Atea Wallboard
UAW 2.2.01

Administration Guide

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Document History

Date	Author	Version	Summary
13 May 2016	Murray Lum	2.2.01b	Instructions on how to view team agents
31 Jan 2016	Murray Lum	2.2.01a	Updated to 2.2.01 – revised user interface
16 June 2015	Murray Lum	2.1.31b	Updated to version 2.1.31 and reformatted
18 Feb 2015	Sascha Monteiro	2.1.11	To suit release 2.1

Related Documents

Document	Description
UAW Technical Reference 1.6a	Planning, design and technical information for Atea Wallboard application (April 2016)

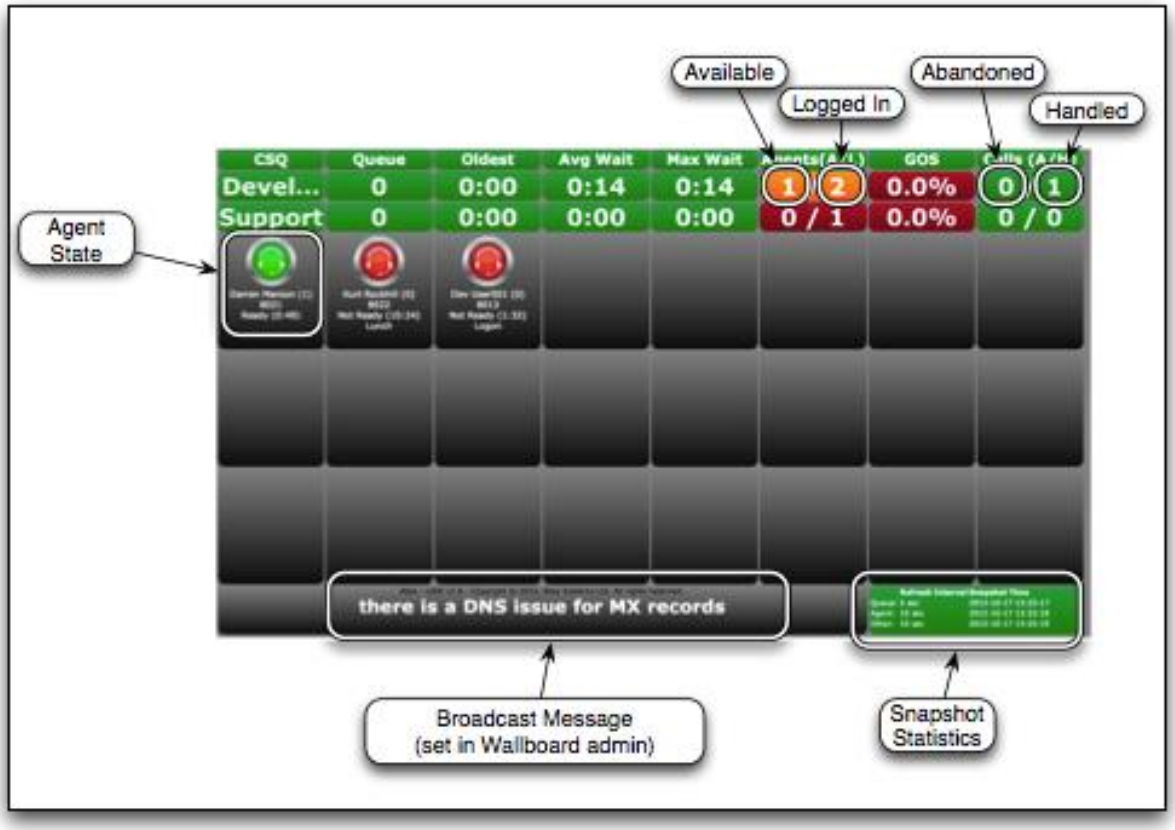
1 Wallboard Overview

The Atea UAW Wallboard enables the presentation of a variety of statistics in real time, via a wall mounted screen, or any other device capable of displaying a standard web page. Initially designed for the presentation of Cisco UCCX queue statistics, agent state and grade of service information, the Atea UAW Wallboard has been expanded to access statistical data from other sources too. This includes databases, CSV and Excel spreadsheet files (full version only, not the basic XA version or demo versions).

There are a variety of screen layouts to display the statistics.

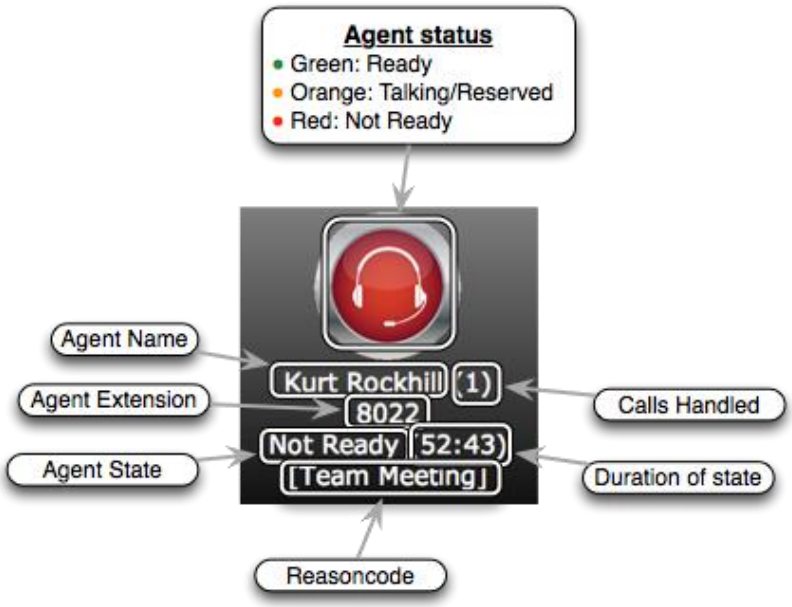
Wallboard Presentation - General

This wallboard shows both real time queue data and agent status on one page.



Agent Status - Detail

Here is the on screen information for each agent. Some layouts show only a subset of the information.



Here are the details shown for each agent;

- Coloured Icon (Red, Orange or Green) reflecting the agent's state
- Agent Name and Calls Handled
- Agent Extension (or DN)
- Agent State and the duration of how long they've been in this state
- Reason Code if they are unavailable (this is blank when they are available)

WallBoard Message - Detail

A broadcast message can be shown on the Wallboards in the bottom left area. This may be either one message for all Wallboards, or individual messages for the configured Wallboards. Messages may be fixed, scheduled or based on threshold.

WallBoard Snapshot Statistics - Detail

This provides details about the query processes used to get the wallboard data. There are three polling threads (see System Administration).

The Refresh Interval is the time between the last and previous UCCX data read. The snapshot time is when the last data was read.

Note: If the Snapshot Time turns red (as in this screenshot), the runtime of this Query takes longer than the configured Interval. Either increase the interval, or perhaps improve the response time by purging some data from the UCCX server (consult your UCCX system administrator).

Queue Wallboards and Service Wallboards

An Atea UAW Wallboard is a table of statistical data, displayed via webpage and updated in real time. Each wallboard display has one or more tables. The rows in the table represents a Queue or a Service.

- Each **Queue** corresponds to a UCCX queue. The queue information is presented as a row of data cells.
- A **Service** is a row of data cells from any supported data source, and includes the ability to aggregate the data values.

A wallboard definition can consist of both queues and services for queue/service wallboards. For mixed queue and agent state wallboards, only queues can be applied.

The first cell in each row contains the name of the queue/service along with an optional image/icon (template dependent). The remaining cells display the data associated with that queue/service, as configured in the administration section. The cells may also be configured with thresholds, which alter display properties of that cell (and possibly the whole row) depending on the value of the cell.

Some wallboards contain agent status information. The layout is set by the specific wallboard template.

2 Wallboard Architecture

The Atea wallboard application resides on a server known as the Atea TSP. Atea provide the TSP as a virtual machine. It comprises of a Linux O/S (Oracle Linux) server complete with:

- An Oracle database and application environment
- A Tomcat web server
- An Open LDAP directory
- Other supporting applications such as the Java run time environment, SFTP and SSH.

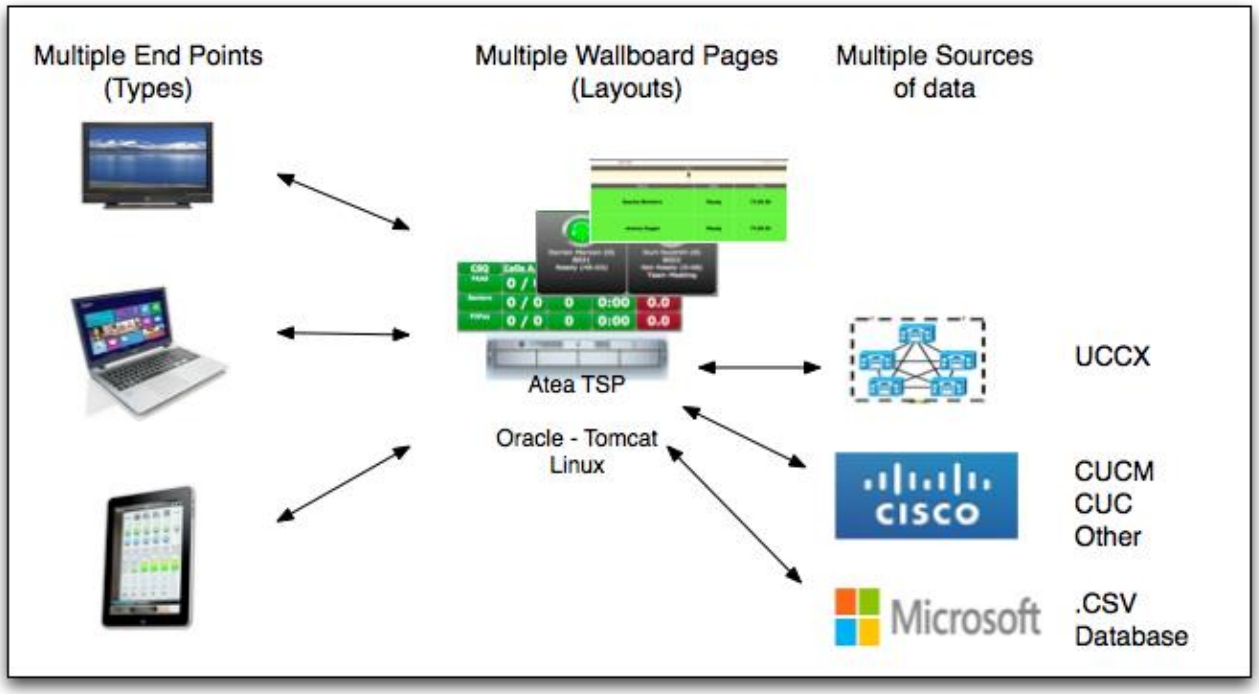
The Atea applications are written in the Java environment.

The wallboard application resides within the Tomcat web server. On one side the application queries data sources (such as UCCX) for statistics. These statistics are then compiled into a series of pages in memory on the server (the wallboards). Devices with a web browser can then connect to the appropriate page URL to display the wallboard. The browser is the only software required on the client desktop.

Each wallboard can be set to require authentication by a user or source IP address. Where a user is authenticated to more than one wallboard, application will automatically cycle the user's screen each of the wallboards.

High availability is supported both from a UCCX and UAW perspective.

The general architecture is shown in this diagram below.



3 Wallboard Layouts

The wallboard is shipped with several default layouts. You may customise these, or pay Atea to create a custom template. The table below has examples. Each template layout dictates what you need to configure to create your wallboard. For example, a queue statistics wallboard needs configuration for both the queues and the columns. By contrast, a wallboard that only displays agent status, needs configuration for just the queues that the agents belong to (e.g. those that they have skills for).

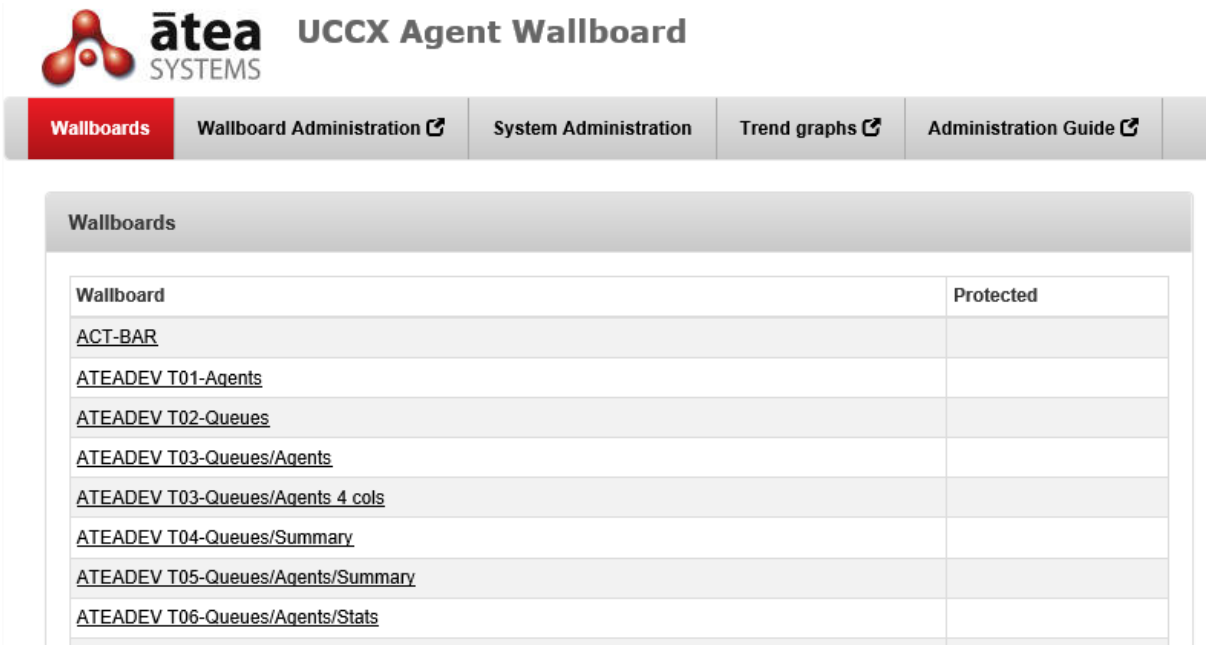
Layout	Comments	Screenshot
Table-Queue (Atea Default)	Provides information on queues. Displayed on manager's PC and large screens in offices.	
Table-Queue 2 (Atea Default)	Real time wallboard that is displayed on LCD TVs in the contact centre that shows all configured CSQs providing information on service, handled calls, abandoned calls, agents available and maximum wait time.	
Grid-Queue and Agent (Atea default)	This is most common layout, 1 or 2 queues and up to 24 agents can be presented per Wallboard	
Grid-Agent (Atea default)	On an Agent only page, up to 32 Agents can be presented per Wallboard	
Grid-Queue (Atea default)	On a Queue only page, up to 8 CSQ's can be presented per Wallboard	

4 Administration Options

Tip: ***Remember to check the website for the latest tips and advice on Atea products.***

4.1 Connecting to the landing page

From a web browser, connect to the Wallboard landing page, which normally looks like http://wallboardserver:8088/UccxStats/wallboard. Here is an example of the landing page.



The main sections are:

- **Wallboards –** This is the list of the individual wallboards configured, and their protection status. Click on the wallboard link to open it.
- **Wallboard Administration –** Create, modify or delete any of the settings for a wallboard. This includes wallboard security and aliases for queues and agents.
- **System Administration –** This area holds the license file information and settings such as the UCCX IP address(s) and database passwords. You can also check the current software version here.
- **Trend graphs –** These are from the UCCX statistics for each queue or the whole UCCX. There are charts for 15 minute through to one year.
- **Administration Guides –** A link to the online support information.

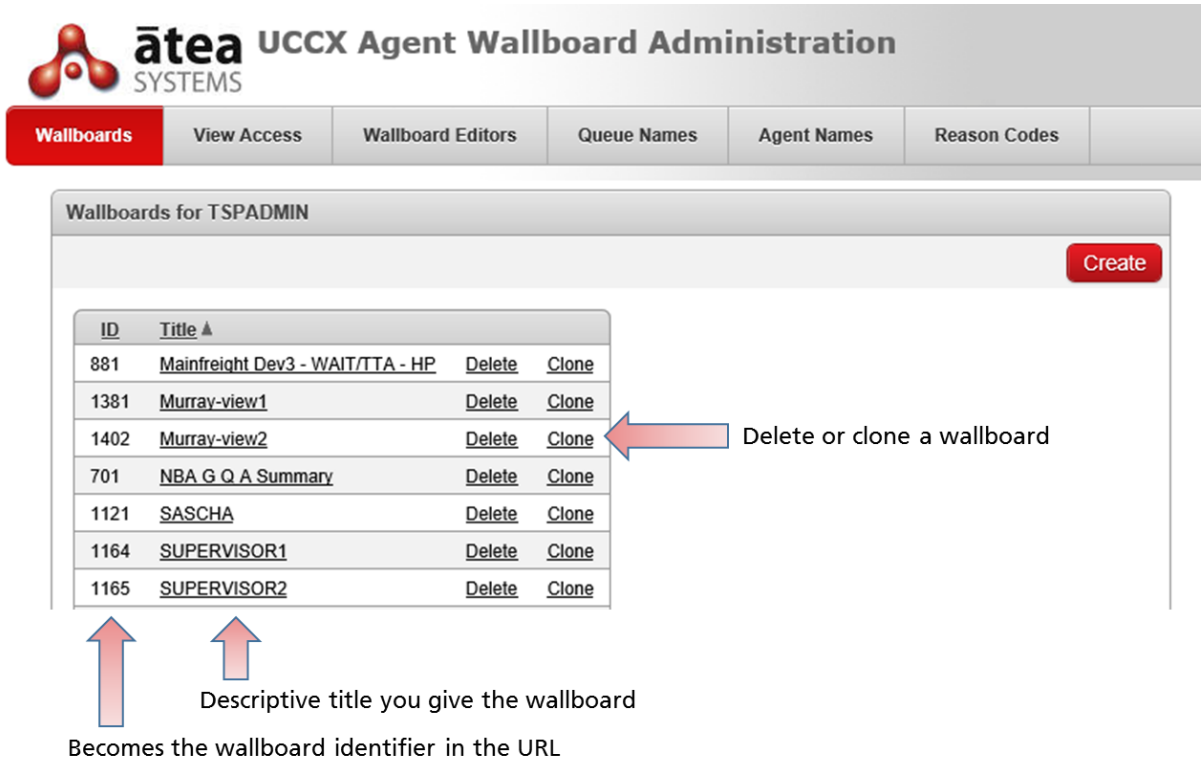
5 Wallboard Administration

Use this application to create, edit and delete wallboards. From here, you can also:

- Change the display names of agents and queues retrieved from UCCX
- Assign wallboards to specific users
- Edit agent not ready "Reason Codes"

To configure the wallboards:

1. Login with the provided credentials. The default username is **ursadmin**.
2. Click the link for Wallboard Administration to go to the "Wallboards" page. The tab in red indicates the administration area you are in.



From this page you can:

- Create a new wallboard using the **Create** button. The new wallboard will be blank.
- Clone an existing wallboard using the **Clone** link
- Modify a wallboard by clicking the **title of the wallboard**
- Delete a wallboard using the **Delete** link.

