



Avaya Solution & Interoperability Test Lab

Application Notes for Pridis Wallboard 2.0 with Avaya Contact Center Select 7.1 using the Real-time Data API and Contact Center Manager Administrator API - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Pridis Wallboard 2.0 to successfully interoperate with Avaya Contact Center Select R7.1 using the Real-time Data API to access real-time data for agent and queue statistics and Contact Center Manager Administrator API to get list of agents, list of skills and relationship between agent and skills.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1**, as well as 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 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 Pridis Wallboard to successfully interoperate with Avaya Contact Center Select (ACCS) using the Real-time Data API to access real-time data for agent and queue statistics. Pridis Wallboard also connect ACCS Contact Center Manager Administrator (CCMA) to get list of agents, list of skills and relationship between agent and skills.

Pridis Wallboard display real-time and daily data visualizations for skillset and agent statistics through the browser. Pridis Wallboard allow to create different layouts, select the key performance indicators, add websites, video or other media content. Then publish the wallboard for others or simply show the dashboard on a central screen.

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying Pridis Wallboard's ability to receive real-time Skillset statistics and Agent statistics from Avaya Contact Center Select (ACCS) using the Real-time Data (RTD) API and get list of agents, list of skills and relationship between agent and skills using CCMA API. Calls were made into IP Office to the ACCS agents to generate real-time statistics for:

- Agents in various states, e.g. Ready, Not Ready, Logged out.
- Agents on ACD calls.

Using the Real-Time Reporting on ACCS was compared to the real-time statistics being displayed on the Pridis Wallboard.

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.

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Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya systems and the Pridis Wallboard did not include use of any specific encryption features as requested by Pridis.

2.1. Interoperability Compliance Testing

The feature testing focused on verifying Pridis Wallboard correctly displaying Skillsets and Agent data from ACCS. A number of call center scenarios including the following were created to provide data to the Contact Center. The testing includes agents on both IP Office Server Edition and IP Office 500v2.

- Agent login/logout
- Agent state changes
- Number of answered calls for a Skillset
- Number of dropped calls for a Skillset
- Logged in Agents for a Skillset
- Number of available agents for a Skillset
- Calls waiting in the queue for a Skillset
- Number of calls for a Skillset
- Last wait time for a Skillset
- Longest waiting time for a Skillset
- Maximum wait time for a Skillset
- Serviceability

The serviceability testing focused on verifying the ability of Pridis Wallboard to recover from adverse conditions, such as disconnecting/reconnecting the network to Pridis Wallboard.

2.2. Test Results

All test cases passed successfully.

2.3. Support

Support for Pridis Wallboard is available as follows:

Pridis B.V.

Berencamperweg 6B

3861 MC Nijkerk

The Netherlands

Phone: +31 (0)33 2475700

E-mail: info@pridis.com

Web: www.pridis.com

3. Reference Configuration

Figure 1 illustrates a sample configuration that consists of Avaya IP Office, Avaya Contact Center Select and Pridis Wallboard.

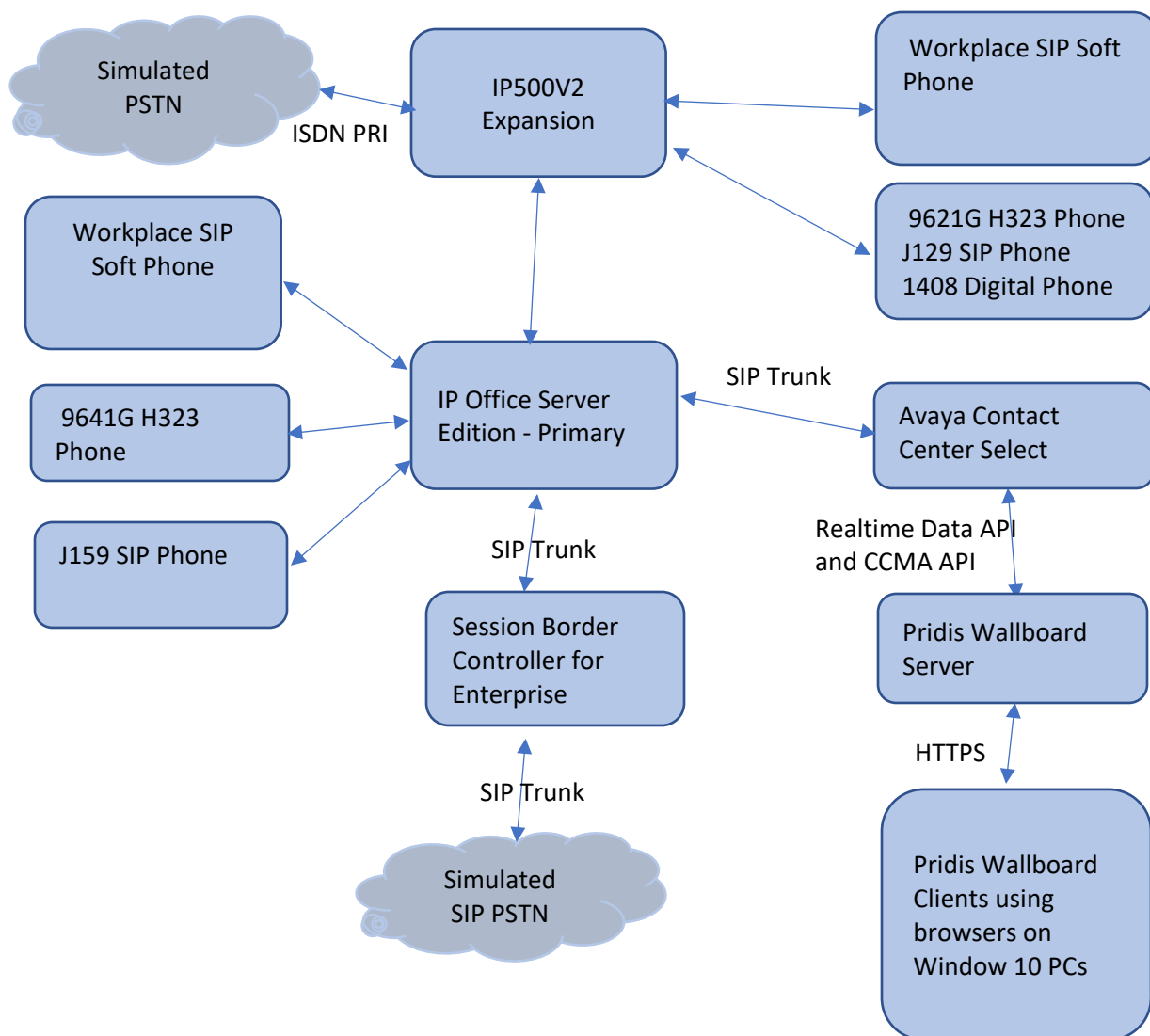


Figure 1: Test Configuration for Pridis Wallboard, Avaya Contact Center Select and Avaya IP Office

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office Server Edition (Primary)	11.1.0.0.0 build 237
Avaya IP Office 500 V2 (Expansion)	11.1.0.0.0 build 237
Avaya IP Office Manager	11.1.0.0.0 build 237
Avaya 9621G & 9641G IP Deskphone (H.323)	6.8
Avaya Workplace	3.8.4.10.2
Avaya J129 & J159 IP Deskphone (SIP)	4.0.5
Avaya 1408 Digital Deskphone	R48
Avaya Contact Center Select	7.1.0.3
Pridis Wallboard running on Microsoft Windows 2012 R2 SP1 hosted on VMware 6.7	2.0

Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 and also when deployed with IP Office Server Edition in all configurations.

5. Configure Avaya IP Office

It is assumed that Avaya IP Office is already configured and running properly with all the necessary licenses on board. The configuration steps required to connect Avaya Contact Center Select with Avaya IP Office are outside the scope of these Application Notes and will therefore not be covered in this section.

There is no extra configuration required on IP Office for the connection of Pridis Wallboard to Avaya Contact Center Select.

6. Configure Avaya Contact Center Select

It is implied that a working Contact Center Select is already in place and that the connections to IP Office are already configured.

