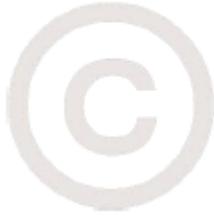


Avertissement



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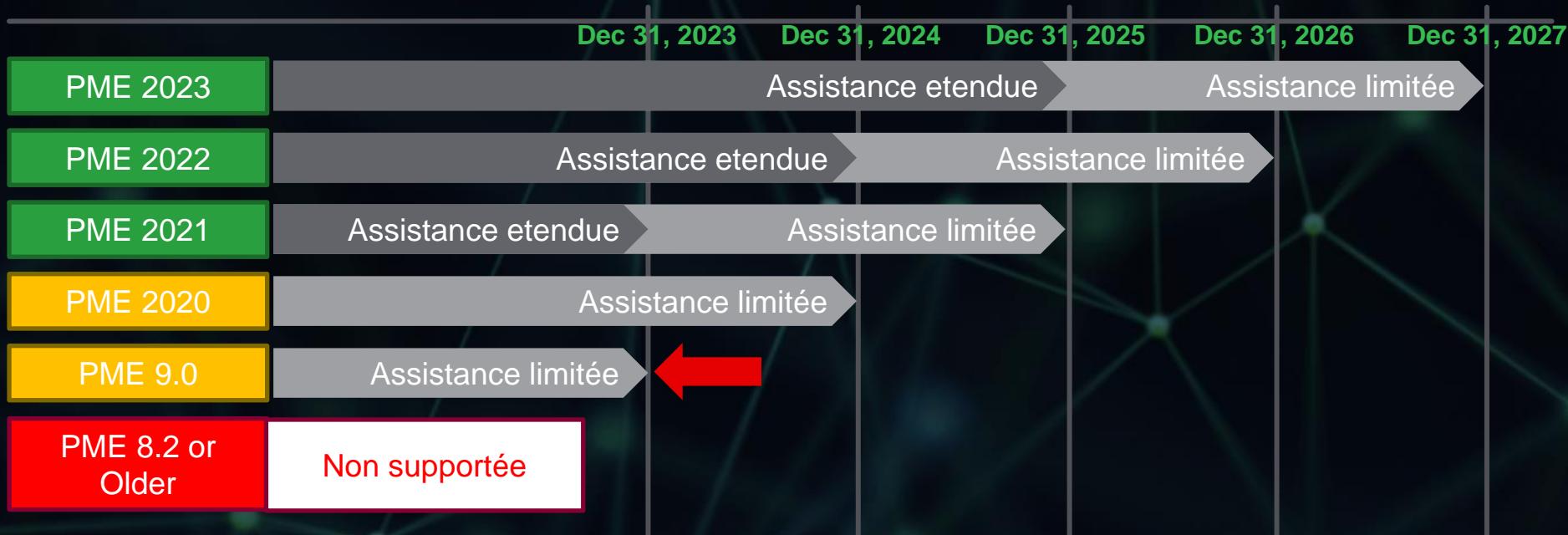
EcoStruxure Power Monitoring Expert

2020 - 2023

Quoi de neuf?

PLUG Montréal 2023

Assistance pour chaque version PME



Assistance étendue :

Enquête technique et assistance pour les problèmes des clients, y compris la création de correctifs critiques jugés nécessaires par l'usine

Assistance limitée :

Enquête technique et assistance pour les problèmes des clients, mais pas de nouveaux correctifs pour les problèmes.
Fournir des informations sur la migration vers une version de produit plus récente bénéficiant d'une assistance complète.

PME Mise à jour des versions depuis 2020

2020

2021

2022

2023

Applications Thin Client

Configuration, gestion du système à partir de n'importe quel navigateur web

ION Analytics

Innovations uniques et différenciatrices en matière de qualité de l'énergie grâce à la technologie ION

Interopérabilité

Intégrer le PME dans d'autres systèmes

Conformité TI

Conformité avec la sécurité cybernétique et avec les politiques TI

Multi-Site avec contrôle d'accès base sur les rôles (RBAC)

Gestion des licences améliorée

Simplification des licences

Amélioration des applications PQ

Multi-site, analyse de la forme d'onde, SARFI

Analyse énergétique étendue

Alarme d'enregistrement des données, gadgets améliorés, agrégation et calcul des données en temps réel

Intégration avec plus d'équipements et nouvelles applications

Protection d'arc, Conformité NRG

Amélioration du performance et de la cybersécurité

Connectivité ouverte

Connexion avec d'autres systèmes grâce aux extensions Smart Connector

PQ Analytics

PQ Analyse avec caractérisation de la forme d'onde

Intégration avec BMS

Intégration simplifiée avec EBO

Plus Sécuritaire

Communication sécurisée avec équipements ION

Graphiques modernes avec TGML

Graphiques dynamiques pour améliorer l'interface utilisateur et réduire le coût de possession

Surveillance de la charge des VE

Intégration de l'infrastructure électrique moderne

Outils pour optimiser la consommation

Mieux gérer l'électricité en cas de crise énergétique

Communication Cryptée

Protéger les données en transit grâce à des communications cryptées (ION et Modbus).

Life Is On

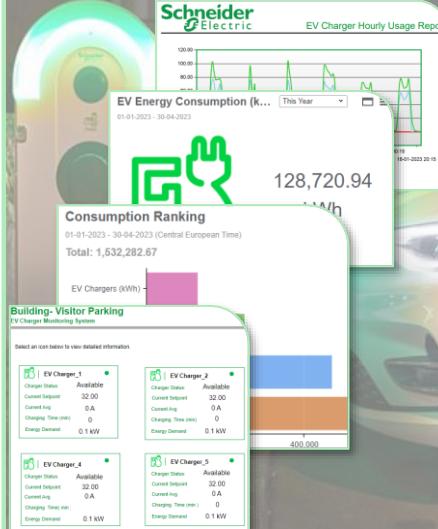
Schneider
Electric



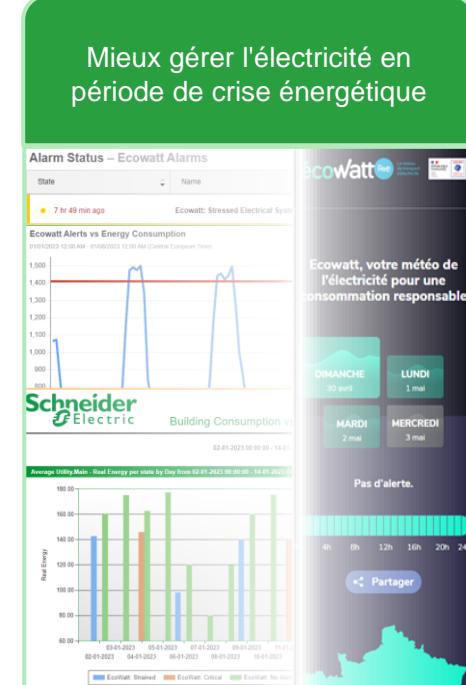
Des graphiques dynamiques pour améliorer l'expérience utilisateur et réduire le coût d'implementation



Améliorer la durabilité grâce à la surveillance de la recharge des VE

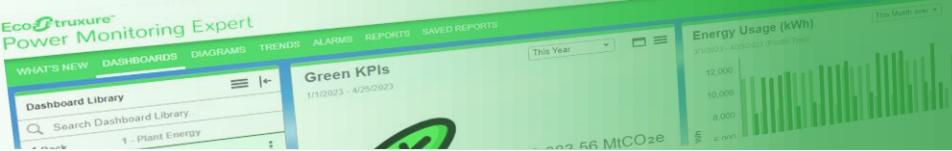


Mieux gérer l'électricité en période de crise énergétique



Protéger les données en transit grâce à une communication cryptée entre les appareils





Graphiques modernes avec TGML

Qu'est-ce que le TGML ?

Inspiré par le langage SVG (*Scalable Vector Graphics*) basé sur XML, le TGML (TAC Graphics Markup Language) est un langage déclaratif basé sur XML pour les graphiques dynamiques en 2D

```
<?xml version="1.0"?>
<?TGML Version="1.2"?>

<TGML Width="800" Height="600" Stretch="Uniform" Background="#FFFFFF">
  ...
</TGML>
```

Le TGML spécifie une hiérarchie d'objets d'exécution avec un ensemble de propriétés et de logique.

Chaque élément (élément XML) représente un objet TGML qui peut être modifié ou configuré dans un éditeur graphique.

Le modèle d'objet TGML est basé sur le modèle d'objet de document (DOM) du W3C.

Les éléments graphiques TGML sont accessibles aux applications à travers les interfaces TGML DOM exposées.

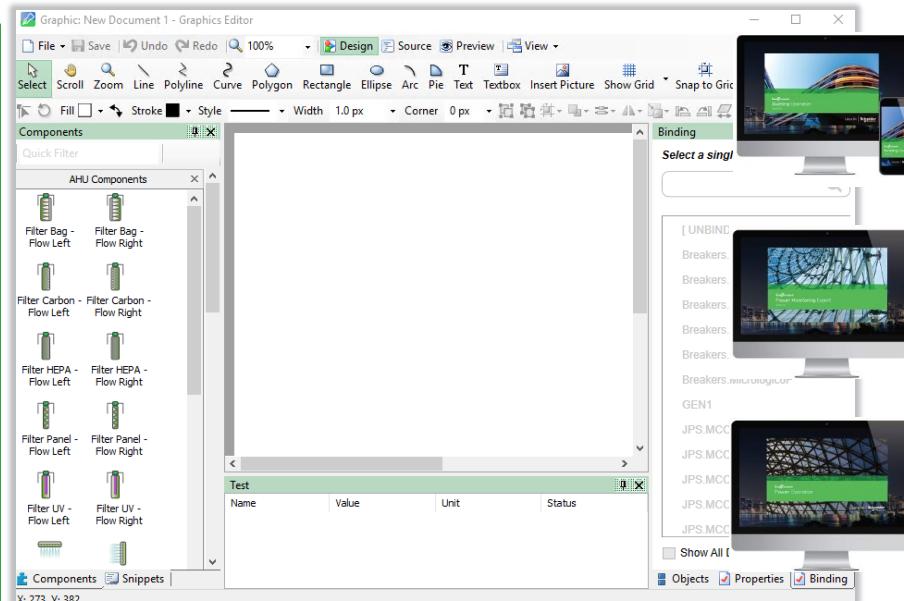
The screenshot shows the main interface of the EcoStruxure Power Monitoring Expert. At the top, there's a navigation bar with links like 'WHAT'S NEW', 'DASHBOARDS', 'DIAGRAMS', 'TRENDS', 'ALARMS', 'REPORTS', and 'SAVED REPORTS'. Below the navigation is a search bar for the 'Dashboard Library' with a placeholder 'Search Dashboard Library' and a filter for 'Plant Energy'. The main area displays a dashboard titled 'Green KPIs' for the period '1/1/2023 - 4/25/2023'. It features a bar chart for 'Energy Usage (kWh)' with values from 6,000 to 12,000, a pie chart for 'CO2 Emissions (MtCO2e)' with a value of 0.66 MtCO2e, and a small green icon.

EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

Même moteur graphique et même éditeur graphique dans EBO, EPO et PME

- Flux de travail commun pour la création de graphiques
- Bibliothèque complète de composants pour la création de diagrammes
- Une apparence et une convivialité cohérentes
- Rationalisation du déploiement
- Extensible



Pourquoi TGML?

EcoStruxure
Building Operation

EcoStruxure Power
Monitoring Expert

EcoStruxure Power
Operation



EcoStruxure

Power Monitoring Expert

Graphiques modernes avec TGML

TGML vs Vista

TGML	Vista
Basé sur XML	Basé sur XML
Scalable Vector Graphics (SVG) supporté	SVG pas supporté
Industrialisation et mise à jour continue	Pas de mise à jour
De nouveaux composants peuvent être créés par les utilisateurs	Aucun objet ne peut être créé par les utilisateurs
Scripting	Pas de scripting
Module d'animation	Pas d'animation
Panoramiques et zoom	Pas de Panoramiques et zoom
Editeur graphique unique pour créer des diagrammes	Potentiellement besoin d'utiliser d'autres outils
Focalisé pour BMS et besoin d'adaptation au domaine de l'électricité	Polyvalent et orienté pour les applications électriques

EcoStruxure Power Monitoring Expert

This screenshot shows the main interface of the EcoStruxure Power Monitoring Expert software. At the top, there's a navigation bar with links for DASHBOARDS, DIAGRAMS, TRENDS, ALARMS, REPORTS, and SAVED REPORTS. Below the navigation is a 'WHAT'S NEW' section and a 'Dashboard Library' with a search bar. The main content area is titled 'Green KPIs' and displays various performance metrics, including a bar chart for 'Energy Usage (kWh)' over time and a pie chart for 'CO2 Emissions'.

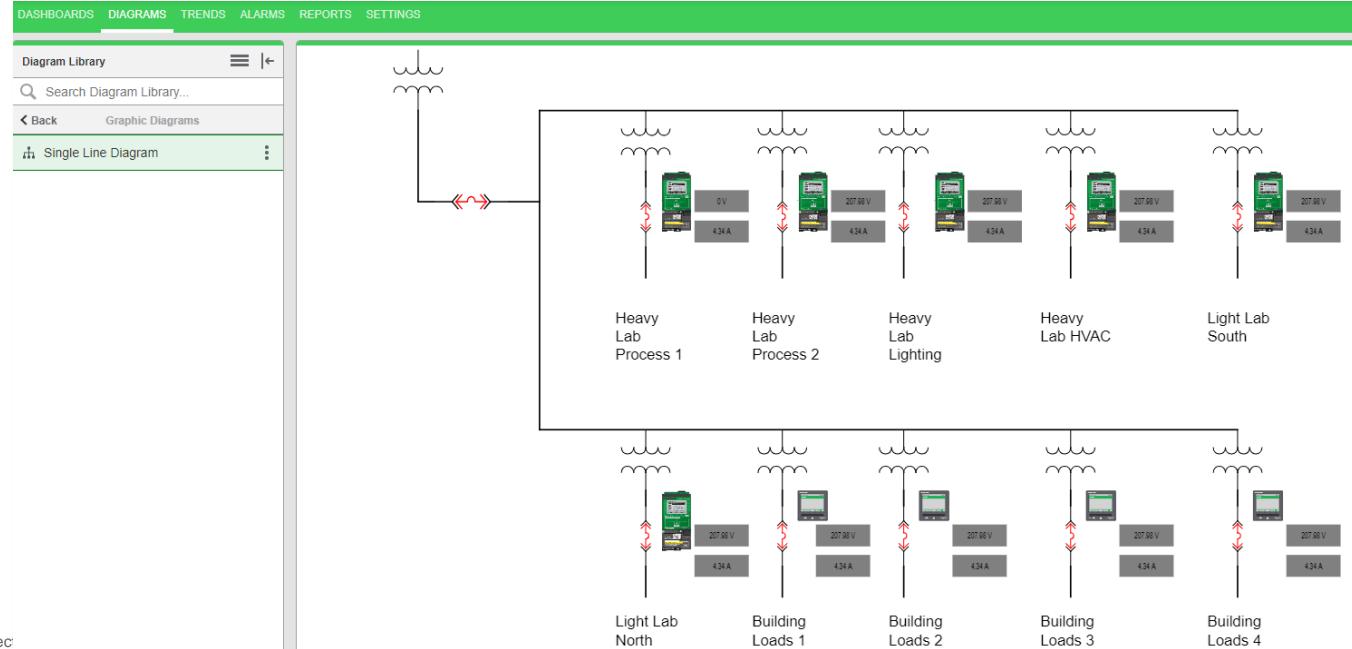
EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

Création du SLD avec TGML



66 minutes au total pour créer l'échantillon SLD



EcoStruxure Power Monitoring Expert

WHAT'S NEW DASHBOARDS DIAGRAMS TRENDS ALARMS REPORTS SAVED REPORTS

Dashboard Library

Search Dashboard Library

1 - Plant Energy

Green KPIs
1/1/2023 - 4/25/2023

Energy Usage (kWh)
This Month over
3/1/2023 - 4/25/2023 (Past 30 days)

12,000
10,000
8,000
6,000
4,000
2,000
0

0.66 MtCO₂e

EcoStruxure Power Monitoring Expert

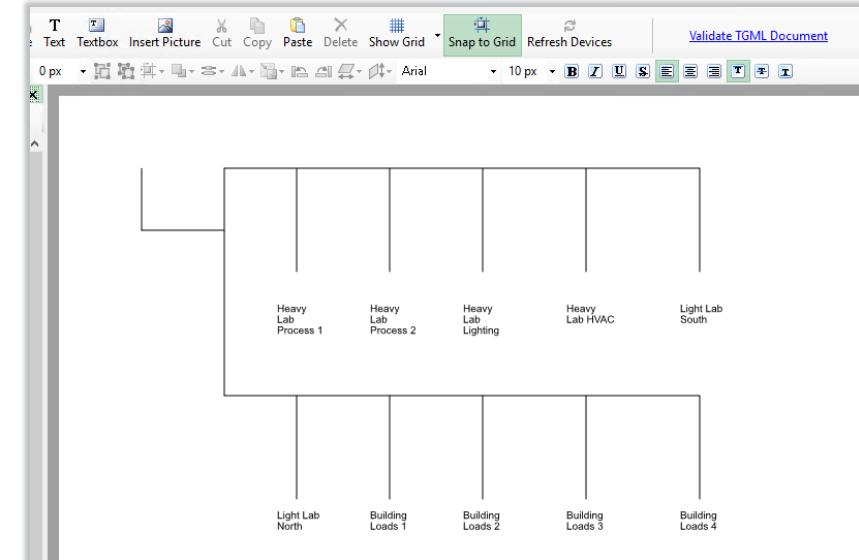
Graphiques modernes avec TGML

Création du SLD avec TGML



2 minutes pour dessiner la base de l'échantillon du SLD

- L'éditeur graphique TGML est livré avec une liste de composants de dessin permettant de créer un diagramme unifilaire (SLD) sans avoir besoin d'utiliser d'autres outils tels que Visio.
- Avec les lignes et les boîtes de texte, la base du SLD peut être dessinée en quelques minutes.
- Il faut deux minutes pour dessiner cet exemple de diagramme avec le copier-coller.



