<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Periscope Home</td>
<td>3</td>
</tr>
<tr>
<td>1.1 Periscope Overview</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Understanding the Basics</td>
<td>5</td>
</tr>
<tr>
<td>1.3 Getting Started</td>
<td>6</td>
</tr>
<tr>
<td>1.3.1 Installation</td>
<td>7</td>
</tr>
<tr>
<td>1.3.2 Configuring Users</td>
<td>9</td>
</tr>
<tr>
<td>1.3.3 Tagging</td>
<td>10</td>
</tr>
<tr>
<td>1.4 Using Periscope</td>
<td>11</td>
</tr>
<tr>
<td>1.4.1 Navigation</td>
<td>12</td>
</tr>
<tr>
<td>1.4.2 Context Sensitive Views</td>
<td>13</td>
</tr>
<tr>
<td>1.4.3 Kiosk Mode</td>
<td>15</td>
</tr>
<tr>
<td>1.4.4 Dynamic Histories (Niagara)</td>
<td>16</td>
</tr>
<tr>
<td>1.4.5 Managing Views</td>
<td>17</td>
</tr>
<tr>
<td>1.4.6 Unit Conversions</td>
<td>21</td>
</tr>
<tr>
<td>1.5 Licensing</td>
<td>22</td>
</tr>
<tr>
<td>1.6 Viewlets</td>
<td>23</td>
</tr>
<tr>
<td>1.6.1 Alarm Timeline</td>
<td>24</td>
</tr>
<tr>
<td>1.6.2 Baseline</td>
<td>25</td>
</tr>
<tr>
<td>1.6.3 Demand Duration</td>
<td>27</td>
</tr>
<tr>
<td>1.6.4 Energy Profile</td>
<td>29</td>
</tr>
<tr>
<td>1.6.5 Green Tips</td>
<td>30</td>
</tr>
<tr>
<td>1.6.6 IFrame</td>
<td>33</td>
</tr>
<tr>
<td>1.6.7 Image</td>
<td>34</td>
</tr>
<tr>
<td>1.6.8 KPI</td>
<td>35</td>
</tr>
<tr>
<td>1.6.9 Live Point</td>
<td>37</td>
</tr>
<tr>
<td>1.6.10 Multi Chart</td>
<td>38</td>
</tr>
<tr>
<td>1.6.11 Pie Chart</td>
<td>40</td>
</tr>
<tr>
<td>1.6.12 Point Table</td>
<td>42</td>
</tr>
<tr>
<td>1.6.13 Ranking Chart</td>
<td>43</td>
</tr>
<tr>
<td>1.6.14 Simple Gauge</td>
<td>45</td>
</tr>
<tr>
<td>1.6.15 Site Scatter Plot</td>
<td>47</td>
</tr>
<tr>
<td>1.6.16 Speedometer</td>
<td>49</td>
</tr>
<tr>
<td>1.7 Views</td>
<td>51</td>
</tr>
<tr>
<td>1.7.1 Alarm Timeline View</td>
<td>53</td>
</tr>
<tr>
<td>1.7.2 Dashboard View</td>
<td>55</td>
</tr>
<tr>
<td>1.7.3 Heat Map View</td>
<td>57</td>
</tr>
<tr>
<td>1.7.4 IFrame View</td>
<td>58</td>
</tr>
<tr>
<td>1.7.5 Map View and Viewlet</td>
<td>59</td>
</tr>
<tr>
<td>1.7.6 PX Connect View</td>
<td>63</td>
</tr>
<tr>
<td>1.7.7 Tree Map View</td>
<td>64</td>
</tr>
<tr>
<td>1.8 Settings</td>
<td>65</td>
</tr>
<tr>
<td>1.8.1 About</td>
<td>66</td>
</tr>
<tr>
<td>1.8.2 Database</td>
<td>67</td>
</tr>
<tr>
<td>1.8.3 General</td>
<td>68</td>
</tr>
<tr>
<td>1.8.4 Kiosk</td>
<td>69</td>
</tr>
<tr>
<td>1.8.5 Style</td>
<td>70</td>
</tr>
<tr>
<td>1.8.6 View Manager</td>
<td>72</td>
</tr>
</tbody>
</table>
Periscope Overview

About Periscope

Periscope™ is a rich internet application (RIA) built on HTML5, an open source framework for building and maintaining expressive web applications that deploy consistently on all major browsers, desktops, and operating systems. Periscope runs as a service on a Niagara4 station (a platform marketed by most of the major controls suppliers) and can be easily integrated with third party BACnet, LonWorks, SQL and other standard protocols. It provides a web-based client that can graphically display and analyze any information contained in the automation control system, as well as related items like weather, occupancy, and production from other traditional databases.

Periscope Benefits

Periscope is unique in its ability to allow each and every user the ability to easily customize (in minutes) their own “views” of various data, histories, and metrics, including energy trends, building comparisons, weather data, network status, consumption efficiencies, key performance indices, and more. Periscope can even display the custom pages built with proprietary graphics tools, thus preserving prior investments while enabling side-by-side comparisons of operating graphics with related variables and performance trends.

Periscope Goals

Designed to promote behavioral change through wider access to critical facility control parameters, Periscope enables a high level of engagement by facility stakeholders that, for the first time, can see the real-time impact of the choices they make in utilization of facility resources like lighting, electricity, water and other consumables. Using Periscope, facility stakeholders can truly become “agents of change”, with the ability to dramatically influence the demand on limited facility resources.
Understanding the Basics

JACE®

JACE controllers are embedded computers running the Niagara Framework® software. JACEs are distributed throughout the customer’s network and they provide connectivity to the many different physical devices and systems within a building. JACEs connect to common building automation systems, metering, lighting and other smart devices using protocols such as LonWorks, BACnet, Modbus, or various proprietary protocols. The JACE provides control logic, trending, scheduling and alarming and allows real-time point data to be brought into Periscope.

Web Supervisor™

The Web Supervisor is a desktop server or PC running the Niagara Framework. The Supervisor is designed to manage a network of JACEs or to monitor points from third party servers. It reduces the costs of managing and controlling multiple buildings and allows centralized engineering, alarming, scheduling and trending of remote equipment. The Web Supervisor supports multiple client workstations, and has an extensive security/password model to protect user information. A Web Supervisor is often the best location for Periscope software because historical data trends from networks of JACEs and points from third party servers are generally stored here. Live data points must also be mapped to the Supervisor if displayed in Periscope.

