StruxureWare™

Power Monitoring Expert 8.0

Web Applications – Help Topics

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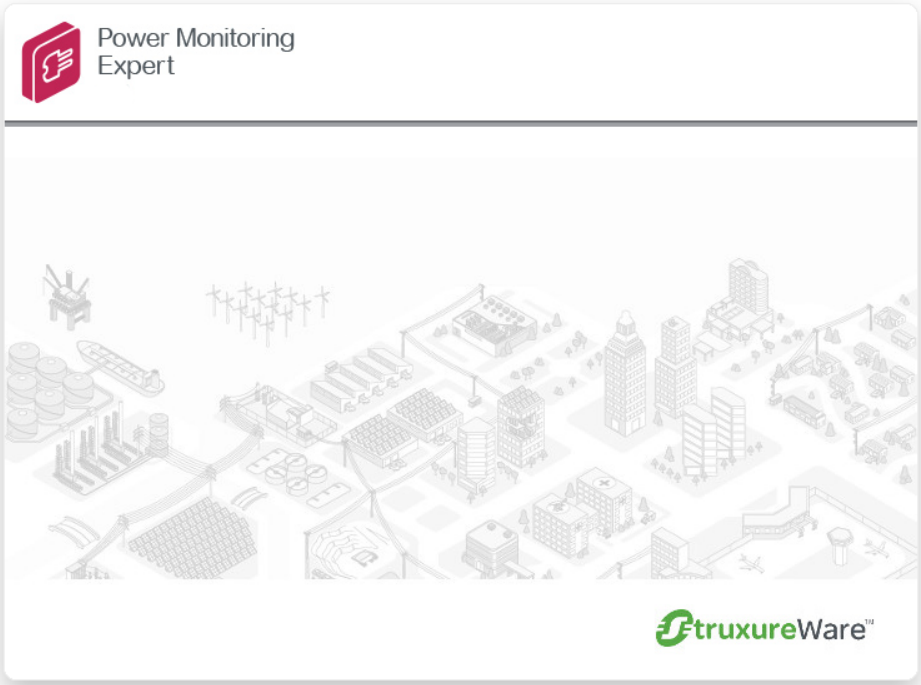


Schneider Electric

Safety information

Important information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Safety precautions

During installation or use of this software, pay attention to all safety messages that occur in the software and that are included in the documentation. The following safety messages apply to this software in its entirety.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not use the software for critical control or protection applications where human or equipment safety relies on the operation of the control action.
- Do not use the software to control time-critical functions because communication delays can occur between the time a control is initiated and when that action is applied.
- Do not use the software to control remote equipment without securing it with an authorized access level, and without including a status object to provide feedback about the status of the control operation.

Failure to follow these instructions can result in death or serious injury.

⚠ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the software, as this can lead to inaccurate reports and/or data results.
- Do not base your maintenance or service actions solely on messages and information displayed by the software.
- Do not rely solely on software messages and reports to determine if the system is functioning correctly or meeting all applicable standards and requirements.
- Consider the implications of unanticipated transmission delays or failures of communications links.

Failure to follow these instructions can result in death, serious injury, equipment damage, or permanent loss of data.

Contents

Web Applications

The Web Applications component provides access to several integrated applications. The Web Applications interface is divided into the following sections:

Log Out | Help

In the top right corner of the screen, click **Log Out** to log out of the system and return to the Login dialog. Click **Help** to open a list of Help files available for the applications. The logged in user name and date display to the left of the links.

Navigation Bar

On the left side of the Navigation Bar are the following application links: Dashboards, Diagrams, Trends, Tables, Alarms, and Reports. The system Settings link is located on right of the Navigation Bar.

Alarm Annunciator

Above the Navigation Bar, the Alarm Annunciator shows unacknowledged alarms. User permissions determine if the Alarm Annunciator appears. An individual count displays beside each priority icon:

	High
	Medium
	Low

The Alarm Annunciator also has an alarm sound option to alert you to unacknowledged alarms. Click the speaker icon to turn the alarm sound:

	On
	Off

Configuration Pane

The configuration pane contains collections of data visualizations and configuration options available for the selected application. To open the configuration pane, click **<** on the bar at the right side of the framework, and click **>** on the bar to the right of the display pane to close it.

Display Pane

The display pane loads the data visualization selected in the configuration pane.

Application Query Parameters

By default, the first application on the Navigation Bar appears when the interface opens. To specify which application should appear, pass the application query parameters into the web address, as shown below:

/?application=Dashboards
/?application=Diagrams
/?application=Trends
/?application=Tables
/?application=Alarms
/?application=Reports

Login

When you open Web Applications, you are prompted to log in with your user name and password.

The access level assigned to your user name determines your access to Dashboards, Diagrams, Tables, Trends, Alarms, Reports, and Settings. The following table indicates which of these are excluded for each access level.

Access Level	Excluded From
Observer	Alarms, Alarm Annunciator, Settings
User	Alarms, Alarm Annunciator, Settings
Controller	Settings
Operator	Settings
Supervisor	None

If you do not have a user name or password, select **Log in as Visitor** and click **Log In**. Visitor access is limited to Dashboard Slideshows.

To bypass the login page and log in as a visitor, append **/visitor** to the end of the web address:

http://localhost/web/visitor

If you enter an incorrect user name or password 2 times, try logging in again after approximately 10 seconds. For additional login assistance, contact your system administrator.

Settings

The Settings dialog allows you to specify system setup options and application settings. Only users with setup privileges have access to the Settings. Click the **Settings** icon on the Web Applications Navigation Bar to open the dialog. Click **Colors**, **Localization**, **Logo**, or **Alarms** to open their respective configuration page.

To cancel changes and close the Settings dialog at any time during setup, click **Cancel** or click the **X** in the top right corner.

Colors

Use the **Colors** configuration page to select a color scheme for your system. You can select from six color schemes, or you can create your own using the **Custom Color** drop-down control.

When you complete your color setting, proceed to another setting configuration page, or click **OK** to save your settings and close the Settings dialog.

Localization

Use the **Localization** configuration page to select the language, region, and date, time, and number formats.

1. Select the system **Language** from the drop-down list.
2. Select the **Region** from the drop-down list.
3. If you change localization settings, a **Save Changes** dialog opens. Click **Yes** to save changes. You must restart the application to view localization changes.
4. When you complete your localization settings, proceed to another setting configuration page, or click **OK** to save your settings and close the Settings dialog.

Logo

Use the **Logo** configuration page to select a custom logo for the Web Applications user interface.

1. Click the folder icon to open an **Open** window.
2. Navigate to and select your logo file. The maximum file size is 2MB.
3. Click **Open**.
4. To remove a custom logo, click **Remove** to clear the entry in the Import Logo field.
5. When you complete your logo setting, proceed to another setting configuration page, or click **OK** to save your settings and close the Settings dialog.

Alarms settings

The Alarms configuration page contains 2 areas, the alarm annunciator area and the event and alarm priority classification area. Note that changes in these settings apply to all users.

Use the alarm annunciator area in the top portion of the page to specify whether or not to display the annunciator in the user interface, and to specify when an audible notification should occur.

1. Clear the **Show the Alarm Annunciator** checkbox to stop displaying the Alarm Annunciator in the user interface. The default is to show the Alarm Annunciator.

When you clear the checkbox, a note indicates that all audible alarms are disabled when the Alarm Annunciator is not visible.

2. Select one of the following audible alarm notification options. The default option is **On Low, Medium or High Priority Alarms**.
   a. **On Low, Medium or High Priority Alarms** specifies that an audible notification occurs for any alarm priority.
   b. **On Medium or High Priority Alarms** specifies that an audible notification occurs for medium or high priority alarms only.
   c. On **High Priority Alarms** specifies that an audible notification occurs for high priority alarms only.
   d. **Disabled** specifies that the audible notification is turned off regardless of the alarm priority. This option also removes the audible alarm on/off icon from the Alarm Annunciator.

Use the event and alarm priority classification area in the bottom portion of the page to customize the priority identification for alarms displayed in the Alarms application by adjusting the priority values. By default, a priority of 192 or above is considered a High alarm, a priority of 128 to 191 is considered a Medium alarm, and a priority of 64 to 127 is considered a Low alarm. A priority of 63 or below is not identified as an alarm. However, these values can now be changed.

To change the values for alarm priorities:

1. Click the up or down arrow in the spin control to reset the low threshold value of 192 for high priority alarms. When you modify this value, the high threshold value for medium priority alarms automatically changes. For example, if you change the low threshold value from 192 to 195, the high threshold value for medium priority alarms automatically changes from 191 to 194.
2. Click the up or down arrow in the spin control to reset the low threshold value of 128 for medium priority alarms. When you modify this value, the high threshold value for low priority alarms automatically changes. For example, if you change the low threshold value from 128 to 130, the high threshold value for low priority alarms automatically changes from 127 to 129.
3. Click the up or down arrow in the spin control to reset the low threshold value of 64 for low priority alarms. When you modify this value, the high threshold value for events not identified as alarms automatically changes. For example, if you change the low threshold value from 64 to 68, the high threshold value for events not identified as alarms automatically changes from 63 to 67.

When you complete your Alarm settings, proceed to another setting configuration page, or click **OK** to save your settings and close the Settings dialog.

Dashboards

The Dashboards application provides a way to visualize present and past energy usage in meaningful graphic representations called gadgets. These gadgets display energy data taken from your underlying power monitoring system, enabling you to make informed decisions about your operations that may impact present and future energy needs. The Dashboards application is divided into the following sections:

View Selector

The type of view selected in the View Selector changes the display. To view a dashboard, select Presentation View. To cycle through a slideshow collection of dashboards, select Slideshow View. To create or edit a dashboard, select Setup View. User permissions determine access to view types.

Configuration Pane

The configuration pane contains libraries of all the data visualizations available for the Dashboards application. Certain libraries are displayed depending on the selected view option and user permissions, including the Dashboard Library, Gadget Library, and Slideshow Library. To open the configuration pane, click **<** on the bar at the right side of the screen, and click **>** on the bar to the right of the dashboard display pane to close it.

Dashboard Display Pane

The dashboard display pane shows the dashboard selected in the Dashboard Library. By default, a dashboard is displayed the first time you sign in to the system. This dashboard is assigned by the system administrator as the Systemwide Homepage. All user security levels, except observers, can select a new default homepage by selecting **Use this Dashboard as my Homepage** in the Dashboard Properties Window.

Presentation View

Presentation View enables you to select and display dashboards and slideshows. Presentation View consists of the Dashboard Library where you can select and view pre-configured dashboards, the Slideshow Library where you can select a slideshow for display in Slideshow View, and the dashboard display pane where the selected dashboard and associated gadgets display. User permissions determine which of the following options are available.

Dashboard Library

The Dashboard Library contains a library of all dashboards available in the system.

Click the following Dashboard Library icon to:

	Open the Dashboard Properties window and select **Use this Dashboard as my Homepage** to make the selected dashboard the default. Your default dashboard appears as the homepage in the dashboard display pane when you log into the system.

Slideshow Library

The Slideshow Library contains a library of all slideshows available in the system. The Slideshow Library appears as the **Public Dashboard Library** for users logged in as Visitor. To reorder dashboards in a slideshow, select a dashboard title, then drag and place it where you want it to appear in the slideshow.

To display a slideshow in the application full screen mode, log in as a Visitor and follow the steps below.

To display a slideshow:

1. Click Slideshow View. The Slideshow Settings window appears.
2. Select a slideshow from the drop-down list.
3. Drag and place the slideshow interval selector to set the slideshow interval. The slideshow interval options range from 10 to 300 seconds.
4. Click **OK** to save the selected slideshow interval and begin to display the slideshow in Slideshow View, or click **Cancel** or the **X** in the top right corner to close the Slideshow Settings window and return to Setup View.
5. To change the display to browser full screen mode, press F11.

To exit a slideshow, select another View (Presentation or Setup), or click **Esc.** if the slideshow is in Full Screen mode.

Dashboard Display Pane

In Presentation View, the gadgets associated with the selected dashboard cannot be configured from the dashboard display pane.

Slideshow View

If slideshows have been configured, Slideshow View enables you to display pre-configured slideshows at various locations throughout a facility, or through a web-browser on a company intranet. Configure slideshows using the Slideshow Library in Setup View.

To display a slideshow in application full screen mode, log in as a Visitor and follow the steps below.

To display a slideshow:

1. Click **Slideshow View**. The Slideshow Settings window appears.
2. Select a slideshow from the drop-down list.
3. Drag and place the slideshow interval selector to set the slideshow interval. The slideshow interval options range from 10 to 300 seconds.
4. Click **OK** to save the selected slideshow interval and begin to display the slideshow in Slideshow View, or click **Cancel** or the **X** in the top right corner to close the Slideshow Settings window and return to Setup View.
5. To change the display to browser full screen mode, press F11.

To exit a slideshow, select another View (Presentation or Setup), or click **Esc.** if the slideshow is in application full screen mode.

Setup View

Setup View allows you to create and fully configure dashboards, gadgets, and slideshows. Setup View consists of the Dashboard Library where you can create and configure dashboards, the Gadget Library containing all available gadgets, the Slideshow Library where you can create and configure slideshows, and the dashboard display pane where the selected dashboard and associated gadgets appear. User permissions determine which of the following options are available to you.

Dashboard Library

The Dashboard Library contains all the dashboards available in the system.

Click the following Dashboard Library icons to:

	Add a new dashboard.
	Organize your dashboards: 1. A new folder opens in the Dashboard Library. 2. Click  to open the folder properties window. 3. Enter a name and description for the folder, then click **OK**. 4. To add an existing dashboard to the folder, select the dashboard, then drag and drop it in the folder. 5. To add or delete dashboards in the folder, click the appropriate icons. 6. To add a sub-folder, click  and follow Steps 1 to 4.
	Open the Dashboard Properties window and configure the settings for the selected dashboard.
	Delete the selected dashboard. The Confirm dialog box appears. Click **Yes** to delete the dashboard or **No** to return to the Dashboard Library.

Gadget Library

The Gadget Library contains all the gadgets available in the system. Type in the search tool to find gadget types or titles in the Gadget Library. You can also sort the gadgets by the following types: **All**, **Energy**, **Web**, or **General**.

To add a gadget to a dashboard, select the gadget, then drag and drop it on an open area of the dashboard displayed in the dashboard display pane. The gadget type and **Click to Setup** will appear. Setup varies by gadget type.

Slideshow Library

The Slideshow Library contains a library of all slideshows available in the system. To reorder dashboards in a slideshow, select a dashboard title, then drag and place it where you want it to appear in the list.

Click the following Slideshow Library icons to:

	Add a new slideshow.
	Open the Slideshow Properties window and enter a name and description for the selected slideshow.
	Delete the selected slideshow. The Confirm dialog box appears. Click **Yes** to delete the slideshow or **No** to return to the Slideshow Library.

To build a slideshow:

1. In Setup View, select the slideshow you want to build from the drop-down list.
2. Select a dashboard from the Dashboard Library, then drag and drop it in the selected slideshow.
3. Repeat Step 2 to add additional dashboards. You can add up to 100 dashboards to a slideshow.

Changes to existing slideshows must be manually updated. Reload the updated slideshow on remote kiosks and displays to show the most current information.

To display a slideshow in application full screen mode, log in as a Visitor and follow the steps below.

To display a slideshow:

1. Click Slideshow View. The Slideshow Settings window appears.
2. Select a slideshow from the drop-down list.
3. Drag and place the slideshow interval selector to set the slideshow interval. The slideshow interval options range from 10 to 300 seconds.
4. Click **OK** to save the selected slideshow interval and begin to display the slideshow in Slideshow View, or click **Cancel** or the **X** in the top right corner to close the Slideshow Settings window and return to Setup View.
5. To change the display to browser full screen mode, press F11.

To exit a slideshow, select another View (Presentation or Setup), or click **Esc.** if the slideshow is in Full Screen mode.

Slideshow Query Parameters

To limit the Slideshow Library to only 1 slideshow, pass the following query parameter into the web address:

/?slideshow= (Slideshow Name)

If the slideshow name contains spaces then the spaces should be substituted with **%20**. For example, for a slideshow named **My Slideshow**:

/?slideshow=My%20Slideshow

Dashboard Display Pane

In Setup View, the gadgets associated with the selected dashboard can be configured from the dashboard display pane.

Dashboard Library

The Dashboard Library contains all the dashboards available in the system. User permissions and view type determine which of the following options are available.

Dashboard Library Icons

Click the following Dashboard Library icons to:

+	Add a new dashboard.

	Organize your dashboards: 1. A new folder opens in the Dashboard Library. 2. Click  to open the folder Properties window. 3. Enter a name and description for the folder, then click **OK**. 4. To add an existing dashboard to the folder, select the dashboard, then drag and drop it in the folder. 5. To add or delete dashboards in the folder, click the appropriate icons. 6. To add a sub-folder, click  and follow Steps 1 to 5.
	Open the Dashboard Properties window and configure the settings for the selected dashboard.
	Delete the selected dashboard. The Confirm dialog box appears. Click **Yes** to delete the dashboard or **No** to return to the Dashboard Library.

Dashboard Properties Window

The Dashboard Properties window opens to the General screen. Use the left navigation pane to configure the properties in the General, Layout, Background, and My Settings screens. User permissions determine which of the following options are available.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

General

1. Enter a **Name** for the dashboard. The name is displayed in the list of dashboards in the Dashboard Library.
2. Enter a **Description** of the dashboard in the area provided.
3. To use the selected dashboard as the **Systemwide Homepage**, select the check box. Once defined, the system default homepage cannot be deleted.
4. Proceed to the next section, or click **OK** to save your settings and close the Dashboard Properties window.

Layout

1. Select **Layout** on the left navigation pane.
2. Select the tab for the number of gadgets you want to place on the dashboard.
3. Select a layout option. There may be more than one layout option for the number tab you select.
4. Proceed to the next section, or click **OK** to save your settings and close the Dashboard Properties window.

Background

1. Select **Background** on the left navigation pane.
2. To upload a file to the **BackgroundImages** folder on the server, click **Add Image**, navigate to and select the image, then click **Open**. The maximum file size is 2MB.
3. To set a background image for the dashboards display pane, select an image in the background images selector. The opacity selector and a thumbnail of the image appears.

4. Set the opacity. As you select an opacity option, the thumbnail window provides a preview.
5. To deselect an image, click **Clear**, and refer to the previous steps to set a new image. If you do not select an image, the dashboards display pane background will remain blank.
6. Proceed to the next section, or click **OK** to save your settings and close the Dashboard Properties window.

My Settings

1. Select **My Settings** on the left navigation pane.
2. Select **Use this Dashboard as my Homepage** to make the current dashboard the default that appears in the dashboard display pane when you log into the system.
3. Click **OK** to save your settings and close the Dashboard Properties window.

Gadget Library

Gadgets are graphical display objects used in the dashboard display pane to represent measurements or key performance indicators (KPIs). The Gadget Library contains all the gadgets available in the system. It is only displayed in Setup View.

Type in the search field to find specific gadget types or titles in the gadget library. You can also sort the gadgets by the following types: **All**, **Energy**, **Web**, or **General**.

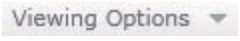
To add a gadget to a dashboard, select the gadget, then drag and drop it on an open area of the dashboard displayed in the dashboard display pane. The gadget type and **Click to Setup** will appear. Setup varies by gadget type.

Bar/Line Gadget

The Bar/Line gadget displays energy consumption from several data series in a single chart that allows you to compare consumption with outside drivers. You can set either the bar or line as the primary axis chart.

To set or view the Bar/Line gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Bar/Line Gadget Setup window and configure the gadget.
	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Bar/Line Gadget Setup

The Bar/Line gadget properties dialog opens to the Summary page. Click **Summary**, **Charts Available**, **Data Series**, or **Viewing Period** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section in the left navigation pane, or click **OK** to save your settings and view the configured gadget on the dashboard.

Chart Type

1. Select **Chart Type** on the left navigation pane.
2. On the Primary Axis tab, select the bar chart or line chart radio button for the primary axis, then select either the other chart type or None for the Secondary Axis tab.
3. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data Series

There are two options for selecting a data series for a gadget; **Devices** and **Views**. Selecting the sources by device allows you to pick a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to pick sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or, by virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see Hierarchy Manager help.

Data series by device

To select your data series by device:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Devices** in the **Sources** area.
4. Select an option from the **Grouping** drop-down list. Select **None** for no grouping, or **Device Groups**, which organizes the devices based on groups defined in Management Console. See "Management Console" in the *StruxureWare Power Monitoring Expert User Guide* for additional information.

5. Select a source from the device list.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. The **Display only Measurements with data** option allows you to see only the measurements that contain data. Uncheck this option to show all measurements, regardless of whether the measurements contain data or not.
9. Click to view newly added devices or measurements.
10. Click the arrow beside any measurement heading in the list to expand it to display the measurement types. Select the measurement you want to display in the gadget.
11. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
12. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001
13. Click **OK** to return to the **Data Series** tab.
14. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
15. To modify an existing data series, select a series from the list and click **Edit** .
16. To remove a series from the list, select a series from the list and click **Delete** .
17. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data series by view

To select your data series by view:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Views** in the **Sources** area.

