



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for Resource Software International Shadow Real-Time Dashboard with Avaya IP Office – 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 IP Office. RSI Shadow RTD is a computer telephony solution that uses the CTI Link Pro (DevLink and 3rd Party TAPI) interface to Avaya IP Office to provide real-time monitoring of 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 IP Office.

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 Hunt Groups and Agent's call data from an Avaya IP Office 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

### 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 IP Office, 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.

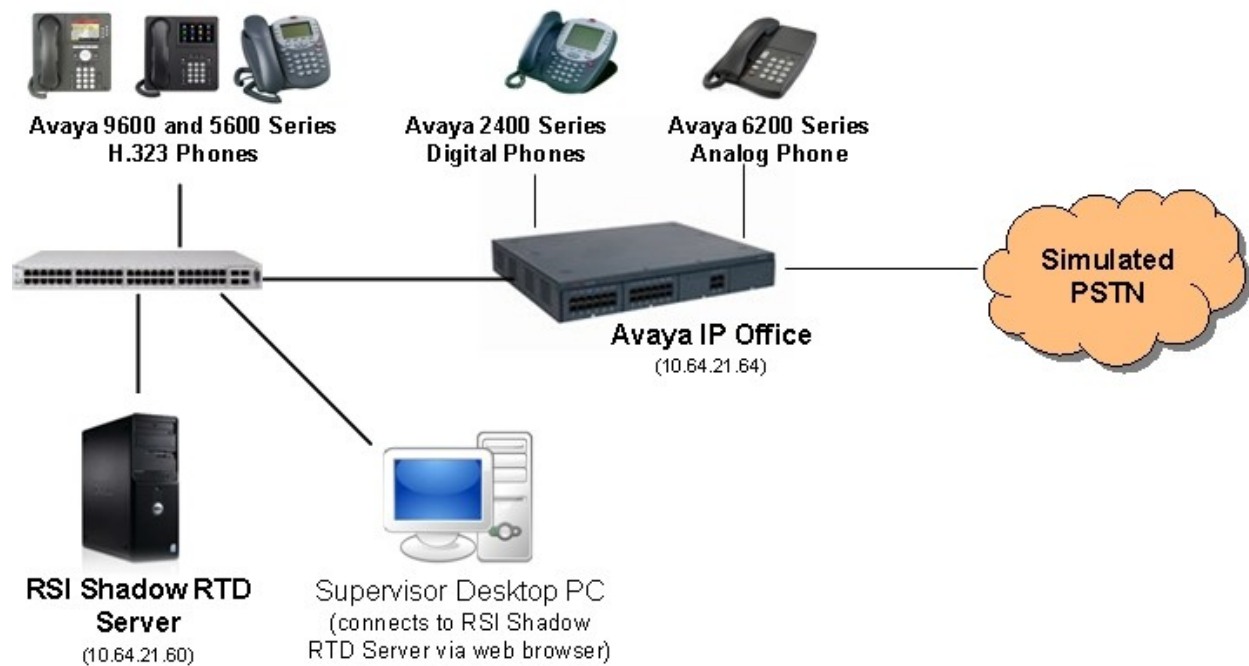
### 2.3. Support

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

- **Phone:** (905) 576-4575
- **Email:** [support@telecost.com](mailto:support@telecost.com)
- **Web:** [www.telecost.com](http://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 CTI Link Pro (DevLink and 3rd Party TAPI) interface to Avaya IP Office to provide real-time monitoring of 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:

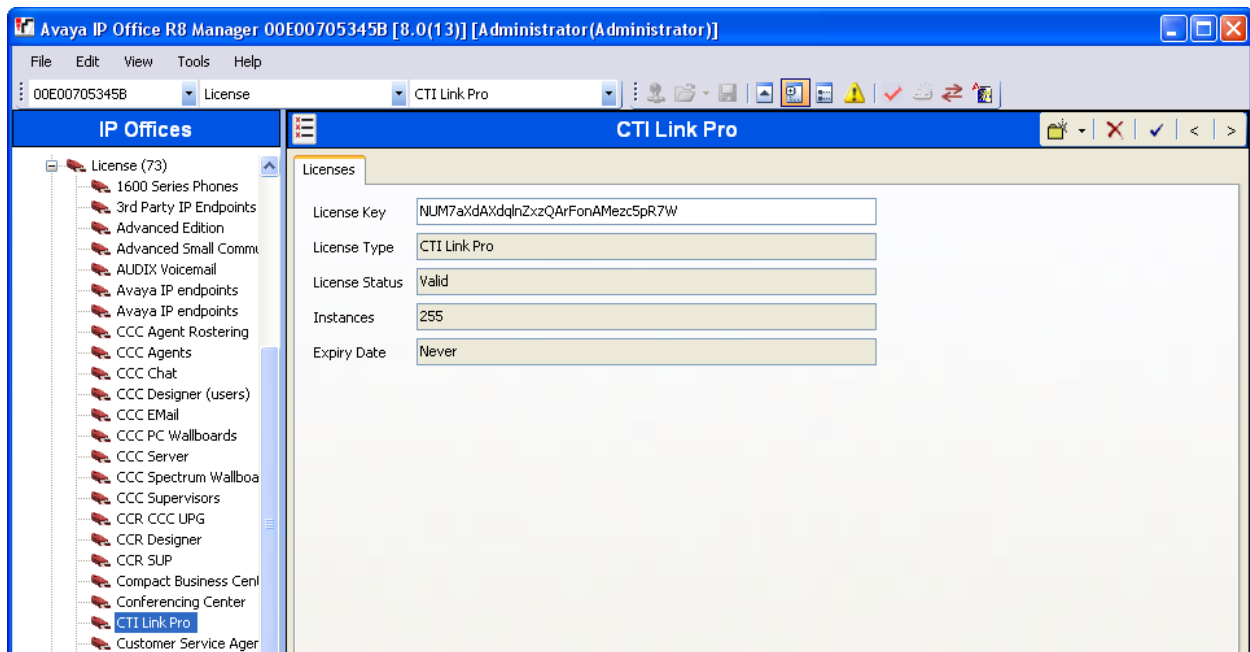
Equipment	Software
Avaya IP Office 500 <ul style="list-style-type: none"><li>DIGSTA8/PRIS U</li><li>VCM32</li><li>ANALOG POTS30V2</li></ul>	8.0 (13) <ul style="list-style-type: none"><li>8.0 (13)</li><li>8.0 (13)</li><li>10.0 (13)</li></ul>
Avaya 6200 Series Analog Telephone	—
Avaya 2400 Series Digital Telephones	Release 6
Avaya 5600 Series IP Telephones (H.323)	2.9.1
Avaya 9600 Series IP Telephones (H.323) <ul style="list-style-type: none"><li>96x0</li><li>96x1</li></ul>	3.1 SP2 6.0 SP5
Avaya IP Office TAPI Driver	tapiQ3Maint2011.exe
RSI Shadow Real-Time Dashboard Server on a Windows XP Professional Service Pack 3 PC	2.1.3.20

## 5. Configure Avaya IP Office

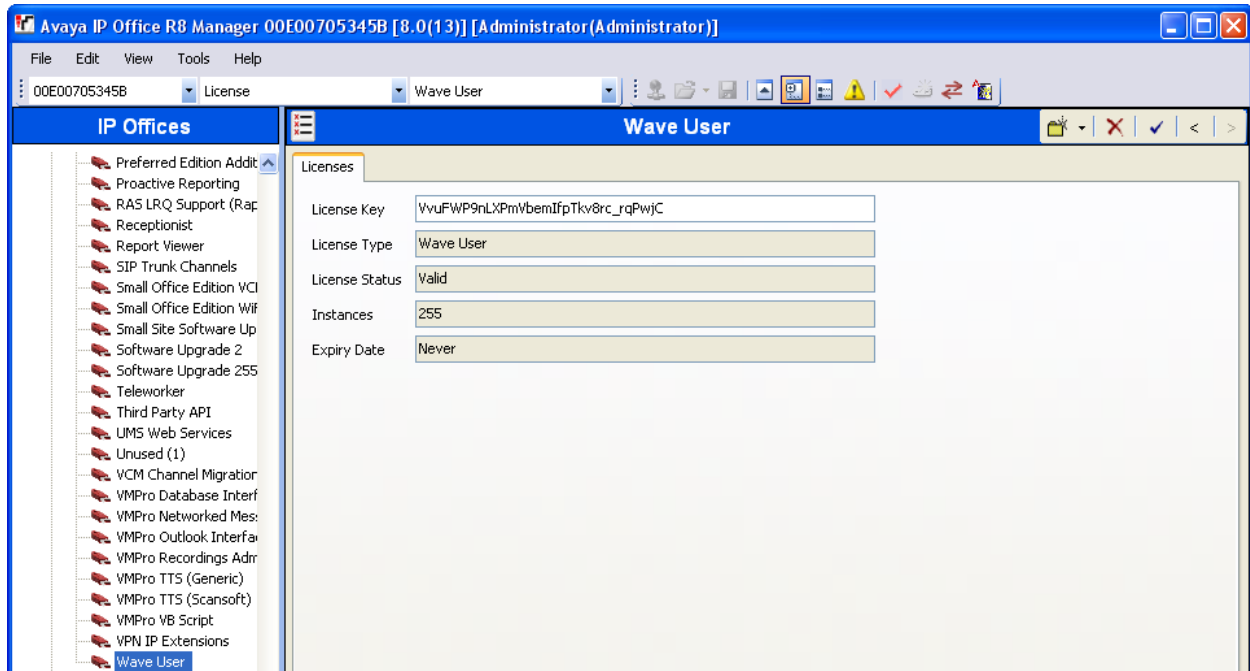
This section provides the procedures for configuring Avaya IP Office.