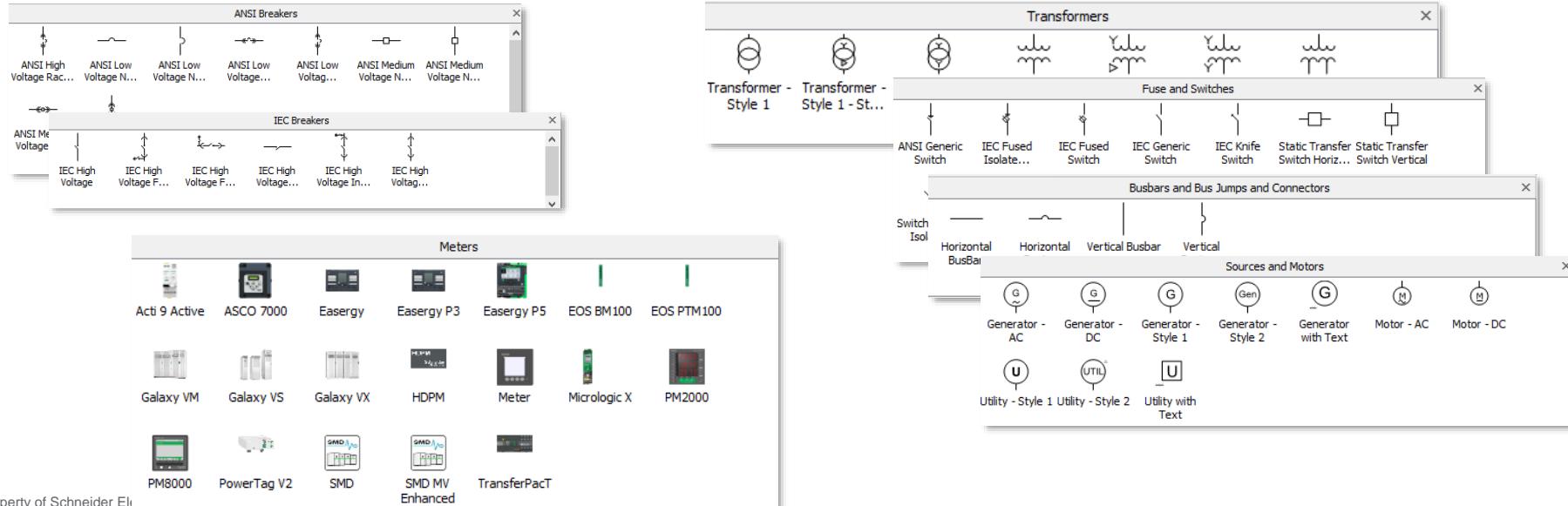
EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

EcoStruxure Power Monitoring Expert

Création du SLD avec TGML

Alors que les composants TGML d'origine sont centrés sur la GTB, nous avons créé des composants de réseau électrique pour simplifier la création de diagrammes SLD.



Graphiques modernes avec TGML

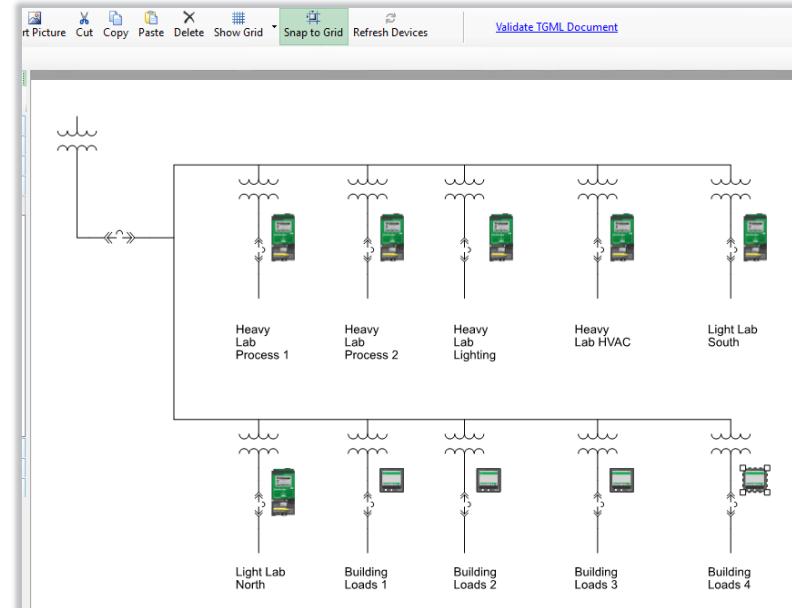
Création du SLD avec TGML

Alors que les composants TGML d'origine sont centrés sur la GTB, nous avons créé des composants de réseau électrique pour simplifier la création de diagrammes SLD.



12 minutes pour ajouter des composants à l'échantillon du SLD

- L'option d'alignement sur la grille permet d'aligner facilement et automatiquement les composants.
- Les composants, tels que les transformateurs, les disjoncteurs et les compteurs, sont glissés et déposés sur un diagramme TGML et peuvent être redimensionnés si nécessaire.
 - 5 minutes pour 11 transformateurs
 - 5 minutes pour 11 disjoncteurs
 - 2 minutes pour 10 compteurs



Graphiques modernes avec TGML

Création du SLD avec TGML

Les composants TGML peuvent être liés à des registres ION pour afficher des données provenant d'appareils, de la même manière que les objets sont liés à des registres ION dans Vista.

The screenshot shows the 'Binding' dialog box with a tree view of device registers. The tree includes categories like [UNBIND], Ali.A7650_2, Ali.UPS, Breakers.Masterpact_MTZ, and Breaker Status. Under Breaker Status, 'Breaker Trip Unit Status' is selected. A right-click context menu is open over this selection, with the option 'Bind to TGML' highlighted in green.

Lier les registres d'état du disjoncteur et de position du rack aux propriétés du composant Disjoncteur pour indiquer l'état du disjoncteur sur le SLD.

The screenshot shows the 'Properties' dialog box for a component. The 'Exposed Properties' section is expanded, showing properties like BreakerColorOnOpen, BreakerColorOnClose, BaseColor, StrokeWidth, DisconnectedColor, BreakerStatus, BindName, RldPosition, and BindName. The 'BreakerStatus' property is highlighted in green, indicating it is bound to the selected register.

Graphiques modernes avec TGML

Création du SLD avec TGML

Les composants TGML peuvent être liés à des registres ION pour afficher des données provenant d'appareils, de la même manière que les objets sont liés à des registres ION dans Vista.

Bind data registers to TextBox components to show device data on SLD in real time

Properties

- Exposed Properties
 - BaseColor: #808080
 - Unit: V
 - Resolution: 2
 - DisconnectedStatusColor: #FFFF00
 - TextValue: BindName
- General
 - Id: Breakers.Masterpact_MTZ\$Voltage A-B\$178257921
 - Name: Textbox_3

Graphiques modernes avec TGML

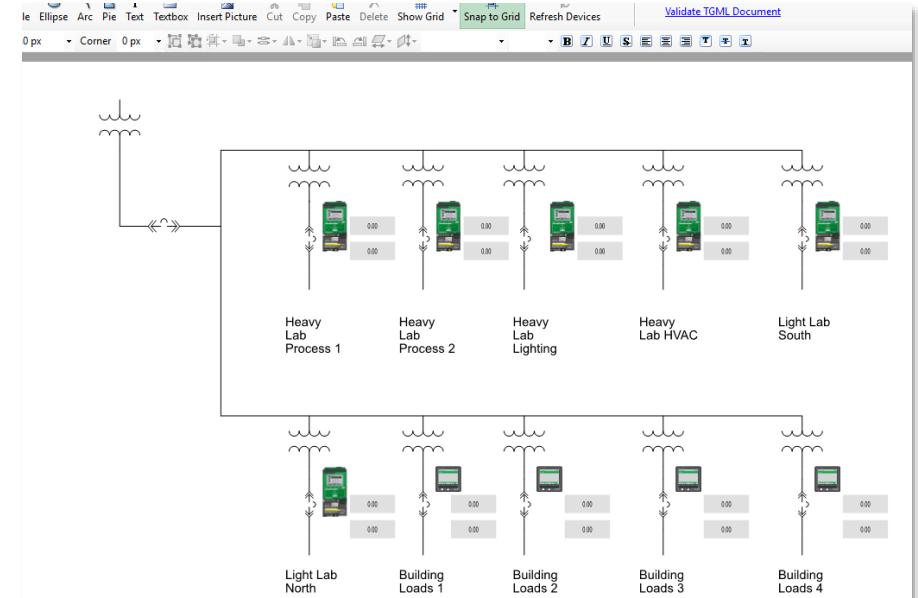
Création du SLD avec TGML

Les composants TGML peuvent être liés à des registres ION pour afficher des données provenant d'appareils, de la même manière que les objets sont liés à des registres ION dans Vista.



42 minutes pour lier les composants aux registres ION

- Chaque composant doit être lié au bon dispositif et au bon registre en conséquence.
 - Disjoncteur : 2 minutes chaque
 - TextBox : 1 minute chaque
- Des propriétés supplémentaires peuvent être configurées pour les composants, telles que BaseColor, DisconnectedStatusColor, Unit, etc.



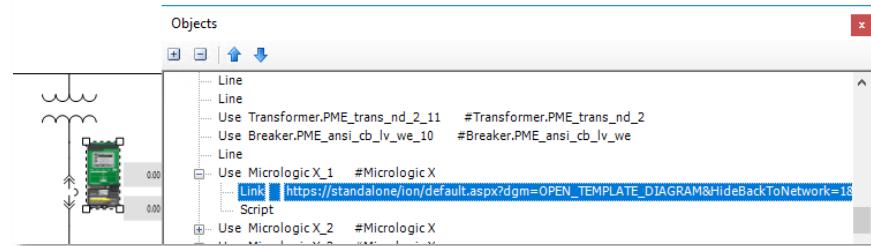
Graphiques modernes avec TGML

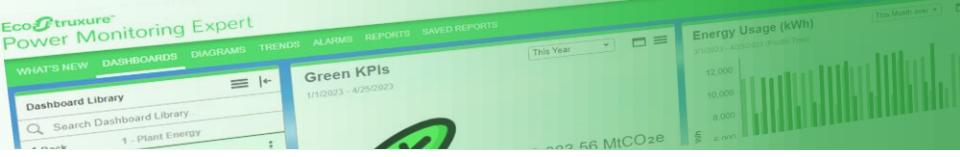
Création du SLD avec TGML

Les TGML Snippets sont des fonctions standardisées et prédéfinies pour un usage défini. L'extrait Popup peut être utilisé pour ouvrir un diagramme Vista à partir d'un diagramme TGML.

Basic Functions	
Name	Description
Blink	Starts and stop...
DynamicText	A Text element ...
Execute	Starts a Windo...
FlowX	An animated tr...
FlowY	An animated tr...
Link	
NewTab	
NewWindow	
OpenFile	Opens a file wh...
Pop-Up	
RotationClockwise	Starts and stop...
Sequence	Drop this on a g...
Status(Fill)	Indicates the v...
Status(Stroke)	Indicates the v...
Tooltip	Attaches a stati...

Ajouter un snippet Pop-up à un composant et fournir un lien vers le snippet afin que le TGML puisse ouvrir le lien dans une fenêtre pop-up.





EcoStruxure Power Monitoring Expert

EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

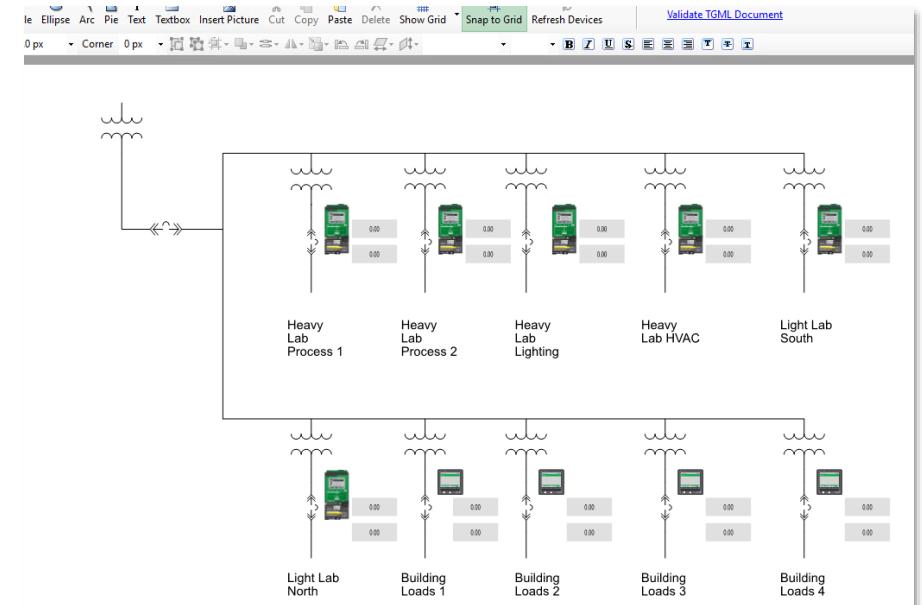
Création du SLD avec TGML

Les composants TGML peuvent être liés à des registres ION pour afficher des données provenant d'appareils, de la même manière que les objets sont liés à des registres ION dans Vista.



10 minutes to configure pop-up for each component

- Le lien vers le diagramme Vista de l'appareil peut être obtenu à partir de l'application web Diagrammes.
- Ajouter un snippet Pop-up à chaque appareil sur le SLD pour que le TGML ouvre le lien vers le diagramme de l'appareil dans une fenêtre pop-up.



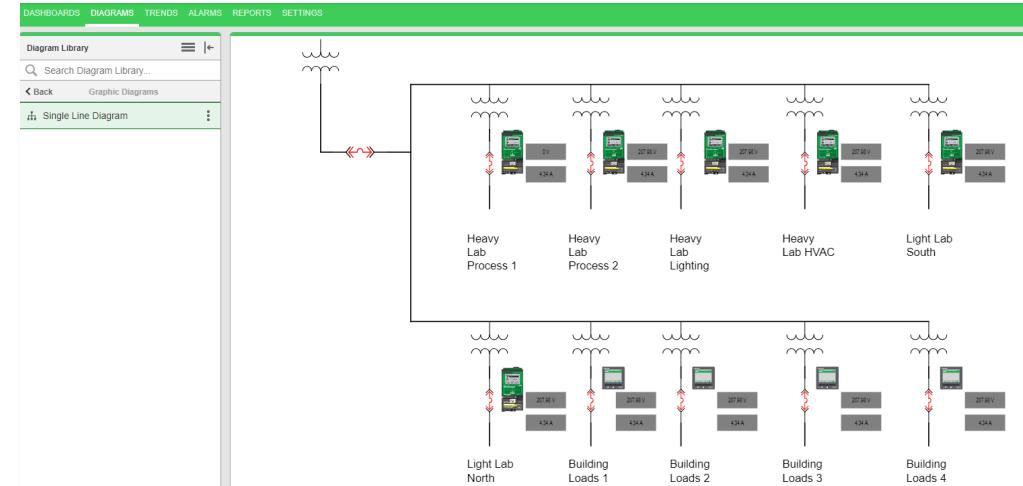
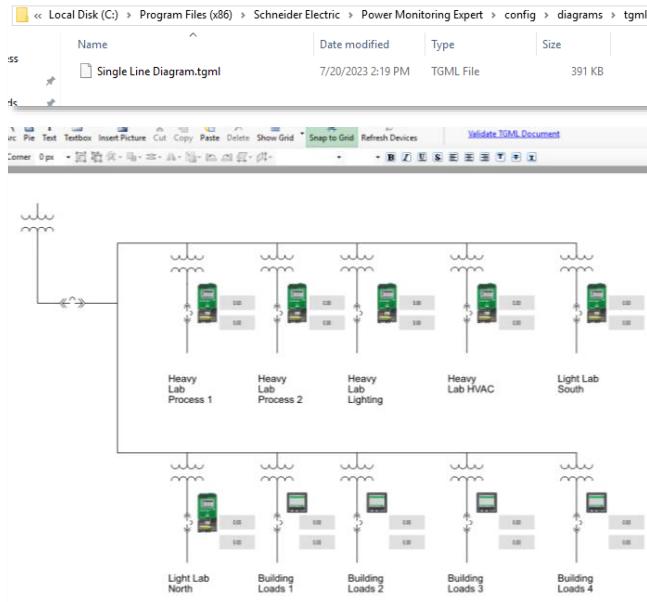
EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

EcoStruxure Power Monitoring Expert

Création du SLD avec TGML

Diagrammes TGML enregistrés automatiquement inclus dans l'application web Diagrams