5.1 Queue and Agent State Wallboards

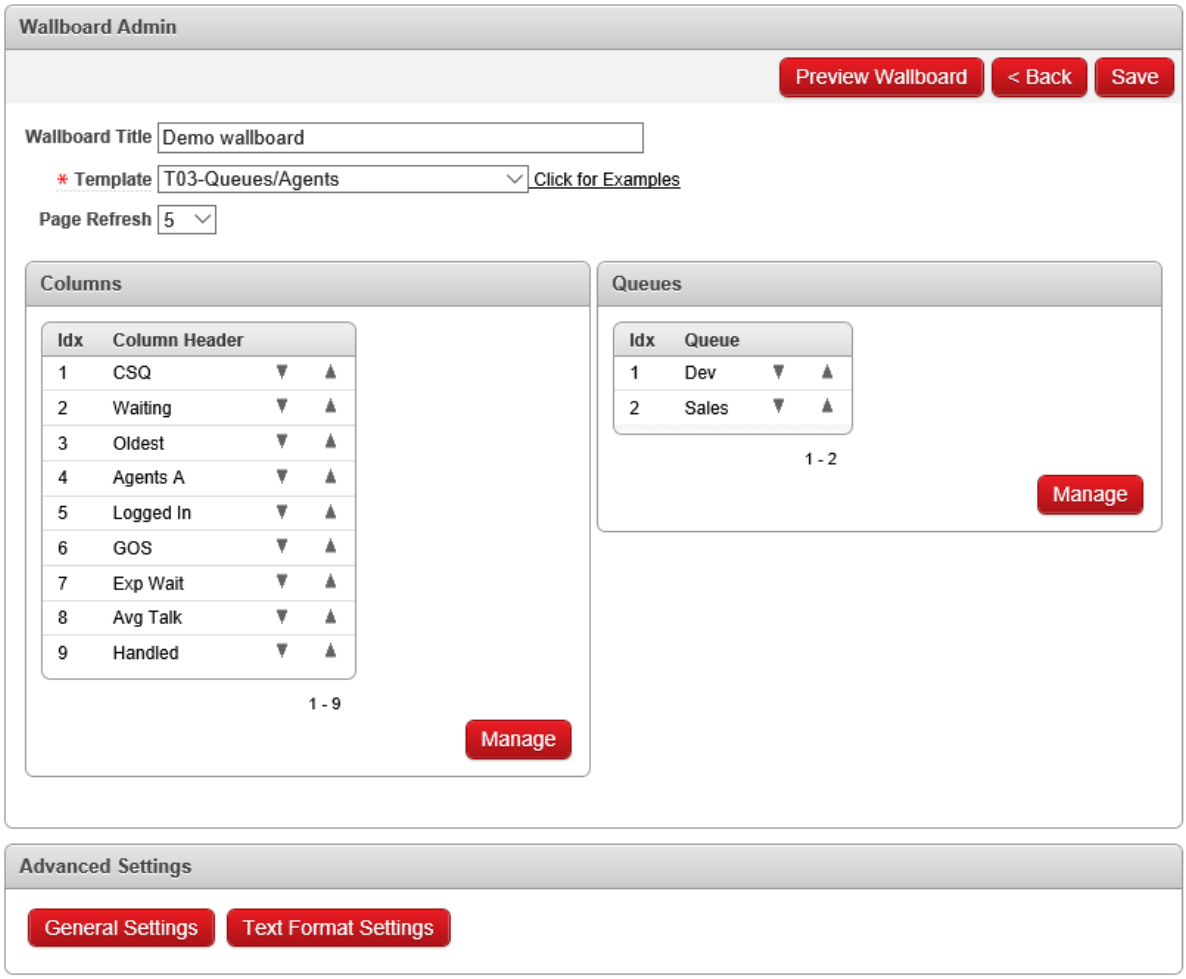
This section applies only to queue or agent status wallboards. For service wallboards see the section later in this guide: **5.6 Service Wallboards**.

Tip: *The Atea wallboard application is preconfigured with a sample wallboard called "**Change me**". This gives you a wallboard that you can begin to edit. We recommend that you clone this to get started.*

5.1.1 Edit or Clone Queue and Agent State Wallboards

To clone a queue or agent state wallboard:

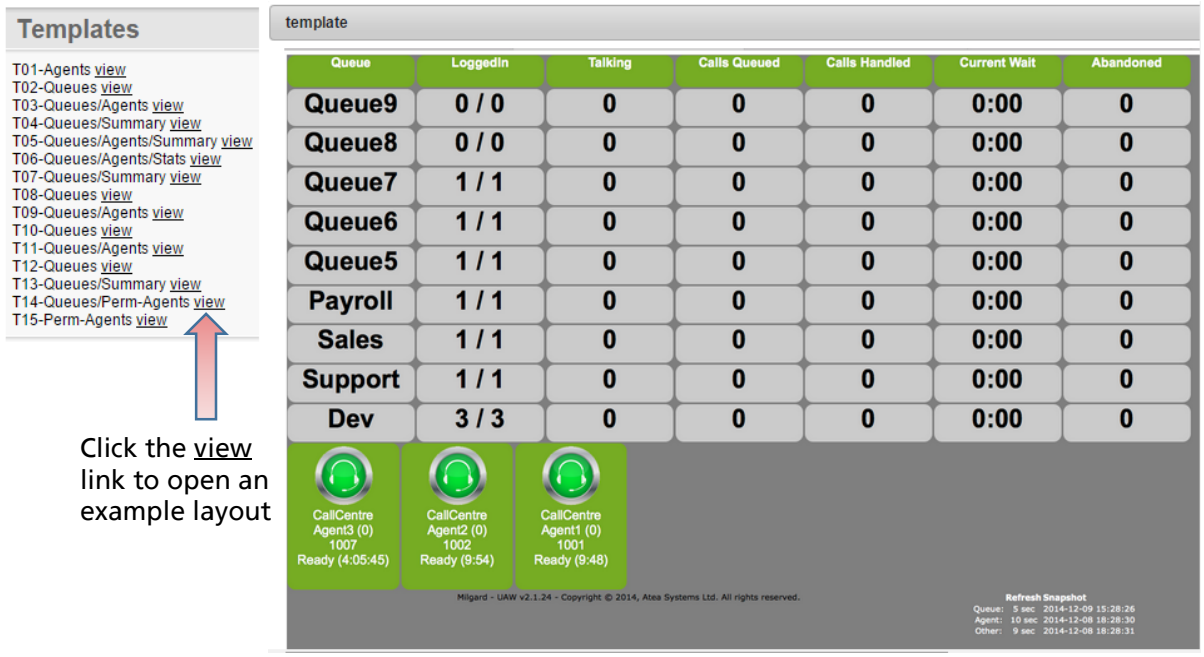
1. Click the '**Clone**' link on the wallboard administration page. This creates a copy of the wallboard that you can now edit.
2. Click on the cloned wallboard title to edit the specific wallboard.



3. Adjust the settings for the wallboard.

Setting	Comments
Wallboard Title	Your descriptive name for the wallboard. You may include special characters.
Template (this field is mandatory)	The template determines the layout of the information on the wallboard screen. Choose from the list of options. Click the link to open a new window with examples of each layout (see below).
Page Refresh	This value is in seconds and sets the browser refresh interval for the wallboard. The information presented may be slightly behind due to the application polling intervals.

Template examples (opens in new window)



4. Other settings:

- The **preview** button opens a pop-up window with a live version of the wallboard showing your changes.
- **Columns** – adjust the order using the up/down arrows. Click **Manage** to choose the columns to display.
- **Queues** – adjust the order using the up/down arrows. Click **Manage** to choose the Queues to display
- **General Settings** is for authentication, messages, background colours, default settings and Agent Thresholds.
- **Text Settings** is for font sizes, colours and custom layout settings.

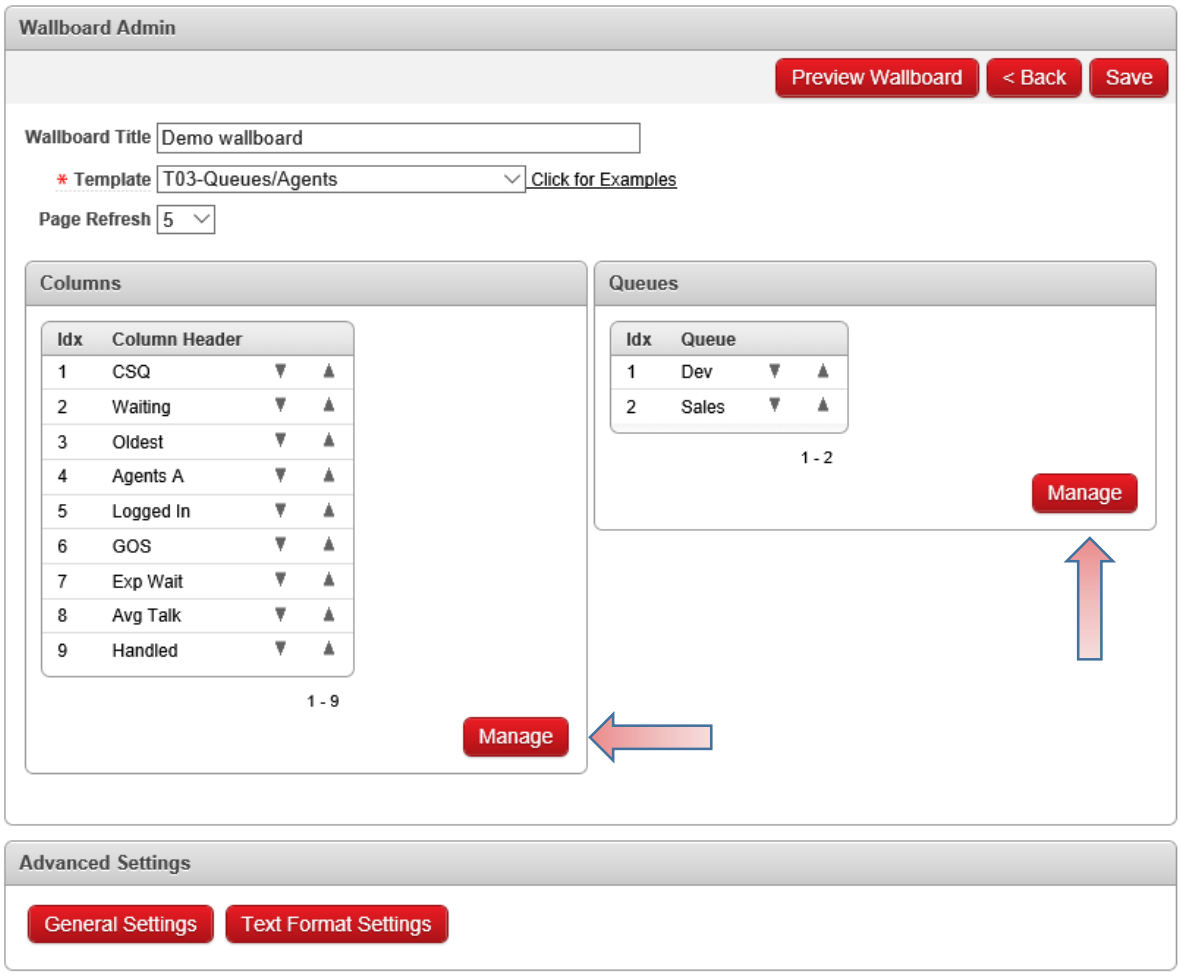
5. When you are done, click an action button:
   - **Save** will save all your settings for this wallboard
   - **Back** takes you to the previous page without saving any settings

Tip: *This application inserts the page refresh time into the HTML header of each web page, causing the client browsers to initiate the refresh.*

5.1.2 Manage Wallboard Queues and Columns

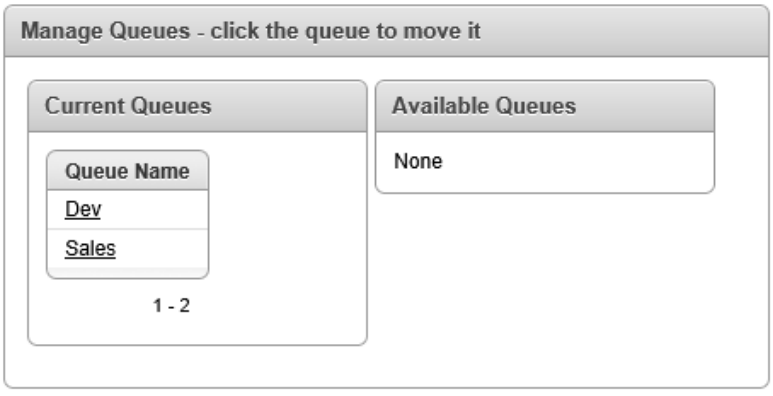
To manage the queues and columns that display on a wallboard click on the respective 'Manage' button. For new wallboards these tables will be empty, so it is usually easier to edit a copy of an existing wallboard.

Tip: *Columns are only relevant when displaying queue (or service) information. The display of agent status is governed by the template you are using.*



To manage the queues for a wallboard, click the queue "Manage" button. A new window will pop-up with two tables:

- **Current Queues –** these display on the wallboard, and
- **Available Queues –** these are the remaining queues that you can choose from.



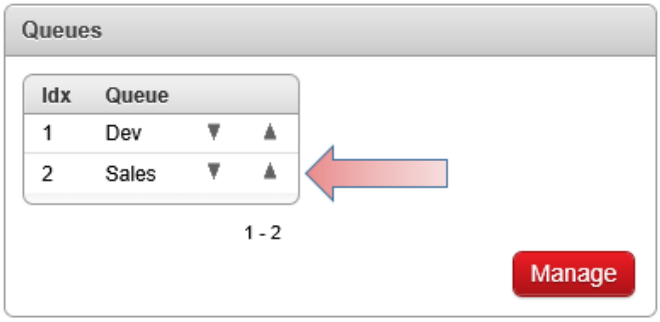
Click on the queue name to move it between the tables. This example shows two queues selected. Make sure you assign at least one queue to a wallboard.

Please note that you cannot edit the actual queues here, just the assignment to the current wallboard.

When you are done, close the pop-up window.

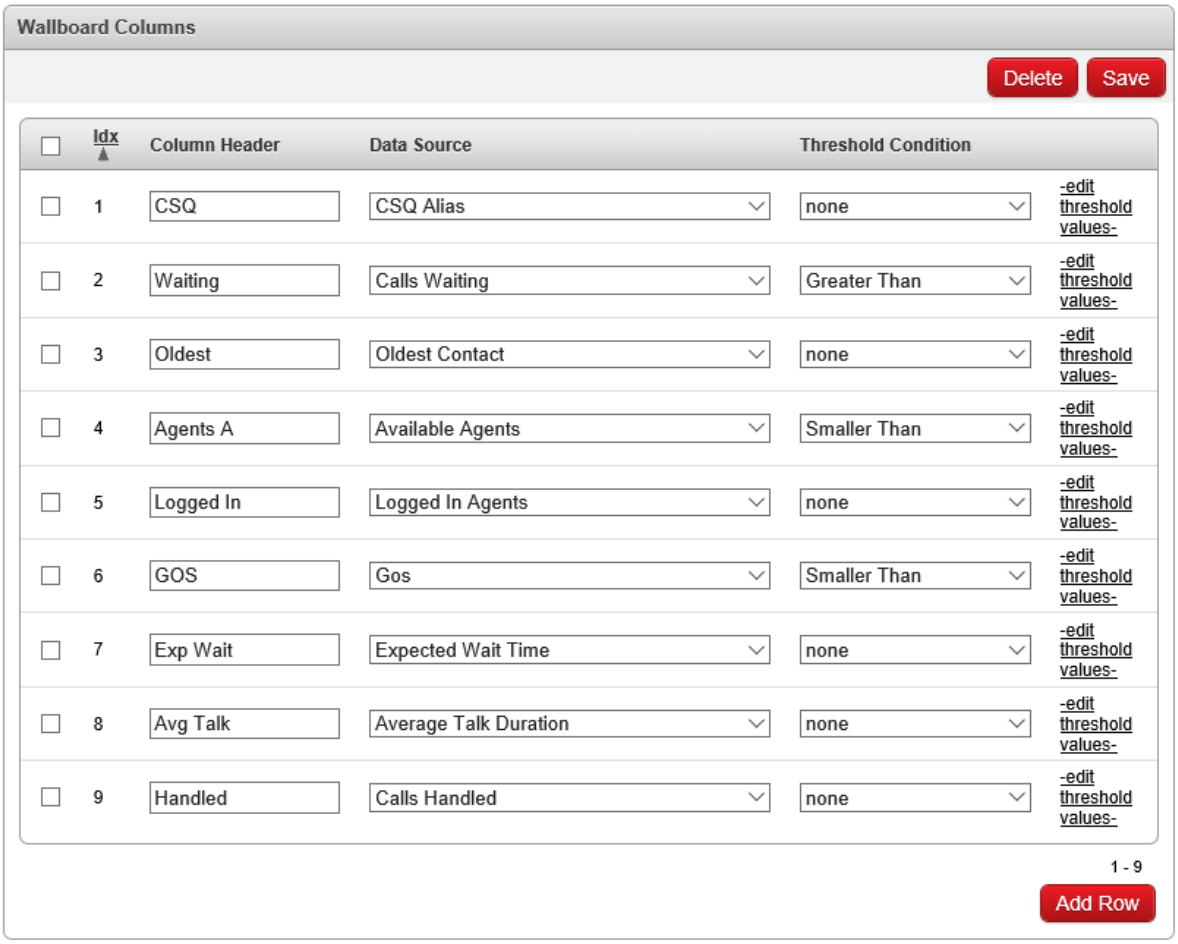
Tip: *The wallboard application gets the queues directly from UCCX. The administrator then has the option to give the queue a nickname. The queues you see here are all the queues in UCCX and they may (or may not) have a nickname applied.*

Now you can adjust the order that the queues display on the wallboard. Use the up and down arrows until they are in the order you prefer. When you are done, click **Save**.



To manage the columns for a wallboard, click the column "Manage" button to open the popup window.

Most wallboard templates require between three and eight columns. To add a column to the wallboard, add another row to this table using the '**Add Row**' button.



Each row requires at least the column header and data source to be filled out.

General Property	Comments
Idx	The index number is the order in which the columns are displayed. You can change the display order in the previous screen (wallboard admin).
Column Header	The heading for a column. Enter the text to display on the wallboard.
Data Source	Use this select list to define the data to display in the column. The data fields in this drop down box are from the real time and historical tables in UCCX.
Threshold Condition	This determines how the column values are compared to the configured thresholds. These are basic comparisons like less-than or greater-than or equal-to.
Edit Threshold Values	The **-edit threshold values-** link goes to another page where individual values and colour combinations can be edited.

When you are done, click an action button:

- **Delete** – to remove the selected rows; OR
- **Save** – to save the changes to the columns
- **Close** – to close the popup window

Tip: *Adding columns is only useful when the template you have chosen displays queue or grade of service statistics.*

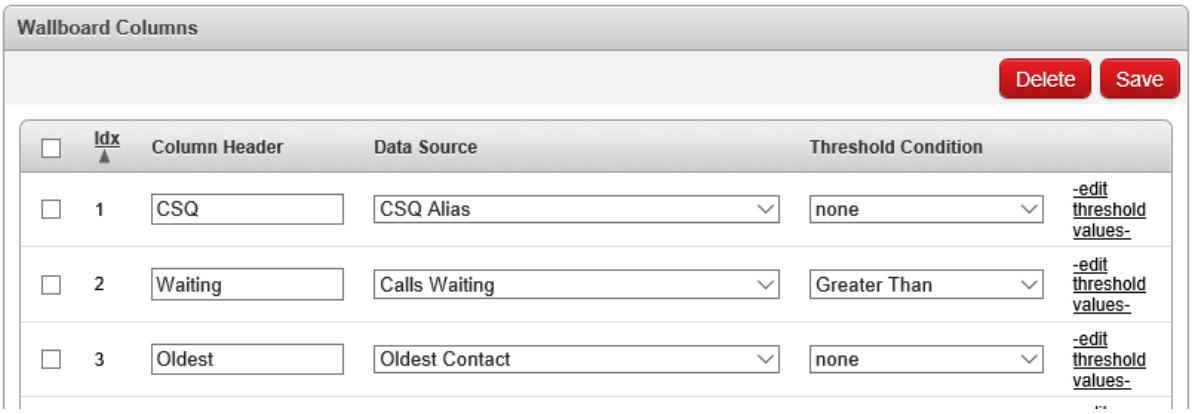
5.1.3 Manage Wallboard Thresholds

Thresholds are optional and can be set against queue statistics or the status of agents. Firstly, set the threshold condition and then apply the value and colour combination.