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The **Avaya IP Office R8 Manager** screen is displayed. From the configuration tree in the left pane, select **License > CTI Link Pro** to display the **CTI Link Pro** screen in the right pane. Verify that the **License Status** is “Valid”.



From the configuration tree in the left pane, select **License > Wave User** to display the **Wave User** screen in the right pane. Verify that the **License Status** is “Valid”.



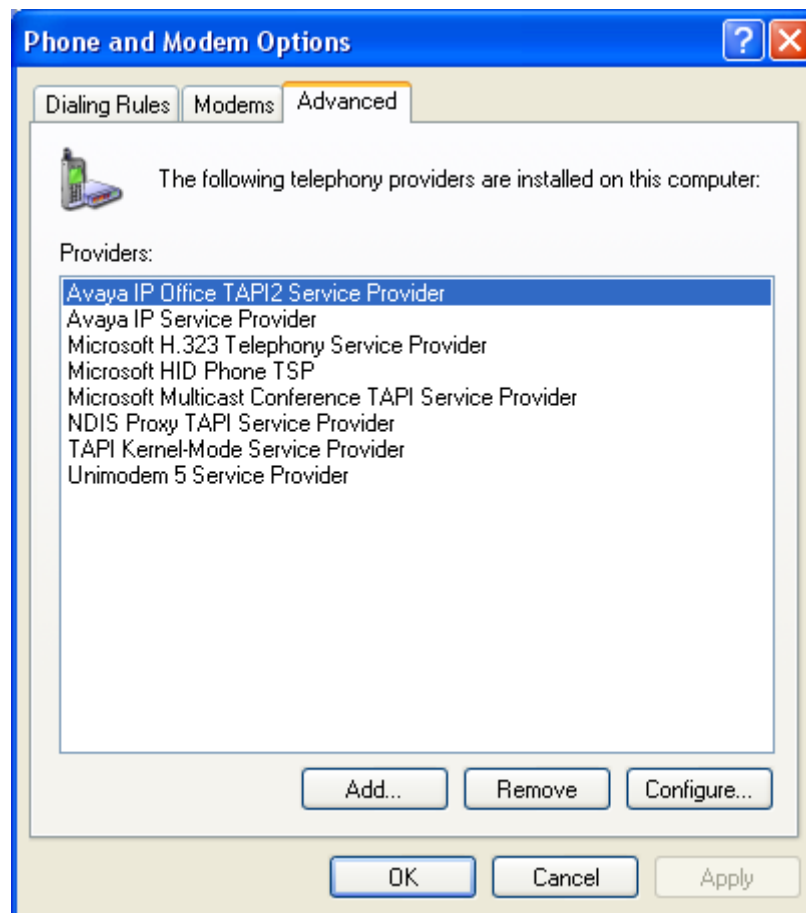
## 6. Configure RSI Shadow Real-Time Dashboard

