

# **GPM PLUS**

## **2023.3 - User Guide**

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# Get started

This section contains the information that you need to start using GPM Plus.

# Software requirements

GPM Plus is a remote application and has no CPU and RAM minimum requirements. However, the remote desktop client that connects you to GPM Plus does use your machine's resources.

The requirements to use GPM Plus through a remote desktop client are the following:

- A remote desktop client, such as Remote Desktop Connection in Microsoft Windows.
- Connection speed: 2Mb/s in download.
- Screen resolution: 1024 x 768.

## Connect to GPM Plus

GPM Plus is hosted on a remote server and uses Active Directory to manage users. A GPM representative will give you the Remote Desktop Connection (RDP) file and the credentials to connect to your GPM Plus instance.

There are two methods to connect to GPM Plus depending on your system:

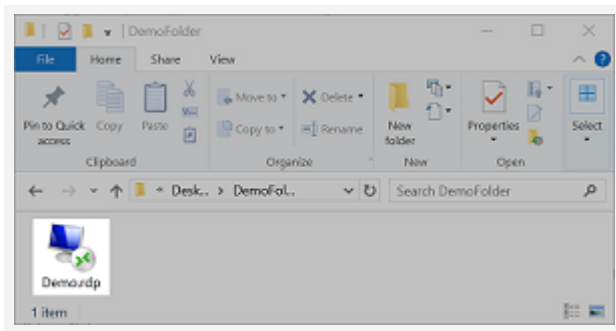
- [Connect from Windows](#)
- [Connect from Mac](#)

# Connect to GPM Plus from Windows

To connect to GPM Plus from a Windows device, follow these steps:

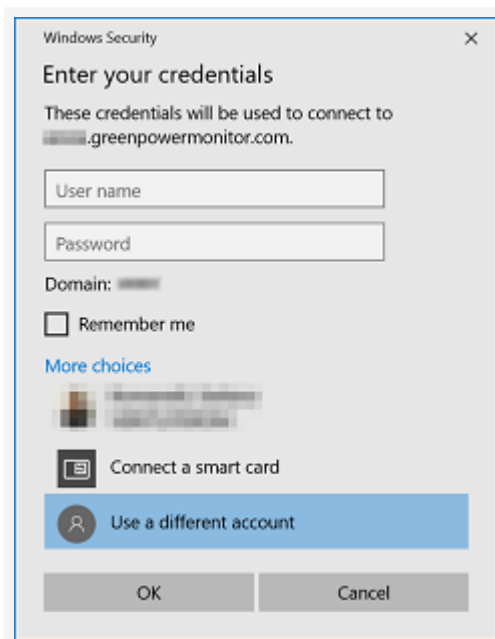
- 1 Open the RDP file provided by your GPM representative.

## RDP file



**Result:** The Remote Desktop Connection window opens:

## Remote Desktop Connection

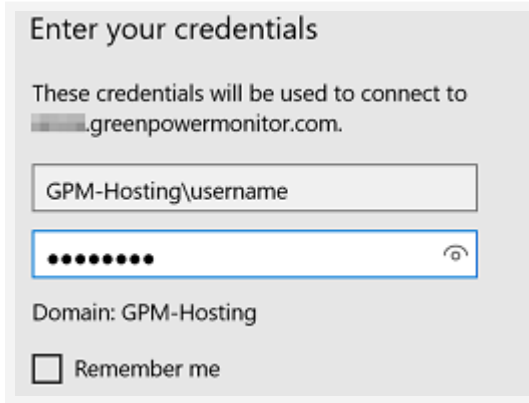


- 2 In the *User name* and *Password* fields, enter your Active Directory username and password.

**NOTE:** Use the format `DOMAIN\username`, where "DOMAIN" is the domain from the **Active Directory**. The domain name is saved for future log-ins, but you can change it by following the alternative to this step below.

OR: If it is the first time you are logging in, or if you want to access GPM Plus with a different username, on the **Windows Security** dialog, click **More choices** and select **Use a different account**.

### Remote log-in example



The screenshot shows a Windows Security dialog box titled "Enter your credentials". It contains the following elements:

- Text: "These credentials will be used to connect to [redacted].greenpowermonitor.com."
- Username field: A text box containing "GPM-Hosting\username".
- Password field: A text box with masked characters (dots) and a visibility icon (an eye) on the right.
- Domain label: "Domain: GPM-Hosting".
- Remember me checkbox: An unchecked checkbox labeled "Remember me".

## Result

You are now connected to GPM Plus.

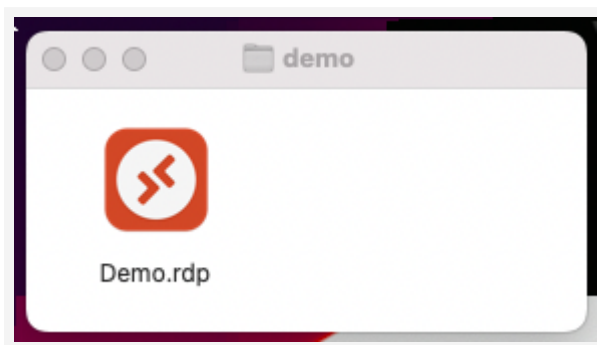
# Connect to GPM Plus from Mac

To connect to GPM Plus from a Mac device, follow these steps:

**NOTE:** To establish a remote connection, you first need to install the Microsoft Remote Desktop app from the Mac App Store.

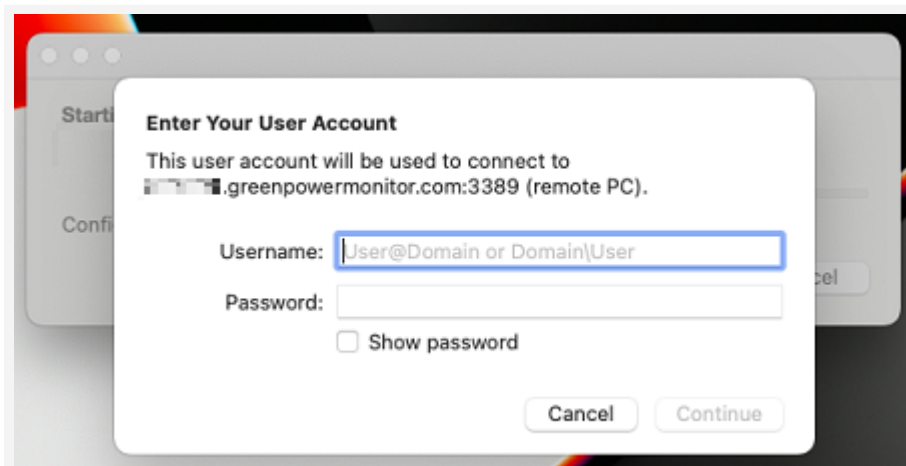
- 1 Open the RDP file provided by your GPM representative.

## RDP file



**Result:** The Remote Desktop Connection window opens:

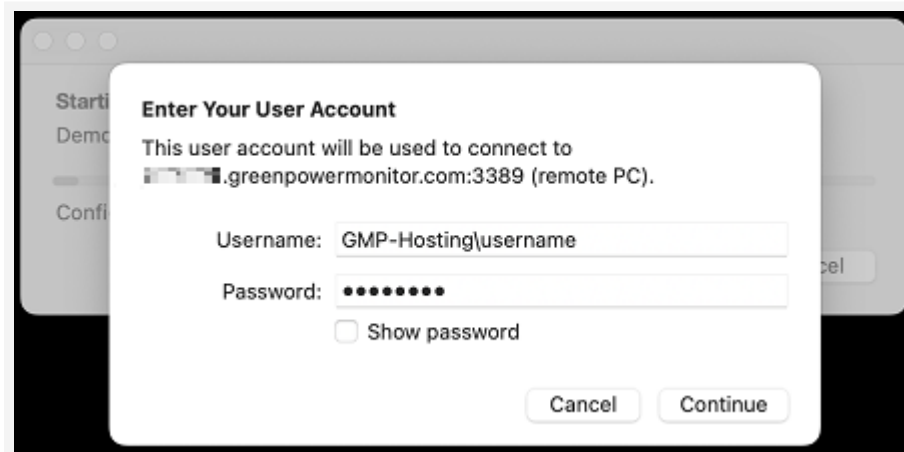
## Remote Desktop Connection



- 2 In the *User name* and *Password* fields, enter your Active Directory username and password.

**NOTE:** Use the format `DOMAIN\username`, where "DOMAIN" is the domain from the **Active Directory**.

## Remote log-in example



## Result

You are now connected to GPM Plus.

# Disconnect from GPM Plus

You can disconnect from GPM Plus by signing out of your remote desktop connection.

There are two methods to disconnect from GPM Plus depending on your system:

- [Disconnect from Windows](#)
- [Disconnect from Mac](#)



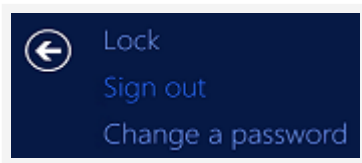
# Disconnect from GPM Plus from Windows

To disconnect from GPM Plus from a Windows device, follow these steps:

- 1 With the Remote Desktop Connection window active, press **Ctrl + Alt + End**.

**Result:** The remote connection options open:

## Remote connection options



- 2 Click **Sign out**.

## Result

You are now disconnected from GPM Plus.

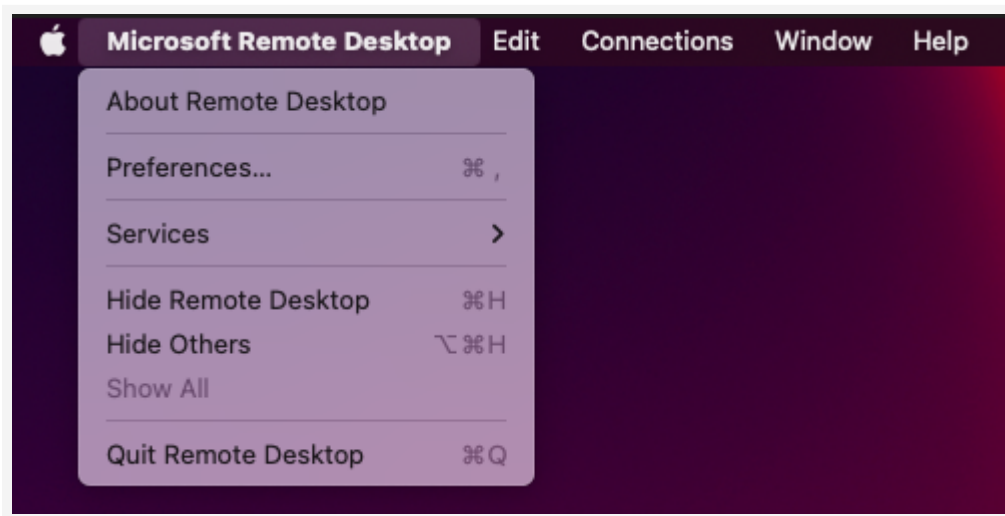
# Disconnect from GPM Plus from Mac

To disconnect from GPM Plus from a Mac device, follow these steps:

- 1 With the Remote Desktop Connection window active, select **Microsoft Remote Desktop** and then **Quit Remote Desktop**.

**Result:** The remote connection options open:

## Remote connection options



- 2 Click **Sign out**.


## Result

You are now disconnected from GPM Plus.

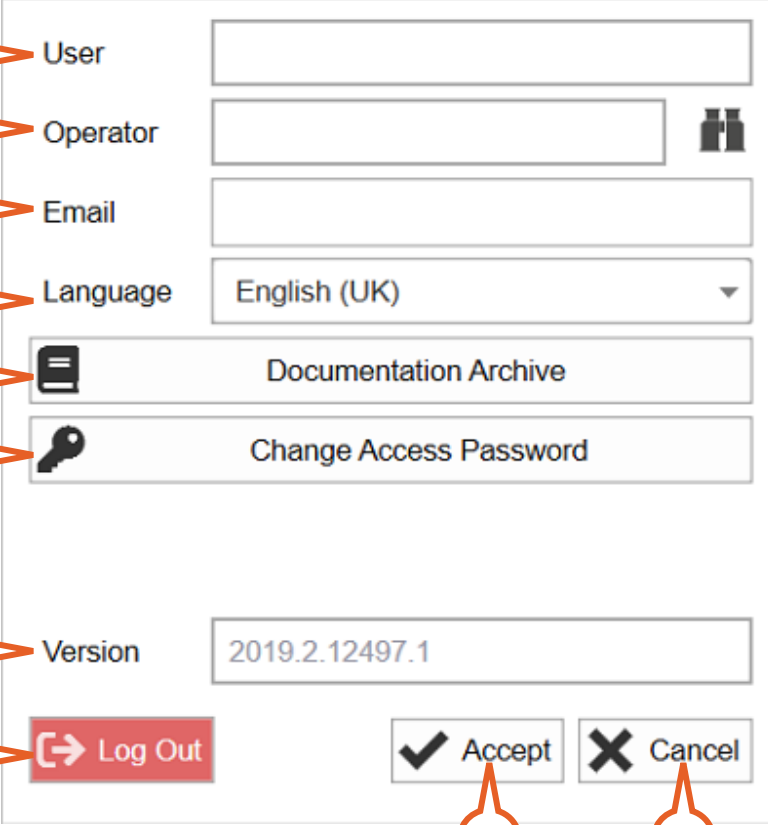
# Personal Configuration

The Personal Configuration menu allows you to set the application language, your contact email, access information, and other data to customize your user experience. Additionally, you can see the application version and download the latest user documentation.

**NOTE:** When you first access the Personal Setup section after a new version update, a pop-up appears that prompts you to view the release notes for the version. If you decide to view them later, you can access them through the [Documentation Archive](#).

Click the  icon on the **Upper Bar** to access the Personal Configuration.


## Personal Configuration menu



The screenshot shows the Personal Configuration menu with the following elements:

- 1: User (text field)
- 2: Operator (text field with a person icon)
- 3: Email (text field)
- 4: Language (dropdown menu showing "English (UK)")
- 5: Documentation Archive (button with a document icon)
- 6: Change Access Password (button with a key icon)
- 7: Version (text field showing "2019.2.12497.1")
- 8: Log Out (button with a right arrow icon)
- 9: Accept (button with a checkmark icon)
- 10: Cancel (button with an X icon)

1. User: displays your username. This field cannot be changed.
2. Operator: click to [link your Active Directory user to an operator profile](#). Operator users have a set of characteristics, such as user status and phone number, that are used to track alarm and ticketing operations.

Click the  icon to change the operator

3. **Email:** displays the e-mail account linked to the application.
4. **Language:** click the drop-down menu to select the language for the user interface.
5. **Documentation Archive:** click to access the latest documentation. In the Documentation Archive window, double-click a document to open it in the PDF viewer (for example, the release notes for the latest update of GPM Plus).

When you first access the **Personal Setup** after a new version release, a pop-up appears to give you the option to view the latest release notes. If you choose to view them later, they are available in the Documentation Archive.


6. **Change Access Password:** select this option if you want to change your password. In the following dialog you are prompted to enter your current password, your new password, and confirm the new password.

**NOTE:** For security reasons, your system administrator may enforce a password expiration policy. The application notifies you when the expiration date is near.

7. **Version:** displays the current version number of the application.
8. **Log Out:** click to close the Remote Desktop Client. This action leaves your user session open and you will already be logged in next time you open the Remote Desktop Client.
9. **Accept:** click to save your changes.
10. **Cancel:** click to close the window without saving your changes.

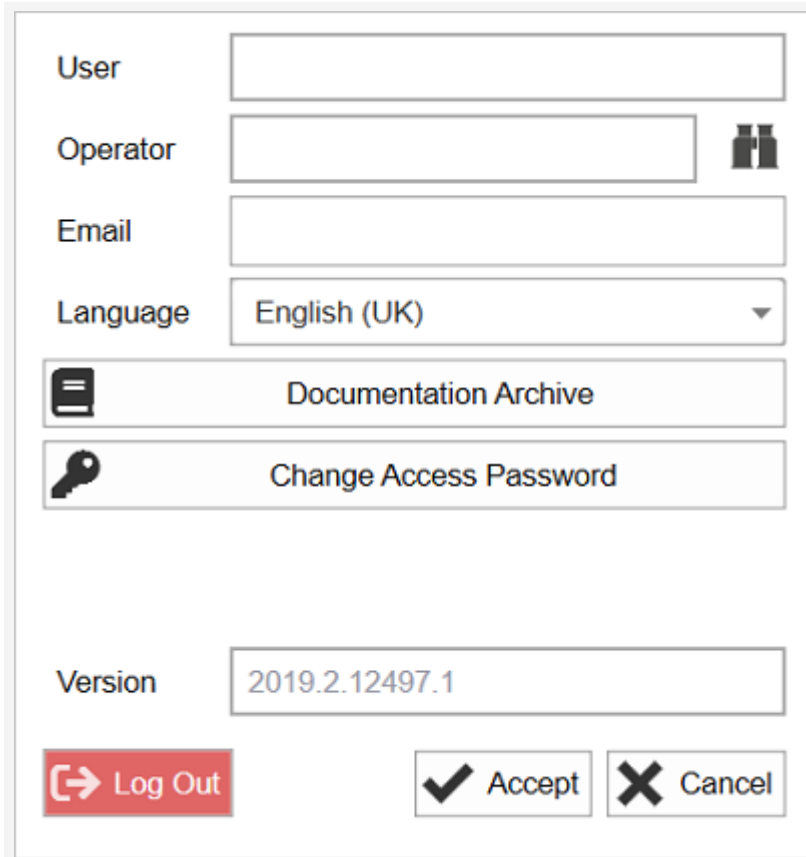
# Link user accounts to Operator profiles

To link your user account to an operator profile, follow these steps:

- 1 Click the  icon on the top navigation bar to open your personal configuration.

**Result:** The Personal configuration dialog appears:

## Personal configuration menu



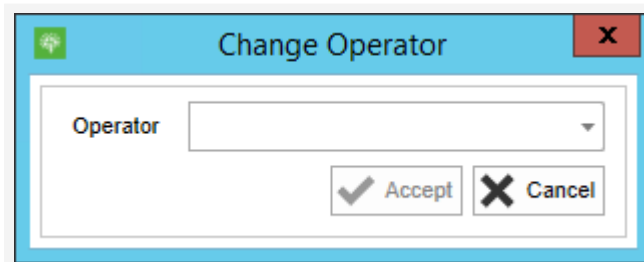
The screenshot shows a dialog box titled "Personal configuration menu". It contains several input fields and buttons:

- User:** A text input field.
- Operator:** A text input field with a person icon to its right.
- Email:** A text input field.
- Language:** A dropdown menu currently set to "English (UK)".
- Documentation Archive:** A button with a document icon.
- Change Access Password:** A button with a key icon.
- Version:** A text input field displaying "2019.2.12497.1".
- Log Out:** A red button with a right-pointing arrow icon.
- Accept:** A button with a checkmark icon.
- Cancel:** A button with an 'X' icon.

- 2 Click the  icon next to the *Operator* field.

**Result:** The **Change operator** dialog appears:

## Change operator dialog



The screenshot shows a dialog box titled "Change Operator". It contains:

- Operator:** A dropdown menu.
- Accept:** A button with a checkmark icon.
- Cancel:** A button with an 'X' icon.

- 3 Click the **Operator** drop-down menu and select your name from the list, then click ✓ **Accept**.
- 4 In the **Personal configuration** dialog, click ✓ **Accept**.

## Result

The operator profile is linked to your Active Directory account.

# Quick tour

GPM Plus is a modular application. The different modules allow you to perform various browsing and operational tasks.

To see a list of all the modules available in GPM Plus, see the [Modules section](#).

You can access these modules from three main areas of the user interface:

1. Side panel
2. Content area
3. Upper bar

In some areas, tabs are used to condense multiple modules within the same interface.

**NOTE:** Access to each module is configured based on the intended user needs. Some modules described in this document may not be available to you if your setup does not require them.

## User interface (UI) overview



1. Side panel: contains the [Navigation](#) and the [Element Viewer](#) modules, displayed as tabs. For more information, see [Navigation Module](#) and [Element Viewer Module](#).
2. Content area: displays content from the main modules: [NOC](#), [Map](#), [Tickets](#), [Alarms](#),

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and [Plant Dashboard](#).

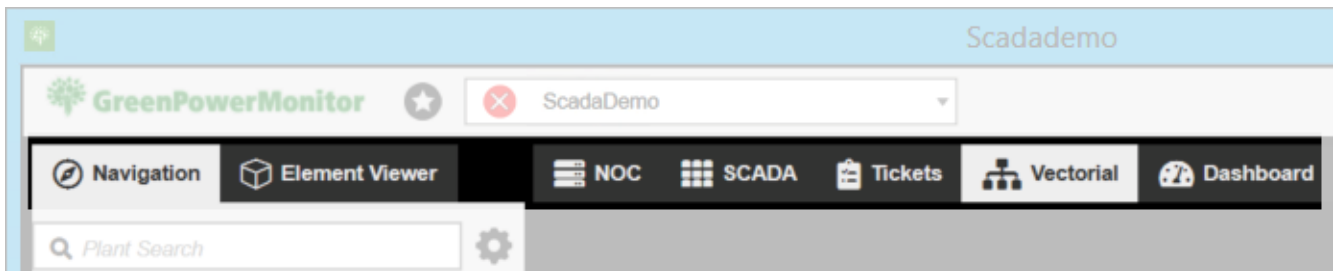
3. Upper bar: contains buttons that provide access to additional modules, the application setup, and the personal configurations for the user. For more information, see [Modules](#) and [User Configuration](#).
-



# Tab navigation

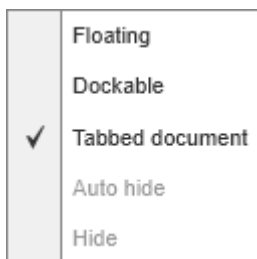
The user interface of GPM Plus contains top-level navigation tabs to facilitate your navigation through various operational modules.

## Tabs in the UI



Each tab has a context menu that allows you to customize its position and appearance in the application. You can access the context menu by right-clicking a tab.

## Tab-level context menu



- **Floating:** move the tab outside of the main window and:
  - Drag it to a different area of the screen.
  - Drag it to another screen.
  - Set the tab to full screen by double-clicking the tab's heading.
- **Dockable:** Move the tab outside of the main window and:
  - Drag it to a different area of the screen.
  - Drag it to another screen.
  - Drag it to one of the pop-up icons to anchor it to a specific area of the screen.
  - Set the tab to full screen by double-clicking the tab's heading.
- **Tabbed document:** When a tab is set to **Dockable** or **Floating**, select this option to anchor it as the last tab in its default location.

- 
- **Hide:** When a tab is set to **Dockable** or **Floating**, select this option to anchor the tab to its default position.
  - **Autohide:** When a tab is anchored to the top or bottom of the screen, select this option to automatically hide the tab when you are not using it.
-

## Side panel

The Side Panel contains the **Navigation** and **Element Viewer** modules, divided in tabs.

The Navigation module allows you to browse your portfolio. For more information, see the [Navigation module section](#).

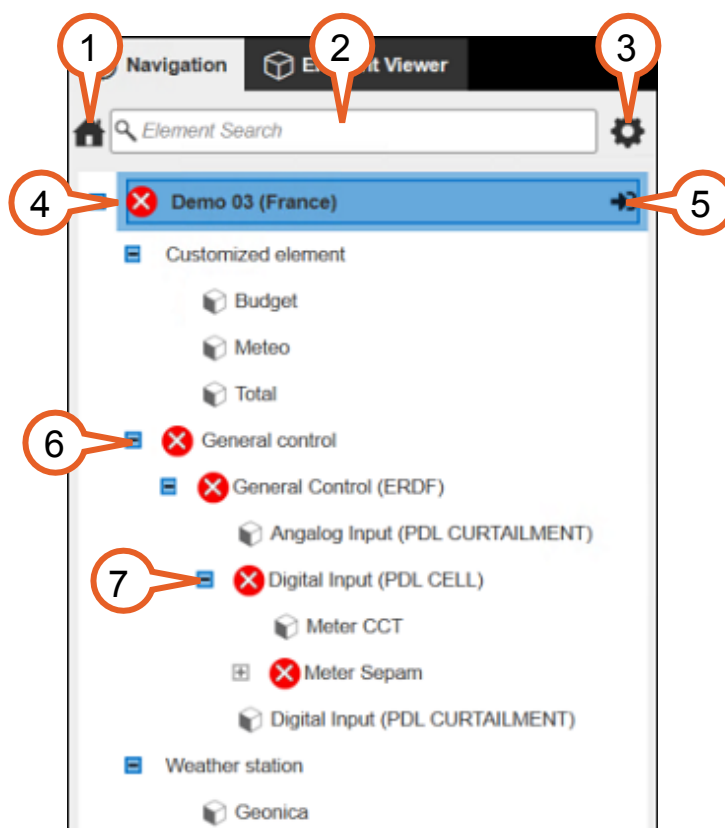
The Element Viewer module allows you to access information about elements. For more information, see the [Element viewer module section](#).

# Navigation module

The Navigation module lists the plants in your portfolio and their child elements. Each plant is organized as a cascading object to allow you to navigate the plant structure.

You can perform several tasks in your plants directly from the Navigation module. For more information, see the [list of available tasks](#).

## Navigation module




1. **Navigation home:** click to return to the portfolio list. This button is only displayed when you are navigating inside a plant.
2. **Search bar:** enter text to search for:
  - plants when you are navigating at the level of the portfolio.
  - elements when you are navigating inside a plant.
3. **Navigation settings:** click to customize the Navigation module and set the plant grouping criterion from available metadata such as country or technology.

---

Additionally, you can:

- Set the Plant Icon as the **Main Alarm** of the plant, or as **% Available Peak Power**
- Sort plants by **Name**, **Peak Power**, or **% Available Peak Power**.
- Arrange elements by **Production Hierarchy**, **Communication Hierarchy**, or **Device Type**.

4. **Plant name and icon:** place your cursor on the icon to display information about the plant's main alarm or the percentage of available peak power.

Click the  icon to customize the icon information. When the plant main alarm is displayed, you can click the icon to open the Alarm Information window.

5. **Open plant:** click to open the Plant Module in the Content Area.

6. **Expand/collapse:** click to expand or collapse plant details.

7. **Element icon:** click to display the element information on the Element Viewer.

Right-click an element to to open the context menu for it and see the available options.

When there is an active alarm for the element, an alarm icon is displayed. You can click the alarm icon to open the Alarm Information window and place your cursor on the icon to see the alarm message. When the icon is set to display the **% Available Peak Power**, placing your cursor on the icon displays the percentage information.

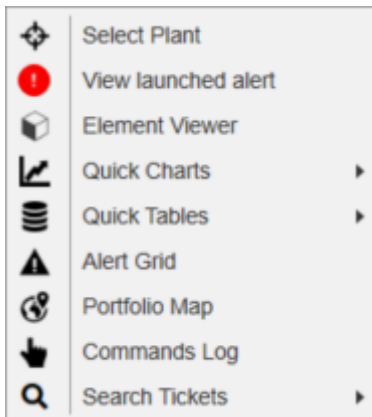
8. **Element name:** displays the name of the element.

---

## Context menu

The context menu allows you to perform quick actions from the Navigation module. You can activate it by right-clicking a plant or an element in the module.

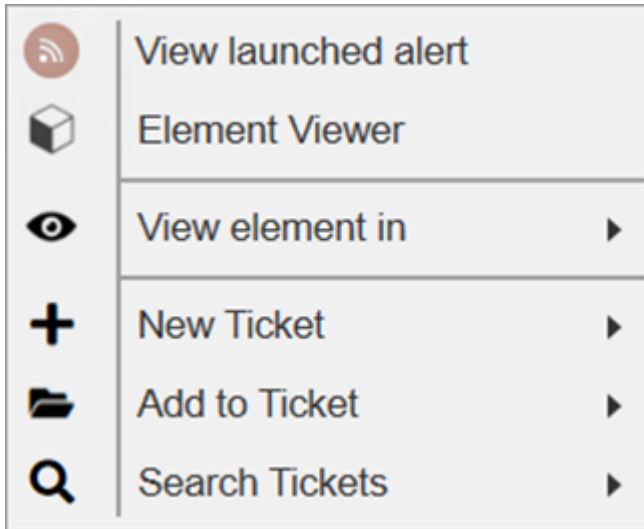
### Context menu: plant



- **Select plant:** Open the [Plant module](#) for the selected plant.
- **View launched alarm:** Open the related alarm in the [Alarm information window](#).
- **Element viewer:** Open the [Element Viewer](#) for the selected plant.
- **Quick charts:** Open the selected custom query in the [Linear Chart Viewer module](#).  
 Since the back-end processes charts differently, the **Quick Chart** menu contains two sub-menus:
  - **Custom Charts:** contains charts that are complex to build because they are built specifically for your portfolio and can query any parameter.
  - **Default Charts:** contains charts that query only generic parameters that every portfolio has, such as energy, PR, or availability.
- **Quick tables:** Open the selected custom query in the [Data Viewer module](#).
- **Alarms table:** Display all the related alarms in the [Alarms module](#).
- **Portfolio map:** Display the plant on the [Map module](#)
- **Commands log:** Display related commands in the [Commands Control module](#).
- **Search tickets:** Choose a ticket type to open the related tickets in the [Tickets module](#).

---

## Context menu: element



- **View launched alarm:** open the related alarm in the [Alarm information window](#).
  - **Element viewer:** open the [Element Viewer](#) for the selected element.
  - **View element in:** display all the related alarms in the [Alarms module](#) or the [Commands Control module](#).
  - **New ticket:** select a new ticket type to create a new ticket and automatically pair the selected element to it. For more information, see [Create maintenance tickets from elements](#), [Create task tickets from elements](#) and [Create data correction tickets from elements](#).
  - **Add to ticket:** Place your cursor here, enter a ticket ID in the *Search* field, and press **Enter** to add the selected element to an existing ticket.
  - **Search tickets:** Choose a ticket type to open the related tickets in the [Tickets module](#).
-

# Working with the Navigation module

The Navigation module allows you to perform several tasks with different features and tools.

## Tickets

- Create maintenance tickets.
- Create task tickets.
- Create data correction tickets.
- Add elements to existing tickets.



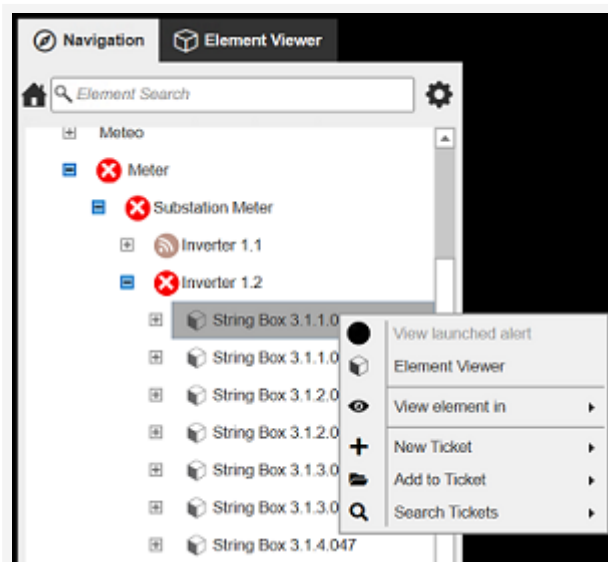
## Create new maintenance tickets from the Navigation module

To create a new maintenance ticket from the Navigation module, follow these steps:

- 1 In the Navigation module, navigate to the level of the element for which you want to create the ticket, then click the icon of the element to select it. Then, right-click the selected element to open the Context menu:

**Result:** The Context menu appears:

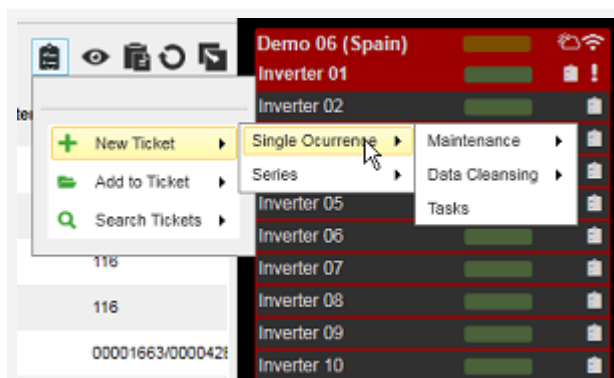
### Context menu for an element in the Navigation module



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

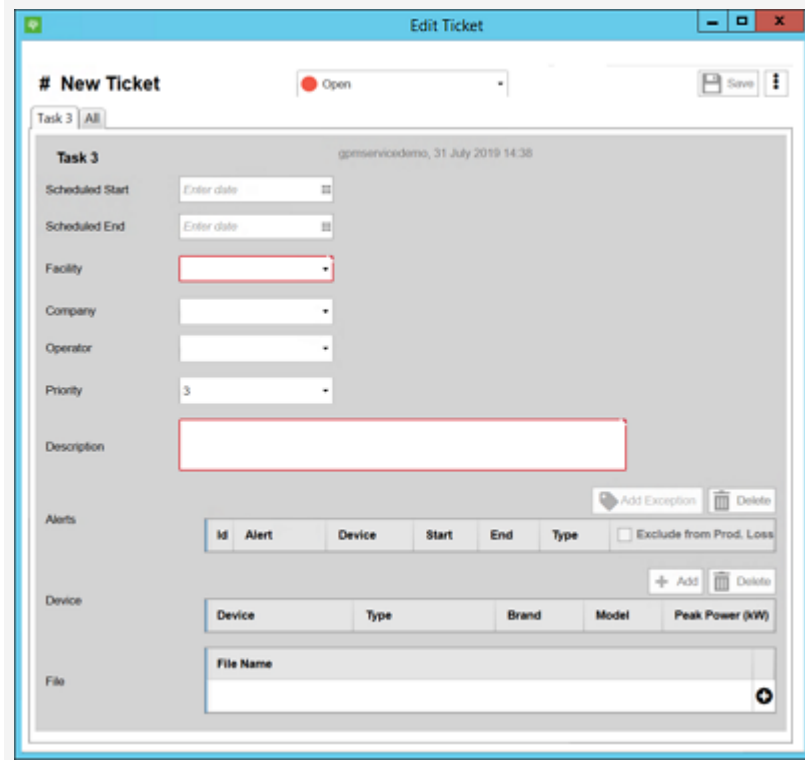
### Ticket types



- 3 In the menu, select **Maintenance**, then select the **GPM Default** template.


**Result:** The **Edit Ticket** dialog appears:

### Edit Ticket dialog



The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and 'Open'. Below that, there's a 'Task 3' section with a timestamp 'gpm-servicesdemo, 31 July 2019 14:38'. The fields include 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholders), 'Facility', 'Company', 'Operator', and 'Priority' (set to '3'). There's a large 'Description' text area. Below the description are 'Alerts' and 'Device' sections, each with a table header and 'Add'/'Delete' buttons. The 'Alerts' table has columns: Id, Alert, Device, Start, End, Type, and a checkbox for 'Exclude from Prod. Loss'. The 'Device' table has columns: Device, Type, Brand, Model, and Peak Power (KW). At the bottom, there's a 'File' section with a 'File Name' input field and an 'Add' button.

- 4 In the **Edit Ticket** dialog, enter the information for the ticket:

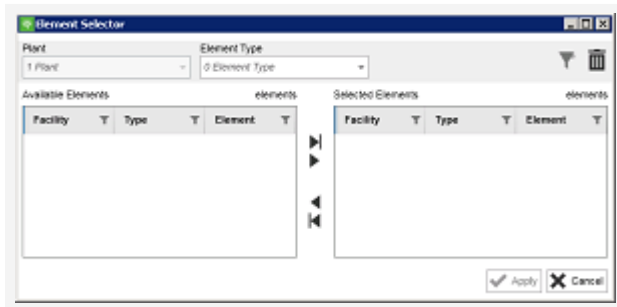
- a **Scheduled Start:** select the date on which the ticket starts.
- b **Scheduled End:** select the date on which you expect the ticket to close.
- c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
- d **Company:** select the company that must resolve the issue related to the ticket.
- e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
- f **Priority:** select a priority from the drop-down list.  
Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
- g **Description:** enter a description in the text input field.
- h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
- i (Optional) **File:** click the  icon to add files to the ticket. For more information,

see [Import data from a file](#).


**NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.


- 5 (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**BEST PRACTICE:** You can type a term into the *Search* field and click the  icon to narrow down the options available on the list.


- b In the **Available Elements** panel select the element you want to add to the ticket, then click the  icon.

OR: Click the  icon to select all the elements on the list.

**TIP:** Hold down the shift key to select multiple elements.

- c Click **Apply**.

**Result:** The element is added to the list.

- 6 (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).
- 7 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

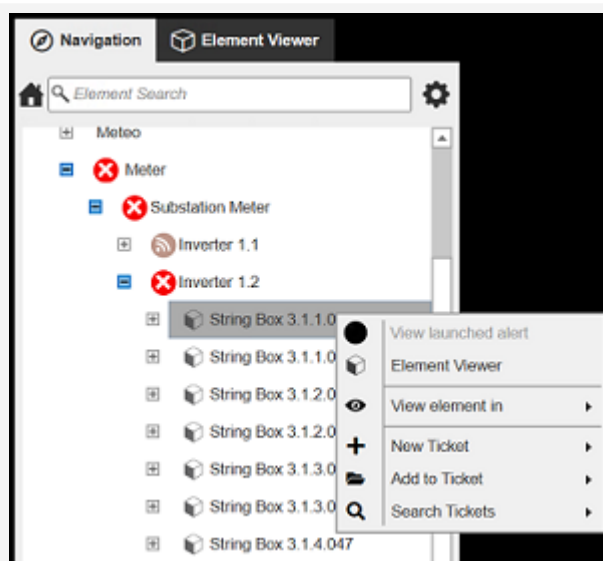
## Create task tickets from the Navigation module

To create a task ticket from the Navigation module, follow these steps:

- 1 In the Navigation module, navigate to the level of the element for which you want to create the ticket, then click the icon of the element to select it. Then, right-click the selected element to open the Context menu:

**Result:** The Context menu appears:

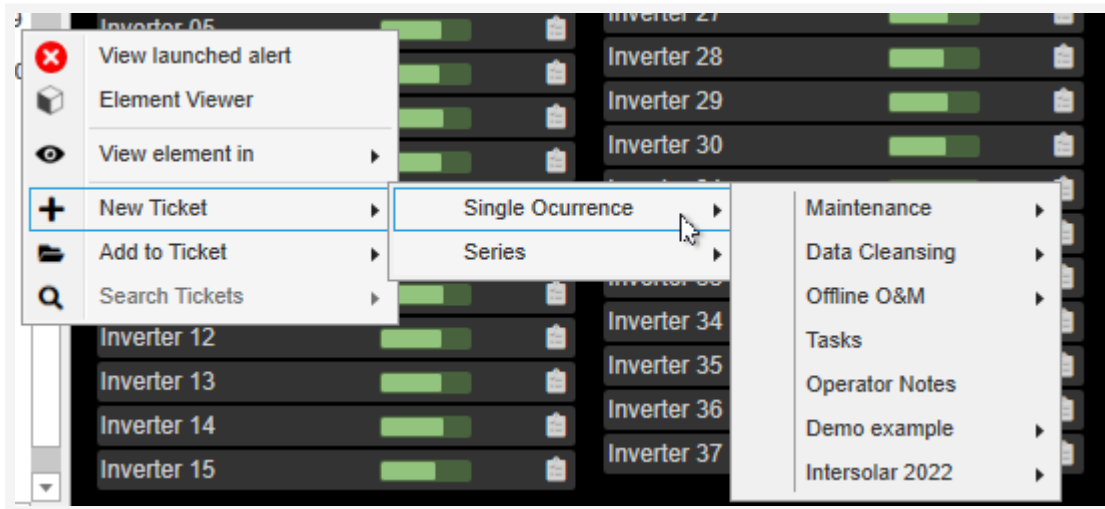
### Context menu for an element in the Navigation module



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

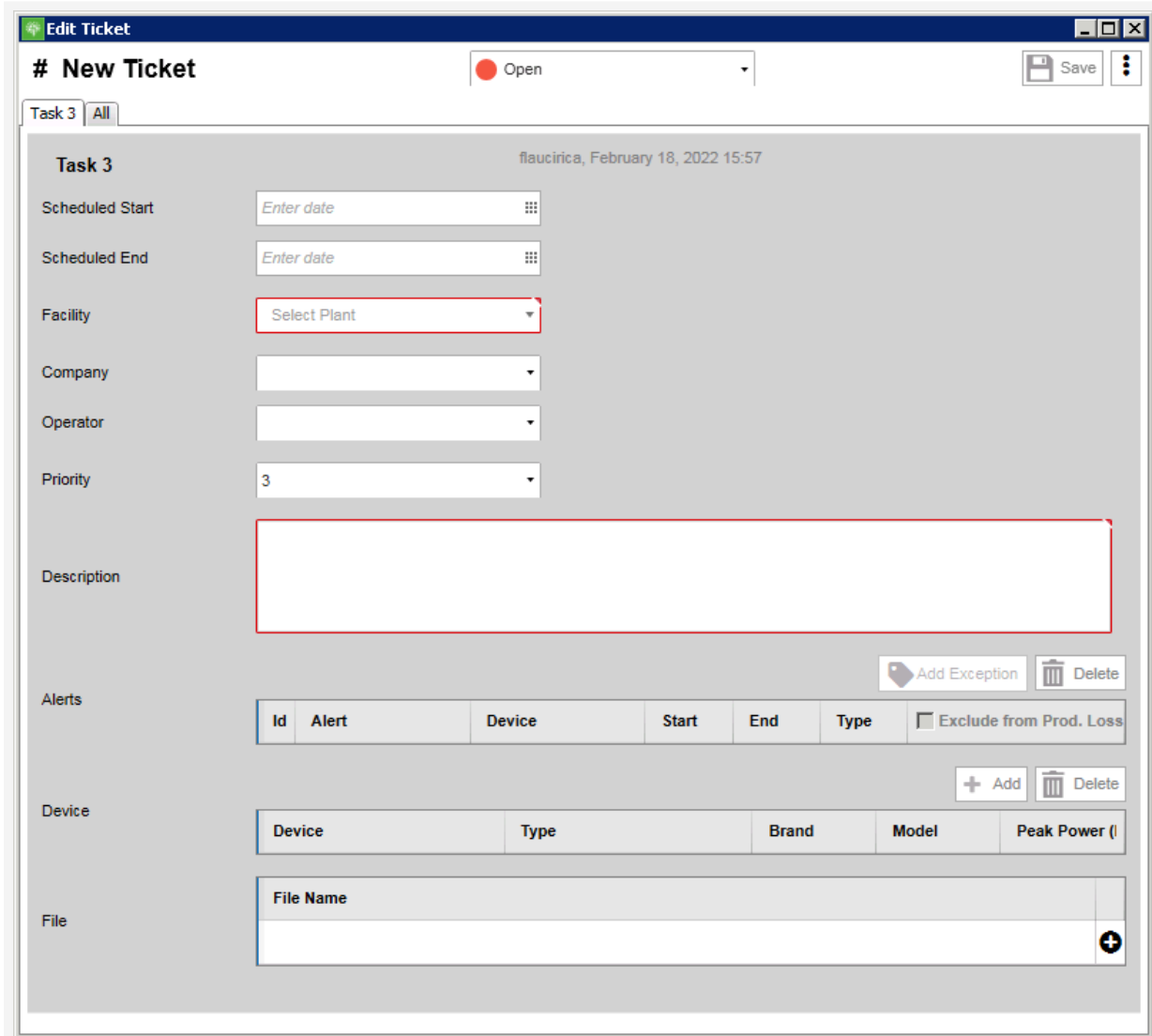
### Ticket types



- 3 In the menu, select **Task**, then select the **GPM Default** template.

**Result:** The **Edit** ticket dialog appears:

### Edit ticket dialog (task)



**Edit Ticket**

# New Ticket Open Save

Task 3 All

Task 3 flaucirica, February 18, 2022 15:57

Scheduled Start

Scheduled End

Facility

Company

Operator

Priority

Description

Alerts Add Exception Delete

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
<span>+ Add</span> <span>Delete</span>						

Device + Add Delete

Device	Type	Brand	Model	Peak Power (I)
<span>+ Add</span>				

File  + Add

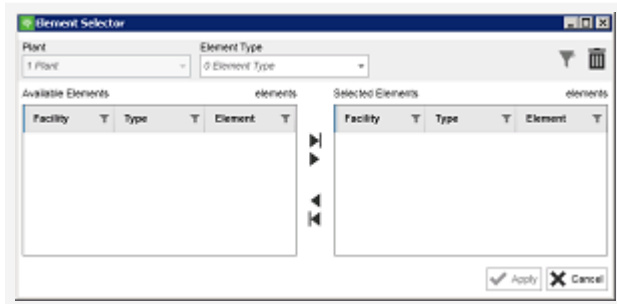
- 4 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.

Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.

**g** *Description:* enter a description in the text input field.

- 5** (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a** Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**📌 BEST PRACTICE:** You can type a term into the *Search* field and click the **▼** icon to narrow down the options available on the list.

- b** In the **Available Elements** panel select the element you want to add to the ticket, then click the **▶** icon.

OR: Click the **▶▶** icon to select all the elements on the list.

**📌 TIP:** Hold down the shift key to select multiple elements.



- c** Click **Apply**.

**Result:** The element is added to the list.

- 6** (Optional) In the File section, click the **+** icon to open the Import Box and import a file.

## Import box



- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click  **Paste**.
- c Click  **Import**.

**Result:** The file is imported to the ticket.

- 7 (Optional) To add a note, follow these steps:

- a Click the  icon, hover over **Add section** and select **Note**.

**Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.

**Result:** The note is added to the ticket.

- 8 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.



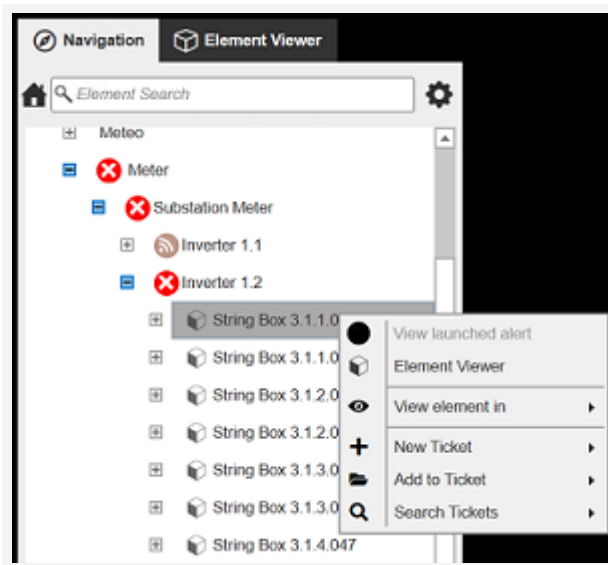
## Create data correction tickets from the Navigation module

To create a data correction ticket from the Navigation module, follow these steps:

- 1 In the Navigation module, navigate to the level of the element for which you want to create the ticket, then click the icon of the element to select it. Then, right-click the selected element to open the Context menu:

**Result:** The Context menu appears:

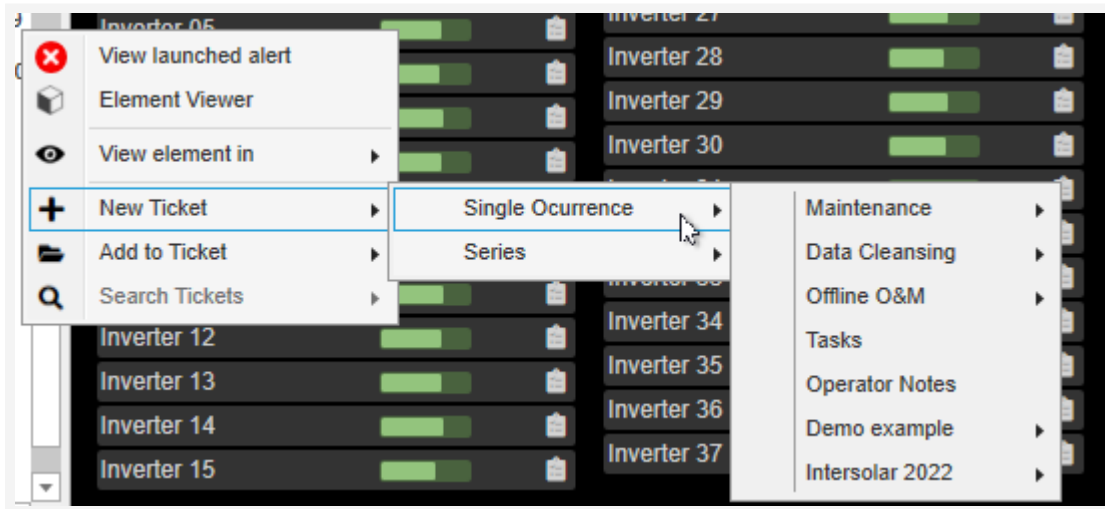
### Context menu for an element in the Navigation module



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

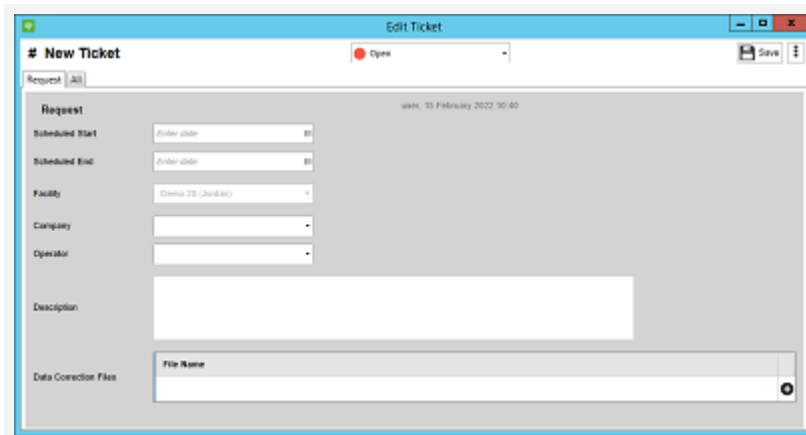
### Ticket types



- 3 In the menu, select **Data Cleansing**, then select **GPM Data Correction**.

**Result:** The Edit ticket dialog appears:

### Edit ticket dialog (Data cleansing)

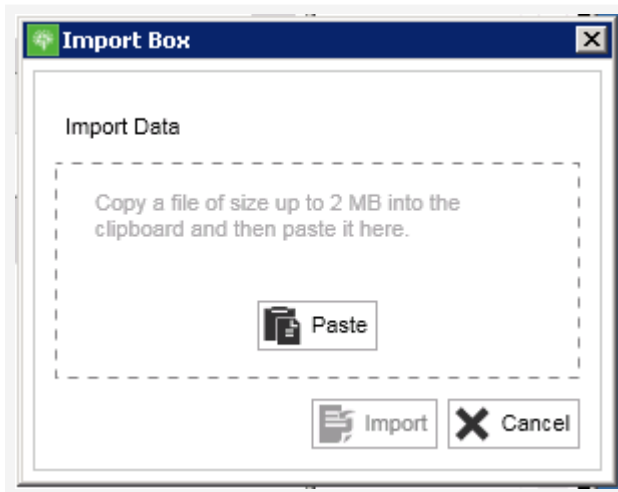


- 4 In the Request section, enter the information for the ticket:
- Scheduled Start:** select the date on which the ticket starts.
  - Scheduled End:** select the date on which you expect the ticket to close.
  - Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - Company:** select the company that must resolve the issue related to the ticket.
  - Operator:** select the username of an operator from the drop-down list to assign the ticket to them.

f *Description:* enter a description in the text input field.

- 5 In the Data Correction Files section, click the **+** icon to open the Import Box and import an XLS file from which to add the corrected data:

### Import Box



**NOTE:** You can only import XLS files.

- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click **Paste**.
- c Click **Import**.

**Result:** The file is imported to the ticket.

- 6 (Optional) To add a note, follow these steps:

- a Click the **:** icon, hover over **Add section** and select **Note**.

**Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.

**Result:** The note is added to the ticket.

7 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

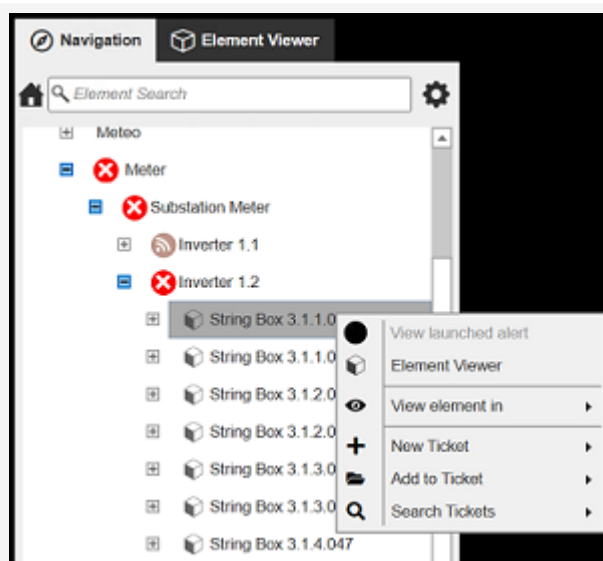
## Add elements to existing tickets from Navigation


To add an element to an existing ticket from the Navigation module, follow these steps:

- 1 In the Navigation module, navigate to the level of the element for which you want to create the ticket, then click the icon of the element to select it. Then, right-click the selected element to open the Context menu:

**Result:** The Context menu appears:

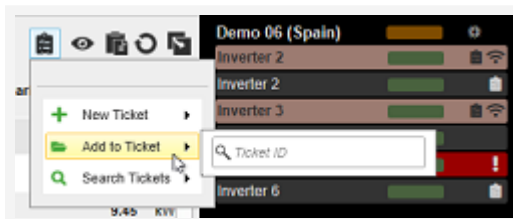
### Context menu for an element in the Navigation module



- 2 Hover over  **Add to Ticket** and enter the *Ticket ID* of an existing ticket (for example, "1543549623"), and press **Enter**.

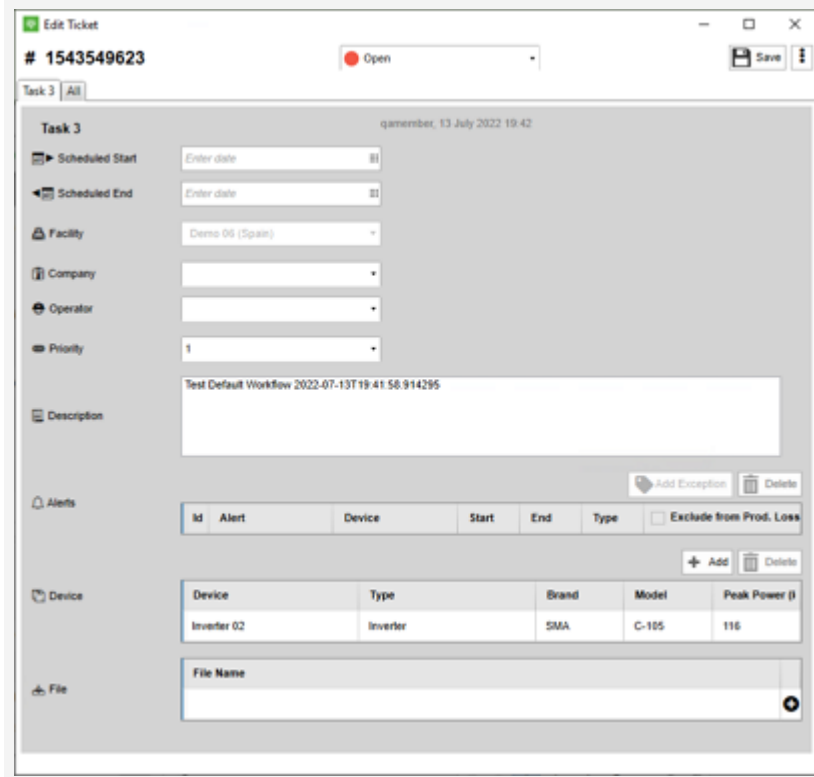
**REMEMBER:** You must enter the ID of an existing ticket. If no ticket exists, follow the instructions to create a new ticket from the Element viewer.

### Ticket menu



**Result:** The **Edit ticket** dialog appears, displaying the selected element in the Element field:

### Edit ticket dialog



**Edit Ticket**  
# 1543549623    Open    Save

Task 3 | All    qmember, 13 July 2022 19:42

**Task 3**

Scheduled Start: Enter date

Scheduled End: Enter date

Facility: Demo 06 (Spain)

Company: [Dropdown]

Operator: [Dropdown]

Priority: 1

Description: Test Default Workflow 2022-07-13T19:41:58.914295

Alerts: Add Exception, Delete

Id	Alert	Device	Start	End	Type	Exclude from Prod. Loss
----	-------	--------	-------	-----	------	-------------------------

+ Add    Delete

Device

Device	Type	Brand	Model	Peak Power ()
Inverter 02	Inverter	SMA	C-105	116

File

File Name: [Input field]

3 (Optional) Edit any other fields of the ticket you want to change.

4 Click  **Save**.

### Result

The element is added to the ticket and any other changes are saved.

# Element viewer module

The Element Viewer module is a dynamic tab that allows you to quickly monitor, analyze, and perform maintenance on a selected plant or device.

**NOTE:** The information displayed on the Element Viewer refreshes automatically when GPM Plus receives data from the selected element.

You can perform tasks to manage elements directly from this module.




## Element Viewer module








1. **Heading:** When you select a:
  - **Plant:** displays the plant name, coordinates and peak power.
  - **Device:** displays the device name, the plant it belongs to, and its peak power. If there is an active alarm on the selected element, you can click the alarm to open the Alarm Information window.
2. **Tabs:** select a tab to display its content on the Main Area. For further information,

---

see the following sections:

-  Monitor
-  Parameters
-  Info

3. **Quick actions:** take quick actions related to the selected plant or device. For further information, see Quick Actions below.

-  Ticket menu
-  View Element menu
-  Copy to Clipboard
-  Refresh
-  Copy Window


4. Main area: displays information about a selected element.



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## Monitor tab

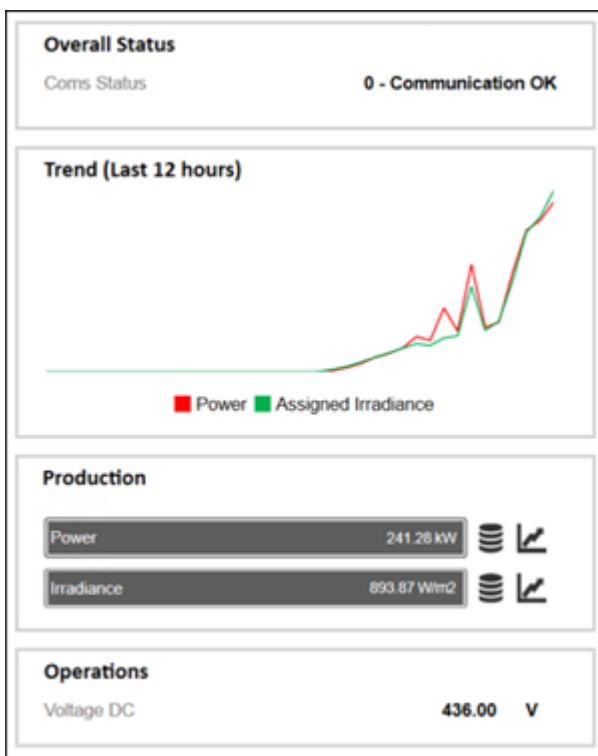
The Monitor tab provides you with tools to monitor the main key performance indicators (KPIs) of a selected element. The Monitor tab tools are organized in cards and change based on the selected element type.

Access the Monitor tab by clicking the  icon on the Element Viewer.

You can place your cursor on any chart heading and click the  icon to display the chart KPIs in the [Data Viewer module](#) or click the  icon to display them in the [Linear Chart Viewer module](#).

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### Monitor tab




## Parameters tab

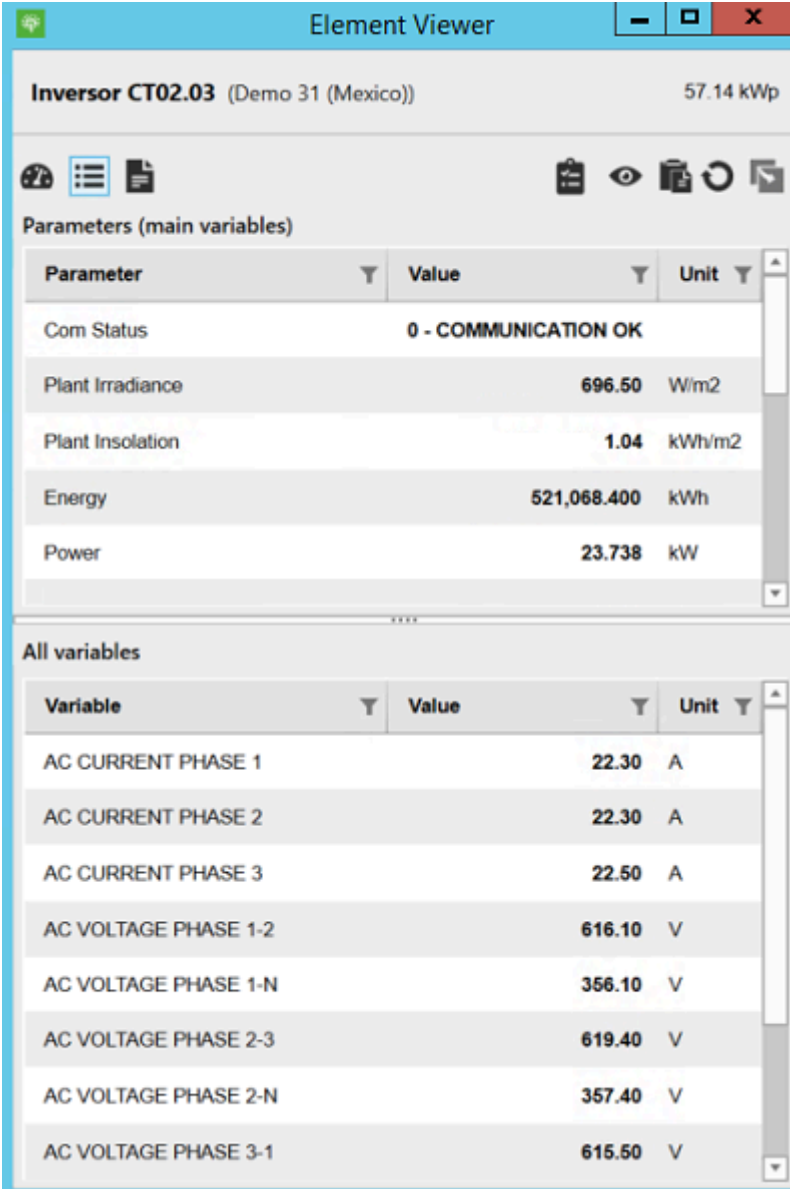
The Parameters (main variables) tab allows you to monitor data that is retrieved at regular time intervals from the selected element.

Access the Parameters tab by clicking the  icon on the Element Viewer.

You can place your cursor on any parameter and click the  icon to display the parameter values in the [Data Viewer module](#) or click the  icon to display them in the [Linear Chart Viewer module](#).

You can click the  icon on the column headers to open the filtering options for the data on display. This allows you to find, visualize, and select specific variables. For more information about filtering options, see [Advanced Filtering](#).

## Parameters tab



**Inversor CT02.03** (Demo 31 (Mexico)) 57.14 kWp

Parameters (main variables)

Parameter	Value	Unit
Com Status	0 - COMMUNICATION OK	
Plant Irradiance	696.50	W/m2
Plant Insolation	1.04	kWh/m2
Energy	521,068.400	kWh
Power	23.738	kW


All variables

Variable	Value	Unit
AC CURRENT PHASE 1	22.30	A
AC CURRENT PHASE 2	22.30	A
AC CURRENT PHASE 3	22.50	A
AC VOLTAGE PHASE 1-2	616.10	V
AC VOLTAGE PHASE 1-N	366.10	V
AC VOLTAGE PHASE 2-3	619.40	V
AC VOLTAGE PHASE 2-N	357.40	V
AC VOLTAGE PHASE 3-1	615.50	V

**NOTE:** You can resize the **Parameters (main variables)** and **Variable** sections by clicking and dragging the dotted line that separates them. The system saves your preferences after the change.


Section	Description
---------	-------------

<b>Main Parameters</b>	Most relevant parameters that are configured for the selected element.
------------------------	--

 **NOTE:** If you want to modify the parameters displayed here, contact your GPM representative.


## All Variables

All the variables that are retrieved from the selected element.

 **NOTE:** This section is only available for elements.

## Info tab

The Info tab provides contextual information about the selected plant or device. The information is retrieved from the entity's metadata, which is customizable and can change depending on your setup.

Access the Info tab by clicking the element icon in the Navigation module or by clicking the  icon on the Element Viewer.


You can right-click a parameter and select **See History** to open the Entity Log, where you can track and manage changes made the values. For further information, see [Entity Log](#).

### Info tab

Description Parameters	
Name	INV 15B
Typology	Inverter
Description	00000DCE/000021FC/2


## Quick Actions


The quick actions buttons allow you to easily perform basic tasks directly from the Element Viewer. Click any icon to access the available options:


-  **Ticket menu:** pair the selected element to a ticket or find existing tickets related to the element.

Option	Description
<b>New Ticket</b>	Create a new ticket and automatically pair the selected element to it: <ul style="list-style-type: none"> <li>▪ <a href="#">Create maintenance tickets</a></li> <li>▪ <a href="#">Create task tickets</a></li> <li>▪ <a href="#">Create data correction tickets</a></li> </ul>
<b>Add to Ticket</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .
<b>Search Tickets</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .

-  **View Element menu:** display information related to the selected element.

 **NOTE:** The options available when you click the View Element button depend on the selected element.




Option	Description
<b>Alarm Grid</b>	Display related alarms on the <a href="#">Alarms tab</a> of the Content Area.
<b>Search Tickets</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .
	<p> <b>NOTE:</b> This option is only available when you are viewing a plant in the Element Viewer.</p>
<b>Portfolio Map</b>	Display the plant on the Portfolio Map tab of the Content Area.

 **NOTE:** This option is only available when you are viewing a plant in the Element Viewer.

**Commands** Display related commands in the Commands Control module.

### Log

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-  **Copy to clipboard:** click to copy all the parameters and values on display to your clipboard.
-  **Refresh:** click to refresh the information displayed in the tab.
-  **Copy Window:** click to open a copy of the Element Viewer module in a separate window.

# Element management

You can manage elements directly from the Element Viewer.


## Tickets

- Create maintenance tickets
- Create task tickets
- Create data correction tickets
- Add elements to existing tickets

## Create maintenance tickets from elements

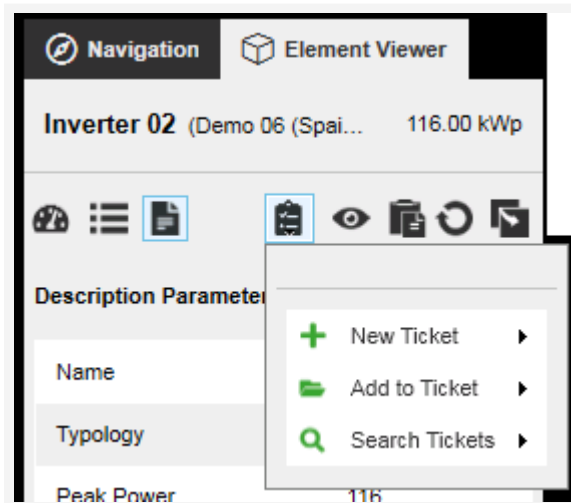
To create a maintenance ticket from an element, follow these steps:

**NOTE:** Information contained in Maintenance tickets is customizable. Each customization is stored as a template. The following instructions use the **GPM Default** template.

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

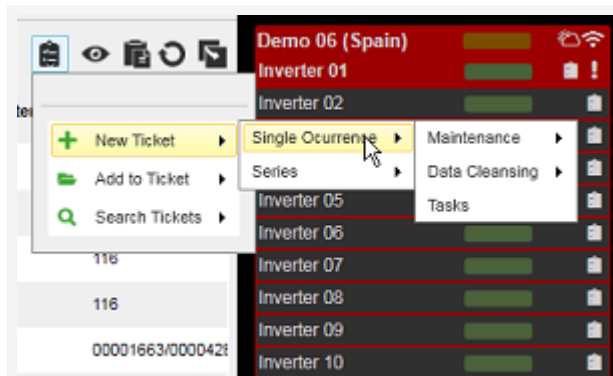
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

### Ticket types

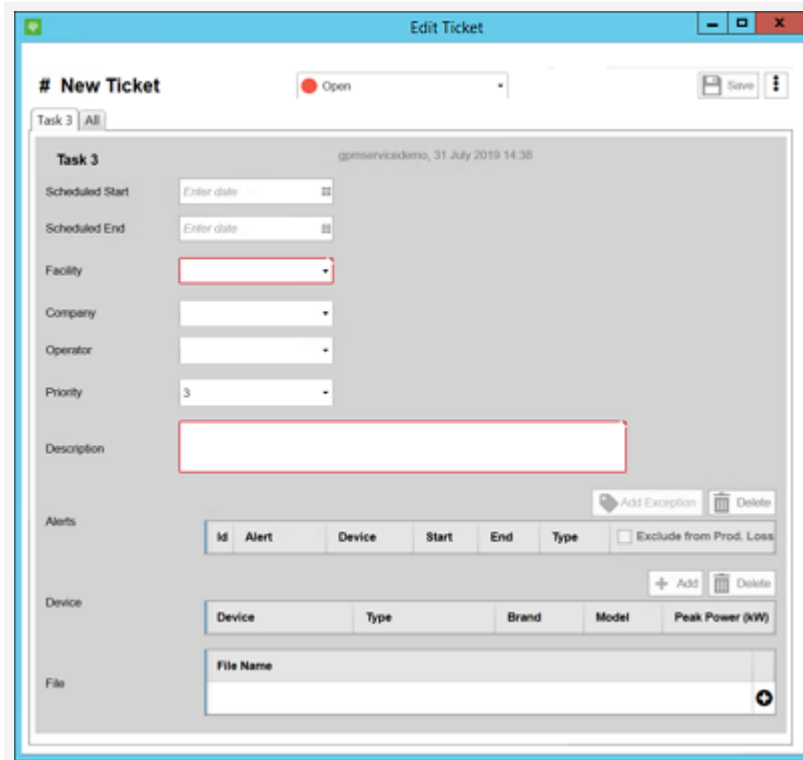


- 3 In the menu, select **Maintenance**, then select the **GPM Default** template.




**Result:** The **Edit Ticket** dialog appears:

### Edit Ticket dialog



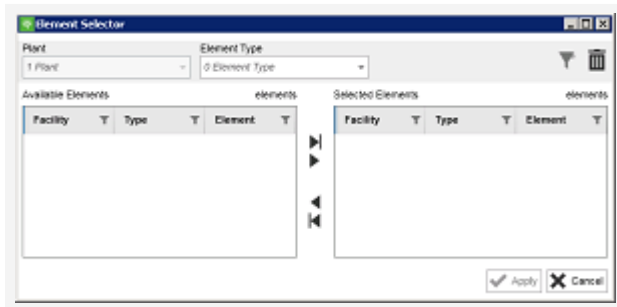
The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and has a status indicator 'Open'. Below that, there's a 'Task 3' section with a date '31 July 2019 14:38'. The form contains several input fields: 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholder), 'Facility', 'Company', 'Operator', and 'Priority' (set to '3'). A large 'Description' text area is also present. Below the description, there are sections for 'Alerts' and 'Device', each with a table and an 'Add' button. The 'Alerts' table has columns for Id, Alert, Device, Start, End, Type, and a checkbox for 'Exclude from Prod. Loss'. The 'Device' table has columns for Device, Type, Brand, Model, and Peak Power (KW). At the bottom, there's a 'File' section with a 'File Name' input field and a '+' icon.

- 4 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.  
 Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
  - g **Description:** enter a description in the text input field.
  - h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
  - i (Optional) **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).


**NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.


- 5 (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**BEST PRACTICE:** You can type a term into the *Search* field and click the  icon to narrow down the options available on the list.


- b In the **Available Elements** panel select the element you want to add to the ticket, then click the  icon.

OR: Click the  icon to select all the elements on the list.

**TIP:** Hold down the shift key to select multiple elements.

- c Click **Apply**.

**Result:** The element is added to the list.

- 6 (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).
- 7 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

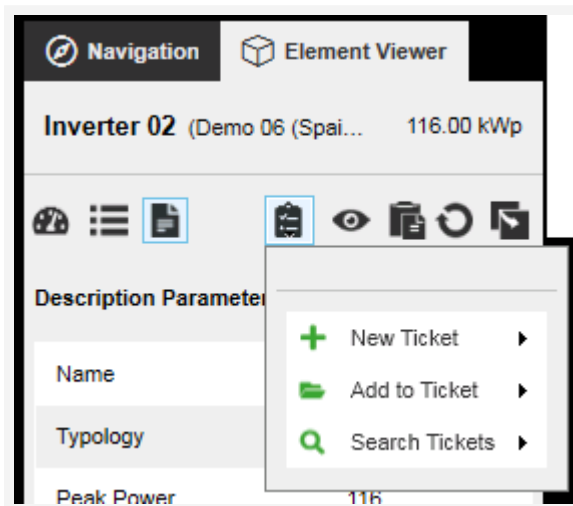
## Create data correction tickets from elements

To create a data correction ticket from an element, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

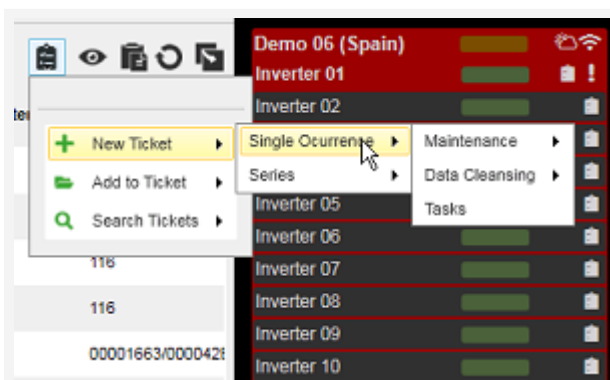
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

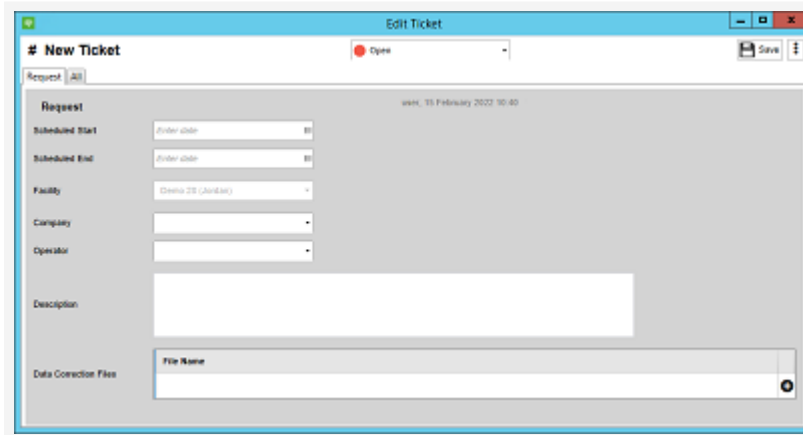
### Ticket types



- 3 In the menu, select **Data Cleansing**, then select **GPM Data Correction**.

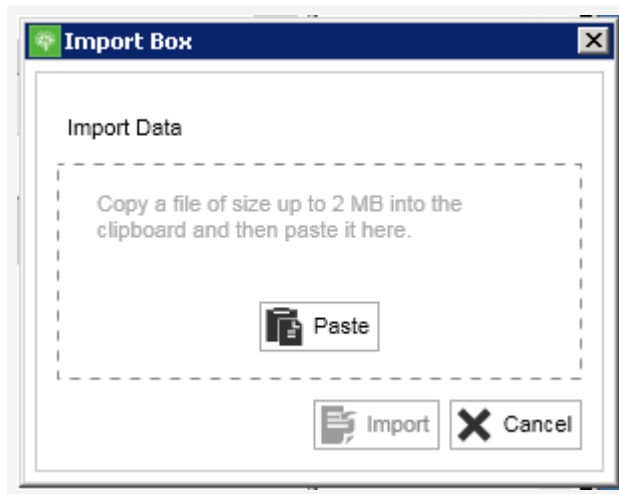
**Result:** The Edit ticket dialog appears:

### Edit ticket dialog (Data cleansing)



- 4 In the Request section, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f *Description:* enter a description in the text input field.
- 5 In the Data Correction Files section, click the **+** icon to open the Import Box and import an XLS file from which to add the corrected data:

## Import Box



**NOTE:** You can only import XLS files.

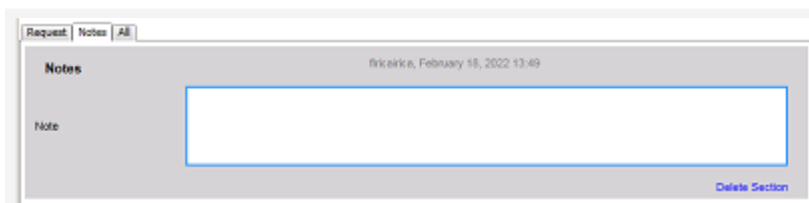
- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click **Paste**.
- c Click **Import**.