6.1. Verify ACCS Multicast Stream Control

From the ACCS server open the **Multicast Stream Control** application as shown below.



Ensure that all Agent and Skillset boxes are ticked as shown below. The others are not used by member application. Ensure that neither **RTD Compression** nor **RSM Compression** is ticked. Click on **Apply** or **OK** to finish.

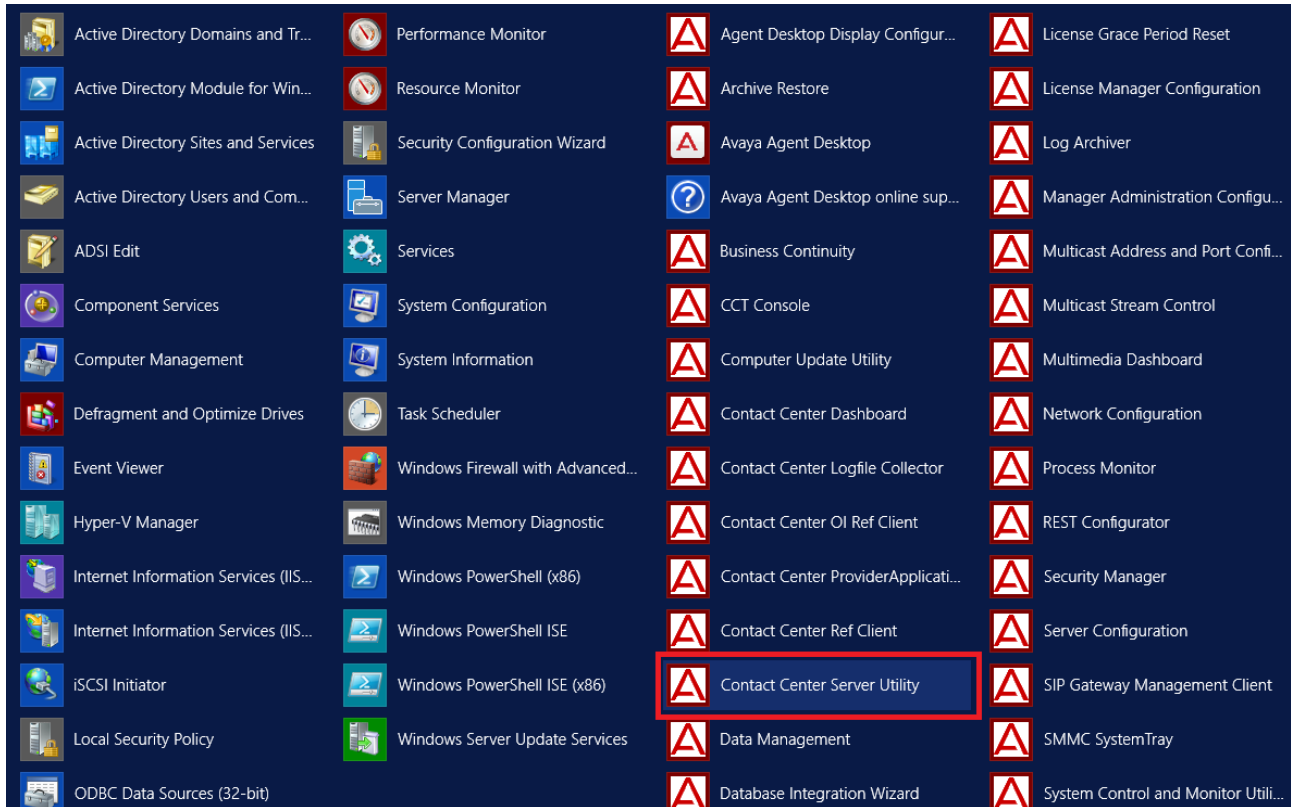
The screenshot shows the 'RTD Multicast Controller' dialog box. It features a blue title bar with the text 'RTD Multicast Controller' and standard window controls (minimize, maximize, close). The main area is divided into several sections, each with a title and a list of options:

- Skillset**: ☒ Moving Window, ☒ Interval To Date
- Nodal**: ☒ Moving Window, ☒ Interval To Date
- Application**: ☒ Moving Window, ☒ Interval To Date
- IVR**: ☒ Moving Window, ☒ Interval To Date
- Agent**: ☒ Moving Window, ☒ Interval To Date
- Route**: ☒ Moving Window, ☒ Interval To Date
- Compression**: ☐ RTD Compression, ☐ RSM Compression
- Version**: Release

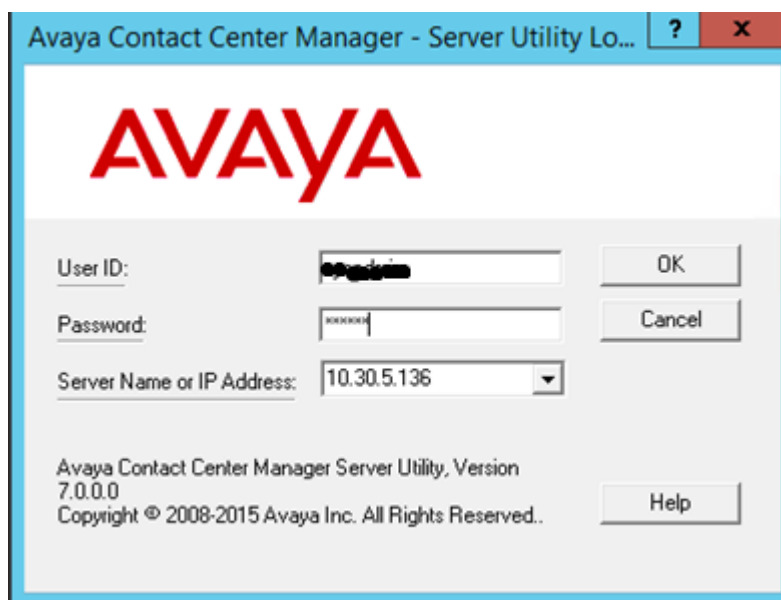
At the bottom of the dialog are four buttons: 'Get Current States', 'OK', 'Cancel', and 'Apply'.

6.2. Configure Access Class and Pridis User to Access ACCS Realtime Data

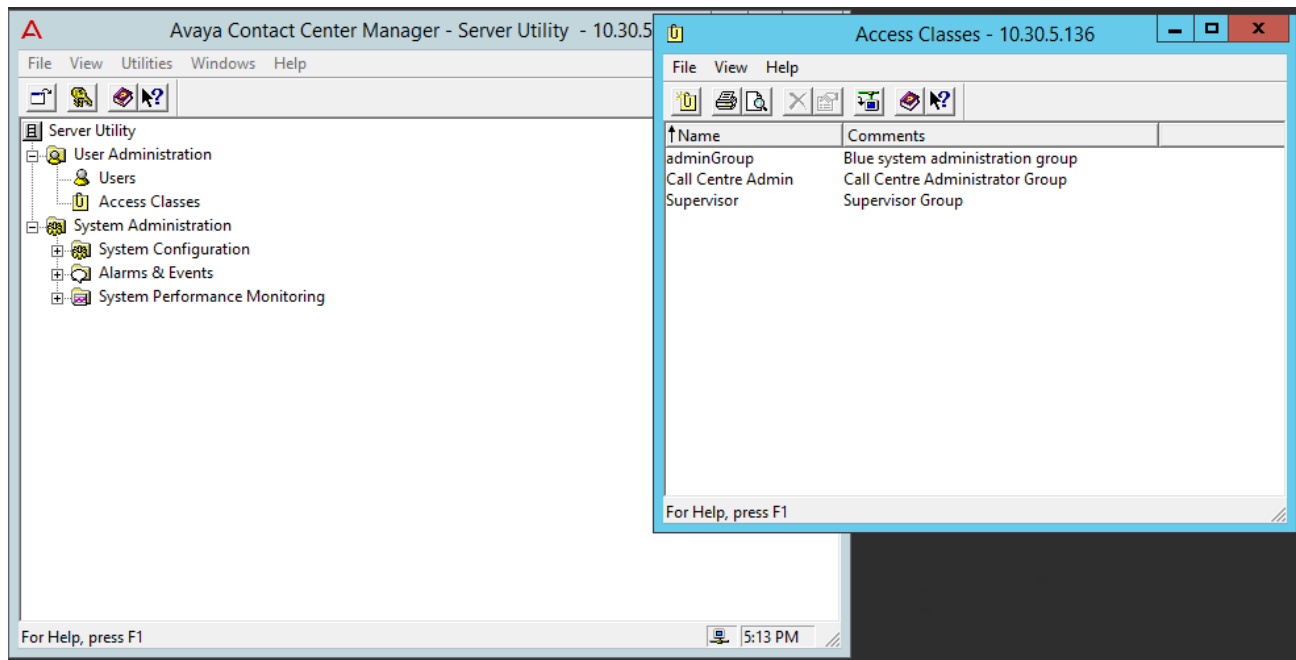
From the ACCS server open the **Contact Center Server Utility** application as shown below.