Tip: *A threshold can be applied to either an individual cell or a whole row. Set this in the General Settings area of the wallboard admin.*

Queue Thresholds

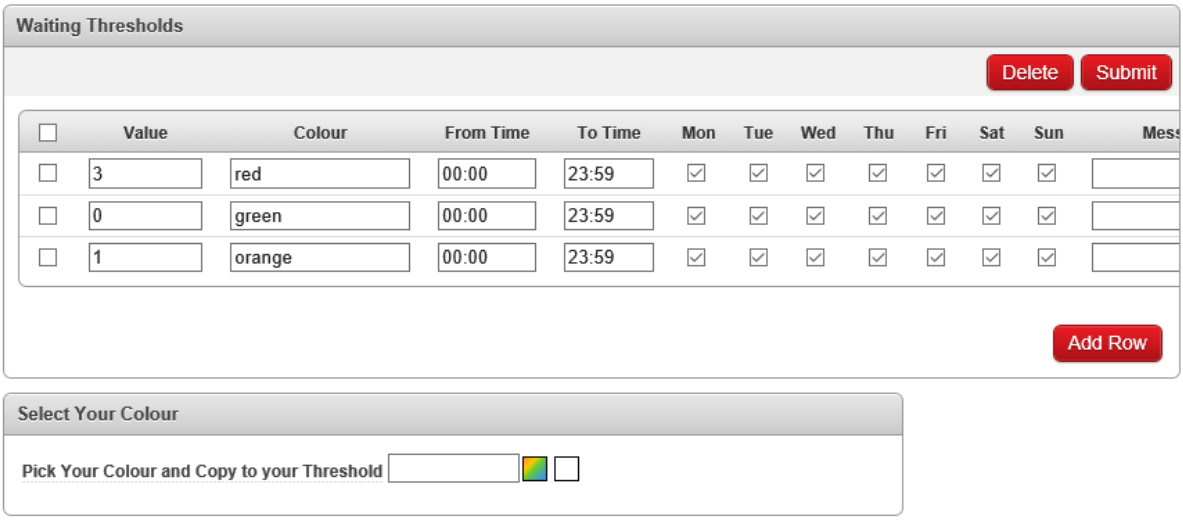
From the main administration screen for a wallboard, click on the 'Manage' button under column. A screen similar to the one below will be shown.



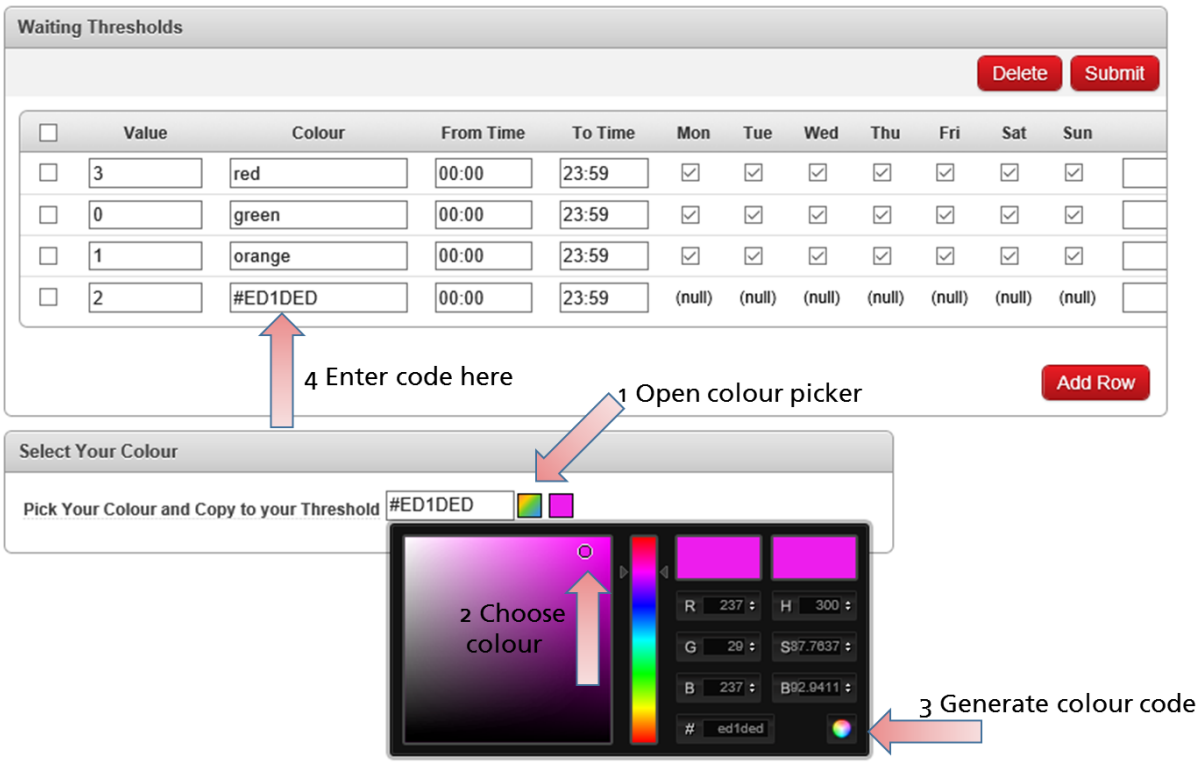
This wallboard has a condition set on calls waiting. To set a condition, choose from the drop down box and click '**Save**'. To add, modify or delete a threshold, click on the '**-edit threshold values-**' link. This takes you to a new page where you can set the threshold value and colour combination for the current wallboard column.

The **Value** field is the threshold trigger value. The colour field is for simple colour strings like blue, red or green or a numeric code generated in the colour picker. In the example below three thresholds are set. This changes the cell/row colour depending on how may calls are queued.

You can set up to five thresholds. To add another threshold, click on the '**Add Row**' button. To delete a row, select the check box on the left and click the '**Delete**' button.



If you want a special colour, enter the numeric code (including the #) from the colour picker. Click the rainbow button to open the colour picker, then choose a colour. Generate the code and enter it against the threshold.

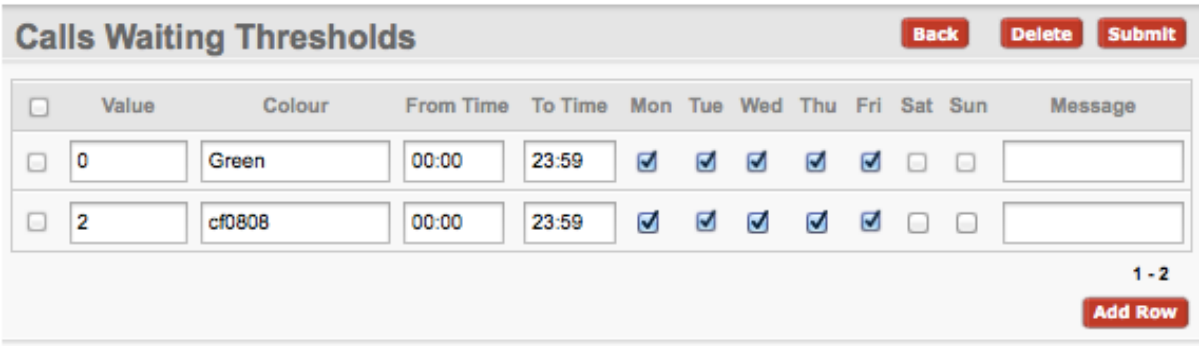


Now set the time threshold time settings and message.

Threshold time settings

You can set thresholds based on time-of-day and/or days of the week. The times can overlap but as the time is inclusive, avoid overlap if you need thresholds back-to-back. For example, configure 00:00-07:59, 08:00-17:00 and 17:01-23:59 for day/night ranges. Here are two examples.

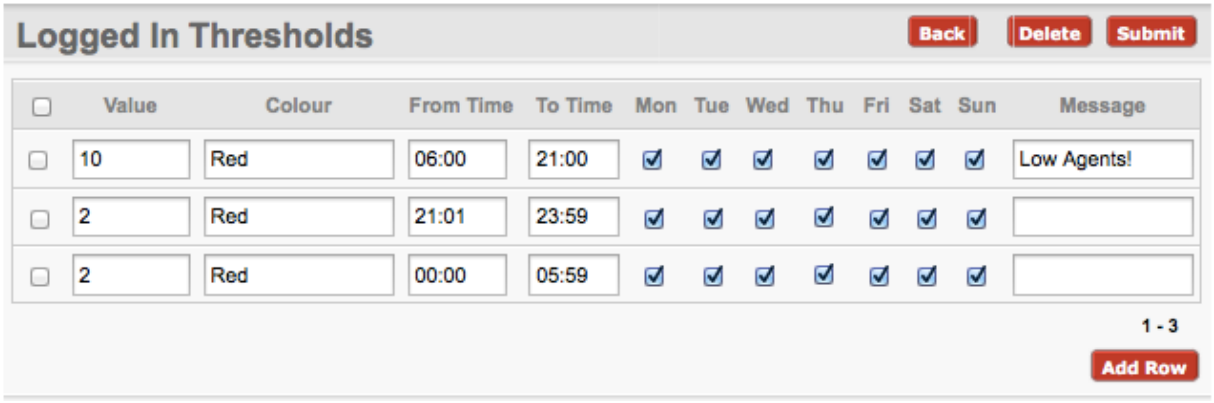
Example 1: Overlapping times. In this case the cell will be green if there are 0 or 1 calls in the queue and red if there are 2 or greater calls in the queue - for the whole day, Monday to Friday.



Example 2: Non overlapping times. In this case the cell will change to red if there are less than 10 agents logged in during business hours, 06:00 - 21:00, but only show red if less than 2 agents are logged outside of the main business day.

Threshold Messages

A message can be shown when a threshold is met. This message takes priority over scheduled messages and the fixed message.



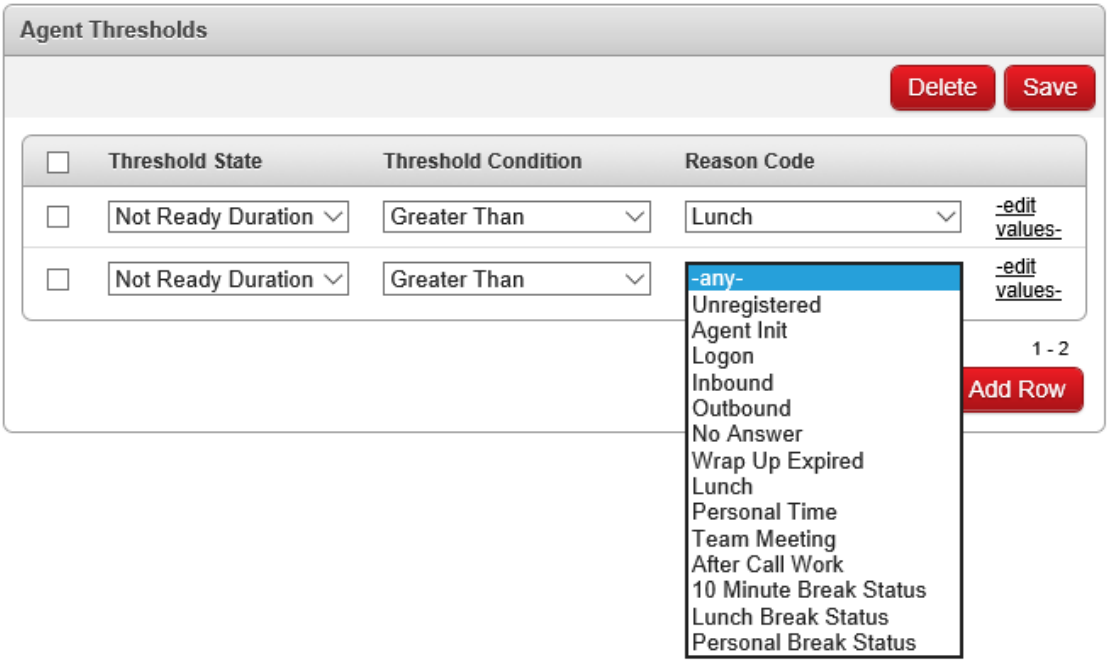
Tip: *You can add an audible warning by inserting this code into the message box*

<embed height=1 width=1 src="http://www.ateasystems.com/Notify.wav"></embed>

Managing Thresholds for Agents

Some wallboards display the status of an agent, i.e. ready, talking or not-ready.

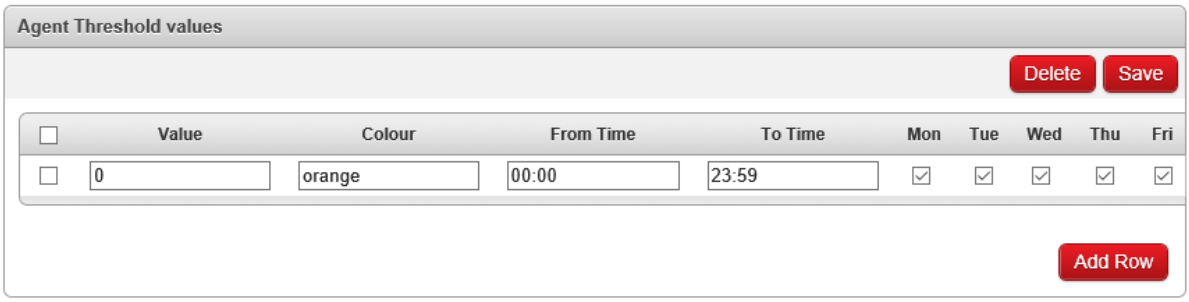
From the '**General Settings**' for a wallboard, click on the '**Manage Agent Thresholds**' button for the wallboard. This takes you to the Agent Thresholds screen.



Here, you can use the select boxes to change threshold states and conditions. For example, when Not Ready Duration is Greater Than a given value, the wallboard will change accordingly. Each line of this table must be unique. A threshold state can also have a reason code associated with it. For example, if an agent is Not Ready - Lunch then the threshold will be met, but all other Not Ready codes will not cause the threshold to be met unless they too have been explicitly configured.

Tip: *A reason code must match a state. For example, while Not Ready - Lunch is valid (as Lunch is a Not Ready code), Talking - Lunch is invalid as Lunch is not a code associated with the Talking state.*

To add a threshold, click on '**Add Row**'. Choose a threshold state and condition then '**Save**' your changes. To set what the conditions will be, click on the '**-edit values-**' link. This link opens a page where you can edit individual value/colour combinations. The value field is measured in seconds.



Here you may add a new value and colour combination using **Add Row** and edit any existing values or colour. The colour field takes simple strings like blue, red or green or a numeric code generated in the colour picker. Save changes by clicking the **'Submit'** button. Time of day and day of week options are also available.

To **delete** one or more value/colour combinations, select the check box in the left-most column and click the Delete button.

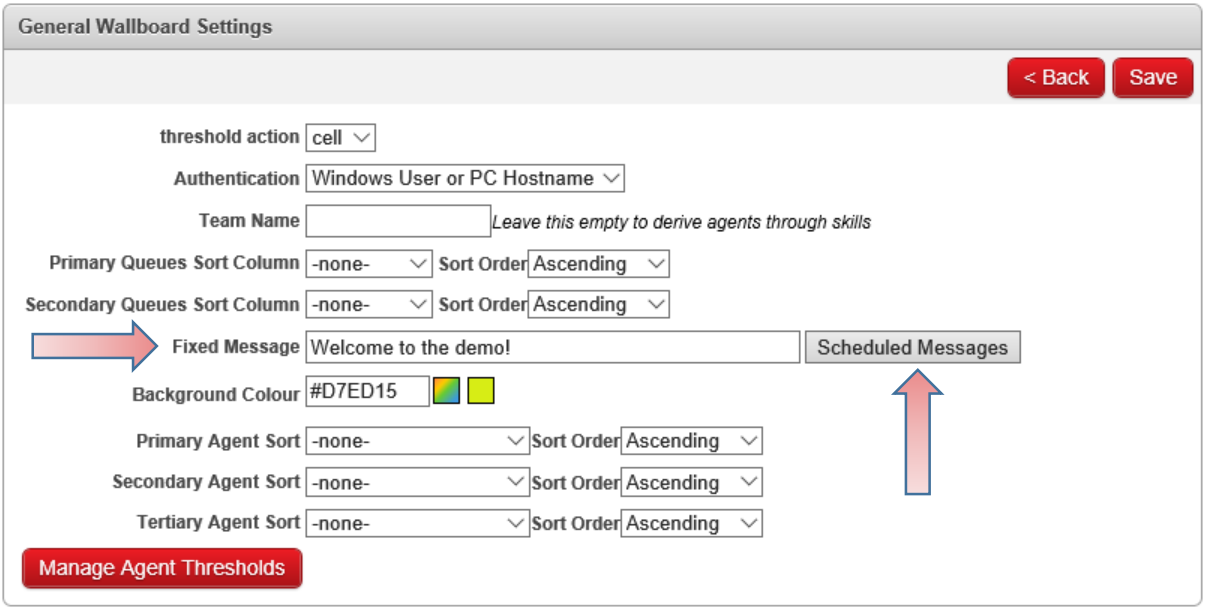
Tip: *Clicking Save on this form confirms change but it won't be applied to the live wallboard until the **'Save'** button is clicked on the main administration screen for the wallboard you are editing.*

Note: *All threshold conditions must include a value and colour otherwise the wallboard will fail to display.*

5.1.4 General Settings – Wallboard Messages

Some wallboard templates support messages. Messages may be fixed, scheduled or based on threshold.

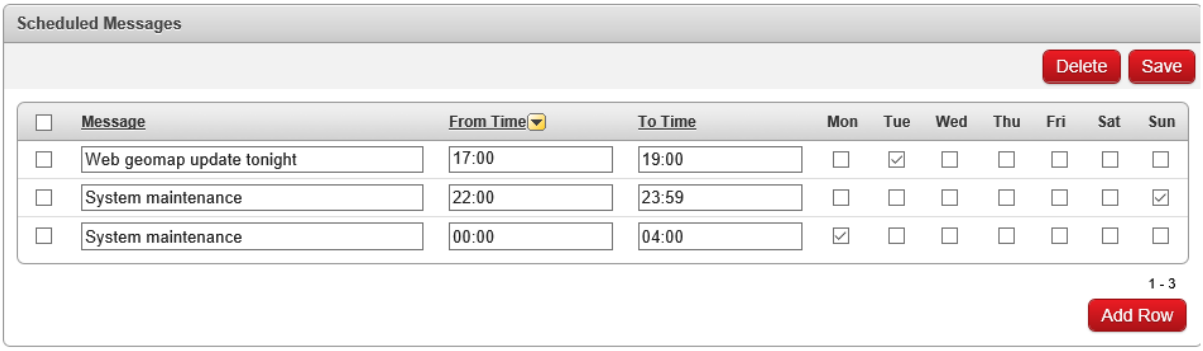
While threshold messages are set on the individual thresholds (see section above) fixed and scheduled messages are set from the 'General Settings' section of the wallboard administration page.



To set a fixed message just enter the message into the **Fixed Message** box. To schedule a message, click the **Scheduled Messages** button to go to the scheduled messages screen.

Scheduled messages can be set for different times of the day and/or days of the week. The times can overlap but as the time is inclusive, avoid overlap if you need messages back to back. E.g. configure 00:00-07:59, 08:00-17:00 and 17:01-23:59 for day/night ranges. If messages do overlap then both messages will be displayed at the same time.

In the example below a messages are scheduled to appear weekly.