   This allows you to select:

   A view as defined in the hierarchy, such as a physical layout made up of buildings, floors and rooms, or a data center with tenants, racks, and circuits.

A virtual meter that is defined in Hierarchy Manager.

4. Select an option from the **Views** drop-down list. Changing the view provides alternative ways of showing hierarchy relationships between the different Nodes or by showing virtual meters. For information regarding hierarchies and virtual meters, see Hierarchy Manager help.
5. Select a Node from a hierarchy view or a virtual meter from the **Virtual Meter** view.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. Click to view newly added devices or measurements.
9. Select the measurement to display in the gadget.
10. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
11. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001.
12. Click **OK** to return to the **Data Series** tab.
13. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
14. To modify an existing data series, select a series from the list and click **Edit** .
15. To remove a series from the list, select a series from the list and click **Delete** .
16. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

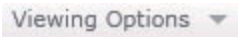
1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. For viewing periods that have more than one viewing interval available, select the applicable viewing interval option.
4. Click **OK** to save your settings and view the configured gadget on the dashboard.

Energy Equivalency Gadget

The Energy Equivalency gadget aggregates energy consumption from one or more data sources for the specified time range into a single value, converting measurement units as needed.

To set or view the Energy Equivalency gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Energy Equivalency Gadget Setup window and configure the gadget.
	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Energy Equivalency Gadget Setup

The Energy Equivalency gadget properties dialog opens to the Summary page. Click **Summary**, **Settings**, **Measurements**, **Image**, and **Viewing Period** in the navigation pane to open their respective properties configuration page.

Summary

1. Enter a **Title** for the gadget. The title is not currently displayed but may be in the future.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section in the left navigation pane, or click **OK** to save your settings and view the configured gadget on the dashboard.

Settings

1. Select **Settings** on the left navigation pane.
2. Enter the **Energy Equivalency Description** to be displayed in the gadget.
3. Enter the **Value Multiplier** value to convert from the watt-hour values into the equivalent measurement.
4. Enter the **Value Unit** for the equivalency. For example, "miles", "kilometers", "lbs", "kg", and so on.
5. Select the **Value Unit Placement** to be placed either before or after the actual value.
6. Select the **Decimal Places to Display** in the value.
7. Select an item from the **Predefined Energy Equivalencies** list if you want to apply predefined values for common equivalencies to the fields on the page.
8. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Measurements

Add one or more source-measurements to use for gathering the data. The measurements are organized on tabs for ease of identification. After selecting the tab and clicking **Add**, use the next window to select the Source and Measurement. The Multiplier value is the constant multiplier that

needs to be applied to the value to convert it to a watt-hour value. This value is automatically populated for several well-known measurements. Press **OK** when you have complete the entries on this window.

Image

1. Select **Image** on the left navigation pane.
2. Select an image to display on the gadget by selected it from the displayed list. You can add a custom image by pressing the **Add Image** button and selecting an image to upload.
3. If you do not want an image to be displayed, press the **Clear** button
4. Proceed to the next section in the left navigation pane, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

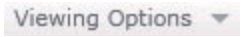
1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. Click **OK** to save your settings and view the configured gadget on the dashboard.

Horizontal Bar Gadget

The Horizontal Bar gadget displays a summary comparison of several data series in a single chart that allows you to compare consumption.

To set or view the Horizontal Bar gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Horizontal Bar Gadget Setup window and configure the gadget.
	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Horizontal Bar Gadget Setup

The Horizontal Bar gadget properties dialog opens to the Summary page. Click **Summary**, **Data Series**, or **Viewing Period** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data Series

There are two options for selecting a data series for a gadget; **Devices** and **Views**. Selecting the sources by device allows you to pick a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to pick sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or, by virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see Hierarchy Manager help.

Data series by device

To select your data series by device:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Devices** in the **Sources** area.
4. Select an option from the **Grouping** drop-down list. Select **None** for no grouping, or **Device Groups**, which organizes the devices based on groups defined in Management Console. See "Management Console" in the *StruxureWare Power Monitoring Expert User Guide* for additional information.
5. Select a source from the device list.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. The **Display only Measurements with data** option allows you to see only the measurements that contain data. Uncheck this option to show all measurements, regardless of whether the measurements contain data or not.
9. Click  to view newly added devices or measurements.

10. Click the arrow beside any measurement heading in the list to expand it to display the measurement types. Select the measurement you want to display in the gadget.
11. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
12. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001
13. Click **OK** to return to the **Data Series** tab.
14. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
15. To modify an existing data series, select a series from the list and click **Edit** .
16. To remove a series from the list, select a series from the list and click **Delete** .
17. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data series by view

To select your data series by view:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Views** in the **Sources** area.

   This allows you to select:

   A view as defined in the hierarchy, such as a physical layout made up of buildings, floors and rooms, or a data center with tenants, racks, and circuits.

   A virtual meter that is defined in Hierarchy Manager.
4. Select an option from the **Views** drop-down list. Changing the view provides alternative ways of showing hierarchy relationships between the different Nodes or by showing virtual meters. For information regarding hierarchies and virtual meters, see Hierarchy Manager help.
5. Select a Node from a hierarchy view or a virtual meter from the **Virtual Meter** view.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.

8. Click  to view newly added devices or measurements.
9. Select the measurement to display in the gadget.
10. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
11. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001.
12. Click **OK** to return to the **Data Series** tab.
13. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
14. To modify an existing data series, select a series from the list and click **Edit** .
15. To remove a series from the list, select a series from the list and click **Delete** .
16. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

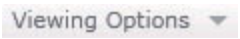
1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. For viewing periods that have more than one viewing interval available, select the applicable viewing interval option.
4. Click **OK** to save your settings and view the configured gadget on the dashboard.

Period over Period Gadget

The Period over Period gadget displays consumption from two defined viewing periods that allow you to identify patterns in consumption.

To set or view the Period over Period gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Period over Period Gadget Setup window and configure the gadget.
	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Period over Period Gadget Setup

The Period over Period gadget properties dialog opens to the Summary page. Click **Summary**, **Data Series**, or **Viewing Period** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data Series

There are two options for selecting a data series for a gadget; **Devices** and **Views**. Selecting the sources by device allows you to pick a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to pick sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or, by virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see Hierarchy Manager help.

Data series by device

To select your data series by device:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Devices** in the **Sources** area.
4. Select an option from the **Grouping** drop-down list. Select **None** for no grouping, or **Device Groups**, which organizes the devices based on groups defined in Management Console. See "Management Console" in the *StruxureWare Power Monitoring Expert User Guide* for additional information.
5. Select a source from the device list.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.

- **Consumption Measurements** displays measurements related to consumption.

8. The **Display only Measurements with data** option allows you to see only the measurements that contain data. Uncheck this option to show all measurements, regardless of whether the measurements contain data or not.
9. Click to view newly added devices or measurements.
10. Click the arrow beside any measurement heading in the list to expand it to display the measurement types. Select the measurement you want to display in the gadget.
11. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
12. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001
13. Click **OK** to return to the **Data Series** tab.
14. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
15. To modify an existing data series, select a series from the list and click **Edit** .
16. To remove a series from the list, select a series from the list and click **Delete** .
17. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data series by view

To select your data series by view:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Views** in the **Sources** area.

   This allows you to select:

   A view as defined in the hierarchy, such as a physical layout made up of buildings, floors and rooms, or a data center with tenants, racks, and circuits.

   A virtual meter that is defined in Hierarchy Manager.
4. Select an option from the **Views** drop-down list. Changing the view provides alternative ways of showing hierarchy relationships between the different Nodes or by showing virtual meters. For information regarding hierarchies and virtual meters, see Hierarchy Manager help.
5. Select a Node from a hierarchy view or a virtual meter from the **Virtual Meter** view.
6. Select an option from the **Type** drop-down list.

7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. Click to view newly added devices or measurements.
9. Select the measurement to display in the gadget.
10. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
11. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001.
12. Click **OK** to return to the **Data Series** tab.
13. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
14. To modify an existing data series, select a series from the list and click **Edit** .
15. To remove a series from the list, select a series from the list and click **Delete** .
16. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. For viewing periods that have more than one viewing interval available, select the applicable viewing interval option.
4. Click **OK** to save your settings and view the configured gadget on the dashboard.

Pie Gadget

The Pie gadget displays a summary comparison of several data series in a single chart that allows you to determine the relationship between several sources of consumption.

To set or view the Pie gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Pie Gadget Setup window and configure the gadget.
Viewing Options	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help

	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Pie Gadget Setup

The Pie gadget properties dialog opens to the Summary page. Click **Summary**, **Data Series**, or **Viewing Period** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data Series

There are two options for selecting a data series for a gadget; **Devices** and **Views**. Selecting the sources by device allows you to pick a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to pick sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or, by virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see Hierarchy Manager help.

Data series by device

To select your data series by device:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Devices** in the **Sources** area.
4. Select an option from the **Grouping** drop-down list. Select **None** for no grouping, or **Device Groups**, which organizes the devices based on groups defined in Management Console. See "Management Console" in the *StruxureWare Power Monitoring Expert User Guide* for additional information.
5. Select a source from the device list.
6. Select an option from the **Type** drop-down list.

7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. The **Display only Measurements with data** option allows you to see only the measurements that contain data. Uncheck this option to show all measurements, regardless of whether the measurements contain data or not.
9. Click  to view newly added devices or measurements.
10. Click the arrow beside any measurement heading in the list to expand it to display the measurement types. Select the measurement you want to display in the gadget.
11. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
12. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001
13. Click **OK** to return to the **Data Series** tab.
14. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
15. To modify an existing data series, select a series from the list and click **Edit** .
16. To remove a series from the list, select a series from the list and click **Delete** .
17. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data series by view

To select your data series by view:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Views** in the **Sources** area.

   This allows you to select:

   A view as defined in the hierarchy, such as a physical layout made up of buildings, floors and rooms, or a data center with tenants, racks, and circuits.

   A virtual meter that is defined in Hierarchy Manager.

4. Select an option from the **Views** drop-down list. Changing the view provides alternative ways of showing hierarchy relationships between the different Nodes or by showing virtual meters. For information regarding hierarchies and virtual meters, see Hierarchy Manager help.
5. Select a Node from a hierarchy view or a virtual meter from the **Virtual Meter** view.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. Click  to view newly added devices or measurements.
9. Select the measurement to display in the gadget.
10. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
11. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001.
12. Click **OK** to return to the **Data Series** tab.
13. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
14. To modify an existing data series, select a series from the list and click **Edit** .
15. To remove a series from the list, select a series from the list and click **Delete** .
16. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

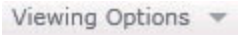
1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. For viewing periods that have more than one viewing interval available, select the applicable viewing interval option.
4. Click **OK** to save your settings and view the configured gadget on the dashboard.

Trending Gadget

The Trending gadget displays the trends of several topics in a data series over any query time period.

To set or view the Trending gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Trending Gadget Setup window and configure the gadget.
	Change the viewing period. Once a gadget has been defined, click the arrow to open a list of alternate viewing options available for selection.
	Display the Gadget Setup Help
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Trending Gadget Setup

The Trending gadget properties dialog opens to the Summary page. Click **Summary**, **Data Series**, or **Viewing Period** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data Series

There are two options for selecting a data series for a gadget; **Devices** and **Views**. Selecting the sources by device allows you to pick a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to pick sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or, by virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see Hierarchy Manager help.

Data series by device

To select your data series by device:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Devices** in the **Sources** area.

4. Select an option from the **Grouping** drop-down list. Select **None** for no grouping, or **Device Groups**, which organizes the devices based on groups defined in Management Console. See "Management Console" in the *StruxureWare Power Monitoring Expert User Guide* for additional information.
5. Select a source from the device list.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. The **Display only Measurements with data** option allows you to see only the measurements that contain data. Uncheck this option to show all measurements, regardless of whether the measurements contain data or not.
9. Click to view newly added devices or measurements.
10. Click the arrow beside any measurement heading in the list to expand it to display the measurement types. Select the measurement you want to display in the gadget.
11. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
12. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001
13. Click **OK** to return to the **Data Series** tab.
14. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
15. To modify an existing data series, select a series from the list and click **Edit** .
16. To remove a series from the list, select a series from the list and click **Delete** .
17. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Data series by view

To select your data series by view:

1. Select **Data Series** from the left navigation.

   Measurement Units for the **Primary Axis Label** and the **Secondary Axis Label** is selected by default. **Measurement Units** uses the units of the data selected in the **Data Series** tab.

   To specify a different label for the axis, select **Custom** and enter a description in the **Custom** field.
2. Click **Add** to add a data series. The data series selector dialog opens.
3. Select **Views** in the **Sources** area.

This allows you to select:

A view as defined in the hierarchy, such as a physical layout made up of buildings, floors and rooms, or a data center with tenants, racks, and circuits.

A virtual meter that is defined in Hierarchy Manager.

4. Select an option from the **Views** drop-down list. Changing the view provides alternative ways of showing hierarchy relationships between the different Nodes or by showing virtual meters. For information regarding hierarchies and virtual meters, see Hierarchy Manager help.
5. Select a Node from a hierarchy view or a virtual meter from the **Virtual Meter** view.
6. Select an option from the **Type** drop-down list.
7. Select an option from the **Show** drop-down list. You can choose to show only measurements based on the following categories:
   - **All Measurements** displays all available measurements for the selected utility type.
   - **Common Measurements** displays a list of the most commonly used measurements.
   - **Consumption Measurements** displays measurements related to consumption.
8. Click to view newly added devices or measurements.
9. Select the measurement to display in the gadget.
10. Type a description in the **Display Name** field to add or change the data series display name for the gadget.
11. Change the multiplier value by entering the new value in the **Multiplier** field (optional).

    Change the multiplier value to convert the data from its original measurement unit to the display unit. For example, convert the measurement unit from kWh to MWh by using a multiplier of 0.001.
12. Click **OK** to return to the **Data Series** tab.
13. Click **Add** to add another data series to the Chart. You can chart up to 8 data series.
14. To modify an existing data series, select a series from the list and click **Edit** .
15. To remove a series from the list, select a series from the list and click **Delete** .
16. Proceed to another tab, or click **OK** to save your settings and view the configured gadget on the dashboard.

Viewing Period

1. Select **Viewing Period** on the left navigation pane.
2. Select a viewing period from the drop-down list.
3. For viewing periods that have more than one viewing interval available, select the applicable viewing interval option.
4. Click **OK** to save your settings and view the configured gadget on the dashboard.

Web Image Gadget

The Web Image gadget displays a static image of a website. You can configure the gadget to display a specified area of the website, and to take a new snapshot at a defined interval.

To set or view the Web Image gadget properties for the first time, click **Click to Set Up**.

Move your pointer to the top of the gadget to display the gadget icons. Use the gadget icons to:

	Move the gadget to another position on the dashboard.
	Open the Web Image Gadget Setup window and configure the gadget.
	Display the Gadget Setup help.
	Restore the gadget to the original size and position as defined in the Layout screen of the Dashboard Properties window.
	Maximize the gadget to fill the dashboard.
	Delete the gadget. The Confirm dialog opens. Click **Yes** to delete the gadget or **No** to return to the dashboard display pane.

Web Image Gadget Setup

The Web Image gadget properties dialog opens to the Summary page. Click **Summary** or **Selected URL** in the navigation pane to open their respective properties configuration page.

To cancel changes and close the gadget setup window at any time during setup, click **Cancel** or click the **X** in the top right corner.

Summary

1. Enter a **Title** for the gadget. The title is displayed on the front of the gadget.
2. Enter a **Description** of the gadget in the area provided.
3. Change the **Gadget Opacity** to allow the background image to be visible through the gadget.
4. Proceed to the next section, or click **OK** to save your settings and view the configured gadget on the dashboard.

Selected URL

1. The Web Image gadget displays a static image of a website. Enter the **URL** for the website you want to display. For security purposes, the URL must use only the **http** or **https** protocol.
2. Click **Preview** to see the website in the preview window.
3. To set a delay between the time when the website loads and the snapshot is taken, enter a **Loading Wait Time** value (in seconds) between 0 and 300. For example, 3 to 6 seconds is recommended for a WebReach page to allow the content to load.
4. To define when a new snapshot of the website is taken, enter a **Refresh Interval** value (in seconds) between 3 and 86,400.
5. To display the website as it displays in the preview window, leave the **Image Width** and **Height** default values.
   To display more or less of the website, adjust the **Width** or **Height** value, then click **Preview**. If you change an **Image** value, the other value adjusts automatically to maintain proportion.

6. To display a manually cropped region of the website, click on the image and draw the crop region. The preview window refreshes automatically.
   To modify the **Crop rectangle**, adjust the **Left**, **Top**, **Width**, and **Height** crop values as needed, then click **Preview**.
7. To set a new crop region, click **Clear Crop** to return to the original image, and repeat Step 6.
8. Click **OK** to save your settings and view the configured gadget on the dashboard.

Where Is My Measurement?

If you do not see a measurement that you expect in the data series list, it is probably due to one of the following:

- The measurement is not logged. By default, only logged measurements are available in the data series list. To view newly added measurements, unselect **Display only Measurements with Data**.
- The measurement is filtered out of the current list. Select from one of the options in the **Show** drop-down list:
  - **All Measurements** displays all available measurements for the selected type.
  - **Common Measurements** displays a list of the most commonly used measurements.
  - **Consumption Measurements** displays only measurements related to consumption.
- The measurement is not available for the type selected in the **Type** drop-down list. Select a different type from the **Type** drop-down list.
- The measurement is a custom measurement for which the metadata is not set up. The metadata defines the measurement type, as well as how a measurement is presented in the **Type** and **Show** drop-down lists. The standard measurements supplied in the software have their metadata already defined. However, metadata for an application-specific measurement created in the field (i.e. a custom measurement) must also be defined in order for the software to know how to use the measurement.

Slideshow Library

The Slideshow Library contains all the slideshows available in the system. To reorder dashboards in a slideshow, select a dashboard title, then drag and place it where you want it to appear in the list. The Slideshow Library appears as the **Public Dashboard Library** for users logged in as Visitors. User permissions and view type determine which of the following options are available.

Click the following Slideshow Library icons to:

	Add a new slideshow. The new slideshow appears in the drop-down list.
	Open the Slideshow Properties window and enter a name and description for the selected slideshow.
	Delete the selected slideshow. The Confirm dialog box appears. Click **Yes** to delete the slideshow or **No** to return to the Slideshow Library.

To build a slideshow:

1. In Setup View, select the slideshow you want to build from the drop-down list.
2. Select a dashboard from the Dashboard Library, then drag and drop it in the selected slideshow.
3. Repeat Step 2 to add additional dashboards. You can add up to 100 dashboards to a slideshow.

Changes to existing slideshows must be manually updated. Reload the updated slideshow on remote kiosks and displays to show the most current information.

To display a slideshow in the application full screen mode, log in as a Visitor and follow the steps below.

To display a slideshow:

1. Click Slideshow View. The Slideshow Settings window appears.
2. Select a slideshow from the drop-down list.
3. Drag and place the slideshow interval selector to set the slideshow interval. The slideshow interval options range from 10 to 300 seconds.
4. Click **OK** to save the selected slideshow interval and begin to display the selected slideshow, or click **Cancel** or the **X** in the top right corner to close the Slideshow Settings window and return to Setup View.
5. To change the display to browser full screen mode, press F11.

To exit a slideshow, select another View (Presentation or Setup), or click **Esc.** if the slideshow is in application full screen mode.

Slideshow Query Parameters

To limit the Slideshow Library to only 1 slideshow, pass the following query parameter into the web address:

/?slideshow= (Slideshow Name)

If the slideshow name contains spaces then the spaces should be substituted with **%20**. For example, for a slideshow named **My Slideshow**:

/?slideshow=My%20Slideshow

To bypass the login page and automatically launch a slideshow, append **/visitor** to the query parameter in the web address:

/visitor/?slideshow= (Slideshow Name)

Slideshow Properties Window

The Slideshow Properties window opens to the General screen. Enter the slideshow **Name** and **Description**.

To view the configured slideshow:

1. Click **OK** to save the slideshow settings and close the Slideshow Properties window.
2. Click **Slideshow View**. The Slideshow Settings window appears.
3. Select a slideshow from the drop-down list.

4. Drag and place the slideshow interval selector to set the slideshow interval. The slideshow interval options range from 10 to 300 seconds.
5. Click **OK** to save the selected slideshow interval and begin to display the slideshow, or click **Cancel** or the **X** in the top right corner to close the Slideshow Settings window and return to Setup View.
6. To change the display to browser full screen mode, press F11.

To display a slideshow in application full screen mode, log in as a Visitor and follow the steps above.

To exit a slideshow, select another View (Presentation or Setup), or click **Esc.** if the slideshow is in application full screen mode.