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

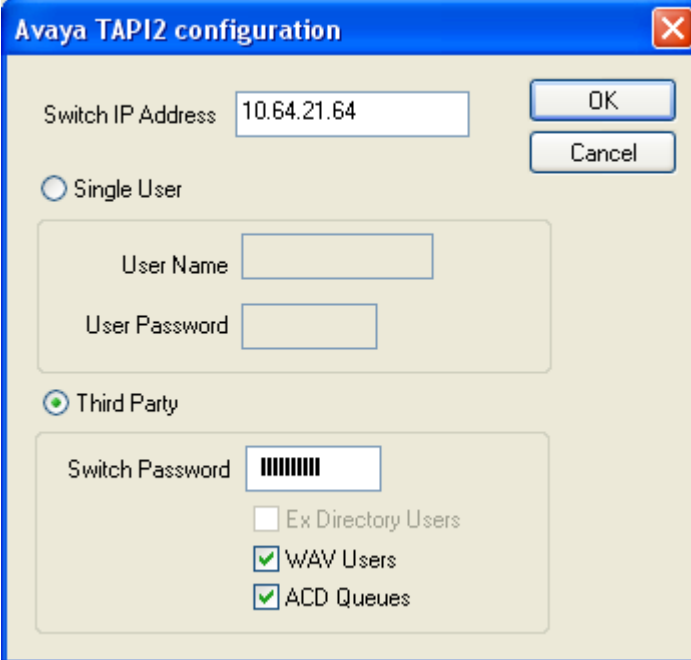
- Administer TAPI Driver
- Launch Shadow RTD Configuration Console
- Administer Shadow RTD Server

### 6.1. Administer TAPI Driver

From the RSI Shadow Real-Time Dashboard PC, select **Start > Control Panel > Phone and Modem Options**, to display the **Phone and Modem Options** screen. Select the **Avaya IP Office TAPI2 Service Provider** entry under the **Advanced** tab, and click **Configure**.



The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of Avaya IP Office. Select the radio button for **Third Party**. Enter the appropriate credentials for the **Switch Password**. Reboot the RSI Shadow Real-Time Dashboard PC.



The image shows a Windows-style dialog box titled "Avaya TAPI2 configuration". It has a blue title bar with a red close button in the top right corner. The main area is light beige. At the top, there is a text label "Switch IP Address" followed by a text input field containing "10.64.21.64". To the right of this field are two buttons: "OK" and "Cancel". Below this, there are two radio buttons. The first is "Single User" and is unselected. The second is "Third Party" and is selected, indicated by a green dot. Below the "Single User" radio button is a group box containing two text input fields: "User Name" and "User Password". Below the "Third Party" radio button is a group box containing a text label "Switch Password" followed by a password input field with masked characters. Below the password field are three checkboxes: "Ex Directory Users" (unchecked), "WAV Users" (checked with a green checkmark), and "ACD Queues" (checked with a green checkmark).



## 6.2. Launch 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:** “8080”
- **Admin Password:** enter appropriate credentials for the Shadow RTD “admin” user

Under the **Data Connection** tab:

- **Data Source:** select “Avaya IP Office” from the drop-down menu
- **IP Address:** enter the IP address of IP Office (e.g. “10.64.21.64”)
- **Password:** enter the IP Office Administrator password
- **Log file (Optional):** enter a location for the log file

SHADOW RTD Configuration Console [Trial: 5 Days Remaining]

### SHADOW RTD Configuration Control Panel

**Server Status**

Server is currently not running

**Server Setup**

Web Server Port: 8080 **Port is currently available**

Admin Password: xxxxxx

☐ Run server as a service ☐ Show debug window

**Data Connection** Advanced Register

Data Source: Avaya IP Office

IP Address: 10.64.21.64

Password: xxxxxxxx

Log File (Optional): C:\Documents and Settings\

Save Settings

Under **Server Status**, 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.

SHADOW RTD Configuration Console [Trial: 5 Days Remaining]

### SHADOW RTD Configuration Control Panel

**Server Status**

Server is currently running, to connect go here: <http://10.64.21.65:8080>

**Server Setup**

Web Server Port: 8080 Port is currently available

Admin Password: [masked]

☐ Run server as a service ☐ Show debug window

**Data Connection** Advanced Register

Data Source: Avaya IP Office

IP Address: 10.64.21.64

Password: [masked]

Log File (Optional): C:\Documents and Settings\ [Browse]