**Result:** The file is imported to the ticket.

6 (Optional) To add a note, follow these steps:

- a Click the **:** icon, hover over **Add section** and select **Note**.
- Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.
- Result:** The note is added to the ticket.

7 Click **Save**.

## Result

The ticket is created and assigned to the operator you selected.

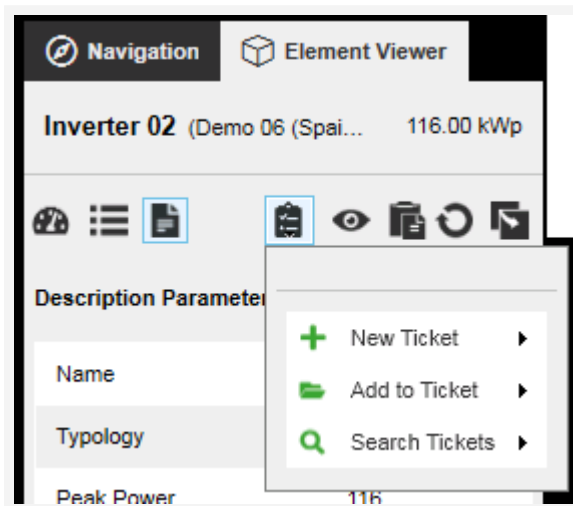
## Create task tickets from elements

To create a task ticket from an element, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

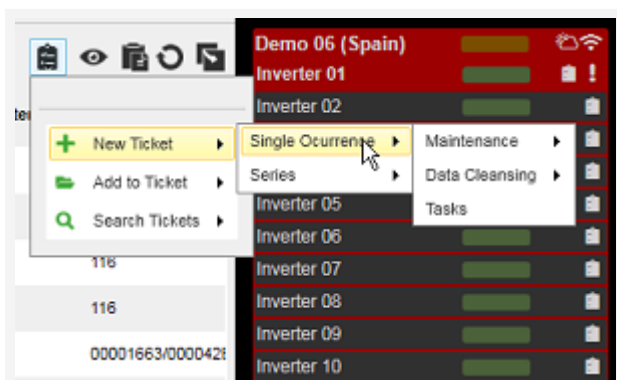
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

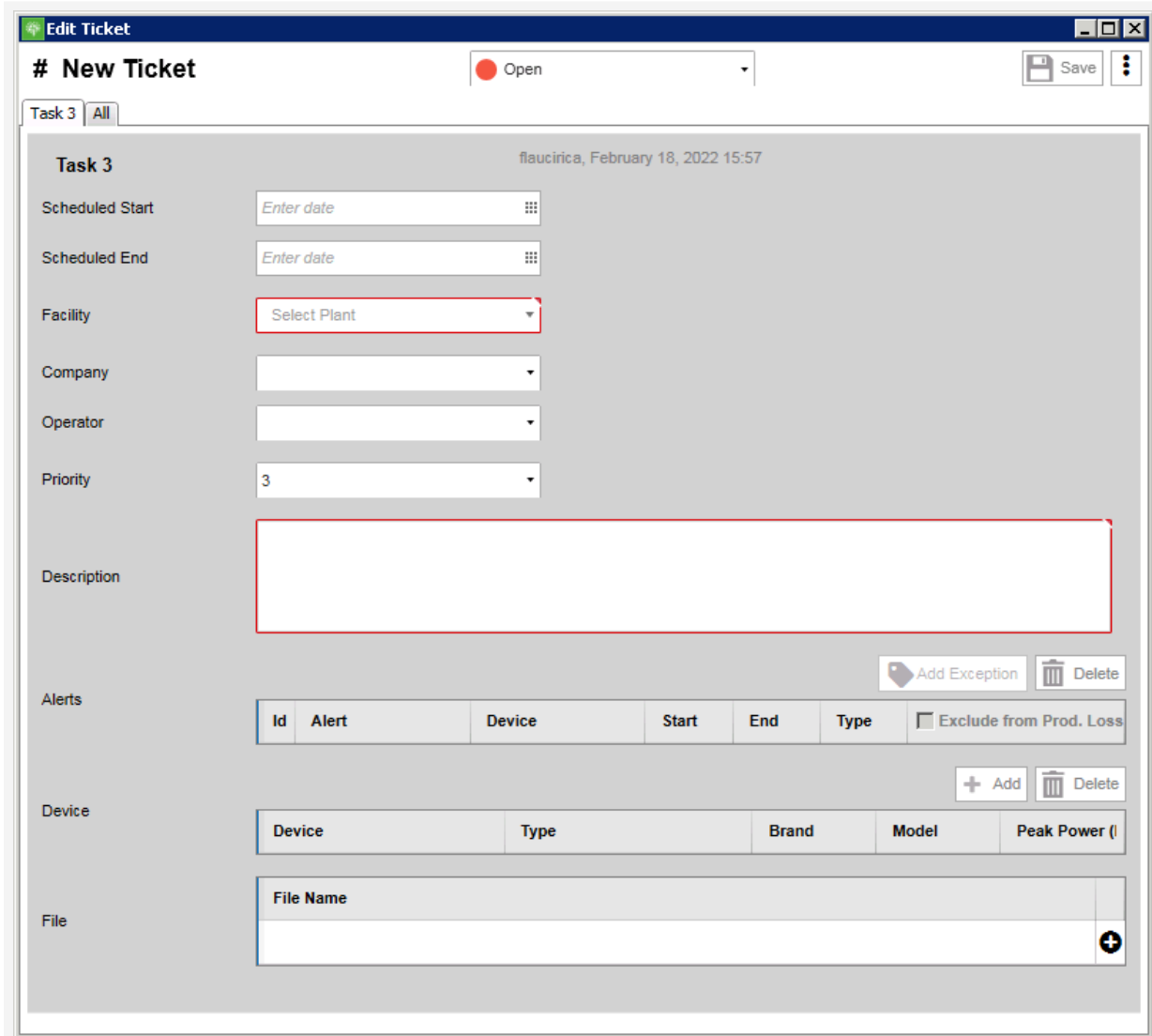
### Ticket types



- 3 In the menu, select **Task**, then select the **GPM Default** template.

**Result:** The **Edit** ticket dialog appears:

### Edit ticket dialog (task)



**Edit Ticket**

# New Ticket Open Save

Task 3 All

Task 3 flaucirica, February 18, 2022 15:57

Scheduled Start

Scheduled End

Facility

Company

Operator

Priority

Description

Alerts Add Exception Delete

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
<span>+ Add</span> <span>Delete</span>						

Device + Add Delete

Device	Type	Brand	Model	Peak Power (I)
<span>+ Add</span>				

File  + Add

- 4 In the **Edit Ticket** dialog, enter the information for the ticket:
- a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.

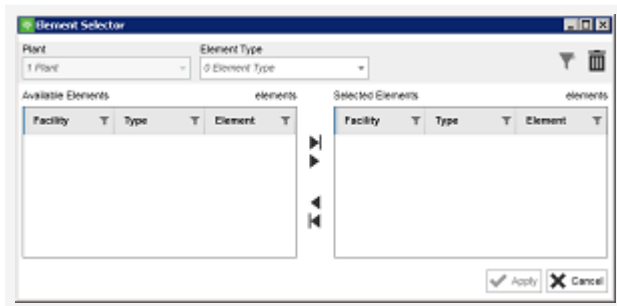


Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.

**g** *Description:* enter a description in the text input field.

- 5** (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a** Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**📌 BEST PRACTICE:** You can type a term into the *Search* field and click the **▼** icon to narrow down the options available on the list.

- b** In the **Available Elements** panel select the element you want to add to the ticket, then click the **▶** icon.

OR: Click the **▶▶** icon to select all the elements on the list.

**📌 TIP:** Hold down the shift key to select multiple elements.



- c** Click **Apply**.

**Result:** The element is added to the list.

- 6** (Optional) In the File section, click the **+** icon to open the Import Box and import a file.

## Import box



- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click  **Paste**.
- c Click  **Import**.

**Result:** The file is imported to the ticket.

- 7 (Optional) To add a note, follow these steps:

- a Click the  icon, hover over **Add section** and select **Note**.

**Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.

**Result:** The note is added to the ticket.

- 8 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

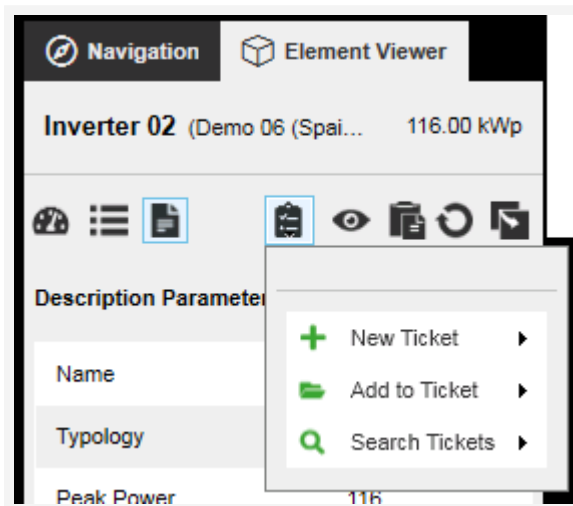
## Add elements to existing tickets


To add an element to an existing ticket, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

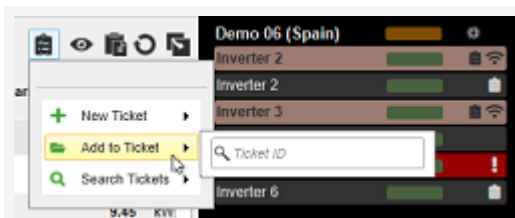
### Ticket menu



- 2 Hover over  **Add to Ticket** and enter the *Ticket ID* of an existing ticket (for example, "1543549623"), and press **Enter**.

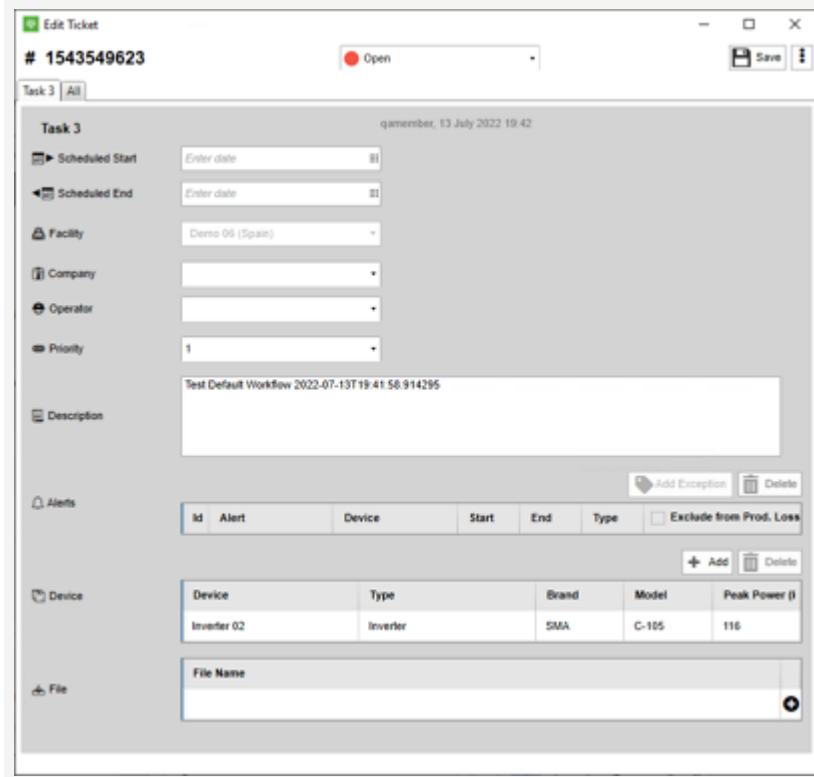
**REMEMBER:** You must enter the ID of an existing ticket. If no ticket exists, follow the instructions to create a new ticket from the Element viewer.

### Ticket menu



**Result:** The **Edit ticket** dialog appears, displaying the selected element in the Element field:

### Edit ticket dialog



**Edit Ticket**  
 # 1543549623    Open    Save

Task 3 | All    qmember, 13 July 2022 19:42

**Task 3**

Scheduled Start: Enter date

Scheduled End: Enter date

Facility: Demo 06 (Spain)

Company: [Dropdown]

Operator: [Dropdown]

Priority: 1

Description: Test Default Workflow 2022-07-13T19:41:58.914295

Alerts: Add Exception, Delete

Id	Alert	Device	Start	End	Type	Exclude from Prod. Loss
						<input type="checkbox"/>

+ Add    Delete

Device	Type	Brand	Model	Peak Power ()
Inverter 02	Inverter	SMA	C-105	116

File: File Name

3 (Optional) Edit any other fields of the ticket you want to change.

4 Click  **Save**.

### Result

The element is added to the ticket and any other changes are saved.

# Content area

The Content Area is organized in tabs and gives you access to the main tools and features of GPM Plus. Each tab gives you access to a specific module, which consists of specific frameworks that you can use to monitor and analyze all the information in your portfolio.

The main tabs in the content area are the following modules:

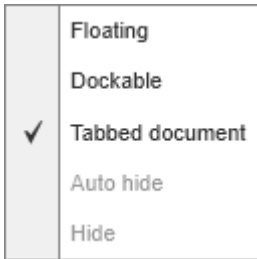
- [Network Operating Center \(NOC\)](#)
- [Map](#)
- [Tickets](#)
- [Alarms](#)

## Content area



You can use drag-and-drop to change the order of the tabs. Also, you can right-click a tab and select one of the following display modes from the context menu.

## Context menu



Option	Description
<b>Floating</b>	Click to undock the tab. You can use drag-and-drop to move it outside of the main window or to another screen.
<b>Dockable</b>	Click to undock the tab. To dock it again, you can use drag-and-drop and drop the tab on the icons indicating any side of the screen.
<b>Tabbed document</b>	When a tab is set to <b>Floating</b> , select this option to pin the tab to the Content Area.
<b>Hide</b>	When a tab is set to <b>Floating</b> , select this option to pin the tab to its default position in the Content Area.
<b>Autohide</b>	When a tab is docked, select this option to automatically hide the tab when you are not using it.

# Alarms

Alarms are entities that contain a set of activation and a set of deactivation conditions. When an alarm is triggered, you receive a notification to inform you when there is an event that affects production in your site. You can monitor, analyze and manage alarms in the [Alarms module](#).

[Alarm triggers](#) are the events that set off the alarm when a site or an element meets a given activation condition. You can perform tasks directly from the table of the Alarms module to address these conditions, such as creating a ticket and assigning it to an operator. The system deactivates the alarm when the deactivation conditions are met. It is also possible to deactivate certain alarms manually, depending on its configuration. For more information about activation and deactivation conditions, see the article on [alarm triggers](#).

The Alarms module allows you to perform several actions, depending on your role and the needs of your organization. For more information, see the [section on working with alarms](#).

# Alarm triggers

A trigger is the event that sets off the alarm when a site or an element meets a set of activation conditions. Each type of alarm has its own activation conditions. To deactivate the alarm, the element must meet the deactivation conditions defined for that trigger.

The system checks specific values for every element in a site periodically. When one of these values meets the activation conditions, the alarm trigger activates the alarm and notifies you in different screens of the user interface (for example, in the [NOC module](#)). In the [Alarms module](#), you can see detailed information to interpret the activation and deactivation conditions of the alarm.

## Activation conditions

Activation conditions are sets of values that trigger an alarm. These values can be specific (for example, "Status=0") or any number above or below a specific threshold (for example, "Power < 10").

An activation condition can have one or several values, depending on the parameters of a specific technology type, site or element. For instance, in a solar site, an inverter may trigger an alarm when its power output is below a specific threshold in relation to the irradiance (for example, "Power < 10" and "Irradiance > 3"). The relative nature of these thresholds prevents the system from incorrectly triggering an alarm for a solar panel at night, when the power output is expected to be zero. In wind sites, the same may happen when the generator of a wind turbine is generating less power than expected at a certain wind speed (for example, "Power < 10" and "Wind speed > 3").

**NOTE:** Some alarm types do not have activation conditions. For example, "Datalogger without communication" and "Plant communication stop."

## Deactivation conditions

The system deactivates an alarm after the element meets the deactivation conditions. For example, a communication-type alarm may trigger when the system pings an element and does not receive an answer after a specific period of time. The alarm will be deactivated when the communications resume.

When an alarm does not have an explicit deactivation condition explicitly defined for it, the deactivation condition is the opposite of the activation condition. For example, if the activation condition for an alarm for a generator in a wind turbine is "Power <= 0", the deactivation condition will be "Power = 0".



# Work with alarms

Alarms are mainly useful for two tasks: analyzing production and operations and management (O&M).

## Analyze alarms

To analyze production, the main resource is the Alarm Information Window in the Alarms module. Here, you can assess how the condition that triggers an alarm impacts production.

The main analysis tasks for alarms are:

- View detailed information for alarms
- Interpret activation and deactivation conditions
- Apply filters to the alarms table
  - Basic filters: time period, plant and keywords.
  - Advanced filters: alarm ID, status, type, severity, and more.
- Export alarms from different areas of GPM Plus:
  - Export data from the alarms grid
  - Generate reports for alarms

## O&M tasks

O&M tasks allow you to address alarms by creating tickets, assigning them to operators and managing the status of an alarm. You can use the context menu of an alarm to directly access the available actions. Some of these are also available through other modules (for example, Tickets).

The main O&M tasks for alarms are:

- Assign alarms to operators

**NOTE:** This option is not available when the alarm is already assigned to a ticket, or when there is no operator associated to the plant where the alarm is triggered.

- Ticket-related tasks
  - Create new tickets for alarms:
    - Maintenance
  - Add alarms to tickets
  - Search for tickets linked to alarms

**NOTE:** These options are not available when you select multiple alarm triggers from different plants.

- Add exceptions to alarms
- Manage alarms:
  - Put alarms on hold
  - Deactivate alarms
  - Delete alarms

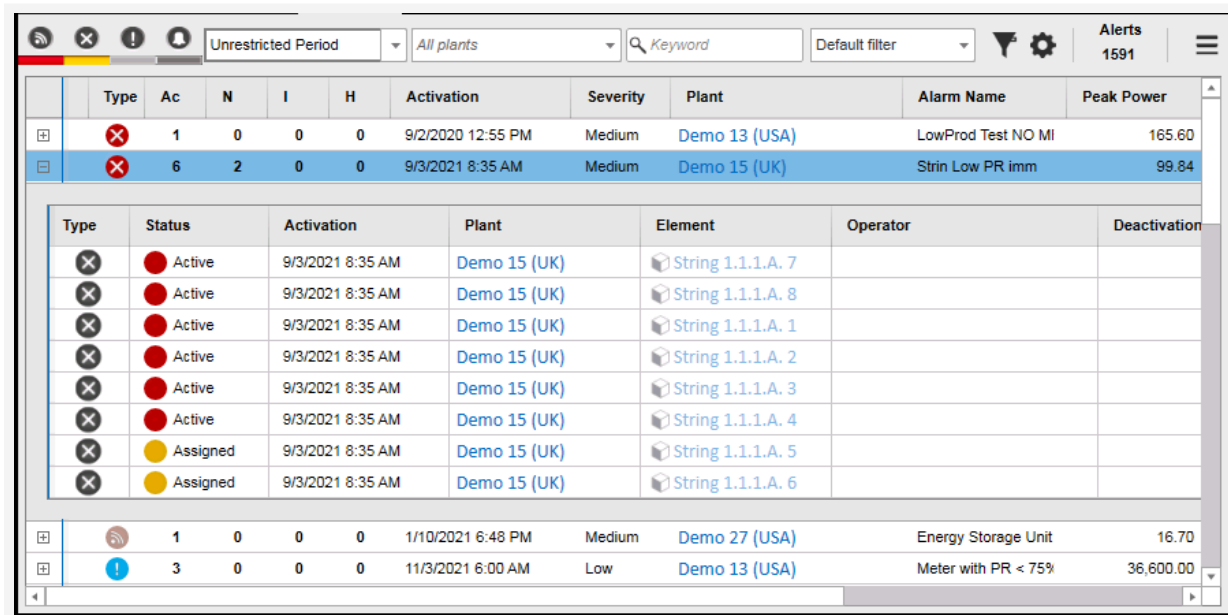
# Assign alarms to operators

To assign an alarm to an operator, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two alarm groups are expanded. The first group, 'Demo 15 (UK)', has 6 triggers, with 4 'Active' (red) and 2 'Assigned' (yellow). The second group, 'Demo 13 (USA)', has 3 triggers, with 1 'Active' (red) and 2 'Assigned' (yellow).

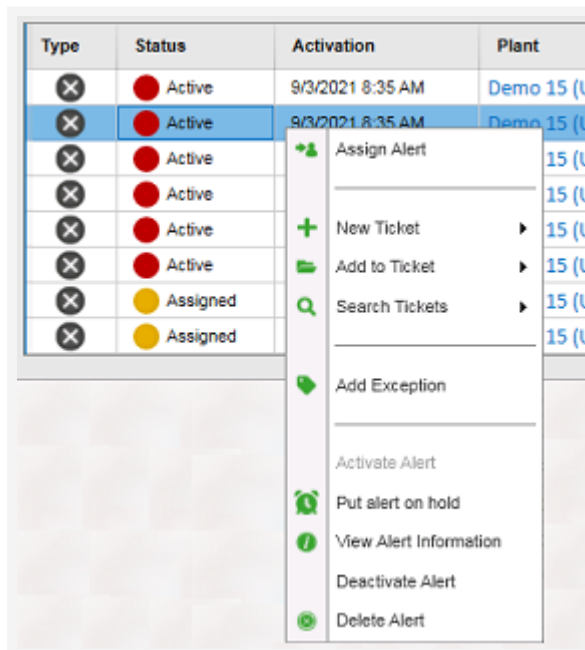
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊕	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60	
⊕	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84	
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊕	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70	
⊕	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00	

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

🔔 **TIP:** Hold down the shift key to select multiple triggers. To select multiple triggers from different alarms, see the instructions to Ungroup alarm triggers.

**Result:** The context menu appears:

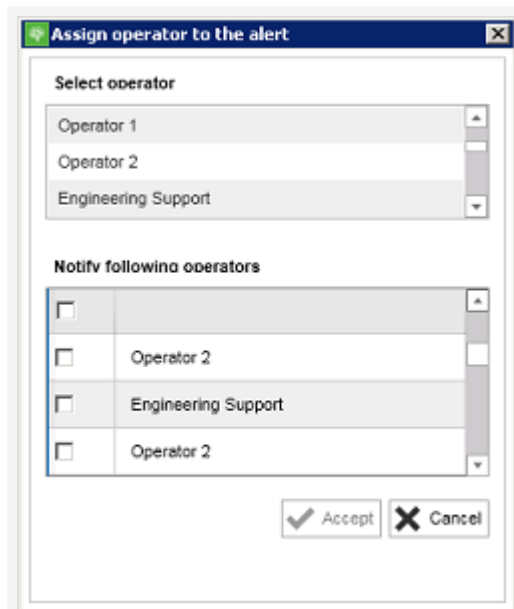
### Alarm trigger context menu



### 3 Click **Assign Alarm**.

**Result:** The Assign alarm to operator dialog appears:

### Assign alarm to operator dialog



### 4 In the **Select operator** section, click on the operator to whom you want to assign the alarm.

### 5 (Optional) Click the **Notify re assignment** checkbox to automatically notify the operator

of the assignment.

6 (Optional) In the **Notify following operators** section, select additional operators to whom you want to send a notification regarding the assignment.

7 Click **Accept**.

## Result

The alarm is assigned to the operator.

**NOTE:** You can re-assign or unassign an alarm that has been assigned to an operator.

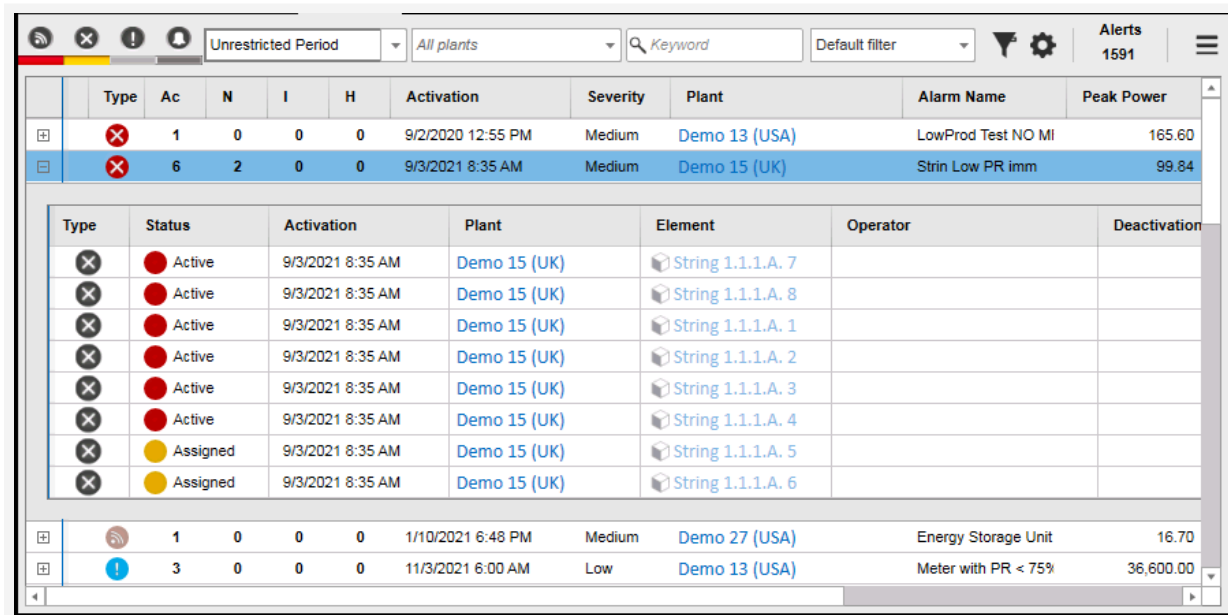
# Add alarms to tickets

To add an alarm to a ticket, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed table of triggers. The first expanded row has a Type of 'X' and a Status of 'Active'. The second expanded row has a Type of 'X' and a Status of 'Assigned'.

Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
X	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60	
X	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84	
Type	Status	Activation	Plant	Element	Operator	Deactivation				
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
X	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
X	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
X	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
X	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70	
X	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00	

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**TIP:** Hold down the Ctrl key in your keyboard to select multiple triggers.

**Result:** The context menu appears:

### Alarm trigger context menu

Type	Status	Activation	Plant
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (U
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (U
⊗	● Active	+ Assign Alert	15 (U
⊗	● Active		15 (U
⊗	● Active	+ New Ticket ▶	15 (U
⊗	● Active	+ Add to Ticket ▶	15 (U
⊗	● Active	🔍 Search Tickets ▶	15 (U
⊗	● Assigned		15 (U
⊗	● Assigned		15 (U

➡ Add Exception
Activate Alert
🕒 Put alert on hold
📄 View Alert Information
Deactivate Alert
🗑 Delete Alert

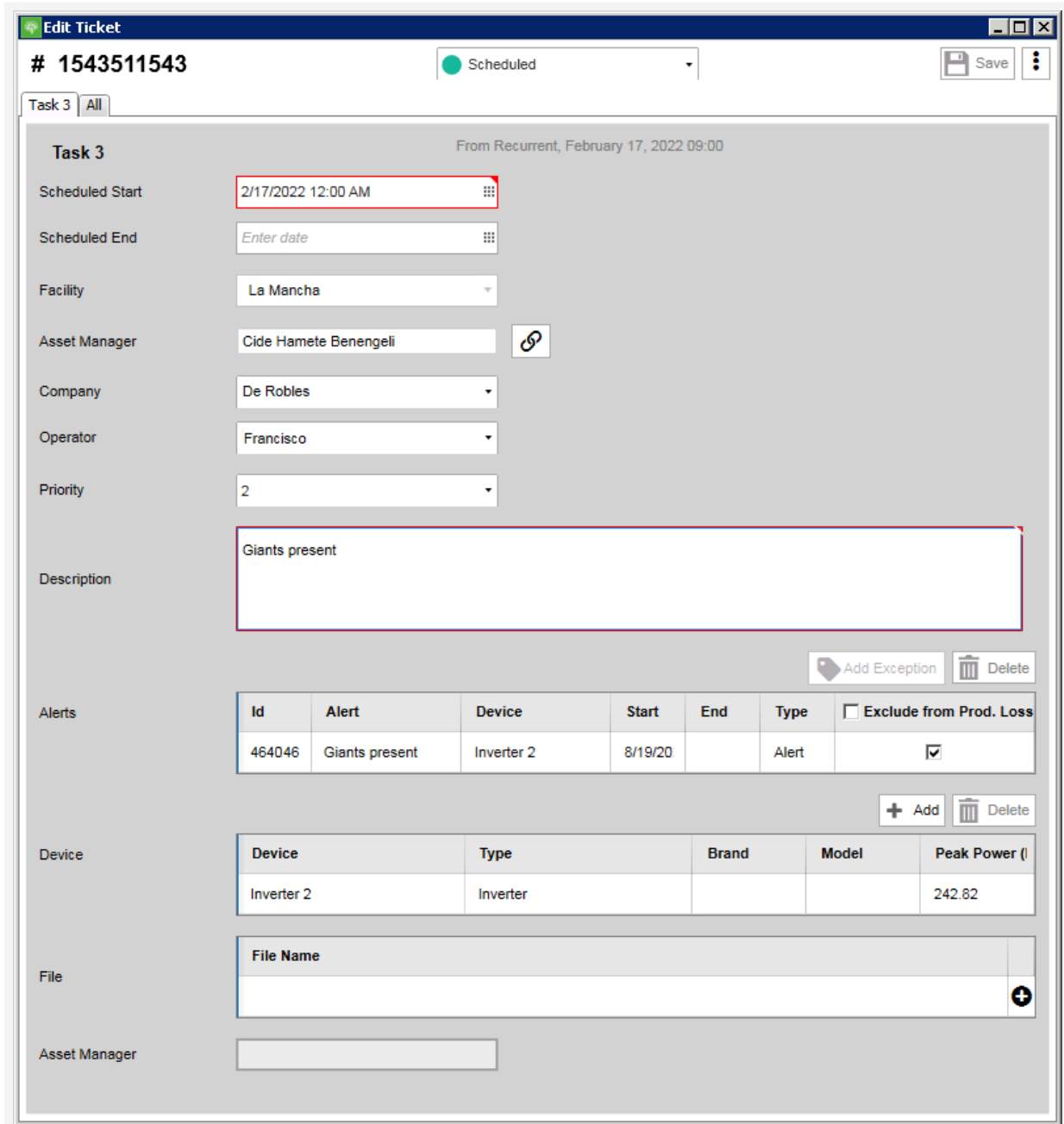
- 3 Hover over **Add to Ticket** and enter the *Ticket ID* in the search field, then press Enter.

① **NOTE:** The ticket must belong to the same plant as the alarm.



**Result:** The Edit ticket dialog appears:

### Edit ticket dialog



**Edit Ticket**

# 1543511543 Scheduled Save


Task 3 | All

**Task 3** From Recurrent, February 17, 2022 09:00

Scheduled Start: 2/17/2022 12:00 AM

Scheduled End: Enter date

Facility: La Mancha

Asset Manager: Cide Hamete Benengeli 

Company: De Robles

Operator: Francisco

Priority: 2

Description: Giants present

Add Exception Delete

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
464046	Giants present	Inverter 2	8/19/20		Alert	<input checked="" type="checkbox"/>

+ Add Delete

Device	Type	Brand	Model	Peak Power (l)
Inverter 2	Inverter			242.82

File: File Name + Add

Asset Manager:

4 Click  **Save**.

### Result

The trigger is linked to the ticket.

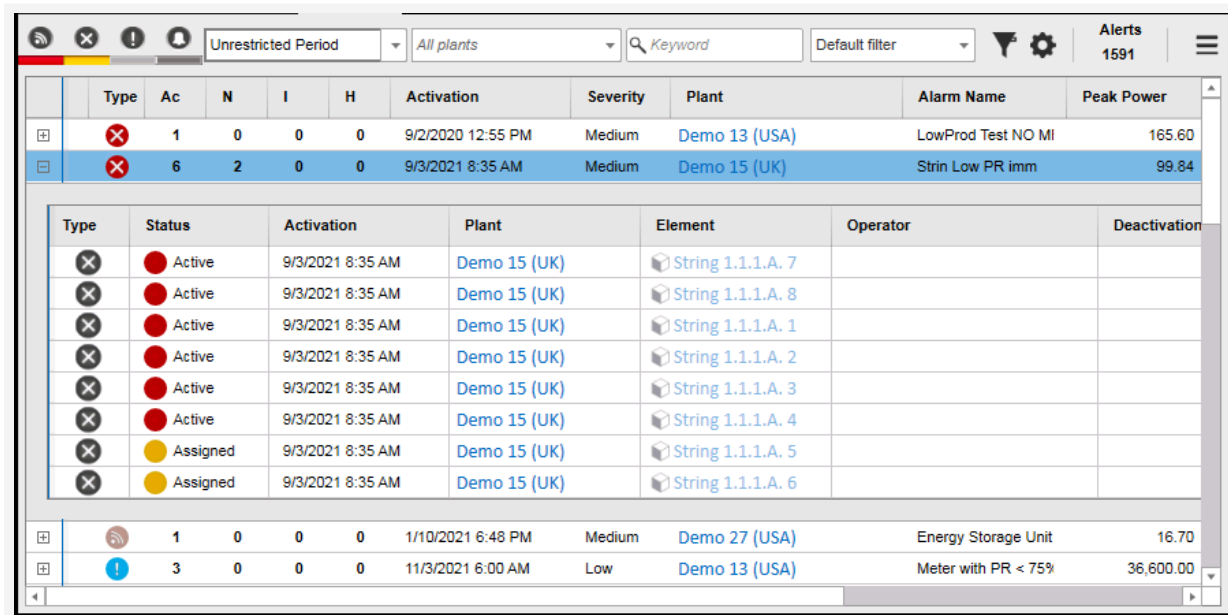
# Create maintenance tickets for alarms

To create a maintenance ticket from an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed view of the alarm triggers. The first expanded row shows 6 triggers for 'Demo 15 (UK)' with 'Strin Low PR imm' as the alarm name and a peak power of 99.84. The second expanded row shows 3 triggers for 'Demo 13 (USA)' with 'Meter with PR < 75%' as the alarm name and a peak power of 36,600.00. The detailed view includes columns for Type, Status, Activation, Plant, Element, Operator, and Deactivation.

Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊞	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60	
⊞	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84	
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊞	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊞	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊞	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊞	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70	
⊞	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00	

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**TIP:** Hold down the Ctrl key in your keyboard to select multiple triggers.

**Result:** The context menu appears:

### Alarm trigger context menu

Type	Status	Activation	Plant
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (L
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (L
⊗	● Active	+ Assign Alert	15 (L
⊗	● Active		15 (L
⊗	● Active	+ New Ticket ▶	15 (L
⊗	● Active	+ Add to Ticket ▶	15 (L
⊗	● Active	🔍 Search Tickets ▶	15 (L
⊗	● Assigned		15 (L
⊗	● Assigned		15 (L

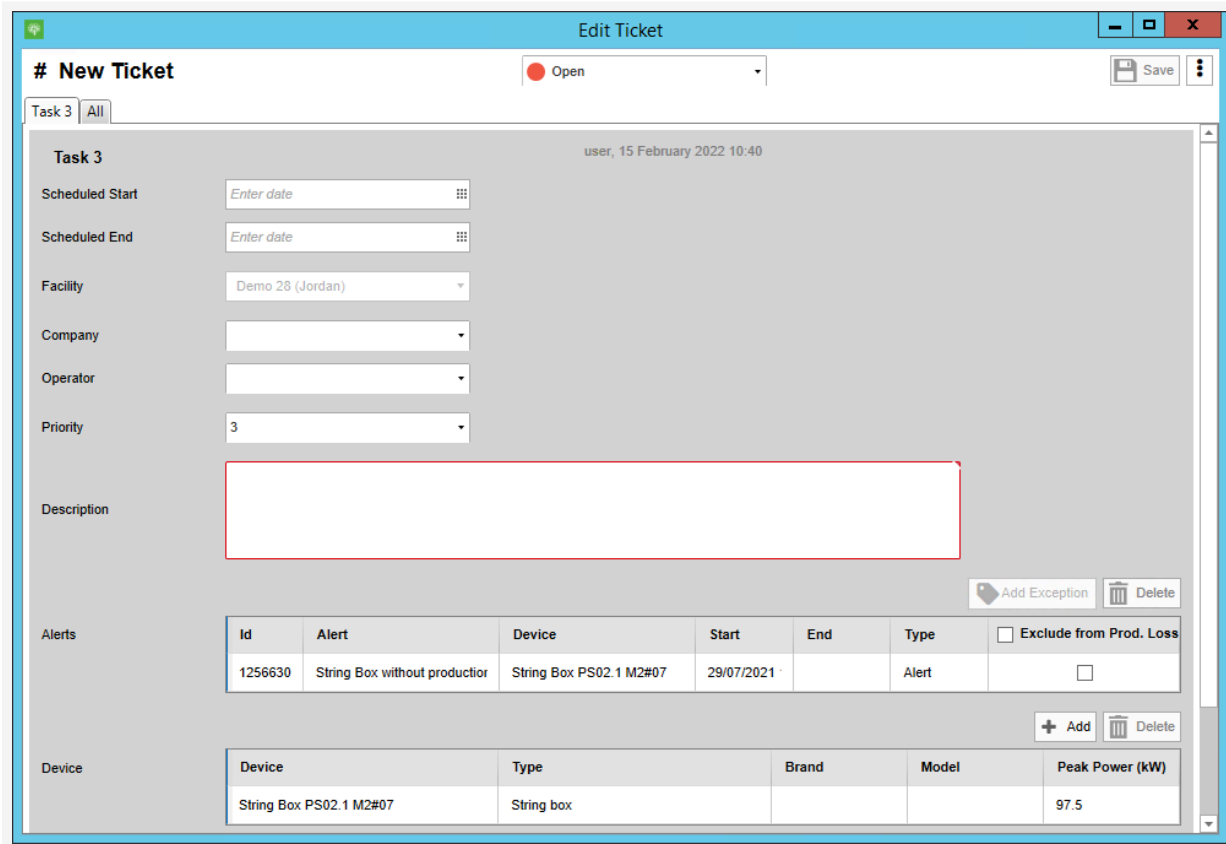
  

➡ Add Exception
Activate Alert
🕒 Put alert on hold
🔍 View Alert Information
Deactivate Alert
🗑️ Delete Alert

- 3 Hover over **New Ticket** to expand the options panel, then hover over **Maintenance** to expand the templates panel. Select the template from which to create the ticket.

**Result:** The Edit Ticket dialog appears:

### Edit Ticket dialog



**# New Ticket** Open Save

Task 3 | All

**Task 3** user, 15 February 2022 10:40

Scheduled Start:

Scheduled End:

Facility:

Company:

Operator:

Priority:

Description:


Alerts

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
1256630	String Box without production	String Box PS02.1 M2#07	29/07/2021		Alert	<input type="checkbox"/>

Device

Device	Type	Brand	Model	Peak Power (kW)
String Box PS02.1 M2#07	String box			97.5

4 In the **Edit Ticket** dialog, enter the information for the ticket:

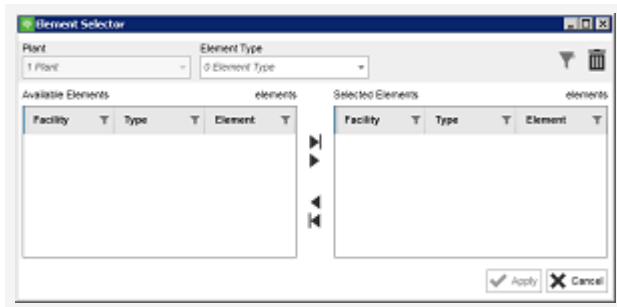
- a **Scheduled Start:** select the date on which the ticket starts.
- b **Scheduled End:** select the date on which you expect the ticket to close.
- c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
- d **Company:** select the company that must resolve the issue related to the ticket.
- e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
- f **Priority:** select a priority from the drop-down list.  
Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
- g **Description:** enter a description in the text input field.
- h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
- i (Optional) **File:** click the  icon to add files to the ticket. For more information,

see [Import data from a file](#).


**NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.


- 5 (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**BEST PRACTICE:** You can type a term into the *Search* field and click the  icon to narrow down the options available on the list.


- b In the **Available Elements** panel select the element you want to add to the ticket, then click the  icon.

OR: Click the  icon to select all the elements on the list.

**TIP:** Hold down the shift key to select multiple elements.

- c Click **Apply**.

**Result:** The element is added to the list.

- 6 (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).
- 7 Click  **Save**.

## Result

The ticket is created and linked to the alarm.

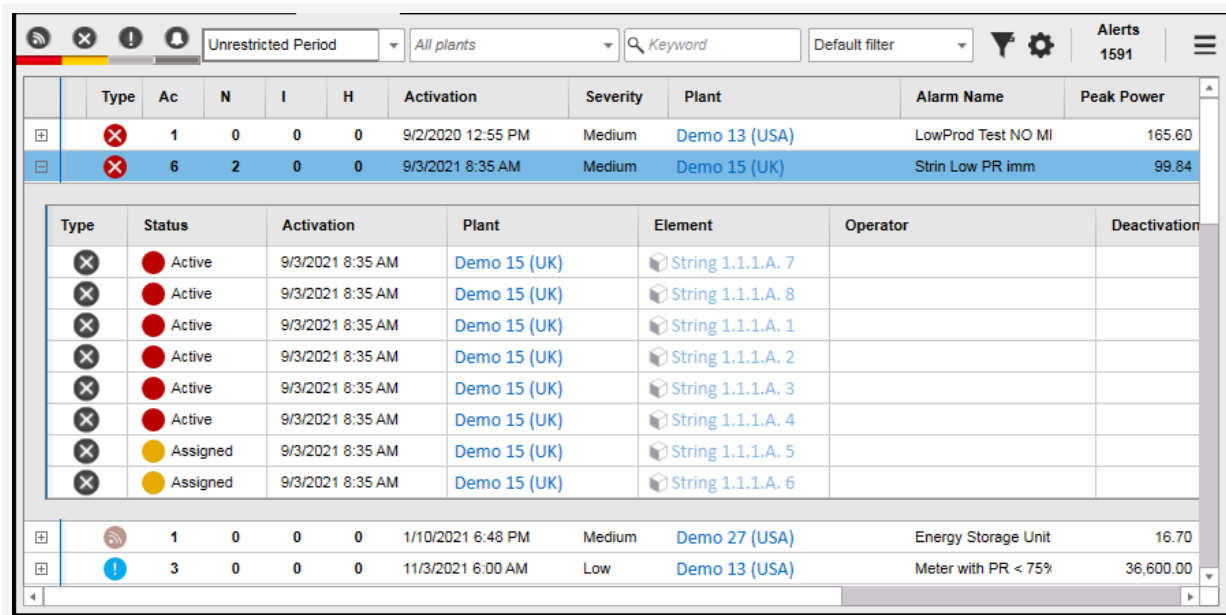
# Search for tickets linked to alarms

To search for tickets linked to an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed view of the alarm triggers. The first expanded row shows 6 triggers for 'Demo 15 (UK)' with 'Strin Low PR imm' as the alarm name and a peak power of 99.84. The second expanded row shows 3 triggers for 'Demo 13 (USA)' with 'Meter with PR < 75%' as the alarm name and a peak power of 36,600.00.

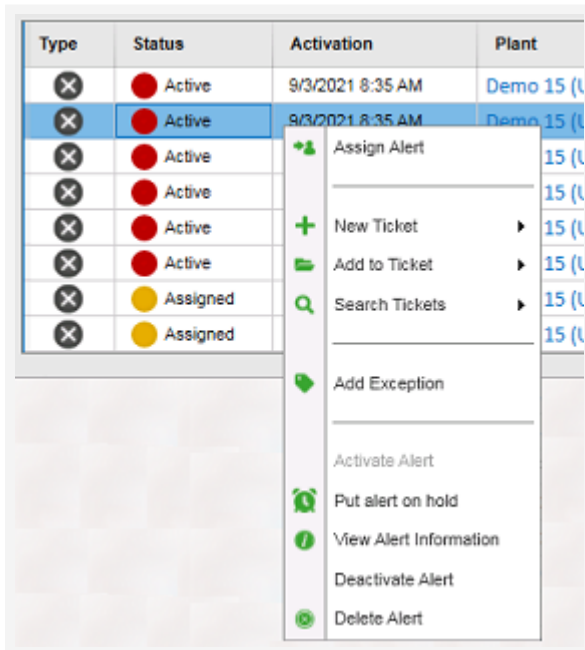
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊗	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60	
⊗	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84	
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊗	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70	
⊗	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00	

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**TIP:** Hold down the Ctrl key in your keyboard to select multiple triggers.

**Result:** The context menu appears:

### Alarm trigger context menu

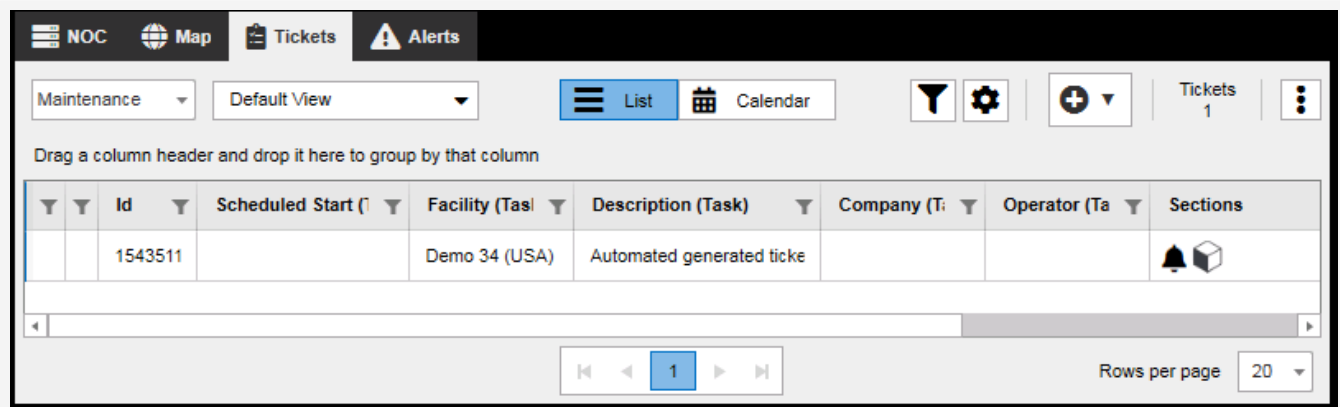


3 Click **Search tickets**.

## Result

The Tickets module opens and displays the results:

### Search results in Tickets module



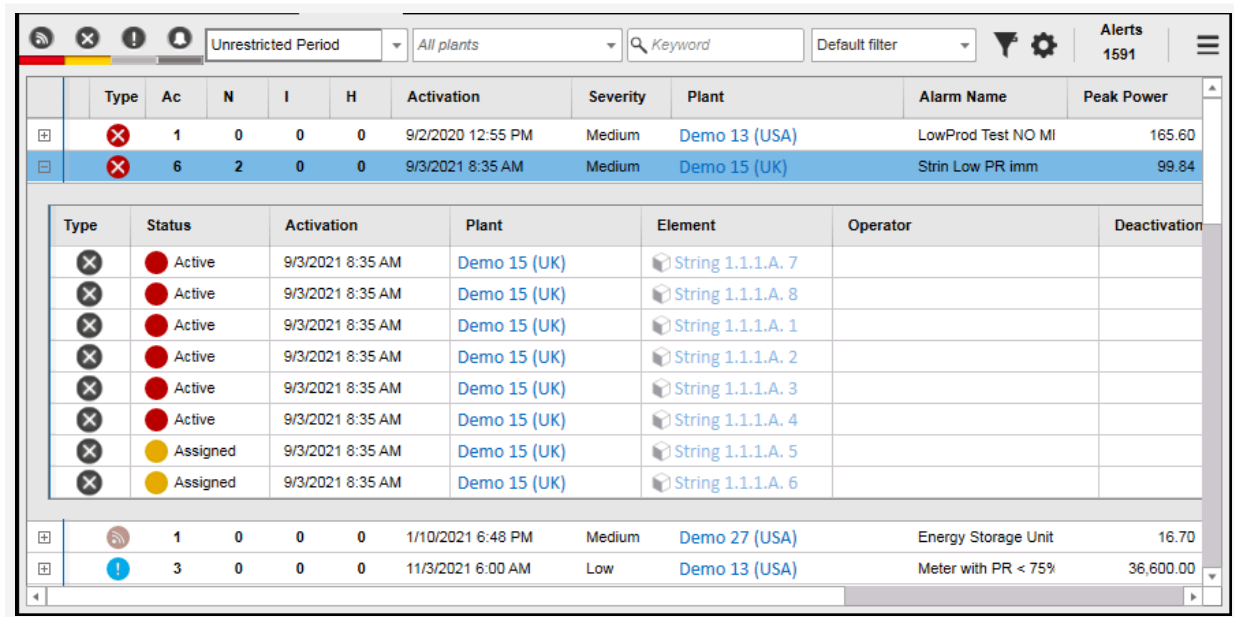
# Add exceptions to alarms

To add an exception to an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed table with columns: Type, Status, Activation, Plant, Element, Operator, and Deactivation.

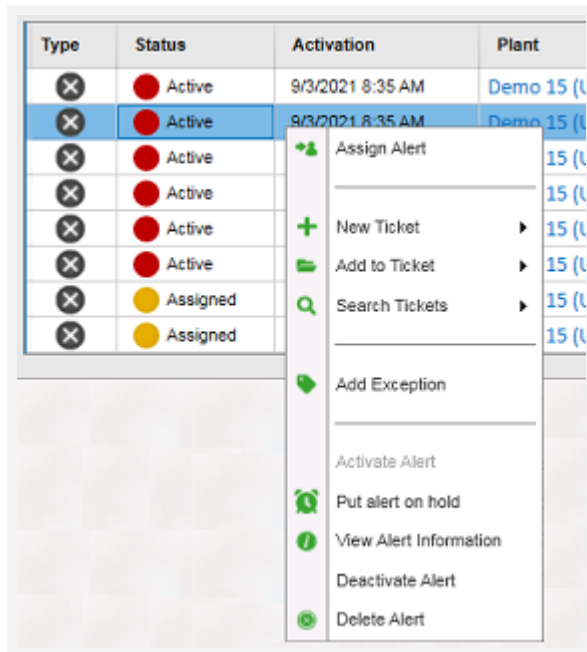
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊞	⊗	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60
⊞	⊗	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊞	⊗	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70
⊞	⊕	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.



**Result:** The context menu appears:

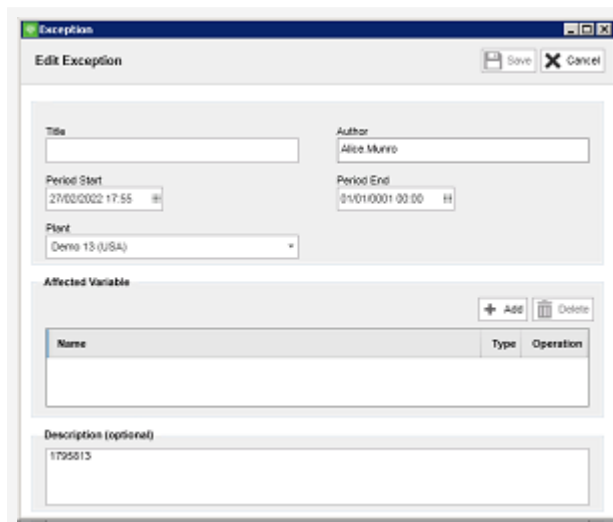
### Alarm trigger context menu



### 3 Click **Add Exception**.

**Result:** The Edit Exception dialog appears:

### Edit exception dialog



### 4 In the **Edit exception** dialog, enter the details for the exception:

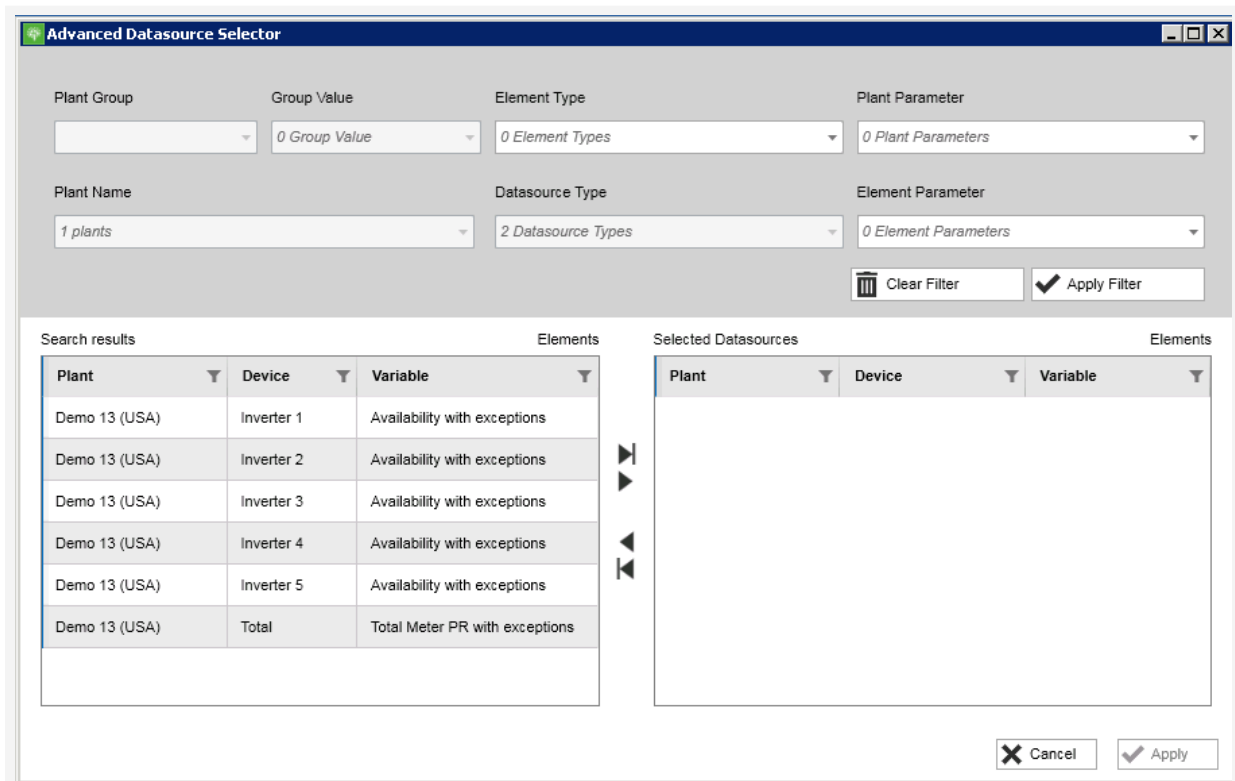
**NOTE:** The *Author* field is automatically filled in with your username.

- a Enter a *Title* for the exception.
- b Click the **Period Start** menu and select the date and time at which the exception begins.
- c Click the **Period End** menu and select the date and time at which the exception ends.

5 In the **Affected Variable** section, click **+ Add**.

**Result:** The **Advanced Datasource Selector** dialog appears:

### Advanced Datasource Selector



Plant	Device	Variable
Demo 13 (USA)	Inverter 1	Availability with exceptions
Demo 13 (USA)	Inverter 2	Availability with exceptions
Demo 13 (USA)	Inverter 3	Availability with exceptions
Demo 13 (USA)	Inverter 4	Availability with exceptions
Demo 13 (USA)	Inverter 5	Availability with exceptions
Demo 13 (USA)	Total	Total Meter PR with exceptions

6 In the **Advanced Datasource Selector** dialog, select the variables you want to add to the exception:

- a In the Search Results panel, click the exceptions you want to add, then click the ► icon to move them to the **Selected Datasources** panel.

**TIP:** Hold down the SHIFT key to select multiple variables.

OR: Click the ► icon to move all the available variables to the **Selected Datasources** panel.

- b Click **✓ Apply**.

**Result:** The variables are added to the exception and an **Operations** menu appears for each variable:

### Operations menu for variables

Name	Type	Operation
Demo 30 (Australia) - INV03BCBK09 - A	Availability	Exclude event time from calculation ▾
Demo 30 (Australia) - INV03BCBK09 - P	Performance Ratio	Exclude event time from calculation ▾

7 For each variable, click the Operation drop-down menu and select one of the available options:

- **Exclude event time from calculation:** the calculation excludes data of the specified corresponding to the time period specified in Step 4.
- **Force time as Available:** sets the status of the variables for the selected devices to "Available" for the time period specified in Step 4.

**NOTE:** This option is only available for Availability.

- **Force time as Unavailable:** sets the status of the variables for the selected devices to "Unavailable" for the time period specified in Step 4.

**NOTE:** This option is only available for Availability.

8 (Optional) Enter a *Description* for the exception to include additional details.

9 Click **Save**.

## Result

The exception is added to the alarm.

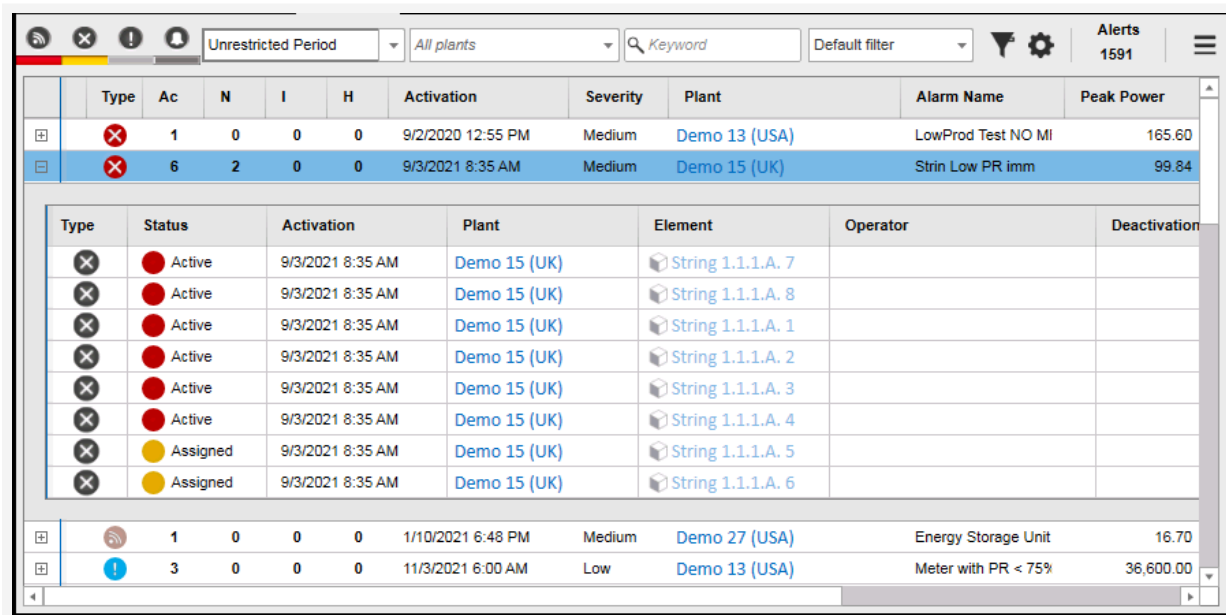
# Put alarms on hold

To put an alarm on hold, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The 'Alerts' count is 1591. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed table with columns: Type, Status, Activation, Plant, Element, Operator, and Deactivation.

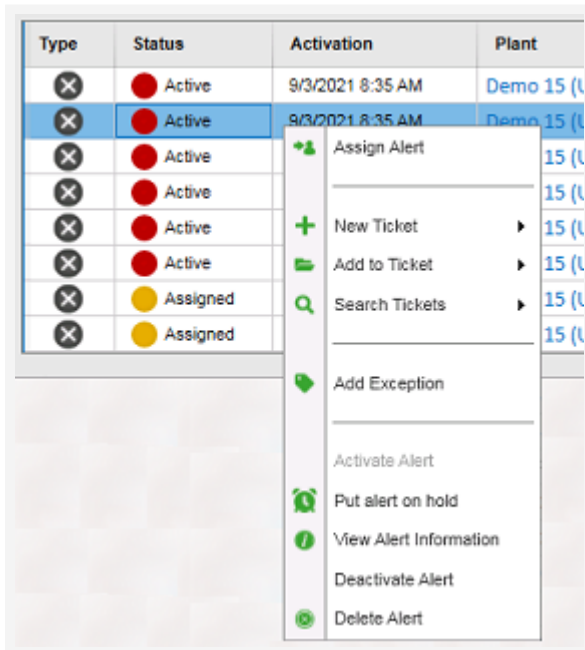
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊕	⊗	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60
⊕	⊗	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊕	⊗	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70
⊕	ⓘ	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

🔔 **TIP:** Hold down the shift key to select multiple triggers. To select multiple triggers from different alarms, see the instructions to Ungroup alarm triggers.

**Result:** The context menu appears:

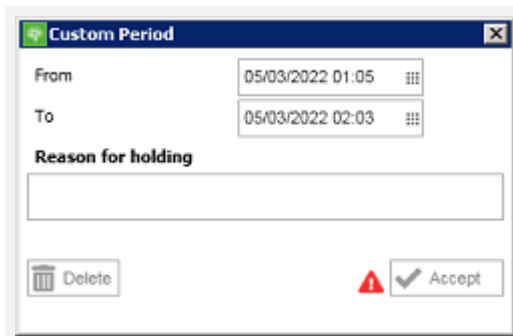
### Alarm trigger context menu



- 3 Click **Put alarm on hold**.

**Result:** The **Custom Period** dialog appears:

### Custom Period dialog




- 4 In the Custom Period dialog, enter the details for the alarm status:
- a Click the **From** menu and select the date and time on which the hold status starts.
  - b Click the **To** menu and select the date and time on which the hold status ends.
  - c Enter a *Reason for holding*.
  - d Click ✓ **Accept**.



## Result

The alarm status changes to "On hold":

### Alarm on hold

Type	A	N	I	H	Activation
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/03/2022 21:26

Type	Status	Activation
	 On hold	04/03/2022 21:25

**NOTE:** You can edit the hold information by opening the context menu for the alarm and selecting **Edit hold information**.

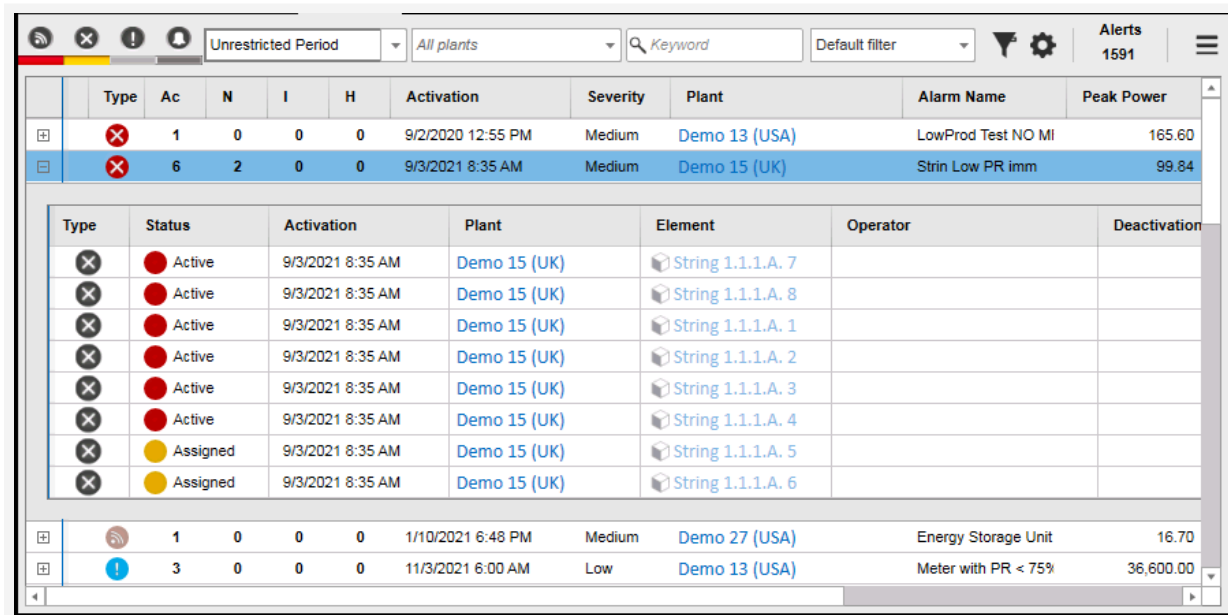
# View detailed information for alarms

To view the information for an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

## Expanded alarms



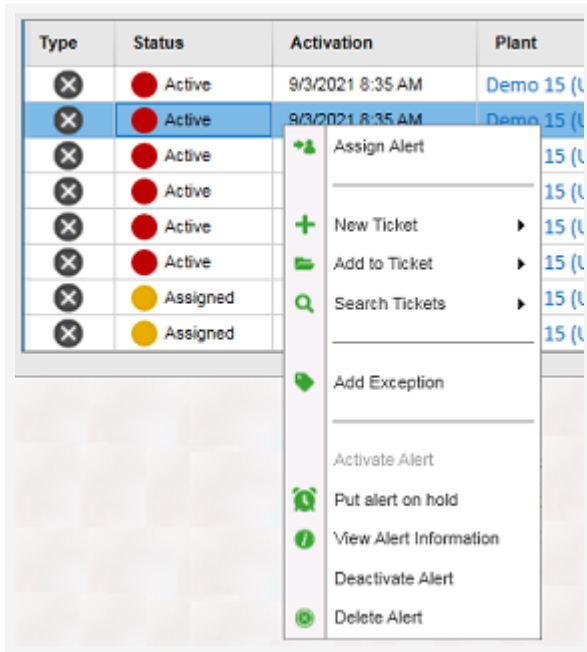
The screenshot shows the Alarms module interface. At the top, there are navigation icons, a search bar with 'Unrestricted Period' and 'All plants', a keyword search field, a 'Default filter' dropdown, and an 'Alerts 1591' indicator. The main table has columns: Type, Ac, N, I, H, Activation, Severity, Plant, Alarm Name, and Peak Power. Two rows are expanded, showing a detailed view of the alarm triggers. The first expanded row shows 6 triggers for 'Demo 15 (UK)' with 'Strin Low PR imm' alarm name and a peak power of 99.84. The second expanded row shows 3 triggers for 'Demo 13 (USA)' with 'Meter with PR < 75%' alarm name and a peak power of 36,600.00. The detailed view table has columns: Type, Status, Activation, Plant, Element, Operator, and Deactivation.

Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊞	⊗	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60
⊞	⊗	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊞	⊗	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70
⊞	ⓘ	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**Result:** The context menu appears:

### Alarm trigger context menu

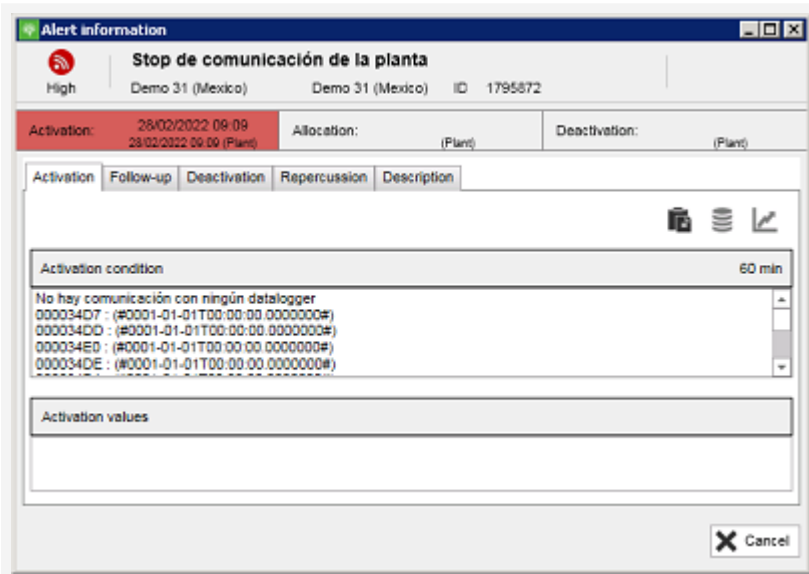


**3** Click **View Alarm Information**.

## Result

The Alarm information window appears:

### Alarm information window





# Deactivate alarms manually

## Before you begin

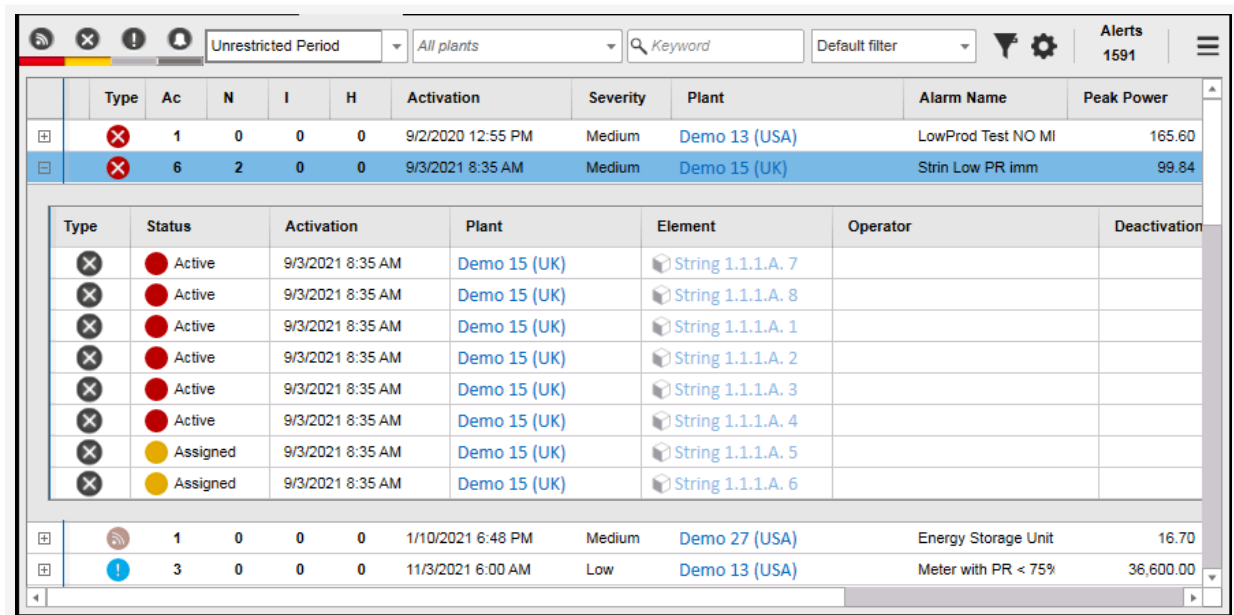
This task requires an administrator password for security validation.

To deactivate an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

### Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The main table displays a list of alarms. Two alarms are expanded, showing their details in a sub-table below. The first expanded alarm is 'Demo 15 (UK)' with a severity of 'Medium' and an activation time of '9/3/2021 8:35 AM'. The sub-table shows seven triggers for this alarm, with statuses ranging from 'Active' (red dot) to 'Assigned' (yellow dot). The second expanded alarm is 'Demo 27 (USA)' with a severity of 'Medium' and an activation time of '1/10/2021 6:48 PM'. The sub-table shows one trigger with a status of 'Active' (red dot).

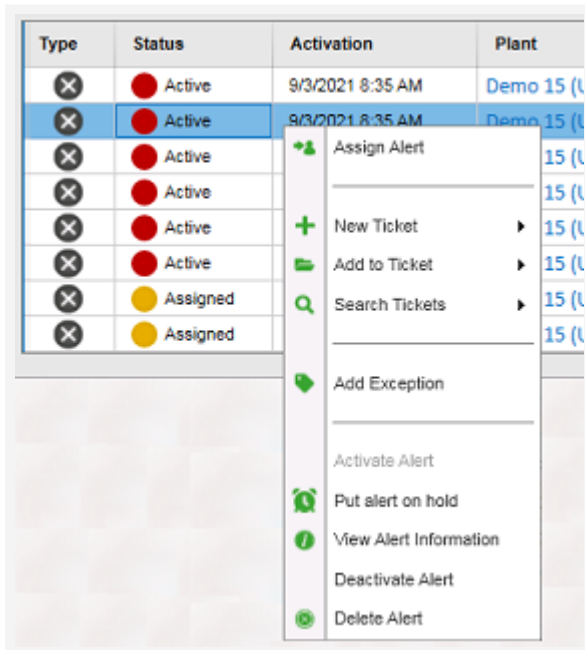
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊞	⊗	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60
⊞	⊗	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊗	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊗	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊞	⊗	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70
⊞	ⓘ	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**TIP:** Hold down the shift key to select multiple triggers. To select multiple triggers from different alarms, see the instructions to Ungroup alarm triggers.

**Result:** The context menu appears:

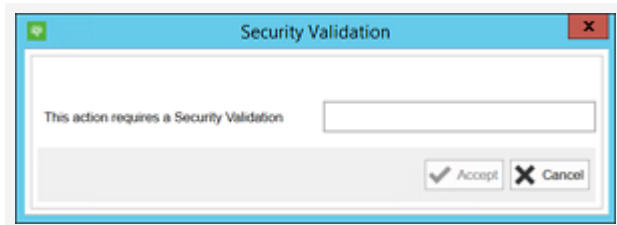
### Alarm trigger context menu



- 3 Click **Deactivate alarm**.

**Result:** The Security Validation dialog appears:

### Security validation



- 4 Enter the password and click ✓ **Accept**.

## Result

The alarm is deactivated.

**NOTE:** If the activation condition that triggered the alarm is still present after a predefined period of time, a new alarm will be triggered and you will receive a notification with a new Alarm trigger ID and timestamp.

# Delete alarms

## Before you begin

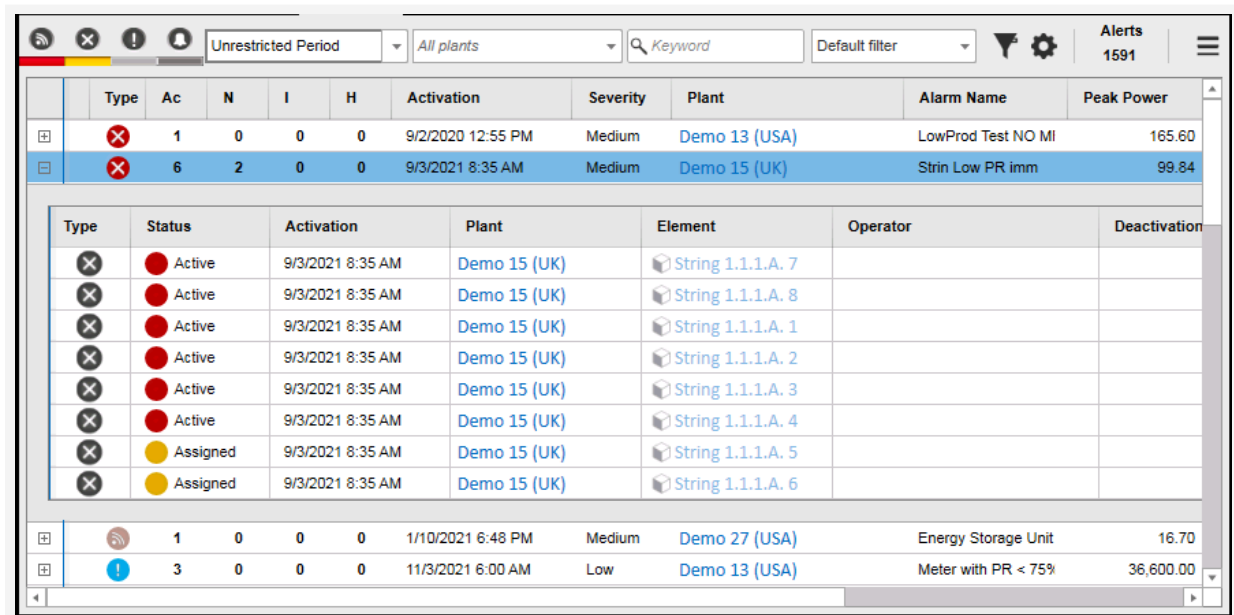
This task requires an administrator password.