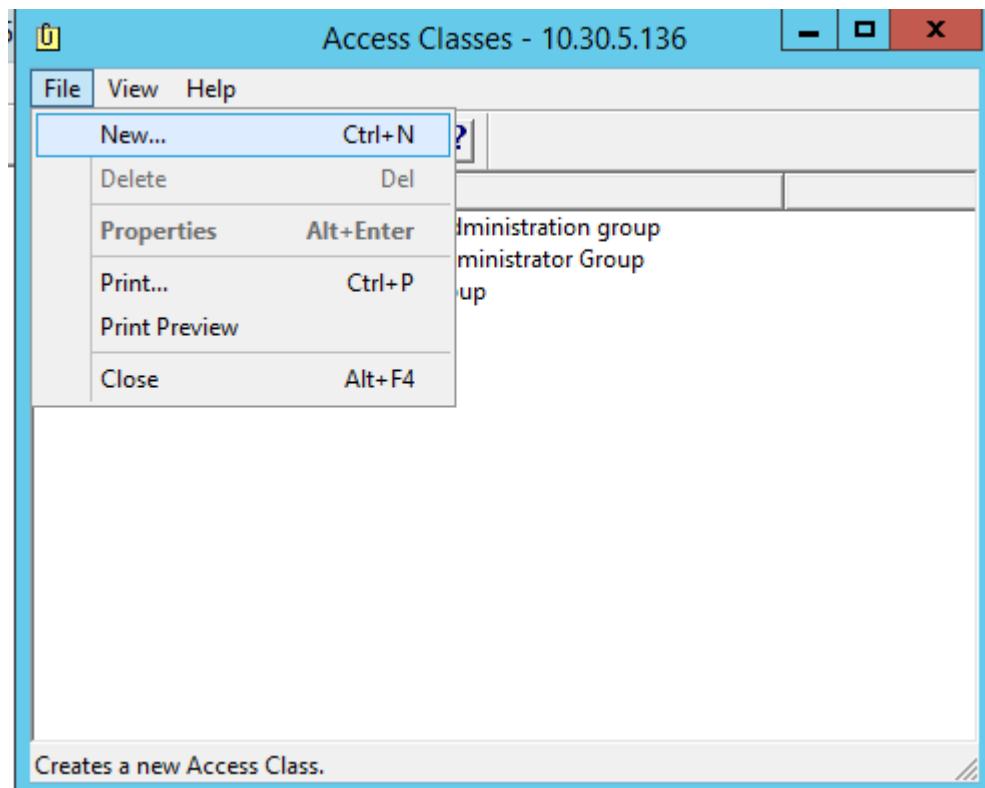
Enter administrator credential as show below:



From **Avaya Contact Center Management – Server Utility** window, double click on **Access Classes** to open **Access Classes** window.



Select **File → New** from **Access Classes** window to create new Access Class.



Enter the **Name** for new Access Class.

The image shows a software dialog box titled "New Access Class". It has a blue header bar with a question mark icon and a close button (X). Below the header, there are two tabs: "General" and "Access". The "General" tab is currently selected. Inside the "General" tab, there is a "Name:" label followed by a text input field containing "RTD". Below that is a "Comments:" label followed by a larger text area containing "Realtime Data". At the bottom of the dialog, there are three buttons: "Save", "Cancel", and "Help".

Click on **Access** tab and change **Level of Access** for these items: **Historical Statistics**, **Real-time Statistics** and **Real-Time Displays** as shown below and click **Save**.

The screenshot shows the 'New Access Class' dialog box with the 'Access' tab selected. The 'Members have access to the following items in the system window:' section contains a table with two columns: 'Item in system window' and 'Level of Access'. The table lists various system items and their current access levels. Three items are highlighted with red boxes: 'Historical Statistics' (View), 'Real-Time Statistics' (View), and 'Real-Time Displays' (View all agents - create displays). Below the table, the 'Selected item:' field shows 'Real-Time Displays' and the 'Level of Access:' dropdown is set to 'View all agents - create displays'. The 'Save', 'Cancel', and 'Help' buttons are at the bottom.

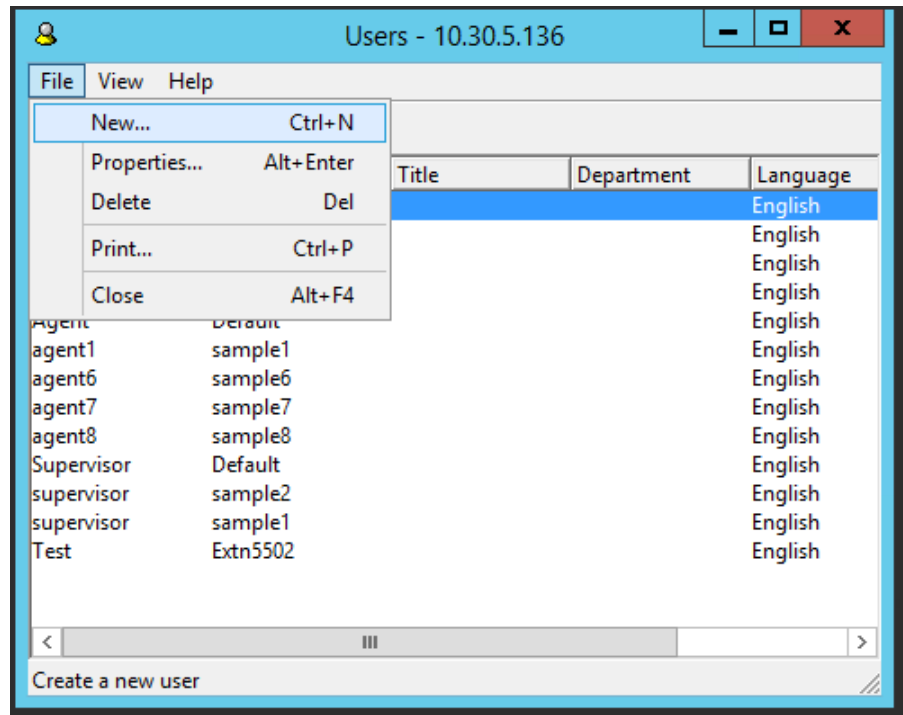
Item in system window	Level of Access
Voice Ports	None
IVR ACD-DNs	None
Historical Statistics	View
Real-Time Statistics	View
Routes	None
Real-Time Displays	View all agents - create displays
Formulas	None
Agent Threshold Classes	None
Application Threshold Classes	None
Nodal Threshold Classes	None
IVR ACD-DN Threshold Classes	None

Selected item: Real-Time Displays

Level of Access: View all agents - create displays

Save Cancel Help

Back from **Avaya Contact Center Management – Server Utility** window, double click on **Users** to create new user for RTD Access Class created above (not shown). From **Users** window, select **File → New**.



Enter the **Fist name** and **Last name** for **New User**.

New User

General Desktop

First name: Pridis

Last name: RTD

Comments:

Title:

Department:

Language: English

Save Cancel Help

Click on **Desktop** tab and enter **User ID** and **Set Password** for this user. Change **Access Class** to **RTD** class created above. Then click **Save**.