Diagrams

The Diagrams application allows users to access and display Vista diagrams in the Web Applications (browser) interface. The Diagrams application manages all the necessary data processing and system functions at the server and uses XML to process Vista objects and data for display on the Web pages.

Use the Web Applications component from any computer on your network to view the Vista network diagrams of devices in your power management system. Objects that can be displayed in the browser include real-time numeric data, full or partial gauges, background graphics or diagrams, and basic views of event, data and waveform logs.

Although identical in many ways to Vista, the Diagrams application has certain differences and limitations:

- The diagrams are read-only; control objects such as On/Off and Trigger switches are disabled.
- The time displayed is the local time at the Web server, not at the client computer.

NOTE: Configure the TZ Offset, DST Start, DST End, and DST Offset on the meter to display the correct local time in the Diagrams application.

The Diagrams application and user authentication

User authentication for the Diagrams application is enabled by default. It is also enabled if you upgrade from previous versions of the product.

If you access Diagrams from a browser on a Web Client computer using the URL `http://server_name/ion` (where *server_name* is the fully-qualified name of the server or its IP address), you are prompted to log in using your Power Monitoring Expert user name and password.

If you access the Diagrams application on the server which hosts the IIS service, user authentication is not required. This also applies for any http request originating from applications within the server hosting the IIS service. For example, if a Web Image gadget in the Dashboards application is configured to access Diagrams, user authentication is not required.

Contact your Schneider Electric representative if you want to disable user authentication for Diagrams.

Preliminary setup

Before you can view Vista diagrams in the Diagrams application, a network diagram ("network.dgm") must exist. The Diagrams application processes each element in the network diagram and converts them for display in the browser.

Note that the Vista component is installed with Power Monitoring Expert on a primary server or Engineering Client. Contact your system administrator if you need a network diagram generated for your use or if you need access to Vista.

To generate a network diagram automatically in Vista:

1. Start Vista.
2. Click **File > Generate network diagram**.
3. Click **File > Save**.

The network diagram generated in Vista is used as the home page when you access the Diagrams application.

Displaying Vista network diagrams online

Use one of the following procedures to view the Web version of the network diagram generated in the Vista component of Power Monitoring Expert.

From a Web client computer

1. Start Internet Explorer.
2. Enter `http://domain_name/Web` in the address field to open the Web Applications login dialog (where *domain_name* is the Internet address for the server hosting the Web Applications component of Power Monitoring Expert).

   For example, for server name **srv1** and company name **MyCompany**, enter the address in the browser as:

   `http://srv1.MyCompany.com/Web`

   If you cannot access the Diagrams application, the product may have been installed on the server with a different virtual root than the default of `Web`. Contact your system administrator for the full address.
3. Enter your user name and password and click **Log In**.
4. Click the **Diagrams** icon on the Navigation Bar to view the network diagram.

   The network diagram that was created in Vista is displayed. Click an icon to display its contents (for example, click the group icon to display the meters belonging to that group).

From the primary server

1. Double-click the Power Monitoring Expert folder, then double-click Web Applications to open the Web Applications login dialog.
2. Enter your user name and password and click **Log In**.
3. Click the **Diagrams** icon on the Navigation Bar to view the network diagram.

   The network diagram that was created in Vista is displayed. Click an icon to display its contents (for example, click the group icon to display the meters belonging to that group).

Viewing historical (trend) data

The Diagrams application provides a Web-based graphing utility for viewing historical data. This utility allows you to select the date range and the data that you want to view.

1. Click the meter icon to open its diagram, then click the link or tab that contains the button for the trending information you want to view.
2. Click the Data Log Viewer button  that corresponds to the data log you want to view.

   The data log table displays today's data by default.

   When the data log table opens, 30 rows of data are displayed initially. As you scroll or page down, 30 additional rows of data at a time are added to the table.
3. Click **Change Date Range** to change the timeframe for the data and select one of the available

options for the data that you want to view. To specify a custom date range, select **Between these dates** then click the calendar icons to set start and end dates.

The new date range is applied when you view the graph. Click **Show Table** to return to the data log table. (When you return to the data log table, your previous table header selections are cleared.)

If you select a custom date range, a maximum of 6000 rows of data are displayed initially. If the custom date range includes more than 6000 rows of data, you can display the additional records in increments of 30 rows at a time by scrolling down or pressing **End**.

4. Select the check boxes for the items in the table header for the parameters that you want to graph.
5. Click **Show Graph**.
6. Manipulate and control the displayed graph by doing the following:
   a. To zoom in on the graph, left click and drag the mouse pointer around the portion you want to zoom in on.
   b. To restore the graph to its original display size, double-click anywhere in the graph.
7. Click:
   a. **Device Diagram** to return to that page.
   b. **Change Date Range** to select a different date range for the data log table. The new date range is applied when you view the graph.
   c. **Show Table** to return to the data log table. (When you return to the data log table, your previous table header selections are cleared.)

RMS waveform plotting

The Diagrams application plots the calculated root mean square (RMS) values for waveforms. To show or hide these RMS values, select the appropriate check box for the waveform in the data table.

Viewing meter events

You can view meter events in a table format using the Diagrams application.

NOTE: You cannot acknowledge alarms on the screens generated by the Diagrams application since control functions are not supported. To acknowledge alarms, click the **Alarms** icon in the Web Applications component to open the Alarms viewer.

Viewing the meter events

1. Click the meter icon to open its diagram, then click the link or tab that contains the Meter events button.
2. Click the Meter events button to open the a table showing the meter events.

   The meter events table displays today's data by default.

   When the meter events table opens, 30 rows of data are displayed initially. As you scroll or page down, 30 additional rows of data at a time are added to the table.
3. Click **Change Date Range** to change the timeframe for the data and select one of the available

options for the data that you want to view. To specify a custom date range, select **Between these dates** then click the calendar icons  to set a start and end date.

If you select a custom date range, a maximum of 6000 rows of data are displayed. If the custom date range includes more than 6000 rows of data, you can display the additional records in increments of 30 rows at a time by scrolling down or pressing **End**.

Adding a Global Event Log Viewer

To display the Vista Global Event Log Viewer online, you need to create an Event Log Viewer object in the Vista diagram and link it to the Global Event Log. To add this object to the home page for the Diagrams application:

1. Open network.dgm in Vista and make sure you are at the top level (that is, the title bar displays **User Diagram:network**). Select **Options > Show Toolbox** to switch to Edit mode.
2. Drag an Event Log Viewer object onto the diagram, then right-click the object to display its properties.
3. Click the **Query** tab, then click **Edit Query**.
4. Select **Global**, click **Add**, then click **Next**.
5. Select **Global Event Log @Global**, click **Add**, then click **Next**.
6. Select at least one column other than * in the **Available** section and then click **Add**. If you want to change the order of selected columns, select the column in the **Selected** section then use the up or down arrow buttons to move it accordingly.
7. Set a filter to display only alarms:
   - Use the **Filter** section to select `priority`, and `>=` in the respective lists, and enter `128` in the text field.
   - Click **Insert** to add the filter to the **Where** field.
8. Click **Next**.
9. Select the column you want to assign as the first sorting criteria, then click **Add**. Repeat for the second sorting criteria, and so on. In the **Sort Order** section, double-click a column to change its sort order (for example, to change from “ascending” to “descending”).
10. Click **Finish**, then click **OK** to close the **Event Log View Configuration** dialog.
11. Click **File > Save**.

Stale data and error indicators

The Diagrams application uses the Vista stale data settings for its diagrams. Stale data and errors are displayed in the browser as follows:

- A **yellow** border surrounding an object indicates stale data.
- An **orange** border surrounding an object indicates an error in communications, security access, configuration, or other system error.

NOTE: See the "Identifying Stale Data" topic in the Vista section of the online *Power Monitoring Expert Help* for information on stale data. Although you can change the stale data and error flag colors in Vista, the color indicators for these flags do not change in the Diagrams application. Contact Technical Support if you need to change the default Diagrams flag colors.

Advanced Diagrams configuration

Customization and advanced configuration information for the Diagrams application is intended for advanced users only.

See the following topics for additional information:

- Custom network diagram setup describes how to change registry settings to use a custom network diagram instead of the automatically generated network diagram.
- Diagrams registry settings describes registry entries and settings used in the Diagrams application.

Custom network diagram setup

If you have a custom network diagram on the primary server that you want to use instead of the automatically generated network diagram, you need to modify the registry settings of the computer where you run the Diagrams application to specify the location of the custom network diagram.

Modifying system registry keys without sufficient knowledge or experience in these procedures can damage the computer's operating system and all existing data.

NOTICE
OPERATING SYSTEM DAMAGE OR DATA CORRUPTION • Before making any changes to your system registry, back up the registry to a network folder or other remote location. • Only advanced users with knowledge of operating system registry entries should use the Registry Editor. **Failure to follow these instructions can require operating system re-installation.**

1. Start Windows Registry Editor and navigate to:

   HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0WebReach

   If the Diagrams application is run on a 64-bit operating system, navigate to:

   HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Electric\Power Monitoring Expert\8.0\WebReach

2. Right-click to add a new string value and name it “NetworkDiagram”.
3. Right-click **NetworkDiagram**, select **Modify**, then type the path and name of your custom network diagram in the **Value data** field.
4. Click **OK**.
5. Restart IIS on your computer to apply the changes.

For more information, refer to the **NetworkDiagram** item in the table under Diagrams registry settings. If there is no NetworkDiagram entry in the registry, then the default value "x-pml:/diagrams/ud/network.dgm" is used.

The Network Diagram navigation button located on the date range page and the results page is automatically updated to link to the custom network diagram you specified. However, the Network Diagram button that exists in each meter user diagram uses a hard-coded link to "x-pml:/diagrams/ud/network.dgm". Use Vista to manually update the Network Diagram link in the meter user diagrams. If you do not have access to Vista, contact your system administrator to change the link for the grouping object in the network diagram as described below.

Changing the link for the grouping object in the network diagram

1. Start Vista and select **Options > Show Toolbox** to switch to Edit mode.
2. Right-click the grouping object in the network diagram to open the **Grouping Object Configuration** dialog.
3. Select the **Action** tab and select **Open User Diagram**.
4. Click **Browse** to locate your custom network diagram. Select the diagram filename, then click **Open**.
5. Click **OK** to save your changes.

Diagrams registry settings

The registry keys for Diagrams on a 32-bit system are located in HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0\WebReach.

On a 64-bit system, the registry keys are located in HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Electric\Power Monitoring Expert\8.0\WebReach.

The following table lists the default Diagrams registry entries and settings.

Default Registry Entries	Default Setting	Desciption
AutoDiagramTimeout	20000 milliseconds	Timeout period for the autodiagram components to communicate with the device and determine the appropriate template to open.
ExpireTimeLimit	600 seconds	Time limit for a diagram subscription to update its timestamp. If the subscription is not updated within this time period, it is considered expired and is removed.
HTTPRefreshInterval	10 seconds	The webpage refresh rate.
SubscriptionObject	pmlitem:webreachstore:	The name (tag) that the subscription service uses to find Diagrams-related information.
VirtualDirectory	ION	The part of the Web address that points to the Diagrams-generated Vista diagrams for displaying in the browser.
XMLRefreshInterval	3000 milliseconds	The real time data update rate on the webpage.

The following table lists the optional registry entries you can set for custom functionality. Modifying system registry keys without sufficient knowledge or experience in these procedures can damage the computer's operating system and all existing data.

NOTICE
OPERATING SYSTEM DAMAGE OR DATA CORRUPTION • Before making any changes to your system registry, back up the registry to a network folder or other remote location. • Only advanced users with knowledge of operating system registry entries should use the Registry Editor. **Failure to follow these instructions can require operating system re-installation.**

Optional Registry Entries	Default Setting	Description
NetworkDiagram	x-pml:/diagrams/ud/network.dgm	This value specifies the network diagram to display as the homepage for Diagrams. The value can be a relative path, such as the default setting, or it can be an absolute file path (e.g., D:\customdiagrams\ud\networkB.dgm).
QueryTimeout	See description	This value determines how long Diagrams waits for the results of a query to return from the database before timing out. If this registry entry is not created or no QueryTimeout valus is specified, Diagrams times out after 60 seconds. This optional registry entry is useful if you know that a query will take more than 60 seconds to return its results and you do not want Diagrams to time out before then. Specify a value that gives you enough time to get your query results.

Troubleshooting

Diagrams depends on the ION XML Subscription Service and ION XML Subscription Store Service to function properly. If you are experiencing difficulties with Diagrams pages (such as getting an error message when you try to open a device diagram), check to make sure these services have been started.

Unable to access the Diagrams application

If you cannot access the Diagrams application, the product may have been installed on the server with a different virtual root than the default of `Web`. For example, the default address is `http://`*domain_name*`/Web`, where *domain_name* is the Internet address of the server hosting the Diagrams application. Contact your system administrator for the full address.

No real-time data is displayed

This may be caused by security settings being reset by a Microsoft Windows update on the server. If this is the case, open Internet Explorer on the server, select **Tools > Internet Options**, then click the **Security** tab. Click the **Trusted sites** icon, then click **Sites**. Add the Web Applications site in the form of `http://domain_name/Web` to the **Trusted sites** zone. For example, for server name **srv1** and company name **MyCompany**, add the Web site as:
`http://srv1.Mycompany.com/Web`

Page cannot be displayed

This may be caused by complex or large queries, such that the results do not arrive within the default Diagrams timeout setting of 60 seconds. If you suspect this is the case, add the custom DWORD registry key `QueryTimeout` and set it to a higher timeout value (for example, to `120` for 120 seconds).

Tick labels for gauges are unreadable

This may occur if you specify an unsupported font for the **Ticks Label Font**. To fix this, select only **TrueType** or **OpenType** fonts in Vista.

Tables

The Tables application allows you to quickly build an on-demand view of real-time data from devices configured in the Management Console component of your StruxureWare™ Power Monitoring Expert system.

⚠ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the software, as this can lead to inaccurate reports and/or data results.
- Do not rely solely on data results to determine if the system is functioning correctly or meeting all applicable standards and compliances.
- Do not use reports or data results as substitutes for proper workplace practices or equipment maintenance; they are supplemental only.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

When you click the **Tables** icon on the Navigation Bar, the application window opens with a table display pane on the left, and a table configuration pane on the right.

Table display pane

The table display pane on the left contains a table header area above a data display grid area.

Table header

The table header contains the following fields and options:

Field or Option	Description
Table	Displays the title of the table selected in the **Table Library**. For tables that you defined, this field shows the table name that you saved.
Export	Opens the **Save As** window, where you can save the table as an Excel (XLsx) file.
Last Update	Displays the server date and time when the data in the table was last refreshed. Before you make any selections for a real-time table, the text reads **No data displayed**.
Update in / Updating	Provides a countdown for the interval that you select. All time intervals are expressed as minutes and seconds in an mm:ss format. Changes to **Updating** when the countdown reaches `0`. If the **Update Interval** is set to **Continuous**, the label always indicates **Updating**.
Pause / Resume	Stops the next update countdown and retains the current data in the table. When you select **Pause**, the text changes to **Resume**. When you select **Resume**, the countdown continues for the remaining time in **Next Update**.
Update Interval	Shows the default refresh rate for the data in the table. The initial setting is **5 seconds**, but you can choose other time periods from the list.

Data display grid

The data display grid is the area where the real-time data displays. The data is organized by device name in the left column of the grid, and measurement headings arranged in columns across the top of the grid.

Table configuration pane

The table configuration pane on the right contains panels labeled **Table Library**, **Devices**, and **Measurements** that you use to select and configure a real-time table.

Table Library

The **Table Library** contains pre-defined and user-defined tables that are grouped under their respective folders. The number of folders that you see depends on your Power Monitoring Expert system access privileges.

The folders are:

- **System**: contains pre-defined tables included in Power Monitoring Expert.
- **Shared**: contains user-built tables that are visible to all users.
- **Private**: contains your user-built tables.
- **Other User Tables**: contains tables created by other users and saved in their **Private** folder. The **Other User Tables** folder is visible to users with an access level of Supervisor. Each table name in this folder is identified with the owner's user name.

Use the icons at the top of the **Table Library** to complete the following actions:

	New	Clears the table display pane. Select one or more devices and measurements for the new table.
	Save	Opens the **Save Table** dialog. You can enter a name for the table and indicate whether to save it in your private or shared folder.
	Edit	Opens the **Save Table** dialog for the selected table. Modify any of the settings for the table and click **OK**.
	Delete	Permanently deletes a table. Users with supervisor-level access can delete any table that appears in the **Table Library**. All other users can only delete tables that they created.

Access levels and table folder visibility

Your access level determines which folders are visible in the Table Library. The following summary shows the folders that are visible for each access level.

Access privileges	Table Folders			
	System	Shared	Private	Other User Tables
Observer (View Only)	Yes	Yes	Yes	No
User	Yes	Yes	Yes	No
Controller	Yes	Yes	Yes	No
Operator	Yes	Yes	Yes	No
Supervisor	Yes	Yes	Yes	Yes

Devices

The Devices panel lists all of the devices, organized by group names, that are configured in your Power Monitoring Expert system.

Measurements

The Measurements panel lists all of the measurements associated with the devices configured in your Power Monitoring Expert system. The measurements are grouped in categories, such as Current, Energy, Power, Voltage. It also includes a **Favorite Measurements** category.

Use the icons at the top of the Measurements panel for the following actions:

	Open the measurement filter	Opens the measurement filter dropdown list. The default selection is **All**. Select **Common** to list the more commonly used measurements within each category. Click the icon to close the measurement filter list.
	Edit Favorite Measurements	Opens the **Favorite Measurements** dialog. Use the dialog to add, edit, or delete a favorite measurement and click **OK**.

Favorite Measurements

Favorite Measurements provides a way to convert an existing device measurement to a calculated value for display in the real-time table. Favorite measurements can be configured, modified, or deleted by users with access levels of Operator, Controller or Supervisor. Each defined favorite measurement is available for selection in a real-time table.

Creating a favorite measurement

1. Click the **Edit Favorite Measurements** icon  to open the Favorite Measurements dialog.
2. Click **Add** to open the measurement configuration dialog:
3. In the **Type** list, select:
   - **All** to display all measurement categories.
   - A specific category in the list to display the measurements for that category. Available categories are **Air**, **Electricity**, **Environment**, **Generic**, **Natural Gas**, **Steam**, **Wastewater**, and **Water**.
4. In the **Show** list, select:
   - **All** to display all available measurements within each category specified by your **Type** selection.
   - **Common** to display a list of the most commonly used measurements within the categories specified in your **Type** selection.
   - **Consumption** to display only measurements related to consumption within the categories specified in your **Type** selection.
5. Enter a name in the **Display Name** field for the column label in the table.
6. Enter a unit of value in the **Display Unit** field to represent the underlying measurement, such as, kWh, kVAR, kVARh, and so on.
7. Enter a multiplier value in the **Multiplier** field to convert the data read from the device to a value

for display in the table.

Using a multiplier of 1 lets you organize your favorite measurements into this convenient group.

8. Click **OK** to save the favorite measurement.

   The favorite measurement is available for selection in the **Measurements** panel under the **Favorite Measurements** category.

Getting started

When you select **Tables** on the Navigation Bar, the application opens and instructions appear in the data display area.

```
Please Select:

A Table and one or more Devices.
or
One or more Measurements and one or more Devices.
```

The instruction to select **A Table and one or more Devices** refers to selecting a table in the **System** folder of the **Table Library**, and then adding devices to the table by selecting them in the **Devices** panel. This instruction also applies to selecting a user-built table in the **Shared** folder when the table definition does not include devices. See Selecting a pre-defined table for further information.

The instruction to select **One or more Measurements and one or more Devices** refers to creating a table by selecting measurements and devices from the **Measurements** and **Devices** panels, respectively. See Creating a user-defined table for further information.

Note that if you are viewing a table and log out of the application or close the browser, the table you last viewed is automatically loaded when you return to the Tables application.

Selecting a pre-defined table

Pre-defined tables are located in the **System** folder in the **Table Library**.

Each of the pre-defined tables has a specific set of measurements that appear as column headings in the data display grid.

The **Table Library** displays all of the tables that are available for selection. This includes pre-defined tables in the **System** folder, user-defined tables in the **Shared** folder, and any of your own tables in the **Private** folder. The following information is specific to the tables in the **System** folder.

Selecting a table first, then devices

To display real-time data by selecting a table definition first, complete the following steps:

1. Select a table listed in the **System** folder or **Shared** folder.
   - The measurements associated with the selected table appear as column headings on the data display grid.
   - The table title appears in the header area.

- The prompt in the data display grid indicates that you need to select one or more devices. (For a table in the **Shared** folder, this instruction appears only if devices had not been saved with the table definition.)

2. Select specific devices from the list (organized by group name) in the **Devices** panel.
   - The device name appears under the **Devices** column in the data display grid.
   - Real-time data begins to display in each of the measurement columns.
   - The **Last Update** field shows the date and time of the last data update.

If you select another table in the **System** folder (or **Shared** folder) where devices have not been specified as part of the table definition, the existing table is replaced with the new set of measurement headings for the devices that you previously selected.