To delete an alarm, follow these steps:

- 1 In the Alarms table of the Alarms module, click the + sign next to the group of alarm triggers you want to expand.

**Result:** The collapsed list of triggers expands:

### Expanded alarms



The screenshot shows the Alarms module interface. At the top, there are filters for 'Unrestricted Period', 'All plants', a search bar for 'Keyword', and a 'Default filter' dropdown. The main table displays a list of alarms. One alarm group is expanded, showing a detailed view of its triggers. The expanded view includes columns for Type, Status, Activation, Plant, Element, Operator, and Deactivation.

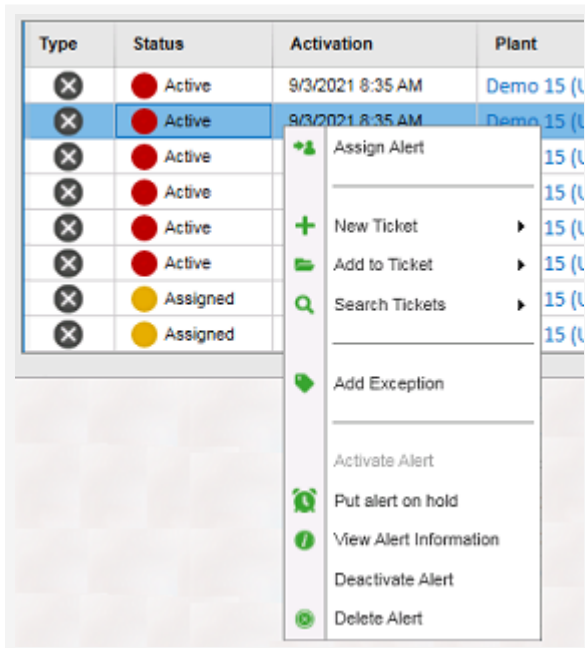
Type	Ac	N	I	H	Activation	Severity	Plant	Alarm Name	Peak Power	
⊞	✖	1	0	0	0	9/2/2020 12:55 PM	Medium	Demo 13 (USA)	LowProd Test NO MI	165.60
⊞	✖	6	2	0	0	9/3/2021 8:35 AM	Medium	Demo 15 (UK)	Strin Low PR imm	99.84
Type	Status	Activation	Plant	Element	Operator	Deactivation				
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 7						
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 8						
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 1						
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 2						
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 3						
⊞	● Active	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 4						
⊞	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 5						
⊞	● Assigned	9/3/2021 8:35 AM	Demo 15 (UK)	String 1.1.1.A. 6						
⊞	📶	1	0	0	0	1/10/2021 6:48 PM	Medium	Demo 27 (USA)	Energy Storage Unit	16.70
⊞	!	3	0	0	0	11/3/2021 6:00 AM	Low	Demo 13 (USA)	Meter with PR < 75%	36,600.00

- 2 Click the alarm trigger you want to address to select it, then right-click it to open the context menu.

**TIP:** Hold down the shift key to select multiple triggers. To select multiple triggers from different alarms, see the instructions to Ungroup alarm triggers.

**Result:** The context menu appears:

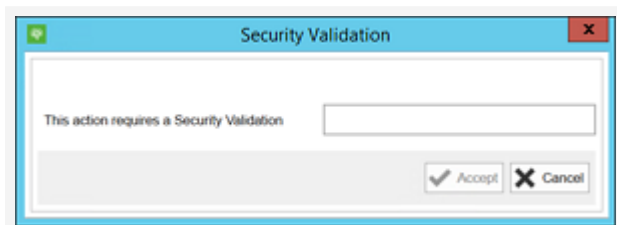
### Alarm trigger context menu



- 3 Click **Delete alarm**.

**Result:** The Security Validation dialog appears:

### Security validation



- 4 Enter the password and click ✓ **Accept**.

## Result

The alarm is deleted.

# Advanced Analytics

GreenPowerMonitor's Advanced Analytics feature is a cutting-edge tool to help asset managers monitor and analyze the performance of their assets. The feature consists of a set of advanced algorithms, developed by leading experts in the industry, to provide top-tier analytics, identify underperformance and downtime, and address other issues that may impact the overall production and availability of your assets.

The Advanced Analytics leverage GPM's data collection, machine-learning, and statistical models to analyze large volumes of data from various sources, including weather, performance, and other operational data. Our algorithms then apply sophisticated analysis techniques to identify trends, patterns, and anomalies that may indicate underperformance or other issues.

This feature allows you to identify issues before they become significant problems, enabling you to take proactive measures to resolve them. For example, if the algorithms detect a drop in energy production or an increase in downtime, you can investigate the issue and take corrective actions, such as maintenance or optimization, to prevent further loss of revenue or production.

The Advanced Analytics feature provides a range of key performance indicators (KPIs) that offer insights into the performance and health of your assets. These KPIs include energy production, availability, and other critical metrics, which help asset managers to make informed decisions about their operations.

Thanks to the Advanced Analytics feature, you can increase the reliability and performance of your assets, minimize downtime, and reduce maintenance costs. You can also optimize energy production, leading to increased revenue and profitability.

## **Available tools**

GPM Plus has two powerful tools based on Advanced Analytics, accessible through the [Plant Dashboard](#) module.

### **Heatmap**

The Heatmap displays historical aggregated data at the element level (for example, inverters or wind turbines). This feature leverages GPM's [Advanced Analytics](#) to allow you to identify where and when assets in your portfolio are under-performing, allowing you to evaluate and address inefficiencies at the level of individual elements.

### **Losses Categorization table**

The Losses Categorization Table provides a detailed breakdown that allows you to identify and quantify the causes behind the energy losses of your plants, compared to the predicted production. This provides insight and a detailed understanding of the reasons behind the losses, enabling you to make strategic decisions to improve your energy production.

### **Losses Heatmap**

The Losses Heatmap is an advanced visualization feature that presents a detailed and interactive view of energy losses across devices over time. This feature leverages GPM's [Advanced Analytics](#) to allow you to identify patterns, trends and anomalies in energy production and output.

## Loss categories

Loss categories are detailed and quantifiable definitions of the factors that affect your assets and cause losses in production and output. This enables a level of great detail to classify and analyze the difference between the expected or estimated energy production and the actual production at the level of plants and individual devices (for example, inverters or turbines).

This level of analysis provides GPM's team of renewable energy experts define these categories in close collaboration with asset managers and other stakeholders, taking into consideration every factor that impacts production at a plant. These include technical specifications of specific devices, to energy engineering, financial planning, environmental and meteorological contexts, and the requirements and limitations of energy grids. The Advanced Analytics algorithms that categorize and quantify losses power several features across all GPM products, providing you with a comprehensive toolkit that empowers you to analyze and optimize energy production at every level, ranging from large-scale portfolio and plant management, including long-term financial analysis and forecasts, to everyday maintenance and operation tasks.

## Products and features

### GPM Plus

- Losses Categorization Table
- Losses Heatmap



## Solar loss categories

Category	Description
<b>Actual energy</b>	Real energy output of the plant after accounting for all losses.
<b>Clipping</b>	Losses caused by limiting the energy production of inverters to their maximum capacity.
<b>Curtailment</b>	Deliberate reduced output due to grid management or response to overproduction.
<b>Expected energy/ Theoretical production</b>	Projected energy yield after taking into consideration corrections for irradiance and temperature.
<b>Grid outage</b>	Energy lost or not produced due to failures in the connectivity of the power grid.
<b>Inverter efficiency</b>	Discrepancy between the expected and the actual performance of inverters.
<b>Inverter outage</b>	Downtime or inefficiency of inverters, affecting energy conversion.
<b>Irradiance correction</b>	Adjustment of predicted production, based on real-time solar irradiance.
<b>Partial breakdown</b>	Malfunction or degradation in a section of the solar array.
<b>Predicted production</b>	Initial forecast of energy output, based on historical data and plant capacity.
<b>Temperature correction</b>	Modification to account for temperature impacts on the efficiency of panels.
<b>Shadow</b>	Losses caused by shading of the panels, due to natural or artificial obstructions.
<b>Soiling</b>	Losses caused by dirt, dust and other residues on solar panels.

<b>Tracker misalignment</b>	Reduced efficiency due to the solar trackers sub-optimally aligning the panels with the sun.
<b>Tracker stow</b>	Losses caused when trackers are stowed for protection (for example, during harsh weather conditions).
<b>Vegetation</b>	Reduced efficiency caused by overgrown vegetation that casts shadows or damages panels.
<b>Other losses</b>	Miscellaneous or unidentified causes.

# Commands

Commands and command sequences allow you to take different actions to control the productivity of your plant and its physical devices. You can perform all the tasks related to commands in the [Commands Control](#) and the [Power Plant Control \(PPC\)](#) modules.

From the PPC, you can perform the following tasks:

- [Send set point values](#): control the set points of your plant.
- [Schedule commands](#): configure a command to automatically send it to your plant at regular intervals.
- Send command sequences: control complex sets of commands. For more information, see the [Commands sequences section](#).

**⚠ CAUTION:** Use extreme caution and follow all the safety procedures before performing any action related to commands. These actions directly impact the plant.

## Command sequences

Command sequences are sets of commands that you can send to your plant in a pre-defined order. You can also define launch conditions for each sequence.

**📌 NOTE:** To configure command sequences, contact your GPM representative.

Communications with physical devices occur through a proprietary GPM protocol that digests the data received from devices and makes them usable for the application.

You can send previously configured command sequences from the following modules in the user interface:

- [Commands Control](#)
- [Vectorial Layout](#)
- [Element Viewer](#)

**📌 NOTE:** Command sequences can only be sent to modify parameters that have "write" permissions.

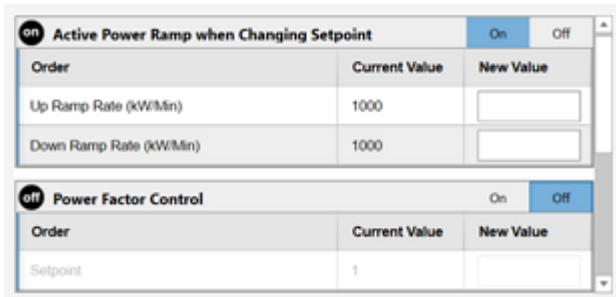
# Send set point values to plants

To send a set point value to a plant, follow these steps:

**⚠ CAUTION:** Use extreme caution and follow all the safety procedures before performing any action from the PPC module. These actions directly impact the plant.

- 1 On the **Set Point Controls** panel of the Power Plant Control module, identify the set point that you want to control and click **On** to enable it.

### Set Point Controls panel



Active Power Ramp when Changing Setpoint		
		On Off
Order	Current Value	New Value
Up Ramp Rate (kW/Min)	1000	<input type="text"/>
Down Ramp Rate (kW/Min)	1000	<input type="text"/>

Power Factor Control		
		On Off
Order	Current Value	New Value
Setpoint	1	<input type="text"/>

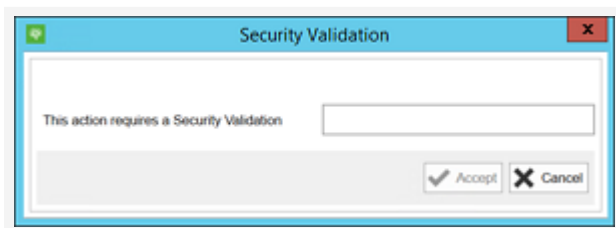
- 2 In the *New Value* field, enter the new value.

**① NOTE:** The application automatically suggests the last value entered.

- 3 Click **APPLY CHANGES**.

**Result:** The **Security Validation** dialog appears:

### Security Validation dialog



Security Validation

This action requires a Security Validation

- 4 On the **Security Validation** dialog, enter the administrator password and click **Accept**.

**① NOTE:** If you do not have the administrator password, contact your GPM representative


## Result

The set point value is sent to the plant.

# Create scheduled commands

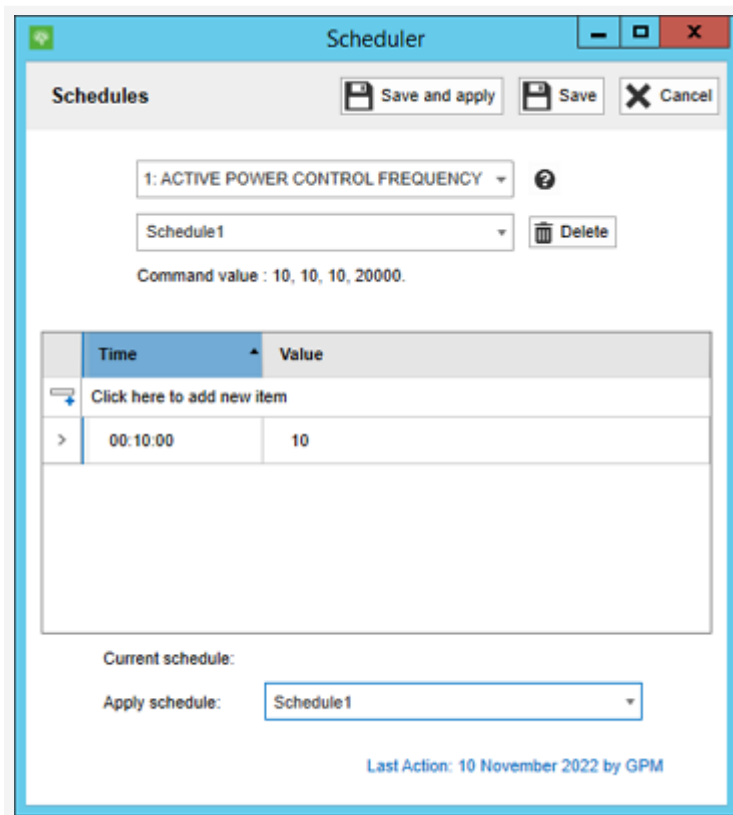
You can create a scheduled command from the [step 1](#) and the [Power Plant Control Module](#).

**NOTE:** You can only schedule one modifiable parameter for each command.

- 1 In the **Actions** column of the [Commands Control Module](#), click the  icon.

**Result:** The **Scheduler** dialog appears:

## Scheduler dialog



Time	Value
Click here to add new item	
> 00:10:00	10

- 2 In the Scheduler dialog, enter the information to create the command:
  - a **Parameter:** select one of the parameters configured for the command.
  - b **Scheduled commands:** click **+ New Schedule** to create a new command or select a preexisting command to edit it.
  - c **Command scheduled table:** click the **+** icon on the left-hand column to add the time and value for the command execution within the 24-hour period.
  - d **Current schedule:** displays the scheduled command that applies currently.
  - e **Apply schedule:** select the scheduled command to apply.


- 3 Click  **Save**, or click  **Save and Apply** to automatically execute the command.

④ **NOTE:** It is not possible to save commands with values that are not valid. This usually applies to values that are out of range (according to the Metacommand control). If you try to save commands with values that are not valid, the system notifies you and prompts you to correct them before completing the process.


**Result:** The **Modify Metacommand** dialog appears.

- 4 In the **Modify Metacommand** dialog, enter your administrator password and click **Apply**.

## Result

The command is created and scheduled for execution. In the PPC module, the  icon will appear in the related command parameter.

### Scheduled command icon

off Fixed Reactive Control		On	Off
Order		Current Value	New Value
Setpoint		125,000	<input type="text" value="100.00"/>


on Active Power Limit		On	Off
Order		Curr	
P Setpoint 3	Schedule 5 	100.00	<input type="text" value="100.00"/>


Scheduled at 12:40 (2 min left) = 20000  
Scheduled at 13:27 (49 min left) = 5000  
New value must be within 0 and 15000.

The  icon displays the status of the scheduled command in two colors:

- Green: the scheduled command is currently active.
- Black: the scheduled command is currently inactive or no schedule has been configured.

You can obtain more information on the active scheduled command by doing the following:

- Hover over the  icon to view the currently active schedule.
- Hover over the *New Value* input box to access additional details.

If you want to view and edit the scheduled command, you can access the Figure 93. Scheduler dialog by selecting the  icon.

 **NOTE:** If

the  icon


does not appear after creating a scheduled command, contact your GPM representative.



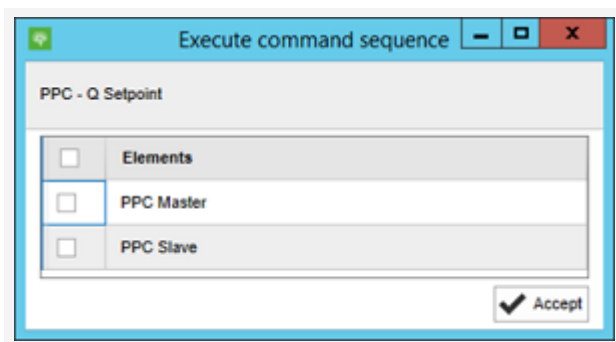
# Send command sequences from the Commands Control module

To send a command sequence from the [Commands Control module](#), follow these steps:

**CAUTION:** Use extreme caution and follow all safety procedures before following these steps. They have a direct impact on the plant's hardware.

- 1 In the **Actions** column of the command sequence, click the  icon.
- 2 (Optional) ) If your command affects multiple devices, on the **Execute Command Sequence** dialog, select the devices to which you want to send the command sequence and click **Accept**:

### Execute Command Sequence dialog

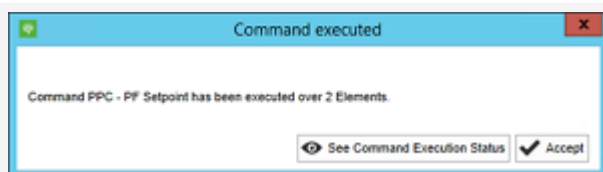


- 3 On the **COMMAND EXECUTION** dialog, enter the administrator password and click **Accept**.

## Result

The command sequence is sent to the selected elements and a confirmation message appears:

### Command execution confirmation



To check if the command sequence is successfully sent, click **See Command Execution Status**. This takes you to the [Command History tab of the Commands Control module](#) and displays the history of the related command. If you want to close the dialog, click **Accept**.

# Send command sequences from the Vectorial Layout module

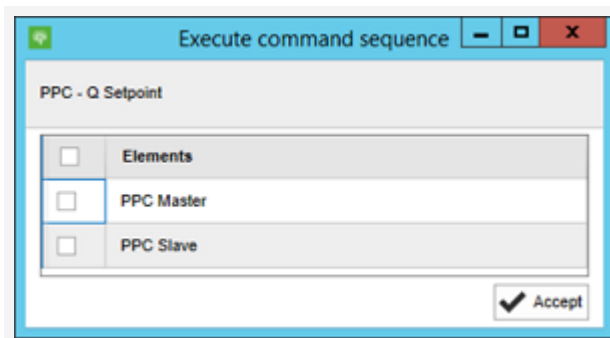
To send a command sequence from the Vectorial Layout module, follow these steps:

**CAUTION:** Use extreme caution and follow all safety procedures before following these steps. They have a direct impact on the plant's hardware.

**NOTE:** The Vectorial Layout module can include buttons that act as shortcuts for commands. These buttons are customizable in column and shape, so they vary between user. In your configuration, the buttons will look the way you agreed with your GPM representative.

- 1 Click the button for the command you want to send.
- 2 (Optional) ) If your command affects multiple devices, on the **Execute Command Sequence** dialog, select the devices to which you want to send the command sequence and click **Accept**:

## Execute Command Sequence dialog



- 3 On the **COMMAND EXECUTION** dialog, enter the administrator password and click **Accept**.

## Result

The command sequence is sent to the selected elements and a confirmation message appears:

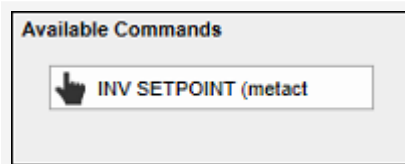
To check if the command sequence is successfully sent, click **See Command Execution Status**. This takes you to the Command History tab of the Commands Control module and displays the history of the related command. If you want to close the dialog, click **Accept**.

# Send command sequences from the Element Viewer module

To send a command sequence from the Element Viewer module, follow these steps:

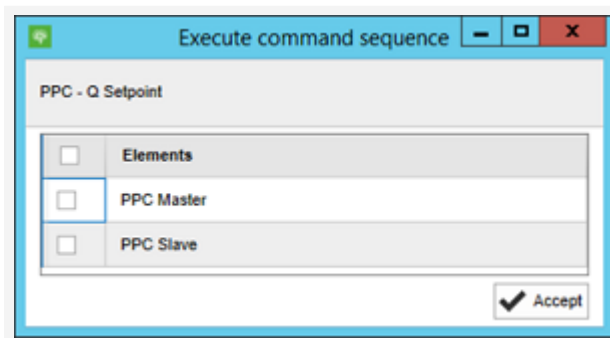
- 1 In the **Commands** tab of the Element Viewer module, click the command sequence that you want to send:

## Commands tab



- 2 (Optional) ) If your command affects multiple devices, on the **Execute Command Sequence** dialog, select the devices to which you want to send the command sequence and click **Accept**:

## Execute Command Sequence dialog



- 3 On the **COMMAND EXECUTION** dialog, enter the administrator password and click **Accept**.

## Result

The command sequence is sent to the selected elements and a confirmation message appears:

To check if the command sequence is successfully sent, click **See Command Execution Status**. This takes you to the Command History tab of the Commands Control module and displays the history of the related command. If you want to close the dialog, click **Accept**.

# Entities

Entities are specific objects that contain information in the GPM system. They are the main sources of information to analyze, assess and manage portfolios, plants and elements.

## Parameters

A parameter is a measurable factor that allows you to assess the performance or the status of your portfolio, a plant or an element within a plant. The values for parameters are usually numerical, but may sometimes be expressed as text (for example, "Offline" for the status of an element in a plant). These values for the data come from datasources.

Examples of parameters:

- Power
- Energy
- Performance Ratio (PR)
- Irradiation
- Wind speed

## Descriptions

A description is metadata of a plant or an element within a plant. Descriptions usually have fixed values that are not necessarily numerical (for example, "Wind" is a value for "Technology type").

The flexibility of the GPM system allows you to use them as categories that you can modify manually (for example, the "Assigned Operator" of an alarm).

Examples of descriptions:

- Location (country or geolocation)
- Technology (wind, solar, storage)
- Element type (wind turbine, generator, inverter, weather station, etc.)

## Datasources

A datasource is a source of data that enters parameter values from one or more elements into the system. The most basic datasources provide raw data (for example, irradiation, wind speed, and power) monitored directly from elements in the plant. Advanced datasources apply calculations to raw values, producing more complex data (for example, production ratios), and may be customized by GPM to meet the needs of your organization.

The datasource may input raw data, or process it beforehand, depending on its configuration.

Examples of datasources:

- Total active power
- Energy
- Production Ratio
- Power Curve
- Communication status

## Alarm triggers

A trigger is the event that sets off the alarm when a site or an element meets a set of activation conditions. Each type of alarm has its own activation conditions. To deactivate the alarm, the element must meet the deactivation conditions defined for that trigger.

**NOTE:** For more information see the section on [Alarm triggers and activation conditions](#).

# Exceptions

The Exceptions feature allows you to retrospectively exclude periods from calculations. This is useful when you need to account for downtimes in production that result from external factors (for example, curtailment requests from the grid operator).

You can apply exceptions at every level of the portfolio, from entire plants, to individual devices. You can also group devices, to account for situations that affect specific areas within a plant.

You can create exceptions in the [Budgets panel](#) of the [Plant Dashboard module](#), or from the [Alarms table](#) of the [Alarms module](#):

- [Create exceptions in the Budgets panel.](#)
- [Create exceptions in the Alarms table.](#)



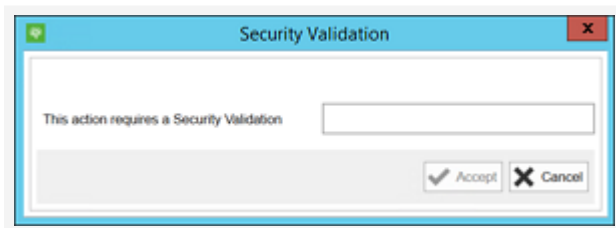
# Create exceptions from the Budgets panel

To create exceptions from the Budgets panel of the Plant Dashboard module, follow these steps:

- 1 On the Budgets panel, click **Exceptions**.

**Result:** The **Security Validation** dialog opens:

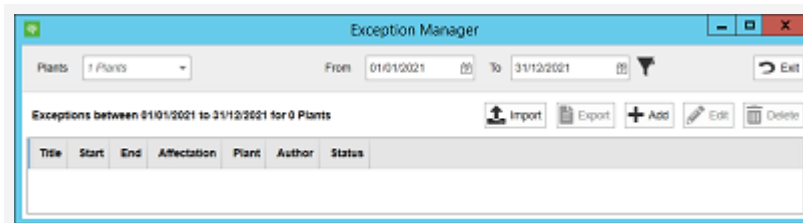
## Security Validation dialog



- 2 On the **Security Validation** dialog, enter the administrator password and click **Accept**.

**Result:** The **Exception Manager** dialog opens.

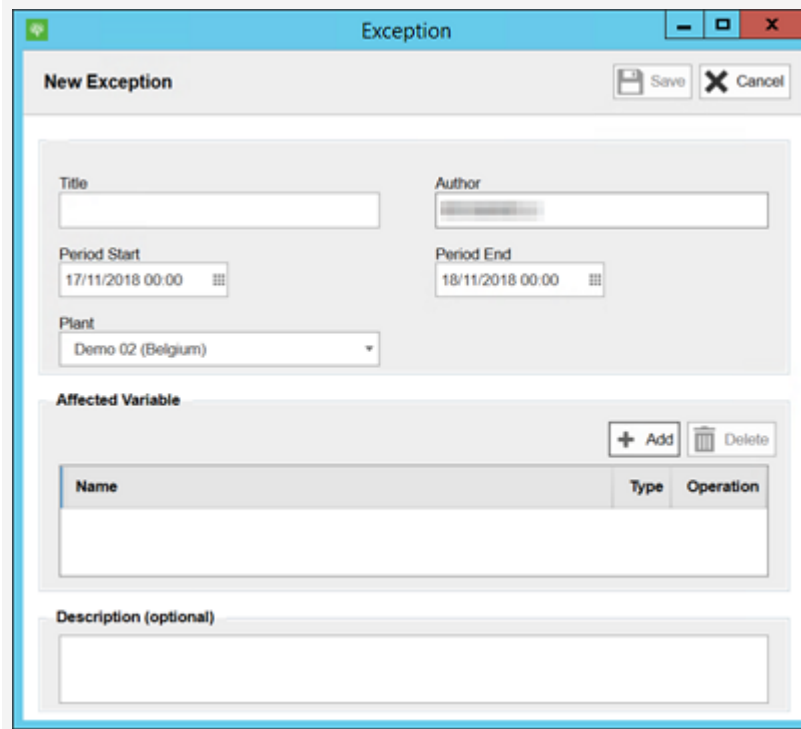
## Exception Manager dialog




- 3 On the **Exception Manager** dialog, click **Add**.

**Result:** the **New Exception** dialog opens.

### New Exception dialog



- 4 Enter the information for the exception:
  - a **Title:** enter a title for the exception.
  - b **Author:** displays the username of the person who created the exception.
  - c **Period start:** select the date and time at which the exception starts.
  - d **Period end:** select date and time at which the exception ends.
  - e **Plant:** select the plant to which the exception must be added. This field is pre-filled with the plant from which the exception is being added.
  - f **Affected variable:** click **Add** to select the parameters affected by the exception. For further information, see the [instructions to select parameters using the Advanced Datasource Selector](#).
  - g **Description:** enter a description for the exception.
- 5 Click  **Save**.

## Result

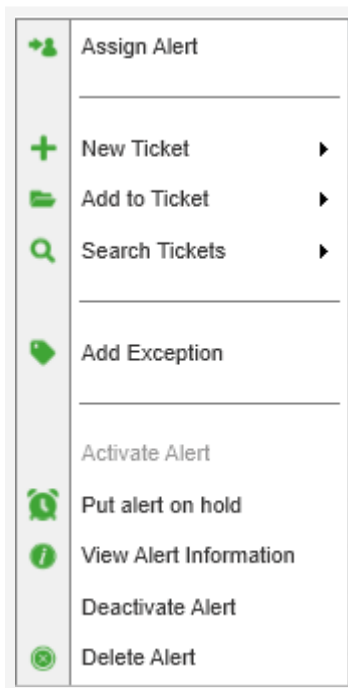
The exception is created.

# Create exceptions from the Alarms table

To create exceptions from the Alarms table of the Alarms module, follow these steps:

- 1 On the Alarms table, right-click the alarm for which you want to create an exception to open the Alarms context menu:

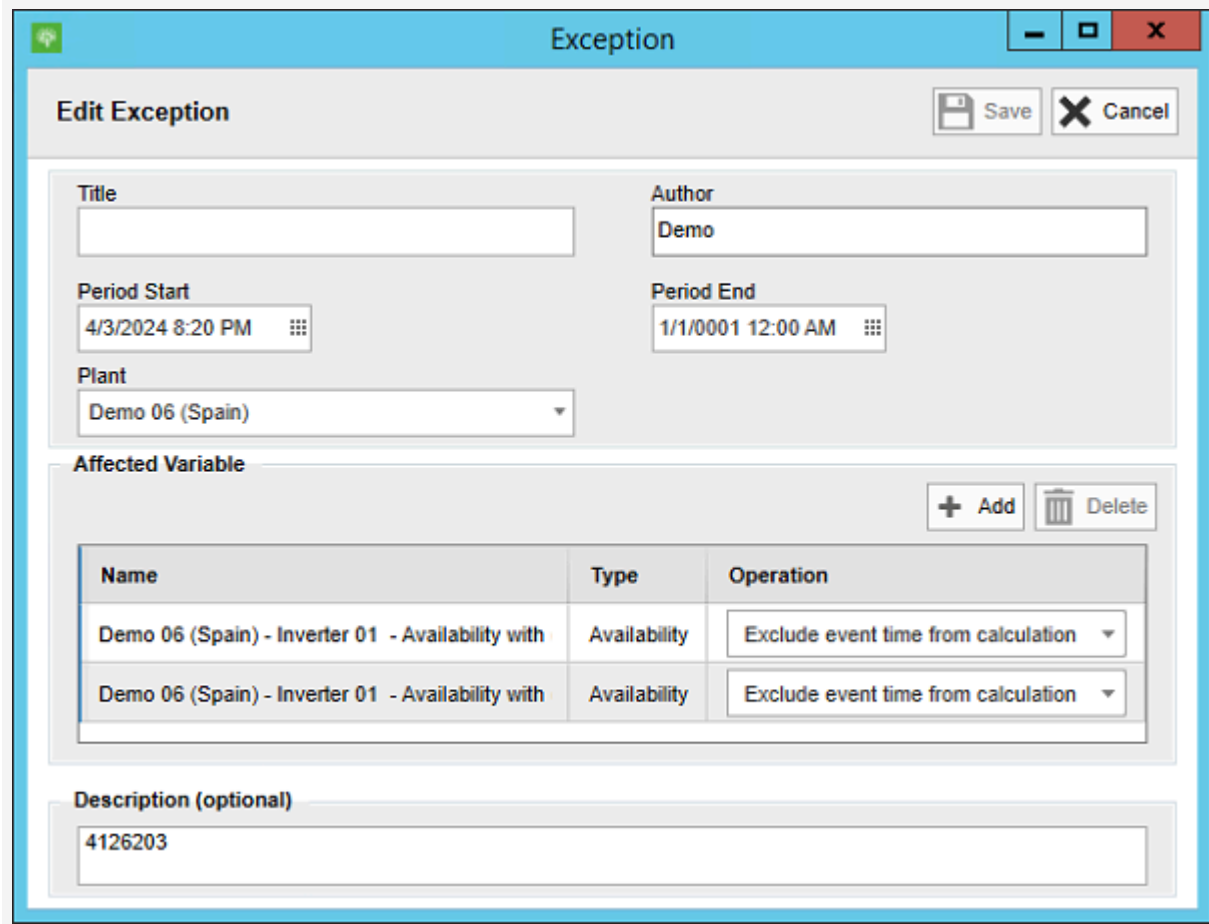
## Alarms context menu



- 2 Click **Add Exception**.

**Result:** The **Exception Manager** dialog opens, displaying information for the selected alarm:

### Exception Manager dialog



**Edit Exception** Save Cancel

Title

Author

Period Start

Period End

Plant

**Affected Variable** + Add Delete

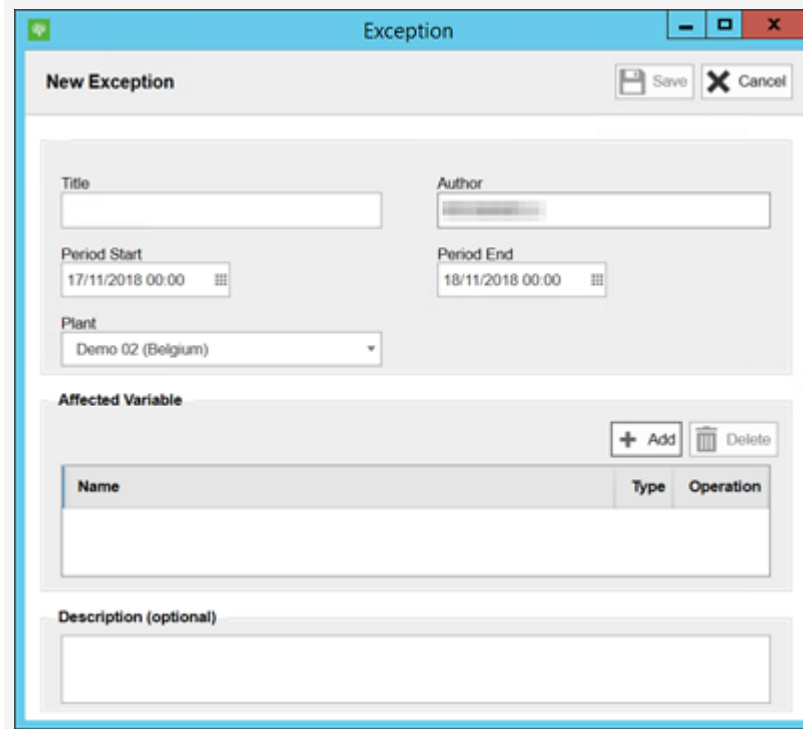
Name	Type	Operation
Demo 06 (Spain) - Inverter 01 - Availability with	Availability	Exclude event time from calculation
Demo 06 (Spain) - Inverter 01 - Availability with	Availability	Exclude event time from calculation


**Description (optional)**

3 click **Add**.

**Result:** the **New Exception** dialog opens.

### New Exception dialog



- 4 Enter the information for the exception:
  - a **Title:** enter a title for the exception.
  - b **Author:** displays the username of the person who created the exception.
  - c **Period start:** select the date and time at which the exception starts.
  - d **Period end:** select date and time at which the exception ends.
  - e **Plant:** select the plant to which the exception must be added. This field is pre-filled with the plant from which the exception is being added.
  - f **Affected variable:** click **Add** to select the parameters affected by the exception. For further information, see the [instructions to select parameters](#) using the [Advanced Datasource Selector](#).
  - g **Description:** enter a description for the exception.
- 5 Click  **Save**.

## Result

The exception is created.

# Modules

GPM Plus has several modules that you can access from different sections of the user interface.

**NOTE:** The availability of certain modules, features and functionalities may vary depending on your product configuration.

- [Alarms](#)
- [Advanced filters](#)
- [Commands control](#)
- [Data viewer](#)
- [Element viewer](#)
- [Entity log](#)
- [Kiosk view](#)
- [Linear Chart viewer](#)
- [Live viewer](#)
- [Map](#)
- [Network Operating Center \(NOC\)](#)
- [Permissions](#)
- [Plant](#)
- [Plant elements](#)
- [Power Plant Control \(PPC\)](#)
- [Ranking](#)
- [Reports](#)
- [SCADA layout](#)
- [Scatter Plot](#)
- [Tickets](#)
- [Vectorial Layout](#)
- [Videowall](#)

# Alarms

Alarms are notifications that trigger when certain predefined conditions are met by elements in a plant.


The Alarms module allows you to monitor, manage, and analyze alarms by notifying you when something needs your attention. Alarms can trigger when one or more activation conditions are met. In the Alarms module, triggers are grouped by plant and by alarm.

**NOTE:** For more information, see the article about [Alarm triggers and activation conditions](#).

The system uses a smart mechanism that constantly checks for new alarms by scanning devices hierarchically, from the highest to the lowest. When the system detects an alarm, it stops checking lower devices to avoid displaying too many Alarms related to the same issue.

**NOTE:** By default, after an alarm is triggered, the system notifies you every 24 hours that the alarm is still active. It is possible to customize this notification period when configuring the alarm conditions.

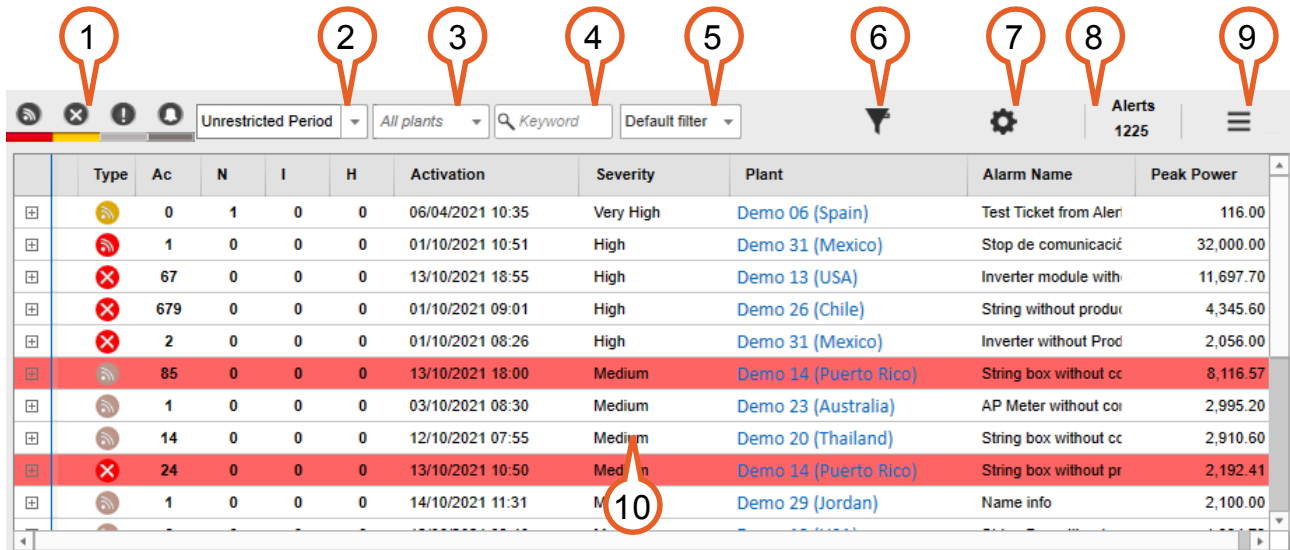
Alarms are also automatically hidden if the issue detected was reported in another alarm.

**CAUTION:** After you customize your filter, you must click the  to apply the new criteria.

You can open the Context Menu for alarms by selecting one or more alarms and right-clicking them. For more information, see the [Alarms Context Menu](#) below.

You can also access the Alarm Information by selecting it from the Context Menu. This menu contains detailed information and data analytics tool for the specific alarm. For more information, see [Alarm Information window](#) below.

## Alarms module



1. **Quick filters:** Toggle an alarm type to display or hide related alarm:

- **Communication**
- **Stop**
- **Warning**
- **Preventive**

Toggle a status to display or hide related triggers:

Status	Color code	Description
Active		the criteria that caused the alarm activation are still valid and no operator has been assigned to the alarm.
Notified		the criteria that caused the alarm activation are still valid, but an operator has been assigned to the alarm.
Inactive		the alarm deactivation criteria have been met.
On hold		a user put the alarm on hold for a specific period of



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time.

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**NOTE:** The default icons and colors are customizable. Contact your GPM representative if you want to change them.

2. **Period picker:** select a date range from the drop-down list to display alarms that were activated during that period:
  - **Current day**
  - **Custom period**
  - **Last 15 days**
  - **Last 30 days**
  - **Last 7 days**
  - **Unrestricted period**

**NOTE:** When you choose **Unrestricted Period**, the system automatically disables active alarms to avoid generating too many queries.

3. **Plant filter:** select a plant from the drop-down menu to display only the alarms related to it.
  4. **Keyword filter:** enter a keyword to filter alarms by their name, Alarm ID, or global Alarm ID:
    - Use # before a number to search by Alarm ID.
    - Use \* before a number to search by global Alarm ID.
    - Use ; to separate multiple criteria.
  5. **Saved filters:** select a filter from the drop-down menu to apply it to the alarm list.
  6. **Apply filters:** click to apply the combination of filters you have selected.
  7. **Advanced filters:** click to display the Advanced Alarms Filters window and customize your filter with more advanced options. For further information, see [Advanced Alarm Filters](#).
  8. **Total tiggers:** displays count of the alarms that are currently displayed.
  9. **More actions:** click to display more actions:
    - **Export Alarms:** click to export alarms that are currently displayed to a Microsoft Excel format. For further information, see [Export Data to File](#).
    - **Audible Alarms:** toggle to enable or disable audio alarms.
-

- 
- **Blinking Alarms:** toggle to enable or disable blinking alarms.
  - **Group Alarms:** toggle to group or ungroup the alarms. When alarms are ungrouped, you can select multiple triggers and perform bulk actions on them.

10. Alarms table: displays groups of alarms with their triggers, automatically collapsed, and sorted in descending order by severity, status and activation time.

Double-click a group of alarms to expand it and display related triggers.

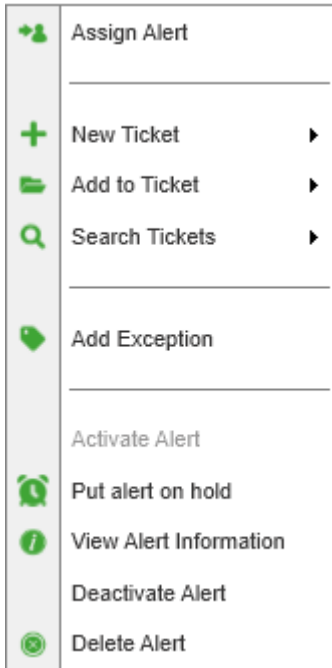
Click a plant to open its hierarchy tree in the [Navigation module](#).

Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers.

Right-click a trigger to open the [context menu](#) and perform quick changes.

---

## Context menu



Option	Description
<b>Assign alarm</b>	Click to open a dialog that allows you to assign the alarm to an operator.
<b>New ticket</b>	Select a new ticket type to create a new ticket and automatically pair the selected element to it.
<b>Add to ticket</b>	Place your cursor here, enter a ticket ID in the search field, and press enter to add the selected element to an existing ticket.
<b>Search tickets</b>	Choose a ticket type to open the related tickets in the Tickets view.
<b>Add exception</b>	Click to create an exception and add the alarm ID in the exception description. For further information, see the <a href="#">Commands section</a> .
<b>Put alarm on hold</b>	Click to put the alarm on hold. You must specify the time period for which the alarm remains on hold. Once the time is up, the alarm reverts to its previous status. You can also input the reason for putting the alarm on hold.

It is also possible to delete an existing hold. This resets the alarm to its previous status.

**View alarm information** Click to open the [Alarm Information](#) window and see further information about the alarm.

**Deactivate alarm** Click to deactivate the alarm.


**⚠ CAUTION:** This action requires the administrator password.

**Delete alarm** Click to delete the alarm.

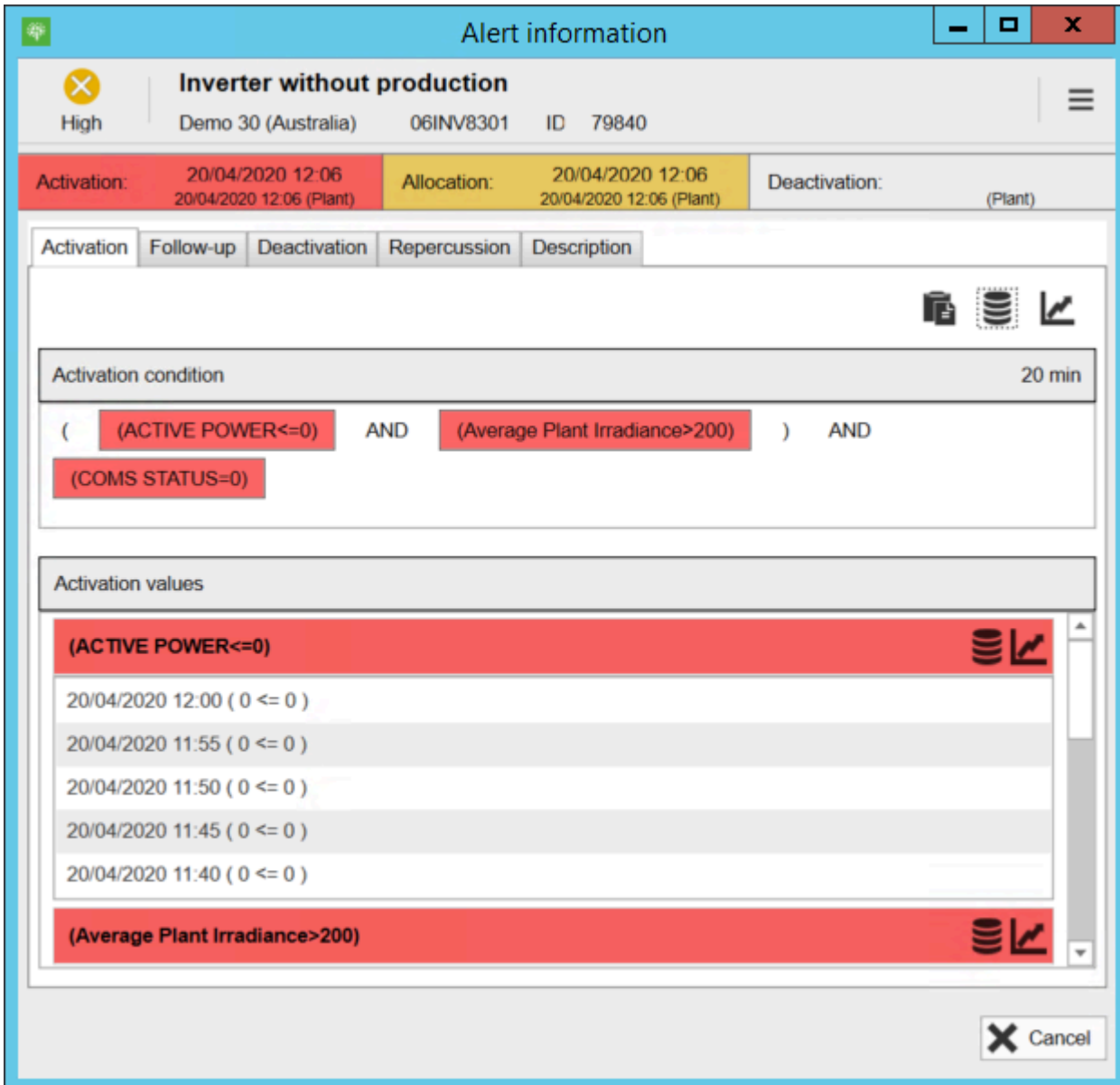
**⚠ CAUTION:** This action requires the administrator password.

---

## Alarm Information window

In the Alarm Information window, the upper displays the alarm priority and the timestamp of Activation, Allocation, and Deactivation, which are the core events of an alarm. In the upper area, you can also create tickets and automatically link them to the alarm by clicking the  icon. The area below the upper bar is organized in tabs. Each tab contains a different piece of information. When it is possible to perform actions on the data displayed, the tab will include Action buttons.

### Alarm Information



The screenshot shows the 'Alert information' window for an alarm titled 'Inverter without production'. The window includes a header with the alarm name, priority ('High'), location ('Demo 30 (Australia)'), ID ('06INV8301'), and another ID ('79840'). Below the header, there are three main event sections: 'Activation' (20/04/2020 12:06), 'Allocation' (20/04/2020 12:06), and 'Deactivation' (Plant). A tabbed interface is visible with 'Activation' selected. The activation condition is defined as: (ACTIVE POWER<=0) AND (Average Plant Irradiance>200) AND (COMS STATUS=0). The 'Activation values' section shows a list of timestamps where the condition was met, such as 20/04/2020 12:00 (0 <= 0). A 'Cancel' button is located at the bottom right.

Tab	Description
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**Activation** Includes the activation condition and the latest values of each criteria used in the activation condition.

**Follow-up** Includes all the actions performed by operators on the trigger since it was triggered.

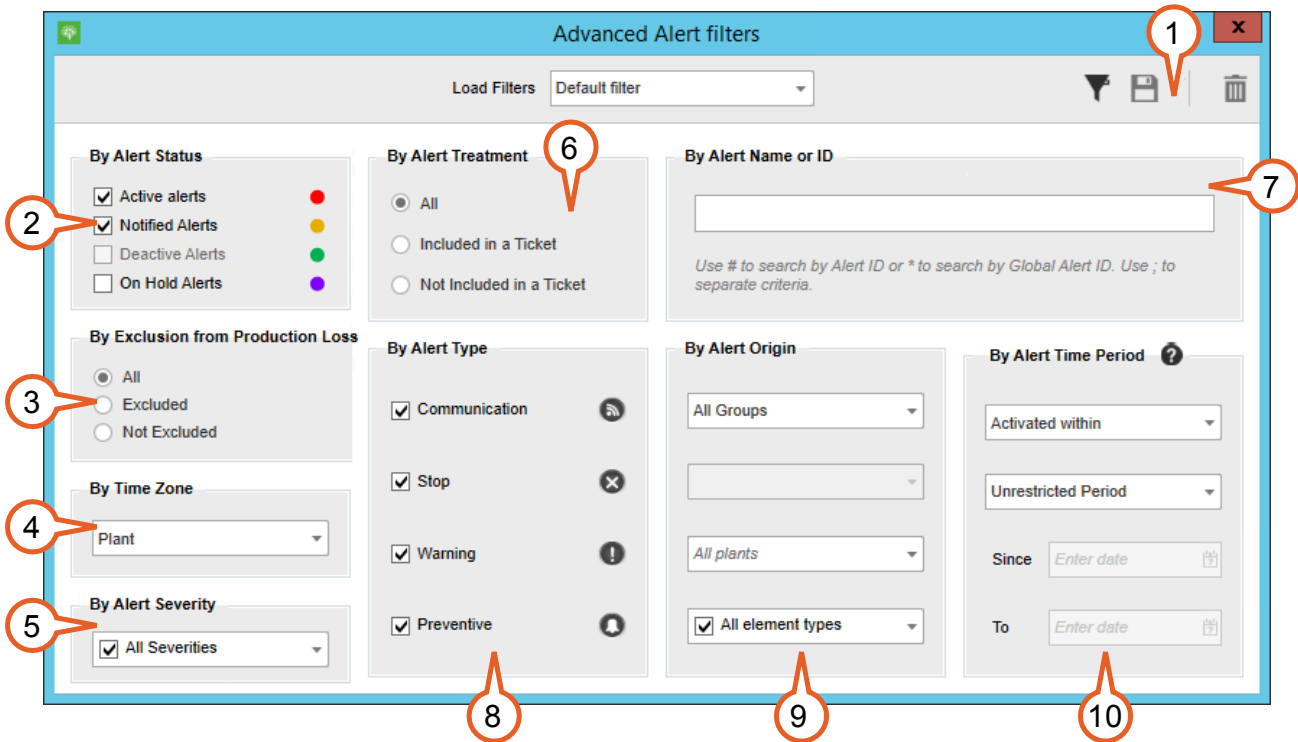
**Deactivation** Includes the deactivation condition and the most recent values of each criteria used in the deactivation condition.




**Repercussion** When the triggering of the alarm affects availability, users can see the timestamp of the issue as well as its total duration. If the status of the trigger is "On hold", this tab also includes the time that the alarm has been on hold.

**Description** Includes the alarm description.

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## Advanced alarm filters



1. Action buttons: click to perform actions on the alarm:
  -  **Apply**: apply the filters to the list without saving.
  -  **Save**: save the filters for future use.
  -  **Delete**: delete the selected filter.
2. Status: select the alarm status:
3. Production loss exclusion: select whether to include or exclude alarms that caused losses in production.
4. Time zone: select the time zone for the plant.
5. Severity: select the alarm severity. You can select more than one option.
6. Treatment: select whether the alarm have been included in a ticket.
7. Name or ID: enter the alarm name or ID.
8. Type: select one or more alarm types.
9. Origin: select the plants or devices that the alarm is associated to.

---

**NOTE:** The alarm origin allows you to filter alarms by plants or devices using the pre-defined groups of your portfolio.

10. Period: select the alarm time criteria and period.

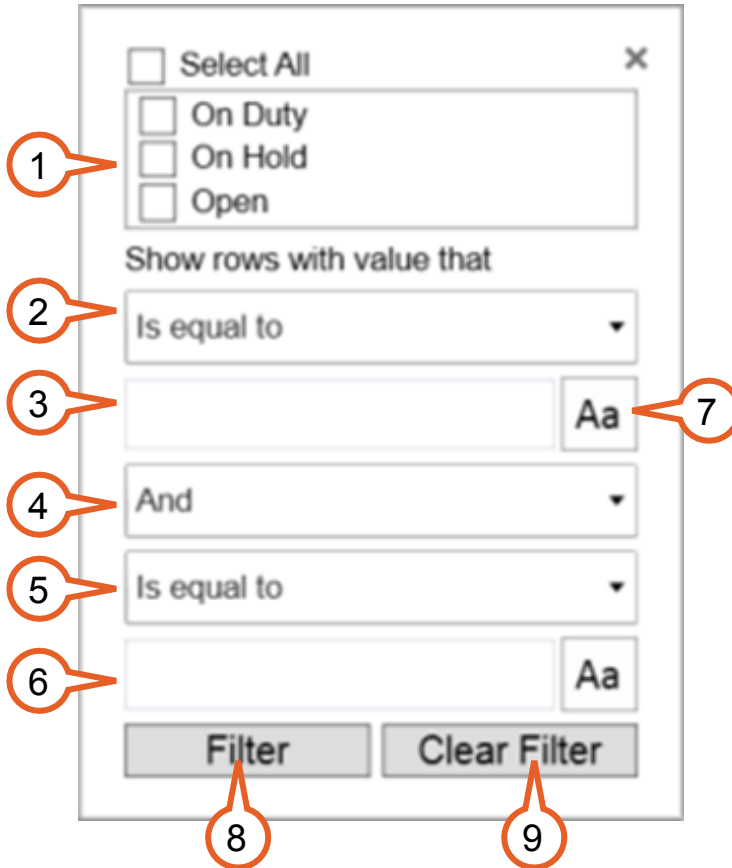
---



## Advanced filters

Advanced filters allow you to filter the content of specific columns in a table using two mechanisms. The first mechanism allows you to select the values that you want to display from a list containing all the values of a column. The second mechanism allows you to apply a simple Boolean expression with two conditions to filter the values of a column.

## Advanced filter




The screenshot shows an 'Advanced filter' dialog box with the following elements and callouts:

- 1**: A list of available values:  Select All,  On Duty,  On Hold,  Open.
- 2**: A dropdown menu showing 'Is equal to'.
- 3**: An empty text input field for the first filter value.
- 7**: A case-sensitivity button labeled 'Aa'.
- 4**: A dropdown menu showing the Boolean operator 'And'.
- 5**: A second dropdown menu showing 'Is equal to'.
- 6**: A second empty text input field for the filter value.
- 8**: A 'Filter' button to apply the criteria.
- 9**: A 'Clear Filter' button to reset the criteria.

1. **Available values**
2. **First Boolean condition**
3. *First values*
4. **Boolean operator**
5. **Second Boolean condition**
6. *Second values*
7. **Case-sensitive button**
8. **Apply filter**
9. **Clear filtering criteria**


## Use advanced filters

To use advanced filters, follow these steps:

- 1 Click the  icon on any column where the advanced filtering option is available.


**Result:** The **Advanced Filtering** dialog appears.


- 2 (Optional) Select the values that you want to display on the table.

 **NOTE:** Selecting values automatically displays them on the table.

- 3 In the **Show rows with value that** section, select the first Boolean condition from the drop-down list.


- 4 In the first *Values* input field, enter the first values.


(Optional) Toggle the  button to turn the case-sensitive option on or off.

 **NOTE:** The case-sensitive button is not available when you are filtering numerical values.

- 5 Click the second **Boolean operator** drop-down menu and select the second Boolean condition from the drop-down list.

- 6 In the second *Values* input field, enter the second values.


(Optional) Toggle the  button to turn the case-sensitive option on or off.

 **NOTE:** The case-sensitive button is not available when you are filtering numerical values.

- 7 Click **Filter**.

### Result

The filter is applied and elements matching the filtering criteria are displayed on the table. The icon on the column turns blue.

 **NOTE:** You can clear all the criteria by clicking **Clear Filter**.


# Commands Control

The Commands Control module allows you to monitor, manage, and send pre-configured command sequences to the physical elements in your portfolio. The module is divided in three tabs:

- [Commands](#)
- [Command History](#)
- [Command Retry Queue](#)

**⚠ CAUTION:** Follow all the safety procedures before performing any action from this module. These actions directly impact the plant.

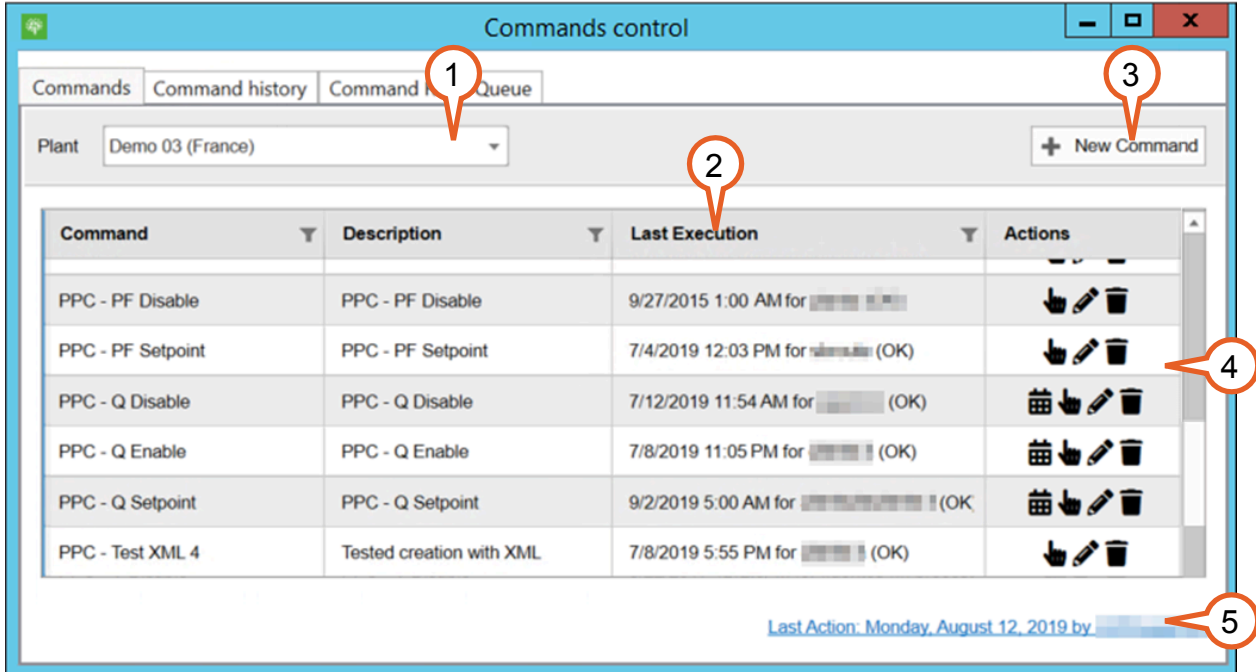
**⚠ CAUTION:** For security reasons, actions taken in the Commands Control module are protected by a password and stored in the application log.

To access the Commands Control module, click the  icon on the Upper Bar.

## Commands

The Commands tab allows you to create, send, edit, and delete command sequences.






### Commands tab



The screenshot shows the 'Commands control' window with the following elements:

- 1**: Plant selection dropdown menu showing 'Demo 03 (France)'.
- 2**: The main table of commands with columns: Command, Description, Last Execution, and Actions.
- 3**: '+ New Command' button.
- 4**: Action buttons for each command row: Execute (hand icon), Edit (pencil icon), Delete (trash icon), and View or edit (calendar icon).
- 5**: 'Last Action: Monday, August 12, 2019 by [user]' text at the bottom right.

Command	Description	Last Execution	Actions
PPC - PF Disable	PPC - PF Disable	9/27/2015 1:00 AM for [user]	[Execute] [Edit] [Delete]
PPC - PF Setpoint	PPC - PF Setpoint	7/4/2019 12:03 PM for [user] (OK)	[Execute] [Edit] [Delete]
PPC - Q Disable	PPC - Q Disable	7/12/2019 11:54 AM for [user] (OK)	[Calendar] [Execute] [Edit] [Delete]
PPC - Q Enable	PPC - Q Enable	7/8/2019 11:05 PM for [user] (OK)	[Calendar] [Execute] [Edit] [Delete]
PPC - Q Setpoint	PPC - Q Setpoint	9/2/2019 5:00 AM for [user] (OK)	[Calendar] [Execute] [Edit] [Delete]
PPC - Test XML 4	Tested creation with XML	7/8/2019 5:55 PM for [user] (OK)	[Execute] [Edit] [Delete]

- Plant selection:** click to select a plant from the drop-down list to display the available commands.
- Commands list:** displays the available commands for the selected plant. Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the icon  on any column header for advanced filtering. For further information, see [Advanced Filters](#).
- New command:** click to create a new command sequence. For further information, contact your GPM representative.
- Action buttons:**
  -  **Execute** the command.
  -  **Edit** the command sequence.
  -  **Delete** the command.
  -  **View or edit** the scheduled command.
- Last action:** displays the date and the user who made the last changes to the Command Controls view.

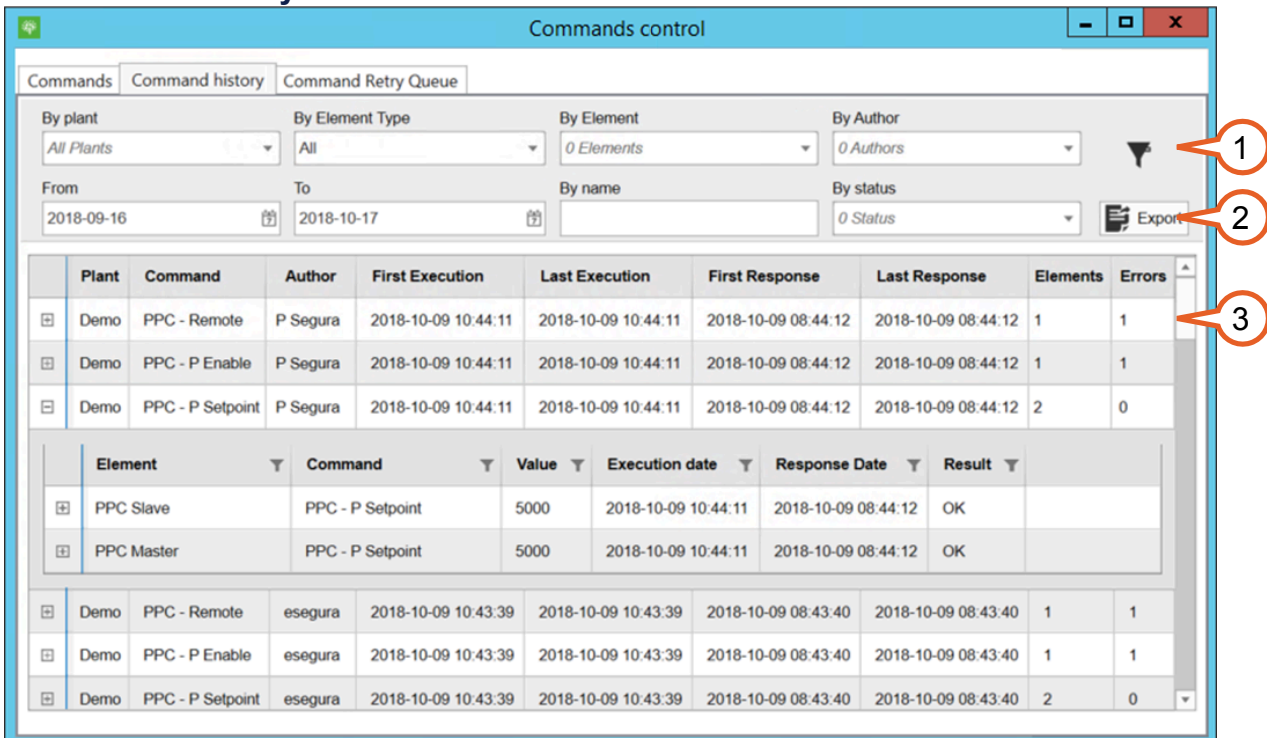
**NOTE:**

Clicking on the hyperlink takes you to the [Actions Log](#).

## Commands History

The Command History tab allows you to see the history of the commands that have been executed and export this information.

### Commands History tab




Plant	Command	Author	First Execution	Last Execution	First Response	Last Response	Elements	Errors
Demo	PPC - Remote	P Segura	2018-10-09 10:44:11	2018-10-09 10:44:11	2018-10-09 08:44:12	2018-10-09 08:44:12	1	1
Demo	PPC - P Enable	P Segura	2018-10-09 10:44:11	2018-10-09 10:44:11	2018-10-09 08:44:12	2018-10-09 08:44:12	1	1
Demo	PPC - P Setpoint	P Segura	2018-10-09 10:44:11	2018-10-09 10:44:11	2018-10-09 08:44:12	2018-10-09 08:44:12	2	0

Element	Command	Value	Execution date	Response Date	Result
PPC Slave	PPC - P Setpoint	5000	2018-10-09 10:44:11	2018-10-09 08:44:12	OK
PPC Master	PPC - P Setpoint	5000	2018-10-09 10:44:11	2018-10-09 08:44:12	OK

Plant	Command	Author	First Execution	Last Execution	First Response	Last Response	Elements	Errors
Demo	PPC - Remote	esegura	2018-10-09 10:43:39	2018-10-09 10:43:39	2018-10-09 08:43:40	2018-10-09 08:43:40	1	1
Demo	PPC - P Enable	esegura	2018-10-09 10:43:39	2018-10-09 10:43:39	2018-10-09 08:43:40	2018-10-09 08:43:40	1	1
Demo	PPC - P Setpoint	esegura	2018-10-09 10:43:39	2018-10-09 10:43:39	2018-10-09 08:43:40	2018-10-09 08:43:40	2	0

- Filter:** select the filtering criteria and click  to display commands that match the criteria on the list.
- Export:** click to export the list to a Microsoft Excel format. For further information, see [Export Data to File](#).
- Commands list:** click a column header to sort the table by the values of that column. You can rearrange columns by dragging and dropping the headers.

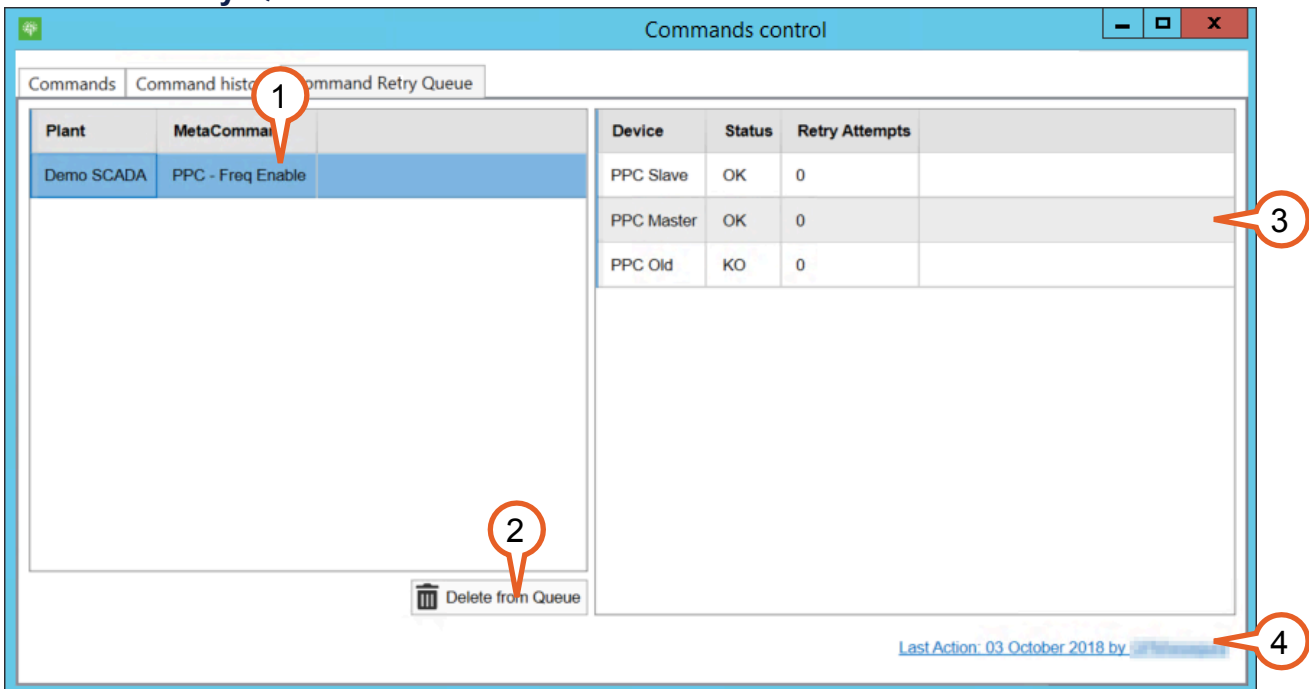
## Command Retry Queue

The system can be configured to resend a command when it is not possible to communicate with the device.

The Command Retry Queue tab displays the commands that are queued for a retry when they fail to be sent. If you do not want the system to retry sending a command, you can delete it from the retry queue.

**NOTE:** The Command Retry Queue tab is only available for plants with multiple PPCs.

### Command Retry Queue tab



Plant	MetaCommand	Device	Status	Retry Attempts
Demo SCADA	PPC - Freq Enable	PPC Slave	OK	0
		PPC Master	OK	0
		PPC Old	KO	0

Delete from Queue

Last Action: 03 October 2018 by: [user]

1. **Retry queue:** displays commands that are being retried are displayed here. Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers.
2. **Delete:** click to delete the selected commands from the retry queue.

**NOTE:** This action requires the administrator password.

3. **Command sequence:** displays the retry status of each PPC to which the command is sent. Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers
4. **Last action:** displays the date and the user who made the last changes to the Command Controls module.



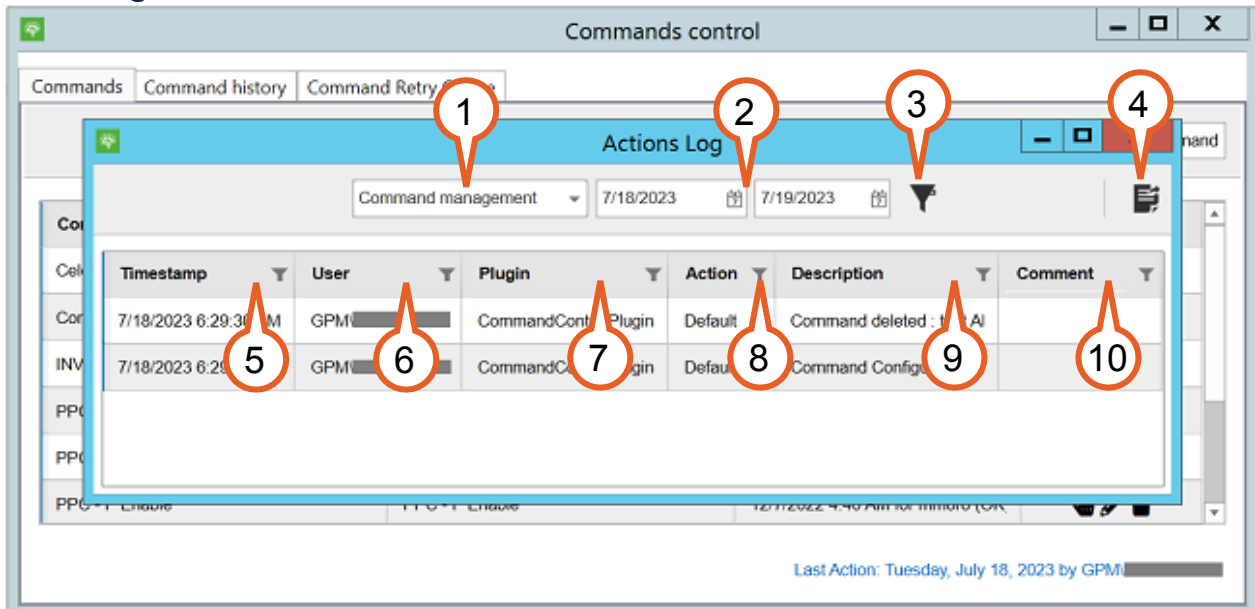
① NOTE:

Clicking on the hyperlink takes you to the [Actions Log](#).

# Actions Log

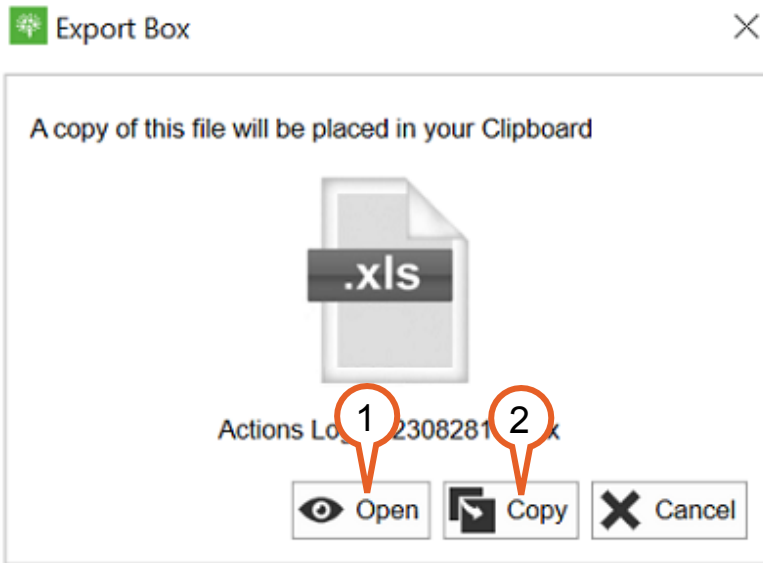
The Actions log records all users activities in the system. It includes action timestamps, user identification, action descriptions and classification by modules.

## Actions log



1. Module: filter the actions by module.
2. Calendar: filter by the dates selected in the calendar.
3. Filter: apply the module and calendar filters.
4. Export: access the [Export Box](#) to view or download the Actions log.
5. Timestamp: date and time when the action was performed.
6. User: user that performed the action.
7. Plugin: plugin related to the action.
8. Action: type of action.
9. Description: brief description of the action.
10. Comment: comments related to the action.

## Actions log export





1. Open: see the Actions Log in XLS format.
2. Copy: download an XLS copy of the Actions log onto your Clipboard.

# Data viewer module

The Data Viewer is a tool that allows you to create queries and analyze the data of your portfolio. The results of the query are arranged in tables that display the values for the selected parameters at specific moments in time. You can save the results of your queries for further use or export them to other views.

You can add queries to the Data Viewer from other areas of the user interface or create queries directly from the Data Viewer module.

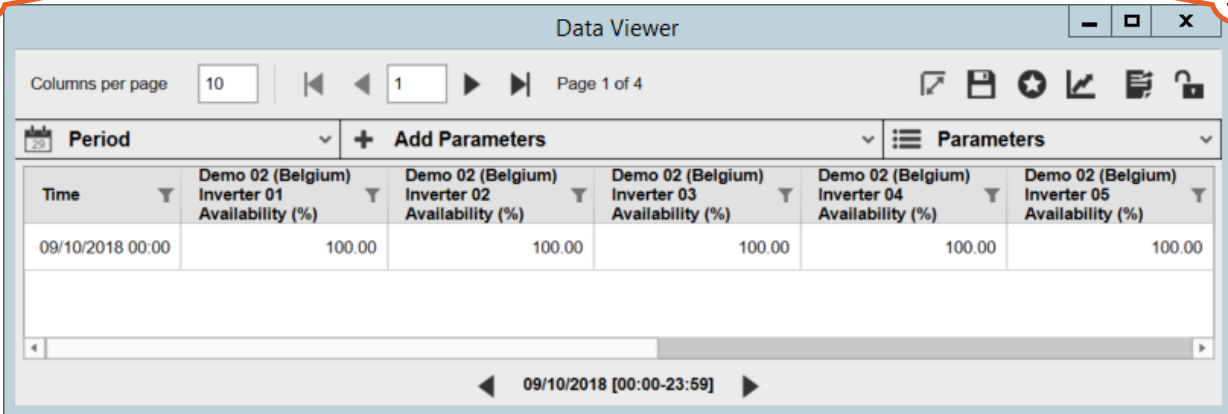
Access the data viewer by clicking  the icon on the upper bar of the user interface.