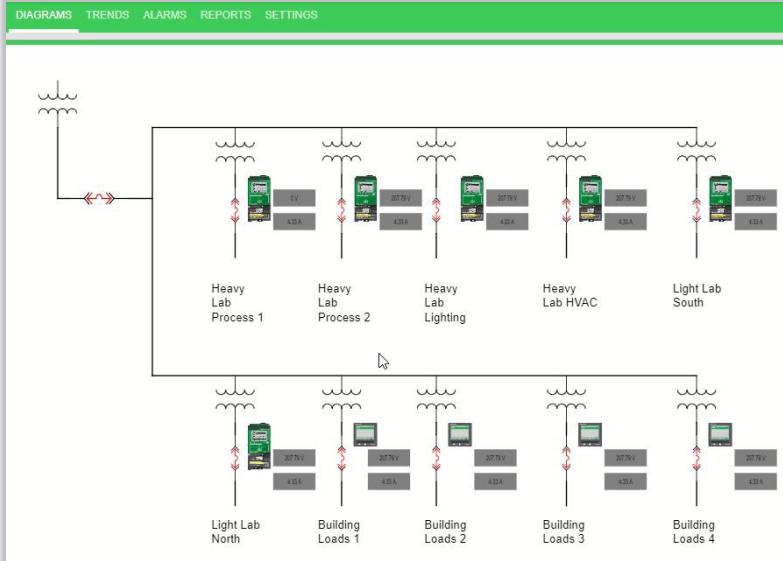


EcoStruxure Power Monitoring Expert

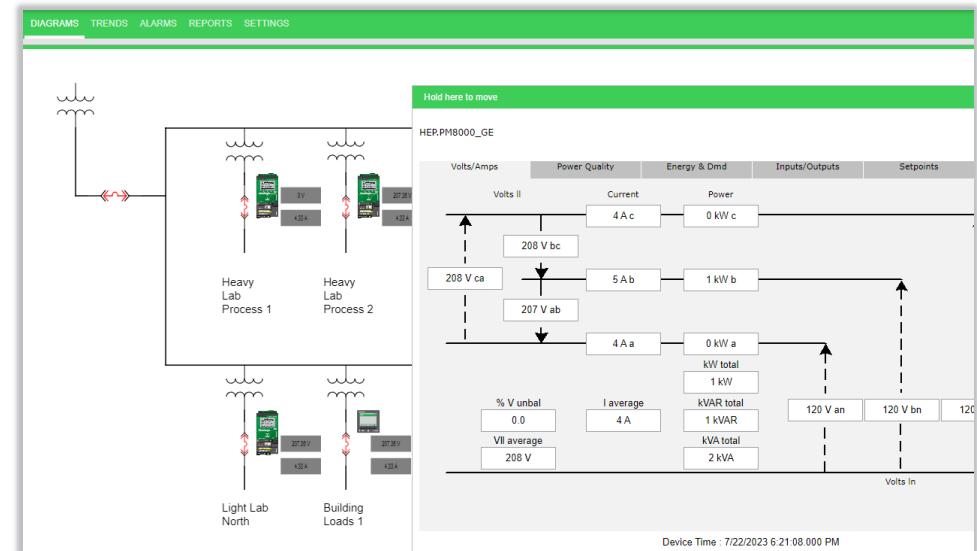
Graphiques modernes avec TGML

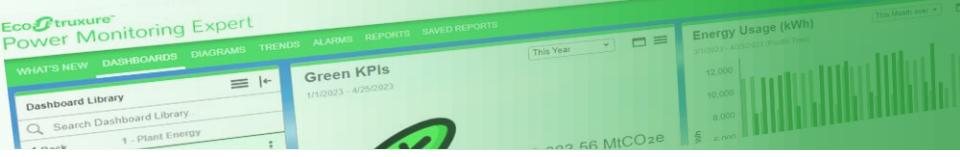
Visualiser le TGML dans l'application web Diagrams

Naviguer dans le SLD pan / zoom



Afficher le diagramme de l'appareil





EcoStruxure Power Monitoring Expert

Graphiques modernes avec TGML

Prise en charge du TGML par phases

PME 2023

Support de base du TGML

- Créer des diagrammes dans PME avec l'éditeur graphique TGML, tels que des diagrammes unifilaire.
- Créer des liens entre les composants TGML et les dispositifs pour permettre l'affichage de données et d'états en temps réel
- Visualiser les diagrammes TGML dans l'application web Diagrams
- L'application web Diagrams supporte à la fois les diagrammes TGML et les diagrammes Vista
- Passer des diagrammes TGML aux diagrammes Vista

PME 2024

Support TGML Étape 2

- Outil de migration de Vista vers TGML pour les diagrammes Vista existants
- Nouveaux drivers standard pour les diagrammes TGML
- Support de scripts et d'animation TGML
- Bibliothèque de composants commune à EPO et PME

PME 2025+

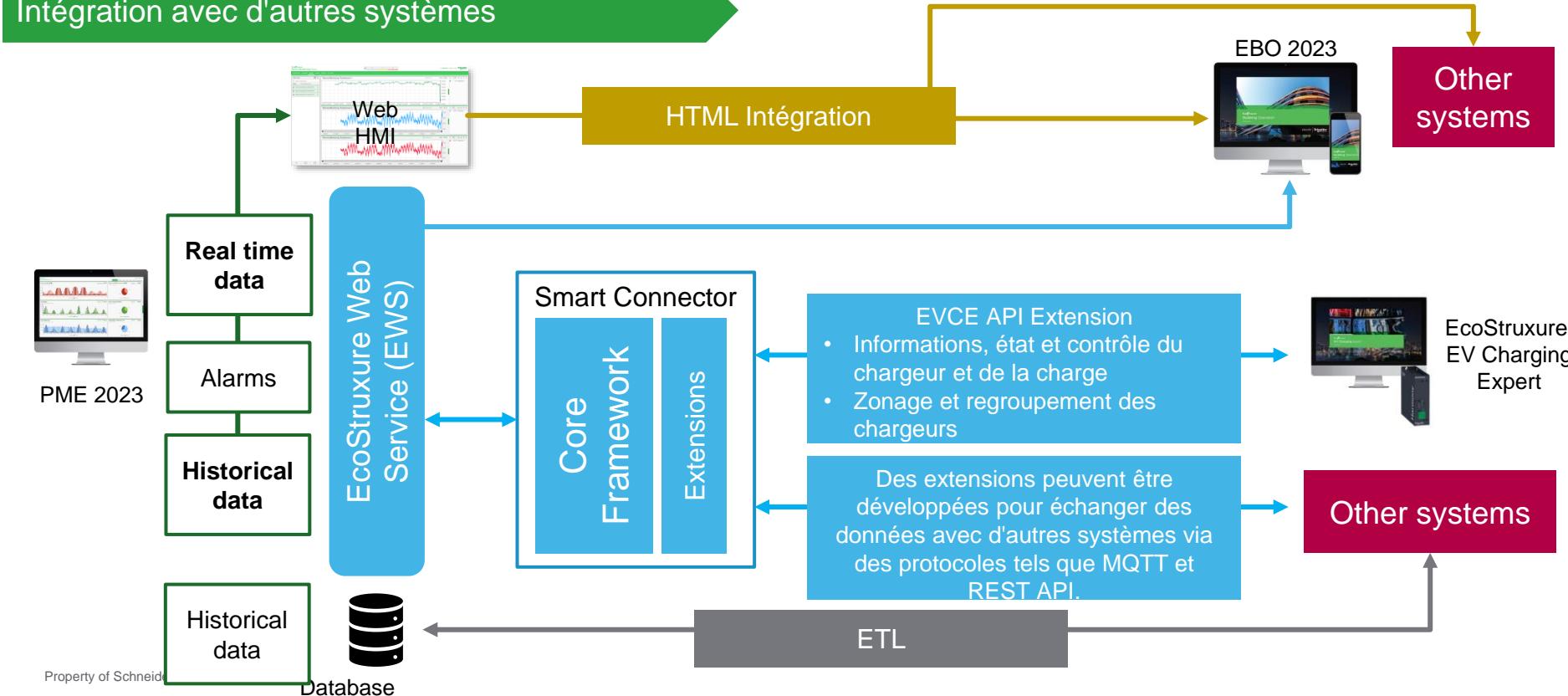
Remplacement de Vista

- Tous les diagrammes livrés avec PME ou générés par l'outil de configuration de PME seront uniquement au format TGML.
- Aucun nouveau diagramme Vista ne sera créé
- Vista ne sera plus nécessaire et finira par être obsolète.



EcoStruxure Power Monitoring Expert

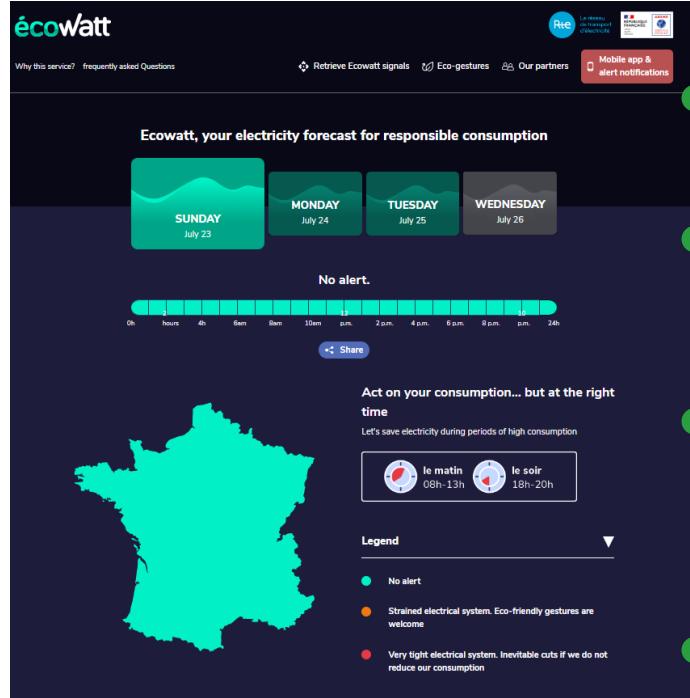
Intégration avec d'autres systèmes



EcoStruxure Power Monitoring Expert

Mieux gérer l'électricité

Integration avec Ecowatt API

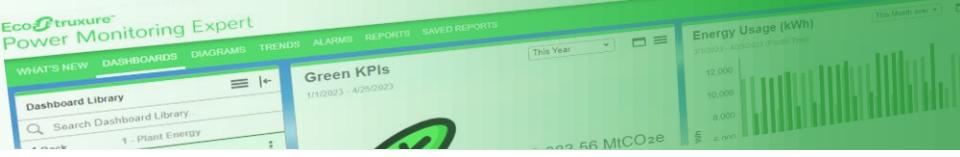


Objectif : aider la France à mieux consommer l'électricité en période de crise énergétique

Fournit le niveau de consommation de la France en temps réel et en prévisions

En connaissant les prévisions de consommation de la France, les entreprises peuvent planifier leurs opérations afin d'assurer un bon approvisionnement en électricité pour tous et d'éviter les coupures de courant.

Fournit une API permettant aux abonnés d'être alertés du niveau de consommation horaire pour aujourd'hui et les trois prochains jours.

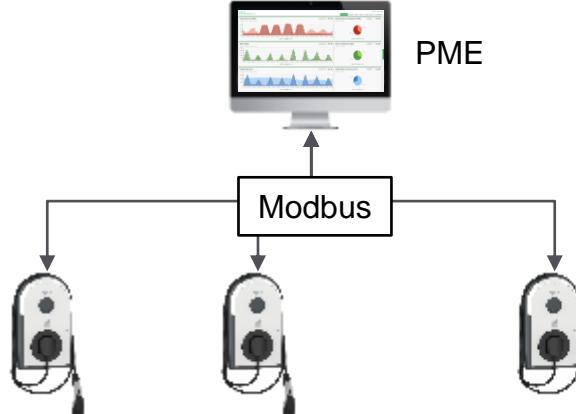


EcoStruxure Power Monitoring Expert

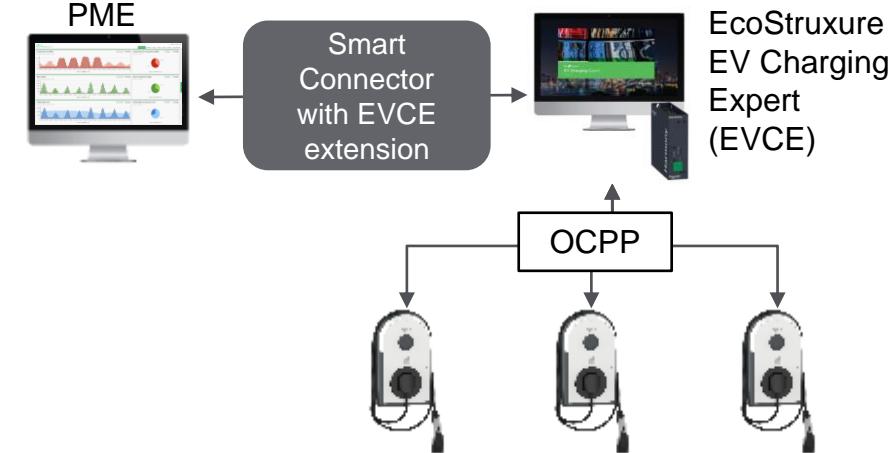
Efficacité à travers la surveillance des chargeurs pour les VE

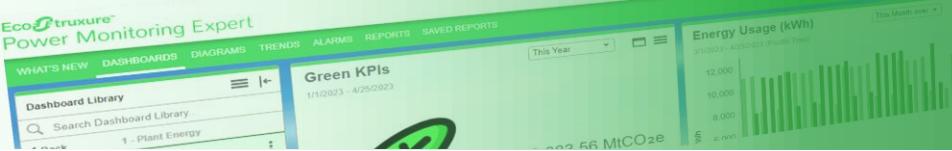
Integration avec EV Charging Expert (EVCE) API

System without EV Charging Expert



System with EV Charging Expert





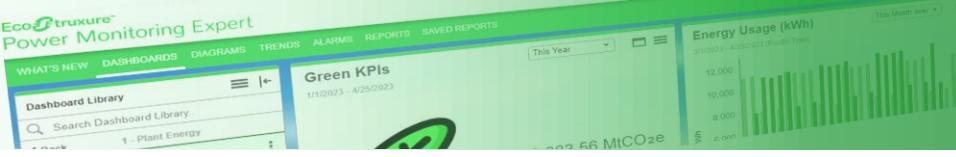
Smart Connector

Formation pour le développement du connector

Formation en ligne sur [Smart Connector extension development training](#)

Chapter 1: Intro
 Intro To SmartConnector
 Start
Chapter 2: Data Flows
 Common Data Flows
 Start
Chapter 3: Initial Setup
 Setup Development Environment
 Start
Chapter 4: Setup Processor Configuration
 Setup Processor Config
 Start
Chapter 5: Setup Processor
 Setup Processor Development Part 1
 Start
 Setup Processor Development Part 2: Custom Code
 Start
Chapter 6: Setup Processor (Cont.)
 Setup Processor: Creating Objects
 Start
 Setup Processor: Creating Objects (Cont.)
 Start
 Setup Processor: Getting Forecast Data
 Start

Chapter 7: Update Processor
 Update Processor Part 1: Refactoring
 Start
 Update Processor Part 2
 Start
 Update Processor Part 3
 Start
Chapter 8: Customizing our EWS Server
 Custom EWS Server
 Start
Chapter 9: Testing
 Unit Testing
 Start
Chapter 10: Deployment
 Deploying Your Extension
 Start
Chapter 11: Licensing
 How to License your Extension
 Start
Chapter 12: Quiz!
 SmartConnector Final Quiz
 Start



EcoStruxure Power Monitoring Expert

Smart Connector

Communauté d'experts

Accès à des ressources et à une communauté d'experts prêts à répondre à vos questions sur Smart Connector sur [Smart Connector Forum](#)

The screenshot shows the SmartConnector Forum page with three visible posts:

- Tus_bms-Tech_co** posted "Hilton OnQ integration issue":

Hi community, I faced a problem with room occupancy state. In the occupied mode, it appears as 1 and its perfect, but when room is unoccupied there is no value state (null). As a result in EWS server..

EcoStruxure Building • SmartConnector Forum • 1 Unread

80 views, 0 likes, 0 replies. Posted Friday.
- eeee PiotrJakubczyk** posted "smart connector 2.5.4 not able to use other SQL user than sa":

Hello Independently from what I put into "Username:" field during installation in logs I always see "sa" user.

EcoStruxure Building • SmartConnector Forum • 1 Unread

103 views, 0 likes, 0 replies. Posted 2 weeks ago.
- Sascha_dubach_b** posted "EWS RESTful Gateway documentation for SmartConnector v2.5":

Hello Everyone We need to create an interface between EBO 2023 (and several future EBO versions, very large multi-year project) and a 3rd party FM software. On <https://smartconnectorserver.com/DownloadC...>

EcoStruxure Building • SmartConnector Forum • 2 Unread

Communication sécurisée des appareils



Micrologic X with IFE/IFM

Cryptage des données en transit via ION et Modbus



PM8000, ION7400 and ION9000

- 1 Activer la connexion sécurisée sur l'appareil supporté

Ethernet Device Configuration

Required	
Group	Breakers
Name	Micrologic5H
Device Type	Micrologic 5.0/6.0/7.0 H IFE_IFM
IP Address or Host Name	127.0.0.1
Enabled	<input checked="" type="checkbox"/>
Secure Connection Enabled	<input checked="" type="checkbox"/> ←

- 2 Configurer l'option de validation du certificat

Ethernet Device Configuration

Name	ION9000_GE
Device Type	ION 900
IP Address or Host Name	127.0.0.1
Enabled	<input checked="" type="checkbox"/>
Secure Connection Enabled	<input checked="" type="checkbox"/>
Time Synch Ethernet Enabled	<input type="checkbox"/>
Time Zone	(UTC-08:00) Pacific Time (US & Canada)
Certificate Validation	<input type="button" value="Full"/> ←
Optional	
Description	

Option de validation de la certification :

- Complète : bloque la communication en cas de problèmes de certification
- Partielle : avertissement en cas de problèmes de certification
- Aucune : pas de vérification de la certification

The screenshot shows the main dashboard library with several pre-made dashboards like 'Green KPIs' and 'Plant Energy'. It also shows a detailed view of a specific dashboard with a bar chart titled 'Energy Usage (kWh)' for the month of July, comparing current usage against historical data.

