shadow RTD documentation (**Section 10**, reference **[3]**) for details. The example screen below shows some Widgets created and used during compliance testing.



The example screen below shows some Triggers created and used during compliance testing.

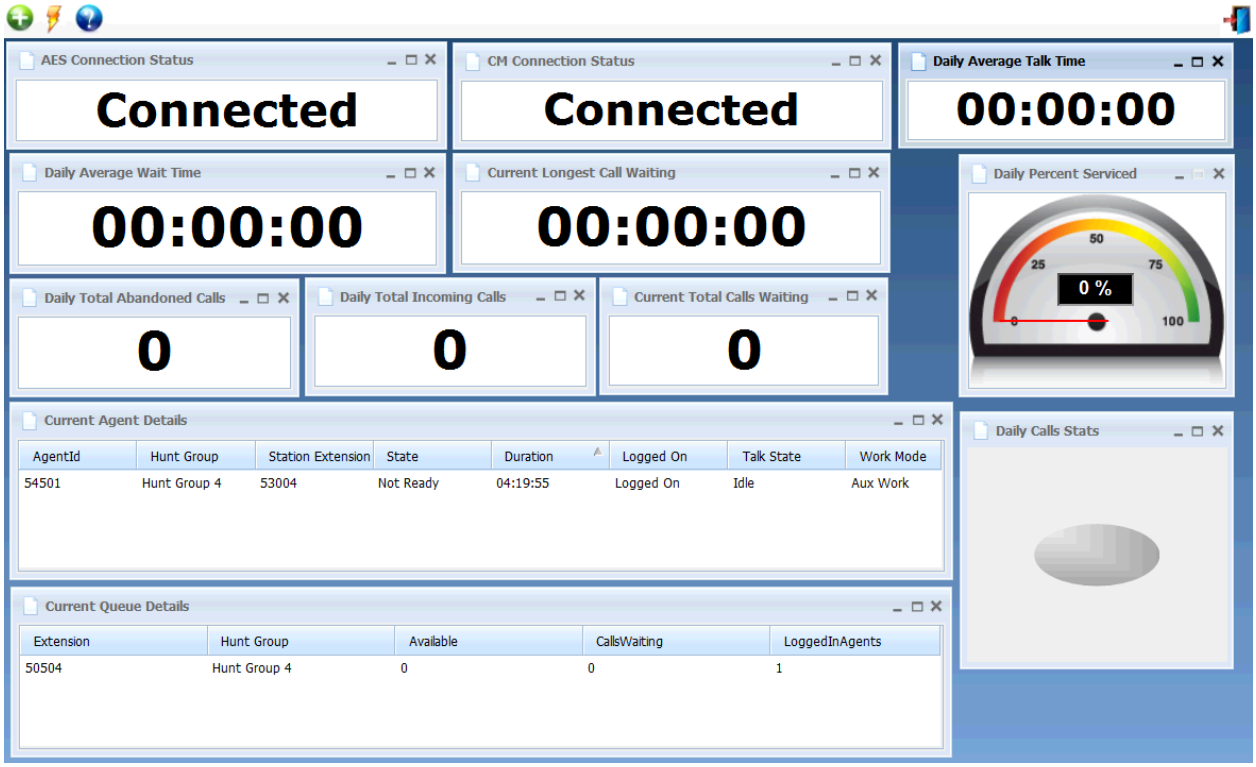


8. Verification Steps

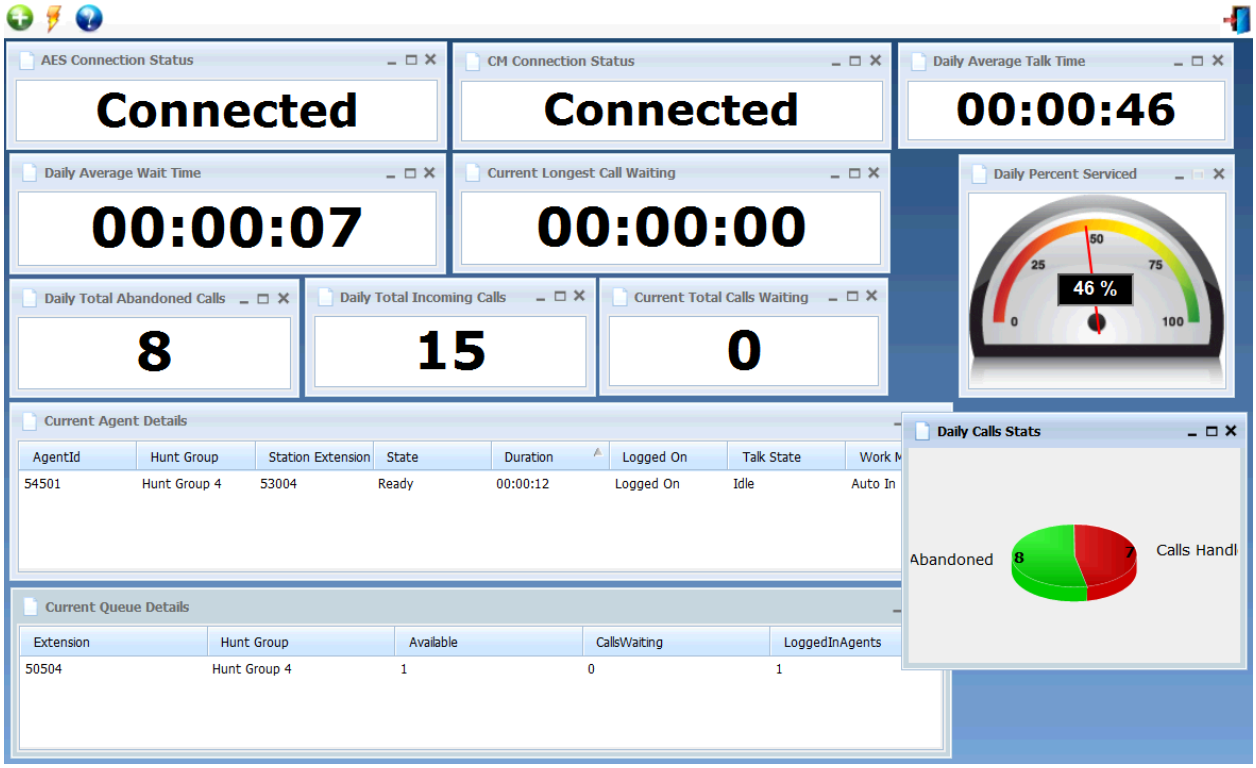
This section provides the tests that can be performed to verify proper configuration of Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager and RSI Shadow Real-Time Dashboard.

Connect to the RSI Shadow RTD server as shown in **Section 7.2**. Enter valid user credentials at the Login screen.

All the configured widgets will be displayed in the browser. Rearrange the widgets as desired.



Place a few calls and verify the appropriate widgets for each call are updated in real-time accordingly.



9. Conclusion

These Application Notes describe the configuration steps required for RSI Shadow Real-Time Dashboard to successfully interoperate with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager with the observations noted in **Section 2.2**.

10. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Release 6.3, Document ID 03-300509, Issue 9, October 2013, available at http://support.avaya.com.

2. *Avaya Aura® Application Enablement Services Administration and Maintenance Guide*, Release 6.3, Issue 2, October 2013, available at http://support.avaya.com.

3. *Resource Software International Ltd. Shadow Real-Time Dashboard (RTD) Installation & Users Guide*, available as part of RSI Shadow Real-Time Dashboard installation.

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.