New User

General Desktop

User ID: pridis Set Password

Password retry count: 0 ☒ Password Expires

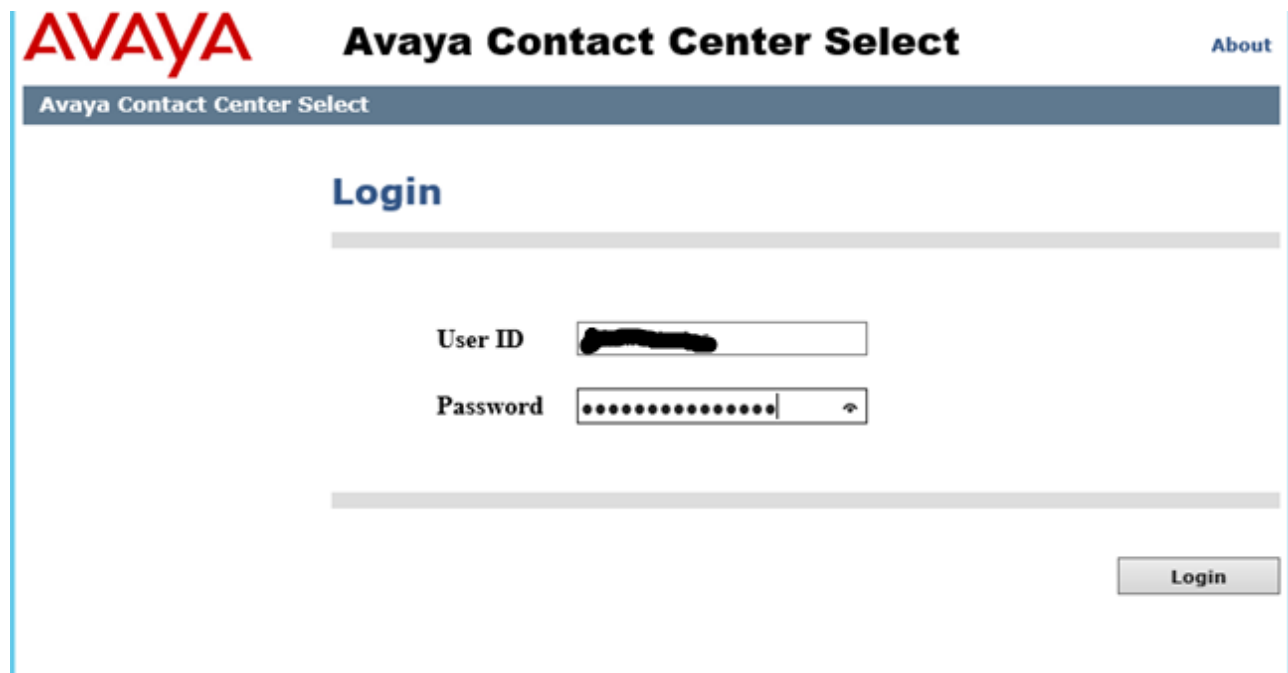
User desktop status: OK Lock Out

Access Class: RTD

Save Cancel Help

6.3. Create a New CCMA User

Open a web session to the Contact Center server and Log In with the proper credentials as shown below.



The screenshot shows the Avaya Contact Center Select login interface. At the top left is the Avaya logo in red. To its right is the text "Avaya Contact Center Select" in bold black. Further right is a blue link labeled "About". Below this is a dark blue horizontal bar with the text "Avaya Contact Center Select" in white. The main heading "Login" is in blue. Below it is a light gray horizontal bar. The login form consists of two fields: "User ID" with a text input field containing a redacted value, and "Password" with a password input field showing 12 dots and a toggle icon. Below the password field is another light gray horizontal bar. At the bottom right is a gray "Login" button.

Click on **Access and Partition Management**

Launchpad

- | | |
|--|--|
|  Contact Center Management |  Configuration |
|  Access and Partition Management |  Scripting |
|  Real-Time Reporting |  Emergency Help |
|  Historical Reporting |  Outbound |
|  Prompt Management |  Multimedia |

Right click on **User Administration** in the left window and click **New user**.

AVAYA

Access and Partition Management

Logged in user: **Administrator ipoffice** | [Change Password](#) | [Logout](#)

View/Edit

Add

Status

Launchpad

Help

User Administration

New user

nguyen quang

Pridis Wallboard

supervisor samp

supervisor samp

Sync ACCS

Access and Partition Management

- Choose from the options in the View/Edit menu to load users, partitions, access classes, or report groups in the tree. If you are working with users, click the User Administration heading in the tree to view and manage all configured users.
- To add a new item choose the type of item from the Add menu. For example, to add a new user, click Add > New User.

Enter the details of the user including the **User ID**, **First Name**, **Last Name** and **Password**. On **Launchpad Options**, select **Real-Time Reporting** and **Contact Center Management**.

AVAYA

Access and Partition Management

Logged in user: **Administrator ipoffice** | [Change Password](#) | [Logout](#)

View/Edit

Add

Status

Launchpad

Help

User Administration

- Administrator ipoff
- Nguyen Quang
- Pridis Wallboard
- supervisor sample
- supervisor sample
- Sync ACCS

User Details

User ID: * pridis

First Name: * Pridis

Last Name: * CCMA

User Type: Standard

Account Type: CCMA Account

Password

New password

Confirm password

Launchpad Options

☐ Access and Partition Management

☐ Configuration

☐ Emergency Help

☐ Multimedia

☒ Real-Time Reporting

☒ Contact Center Management

☐ Audit Trail

☐ Prompt Management

☐ Historical Reporting

☐ Scripting

☐ Outbound

<

III

>

Submit

Create Copy

Delete

Unassign User

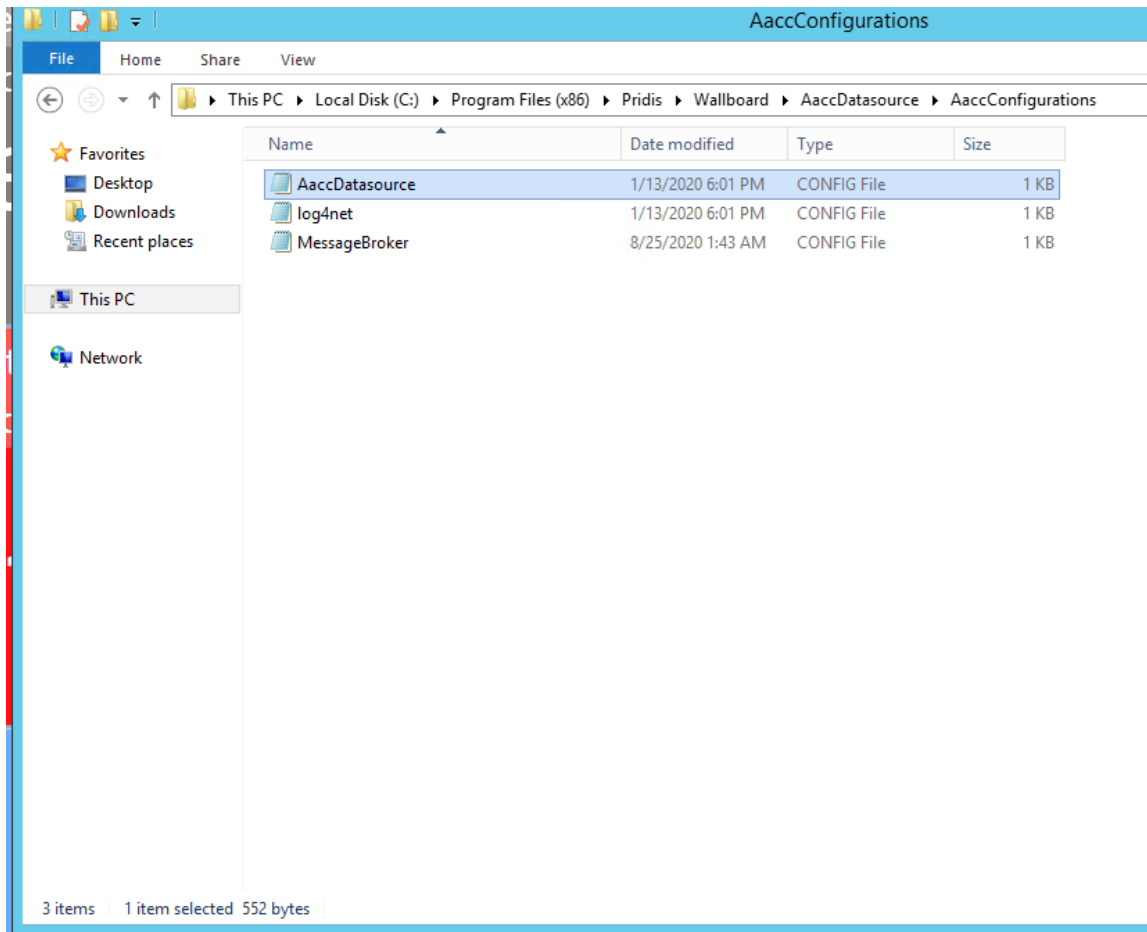
Close All Sections

7. Configure Pridis Wallboard

The following sections describe the steps required to configure the base configuration required to enable Pridis listen for real-time data given out from the Avaya Contac Center Select via Real-time Data API. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 10**.