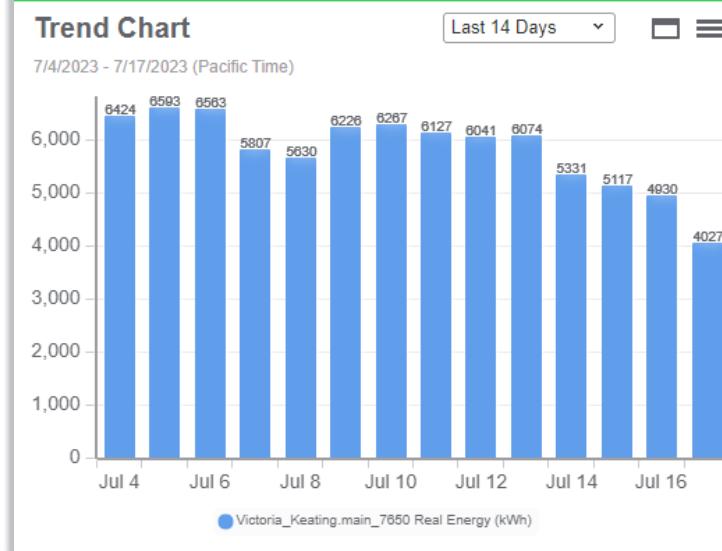
EcoStruxure Power Monitoring Expert

Analyse de l'énergie flexible



L'utilisateur n° 1 : quotidienne de la consommation de 12h00 à 12h00 (jour calendaire).

Custom Day Settings
Custom Start of Day
12:00 AM

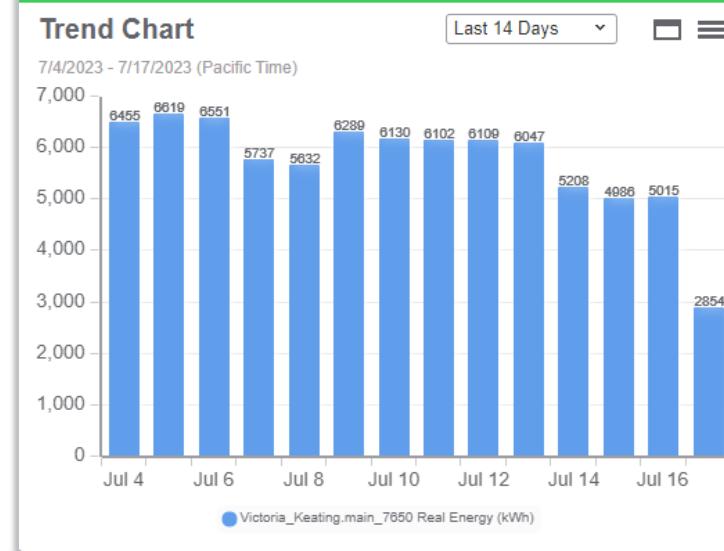


Analyser la consommation avec des journées personnalisées



L'utilisateur n° 2 : agrégation quotidienne de la consommation de 6h00 à 6h00 (jour personnalisé).

Custom Day Settings
Custom Start of Day
6:00 AM



EcoStruxure Power Monitoring Expert

WHAT'S NEW DASHBOARDS DIAGRAMS TRENDS ALARMS REPORTS SAVED REPORTS

Dashboard Library

Search Dashboard Library

1 - Plant Energy

Green KPIs
1/1/2023 - 4/25/2023

Energy Usage (kWh)

12,000
10,000
8,000
6,000
4,000
2,000
0

301,566 MtCO₂e

EcoStruxure Power Monitoring Expert

Analyse de l'énergie flexible

Analyser la consommation avec des journées personnalisées

Si le rapport possède ses propres paramètres de début et de fin de journée, les paramètres du rapport ont la priorité sur les paramètres personnalisés de début de journée.

Custom Day Settings

Custom Start of Day
6:00 AM

Energy Usage Report

Title: Energy Usage

Sources: Select Sources, None Selected

Measurements: Select Measurements, None Selected

Reporting Period: Last 7 Days [start of day 6/1]

Server Local Time

Rollup: Day

Start Hour: 11:00

End Hour: 11:00

Lower Target Line: No Target Line

Upper Target Line: No Target Line

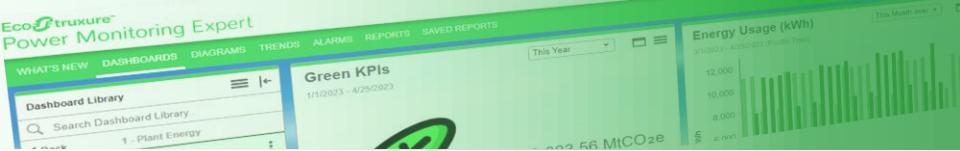
Source Label: Source Name

Generate Report

Agrégation	Début	Fin
Quotidien	11:00am	11:00am jour calendaire suivant*
Hebdomadaire	Samedi 11:00am	11:00am Samedi suivant
Annuel	11:00am on Jan 1	11:00am Jan 1 année suivant

Le premier jour de la semaine est le dimanche

*: L'heure de fin n'est considérée que dans les 24 heures suivant l'heure de début. Il n'est pas possible de fixer l'heure de fin à 11h00 le deuxième jour calendaire suivant le début.



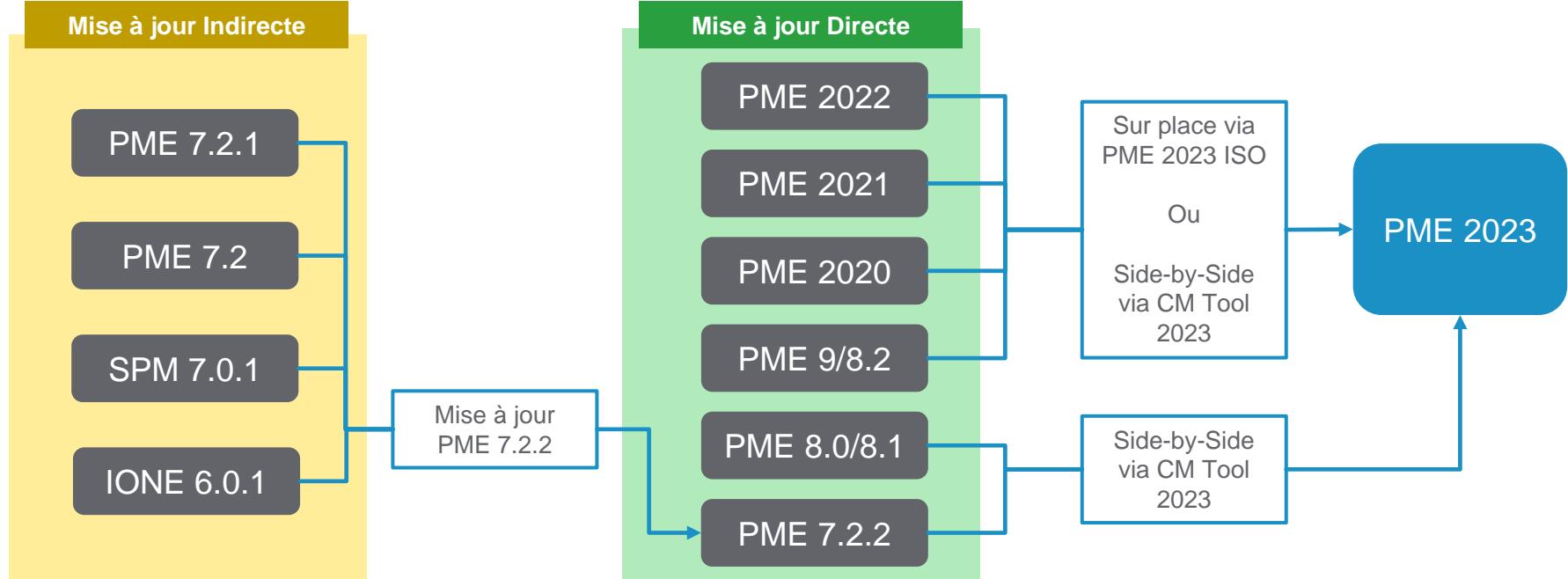
EcoStruxure Power Monitoring Expert

Raisons de la mise à niveau

Suivre l'évolution des TI

Operating Systems	Database Systems	Virtual Environments
<ul style="list-style-type: none">Windows 10 Professional/EnterpriseWindows 11 Professional/EnterpriseWindows 11 IoT EnterpriseWindows Server 2012 StandardWindows Server 2012 R2 Standard/EnterpriseWindows Server 2016 StandardWindows Server 2019 StandardWindows Server 2022 Standard	<ul style="list-style-type: none">SQL Server 2012 ExpressSQL Server 2014 ExpressSQL Server 2016 ExpressSQL Server 2017 ExpressSQL Server 2019 ExpressSQL Server 2022 Express (included in PME 2023 ISO)SQL Server 2012 Standard/Enterprise/Business IntelligenceSQL Server 2014 Standard/Enterprise/Business IntelligenceSQL Server 2016 Standard/Enterprise/Business IntelligenceSQL Server 2017 Standard/Enterprise/Business IntelligenceSQL Server 2019 Standard/Enterprise/Business IntelligenceSQL Server 2022 Standard/Enterprise/Business Intelligence	<ul style="list-style-type: none">VMWare Workstation 10VMWare ESXi 7.0Oracle Virtual Box 5.0.4Microsoft Hyper-V from Windows 10, Windows Server 2016Citrix XenServer 6.2Parallels Desktop 10QEMU-KVM
Microsoft Excel	Web Browser	
<ul style="list-style-type: none">Microsoft Excel 2013, 2016, 365	<p>Desktop Web Brower:</p> <ul style="list-style-type: none">Google Chrome version 100 and laterMozilla Firefox version 71 and laterApple Safari versions 7 or 8 and laterMicrosoft Edge	
.Net Framework	Mobile Web Browser:	
<ul style="list-style-type: none">.NET 4.8 or higher	<ul style="list-style-type: none">Safari on iOS8.3+ operating systemsChrome on Android systems	

Implementation de mise à jour



Vérifiez toujours si les versions existantes de Windows OS et SQL sont supportées par PME 2023 avant de procéder à une mise à jour.

Life Is On



Annexes

PME 2020

Web Device Manager

Device Manager

DEVICES SITES

Add Ethernet Device Import... Default Types Search Devices

Communication Status	Type	Full Name	Address	Device Type	Site
✓	Ethernet	Alarms.HSTC	127.0.0.1:7700	ION 7350	N/A
✓	Ethernet	Alarms.PreExisting	127.0.0.1:7700	ION 7650	N/A
✓	Ethernet	Alarms.RealTime	127.0.0.1:7700	ION 7650	N/A
✓	Serial	BreakerAging.NSXAXA	127.0.0.1:502/1	Micrologic 5.2/6.2/5.3/6.3 A	BreakerAging NSXA
✓	Ethernet	CM.4000T_84_247	127.0.0.1:502	CM4000 Series	N/A

Web Device Control

HST.9000T

Power Quality Setup

Common

Nominal voltage	120.00	V
Nominal Frequency	60	Hz
PT primary	120.00	
PT secondary	120.00	
CT primary	5.00	
CT secondary	5.00	

Enable Harmonics Logging Enable Waveform Recording

Sag/swell

Swell limit	110	% of Nominal Voltage
Sag limit	90	% of Nominal Voltage
Sag/Swell Detection		
Enable Burst Data Logging	<input checked="" type="checkbox"/>	Before enabling Burst Data, correctly configure nominal voltage, nominal frequency and PT/CT ratios. If not configured correctly, burst data can generate large amounts of traffic.
Rapid Voltage Change Threshold	5	% of Nominal Voltage
Rapid Voltage Change Enabled		
<input checked="" type="checkbox"/> No		

New Notification Engine

Notifications

RULES RECIPIENTS TEMPLATES SCHEDULES SETTINGS

Add Notification Rule

Rule Name	Alarm View	Recipients
PQ	Incident History – Power Quality Incidents [New Activity]	Operator

User Personalization Settings

Profile Details

First Name	Last Name	Organization
Supervisor	Account	Default Organiz

Change Password

Current Password	New Password	Confirm New Pas
------------------	--------------	-----------------

Localization

User Language	English
User Region	English (United States)

Date format: Example: Time format: Example: Number format: Example:

Theme Color

Enable high contrast mode

Color palette: Red, Green, Blue, Yellow, Purple, Orange, Brown, Grey, Black, White

Web Device Manager

Same and more features that device management in Management Console

Device Manager

DEVICES **SITES**

Add Ethernet Device ▾ Import... Default Types Search Devices

Communication Status	Type	Full Name	Address	Device Type	Site
Green	Ethernet	Alarms.H...	0.0.1:7700	ION 7350	N/A
Green	Ethernet	Alarms.P...	0.0.1:7700		
Green	Ethernet	Alarms.R...	0.0.1:7700		
Green	Serial	BreakerA...	0.0.1:502/1		NSXA
Green	Ethernet	CM.4000...	0.0.1:502	CM4000 Series	N/A
Green	Ethernet	HST.9000...	68.69.41:7700	ION 9000	N/A
Green	Ethernet	ION.7650...	0.0.1:7700	ION 7650	N/A
Green	Serial	MAIN.DP...	0.0.1:502/4	PM800 Series	MAIN_FL12_EGX
Green	Serial	MAIN.DP...	0.0.1:502/3	PM800 Series	MAIN_FL12_EGX
Green	Serial	MAIN.ED...	0.0.1:502/6	CM4000 Series	MAIN_BLDG_R_EGX
Green	Serial	MAIN.GE...	0.0.1:502/7	PM800 Series	MAIN_BOILER_RM_EGX
Green	Serial	MAIN.GE...	0.0.1:502/6	PM800 Series	MAIN_BOILER_RM_EGX
Green	Serial	MAIN.GEN_3	127.0.0.1:502/5	PM800 Series	MAIN_BOILER_RM_EGX
Green	Serial	MAIN.TS_1	127.0.0.1:502/9	PM800 Series	MAIN_BOILER_RM_EGX
Green	Serial	MAIN.TS_2	127.0.0.1:502/1	PM800 Series	MAIN_RM6A_EGX

Device communication status at a glance

CSV Import/Export

- Batch add and edit devices in a csv and import the csv to update devices in PME
- Export device csv from ION Setup and import into PME
- Export devices from PME to always have latest device information
- Import sites, ethernet devices, serial devices and OPC devices at the same time

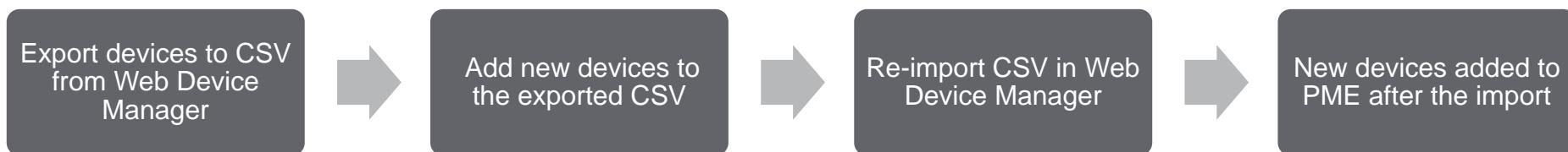
Search and filter options to quickly find and view devices you are looking for

Web Device Manager

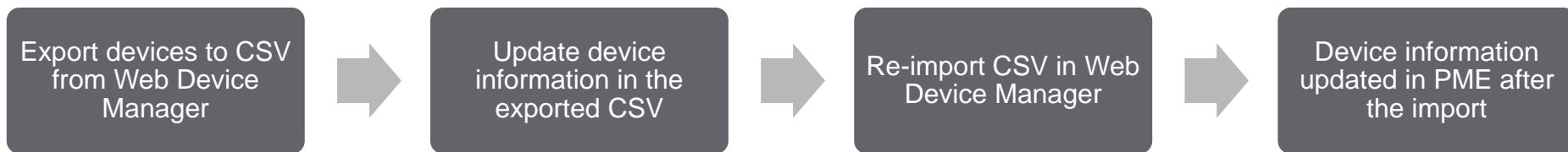
Use case #1: Adding devices very first time



Use case #2: Adding more devices



Use case #3: Bulk editing devices



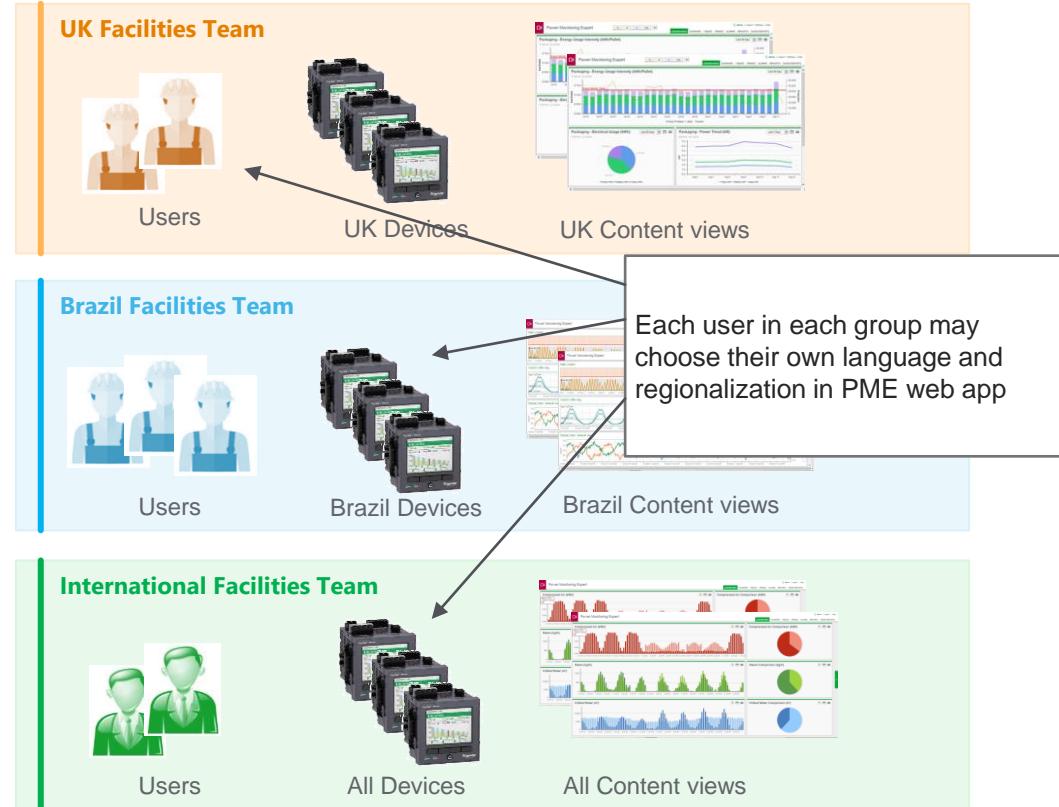
Multi Site with Role Based Access Control (RBAC)

PME Groups



A user group is a set of users with access to the same list of devices/sources and the same shared web content.