**NOTE:** You can open multiple Data Viewer module windows, but you can only add queries to an unlocked window. The active window has the  icon at the top right corner.

The Data Viewer module has three panels to define the information on display:

- Query period
- Add parameters
- Current parameters












## Data Viewer module





The screenshot shows the Data Viewer interface with the following components labeled:

- 1: Window title bar (Data Viewer)
- 2: Columns per page (10)
- 3: Page navigation (Page 1 of 4)
- 4: Add Parameters button
- 5: Parameters list
- 6: Table header (Time, Inverter 01 Availability (%), Inverter 02 Availability (%), Inverter 03 Availability (%), Inverter 04 Availability (%), Inverter 05 Availability (%))
- 7: Table body (09/10/2018 00:00, 100.00, 100.00, 100.00, 100.00, 100.00)

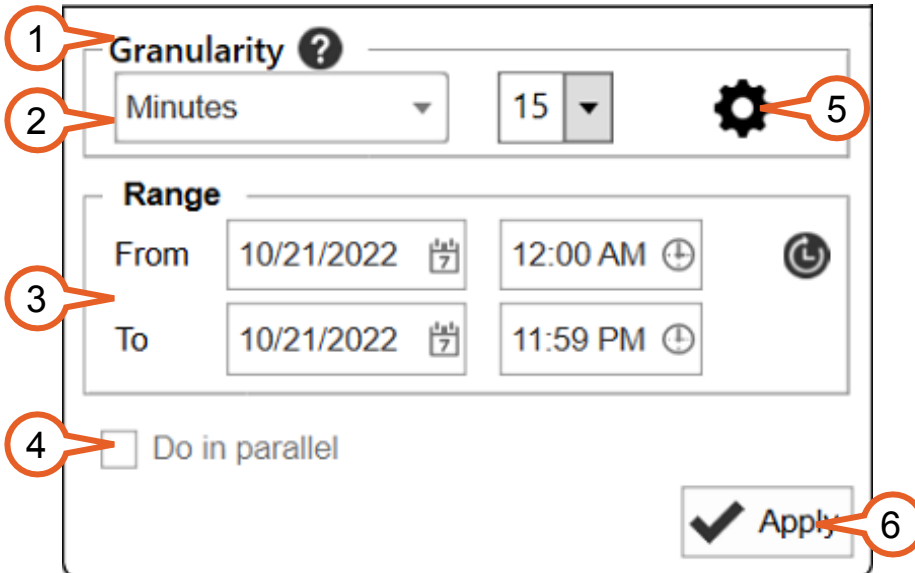
Time	Demo 02 (Belgium) Inverter 01 Availability (%)	Demo 02 (Belgium) Inverter 02 Availability (%)	Demo 02 (Belgium) Inverter 03 Availability (%)	Demo 02 (Belgium) Inverter 04 Availability (%)	Demo 02 (Belgium) Inverter 05 Availability (%)
09/10/2018 00:00	100.00	100.00	100.00	100.00	100.00

- 
1. Query period: click the  icon to expand the menu and customize the data granularity and time range. For more information, see [Query period](#).
  2. Pagination: navigate between pages using the arrows and the text input field and define the number of columns to display on each page.
  3. Add parameters: click the  icon to expand the menu and add parameters to the table. For more information, see [Add parameters](#).
  4. Action buttons:
    -  Invert the axis of the table.
    -  Save the current query to your favorites.
    -  Load a favorite query.
    -  Analyze the selected parameters in the [Linear Chart Viewer module](#).
    -  Export the query to the clipboard or to a file.
    -  Toggle the window lock on and off. When you lock a window, you cannot add further parameters to it from other parts of the application.
  5. Current parameters: click the  icon to expand the menu and manage the parameters currently on display. For more information, see [Current parameters](#).
  6. Data table: click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column header for advanced filtering. For further information on advanced filtering, see [Advanced Filters](#).  
When you are analyzing consolidated data (for example, datasets of values aggregated every 5 minutes), you can right-click one or more selected values and click the  icon to display the data in the [Live Viewer module](#). For more information about data consolidation intervals, see [Data Consolidation](#).
  7. Period browser: browse the period using the arrows. The period displayed is based on the query period that you selected.
-

## Query Period

The Query Period panel lets you customize the data granularity and time range of your query. You can expand and collapse the panel by clicking the  and  icons.

### Query Period panel




The screenshot shows the Query Period panel with the following elements:

- 1**: Granularity header with a help icon.
- 2**: Drop-down menu for data granularity, currently set to "Minutes".
- 3**: Input field for the number of increments, currently set to "15".
- 4**: Gear icon for settings.
- 5**: Range section with "From" and "To" date and time pickers.
- 6**: "Do in parallel" checkbox.
- 6**: "Apply" button with a checkmark icon.

- Data granularity:** leave the default data granularity setting or select a data granularity from the drop-down list.  
For example, to see data in 15-minute increments, select "Minutes" and "15" in the drop-down menus.
- Force recalculation:** click to manually force a recalculation of the data if the values have changed you do not want to wait for the next automatic recalculation to see them. The system automatically calculates values at recurring intervals and stores them in the database for faster access.  
This option is only available when the selected granularity is **Days**, **Months**, or **Years**.

**NOTE:** Recalculations may take several minutes.

- Date and time range:** select the date and time range using the calendar picker. Click the  icon to set the range to the default period.
- Do in parallel:** select the checkbox to analyze the same parameter over equivalent periods. Each period is displayed as a column.

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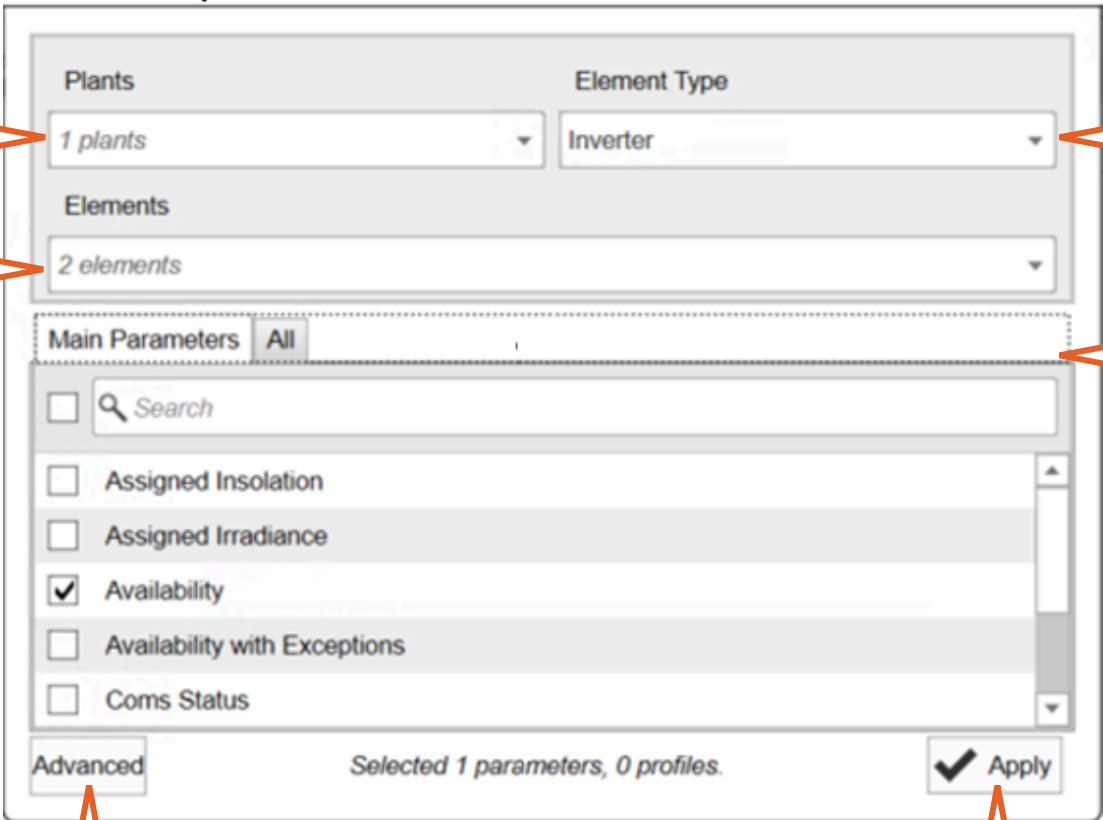
**NOTE:** This option is only available when the data granularity unit is smaller than the period unit.

5. **Data granularity settings:** Click to access advanced settings for data granularity, such as grouping methods to aggregate data, and the operations you want to perform on it (for example, calculating averages).
  6. **Apply:** click to apply your settings to the query.
-

## Add Parameters

The Add Parameters panel lets you add parameters to your query. You can expand and collapse the panel by clicking the ▼ and ▲ icons.

### Add Parameters panel



The screenshot shows the 'Add Parameters' panel with the following components and callouts:

- 1**: 'Plants' dropdown menu showing '1 plants'.
- 2**: 'Elements' dropdown menu showing '2 elements'.
- 3**: 'Element Type' dropdown menu showing 'Inverter'.
- 4**: 'Main Parameters' tab with a search field and a list of parameters: 'Assigned Insolation', 'Assigned Irradiance', 'Availability' (checked), 'Availability with Exceptions', and 'Coms Status'.
- 5**: 'Advanced' button.
- 6**: 'Apply' button.

At the bottom of the panel, it displays 'Selected 1 parameters, 0 profiles.'

- Plants:** click to select one or more plants from the drop-down list. You can use the *Search* field to refine the drop-down list results.
- Elements:** click to select one or more element from the drop-down list.

**NOTE:** You can only select elements after selecting multiple plants.

- Element type:** click to select one or more element type from the drop-down list.

**NOTE:** You can only select element types after selecting multiple plants.

- Parameters: click to select one or more parameters or series from one of the tabs. You can use the *Search* field to refine the drop-down list results.
  - Main Parameters:** lists the most relevant parameters that are configured for



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the selected element.

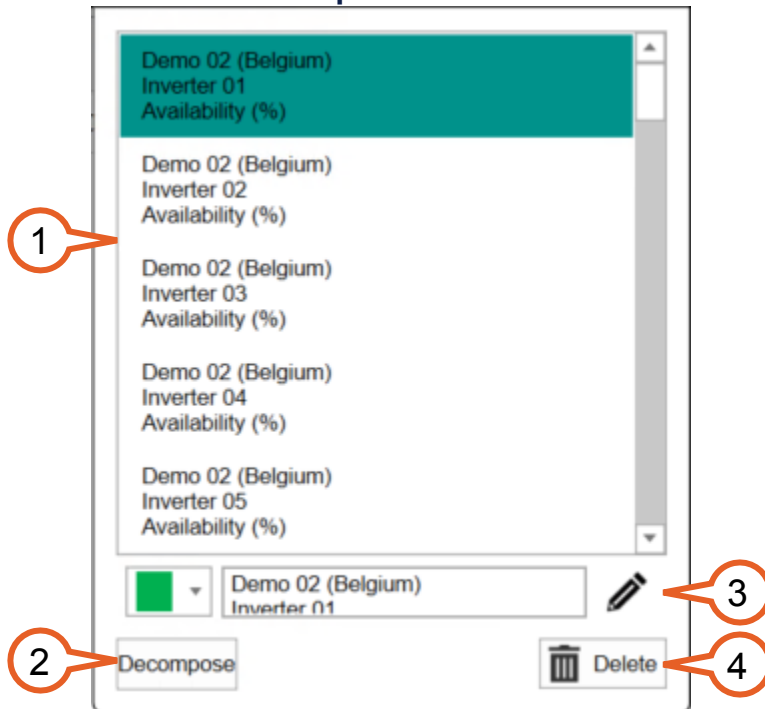
- **All:** lists all the parameters that are retrieved from the selected element.
5. **Advanced mode:** Click to open the Advanced Datasource Selector window. For further information, see the [Advanced Datasource Selector](#).
  6. **Apply:** click to apply your settings to the query.
-

## Current Parameters

The Current Parameters panel lets you manage parameters included in a query. You can expand and collapse the panel by clicking the ▼ and ▲ icons. You can also change the display name and the color of a parameter.

It is possible to see a break-down of parameters to analyze complex data in detail.

### Current Parameters panel



1. **Parameters:** lists the parameters currently displayed on the table. Select one or more parameters to customize their appearance. To select multiple parameters, use CTRL+Click.
2. **Decompose:** click to add all the factors that make up the selected parameter to the query. Factors can be other parameters or data sources.
3. **Edit:** click to enable editing for the selected parameter. You can customize the background color and the column heading text. The default text has the plant name, the element name, and the parameter name.
4. **Delete:** click to delete the selected parameters from the chart.

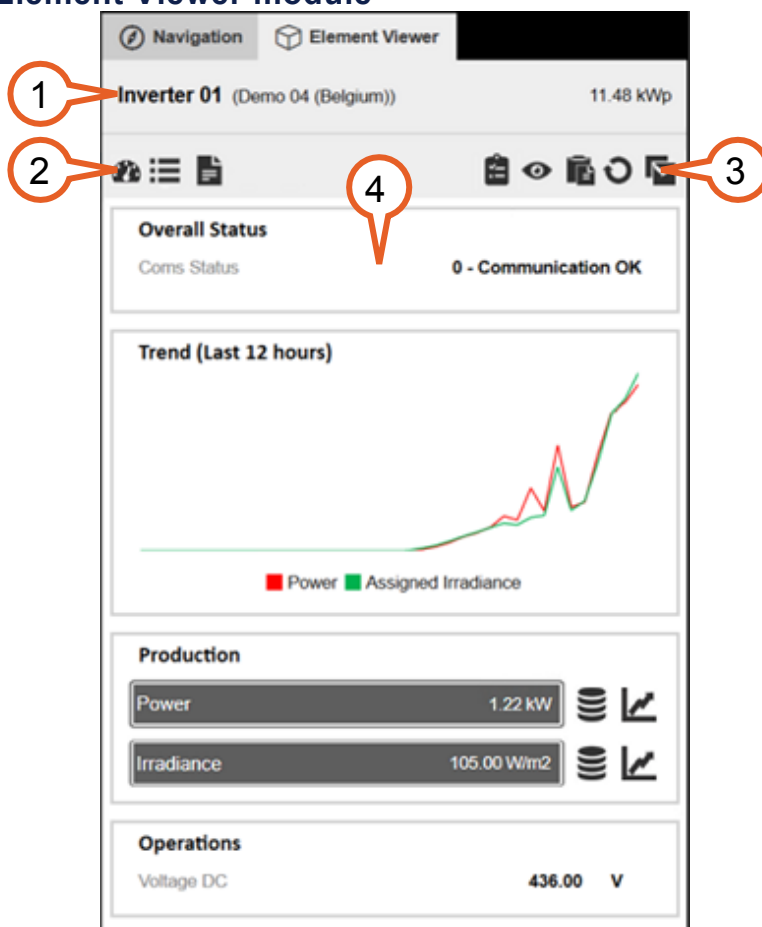
# Element viewer module

The Element Viewer module is a dynamic tab that allows you to quickly monitor, analyze, and perform maintenance on a selected plant or device.

**NOTE:** The information displayed on the Element Viewer refreshes automatically when GPM Plus receives data from the selected element.

You can perform tasks to manage elements directly from this module.




## Element Viewer module








1. **Heading:** When you select a:
  - **Plant:** displays the plant name, coordinates and peak power.
  - **Device:** displays the device name, the plant it belongs to, and its peak power. If there is an active alarm on the selected element, you can click the alarm to open the Alarm Information window.
2. **Tabs:** select a tab to display its content on the Main Area. For further information,

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see the following sections:

-  Monitor
-  Parameters
-  Info

3. **Quick actions:** take quick actions related to the selected plant or device. For further information, see Quick Actions below.


-  Ticket menu
-  View Element menu
-  Copy to Clipboard
-  Refresh
-  Copy Window



4. Main area: displays information about a selected element.

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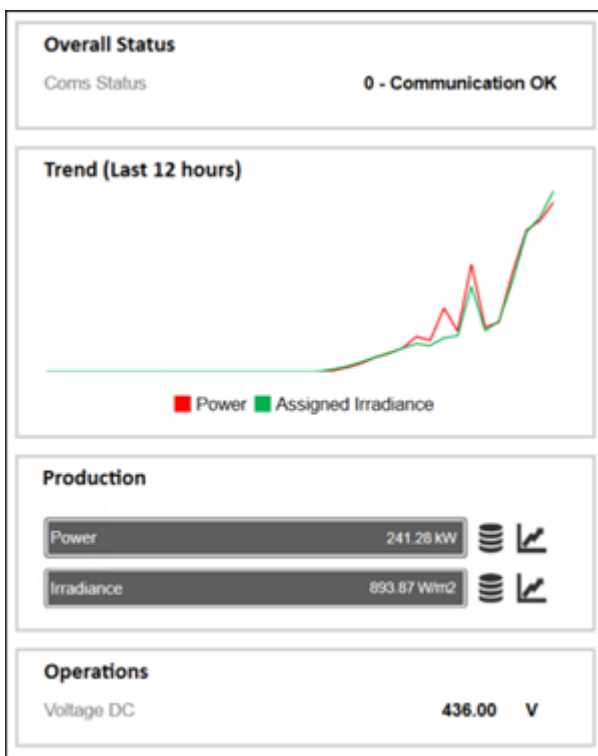
## Monitor tab

The Monitor tab provides you with tools to monitor the main key performance indicators (KPIs) of a selected element. The Monitor tab tools are organized in cards and change based on the selected element type.

Access the Monitor tab by clicking the  icon on the Element Viewer.


You can place your cursor on any chart heading and click the  icon to display the chart KPIs in the [Data Viewer module](#) or click the  icon to display them in the [Linear Chart Viewer module](#).



### Monitor tab




## Parameters tab

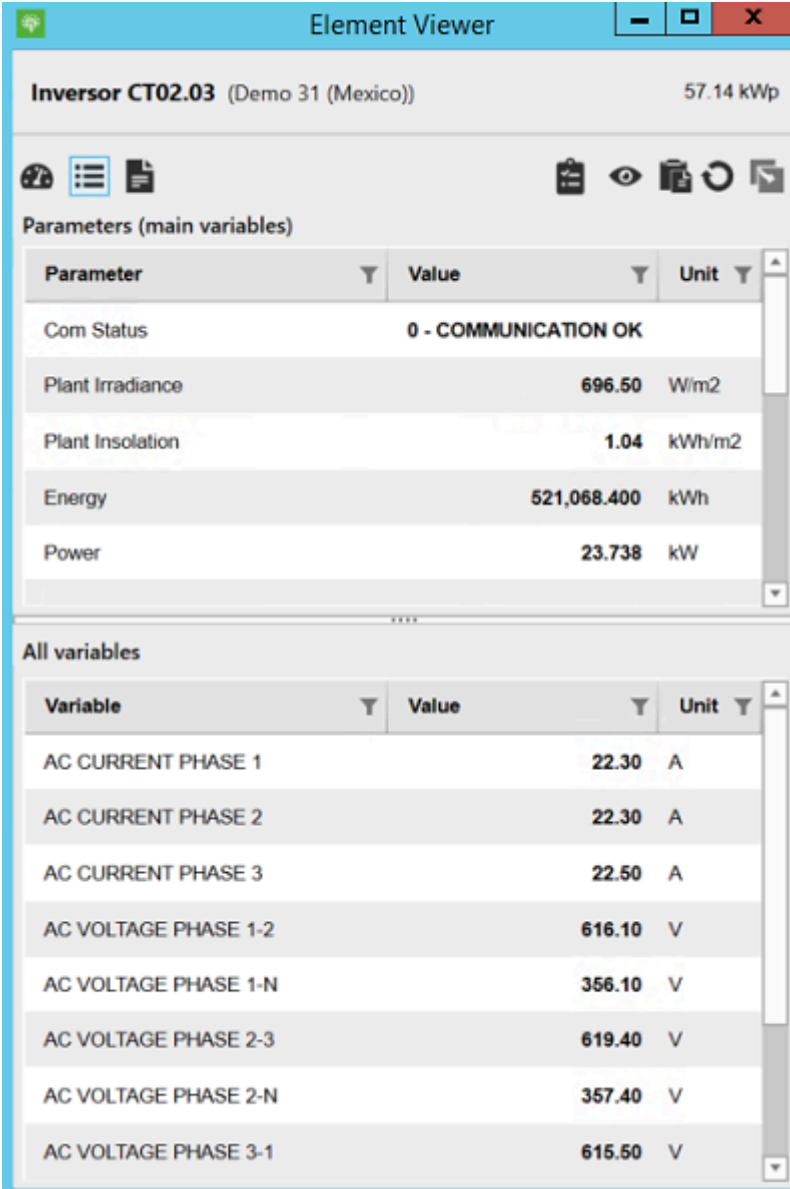
The Parameters (main variables) tab allows you to monitor data that is retrieved at regular time intervals from the selected element.

Access the Parameters tab by clicking the  icon on the Element Viewer.

You can place your cursor on any parameter and click the  icon to display the parameter values in the [Data Viewer module](#) or click the  icon to display them in the [Linear Chart Viewer module](#).

You can click the  icon on the column headers to open the filtering options for the data on display. This allows you to find, visualize, and select specific variables. For more information about filtering options, see [Advanced Filtering](#).

## Parameters tab



**Inversor CT02.03** (Demo 31 (Mexico)) 57.14 kWp

Parameters (main variables)

Parameter	Value	Unit
Com Status	0 - COMMUNICATION OK	
Plant Irradiance	696.50	W/m2
Plant Insolation	1.04	kWh/m2
Energy	521,068.400	kWh
Power	23.738	kW


All variables

Variable	Value	Unit
AC CURRENT PHASE 1	22.30	A
AC CURRENT PHASE 2	22.30	A
AC CURRENT PHASE 3	22.50	A
AC VOLTAGE PHASE 1-2	616.10	V
AC VOLTAGE PHASE 1-N	366.10	V
AC VOLTAGE PHASE 2-3	619.40	V
AC VOLTAGE PHASE 2-N	357.40	V
AC VOLTAGE PHASE 3-1	615.50	V

**NOTE:** You can resize the **Parameters (main variables)** and **Variable** sections by clicking and dragging the dotted line that separates them. The system saves your preferences after the change.


Section	Description
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<b>Main Parameters</b>	Most relevant parameters that are configured for the selected element.
------------------------	--

 **NOTE:** If you want to modify the parameters displayed here, contact your GPM representative.


## All Variables

All the variables that are retrieved from the selected element.

 **NOTE:** This section is only available for elements.

## Info tab

The Info tab provides contextual information about the selected plant or device. The information is retrieved from the entity's metadata, which is customizable and can change depending on your setup.

Access the Info tab by clicking the element icon in the Navigation module or by clicking the  icon on the Element Viewer.

You can right-click a parameter and select **See History** to open the Entity Log, where you can track and manage changes made the values. For further information, see [Entity Log](#).


### Info tab

Description Parameters	
Name	INV 15B
Typology	Inverter
Description	00000DCE/000021FC/2




## Quick Actions


The quick actions buttons allow you to easily perform basic tasks directly from the Element Viewer. Click any icon to access the available options:


-  **Ticket menu:** pair the selected element to a ticket or find existing tickets related to the element.

Option	Description
<b>New Ticket</b>	Create a new ticket and automatically pair the selected element to it: <ul style="list-style-type: none"> <li>▪ <a href="#">Create maintenance tickets</a></li> <li>▪ <a href="#">Create task tickets</a></li> <li>▪ <a href="#">Create data correction tickets</a></li> </ul>
<b>Add to Ticket</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .
<b>Search Tickets</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .

-  **View Element menu:** display information related to the selected element.

 **NOTE:** The options available when you click the View Element button depend on the selected element.




Option	Description
<b>Alarm Grid</b>	Display related alarms on the <a href="#">Alarms tab</a> of the Content Area.
<b>Search Tickets</b>	Choose a ticket type to open the related tickets in the <a href="#">Tickets module</a> .
	 <b>NOTE:</b> This option is only available when you are viewing a plant in the Element Viewer.
<b>Portfolio Map</b>	Display the plant on the Portfolio Map tab of the Content Area.

 **NOTE:** This option is only available when you are viewing a plant in the Element Viewer.

**Commands** Display related commands in the Commands Control module.

### Log

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-  **Copy to clipboard:** click to copy all the parameters and values on display to your clipboard.
-  **Refresh:** click to refresh the information displayed in the tab.
-  **Copy Window:** click to open a copy of the Element Viewer module in a separate window.

# Element management

You can manage elements directly from the Element Viewer.


## Tickets

- Create maintenance tickets
- Create task tickets
- Create data correction tickets
- Add elements to existing tickets

## Create maintenance tickets from elements

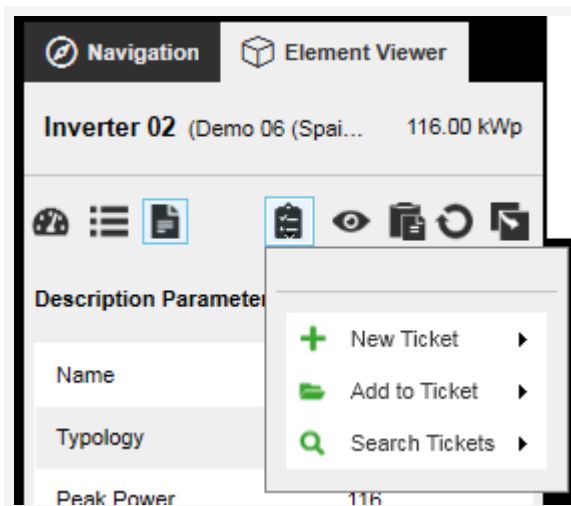
To create a maintenance ticket from an element, follow these steps:

**NOTE:** Information contained in Maintenance tickets is customizable. Each customization is stored as a template. The following instructions use the **GPM Default** template.

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

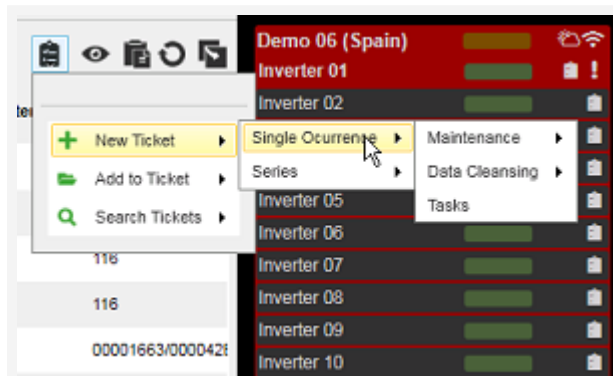
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

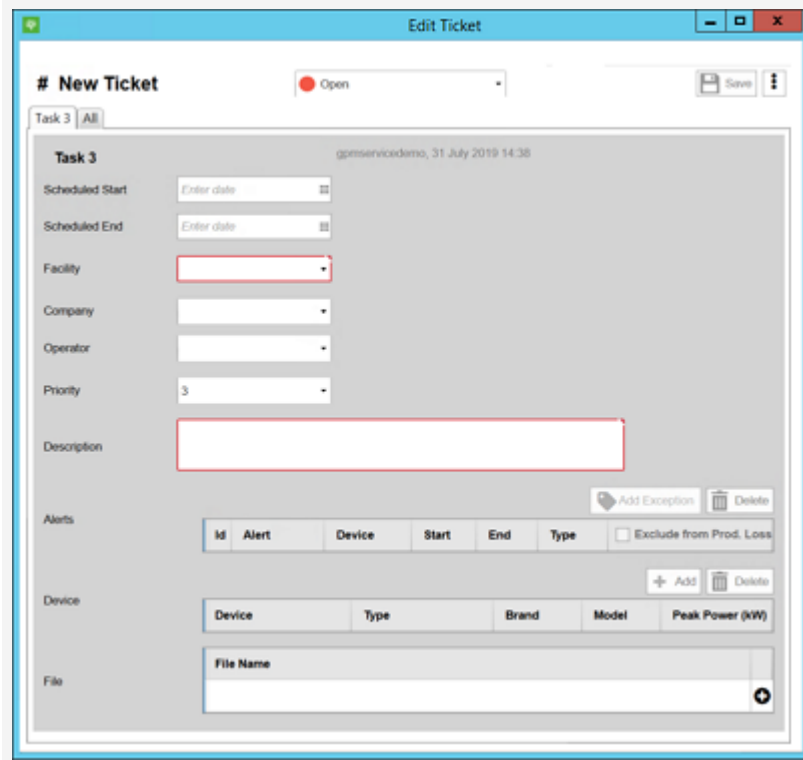
### Ticket types




- 3 In the menu, select **Maintenance**, then select the **GPM Default** template.

**Result:** The **Edit Ticket** dialog appears:

### Edit Ticket dialog



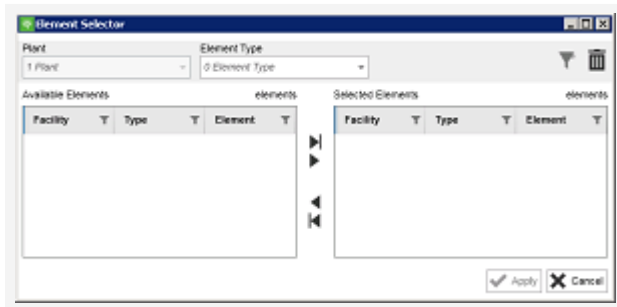
The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and has a status indicator 'Open'. Below that, there's a 'Task 3' section with a date '31 July 2019 14:38'. The form contains several input fields: 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholder), 'Facility', 'Company', 'Operator', and 'Priority' (set to '3'). A large 'Description' text area is also present. Below the description, there are sections for 'Alerts' and 'Device', each with a table and an 'Add' button. The 'Alerts' table has columns for Id, Alert, Device, Start, End, and Type, with an 'Exclude from Prod. Loss' checkbox. The 'Device' table has columns for Device, Type, Brand, Model, and Peak Power (KW). At the bottom, there's a 'File' section with a 'File Name' input field and a '+' icon.

- 4 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.  
 Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
  - g **Description:** enter a description in the text input field.
  - h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
  - i (Optional) **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).


**NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.


- 5 (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**BEST PRACTICE:** You can type a term into the *Search* field and click the  icon to narrow down the options available on the list.


- b In the **Available Elements** panel select the element you want to add to the ticket, then click the  icon.

OR: Click the  icon to select all the elements on the list.

**TIP:** Hold down the shift key to select multiple elements.

- c Click **Apply**.

**Result:** The element is added to the list.

- 6 (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).
- 7 Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

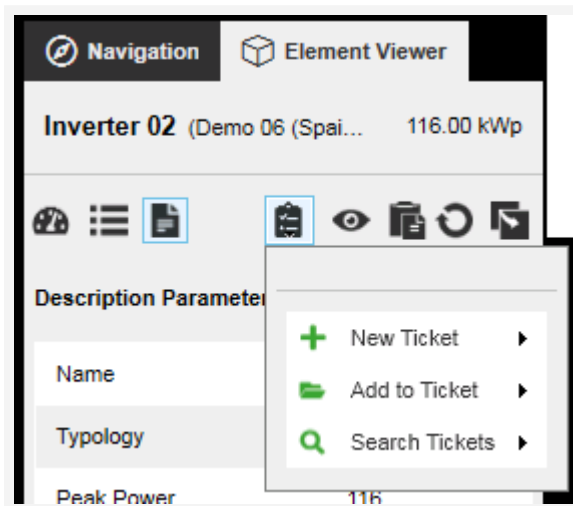
## Create data correction tickets from elements

To create a data correction ticket from an element, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

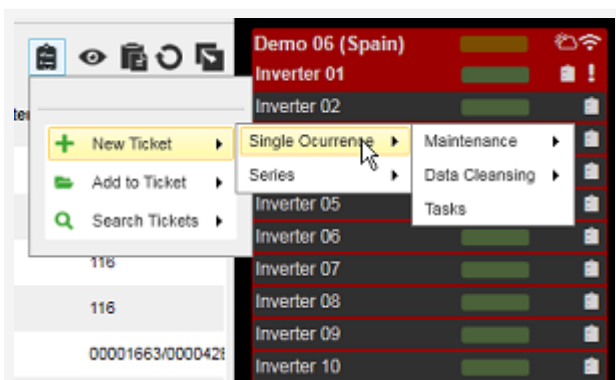
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

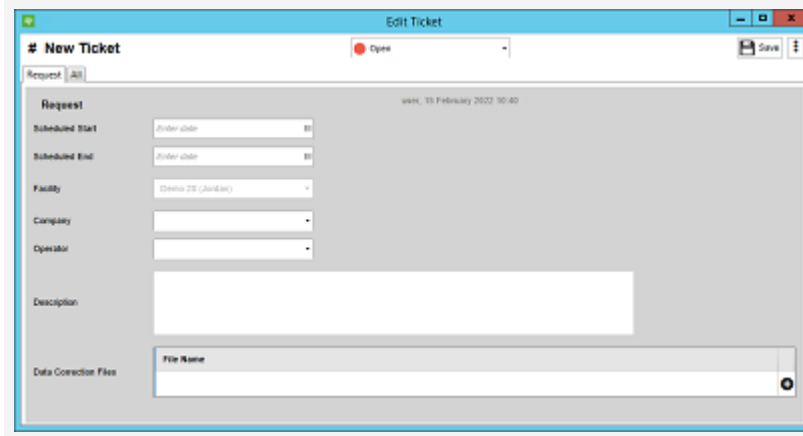
### Ticket types



- 3 In the menu, select **Data Cleansing**, then select **GPM Data Correction**.

**Result:** The Edit ticket dialog appears:

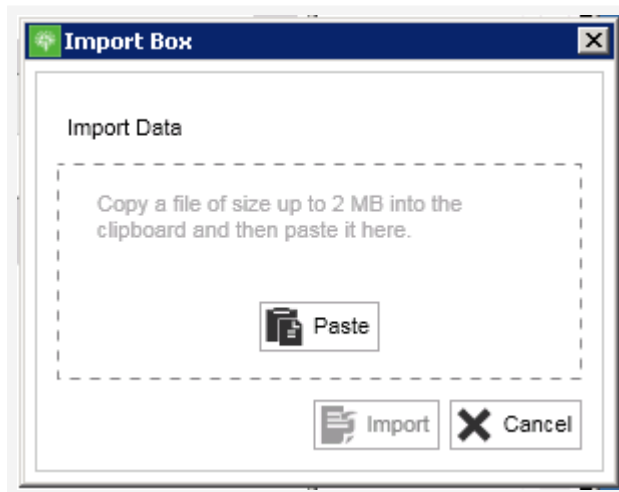
### Edit ticket dialog (Data cleansing)



- 4 In the Request section, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f *Description:* enter a description in the text input field.
- 5 In the Data Correction Files section, click the **+** icon to open the Import Box and import an XLS file from which to add the corrected data:



## Import Box



**NOTE:** You can only import XLS files.

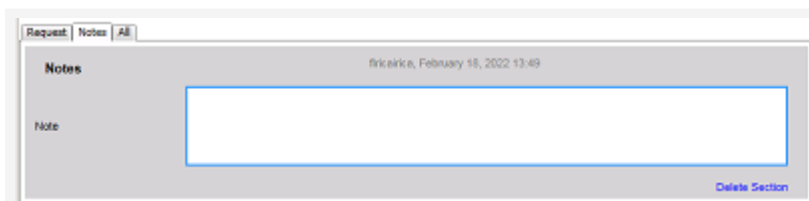
- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click **Paste**.
- c Click **Import**.

**Result:** The file is imported to the ticket.

6 (Optional) To add a note, follow these steps:

- a Click the **:** icon, hover over **Add section** and select **Note**.
- Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.
- Result:** The note is added to the ticket.

7 Click **Save**.

## Result

The ticket is created and assigned to the operator you selected.

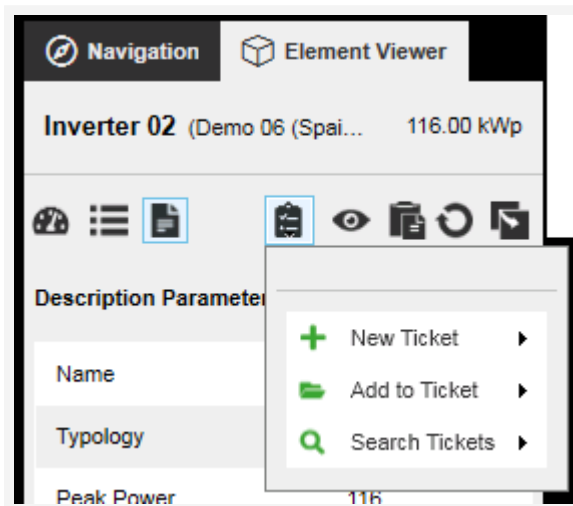
## Create task tickets from elements

To create a task ticket from an element, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

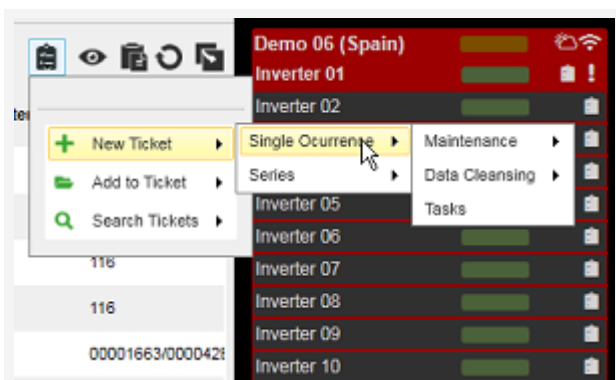
### Ticket menu



- 2 Hover over **+ New Ticket** to open the options panel and select **Single occurrence**.

**Result:** The ticket type panel opens:

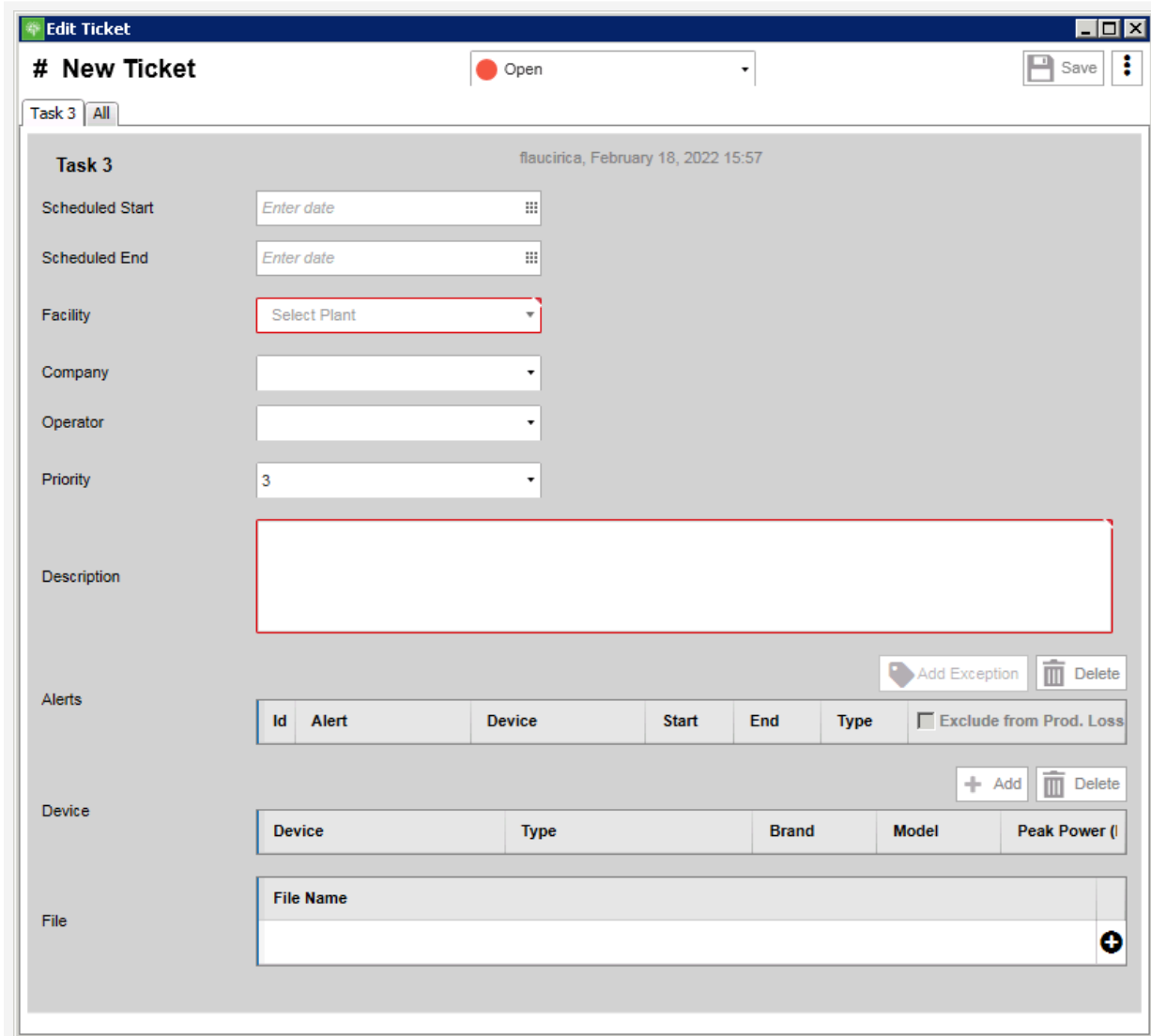
### Ticket types



- 3 In the menu, select **Task**, then select the **GPM Default** template.

**Result:** The **Edit** ticket dialog appears:

### Edit ticket dialog (task)



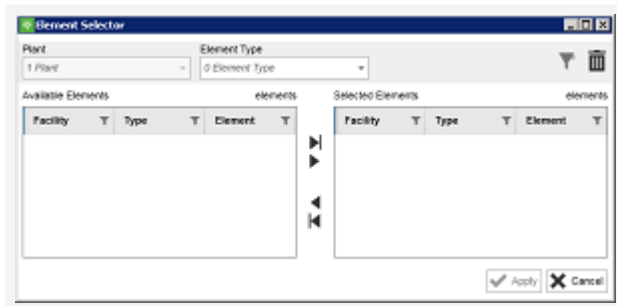
- 4 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.

Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.

**g** *Description:* enter a description in the text input field.

- 5** (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
 The Element selector dialog appears:

### Element selector



- a** Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

**📌 BEST PRACTICE:** You can type a term into the *Search* field and click the **▼** icon to narrow down the options available on the list.

- b** In the **Available Elements** panel select the element you want to add to the ticket, then click the **▶** icon.

OR: Click the **▶▶** icon to select all the elements on the list.

**📌 TIP:** Hold down the shift key to select multiple elements.



- c** Click **Apply**.

**Result:** The element is added to the list.

- 6** (Optional) In the File section, click the **+** icon to open the Import Box and import a file.

## Import box



- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click  **Paste**.
- c Click  **Import**.

**Result:** The file is imported to the ticket.

## 7 (Optional) To add a note, follow these steps:

- a Click the  icon, hover over **Add section** and select **Note**.

**Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.

**Result:** The note is added to the ticket.

## 8 Click **Save**.

## Result

The ticket is created and assigned to the operator you selected.

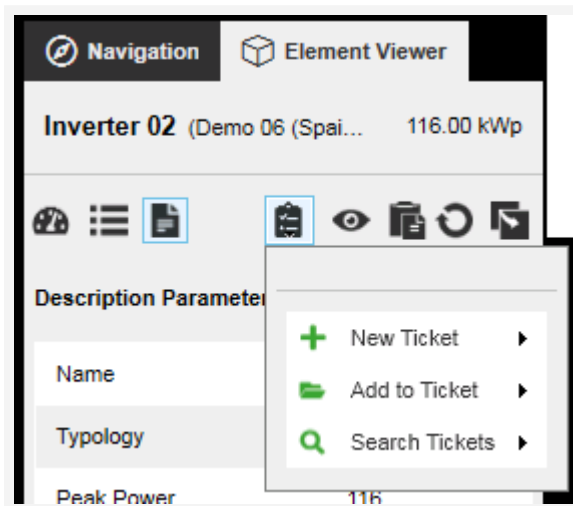
## Add elements to existing tickets


To add an element to an existing ticket, follow these steps:

- 1 In the Element viewer module, click the  icon.

**Result:** The **Ticket** menu opens:

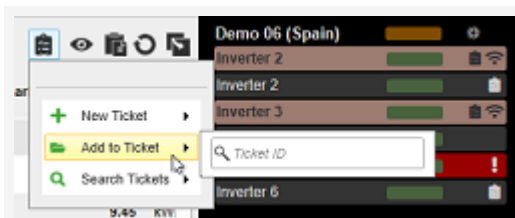
### Ticket menu



- 2 Hover over  **Add to Ticket** and enter the *Ticket ID* of an existing ticket (for example, "1543549623"), and press **Enter**.

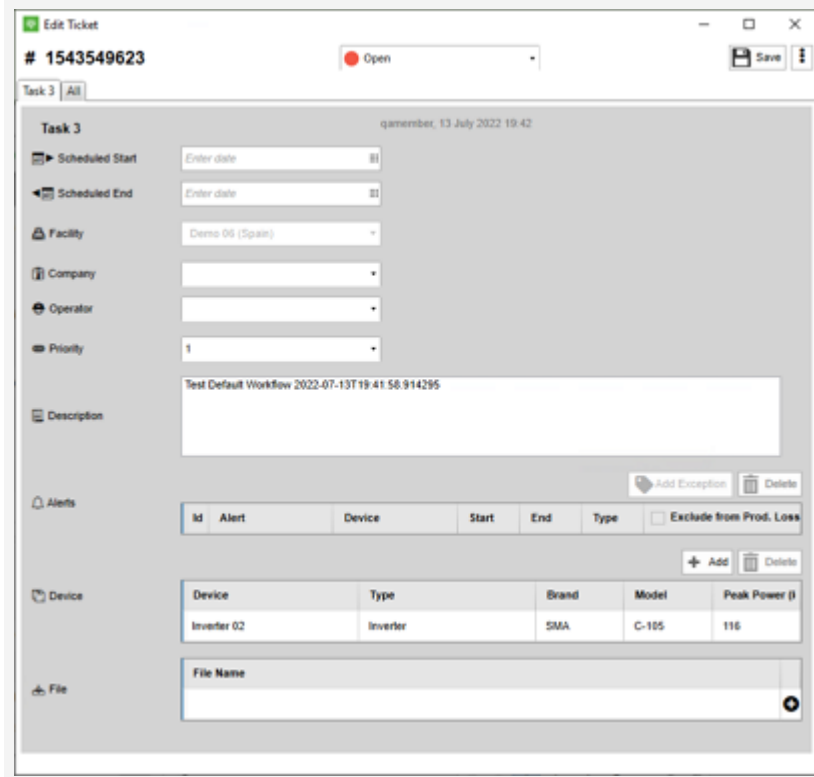
**REMEMBER:** You must enter the ID of an existing ticket. If no ticket exists, follow the instructions to create a new ticket from the Element viewer.

### Ticket menu



**Result:** The **Edit ticket** dialog appears, displaying the selected element in the Element field:

### Edit ticket dialog



**Edit Ticket**

# 1543549623 ● Open Save

Task 3 | All qmember, 13 July 2022 19:42

**Task 3**

► Scheduled Start

◄ Scheduled End

🏠 Facility

🏢 Company

👤 Operator

📌 Priority

Description

🔔 Alerts Add Exception Delete

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
<span>+ Add</span> <span>Delete</span>						

🔧 Device

Device	Type	Brand	Model	Peak Power ()
Inverter 02	Inverter	SMA	C-105	116

📎 File

3 (Optional) Edit any other fields of the ticket you want to change.

4 Click  **Save**.

### Result


The element is added to the ticket and any other changes are saved.



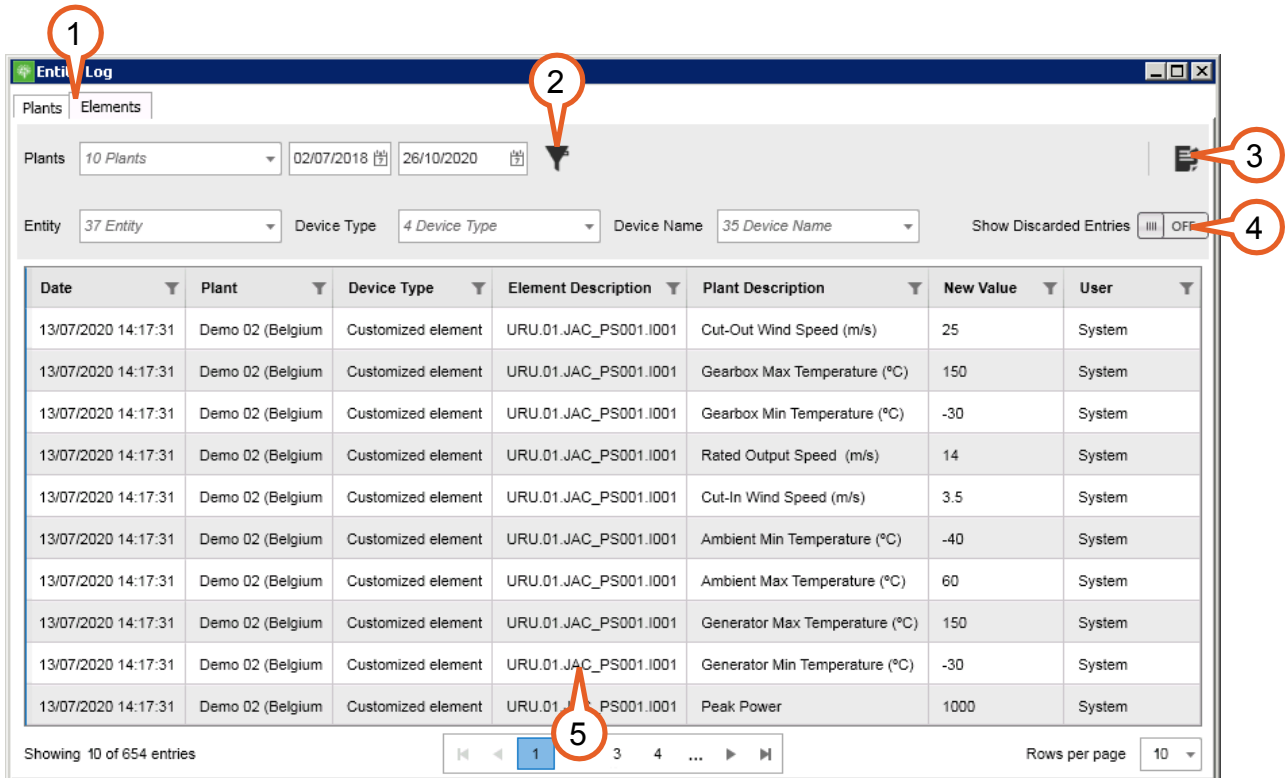
# Entity log module

The Entity Log helps you audit and manage the metadata of your plants and devices by tracking changes to values, the timestamp of the change, and the user who made it.

Metadata values are more inclined to human error, because users input them manually. This means that you may want to use the Entity Log to restore an old value or to confirm with a user that the change was intended. Additionally, you can discard values for a more focused browsing and to exclude them when you export this data.

You can access the Entity Log by right-clicking any metadata in the  **Info** tab of the Element Viewer and selecting **Open Log**.

## Entity Log




The screenshot shows the Entity Log interface with the following components:

- 1**: Entity tabs (Plants, Elements)
- 2**: Filter criteria (Plants, Date range, Entity, Device Type, Device Name)
- 3**: Export icon
- 4**: Show Discarded Entries toggle (OFF)
- 5**: Page navigation (1, 3, 4, ...)

Date	Plant	Device Type	Element Description	Plant Description	New Value	User
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Cut-Out Wind Speed (m/s)	25	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Gearbox Max Temperature (°C)	150	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Gearbox Min Temperature (°C)	-30	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Rated Output Speed (m/s)	14	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Cut-In Wind Speed (m/s)	3.5	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Ambient Min Temperature (°C)	-40	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Ambient Max Temperature (°C)	60	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Generator Max Temperature (°C)	150	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Generator Min Temperature (°C)	-30	System
13/07/2020 14:17:31	Demo 02 (Belgium)	Customized element	URU.01.JAC_PS001.I001	Peak Power	1000	System

Showing 10 of 654 entries

- Entity tabs:** each available entity type has its own log in a different tab. Click on a tab to display the relevant entity log.
- Filter:** the system applies a filter with the criteria of the selected metadata by default. You can edit the filter and click  to apply the new filtering criteria.  
Filtering criteria change based on the selected entity
- Export:** click to export entries that are visible in the list. For further information, see Export Data to File.

- 
4. **Discard entities:** toggle on or off to display or hide discarded values so that they are not exported. This is useful because the export feature only exports visible entries.
  5. **Log:** tracks all the changes made to the values. If a value was changed by mistake, you can right-click the entry and discard it, so that it will be excluded from the export. You can restore discarded values at any time.
-

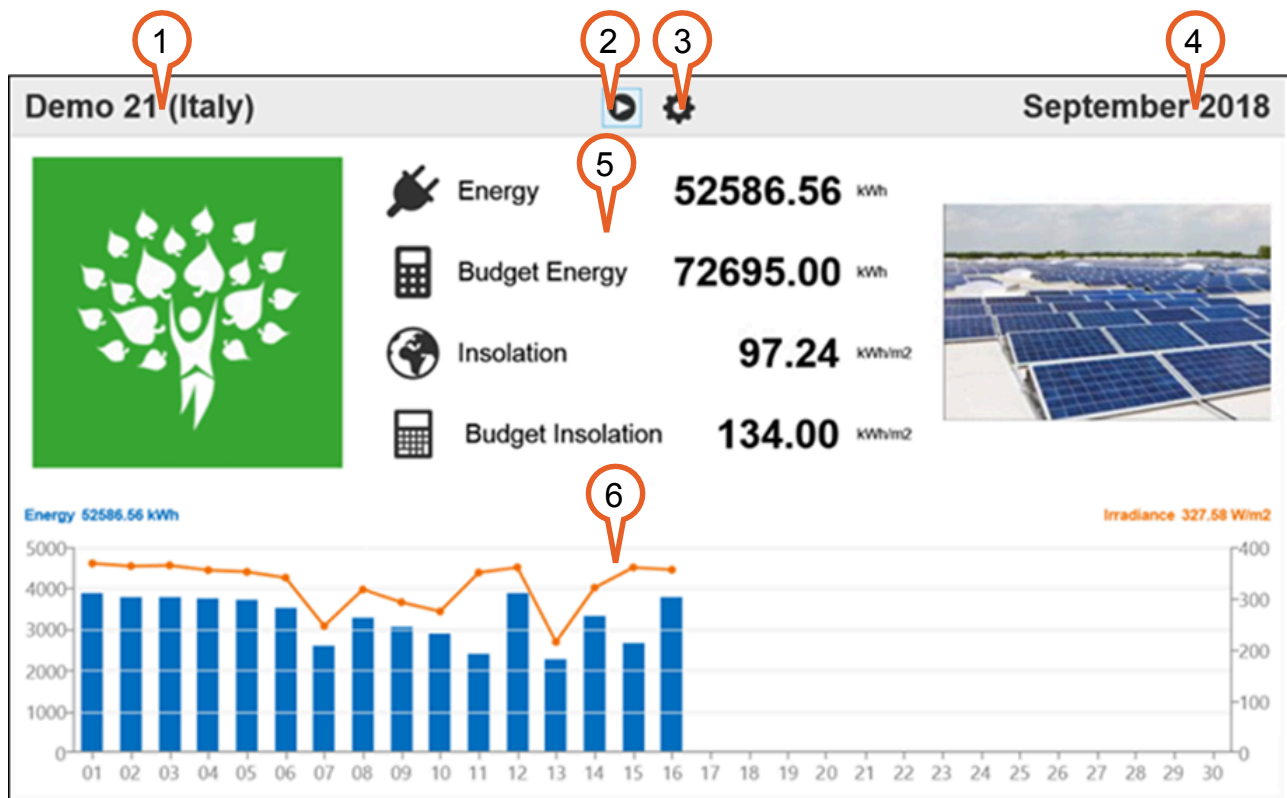
# Kiosk View

The Kiosk View module allows you to display a slideshow with cards containing the main KPIs of the plants in your portfolio. For example, you can open the Kiosk View module in a cyclic playback mode in a public display, so that the most up-to-date values can be monitored at any time.


You can customize the Kiosk View module with up to four KPIs and one chart displaying two parameters. Additionally, it can display the logo of your Company logo and another image, such as a photo of the plant. For more information, see the [Slide Configuration](#) section.

To access the Kiosk View module, click the  icon on the upper bar, then click the  icon.

## Kiosk View



1. **Plant name:** click to select another plant from the drop-down list

 **NOTE:** Selecting another plant stops the slideshow.

2. **Resume:** click to resume the slideshow.
3. **Settings:** click to open the Kiosk View module settings.
4. **Period:** click to customize the period of the data on display. Available options are

day, month, year, and lifetime.

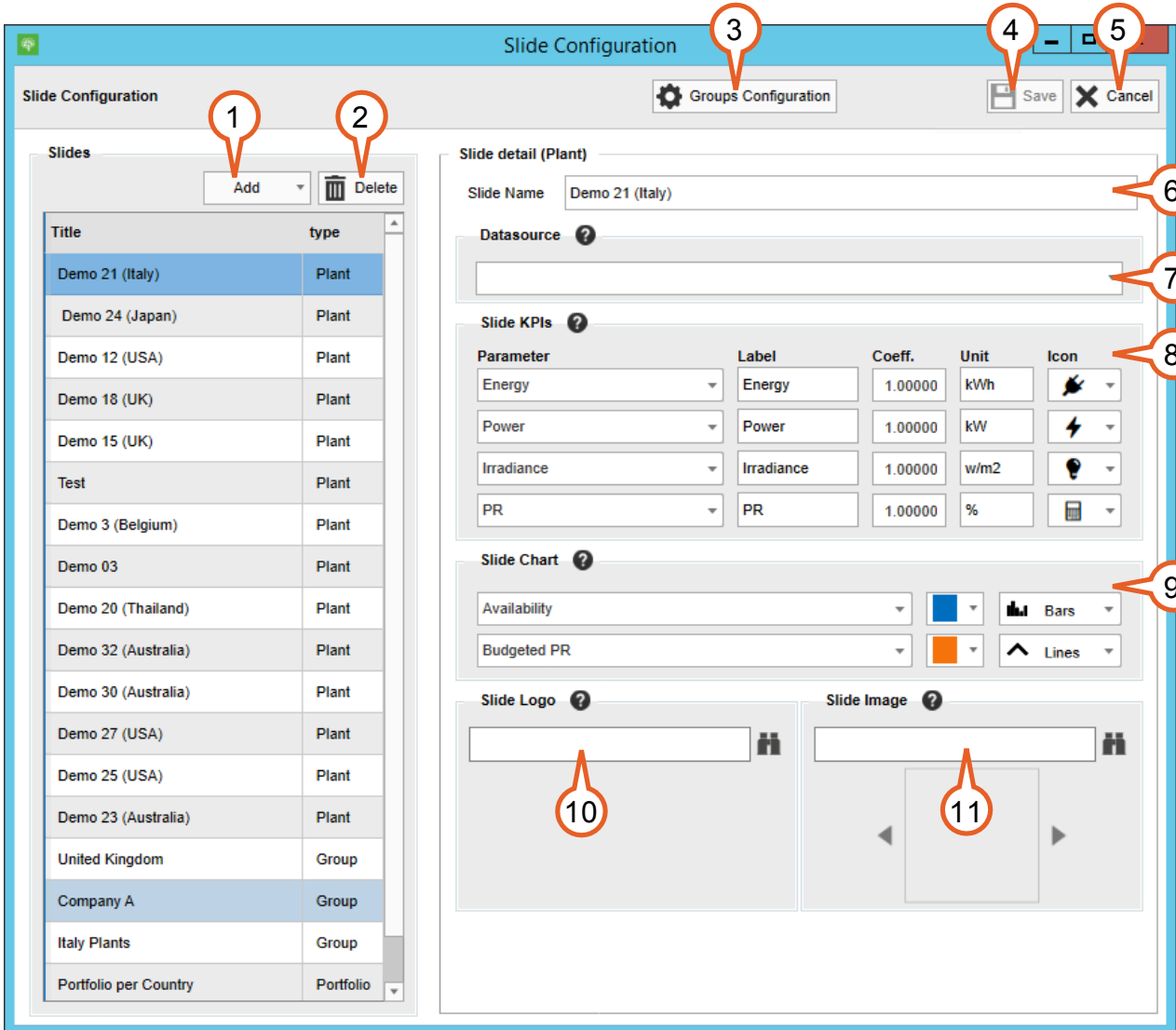
5. KPIs: displays pre-configured KPI values for the selected period.
6. Chart: displays a chart produced by comparing two parameters.

Setting	Description
Slides	<p>Select the plants to display in the slideshow.</p> <p>Click and drag a plant to sort the order in which they appear.</p>
Included time periods	<p>Enable a checkbox to display slides for the selected time period. You can choose multiple options.</p> <p>The available options are: <b>Day, Month, Year</b> and <b>Lifetime</b>.</p>
Play order	Select the order in which to display the slides and the time periods.
Slide preferences	<p>Click and drag the slider to define the time between slides (for example, 10 seconds).</p> <p>Click the <b>Transition effect between frames</b> menu and select an option for transitions between slides.</p>

## Slide configuration

You can customize the configuration of the slides for one or more plants by clicking the **Slide Configuration** button in the Settings screen.

### Slide Configuration



The screenshot shows the Slide Configuration window with the following components and callouts:

- 1**: Add button (dropdown)
- 2**: Delete button (trash icon)
- 3**: Groups Configuration button (gear icon)
- 4**: Save button (floppy disk icon)
- 5**: Cancel button (X icon)
- 6**: Slide Name input field (containing "Demo 21 (Italy)")
- 7**: Datasource input field
- 8**: Slide KPIs table
- 9**: Slide Chart configuration section
- 10**: Slide Logo input field
- 11**: Slide Image input field

Parameter	Label	Coeff.	Unit	Icon
Energy	Energy	1.00000	kWh	
Power	Power	1.00000	kW	
Irradiance	Irradiance	1.00000	w/m2	
PR	PR	1.00000	%	


Availability	Color	Chart Type
Availability	Blue	Bars
Budgeted PR	Orange	Lines

- Add:** click to add a new slide and select the type of data you want to include in it. The available options are **Group**, **Plant** and **Portfolio**.
- Delete:** click to delete the selected slide from the slideshow.
- Groups configuration:** click to create and configure groups of plants you can then add to the slides.
- Save:** click to save your changes.
- Cancel:** click to discard your changes.

- 
6. *Slide name*: enter a name for the slide. By default, the slide name is the same as the plant name.
  7. **Datasource**: click to select a plant or a group of plants from the drop-down menu.
  8. Slide KPIs: click each field to define the data you want to display, and how to display it:
    - **Parameter**: click to select a parameter from the drop-down menu.
    - *Label*: enter a name for the label you want to assign to the parameter.
    - *Coefficient*: enter a coefficient for the parameter.
    - *Unit*: enter a unit for the parameter.
    - **Icon**: click to select an icon for the parameter from the drop-down menu.
  9. Slide chart: click each field to configure the chart that appears on the slide:
    - **Parameters**: click to select a parameter from the drop-down menu.
    - **Parameter color**: click to select a color for the parameter.
    - **Graph type**: click to select the type of graph you want to display for the parameter.
  10. Slide logo: click the icon to import a corporate image to display on the slide (for example, your company's logo).
  11. Slide image: click the arrows to browse between available images and select one to display on the slide, or click the icon to upload a new image.
-


# Linear Chart Viewer









The Linear Chart Viewer module is a tool that allows you to create queries and analyze your portfolio's performance by creating charts that display parameter values at specific moments in time. The results of your queries can be saved for further use or exported to other views.

**BEST PRACTICE:** You can open multiple Linear Chart Viewer module windows, but you can only add queries to the active window. The active window has the  icon.

## Linear Chart Viewer module



1. Chart: displays the results of your query.  
Right-click a point of the chart to display the context menu.
2. Query period: click the  icon to expand the menu and customize the data granularity and time range. For information, see the [Query Period](#) section below.

- 
3. Add parameters: click the  icon to expand the menu and add parameters to the table. For more information, see the [Add Parameters section](#). below.
  4. **Action buttons:** click to perform quick actions:
    -  Toggle zoom on and off. When zoom is enabled, use the mouse scroll or drag and drop the area of the chart that you want to zoom.
    -  Save the current query as a favorite.
    -  Load a favorite query.
    -  Display the selected parameters in the [Linear Chart Viewer module](#).
    -  Export the query to the clipboard or to a file. For further information, see [Export Data to File](#).
    -  Toggle the window lock on and off. When you lock a window, you cannot add further parameters to it from other parts of the application.
  5. Current parameters: click the  icon to expand the menu and manage current parameters. You can change the display name and color for a parameter. You can also decompose parameters. For more information, see the [Current Parameters section](#) below.
  6. Legend: displays the results of your query as a table. You can hide data from the chart and customize the appearance of single parameters. For further information, see the [Legend section](#) below.
  7. **Period browser:** browse the time range using the arrows. The time range displayed is based on the query period that you selected.
  8. **Unlock time bar:** click to enable the time bar usage on the chart.

When the time bar is active, you can place your cursor over a point on the chart to display a tooltip with further information. When you click that point on the chart, the time bar is fixed, and you can analyze the data from that point on the Legend. For further information, see the [Legend section](#) below.

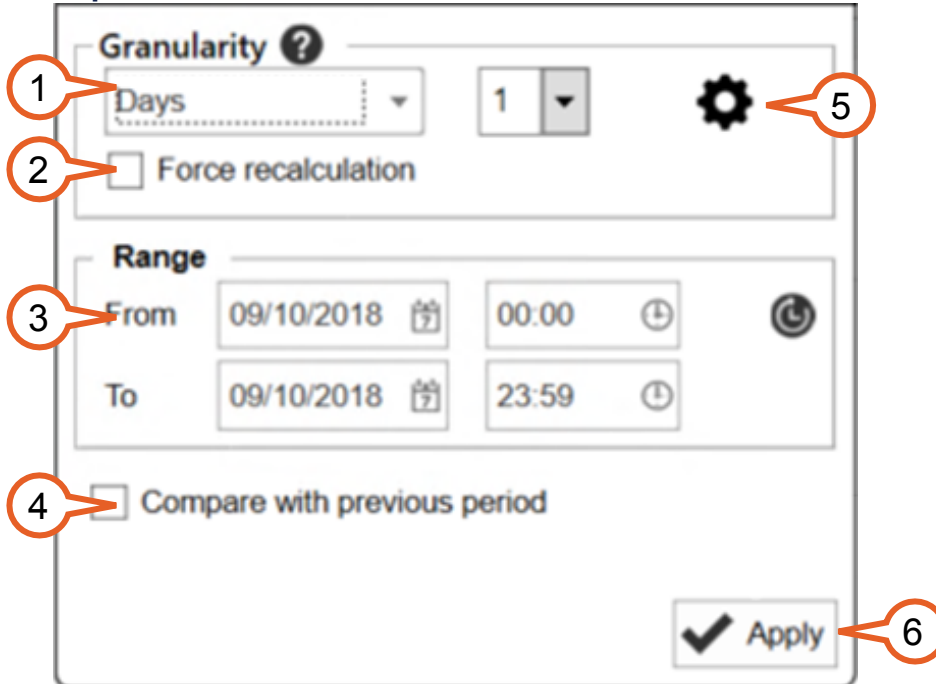
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## Query Period

The Query Period panel lets you customize the data granularity and time range of your query. You can expand and collapse the panel by clicking the ▼ and ▲ icons.

### Query Period panel



The screenshot shows the Query Period panel with the following elements and callouts:

- 1:** Granularity dropdown menu showing 'Days'.
- 2:** 'Force recalculation' checkbox.
- 3:** 'From' date and time picker showing '09/10/2018 00:00'.
- 4:** 'Compare with previous period' checkbox.
- 5:** Gear icon for settings.
- 6:** 'Apply' button with a checkmark.

- Data granularity:** leave the default data granularity setting or select a data granularity from the drop-down list.  
Select a data granularity value if the selected granularity requires it.
- Force recalculation:** click to manually force a recalculation of the data if the values have changed you do not want to wait for the next automatic recalculation to see them. The system automatically calculates values at recurring intervals and stores them in the database for faster access.  
This option is only available when the selected granularity is **Days**, **Months**, or **Years**.

**NOTE:** Recalculations may take several minutes.

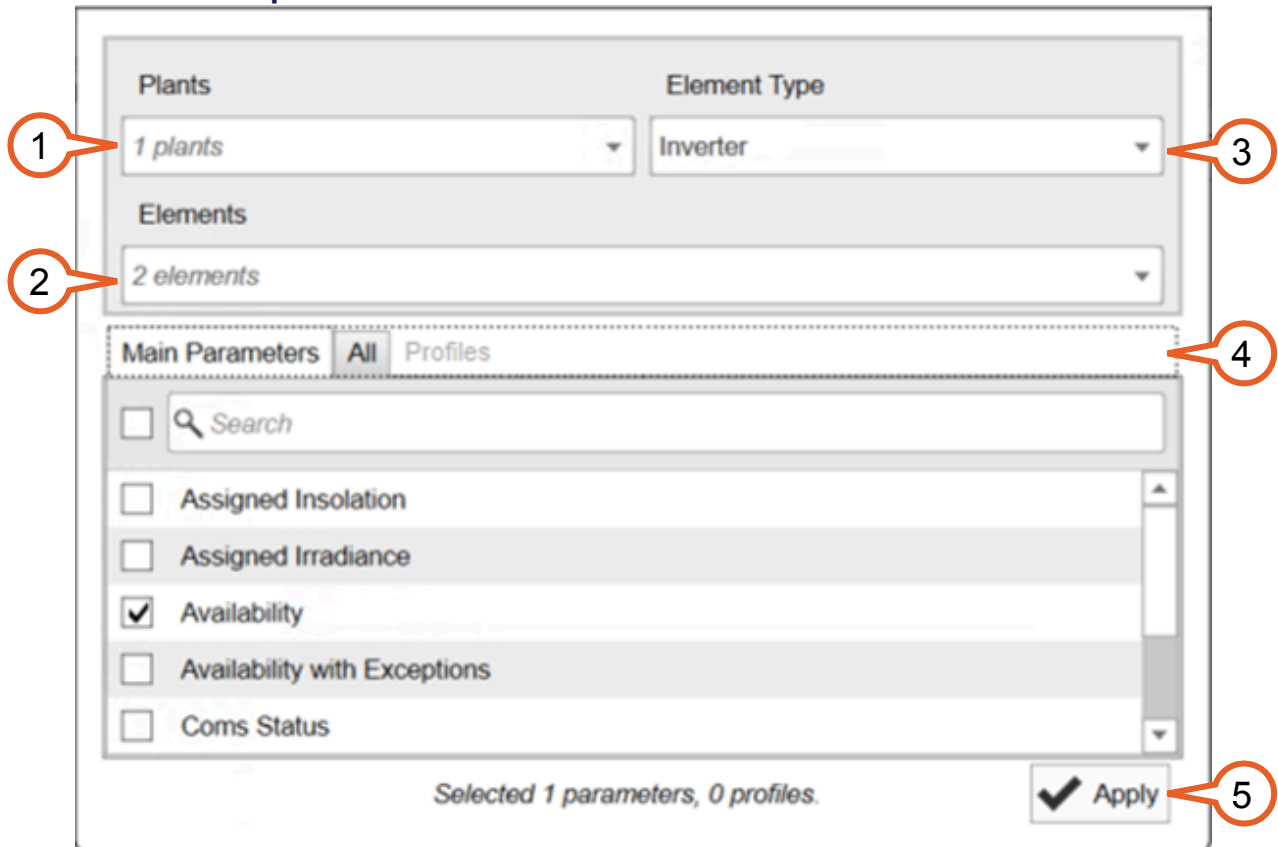
- Date and time range:** select the date and time range using the calendar picker. Click the 🕒 icon to set the range to the default period.
- Compare with previous period:** select the checkbox if you want the chart to include data from the previous period to the one you selected. For example, you can select today as the period and select this checkbox to include yesterday's data.

- 
5. **Data granularity settings:** click to access advanced settings for data granularity.
  6. **Apply:** click to apply your settings to the query.
-

## Add Parameters

The Add Parameters panel lets you add parameters to your query. You can expand and collapse the panel by clicking the ▼ and ▲ icons.

### Add Parameters panel



- Plants:** click to select one or more plants from the drop-down list. You can use the *Search* field to refine the drop-down list results.
- Elements:** click to select one or more element from the drop-down list.

**NOTE:** You can only select elements after selecting a single plant. If you select multiple plants, this option is disabled.

- Element type:** click to select one or more element type from the drop-down list.

**NOTE:** You can only select element types after selecting multiple plants.

- Parameters:** click to select one or more parameters or series from one of the tabs. You can use the *Search* field to refine the drop-down list results.
  - Main Parameters:** lists the most relevant parameters that are configured for

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the selected element.

- **All:** lists all the parameters that are retrieved from the selected element.
- **Profiles:** lists all the saved profiles.

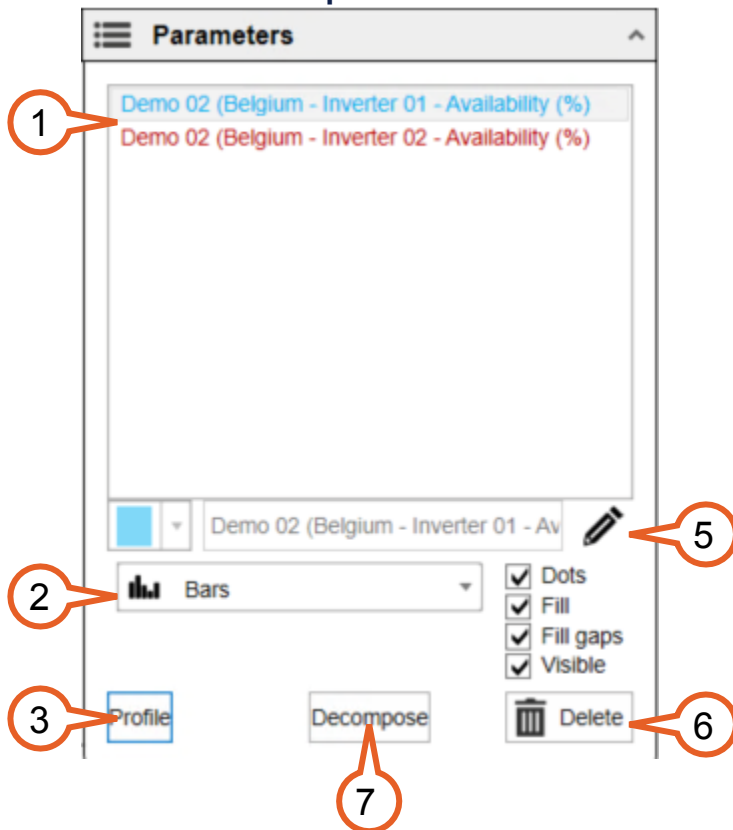
5. **Apply:** click to apply your settings to the query.

---

## Current Parameters

The Current Parameters panel lets you manage parameters included in a query. You can expand and collapse the panel by clicking the ▼ and ▲ icons. You can also change the display name and the color of a parameter.

### Current Parameters panel



1. **Parameters:** lists the parameters currently displayed on the table. Select one or more parameters to customize their appearance. To select multiple parameters, use CTRL+Click.
2. **Chart format:** select the chart format from the drop-down list:
  - ▲ **Lines:** display data as lines.
  - ◡ **Curves:** display data as curves.
  - ▮ **Bars:** display data as bars.
  - ◉ **Points:** display data as points.
3. **Save as profile:** click to save the query as a profile and use it as a reference in other charts. You can select saved profiles in the **Profiles** tab of the Add Parameters panel.
4. **Edit:** click to enable editing for the selected parameter. You can customize the

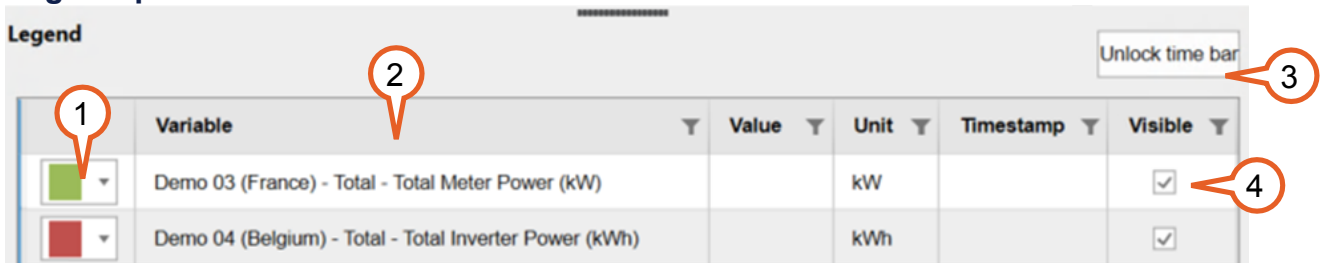
background color and the column heading text. The default text has the plant name, the element name, and the parameter name.