7.1. Configure ACCS Datasource for Pridis Wallboard

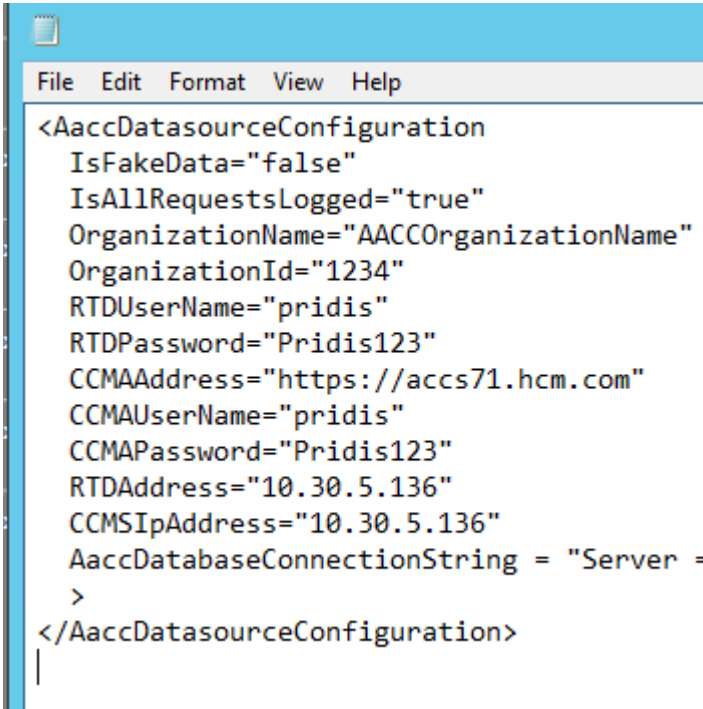
To configure the Pridis Wallboard server navigate to the **AaccDatasource** file, the location of this file may be different on different systems but in the example below this was located at **C:\Program Files (x86)\Pridis\Wallboard\AaccDatasource\AaccConfigurations** as shown on the screen below.



Open the **AaccDatasource.config** file and modify all the following settings:

OrganizationName:	Enter a name for the Organization, in this case “ ACCSDevConnect ”.
OrganizationId:	Enter ID provided by Pridis.
RTDUserName:	Enter ACCS Username to get Real-Time data, created on Section 6.2 .
RTPPassword:	Enter ACCS password for username above.
CCMAAddress:	Enter ACCS Contact Center Manager Administration (CCMA) URL, in this case http://10.30.5.136 .
CCMAUserName:	Enter ACCS CCMA Username, created on Section 6.3 .
CCMAPassword:	Enter ACCS CCMA Password for username above.
RTDAddress	Enter ACCS RTD address.
CCMSIpAddress	Enter ACCS Contact Center Manager Server (CCMS) IP address.

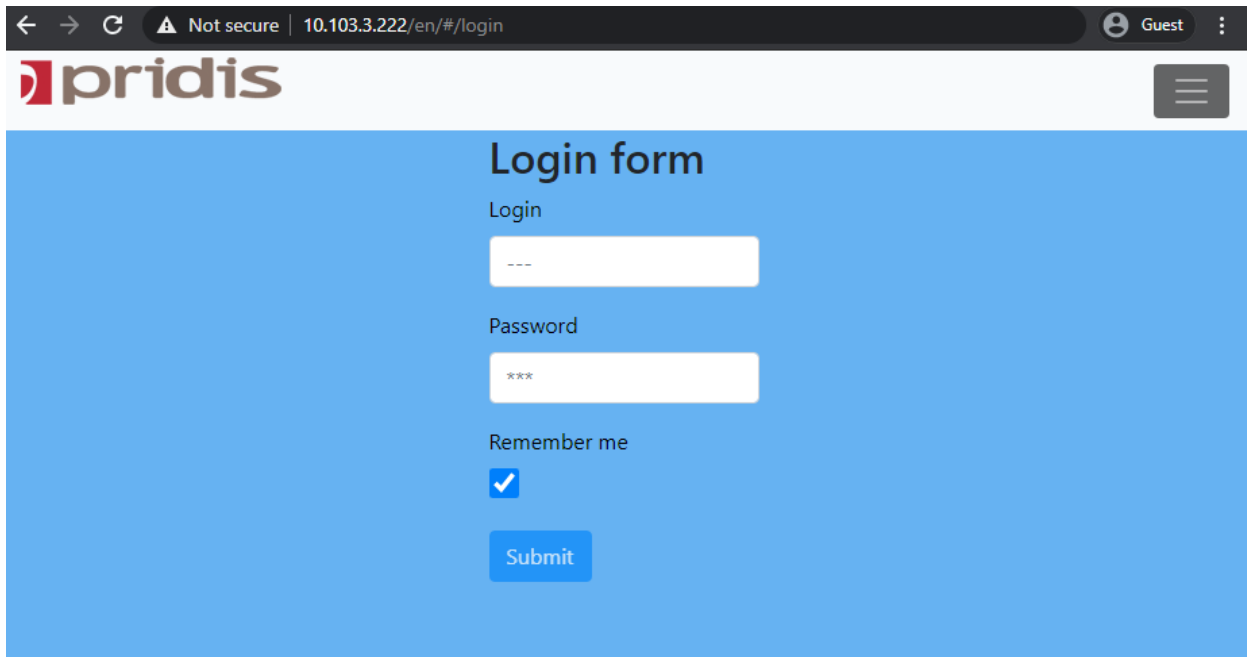
Leave the rest as default value.



```
<AaccDatasourceConfiguration
  IsFakeData="false"
  IsAllRequestsLogged="true"
  OrganizationName="AACCOrganizationName"
  OrganizationId="1234"
  RTDUserName="pridis"
  RTDPassord="Pridis123"
  CCMAAddress="https://accs71.hcm.com"
  CCMAUserName="pridis"
  CCMAPassword="Pridis123"
  RTDAddress="10.30.5.136"
  CCMSIpAddress="10.30.5.136"
  AaccDatabaseConnectionString = "Server =
>
</AaccDatasourceConfiguration>
```