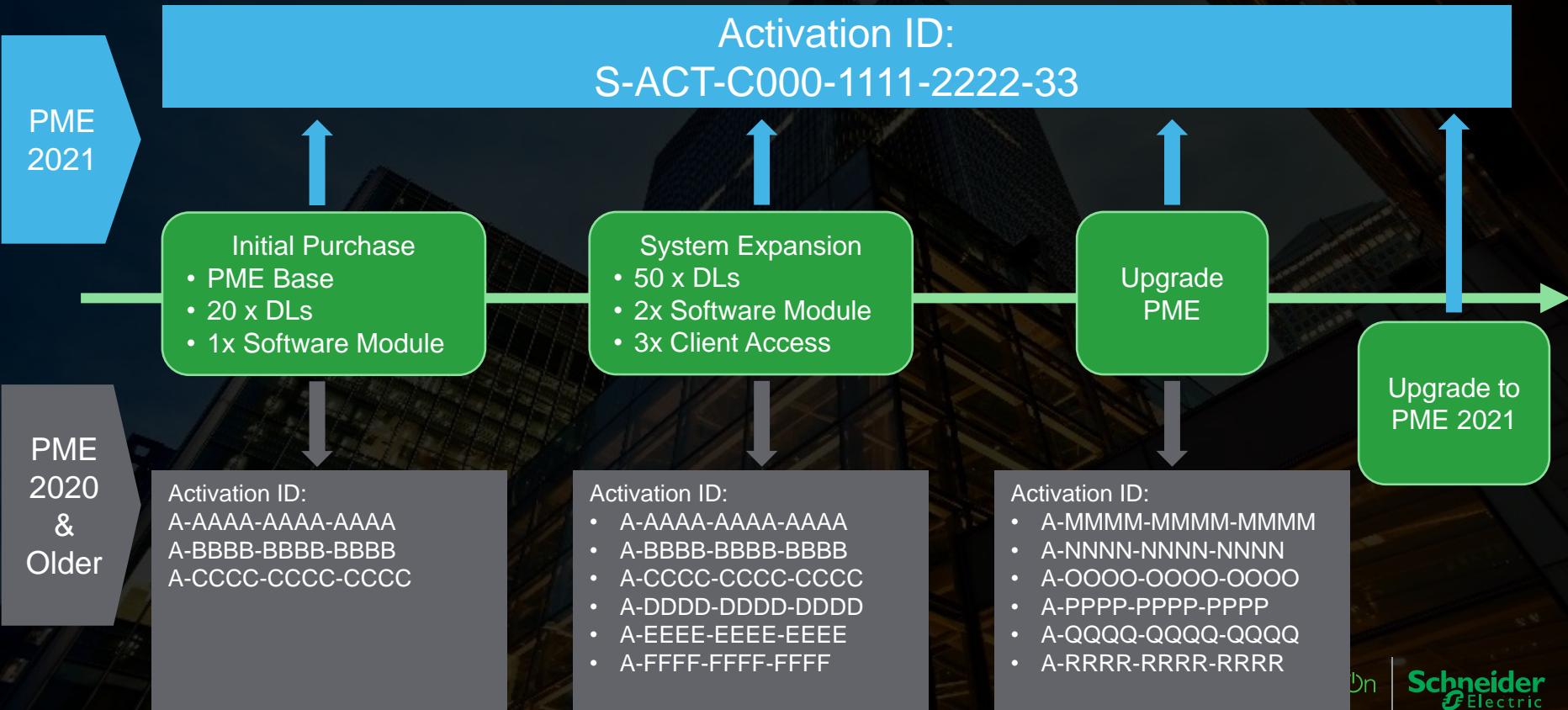
- Users of a group can have private content (dashboards, diagrams, alarms and reports)
- Users can belong to multiple groups
- Users can be Windows or native PME
- PME groups are not required if content partitioning is not needed



PME 2021

IT Friendly License Management

Single Activation ID for a PME system

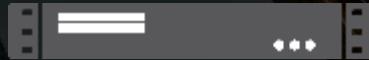


IT Friendly License Management

Reduces License Re-activations on Typical Operations



OR



When running on virtual machines, licenses remain trusted during following scenarios

- Changes to physical host or VM MAC address of NIC card
- Changes to physical host or VM RAM
- Changes to physical host hard disk or VM disk
- Changes to OS clock
- Physical host or VM rebooted
- VM paused or resumed
- VM restored from snapshot
- VM live migrated / moved (eg: VMotion) for common migration scenarios (see slide notes for details)

When running on physical machines, licenses remain trusted during following scenarios

- Physical host rebooted
- Changes to physical host RAM
- Changes to physical hard disk
- Changes to OS clock

Improved PQ Applications

Multi Site PQ Performance

PQ Performance Module



Multi-site Support



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Improved PQ Applications

Multi Site PQ Performance

Role-Based Access Control (RBAC)

Boston Site



Boston User Group



Boston Devices

Create a hierarchy to represent sites and add devices to each site in hierarchy accordingly

Victoria Site



Victoria User Group



Victoria Devices

Create a user group for each site and assign site users to a corresponding user group

Sydney Site



Sydney User Group



Sydney Devices

Select hierarchy sources to site user group can access

Assign user group to PQ Group

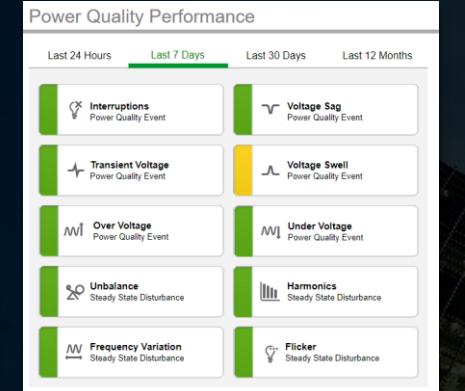
Configure PQ Performance diagrams for each site



Improved PQ Applications

Multi Site PQ Performance

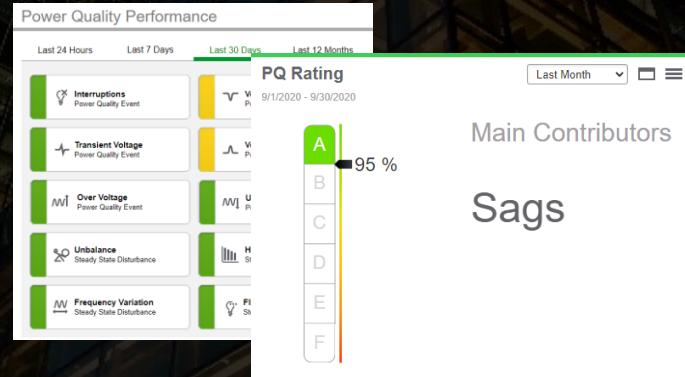
Victoria Site



\$56,411
Estimated Surcharge



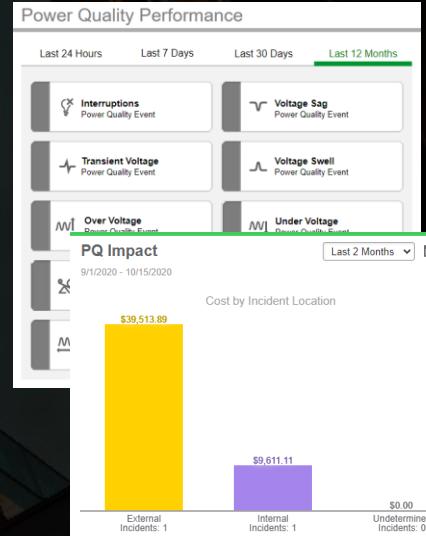
Sydney Site



Main Contributors

Sags

Boston Site



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Improved PQ Applications

Understand Voltage Variations with SARFI Index



Supply

A customer and a utility may agree upon a contract of how many voltage sags and what level of voltage sags is acceptable. SARFI Report helps both the customer and utility to understand the count of the voltage variations and fulfill the contract



Demand

Utility customers may run SARFI index at each of their customers to monitor and benchmark voltage variations, such as voltage sag, among their customers



SARFI Report

1/1/2019 12:00:00 AM - 1/1/2020 12:00:00 AM (Server Local)

Source	SARFI									
	10	50	70	80	90	110	120	140	ITIC	SEMI
Keating.Main_7650	1	2	4	14	72	0	0	0	4	1
Keating.Panel_B	1	1	4	14	86	0	0	0	5	1
Keating.Panel_E	1	1	4	14	86	0	0	0	4	1
Keating.Panel_M	1	1	4	14	86	0	0	0	4	1
Keating.Panel_M_Left	0	1	3	28	63	0	0	0	4	1
Keating.Panel_M_Right	0	0	4	23	61	0	0	0	4	1
Keating.Panel_R	1	1	4	14	86	0	0	0	5	1
Keating.RTU_5	1	1	4	14	86	0	0	0	5	1
Keating.Server_Room_IT_Load	1	1	1	10	38	0	0	0	2	2

Generated on: 7/14/2020 2:48:17 PM

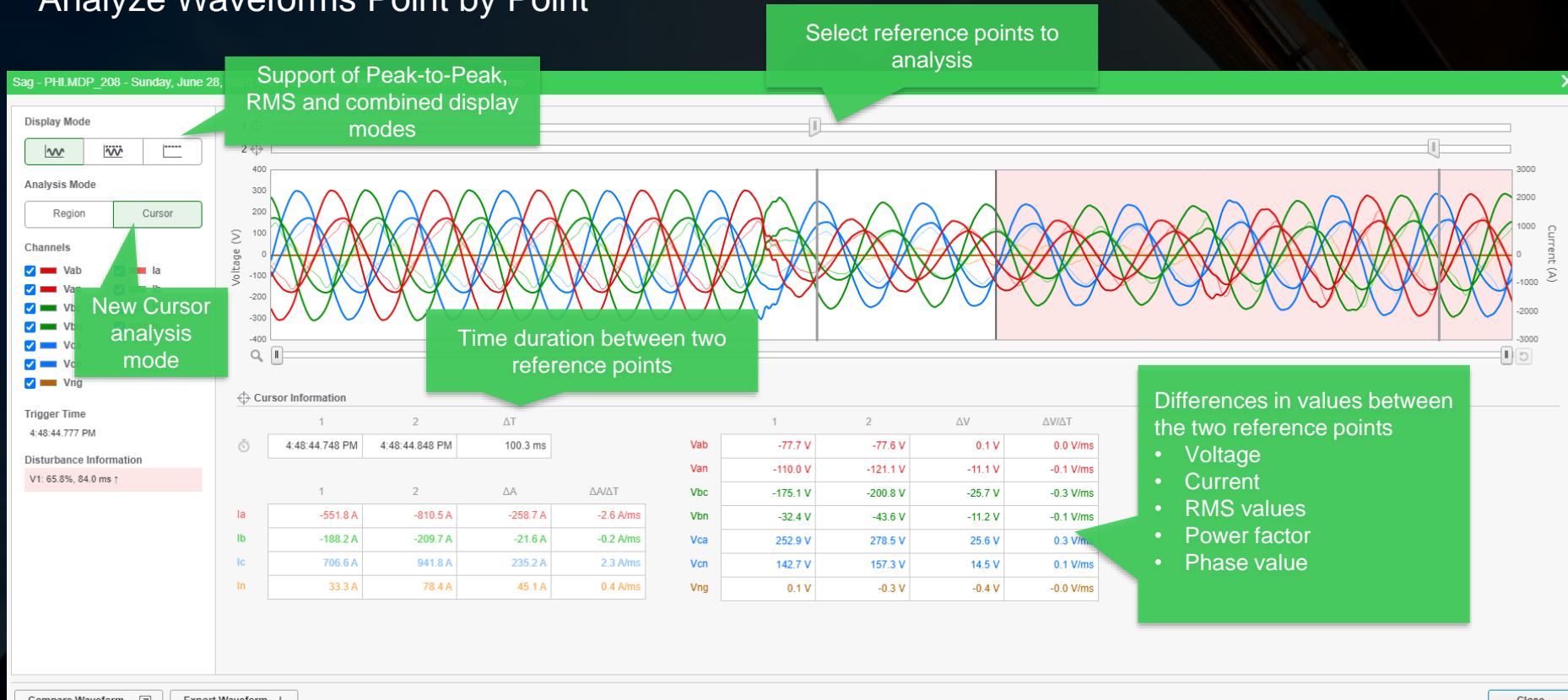
Page 1 of 1

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Improved PQ Applications

Analyze Waveforms Point by Point



- Differences in values between the two reference points
- Voltage
 - Current
 - RMS values
 - Power factor
 - Phase value

Compare Waveform...

Export Waveform

Close

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Improved PQ Applications

Analyze Waveforms Point by Point

Option to show phasor diagrams or not in the Cursor Mode

Advanced Options

Auto scale Y-Axis

View

Phasor



Cursor Information

	1	2	$\Delta(1, 2)$	$\Delta(1, 2)/\Delta T$
I1	0.0 A	0.0 A	0.0 A	0.0 A/ms
I2	0.0 A	0.0 A	0 A	0 A/ms
I3	0.0 A	0.0 A	0 A	0 A/ms
V1	97.0 V	95.9 V	-1.1 V	0 V/ms
V2	114.6 V	133.3 V	18.7 V	0.0 V/ms
V3	114.7 V	133.4 V	18.7 V	0.0 V/ms

	1	2	$\Delta(1, 2)$	$\Delta(1, 2)/\Delta T$
I1 - RMS	0.0 A	0.0 A	0.0 A	0.0 A/ms
I2 - RMS	0.0 A	0.0 A	0 A	0 A/ms
I3 - RMS	0.0 A	0.0 A	0.0 A	0.0 A/ms
V1 - RMS	102.0 V	86.3 V	-15.7 V	0 V/ms
V2 - RMS	119.8 V	119.9 V	0.0 V	0.0 V/ms
V3 - RMS	119.9 V	119.9 V	0.0 V	0.0 V/ms

Phasor



V RMS I RMS $\phi_{V,V}$ $\phi_{V,I}$ Power Factor

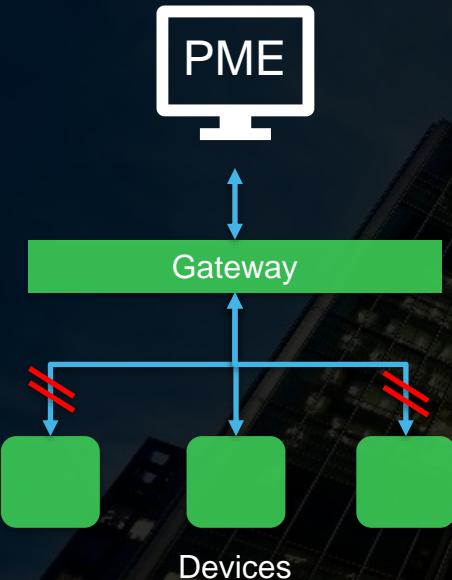
1	88.6	0.0	0.0°	-173.1°	99.3 Lag
2	119.8	0.0	0.3°	157.5°	92.4 Lead
3	119.8	0.0	0.4°	-96.9°	11.9 Lag

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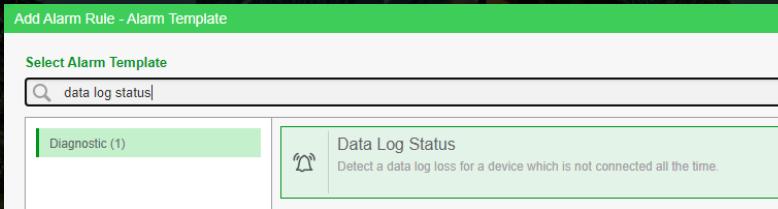
Extended Energy Analysis

Alarm when data not being logged

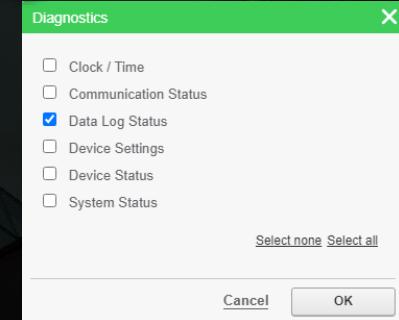


When devices are connected to PME via a gateway, there may be loss of communication between the gateway and downstream devices that PME cannot detect and therefore cannot log the data from devices

- 1 Set up a data log status for devices via gateway



- 2 Set up an alarm view

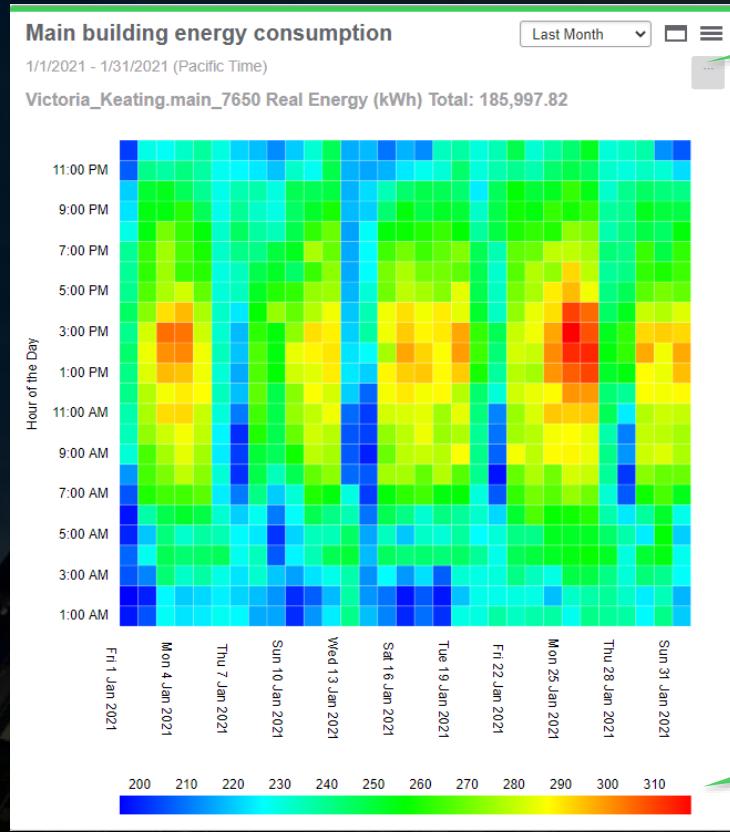


- 3 A dedicated alarm view on data log status that you can configure notification