Selecting devices first, then a table

To display real-time data by selecting devices first, complete the following steps:

1. Select specific devices from the list (organized by group name) in the **Devices** panel.
   - The device name appears under the **Devices** column in the data display grid.
   - The prompt in the data display grid indicates that you need to select a table or one or more measurements.
2. Select any of the tables from the **System** folder or a user-built table in the **Shared** folder.
   - The measurements associated with the selected table appear as column headings in the data display grid.
   - The table title appears in the header area.
   - Real-time data begins to display for the selected devices.
   - The **Last Update** field shows the date and time of the last data update.

If you select additional devices, each device name appears under the **Devices** column and real-time data begins to display in each of the measurement columns.

Note that if you add or rename devices in Management Console while you are logged in to the Tables application, the additional or renamed devices are not listed in the **Devices** panel unless you log out of the Tables application for 15 minutes, and then log back in.

Creating a user-defined table

User-defined tables are a combination of both the devices and the measurements that you select from the **Devices** and **Measurements** panels, respectively.

To create a user-defined table, complete the following steps:

1. If the data display grid already contains data, you can clear the grid by clicking **New** (the + icon) at the top of the **Table Library** panel, and then complete the following steps.
2. Select one or more devices (organized by group name) listed in the **Devices** panel.
   - The device name appears under the **Devices** column in the data display grid.
   - The prompt in the data display grid indicates that you need to select one or more measurements.

3. Select one or more measurements to associate with the selected devices.
   - The measurements appear as column headings in the data display grid.

     Real-time data for the devices appears in the measurement columns.

To refine your table, modify your selection of devices and measurements.

To save your table, click the **Save** icon to open the **Save Table** dialog.

- If you save a table with measurements but without devices, a green circle appears beside the table name.
- If you save a table with both devices and measurements, then a green checkmark appears beside the table name.
- If you attempt to save a table without any measurements, you are prompted to select one or more measurements before you can save the table.

To clear the data display grid, select **Clear Selection** at the top of both the **Devices** and **Measurements** panels, respectively. Alternatively, you can click **New** and select **No** on the save table prompt to clear the data display grid.

Note that if you add or rename devices in Management Console while you are logged in to the Tables application, the additional or renamed devices are not listed in the **Devices** panel unless you log out of the Tables application for 15 minutes, and then log back in.

Saving your table

After you have configured the table to display the data that you want to see, you can save the table in the **Table Library** for selection at another time.

1. Click the **Save** icon at the top of the **Table Library** panel to open the **Save Table** dialog.
2. Complete the following on the **General** page:
   a. Enter a table name in **Name** field.
   b. Select **Private** or **Shared** as the access option for the table.

      This selection determines who can view, edit or delete the table.

      Note that tables are saved in the **Private** folder by default for users with an access level of Observer or User.
   c. If you want to change your selection of **Measurements** or **Devices**, complete the following steps. Otherwise, click **OK** to save your table.
3. Click **Measurements** to open that page:

   The measurements that you selected when you defined your table are also selected on this page.

   If you want to refine the measurements associated with your table, you can add or remove measurements by selecting or clearing the adjacent check boxes.
4. Click **Devices** to open that page:

   The devices that you selected when you defined your table are also selected on this page.

If you want to refine the devices associated with your table, you can add or remove devices by selecting or clearing the adjacent check boxes.

5. Click **OK** to save your table in the **Private** or the **Shared** folder in the **Table Library**.

   The folder for the saved table is determined by the access option that you selected on the **General** page.

Sorting and filtering data

You can sort and filter data in the data display grid by using the controls and options available in the column headings.

Sorting data

To sort data into a specific order or sequence in the data display grid, click the column heading. The first click sorts the data in ascending order, and the second click sorts the data in descending order.

- For the Devices column, the list of devices is sorted in ascending or descending alphabetical order by group name and then by device name.
- For measurement columns, the measurement data is sorted in ascending or descending numerical order.

Filtering data

To filter data in the data display grid:

1. Click the arrow in a column heading to display the filter settings for that column.

   The settings provide an operator selection list and a numeric field.

2. To change the filter parameter, open the parameter list and select one of the operators.
3. Enter a numeric value associated with the data in the column that you want to filter.
4. If you select the **Or** or **And** option, the operator list and numeric field below the option are enabled for further filter definition.
5. Click **Filter** to filter the data that appears in the column based on your selections.

   A filter icon appears on the right of the column heading to indicate that a filter is applied to the data in the column.

To remove filtering for a column:

1. Click the filter icon in a column heading to display the filter settings.
2. Click **Clear** to remove all entries from the filter.

Exporting a table

To export a table to an Excel spreadsheet:

1. Select the **Export** link above the **Devices** column to open the **Save As** dialog.
2. In the **File name** field, enter a name for the table that you are exporting.

3. The **Save as type** field indicates the file type of Xlsx.
4. Click **Save** to export the table and to return to the Tables application.

After you have exported the table, you can open the Excel file and save it in another format, for example, as a PDF file for printing or distribution.

User permissions

The following table summarizes user permissions for specific table operations. User permissions are assigned through User Manager, which is accessible from the **Tools** menu in Management Console.

Operation Allowed	User Permissions				
	Observer	**User**	**Controller**	**Operator**	**Supervisor**
View a pre-defined table in the System folder.	Yes	Yes	Yes	Yes	Yes
View a user-defined table in the Shared folder (saved with the Shared option).	Yes	Yes	Yes	Yes	Yes
Create, view, edit, delete your own table in the Private folder (saved with the Private option).	Yes[1]	Yes[1]	Yes	Yes	Yes
Save a table with the Shared option.	No	No	Yes	Yes	Yes
Delete any table created by other users.	No	No	No	No	Yes
Delete a pre-defined table.	No	No	No	No	Yes
[1] Tables are saved in the Private folder by default for users with access levels of Observer or User.					

Trends

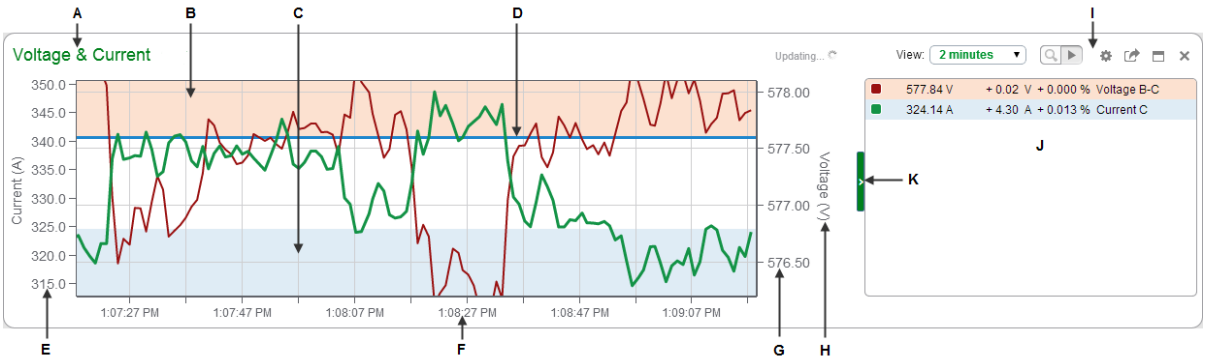
The Trends application allows you to monitor current system conditions by displaying real-time data in a graphical format. You can configure trend settings to include data from the database as it is logged (referred to as historical data), or you can combine real-time data and historical data in the trend diagram. In addition, you can save the trend data as a csv file.

⚠ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the system; this can lead to incorrect reports and/or data results.
- Do not rely solely on reports or data results to determine if the system is functioning correctly or meeting all applicable standards and compliances.
- Do not use reports or data results as substitutes for proper workplace practices or equipment maintenance; they are supplemental only.

Failure to follow these instructions can result in death, serious injury, or equipment damage.



A	Title	**B**	Upper threshold	**C**	Lower threshold
D	Target line	**E**	Left axis	**F**	Scale (from View setting)
G	Right axis	**H**	Axis title	**I**	Trend options
J	Legend	**K**	Close/open toggle		

Getting started

When you select **Trends** on the Navigation Bar, the application opens with the following instructions in the trend display pane.

```
To add content, enable an existing Trend or create a new Trend
```

The instruction to enable an existing Trend refers to selecting one or more trends in the **Shared**, **Private**, or **Other User Trends** folders in the **Trend Library**. (The **Other User Trends** folder is available only for users with supervisor-level access.)

The instruction to create a new trend refers to clicking the plus icon at the top of the **Trend Library** pane to open the **Add Trend** dialog.

The Trends interface

The Trends interface consists of a display pane on the left and a library pane on the right.

The display pane

The Trends display pane is the area where trend diagrams and data are displayed. See "Available options for a trend" for information about the icons that are available when a trend opens in the display pane.

When you create a trend, it automatically opens in the display pane and the checkbox for the trend is selected in the **Trend Library**. Three trends are visible in the display pane at any one time. You can scroll the display pane to view additional trends that have been selected.

If you log out of the application, your selections are preserved and are loaded in the display pane when you log in at a later time.

The library pane

The **Trend Library** contains trends that have been created and grouped under their respective folders. The number of folders that you see depends on your Power Monitoring Expert system access privileges.

The folders are:

- **Shared**: contains user-defined trends that are visible to all users.
- **Private**: contains trends that you created as private trends.
- **Other User's Trends**: contains trends created by other users and saved in their **Private** folder. The **Other User's Trends** folder is visible to users with an access level of Supervisor. Each trend in this folder is identified with the owner's user name.

Use the icons at the top of the **Trend Library** to complete the following actions.

	Add	Opens the **Add Trend** dialog. Click the tabs in the dialog to configure the new trend.
	Duplicate	Opens the **Duplicate Trend** dialog. You can enter a new title and indicate whether to save the duplicate in your private or shared folder.
	Edit	Opens the **Trend Setup** dialog. You can modify any of the settings for the trend.
	Delete	Permanently deletes a trend. Users with supervisor-level access can delete any trend that appears in the Trend library. All other users can only delete trends that they created.

Select or clear the checkbox beside a trend name in the **Trend Library** to display or remove it from the display pane.

Right-click a trend to open the context menu. This menu is available whether or not you selected the checkbox to view the trend. Enabled menu items are dependent on your access level. For example, users with an access level of Supervisor can duplicate or delete another user's trends, but they cannot open the trend in a new window or edit the trend.

The menu items are:

- **Open in New Window**: opens the trend in a new window or on a separate tab in your browser. If you want to share the trend with other users or applications within your system network, copy the URL from the address field of the new browser window or tab, and distribute it via email or instant messenger (IM), embed it in a Web page, and so on. Note that access to the trend is dependent on site policies and user access privileges.
- **Duplicate**: opens the **Duplicate Trend** dialog. See "Duplicating a trend" on page 67 for more information.
- **Edit**: opens the **Trend Setup** dialog. See "Modifying a trend" on page 67 for more information.
- **Delete**: opens the delete trend confirmation window. Click **OK** to delete the trend or **Cancel** to cancel the deletion.

See the following topics for additional information:

- "Adding a trend" on page 61
- "Modifying a trend" on page 67
- "Duplicating a trend" on page 67
- "Deleting a trend" on page 67

Adding a trend

To add a trend:

1. Click the plus icon + to open the **Add Trend** dialog.
2. On the **General** tab:
   a. Enter a title for the trend.
   b. Click **Add** under **Data Series** to open the **Add Data Series** dialog.
   c. Select a device in the **Sources** area of the dialog by clicking the device name.

      By default, the sources are listed in alphabetical order by group name and by device name within a group. You can use the **Search** field to find entries by device name, group name, or a combination of group and device names.

      Click **Advanced** to show the **Grouping** list, and select how you want to list the devices displayed in the **Sources** area.

      NOTE: For large systems with many devices, it takes longer to choose a source from the source selector if you change the **Grouping** setting from its default value.

   d. For the selected device, expand a measurement type, for example **Voltage**, and click the specific measurement you want to include in your trend, for example **Voltage A-B**.

      The measurements are list in alphabetical order by measurement category. You can use the **Search** field to find a specific measurement category or measurement.

   e. Select **Custom Name** if you want to enter a series name of your choice for trend data purposes. By default, a series name is a combination of device and measurement information formatted as `group.device measurement`, for example `BldgA.meterA Voltage A-B`.

f. Similarly, you can select **Custom Units** and enter a unit description of your choice.

g. You can modify the following settings for each source measurement:

- **Style**: select the color and line thickness from the available choices in the dropdown menus.
- **Decimals**: select the number of decimal places for the data displayed in the legend.
- **Plot on**: select **Right** or **Left Axis** for the location of the measurement values for the selected measurement.
- **Overlay**: select the values that you want to overlay on the trend diagram. By default, no items are selected. The selections are **Min**, **Max**, and **Mean**.
- **Data Source**: select where to access the data for the trend diagram. The options are to gather series data from the device in real-time, gather series data from the database as it is being logged, or gather real-time series data from the device and historical data from the database to fill the trend diagram, if possible.

h. Click **OK** to save your changes and close the **Add Data Series** dialog and to return to the **Add Trend** dialog.

i. Click **Add** to specify additional devices and measurements for the trend.

j. Select **Private** or **Shared** to save the trend in the private or shared folders, respectively. **Private** is selected by default.

3. On the **Axes** tab:

a. Enter a label for the axes in the **Title** field under **Right Axis (Primary)** or **Left Axis (Secondary)**.

Axis titles only appear if you have configured at least one measurement series and it appears on the trend diagram.

b. For **Right Axis (Primary)** select **Auto** or **Custom** for **Max Value** for the data in the diagram. **Auto** is the default.

c. Select **Custom** to enable the **Max Value** input field and the **Upper Threshold** checkbox.

For **Custom**, specify the maximum value for the data by entering a value in the **Max Value** input field.

If you select **Upper Threshold**:

- Select a color from the color selector for area shading on the trend diagram between the maximum value and the upper threshold value.
- Enter a value for the upper threshold in the input field.

  Each time the latest data point of a measurement series occurs in an upper or lower threshold, the color defined for the threshold also colors the background of the measurement series in the legend.

d. Select **Auto** or **Custom** for **Min Value** for the data in the diagram. **Auto** is the default.

e. Select **Custom** to enable the **Min Value** input field and the **Lower Threshold** checkbox.

For **Custom**, specify the minimum value for the data by entering a value in the **Min Value** input field.

If you select **Lower Threshold**:

- Select a color from the color selector for area shading on the trend diagram between the minimum value and the lower threshold value.
- Enter a value for the lower threshold in the input field.

  If the latest data point of a measurement series occurs in an upper or lower threshold, the color defined for the threshold also colors the background of the measurement series in the legend.

f. Select **Target Line** then select a color from the color selector and enter a value for the target line in the input field.

You can select the **Target Line** independently from the **Upper Threshold** or **Lower Threshold** settings.

g. For **Left Axis (Secondary)** select **Auto** or **Custom** for **Max Value** and **Min Value** for the data in the diagram. **Auto** is the default.

For **Custom** maximum or minimum, enter the values in the respective input fields.

4. On the **Chart** tab:

a. Select the text size from the list.

The text size property is applied to trend axis labels, the size of the legend, the legend text size, and trend data point tooltips.

The default setting is **Medium**, and the choices are **Small**, **Medium**, or **Large**.

b. Select the position of the legend included in the trend display area from the list.

The default setting is **Right**, which places the legend on the right side of the trend diagram. The available choices are **Off**, **Left**, or **Right**.

c. Select the content that you want to include in the legend from the available settings.

The default selections are **Name** and **Value**. The additional selections are **Difference** and **Difference (%)**.

Name is either the default measurement name in the form of `group.device measurement`, or the custom name that you specified on the **Add** or **Edit Data Series** dialogs.

Value is latest data value and the unit of measurement. For example, for voltage measurements, the default value is *`numeric_value V`* such as `415.2 V`.

Difference is the change in the measurement from one update to the next. For example, if the voltage is `415.8` and it changes to `416.1` at the next trend update, the difference appears as `+0.3` in the legend.

Difference (%) is the percentage change in the measurement from one update to the next. For example, if the voltage changes from `415.8` to `416.1` at the next trend update, the difference expressed as a percentage appears as `+0.072%` in the legend.

5. On the **Data** tab:
   a. Specify the **Data Update Intervals** in the **From device** and **From database** dropdown lists.

      The default setting is `5 seconds` for data updates for Trends using the data directly from a device, and `5 minutes` for data updates for Trends with data from a database.

   b. Specify the **Data Points** for the x-axis of the trend diagram in the **Max per series** input field.

      The default setting is `40000`.

      The value must be between 100 and 500,000. Increasing the value adds more data points per series but this can result in a degradation of trend performance.

      Examples:

      - A data interval of 1 second equates to 3600 data points per hour (60 points per minute X 60 minutes per hour). At a setting of 40000 points, approximately 11.1 hours of data is retained for viewing (40, 000 points / 3600 points per hour = approximately 11.1 hours).
      - A data interval of 5 seconds equates to 720 data points per hour (12 points per minute X 60 minutes per hour). At a setting of 40000 points, approximately 55.5 hours of data is retained for viewing (40, 000 points / 720 points per hour = approximately 55.5 hours).
      - A data interval of 10 seconds equates to 360 data points per hour (6 points per minute X 60 minutes per hour). At a setting of 40000 points, approximately 111.1 hours of data is retained for viewing (40, 000 points / 360 points per hour = approximately 111.1 hours).
6. Click **OK** to save your settings and to close the **Add Trend** dialog.

Available options for a trend

The following set of options is available in the upper right when you open a trend in the display area.

These options are summarized in the following table.

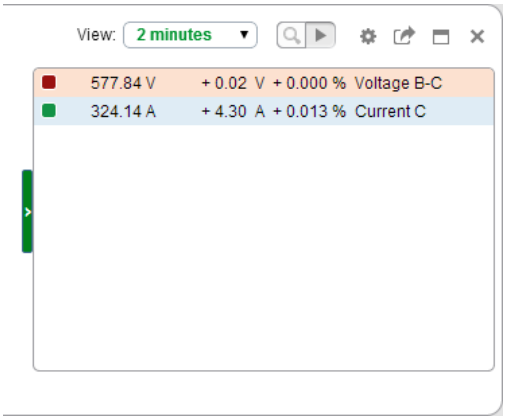
	Open the Diagnostic Log Viewer	This icon only appears if there is an error associated with the device. If the icon pulses, the viewer contains new information that has not yet been viewed. When you open the viewer you can click **Clear Log** to remove the existing entries. This action removes the icon from the trend display area until new information is logged in the viewer. Click **Close** to close the viewer and return to the trend display.

View: 15 minutes	View list	The setting for the time range on the X-axis. Select a time range from the dropdown list. The view window reflects the time in minutes or hours from the last data point read from the device. For example, if you are viewing a 15 minute window and the last data point occurred 20 minutes ago, then the trend time range spans the previous 35 to 20 minutes.
	Inspect	Acts as toggle to enable and disable the inspection mode for the trend diagram. When you enable inspection mode, inspect icons appear on the trend diagram when you place your pointer anywhere on the diagram. A slider also opens below the X-axis. Use the slider to adjust the time range for the trend. Data values are not updated in the trend diagram but they continue to be updated in the legend. When you disable inspection mode, all data that was captured is shown.
	Edit	Opens the **Trend Setup** dialog. You can modify any of the settings for the trend.
	Download trend data as CSV	Saves the current trend data that is displayed as a CSV file on your system. When events occur, you can download the data to a CSV file for further analysis.
	Maximize	Displays the trend diagram in a full browser page. Click the Restore icon  to return to the default size in the trend display area.
	Exit	Closes the trend diagram. This also clears the checkbox for the trend in the **Trend Library**.

If you right-click a trend in the **Trend Library** and select **Open in New Window** from the context menu, only the **Open the Diagnostic Log Viewer**, **View**, **Inspect**, and **Download Trend Data as CSV** options are available.

The legend

The legend opens on the right of the trend diagram by default. You can select **Left** or **Off** on the **Chart** tab in the **Add Trend** or **Trend Setup** dialog to change the location of the legend or to remove it from the trend display.

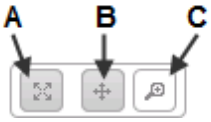


The legend provides the following capabilities:

- You can close and open the legend by clicking the arrow on the left side of the legend.
- If you have enabled multiple axes in your trend, when you place your mouse pointer over a measurement series in the legend, it indicates which axis the series is drawn on.
- You can temporarily disable a measurement series by clicking the color swatch for the series.
- The background color of a measurement series entry changes to match the threshold colors when the series passes into the upper or lower threshold. You set the threshold colors on the **Axes** tab of the **Add Trend** or the **Trend Setup** dialog.

Inspection mode

The following icons appear when you enable the inspection mode and you place your pointer on the trend diagram.



A	Reset Zoom (100%) - resets the trend diagram to its default size.
B	Pan the chart - after you zoom in to an area of the diagram, click **Pan the chart**, then click and hold the left mouse button on the diagram and drag it left or right.
C	Zoom in to selection area - zooms in when you drag the mouse over an area of the chart. The zoom action occurs when you release the left mouse button.