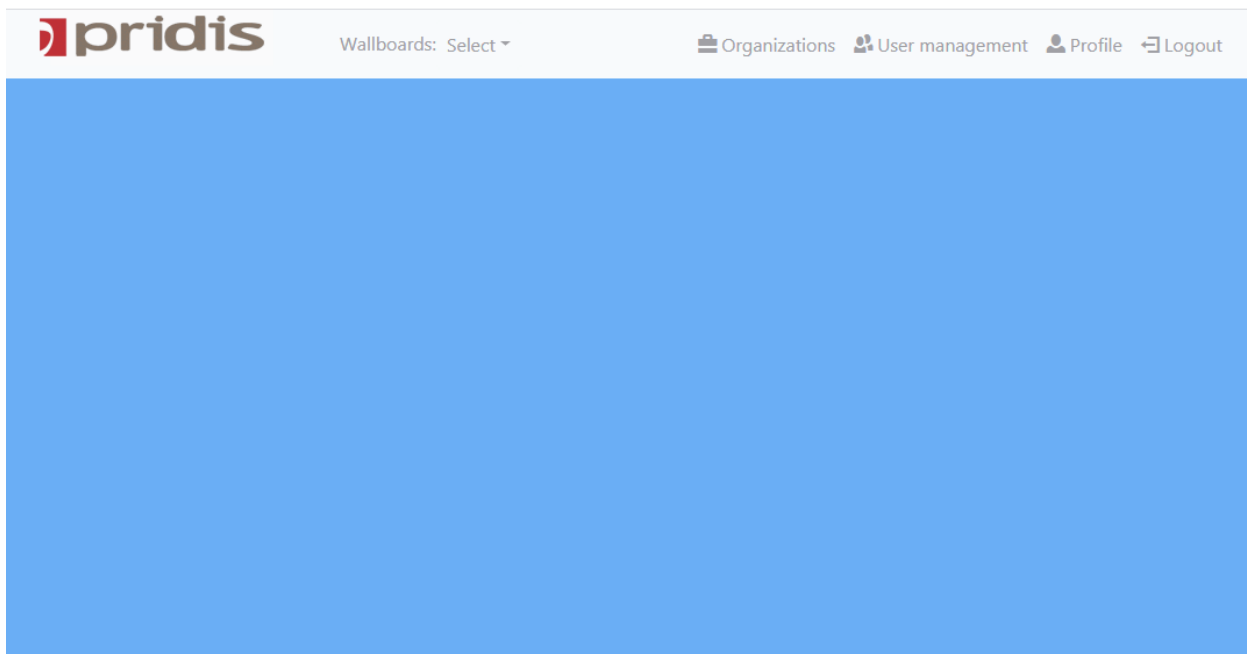
7.2. Configure Pridis Wallboard

Access the Pridis Wallboard by using the URL “<http://<server ip address/en>>” as shown below. The login screen is displayed. Log in using the appropriate credentials.

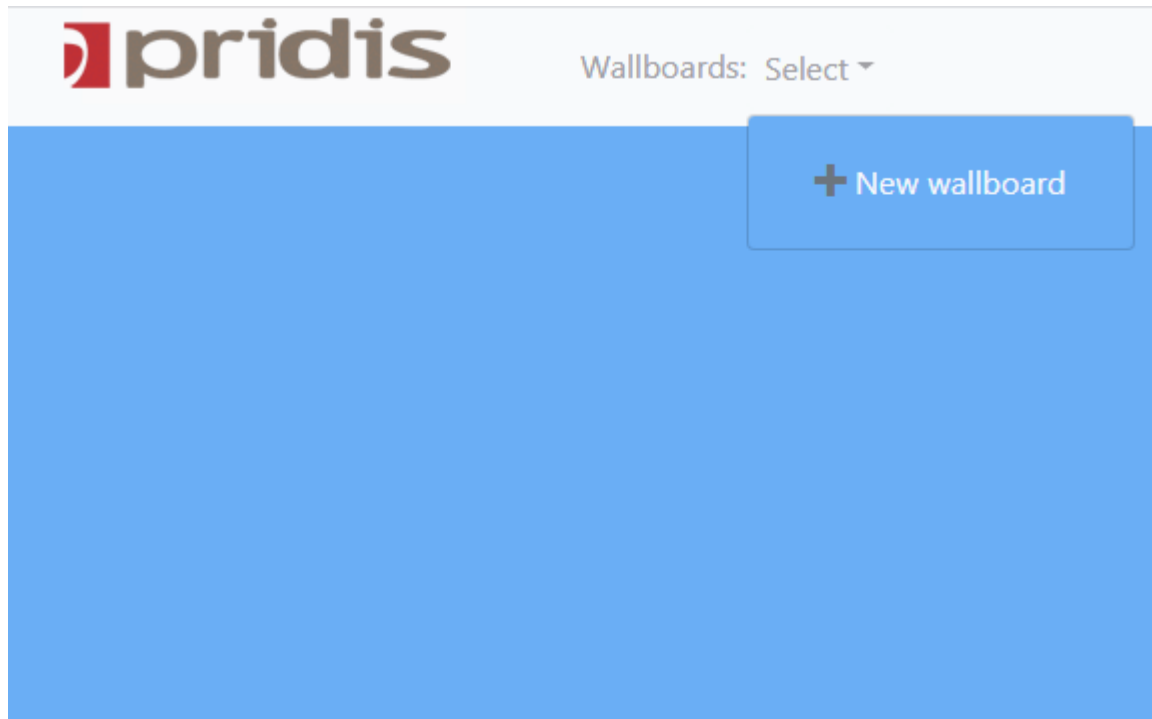


The screenshot shows a web browser window with the address bar displaying "10.103.3.222/en/#/login". The page features the Pridis logo in the top left corner and a hamburger menu icon in the top right. The main content area has a blue background and is titled "Login form". It contains a "Login" label, a text input field with three dashes, a "Password" label, a password input field with three asterisks, a "Remember me" label with a checked checkbox, and a blue "Submit" button.

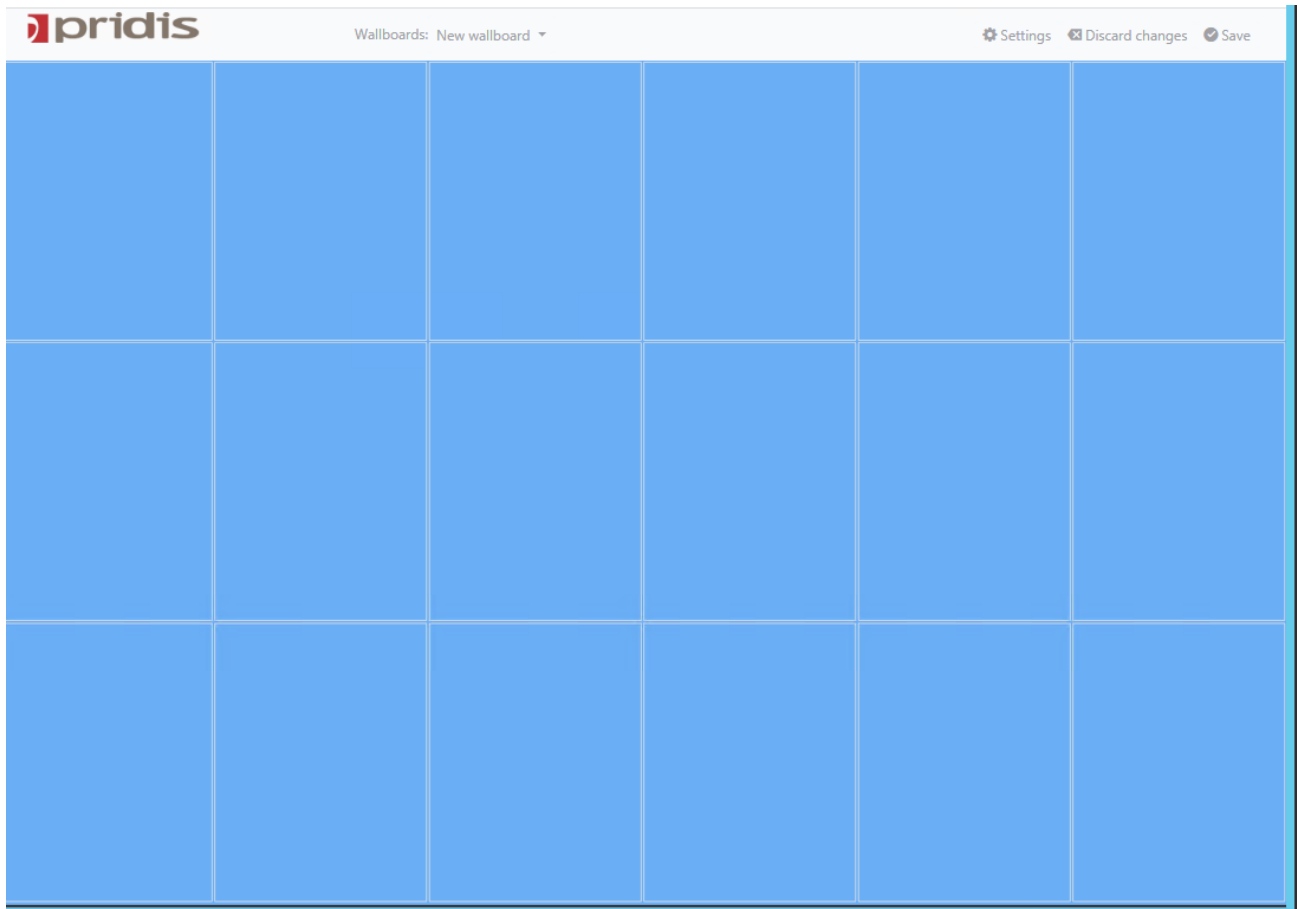
The home screen is shown below.