Views

The core UI components of Periscope are “views”. Views are chosen from an ever expanding library and contain things such as a dashboard view, alarming, IFrame, map, and many more. Views are unique per user, each user would add their own views configured in a specific way that is important to them. Views can also be assigned to a specific level of the hierarchy, which means that some views appear only at the top-level or perhaps only when viewing sites.

Viewlets

Sometimes referred to as a widget or pod, viewlets are the data windows used to populate a user’s “dashboard view”, which refers to the Periscope user’s layout of their information. Viewlets vary from focusing on live point data, historical data, as well as displaying more analytical information such as KPI or analytics results. Each viewlet has different capabilities and configuration options which are covered later in the document.

Dashboard Basics

The user can modify their dashboard and its viewlets in a variety of ways. Viewlets can be added, moved, resized. The “plus” button allows users to choose to add new viewlets to their dashboard from an ever expanding library of viewlets. A viewlet options list is accessible through a menu (wrench icon) in each viewlet. Site colors will remain consistent across multiple viewlets automatically for ease of identification.

Points

“Points” refer to data within the Niagara network that consists of real-time values or setpoints. Viewlets which rely on point data have the ability to update in seconds, and provide immediate indication of a change of status or value. The Point Table Viewlet is an example of a viewlet that uses points.

Trends

“Trends” refer to data sets that contain historic information. Trends can consist of data points plotted for time periods reaching as far back as data is available, years in many cases. Certain viewlets rely on trend data to give users a detailed view of energy usage for a user-selectable time range. This can be useful in identifying areas of concern or opportunities to reduce energy consumption.
Getting Started

- Installation
- Configuring Users
- Tagging
Installation

Periscope Prerequisites

- Periscope must run on a Niagara4 station, version 4.0 or higher. It is recommended that Periscope run on a Niagara Web Supervisor or SoftJACE due to increased storage capacity and speed but it can also run on any Niagara4 compatible JACE.
- Any station running Periscope must have at least 6MB available.
- Periscope is a web application and requires a modern browser. Officially supported browsers include IE10+ as well as the latest versions of Chrome and Firefox.

Periscope will soon support SkySpark in addition to Niagara4.

Installing Periscope

Saving and stopping your station:

- Open your Platform and access the Application Director
- Save your running station (Save Bog)
- Stop the station (Stop)

Installing Periscope JAR file

- Using Windows Explorer, navigate to your current build of Niagara
- Place the periscope-rt.jar file in the modules folder under your Niagara build
- Place your Periscope license file in the licenses folder under your Niagara build

Adding the Periscope Service in Niagara4

- Open Workbench, reopen your Platform and access the Application Director
- Start the station
- Open the periscope palette
- Drag and drop the PeriscopeService from the palette into your station's Services
- After which, Periscope installation will be complete and you may open Periscope by going to http://(IP address of the Web Supervisor/JACE)/periscope

* The menu shown is located on the right side of the Application Director window

- Close Workbench
Installing License File

The license file provided is not a normal Niagara license and needs to be installed separately. The license can be automatically installed as long as the Niagara server has access to the internet.

Automatic Installation

To automatically install the license:

1. Navigate to Services/PeriscopeService within your station
2. Right Click on PeriscopeService and click Action > Fetch License

At this point your license file will be downloaded from Periscope servers, copied into the appropriate directory, and loaded.

Manual Installation

To manually install the license, copy the license folder into:

- {STATION_HOME}/shared/periscope

For example, on my local machine this is: C:\Niagara\Niagara-4.2.36.20\stations\demo\shared\periscope.

The "periscope" folder should be created if it does not already exist in your station shared folder.

The "Debug License" action will print some additional information about your license file into the Station Output. This can be a useful tool to identify license problems or assist tech support.

Important Notes:
- If your dashboard locks up, try refreshing the page.
- You can delete a user's dashboard by deleting the folder station:\files\Periscope\users\[username]
- techsupport@activelogix.com for support questions

Selecting Sites

Before using Periscope the user must choose which sites in the database are available to Periscope, each of which will consume one "site" in the license.

To do this, navigate to Periscope in the browser and go to Settings (gear at the top right of the page). This will take you to the About settings page:

License

Sites: 10 / 10 sites used.

Choose Sites

Then click on the Choose Sites button to select which sites are usable by Periscope.
Configuring Users

Each Niagara user has their own Periscope space to create views and viewlets. This means that two users could create their own Periscope dashboard with unique viewlets and they would not conflict. Periscope uses the Niagara4 security model, in order for a Periscope user to see a specific Site or Trend they need access to it in Niagara. This is configured using the Niagara RoleService and CategoryService.

Minimum User Requirements

Users must have Operator Read access on the PeriscopeService as well as every component in the station that will be accessed within Periscope. This includes components in the Hierarchy as well as point or trends that may appear in views. Users must also have Operator Write access to every component in the station that the user may modify using the Database view.

Hiding Views

Individual views or viewlets can be hidden from a user by modifying the categories. Views can be found in PeriscopeService/PeriscopeDatabase/Views. The Add View dialog will only show views that the user has access operator read access to. Additionally, viewlets can be hidden by modifying permissions of the components within PeriscopeService/PeriscopeDatabase/Viewlets.

Duplicating Users

Users can be easily duplicated which can serve as a backup or as a default view for new users. To duplicate a user:

1. Navigate to /PeriscopeService/PeriscopeDatabase/Users
2. Copy/Paste the user you would like to duplicate
3. Set the name of the duplicated user to the target user

The next time the new user logs in they will have a new copy of all views and viewlets from the original user.

The new user must first be created in the Niagara UserService
Tagging

Periscope uses Haystack ([http://www.project-haystack.org](http://www.project-haystack.org)) as the underlying data model. This allows Periscope to make assumptions about the data and reduces the need for configuration in Periscope (such as PeriscopeConfig in 2.x). Niagara4 has support for Haystack out of the box and it can be enabled by:

1. Navigate to the Services > TagDictionaryService
2. Open the Haystack palette
3. Drag the Haystack tag dictionary from the palette into your Tag Dictionary Manager

Once the Haystack Tag Dictionary is installed a new tag namespace "hs" is available which Periscope will use for all queries. At this point, all data that should be viewed withing Periscope should be tagged according to the Project-Haystack standards. There are several tools available to assist tagging, including:

- Creating your own tag dictionary - a custom tag dictionary can be created which can contain rules defining haystack tags. For example, this could be used to map naming conventions to Haystack Tags for batch tagging.
- Implied tags - Niagara4 automatically applies certain tags such as "point" to ControlPoints. You can view implied tags of a component in the Edit Tags dialog.
- Periscope Database view - the Database view allows users to manually manage tags or create new haystack records.