5. **Parameter format:** select the checkboxes to customize the parameter appearance:
  - **Points:** display dots on the chart events.
  - **Fill:** fill the chart area with a color.
  - **Fill gaps:** connect points even if there is no data.
  - **Visible:** display the parameter.
6. **Delete:** click to delete the selected parameters from the chart.
7. **Breakdown:** click to add all the factors that make up the selected parameter to the query. Factors can be other parameters or data sources.

## Legend

The legend panel provides quick access to the chart legend and displays the results of your queries as a table. You can filter and sort the data on display and customize the parameter colors.

### Legend panel



	Variable	Value	Unit	Timestamp	Visible
<input type="color" value="#90EE90"/>	Demo 03 (France) - Total - Total Meter Power (kW)		kW		<input checked="" type="checkbox"/>
<input type="color" value="#D62728"/>	Demo 04 (Belgium) - Total - Total Inverter Power (kWh)		kWh		<input checked="" type="checkbox"/>

1. **Parameter color:** click to select the display color of a parameter from the drop-down list.
2. **Table:** displays the plant, device and parameter names; the parameter values; the unit; and the time stamp when the value was retrieved.
3. **Unlock time bar:** when the time bar is active, you can place your cursor over a point on the chart to display a tooltip with further information. When you click that point on the chart, the time bar is fixed, and you can analyze the data from that point.
4. **Visible column:** toggle a checkbox to display or hide the parameter from the chart.

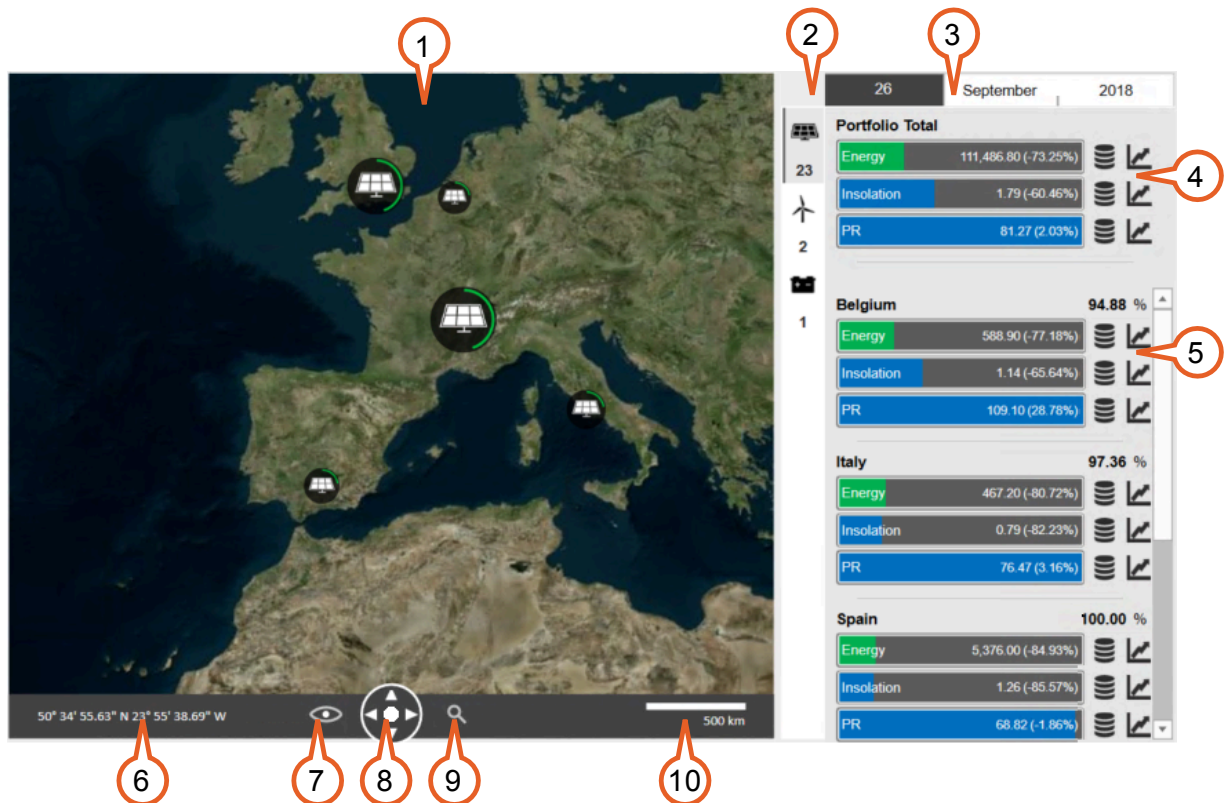
# Map

The Map module provides a geographical overview of your portfolio by placing each plant on a map based on their geo-location. The Map module provides KPIs to monitor the portfolio performance as well as the specific performance of each plant.





The Map module allows you to navigate and monitor your portfolio by layers, providing information at different degrees of detail when you zoom in or out of the map.

The Data Panel located on the right side provides further tools to monitor the performance of your portfolio by location, technology, and time stamp.

## Map



1. Map: monitor your plants or clusters based on their geo-location. Drag and drop the map to browse it.
2. Technology: select a technology to display plants with a specific technology in the Plant KPIs area. This option is available when you monitor a multi-technology cluster.
3. **Date selector**: select the date range for which to display the KPIs. You can select the current day, month or year.

- 
4. **Portfolio KPIs:** displays the total KPIs of the plants currently displayed on the map. Click the  icon to display the KPIs in the Data Viewer module or click the  icon to display them in the Linear Chart Viewer module.
  5. **Plant KPIs:** displays up to four plant-specific KPIs for plants that are currently visible on the map. Click the  icon to display the KPIs in the Data Viewer module or click the  icon to display them in the Linear Chart Viewer module.
  6. **Geolocation:** displays the coordinates of the last point clicked on the map.
  7. **Map options:** click the icon to customize the map:
    - **Road Map:** display the map as a road map.
    - **Satellite:** display the map as a seen from a satellite.
    - **Terrain:** display the map with terrain information.
    - **Show labels:** toggle to display or hide city and road labels.
  8. **Navigation:** click the arrows to move the map to the four sides or click the central button to set the zoom to minimum.
  9. **Zoom:** click and select the map zoom. You can also use your mouse scroll button to zoom in and out of the map.

There are three levels of zoom:








    - **Default:** includes all the plants in the portfolio.
    - **Country:** displays a single icon for each country, with information on the overall performance for all the plants in it.
    - **Region:** displays one icon per plant with information on its performance.
  10. **Scale:** displays the current scale of the map.
-



## Entities in the Map module

The Map module has dynamic icons that reflect the performance of clusters, plants and devices. Each icon has a progress bar to indicate its power production, expressed as a percentage of its peak power.

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Icon	Type
	General
	Solar
	Wind
	Storage
	Biogas
	Gas
	Cluster

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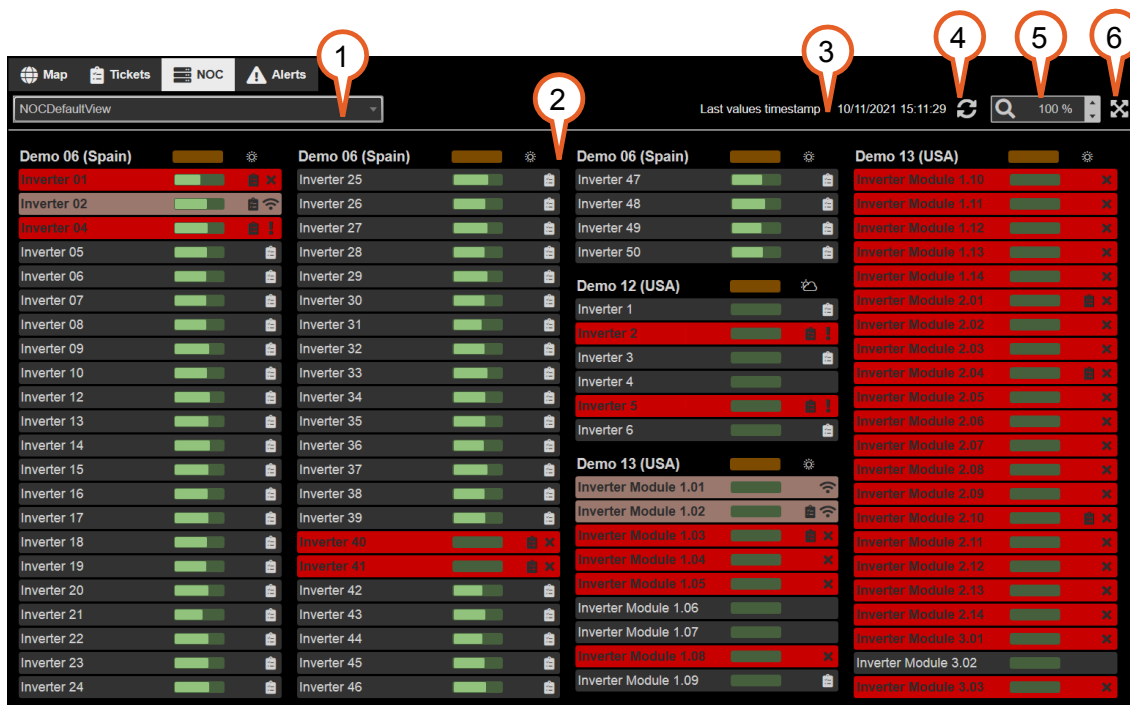
# Network Operating Center (NOC)


The NOC (Network Operating Center) module is a dashboard designed for operations and maintenance users. It makes the portfolio easy to monitor because it condenses its relevant information in one area.

The NOC displays cards with information that refreshes automatically at regular intervals. By default, the NOC displays the cards for all the plants in your portfolio, with its corresponding elements.

The heading and each row of a card appear in the color that corresponds to the most relevant alarm for the corresponding plant and device.

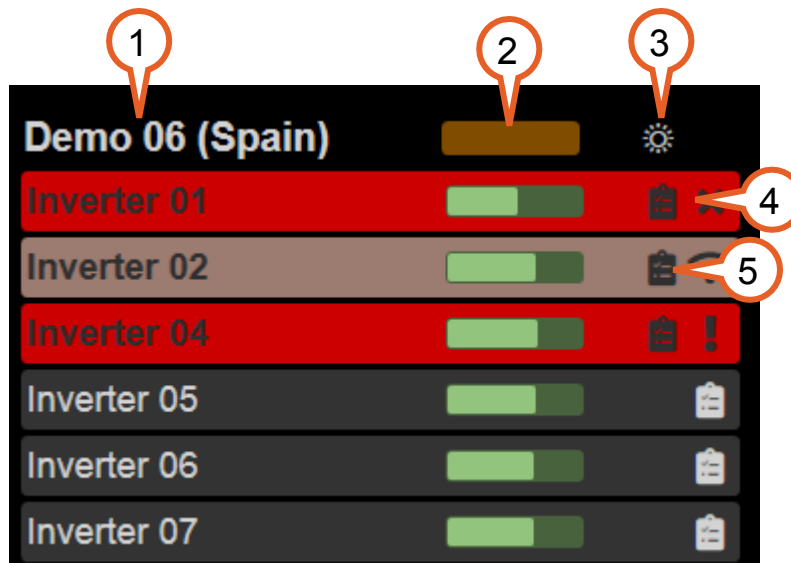
## Network Operating Center (NOC)



1. **View mode:** select one of the available views from the drop-down menu. You can open views in a separate window by clicking the  icon next to an option.
2. **Cards area:** displays the selected view. Views are pre-configured and display the information as cards that auto-resize to fit your screen. Each card corresponds to a plant and displays a set of child devices.
3. **Timestamp:** provides the time at which the values displayed on the NOC module were last updated.

4. **Refresh:** click to manually refresh the values displayed on the Cards Area.
5. **Zoom:** select the level of zoom to apply to the Cards Area. You can use the arrows to increase the zoom, decrease it, or type the zoom percentage manually.
6. **Auto-fit:** click to automatically resize the cards to fit your screen.

## NOC card



1. **Plant and element names:** displays the names of the plant and its elements.  
Click on a name to display further details in the [Element Viewer](#).
2. **Performance bar:** provide a quick view of the performance of the plant or device.  
The system calculates the level of performance by comparing the real value received from the plant with a predefined reference value.  
Place your cursor on the bar to display the performance details and click the bar to display the performance details in the [Linear Chart Viewer module](#).
3. **Weather:** displays the current weather at the plant. Place your cursor on the icon for further information.  
The weather is retrieved using the plant geo-position from a GPM partner weather service.
4. **Alarms:** displays the icon of the most relevant alarm, if any.  
Click the icon to display further information about the alarm in the [Alarms Information](#) panel.

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5. **Ticket status:** Displays ticket icon when there is any active ticket related to the device.

Click the icon to open the Edit Work Order dialog.

Place your cursor on the icon to display the ticket description.

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# Permissions module

The Permissions module allows you to manage the permissions that restrict access to entities in GPM Plus. Permissions work by using tags to link roles and the entities (for example, datasources) to which they have access. When you assign a tag to an entity, it becomes accessible only to the user roles which also have the tag assigned to them.

**NOTE:** The permissions you assign to the user roles also affect the access that users have in GPM Horizon.

The Permissions module has two tabs:

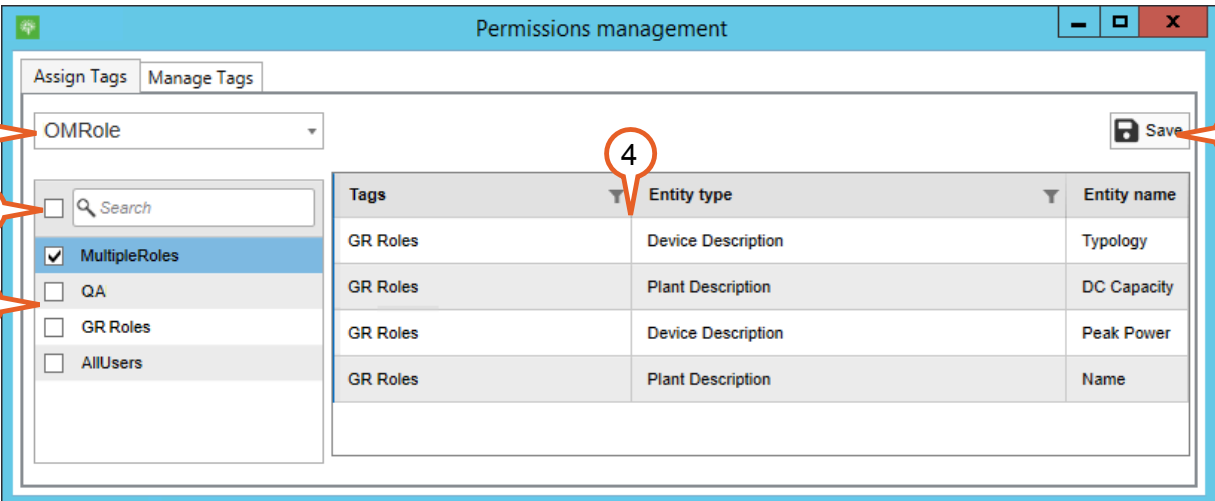
- Assign tags, where you assign tags to user roles.
- Manage tags, where you create, edit and delete tags.

To access the Permissions module, click the  icon on the Upper Bar.

① **NOTE:** For more information about the system of permissions, see the [article on Permissions](#). For more information about working with tags, see [Manage permissions](#).

## Assign Tabs

### Assign Tags tab



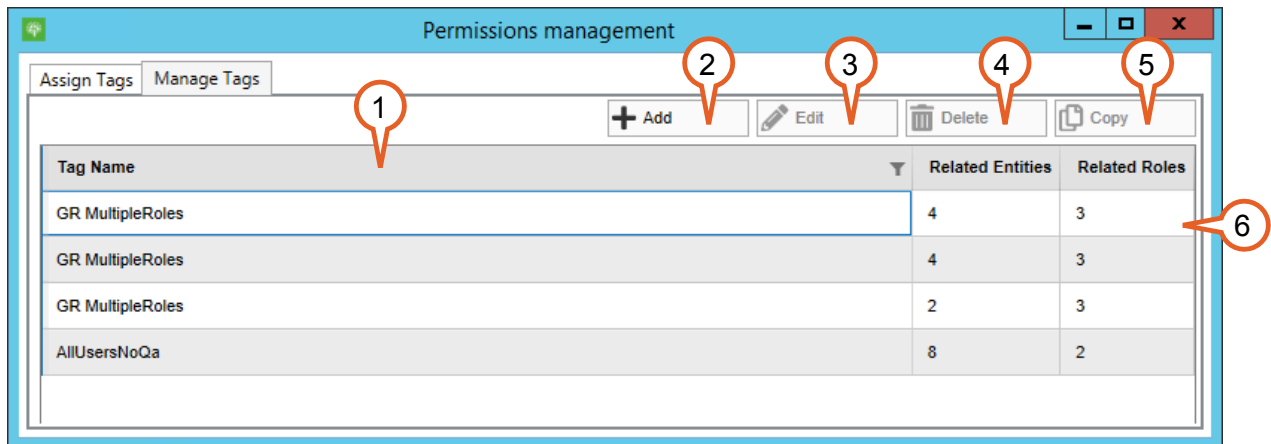
The screenshot shows the 'Permissions management' window with the 'Assign Tags' tab selected. The interface includes a dropdown menu for selecting a role (OMRole), a search bar, a list of available tags with checkboxes, a table of assigned tags, and a 'Save' button.

Tags	Entity type	Entity name
GR Roles	Device Description	Typology
GR Roles	Plant Description	DC Capacity
GR Roles	Device Description	Peak Power
GR Roles	Plant Description	Name

1. **Roles:** click the drop-down menu to see the available user roles.
2. **Search bar:** enter text to narrow down the available tags.
3. **Tags:** list of available tags you can assign to roles.  
Click the checkbox next to the name of a tag to select it and make changes to it.
4. **Tags table:** lists the tags assigned to the selected role.
5. **Save button:** click to save changes to roles and tags.

## Manage Tabs


### Manage Tags tab



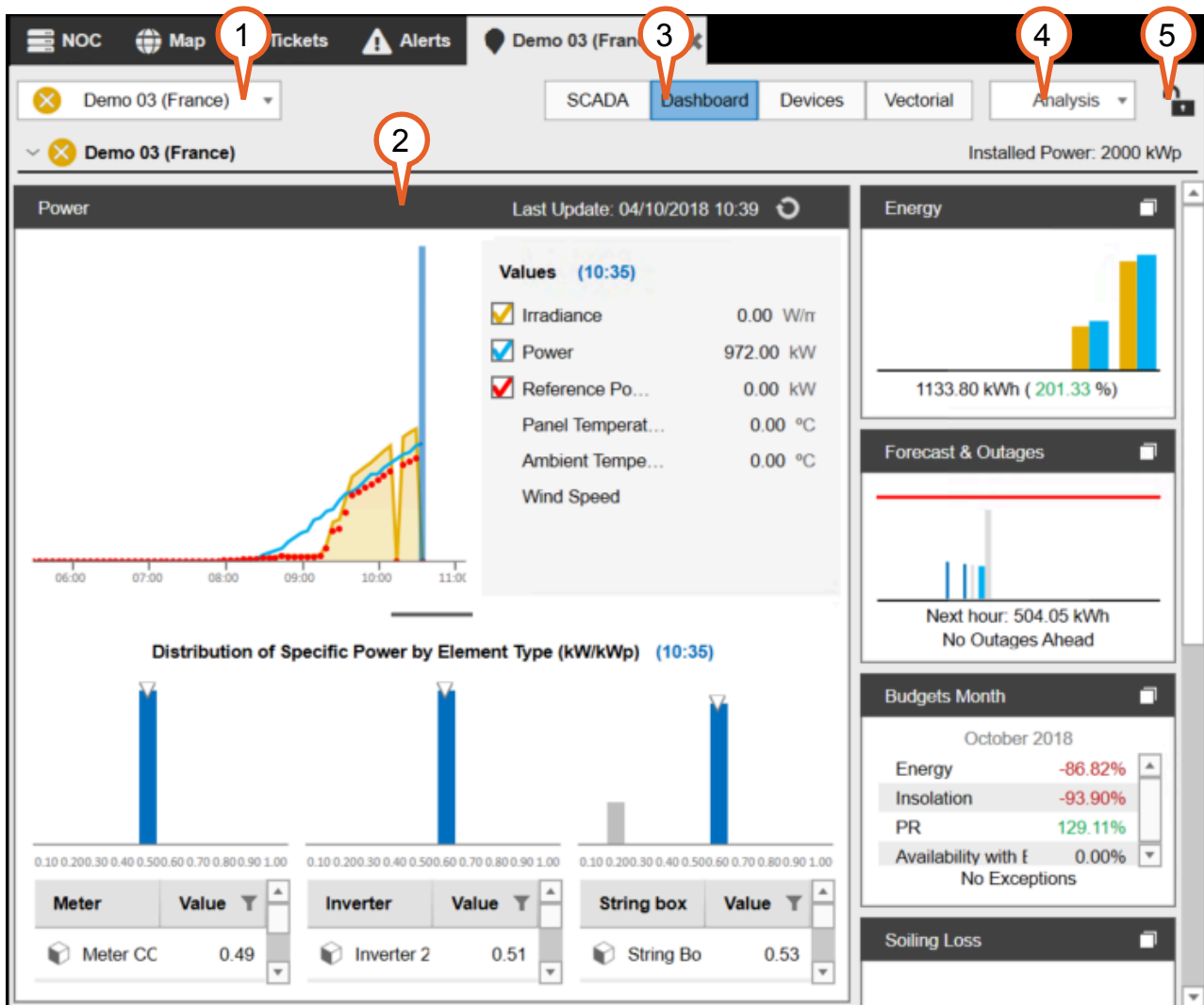
- Tags table:** displays all the tags in your system.  
Click on a tag to select it in order to edit, delete, or copy it.
- Add:** click to add a new tag.
- Edit:** click to edit a selected tag.
- Delete:** click to delete a selected tag.
- Copy:** click to copy a selected tag.
- Total links:** displays the total numbers of entities and roles related to the tag.

# Plant module

The Plant module displays as a tab of the Content Area and gathers all plant-related tools in the same interface, allowing you to quickly navigate, monitor, and manage your portfolio.

To access the module, click the  icon next to a plant or double-click a plant on the Navigation panel. Alternatively, you can right-click the plant and click **Select Plant** on the context menu.


The Plant module is organized in tabs located on the top-right area. Each tab allows you to perform specific monitoring and management tasks.



1. **Plant selection:** click to open the drop-down menu and switch between the plants in your portfolio.
2. **Information area:** displays the content of the selected tab.
3. **Tabs:** click switch to other plant-related modules:



- 
- Plant Dashboard
  - Vectorial Layout
  - SCADA Layout
  - Plant Elements
4. **Custom queries:** click to open a custom chart associated to the selected plant to open it in a separate window.
  5. **Lock button:** click to lock the panel. When the panel is locked and you open a plant from the Navigation panel, its Plant module opens in a new panel.

 **BEST PRACTICE:** You can open up to five Plant modules.

## Plant Dashboard module

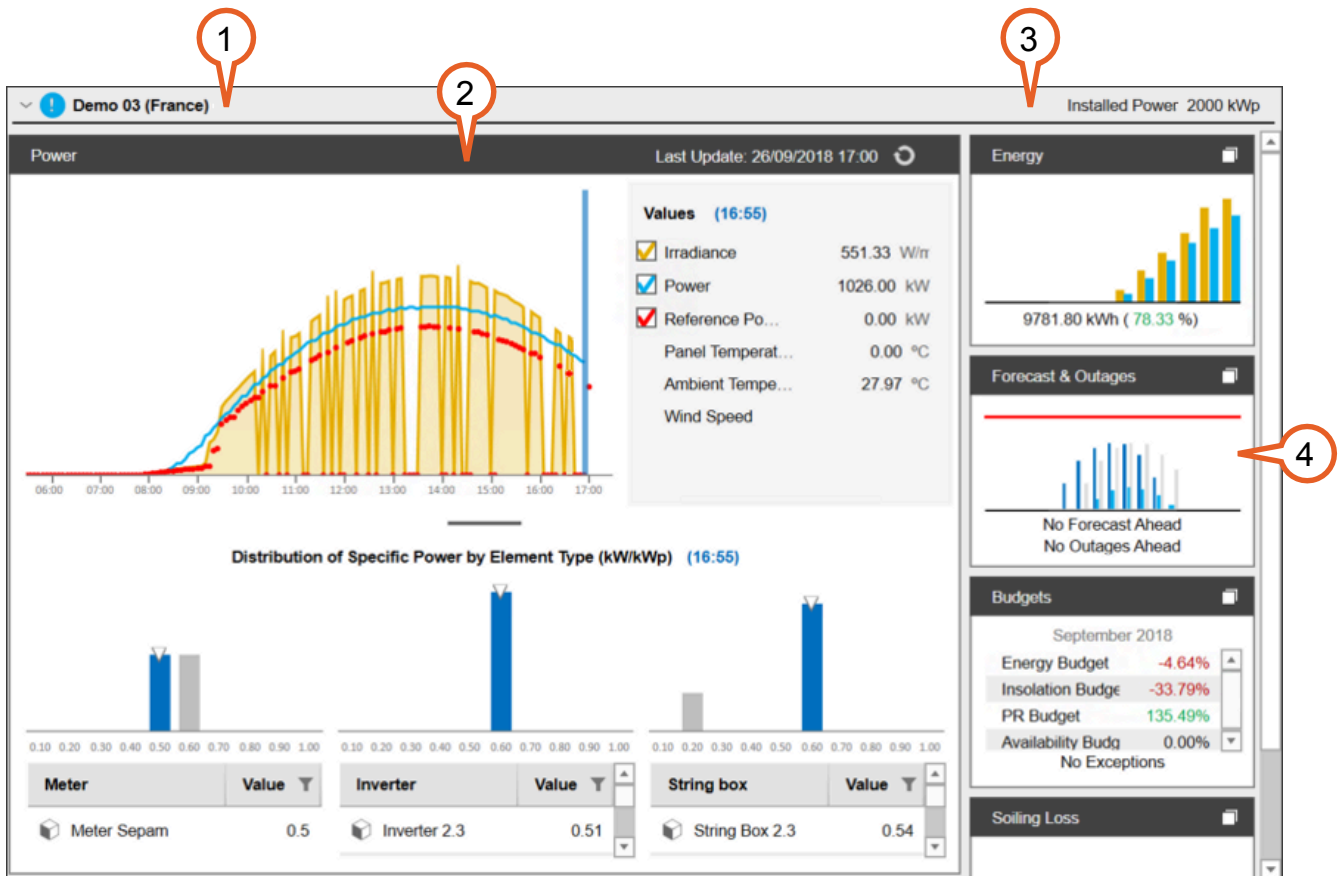
The Plant Dashboard module is the main tool to monitor and analyze your plant's performance with visual KPIs that compare multiple parameters.




The information on the Plant Dashboard module is organized into panels:


- [Plant information](#)
- [Energy](#)
- [Power](#)
- [Forecast & outages](#)
- [Soiling loss](#)
- [Budgets](#)
- [Heatmap](#)
- [Losses Categorization Table](#)
- [Losses Heatmap](#)

The main area displays the currently selected panel. The other panels are collapsed on the side, displaying condensed information. When you expand one of the panels on the side, the one currently displaying is automatically minimized.

## Plant Dashboard module



1. Plant information: This panel is collapsed by default. When expanded, it displays the plant name and the most relevant alarm for the plant (if any). Click the  icon to expand the plant information, and click the  icon to collapse it. For further information, see [Plant Information Panel](#).
2. Main panel: The main panel area displays the KPIs and charts of the selected panel. You can refresh the data by clicking the  icon on the top-right of the panel. The last data update is displayed on the top-right of the panel.
3. Installed power: displays the currently installed power of the plant.
4. Side panels: Minimized panels are displayed here and display a summary of the panel data.

Click the  icon on the top-right of a panel to expand it. For more information, see the sections corresponding to each panel:

- [Energy](#)
- [Power](#)
- [Forecast & Outages](#)

- 
- Soiling Loss
  - Budgets
-

## Budgets panel

The Budgets panel provides you with charts to monitor the productivity of your plant by comparing the actual production to the budgeted production.

Additionally, you can create exceptions to the availability and performance ratio calculations.

**NOTE:** You can display up to four charts on the Budgets panel. Contact to your GPM representative if you want to customize the charts on display.

### Budgets panel



1. Date range: toggle between **Month** and **Year** to display monthly data or yearly data.

- 
2. Date picker: select the month or year, according to the date range on display.
  3. Data Granularity: toggle between **Months** and **Days** to display monthly or daily data.

**NOTE:** This toggle is only available for monthly data.

4. Charts: displays the budgeted data of the selected date range. You can select a specific date range by clicking a date on the chart or by dragging-and-dropping the blue date range picker (■).

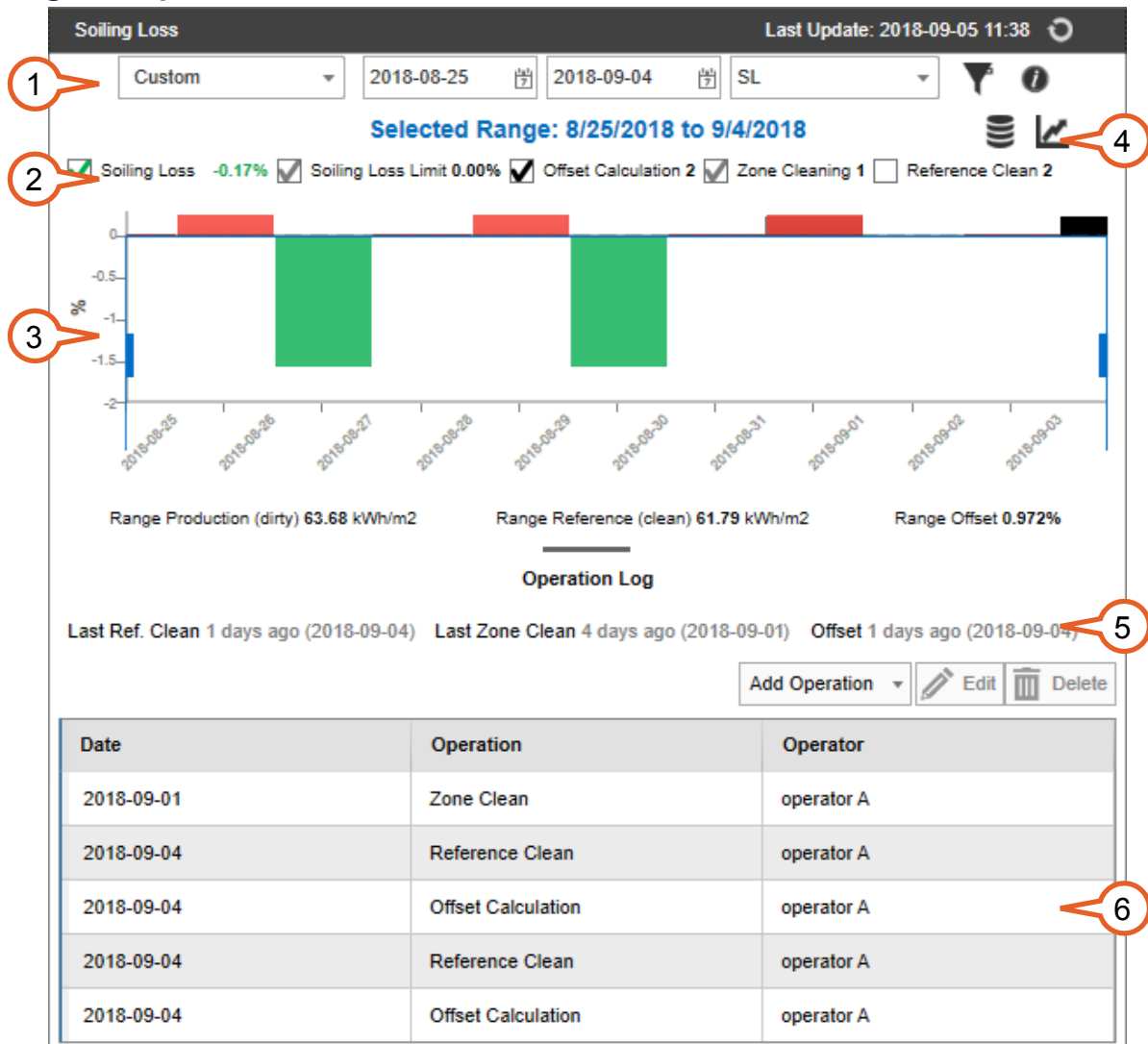
Values with gray backgrounds represent exceptions.



5. Exceptions list: displays the list of exceptions for the date range on the chart. Click the Exceptions button to add an exception to the calculations. For further information, see [Create Exceptions](#).
-

## Energy panel

The Energy panel provides you with a chart to monitor the daily energy generated by your plant. The data in the chart is divided by hour and can be customized by changing the date and the time interval or toggling the values on display.

### Soiling Loss panel



1. Date Range and Zone Picker: Select a date range and a zone for the data. You must click the  icon to display the selected date range on the chart.
2. Values: provides a text legend of the data displayed on the chart. You can click a parameter to toggle it on the chart.
3. Chart: displays the soiling loss data of the date range that you picked. You can select a specific date or date range by clicking an hour on the chart or by dragging-and-dropping the blue hour range picker () . When you select a specific date or

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date range, their values are displayed in the Value Ribbon.

4. Quick actions: click to display the chart data in the Data Viewer module or click to display the chart data in the Linear Chart Viewer module.
5. Last operations: displays the date of the latest maintenance operations.
6. Operation list: displays a list of the maintenance operations. You can add, edit, or delete maintenance operations using the action buttons.

Click any column header to sort the list by that column. For more information, see Soiling Loss Operations.

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## Forecast & Outages panel

The Forecast & Outages panel provides you with tools to plan and monitor the stop or decrease of performance in your portfolio due to an electric network request or maintenance. The data displayed is hourly and can be customized by toggling the parameters.



### Power panel



1. Chart: displays the power data of the date that you picked. By default, the entire hour range is selected. You can click a specific hour on the chart to display the hourly values in the Value Panel.
2. Values panel: provides a text legend of the data displayed on the chart. You can click a parameter to toggle it on the chart.
3. Distribution charts: display the device performance by grouping data in bins. Elements are charted comparing the actual performance to the declared peak performance during the time range selected on the main chart.

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Click any bar on the chart to display the elements that belong to that bin in the table below.

Sort the table by the productivity Value by clicking on the header and filter the elements by clicking the  icon. You can display any element on the Element Viewer by clicking the  icon.

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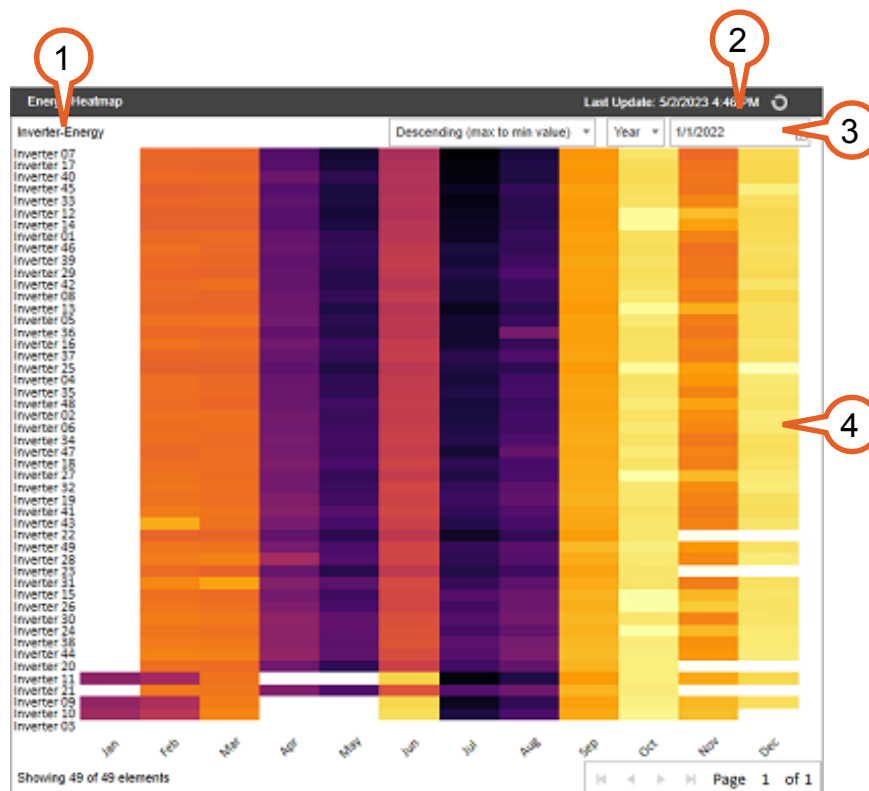
## Heatmap


The Heatmap displays historical aggregated data at the element level (for example, inverters or wind turbines). This feature leverages GPM's [Advanced Analytics](#) to allow you to identify where and when assets in your portfolio are under-performing, allowing you to evaluate and address inefficiencies at the level of individual elements.

The default data available on the Heatmap are availability, energy, and production ratio (PR). Each data appears as a separate Heatmap module in the [Plant dashboard](#). You can sort the data alphabetically by element name, as well as by value, in ascending or descending order.

It is possible to customize the color-code for the percentage ranges, as well as to configure Heatmaps for other data. For more information on custom configurations, contact your GPM representative.

### Heatmap



1. Element and data types on display.
2. Timestamp: informs you of when the data on display was retrieved.  
Click the  icon to refresh and load the latest available data.
3. Display options:

- 
- **Sorting:** open the drop-down menu to select how to arrange the data on the map:
    - **Alphabetical**
    - **Ascending (minimum to maximum values)**
    - **Descending (maximum to minimum values)**
  - **Time span:** select the periods covered by the chart.
    - **Month**
    - **Quarter**
    - **Year**
  - **Date selector:** open the drop-down menu to select the dates for the time period.
4. **Element performance:** hover over a cell to view a detailed information panel about the element's performance at a particular point in time:

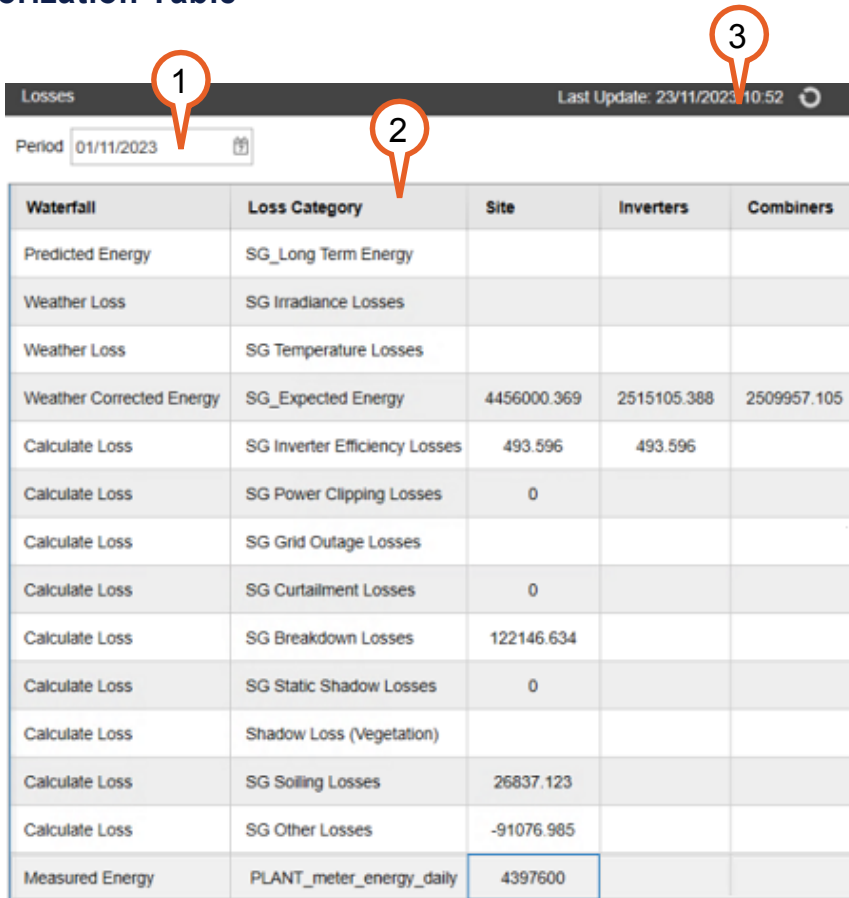


## Losses Categorization Table

The Losses Categorization Table provides a detailed breakdown that allows you to identify and quantify the causes behind the energy losses of your plants, compared to the predicted production. This provides insight and a detailed understanding of the reasons behind the losses, enabling you to make strategic decisions to improve your energy production.

This feature leverages GPM's [Advanced Analytics](#) to allow plant managers and operators to maximize efficiency, reduce unnecessary losses, and align the performance of their plants with their financial and environmental objectives.

## Losses Categorization Table



The screenshot shows a web interface for 'Losses'. At the top right, it says 'Last Update: 23/11/2023 10:52'. Below this is a 'Period' selector showing '01/11/2023'. The main part of the interface is a table with the following data:

Waterfall	Loss Category	Site	Inverters	Combiners
Predicted Energy	SG_Long Term Energy			
Weather Loss	SG Irradiance Losses			
Weather Loss	SG Temperature Losses			
Weather Corrected Energy	SG_Expected Energy	4456000.369	2515105.388	2509957.105
Calculate Loss	SG Inverter Efficiency Losses	493.596	493.596	
Calculate Loss	SG Power Clipping Losses	0		
Calculate Loss	SG Grid Outage Losses			
Calculate Loss	SG Curtailment Losses	0		
Calculate Loss	SG Breakdown Losses	122146.634		
Calculate Loss	SG Static Shadow Losses	0		
Calculate Loss	Shadow Loss (Vegetation)			
Calculate Loss	SG Soiling Losses	26837.123		
Calculate Loss	SG Other Losses	-91076.985		
Measured Energy	PLANT_meter_energy_daily	4397600		

1. Period selector: click to select the time period covered by the table.
2. Table: displays the categories and losses affecting your assets for the selected time period.
3. Time stamp: displays the time when the data on the table was last updated.

## Loss Categories

Loss categories are detailed and quantifiable definitions of the factors that affect your assets and cause losses in production and output. This enables a level of great detail to classify and analyze the difference between the expected or estimated energy production and the actual production at the level of plants and individual devices (for example, inverters or turbines).

**NOTE:** For more information, see the sections on [Advanced Analytics](#) and [Loss Categories](#).

Category	Description
<b>Actual energy</b>	Real energy output of the plant after accounting for all losses.
<b>Clipping</b>	Losses caused by limiting the energy production of inverters to their maximum capacity.
<b>Curtailment</b>	Deliberate reduced output due to grid management or response to overproduction.
<b>Expected energy/ Theoretical production</b>	Projected energy yield after taking into consideration corrections for irradiance and temperature.
<b>Grid outage</b>	Energy lost or not produced due to failures in the connectivity of the power grid.
<b>Inverter efficiency</b>	Discrepancy between the expected and the actual performance of inverters.
<b>Inverter outage</b>	Downtime or inefficiency of inverters, affecting energy conversion.
<b>Irradiance correction</b>	Adjustment of predicted production, based on real-time solar irradiance.
<b>Partial breakdown</b>	Malfunction or degradation in a section of the solar array.
<b>Predicted production</b>	Initial forecast of energy output, based on historical data and plant capacity.

<b>Temperature correction</b>	Modification to account for temperature impacts on the efficiency of panels.
<b>Shadow</b>	Losses caused by shading of the panels, due to natural or artificial obstructions.
<b>Soiling</b>	Losses caused by dirt, dust and other residues on solar panels.
<b>Tracker misalignment</b>	Reduced efficiency due to the solar trackers sub-optimally aligning the panels with the sun.
<b>Tracker stow</b>	Losses caused when trackers are stowed for protection (for example, during harsh weather conditions).
<b>Vegetation</b>	Reduced efficiency caused by overgrown vegetation that casts shadows or damages panels.
<b>Other losses</b>	Miscellaneous or unidentified causes.

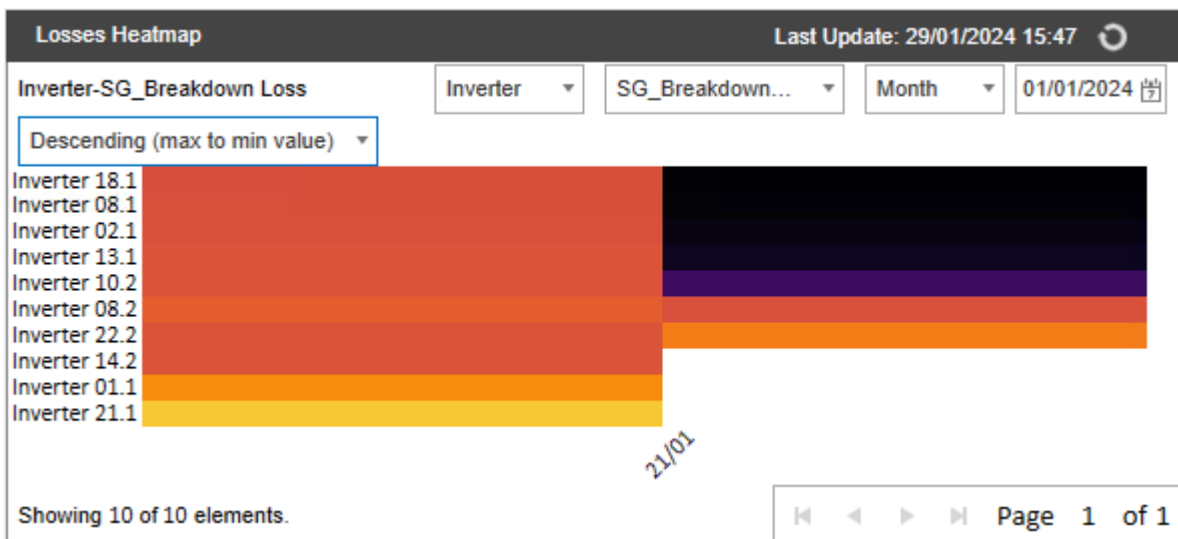



## Losses Heatmap

The Losses Heatmap is an advanced visualization feature that presents a detailed and interactive view of energy losses across devices over time. This feature leverages GPM's [Advanced Analytics](#) to allow you to identify patterns, trends and anomalies in energy production and output.

Losses are color-coded to reflect the severity of each [loss category](#), based on its impact on production. The color code can be customized to meet the specific requirements of your organization.

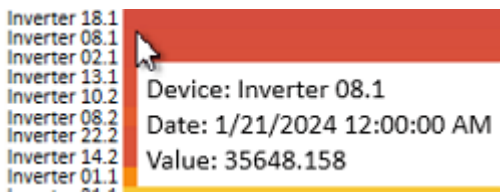
### Losses Heatmap



1. Element and loss types on display.
2. Timestamp: informs you of when the data on display was retrieved.  
Click the  icon to refresh and load the latest available data.
3. Display options:
  - **Device type**: open the drop-down menu to change the devices you want to analyze:
    - **Inverter**
    - **String**
    - **String-box**
  - **Loss type**: open the drop-down menu to change the type of losses you want to see displayed (for example, **Breakdown**).
  - **Sorting**: open the drop-down menu to select how to arrange the data on the

map:

- **Alphabetical**
  - **Ascending (minimum to maximum values)**
  - **Descending (maximum to minimum values)**
  - **Time span:** select the periods covered by the chart.
    - **Month**
    - **Quarter**
    - **Year**
  - **Date selector:** open the drop-down menu to select the dates for the time period.
4. **Element losses:** hover over a cell to view a detailed information panel about the losses of a specific element at a particular point in time:



The Losses Heatmap has five main functionalities:

- **Temporal loss analysis** enables you to visualize how different types of losses vary over time, providing insights into periodic or sporadic issues.
- **Device-specific insights** allow you to break down losses by device, to quickly identify underperforming or faulty components in a plant.
- **Pattern recognition** facilitates the identification of recurring issues, such as regular drops in production related to seasonal changes or maintenance schedules.
- **Comparative analysis** of different time periods or devices makes it easy to pinpoint effective operational strategies and maintenance interventions.
- **Interactive exploration** allows you to interact with the data, zooming into specific time frames or focusing on particular devices or loss types.

## Loss Categories


Loss categories are detailed and quantifiable definitions of the factors that affect your assets and cause losses in production and output. This enables a level of great detail to classify and analyze the difference between the expected or estimated energy production and the actual production at the level of plants and individual devices (for example, inverters or turbines).

**NOTE:** For more information, see the sections on [Advanced Analytics](#) and [Loss Categories](#).

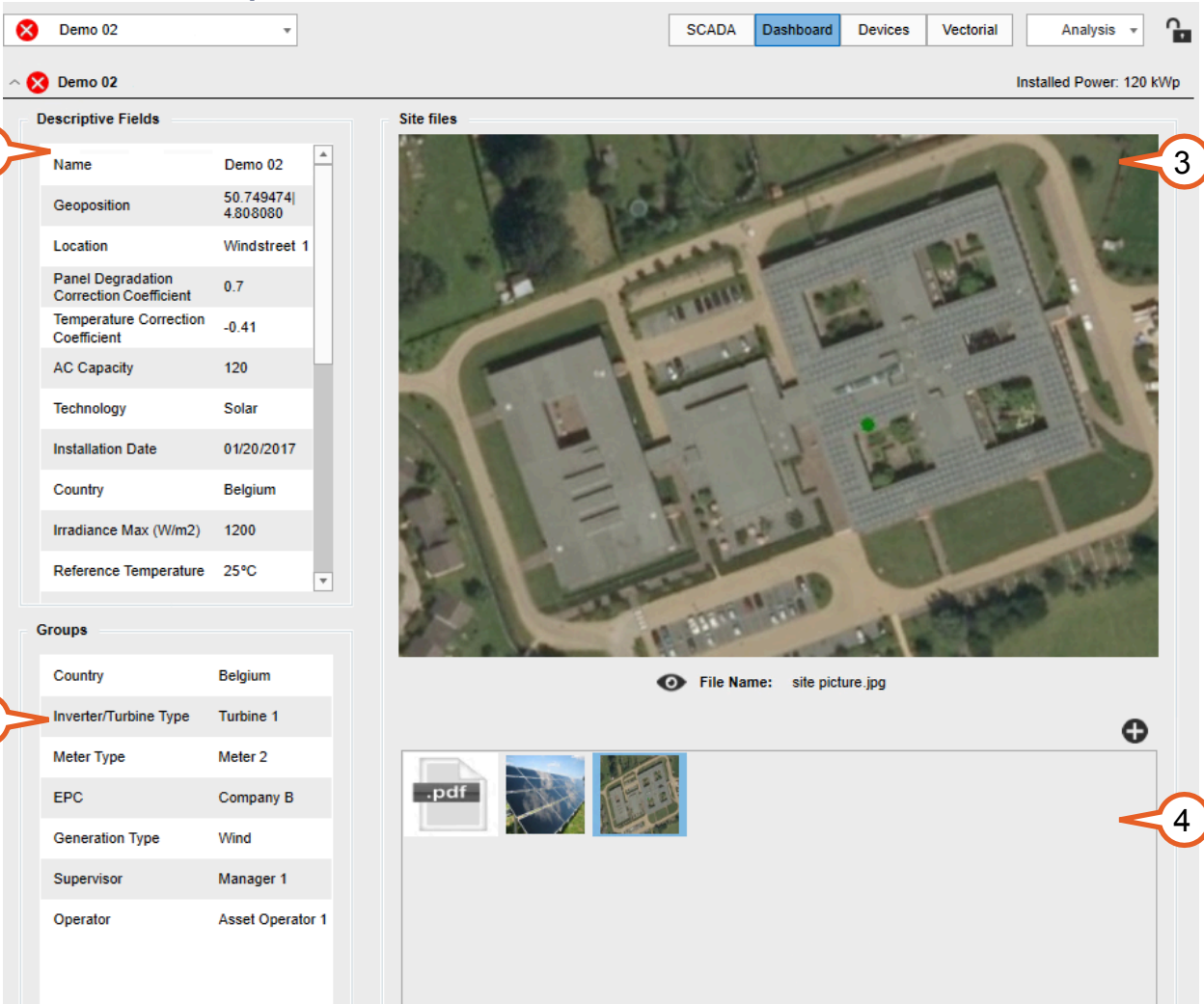
Category	Description
<b>Actual energy</b>	Real energy output of the plant after accounting for all losses.
<b>Clipping</b>	Losses caused by limiting the energy production of inverters to their maximum capacity.
<b>Curtailment</b>	Deliberate reduced output due to grid management or response to overproduction.
<b>Expected energy/ Theoretical production</b>	Projected energy yield after taking into consideration corrections for irradiance and temperature.
<b>Grid outage</b>	Energy lost or not produced due to failures in the connectivity of the power grid.
<b>Inverter efficiency</b>	Discrepancy between the expected and the actual performance of inverters.
<b>Inverter outage</b>	Downtime or inefficiency of inverters, affecting energy conversion.
<b>Irradiance correction</b>	Adjustment of predicted production, based on real-time solar irradiance.
<b>Partial breakdown</b>	Malfunction or degradation in a section of the solar array.
<b>Predicted production</b>	Initial forecast of energy output, based on historical data and plant capacity.

<b>Temperature correction</b>	Modification to account for temperature impacts on the efficiency of panels.
<b>Shadow</b>	Losses caused by shading of the panels, due to natural or artificial obstructions.
<b>Soiling</b>	Losses caused by dirt, dust and other residues on solar panels.
<b>Tracker misalignment</b>	Reduced efficiency due to the solar trackers sub-optimally aligning the panels with the sun.
<b>Tracker stow</b>	Losses caused when trackers are stowed for protection (for example, during harsh weather conditions).
<b>Vegetation</b>	Reduced efficiency caused by overgrown vegetation that casts shadows or damages panels.
<b>Other losses</b>	Miscellaneous or unidentified causes.

## Plant Information panel

In the Plant Information panel, you can see general information about the selected plant and add plant-specific files. Click the  icon next to the plant name to expand or collapse the plant information.

### Plant information panel




The screenshot shows the Plant Information panel for 'Demo 02'. The panel is divided into several sections:


- Descriptive Fields (1):** A table containing general plant information:
 

Name	Demo 02
Geoposition	50.749474 4.808080
Location	Windstreet 1
Panel Degradation Correction Coefficient	0.7
Temperature Correction Coefficient	-0.41
AC Capacity	120
Technology	Solar
Installation Date	01/20/2017
Country	Belgium
Irradiance Max (W/m2)	1200
Reference Temperature	25°C
- Groups (2):** A table listing groups the plant belongs to:
 

Country	Belgium
Inverter/Turbine Type	Turbine 1
Meter Type	Meter 2
EPC	Company B
Generation Type	Wind
Supervisor	Manager 1
Operator	Asset Operator 1
- Site files (3):** An aerial photograph of the plant site. Below the image, the file name 'site picture.jpg' is displayed. A plus icon (+) is visible in the bottom right corner of the image area.
- Plant files (4):** A section for uploading and viewing plant-specific files. It shows a .pdf icon and two thumbnail images of solar panels and a site plan.

1. Plant description: general plant information is displayed here.
2. Groups: lists all the groups that the plant belongs to.  
Groups are a set of custom parameters used to classify the portfolio.
3. Plant image: displays an image of the plant. You can upload an image and select it from the plant files.
4. Plant files: upload and view plant-specific files.  
You can upload files by clicking the  icon and view uploaded files in a separate

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window by clicking the  icon. The size limit for uploaded files is 2MBs.

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## Power panel

The Power panel provides you with a chart to monitor the daily power generated by your plant. The chart displays hourly data that can be customized by toggling the values on display.

### Power panel





1. Chart: displays the power data of the date that you picked. By default, the entire hour range is selected. You can click a specific hour on the chart to display the hourly values in the Value Panel.
2. Values panel: provides a text legend of the data displayed on the chart. You can click a parameter to toggle it on the chart.
3. Distribution charts: display the device performance by grouping data in bins. Elements are charted comparing the actual performance to the declared peak performance during the time range selected on the main chart.



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Click any bar on the chart to display the elements that belong to that bin in the table below.

Sort the table by the productivity Value by clicking on the header and filter the elements by clicking the  icon. You can display any element on the Element Viewer by clicking the  icon.

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## Soiling Loss panel



The Soiling Loss panel allows you to monitor and manage the loss of performance caused by soiling on solar panels. The chart displays daily data that you can customize by changing the date interval or toggling the values on display. You can also monitor data from multiple zones within the same plant.

The **Operation Log**, located at the bottom of the panel, allows you to monitor the latest maintenance operations and add new ones to the soiling loss calculations.

### Power panel



1. Chart: displays the power data of the date that you picked. By default, the entire hour range is selected. You can click a specific hour on the chart to display the hourly values in the Value Panel.
2. Values panel: provides a text legend of the data displayed on the chart. You can click a parameter to toggle it on the chart.

- 
3. Distribution charts: display the device performance by grouping data in bins. Elements are charted comparing the actual performance to the declared peak performance during the time range selected on the main chart.
- Click any bar on the chart to display the elements that belong to that bin in the table below.
- Sort the table by the productivity Value by clicking on the header and filter the elements by clicking the  icon. You can display any element on the Element Viewer by clicking the  icon.
-

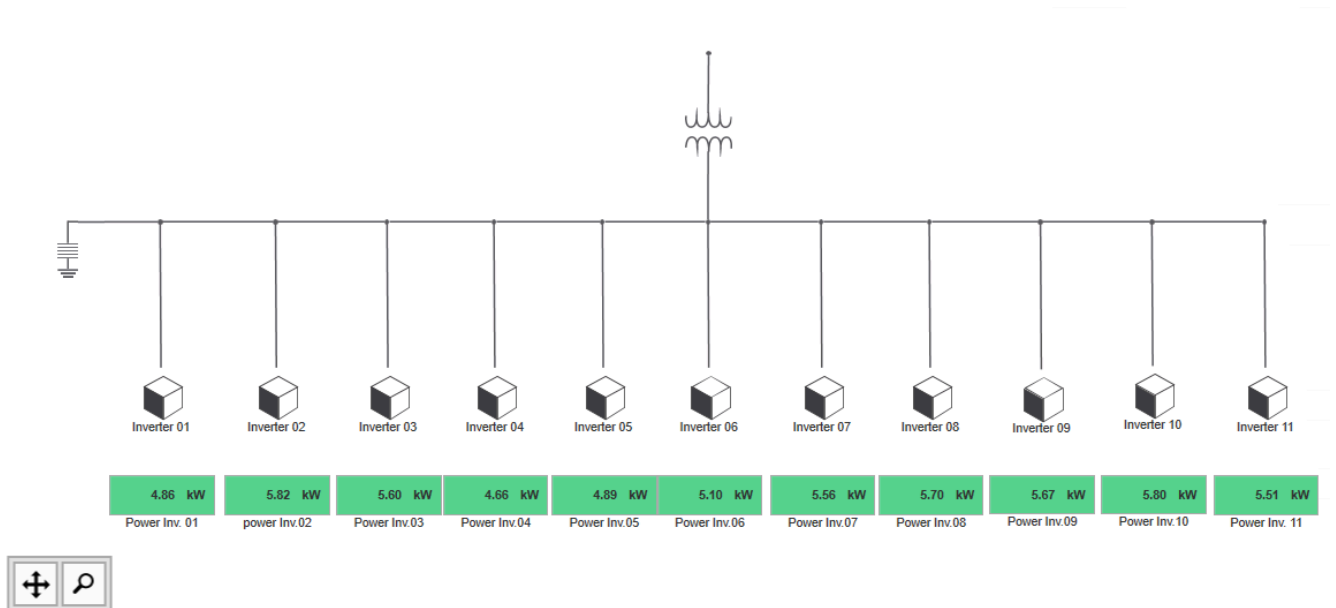
## Vectorial Layout module

The Vectorial Layout module provides you with a multi-layered, custom vectorial schema to help you understand a plant's structure, its relationships, and the status of its elements. Within the Vectorial Layout, you can also send pre-defined commands to the hardware devices in your plant.

Access the module by clicking the  **Vectorial** tab in the upper area of the screen.

 **NOTE:** To customize your Vectorial Layout, contact your GPM representative.

## Vectorial layout




## Navigate the Vectorial Layout



### Action Description

**Mouse scroll** Use the scroll wheel on your mouse to zoom in and out of the Vectorial Layout. To zoom in, scroll up. To zoom out, scroll down.

**Drag and drop** Click and hold on a point of the layout, then drag it anywhere to move around the interface.

**Single click** Click on elements of the Vectorial Layout to interact with them. For further information, [see the reference below](#).





**Auto-fit** Click the  icon at the bottom-left of the Vectorial Layout to automatically resize it and fit the screen.







**Zoom** Click the  icon at the bottom-left of the Vectorial Layout to set the zoom manually and preview the area being zoomed. Click the  icon to close the zoom dialog.

## Vectorial Layout elements

You can interact with some elements of the Vectorial Layout. This reference lists the elements with which you can interact.

**NOTE:** The background, element and icon colors in your vectorial layout are customizable. Contact your GPM representative if you want to customize them.














Element	Name	Description
	Alarm Counter	<p>Counts the number of specific alarms for a specific set of devices.</p> <p>It is possible to set limits for the counter, so that its color changes from white to red when alarms exceed the configured number.</p> <p>When the alarms exceed the configured number and the counter turns red, you can click the box to display related alarms in the Alarms module.</p>
	Command	<p>Click to execute a command or a metacommand on one or more devices. If the command is configured to be executed on multiple devices, you can select the devices to which the command must be sent in the pop-up window.</p> <p>For more information, see <a href="#">Send a Command Sequence from the Vectorial Layout</a>.</p>
	Connection point	Displays the layout nodes.
	Data	<p>Displays information that is retrieved from a parameter and is automatically refreshed at regular intervals.</p> <p>The box icon can be customized and up to three statuses can be set on every box. For example, the color can be set to change when a certain condition is met.</p> <p>Click a data box to display the values in the <a href="#">Linear Chart Viewer module</a>.</p>

	Element	Represents a physical device that is communicating with the application. If there is an active alarm on the element, an alarm icon is displayed next to it. Click an element to display further information in its relevant section.
	Icon	A static visual reference to a physical device in your plant. For further information, see <a href="#">Send a Command Sequence from the Vectorial Layout</a> .
	Label	A text label used to identify elements.
	Line	Connects various physical or virtual elements in your setup. Lines can be assigned custom color-coding that changes when a specific condition is met.
	Link	Links the current layer to other layers in the layout. Click it to display the linked layer.
	Switch	Switches are elements that behave as a data box. This means that they can have values that change over time.

---

## Vectorial icons

The application uses a default set of icons to identify specific device or element types in the Vectorial Layout.

Icon	Name
	Breaker
	Circuit breaker
	Current transformer
	Earth ground
	Fuse
	Generator
	Medium
	Meter
	Potential transformer
	Surge arrestor
	Transformer
	Transformer Type X
	Three-winding transformer



## Configuring data objects and connection objects

You can configure data objects and connection objects using an [XLSX template](#) or the corresponding configuration window [in the grid](#).

**NOTE:** A **data object** is an element used to monitor a datasource value of a device, while a **connection object** is a line used to connect several objects.



## Configuring data objects and connection objects using the XLSX template

|

- **SourceType:** Set the type of source the layer must use. You can enter one of the following options:
  - **Datasource:** It defines the type of source required in the *DatasourceId* column. When configuring a Monitored DS or Custom DS, you must provide a specific value for the *DatasourceId*. Additionally, you need to fill in the *ElementId* field in both cases.
  - **ElementParameter:** It indicates that the configuration of the object is determined by the *ElementParameterId* field. You must set a specific value for the element parameter during setup (parametrization).
- **DataSourceComponentId**

**NOTE:** This column can only be used in GPM Plus. Do not configure it as it will not display any data.

This is an example of how to configure layer settings for data and connection objects using the XSLX template:

Item	SourceType	ElementId	ElementParameterId	DatasourceId
DataElement PARAMETER	ElementParameter	247	76	0
DataElement MONITORED DATASOURCE	Datasource	247	76	0
DataElement CUSTOM DATASOURCE	Datasource	0		20941

## Configuring data objects and connection objects in the grid

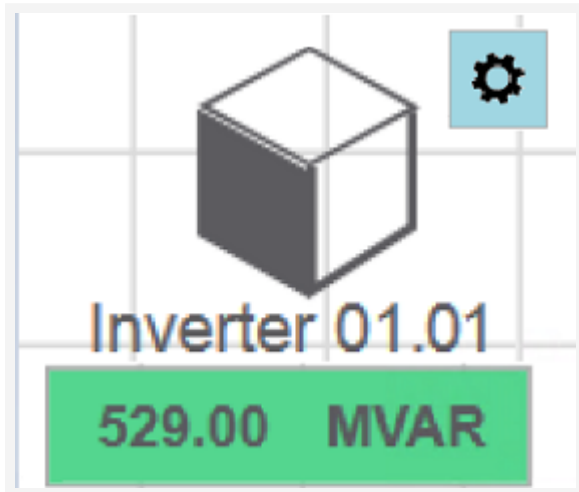
You can configure data objects and connection objects using the corresponding configuration window. You have to choose the desired element in the plant and assign to it parameters.

## Configuring data objects in the grid

You can configure data objects using the corresponding configuration window. To configure data objects, follow these steps:

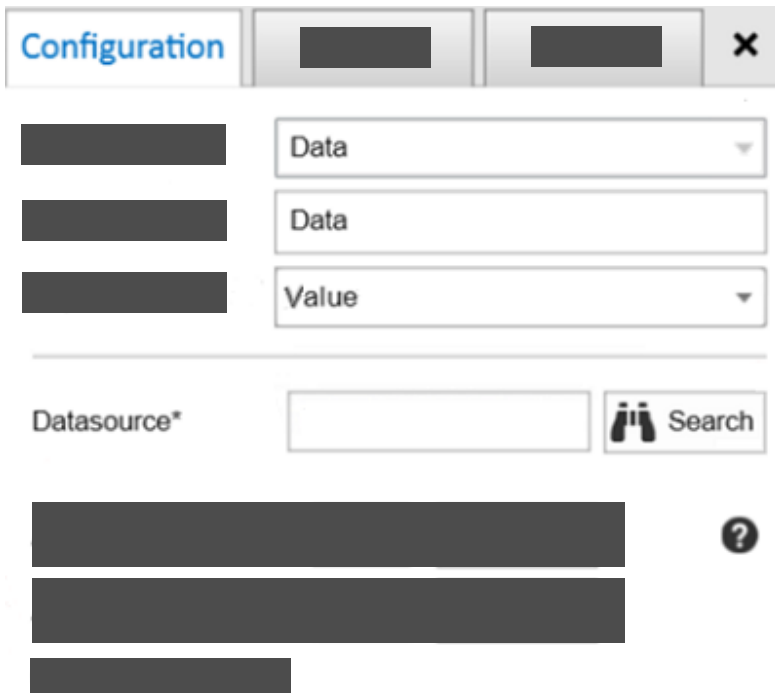
- 1 Click on the configuration button for the required data object.

### Data object configuration



- 2 In the configuration screen, go to the *Datasource* field and click the Search button.

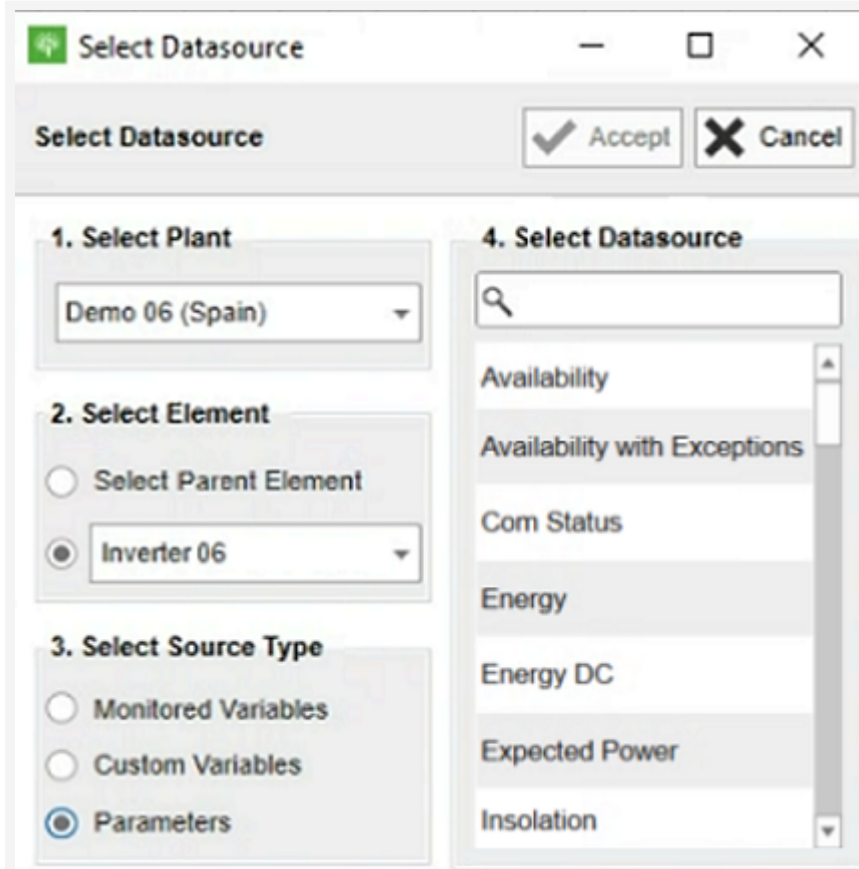
### New Datasource field



- 3 In the Select Datasource window, do the following:

- 2. Select Element: select the element in the plant to which you want to assign parameters.
- 3. Select Source Type: select **Parameters**. The list of available parameters will then be displayed.
- 4. Select Datasource: choose the required parameter.

### Select Datasource



**Select Datasource**

Accept Cancel

**1. Select Plant**

Demo 06 (Spain)

**2. Select Element**

Select Parent Element

Inverter 06

**3. Select Source Type**

Monitored Variables

Custom Variables

Parameters

**4. Select Datasource**

Availability

Availability with Exceptions

Com Status

Energy

Energy DC

Expected Power

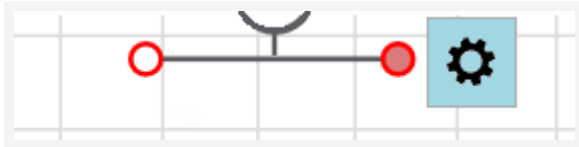
Insolation

## Configuring connection objects in the grid

You can configure connection objects using the corresponding configuration window. To configure connection objects, follow these steps:

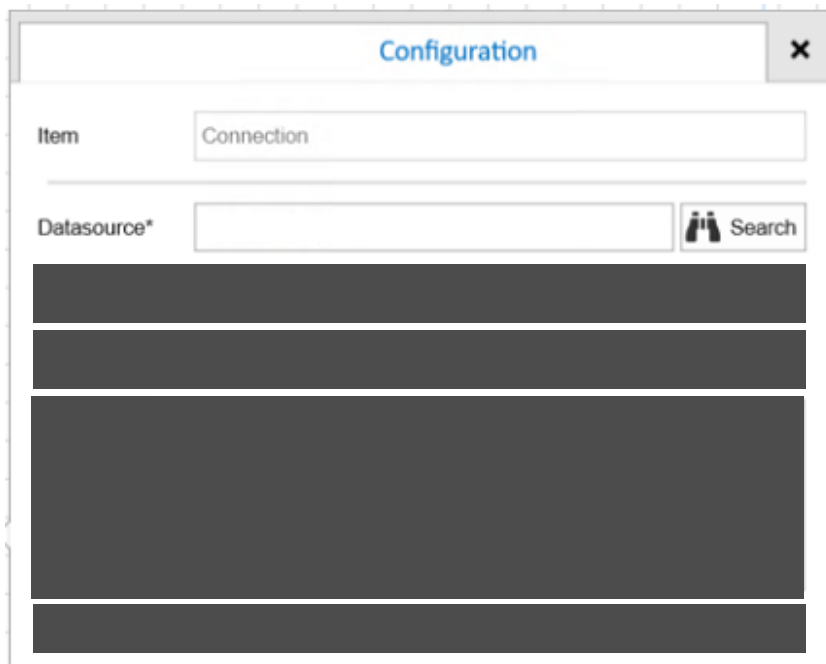
- 1 Click on the configuration button for the required connection object.

### New Datasource field



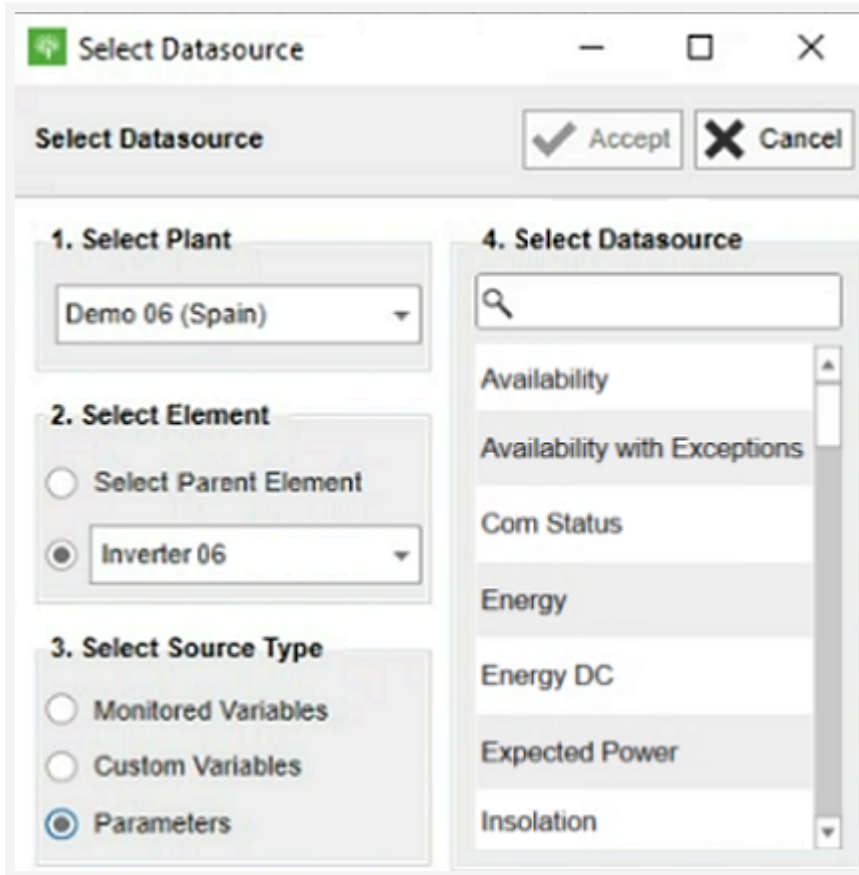
- 2 In the configuration screen, go to the *Datasource* field and click the Search button.

### New Datasource field



- 3 In the Select Datasource window, do the following:

## Select Datasource



The screenshot shows a 'Select Datasource' dialog box with the following configuration:

- 1. Select Plant:** Demo 06 (Spain)
- 2. Select Element:** Inverter 06 (selected)
- 3. Select Source Type:** Parameters (selected)
- 4. Select Datasource:** A list of parameters is displayed, including Availability, Availability with Exceptions, Com Status, Energy, Energy DC, Expected Power, and Insolation.

2. Select Element: select the element in the plant to which you want to assign parameters.

3. Select Source Type: select **Parameters**. The list of available parameters will then be displayed.

4. Select Datasource: choose the required parameter.

5

## Result

## SCADA layout module

The Supervisory Control and Data Acquisition (SCADA) layout modules provides a global view of the plant efficiency and of the real-time status of the plant devices.