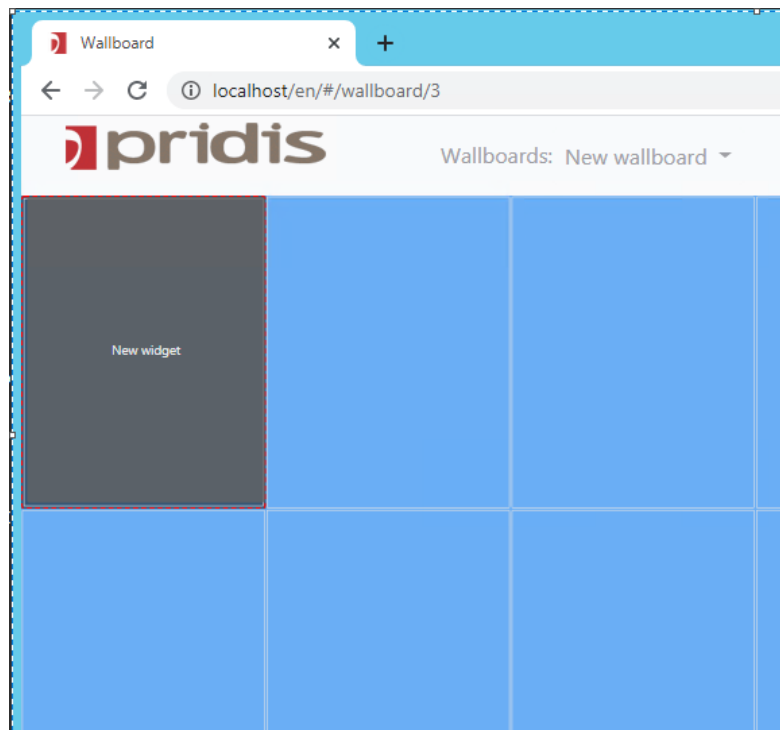
From the home screen, press **Select** → **New wallboard** to create new wallboard



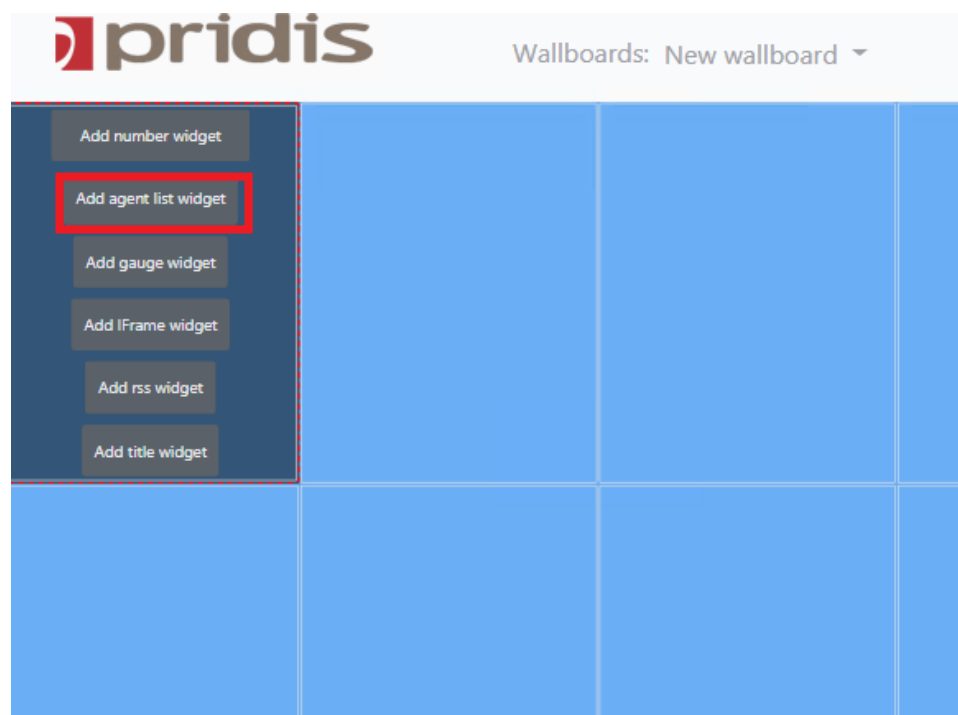
The new wallboard was created and shown as below with a default small grid for multiple panels



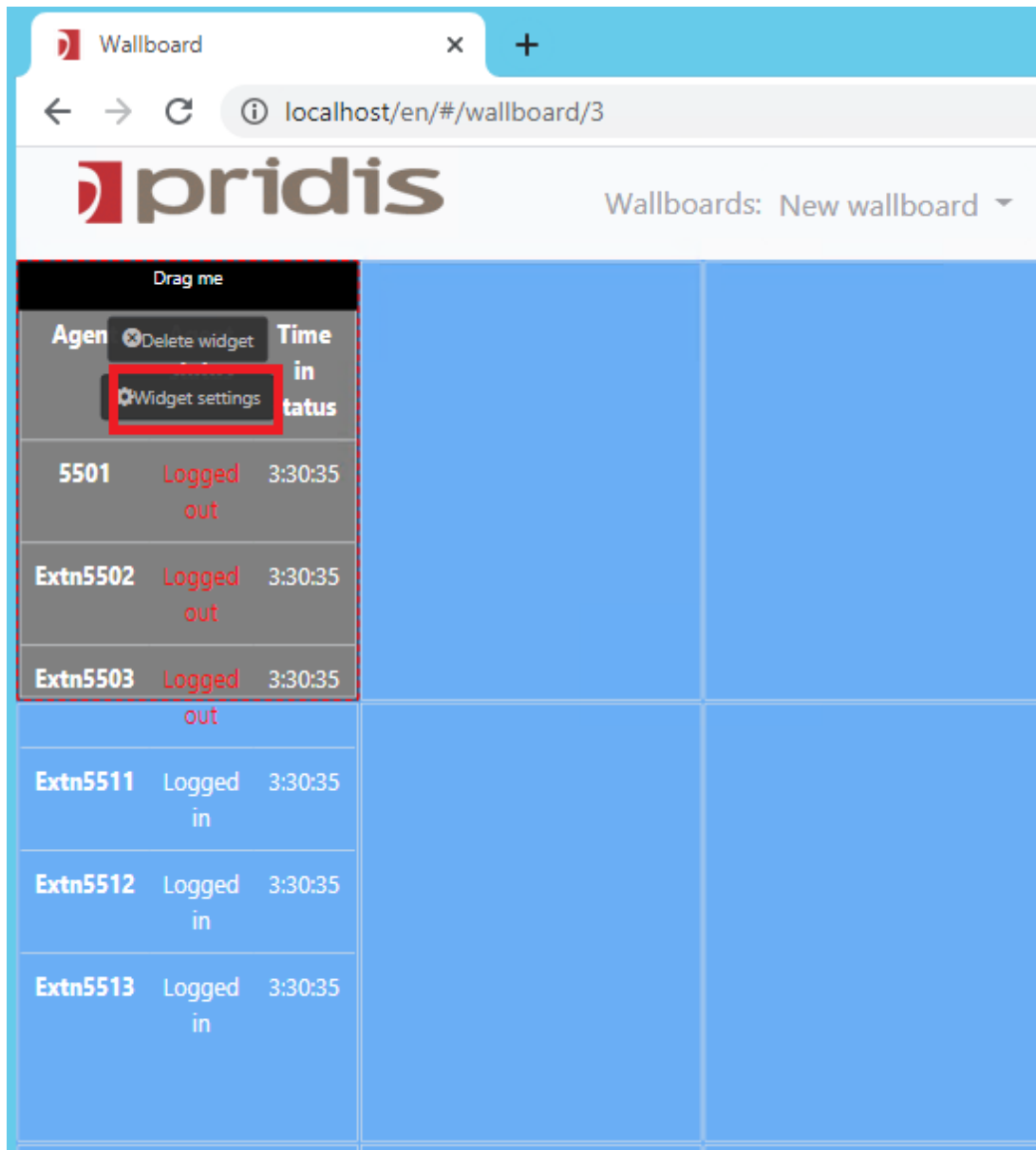
Select top left panel and click to create **New widget**