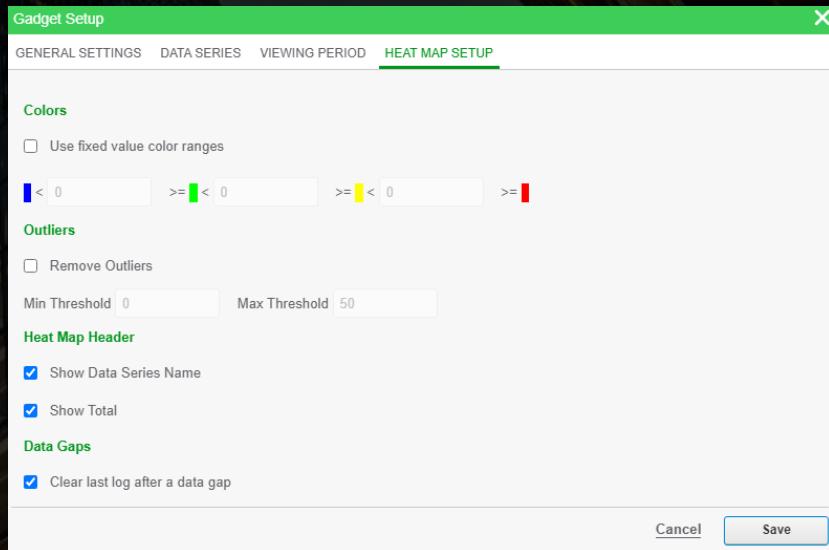
Alarm Status – Data Log Status				
State	Name	Type	Source	
● 5 min 15 sec ago	Data Log Status	Data Log Status	Simulator.PM8000	

Extended Energy Analysis

Updated Heatmap Gadget



New export option menu for print gadget or export gadget to PNG, JPG, SVG, CSV and HTML format



Improved legend display

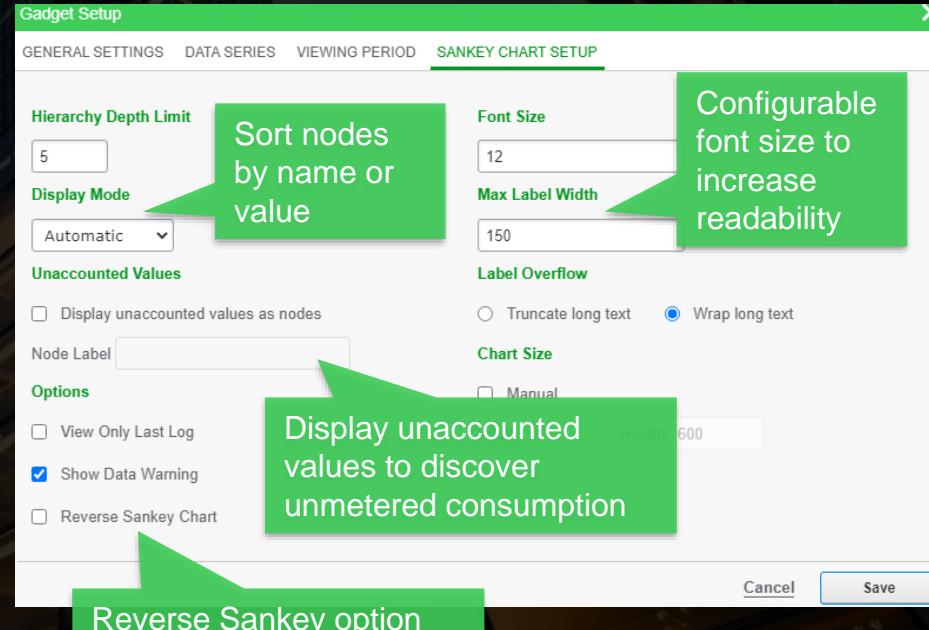
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Extended Energy Analysis

Updated Sankey Gadget

New export option menu for print gadget or export gadget to PNG, JPG, SVG, CSV and HTML format

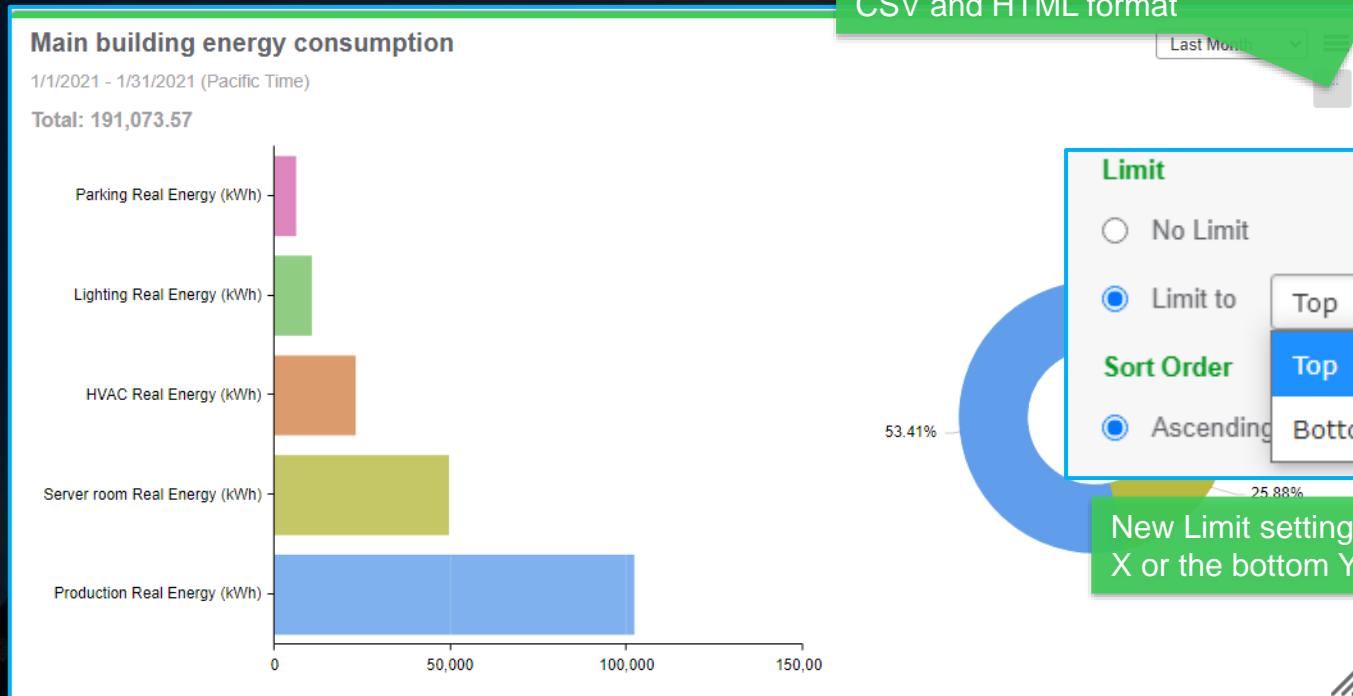


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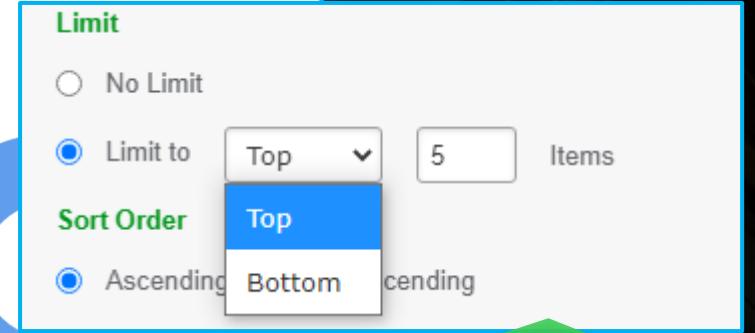
Schneider
Electric

Extended Energy Analysis

Updated Consumption Ranking Gadget



New export option menu for print gadget or export gadget to PNG, JPG, SVG, CSV and HTML format



New Limit setting to show all sources, the top X or the bottom Y sources of your choice

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Extended Energy Analysis

Updated Table Gadget

Show Statistics Row

Type: Average Highlighting Rule: None 0

Type: Average Statistics Column

Type: Sum Highlighting Rule: Under -92

Show Statistics Column

Type: Average Highlighting Rule: Under -92

Highlight Under

Highlight Regular Cells

Highlighting Rule: Under -93

Decimal Places: 2

Statistic row and column to show real time aggregation of values

Cell highlighting gives you a quick glance what the abnormalities are

Real Time Table

Last Update: 2/22/2021 3:53:02 PM Update in 0:08

Measurements	Simulator.PM8...
Power Factor A	-94.1
Power Factor B	-92.1
Power Factor C	-91.0
Average	-92.41

Real Time Table

Last Update: 2/22/2021 3:53:12 PM Update in 0:09

Sources	Power Factor A	Power Factor B	Power Factor C	Average
Simulator.PM8000	-94.2	-92.0	-90.9	-92.37

Extended Energy Analysis

Updated Table Gadget Cont'd

Compute new values in real time with user defined calculated field and custom formula of device measurements

Show User Defined Calculated Field

Calculated Field Name: Power (W)

Formula: A*B Highlighting Rule: None 15111

Variable	Column Name
A	Voltage L-L Avg (V)
B	Current Avg (A)



Sample - Calculating Power from V and I

Last Update: 2/22/2021 9:50:17 PM Update in 0:02

Sources	Voltage L-L Avg...	Current Avg (A)	Power (W)
Simulator.PM8000	208	4	901.22

Sample - Calculating Power Factor

Last Update: 2/22/2021 9:50:53 PM Update in 0:08

Sources	Real Power (kW)	Apparent Pow...	Power Factor
Simulator.PM8000	1	2	0.92

Sample - Calculating kg of Coal from kWh

Last Update: 2/22/2021 9:54:41 PM Updating...

Sources	Real Energy (...)	Kg of Coal
Simulator.PM8000	11	5.23

Extended Energy Analysis

New Measurement Statistics Report

This report give you a statistic summary of measurements that you can choose different aggregation intervals and show statistics respective to TOU

 Helps you understand consumption pattern based on TOU

Measurement Statistics Report

1/1/2021 12:00:00 AM - 2/1/2021 12:00:00 AM (Server Local)

Source	Real Energy, (kWh) Partial Peak				Real Energy (kWh) Off Peak				Voltage A-B (V)			
	Total	Start Value	End Value		Total	Start Value	End Value	Min Value	Min Timestamp	Max Value	Max Timestamp	Average
Warp.WarpMeter	-	-	-	-	-	-	-	-	-	-	-	-
Device created by Data Generation job	13,581.56	531,748.12	550,157.44	4,832.69	533,516.00	549,026.31	-	-	-	-	-	-
Device created by Data Generation job	4,454.62	532,712.31	539,139.00	1,974.38	533,297.06	538,687.31	-	-	-	-	-	-
Device created by Data Generation job	-	-	-	-	-	-	-	585.00	1/26/2021 6:15:00 PM	622.00	1/26/2021 1:45:00 AM	595.57
Device created by Data Generation job	133,979.38	1,305,506.50	1,491,439.25	52,004.25	1,323,279.00	1,479,077.50	-	-	-	-	-	-
Device created by Data Generation job	133,994.88	1,076,115.88	1,262,061.00	52,001.00	1,093,888.75	1,249,697.62	-	-	-	-	-	-
Device created by Data Generation job	26.29	937.78	966.90	2.83	941.32	965.02	-	-	-	-	-	-
EPSS - Supports IPU6 data	5,988.68	34,451.95	42,839.52	2,400.75	35,318.92	42,299.56	575.66	1/5/2021 1:23:00 PM	616.04	1/5/2021 1:55:00 PM	584.04	-
Device created by Data Generation job	-	-0.13	-0.13	-	-0.13	-0.13	-	-	-	-	-	-
Device created by Data Generation job	-	-0.01	-0.01	-	-0.01	-0.01	-	-	-	-	-	-

Support of both cumulative, such as kWh, and non-cumulative measurements, such as Voltage

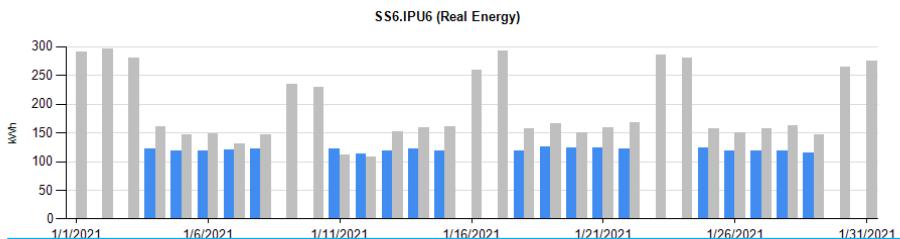
Extended Energy Analysis

New Measurement Statistics Report – Cont'd

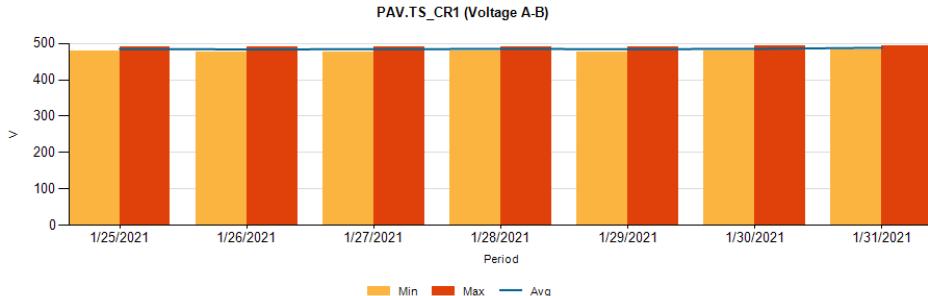
Graphical representation of aggregated measurement statistics



Measurement Statistics Report



Measurement Statistics Report



Support of hierarchy sources

Measuremen

1/1/2021 12:00:00 AM

Source	Real Energy (kWh) Partial Peak			Real Energy (kWh) Off Peak		
	Total	Start Value	End Value	Total	Start Value	End V
LArea2	133,994.88	50.75	49.62	52,001.00	56.12	59
LArea1	133,979.38	50.88	49.62	52,004.25	56.25	59

Flexible aggregation option to analyze statistics daily, weekly, monthly or yearly



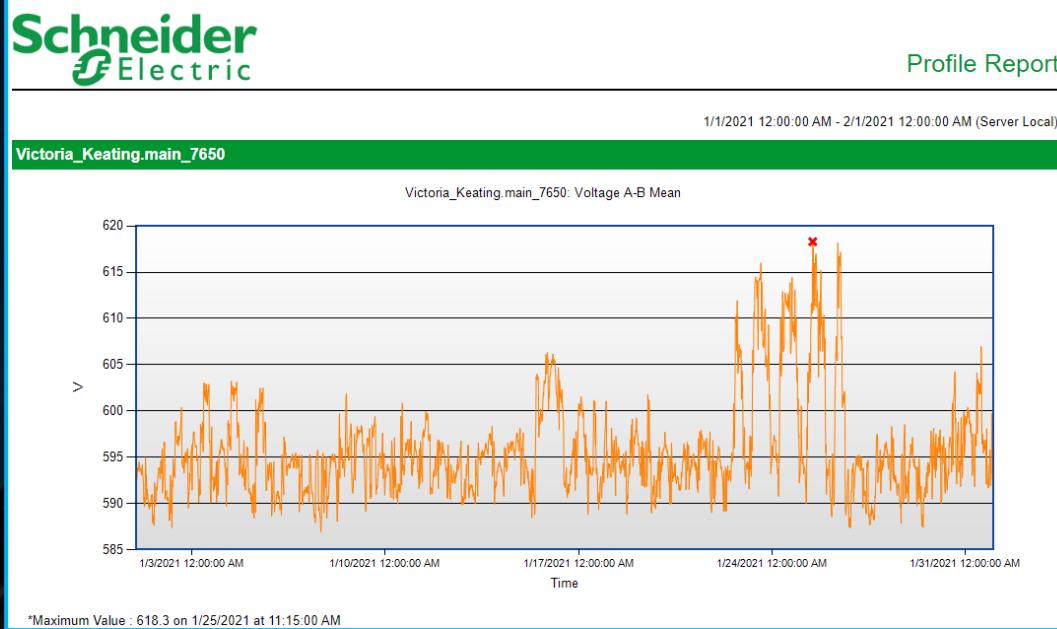
Source	Real Energy (kWh) Partial Peak			
	Total	Start Value	End Value	
Device created by Data Generation job	1/31/2021	6,120.38	1,255,993.62	1,262,061.00
Device created by Data Generation job	12/27/2020	1.75	937.78	939.53
Device created by Data Generation job	1/3/2021	6.89	939.53	947.23
Device created by Data Generation job	1/10/2021	7.41	947.23	955.59
Device created by Data Generation job	1/17/2021	4.46	955.59	960.36
Device created by Data Generation job	1/24/2021	5.02	960.36	966.14
Device created by Data Generation job	1/31/2021	0.76	966.14	966.90
EPSS - Supports IPU6 data	1/3/2021	1,249.32	35,039.43	36,888.49
EPSS - Supports IPU6 data	12/27/2020	587.41	34,451.95	35,037.50
EPSS - Supports IPU6 data	1/10/2021	1,178.57	36,893.84	38,659.86
EPSS - Supports IPU6 data	1/17/2021	1,380.62	38,665.11	40,653.27