Implied Tags

Niagara4 can automatically tag records based off of the component type, properties, or placement within the station. This is a powerful feature that can vastly speed up tagging time. It's recommended that you create a new Smart Tag Dictionary that uses implied tagging to automate all tags where possible.

Niagara Proxy Points

By default Proxy Points in the Niagara Network lose all tags that were defined in the remote station. This is especially problematic when dealing with points that may contain a history that's also imported. Starting in Niagara 4.2 you can now keep specific tags, including history tags.

To do this, navigate to the property sheet view of the Niagara Network and set Persist Fetched Tags to true. This will cause any dynamically fetched tag to persist on the proxy point. To force a sync, right click on the Niagara Network and click Actions > Force Update Niagara Proxy Points. This will look at each proxy point, check to see if a matching history is being imported, and add the appropriate history tags.

Manually Adding Histories

Sometimes a station may have histories that are created outside of a normal history extension which causes it to lack the appropriate history tags. These types of trends can be manually added to the Haystack database by creating a new component and tagging the history appropriately. For example, let's assume a trend was imported from a CSV called /Weather/Charlotte_OAT. To add this to Periscope:

1. Create a new Component (or Folder) called CharlotteOAT
2. Right Click > Edit Tags
3. Add a Marker tag named hs:his
4. Add a String tag named n:history with the value of "/Weather/Charlotte_OAT"
Using Periscope

- Navigation
- Context Sensitive Views
- Kiosk Mode
- Dynamic Histories (Niagara)
- Managing Views
- Unit Conversions
Navigation

Periscope supports navigation between contexts by using the Navigation Bar (pictured below). The navigation tree is defined in Settings and maps to a Niagara Hierarchy. Navigation trees can be different per user and can be simple (such as just viewing sites) or as complex as needed. Periscope automatically installs and defaults to a hierarchy called "Periscope_Site" which consists of every haystack site defined and accessible by the current user in your database.

![Navigation Bar Image]

When navigating within Periscope you're either at the top-level or viewing a specific context, which is displayed in the navigation bar. The top level can be thought of as a global view level - any view on this level can contain information about the entire system. The top level is a good place for a database view or a dashboard that may compare sites across the entire system.

From the top-level, one can begin navigating the hierarchy by clicking on the icon. This will drop down a list of elements in the hierarchy which can then be navigated into similar to a tree.

Context

"Context" is an important concept in Periscope and is defined as the currently selected hierarchy item. For example, if you used the navigation bar to reach a site called "Atkins" your context is "Atkins", or more specifically, the ID of the Atkins component. One reason this is important is because views within Periscope are "context sensitive" and can be reused as the context changes across the same hierarchy level. For example, one dashboard can be created which works across every site. The user can then switch sites using the navigation bar and each viewlet within the dashboard will dynamically update to the new context.

Views at the "top level" aren't targeting a specific component and are considered to have no context.
**Context Sensitive Views**

One of the most powerful features of Periscope is that views are *context sensitive*. That means that one view can be reused across different contexts (such as sites) which can save configuration time as well as help tell a story about how the data changes. In this document I’ll walk you through setting up a context sensitive dashboard (View) that can be reused across all sites.

**Step 1: Create a new Dashboard View**

The first thing we’ll do is create a new Dashboard view that is assigned to all sites. To do this, navigate to your View Settings page or click the button in the bottom left of Periscope. The "Select View" dialog will appear, choose the "Dashboard" view and click OK. The next dialog that appears allows us to configure our view.

![Dashboard View Configuration Dialog]

In the above dialog I set the name to "Site Dashboard", chose a new icon of a building and set the Target to All Sites. This caused our new view to appear on every site in our database. Now if we navigate to a Site we should see a building icon on the left which takes us to our new Dashboard view.

**Step 2: Creating context sensitive viewlets**

Now that we have a dashboard that is being reused across all of our sites we need to setup viewlets that are context sensitive. As we change from one site to another we want our viewlets to change as well. To do this:

1. Click the small + button in the top right to add a new viewlet and choose the Multi Chart Viewlet.
2. Click on the wrench within the viewlet to configure the viewlet, and expand the "Left" axis config section.
3. Click on the "Data" button to choose which trends are showing on our left axis.
4. Change the Mode to Query.
5. Set the query to energy and press enter to preview the query results.
6. Click the "context" tag on the far right of the Query field.
In the above example my chosen context is the site Barnard and the query returned one result as expected. The query is a Haystack Filter which contains a variable of "context". This is the only dynamic variable available in Periscope today and it can be used to insert the ID of the current context.


**Kiosk Mode**

Kiosk Mode enables Periscope to be used as a simplified digital signage solution that automatically navigates through all of your views. This is a great way to add interest and provide a high level view of the data you want to share. (Note: only Views are affected by Kiosk Mode; settings pages will not be affected)

**Enabling Kiosk Mode**

There is a single switch in Kiosk Mode settings that makes it easy to turn Kiosk Mode on or off. Once Kiosk is turned on it will stay on, even after refreshing the browser.

**Using Kiosk Mode**

The settings page for Kiosk Mode contains a single field for View Timing. This field controls the delay behavior of Kiosk Mode.

**Pause Kiosk Mode**

To pause Kiosk Mode, simply move your mouse over Periscope or press a key on your keyboard with Periscope in focus.

**Resume Kiosk Mode**

Kiosk Mode will resume once no interactions have occurred for the amount of time determined by the View Timing value.

**Notifications**

Kiosk Mode uses our built-in notification system to inform you on changes to the running status of Kiosk Mode. There will be notifications for the following events:

- Enabled (on-load)
- Pause
- Resume
Dynamic Histories (Niagara)

Periscope has the ability to create two types of dynamic histories on the Niagara platform:

1. Group - combine multiple histories into a single history and optionally convert to a new unit
2. Scale - scale a history by some scalar value

Dynamic histories will show up within Periscope views and in the haystack database but don't actually exist in the Niagara History Database.