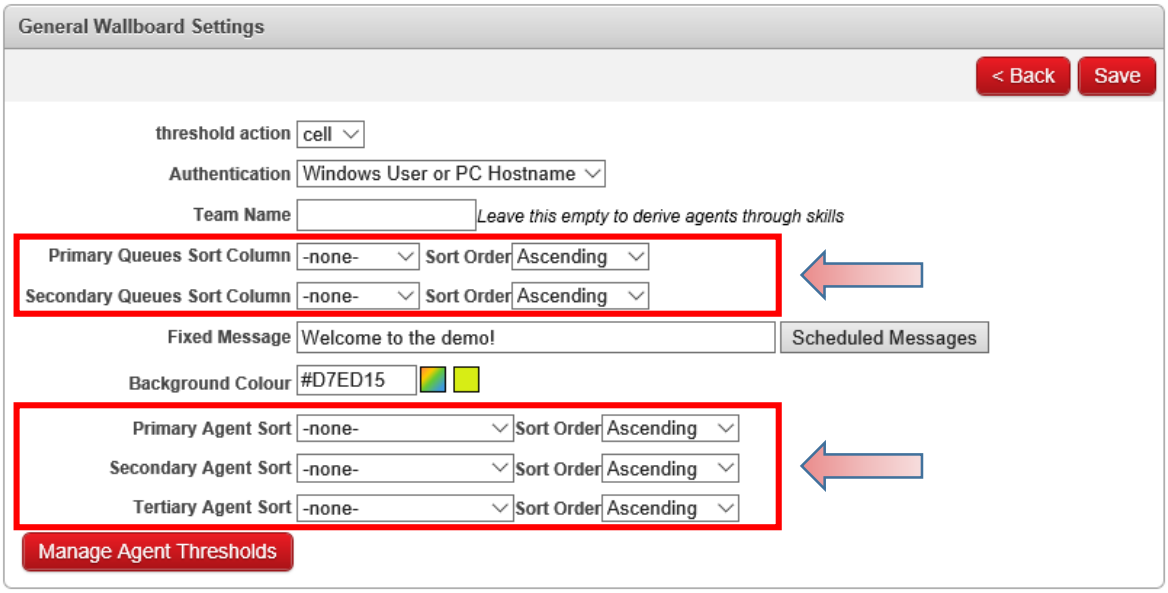


Message Precedence

Threshold messages take priority over scheduled messages. Scheduled messages take priority over fixed messages.

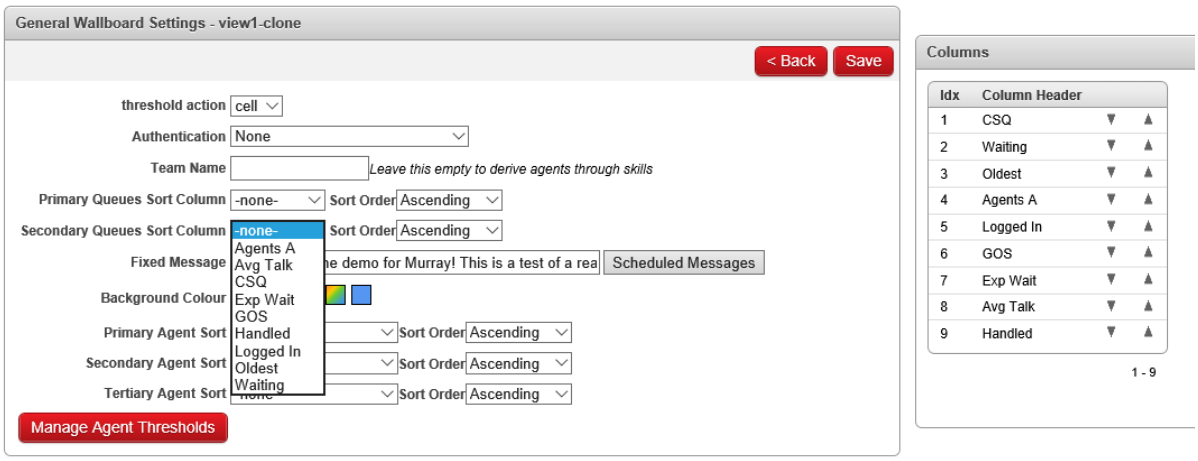
5.1.5 General Settings – Dynamic Sorting of Queues and Agents

Once a wallboard has been created and had columns added, the information can be sorted manually or dynamically. To view the settings, click on "General Settings" for the wallboard.



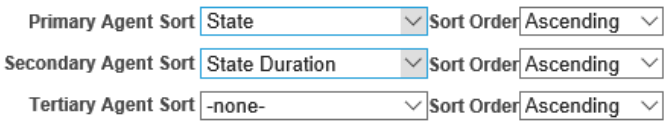
Queue Sorting – Static or dynamic

Set the sort column to "none" to use static sorting based on the index number of the queue. Alternatively, choose a value from the drop down boxes for the primary and secondary queue sort columns to use dynamic sorting, based on queue activity.



Agent Sorting – static or dynamic

Three levels of agent sorting are available. In the screenshot below the agents have been sorted by the state they are in and then by the time in the state.



The states are set by Cisco as shown below. An administrator cannot currently change this order.

case 1: return "Log In";

case 2: return "Not Ready";

case 3: return "Ready";

case 4: return "Reserved";

case 5: return "Talking";

case 6: return "Work";

case 7: return "Log Out";

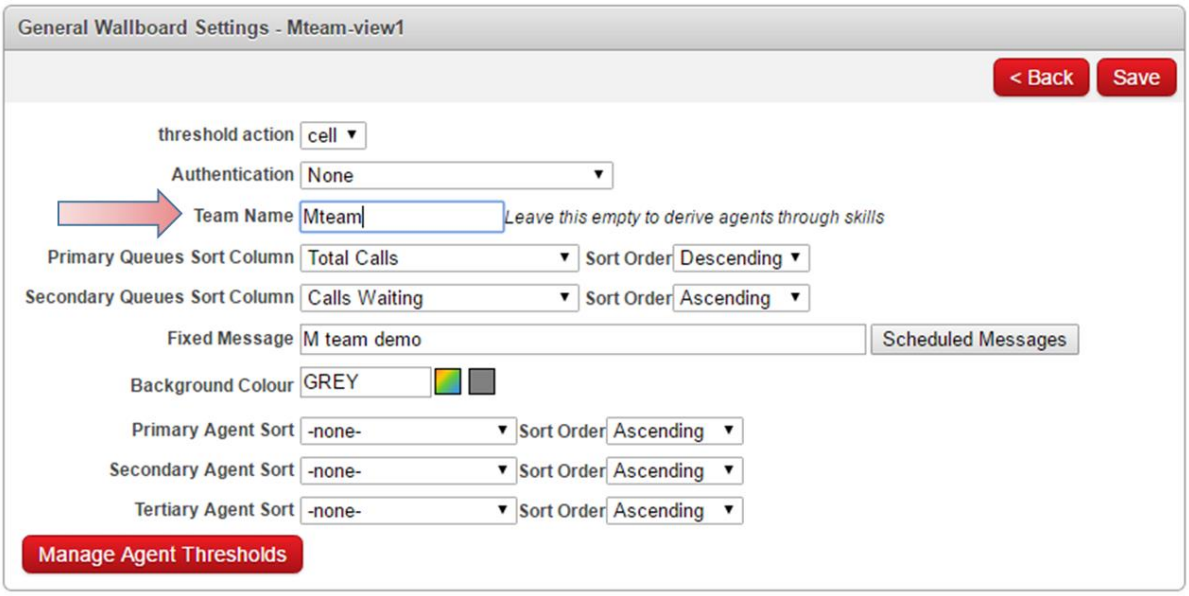
Tip: *Agent state duration is set in seconds.*

5.1.6 General Settings – Show only team Agents

On wallboards that show queues and agents, you can create a wallboard that shows only the agents for a specific team. This is handy where you have several teams looking after a set of queues, and want to wallboard that is specific to a single team.

You may also want to create a separate wallboard for each team.

1. Go to the **Wallboard Admin** page
2. Click the **General Settings** button
3. Enter the **Team Name** (as listed in the UCCX) and click **Save**.



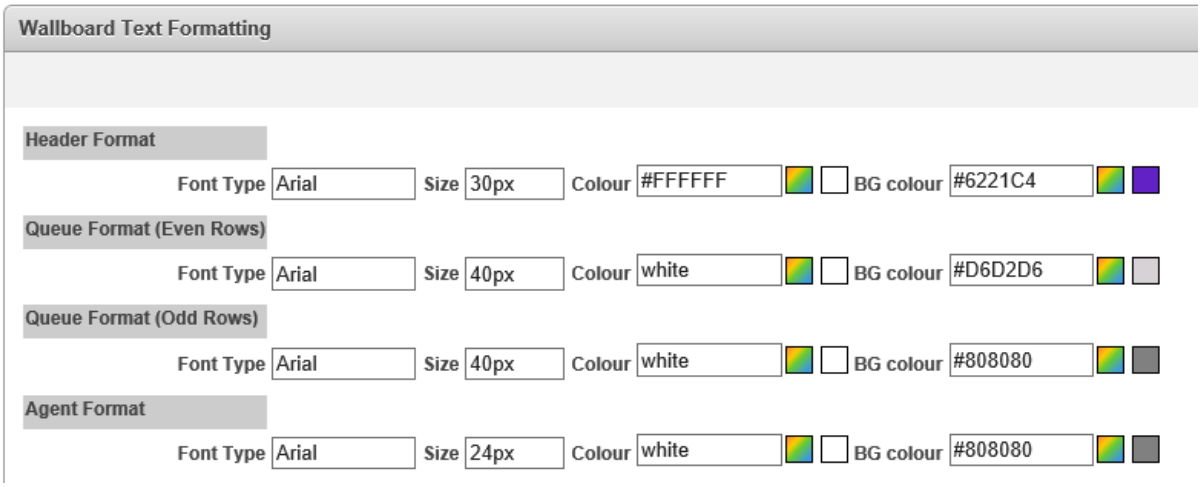
5.1.7 Text Format Settings – Fonts and Colours

Click on the Text Format Settings button to access this area. These settings apply only to the current wallboard being edited.

Wallboard Formatting - Basic

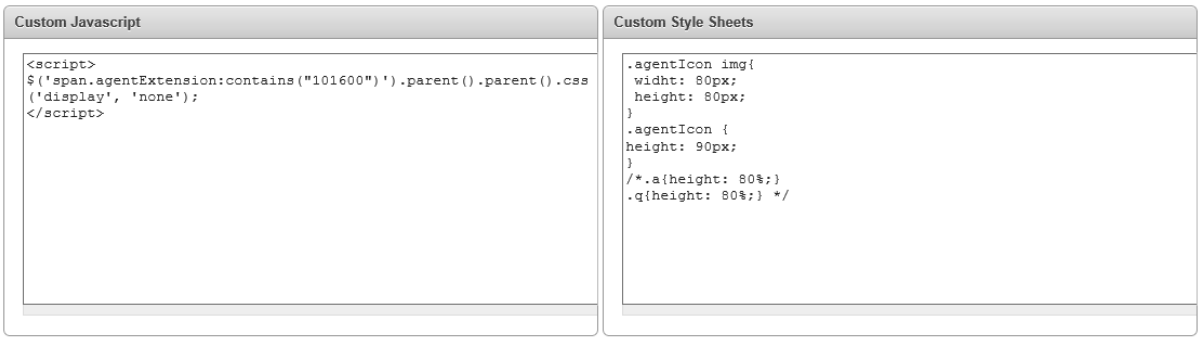
Here you can manage the display format of the current wallboard including font types and sizes.

Header Format	Font and colour settings for the wallboard title and main background
Queue Format (odd/even)	Font and colour settings for alternating queues for wallboards that have these
Agent Format	Default font and colour settings for the agent cells



Wallboard Formatting - Advanced

At the bottom of the Wallboard Text Formatting section are two additional boxes to allow the HTML templates to be changed (using CSS's) and for Javascript to be inserted. Javascript is useful for advanced functions.



Note: *Atea cannot guarantee the correct operation of the wallboard where custom javascript or CSS's are used. For guides on how to use these correctly refer the articles on the webpage.*

http://www.ateasystems.com/supoort/how-to/?category=uaw

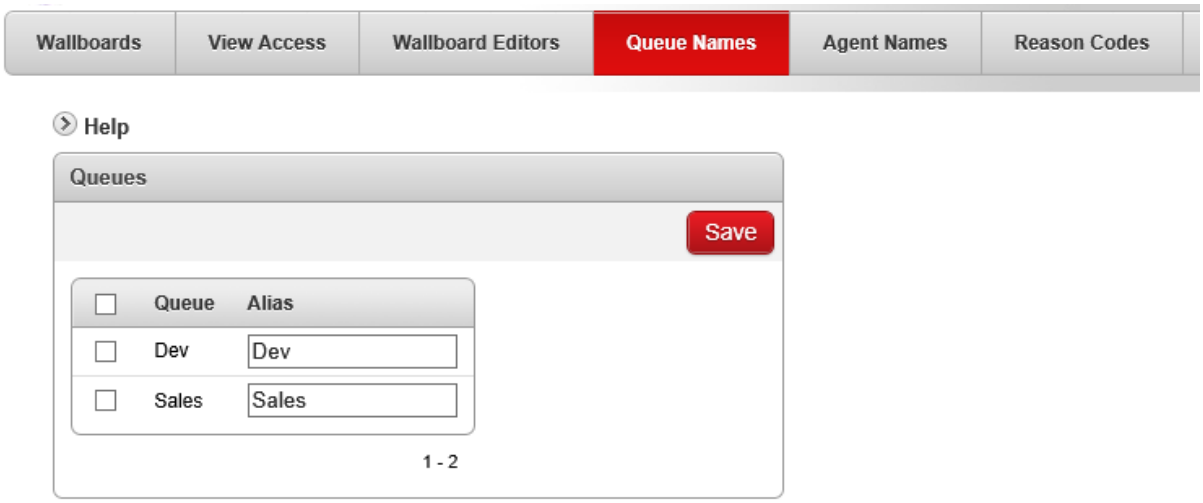
5.2 Queue and Agent Display Names (Aliases)

The wallboard administration allows the administrator to change the name displayed on the wallboard for the queues and agents. Both of these options are accessed using the tabs on the main wallboard administration page.

Queue Names

To edit the Queue aliases

1. From the wallboard administration screen, click the "**Queues Names**" tab.



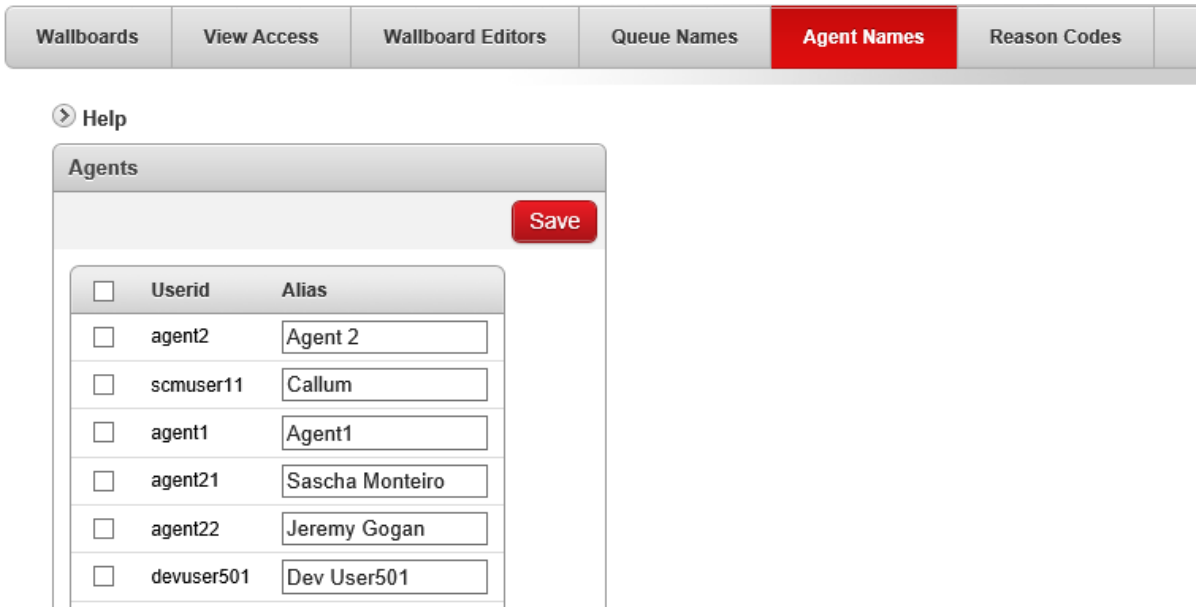
2. Enter the alias for each queue as you want it to appear on the wallboard. You can leave it blank to accept the UCCX queue name. Short names work well.
3. Click "**Save**" to accept the changes.

Agent Names

Use this to set an Alias for the agent rather than their UserID. The agents are automatically imported from the UCCX server, and appear immediately after they have been setup.

To edit the Agent aliases

1. From the wallboard administration screen, click the "**Agents**" tab.



2. Enter the alias for each agent as you want it to appear on the wallboard. You can leave it blank to accept the UserID.
3. Click "**Save**" to accept the changes.

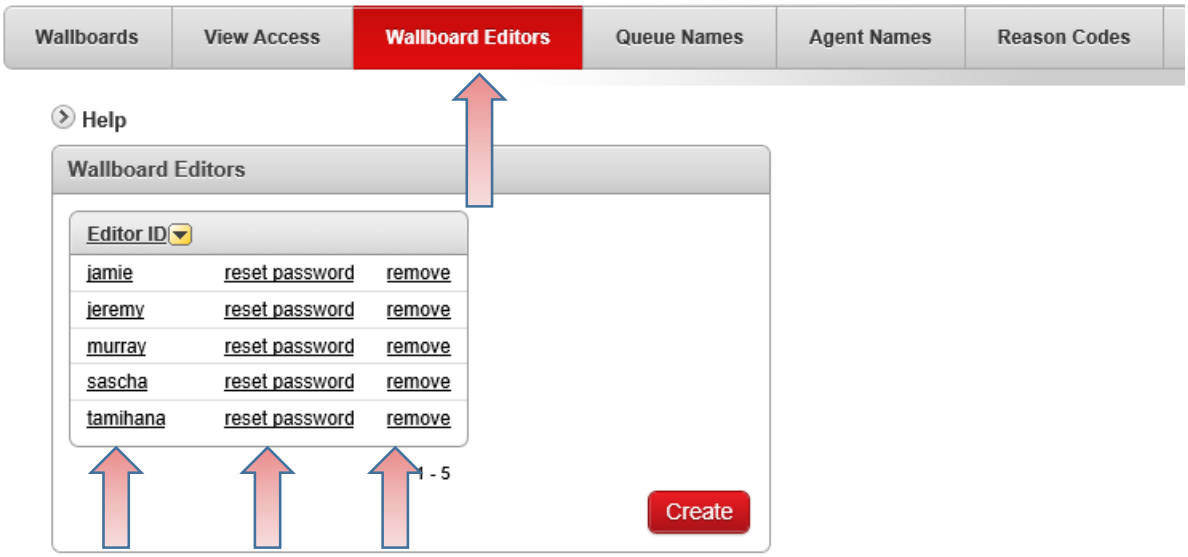
5.3 Wallboard Editors – allow a user to change wallboard settings

You can create wallboard editor accounts to allow trusted people to edit a specific wallboard without having full administration access to the application. These accounts are independent of your user directory, as they are local to the UAW application.