List of these widgets are shown as below, select one widget for example “**Add agent list widget**”



The following screen will be displayed and new agent list widget have been created, select **Widget settings** to configure the widget



Change the settings as below for this widget and leave the rest as default.

Title	Name of this widget, example “ Skill SE Group ”
Row span, Column span	Number of rows and columns using for this widget, example “ Column span 1 ” and “ Row span 5 ”
For Skillset	Select Skillset on ACCS for this widget, in this case “ SE Group ” - a voice skillset on ACCS.
Value to show	Select value for this widget, example “ Agent status ”

The screenshot shows the 'Widget settings' dialog box with the following configurations:

- Title:** Skill SE Group
- Column span 1:** Set to 1 (indicated by a slider).
- Row span 5:** Set to 5 (indicated by a slider).
- Background color:** #808080
- Text color:** #ffffff
- Font size 20:** Set to 20 (indicated by a slider).
- Agent status colors:**
 - ☒ Different color for: "Busy" (Color: #EE9910)
 - ☒ Different color for: "Logged out", "Disabled", "Not ready" (Color: #FF1010)
- Column: Agent status (SE Group):** Includes a 'Delete' button.
- Column title:** Agent status (SE Group)
- Keep this title:** ☐
- Value to show:** Agent status
- For skillset:** SE Group

Scroll down and press **OK** to save the widget.

In the compliance testing, the following widgets were created. Pridis Wallboard provide two widgets interfaces for statistics (except Agents list): Number Widget and Gauge Widget. In the testing, all widget is using “Number Widget”.

- Number of answered calls.
- Number of dropped calls.
- Logged in Agents.
- Number of available agents.
- Calls waiting in the queue.
- Number of calls.
- Last wait time.
- Expected wait time.
- Longest waiting time.
- Maximum wait time.

New widget title			Wallboards: New wallboard				
Agent	Agent status	Time in status	Number of logged in agents (SE Group)	Number of available agents (SE Group)	Calls waiting in the queue (SE Group)	Number of answered calls (SE Group)	Number of dropped calls (SE Group)
5501	Logged out	3:49:31	3	3	0	0	5
Extn5502	Logged out	3:49:31					
Extn5503	Logged out	3:49:31					
Extn5511	Logged in	3:49:31	Number of calls (SE Group)	Last wait time (SE Group)	Average wait time (SE Group)	Maximum wait time (SE Group)	Longest waiting time (SE Group)
Extn5512	Logged in	3:49:31	5	1:10	1:09	2:43	0:00
Extn5513	Logged in	3:49:31					

8. Verification Steps

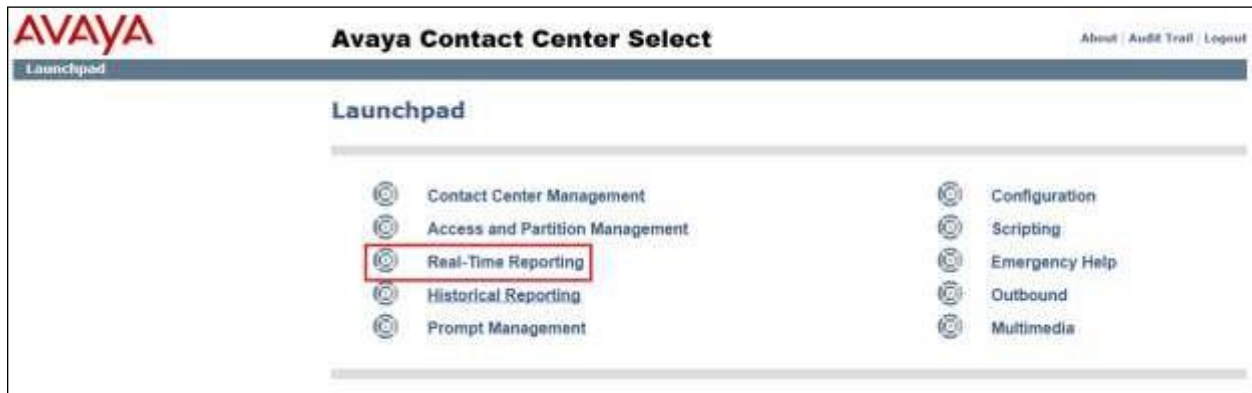
This section provides verification steps that may be performed in the field to verify that the solution is configured properly.

8.1. Verify Avaya Contact Center Select Real-Time Reporting

Log in to ACCS by navigating to the IP address of the ACCS server from a web browser such as Internet Explorer as shown below and click on **Login**.



Once logged in click on **Real-Time Reporting**.



Select the appropriate display, for example **Standard_Agent_Display** is chosen below, click on **Launch Display** from the main window. A number of displays can be opened at the same time to show agents statistics for the Contact Center.

Agt First Name	Agt Last Name	Supr First Name	Supr Last Name	Ans SklSet	In Contacts Status	DN In	DN Out	Time In State
Extn5511	5511	sample1	supervisor		Idle			13:16
Extn5512	5512	sample1	supervisor		Idle			10:31
Extn5513	5513	sample1	supervisor		Idle			02:20

Click on **Standard_Skillset_Display** and **Launch Display** to show Skillset statistics:

Skillset	Srv Lvl %	Wait	Ans	Avg Ans Dly	Sklset Abnd	Agt Idle	Agt Active
SE_Group	100	0	0	0	0	3	0

8.2. Verify Pridis Wallboard Real-Time Report

Make some calls to the SE Group voice skillset on ACCS. The following Wallboard window is displaying real-time information and agents for skillset SE Group.

New widget title			Number of logged in agents (SE Group)	Number of available agents (SE Group)	Calls waiting in the queue (SE Group)	Number of answered calls (SE Group)	Number of dropped calls (SE Group)
Agent	Agent status	Time in status	3	3	0	0	7
5501	Logged out	4:06:11					
Extn5502	Logged out	4:06:11					
Extn5503	Logged out	4:06:11	7	0:55	1:04	2:43	0:00
Extn5511	Logged in	4:06:11					
Extn5512	Logged in	4:06:11					
Extn5513	Logged in	4:06:11					
			Number of calls (SE Group)	Last wait time (SE Group)	Average wait time (SE Group)	Maximum wait time (SE Group)	Longest waiting time (SE Group)

9. Conclusion

These Application Notes describe the procedures for configuring necessary to connect Pridis Wallboard 2.0 to Avaya Contact Center Select 7.1 and Avaya IP Office 11.1, as shown in Figure 1. Pridis Wallboard was able to successfully interoperate with Avaya Contact Center Select 7.1 and Avaya IP Office 11.1.

10. Additional References

Documentation related to Avaya can be obtained from <https://support.avaya.com>.

- Administering Avaya IP Office™ Platform with Web Manager, Release 11.1 Issue 2 May 2020*
- Administering Avaya IP Office™ Platform with Manager, Release 11.1 Issue 2 May 2020*
- Deploying Avaya Contact Center Select Software Appliance, Release 7.1 Issue 03.05 December 2019*

Product Documentation for Pridis Wallboard can be obtained from Pridis BV or can be obtained at: www.pridis.com.

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