Save Settings

### 6.3. Administer Shadow RTD Server

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

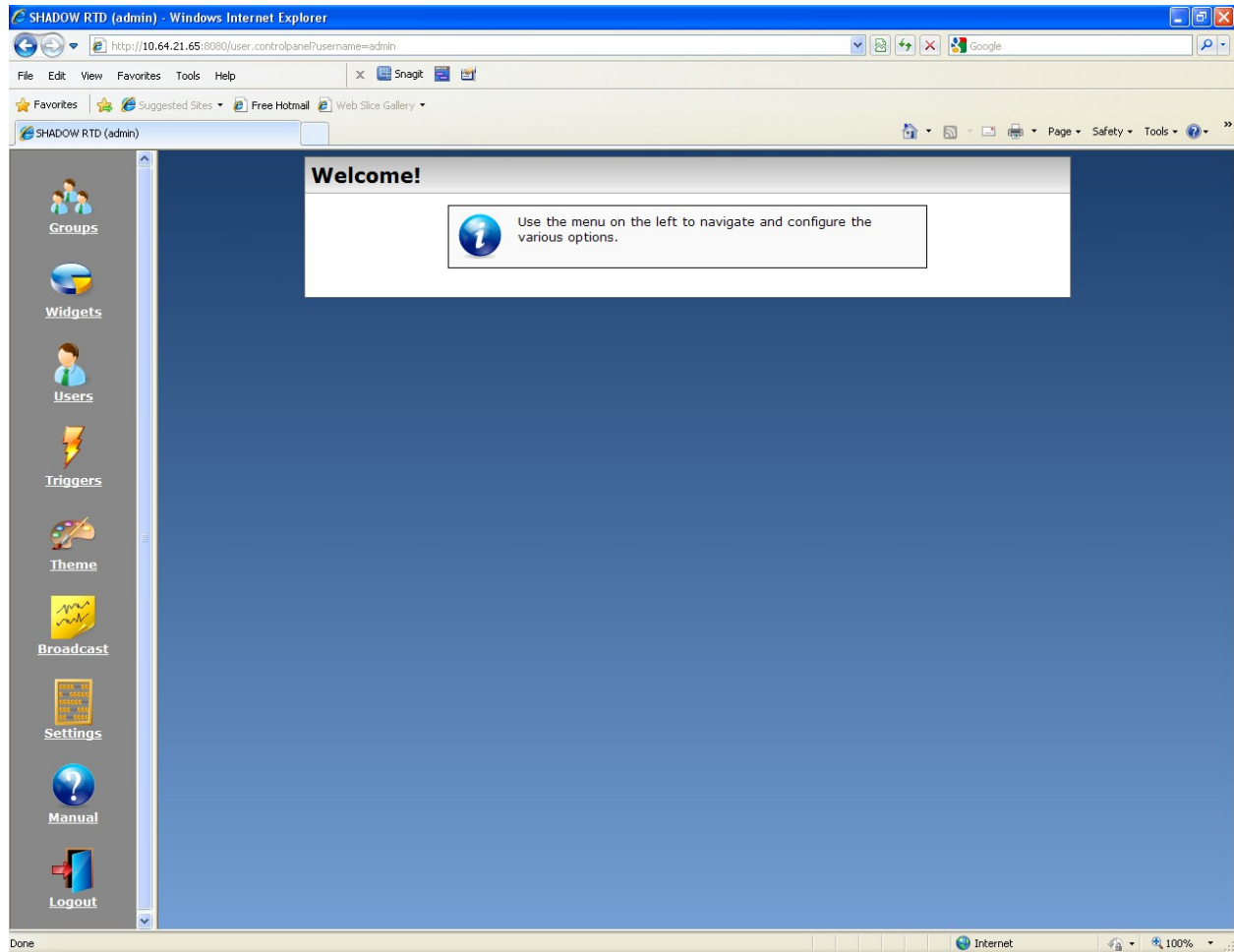
### Login

Username [input field]

Password [input field]

Login

The following **Welcome** screen is displayed.



Configure Shadow RTD as desired. Refer to the Shadow RTD documentation (**Section 9, Reference [3]**) for details. The example screen below shows some Widgets created and used during compliance testing.

**All Widgets**

Widgets are the charts and graphs that regular users will see when logging in.  
[Click here to create a new widget.](#)

Widget Name	Type	Edit	Delete
Offered HG Calls	counter		
Answered HG Calls	counter		
Abandoned HG Calls	counter		
VM HG Calls	counter		
Tandem Calls	counter		
Active Calls - Calls Waiting (Grid)	grid		
Active Calls - Agents on External Calls Detail (Grid)	gridwide		
Longest Waiting In Queue	counter-large		
Calls Waiting	counter		
Device Status - Extension Status Details (Grid)	gridwide-large		
Agents In DND (Counter)	counter		
Number of Unread VMs (Counter)	counter		
Outbound Calls (Counter)	counter		
Call History - Hunt Group Daily Group Call Summary (Grid)	grid		
Hunt Group Daily Call Results (PIE)	pie-medium		
Abandoned %	speedometer		