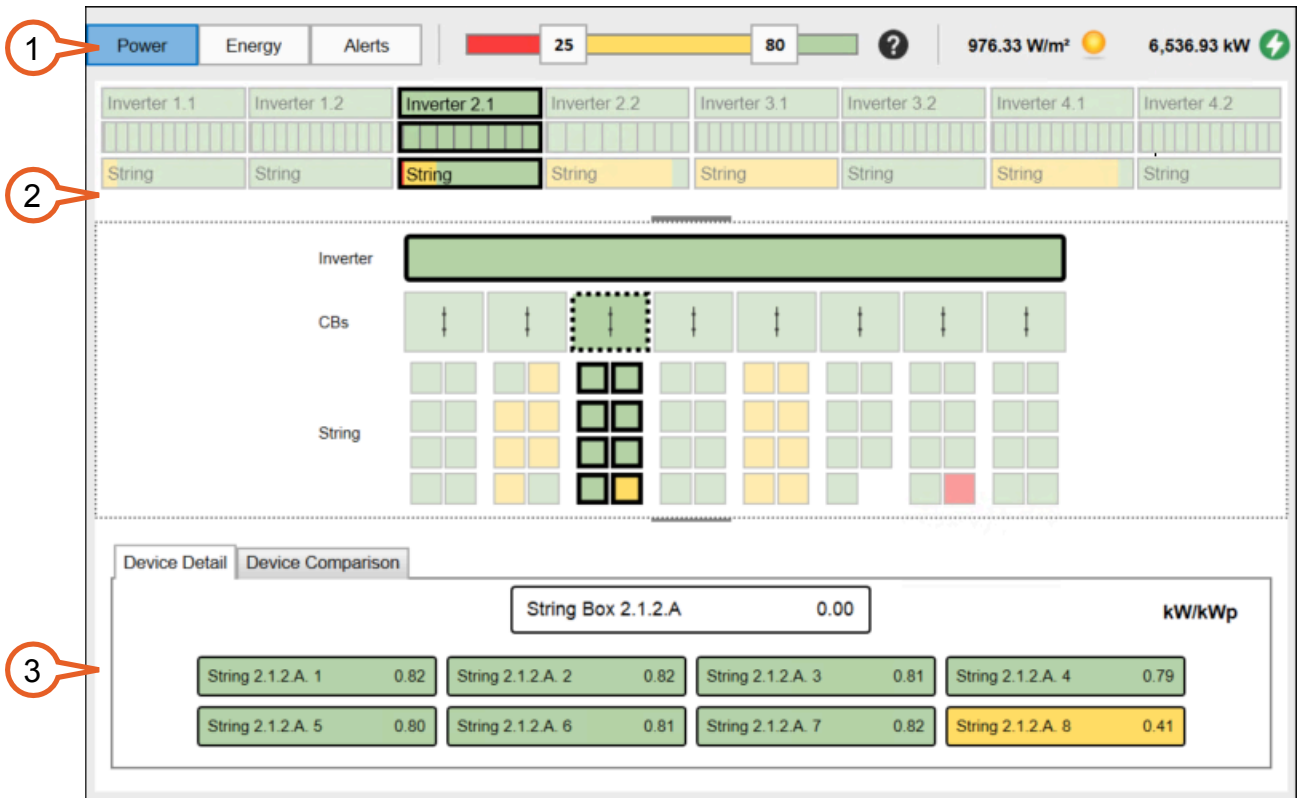
The SCADA Layout module uses color-coded cells to represent the performance of the devices. Each cell represents one element, and the cell size depends on the position of the element in the hierarchy. The performance of devices is calculated using the value of the best performing device as a reference and then expressed in percentage. The reference device can either be the best performing device of the same type or the best performing sibling device. The SCADA Layout also offers tools to analyze a single device and to compare multiple devices.

This module has three modes to analyze efficiency:

- **Power:** performance is calculated by comparing the device performance against a reference device for each device type. The reference is the latest and highest normalized power value for each device type.
- **Energy:** performance is calculated by comparing the device performance against a reference device for each device type. The reference is the highest daily normalized energy value for each device type.
- **Alarms:** each device is colored with the color of its most representative alarm that is active at the time. There is no comparison between devices in this mode.



## SCADA layout



1. Main Menu
2. Element Hierarchy
3. Element Analysis

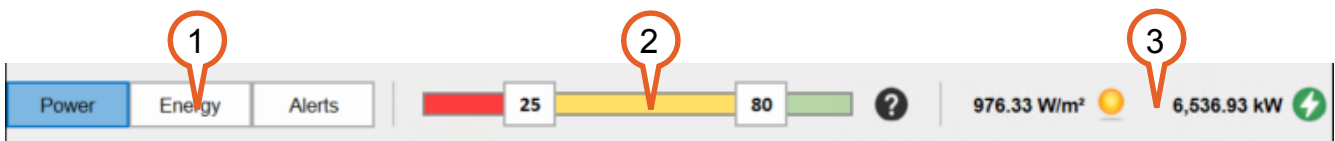
Color	Performance
<b>Dark green</b>	The device used as a reference to calculate the performance of other devices.
<b>Green</b>	The device is performing above the highest threshold.
<b>Yellow</b>	The device is performing between the lowest and highest thresholds.
<b>Red</b>	The device is performing below the lowest threshold.
<b>White</b>	The device is not communicating with the system and data cannot be retrieved.

## Main Menu

The main menu is where you can change the SCADA Layout mode, customize the threshold for device comparison, see the active alarms, and see the plant weather and the latest total power or energy produced by the plant.

**NOTE:** The options available on the user interface vary depending on the mode that you select.

### Main menu



1. Mode selector: click to switch between **Power**, **Energy** and **Alarms**.
2. Slider bar: click and drag the sliders to define the thresholds for performance. Click the **?** icon to display the legend.

**NOTE:** The slider bar is only available in Power and Energy modes.

OR:

Active alarms: displays a count of the active alarms, divided by type. Click the **?** icon to display the legend.

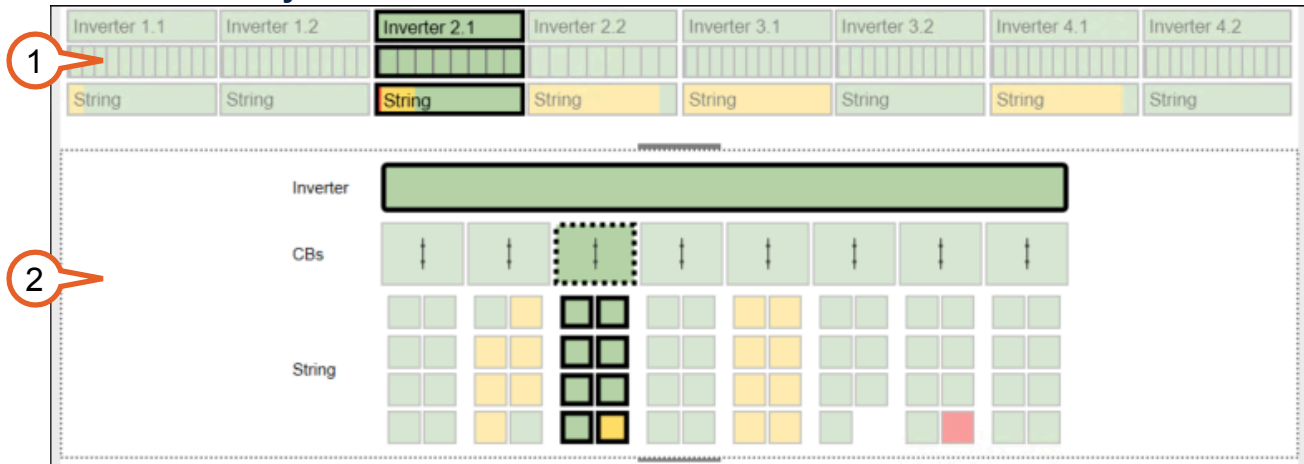
**NOTE:** This is only available in Alarm mode.

3. Plant information: displays general information about the plant. The information depends on the selected mode:
  - **Power:** total plant irradiance, plant weather, and total plant power.
  - **Energy:** total plant insolation, plant weather, and total plant energy.
  - **Alarms:** available peak power percentage and the number of dataloggers currently communicating with the system.

## Element Hierarchy

The Element Hierarchy is a visual representation of the plant production hierarchy with parent sets of elements on top, followed by child sets of elements. For example, inverters are on the top lines, followed by string boxes, which in turn are followed by string.

### Element hierarchy





1. Plant units: displays the high-level hierarchy by units. For every unit, you can see the number of levels and use the color-coding to understand the general performance of each level. The last hierarchical level can be customized to condense all the information of its devices in a single cell. This cell is filled proportionally with the device performance color coding.

Click a unit to display its devices in the Plant elements area.

**📌 BEST PRACTICE:** We recommend activating the Plant Units area for plants with a high number of devices, when it is needed to divide the plant in smaller units.

2. Plant elements: displays the devices and their granular hierarchy. Click a device to display its details in the Device Details area or to add it to the Device Comparison areas. The selected device is highlighted with a dotted line and its parent and child devices with a full line.

**📌 BEST PRACTICE:** Switches cannot be compared and have only two possible statuses:

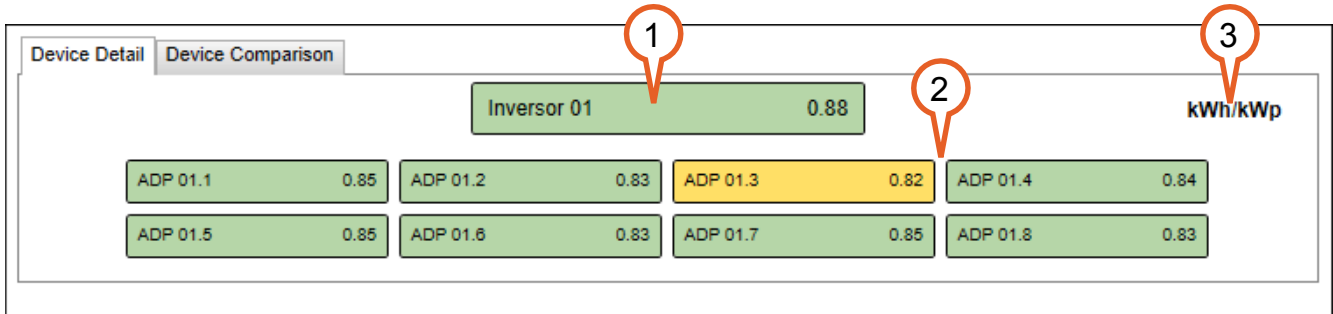
-  The switch is open.
-  The switch is closed.

## Element Analysis

The Device Analysis area consists of two tabs where you can see the device details and compare devices between them:

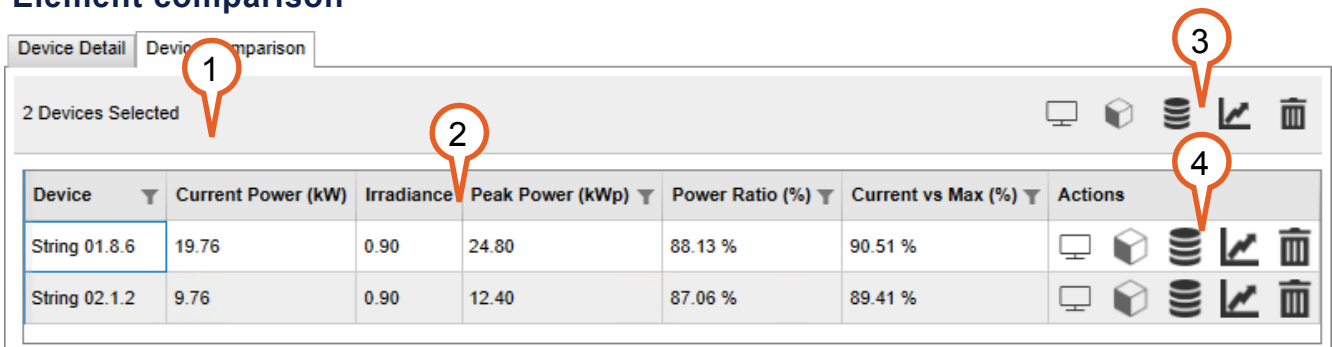
- Element details
- Element comparison

### Element details




1. Selected element: displays the selected element as a cell. Its efficiency is expressed by the color-coding and by the value on the right side of the cell.
2. Child elements: the first level of child elements for the selected element are displayed as cells. Their efficiency is represented by the color-coding and by the value on the right side of the cell.
3. Performance unit: the unit used to express the element performance.

### Element comparison







Device	Current Power (kW)	Irradiance	Peak Power (kWp)	Power Ratio (%)	Current vs Max (%)	Actions
String 01.8.6	19.76	0.90	24.80	88.13 %	90.51 %	[Icons]
String 02.1.2	9.76	0.90	12.40	87.06 %	89.41 %	[Icons]


1. Element count: displays the number of selected elements.
2. Comparison table: displays selected elements. You can click any header to sort the table by that column.  
Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column

---





header for advanced filtering. For further information, see [Advanced Filtering](#).


3. Group actions: click to open and compare the selected elements in other modules:

-  **Live Viewer**
-  **Element Viewer**
-  **Data Viewer**
-  **Linear Chart Viewer**

Click the  icon to delete all elements from the table.

4. Element actions: click to open the element in other modules:

-  **Live Viewer**
-  **Element Viewer**
-  **Data Viewer**
-  **Linear Chart Viewer**

Click the  icon to delete all elements from the table.

---

## Plant elements module

The Plant Elements module helps users to quickly compare a group of devices and analyze their performance in real time or at specific moments in time. You can select the data to display from a pre-configured set of tables.

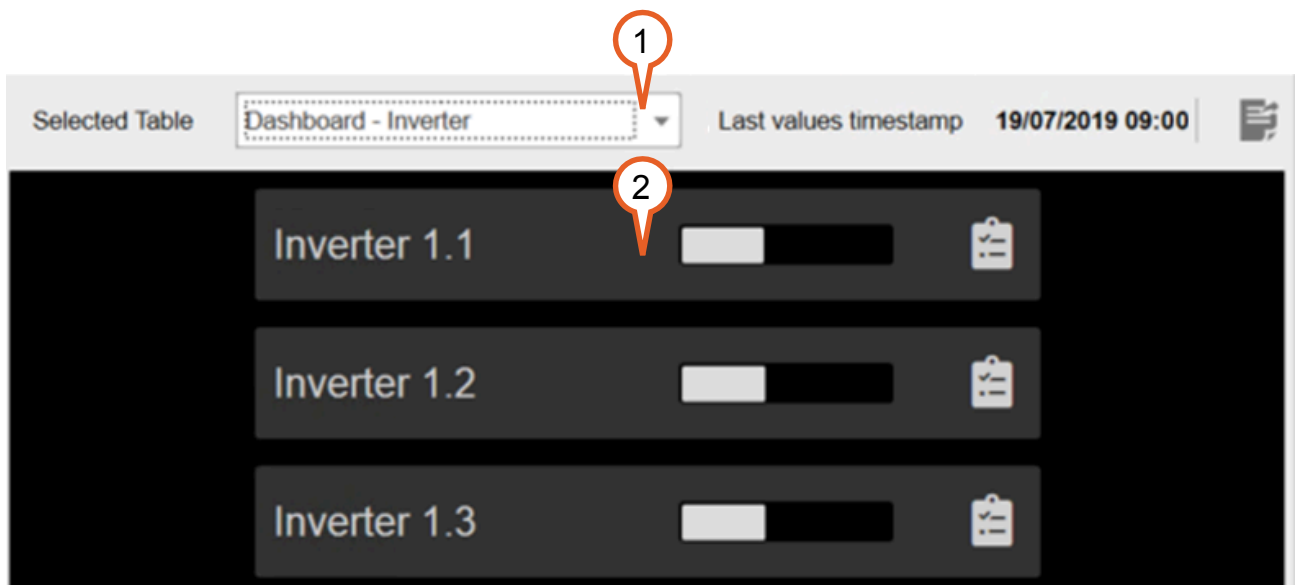
The Plant Elements module is divided in two sections:

- Upper bar: contains tools to customize the data on display.

**NOTE:** The available options change based on the table that you select.

- Plant elements: displays the selected table using three pre-configured display modes: **Dashboard**, **Table**, and **Real-Time**.

## Plant Elements module



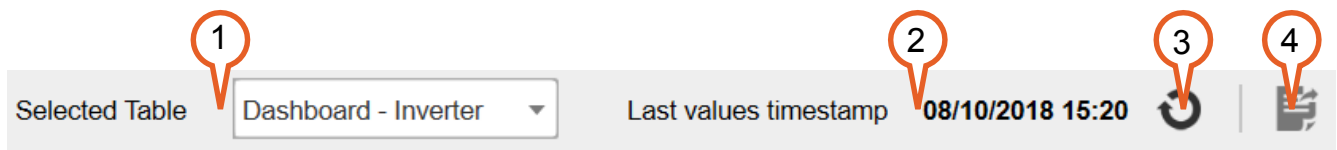
1. Upper bar
2. Plant elements

## Upper bar

Use the Upper Bar to select and customize the data on display. The options available change based on the table that you select:

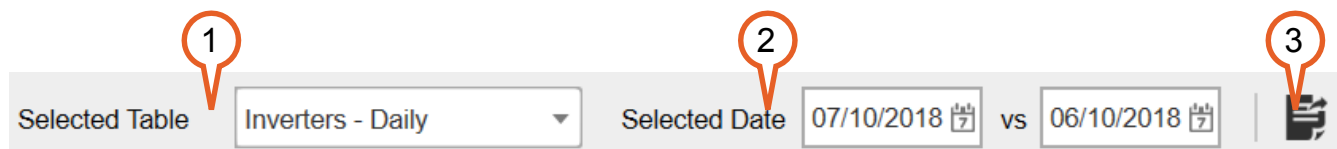
- Dashboard
- Comparison
- Real-time

### Dashboard mode



1. **Tables:** click to select a table from the drop-down list to display its data in the Plant Elements area.
2. **Timestamp:** displays the time for the value updates. Values are automatically updated at recurring intervals.
3. **Refresh:** click to manually update values.
4. **Export:** this button is disabled in Dashboard mode.

### Comparison mode

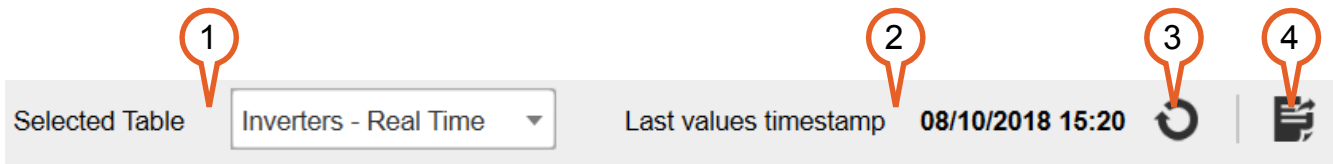


1. **Tables:** click to select a table from the drop-down list to display its data in the Plant Elements area.
2. **Comparison dates:** select the dates that you want to compare. The second date is the reference against which the values of the first date are compared.
3. **Export:** click to export the table to a Microsoft Excel format. For further information, see [Export Data to File](#).



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## Real-time mode



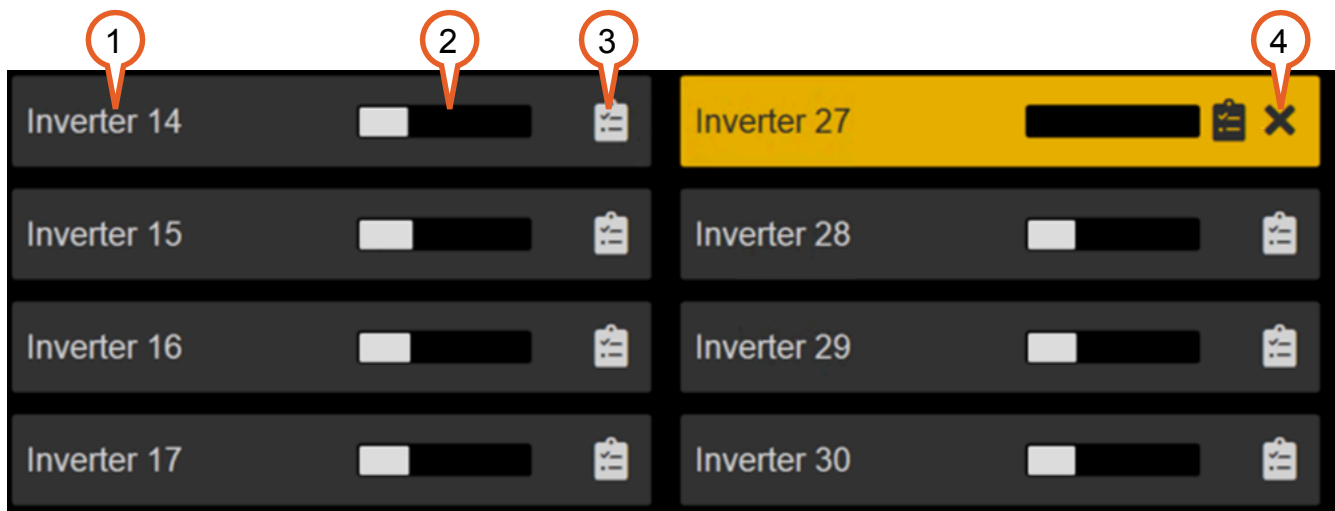
1. **Tables:** click to select a table from the drop-down list to display its data in the Plant Elements area.
  2. **Timestamp:** displays the time for the value updates. Values are automatically updated at recurring intervals.
  3. **Refresh:** click to manually update values.
  4. **Export:** click to export the table to a Microsoft Excel format. For further information, see Export Data to File.
-


## Plant elements

Monitor and compare devices that are at the same hierarchical level in a plant. This section has two display modes that change based on the table that you select on the upper bar:

- **Dashboard:** displays elements as cards.
- **Table:** displays the KPIs as a table.
- **Real-time:** displays the KPIs as a table.

### Dashboard








1. **Element name:** displays the name of the element. Click the name to display more details on the [Element Viewer](#).
2. **Status bar:** displays a quick view of a particular KPI for the element.  
 The KPI is calculated by comparing a reference value with the actual value received from the element. You can place your cursor on the bar to display the KPI details and click the bar to display the data in the [Linear Chart Viewer](#) module.  
 The KPI on display is defined during the initial configuration of GPM Plus. To define or customize KPIs, contact your GPM representative.
3. **Ticket status:** displays the Ticket icon when there is any active ticket related to the element. Click the  icon to open the Edit Work Order dialog.
4. **Alarm:** displays the icon of the most relevant alarm for the element, if any. Place your cursor on the alarm to display the alarm message and click the icon to display further information about the alarm in the [Alarm Information](#) panel.

## Table & Real-time

Drag a column header and drop it here to group by that column

Devices	Insolation (kWh/m2)	Insolation vs Budget (%)	Peak Power (kWp)	Energy (kWh)	PR (%)
Inverter CT01.1	239.10	92.60	3,000.00	434,910.00	60.51
Inverter CT02.1	239.10	92.60	4,000.00	431,850.00	45.09
Inverter CT02.2	239.10	92.60	2,073.60	431,780.00	86.91
Inverter CT03.1	239.10	92.60	2,995.20	430,200.00	59.95
Inverter CT04.1	239.10	92.60	3,916.80	433,530.00	46.22
Inverter CT04.2	239.10	92.60	2,073.60	435,490.00	87.66
Inverter CT05.1	239.10	92.60	3,916.80	434,790.00	46.33
Inverter CT05.2	239.10	92.60	2,073.60	435,120.00	87.58
Inverter CT06.1	239.10	92.60	3,916.80	425,700.00	45.40
Inverter CT06.2	239.10	92.60	2,073.60	432,280.00	87.01
Inverter CT07.1	239.10	92.60	2,995.20	431,270.00	60.08
Inverter CT08.1	239.10	92.60	2,880.00	418,940.00	60.78
22	239.10	92.60	66,904.00	9,482,540.00	59.16

Data Viewer module or in the [Linear Chart Viewer](#) module.

- Elements column:** click a element icon to display its information on the Element Viewer. Right click a element to display the context menu and access additional options:
  -  **View Element:** this functionality is inactive.
  -  **Filter Element Alarms:** display the related alarms in the Alarms module.
  -  **Alarm Information:** open the Alarm Information dialog for the active alarm.
  -  **Element Viewer:** display the selected element on the Element Viewer.
- Header rows:** Click a column header to sort the table by the values of that column. You can rearrange columns by dragging and dropping the headers. This also groups elements by the selected parameter. Click the **X** icon to reset the table grouping. Click the  icon on any column header for advanced filtering. For more information, see [Advanced filters](#).

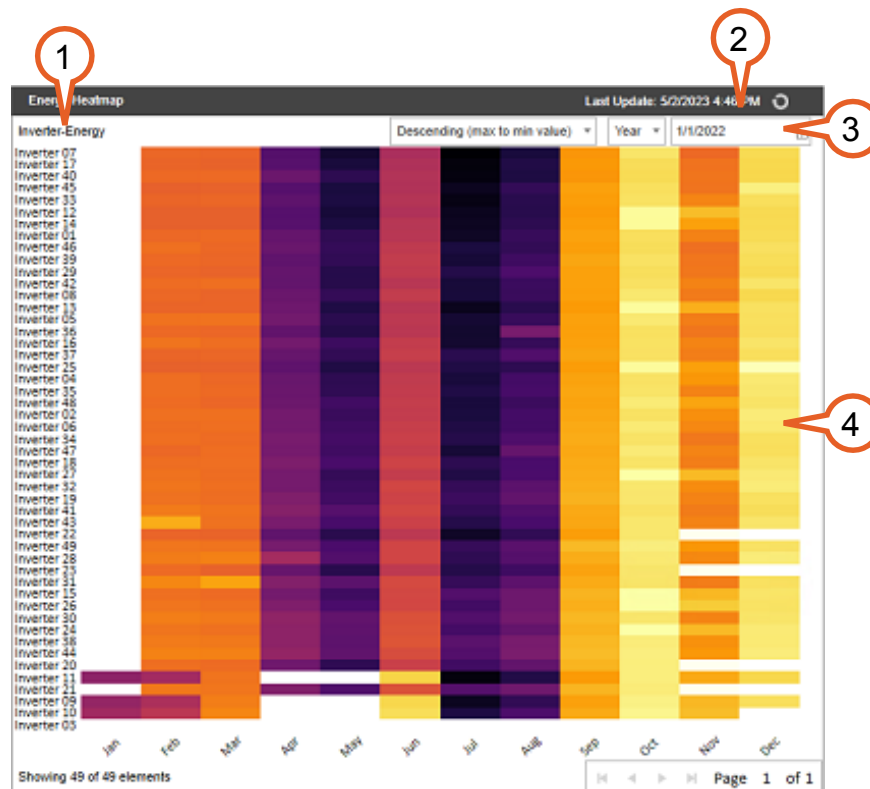
- 
3. **Values column:** display data as text.
  4. **Status bar column:** displays data in a colored status bar that indicates the performance in percentage. The percentage is calculated by comparing the current KPI against a reference KPI.
  5. **Health icon column:** displays colored icons that indicate the health of the element. The health is calculated by comparing the current KPI and a reference KPI. For more information about how to interpret the icons, see the [Ranking Module section](#).
-


## Heatmap

The Heatmap displays historical aggregated data at the element level (for example, inverters or wind turbines). This feature leverages GPM's [Advanced Analytics](#) to allow you to identify where and when assets in your portfolio are under-performing, allowing you to evaluate and address inefficiencies at the level of individual elements.

The default data available on the Heatmap are availability, energy, and production ratio (PR). Each data appears as a separate Heatmap module in the [Plant dashboard](#). You can sort the data alphabetically by element name, as well as by value, in ascending or descending order. It is possible to customize the color-code for the percentage ranges, as well as to configure Heatmaps for other data. For more information on custom configurations, contact your GPM representative.

### Heatmap



1. Element and data types on display.
2. Timestamp: informs you of when the data on display was retrieved.  
Click the  icon to refresh and load the latest available data.
3. Display options:

- 
- **Sorting:** open the drop-down menu to select how to arrange the data on the map:
    - **Alphabetical**
    - **Ascending (minimum to maximum values)**
    - **Descending (maximum to minimum values)**
  - **Time span:** select the periods covered by the chart.
    - **Month**
    - **Quarter**
    - **Year**
  - **Date selector:** open the drop-down menu to select the dates for the time period.
4. **Element performance:** hover over a cell to view a detailed information panel about the element's performance at a particular point in time:



# Plant elements module

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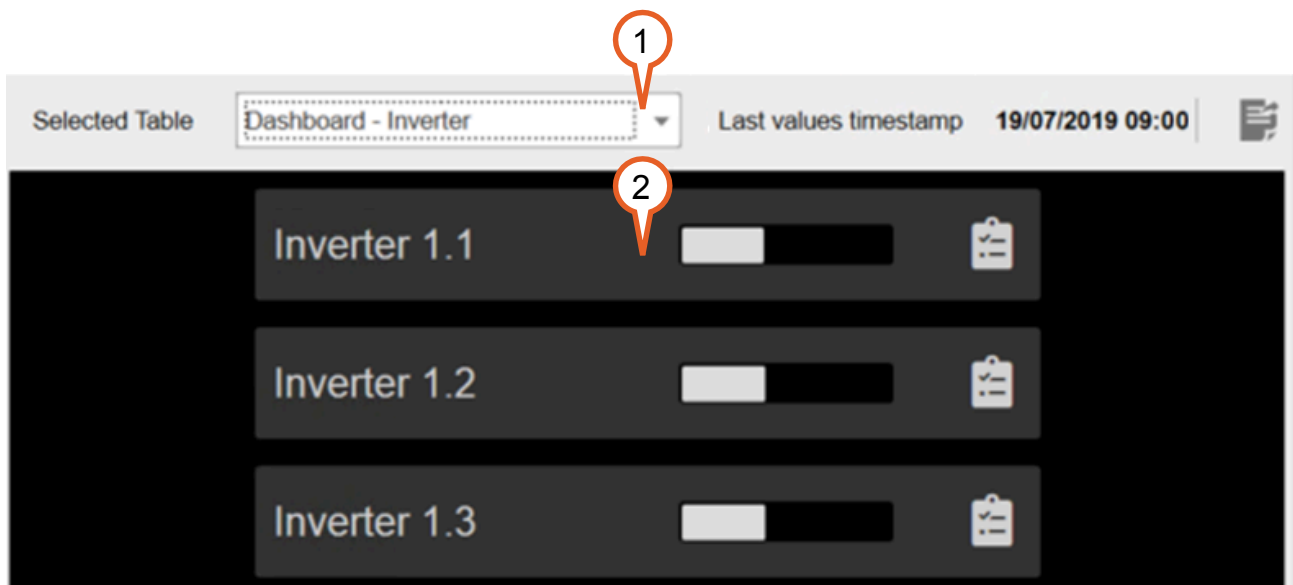
The Plant Elements module is divided in two sections:

- Upper bar: contains tools to customize the data on display.

ⓘ **NOTE:** The available options change based on the table that you select.

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## Plant Elements module



1. Upper bar
2. Plant elements

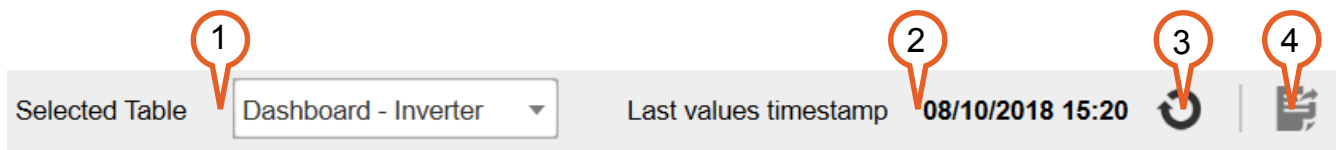


## Upper bar

Use the Upper Bar to select and customize the data on display. The options available change based on the table that you select:

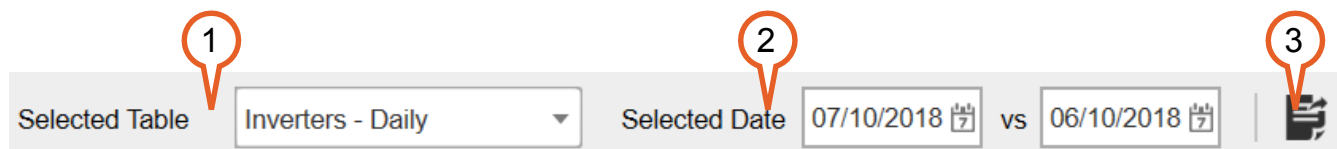
- Dashboard
- Comparison
- Real-time

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3. **Refresh:** click to manually update values.
4. **Export:** this button is disabled in Dashboard mode.

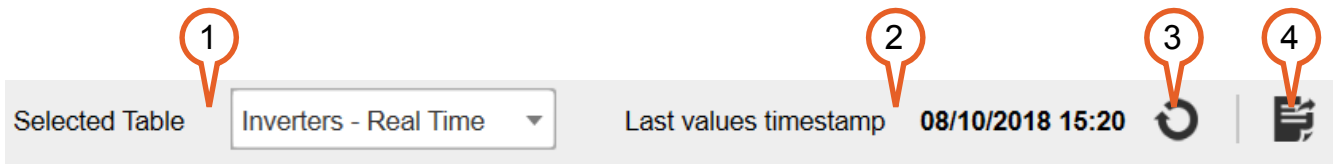
### Comparison mode



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3. **Export:** click to export the table to a Microsoft Excel format. For further information, see [Export Data to File](#).

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## Real-time mode



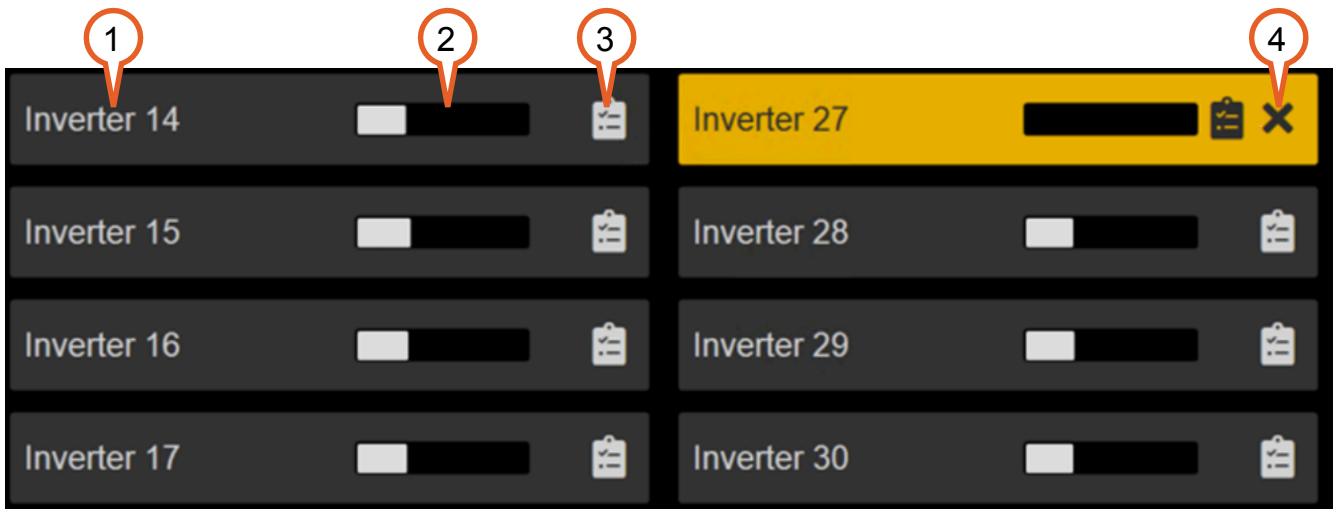
1. **Tables:** click to select a table from the drop-down list to display its data in the Plant Elements area.
  2. **Timestamp:** displays the time for the value updates. Values are automatically updated at recurring intervals.
  3. **Refresh:** click to manually update values.
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-


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1. **Element name:** displays the name of the element. Click the name to display more details on the [Element Viewer](#).
2. **Status bar:** displays a quick view of a particular KPI for the element.  
 The KPI is calculated by comparing a reference value with the actual value received from the element. You can place your cursor on the bar to display the KPI details and click the bar to display the data in the [Linear Chart Viewer](#) module.  
 The KPI on display is defined during the initial configuration of GPM Plus. To define or customize KPIs, contact your GPM representative.
3. **Ticket status:** displays the Ticket icon when there is any active ticket related to the element. Click the  icon to open the Edit Work Order dialog.
4. **Alarm:** displays the icon of the most relevant alarm for the element, if any. Place your cursor on the alarm to display the alarm message and click the icon to display further information about the alarm in the [Alarm Information](#) panel.

## Table & Real-time

Drag a column header and drop it here to group by that column

Devices	Insolation (kWh/m2)	Insolation vs Budget (%)	Peak Power (kWp)	Energy (kWh)	PR (%)
Inverter CT01.1	239.10	92.60	3,000.00	434,910.00	60.51
Inverter CT02.1	239.10	92.60	4,000.00	431,850.00	45.09
Inverter CT02.2	239.10	92.60	2,073.60	431,780.00	86.91
Inverter CT03.1	239.10	92.60	2,995.20	430,200.00	59.95
Inverter CT04.1	239.10	92.60	3,916.80	433,530.00	46.22
Inverter CT04.2	239.10	92.60	2,073.60	435,490.00	87.66
Inverter CT05.1	239.10	92.60	3,916.80	434,790.00	46.33
Inverter CT05.2	239.10	92.60	2,073.60	435,120.00	87.58
Inverter CT06.1	239.10	92.60	3,916.80	425,700.00	45.40
Inverter CT06.2	239.10	92.60	2,073.60	432,280.00	87.01
Inverter CT07.1	239.10	92.60	2,995.20	431,270.00	60.08
Inverter CT08.1	239.10	92.60	2,880.00	418,940.00	60.78
22	239.10	92.60	66,904.00	9,482,540.00	59.16

Data Viewer module or in the [Linear Chart Viewer](#) module.

- Elements column:** click a element icon to display its information on the Element Viewer. Right click a element to display the context menu and access additional options:
  -  **View Element:** this functionality is inactive.
  -  **Filter Element Alarms:** display the related alarms in the Alarms module.
  -  **Alarm Information:** open the Alarm Information dialog for the active alarm.
  -  **Element Viewer:** display the selected element on the Element Viewer.
- Header rows:** Click a column header to sort the table by the values of that column. You can rearrange columns by dragging and dropping the headers. This also groups elements by the selected parameter. Click the **X** icon to reset the table grouping.  
 Click the  icon on any column header for advanced filtering. For more information, see [Advanced filters](#).

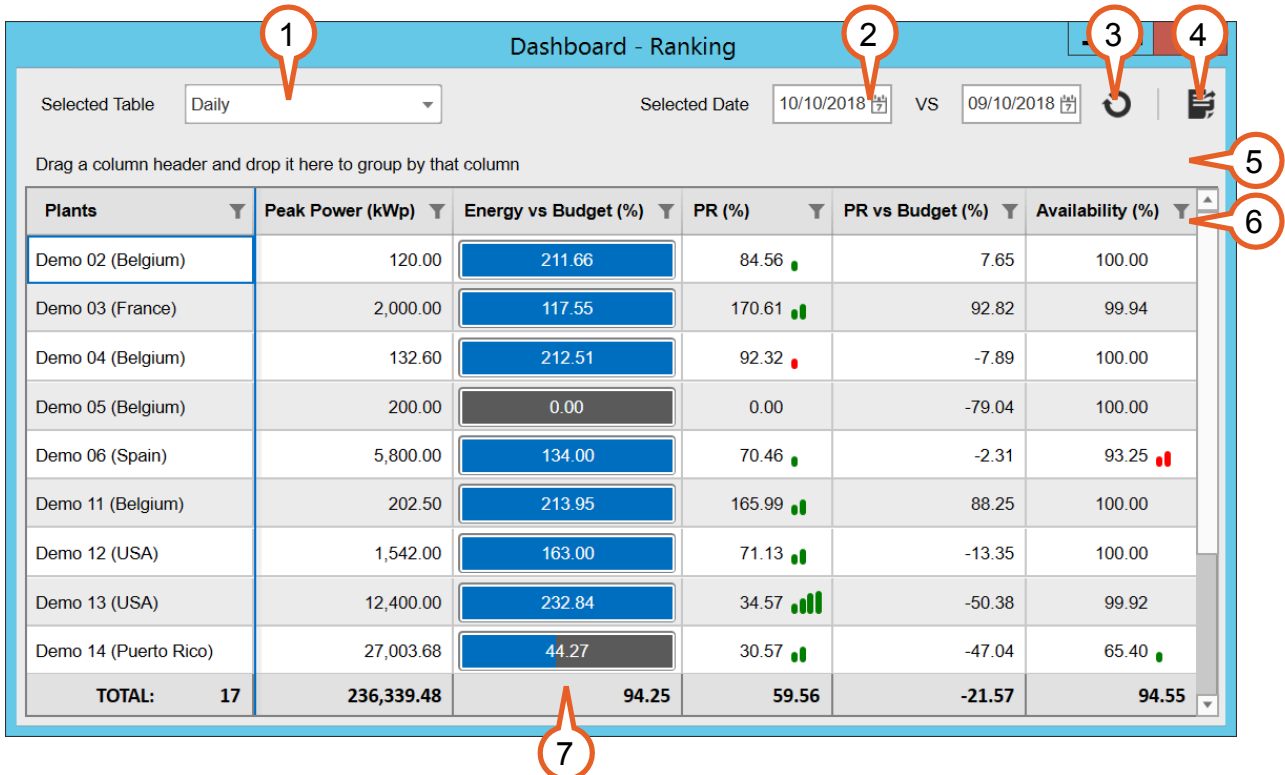
- 
3. **Values column:** display data as text.
  4. **Status bar column:** displays data in a colored status bar that indicates the performance in percentage. The percentage is calculated by comparing the current KPI against a reference KPI.
  5. **Health icon column:** displays colored icons that indicate the health of the element. The health is calculated by comparing the current KPI and a reference KPI. For more information about how to interpret the icons, see the [Ranking Module section](#).
-

# Ranking

The Ranking module is a tool that allows users performing asset management tasks to analyze the status of their portfolio by comparing, grouping, and ranking the plants by their performance. The performance is calculated by comparing KPIs between two periods.

To access the Ranking module, click the  icon in the Upper Bar and then click the  icon.

## Ranking Module





The screenshot shows the 'Dashboard - Ranking' interface. It includes a 'Selected Table' dropdown (1) set to 'Daily', a 'Selected Date' picker (2) for '10/10/2018' and '09/10/2018', a refresh icon (3), and a print icon (4). Below the date pickers is a text prompt: 'Drag a column header and drop it here to group by that column'. The main table (5) has columns: 'Plants', 'Peak Power (kWp)', 'Energy vs Budget (%)', 'PR (%)', 'PR vs Budget (%)', and 'Availability (%)'. The table contains data for 14 demo plants and a 'TOTAL' row. A callout (6) points to the table's scroll bar. A callout (7) points to the 'TOTAL' row.


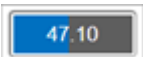


Plants	Peak Power (kWp)	Energy vs Budget (%)	PR (%)	PR vs Budget (%)	Availability (%)	
Demo 02 (Belgium)	120.00	211.66	84.56	7.65	100.00	
Demo 03 (France)	2,000.00	117.55	170.61	92.82	99.94	
Demo 04 (Belgium)	132.60	212.51	92.32	-7.89	100.00	
Demo 05 (Belgium)	200.00	0.00	0.00	-79.04	100.00	
Demo 06 (Spain)	5,800.00	134.00	70.46	-2.31	93.25	
Demo 11 (Belgium)	202.50	213.95	165.99	88.25	100.00	
Demo 12 (USA)	1,542.00	163.00	71.13	-13.35	100.00	
Demo 13 (USA)	12,400.00	232.84	34.57	-50.38	99.92	
Demo 14 (Puerto Rico)	27,003.68	44.27	30.57	-47.04	65.40	
<b>TOTAL:</b>	<b>17</b>	<b>236,339.48</b>	<b>94.25</b>	<b>59.56</b>	<b>-21.57</b>	<b>94.55</b>

- Tables list:** select a table from the drop-down list. The available options change based on the table you select:
  - **Daily:** rank the KPIs of two different days.
  - **Monthly:** rank the KPIs of two different months.
  - **Real Time:** rank KPIs as they are retrieved in real time by the system. When there are ongoing issues on a plant, some parameters display the current weather and an alarm sign.
  - **Yearly:** rank the KPIs of two different years.
- Date picker:** select two dates using the calendar picker. The first date is used to rank the KPIs of your portfolio against the second date.

**NOTE:** You cannot pick dates when you are ranking KPIs in real time.









3. **Refresh:** click to refresh the data on display.
4. **Export:** click to export the data currently displayed on the list to a Microsoft Excel format. For more information, see [Export Data to File](#).
5. Drag-drop area: click and drag a column header and drop it to this area to group the plants by one or more criteria.
6. **Column headers:** display the KPI name and the measure unit between brackets. Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column header for advanced filtering. For further information on advanced filtering, see [Advanced Filters](#)
7. Ranking table: displays portfolio KPIs, with the total of each column at the bottom of the table. Select one or more cells, right-click and then click the  icon to display the KPIs in the [Data Viewer module](#) or click the icon to display them in the [Linear Chart Viewer module](#).

There are four display modes:

-  Simple: displays data as text.
-  Status: displays data in a colored status bar that expresses the performance as a percentage.
-  Health: displays data as text. Colored icons indicate the health of the device by comparing one KPI over two different periods. For more information, see the [Health icons](#) section.
-  Weather: displays data as text. Weather icons display the current plant weather. The weather icons are only displayed in Real Time tables.


## Health icons

The health icons display a range of production values as percentages of the reference value for an element or a plant.

Icon	Description
	00.01% above the reference value
	02.01% above the reference value
	13.61% above the reference value
	34.01% above the reference value
	00.01% below the reference value
	02.01% below the reference value
	13.61% below the reference value
	34.01% below the reference value



# Reports module

To access the Reports module, click the  icon on the Upper Bar.

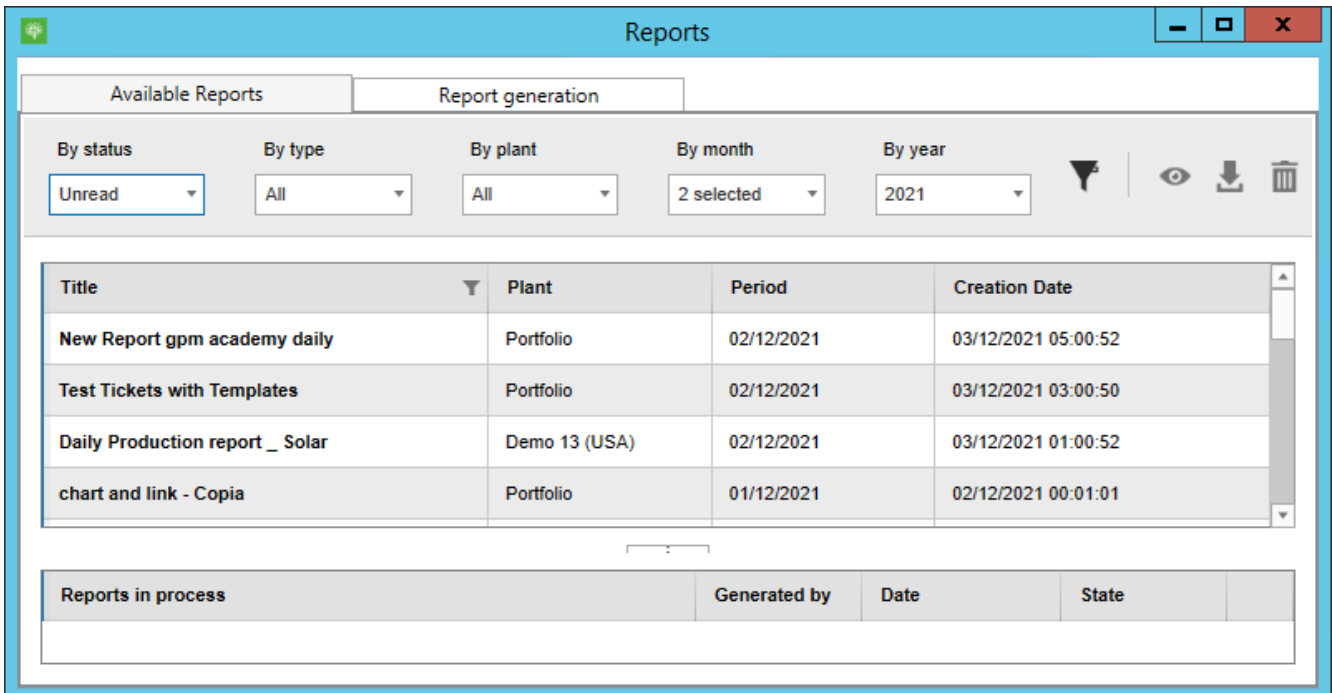
The interface of the Reports module consists of two tabs:

- **Available Reports:** access existing reports.
- **Report Generation:** create new reports.

## Available Reports

This tab allows you to access existing reports. By default, the list displays unread reports from the current year and the most recent reports.

### Available Reports tab

The screenshot shows the 'Reports' window with two tabs: 'Available Reports' (selected) and 'Report generation'. The interface includes several filter dropdowns: 'By status' (Unread), 'By type' (All), 'By plant' (All), 'By month' (2 selected), and 'By year' (2021). To the right of these filters are icons for a funnel, eye, download, and trash. Below the filters is a table with the following data:

Title	Plant	Period	Creation Date
New Report gpm academy daily	Portfolio	02/12/2021	03/12/2021 05:00:52
Test Tickets with Templates	Portfolio	02/12/2021	03/12/2021 03:00:50
Daily Production report _ Solar	Demo 13 (USA)	02/12/2021	03/12/2021 01:00:52
chart and link - Copia	Portfolio	01/12/2021	02/12/2021 00:01:01

Below the table is a section for 'Reports in process' with columns for 'Generated by', 'Date', and 'State'.






- 1. Template filters:** click to select the filtering criteria from the drop-down lists and


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click the  icon to display reports that match the criteria on the list.

2. **Action buttons:** click to perform actions on the selected reports:

-  **Open** the selected report. Each report you select opens in a separate window.
-  **Download** the selected report. Each report you select opens a separate download dialog.
-  **Delete** the selected report.

3. Reports list: displays available reports. Select one or more reports to perform actions on them.

Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. click the  icon on the **Title** column header for advanced filtering. For more information, see [Advanced Filters](#).

4. Reports in process: displays reports that are being generated. You can cancel the generation fo a report by clicking the  icon on the right side of the list.

Click on a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers.

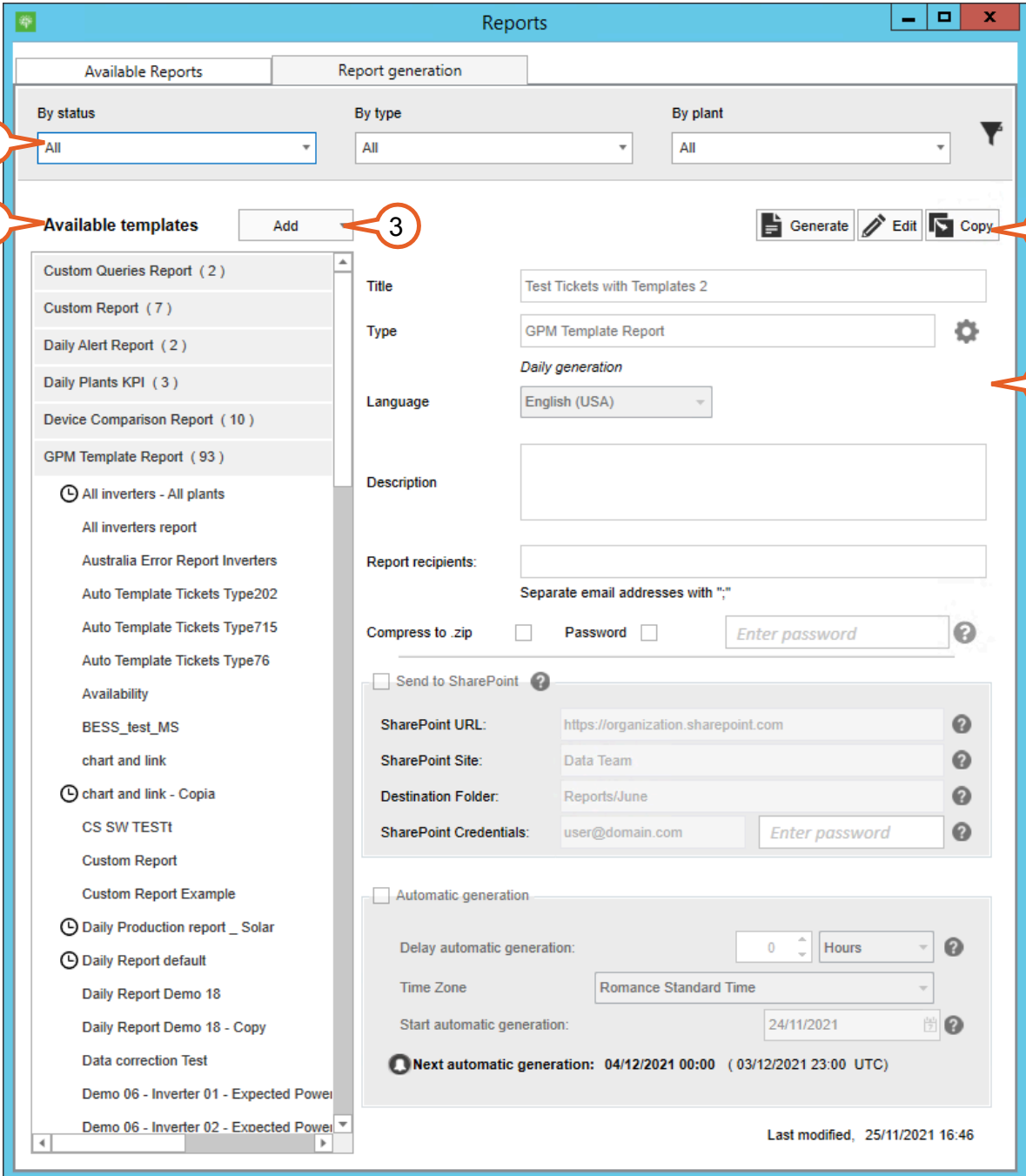
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## Report Generation


On this tab, you can generate new reports, schedule automatic report generation, and edit existing reports. You can create new reports based on templates that are configured for you.

When you save your report, it becomes available in the **Available templates** panel in the section of the template on which it is based.

### Report Generation tab









The screenshot shows the 'Reports' window with the 'Report generation' tab active. At the top, there are three filter dropdowns: 'By status' (set to 'All'), 'By type' (set to 'All'), and 'By plant' (set to 'All'). Below these is a list of 'Available templates' on the left, including 'Custom Queries Report (2)', 'Custom Report (7)', 'Daily Alert Report (2)', 'Daily Plants KPI (3)', 'Device Comparison Report (10)', and 'GPM Template Report (93)'. The 'GPM Template Report (93)' is selected, showing a list of sub-templates like 'All inverters - All plants', 'All inverters report', 'Australia Error Report Inverters', etc. The main form on the right is for creating a new report. It has a title 'Test Tickets with Templates 2', type 'GPM Template Report', and language 'English (USA)'. There are buttons for 'Generate', 'Edit', and 'Copy'. A 'Daily generation' section is visible, with a 'Next automatic generation' date of '04/12/2021 00:00'. A 'SharePoint' section is also present, with fields for URL, site, folder, and credentials. A 'Password' field is also visible. The bottom right corner shows 'Last modified, 25/11/2021 16:46'.

1. **Template filters:** click to select the filtering criteria from the drop-down lists and click the  icon to display reports that match the criteria on the **Available**

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**templates** panel.

2. Available templates: displays the available reports, organized by report type. Click on a template to edit it.
  3. **Add template**: click to select a template from the drop-down list. For further information, see [Create Reports using the GPM template](#).
  4. **Action buttons**: click to perform actions on templates or reports:
    -  **Generate** one of the selected reports manually. This button is only available for saved templates.
    -  **Enable editing** for a selected report. This button is only available for saved templates.
    -  **Create a copy** of the selected report. This button is only available for saved templates
    -  **Save** your changes. This button is only available for unsaved reports.
    -  **Cancel** your changes. This button is only available for saved reports.
    -  **Delete** the selected report. This button is only available for saved reports.
  5. Report settings: configure the settings for the report. This template becomes available when you add new report or when you are editing one of the available templates.
-

## SCADA layout module

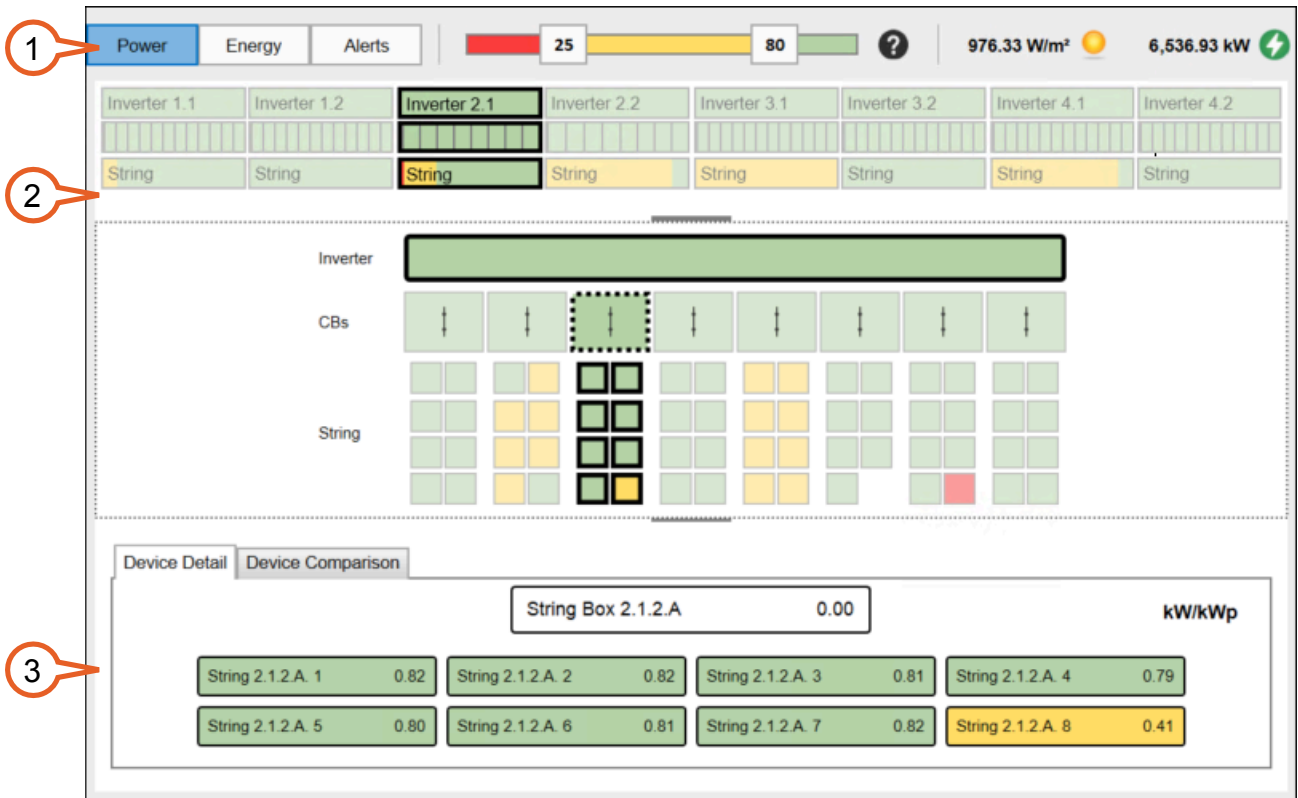
The Supervisory Control and Data Acquisition (SCADA) layout modules provides a global view of the plant efficiency and of the real-time status of the plant devices.

The SCADA Layout module uses color-coded cells to represent the performance of the devices. Each cell represents one element, and the cell size depends on the position of the element in the hierarchy. The performance of devices is calculated using the value of the best performing device as a reference and then expressed in percentage. The reference device can either be the best performing device of the same type or the best performing sibling device. The SCADA Layout also offers tools to analyze a single device and to compare multiple devices.

This module has three modes to analyze efficiency:

- **Power:** performance is calculated by comparing the device performance against a reference device for each device type. The reference is the latest and highest normalized power value for each device type.
- **Energy:** performance is calculated by comparing the device performance against a reference device for each device type. The reference is the highest daily normalized energy value for each device type.
- **Alarms:** each device is colored with the color of its most representative alarm that is active at the time. There is no comparison between devices in this mode.

## SCADA layout



1. [Main Menu](#)
2. [Element Hierarchy](#)
3. [Element Analysis](#)

Color	Performance
<b>Dark green</b>	The device used as a reference to calculate the performance of other devices.
<b>Green</b>	The device is performing above the highest threshold.
<b>Yellow</b>	The device is performing between the lowest and highest thresholds.
<b>Red</b>	The device is performing below the lowest threshold.
<b>White</b>	The device is not communicating with the system and data cannot be retrieved.

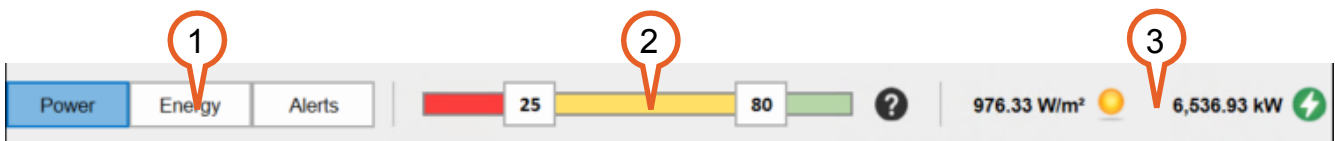


## Main Menu

The main menu is where you can change the SCADA Layout mode, customize the threshold for device comparison, see the active alarms, and see the plant weather and the latest total power or energy produced by the plant.

**NOTE:** The options available on the user interface vary depending on the mode that you select.

### Main menu



1. Mode selector: click to switch between **Power**, **Energy** and **Alarms**.
2. Slider bar: click and drag the sliders to define the thresholds for performance. Click the **?** icon to display the legend.

**NOTE:** The slider bar is only available in Power and Energy modes.

OR:

Active alarms: displays a count of the active alarms, divided by type. Click the **?** icon to display the legend.

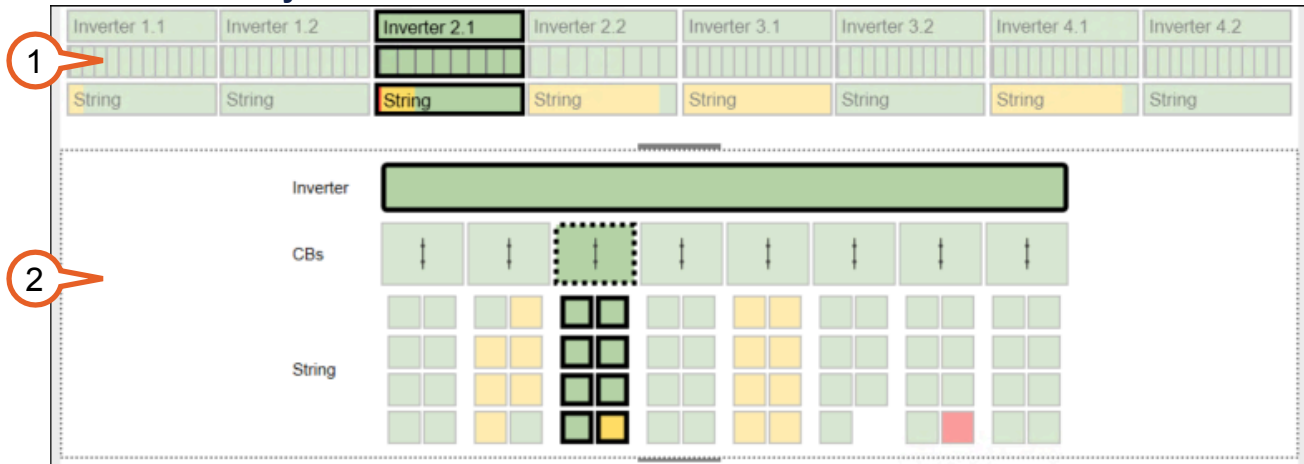
**NOTE:** This is only available in Alarm mode.

3. Plant information: displays general information about the plant. The information depends on the selected mode:
  - **Power:** total plant irradiance, plant weather, and total plant power.
  - **Energy:** total plant insolation, plant weather, and total plant energy.
  - **Alarms:** available peak power percentage and the number of dataloggers currently communicating with the system.

## Element Hierarchy

The Element Hierarchy is a visual representation of the plant production hierarchy with parent sets of elements on top, followed by child sets of elements. For example, inverters are on the top lines, followed by string boxes, which in turn are followed by string.

### Element hierarchy





1. Plant units: displays the high-level hierarchy by units. For every unit, you can see the number of levels and use the color-coding to understand the general performance of each level. The last hierarchical level can be customized to condense all the information of its devices in a single cell. This cell is filled proportionally with the device performance color coding.

Click a unit to display its devices in the Plant elements area.

**📌 BEST PRACTICE:** We recommend activating the Plant Units area for plants with a high number of devices, when it is needed to divide the plant in smaller units.

2. Plant elements: displays the devices and their granular hierarchy. Click a device to display its details in the Device Details area or to add it to the Device Comparison areas. The selected device is highlighted with a dotted line and its parent and child devices with a full line.

**📌 BEST PRACTICE:** Switches cannot be compared and have only two possible statuses:

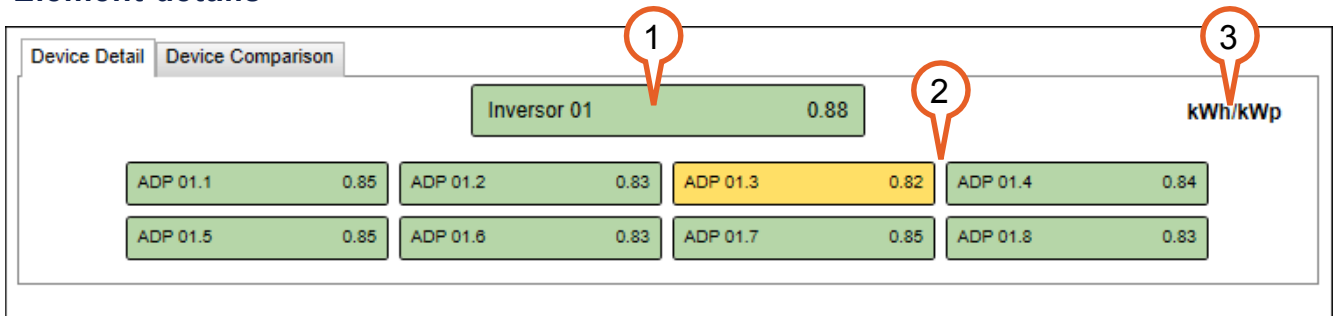
-  The switch is open.
-  The switch is closed.

## Element Analysis

The Device Analysis area consists of two tabs where you can see the device details and compare devices between them:

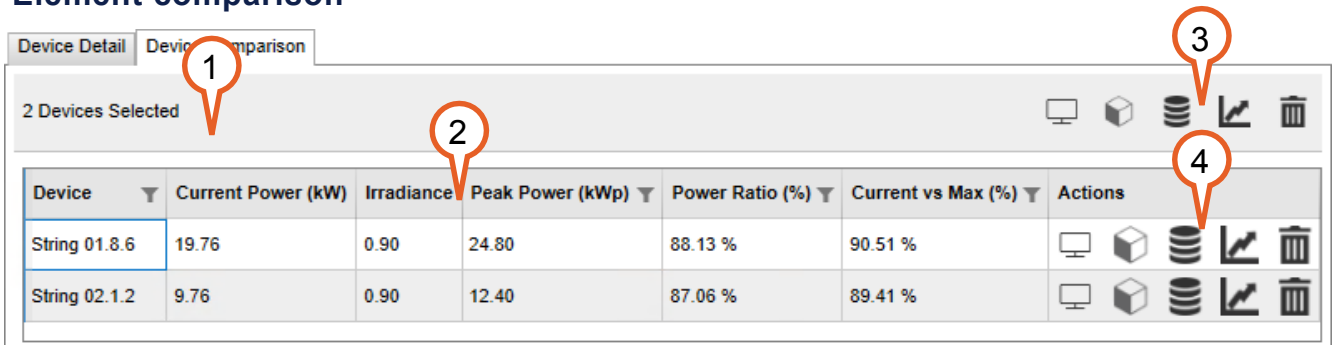
- Element details
- Element comparison

### Element details




1. Selected element: displays the selected element as a cell. Its efficiency is expressed by the color-coding and by the value on the right side of the cell.
2. Child elements: the first level of child elements for the selected element are displayed as cells. Their efficiency is represented by the color-coding and by the value on the right side of the cell.
3. Performance unit: the unit used to express the element performance.

### Element comparison







Device	Current Power (kW)	Irradiance	Peak Power (kWp)	Power Ratio (%)	Current vs Max (%)	Actions
String 01.8.6	19.76	0.90	24.80	88.13 %	90.51 %	[Icons]
String 02.1.2	9.76	0.90	12.40	87.06 %	89.41 %	[Icons]


1. Element count: displays the number of selected elements.
2. Comparison table: displays selected elements. You can click any header to sort the table by that column.  
Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column

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header for advanced filtering. For further information, see [Advanced Filtering](#).


3. Group actions: click to open and compare the selected elements in other modules:

-  **Live Viewer**
-  **Element Viewer**
-  **Data Viewer**
-  **Linear Chart Viewer**

Click the  icon to delete all elements from the table.

4. Element actions: click to open the element in other modules:

-  **Live Viewer**
-  **Element Viewer**
-  **Data Viewer**
-  **Linear Chart Viewer**

Click the  icon to delete all elements from the table.

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# Scatter Plot Chart



The Scatter Plot Chart Viewer is a tool that allows you to create queries and analyze your portfolio's data using scatter plots charts. A scatter plot chart allows you to display the relationship of two sets of data by placing them along two axes. The results of your queries can be saved for further use or exported to other views.








You can add queries to the [Live Chart Viewer](#) from other areas of the user interface or create queries directly from the Scatter Plot Chart Viewer module.

To access the Scatter Plot Chart, click the  icon on the [Upper Bar](#), then click the  icon.

## Scatter Plot Chart



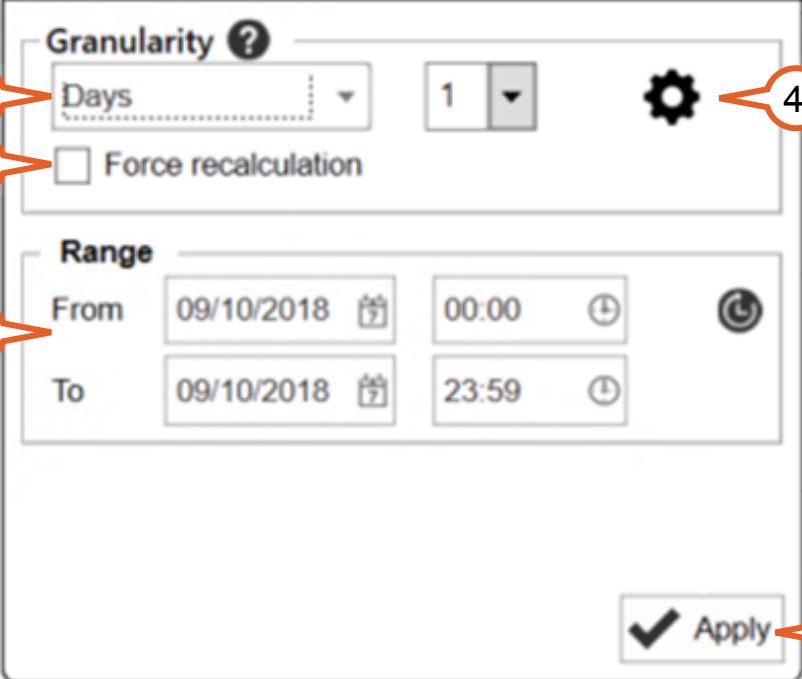
1. Query Period: click the  icon to expand the menu and customize the data granularity and time range. For information, see the [Query Period](#) section below.
2. Add Parameters: click the  icon to expand the menu and add parameters to the table. For more information, see the [Add Parameters](#) section below.

- 
3. Action Buttons: click to perform quick actions:
    -  **Open** the [Data Filtering window](#) to filter the data on display.
    -  **Toggle zoom** on and off. When zoom is enabled, use the mouse scroll or drag and drop the area of the chart that you want to zoom.
    -  **Save** the current query as a favorite.
    -  **Load** a favorite query.
    -  **Display** the selected parameters in the [Linear Chart Viewer module](#).
    -  **Export** the query to the clipboard or to a file. For further information, see [Export Data to File](#).
  4. Current Parameters: click the  icon to expand the menu and manage current parameters. You can change the display name and color for a parameter. You can also decompose parameters. For more information, see the [Current Parameters section](#) below.
  5. Chart: displays data as a plot. Place your cursor over a dot to display a tooltip with the parameter name and the value of each axis.  
  
Click the labels of the **X-axis** or the **Y-axis** to customize their ranges and auto-scale them.
  6. Legend: displays the results of your query as a table. You can hide data from the chart and customize the appearance of single parameters. For further information, see the [Legend section](#) below.
  7. **Period browser**: browse the time range using the arrows. The time range displayed is based on the query period that you selected.
-

## Query Period

The Query Period panel lets you customize the data granularity and time range of your query. You can expand and collapse the panel by clicking the ▼ and ▲ icons.

### Query Period panel



The screenshot shows the Query Period panel with the following elements:

- 1**: A gear icon next to the Granularity dropdown menu.
- 2**: A checkbox labeled "Force recalculation".
- 3**: The "From" date and time input fields.
- 4**: A gear icon next to the Range section.
- 5**: An "Apply" button with a checkmark icon.



1. **Data granularity:** click to access advanced settings for data granularity.
2. **Force recalculation:** click to manually force a recalculation of the data if the values have changed you do not want to wait for the next automatic recalculation to see them. The system automatically calculates values at recurring intervals and stores them in the database for faster access.

This option is only available when the selected granularity is **Days**, **Months**, or **Years**.

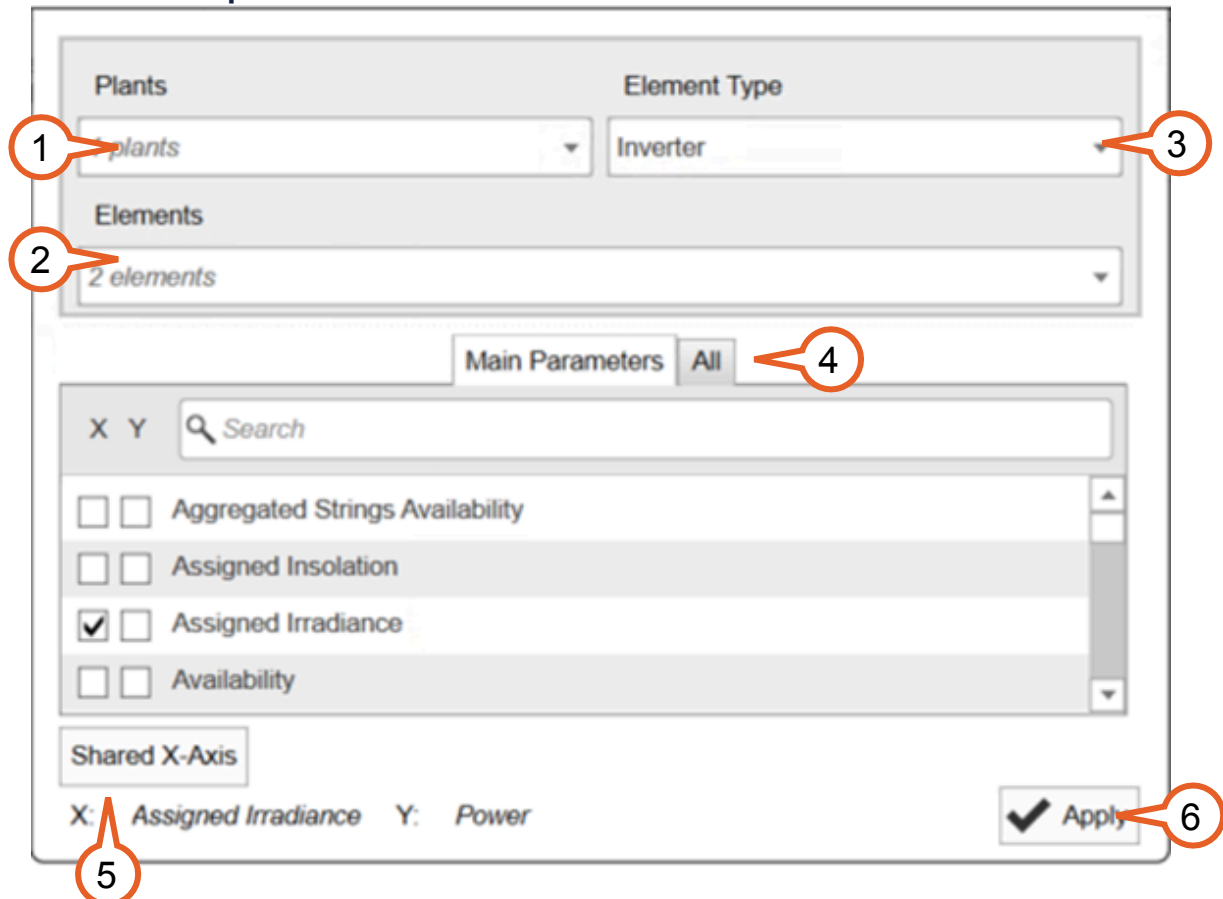
**NOTE:** Recalculations may take several minutes.