Dynamic histories are an advanced feature and require configuration on the Niagara back-end.

Group dynamic history

A group dynamic history can aggregate any number of histories into a single history which can the be used throughout Periscope. Group dynamic histories only support "sum" but will later be improved to support other aggregation types. The following tags are required to create a new group dynamic history.

<table>
<thead>
<tr>
<th>Haystack Tag</th>
<th>Niagara Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hs:his</td>
<td>Marker</td>
<td>The his tag is used to define a historized point</td>
</tr>
<tr>
<td>hs:dynamicHis</td>
<td>Marker</td>
<td>The dynamicHis tag denotes a Periscope Dynamic History</td>
</tr>
<tr>
<td>hs:hisQuery</td>
<td>String</td>
<td>Haystack filter which returns historized recs that will be aggregated. For example: siteMeter and his would allow a user to aggregate all energy for all Sites</td>
</tr>
<tr>
<td>hs:convertTo (optional)</td>
<td>String</td>
<td>Haystack Unit that the resulting aggregated trend will be converted to (&quot;BTU&quot;)</td>
</tr>
</tbody>
</table>

Example Setup

1. Create a new NumericWritable in your station (location is not significant)
2. Add the following tags: hs:dynamicHis, hs:his, hs:hisQuery:"siteMeter and his", hs:convertTo:"BTU"
3. Update Periscope Haystack Cache

Group Dynamic Histories are calculated on the fly and should be used cautiously to avoid overloading the server. For example, a dynamic history that aggregates 50 histories will still individually query all 50 of the histories behind the scenes. This would occur any time the aggregate trend is used in a viewlet or view. In this case it would be better to use a standard Niagara History Extension with the total calculated in the wire sheet. The result would be one history query for each view.

Scale Dynamic Histories

A scale dynamic history is a history that is multiplied by a scalar value. This can be used to perform basic calculations such as Energy to Cost ($) or to some unit that doesn't exist in our database. The following tags are required to create a new scale dynamic history.

<table>
<thead>
<tr>
<th>Haystack Tag</th>
<th>Niagara Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hs:his</td>
<td>Marker</td>
<td>The his tag is used to define a historized point</td>
</tr>
<tr>
<td>hs:dynamicHis</td>
<td>Marker</td>
<td>The dynamicHis tag denotes a Periscope Dynamic History</td>
</tr>
<tr>
<td>hs:hisRef</td>
<td>Ref</td>
<td>Reference to the source history that will be scaled</td>
</tr>
<tr>
<td>hs:scale</td>
<td>Num</td>
<td>Scalar value</td>
</tr>
</tbody>
</table>
Managing Views

Periscope is now organized with what are called ‘views’. This has replaced ‘tabs’ in the earlier revisions of Periscope. Views are context sensitive, meaning they can be set up to display only on certain types of levels of the hierarchy. For example, you could have a Map view that only displays at the top-level and a site dashboard that displays only if a “site” is selected. Views are represented by the icons on the left-hand side of Periscope, as shown below.

Adding Views

Views can be created in two ways:

A. Add, modify, or delete a view by accessing the settings menu in the top right corner of the window:
While in the settings configuration, select the bottom icon to access the views.

This will show you all the views that are currently set up, what their id is and the context they are associated with.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Database</td>
<td>database</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dashboard</td>
<td>dashboard</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tree Map</td>
<td>tree-map</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PX Connect</td>
<td>px</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dashboard</td>
<td>dashboard</td>
<td>site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Map</td>
<td>map</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Database</td>
<td>database</td>
<td>id = @h:133a &quot;meter&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heat Map</td>
<td>heat-map</td>
<td>site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Database</td>
<td>database</td>
<td>site</td>
</tr>
</tbody>
</table>
The Views main setting page is broken into 5 columns:

1. **Drag Handle**: This can be used to re-order views by clicking and dragging on a row.
2. **Icon**: You can set whichever icon you’d like to best represent the view that you’re building. Chose from dozens of options to best fit your project.
3. **Name**: What you’d like to call your view.
4. **View ID**: These id’s are assigned to the components that are created for Niagara behind the scenes.
5. **Context**: The assigned location that the particular view will reside and be visible when navigating. IE if you had a “Database” view assigned to the top level (^), you would see this view when you’re on the ‘home’ page. If you added a “Dashboard” view on a site level (site) when you navigate to any site, that dashboard would be available on the left side menu. The top ‘home’ page would not have this dashboard view as it was assigned to the ‘site’ level and not the ‘top’ level.

**B. A quicker method of just adding a view once you’re already in the correct context, simply click the + button on the bottom-left:** 

![Periscope Dashboard](image.png)

Note: Views can only be deleted or edited once created via method A. through the view settings.

**Creating a View**

When Creating a view, click the ‘Add’ button at the bottom of the view pane. You’re given a choice of 7 different view types, as seen below.
Once you select the view you'd like to add, give it a name, a unique icon, and most importantly a target designation for context.
Unit Conversions

Many viewlets within Periscope have the ability to convert to other units on the fly by using the "Convert To" unit selector.

Once a new unit is selected all data within the viewlet will be converted on the fly. The Clear Unit button will remove all conversions and switch back to the default unit.

Sustainability Equivalencies

Some of the sustainability focused units require the Sustainability Bundle in order to be used. These units are denoted by a leaf icon (��). This includes equivalencies for:

- Metric Tons of CO2
- Barrels of Oil consumed
- Carbon sequestered by acres of U.S. forests in a year
- CO2 emissions from homes’ energy use for one year
- Greenhouse gas emissions from miles driven by an average car

Calculation information is available here.
Licensing

Periscope is licensed by the number of sites being used in your installation (minimum of 10). A "site" according to Project Haystack is:

> A site entity models a single facility using the site tag. A good rule of thumb is to model any building with its own street address as its own site. For example a campus is better modeled with each building as a site, versus treating the entire campus as one site.

Certain views, viewlets, and other feature are also licensed and require a certain part number in order to operate.

> Periscope will only work with points and trends that are associated with a selected site.