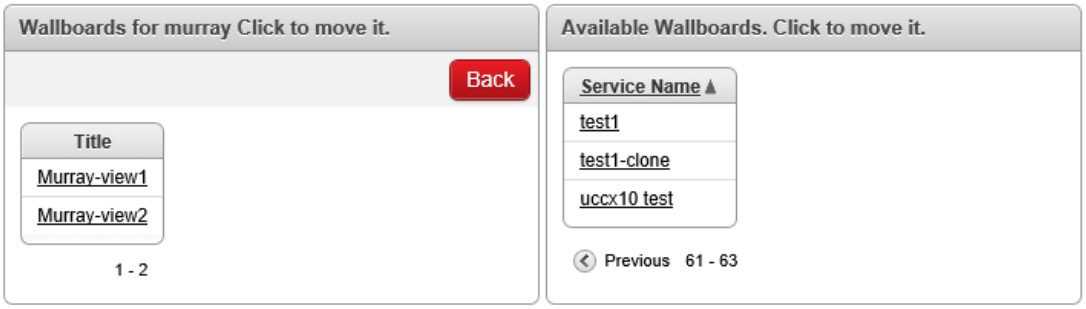
You can assign any of the wallboards to these accounts, allowing editing of those wallboards. For example, you might create one of these accounts to allow the on-duty supervisor to adjust messages, colours or threshold values.

To manage the wallboard editor accounts:

1. Select the **Wallboard Editors** tab from the administration screen.



2. Make your changes:
    a. To add a new account, click the "**Create**" button and fill in the form. Add the account name and password, and click **Save**. Next choose the wallboards to add for this account.
    b. To reset the password, click the "**reset password**" link
    c. To delete an account, click the respective "**remove**" link
3. To choose the wallboards for a wallboard editor, click the account name link. This opens a new page with two lists – one for the current wallboards for the editor, and one for the wallboards that can be added. Click on the wallboard to move it between the lists. When you are done, click the **Save** button to keep the settings wallboard editor screen.

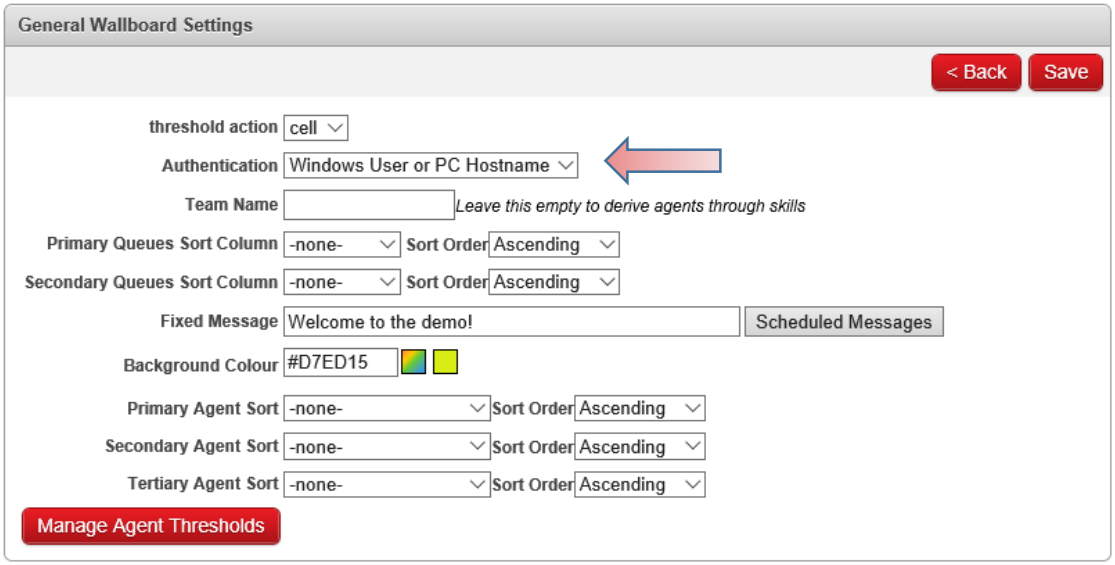


5.4 User Management – Setting who has access to a wallboard

Each wallboard can be restricted to specific users or computers (host IP address). To enable this, the wallboard must be set with authentication on in the general settings.

To set the authentication for the wallboard:

1. Select the wallboard from the list of Wallboards on the Wallboards tab
2. Click the **General Settings** button
3. Set the **authentication** to Windows User or PC hostname to suit your environment.

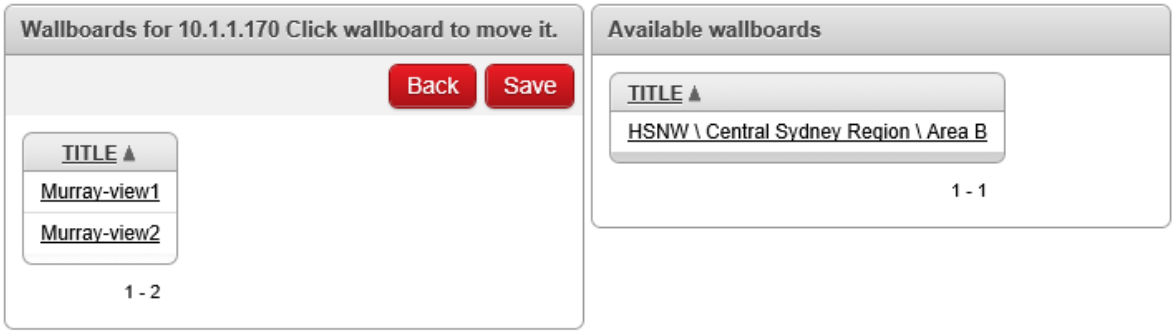


4. **Save** your changes. This wallboard can now be restricted to specific users or devices. Go to the **Users** tab to set this.

To manage which users have access to each wallboard:

1. Select the **View Access** tab from Administration screen.

2. Make your changes:
    a. To **edit** a user or computer, type in the new details and **Save**. You can use a user name, computer name or IP address based on the type of authentication you selected for the wallboard.
    b. To add a new user or computer, click the "**Add Row**" button to get a blank row to edit. Add the name, and click **Save**.
    c. Click the link **–Choose wallboard–** (see below) to change which wallboards the user or computer has access to.
    d. To delete a user or computer, select the checkbox next to the UserID/Host and click the "**Delete**" button
3. To choose the wallboards to view, click the -Choose wallboards- link. This opens a new page with two lists – one for the current wallboards the user can view, and one for the wallboards that can be made available to the user. Click on the wallboard name to move it between the lists. When you are done, click the **Save** button to keep the settings and return to the User screen.



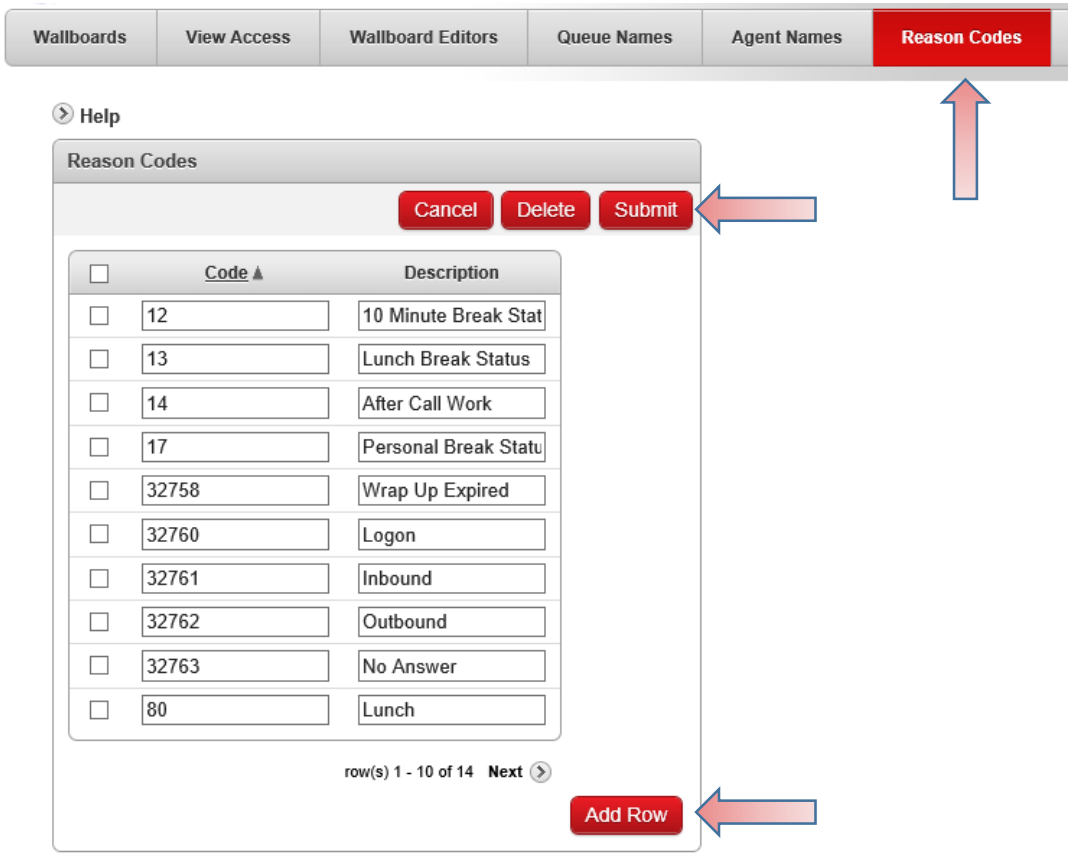
5.5 Reason Codes – Must match UCCX

The UCCX has reason codes to indicate a particular state. Any of these that you want to display on the wallboard, must also be configured in the wallboard application. The code number must match with the entry in the UCCX.

The wallboard application comes pre-configured with some of the standard 32xxx reason codes. Add any others from the UCCX that you also want to see on the wallboard. If you do not add them to the wallboard, they simply won't appear.

To manage the wallboard Reason Codes:

1. Check the reason code is also created on the UCCX.
2. Select the **Reason Codes** tab in the UAW administration screen.



3. Make your changes:
    - To edit a reason code, type in the new details.
    - To add a new code, click the "**Add Row**" button to get a blank row to edit
    - To delete a code, select the checkbox next to the code and click the "**Delete**" button
4. When you are done click "**Submit**" to save the changes to the wallboard, or click "**Cancel**" to ignore the changes.

5.6 Service Wallboards – advanced configuration

A service wallboard differs from a queue wallboard in a number of ways;

1. The information can come from multiple data sources. These may include UCCX tables (real time or historical) or some other external data source. The supported external data sources supported are .CSV or .XLS files, and an SQL query to a database[1].
2. A service consists of a service name, an optional image icon, and one or more data values derived the external data sources. In its simplest form, this could be several UCCX queues 'rolled up' and presented as an aggregate.
3. A service provides the ability to aggregate a number of values in to a single service cell - for example, the ability to roll up the total number of calls handled across a number of queues. The aggregating functions available are:
    - Average (avg)
    - Sum (sum)
    - Maximum (max), and
    - Minimum (min).

To configure a service wallboard, first create the services you want to report on. Secondly, create your wallboard and add your columns and services.

Tip: *A service wallboard can only consist of services, not native queues. If a single native queue needs to be displayed on the service wallboard then a service for this one queue must be created.*

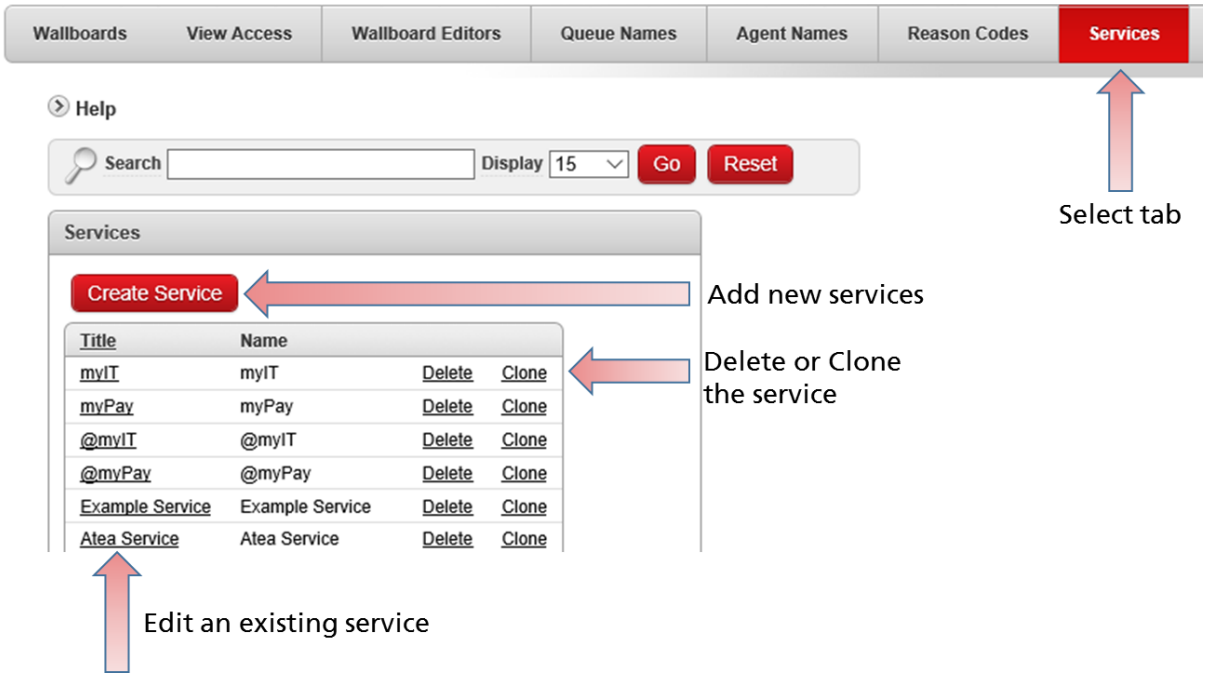
5.6.1 Creating and Editing Services (service wallboards only)

A Service consists of a name, optional icon image, a row of data cells from any supported data source, and includes the ability to aggregate the data values.

To create, modify or delete a service:

1. Click on the '**Services**' tab on the main wallboard administration screen.

[1] Services rely on tables in the local UAW database being populated from external sources. The Atea DataSourceManager provides a mechanism for retrieving external data from these external sources and writing them to the relevant UAW database tables. The DataSourceManager can read data from CSV or XLS files, a contactable Oracle or Informix database and the CUCM Serviceability interface (RIS). The DataSourceManager architecture may work with other SQL databases that provide a working JDBC driver, however only Oracle and Informix have been tested.



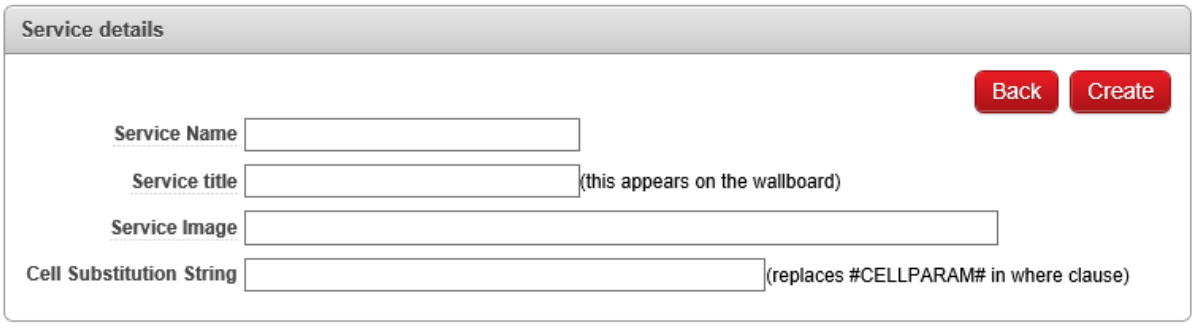
From this page you can:

- Click the "Create" button to create a new service
- Clone an existing service using the Clone link
- Modify a service by clicking the title of the service
- Delete a service using the Delete link.

To create or modify a service

On the Services page:

1. Click the "**Create Service**" button or click the **link** for an existing service.



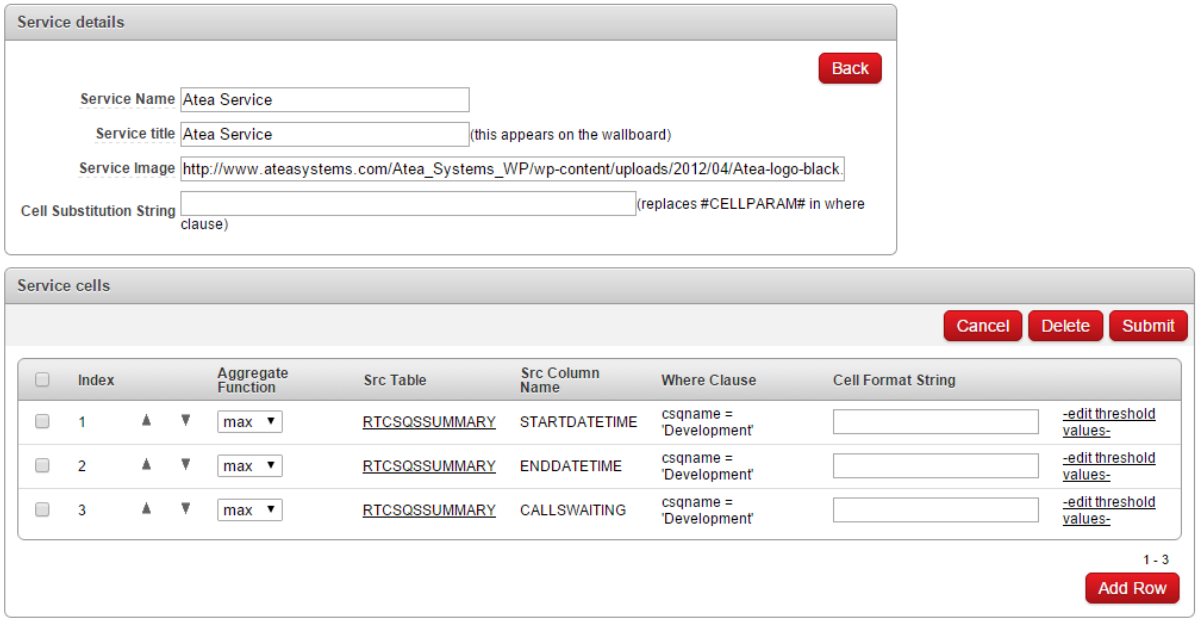
2. Enter or amend the details. The service details are:
   - Service Name – name of the service within the UAW application
   - Service title – name as it appears on the wallboard

- Service Image – Optional, URL of an image to appear on wallboard. The image can either be on the wallboard server or another location accessible by the wallboard server.
- Call Substitution String – in the SQL "Where" clause, this string is substituted in to #CELLPARAM#

3. If you are creating a new service, click **Create** to save the new service and then go onto set up the Service cells.

To set up the Service cells

4. Now add rows to your service. If this is a new service then '**No data found**' is displayed until you configure some cells. Click on '**Add Row**'.



5. Each row in a service will be one or more values of information from a data source and requires at least the source details to be filled out.

General Property	Comments
☐ **row selector**	Select the checkbox(es) to delete rows
Index	The index number sets the order that the services are displayed. To change the order, use the up and down markers to swap the rows.
Aggregate Function	The function to apply when two or more values are retrieved from the data source.
Src Table	This "select list" defines the database or file source the wallboard will display. The data fields shown in this drop down box are the real time and historical tables in UCCX and other locations set by Data Source Manager.
Source Column Name	This "select list" defines the column from the Src Table the data is retrieved from.