3. **Date and time range:** select the date and time range using the calendar picker. Click the 🕒 icon to set the range to the default period.
4. **Data granularity settings:** click to access advanced settings for data granularity.
5. **Apply:** click to apply your settings to the query.

## Add Parameters

The Add Parameters panel lets you add parameters to your query. You can expand and collapse the panel by clicking the  and  icons.

### Add Parameters panel



1. **Plants:** select one or more plants from the drop-down list. You can use the *Search* field to refine the drop-down list results.
2. **Elements:** select one or more elements from the drop-down list.

**NOTE:** You can only select elements after selecting a single plant. If you select multiple plants, this option is disabled.

3. **Element type:** select one or more element types from the drop-down list.

**NOTE:** You can only select element types after selecting multiple plants.

4. **Parameters:** click to select one or more parameters or series from one of the tabs. You can use the *Search* field to refine the drop-down list results.

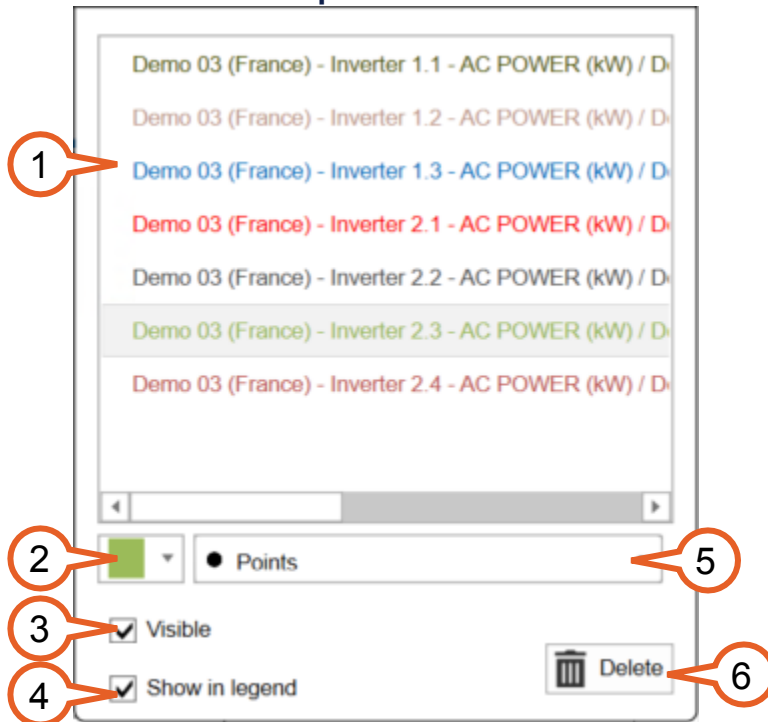


- 
- **Main Parameters:** lists the most relevant parameters that are configured for the selected element.
  - **All:** lists all the parameters that are retrieved from the selected element.
5. **Shared X-axis:** click to select the X-axis parameter if you want to compare multiple parameters on the Y-axis against a single parameter on the X-axis.
  6. **Apply:** click to apply your settings to the query.
-

## Current Parameters

The Current Parameters panel lets you manage parameters included in a query. You can expand and collapse the panel by clicking the ▼ and ▲ icons. You can also change the display name and the color of a parameter.

### Current Parameters panel

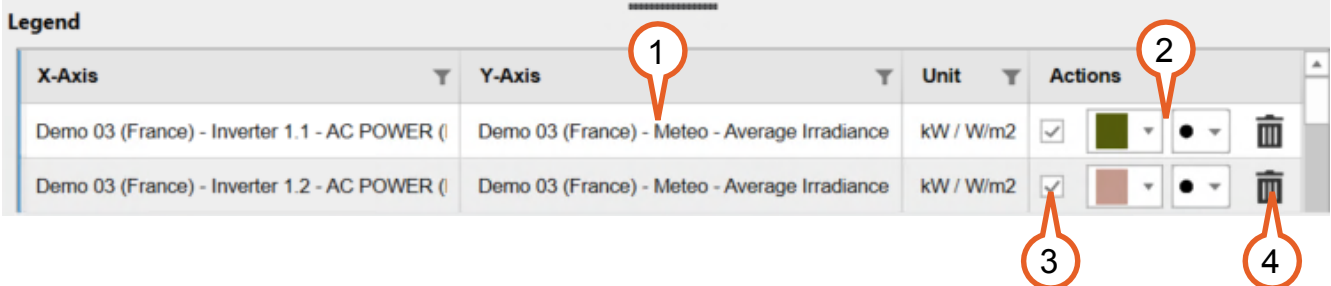


1. **Parameters:** lists the parameters currently displayed on the table. Select one or more parameters to customize their appearance. To select multiple parameters, use CTRL+Click.
2. **Point color:** select a color for the parameter from the drop-down list.
3. **Visible:** toggle the checkbox to display or hide the selected parameter from the chart.
4. **Show in legend:** toggle the checkbox to display or hide the selected parameter from the legend.
5. **Point shape:** select the shape for the data points from the drop-down list. Available options are **Points**, **Rectangles**, and **Diamonds**.
6. **Delete:** click to delete the selected parameters from the chart.


## Legend

The legend panel provides quick access to the chart legend and displays the results of your queries as a table. You can filter and sort the data on display and customize the colors for the parameters.

### Legend panel



X-Axis	Y-Axis	Unit	Actions
Demo 03 (France) - Inverter 1.1 - AC POWER (	Demo 03 (France) - Meteo - Average Irradiance	kW / W/m2	<input checked="" type="checkbox"/> <span style="background-color: #669933; border: 1px solid black; display: inline-block; width: 15px; height: 15px; vertical-align: middle;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; border-radius: 50%; vertical-align: middle;"></span> <input type="checkbox"/> <input type="checkbox"/>
Demo 03 (France) - Inverter 1.2 - AC POWER (	Demo 03 (France) - Meteo - Average Irradiance	kW / W/m2	<input checked="" type="checkbox"/> <span style="background-color: #993333; border: 1px solid black; display: inline-block; width: 15px; height: 15px; vertical-align: middle;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; border-radius: 50%; vertical-align: middle;"></span> <input type="checkbox"/> <input type="checkbox"/>

1. **Table:** the name of the parameters used to plot the chart, by axis and by unit. Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column header for advanced filtering. For further information on advanced filtering, see [Advanced Filters](#).
2. **Point color and shape:** select the display color for the data points from the drop-down list.
3. **Display/Hide:** toggle the checkbox to display or hide the parameter from the chart.
4. **Delete:** click to delete the selected parameters from the chart.

# Tickets module

The Tickets module contains the tools to manage and follow up on corrective and preventive maintenance duties for plants. Tickets can be single or recurring. Recurring tickets are called "series".

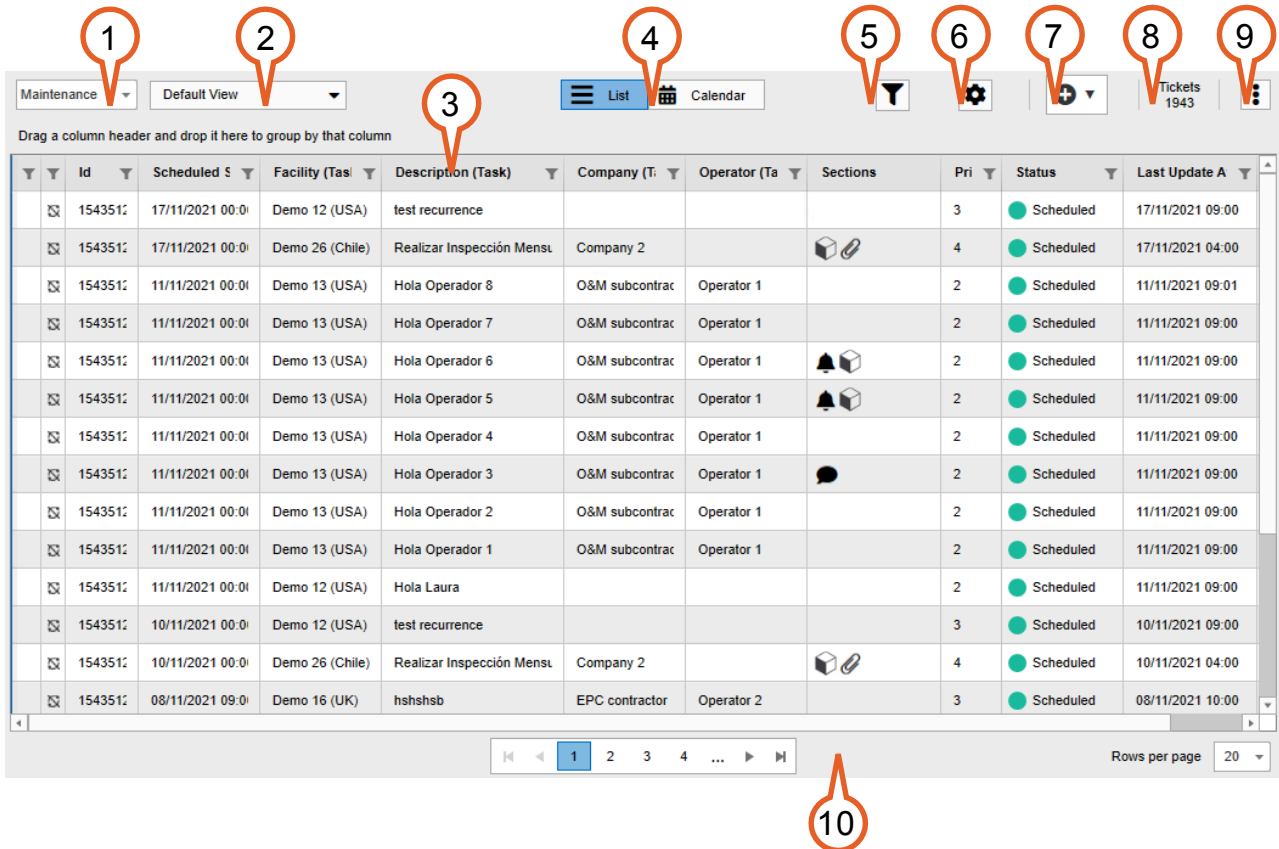
The tickets list displays detailed information for all the tickets currently in the system. You can display tickets in two modes: **List** or **Calendar**.

It is possible to configure custom views of the list, and you can also filter the tickets displayed in the view using different criteria and save the filter to reuse it as a default view. For more information, see the [tasks to configure the tickets module](#).

You can access the Context Menu for tickets by selecting one or more tickets and right-clicking on it. For more information, see [Tickets Context Menu](#) below.

**NOTE:** When you select multiple tickets, certain menu options are disabled or limited.







## Tickets module: List view



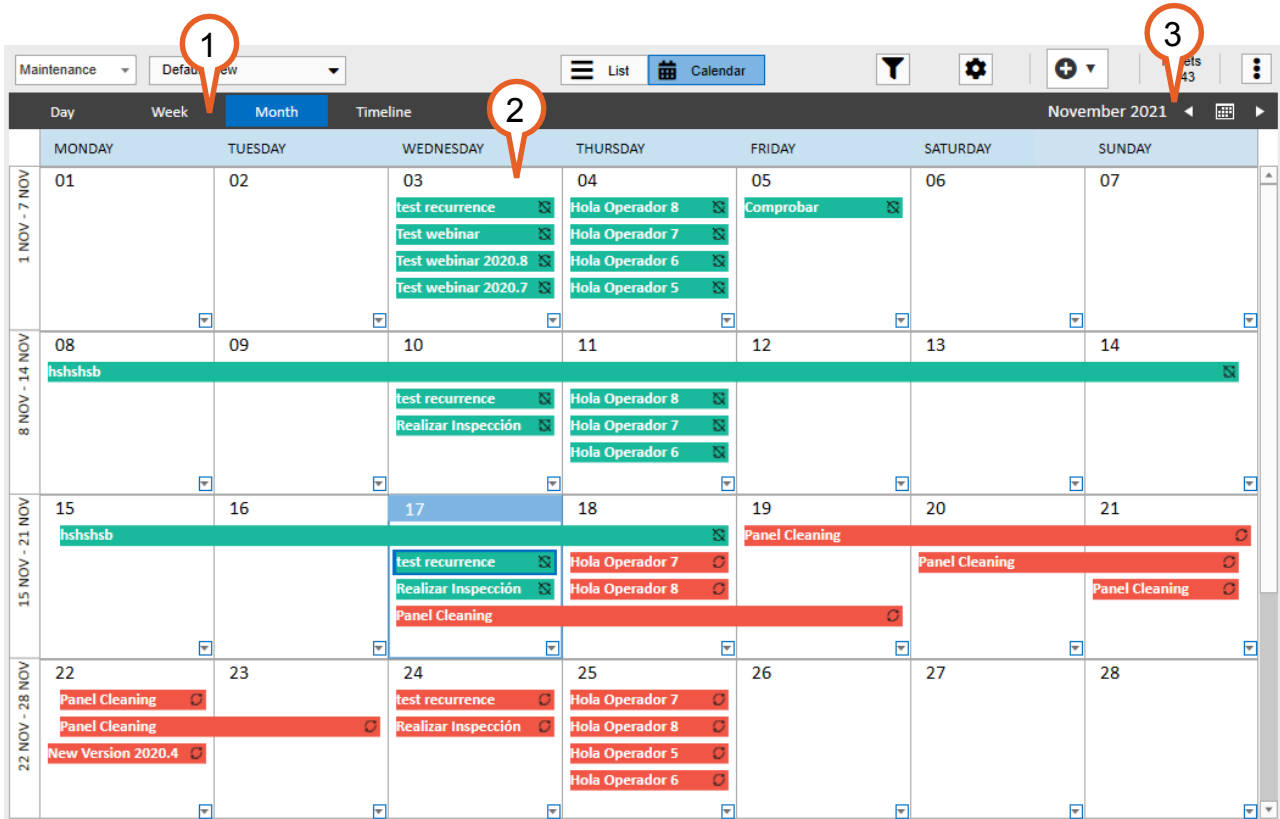
The screenshot shows the Tickets module List view interface. The interface includes a top navigation bar with a 'Maintenance' dropdown (1), a 'Default View' dropdown (2), and buttons for 'List' and 'Calendar' (4). A search filter icon (5), a settings gear icon (6), a refresh icon (7), and a 'Tickets 1943' indicator (8) are also present. A context menu icon (9) is located on the right. Below the navigation bar is a table with columns: Id, Scheduled S, Facility (Tas), Description (Task), Company (T), Operator (Ta), Sections, Pri, Status, and Last Update A. The table contains 15 rows of ticket data. At the bottom, there is a pagination control (10) showing page 1 of 4, and a 'Rows per page' dropdown set to 20.

Id	Scheduled S	Facility (Tas)	Description (Task)	Company (T)	Operator (Ta)	Sections	Pri	Status	Last Update A
154351	17/11/2021 00:00	Demo 12 (USA)	test recurrence				3	Scheduled	17/11/2021 09:00
154351	17/11/2021 00:00	Demo 26 (Chile)	Realizar Inspección Mensu	Company 2			4	Scheduled	17/11/2021 04:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 8	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:01
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 7	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 6	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 5	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 4	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 3	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 2	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 13 (USA)	Hola Operador 1	O&M subcontrac	Operator 1		2	Scheduled	11/11/2021 09:00
154351	11/11/2021 00:00	Demo 12 (USA)	Hola Laura				2	Scheduled	11/11/2021 09:00
154351	10/11/2021 00:00	Demo 12 (USA)	test recurrence				3	Scheduled	10/11/2021 09:00
154351	10/11/2021 00:00	Demo 26 (Chile)	Realizar Inspección Mensu	Company 2			4	Scheduled	10/11/2021 04:00
154351	08/11/2021 09:00	Demo 16 (UK)	hshshsb	EPC contractor	Operator 2		3	Scheduled	08/11/2021 10:00

- Ticket selector:** select the type of ticket to display in the Ticket List (for example, "Maintenance").

- 
2. **Available views:** select a view from the drop-down list to display the tickets that match it. You can also save the current filtering criteria as a new view. For more information about creating new views or editing existing views, see the [instructions to configure the tickets module](#).
  3. Tickets list: double-click a ticket to open the Edit Ticket dialog. Right-click a ticket to open the context menu and perform quick changes to the ticket. For further information, see [Context Menu](#).  
Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. Click the  icon on any column header for advanced filtering. For further information, see [Advanced Filters](#).
  4. View mode: switch between view modes.
  5. Advanced filter: click the  icon to expand or collapse the filtering options and refine filtering criteria. For further information, see [Tickets Module Filtering Options](#).
  6. Display settings: click to customize the columns displayed on the work order grid. You can add or remove columns, rearrange them, or customize the column header text. For more information, see the [instructions to configure the tickets module](#).
  7. New ticket: click and select a ticket type to [create a new ticket](#).
  8. Ticket count: displays the total count of the tickets on the table.
  9. Options: click to display the available options:
    -  Export data: export the tickets currently displayed on the list to a file in Microsoft Excel format. For further information, see [Export data to file](#).
    -  History: display the history of the selected ticket.
    -  Export template: download the ticket template to create tickets in bulk using your spreadsheet editor.
-  **NOTE:** This action requires the administrator password.
10. Pagination: define the number of tickets to display on each page and browse the pages using the arrows.
-

## Tickets module: Calendar view



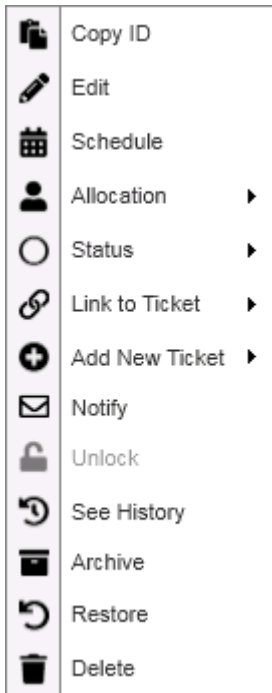
The screenshot displays the 'Tickets module: Calendar view' interface. The calendar is set to November 2021. The interface includes a top navigation bar with 'Maintenance' and 'Default view' dropdowns, a 'List' button, and a 'Calendar' button. The calendar grid shows tickets for various dates, including 'test recurrence', 'Realizar Inspección', 'Panel Cleaning', and 'New Version 2020.4'. Three callouts are present: 1. A range selector (1) pointing to the date range '1 NOV - 7 NOV'. 2. A double-click icon (2) pointing to a ticket on Wednesday, Nov 3. 3. A date selector (3) pointing to the month/year 'November 2021'.

1. Range selector: select the calendar date range or display tickets as a **Timeline**.
2. Calendar: double-click a ticket to edit it.
3. Date selector: browse to the previous or next period.

## Context menu

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### Context menu



Option	Description
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<b>Copy ID</b>	Click to copy the ticket ID.
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This option is only available when you select a ticket that is not in a series.

<b>Edit</b>	Click to edit the ticket. You can only edit one ticket at a time from the UI. It is possible to edit tickets from the same template in bulk. To do this, you must export them as an XLS file, edit the values and import the modified file. For further information, see <a href="#">Export Data to File and Import File</a> .
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<b>Schedule</b>	Click to change the scheduled start and scheduled end of the task inside a ticket.  This option is only available when you select one or more non-recurring tickets.
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<b>Allocation</b>	Assign the ticket to another operator.
-------------------	--

This option is only available when you select one or more non-recurring tickets.

**Status**

Change the status of the selected tickets.

This option is only available when you select one or more non-recurring tickets.

**Link to Ticket**

Select a relational link between a single ticket and another ticket. For further information, see [Link a Ticket to Another Ticket](#).

**Add New Ticket**

Create a new ticket with a relational link from a single ticket. For further information, see [Create a New Ticket from an Existing Ticket](#).

**Notify**

Click to open the **Notification Settings** dialog and send an email notification regarding the selected ticket.

This option is only available when you select one or more non-recurring tickets.

When multiple non-recurring tickets are selected, you can only send a notification without customizing the content.

**Unlock**

Click to force the unlocking of a ticket that was locked from the Offline App.

**NOTE:** The unlock functionality is available depending on your GPM Plusconfiguration.

**See History**

Click to see the history of changes to the selected non-recurring ticket or tickets.

**Archive**

Click to archive the selected ticket. Archiving is useful when a ticket is currently not required but may need to be restored or viewed later. For further information on how to archive tickets, see [Archive a Ticket](#).

Archived tickets are hidden from the ticket list, but you can display them by enabling the **Archived** toggle in the filtering options panel. For further information on the available filtering options, see [Tickets Module Filtering Options](#).




**Restore** Click to restore the selected tickets. This button is only available for archived tickets. For further information on how to restore tickets, see [Restore Archived Ticket](#).

**Delete** Click to delete the selected tickets. Deleting is only possible after a ticket is archived and permanently removes the ticket from the application. For further information on how to restore tickets, see [Delete Ticket](#).

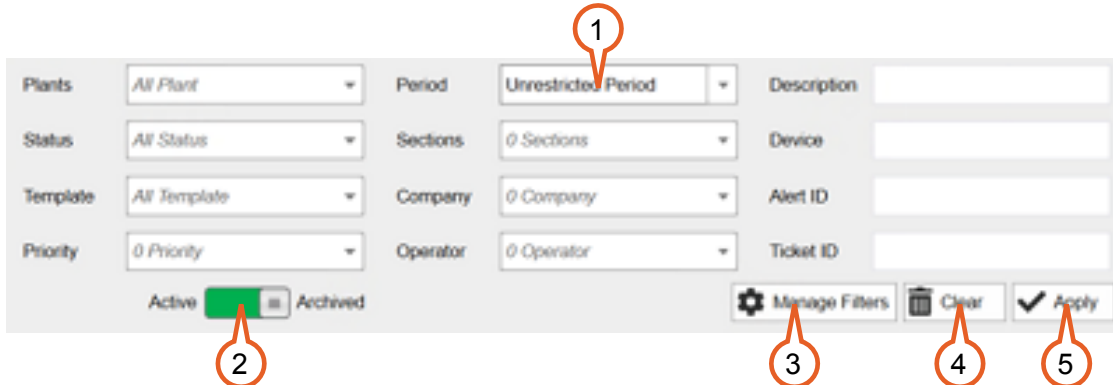
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## Filtering options

The Tickets module has additional filtering options located in a panel that you can access by clicking the  icon in the upper-right area of the user interface. This section lists the filtering options available by default in the Tickets module.

After selecting the filtering criteria, click **Apply** to display the relevant tickets in the ticket list.

### Filtering options



1. **Fields:** click to select the filtering criteria from the drop-down menus.
2. **Active/Archived:** toggle between active or archived tickets.
3. **Manage filters:** click to add or remove custom filtering criteria from the filtering options.
4. **Clear:** click to clear the filtering criteria and display all available tickets on the list.
5. **Apply:** click to apply the filtering criteria and display the relevant tickets on the list.

Field	Description
<b>Plants</b>	Filter by the plant to which the tickets belong.
<b>Status</b>	Filter tickets by their status.
<b>Template</b>	Filter tickets by their template.
<b>Priority</b>	Filter tickets by their priority.
<b>Period</b>	Filter tickets by period. The period is calculated from the Scheduled Start time stamp.  The case-sensitive toggle is not available when you are filtering numerical values.

<b>Sections</b>	Filter tickets by the presence of specific ticket sections.
<b>Company</b>	Filter tickets by the company to which they belong.
<b>Operator</b>	Filter tickets by the operator assigned to them.
<b>Description</b>	Filter tickets by the content of their descriptions.
<b>Device</b>	Filter tickets by the name of their linked devices. You can enter multiple device names, separated by a comma or enter some text between two "%" symbols to use partial matching. For example, "%ren%" is a partial match for the term "renewable".
<b>Alarm ID</b>	Filter tickets by the ID of the alarms linked to them.
<b>Ticket ID</b>	Filter tickets by their Ticket ID. You can enter multiple Ticket IDs, separated by a comma.

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## Configure the Tickets module

You can perform several tasks to configure the views of the tickets table in the Tickets module:

- Create a new view of the tickets table.
- Edit existing views:

**NOTE:** You can only edit views that you have created yourself.

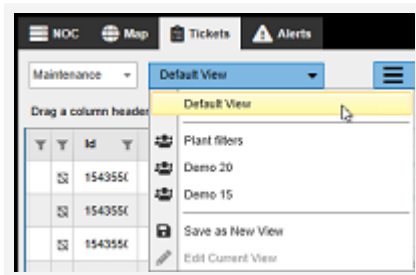
- Edit settings.
- Edit filters.
- Edit columns.

## Create new views for the Tickets list

To create a new view for the Tickets list, follow these steps:

- 1 In the Tickets module, click the drop-down menu of available views and select the **Default View**.

### Available views menu

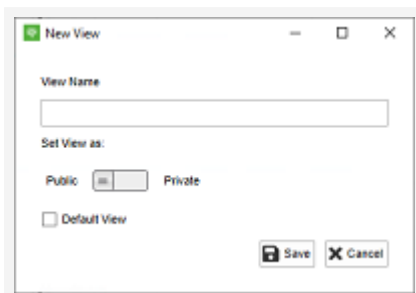


- 2 Click the drop-down menu of available views and select **Save as new view**.


**Result:** The **New view** dialog appears:

**NOTE:** The new view inherits the filters and settings of the view you selected in Step 1. If you select a view other than the Default view, the filters and settings will match those of the selected view.

### New view dialog

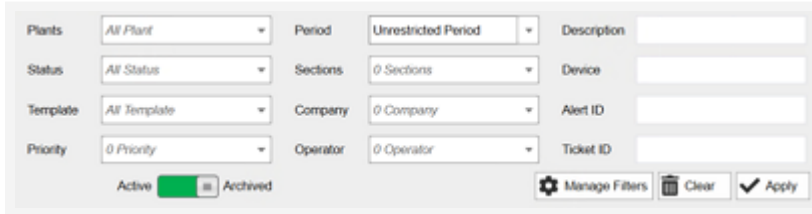


- 3 Enter the *View name*.
- 4 (Optional) Toggle on **Private** to make the view available only to your user account.
- 5 (Optional) Check the **Default view checkbox** to set this as the default view when you open the Tickets module.
- 6 Click **Save**.

- 7 Click the  icon.

**Result:** The filtering options appear:

### Filtering options

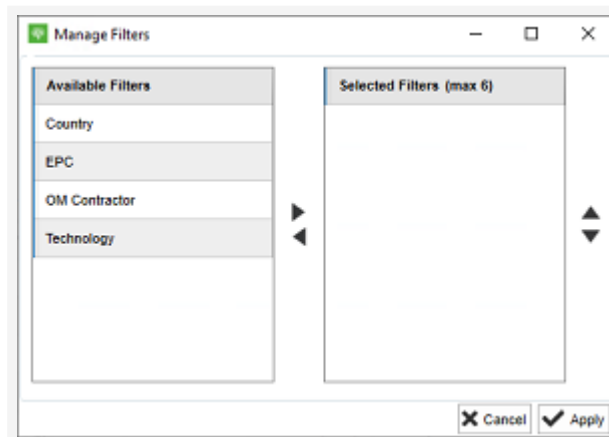






**NOTE:** For detailed information, see the [section on filtering options](#).

- 8 (Optional) Click **Manage filters** to open a dialog to see more available filters:


### Manage filters dialog

**NOTE:** The available filters depend on your product configuration.



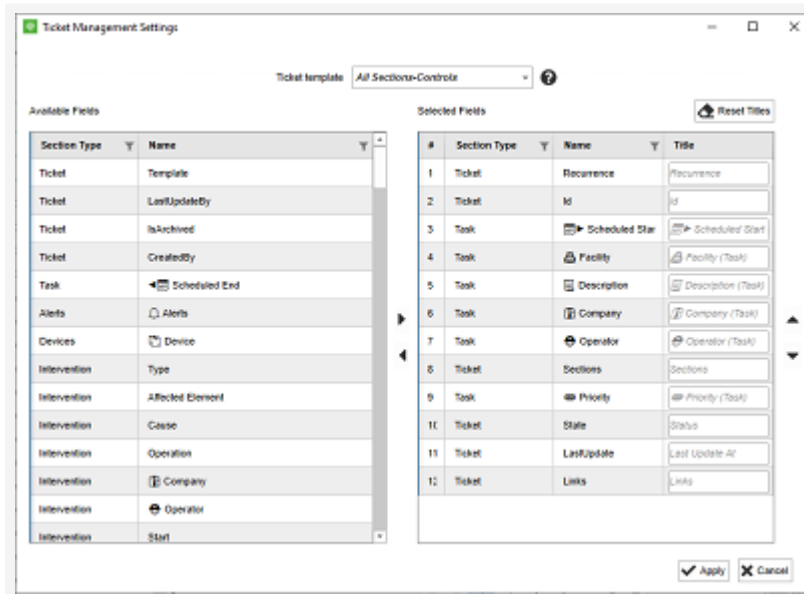
- a Select a filter from the **Available filters** panel and click the  icon to move it to the **Selected filters** panel.
- b (Optional). To change the order of the selected filters, in the **Selected filters** panel, select a filter and click the  icon to move it up, or the  icon to move it down.
- c Click  **Apply**.

**Result:** The selected filters appear in the **Filtering options**.

- 9 Click the  icon.

**Result:** The **Ticket management settings** dialog opens.

### Ticket management settings dialog



**10** Configure the columns for the Tickets table:

- a** In the **Available fields** panel, select the columns you want to display on the Tickets table and click the ► icon to move them to the **Selected fields** panel.

**?** **TIP:** Hold CTRL to select multiple options at once.

- b** (Optional). To change the order of the selected filters, in the **Selected filters** panel, select a filter and click the ▲ icon to move it up, or the ▼ icon to move it down.

- c** Click ✓ **Apply**.

**Result:** The changes are applied and the table displays the selected columns in the order you defined.

**11** Click the drop-down menu of available views and select **Edit current view**.

**Result:** The Edit view dialog appears:

### Edit view dialog



12 Click  **Save**.

### Result

The new view is saved and added to the list of available views.





## Edit settings for existing views of the Tickets list

To edit the settings for an existing view of the Tickets list, follow these steps:

- 1 In the Tickets module, click the drop-down menu of available views and select the view you want to edit.
  - 2 Click the drop-down menu of available views and select **Edit current view**.
- Result:** The Edit view dialog appears:

### Edit view dialog



- 3 (Optional) In the *View name field*, enter a new name for the view.
- 4 (Optional) To make the view available to all users, toggle on **Public**.  
Or: To make the view available only to your own user account, toggle on **Private**.
- 5 (Optional) Check the **Default view checkbox** to make this the default view when you open the Tickets module.  
Or: Uncheck the **Default view checkbox** if you do not want this to be the default view when you open the Tickets module.
- 6 Click  **Save**.


## Result

The settings are saved and applied to the view.

## Edit filters for existing views in the Tickets list

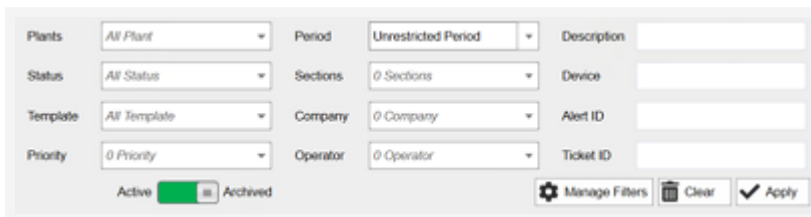
To edit the filters for an existing view in the Tickets list, follow these steps:


- 1 In the Tickets module, click the drop-down menu of available views and select the view you want to edit.

- 2 Click the  icon.

**Result:** The filtering options appear:


### Filtering options

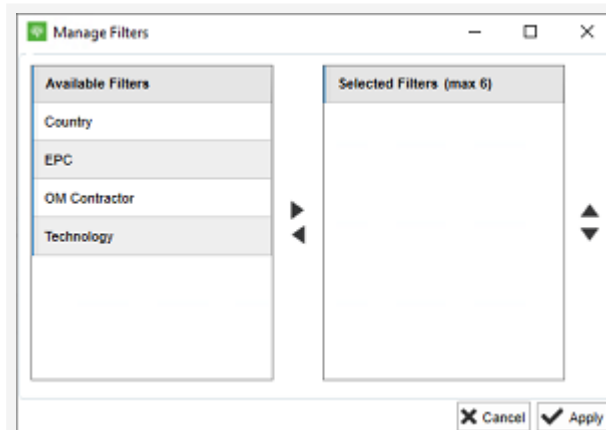



 **NOTE:** For detailed information, see the [section on filtering options](#).

- 3 (Optional) Click **Manage filters** to open a dialog to see more available filters:

### Manage filters dialog

 **NOTE:** The available filters depend on your product configuration.



- a Select a filter from the **Available filters** panel and click the  icon to move it to the **Selected filters** panel.
- b (Optional). To change the order of the selected filters, in the **Selected filters**

panel, select a filter and click the ▲ icon to move it up, or the ▼ icon to move it down.

c Click ✓ **Apply**.

**Result:** The selected filters appear in the **Filtering options**.

4 Select the filters you want to apply to the list:

a Open the **Plants** drop-down menu and select one or more plants from which you want to see tickets.

b Open the **Status** drop-down menu and select one or more statuses (for example, **Open**).

c Open the **Template** drop-down menu and select one or more templates.

d Open the **Priority** drop-down menu and select one or more levels of priority (for example, **High**).

e Open the **Period** drop-down menu and select a time period (for example, **Current week**).

f Open the **Sections** drop-down menu and select one or more sections of the tickets that must be filled in (for example, **Note**).

g Open the **Company** drop-down menu and select one or more companies to which the tickets have been assigned.

h Open the **Operator** drop-down menu and select one or more operators to which the tickets have been assigned.

i Enter a *Description* to display only tickets that match that description.

j Enter a *Device* name to display only tickets that contain the specified device (for example, "Inverter" or "Generator").

k Enter an *Alarm ID* to display only tickets linked to the specified alarm.

l Enter a *Ticket ID* to display only tickets linked to the specified ticket.


m Toggle on **Active** to display only active tickets.

Or: Toggle on **Archived** to include tickets that have been archived.

n In the **Order by** section, select whether to order the list by **Last update** (chronological) or by **Ticket ID** (numerical).

5 Click ✓ **Apply**.

**Result:** The filters are applied and the Tickets table displays the updated list.

① **NOTE:** You can click  **Clear** at any moment to remove all the selected filters and revert back to the Default template.

- 6 Click the drop-down menu of available views and select **Edit current view**.

**Result:** The Edit view dialog appears:

### Edit view dialog




- 7 Click  **Save**.

### Result

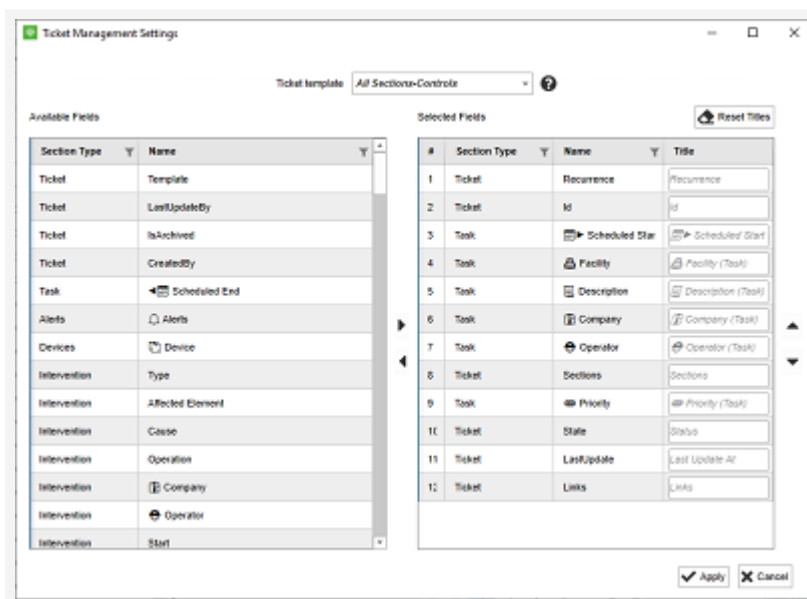
The changes are saved.


## Edit columns for existing views in the Tickets list

To edit the columns for an existing view in the Tickets list, follow these steps:




- 1 In the Tickets module, click the drop-down menu of available views and select the view you want to edit.
  - 2 Click the  icon.
- Result:** The **Ticket management settings** dialog opens.

### Ticket management settings dialog



- 3 Configure the columns for the Tickets table:
  - a In the **Available fields** panel, select the columns you want to display on the Tickets table and click the  icon to move them to the **Selected fields** panel.

 **TIP:** Hold CTRL to select multiple options at once.

- b (Optional). To change the order of the selected filters, in the **Selected filters** panel, select a filter and click the  icon to move it up, or the  icon to move it down.
- c Click  **Apply**.

**Result:** The changes are applied and the table displays the selected columns in the order you defined.

- 4 Click the drop-down menu of available views and select **Edit current view**.

**Result:** The Edit view dialog appears:

### Edit view dialog



5 Click  **Save**.


### Result

The changes are saved.

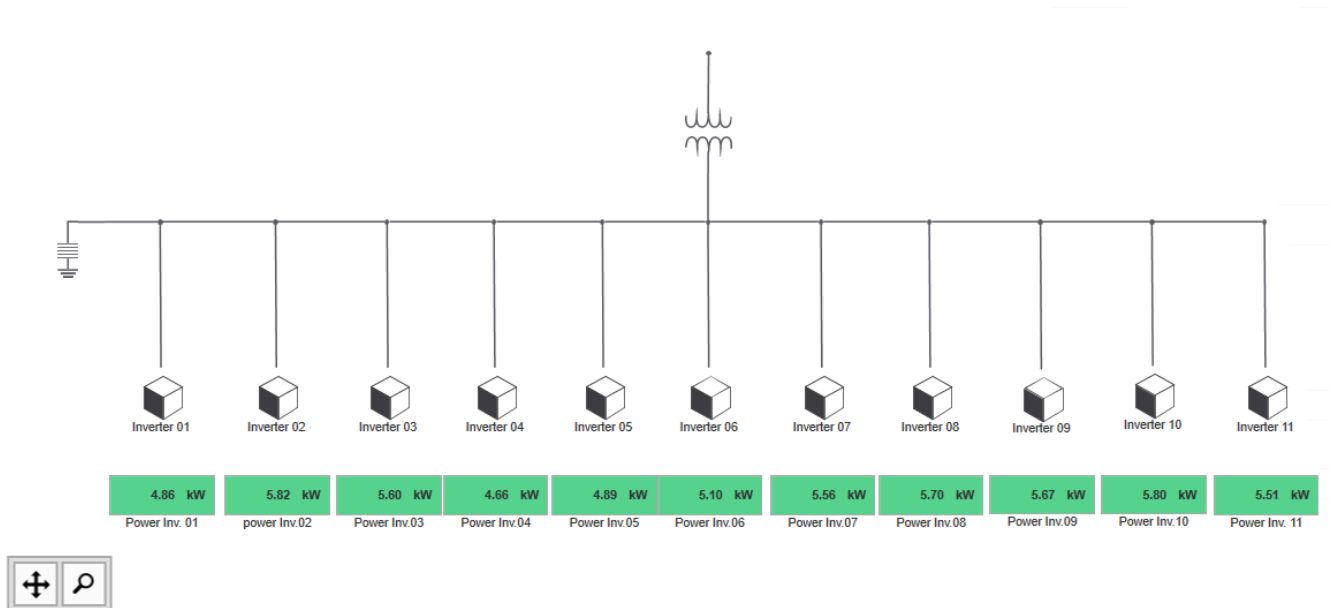
## Vectorial Layout module

The Vectorial Layout module provides you with a multi-layered, custom vectorial schema to help you understand a plant's structure, its relationships, and the status of its elements. Within the Vectorial Layout, you can also send pre-defined commands to the hardware devices in your plant.

Access the module by clicking the  **Vectorial** tab in the upper area of the screen.

 **NOTE:** To customize your Vectorial Layout, contact your GPM representative.

## Vectorial layout




## Navigate the Vectorial Layout



### Action Description

**Mouse scroll** Use the scroll wheel on your mouse to zoom in and out of the Vectorial Layout. To zoom in, scroll up. To zoom out, scroll down.

**Drag and drop** Click and hold on a point of the layout, then drag it anywhere to move around the interface.

**Single click** Click on elements of the Vectorial Layout to interact with them. For further information, [see the reference below](#).

**Auto-fit** Click the  icon at the bottom-left of the Vectorial Layout to automatically resize it and fit the screen.





**Zoom** Click the  icon at the bottom-left of the Vectorial Layout to set the zoom manually and preview the area being zoomed. Click the  icon to close the zoom dialog.









## Vectorial Layout elements

You can interact with some elements of the Vectorial Layout. This reference lists the elements with which you can interact.

**NOTE:** The background, element and icon colors in your vectorial layout are customizable. Contact your GPM representative if you want to customize them.














Element	Name	Description
	Alarm Counter	<p>Counts the number of specific alarms for a specific set of devices.</p> <p>It is possible to set limits for the counter, so that its color changes from white to red when alarms exceed the configured number.</p> <p>When the alarms exceed the configured number and the counter turns red, you can click the box to display related alarms in the Alarms module.</p>
	Command	<p>Click to execute a command or a metacommand on one or more devices. If the command is configured to be executed on multiple devices, you can select the devices to which the command must be sent in the pop-up window.</p> <p>For more information, see <a href="#">Send a Command Sequence from the Vectorial Layout</a>.</p>
	Connection point	Displays the layout nodes.
	Data	<p>Displays information that is retrieved from a parameter and is automatically refreshed at regular intervals.</p> <p>The box icon can be customized and up to three statuses can be set on every box. For example, the color can be set to change when a certain condition is met.</p> <p>Click a data box to display the values in the <a href="#">Linear Chart Viewer module</a>.</p>

	Element	Represents a physical device that is communicating with the application. If there is an active alarm on the element, an alarm icon is displayed next to it. Click an element to display further information in its relevant section.
	Icon	A static visual reference to a physical device in your plant. For further information, see <a href="#">Send a Command Sequence from the Vectorial Layout</a> .
	Label	A text label used to identify elements.
	Line	Connects various physical or virtual elements in your setup. Lines can be assigned custom color-coding that changes when a specific condition is met.
	Link	Links the current layer to other layers in the layout. Click it to display the linked layer.
	Switch	Switches are elements that behave as a data box. This means that they can have values that change over time.

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## Vectorial icons

The application uses a default set of icons to identify specific device or element types in the Vectorial Layout.

Icon	Name
	Breaker
	Circuit breaker
	Current transformer
	Earth ground
	Fuse
	Generator
	Medium
	Meter
	Potential transformer
	Surge arrestor
	Transformer
	Transformer Type X
	Three-winding transformer

## Configuring data objects and connection objects

You can configure data objects and connection objects using an [XLSX template](#) or the corresponding configuration window [in the grid](#).

**NOTE:** A **data object** is an element used to monitor a datasource value of a device, while a **connection object** is a line used to connect several objects.



## Configuring data objects and connection objects using the XLSX template

|

- **SourceType:** Set the type of source the layer must use. You can enter one of the following options:
  - **Datasource:** It defines the type of source required in the *DatasourceId* column. When configuring a Monitored DS or Custom DS, you must provide a specific value for the *DatasourceId*. Additionally, you need to fill in the *ElementId* field in both cases.
  - **ElementParameter:** It indicates that the configuration of the object is determined by the *ElementParameterId* field. You must set a specific value for the element parameter during setup (parametrization).
- **DataSourceComponentId**

**NOTE:** This column can only be used in GPM Plus. Do not configure it as it will not display any data.

This is an example of how to configure layer settings for data and connection objects using the XSLX template:

Item	SourceType	ElementId	ElementParameterId	DatasourceId
DataElement PARAMETER	ElementParameter	247	76	0
DataElement MONITORED DATASOURCE	Datasource	247	76	0
DataElement CUSTOM DATASOURCE	Datasource	0		20941

## Configuring data objects and connection objects in the grid

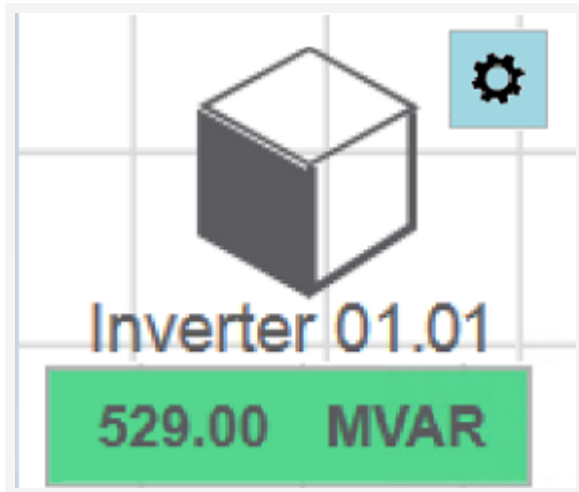
You can configure data objects and connection objects using the corresponding configuration window. You have to choose the desired element in the plant and assign to it parameters.

## Configuring data objects in the grid

You can configure data objects using the corresponding configuration window. To configure data objects, follow these steps:

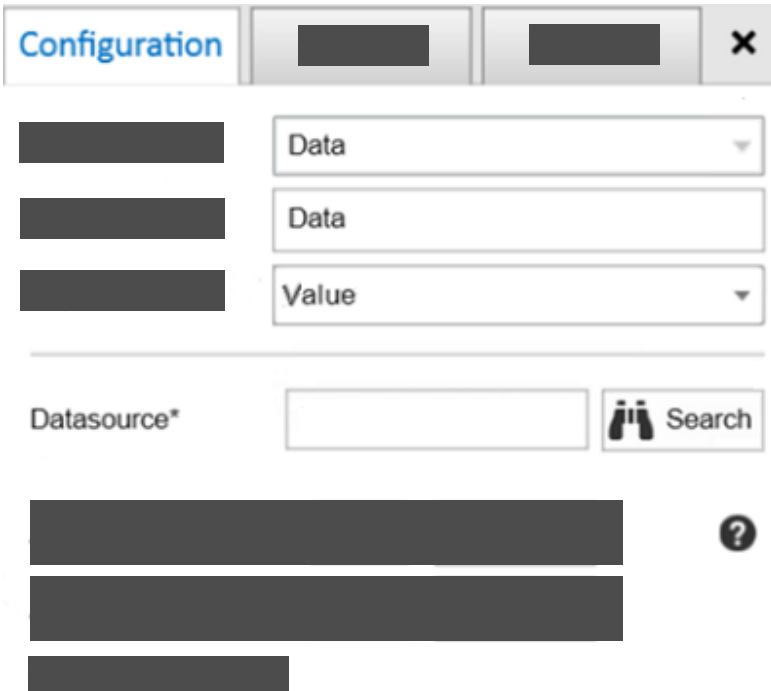
- 1 Click on the configuration button for the required data object.

### Data object configuration



- 2 In the configuration screen, go to the *Datasource* field and click the Search button.

### New Datasource field



Configuration [Redacted] [Redacted] X

[Redacted] Data

[Redacted] Data

[Redacted] Value

---

Datasource\* [Redacted] Search

[Redacted] ?

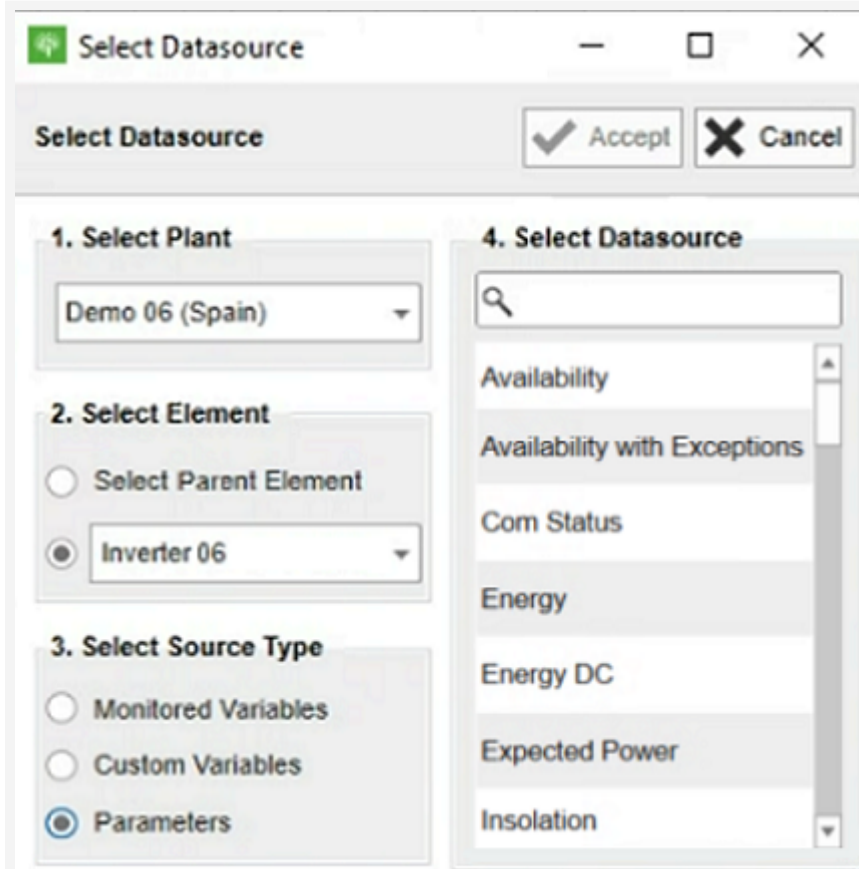
[Redacted]

[Redacted]

- 3 In the Select Datasource window, do the following:

- 2. Select Element: select the element in the plant to which you want to assign parameters.
- 3. Select Source Type: select **Parameters**. The list of available parameters will then be displayed.
- 4. Select Datasource: choose the required parameter.

### Select Datasource



**Select Datasource**

Accept Cancel

**1. Select Plant**

Demo 06 (Spain)

**2. Select Element**

Select Parent Element

Inverter 06

**3. Select Source Type**

Monitored Variables

Custom Variables

Parameters

**4. Select Datasource**

Availability

Availability with Exceptions

Com Status

Energy

Energy DC

Expected Power

Insolation

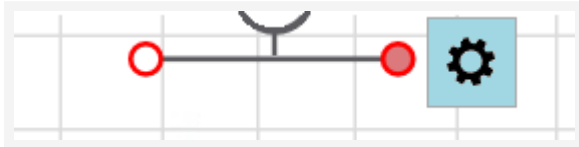


## Configuring connection objects in the grid

You can configure connection objects using the corresponding configuration window. To configure connection objects, follow these steps:

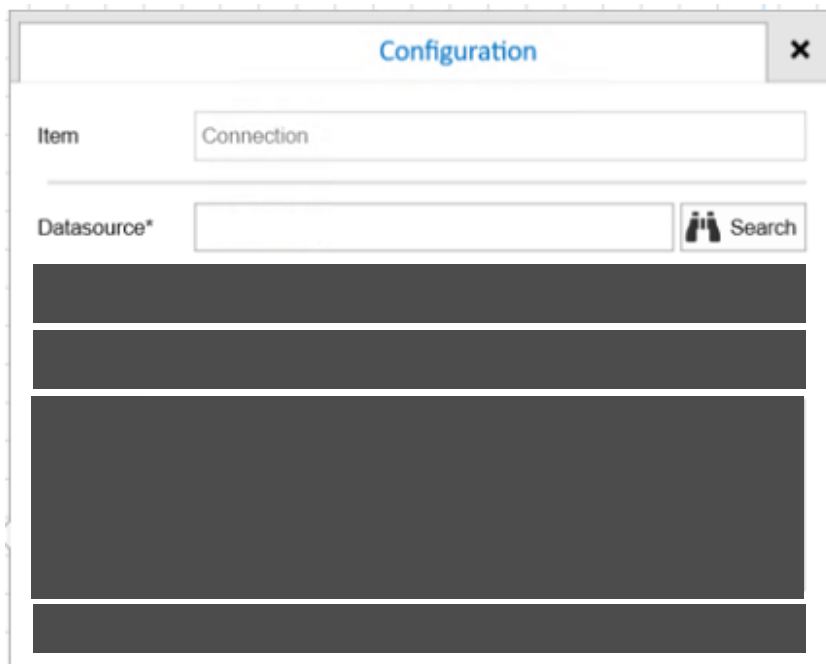
- 1 Click on the configuration button for the required connection object.

### New Datasource field



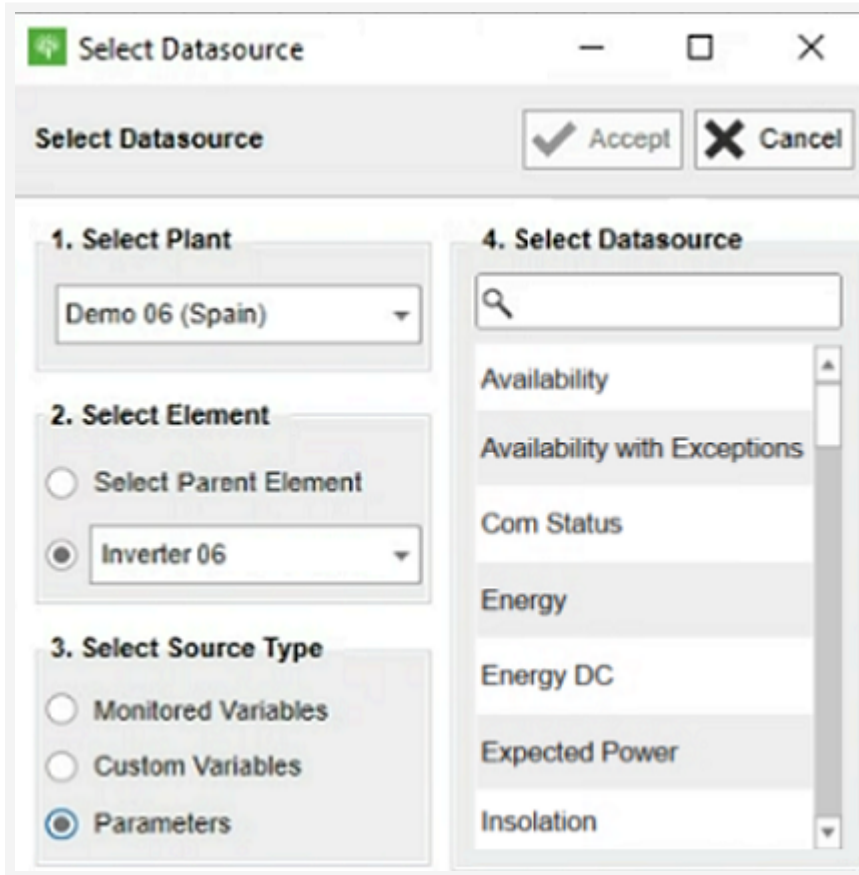
- 2 In the configuration screen, go to the *Datasource* field and click the Search button.

### New Datasource field



- 3 In the Select Datasource window, do the following:

## Select Datasource



The screenshot shows a dialog box titled "Select Datasource" with the following sections:

- 1. Select Plant:** A dropdown menu showing "Demo 06 (Spain)".
- 2. Select Element:** Radio buttons for "Select Parent Element" and "Inverter 06".
- 3. Select Source Type:** Radio buttons for "Monitored Variables", "Custom Variables", and "Parameters".
- 4. Select Datasource:** A search bar and a list of parameters: Availability, Availability with Exceptions, Com Status, Energy, Energy DC, Expected Power, and Insolation.

2. Select Element: select the element in the plant to which you want to assign parameters.

3. Select Source Type: select **Parameters**. The list of available parameters will then be displayed.

4. Select Datasource: choose the required parameter.

5

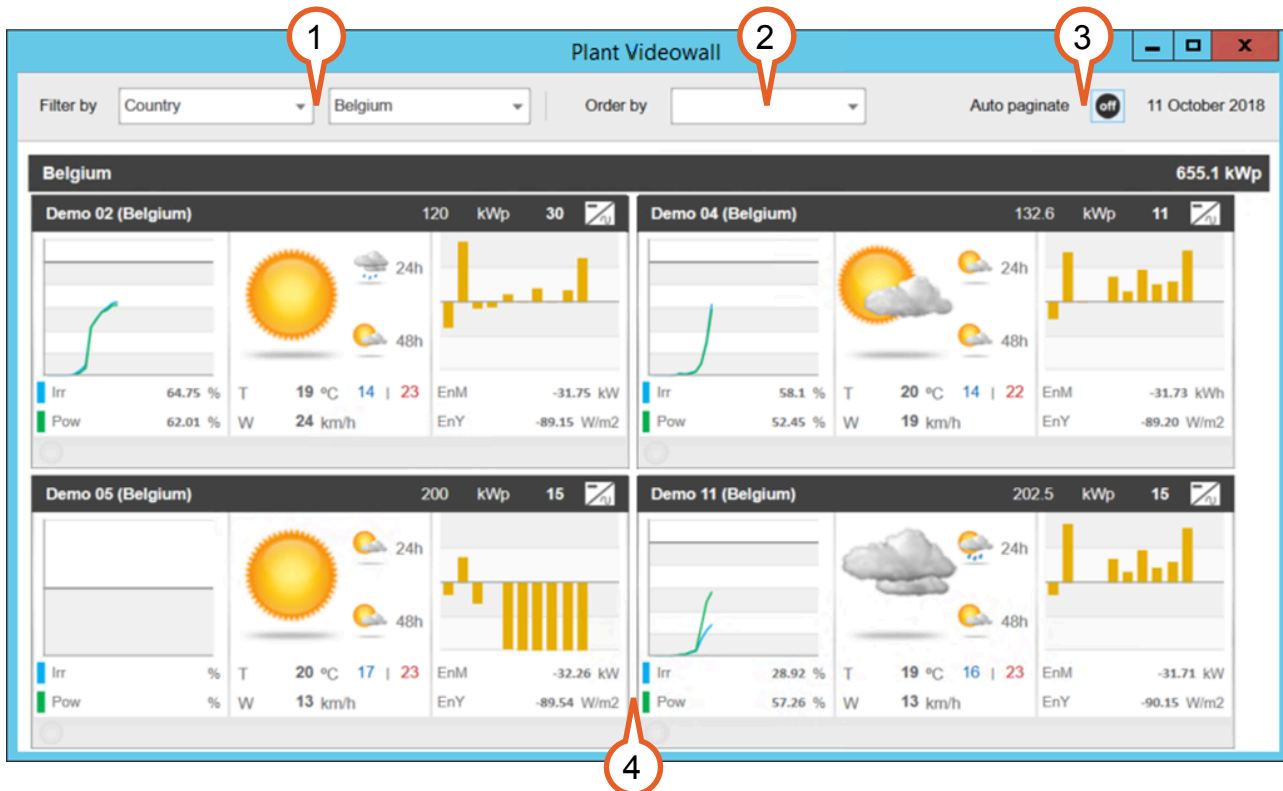
## Result

# Videowall

The Videowall module offers a general portfolio overview for monitors mounted on walls. Videowall displays the most up-to-date content and automatically adapts to the window size. You can customize the module to display the most relevant productive parameters, the weather conditions, and the accumulated tendency.

To access the Videowall module, click the  icon on the Upper bar, then click the  icon.

## Videowall

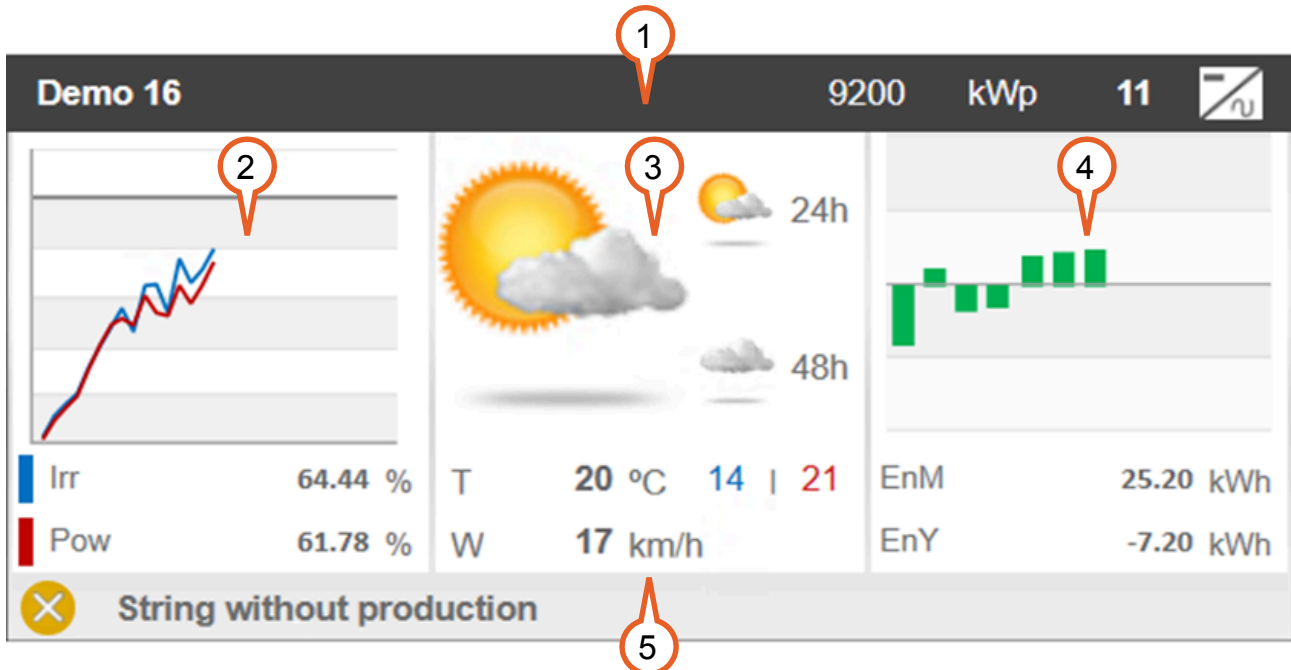


- Filter:** click to filter plants by selecting a criterion and a value from the drop-down lists
- Order by:** click to sort panels by name or by peak power.
- Auto-pagination:** click to switch on or off:
  - **On:** the page scrolls automatically to display all the cards.
  - **Off:** you must scroll the page manually to display cards that do not fit in the window.
- Cards:** display each plant as a card, sorted alphabetically.

## Videowall cards

The cards in the Videowall consist of three panels. Each panel provides general information about the plant, instant values, weather conditions, accumulated values, and the most relevant alarm for the plant.

### Videowall card



1. Upper ribbon: displays the plant name, the peak power in kWp, and the number of installed solar trackers and inverters.
2. Real-time chart: monitors the evolution of two predefined parameters in real time. For the best graphic output, we recommend using parameters expressed as percentages
3. Weather: displays the current weather and the forecast for the following two days. Displays the current, minimum and maximum temperature, and the wind speed. The information is displayed based on the plant coordinates and is retrieved from an external provider, so that you can compare third-party information with the data from the plant sensor.
4. Accumulated values: provides a quick summary of a KPI by comparing a budget value and a real value. Data is provided as a chart and as a value list
5. Lower ribbon: displays the most relevant alarm for the plant, if any.

# Outages

Outages allow you to plan the exclusion of a period from the budget calculations. This lets the system account for future production downtimes caused by external events (such as maintenance), issues, or electrical network requests.

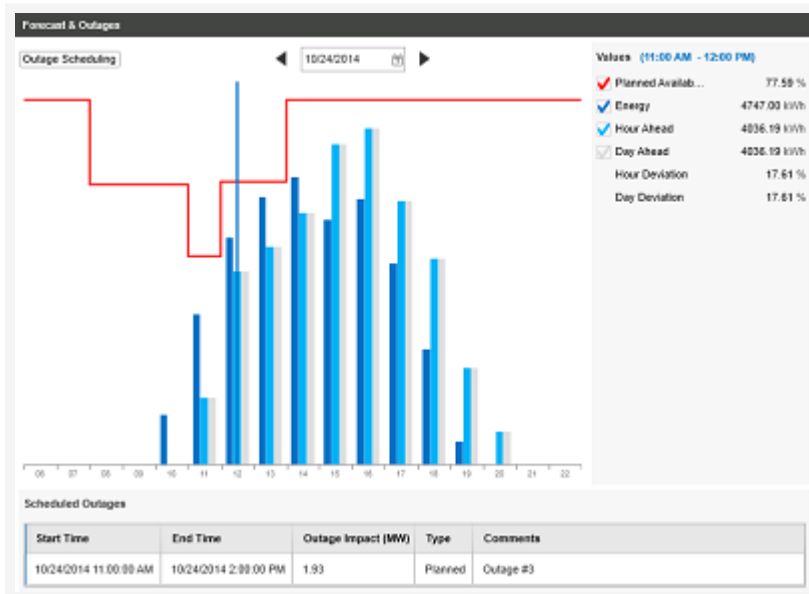
You can schedule an outage in the [Forecast & Outages panel](#) of the [Plant Dashboard module](#).

# Schedule an outage

To schedule an outage, follow these steps:

- 1 Open the Plant Dashboard module and expand the Forecast & Outages panel.

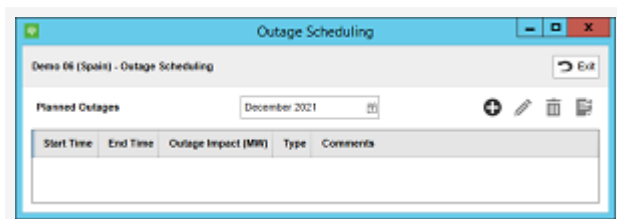
## Forecast & Outages panel



- 2 Click Outage Scheduling.

**Result:** The **Outage Scheduling** dialog appears:

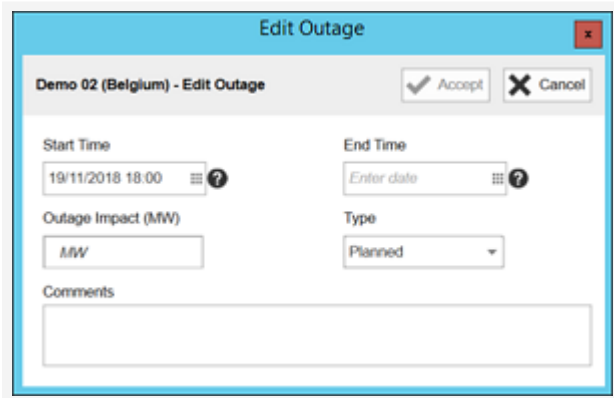
## Outage Scheduling dialog



- 3 Click the **+** icon.

**Result:** The **Edit Outage** dialog appears:

### Edit Outage dialog



- 4 Enter the information for the outage:
  - a **Start time:** select the date and time at which the outage starts.
  - b **End time:** select the date and time at which the outage ends.
  - c *Outage impact:* enter the impact of the outage Megawatts (MW).
  - d Type: select the type of outage from the drop-down list.
    - **Planned**
    - **Unplanned**
    - **Disabled**
  - e Comments: enter any comments you think necessary.
- 5 Click **Accept**.

## Result

The outage is scheduled.



# Permissions

The GPM permissions system allows you to restrict the access that different users have to specific entities (parameters, datasources, descriptions and alarms) by applying tags to specific user roles.

For example, you can make "maintenance" alarms and tickets accessible to everyone, while keeping "operations" alarms and tickets accessible only to operations and management (O&R) users.

You can manage permissions and tags in the Permissions module.

## Tags

A tag is an attribute that links specific entities to user roles. Once you apply a tag to an entity, it becomes exclusive: only users with the same tag have access to it.

# Manage permissions

Permissions work by using tags to link roles and the entities to which they have access. When you assign a tag to an entity, it becomes accessible only to the user roles which also have the tag assigned to them.

① **NOTE:** All the tasks related to managing permissions take place in the Permissions module.

## Create and assign permissions

The basic process to create and assign permissions consists of three steps:

1. Create tag.
2. Add entities to the tag:
  - Alarms
  - Datasources
  - Descriptions
  - Parameters
3. Assign the tag to a user role.

## Tag management tasks

There are several tasks to manage tags:

- Create new tags.
- Edit existing tags by modifying the entities in them:
  - Add alarms
  - Add datasources
  - Add descriptions
  - Add parameters
  - Delete entities
- Copy tags to easily create new tags based on existing ones.
- Delete tags.

## Access management tasks

There are two main tasks to manage access:

- Assign a tag to a user role.
- Unassign a tag from a user role.

# Create tags

To create tags for permissions, follow these steps:

- 1 In the Manage tags tab of the Permissions module, click **+ Add**.

**Result:** The Tag Management dialog appears:

## Tag management dialog



Entity type	Entity name	Entity ID
-------------	-------------	-----------

- 2 In the Tag management dialog, enter a *Unique tag name*.
- 3 Click **Save**.

## Result

The tag is created and you can add entities to it:

- Add alarms
- Add datasources
- Add descriptions
- Add parameters

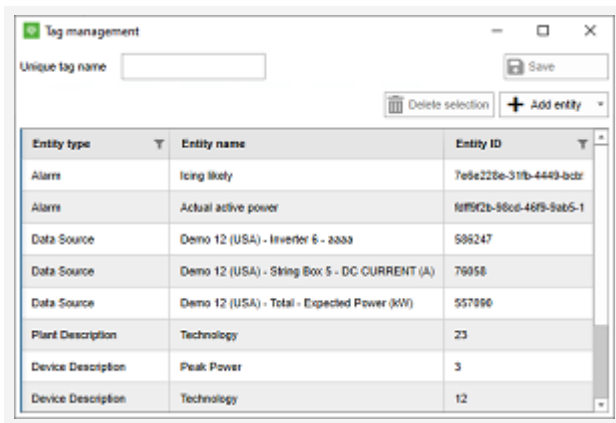
# Copy tags


To copy a tag, follow these steps:

- 1 In the Manage tags tab of the Permissions module, click  **Copy**.

**Result:** The Tag Management dialog appears:

## Tag management dialog



- 2 Enter a *Unique tag name*.
- 3 Click  **Save**.

## Result

The tag is copied and you can edit it:

- Delete entities from tags
- Add entities to tags:
  - Alarms
  - Datasources
  - Descriptions
  - Parameters

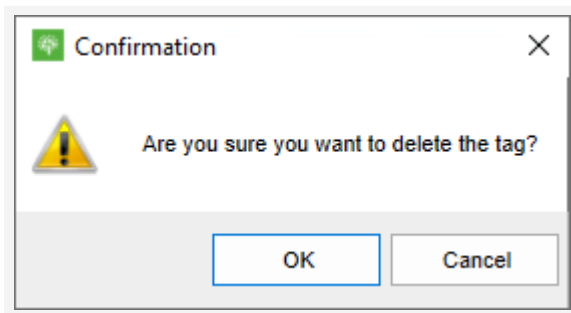
# Delete tags

To delete a tag, follow these steps:

- 1 In the Manage tags tab of the Permissions module, select the tag and click **Delete**.

**Result:** A confirmation message appears:

## Confirmation dialog




- 2 Click **OK**.

## Result

The tag is deleted.


# Add alarms to tags

To add alarms to a tag, follow these steps:

- 1 In the Manage tags tab of the Permissions module, select a tag and click  **Edit**.

**Result:** The Tag Management dialog appears:

## Tag management dialog

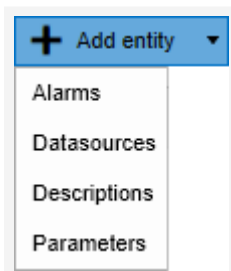


Entity type	Entity name	Entity ID
-------------	-------------	-----------

- 2 Click **+ Add entity**.

**Result:** The **Entities** drop-down menu appears.

## Entities menu

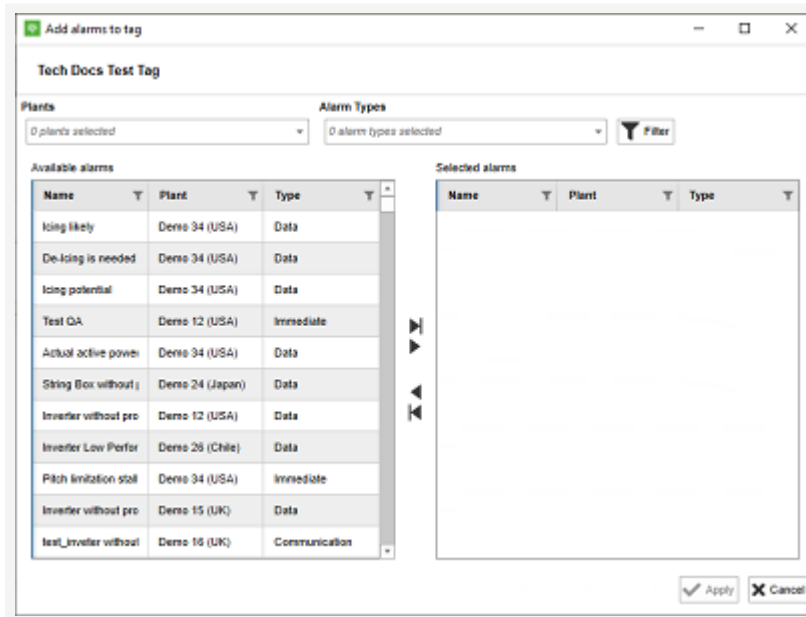


- + Add entity
- Alarms
- Datasources
- Descriptions
- Parameters

- 3 Select **Alarms**.

**Result:** The **Add alarms to tag** dialog appears:

### Add alarms to tag



4 In the **Add alarms to tag** dialog, follow these steps:

- a (Optional) To refine the list of available alarms, click the drop-down menus to select **Plants** and **Alarm types**, then click **Filter**.

**Result:** The Available alarms panel displays the filtered results.

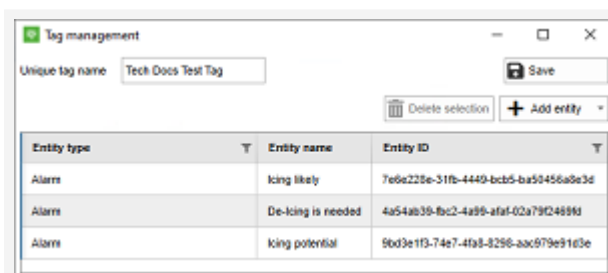
- b In the **Available alarms** panel, select the alarms you want to add to the tag and click the **▶** icon. To select all the available alarms, click the **▶▶** icon.

**Result:** The alarms move to the **Selected alarms** panel.

- a Click **Apply**.

**Result:** The Add alarms to tag dialog closes and the Tag management dialog displays the selected alarms.

### Tag management dialog






- 5 In the **Tag management dialog**, click  **Save**.

## **Result**

The alarms are added to the tag.


# Add datasources to tags

To add datasources to a tag, follow these steps:

- 1 In the Manage tags tab of the Permissions module, select a tag and click  **Edit**.

**Result:** The Tag Management dialog appears:

## Tag management dialog

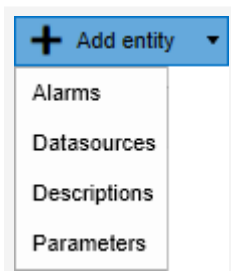


Entity type	Entity name	Entity ID
-------------	-------------	-----------

- 2 Click **+ Add entity**.