Bundles

All installations of Periscope contain the "base" bundle which includes generic and commonly used views and viewlets. Additionally, Periscope has three optional bundles available: Energy, Sustainability, and Analytics. These bundles contain a carefully chosen group of viewlets and features pertaining to a specific theme. The list of available features for each bundle is below:

**Base (included in all installations)**

- Live Point
- Multi-Chart
- Point Table
- KPI
- Simple Gauge
- Speedometer
- Dashboard
- IFrame
- PX Connect

**Energy (PER-ENERGY)**

- Baseline
- Demand Duration
- Energy Profile
- Pie Chart

**Analytic (PER-ANALYTIC)**

- Site Scatter Plot
- Tree Map
- Heat Map

**Sustainability (PER-SUSTAIN)**

- Ranking
- Green Tips
- Image
- Kiosk (feature)
- Equivalencies - the ability to convert trends to sustainable equivalencies such as CO2, miles driven, etc.

**Feature Parts**

Periscope also has some unique features which are licensed separately. These can be added to any installation but are not included by default in the base package or in a bundle.

- Themes (PER-THEME) - this feature enables the ability to create custom themes with your logo and colors.
- Map (PER-MAP) - this enables the map view
- Alarm (PER-ALARM) - enables the usage of the Alarm Timeline view / viewlet.
Viewlets are data windows used to populate a user's dashboard. Periscope comes with an ever expanding library of viewlets, each allowing the user to display their information in a unique way. Viewlets can be added, moved, and deleted from the user's display with ease.

- Alarm Timeline
- Baseline
- Demand Duration
- Energy Profile
- Green Tips
- IFrame
- Image
- KPI
- Live Point
- Multi Chart
- Pie Chart
- Point Table
- Ranking Chart
- Simple Gauge
- Site Scatter Plot
- Speedometer
Alarm Timeline

See Alarm Timeline View
The Baseline Viewlet allows comparison of any two periods for a given trend. This is a useful viewlet to answer questions such as "Is my building consuming more energy compared to yesterday or this time last year?".

Configuration Options:

- **TITLE**: Baseline
- **DATA**: Select Trend
- **DATE**: Date Range
- **ROLLUP**: Manual
- **BASELINE**: Previous
- **CONVERT TO**: Select Unit
- **ALIGN DAYS**: [ ]

Configuration Options:
• **Title:** Set a custom viewlet title.
• **Data:** Select from available trends using either the Picker or Query mode.
• **Date:** Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
• **Rollup:** Select auto, or manual for more rollup control over rollup time, and rollup types such as Avg, Min, Max, Sum values of the trend based on selected date ranges.
• **Baseline:** Compare the current period's data with the previous period data if set to auto, or pick a specific time range.
• **Convert To:** Convert the data to comparable units such as kWh to MWh or kWh to BTU’s.
• **Align Days:** Shift the baseline weekday to start on the same day of the week (+ or -). Example: "today vs yesterday" with "align days" will end up comparing the same day against each other.

This feature requires the part number **PER-ENERGY**
Demand Duration

The Demand Duration viewlet enables the display of the amount of time a variable is above a specific level during the selected interval.

Configuration:

Configuration Options:

- Title: Set a custom viewlet title.
- Data: Select from available trends using either the Picker or Query mode.
- Date: Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
- Convert to: Convert the data to comparable units such as kWh to MWh or kWh to BTU's.

This feature requires the part number PER-ENERGY.
Energy Profile

Description
The Energy Profile Viewlet enables users to quickly identify anomalies in data and compare average profiles to different periods of times or different trends.

Configuration
### Configuration Options:

- **Title**: Set a custom viewlet title.
- **Data**: Select from available trends using either the Picker or Query mode.
- **Date**: Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
- **Profile Period**: Pick from Daily or Weekly energy profiles.
- **Rollup Type**: Average, sum, min/max, or count the records for the date or date range provided.

This feature requires the part number *PER-ENERGY*
Green Tips

The Green Tips viewlet display an animated slideshow of images and text. Periscope provides a "green tips" slideshow out of the box which is focused on sustainability but users also have the ability to create their own slideshows with custom images and text.

Electric cars have several potential benefits as compared to conventional automobiles, including a significant reduction of local urban air pollution. A new line of BEV (all-electric) cars using lithium-ion battery can travel more than 200 miles per charge.

Configuration

<table>
<thead>
<tr>
<th>ID</th>
<th>greentips</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIMING (S)</td>
<td>5</td>
</tr>
<tr>
<td>SHOW TEXT</td>
<td>Always</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>Fade</td>
</tr>
</tbody>
</table>

Configuration Options:

- **ID**: Each slideshow that is created is given a custom ID in Niagara. Entering a different ID will show a different slideshow.
- **Timing**: In seconds, the duration of each slide being shown.
- **Show Text**: Show the accompanying text for the image or not.
- **Transition**: fade, horizontal, or vertical rotation to the next slide image.

Custom Slideshows

The Green Tips viewlet has the ability to display custom slideshows with images and text. This task should be completed by someone with Niagara knowledge since it requires manual modification of the database and installation of files (images).
**Step 1 - Upload Images**

The first step of creating a slideshow is to place the images onto your Niagara server so that Periscope can access them. To do this, copy your images to the "shared" folder of your Station Home. It may be best to create a new folder within your shared folder. Once images are placed into your Niagara Station, they are served from the URL: http://[ip]/file/[folder]/[image] - for example, if I created a folder in my shared directory called "sustainability" and added "solar.jpg" I would access it by navigating to http://localhost/file/sustainability/solar.jpg.

**Step 2 - Create Slideshow Record**

Now we need to create a new slideshow record which will be referenced by all of our images. To do this, navigate to your "Database" view within Periscope Settings and click on "New Record" to create a new Record. This new record should contain:

- **slideshow** (Marker)
- **slideshowId** (String) - the ID the viewlet will reference to load your slideshow

![New Rec](image)

**Step 3 - Create Records for each image**

The next step is to create a new record for each image within the slideshow. This record will contain a link to the image, text to display while the image is showing, and a reference to our new slideshow record created in Step 2. For each image, create a new record as follows:

- **slideshowRef** (Ref) - reference to our slideshow record in Step 2
- **text** (String) - information to display as your image is displayed
- **image** (String) - URI to the image
Step 4 - Configure the Green Tips viewlet

We can now use our new slideshow in a Green Tips viewlet. To do this:

1. Add a new Green Tips viewlet
2. Click on Configure to access the viewlet configuration
3. Set the Slideshow ID to "myslideshow" (the slideshowId used in Step 2)

This feature requires the part number PER-SUSTAIN
IFrame

See IFrame View
Image

The Image viewlet allows embedding of images directly into a viewlet. Images can be linked from 3rd party websites or served locally from the Niagara server.