When the trend is in inspection mode, the trend diagram remains static until you toggle inspection mode off to return the trend diagram to its update mode. Note that the data in the legend continues to update in real time with the latest values even though the trend diagram remains static for analysis purposes. When you toggle inspection mode off, all of the data that was captured when you were in inspection mode is included in the diagram.

You can drag the slider below the X-axis to the right to decrease the time range for the trend. For example, if the time range is set to 15 minutes and you drag the slider to the right, the range values decrease, and if you continue to drag the slider to the right, the values decrease further to show minutes and seconds on the scale.

Modifying a trend

You can modify a trend by selecting the **Edit** icon :

- Above a trend legend in the trend display area.
- In the **Trend Library** by selecting a trend and clicking the **Edit** icon.
- In the **Trend Library**, by right-clicking a trend and selecting the **Edit** menu item.

To modify a trend:

1. Click the **Edit** icon to open the **Trend Setup** dialog.
2. Retain or modify the settings for the trend in the **Trend Setup** dialog. (The settings are the same as the **Add Trend** dialog. See "Adding a trend" on page 61 for a description of the settings).
3. Click **OK** when you complete any changes to save your settings and to close the **Trend Setup** dialog.

Duplicating a trend

When you duplicate a trend, you can enter a new title and indicate whether to save the duplicate in your **Private** or **Shared** folder in the **Trend Library**.

To duplicate a trend:

1. Select the checkbox for the trend in the **Trend Library** pane and click the **Duplicate** icon to open the **Duplicate Trend** dialog.
2. Retain or modify the settings for the trend in the **Duplicate Trend** dialog. (The settings are the same as the **Add Trend** dialog. See "Adding a trend" on page 61 for a description of the settings).
3. Click **OK** when you complete any changes to save your settings and to close the **Duplicate Trend** dialog.

Deleting a trend

To delete a trend:

1. Select the checkbox for the trend in the **Trend Library** and click the **Delete** icon .
2. Click **OK** in the **Delete Trend** confirmation window to permanently delete the trend, or click **Cancel** to return to the Trends application.

Users with supervisor-level access can delete any trend that appears in the Trend library. All other users can only delete trends that they created.

Alarms

NOTE: The Alarms application is not available for users logging in as **Visitor**, or whose access level is Observer or User.

The Alarms application allows users to view system alarms and events in a tabular format. You can tailor the system view to your needs by choosing which alarm states, priorities, date range, and devices you want to view. You can also select the columns that you want to see, thus controlling the information you find helpful. The Alarms interface includes an Alarms tab and an Events tab.

⚠ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the system; this can lead to incorrect reports and/or data results.
- Do not rely solely on reports or data results to determine if the system is functioning correctly or meeting all applicable standards and compliances.
- Do not use reports or data results as substitutes for proper workplace practices or equipment maintenance; they are supplemental only.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

From the Alarms tab, you can:

- View all system alarms (active/inactive, acknowledged/unacknowledged) for a specified time period
- Link to waveforms that are associated with individual alarms
- Acknowledge alarms, singly or in groups
- Silence alarm annunciation

From the Events tab, you can:

- View all system events for a specified time period

On each of the tabs, you can select the columns of information that you want to display.

Alarms Tab

The Alarms tab displays alarm information in a tabular format.

You can select the information that displays (system view), and you can select the columns of data you want to see. If waveforms are associated with alarms, you can also view them.

Alarm Annunciator

The Alarm Annunciator displays above the Navigation Bar except for users logged in with user-level or observer-level access, or users who sign in as **Visitor**. When the annunciator is surrounded by a flashing red border, there are unacknowledged alarms.

The Alarm Annunciator displays:

- ()the number of high priority unacknowledged alarms
- () the number of medium priority unacknowledged alarms
- () the number of low priority unacknowledged alarms
- ( and ) a "silence alarms" button that toggles between turning alarm annunciation "on" and "off." These two icons flash off when the red border flashes off.
  Click this button to toggle between "on" and "off."

View Devices/Waveforms

When a waveform is associated with an alarm, the  icon displays in the left-hand column. To view the associated device type:

1. Click  in the left column of the event for which you want to view the waveform.
2. When the Diagrams window (also accessed via the Diagrams button) displays, click the Power Quality tab.
3. Click *Waveforms / Sequence of Events*.
4. Choose the period of time from which you want to view the waveform.
5. Click *Show Table*.
6. At the table listing the waveforms that were captured during the specified timeframe, locate the waveform you want to view; check the boxes for the measurements to be included in the waveform.
7. Click *Show Graph* to view the waveform.

For additional help in navigating and using Diagrams, click Diagrams in the help TOC.

Acknowledge Alarms

When you acknowledge an alarm, it no longer annunciates. The Acknowledgement column displays the date and time that you acknowledged it.

Note: If more than one person tries to acknowledge an alarm at the same time, the first person who completes the acknowledgment is displayed by the system. Although the second person will not be prevented from continuing, only the first person's acknowledgment will be recorded.

There are three ways to acknowledge alarms:

- Click **Acknowledge** at the top of the alarm view. When the Acknowledge Alarm popup displays, choose whether you want to acknowledge:
  a. All unacknowledged alarms
  b. The displayed unacknowledged alarms
  c. The selected unacknowledged alarms.
  d. Type a descriptive note (optional).
  e. Click **Acknowledge**.

  The alarm(s) are acknowledged.

- Click the Acknowledge button for any of the alarms. When the Acknowledge Alarms popup displays:
  a. Type a note (optional)
  b. Click **Acknowledge**.

  The alarm is acknowledged.
- At the bottom of the screen, click **Show Alarm Details** to expand the bottom section.

  If one alarm is selected, that alarm is listed. Click **Acknowledge**. When the Acknowledge Alarms popup displays, choose whether you want to acknowledge all unacknowledged alarms, the displayed unacknowledged alarms, or the selected unacknowledged alarms. Type a descriptive note (optional). Click **Acknowledge**. The alarm(s) are acknowledged.

  If multiple alarms are selected, the messages tells you that you may acknowledge all selected unacknowledged alarms. To do this, click **Acknowledge All Selected**. When the Acknowledge Alarms popup displays, choose whether you want to acknowledge all unacknowledged alarms, the displayed unacknowledged alarms, or the selected unacknowledged alarms. Type a descriptive note (optional). Click **Acknowledge**. The alarm(s) are acknowledged.

Select Columns

Click the **Select Columns** link to open the Grid Column Selector. From the Grid Column Selector, you determine the columns that appear in the alarm view.

To select/deselect columns to appear in the alarm view, do one of the following:

- Click **Select All** to display all columns.
- Check the individual columns.
- Click **Select None** to clear the current selections.

Click **Done** when you are finished.

Set Alarm Views

You can choose the alarms you will view, based on state, priority, or date. See Set Alarm Views for instructions.

View Alarm Details

To view expanded details about any alarm, select it and click **Show Alarm Details** at the bottom of the page. The bottom of the page displays the information shown on the alarm line, as well as the information created when it was acknowledged.

Alarms Tab Display Pane

The following table describes the possible columns in the Alarms display pane:

NOTE: Entries in bold in the alarm view are unacknowledged alarms.

Column Name	Description

Drag a column here ...	This area is used to group alarms according to column headings. When you drag a column heading here, it creates a button with that column's name. When you click this button, you display alarms for that column only.
n/a	When a waveform is associated with an alarm, this column is flagged with: 
Active	When an alarm is active, this column is flagged with:  . To deactivate an alarm that is permanently active due to never receiving a dropout, see the Deactivate Alarms tool in the Management Console.
Acknowledgement	If the alarm is not yet acknowledged, this column has an "Acknowledge" button. To acknowledge the alarm, click the button. When the Acknowledge Alarm window displays, type the appropriate note, then click Acknowledge. You can acknowledge multiple alarms. For instructions, see Acknowledge Alarms. After an alarm is acknowledged, this column displays the date and time that it was acknowledged.
Acknowledged By	Before an alarm is acknowledged, this column is blank. After the alarm is acknowledged, this column displays the ION log-in name of the user who acknowledged it.
Condition*	The condition that caused the alarm. The condition can be a text string or a number, depending on the configuration options available on a device. When the alarm is active, this is the condition indicating that active state, for example, ON. When the alarm is inactive, this is the condition indicating that inactive state, for example, OFF.
Device	The device that recorded the alarm.
Dropout Time	The date/time that the alarm dropped out, that is, when the measurement returned to a normal reading.
Dropout Value	The value of the measurement when the alarm dropped out, that is, returned to normal.
Duration	The length of time from when the alarm was triggered to when it dropped out.
Priority	Alarm priority as it is established in the system. The icon for the priority level displays here. Options are:  (high priority)  (medium priority)  (low priority)
Start Time	The date/time that the alarm was first triggered, that is, the pickup time.
Type*	The alarm type, as recorded from the device.

Value	When the alarm is active, this is the value of the measurement when the alarm is triggered, that is, the start value. When the alarm is inactive, this is the value of the measurement when the alarm becomes inactive, that is, the end value.
Measurement	The measurement associated with the alarm.
* The combination of the **Type** and **Condition** columns constitutes the effect and effect value of the alarm. For example, "kVAR Alarm" in the **Type** column and "ON" in the **Condition** column indicates that a setpoint status for setpoint module labelled "kVAR Alarm" has changed to the on state.	

Setting Views for Alarms

The Alarms configuration pane contains panels labeled **Alarm View Library** and **Selected View Settings** that you use to select the alarms that are to be listed in the Alarms display pane.

Alarm View Library

Use the **Alarm View Library** in the right-hand pane to select from among pre-defined or user-defined alarm views, which are grouped within their respective folders.

The folders are:

- **System Views**: contains the pre-defined alarm views:
  - **Alarm History** – displays all alarms of all states, whether acknowledged or unacknowledged, in the system.
  - **All Active Alarms** – displays all active alarms in the system.
  - **All Active and Unacknowledged Alarms** – displays all active, unacknowledged alarms in the system.
  - **All Unacknowledged Alarms** – displays all unacknowledged alarms in the system.
  - **Recent Alarms (24 hours)** – displays all alarms from the most recent 24 hours.
- **Shared Views**: contains alarm views that are user-defined and are available for all users.
- **Private Views**: contains alarm views that you create and save in the **Private Views** folder.
- **Other User Views**: contains alarm views created by other users and saved in their **Private Views** folder. The **Other User Views** folder is visible to users with an access level of Supervisor.

Selected View Settings

The Selected View Settings panel contains subsections labeled **Alarm State**, **Alarm Priority**, **Dates**, and **Devices**.

The selections within each of these subsections are summarized in the following tables.

Alarm State
The state options are not mutually exclusive. For example, you can list alarms that are both active and unacknowledged.

Alarm State	
Active State	Select **Active only** to display all active alarms. Select **Inactive only** to display all inactive alarms. Select **Both** to display both active and inactive alarms. To deactivate an alarm that is permanently active due to never receiving a dropout, see the Deactivate Alarms tool in the Management Console.
Acknowledged State	Select **Unacknowledged only** to include all unacknowledged alarms. Select **Acknowledged only** to include all acknowledged alarms. Select **Both** to include both unacknowledged and acknowledged alarms.

Alarm Priority	
High Priority	Select to include high priority alarms.
Medium Priority	Select to include medium priority alarms.
Low Priority	Select to include low priority alarms.

Dates	
All	Select **All** to include all alarms in the system, regardless of date.
Defined	Select **Defined** to choose a pre-defined time period, such as Last Hour, Today, or This Week.
Custom	Select **Custom** to choose a specific date range. Then click next to the Start date to open the calendar tool. Choose a start date. Repeat this action for the end date.

Devices	
Select All/Select None	Click **Select All** to include every device that has been added to Power Monitoring Expert or click **Select None** to exclude all devices.
Device list	Select individual devices to include them in the alarm view.

Creating user-defined alarm views

User-defined alarm views are saved copies of alarm views available in the **System Views**, **Shared Views**, or your **Private Views** folders in the **Alarm View Library** panel.

When you log in to Web Applications and access Alarms, the **Recent Alarms (24 hours)** view displays by default.

You can immediately begin to create your own alarm view by completing the following steps:

1. Modify the contents displayed in the view by:
   - Selecting the columns that you want to include.
   - Changing the order of the columns.

- Dragging a column header to the group-by column field.
- Changing any of the settings under **Selected View Settings** for alarm states, priorities, dates, and devices.

2. Click the **Copy** icon when you complete your view customization.
3. Enter a name for the view in the **New view name** field.
4. Select **Private** or **Shared** to specify that the new alarm view is for your exclusive use or that you want it to be available for other users, respectively.
5. Click **OK** to save the new alarm view.

   The header in the alarm display area now indicates your new view name.

To make any changes to your customized view:

1. Click the alarm view to open it in the alarm display area.
2. Modify any of the columns or settings.
3. Click the **Save** icon to save your settings.

To create an alarm view based on a previously saved view:

1. Click an alarm view to open it in the alarm display area.
2. Modify any of the columns or settings.
3. Click the **Copy** icon .
4. Enter a name for the view in the **New view name** field.
5. Select **Private** or **Shared** for the alarm view.
6. Click **OK** to save the new alarm view.

   The alarm view on which the new alarm view is based retains its original settings.

To edit the name of the view or to change it from Private or Shared:

1. Click the user-defined view to open it in the alarm display area.
2. Click the **Edit** icon .
3. If desired:
   a. Change the view name in the **Edit view name** field.
   b. Change the view from **Private** or **Shared**.
   c. Click **OK** to save your changes or **Cancel** to close the update panel.

To delete a user-defined alarm view:

1. Click the user-defined view and select the **Delete** icon .
2. Click **Yes** on the **Delete View** prompt to proceed or **No** to cancel the deletion.

Events Tab

The Events tab displays event information in a tabular format.

You can select the specific columns of data you want to see, and you can select the system view (priority, date range, and devices) to be displayed.

Select Columns

Click the **Select Columns** link to open the Grid Column Selector. From the Grid Column Selector, you determine the columns that appear in the event view.

To select/deselect columns to appear in the event view, do one of the following:

- Click **Select All** to display all columns.
- Check the individual columns.
- Click **Select None** to clear the current selections.

Click **Done** when you are finished.

Set Event Views

You can choose which events you will view, based on priority, date, or devices. See Set Event Views for instructions.

Events Tab Table

The following table describes the possible columns in the table:

Column Name	Description
Timestamp	The date and time that the event occurred.
Device	The device that recorded the event.
Priority	This is the priority level (0–255) that is assigned to the event.
Event	The name of the event.
Value	When the event is active, this is the value of the measurement when the event is triggered, that is, the start value. When the event is inactive, this is the value of the measurement when the event becomes inactive, that is, the end value.
Condition	The condition that caused the event. When the event is active, this is the condition indicating that active state, for example, ON. When the event is inactive, this is the condition indicating that inactive state, for example, OFF.
Measurement	The measurement observed: currents, volts, etc.
Id	The number associated with the event when it first occurred, automatically assigned in chronological order.

Setting Views for Events

The Events configuration pane contains panels labeled **Event View Library** and **Event View Settings** that you use to select the events that are to be listed in the Events display pane.

Event View Library

Use the **Alarm View Library** in the right-hand pane to select from among pre-defined or user-defined alarm views, which are grouped within their respective folders.

The folders are:

- **System Views**: contains the pre-defined alarm views:
  - **All Events** – displays all events that occurred in the system.
  - **Recent Events (24 hours)** – displays all events that occurred in the system in the last 24 hours.
  - **This Month's Events** – displays all events that occurred in the system in the current month.
  - **This Week's Events** – displays all events that occurred in the system from Sunday through Saturday of the current week.
  - **This Year's Events** – displays all events that occurred in the system in the current calendar year.
- **Shared Views**: contains event views that are user-defined and are available for all users.
- **Private Views**: contains event views that you create and save in the **Private Views** folder.
- **Other User Views**: contains event views created by other users and saved in their **Private Views** folder. The **Other User Views** folder is visible to users with an access level of Supervisor.

Event View Settings

The Event View Settings panel contains subsections labeled **Event Priority**, **Dates**, and **Devices**.

The selections within each of these subsections are summarized in the following tables.

Event Priority	
Minimum Priority	You can either type a number into each of the combo boxes, or click the up or down arrow to select the minimum and maximum priority levels of events you want to view. Valid numbers are from 0 to 255.
Maximum Priority	

Dates	
All	Select **All** to include all events in the system, regardless of date.
Defined	Select **Defined** to display events from a pre-defined time period, such as Last Hour, Today, or This Week.
Custom	Select **Custom** to choose a specific date range. Then click  next to the **Start** to open the calendar tool for selection of a start date. Repeat this action for the end date.

Devices	
Select All/Select None	Click the appropriate link to either include every device or to deselect all devices.
Device list	Select individual devices to include them in the view.

Creating user-defined event views

User-defined event views are saved copies of event views available in the **System Views**, **Shared Views**, or your **Private Views** folders in the **Event View Library** panel.

When you log in to Web Applications and click the **Events** tab in Alarms, the **Recent Events (24 hours)** view displays by default.

You can immediately begin to create your own event view by completing the following steps:

1. Modify the contents displayed in the view by:
   - Selecting the columns that you want to include.
   - Changing the order of the columns.
   - Dragging a column header to the group-by column field.
   - Changing any of the settings under **Event View Settings** for alarm priorities, dates, and devices.
2. Click the **Copy** icon + when you complete your view customization.
3. Enter a name for the view in the **New view name** field.
4. Select **Private** or **Shared** to specify that the new event view is for your exclusive use or that you want it to be available for other users, respectively.
5. Click **OK** to save the new event view.

   The header in the event display area now indicates your new view name.

To make any changes to your customized view:

1. Click the event view to open it in the event display area.
2. Modify any of the columns or settings.
3. Click the **Save** icon to save your settings.

To create an event view based on a previously saved view:

1. Click an event view to open it in the event display area.
2. Modify any of the columns or settings.
3. Click the **Copy** icon +.
4. Enter a name for the view in the **New view name** field.
5. Select **Private** or **Shared** for the event view.

6. Click **OK** to save the new event view.

   The event view on which the new event view is based retains its original settings.

To edit the name of the view or to change it from Private or Shared:

1. Click the user-defined view to open it in the event display area.
2. Click the **Edit** icon .
3. If desired:
   a. Change the view name in the **Edit view name** field.
   b. Change the view from **Private** or **Shared**.
   c. Click **OK** to save your changes or **Cancel** to close the update panel.

To delete a user-defined event view:

1. Click the user-defined view and select the **Delete** icon .
2. Click **Yes** on the **Delete View** prompt to proceed or **No** to cancel the deletion.

Reports

The Web-based Reports application allows you to select, configure, generate, and manage comprehensive reports based on historical data contained in your databases.

The reports are designed for energy consumption and usage, power quality compliance and analysis, and generic system usage. The reports can be generated on a defined schedule and when system events and device alarms occur, and then distributed via email or sent to a file share or a printer.

⚠ CAUTION

INACCURATE DATA RESULTS

- Do not incorrectly configure the system; this can lead to inaccurate reports and/or data results.
- Do not rely solely on reports or data results to determine if the system is functioning correctly or meeting all applicable standards and compliances.
- Do not use reports or data results as substitutes for proper workplace practices or equipment maintenance; they are supplemental only.

Failure to follow these instructions can result in injury or equipment damage.

NOTE: Users of the Excel-based Reporter application can continue to access it in StruxureWare™ Power Monitoring Expert. See the "Reporter" topic in the online *Power Monitoring Expert Help* for additional information. Also note that a Reporting Client is available for installation on client computers. See the *StruxureWare Power Monitoring Expert Installation Guide* for information about this optional setup type.

Reports terminology

- **Report Definition**: The report definition consists of such things as layout, the inputs that need to be specified to run the report, and the information in the database that is accessed for that report.
- **Report Input Parameters (or Inputs)**: Parameters that must be entered before a report can be generated. For most of the report definitions, default values for some of the parameters are provided. You can change these values for your specific requirements.
- **Report**: A report that is generated from a report definition that has been saved with some or all of its input parameters completed.
- **Saved Report**: A report that has been saved with all of its input parameters completed.

The Reports interface

When you click the **Reports** icon on the Navigation Bar, the application opens with a display pane on the left and a library pane on the right.

The display pane

The Reports display pane is the area where you specify the input parameters for a report, and where the generated report displays. The input parameters are dependent on the report you select. See Report input parameters for further information.

Report toolbar

After you generate a report, the toolbar at the top of the display pane allows you to:

- Navigate through the pages of the report by using the forward and backward arrows.
- Use the Download report as dropdown list to download the report as a PDF file, an Excel document, or a TIFF image file.

The library pane

The **Report Library** allows you to select a report definition or a saved report to view or generate. Your selection opens in the display pane. Click < on the bar at the right to open the **Report Library** if it is not visible.