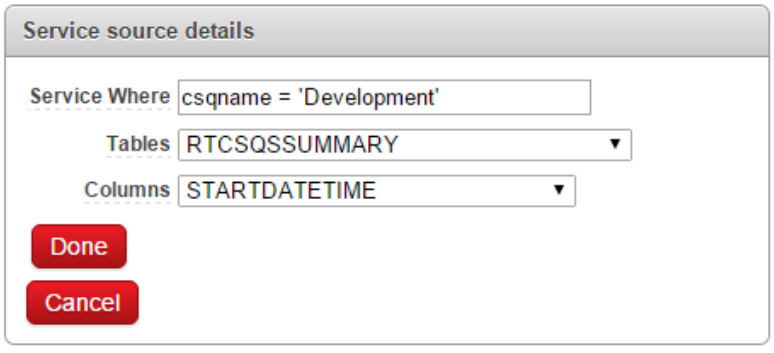
Where Clause	A SQL 'where' statement to further refine the data to be retrieved.
Cell Format String	(Optional) This can be used to format the way the data is presented on the wallboard. Often used with dates.
Edit Threshold Values	The -edit values- link directs you to another page where individual value/colour combinations can be edited. The value field is measured in seconds. **Make sure you Submit your column changes BEFORE you click this link, otherwise your column values will return to the defaults.**

6. When you are done, click an action button:
   - **Cancel** – to return to the previous screen without saving any changes; OR
   - **Delete** – to remove the selected rows; OR
   - **Apply Changes** – to save changes cells for the service.

Editing the source details

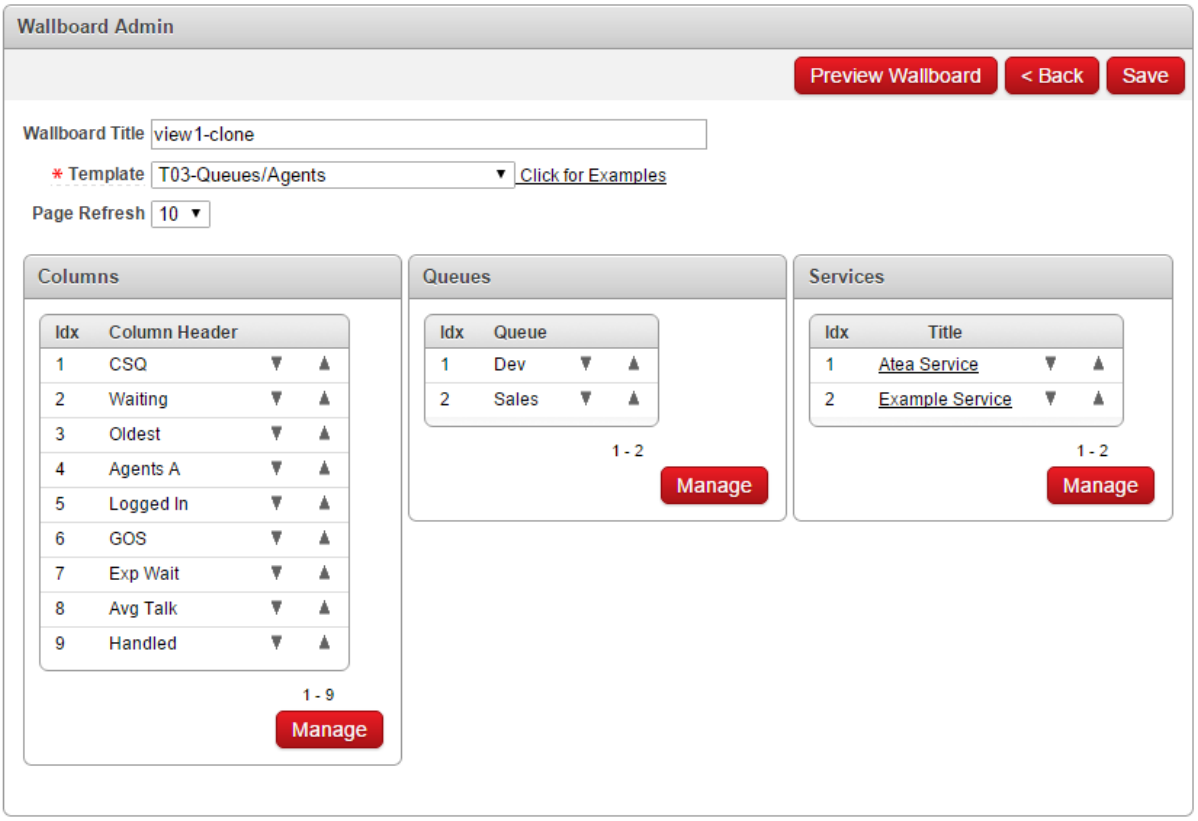
To edit the source details, click the link that is the name of the source table. Here you can set the "where" clause, and select the table and column.

1. Enter the SQL "where" clause. In this case we want the calls handled where the CSQNAME is Development. Note that the 'where' is implied and does not need to be entered manually.
2. Choose the table. In this example RTCSQSUMMARY has been chosen.
3. Once the table has been chosen the columns box will be populated. Choose the column from this list, for example Start Date Time.



Each row is displayed on the service wallboard in the order of its index number.

When creating a service wallboard, choose a template that includes services (see website for an up-to-date list of templates). The example below shows the To3-Queues/Agent template.



5.6.2 About Service Source Configuration – Additional information

The Services framework provides the ability to access and display different types of statistical data in a highly configurable manner. This uses a "DataSourceManager" to read tabular data from multiple external data sources into tables in the UAW database. This data can then be accessed and presented in many different ways.

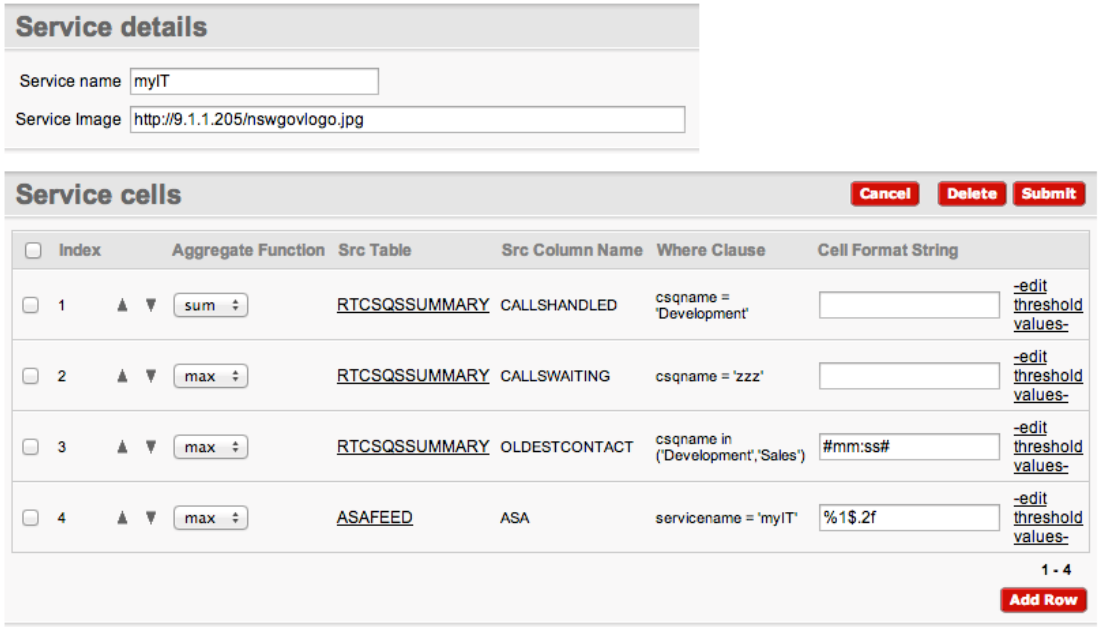
A Service defines a name (and optional icon image) and one or more Service Cells. The value that a Service Cell presents is derived from one or more values in a database table. The Service Source Configuration defines the SQL query used to determine a Service Cell's value.

For example, the screenshot below describes the configuration of a single Service. The name of the Service is "myIT", and it has an associated image icon. There are also four Service Cells. Each Service Cell has an index, aggregate function, source table, source column name and where clause (ignoring the Cell format string column for now).

This configuration describes a service with four values; the first is the calls handled statistic for the UCCX queue "Development". The second is the number of calls waiting in the queue "zzz". The third is the length of the oldest call in either the "Development" or "Sales" queue, and the fourth is the value ASA for the ASAFEED spreadsheet associated with the service name "myIT".

From this configuration the system derives four SQL queries to return the required data. The queries are[2]:

1. SELECT SUM(CALLSHANDLED) FROM RTCSQSSUMMARY WHERE csqname = 'Development'
2. SELECT MAX(CALLSWAITING) FROM RTCSQSSUMMARY WHERE csqname = 'zzz'
3. SELECT MAX(OLDESTCONTACT) FROM RTCSQSSUMMARY WHERE csqname in ('Development', 'Sales')
4. SELECT MAX(ASA) FROM ASAFEED WHERE servicename = 'myIT'



[2] It is highly desirable that you have an understanding of the underlying both the UAW database structure, and SQL query syntax.

5.6.3 Manage Wallboard Services and Columns

To manage the services and columns that a wallboard displays, select the wallboard from the Wallboard Administration page (or clone a copy of an existing wallboard).

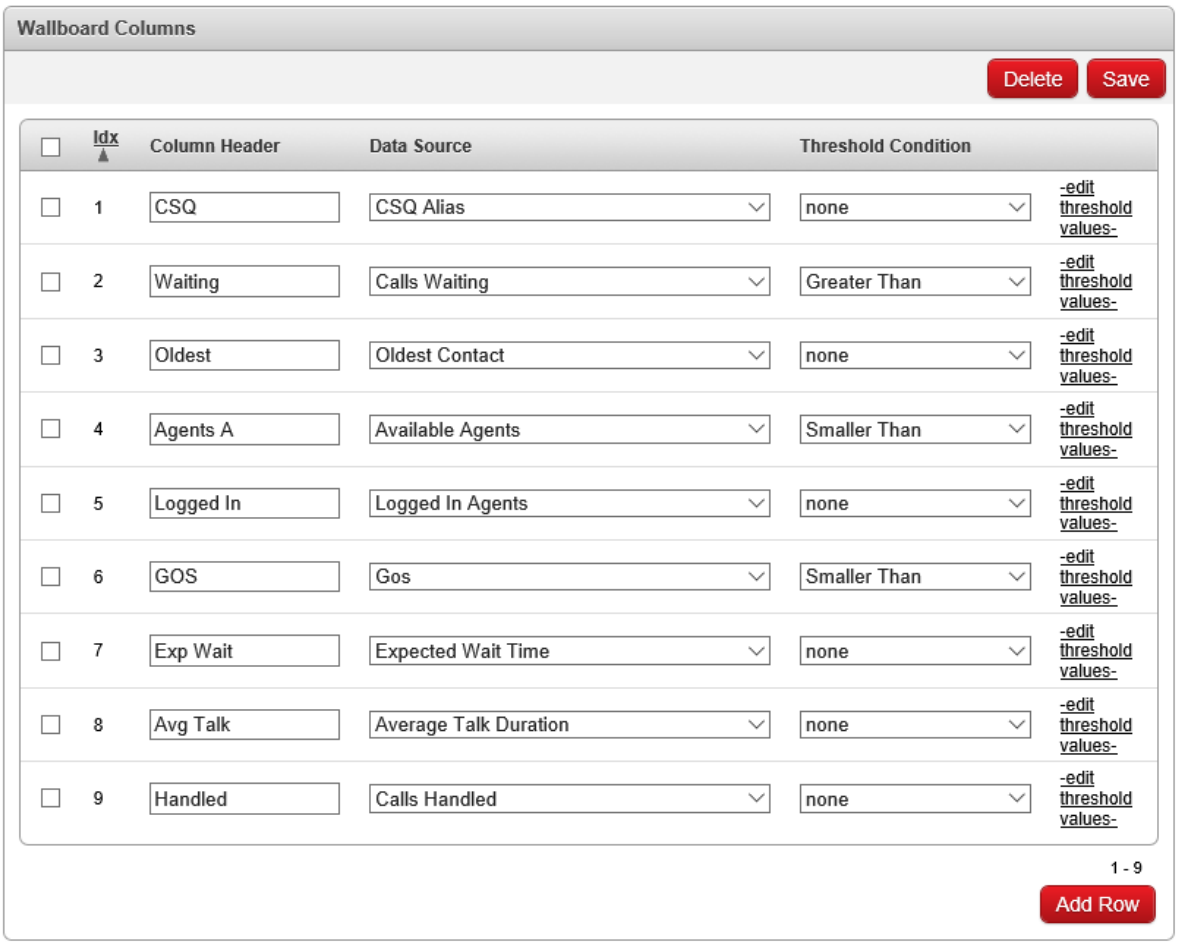
The columns are managed in the same manner with a queue/column wallboard (see 5.1.2 Manage Wallboard Queues and Columns).

Note: When creating a new wallboard or service, these tables will be empty and say 'no data found'.

Tip: *The number of columns and the names displayed in those columns is configured in the columns section of this wallboard page. First configure the columns and then add the services.*

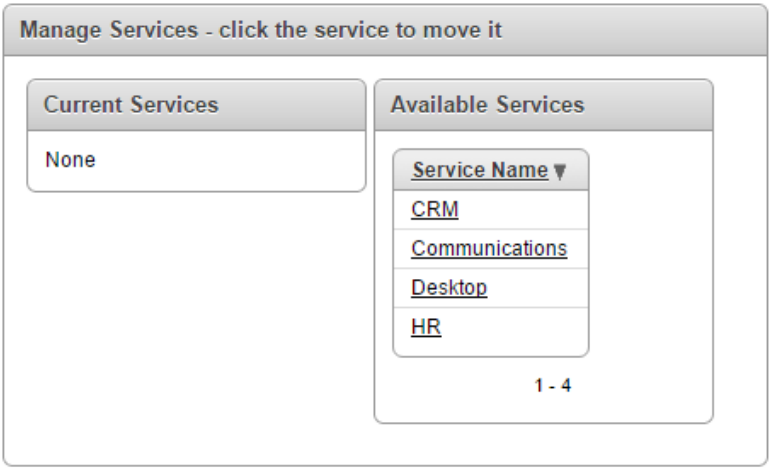
Click the **Manage** button to manage the wallboard columns.

The screenshot below shows the columns displayed on this service wallboard. Use this screen to configure each column.



When you are done, return to the Wallboard Admin screen and add the services.

Add the services by clicking on the 'Services' button and then clicking on the services desired from the 'Available Services' box on the right hand side. The selected services will be moved to the box on the left hand side. Do not be concerned about the order the services appear, as this is adjusted back in the administration main screen. In the screenshot below there are four services that can be added to the wallboard.



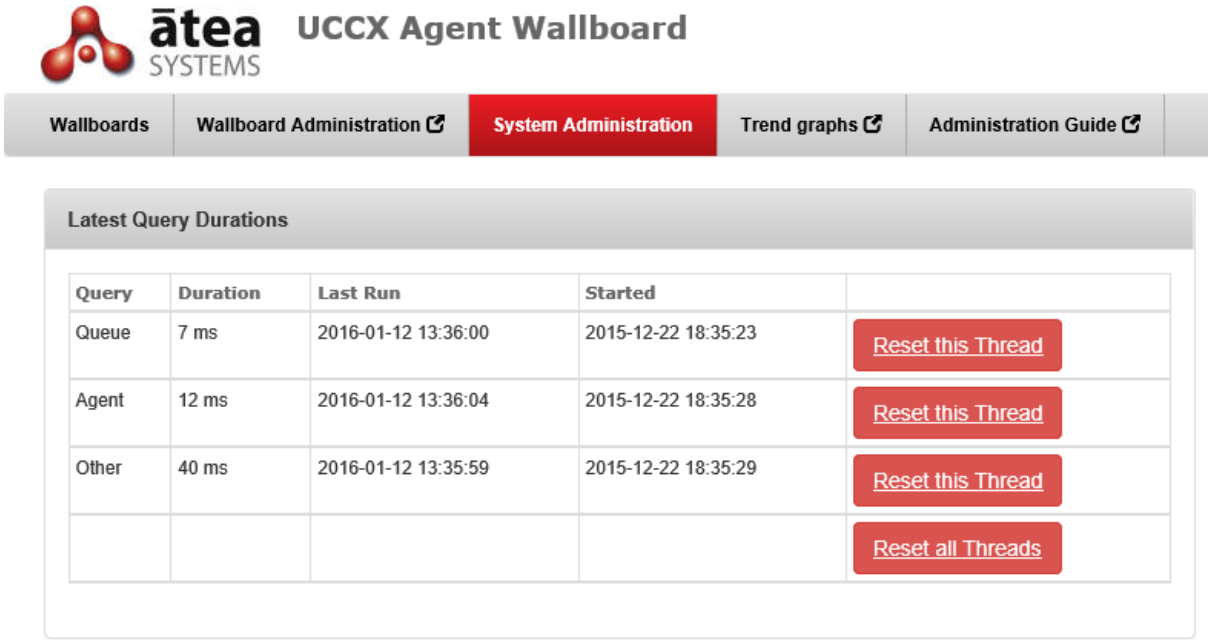
Click the 'Close' button to return to the previous page. From here you can change the order of the services by clicking the up and down arrows.

Tip: *The current services template orders the services down the left hand column first then the right hand column.*

To complete the wallboard check the General Settings and Text Format Settings and save the changes as you go.

6 System Administration

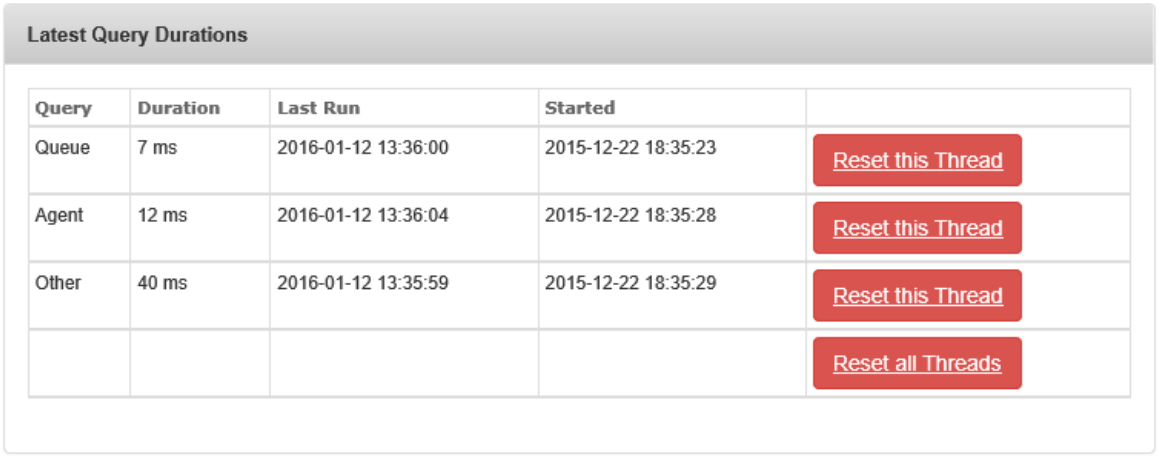
The system administration page is used to setup the wallboard application to communicate with UCCX and backup UCCX server (if installed).



The sections in this screen are:

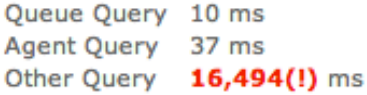
- **Latest Query Durations** – this displays query performance information.
- **System Properties** – this has the license file and system settings such as passwords.
- **Last 10 connection state changes** – recent connection statuses for troubleshooting.
- **Logs** – Buttons to elevate the logging levels and save the output to assist with troubleshooting and support.
- **Version** – the current version of the wallboard application, and whether there is an update available.

6.1 Latest Query Durations



This displays the statistics for the individual queries which run in separate threads (so they don't hold each other up). The polling interval for each query is set in the system configuration section (see below). You may need to adjust these to suit your system. Longer polling intervals means that the wallboard information becomes slightly less real time.