Configuration

- **Image (URL or Tag)** - allows switching of image source.
- **URL** - the URL pointing to the image file
- **Tag** - The tag name on the current context that contains a URL to the image

URL vs. Tag Mode

When in URL mode the configuration will contain a single "URL" property which can be configured to point to a static image file. Tag mode allows a dynamic image, which can do things such as change based off of the currently selected context. For example, let's say each site in your database contains an "image" tag pointing to a building image. The Image viewlet could be set up to dynamically change based off of which site was selected. To do this, you would:

1. Set the Image mode to "Tag"
2. Set the "imageTag" property to "image" (since "image" is the name of the tag on the site that contains an image URL)

This feature requires the part number **PER-SUSTAIN**
The KPI viewlet can be configured to show the current value of any monitored variable or total value for a period of time. For example, "Yearly Savings to Date", "Avoided CO2", "Campus kWh this Month", etc. It can be configured to mirror real-time point data or calculate an accumulated value over a period of time such as "This Month".

**Total Campus Power**

- **921.1 kW**

**This Month's Energy**

- **2974 MBTU**

**This Year's Energy**

- **9630 MWH**

**Today's Energy**

- **2974 MBTU**
**Configuration Options:**

- **Data:** Choose to select a specific point or trend. Select from available trends using either the Picker or Query mode.
- **Convert to:** Convert the data to comparable units such as kWh to MWh or kWh to BTU's.
- **Date:** Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
- **Rollup:** Select auto, or manual for more rollup control over rollup time, and rollup types such as Avg, Min, Max, Sum values of the trend based on selected date ranges.
- **Compare:** Compare the point or trend showing to another point, trend, or static number. There are options to colorize, reverse, or set as percentage the comparison.
- **Title:** Set a custom viewlet title.
- **Prefix & Suffix:** Add a word, letter, number or symbol before or after the value displayed.
- **Precision:** How many digits past a decimal you’d like there to be displayed.
- **Background:** Set the color and opacity of the background field.
Live Point

The Live Point viewlet allows viewing one or more points in real-time with streaming updates.

Configuration Options:
- **Point**: Make a selection of which Point trends to use.
- **Poll Interval**: set the time (in seconds) for the viewlet to update.
- **Rollover Limit**: How many points should be displayed at once per trend on the viewlet.
Multi Chart

The Multi Chart viewlet can be used to plot the aggregate or relative value for multiple variables over time. For each interval over the selected time period, the viewlet can plot the Max, Min, Average, or Sum of the variable.

Configuration

The following configuration will produce a multi axis graph similar to what is shown above.
Configuration Options:

- Title: Set a custom viewlet title
- Axis: Select the Left or Right axis. This control also expands to allow for independent control of each axis
- Enabled (Right axis only): Choose whether to display the right axis
- Data: The familiar data picker use to select trends or points for each axis
- Rollup Type: Avg, Min, Max, Sum, or Count the values of trends based on selected date range
- Convert To: Used Convert data to comparable units, such as kWh to MWh or kWh to BTU's
- Chart Type: Select the method that data is visualized
- Date: Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range
- Rollup Interval: Determine how frequently you would like the summarized data to be displayed
Pie Chart

The Pie Chart viewlet can be used to show the relative value of multiple variables over time. For each interval over the selected time period, the viewlet can plot the Max, Min, Average, or Sum of the variable.

Configuration

Configuration Options:

- Title: Set a custom viewlet title.
- Data: Select from available trends using either the Picker or Query mode.
- Date: Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
- Rollup: Select auto, or manual for more rollup control over rollup time, and rollup types such as Avg, Min, Max, Sum values of the trend based on selected date ranges.
- Convert To: Convert the data to comparable units such as kWh to MWh or kWh to BTU's.
- Chart Type: Select the format the data is displayed as either a Pie, Doughnut, or Polar Area (displayed).

This feature requires the part number PER-ENERGY
Point Table

The Point Table provides a tool to configure and view real-time values of any variable in the network.

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atkins Meter Power</td>
<td>131</td>
<td>ok</td>
</tr>
<tr>
<td>Kennedy Meter Power</td>
<td>121</td>
<td>ok</td>
</tr>
<tr>
<td>KW_Total</td>
<td>6</td>
<td>ok</td>
</tr>
<tr>
<td>Barnard Meter Power</td>
<td>132</td>
<td>ok</td>
</tr>
<tr>
<td>Cypress Meter Power</td>
<td>132</td>
<td>ok</td>
</tr>
<tr>
<td>Blasey Meter Power</td>
<td>132</td>
<td>ok</td>
</tr>
<tr>
<td>Garinger Meter Power</td>
<td>132</td>
<td>ok</td>
</tr>
<tr>
<td>Fretwell Meter Power</td>
<td>132</td>
<td>ok</td>
</tr>
</tbody>
</table>

Configuration Options:

Point: Select from available trends using either the Picker or Query mode.
**Ranking Chart**

The Ranking Chart enables the user to display comparative values for similar variables, ranked in either increasing or decreasing order. If appropriate, values may be normalized based on certain criteria, such as conditioned area (SF).

**Configuration**
### Configuration Options:

- **Title:** Set a custom viewlet title.
- **Data:** Select from available trends using either the Picker or Query mode.
- **Date:** Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.
- **Rollup Type:** Select Avg, Min, Max, Sum values of trends based on selected date ranges.
- **Convert To:** Convert the data to comparable units such as kWh to MWh or kWh to BTU's.
- **Sort:** Display the chart in either ascending or descending order.
- **Normalize By:** Normalization averages data such as energy consumption based upon common units of measurement such as square footage. Select between None or Site Area.
- **Show Goal:** Enable goal line or not.
- **Goal Value:** If Show Goal is enabled, enter a value you'd like to see as a goal line drawn across your graph.

This feature requires the part number **PER-SUSTAIN**
Simple Gauge

The Simple Gauge provides a "doughnut" style display to monitor the real-time value of any variable in the network.