Report names are preceded by a report icon . Icons with a white circle indicate that you need to enter at least some of the inputs. Icons with a black circle indicate that all of the inputs have been saved; the report can be generated without entering any inputs.

Use the icons at the top of the **Report Library** for the following:

	New	Create a new report from an existing report definition.
	Save	Save a generated report.
	Subscribe	Create a subscription for the saved report.
	Manage	Manage reports by selecting **Manage**, **Share**, or **Subscribe** options.
	Upload Report Template	Add a report definition to the **Report Library**.
	Upload Report Pack	Add a report pack to the **Report Library**.

NOTE: The availability of reports in the Report Library is dependent on licensing. You can view all of the report packs that are installed with the product by clicking the **Upload Report Pack** icon on the **Report Library** toolbar. Only those report packs that are licensed can be uploaded if they do not appear in the Report Library. For a licensed report pack, click **Install** on the **Report Pack Install** dialog to upload the reports in the selected report pack.

Configuring options for the Reports application

Use Reporting Configuration Manager in Management Console (**Tools > Reporting Configuration > Reporting Configuration Manager**) to specify the database to report on, subscription delivery options, and regional formatting settings. See the "Reporting Configuration Manager" topic in the Management Console Tools section of the online *Power Monitoring Expert Help*.

Report definitions

The report definitions are organized within specific folders in the **Report Library**.

Descriptions of the individual reports are included in this section.

100 ms

Use the 100 ms report definition to create a report of selected 100 ms measurements from PowerLogic™ Circuit Monitors (for example, CM3000, CM4000, CM4250, and CM4000T).

The report displays timestamped values for each 100 ms measurement selected.

Report inputs:

- Title
- Sources
- Measurements
- Reporting Period
- Include Data Warnings
- Source Label

Billing

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

Use the Billing report definition to create an itemized energy charge back report for a particular source (e.g., tenant) over a given date range (e.g., month). The Billing Report definition uses measurements specified in a rate file. The rate file is configurable and supports many different rate structures.

Use the Billing Report to do the following:

Produce accurate tenant energy bills

Allocate costs to departments or processes

Verify utility bills

NOTE: The report inputs use the meter hierarchy or the virtual meter as the sources. A hierarchy is required for the Billing report to run.

Report inputs:

- Title
- Tenant
- Reporting Period
- Rate

Billing Summary

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

The Billing Summary report can summarize multiple bills in one report and allows run-time customization of exactly what is calculated and displayed in the report. With the Billing Summary report, you can generate a bill for multiple tenants (sources) with a common rate file. The report also allows you to filter the tenants and the line items so you can show only the information you want in the report.

NOTE: The Tenant (Source) input uses Hierarchy Views (for example, Physical Layout, Virtual Meter). A hierarchy is required for the Billing Summary report to run.

Report inputs:

- Title
- Tenant
- Reporting Period
- Rate
- Tenant Filter
- Line Item Filter
- Save Billing Totals
- Keep True Totals

Calendar Trend Month

Use the Calendar Trend Month report definition to provide a monthly interpretation of out-of-hours usage, benchmark performance targets, and to identify peak and off-peak usage patterns.

Report inputs:

- Title
- Single Source – see Sources (Devices and Views)
- Measurement – see Measurements (with Smart Mode)
- Start Hour
- End Hour
- Highlight Start
- Highlight End
- Reporting Period
- Target Line
- Source Label
- Display Zero Days
- Auto-scale Y-Axis
- Include Data Warnings.

Calendar Trend Week

Use the Calendar Trend Week report definition to provide a weekly interpretation of out-of-hours usage, benchmark performance targets, and to identify peak and off-peak usage patterns.

Report inputs:

- Title
- Single Source – see Sources (Devices and Views)
- Measurement – see Measurements (with Smart Mode)
- Start Hour
- End Hour

- Highlight Start
- Highlight End
- Reporting Period
- Target Line
- Source Label
- Auto-scale Y-Axis
- Include Data Warnings.

Circuit Breaker Aging

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

This report allows you to monitor and report on the status of circuit breaker aging and wear of the devices in your electrical system.

Report inputs:

- Title
- Select Group
- Grouped By
- Include Breakers with Minor Aging and Wear
- Include Data Warnings

Consumption Ranking

Use the Consumption Ranking report definition to visualize the relative ranking of energy consumption for one or more source/measurement pairs. You can normalize the consumption data to facilitate your comparison. This report is intended to assist you in building energy awareness through relative visualization.

Report inputs:

- Title
- Select Sources – see Sources (Devices and Views)
- Select Measurement – see Measurements (with Smart Mode)
- Multiplier
- Scale Source
- Scale Measurement
- Reporting Period
- Gauge Scale Override
- Select
- Select Number
- Custom Units Label

- Source Label
- Include Chart
- Include Gauges
- Include Tables
- Auto-scale Y-Axis
- Include Data Warnings.

Data Export - Extended

Use the Data Export - Extended report definition to create a CSV file containing the data for the selected sources and measurements. When the CSV file is generated, you are prompted to save the file in a location of your choice.

The data is organized in columns labeled **Timestamp UTC**, **Timestamp**, **Value**, **Source**, **Measurement**, and **Unit**. This organization facilitates the creation of an Excel pivot table for analyzing the data in the file.

The data is listed for each source and measurement by date and in time the specified time segments for the data.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Reporting Period
- Include Duplicates

Data Export - Standard

Use the Data Export - Standard report definition to create a CSV file containing the data for the selected sources and measurements. When the CSV file is generated, you are prompted to save the file in a location of your choice.

The Data Export - Standard report exports more data to the CSV file because of the way it is organized. For example, where it can export 600 source measurements for 11 months, the Data Export - Extended report can export 80 source measurements for 10 months.

The data is organized by column, with column A labeled **Timestamp**. The remaining columns are labeled with the source name and measurement. The data is listed by date and in the specified time segments for the data.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Reporting Period
- Include Duplicates

Duration Curve

Use the Duration Curve report definition to determine how to reduce peak demand and to lower base load, to validate performance characteristics and to perform capacity modeling tasks.

Report inputs:

- Title
- Single Source – see Sources (Devices and Views)
- Measurement – see Measurements (with Smart Mode)
- n % Crossing
- Exclude Values Over
- Exclude Values Under
- Reporting Period
- Target Line
- Source Label
- Auto-scale Y-Axis
- Include Data Table
- Include Data Warnings.

EN50160:2000

EN50160:2000 is a set of power quality standards used by certain energy suppliers and energy consumers. There are two default report definitions available: EN50160:2000 and EN50160:2000 Mains Signaling.

The EN50160:2000 report definitions use the following types of data from devices: supply voltage dips; temporary overvoltages; supply voltage unbalance; harmonic voltage; interharmonic voltage; frequency and magnitude; flicker; and short- and long-term interruptions.

EN50160:2000

Use the EN50160:2000 report definition to create a report containing comprehensive analysis of all EN50160 2000 compliance data logged by multiple meters. The compliance summary is based on the EN50160 2000 limits for each observation period: each default EN50160 measurement indicates a pass or did not pass on the compliance test with a Y (yes) or N (no) respectively.

Report inputs:

- Title
- Sources
- Evaluation Limits
- Reporting Period
- Include EN50160 Configuration Parameters
- Include Data Warnings
- Source Label

EN50160:2000 Mains Signaling

Use the EN50160:2000 Mains Signaling report definition to create a report for signal line frequency statistics for multiple sources, for each observation period.

Report inputs:

- Title
- Sources
- Signaling Voltage
- Reporting Period
- Include Data Warnings
- Source Label

EN50160:2010

EN50160:2010 is a set of power quality standards, published in 2010, used by certain energy suppliers and energy consumers. There are two default report definitions available: EN50160:2010 and EN50160:2010 Mains Signaling.

The EN50160:2010 report definitions use the following types of data from devices: supply voltage dips; temporary overvoltages; supply voltage unbalance; harmonic voltage; interharmonic voltage; frequency and magnitude; flicker; and short- and long-term interruptions.

EN50160:2010

Use the EN50160:2010 report definition to create a report containing comprehensive analysis of all EN50160 2010 compliance data logged by multiple meters. The compliance summary is based on the EN50160 2010 limits for each observation period: each default EN50160 measurement indicates a pass or did not pass on the compliance test with a Y (yes) or N (no) respectively.

Report inputs:

- Title
- Sources
- Evaluation Limits
- Reporting Period
- Include EN50160 Configuration Parameters
- Include Data Warnings

EN50160:2010 Mains Signaling

Use the EN50160:2010 Mains Signaling report definition to create a report for signal line frequency statistics for multiple sources, for each observation period.

Report inputs:

- Title
- Sources
- Signaling Voltage

- Reporting Period
- Include Data Warnings

Energy Comparison

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

The Energy Comparison report allows the comparison of different load types on a particular source. The comparison is instrumental when you perform building benchmarking. This report converts energy to a common energy unit and can normalize energy by criteria, such as area. Results are shown with either bar or pie charts.

Report inputs:

- Title
- Energy Measurements
- Energy Measurement Label
- Rollup
- Reporting Period
- Show Start & End Periods Only
- Chart Type
- Auto-scale Y-Axis
- Include Data Table
- Include Data Warnings

Energy Cost

Use the Energy Cost report definition to create a report on energy consumption and peak demand levels over a period of time, categorized by time of use. The Energy Cost report definition uses energy and demand measurements.

With an Energy Cost report, you can:

- Use a time of use (TOU) schedule that you define using the Time of Use Editor (see the "Time of Use Editor" topic in the Management Console Tools section of the online *Power Monitoring Expert Help*).

  or

- You can set a flat rate on the **Energy and Demand** tab of the **Energy Rates** dialog. See Rates for more information.

NOTE: This report is intended to be used for positive power flow applications only (where kW and kVAR are both positive). Use with bi-directional flow gives incorrect results.

Report inputs:

- Title
- Sources

- Rates
- Reporting Period
- Include Data Warnings
- Source Label

Energy Period over Period

Use the Energy Period over Period report definition to create a report that compares a measurement from multiple devices over specified time periods (for example, this week vs. the same week from the previous month).

Report inputs:

- Title
- Sources
- Measurement
- Report Period (with additional options)
- Auto-scale Y-Axis
- Include Aggregation Chart
- Include Stacked Aggregation Chart
- Include Interval Line Trend
- Include Interval Column Trend
- Source Label
- Include Data Table
- Include Data Warnings.

Energy Regression Analysis

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

This report shows modeled energy analysis data with respect to a particular data driver, such as weather.

Report inputs:

- Title
- Driver Data Source
- Driver Data Quantity
- Model Data Source
- Model Data Quantity
- Reporting Period
- Regression Type
- X Axis Calculation Method

- Degree Days Pivot Point
- Y Axis Calculation Method
- Aggregation Interval
- Exclude Incomplete Weeks
- Exclude Incomplete Days
- Exclude Days with Rollover
- Deviation Type
- Max Authorized Deviation
- Include Data Warnings
- Include Report Parameters Summary

Energy Usage

Use the Energy Usage report definition to create a report highlighting discrepancies and providing a visual interpretation of the data using the available display options.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Reporting Period
- Aggregation Interval
- Start Hour
- End Hour
- Lower Target Line
- Upper Target Line
- Source Label
- Include Column Chart
- Include Stacked Column Chart
- Include Line Chart
- Include Pie Chart
- Include 100% Area Chart
- Include Area Chart
- Include Gauges
- Auto-scale Y-Axis
- Include Data Warnings.

Energy Usage by Shift

Use the Energy Usage by Shift report definition to create a report that compares a measurement from multiple devices for specified time periods (or shifts). This allows you to compare energy usage between shifts (for example, 6:00-1:00 vs. 1:00 to 8:00).

NOTE: If you generate a report before the end of a shift that spans midnight, a portion of the usage data for that shift is included under the equivalent shift for the current day.

For example, assume:

1. You specify three 8-hour shifts:

   Shift 1: 7:00 AM to 3:00 PM

   Shift 2: 3:00 PM to 11:00 PM

   Shift 3: 11:00 PM to 7:00 AM

   Note that Shift 3 spans midnight (12:00 a.m.).

2. Your **Reporting Period** is **Last 7 Days**.
3. You generate the report on day 8 before 7:00 a.m., that is, before the end of Shift 3 for day 7.

The generated report will include usage data under Shift 3 for day 8. However, this shift 3 usage data is that portion of shift 3 from the previous day (day 7) that occurred after midnight.

In addition, this allocation of usage data to the next day for shift 3 from midnight to 7:00 a.m. occurs for all of the days throughout the reporting period.

To avoid this situation, select specific days (**Fixed Date**) for the **Reporting Period**.

Report inputs:

- Title
- Sources
- Measurement
- Reporting Period
- Aggregation Interval
- Shifts
- Include Data Warnings
- Source Label

Energy Usage by TOU

Use the Energy Usage by TOU report definition to generate a report showing energy usage associated with time of use schedule periods.

Report inputs:

- Title
- Sources (Devices and Views)

- Measurements (with Smart Mode)
- Reporting Period
- Aggregation Interval
- Select Time of Use
- Lower Target Line
- Upper Target Line
- Source Target Line
- Measurement Target Line
- Chart Type
- Source Label
- Include Data Tables
- Auto-scale Y-Axis
- Include Data Warnings.

Event History

Use the Event History report definition to create a report of events or alarms that have occurred in the system. It includes the following information for each event: timestamp; source name; event description; and event priority.

If no event has occurred that matches the inputs entered when generating the report, no data is returned.

Report inputs:

- Title
- Sources
- Reporting Period
- Include Data Warnings
- Priority
- Source Label

Harmonic Compliance

Use the Harmonic Compliance report definition to generate a report showing an analysis of the harmonic compliance of selected sources based on the IEEE 519-1992 reference limits. Consult IEEE 519-1992 standards documentation for details about harmonic limits.

Report inputs:

- Title
- Sources (Devices and Views)
- Reporting Period
- Comments

- Include THD/TDD Charts
- Include Average Harmonic Charts
- Include Harmonic Detail Charts
- Lock Chart Scales at Zero
- Include Data Warnings

Hourly Usage

Use the Hourly Usage report definition to create a tabular report to display usage of various types of quantities (such as consumption of Water, Natural Gas, and so on) per hour for a specific day.

A single report may contain consumption figures for different types of measurements from more than one source.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Reporting Period
- Target Line
- Source Label
- Include Data Table
- Include Chart
- Auto-scale Y-Axis
- Include Data Warnings.

IEC61000-4-30

Use the IEC61000-4-30 report definition to create a report on IEC61000-4-30 compliance information by observation period (a 3 second, 10 minute, or 2 hour measurement interval) for one or more sources.

The IEC61000-4-30 report definition provides the following types of information: voltage profile; THD profile; unbalance profile; flicker profile; frequency profile; and summary table.

Report inputs:

- Title
- Sources
- Measurement Interval
- Voltage Nominal [V]
- Frequency Nominal [Hz]
- Voltage Baseline [%]
- THD Baseline [%]

- Frequency Baseline [%]
- Unbalance Baseline [%]
- Flicker Baseline - High
- Flicker Baseline - Low
- Reporting Period
- Source Label
- Include Data Warnings

Load Profile

Use the Load Profile report definition to create a graphical representation of demand or load levels over a period of time. The profile shows peak loads as points on the graph where peak electricity demand is high. A load trend report can be used to analyze the electrical loads at the time of maximum demand. This information can show opportunities for developing strategies to improve energy management.

The Load Profile report definition uses similar measurements as the Energy Cost report definition but does not use a TOU schedule.

Report inputs:

- Title
- Sources
- Measurements
- Reporting Period
- Include Data Table
- Auto-scale Y-Axis
- Target Line (kW)
- Target Line (kVAr)
- Target Line (kVA)
- Source Label
- Include Data Warnings

Multi Device Usage

Use the Multi Device Usage report definition to view consumption information for multiple devices. View energy usage for a single period, or compare two periods, for example, this month versus last month.

NOTE: The measurements that you select for the devices need to provide equivalent data results. For example:

- Correct:

  Real Energy selected for MeterA
  Real Energy into the Load selected for MeterB

- Incorrect:

  Real Energy selected for MeterA
  Reactive Energy selected for MeterA

The report provides a summary of consumption by one or more sources, an interval usage table, and a pie chart.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Aggregation Interval
- Reporting Period
- Include Two Specific Periods Only
- Source Label
- Chart Type
- Auto-scale Y-Axis
- Include Data Table
- Include Data Warnings

Multiple Billing

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

The Multiple Billing report extends the existing Billing Module report to allow the selection of Multiple Tenants. By allowing multiple Tenant selection you can create, save and schedule one report for all tenants on a common Rate. To do so, select your Tenant(s) and configure the rest of the report parameters as usual.

The output of this report is a single file, so if you choose to save or subscribe to a pdf file, then each bill appears on its own page for easy printing, etc.

Report inputs:

- Title
- Tenant
- Reporting Period
- Rate
- Save Billing Totals
- Notes

Multiple Billing Export

NOTE: For most products, the availability of this report is subject to licensing. Contact your Schneider Electric representative for more information.

The Multiple Billing Export report exports tenant billing data automatically in a customized format for easy integration with third-party billing systems. The report generates a bill for the tenants for the specified date range with the selected billing rate.

Use the Multiple Billing report to generate billing data for multiple tenants (sources) with a common rate file. The report also allows you to filter the tenants and the line items so you can show only the information you wish in the report.

NOTE: The Tenant (Source) input uses Hierarchy Views (for example, Physical Layout, Virtual Meter). A hierarchy is required for the Multiple Billing Export report to run.

Report inputs:

- Title
- Tenant
- Reporting Period
- Rate
- XML Transform File
- XML Export File
- Overwrite XML Export
- Stylesheet (optional)
- Save Billing Totals
- Email XML Export
- Email Recipients (comma separated)

Multiple Trend

Use the Multiple Trend report definition to create a report showing multiple measurements plotted on separate axes.

Report inputs:

- Title
- Left and Right Axis Sources – see Sources (Devices and Views)
- Left and Right Axis Measurements – see Measurements (with Smart Mode)
- Left Axis High Target Line and Right Axis High Target Line
- Left Axis High Target Name and Right Axis High Target Name
- Left Axis Low Target Line and Right Axis Low Target Line
- Left Axis Low Target Name and Right Axis Low Target Name
- Reporting Period
- Chart Type
- Source Label
- Include Data Table

- Auto-scale Y-Axis
- Include Data Warnings

Power Quality

Use the Power Quality report definition to create a report that summarizes the number and severity of voltage sags, swells, and transients over a period of time. The finished report also includes a graphical representation of the disturbances plotted on a CBEMA-ITIC curve.

The Power Quality report aggregates historical PQ (Power Quality) data into power quality incidents. An incident is a summary, or aggregated event, which represents a number of individual events (sags, swells, or transients) that occurred across an electrical network in a small window of time. Disturbance refers to a sag, swell, or transient event in the Event Log, while incident refers to a group of (1 or more) disturbances.

Report inputs:

- Title
- Sources
- Incident Interval
- Reporting Period
- Source Label
- Include Data Warnings

The generated report displays:

- A summary of incidents, incident interval, and number of disturbances.
- The details of the worst disturbances for each power quality incident in the report.
- Statistics for each power quality incident in the report (for example, first timestamp, duration, and the number of transients, sags and swells within the incident).

From the report, you can view either details for an incident or waveform details.

PQ Incident Detail

To view details of an incident, click the incident in the **First Timestamp** column of the **Statistics** table.

Detailed information about a single power quality incident is displayed, including:

- A CBEMA plot containing the power quality disturbances for the selected incident.
- The timestamps, types, durations, phases and magnitudes of disturbances in the selected incident, with the worst event in the selected incident highlighted (worst event = largest magnitude x duration).
- The power quality settings of the device that registered the disturbance (for example, sag/swell limits, transient threshold, and so on).

To return to the PQ Summary report, use the browser's back button.

PQ Waveform Detail

To view the waveform details of an incident, click the waveform icon for the incident.

The waveform details present all of the waveforms that were recorded for a disturbance. It displays a waveform chart along with an optional table with waveform values.

The following waveform plots and data are displayed, based on the timestamp selected:

- A summary waveform plot, displaying a plot of the V1, V2 and V3 waveforms.
- An individual waveform plot for each of:
  - V1 and I1
  - V2 and I2
  - V3 and I3
- If the source queried has digital input logging enabled over the time interval of the waveforms, a waveform showing the digital input status.
- The timestamp for the time the waveforms were triggered.
- The sampling frequency of the waveforms.

To return to the PQ Summary report, use the report section back button on the report toolbar.

Single Device Usage

Use the Single Device Usage report definition to view energy information for one device. View energy usage for a single period, or compare two periods, for example, this month versus last month.

The report provides a summary of the various usage periods, an interval usage table, and a graphical comparison of the various usage periods.

Report inputs:

- Title
- Single Source – see Sources (Devices and Views)
- Measurements (with Smart Mode)
- Aggregation Interval
- Reporting Period
- Source Label
- Include Two Specific Periods Only
- Align Day of Week for Months
- Auto-scale Y-Axis
- Include Data Warnings

System Configuration

Use the System Configuration report definition to create a report containing details about devices in your network, including: device names and types; communications information (such as, IP address, unit ID, protocol) for devices; sites to which devices belong; status of sites (offline or online); and descriptions of the devices in the system (if a description was entered in Management Console).