Schneide

Extended Energy Analysis

New Profile Report

Similar to Load Profile report, this report allows you to profile any measurements you have logged



Support of hierarchy sources

Support of both cumulative and non cumulative measurements

Option to show first, all or no Max values

Option to use source name, source description, or both source name and description as source label

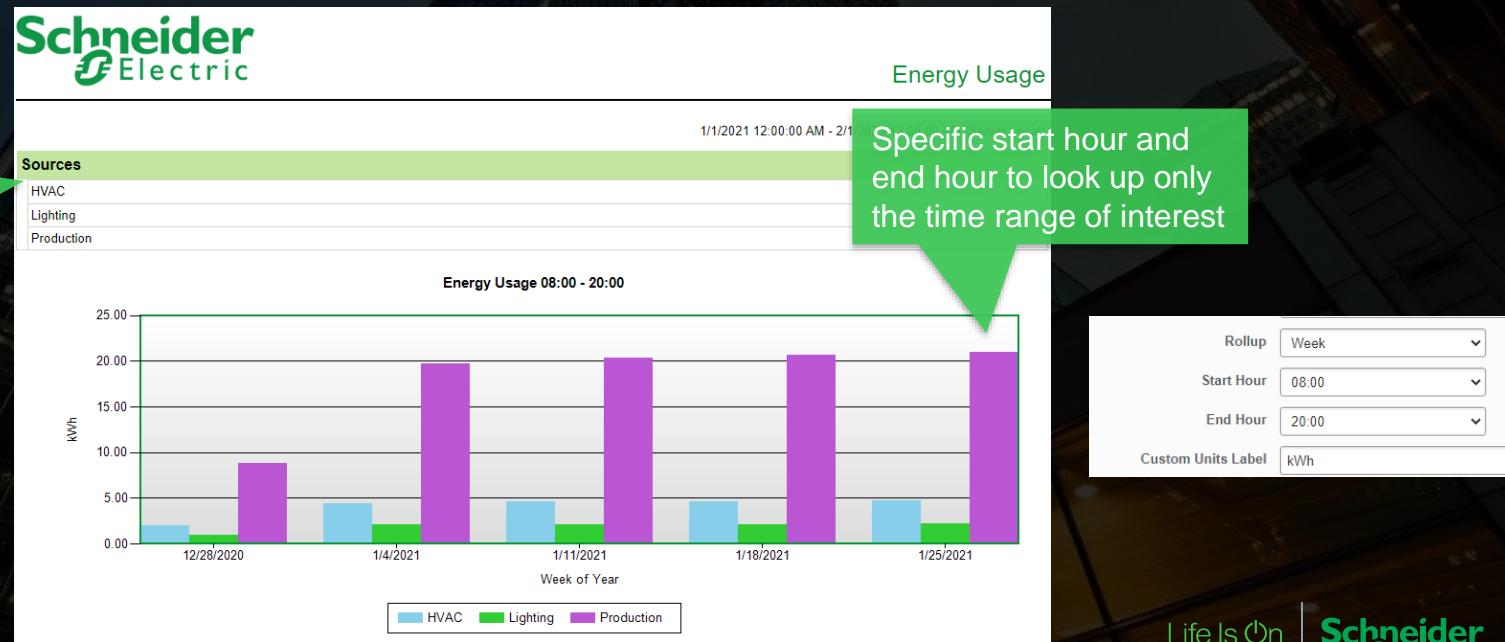
Life Is On

Schneider
Electric

Extended Energy Analysis

New Scaled Energy Usage Report

This report can normalize source measurement pairs before it applies a scale factor from another source measurement pair. It supports different aggregation periods and has a different charting options for data visualization



Extended Energy Analysis

New Scaled Energy Usage Report – Cont'd

Include Column Chart Yes No

Include Stacked Column Chart Yes No

Include Line Chart Yes No

Include Pie Chart Yes No

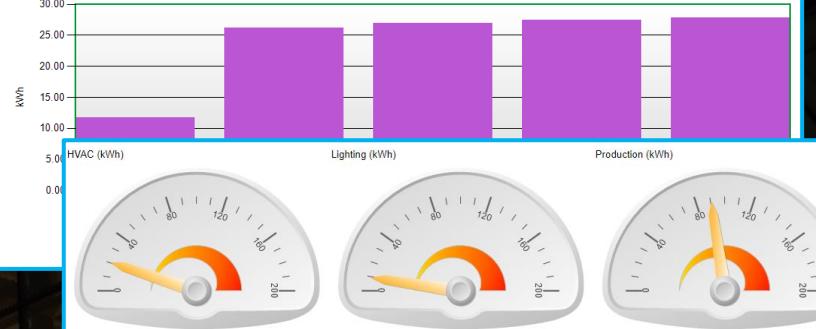
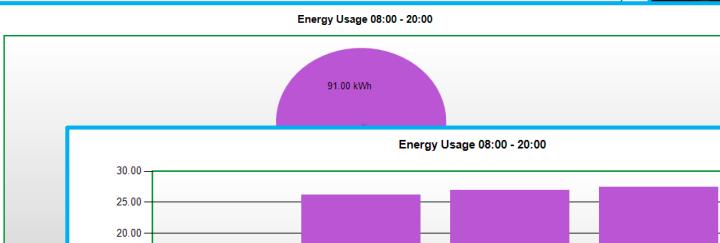
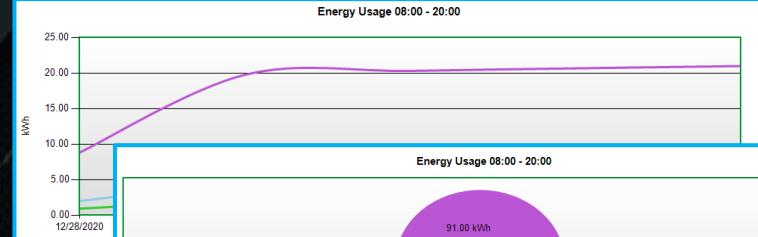
Include 100% Area Chart Yes No

Include Area Chart Yes No

Include Gauges Yes No

Include Tables Yes No

Visualize energy usage with different charting options



Life Is On

Schneider
Electric

Extended Energy Analysis

New KPI by TOU Report

This report can normalize source measurement pairs and apply a scale factor from another source measurement pair. It also supports different rollup periods and TOU, and can email notification on target value exceptions. Being one of the most flexible reports, this report gives you different options to analyze energy usage and stay alerted on abnormality



KPI by TOU Report

Selected TOU Schedule
Sample Schedule_Imported

Usage Summary

Normalize kWh into common consumption among sites, production lines, processes and so on to get overall summary of consumption

Source	Partial Peak (Kg of Coal)	Off Peak (Kg of Coal)	Total (Kg of Coal)
HVAC	718.64	320.85	1,039.49
Lighting	330.20	147.42	477.62
Parking	189.85	84.76	274.61
Production	3,195.45	1,426.65	4,622.09
Server room	1,548.51	691.35	2,239.87
Total	5,982.65	2,671.03	8,653.69

Support of hierarchy sources

Line is On

Schneider
Electric

Extended Energy Analysis

New KPI by TOU Report – Cont'd

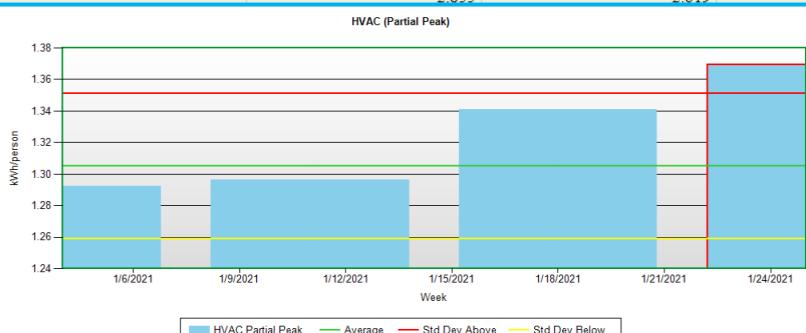
Use a scale source and measurement and scale multiple to calculate simple KPI such as

$\text{kWh/person} = \text{kWh} / \text{occupancy count} * 10$, where occupancy count is the scale source measurement pair and 10 is the scale multiplier

The screenshot shows a configuration panel for a scale source. It includes fields for 'Sources' (with a 'Select Sources' dropdown set to 'HVAC'), 'Scale Source' (with a 'Select Source' dropdown set to 'Victoria_Keay'), 'Scale Measurement' (with a 'Select Measurement' dropdown set to 'Frequency N'), 'Scale Multiplier' (set to 10), 'Precision' (set to 3), and 'Custom Units Override' (set to 'kWh/person'). A large green arrow points from this panel towards the main report area.

Usage Summary

Source	Partial Peak (kWh/person)	Off Peak (kWh/person)	Total (kWh/person)
HVAC	1.325	1.215	1.289
Lighting	0.609	0.558	0.592
Parking	0.350	0.321	0.341
Production	5.891	5.404	5.732
Server room	2.855	2.619	2.778
Total			2.146



Usage Breakdown Table - HVAC

Aggregation Interval	Partial Peak (kWh/person)
1/4/2021	1.293
1/11/2021	1.296
1/18/2021	1.341
1/25/2021	1.370
Total	1.325

Extended Energy Analysis

New KPI by TOU Report – Cont'd

Use Standard deviation as targets to visualize consumption and to send out notification when there is target value exception so that you can make adjustment or preventive measures to manage energy consumption

Standard Deviation Calculation Period: Last Month [start of Server Local Time]

Rollup: Day

Select Time of Use: Sample Schedule_Imported

Use Standard Deviation Target in Column Chart: Yes No

Show Average in Column Chart: Yes No

Standard Deviation Multiplier: 1

Chart Type: Column

Notify On Target Value Exception: Yes No

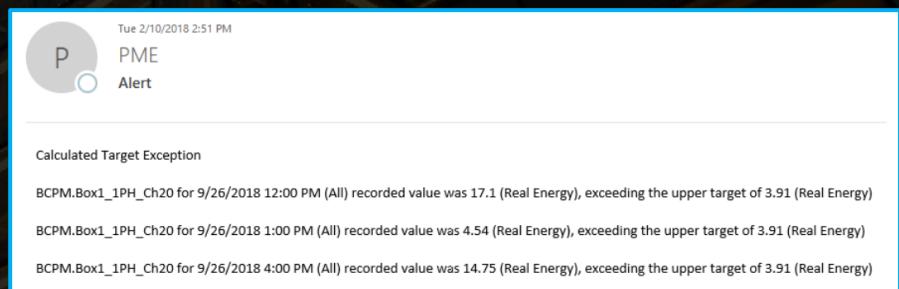
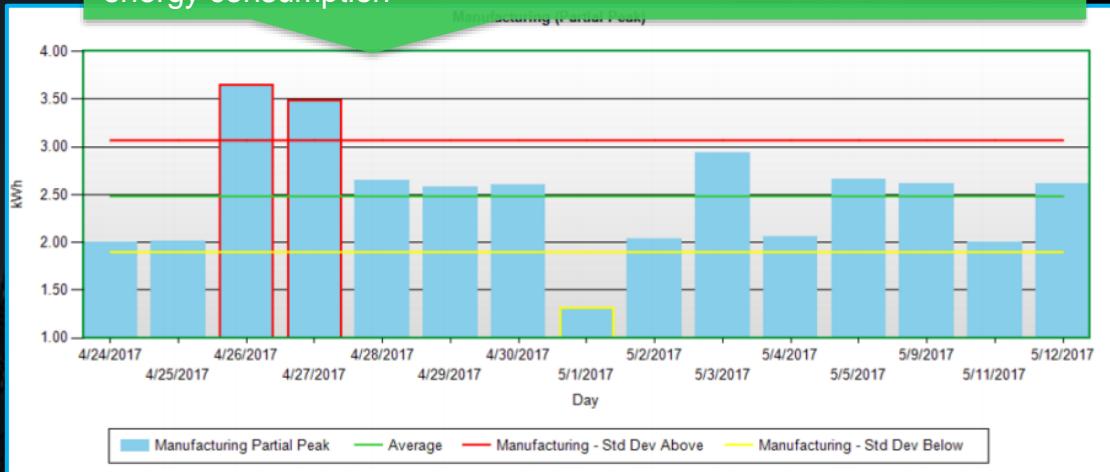
Notify on Std Dev Exception: Do Not Notify

Notify/Show Charts on Last Aggregated Interval Exception Only

Show Charts with Exception Only: Upper Only, Lower Only, None

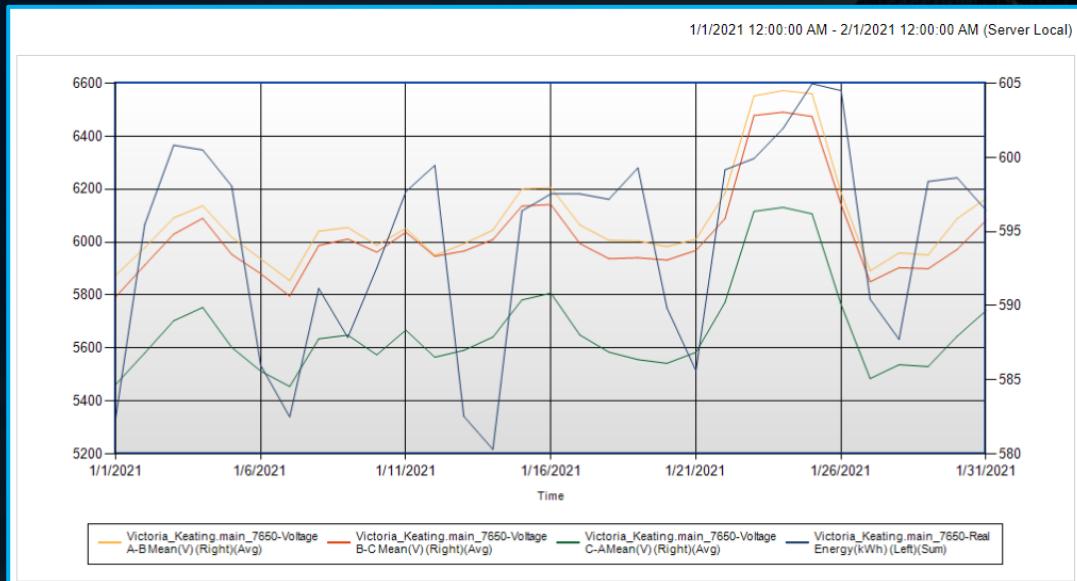
Email Address:

Email Subject: None



Extended Energy Analysis

Updated Multiple Trend Report



Support of hierarchy sources

High speed data support

Multiple aggregation option support such as hourly, daily and weekly

Multiple aggregation methods per axis such as sum, avg, min and max

Life Is On

Schneider
Electric

Extended Energy Analysis

Updated Multiple Trend Report – Cont'd

Quickly understand measurement trends with summary table

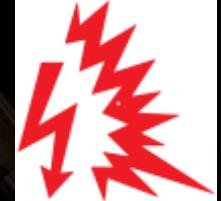
Summary Table		Avg	Min/Max	Min/Max Timestamp
Victoria_Keating.main_7650	Real Energy(Sum)	5,999.87	5,216.50	1/14/2021
			6,598.88	1/25/2021
Victoria_Keating.main_7650	Voltage A-B Mean(Avg)	595.79	591.69	1/7/2021
			604.52	1/24/2021
Victoria_Keating.main_7650	Voltage B-C Mean(Avg)	594.75	590.59	1/1/2021
			603.06	1/24/2021
Victoria_Keating.main_7650	Voltage C-A Mean(Avg)	588.36	584.54	1/7/2021
			596.63	1/24/2021

Aggregating more cumulative and non cumulative measurements for trend analysis

Period	Left Axis		Right Axis		
	Victoria_Keating.main_7650		Victoria_Keating.main_7650	Victoria_Keating.main_7650	Victoria_Keating.main_7650
	Real Energy(Sum)	Voltage A-B Mean(Avg)	Voltage B-C Mean(Avg)	Voltage C-A Mean(Avg)	
1/2/2021	6,065.50	593.90	592.72	586.79	
1/3/2021	6,366.38	595.92	594.82	588.97	
1/4/2021	6,348.38	596.74	595.89	589.87	
1/5/2021	6,212.00	594.62	593.46	587.18	
1/6/2021	5,534.38	593.16	592.15	585.58	

More Connected Devices and Applications

Arc flash can create a high temperature explosion that causes substantial damage, fire and injury. It can happen during abnormal use due to a corruption of isolation or during commissioning or maintenance, rendering equipment unusable and forcing costly downtime with serious economic consequences.