Configuration
Configuration Options:

- Data: Select from available trends using either the Picker or Query mode.
- Title: Set a custom viewlet title.
- Gauge Type: Select Circle or Semi Circle
- Max Value: Select the maximum value that your data could reach.
- Precision: Select how many digits past the decimal that are displayed.
- Prefix: Add a word, number, or symbol in front of the value.
- Background: Set a custom or context color.
- Color: Set the color of the fill area in the gauge.
- Track Color: set the off (non fill) color of the gauge.
**Site Scatter Plot**

The Site Scatter Plot displays points on an x and y-axis. This visualization enables easy visualization of relationship and how they change over time.

![Site Scatter Plot](image)

**Configuration**

- **Title**: Site Scatter Plot
- **Trend**: Y-Axis
- **Data**: Select Trends
- **Rollup Type**: Sum
- **Convert To**: Select Unit
- **Normalize By**: Site Area
- **Date**: Auto

**Configuration Options:**
• Title: Set a custom viewlet title.
• Trend: Select the Trend to be used on the X and Y axis.
• Data: Select from available trends using either the Picker or Query mode.
• Rollup Type: Select Avg, Min, Max, Sum values of trends based on selected date ranges.
• Convert To: Convert the data to comparable units such as kWh to MWh or kWh to BTU's.
• Normalize By: Normalization averages data such as energy consumption based upon common units of measurement such as square footage. Select between None or Site Area.
• Date: Fine tune when the trend's data is shown. Can be set to auto (global control), a preset date range, or a user selected date range.

This feature requires the part number PER-ANALYTIC
Speedometer

The Circular Gauge provides a "Speedometer" style display to monitor the real-time value of any variable in the network.

Configuration
**Configuration Options:**

- **Data:** Select from available trends using either the Picker or Query mode
- **Title:** Set a custom Viewlet title
- **Colors:** Set each of the colors for the color bands
- **Stop Values:** Control where each color band should end
- **Max Value:** Select the maximum value that your data could reach
Views

Available Views:

- Alarm Timeline View
- Dashboard View
- Heat Map View
- IFrame View
- Map View and Viewlet
- PX Connect View
- Tree Map View

Controls

Views have unique controls that modify the data displayed. These controls include:

- Date Range - allows changing the time frame of a view
- Timeline - puts historical data in motion similar to a DVR
- Config - contains additional options to modify the view behavior

Date Range

The Date Range selector allows picking a date range from a list of pre-configured date ranges. It also allows selecting a custom date range by clicking "Custom", which causes a calendar component to appear.

Timeline

Selecting the clock icon will open up the animated timeline which you can play and see the changes as they happened over a set period of time.

The timeline settings (wrench) offer more control over the playback speed and timeline range. Options include:

- Date - Choose previous x days or manually select a date range to animate
- Period - what rollup interval to animate
- Speed - how quickly the animation moves from left to right.

Configuration
Selecting the wrench icon will bring up the configuration which will be unique to each view.

Some views may not have additional configuration
Alarm Timeline View

This view is essentially the same as the **Alarm Timeline Viewlet**, however by also giving it the 'View' designation, it can be more easily accessible from the left menu.

Clicking on an alarm will bring up an alarm information pane:

**Alarm Details**

<table>
<thead>
<tr>
<th>Name</th>
<th>Fretwell/FreezerTemp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>9/1/2016, 4:30:00 AM</td>
</tr>
<tr>
<td>End</td>
<td>9/1/2016, 9:30:00 AM</td>
</tr>
<tr>
<td>Alarm Value</td>
<td>55.00 &gt; 35.0</td>
</tr>
</tbody>
</table>

[Buttons: Acknowledge, Acknowledge Series, Cancel, OK]

Clicking the 'Acknowledge' or 'Acknowledge Series' will either erase the particular alarm as it happened, or all of the alarms that had previously gone off at that site's point.

### Configuration
Configuration Options:

- **Show Acked**: After acknowledging an alarm, it will disappear from the view. By checking 'Show Acked' you can view all acknowledged alarms.
- **Data**: Show alarm data on all alarms, current context, or specific sites.

This feature requires the part number *PER-ALARM*
Dashboard View

The dashboard view is the most common screen seen in Periscope. The dashboard view is intuitive, responsive, and user-configurable. Dashboards can be setup to visualize any aspect of your building or an entire campus of buildings by utilizing a growing library of viewlets. Once in place, viewlets can be moved around and organized however you see fit. Just grab them and pull them around the screen. Viewlets can also be scaled so some are larger than others if for instance some charted data were more important than other data, simply grab the bottom right corner and drag to a desired size. Some viewlets can also be interacted with directly by either double clicking or alt-clicking their legend to show and hide specific trends or points. On mobile devices, the views will dynamically scale to fit the screen’s proportions.

Adding Viewlets

Selecting the plus button will open up the "Add Viewlet" window. Here you’ll find descriptions of each viewlet that can be added to the dashboard view.
Configuration

This will allow for further customization of how you desire the dashboard to look, including options such as margins, colors, and styles. This can be useful if you're setting up a view for a specific display such as a kiosk, and it needs to look perfect.

- **Margin** - amount of pixels margin around viewlets
- **Columns** - how many columns are available for the viewlets
- **Background** - color, gradient, or image of the dashboard background
- **Viewlet**
  - **Background** - background color of viewlets
  - **Border Size** - width of viewlet borders
  - **Border Color** - color of viewlet borders
  - **Text Color** - text color within viewlets
- **Title Style**
  - **Height** - size in pixels of viewlet titles
  - **Background** - background color of viewlet titles
  - **Text** - text color of viewlet titles
  - **Border Size** - border size of viewlet titles
  - **Border Color** - border color of viewlet titles
Heat Map View

The heat map provides a unique hourly spectrum of any trend. Using this view, one can quickly identify anomalies and visualize trends across data.

Rolling over the individual cells will show a time-stamp and value for that point in time.

Configuration

- **Data** - trend picker to choose the data displayed in the Heat Map
- **Rollup Type** - change how the data is rolled up
- **Colors** - the gradient of colors that are mapped to the low, medium, and high values of data
  - Low - Lowest color
  - Mid - Medium Color
  - High - High Color

This feature requires the part number *PER-ANALYTIC*
IFrame View

The IFrame view allows embedding 3rd party websites into a view or viewlet.