This report is useful to Network Administrators when checking network performance and for planning network growth.

Report inputs:

- Title
- Include Data Warnings.

Tabular

Use the Tabular report definition to create a report of data in a tabular format. You can create a report with multiple measurements from multiple sources. You can also select the option to include duplicate data in the report. This data can then be exported for use in another program, such as Microsoft Excel. If you want to only export your data to an Excel file, use the Data Export - Extended report or the Data Export - Standard report.

NOTE: The Tabular Report is limited to 30 source-measurement pairs. Multiple reports are required if the number of source-measurement pairs exceeds 30.

The generated report contains the following information: source; measurement; timestamp; and values.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Reporting Period
- Source Label
- Include Duplicates
- Include Data Warnings

Trend

Use the Trend report definition to create a report that displays trend information in a line, column, bar, or pie chart. You select devices and measurements for a selected period of time.

NOTE: The Trend Report is limited to 30 source-measurement pairs. Multiple reports are required if the number of source-measurement pairs exceeds 30.

NOTE: The Trend Report has been upgraded in Power Monitoring Expert 7.2.1 to include two new parameters: **Include Data Table** and **Include Duplicates**. Trend Reports with subscriptions created prior to version 7.2.1 need to be updated and saved with the new parameters.

- Open each saved Trend Report. The new parameters are visible in the display pane.
- Keep or change the default selections for the parameters.
- Save the updated report to overwrite the existing version.

This ensures that subscriptions for Trend Reports continue to function.

Report inputs:

- Title
- Sources (Devices and Views)
- Measurements (with Smart Mode)
- Chart Type
- Reporting Period
- Source Label
- Target Line
- Auto-scale Y-Axis
- Include Data Table
- Include Duplicates
- Include Data Warnings.

Report input parameters

The report input area opens when you select a report in the **Report Library**. You must specify the necessary input parameters before you can generate the report. For saved reports, some or all of the input parameters may already be specified.

After you generate a report, you can display or change the input parameters you specified for it by clicking **show inputs** in the top-right corner of the report display area. To return to the generated report without changing any of the input parameters, click **hide inputs**. If you change any of the input parameters, click **Generate Report** to regenerate the report.

Inputs for default report definitions

The following information describes the inputs for the default report definitions. The available inputs vary by report definition listed in the **Reports Library**.

Aggregation Interval

This input determines the period of time over which data is accumulated for presentation in the report, such as day, week, and so on. From the dropdown list, select the aggregation interval that you want to use. If a custom report includes a predefined aggregation interval, contact the owner to adjust the interval for your use.

Align Day of Week for Months

When the Aggregation Interval is **Month**, selecting **Yes** includes the data in the table by day of week (Sun, Mon, Tues, and so on). Selecting **No** includes the data in the table by the day of the month (1, 2, 3, and so on). The default is **Yes**.

Auto-scale Y-Axis

Select whether or not to scale the chart normally. Selecting **No** sets the starting point of the Y-axis at zero. The default is **Yes**.

Chart Type

Select one of the available chart types from the dropdown list to graphically display the data that you specified for the report.

Comments

Use this field to add comments that will appear at the bottom of the generated report.

Custom Units Label

Enter any text to be used as the measurement label for instances when normalization is used , for example, **kWh/Person**. The default is **kWh**.

Degree Days Pivot Point

The Degree Days Pivot Point is the point where either heating or cooling is required to keep the temperature within the designated degree range.

Deviation Type

Enter a percentage or specific value to specify the the type of deviation to show in the report.

Display Zero Days

Select whether or not to show days where data is logged but the values are all zero. Note that days with no logged values at all are still included in the report. The default is **No**.

Driver Data Quantity

Click **Select Measurement**. Navigate to and select a measurement, and then click **OK**.

Driver Data Source

Click **Select Source**, and then choose from the dropdown list a Grouping: None, Group Name, Site, or Device Type. Navigate to and select a source, and then click **OK**.

Email Recipients (comma separated)

A comma-separated list of email addresses to which to email the transformed XML.

Email XML Export

Select **Yes** to email the transformed XML output ('XML Export File') to the addresses specified in **Email Recipients**.

End Hour

Select the end hour to display when filtering the data by the time of day.

The time range in the list is in 24-hour format in descending order.

Energy Measurement Label

Input the label to be used to describe the measurements selected in Energy Measurements.

Energy Measurements

Select the load group and load source you want.

Evaluation Limits

Click **Configure** to configure the EN50160 parameters used in the report. Default values are provided based on the EN50160 standard.

Click the links in the dialog box to access configuration options for various measurements included in the report:

- **Basic Configuration**: Type the maximum percentage of intervals in an observation period where the component does not meet the EN50160 N1 and N2 requirements before the component is considered non-compliant.
- **Supply Voltage Dips**: Type the maximum percentage of intervals in an observation period that the RMS value can drop below 90% of the nominal voltage for each duration and depth presented in the dialog box before the component is considered non-compliant.
- **Short and Long Interruptions**: Type the maximum percentage of intervals in an observation period that the RMS value can be less than 1% of the nominal voltage for the given duration before the component is considered non-compliant.
- **Temporary Overvoltages**: Type the maximum percentage of intervals in an observation period that the RMS value can exceed the nominal voltage by each magnitude for each duration presented in the dialog box before the component is considered non-compliant.

NOTE: The EN50160 standard defines the observation period for the above components as one week.

Event Priority

Select the priority of alarms and events that you want to include in the report. The options include high, medium, and low priority alarms and events.

Exclude Days with Rollover

Exclude days that contain rollover from the report.

Exclude Incomplete Days

Exclude days that are incomplete from the report.

Exclude Incomplete Weeks

Exclude weeks that are incomplete from the report.

Exclude Values Over

Enter a value to indicate the point at which values over this number are not plotted in the chart. The default value is **No Exclusions**.

Exclude Values Under

Enter a value to indicate the point at which values under this number are not plotted in the chart. The default value is **No Exclusions**.

Flicker Baseline - High

Type the Flicker Baseline High value if the default is not appropriate for your needs.

Flicker Baseline - Low

Type the Flicker Baseline Low value if the default is not appropriate for your needs.

Frequency Baseline [%]

Type the Frequency Baseline value if the default is not appropriate for your needs.

Frequency Nominal [Hz]

Type the nominal frequency of the system (for example, 60).

Gauge Scale Override

Choose a specific value for all of the gauge scales to use in custom situations, such as when normalizing data. This input is optional.

Grouped By

Select from the dropdown list to determine how the circuit breaker aging and electrical wear analysis results are sorted.

High Target Line (Left and Right Axis)

Enter a value for the target line representing the target for the high end of your energy use. This target line is red in the generated report. The default is **No Target Line**.

High Target Name (Left and Right Axis)

Enter a name to identify the high target line in the chart legend for the left and right axis, respectively. The defaults are **Left Axis High Target** and **Right Axis High Target**, respectively.

Highlight End

Select the end hour to stop the highlighting of the line in the chart.

The time range in the list is in 24-hour format in descending order.

Highlight Start

Select the start hour to begin the highlighting of the line in the chart.

The time range in the list is in 24-hour format in ascending order.

Incident Interval

Select the incident interval that you want to use in the report (such as, 20 seconds, 10 minutes, 1 week).

Include Aggregation Chart

Select whether or not to include a bar chart in the generated report showing a summary of the measurement you chose for the selected sources. The default is **Yes**.

Include 100% Area Chart

Select whether or not to include an area chart showing the data results stacked to a 100% level. The default is **Yes**.

Include Area Chart

Select whether or not to include an area chart in the generated report to view the contribution of data over a given period of time.

Include Average Harmonic Charts

Select whether or not to include charts showing the average values related to harmonic compliance. The default is **Yes**.

Include Breakers with Minor Aging and Wear

Select **Yes** or **No**. Selecting **Yes** allows all of the breakers to appear in the report regardless of the current electrical aging and electrical wear levels. Selecting **No** allows only breakers with moderate or critical electrical aging and electrical wear to appear.

Include Chart

Select whether or not to include the chart in the generated report. The default is **Yes**.

Include Column Chart

Select whether or not to include a column chart in the generated report to compare the data represented in the chart. The default is **Yes**.

Include Data Table

Select whether or not to show the data table in the generated report. The default is **No**.

Include Data Warnings

Select whether or not to show data warnings in the generated report. The default is **Yes**.

Include Duplicates

Select whether or not to show duplicate data in the generated report. The default is **No**.

Duplicate data collection is disabled in Power Monitoring Expert by default. To enable duplicate data collection, the parameter **SaveDuplicates** must be set to `1` in the dbo.Registry table in the ION_ Data database. Contact your SQL Server administrator if you require this change. Also note that enabling duplicate data collection results in more rapid growth in the size of the ION_Data database.

NOTICE
LOSS OF DATA • Do not make unauthorized changes in the software product's databases. • Only personnel with advanced knowledge of the software product's databases should make database parameter changes. **Failure to follow these instructions can result in irreversible database changes.**

Include EN50160 Configuration Parameters

Select whether or not to include the configuration inputs entered in the **Configure Evaluation Limits** dialog in the generated report.

Include Gauges

Select whether or not to include the gauges in the generated report. The default is **Yes**.

Include Harmonic Detail Charts

Select whether or not to include charts showing a second level of harmonic compliance detail for the generated report. The default is **No**.

Include Interval Column Trend

Select whether or not to include a bar chart in the generated report showing the measurement you chose for the sources for each hour in the 24-hour period for the specified days. The default is **Yes**.

Include Interval Line Trend

Select whether or not to include a line chart in the generated report showing the measurement you chose for the sources for each hour in the 24-hour period for the specified days . The default is **No**.

Include Line Chart

Select whether or not to include a line chart in the generated report to display the data trend over a given time period. The default is **Yes**.

Include Pie Chart

Select whether or not to include a pie chart in the generated report to show a numerical proportion of the results. The default is **Yes**.

Include Report Parameters Summary

Select whether or not to include report parameters in the generated report. The default is **Yes**.

Include Stacked Aggregation Chart

Select whether or not to include a stacked chart in the generated report showing the measurement you chose for the selected sources. The default is **No**.

Include Stacked Column Chart

Select whether or not to include a stacked column chart in the generated report to display the proportions for the data represented in the chart. The default is **Yes**.

Include Tables

Select whether or not to include the tables in the generated report. The default is **Yes**.

Include THD/TDD Charts

Select whether or not to include charts showing the total harmonic distortion (THD) of the voltage waveform, and the total demand distortion (TDD) of the current waveform, in the generated report. The default is **Yes**.

Include Two Specific Periods Only

Select whether or not to include only the first and last period of data in the selected date range. The default is **No**.

Keep True Totals

Select **Yes** if you want the totals in the report to be unaffected by the filtering. If you want the totals in the report to be based on line item and tenant filter, select **No**.

Line Item Filter

Anything entered in the **Line Item Filter** parameter (comma separated) excludes rows from the Item column. For example, to exclude the **On Peak Usage** line item, enter **On Peak Usage** in the Line Item Filter. To filter both On and Off Peak usage, enter **Peak Usage**.

Load Measurement

Select the source you want.

Lock Chart Scales at Zero

Select whether or not to force the y-axis to start at zero rather than scaling the chart normally. The default is **Yes**.

Low Target Line (Left and Right Axis)

Enter a value for the target line representing the target for the low end of your energy use. This target line is yellow in the generated report. The default is **No Target Line**.

Low Target Name (Left and Right Axis)

Enter a name to identify the low target line in the chart legend for the left and right axis, respectively. The defaults are **Left Axis Low Target** and **Right Axis Low Target**, respectively.

Lower Target Line

Enter a value for the target line representing the target for the low end of the energy use. The lower target is a yellow line in the report. Columns in charts that are on lower target line, or between the lower target line and the upper target line, are outlined in yellow. The default value is **0**.

Max Authorized Deviation

Enter a value by which deviation is allowed for the report.

Measurement Label

Input the label to be used to describe the measurements selected in Load Measurement.

Measurements (Reports other than Load Profile)

Use this input to select the measurements you want to include in the report.

Click **Select Measurement** to display the **Measurement Selector** dialog. Click **+** and **-** to expand and collapse items in the navigation tree. For reports where you can select multiple measurements, click the check box beside a measurement (or group of measurements) to select it. For reports where you can only select a single measurement, click the measurement name to select it.

After selecting the measurements, click **OK**.

Measurements (with Smart Mode)

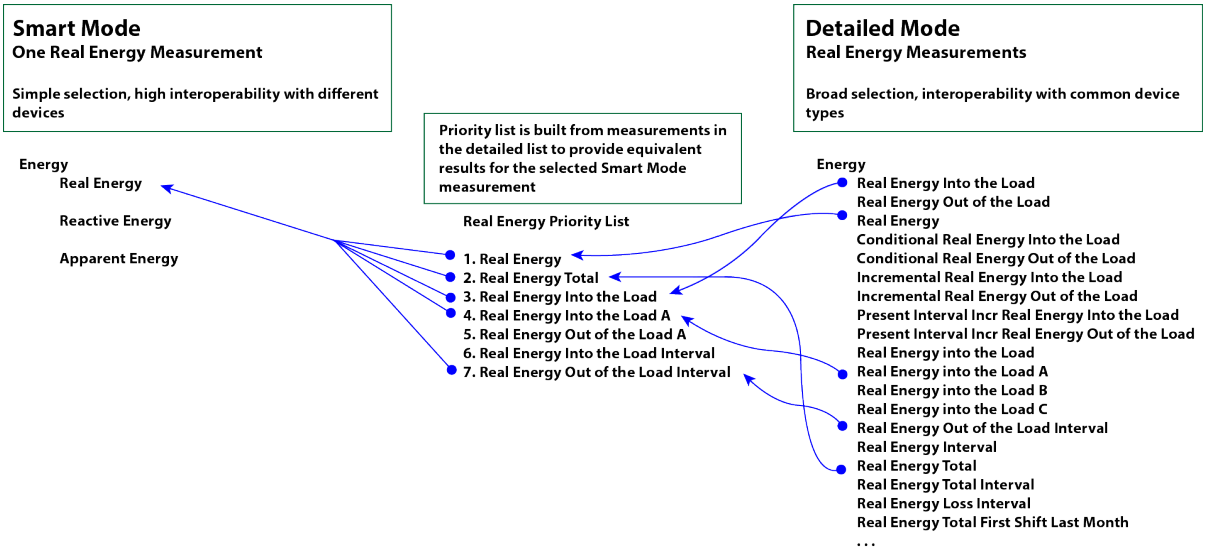
Smart Mode is enabled in the **Measurement Selector** when you select the **Views** radio button in the **Source Selector**, which then lets you select a hierarchy view or a virtual meter for your source parameter.

When you open the **Measurement Selector**, Smart Mode lists general measurement names by default. A **Detailed Mode** option is also available for the measurements.

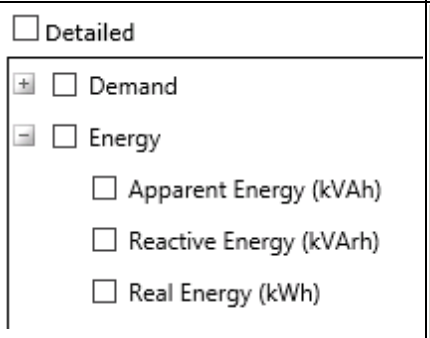
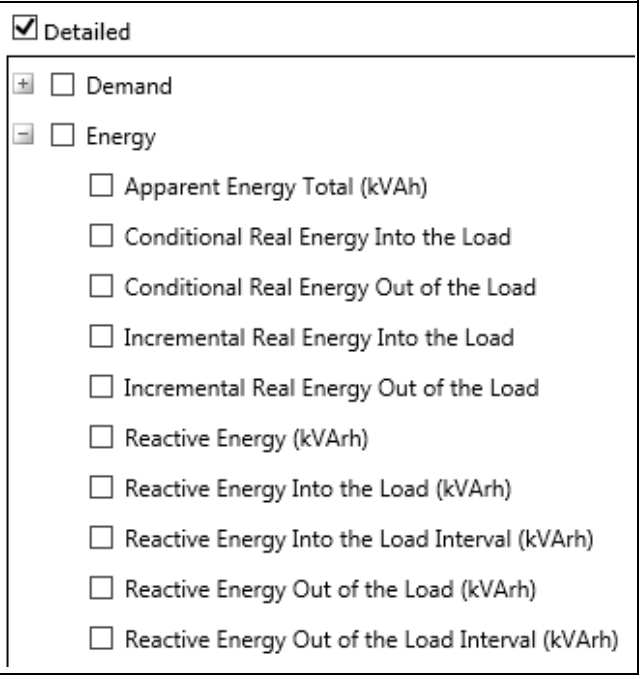
Smart Mode provides a general measurement name for you to select. The measurement is based on a subset derived from all of the available measurements in the particular measurement category. The underlying operation selects an applicable measurement for each device to produce equivalent results for reporting purposes.

The following image illustrates how measurements in Smart Mode are determined and applied from the priority list of measurements. The priority list contains measurements that usually provide equivalent results for the measurement selected in Smart Mode.

For example, for each device included in a hierarchy view or in a virtual meter, the report starts with the Real Energy measurement in the priority list. If data for that measurement exists, then it is used in the report. If data does not exist for the Real Energy measurement, then the report goes to the Real Energy Total measurement in the list. If data exists for that measurement, then it is used. The report continues to progress through the priority list to select a measurement that pertains to each device associated with a hierarchy view or a virtual meter.



You can select **Detailed** to change to the detailed selection mode. This mode allows you to select from a full list of measurements.

Smart Mode	Detailed Mode
	

The **Measurement Selector** provides a full list of measurements when you select the **Devices** radio button in the **Source Selector**.

Click **+** and **-** to expand and collapse items in the navigation tree. For reports where you can select multiple measurements, click the check box beside a measurement (or group of measurements) to select it. For reports where you can only select a single measurement, click the measurement name to select it.

After selecting the measurements, click **OK**.

Measurements (Load Profile Report)

This input determines whether the report is calculated using demand or power measurements. Select either **Demand** or **Power** from the dropdown list.

Measurement Interval

Select the observation period (that is, the measurement interval) of **2 Hour**, **10 Minute**, or **3 Second** to use for the IEC61000-4-30 report.

Measurement Target Line

Select a measurement to use with the source identified in **Source Target Line** to establish ON and OFF peak target lines in the generated report.

Model Data Quantity

Click **Select Measurement**. Navigate to and select a measurement, and then click **OK**.

Model Data Source

Click **Select Source**, and then choose from the dropdown list a Grouping: None, Group Name, Site, or Device Type. Navigate to and select a source, and then click **OK**.

Multiplier

Enter a value to use as a muliplier in normalizing the raw data in the report. The default is **1**.

n % Crossing

Type a value for the duration percentage. This value indicates where to place a cross on the plotted line identifying where that percentage value occurs.

Notes

Any notes appear at the bottom of the report page.

Overwrite XML Export

Selecting **Yes** overwrites an existing file if it exists, and selecting **No** appends the new data to an existing file.

Priority

Select the priority of alarms and events that you want to include in the report. The options include high, medium, and low priority alarms and events.

Rate

Select the appropriate rate structure to apply to this report. The rate determines how the cost for each tenant is calculated.

Rates

Use this input to set up parameters for energy cost reporting. Click **Configure Rates** to open the **Energy Rates** dialog.

- Click **Energy and Demand** to configure basic rate parameters for the report.
  - In the **Select Measurements** section, click the check box beside a measurement to include it in the report.
  - In the **Select Billing Calculation** section, select **Flat Rate** or select **TOU Schedule**. If you select **TOU Schedule**, select a time of use (TOU) schedule from the dropdown list (see the *Time of Use Editor* topic in the online help for Management Console Tools for information on configuring a time of use schedule).
  - In the **Set Rates** section, enter the rates for the selected measurements.
  - In the **Set Demand Calculation** section, select the calculation method used to determine demand: **Independent** (peak demand is calculated independently for each source) or **Coincident** (the demand measurements of the sources are correlated with the peak demand of the main meter). If you select **Coincident** for the calculation method, click **Main Meter** to select the source to which you want to correlate the demand measurements.
- Click **WAGES** to include WAGES (Water, Air, Gas, Electricity, Steam) measurements in the report. Click the +/- buttons to add or remove measurements. Enter a name for the measurement then click **Select Source** and **Select Measurement** to select a source and measurement. Enter a rate for the measurement in the **Rate** field.
- Click **Additional Fees** to add additional rate information to the report. Enter a name in the **Rate Name** field and rate information in the **Amount** field.

Regression Type

Choose from the dropdown list Single-Line or Broken-Line.

Reporting Period

Use this input to select the timeframe for the data you want to view in the report.