Query	Comments
Queue Query	This query polls the real-time stats tables from the UCCX. As these only contain a snapshot of queue statistics, this query usually runs fast.
Agent Query	This query polls the current state of all logged in agents and their reason code if applicable. This data comes from historical reporting tables and will keep growing unless purged. As the tables get bigger, this query may take longer to run.
Other Query	This query polls the call statistics to calculate GOS (Grade Of Service) and Calls Handled per agent. This data comes from historical reporting tables and will keep growing unless purged. As the tables get bigger, this query may take longer to run.

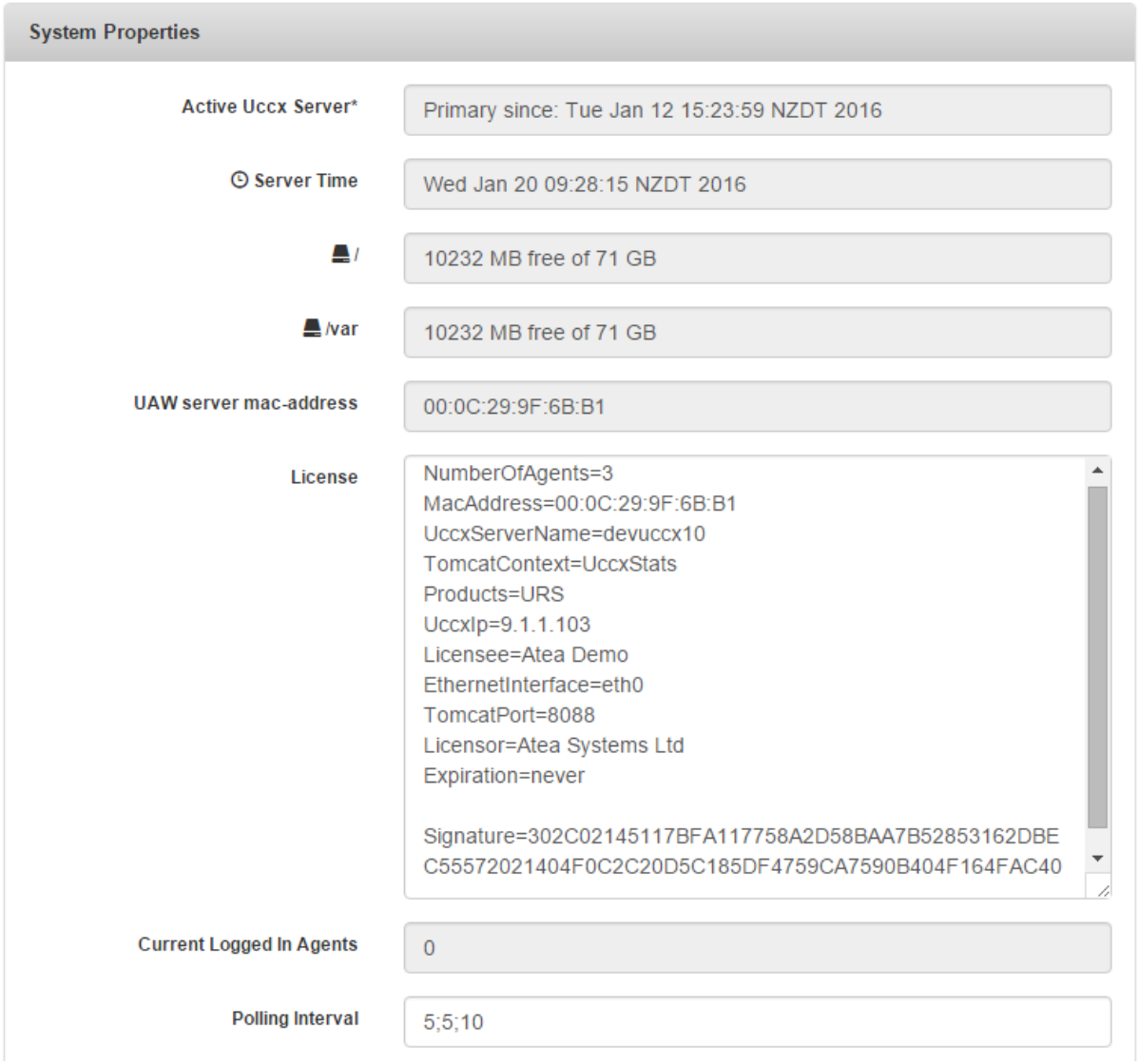


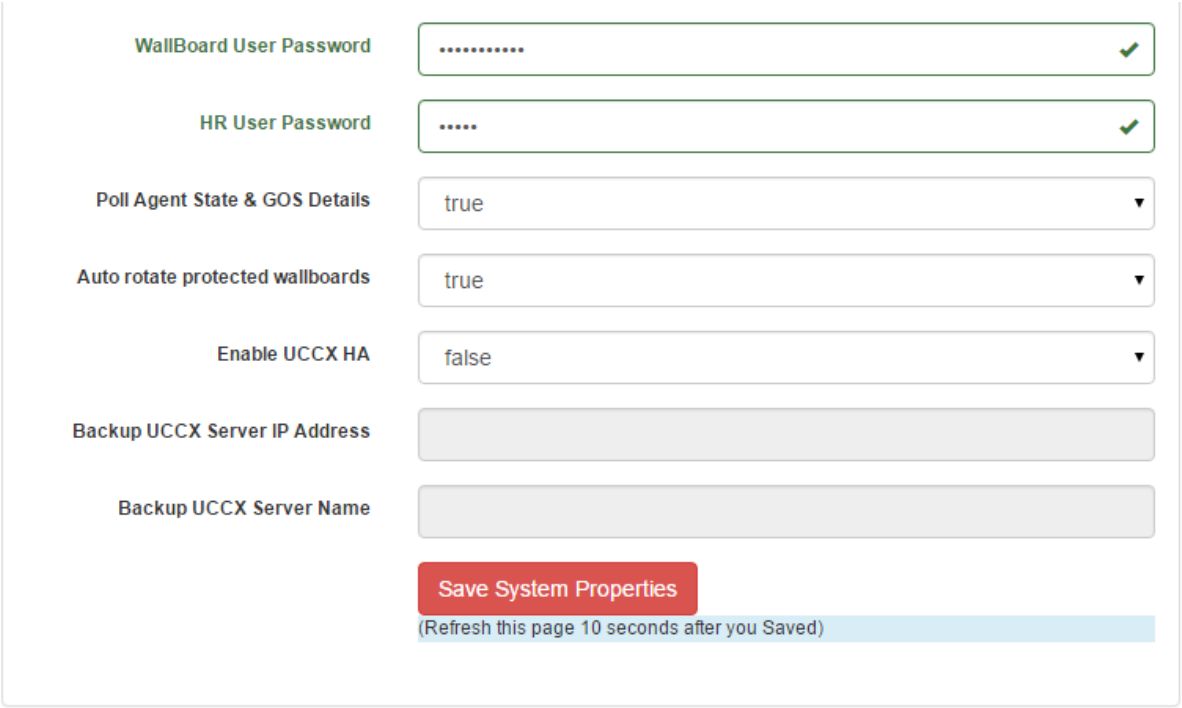
Warning: If the duration of a query turns RED, there is an issue. This means that the query is taking longer than the polling interval. To resolve this, try increasing the polling interval for that query, or get the UCCX administrator to check the size of the database to see if it can be purged.

6.2 System Properties

These are the UAW System Properties and are global for the whole system. They affect all wallboards.

Warning *Clicking the "**Save System Properties**" button will restart the application. The application will be briefly unavailable. All connected wallboards will experience a connection timeout, and their page will need to be refreshed.*



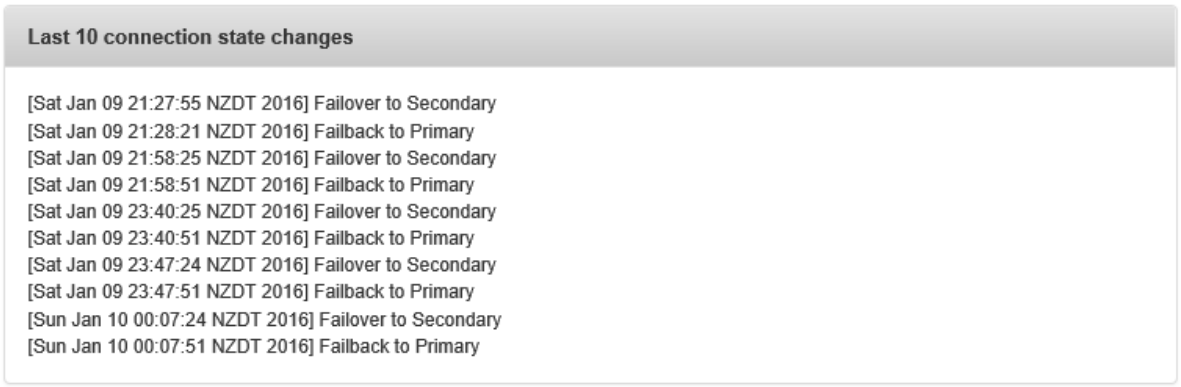


System Property	Comments
Active Uccx Server	Whether the primary or secondary UCCX server is active, and the time date that this connection was established.
Server Time	Date and time of the wallboard server
/	Free disk space in the / directory
/var	Free disk space in the /var directory
UAW server mac-address	MAC address of this UAW server
License	This is the license provided by Atea Systems. Copy the complete content of the license file into this field. The values cannot be changed as it's tamper proof. Contact Atea Systems (support@ateasystems.com) if you need assistance. The information you will need to provide Atea so that this license can be created is; • MacAddress • UccxServerName • UccxIP address • EthernetInterface
Current Logged In Agents	How agents are logged in when this page was accessed. This value should be lower than the licensed NumberOfAgents. ***Note**: a warning will appear on the wallboard and system administration pages when the licensed number of agents is reached and/or exceeded*

Polling Interval	There are 2 options for the 3 thread polling intervals; 1. All 3 threads poll at the same interval, use a single value in seconds (i.e. 10) 2. The 3 threads have different intervals, use a semicolon separated list of intervals in seconds (i.e. 5;10;10 for Queue;Agent;Other) ***Note**: The minimum poll interval for the Agent and Other queries is 10 seconds, if a lower value is provided, the UAW server will apply a 10 sec interval*
Wallboard User Password	Password of the wallboard user in UCCX, see next chapter for the UCCX configuration
HR User Password	Password of the historical reporting user in UCCX (used for any query other than queue statistics), see next chapter for the UCCX configuration
Poll Agent State and GOS Details	Set to true if Agent State or GOS (grade of service) details are presented on the Wallboard. If you only present CSQ information (Grid-Queue template) you can set this to false.
Auto rotate protected wallboards	Set to true (default) to allow the wallboard to cycle through several protected wallboards. This only affects wallboard that are set as protected, and where the wallboard in included in the display list for the user (see 5.4 User Management – Setting who has access to a wallboard).
Enable HA	Set to true where the UCCX is setup in HA with an active/backup server.
Backup Server IP Address	IP Address of the backup UCCX server
Backup Server Name	Server Name of the backup UCCX server, where implemented. This name **must be correct** otherwise the database connection will fail.
Save System Properties	Use this button to save any changes you made to the system properties. Allow about 10 seconds before refreshing the page to see your updates.

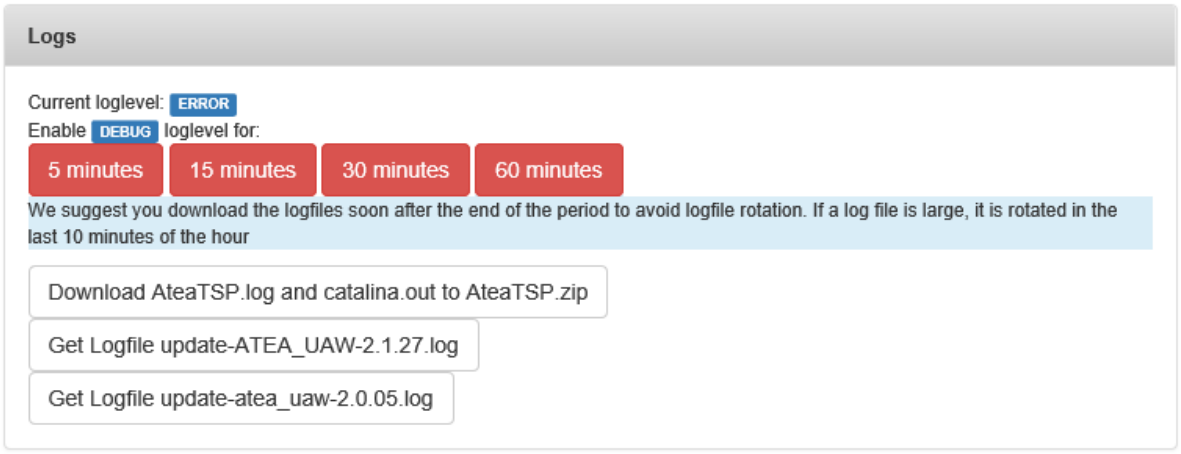
6.3 Last 10 connection state changes (HA configurations only)

This shows the status of the connection the UCCX, to assist with troubleshooting.



6.4 Log files

Use this section if Atea Support ask you to provide log file information, or you wish to include some logs in a support case.



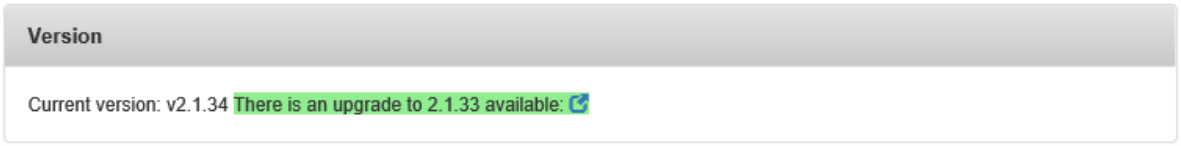
To create a log file:

1. Click on the button for the required logging interval. This commences a capture of the logs (both AteaTSP.log and catalina.out)
2. After the duration has passed, click the **Download** button and save the ZIP file that contains the logs.

The logfiles for any recent upgrade activity are also displayed.

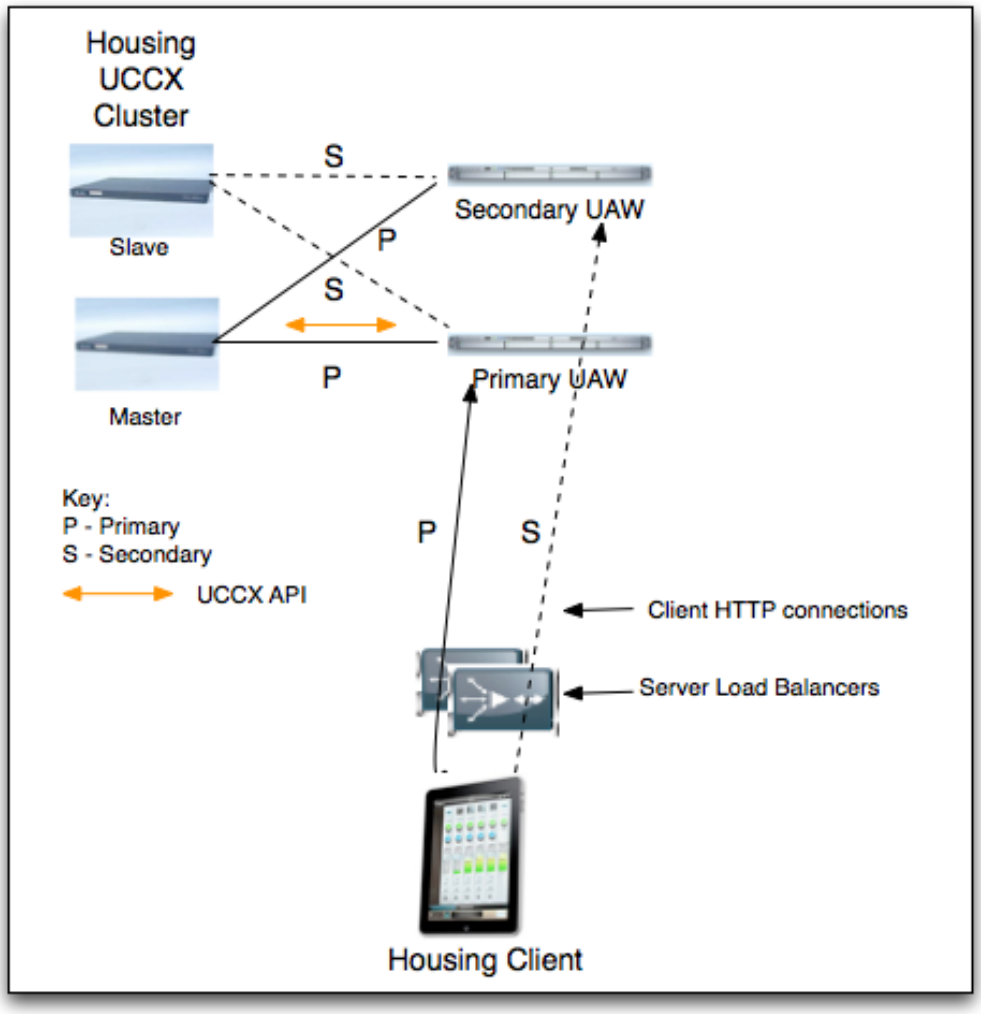
6.5 Version

This is the current version of the software. A link will display if there is an update available. Follow the instructions on the Atea website to update the software.



7 Advanced features - High Availability and User Authentication

There are two aspects to high availability, being UCCX high availability and wallboard high availability. The diagram below shows both of these working together. More details are explained in the sections that follow.



7.1 UCCX High Availability

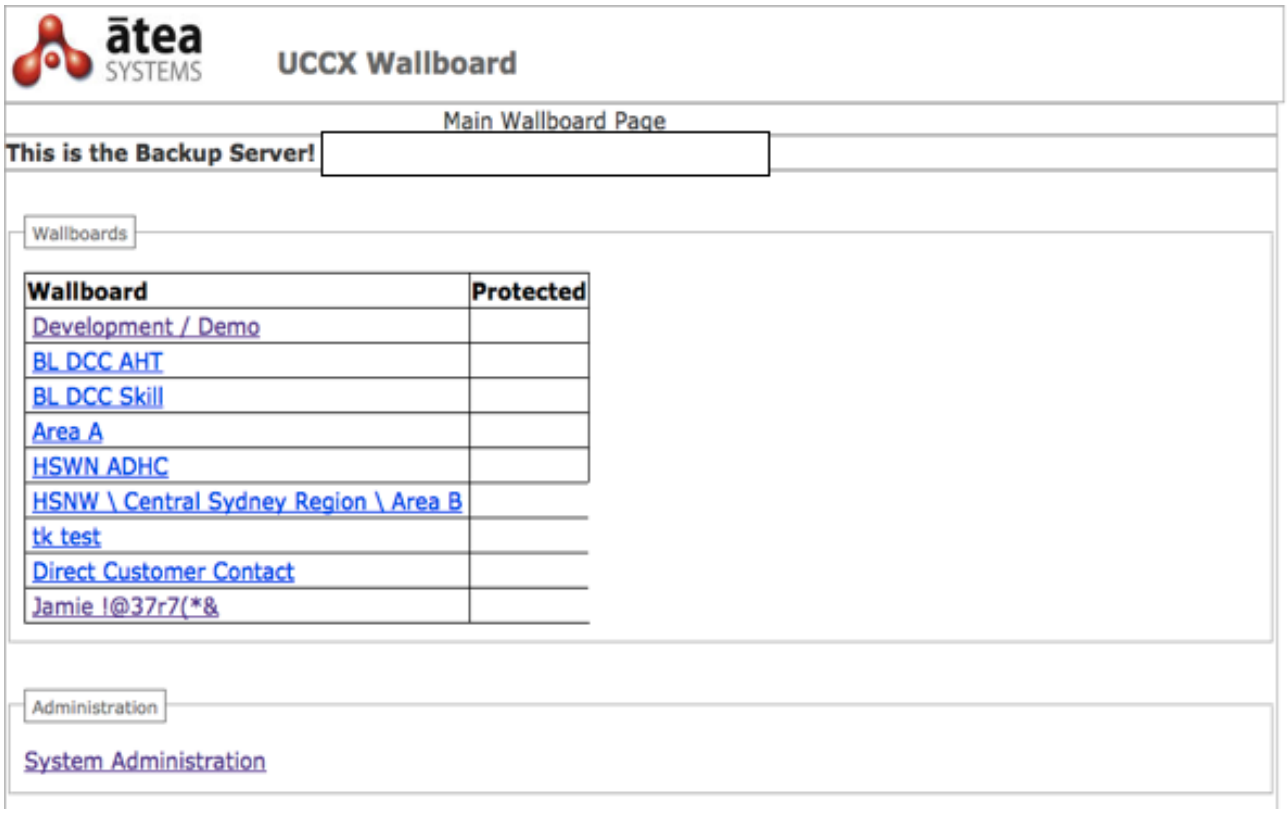
The UAW server polls the active UCCX server every thirty seconds. If a response is not received or the active UCCX server responds that it is not the master, the application will failover to the backup UCCX server (which should now be the master). In the event that the application does failover to the backup UCCX server, a message will be displayed on the wallboards saying "Primary Server NOT Active, Backup Server is now Master!" The polling continues and should the primary UCCX server become the master again, the application will switch back to receiving statistics from that server.