Configuration

- **URL** - URL of the external party website

---

**HTTP vs. HTTPS**

Most browsers do not allow Mixed Active Content, that is mixing HTTP and HTTPS frames in a single webpage. In other words, if you are hosting Periscope on HTTP, you will only be able to embed other HTTP sites.
Map View and Viewlet

The Map serves as a navigation page to different buildings as well as an analytics tool. Users can visualize building KPIs and setup new maps in minutes.

Configuration Outline:

- Edit Mode
- Coords
- View Link
- Show Labels
- Alarming
- Spectrum
- Spectrum Data
- Spectrum Style

Edit Mode
Enable Edit Mode if you would like to:

- Associate buildings to sites
- Adjust the default map center and zoom level

With Edit Mode enabled, you will notice buildings on the Map have a dotted outline, indicating they are available to have a site associated to them. To associate a building to a site, first click on an available building. A dialog will appear containing all the sites available to be associated. Select a site and press OKAY. Now, the site and building outline are tied.

Disable Edit Mode for normal Map operation.

**Coords**

The default center coordinates of the Map, as “latitude,longitude”. This field will automatically update when in Edit Mode changes are completed.

**View Link**

This field is used to create a hyper-link from buildings on the Map to a site-level view, allowing for further exploration of a particular site. The field expects a ViewID. This tag beginning with “h:” can be found in the browser’s URL when viewing the desired View. For example, if the view you would like to link to has the URL, “#/view/h:1234”, the ViewID would be “h:1234”.

**Show Labels**

Labels show the site’s name on their associated building.

**Alarming - [ Off, Filter, Priority ]**

Alarms on the Map are displayed as an “alarm bell” icon on buildings where there is a current (and unacknowledged) alarm. Alarming has three options; the first of which, “Off”, disables alarms on Map entirely. The other two options, “Filter” and “Priority,” allow for control over how alarms are viewed.
Alarming Options:

Off:
Disable alarms. (Alarming can not be set to “Off” for alarms to display)

Filter:
- Min Enabled
- Min Value
- Max Enabled
- Max Value
Alarms can be filtered by priority value here. Priority is a value between 0-255.

Priority:
This is where different alarm priorities get colors associated to them. There are settings for three priority ranges, each with an On/Off switch, “Color”, “Min” value, and “Max” value.

Spectrum
Spectrum mode colorizes buildings according the data chosen in the Spectrum Data configuration options. Colors are determined first by finding the Min, Max, and Average values from the data, then applying colors to each of the value. Colors are customized in the Spectrum Style configuration settings.
Spectrum Style - [ Auto, Manual ]

Spectrum is colorized from three colors, Low, Mid, and High. Since a Low value may or may not indicate positive performance, the use of appropriate colors is important. Typically, red indicates off-target readings, while green indicates on-target readings.

Auto:

High, Mid, and Low colors automatically mapped to data’s High, Mid (average), and Low values.

Manual:

Same color options as when ‘Auto’ is selected, except High, Mid, and Low values are overridden. This allows for some corrections to outliers in the data. This is also an easy way see how buildings are performing relative to a certain target value.

Spectrum Data - [ Trend, Point ]

Data selection, Rollup Type, and Normalize are all described in other areas of this document, and behave the same way here.

Baseline compares the current value of each site against that site’s previous value. View the documentation for the Baseline Viewlet for further information regarding baseline configuration.

The map view serves as a navigational page to different buildings as well as an analytics tool. Users can visualize building KPIs and setup new maps in minutes.

This feature requires the part number

PER-MAP
PX Connect View

PX Connect view allows embedding PX pages into a Periscope View.

Configuration

- **PX Page** - URI or Context
  - **URI** - provide a URL to the PX page
  - **Context** - The view will attempt to load the PX page for the given context
Tree Map View

The tree map provides a unique visualization into hierarchical structures. It is effective in showing anomalies and patterns across different depths of a hierarchy.

Configuration

- **Title**: Set a title for the View
- **Trend**: Size / Color. Both Size and Color data must be selected in order to generate a Tree Map.
  - **Data**: The trend data for the size or color trends
  - **Rollup Type**: The rollup type for the size or color trends
  - **Convert To**: The unit conversion for the size or color trends
  - **Normalize By**: Normalization by sqft option for the size or color trends
- **Height**: Select the vertical fill of the group of blocks on the screen.
- **Date**: Either pick ‘Auto’ to run off the global time frame (calendar), Pick a common ‘Date Range’, or a custom time range with ‘Manual’.

This feature requires the part number PER-ANALYTIC
Settings

To customize Periscope, click the settings cog in the top right corner of the screen.

- About
- Database
- General
- Kiosk
- Style
- View Manager
About

The first settings tab is the information page. Here you'll see details on the version number of Periscope installed, link to documentation, and license details. The "Choose Sites" button allows you to manage which sites within your database are being used by Periscope. More information about using this feature can be found in the Licensing page.
Database

The database view allows querying and modifying of the underlying Haystack database. Users can quickly create new records, tag existing records, or delete records.
General Settings

The second settings tab, indicated by the cog on the left side menu, is the general settings page. Hierarchies are navigation trees created in Niagara Workbench, except for ‘Site’ which Periscope automatically creates. The Site hierarchy can be described as Site > Equipment > Point. The "User Settings" hierarchy will be the hierarchy used for the logged in user and will not affect other users.
Kiosk

Kiosk Mode

The fourth settings tab, Kiosk, enables automatic cycling of the top-level Views, staying on each View for as long as specified in the View Timing section. Ideal uses for Kiosk Mode might be in an entrance to a public space, such as a school or office lobby, on a large monitor or TV. Once enabled, Kiosk Mode will always run unless it is disabled from this window. Click here for more information on Kiosk Mode.

This feature requires the part number PER-SUSTAIN
Style

The fifth settings tab allows for easy customization of the theme, including endless color combinations and a custom logo. The standard themes are 'Dark' and 'Light'.

Duplicating a theme will open up a naming window:

```
Duplicating theme: "Dark"

New theme name: Custom 1
```

Once created, click 'Edit' to open up the options for the theme:
View Manager

The fifth and final window will give you control of the Views seen in the dashboard. More on Views can be found here.