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

**All Triggers**

Triggers are added to widgets to throw warnings when certain conditions are met.  
[Click here to create a new trigger.](#)

Description	Widget Name	Condition Statement	Severity	Edit	Delete
2 calls in queue	Calls Waiting	id = 2	Urgent		
1 call in queue	Calls Waiting	id = 1	Warning		
3 calls in queue	Calls Waiting	id = 3	Critical		

## 7. Verification Steps

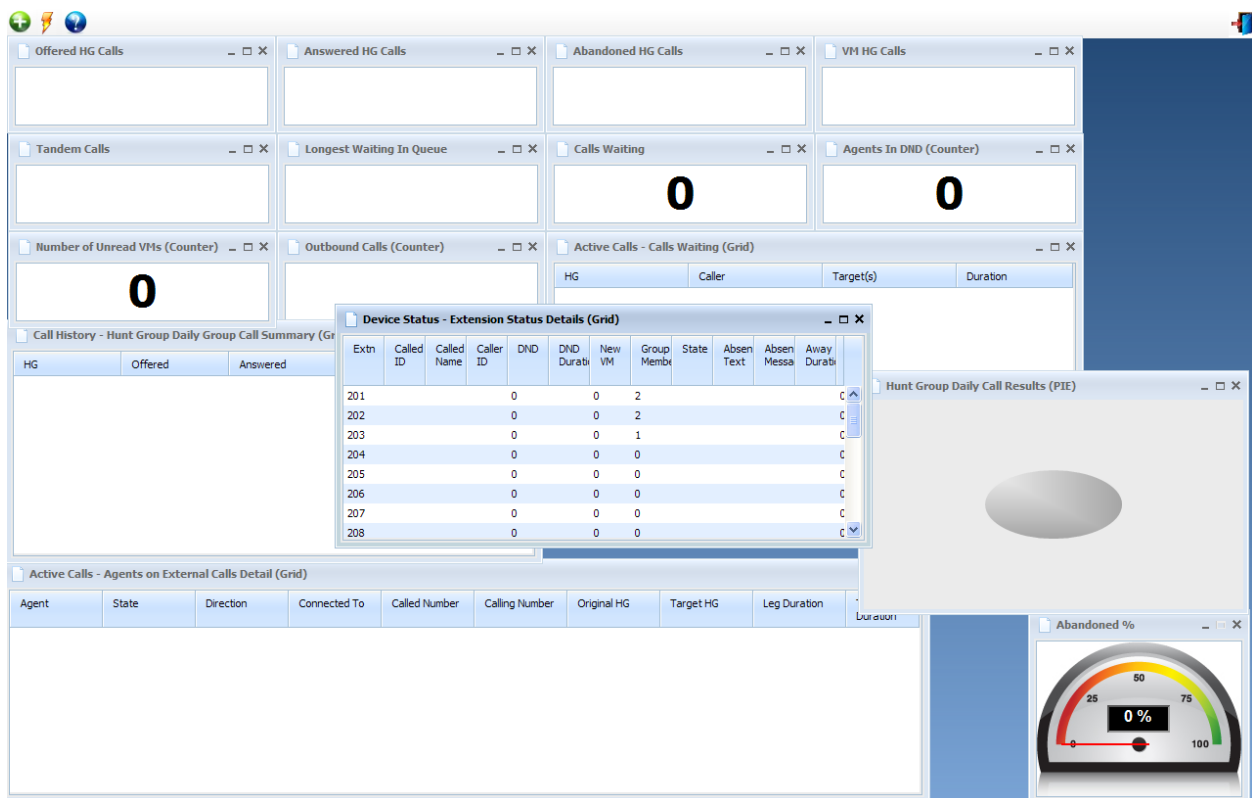
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and RSI Shadow Real-Time Dashboard.

Connect to the RSI Shadow RTD server as shown in **Section 6.2**. Enter valid user credentials at the Login screen.



The login screen is a simple web form with a blue border. It contains the title "Login" in bold. Below the title are two input fields: "Username" and "Password". At the bottom of the form is a "Login" button.

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.



## 8. Conclusion

These Application Notes describe the configuration steps required for RSI Shadow Real-Time Dashboard to successfully interoperate with Avaya IP Office. All feature and serviceability test cases were completed.

## 9. Additional References

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

1. *IP Office 8.0, IP Office Installation*, November 2011, available at <http://support.avaya.com>.
2. *IP Office Manager 10.0*, November 2011, 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.

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