7.2 Wallboard High Availability

The Atea UAW application can be run in high availability mode. This has the primary Atea UAW server functioning as normal, and the secondary/backup Atea UAW server running in "hot standby" mode. Under normal conditions, the secondary polls the primary at regular intervals, and the UAW wallboard application is not available from this server. When the primary fails to respond to polls from the secondary, the secondary takes over by A) Importing the primary server's UAW database, which includes all currently configured wallboards and services, and B) Activating its local UAW wallboard application and the DataSourceManager (if installed). The secondary now takes over normal operation, and continues until the primary once again responds to polls.

While the secondary is active, the wallboard admin page appears as with the warning banner "**This is the Backup Server!**"

Restriction: *When the secondary is active the usual "Administration" links are disabled. The secondary uses the configuration resident on the primary, so changes cannot be made when the primary is unavailable.*

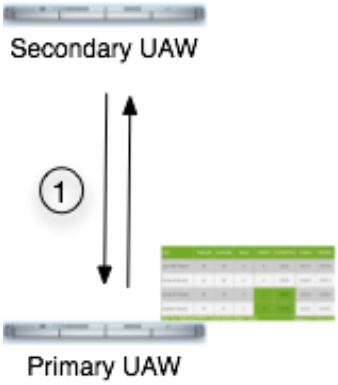


Wallboard Failover:

During normal operation the secondary polls the primary every 15 seconds on the status URL (http://ip-address-of-primary:8088/UccxStats/wallboard?p=status).

The primary server returns the string 'UAW_RUNNING'.

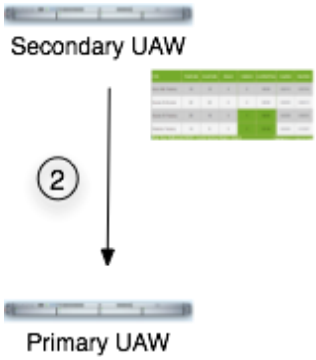
No further action is taken.



During normal operation the secondary polls the primary every 15 seconds, using the status URL (http://ip-address-of-primary:8088/UccxStats/wallboard?p=status).

A primary failure is indicated by no response received from the primary server, or the response received not containing the UAW_RUNNING message.

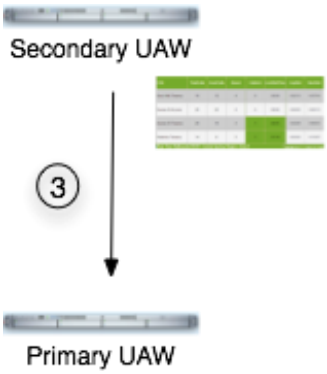
After 5 seconds the secondary again polls the primary server.



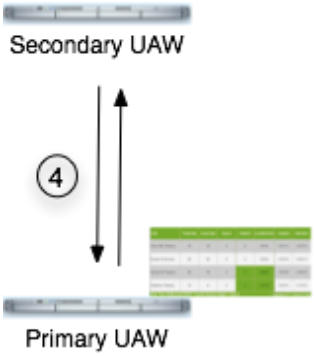
If the primary still appears to be down, the secondary imports the latest primary database configuration, and starts the UAW wallboard application and DataSourceManager.

While failover mode is active, the secondary continues to poll the primary every 15 seconds, on the status URL (http://ip-address-of-primary:8088/UccxStats/wallboard?p=status).

If the primary still appears to be down, the secondary server continues to operate.



When the primary server eventually responds to the poll (twice in succession), the secondary shuts down operation and returns to normal operation mode.



Note: *Some organisations have load balancers that also monitor the status URL on the primary server. Should they detect a failure then they will redirect client HTTP requests to the secondary server. Connected wallboards will experience a connection timeout and their page will need to be refreshed.*

Note: *The troubleshooting section of this guide describes how to interrogate the secondary server to determine the current HA state of the system.*

Database Retrieval:

Wallboards can only be configured on the primary server. The backup server contains a script to take copies of the primary's configuration database every five minutes. This is stored on the backup server and imported into the application on the secondary server application if it becomes active, as described above.

7.3 Wallboard Authentication

Authentication may be added to individual wallboards, so that either a Windows username, hostname or source IP address must be presented.

Here is an example of the details for seamless authentication via Windows single sign on.

1. Create a Service account in AD (i.e. ateasso)

2. Set Service Principal Names for all wallboard hosts (and FQDN) for the created account

   setpsn -A HTTP/SVPVAWB01 ateasso

   setpsn -A HTTP/SVPVAWB01.[OrganisationDomain.com] ateasso

   setpsn -A HTTP/SVPVAWB02 ateasso

   setpsn -A HTTP/SVPVAWB02.[OrganisationDomain.com] ateasso

3. Provide Atea the following details:

   service account username

   service account password

   domain

   kdc server

4. For Windows7 clients accessing a protected wallboard, the following Security Policy will need to be applied (i.e. through group policies): Security Settings - Local Policies - Security Options Network security: Configure encryption types allowed for Kerberos enable: DES_CBC_CRC, DES_CBC_MD5, RC4_HMAC_MD5
5. For protected wallboard access via SSO to work correctly, use the hostname or fqdn in the URL pointing to the wallboard application.
6. If a SLB is used, use a separate hostname which is also included in the DNS and added as Service Principal Name (inc FQDN) with setspn.
7. For SSO the browser needs to detect the wallboard as an intranet page and the user must be logged into the domain from their Windows desktop

8 UCCX Configuration

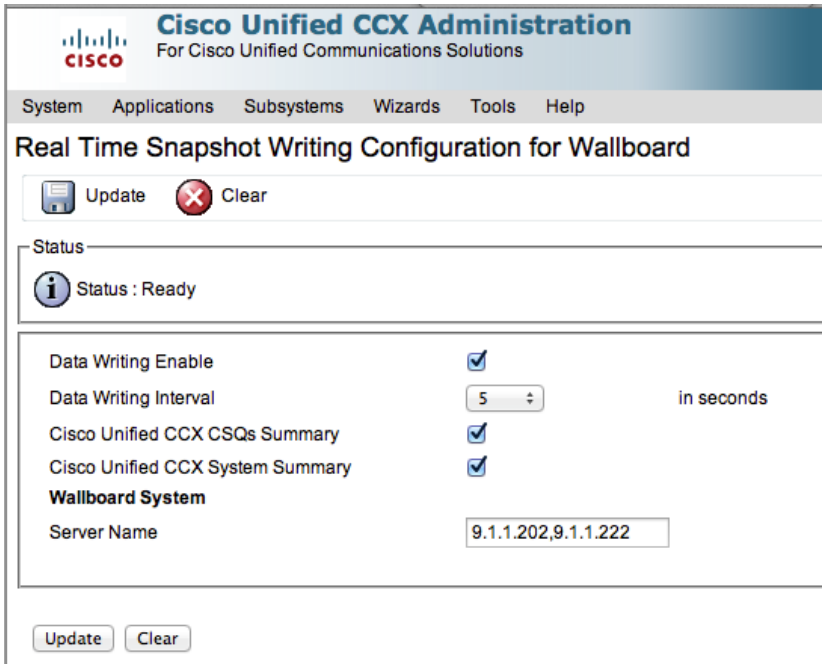
This section is about the settings for the UCCX servers.

Enable Real Time Snapshot Writing

1. Go to the section Real Time Snapshot Writing Configuration for Wallboard.
2. Set these values

   Data Writing Interval: Choose a value that suits your business needs

   Server Name: Add the IP Address(es) of the UAW Server(s), this protects the UCCX database from untrusted connections



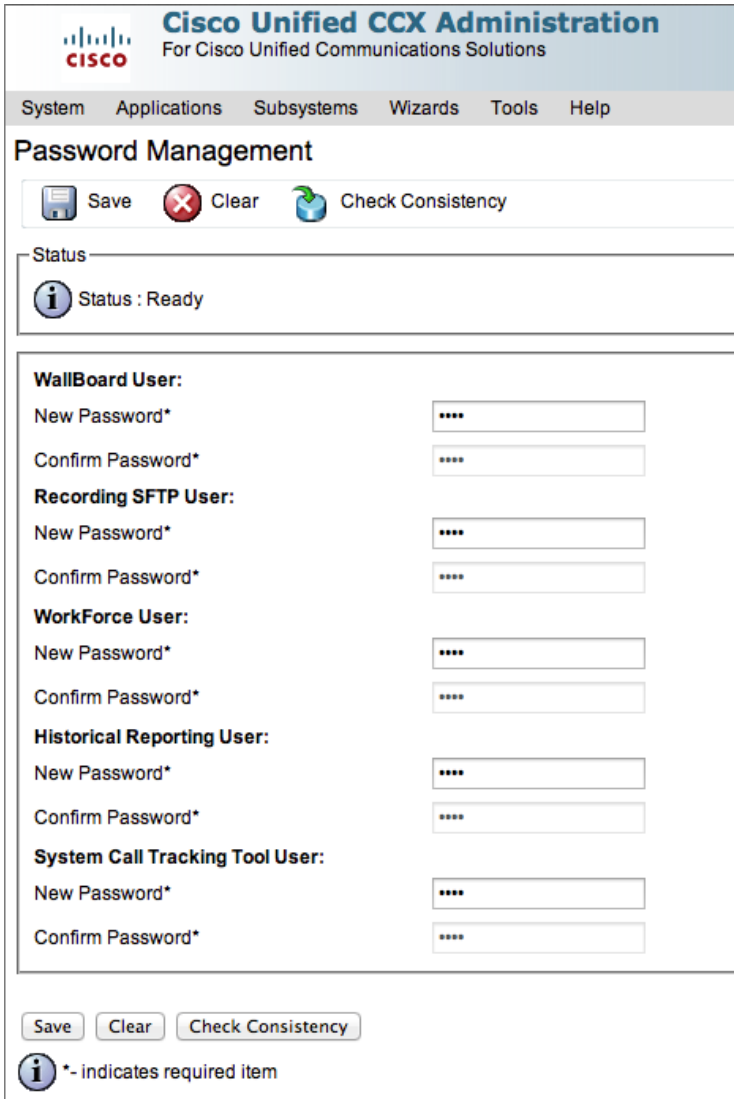
Set passwords

1. Go to the section for Password Management and set passwords for these users:

   WallBoard User

   Historical Reporting User

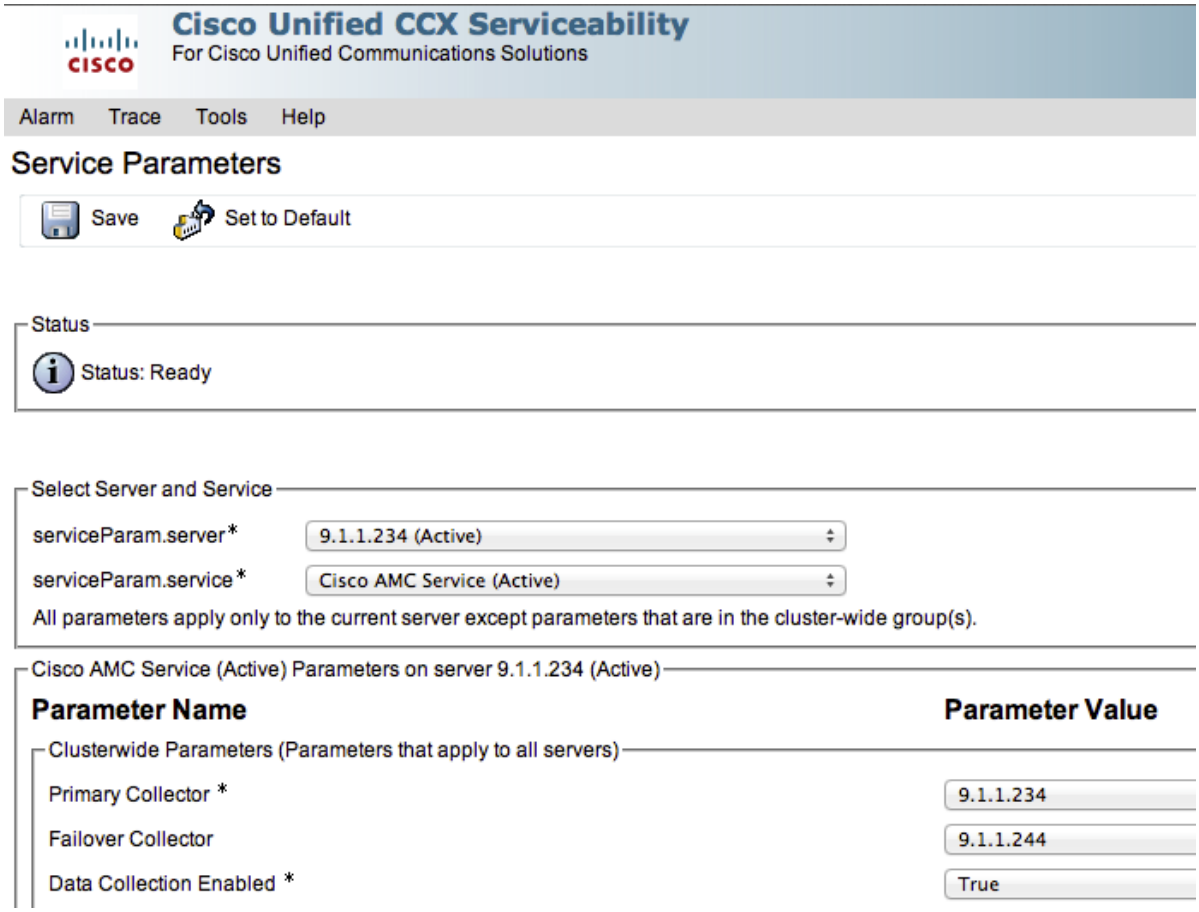
2. If a backup server is present, ensure the passwords are set on those servers as well (click "Check Consistency" to verify the passwords are the same)



Set Service Parameters

Where you have a backup UCCX server:

1. Go to UCCX Serviceability. Under **"Cisco AMC Service"**, ensure the backup UCCX server is configured as the **Failover Collector**



9 Troubleshooting

This section outlines how problems can be determined and rectified.

9.1 Contacting Atea

Atea supplies a maintenance service that includes fault diagnosis and resolution. Here's the process to contact Atea to open a support case.

- Use the support email - it will get you the best response time
- Support email address is: support@ateasystems.com
- Otherwise call +64 26 100 231 and provide the details
- Make sure you include the following information;
    - A description of the problem including the user and wallboard you were working with
    - A screenshot where possible
    - The exact time the problem happened
    - The severity of the problem
    - The contact details of the person the Atea needs to work with
    - Any remote access details that may be required on the day
- Standard support hours are 08:00 - 17:00 AEST and NZDT

9.2 Connecting to the Atea servers for troubleshooting

The main methods to connect to the Atea servers are via either HTTP or SSH.

The wallboards run in the Tomcat web server. The path and port to connect to the main tomcat page is

http://ip-address-of-server:8088/UccxStats/wallboard

Note: Using the DNS name of the server may mean a load balancer will direct you to whichever wallboard server is currently active. As an alternative, specify the server IP address.

The wallboard administration interface runs in the Oracle web server on port 8080.

To connect to the server using SSH on port 22, connect with the username 'thirdparty'. See the application owner for the password.

9.3 Ports and Services for correct operation

We recommend that you monitor the following services and ports. Additionally the wallboard status URL will be monitored by the load balancers and the backup Atea server.

Service port	Service name
80	Http
8088	Tomcat web server
8080	Oracle web server
1521	Oracle database connections

9.4 Log file locations

There are two main log files that Atea may need as part of any support call. These are accessed via SSH and are outlined below.

File	Location	Description
wallBoardChecker.log	Backup server only: /var/log/atea/	Logs the results of the 15 second check from the backup server the primary server.
AteaTSP.log	/etc/atea/logging/	Full log for all events.

9.5 Backup file locations

A process on the TSP provides a back-up the Tomcat and Oracle files to an external location on a regular basis using secure FTP (push).

Attribute	Value
SFTP destination server and path	
Username and password	
Frequency of backup (default value is 11pm daily)	Daily at 11pm

9.6 Troubleshooting FAQs

High Availability

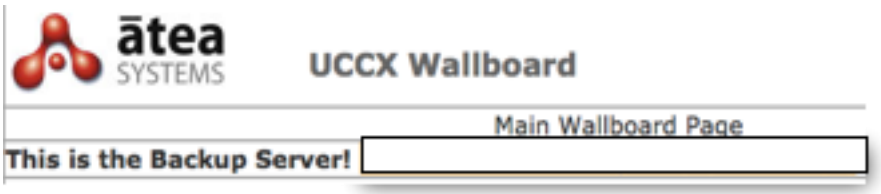
How do I know if the wallboard application is communicating with the primary or backup UCCX server?

A message will be displayed on the wallboards saying "Primary Server NOT Active, Backup Server is now Master!"

How do I know if the client browser is communicating with the primary or backup wallboard server?

This cannot be determined from the client browsers directly, however there are two other ways it can be.

1. From a browser attempt to connect to the main wallboard administration page at http://dns-name-of-wallboard-admin:8088/UccxStats/wallboard. If you see the message "This is the Backup Server!" you will know that the load balancers have directed you to the backup server.



2. From an SSH client connect to the ***secondary*** server and tail the following file (Please note that this is not available on the ***primary*** server)

/var/log/atea/wallBoardChecker.log

Example output when the **primary UAW** is running;

==========

Current directory is /etc/atea/scripts/uaw_ha/bin

Creating functions ...

The Primary AUW Status is:UAW_RUNNING

The Backup(local) UAW status is:

Primary UAW is running

-- Finish Tue May 28 10:08:16 NZST 2013

Example output when the **backup UAW** is running.

==========

== Start Tue May 28 10:10:31 NZST 2013

==========

Current directory is /etc/atea/scripts/uaw_ha/bin

Creating functions ...

The Primary AUW Status is:

The Backup(local) UAW status is:UAW_RUNNING

Primary UAW seems down, sleep 5 sec and test again, then activate this warm standby server

Primary UAW IS NOT RUNNING!

Primary UAW was already not running

-- Finish Tue May 28 10:10:36 NZST 2013

General troubleshooting

Why can't I see an agent under the Agents tab in admin?

The agent may not have logged into UCCX before and therefore no record for them exists in the historical table.

Why are wallboard users being prompted for a username and password?

Possible reasons are:

1. Single Sign-On (SSO) is broken.
2. The user is connecting from a different PC that they are not logged into.
3. The wallboard should not have authentication on it but has been configured with authentication.