Select the reporting period from the dropdown list. The timeframe options in the timeframe dropdown are relative to the date the report is run. To run a report that starts and ends in the past, select the fixed date option. Type a start and end date in the date boxes or click the arrows beside the dates to display a pop-up calendar and select a date. Type a time in the time boxes or click the up and down arrows beside the time to adjust the hours or minutes up or down.

Select whether you want to view timestamps in either Server Local Time or UTC (Universal Coordinated Time).

Reporting Period (with additional options)

The Reporting Period input contains the following fields and dropdown lists:

- **Timezone**: Select whether you want to view timestamps in either Server Local Time or UTC (Universal Coordinated Time).
- **Aggregation Period**: Select the block of time for which you want to compare data (i.e., day, week).
- **Comparison Type**: Select what period of data you want to compare the selected Aggregation Period to (i.e., today vs. the same day from the previous month or current month vs. the same month from the previous year). The options vary depending on the Aggregation Period selected.
- **Number of Comparisons**: Enter the number of periods you want to compare.
- **Aggregation Interval**: This input appears when you select **Month** for the **Aggregation Period**. Select how you want data grouped for the report: by date (Day of Month) or the day of the week.
- **Selected Dates**: This box displays the dates of the data that will appear in the report based on the options selected.

For example, to compare the selected measurements for the same day of the month over the last 12 months, set **Aggregation Period** to **Day**, set **Comparison Type** to **Today vs. Same Weekday From Previous Month**, and enter **12** in the **Number of Comparisons** field.

Rollup

Select from the dropdown list the period of time for which the report data is rolled up.

Save Billing Totals

Save Billing Totals calculates the billing total per Tenant (Source) and writes the value back into the database so that it can be used in other applications, such as Dashboards, Diagrams or Reports.

Scale Measurement

Select the measurement as the base against which to scale the main dataset. This input is optional.

Scale Source

Select the source as the base against which to scale the main dataset. This input is optional.

Select

Select **Top** (highest result) or **Bottom** (lowest result) to indicate the order of the gauges in the generated report. The default is **Top**.

Select Group

Select a group from the dropdown list to be used for determining which switchboards and breakers are used for the analysis.

Select Number

Enter the number of sources that you want to include in the ranking. The default is **99**.

Select Time of Use

Select a TOU schedule to use for the report. Existing time of use schedules are referenced in the list. If you have not created a time of use schedule, the field indicates that no time of use schedule is available.

Shifts

Use the +/- buttons to add additional shifts. For each shift, enter a name and set the start and end time for the shift.

To configure a shift that spans midnight, use two shifts with the same name. For example, to set up a day shift and a night shift, add three shifts: **Day** from 8:00 AM to 8:00 PM, **Night** from 8:00 PM to 12:00 AM, and **Night** from 12:00 AM to 8:00 AM.

Show Report Parameters Summary

Select whether or not to show report parameters in the generated report. The default is **Yes**.

Show Start & End Periods Only

Select to show or not in the report the start and end periods. The default is **No**.

Signaling Voltage 1, 2 and 3 Eval Limit [%]

Type the maximum percentage of intervals in an observation period in which the mean value of the signaling voltage can exceed the curve defined in the EN50160 standard before that mains signaling voltage is considered non-compliant.

Source Label

Select an option for the format of the label describing the source. The options are **Source Name**, **Source Description**, and **Combined Name/Description**.

Sources

Use this input to select the devices you want to include in the report.

Click **Select Sources** to open the **Source Selector** dialog. From the **Grouping** list, select the way in which you want to display the sources (for example by device type, by group name, and so on). Click **+** and **-** to expand and collapse items in the navigation tree. Click the check box beside a device (or group of devices) to select it. Click **Select All** or **Select None** in the top-right corner to select or clear all the check boxes.

After selecting the devices, click **OK**.

Sources (Devices and Views)

The **Source Selector** dialog provides options to show **Devices** or **Views**:

Use the **Devices** option to select the devices you want to include in the report.

From the **Grouping** list, select the way in which you want to display the sources (for example by device type or by group name). Click **+** and **-** to expand and collapse items in the navigation tree. Click the check box beside a device (or group of devices) to select it. Click **Select All** or **Select None** in the top-right corner to select or clear all the check boxes.

After selecting the devices, click **OK**.

Use the **Views** option to select a hierarchy view (a tree of relationships) or virtual meters. The hierarchy views and virtual meters are configured in the Hierarchy Manager component. (See the *Hierarchy Manager Help* for further information about hierarchies, virtual meters, and views.) Click **+** and **-** to expand and collapse items in the tree. Click the check box beside any hierarchy item in the tree or any virtual meter to select it.

Click **OK** after making your selections.

Source Target Line

Select a source to use with the measurement selected in **Measurement Target Line** to establish ON and OFF peak target lines in the generated report.

Start Hour

Select the start hour to display when filtering the data by the time of day.

The time range in the list is in 24-hour format in ascending order.

Stylesheet (optional)

Select the appropriate css stylesheet file to provide additional formatting to the billing data.

Target Line

Enter a value for the target line in relation to the measurement you selected. The default value is not to include a target line.

Target Line (kW)

Enter a value for the location of the target line in the kW chart in the generated report. The default is **0**.

Target Line (kVAr)

Enter a value for the location of the target line in the kVAr chart in the generated report. The default is **0**.

Target Line (kVA)

Enter a value for the location of the target line in the kVA chart in the generated report. The default is **0**.

Tenant

Selecting the tenant by device allows you to choose a source from a list of devices connected to Power Monitoring Expert. Selecting by view allows you to choose sources based on the views configured in a hierarchy, such as a floor in a physical layout or a circuit in an electrical view, or by

virtual meters defined in Hierarchy Manager. For additional information regarding hierarchies and virtual meters, see *Hierarchy Manager help*.

Tenant Filter

Anything entered in the **Tenant Filter** parameter (comma separated) that matches any Billing meta data line items (Tenant column) is excluded. An '*****' can be entered to include everything.

THD Baseline [%]

Type the **THD Baseline** value if the default percentage is not appropriate for your needs.

Title

Type a title for the report in the text box.

Unbalance Baseline [%]

Type the **Unbalance Baseline** value if the default percentage is not appropriate for your needs.

Upper Target Line

Enter a value for the target line representing the target for the high end of your energy use. The upper target is a red line in the report. Columns in charts that on or above the upper target line are outlined in red. The default value is **0**.

Voltage Baseline [%]

Type the **Voltage Baseline** value if the default percentage is not appropriate for your needs.

Voltage Nominal [V]

Type the nominal voltage of the system (for example, 120).

X Axis Calculation Method

Choose from the dropdown list one of the following methods: Cooling Degree Days, Heating Degree Days, Average, Sum, or Delta.

XML Export File

Select the name of the final XML output file, for example, MonthlyBillingDataMain.xml.

XML Transform File

Select the appropriate XML transform file that controls the format of the billing data export.

Y Axis Calculation Method

Choose from the dropdown list one of the following methods: Average, Sum, or Delta.

Generating and viewing a report

To generate a report from a report definition or from a report with some inputs saved:

1. Select the report definition in the **Report Library**.
2. Complete the required input parameters. (See Report input parameters.)
3. Click **Generate Report**. The report displays in the report display pane.
4. Click the forward and backward arrows at the top to navigate through the pages of the report (if there are multiple pages).

After you generate a report, you can display or change the inputs you specified for it by clicking **show inputs** in the top-right corner of the report display area. To return to the generated report without changing any of the inputs, click **hide inputs**. If you change any of the inputs, click **Generate Report** to regenerate the report.

To generate a saved report (a report with some or all inputs defined and saved), select the report from the **Report Library**. For reports with all inputs defined, the report is generated and displayed in the report display pane. When you select a report with only some inputs specified, the report input parameter area opens so that you can specify the remaining required parameters before you can generate the report. (To see which parameters have been defined, click **show saved inputs** next to the report name in the input parameter area.)

NOTE: Each report icon has a small circle on its lower right corner. If the circle is green, it is a Defined Report—it has all of its inputs completed. If the circle is white, you need to fill in inputs before you can generate it.

The date and time shown on the generated report is the server local date and time. To alter the format of the date and time for a specific region, change the settings on the **Regional Formatting** tab of the **Reporting Configuration Manager**. Go to Management Console and select **Tools > Reporting Configuration > Reporting Configuration Manager**.

After you generate a report, you can do any of the following:

- Download the report as a PDF file, an Excel document, or a TIFF image file. See Downloading a report.
- To enable subscriptions for the report, save the report with all of the inputs configured, then click **Manage** in the **Report Library** to open the **Manage Reports** dialog and select **Subscribe**. See Creating report subscriptions.
- Click **show inputs** or **hide inputs** to show and modify report inputs or to hide the report inputs, respectively.

Downloading a report

You can download generated reports in the following formats:

PDF	Creates a PDF of the report that you can view in Adobe Reader.
Excel	Creates a version of the report in Excel format that you can view in Microsoft Excel.
TIFF	Creates a TIFF image file of the report.

To download a report:

1. Select the format you want from the **Download report as** list at the top of the report display area and select the **Open**, **Save**, or **Cancel** option in the pop-up.
2. Choose one of the following actions:
   a. Click **Open** to open the report locally on your computer in the format you selected. This requires that a compatible program for the format you selected exists on the computer.
   b. Select **Save** to save the report on your computer in the format that you selected.
   c. Select **Cancel** to exit the download process.

If you download a report in PDF format, and the report has multiple columns of data in a wide table (that is, if it has multiple measurements or multiple sources), the columns may appear on multiple pages in the file.

Saving a report

You can save a report before or after you generate it. In both cases, you need to specify all of the input parameters for the report.

- If you intend to create a subscription for the report, you need to ensure that all of the input parameters are selected in the **Save Report** dialog before you save it.
- If you intend to generate the report manually rather than by subscription, you can select the input parameters in the **Save Report** dialog that you want to save and specify the remaining parameters when you select the report for generation.

  For example, you may always want to generate an Energy Cost report for a specific number of devices for the previous month. When you save the report, you can save it with the inputs for the devices and time period predefined.

To save a report:

1. Click a report definition in the **Report Library** pane to open it in the display pane.
2. Specify all of the input parameters required for the report.
3. If you do not want to generate the report, click the **Save** icon on the **Report Library** toolbar to open the **Save Report** dialog, or click **Generate Report** and after the report has been generated click the **Save** icon.

   The **Save Report** dialog opens.
4. Type a name for the report in the **Name** field.
5. In the location box below the **Name** field, select the location for the saved report or click **New Folder** to create a new folder for it. (Note that you cannot nest one folder inside another.)
6. In the section at the bottom of the dialog, select **show previously saved inputs** and clear the check boxes for the inputs that you do not want to save with the report.

   When you generate one of these reports, you need to enter information for the inputs that were not saved.
7. Click **OK** to save the report with the inputs you selected.

Report management, sharing, and subscriptions

The **Manage Reports** dialog provides options to manage, share, and subscribe to reports.

Open the dialog by clicking the **Manage** icon at the top of the **Report Library** pane. The following options are available:

- Manage – create a new folder, delete or rename a folder or report, or move or copy a report from one folder to another.
- Share – make a report available to a user or group.

- Subscribe – generate a report on a defined schedule or when system events or device alarms occur, and distribute it via email or send to a file share or a printer.

Managing a report

Use the **Manage** option in the **Manage Reports** dialog to create a new folder, delete or rename a folder or report, or move or copy a report from one folder to another.

1. Click the **Manage** icon in the **Report Library** and select **Manage**.
2. Select the report (or folder) that you want to manage.
3. Select one of these options:
   a. **New Folder**: When the **Create New Folder** dialog opens, type the name of the new folder and click **OK**. The new folder appears in the list. (Note that you cannot nest one folder inside another.)
   b. **Delete**: A prompt appears asking you to confirm the deletion (unless you have selected an empty folder—in this case the folder is deleted without confirmation). Click **OK** to delete the report. If there are any subscriptions for the report, the prompt informs you of the subscriptions.
   c. **Rename**: Type the new name in the field at the bottom of the screen. Click **Update** to save the change.
   d. **Copy**: Select the location where you want to copy the report and click **Update**. The report is copied to that location. The name of the copied report is "Copy of <report>", where <report> is the original report name.
   e. **Move**: Select the new location and click **Update**. The report is moved to the new location.

Sharing a report

Use the **Share** option on the **Manage Reports** dialog to make a report available to a user or group. Users with supervisor-level access can share any report; all other users can only share reports that they own.

1. Click the **Manage** icon in the **Report Library** and select **Share**.
2. Select the report that you want to share from the list box.
3. Select the users or groups that you want to share the report with from the **Available Users & Groups** box, then click the right arrow to move the users or groups to the **Share List**.

   To remove users or groups from the **Share List**, select the users or groups and click the left arrow.

   Select **Order by type** to order the lists alphabetically by group then by user.
4. Click **Apply**.

   The report is available to the users in the **Share List**.

Subscribing to a report

A subscription is a report which is delivered in a specified manner at a defined interval. For example, a subscription can be configured so that a report is generated monthly and sent via email to a group of people. It can also be generated and sent when a specified alarm condition occurs.

Configuring subscription options

Before configuring certain types of subscriptions, you need to configure reporting subscription options such as the SMTP server for email subscriptions or how to handle files when report subscriptions are written to a fileshare. See the "Reporting Configuration Manager" topic in the Management Console Tools section of the online *Power Monitoring Expert Help* for information about configuring these options.

Adding a subscription

You can only create subscriptions for reports you have access to (see Sharing a report). The report must be a saved report that has all of its inputs configured (see Report inputs and Saving a report).

1. To create report subscription:
   a. Click the **Subscribe** icon on the **Report Library** toolbar, or
   b. Click the **Manage** icon on the **Report Library** toolbar and select the **Subscribe** radio control.
2. Select a report in the list and click **Add** to open the **Add New Subscription** dialog.
3. Type a name for the subscription in the **Name** field. This is the name that displays in the list of subscriptions.
4. Select the output format.
5. Select a delivery mode:
   - **Email**: Click **Distribution List**. Enter the email addresses of the personnel that you want to send the report to and click **Add** after each address. (Select an address from the list and click **Remove** to remove it.) Click **OK** when the list is complete. In the **Add New Subscription** dialog, use the **Subject** field to type the text you want in the subject line of the email.
   - **File share**: Type the location of the computer and folder where you want the report to be saved. You must type the absolute pathname to the folder (including the drive letter). The Windows user account “IONUser” must be configured with valid credentials to read and write to that fileshare. See your system administrator for assistance. To overwrite an existing report (if one exists in the folder), select **Overwrite existing file**. To leave an existing file in the folder and save the report with a new name, clear **Overwrite existing file**.
   - **Printer**: From the dropdown list, select the printer to which you want to send the report.

     NOTE: For printed subscriptions, the printer must be a local printer on the Primary Server. For information on setting a network printer as a local printer, consult your server's documentation.
6. In the **Subscription Schedule** section, define the schedule on which you want the report to be generated and delivered:
   - **On Alarm**: Select this option to configure the subscription to run on an alarm. Select the event from the list that you want to use to trigger the subscription. To use this option, you must first configure an Event Watcher. See the *Event Watcher* topic in the online help for Management Console Tools for information on creating an Event Watcher.

- **Once**: Select this option to run the report once at the specified day and time. Use the arrow beside the **Date** field to open a calendar where you can select the date. Type the time into the **Time of Day** field or use the up/down arrows to change the hours and minutes.
- **Hourly**: Select this option to run the report every hour. Select the time from the dropdown list (for example, on the hour, 15 minutes after the hour, and so on).
- **Daily**: Select this option to run the report once per day at the specified time. Type the time into the **Time of Day** field or use the up/down arrows to change the hours and minutes.
- **Weekly**: Select this option to run the report once per week at the time and on the day of the week that you specify. Select the day from the dropdown list. Type the time into the **Time of Day** field or use the up/down arrows to change the hours and minutes.
- **Monthly — Monthly by Date**: Select **Monthly** then select **Monthly by Date** to run the report on selected dates in the calendar month at a specified time. Type the dates in the **On calendar day(s)** field. Separate multiple dates with a comma. To select a range of continguous dates, separate the first and last date in the range with a hyphen. For example, to schedule the report to run on the 1st, 10th to 15th, and 20th days of the month, type 1, 10-15, 20. After you have entered the dates, type the time into the **Time of Day** field or use the up/down arrows to change the hours and minutes.
- **Monthly — Monthly by Day**: Select **Monthly** then select **Monthly by Day** to run the report on a specific day of the week in a selected week of the month at a specified time. For example, to set the subscription to run on the Monday of the last week of the month, select **Last** and **Monday** from the dropdown lists. Type the time into the **Time of Day** field or use the up/down arrows to change the hours and minutes.

7. Click **Test Now** to test that the report subscription configuration is functioning.
8. Click **Save** to save the subscription.

   The subscription appears in the list of subscriptions for the selected report.

Subscription errors and solutions

Certain messages may appear when you try to add subscriptions. For example, you may not be able to add the subscription in certain situations, or you may be able to add it but the output is not delivered successfully.

The following table summarizes possible messages, their cause, and suggested solutions.

Message	Cause	Solution
SQL Agent service not started	The SQL Server Agent (ION) service is not running. Subscriptions cannot be delivered.	On the Primary Server, click **Start > Settings > Control Panel**. Select Administrative Tools, then select Services. Right-click the SQL Server Agent (ION) service and select **Start**.
Report Subscription Service not started	The ION Report Subscription Service is not running. Subscriptions cannot be delivered.	On the Primary Server, click **Start > Settings > Control Panel**. Select Administrative Tools, then select Services. Right-click the ION Report Subscription Service and select **Start**.

Message	Cause	Solution
"From" email address incorrectly configured	The email "from" address is either not set or has an incorrect configuration.	On the Primary Server, open the Reporting Configuration dialog box in Management Console (**Tools > Reporting Configuration**). Enter a valid email address. For example, myemail@mycompany.com.
Path syntax invalid	The file share pathname entered is not correct.	Enter a valid UNC (Universal Naming Convention) pathname.

Installing a report definition or a report pack

Report definitions and report packs can be developed by Schneider Electric or any other organization skilled at developing content for Microsoft Reporting Services. To create report definitions, report developers use Microsoft Business Intelligence Development Studio, which can be specified for installation with SQL Server.

A new report definition can be installed in the Reports application and made available to users. Users can generate and save reports based on the new report definition.

Report Definition versus Report Pack

For the purpose of installing report definitions and report packs, a report definition is a single .rdl file whereas a report pack includes all files for a complex report or series of reports.

Installing or updating a Report Definition

1. On the Web client computer click the **Upload Report Template (Admin)** icon in the **Report Library** to open the **Install Report Definition** dialog.
2. Click **Browse** to navigate to the location of the .rdl file. Select the file, click **Open**, and then click **Install**.

   The uploaded report is located in ...\ Power Monitoring Expert\web\ReportDepot\ION Reports\ION Single Reports
3. Click **New** to open the **New Report From Definition** dialog.
4. Click the new report name in the list, then click **Next**.
5. Click **New Folder** to open the **Create New Folder** dialog.
6. Type a folder name and click **OK** to create the folder containing the new report in the **Report Library**.

Installing or updating a Report Pack

1. To make a report pack available for upload from the server hosting the Web Applications component, copy it into the ReportPacks directory (located in ...\Power Monitoring Expert\web\ReportPacks\).
2. On the client computer click the **Upload Report Pack (Admin)** icon in the **Report Library** to open the **Report Pack Install** dialog.
3. Select the report pack that you want to install and click **Install**.

For an existing report definition, a confirmation message indicates that all reports associated with the definition are to be updated. Click **OK** to continue.

Creating a new report definition from a default report definition

You can create a new report definition by copying one of the existing default report definitions.

To create a new report definition:

1. Click the **New** icon in the **Report Library** to open the **New Report from Definition** dialog listing all of the report definitions.
2. Select the report definition you want to base your new report on, and click **Next**.
3. Type a name for the new report in the **Name** field. Select a location for the new report definition from the navigation tree, or click **New Folder** to create a new folder.
4. Click **Save** to add the new report definition to the list of reports in the **Report Library**.

Creating custom report definitions

You can use Microsoft Business Intelligence Development Studio to create custom report definitions.

Custom report definitions should only be created by users with a thorough understanding of the database access layer, Microsoft Business Intelligence Development Studio and Reporting Services.

Contact your local Schneider Electric representative if you require specialized report definitions.

Report ownership and access

Access to a report is user-specific and can be assigned by a user with supervisor-level access or by the owner of the report.

The owner of the report is the user who saved the report (see Saving a report).

To allow other users access to a saved report:

1. Click the **Manage** icon to open the **Manage Reports** dialog. Select **Share** to display the list of reports and a list of available users and groups.
2. Click a report in the list, then click a user name in the **Available Users & Groups** list and use the right-arrow to move your selection to the **Share List**.
3. Click **Apply** to save your selection and continue working in the **Manage Reports** dialog, or click **Close** to save your selection and close the dialog.

StruxureWare™ Power Monitoring Expert 8.0

Web Applications – Help Topics

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