Easergy P5



SE's latest protection relay with built-in arc flash protection to reduce arc flash risk categorization and improve safety

Real time monitoring of Easergy P5 device status and alarm on when Arc Flash is detected to improve people safety and operation continuity

Trip Status - Latching		Arc Protection Settings								
		Stage	Stage Mode	Trip Delay [X1ms]	Hold Time X1ms	Sensor Activated				
IoUo>>	32N	Inactive	IoInt>	67NI	Inactive	Fx	81	0	20	Yes
I Phi>	67	Inactive	U>>	39	Active	U>	59	0	20	Yes
I Phi>>	67	Inactive	U>>>	39	Active	I2>	46BC	0	20	Yes
I Phi>>>	67	Inactive	I>	50/51	Inactive	T>	49F	0	20	Yes
I Phi>>>>	67	Inactive	U<<	27	Inactive	U2>	47	0	20	Yes
Uo>>>	59N	Inactive	U<<<	27	Inactive	Fxx	81	0	20	Yes
Io>	50/51N	Inactive	Uo>	59N	Inactive	df/dt>	81R	0	20	Yes
I>>>	50/51	Inactive	Uo>>	59N	Inactive	P<	32	0	20	Yes
IoUo>	32N	Inactive	SOTF	50HS	Inactive	f<	27	0	20	Yes
Io>>	50/51N	Inactive	df/dt>>	81R	Inactive	f<<	81U	0	20	Yes
Io>>>	50/51N	Inactive	P<<	32	Inactive	Active		0	20	Yes

Arc Protection		Arc Stages	
	Latching	Non Latching	
01	Inactive	Inactive	
02	Inactive	Inactive	
03	Inactive	Inactive	
04	Inactive	Inactive	
05	Inactive	Inactive	
06	Inactive	Inactive	
07	Inactive	Inactive	
08	Inactive	Inactive	
I	Inactive	Inactive	
Io	Inactive	Inactive	

Arc Protection Settings				
Stage	Stage Mode	Trip Delay [X1ms]	Hold Time X1ms	Sensor Activated
01	Light	0	20	Yes
02	Light	0	20	Yes
03	Light	0	20	Yes
04	Light	0	20	Yes
05	Light	0	20	Yes
06	Light	0	20	Yes
07	Light	0	20	Yes
08	Light	0	20	Yes

Arc Protection		Arc Stages	
	Latching	Non Latching	
01	Inactive	Inactive	
02	Inactive	Inactive	
03	Inactive	Inactive	
04	Inactive	Inactive	
05	Inactive	Inactive	
06	Inactive	Inactive	
07	Inactive	Inactive	
08	Inactive	Inactive	
I	Inactive	Inactive	
Io	Inactive	Inactive	

Trip Status - Latching		Arc Protection Settings								
		Stage	Stage Mode	Trip Delay [X1ms]	Hold Time X1ms	Sensor Activated				
IoUo>>	32N	Inactive	IoInt>	67NI	Inactive	Fx	81	0	20	Yes
I Phi>	67	Inactive	U>>	39	Active	U>	59	0	20	Yes
I Phi>>	67	Inactive	U>>>	39	Active	I2>	46BC	0	20	Yes
I Phi>>>	67	Inactive	I>	50/51	Inactive	T>	49F	0	20	Yes
I Phi>>>>	67	Inactive	U<<	27	Inactive	U2>	47	0	20	Yes
Uo>>>	59N	Inactive	U<<<	27	Inactive	Fxx	81	0	20	Yes
Io>	50/51N	Inactive	Uo>	59N	Inactive	df/dt>	81R	0	20	Yes
I>>>	50/51	Inactive	Uo>>	59N	Inactive	P<	32	0	20	Yes
IoUo>	32N	Inactive	SOTF	50HS	Inactive	f<	27	0	20	Yes
Io>>	50/51N	Inactive	df/dt>>	81R	Inactive	f<<	81U	0	20	Yes
Io>>>	50/51N	Inactive	P<<	32	Inactive	Active		0	20	Yes

Arc Protection		Arc Stages	
	Latching	Non Latching	
01	Inactive	Inactive	
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Io>	50/51N	Inactive	Uo>	59N	Inactive	df/dt>	81R	0	20	Yes
I>>>	50/51	Inactive	Uo>>	59N	Inactive	P<	32	0	20	Yes
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Io>	50/51N	Inactive	Uo>	59N	Inactive	df/dt>	81R	0	20	Yes
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07	Inactive	Inactive	
08	Inactive	Inactive	
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Io	Inactive	Inactive	

More Connected Devices and Applications

The Energy Code Compliance application analyzes energy data for your building loads to help the facility manager or energy manager to comply with building energy codes and standards

Sample aggregated loads for a three-floor building

NEC 220.12	ASHRAE 90.1	CA Title 24	IECC	LEED
<ul style="list-style-type: none">Total Lighting	<ul style="list-style-type: none">Exterior LightingInterior LightingHVACPlug LoadsSite1	<ul style="list-style-type: none">Total LightingHVACPlug LoadsSite1Floor 1Floor 2Floor 3	<ul style="list-style-type: none">Exterior LightingInterior LightingHVACPlug LoadsSite1	<ul style="list-style-type: none">Total LightingPlug Loads

More Connected Devices and Applications

Standard Scope of Work to help you propose to customers and effectively deploy application



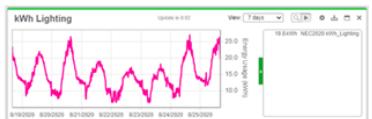
Technical Proposal

Helps customer to understand

- What the application is
- What deployment options are
- How we verify deployment with customer
- How we orientate user, and
- Application examples for customer to see what the deployment may look like

(ASHRAE 90.1, CA Title 24, IECC, LEED) Example

The following image shows an example trend for a kWh



Estimate

Helps tendering teams to quote application deployment

- System requirements
 - Devices
 - Software
- Checklist and time estimates

Step	Summary	Estimate (hours)
<input type="checkbox"/> Plan aggregated loads and measurements	Plan your aggregated loads and measurements based the detailed requirements of the codes and standards you are configuring.	2.00
<input type="checkbox"/> Add a new VIP	Add a new custom VIP for energy code and standard compliance.	0.25
<input type="checkbox"/> Configure energy compliance framework	Use the provided PMEEnergyCompliance.fwn file as a template to calculate aggregated loads in Designer.	1.00
<input type="checkbox"/> Add logical device type and devices	Add a new logical device type for energy compliance. Add logical devices for each of your aggregated loads.	0.50
<input type="checkbox"/> Configure web applications	(NEC 220.12) Configure alarms and notifications. (ASHRAE 90.1, CA Title 24, IECC, LEED) Configure trends. (CA Title 24) Configure Load Profile report. (CA Title 24) Configure Energy Cost report.	1.50
<input type="checkbox"/> Verify configuration	Verify the software configuration.	1.00
<input type="checkbox"/> Review with end user	Review the application with the end user.	1.00
		Total: 7.25



Deployment Guide

Helps Application Engineers to plan and deploy the application

- Prerequisites
- Deployment steps

(PME option) Configure software

Complete the following software configuration steps

1. [Add a new VIP](#)
2. [Configure energy compliance framework](#)
3. [Add logical device type and devices](#)
4. [Configure web applications](#)

• Verification steps

(PME option) Verify software configuration

1. (NEC 220.12) Verify that notifications for lighting load SMS notifications are configured, confirm that the notifications are sent.
2. (ASHRAE 90.1, CA Title 24, IECC, LEED) Verify that the energy compliance framework is configured and standards.
3. (CA Title 24) Verify that you can read the peak demand report.
4. (CA Title 24) Verify that you can read the Energy performance report.
5. (IECC) Verify that you can read the building Power report.

PME 2022 What's New

Connecting with other systems and platforms



PME 2022 equipped with EWS Server and Client to exchange data with other systems

Configure PME as EWS Server for EWS clients to access PME's data

EWS Server

Set credentials for the EcoStruxure Web Services (EWS) account. This account

Change Credentials

User name: Supervisor

Password: [redacted]

Confirm Password: [redacted]

EBO



Exchange real time and historical data and alarms with EBO using EWS without ETL

New!

Configure PME as a EWS Client to connect to a EWS Server and obtain data

EWS Client - Configuration

EWS Client Details

Client Name*: You must enter a client name.

Description: [redacted]

EWS Server Authentication

Server URL*: You must enter server URL... Server Version: 1.2

Server User Name*: You must enter server user name. Server Password*: You must enter server password.

Enabled: [switch]

EWS Server Polling: [switch]

Historical Data Polling: [switch] Historical Data Poll Interval (seconds): 30

Alarm Data Polling: [switch] Alarm Data Poll Interval (seconds): 30

New!

Configure device measurement mappings to store data received by EWS Client to PME

EWS Client - Device/ Measurement Mapping

Refresh Delete all mapping Enable all mapping

Server: 00Server 1 Modbus TCP Network/IOH9000 1S1

Device Name: [redacted]

Measurement Name: [redacted]

<Filter>

Over Current A Alarm

Over Voltage A-B Alarm

Over Voltage B-C Alarm

new

Frequency Trend Log

I 4 Trend Log

Device Name: [redacted]

Measurement Name: [redacted]

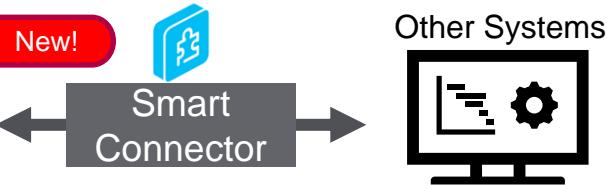
<Filter>

Over Current A Alarm

Over Voltage A-B Alarm

Over Voltage B-C Alarm

EWS Server and Client



Smart Connector and its extensions can be used to bring historical data from PME to other systems and vice versa

Finding probable cause of PQ disturbance

Voltage Sag

Voltage Swell

Over Voltage

Under Voltage

Frequency Variation



Business owners and corporations may experience problems in their equipment and inefficiency in their operations



- Equipment failures
- Circuit board failures
- Data loss
- Tripping of protection devices
- Overheating in ED network
- Damage of sensitive equipment
- Reduced production output
- Abnormal high energy consumption



Interruptions

Transient Voltage

Voltage Unbalance

Harmonics

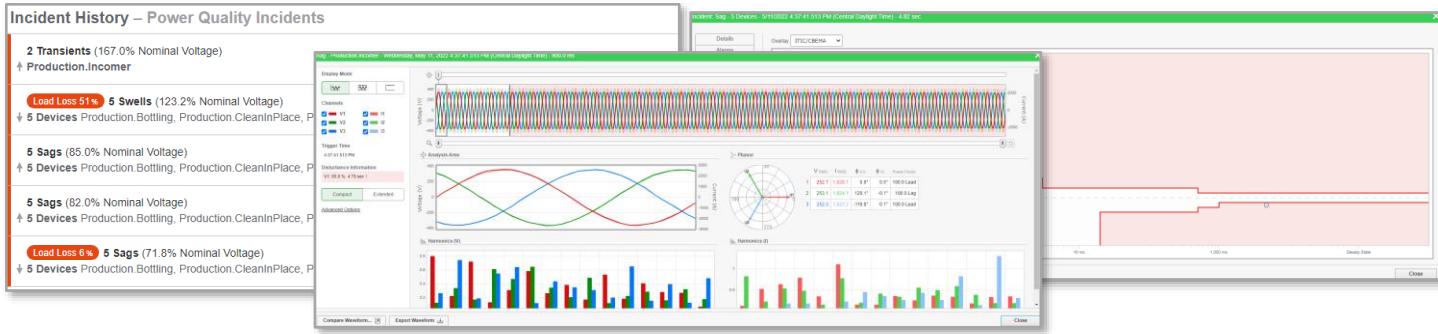
Flicker

Identify cause of PQ disturbance

Detect



Alarm



Analyze and Identify



Automated waveform analytics

Help operators understand high probable cause of Power Quality events



- Caused by upstream events:
- Voltage Sag
 - Capacitor switching

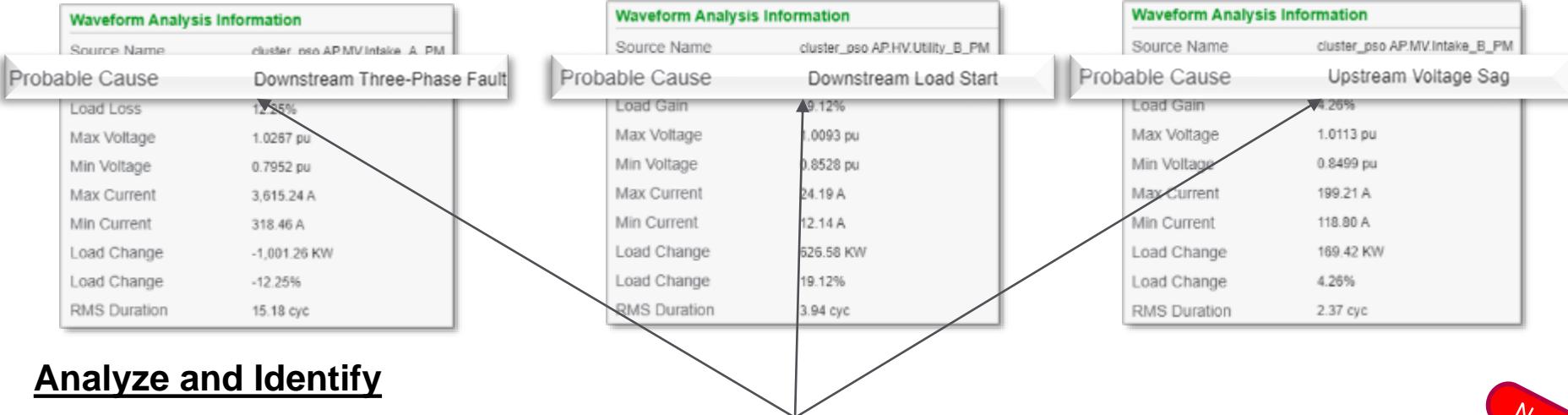


- Caused by downstream events:
- Inrush Event
 - Load Start
 - Single-Phase Fault

- Subcycle Fault
- Three-Phase Fault
- Two-Phase Fault
- Capacitor switching

New!

Identify cause of PQ disturbance



Analyze and Identify

Automated waveform analytics
Help operators understand high probable cause of Power Quality events

New!

Caused by upstream events:

- Voltage Sag
- Capacitor switching

Caused by downstream events:

- Inrush Event
- Load Start
- Single-Phase Fault

- Subcycle Fault
- Three-Phase Fault
- Two-Phase Fault
- Capacitor switching

Connecting with other systems and platforms



PME 2022 equipped with EWS Server and Client to exchange data with other systems

Configure PME as EWS Server for EWS clients to access PME's data

EWS Server

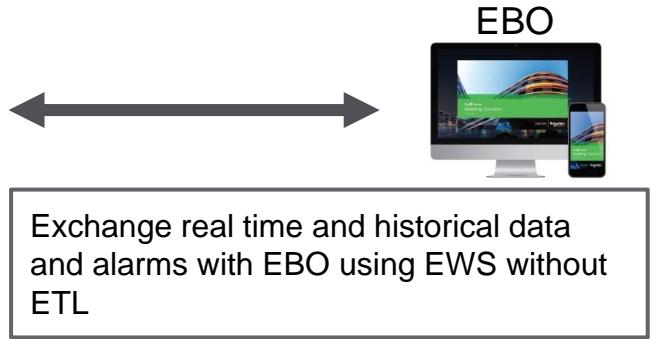
Set credentials for the EcoStruxure Web Services (EWS) account. This account

Change Credentials

User name: Supervisor

Password: [redacted]

Confirm Password: [redacted]



New!

Configure PME as a EWS Client to connect to a EWS Server and obtain data

EWS Client - Configuration

EWS Client Details

Client Name*: You must enter a client name.

Description

EWS Server Authentication

Server URL*: You must enter server URL... Server Version: 1.2

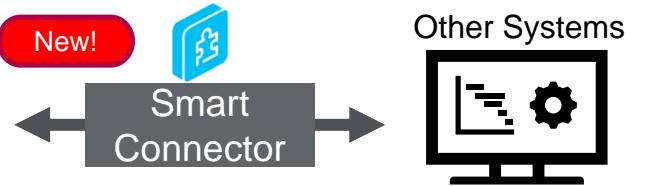
Server User Name*: You must enter server user name. Server Password*: You must enter server password.

Enabled:

EWS Server Polling:

Historical Data Polling: Historical Data Poll Interval (seconds): 30

Alarm Data Polling: Alarm Data Poll Interval (seconds): 30



New!

Configure device measurement mappings to store data received by EWS Client to PME

EWS Client - Device/ Measurement Mapping

Refresh Delete all mapping Enable all mapping

Server: 00Server 1 Modbus TCP Network/IOH9000 1S1

Device Name: [redacted]

Measurement Name: [redacted]

Over Current A Alarm

Over Voltage A-B Alarm

Over Voltage B-C Alarm

new

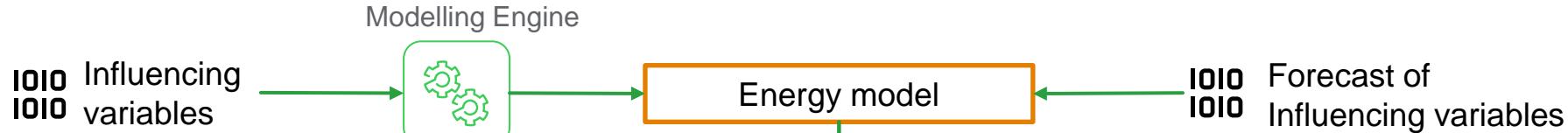
Frequency Trend Log

I 4 Trend Log

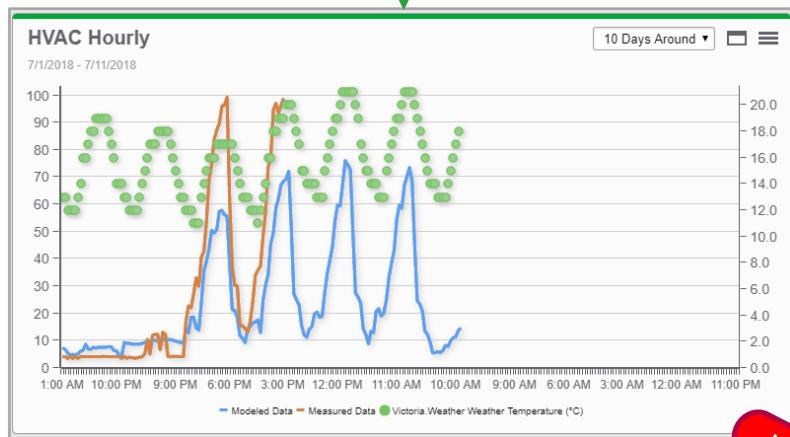
Smart Connector and its extensions can be used to bring historical data from PME to other systems and vice versa

Forecast consumption with energy model

Energy Analysis Reports Module



Monitor and analyze modeled data vs actual metered data to understand model accuracy and adjust model if needed



Model can run with forecast data of influencing variables to calculate consumption forecast, which helps customers to plan their operation and consumption accordingly

New!

Life Is On