**Result:** The **Entities** drop-down menu appears.

## Entities menu

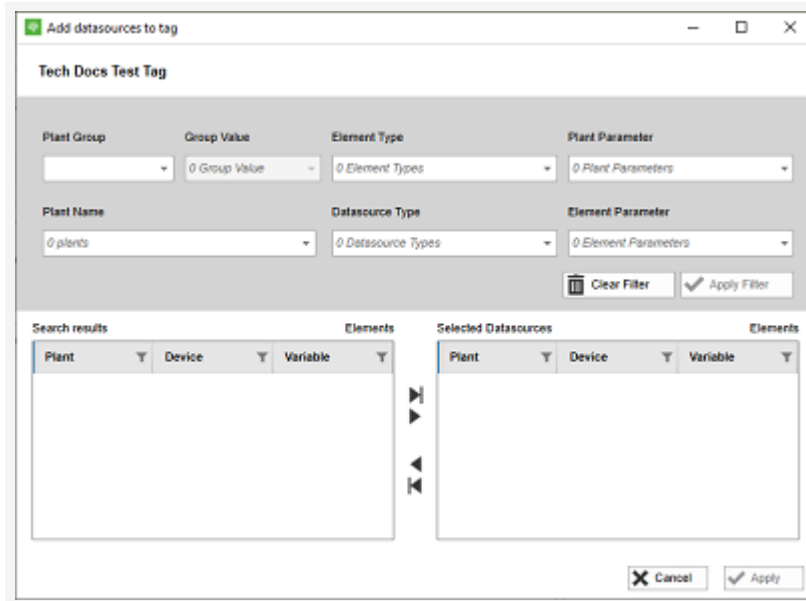


- + Add entity
- Alarms
- Datasources
- Descriptions
- Parameters

- 3 Click **Datasources**.

**Result:** The **Add datasources to tag** dialog appears:

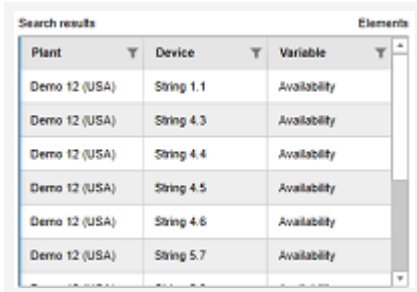
### Add datasources to tag dialog



- 4 Click the **Plant name** drop-down menu and select the plants from which you want to add datasources.
- 5 (Optional) Apply Advanced filters to refine the list of available datasources.
  - a Select a **Plant group** (for example, **Country**) and at least one Group value (for example, **Belgium**).
  - b Click the **Element type** drop-down menu and select types of element (for example, **Inverter** or **Generator**).
  - c Click the **Plant parameters** drop-down menu and select parameters (for example, **Energy** or **Power**).
  - d Click the **Datasource type** drop-down menu and types of datasources (for example, **Availability** or **Production Ratio**).
  - e Click the **Element parameter** drop-down menu and select element parameters (for example, **Availability** or **Alarm**).
- 6 Click **Apply filter**.

**Result:** The **Search results** panel displays the datasources that meet the filtering criteria.

### Available datasources



Plant	Device	Variable
Demo 12 (USA)	String 1.1	Availability
Demo 12 (USA)	String 4.3	Availability
Demo 12 (USA)	String 4.4	Availability
Demo 12 (USA)	String 4.5	Availability
Demo 12 (USA)	String 4.6	Availability
Demo 12 (USA)	String 5.7	Availability

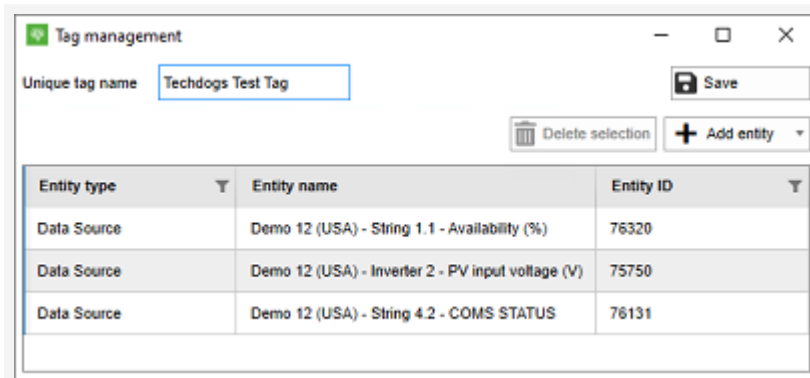
- 7 In the **Search results** panel, select the datasources you want to add to the tag and click the ► icon. To select all the available datasources, click the ►► icon.

**Result:** The datasources move to the **Selected datasources** panel.

- 8 Click **Apply**.

**Result:** The Add datasources to tag dialog closes and the Tag management dialog displays the selected datasources.

### Tag management dialog



Tag management

Unique tag name:

Entity type	Entity name	Entity ID
Data Source	Demo 12 (USA) - String 1.1 - Availability (%)	76320
Data Source	Demo 12 (USA) - Inverter 2 - PV input voltage (V)	75750
Data Source	Demo 12 (USA) - String 4.2 - COMS STATUS	76131


- 9 In the **Tag management dialog**, click .

## Result

The datasources are added to the tag.


# Add descriptions to tags

To add descriptions to tasks, follow these steps:

- 1 In the Manage tags tab of the Permissions module, select a tag and click  **Edit**.

**Result:** The Tag Management dialog appears:

## Tag management dialog

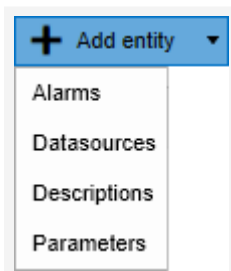


Entity type	Entity name	Entity ID
-------------	-------------	-----------

- 2 Click **+ Add entity**.

**Result:** The **Entities** drop-down menu appears.

## Entities menu

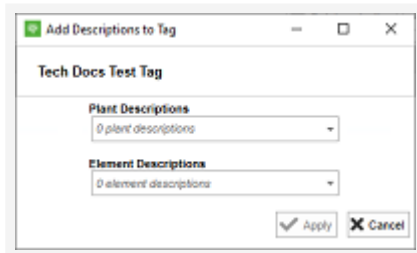


- + Add entity
- Alarms
- Datasources
- Descriptions
- Parameters

- 3 Click **Descriptions**.

**Result:** The **Add descriptions to tag** dialog appears:

### Add descriptions to tag dialog



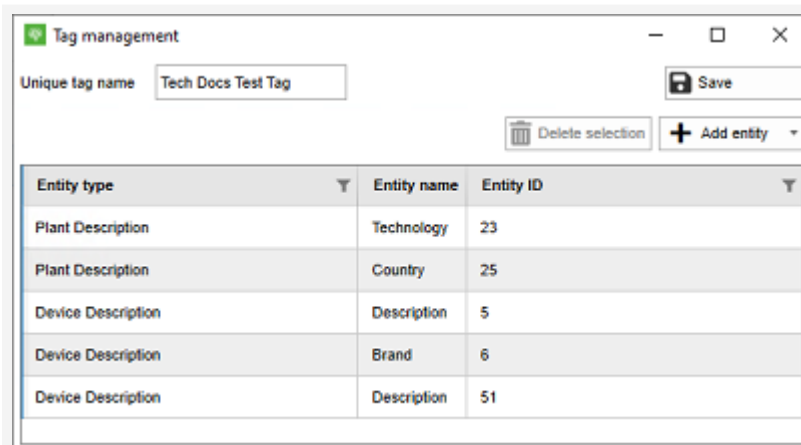
- 4 In the **Add descriptions to tag** dialog, select the descriptions you want to add to the tag.

**NOTE:** You can add Plant descriptions, Element descriptions, or both.

- a Click the **Plant descriptions** drop-down menu and select plant descriptions (for example, **Country** or **Technology**).
- b Click the **Element descriptions** drop-down menu and select element descriptions (for example, **Brand** or **Peak Power**).
- c Click **✓ Apply**.

**Result:** The Add descriptions to tag dialog closes and the Tag management dialog displays the selected descriptions.

### Tag management dialog




- 5 Click **Save**.

## Result

The descriptions are added to the tag.


# Add parameters to tags

To add parameters to a tag, follow these steps:

- 1 In the Manage tags tab of the Permissions module, select a tag and click  **Edit**.

**Result:** The Tag Management dialog appears:

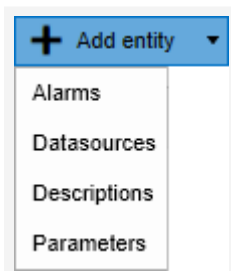
## Tag management dialog



- 2 Click **+ Add entity**.

**Result:** The **Entities** drop-down menu appears.

## Entities menu

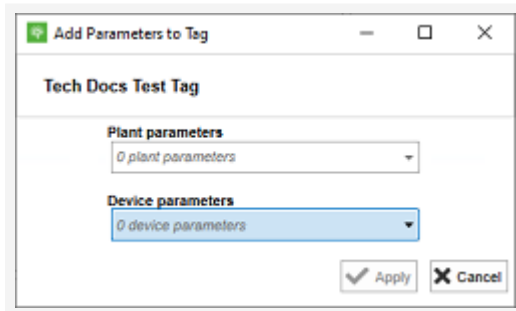


- 3 Click **Parameters**.



**Result:** The **Add parameters to tag** dialog appears:

### Add parameters to tag dialog



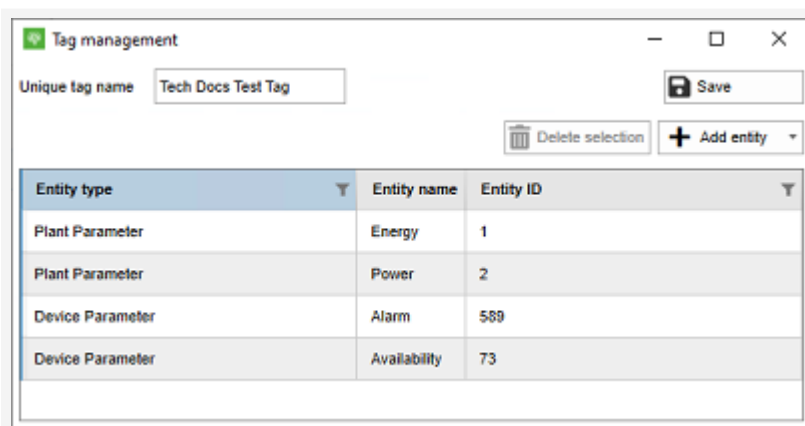
- 4 In the **Add parameters to tag** dialog, select the descriptions you want to add to the tag.

**NOTE:** You can add Plant parameters, Element parameters, or both.

- Click the **Plant parameters** drop-down menu and select plant parameters (for example, **Energy** or **Power**).
- Click the **Element parameters** drop-down menu and select element parameters (for example, **Alarm** or **Availability**).
- Click **Apply**.

**Result:** The Add parameters to tag dialog closes and the Tag management dialog displays the selected parameters.

### Tag management dialog



- 5 Click **Save**.

## Result

The parameters are added to the tag.

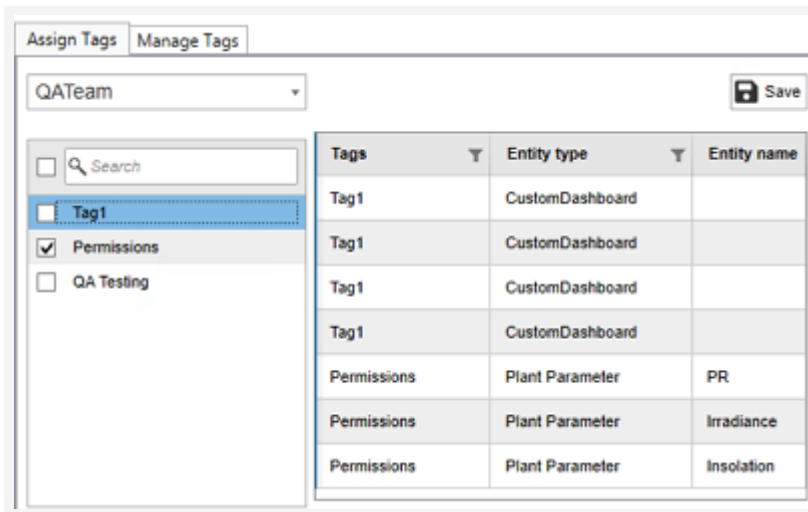
# Assign tags to user roles

To assign a tag to a user role, follow these steps:

- 1 In the **Assign tags** tab of the Permissions module, open the **Select role** drop-down menu and click on the role to which you want to assign a tag.
- 2 Check the checkbox for the tag you want to assign to the role.

**Result:**

## Selected tag



The screenshot shows the 'Assign Tags' interface. At the top, there are two tabs: 'Assign Tags' (active) and 'Manage Tags'. Below the tabs, a dropdown menu shows 'QA Team' selected. To the right of the dropdown is a 'Save' button. On the left side, there is a search box and a list of tags with checkboxes. 'Tag1' is selected (checkbox checked), while 'Permissions' and 'QA Testing' are not. On the right side, there is a table with columns: 'Tags', 'Entity type', and 'Entity name'.

Tags	Entity type	Entity name
Tag1	CustomDashboard	
Tag1	CustomDashboard	
Tag1	CustomDashboard	
Tag1	CustomDashboard	
Permissions	Plant Parameter	PR
Permissions	Plant Parameter	Irradiance
Permissions	Plant Parameter	Insolation

- 3 Click  **Save**.

## Result

The tag is assigned to the user role.

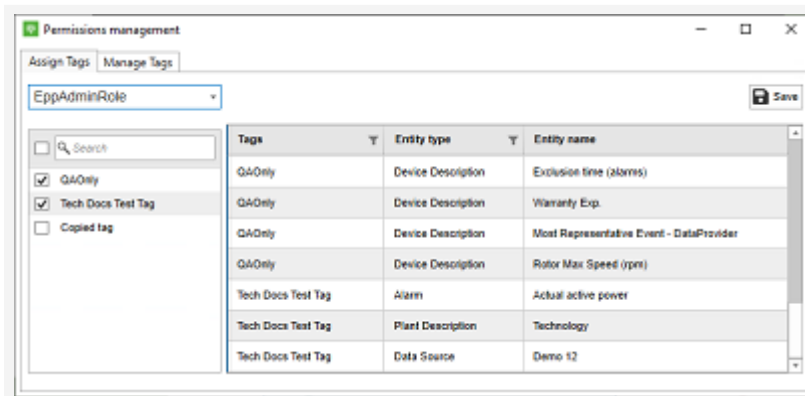
# Unassign tags from user roles


To unassign a tag from a user role, follow these steps:

- 1 In the Assign Tags tab of the Permissions module, click the Roles drop-down menu and select a user role.

**Result:** The tags assigned to the role appear:

## Tags and entities



- 2 Deselect the checkboxes of the tags you want to unassign from the role.
- 3 Click  **Save**.

## Result

The tag is unassigned from the user role and those users no longer have access to the entities in the tag.

# Plant Data

The GPM system constantly processes and transmits data from your organization's assets to provide you with reliable and up-to-date information for monitoring and in-depth analysis.

You can launch queries to analyze data from plants through three modules:

- [Data viewer module](#)
- [Linear Chart Viewer](#)
- [Scatter Plot Chart](#)

# Data Viewer queries

The Data Viewer is a tool that allows you to create queries and analyze the data of your portfolio. The results of the query are arranged in tables that display the values for the selected parameters at specific moments in time. You can save the results of your queries for further use or export them to other views.

You can add queries to the Data Viewer from other areas of the user interface or create queries directly from the Data Viewer module.

Queries consist of two main sections: parameters and time periods. You can select as many parameters as you want, for a single time period. You can also refine the granularity of the data at different levels, from years to minutes. You can also group and aggregate data by different criteria, and apply operations to give it greater complexity.

**NOTE:** Data granularity affects processing times. For example, selecting 1-minute data for large periods of time may cause the query to take longer to load.

- Create queries
  - [Create individual queries](#)
  - [Create and configure recurring queries](#)
- Edit queries:
  - [Change time period](#)
  - [Advanced data granularity](#)
  - [Advanced parameter configuration](#)

## Data granularity

Granularity defines the level of detail for gathering and processing information. In the GPM system, data granularity is defined in units of time (for example, 5-minute intervals).

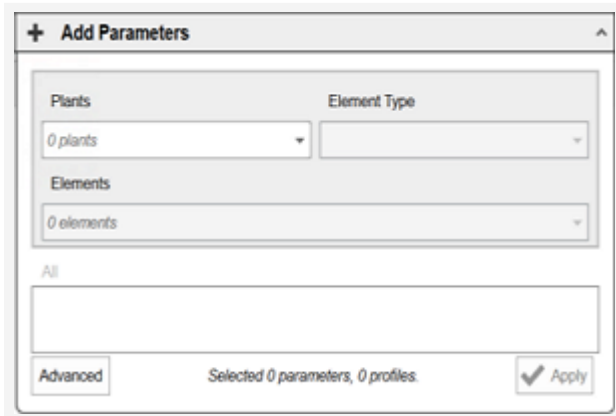
The optimal level of granularity that you select for a data query depends on the kind of analysis you want to perform. For example, a financial analysis of the yearly performance of a plant may require monthly or weekly data, while diagnosing the performance of individual elements to identify potential issues may require gathering data at intervals of 15 minutes over a single day.

# Create queries in the Data Viewer module

To create a query in the Data Viewer module, follow these steps:

- 1 Click **+Add Parameters** to open the parameters selector.

## Parameters selector



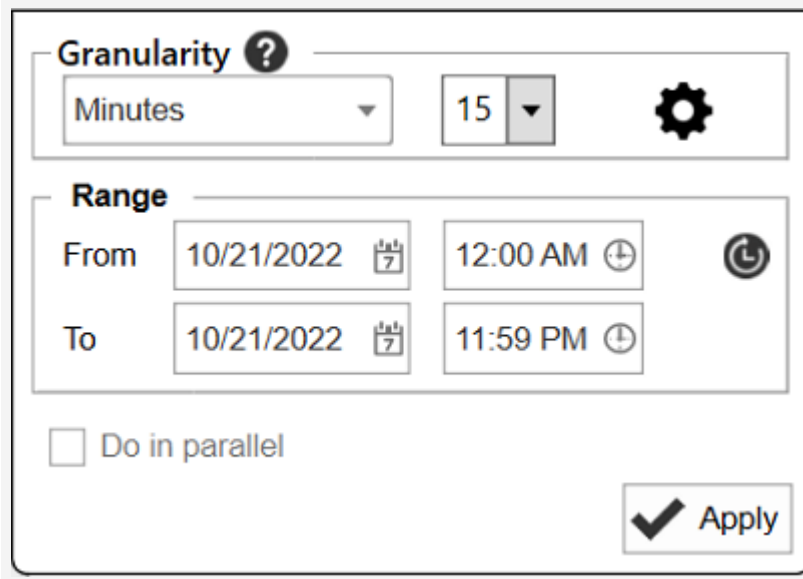
- a Open the **Plants** drop-down menu and select the plants for which you want to see data.
- b Open the **Element Type** drop-down menu and select the type of element you want to include in the query (for example, **Inverter**).
- c Open the **Elements** drop-down menu and select the specific elements you want to include in the query.  
OR: select the checkbox next to the *Search* bar to include all available elements.
- d In the **Main Parameters** section, select the parameters you want to include in the query (for example, **Insolation**, **Irradiance** and **Energy**).  
OR: Select the **All** tab to select from a list of all the available parameters.

**NOTE:** To work with advanced datasources, see the in-depth instructions to [Add advanced parameters to queries](#).

- e Click **✓ Apply**.
- f Click the **^** icon to close the Parameters selector.

- 2 Click **Period** to open the Time Period and Granularity selector:

## Time Period and Granularity selector



- a** In the **Granularity** section, open the Grouping drop-down menu to select a grouping method (for example, **Minutes**), then open the Units drop-down menu and specify a value for (for example, **15**).

**NOTE:** For advanced granularity and grouping configurations, see the in depth instructions to [Define advanced data granularity for queries](#).

- b** In the **From** section, select the starting date and time for the query period.
- c** In the **To** section, select the end date and time for the query period.

**REMEMBER:** For optimal performance, consider the scope and the level of detail you want for the query. Large ranges with high granularity (for example, 15-minute data for a period of one month) take longer to process.

- d** Click **Apply** to launch the query.

# Result

## Query results

Time	Demo 06 (Spain) Inverter 01 AC POWER (kW)	Demo 06 (Spain) Inverter 01 Energy (KWh)	Demo 06 (Spain) Inverter 02 AC POWER (kW)	Demo 06 (Spain) Inverter 02 Energy (KWh)	Demo 06 (Spain) Inverter 03 AC POWER (kW)	De Im En
9/1/2022 9:15 AM	45.67	11.42	40.67	10.17	40.67	
9/1/2022 9:30 AM	57.00	14.25	54.33	13.58	56.00	
9/1/2022 9:45 AM	61.67	15.42	58.00	14.50	60.00	
9/1/2022 10:00 AM	65.00	16.25	61.00	15.25	63.67	
9/1/2022 10:15 AM	68.00	17.00	64.00	16.00	67.00	
9/1/2022 10:30 AM	70.33	17.58	66.67	16.67	69.00	
9/1/2022 10:45 AM	71.00	17.75	68.00	17.00	70.33	
9/1/2022 11:00 AM	72.00	18.00	68.33	17.08	71.33	
9/1/2022 11:15 AM	73.00	18.25	70.00	17.50	72.00	
9/1/2022 11:30 AM	73.33	18.33	70.67	17.67	73.67	

The query results appear in the table:

To make this a recurring query, see the instructions to [Create recurring queries](#).

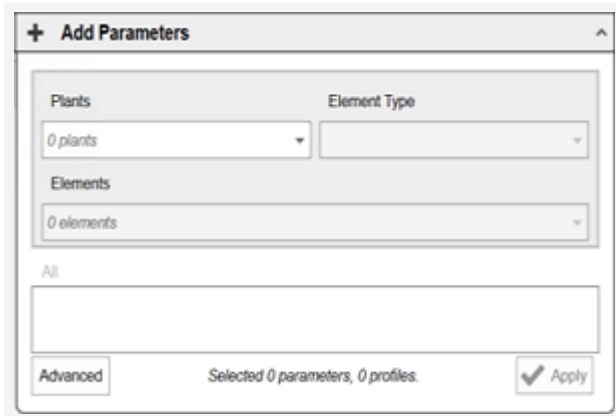


# Create recurring queries

To create a recurring query in the Data Viewer module, follow these steps:

- 1 Click **+Add Parameters** to open the parameters selector.

## Parameters selector



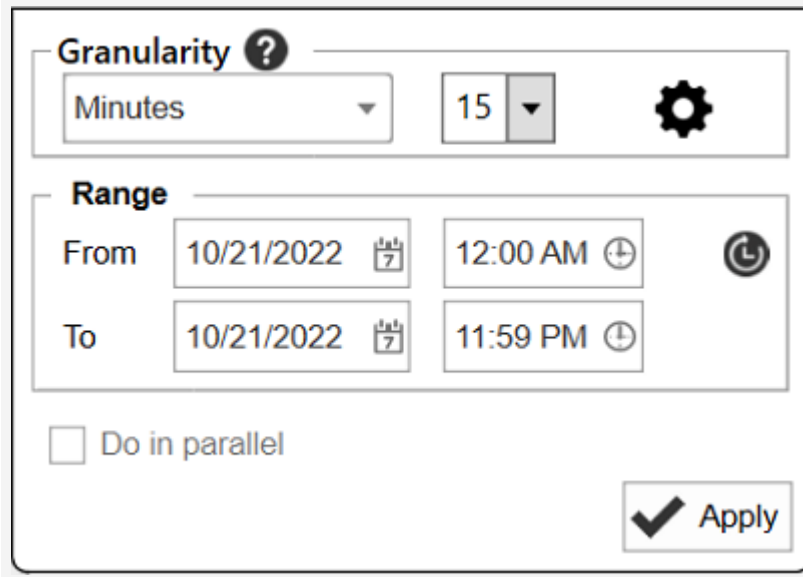
- a Open the **Plants** drop-down menu and select the plants for which you want to see data.
- b Open the **Element Type** drop-down menu and select the type of element you want to include in the query (for example, **Inverter**).
- c Open the **Elements** drop-down menu and select the specific elements you want to include in the query.  
OR: select the checkbox next to the *Search* bar to include all available elements.
- d In the **Main Parameters** section, select the parameters you want to include in the query (for example, **Insolation**, **Irradiance** and **Energy**).  
OR: Select the **All** tab to select from a list of all the available parameters.

**NOTE:** To work with advanced datasources, see the in-depth instructions to [Add advanced parameters to queries](#).

- e Click **✓ Apply**.
- f Click the **^** icon to close the Parameters selector.

- 2 Click **Period** to open the Time Period and Granularity selector:

## Time Period and Granularity selector



**Granularity** ?

Minutes ▾ 15 ▾ ⚙️

**Range**

From 10/21/2022 📅 12:00 AM ⌚ ⌚

To 10/21/2022 📅 11:59 PM ⌚ ⌚

Do in parallel

✓ Apply

- a In the **Granularity** section, open the Grouping drop-down menu to select a grouping method (for example, **Minutes**), then open the Units drop-down menu and specify a value for (for example, **15**).

📘 **NOTE:** For advanced granularity and grouping configurations, see the in depth instructions to [Define advanced data granularity for queries](#).

- b In the **From** section, select the starting date and time for the query period.
- c In the **To** section, select the end date and time for the query period.

📌 **REMEMBER:** For optimal performance, consider the scope and the level of detail you want for the query. Large ranges with high granularity (for example, 15-minute data for a period of one month) take longer to process.

- d Click ✓ **Apply** to launch the query.

- 3 Click 📁 **Save** to open the Save Custom Query window:

- a In the *Save as* field, enter a name for the query.
- b Open the *Frequency* drop-down menu and specify how often you want the system to launch the query (for example, **Weekly**).
- c (Optional) In the *Notes* field, enter any additional information you want to include.
- d Click 📁 **Save**.

## Result

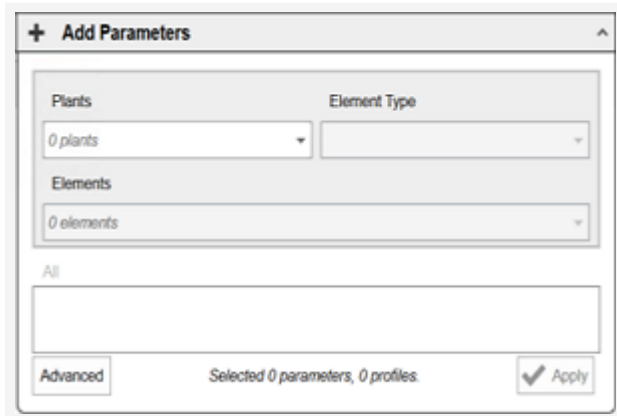
The query is saved and will be launched with the specified frequency.

# Add advanced parameters to queries

To add advanced parameters to a query in the Data Viewer module, follow these steps:

- 1 Click **+Add Parameters** to open the parameters selector.

## Parameters selector

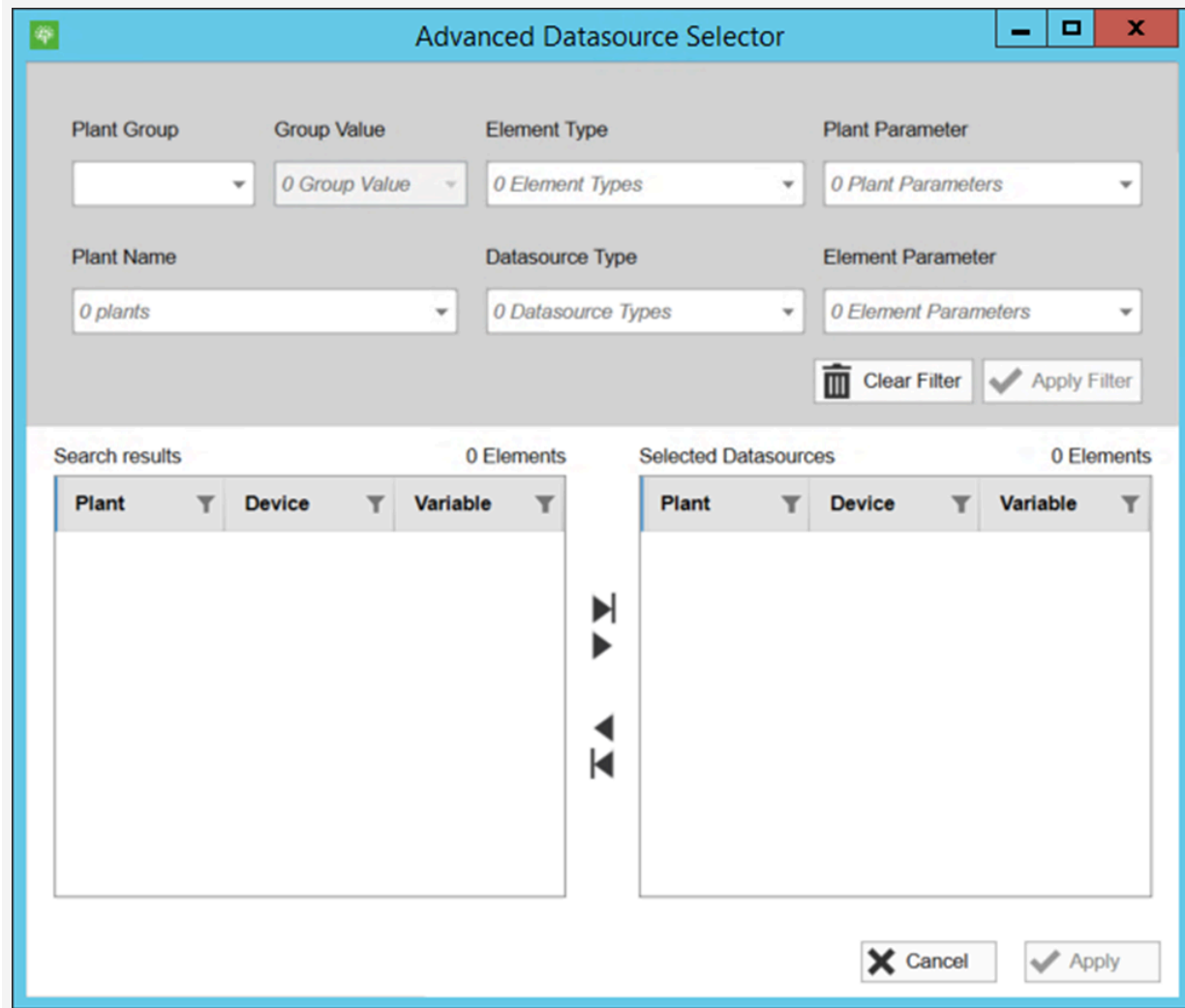


The screenshot shows a dialog box titled "+ Add Parameters". It contains the following elements:

- Plants**: A dropdown menu showing "0 plants".
- Element Type**: A dropdown menu.
- Elements**: A dropdown menu showing "0 elements".
- All**: A text input field.
- Advanced**: A button.
- Selected 0 parameters, 0 profiles.**: A status message.
- Apply**: A button with a checkmark.

- 2 Click **Advanced** to open the Advanced Datasource selector:

## Advanced Datasource selector



**Advanced Datasource Selector**

Plant Group:  Group Value:  Element Type:  Plant Parameter

Plant Name:  Datasource Type:  Element Parameter:

Search results: 0 Elements

Plant	Device	Variable

Selected Datasources: 0 Elements

Plant	Device	Variable

- 3 In the **Plant Group** drop-down menu, select the group to which the plant belongs.
- 4 In the **Group Value** drop-down menu, select one or more values.
- 5 In the **Element Type** drop-down menu, select one or more types of element.
- 6 In the **Plant Parameter** drop-down menu, select one or more parameters.
- 7 In the **Plant Name** drop-down menu, select one or more plants.
- 8 In the **Datasource Type** drop-down menu, select one or more types of datasource.
- 9 In the **Element Parameter** drop-down menu, select one or more parameters.
- 10 Click **Apply filter**.

**NOTE:** You can clear a filter that was already applied by clicking **Clear Filter**.

- 11 In the **Search Results** panel, click to select the parameters, then click the ► icon to move them to the **Selected Datasources** panel.
- 12 Click **Apply**.

## Result

The parameters are added to the query.

# Define advanced data granularity for queries

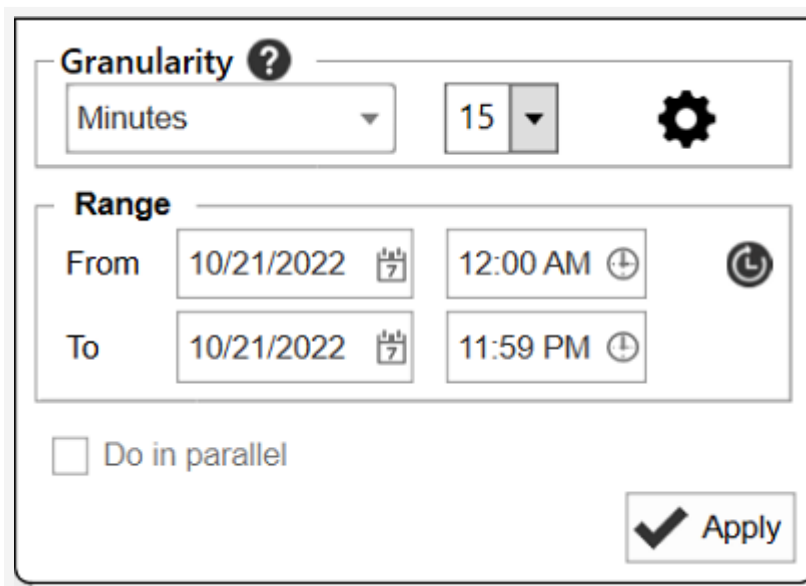
## Before you begin

The query must include parameters before you can define the granularity.

To define advanced granularity options for a query in the [Data Viewer module](#), follow these steps:

- 1 Click **Period** to open the Time Period and Granularity selector:

### Time Period and Granularity selector



The screenshot shows a configuration window for query parameters. It is divided into two main sections: **Granularity** and **Range**.  
 - **Granularity**: Contains a dropdown menu currently set to 'Minutes', a numeric input field with the value '15', and a gear icon for settings.  
 - **Range**: Contains two rows, 'From' and 'To'. Each row has a date selector (showing 10/21/2022) and a time selector (showing 12:00 AM for 'From' and 11:59 PM for 'To').  
 - Below the Range section is an unchecked checkbox labeled 'Do in parallel'.  
 - At the bottom right is an 'Apply' button with a checkmark icon.

- 2 In the **Range** section, define the time period covered by the query:
  - a In the **From** section, select the starting date and time for the query period.
  - b In the **To** section, select the end date and time for the query period.

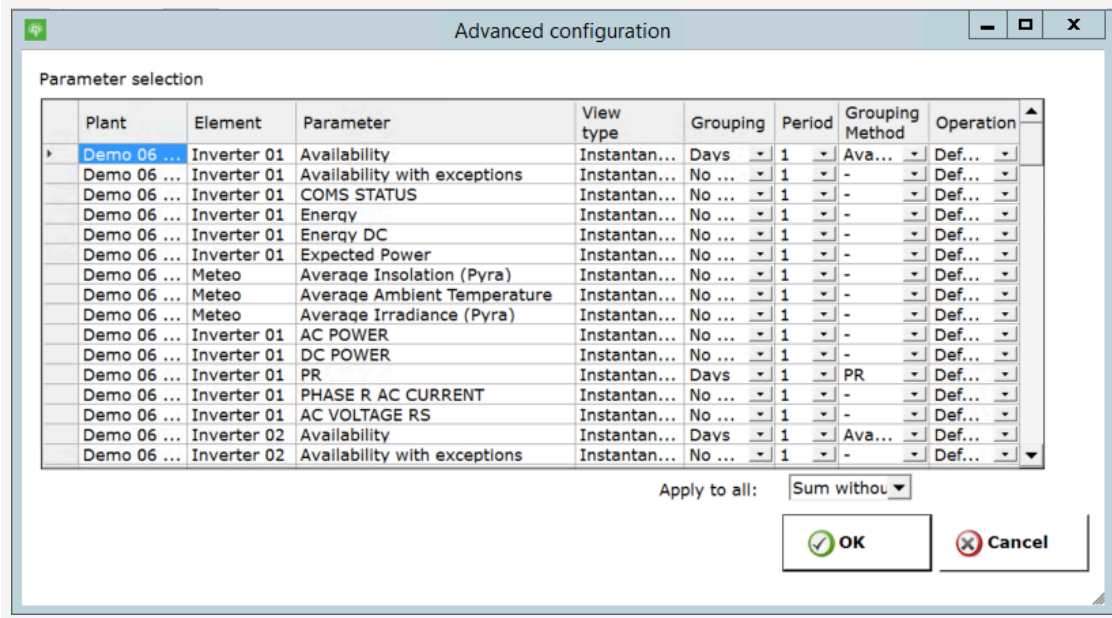
**REMEMBER:** For optimal performance, consider the scope and the level of detail you want for the query. Large ranges of time with high levels of detail (for example, 5-minute data for a period of one month) take longer to process.

- 3 In the Granularity section, open the **Grouping** drop-down menu to select a grouping method (for example, **Minutes**), then open the **Units** drop-down menu and specify a value for (for example, **15**).

① **NOTE:** For advanced granularity and grouping configurations, see the in depth instructions to [Define advanced data granularity for queries](#).

- a Click the icon to open the **Advanced Configuration** window:

### Advanced Configuration



Advanced configuration

Parameter selection

Plant	Element	Parameter	View type	Grouping	Period	Grouping Method	Operation
Demo 06 ...	Inverter 01	Availability	Instantan...	Days	1	Ava...	Def...
Demo 06 ...	Inverter 01	Availability with exceptions	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	COMS STATUS	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	Energy	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	Energy DC	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	Expected Power	Instantan...	No ...	1	-	Def...
Demo 06 ...	Meteo	Average Insolation (Pyra)	Instantan...	No ...	1	-	Def...
Demo 06 ...	Meteo	Average Ambient Temperature	Instantan...	No ...	1	-	Def...
Demo 06 ...	Meteo	Average Irradiance (Pyra)	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	AC POWER	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	DC POWER	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	PR	Instantan...	Days	1	PR	Def...
Demo 06 ...	Inverter 01	PHASE R AC CURRENT	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 01	AC VOLTAGE RS	Instantan...	No ...	1	-	Def...
Demo 06 ...	Inverter 02	Availability	Instantan...	Days	1	Ava...	Def...
Demo 06 ...	Inverter 02	Availability with exceptions	Instantan...	No ...	1	-	Def...

Apply to all: Sum without

OK Cancel

- b In the **Grouping** column, open the drop-down menu to select how to aggregate datapoints (for example, **Minutes**).
- c In the **Period** column, open the drop-down menu to define a value for the grouping method (for example, **5**)
- d In the **Grouping method** column, select the operation you want to apply to the data (for example, **Average**).
- e Click **OK**.

## Result

The system applies the changes and runs the query.

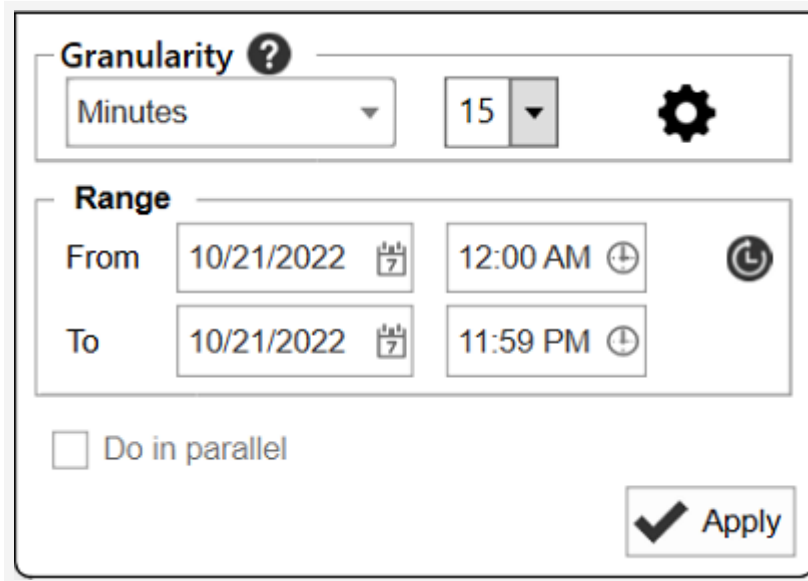


## Change the time period for a query

To change the time period of a query in the Data Viewer module, follow these steps:

- 1 Click **Period** to open the Time Period and Granularity selector:

### Time Period and Granularity selector



- 2 In the **From** section, select the starting date and time for the query period.
- 3 In the **To** section, select the end date and time for the query period.

**REMEMBER:** For optimal performance, consider the scope and the level of detail you want for the query. Large ranges with high granularity (for example, 15-minute data for a period of one month) take longer to process.

- 4 Click **Apply** to launch the query.

## Result

The system launches the query to cover the time period you defined.

# Reports

Reports are documents that allow you to process and analyze data from your portfolio, export it to a Microsoft Excel file format, and share data with other users and third parties, such as clients. You can perform tasks related to reports in the [Reports module](#).

You can create individual reports manually, or set up an automatic process to create them at regular intervals and automatically send them to multiple recipients. It is also possible to send reports to Microsoft SharePoint automatically upon creation. For more information, see the [Reporting Tasks section](#).


**NOTE:** In case of a temporary loss of internet connection, queued reports are automatically sent to Microsoft SharePoint when the connection is re-established.

## Report templates

Templates provide the framework for the information that must be included in a report. The GPM Template Report is the most customizable template, because it allows you to include any data type in your report.

**NOTE:** The descriptions of tasks to create reports all use the GPM Template Report as an example. There may be some slight variations when working with your custom templates, depending on your configuration.

# Reports module

To access the Reports module, click the  icon on the Upper Bar.

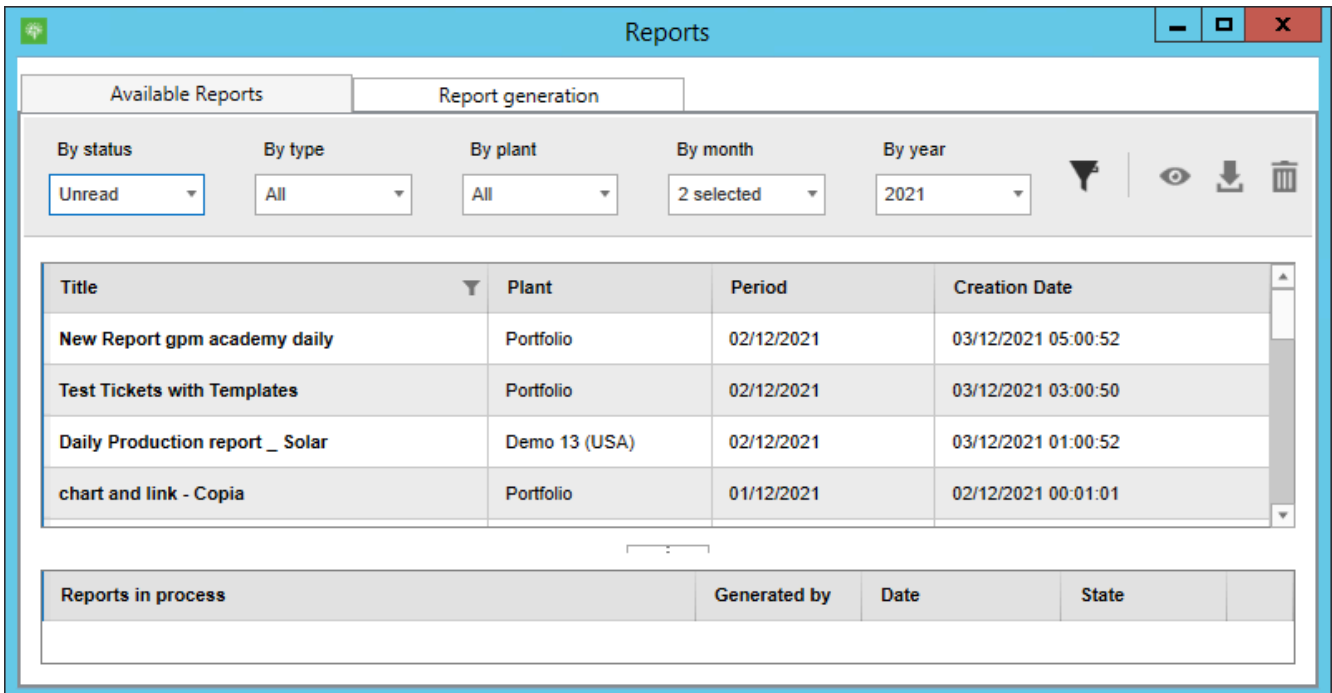
The interface of the Reports module consists of two tabs:

- **Available Reports:** access existing reports.
- **Report Generation:** create new reports.

## Available Reports

This tab allows you to access existing reports. By default, the list displays unread reports from the current year and the most recent reports.

### Available Reports tab


Title	Plant	Period	Creation Date
New Report gpm academy daily	Portfolio	02/12/2021	03/12/2021 05:00:52
Test Tickets with Templates	Portfolio	02/12/2021	03/12/2021 03:00:50
Daily Production report _ Solar	Demo 13 (USA)	02/12/2021	03/12/2021 01:00:52
chart and link - Copia	Portfolio	01/12/2021	02/12/2021 00:01:01

Reports in process	Generated by	Date	State






1. **Template filters:** click to select the filtering criteria from the drop-down lists and


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click the  icon to display reports that match the criteria on the list.

2. **Action buttons:** click to perform actions on the selected reports:

-  **Open** the selected report. Each report you select opens in a separate window.
-  **Download** the selected report. Each report you select opens a separate download dialog.
-  **Delete** the selected report.

3. **Reports list:** displays available reports. Select one or more reports to perform actions on them.

Click a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers. click the  icon on the **Title** column header for advanced filtering. For more information, see [Advanced Filters](#).

4. **Reports in process:** displays reports that are being generated. You can cancel the generation fo a report by clicking the  icon on the right side of the list.

Click on a column header to sort the table by the values of that column. Rearrange columns by dragging and dropping the headers.

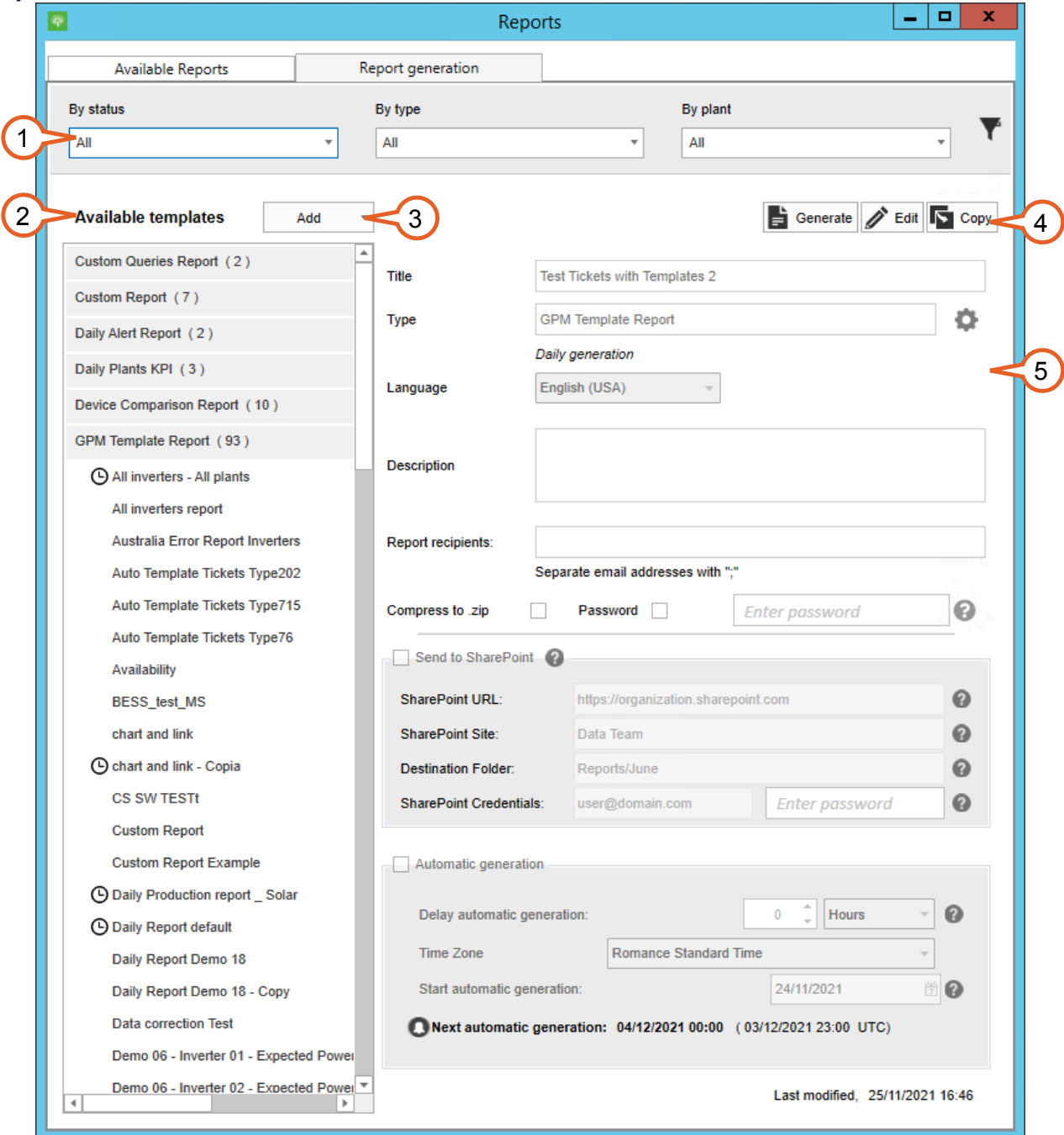
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## Report Generation


On this tab, you can generate new reports, schedule automatic report generation, and edit existing reports. You can create new reports based on templates that are configured for you.

When you save your report, it becomes available in the **Available templates** panel in the section of the template on which it is based.

### Report Generation tab









The screenshot shows the 'Reports' window with the 'Report generation' tab active. At the top, there are three filter dropdowns: 'By status' (set to 'All'), 'By type' (set to 'All'), and 'By plant' (set to 'All'). Below these is a list of 'Available templates' on the left, including 'Custom Queries Report (2)', 'Custom Report (7)', 'Daily Alert Report (2)', 'Daily Plants KPI (3)', 'Device Comparison Report (10)', and 'GPM Template Report (93)'. The 'GPM Template Report (93)' is selected, showing a list of sub-templates like 'All inverters - All plants', 'All inverters report', 'Australia Error Report Inverters', etc. The main form on the right is for creating a report. It has a title 'Test Tickets with Templates 2', type 'GPM Template Report', and language 'English (USA)'. There are buttons for 'Generate', 'Edit', and 'Copy'. A 'Daily generation' section is visible, with a 'Next automatic generation' date of '04/12/2021 00:00'. A 'Send to SharePoint' section is also present, with fields for URL, site, folder, and credentials. A 'Compress to .zip' section has checkboxes for 'Compress to .zip' and 'Password', with a password field. A 'Last modified' timestamp of '25/11/2021 16:46' is shown at the bottom right.

1. **Template filters:** click to select the filtering criteria from the drop-down lists and click the  icon to display reports that match the criteria on the **Available**

---

**templates** panel.

2. Available templates: displays the available reports, organized by report type. Click on a template to edit it.
  3. **Add template**: click to select a template from the drop-down list. For further information, see [Create Reports using the GPM template](#).
  4. **Action buttons**: click to perform actions on templates or reports:
    -  **Generate** one of the selected reports manually. This button is only available for saved templates.
    -  **Enable editing** for a selected report. This button is only available for saved templates.
    -  **Create a copy** of the selected report. This button is only available for saved templates
    -  **Save** your changes. This button is only available for unsaved reports.
    -  **Cancel** your changes. This button is only available for saved reports.
    -  **Delete** the selected report. This button is only available for saved reports.
  5. Report settings: configure the settings for the report. This template becomes available when you add new report or when you are editing one of the available templates.
-

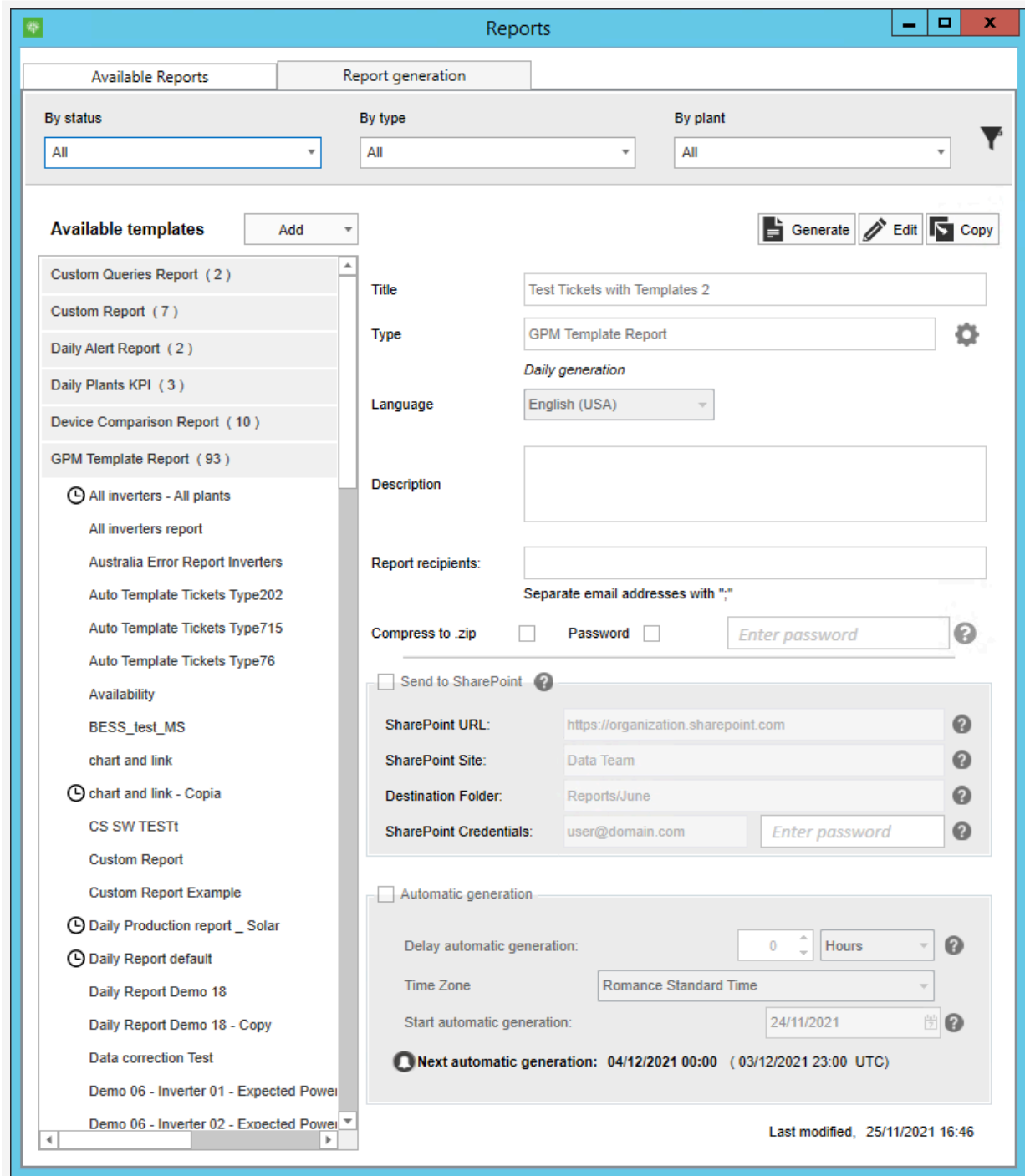


# Create reports using the GPM template

To create a report using the GPM template, follow these steps:

- 1 In the **Reports** module, go to the **Report Generation tab**:

## Report Generation tab



The screenshot shows the 'Reports' application window with the 'Report generation' tab active. At the top, there are three dropdown filters: 'By status' (All), 'By type' (All), and 'By plant' (All). Below these are three buttons: 'Generate', 'Edit', and 'Copy'.

The main area is divided into two sections. On the left is the 'Available templates' panel, which has an 'Add' button and a list of templates. The 'GPM Template Report (93)' is selected, and its sub-items are visible, including 'All inverters - All plants' and various report types like 'Australia Error Report Inverters' and 'Daily Report default'.

On the right is the report configuration form. The 'Title' field contains 'Test Tickets with Templates 2'. The 'Type' field is 'GPM Template Report'. Under 'Daily generation', the 'Language' is set to 'English (USA)'. There is a 'Description' text area and a 'Report recipients:' field with a note 'Separate email addresses with ";"'. Below that are checkboxes for 'Compress to .zip' and 'Password', with a password input field. There is also a 'Send to SharePoint' section with fields for 'SharePoint URL', 'SharePoint Site', 'Destination Folder', and 'SharePoint Credentials'. At the bottom, there is an 'Automatic generation' section with a 'Delay automatic generation' spinner (set to 0) and unit (Hours), a 'Time Zone' dropdown (Romance Standard Time), and a 'Start automatic generation' date field (24/11/2021). A notification shows the 'Next automatic generation' as '04/12/2021 00:00 (03/12/2021 23:00 UTC)'. The bottom right corner indicates 'Last modified, 25/11/2021 16:46'.


- 2 In the **Available Templates** panel, click **Add** and select **GPM Template Report**.
- 3 In the report details area, enter the report information in these fields:
  - a *Title*: enter a title for the report.
  - b *Type*: this field is automatically filled with the template that you choose. To customize the template, see [step 4](#) below.

- c Language:** click to select a culture for the report from the drop-down list.

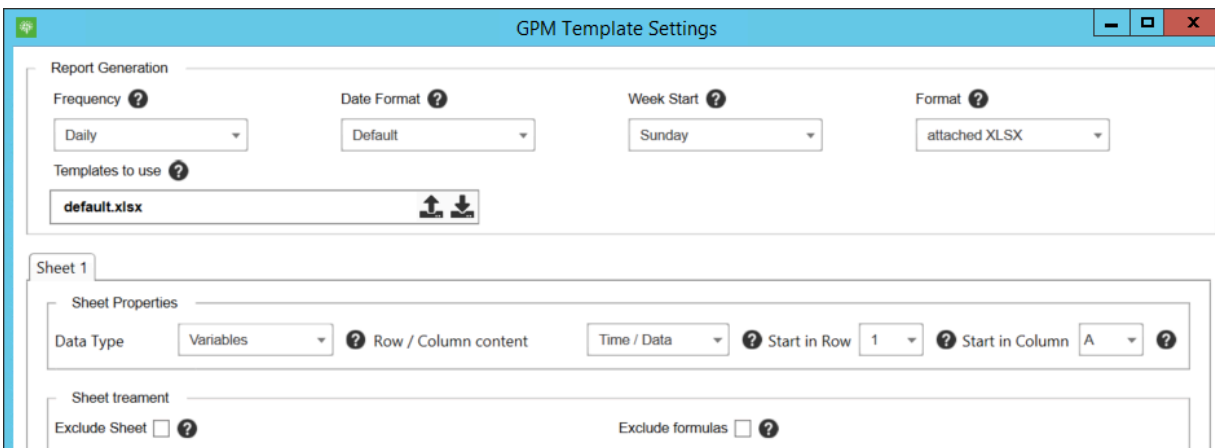
**NOTE:** The culture you select affects the report language, decimal sign, and date format. It is possible to define the date format manually by customizing the report template (see [step 4](#) below).

- d Description:** enter a description for the report.
- e (Optional) Report recipients:** if you want the report to be sent via email, enter the recipient's email address here. Multiple addresses must be comma-separated.
- f Compress to zip:** select this option to compress the report as a ZIP file. If your administrator set a lower size limit for compression, reports will be compressed only when they exceed that size.
- g Password:** select this option and enter a password to encrypt the report with a password.


**NOTE:** If you select this option, the report is compressed as a ZIP file even if you did not select the previous option.


- 4 (Optional)** To customize the report template, click the  icon to open the **GPM Template Settings** dialog.


## GPM Template Settings







**Report Generation**

Frequency : Daily

Date Format : Default





Week Start : Sunday

Format : attached XLSX



Templates to use : default.xlsx  

**Sheet 1**

**Sheet Properties**



Data Type: Variables  Row / Column content: Time / Data  Start in Row: 1  Start in Column: A 


**Sheet treatment**

Exclude Sheet   Exclude formulas  


The report can have multiple sheets. Each sheet can only have one type of object, such as variables, tickets or alarms. If you want to include different object types, you must add one sheet for each type.

Click each field to define it:


- a **Frequency:** select how often to generate the report generation from the drop-down list.
- b **Date format:** the format for dates in the report. By default, the date format matches the language and culture you defined for the report.
- c **Week start:** select the first day of the week for reports.
- d **Format:** select the format of the file that will be sent to the recipient.
- e **Templates to use:** this field is filled automatically with the default Microsoft Excel file for the template. If you want to modify the default template, click the  icon to download it and then click the  icon to upload the edited version.
- f **Data type:** select the type of data for the current sheet.

 **NOTE:** The type you select affects the options available in the Data Selection section (see [Sstep 5](#))

- g **Row/Column content:** select the type of data to include in the table. Selecting **Time / Data** places the time stamp in the column before the data. Selecting **Data / Time** places the time stamp in the column after the data.
- h **Start in row:** select the row on which the data must start.
- i **Start in column:** select the column on which the data must start.
- j **Exclude sheet:** select the checkbox to exclude the sheet from the report file.

 **NOTE:** The data contained in the excluded sheets is still used for calculation purposes.

- k **Exclude formulas:** select the checkbox to exclude the formulas from the report file.

5 Select the data to include in the report and click  **Save**.

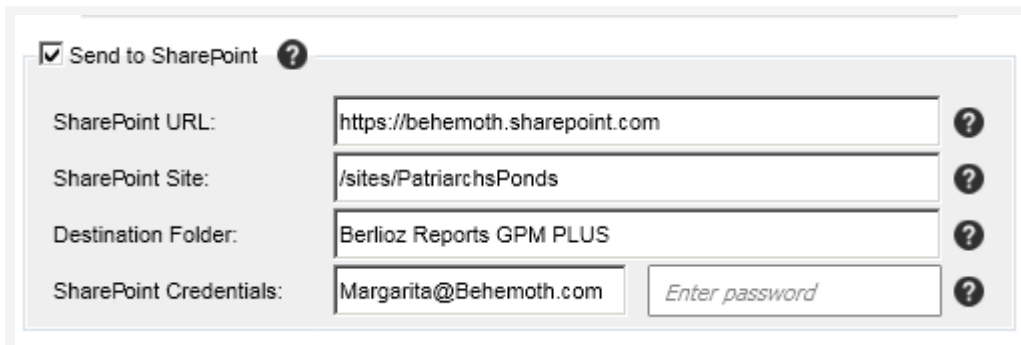
The configurations change depending on the type of data you selected step 4f (above). Follow the link below to see the instructions for the type you selected:

- [Alarms](#)
- [Element Descriptions](#)
- [Events](#)
- [Exceptions](#)
- [Plant Descriptions](#)
- [Power Curve](#)
- [Soiling Operations](#)
- [Tickets](#)
- [Tickets from Template](#)
- [Variables](#)

6 (Optional) If you want to configure more sheets, repeat steps 1-5 for each sheet.

7 (Optional) If you want the system to automatically send reports to Microsoft SharePoint, click the **Send to SharePoint** checkbox to enable it and fill in these fields:

### Send to SharePoint



**a** *SharePoint URL*: enter your organization's Microsoft SharePoint URL.

**b** *SharePoint site*: enter a site within your organization's SharePoint.

**c** *Destination folder*: enter a folder in your SharePoint documents. To create a new folder within the Destination Folder, add a slash and the name of the new folder (example: Reports --> Reports/June).

**d** *SharePoint credentials*: enter your username and password to access SharePoint.


8 (Optional) If you want the system to generate reports automatically, click the **Automatic generation** checkbox and define the automation settings:

- a (Optional) **Delay automatic generation:** If you want to delay the automatic generation, define the amount of hours or days for the delay. This will affect the date and time of the report generation.
- b **Time zone:** select the time zone that will apply to the automatic generation.
- c **Start automatic generation:** select the date at which to begin the automatic generation.

9 Click  **Save**.

## Result

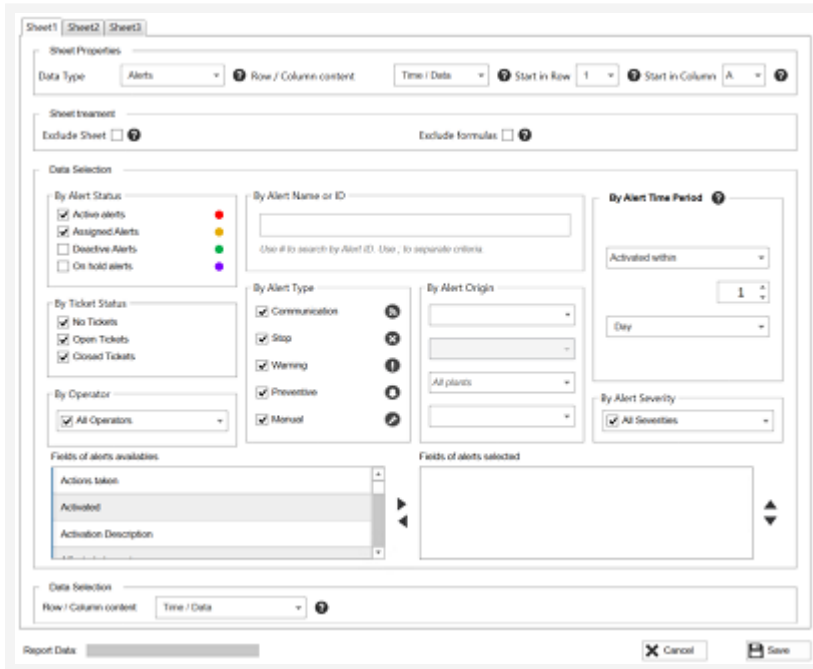
The report is saved and will be generated at the scheduled time.

**NOTE:** If you want to generate your report immediately, select the report from the Available Templates panel and click  **Generate**, then follow the instructions to export the report.

# Add alarms to reports

If you selected **Alarms** as a data type, customize the alarm information to include in the report in the **Data Selection** section:

## Data Selection (Alarms)



To add alarms to the report, follow these steps:

- 1 In the **By Alarm Status** section, select the alarm statuses.
- 2 In the *By Alarm Name or ID* section, enter any alarm name or ID. Multiple values must be comma-separated.
- 3 In the **By Alarm Time Period** section, select the criteria and time period for the alarm.
- 4 In the **By Ticket Status** section, select the status of the tickets associated to the alarms:
  - **No Tickets**
  - **Open Tickets**
  - **Closed Tickets**
- 5 In the **By Alarm Type** section, select the alarm types:

- **Communication**
- **Stop**
- **Warning**
- **Preventive**
- **Manual**

6 In the **By Alarm Origin** section, select the plants, devices, or device types to which the alarm is associated.

**NOTE:** The alarm origin allows you to filter alarms by plants or devices using the pre-defined groups of your portfolio.

7 In the **By Alarm Severity** section, select the alarm severity levels.

8 Select and order the alarm parameters.

Click the ► icon next to the **Available parameters** panel to add them to the **Selected parameters** panel. Click the ◀ icon to remove a parameter from the selection.

Click the ▲ and ▼ icons to change the order in which the parameters appear in the report.

9 In the **Data Selection** section, select the content to export as rows and the content to be export as columns.

- **Time/Data:** adds time values as rows and data values as columns.
- **Time/Data:** adds data values as rows and time values as columns.

10 Click  **Save**.

## Result

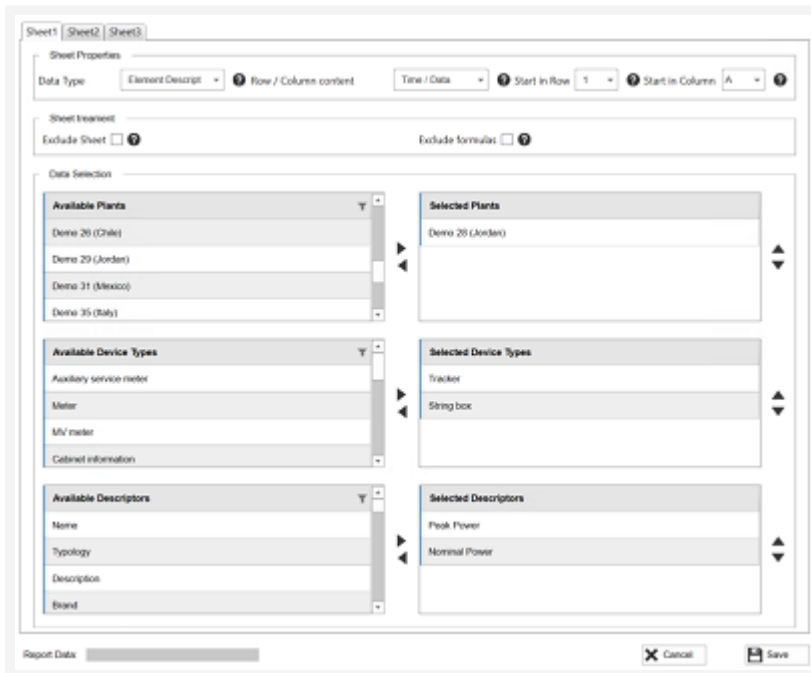
Alarms are added to your report.



# Add element descriptions to reports

If you selected **Element descriptions** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Element descriptions)



To add element descriptions to the report, follow these steps:

- 1 In the **Data Selection** section, select the plants, device types, and descriptors.
  - a Click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Selected Plants** panel.
  - b Click on the device types in the **Available Device Types** panel, then click the ► icon to move them to the **Selected Device Types** panel.
  - c Click on the descriptors in the **Available Descriptors** panel, then click the ► icon to move them to the **Selected Descriptors** panel.

Click the ▲ and ▼ icons to change the order in which the selected items appear in the report.

- 2 Click **Save**.

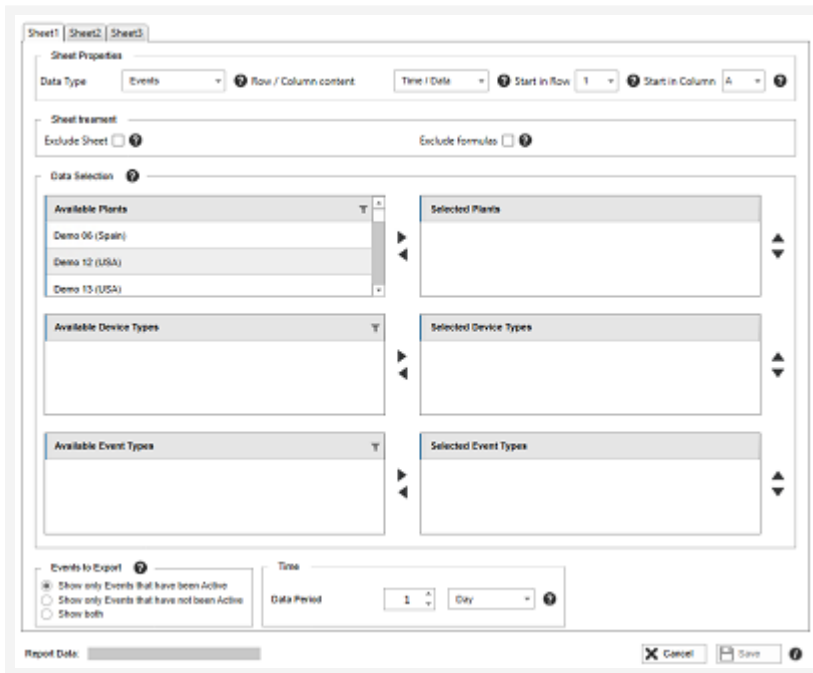
## Result

Element descriptions are included in your report.

# Add events to reports

If you selected **Events** as a data type, customize the alarm information to include in the report in the **Data Selection** section:

## Data Selection (Events)



To add events to a report, follow these steps:

- 1 In the **Data Selection** section, select the plants, device types, and descriptors.
  - a Click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Selected Plants** panel.
  - b Click on the device types in the **Available Device Types** panel, then click the ► icon to move them to the **Selected Device Types** panel.
  - c Click on the descriptors in the **Available Event Types** panel, then click the ► icon to move them to the **Selected Event Types** panel.

Click the ▲ and ▼ icons to change the order in which the selected items appear in the report.

- 2 In the **Events to Export** section, select the events to include in the report:

- **Show only Events that have been Active**: events whose value changed from 1 to 0.
- **Show only Events that have not been Active**: events whose value changed from 0 to 1.
- **Show both**: all events.

3 In the **Time** section, select the time granularity for the events show in the report.

4 Click  **Save**.

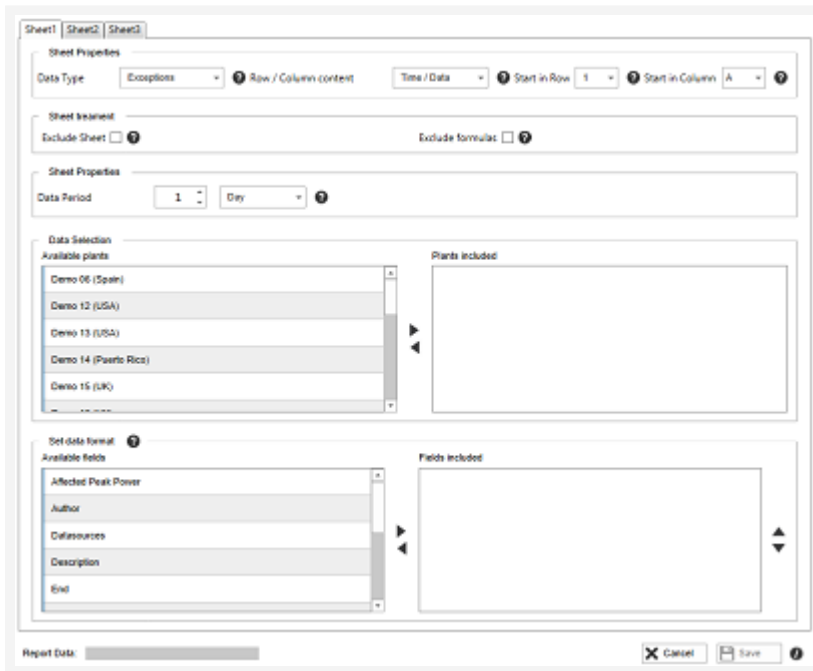
## Result

Events are added to your report.

# Add exceptions to reports

If you selected **Exceptions** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Exceptions)



To add exceptions to a report, follow these steps:

- 1 In the **Sheet Properties** section, select the data period.
- 2 In the **Data Selection** section, select the plants and data format.
  - a Click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Selected Plants** panel.
  - b Click on the device types in the **Set Data Format** panel, then click the ► icon to move them to the **Included Fields** panel.

Click the ▲ and ▼ icons to change the order in which the selected items appear in the report.

- 3 Click **Save**.

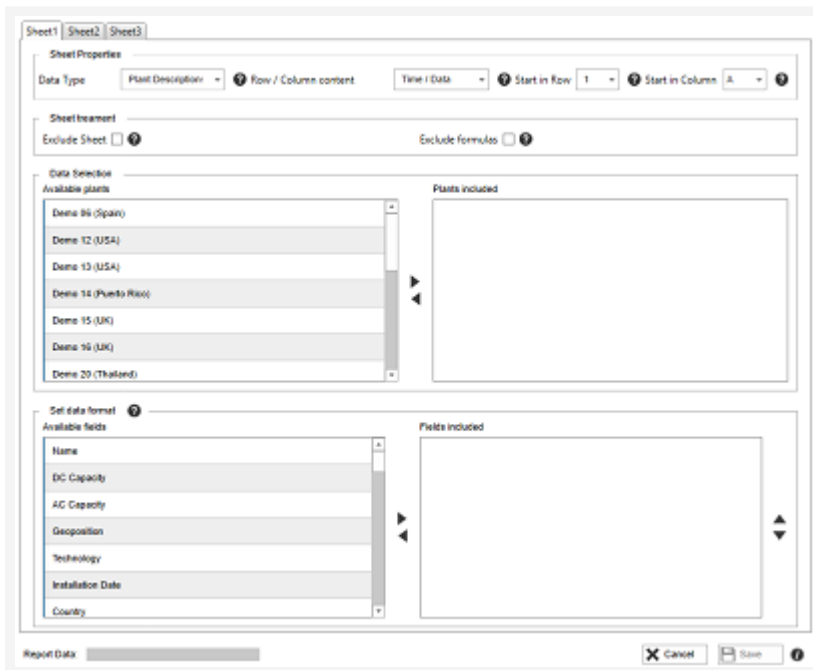
## Result

Exceptions are added to your report.

# Add plant descriptions to reports

If you selected **Plant descriptions** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Plant descriptions)



To add plant descriptions to a report, follow these steps:

- 1 In the **Data Selection** section, select the plants, device types, and descriptors.
  - a Click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Selected Plants** panel.
  - b Click on the device types in the **Available Fields** panel, then click the ► icon to move them to the **Included fields** panel.

Click the ▲ and ▼ icons to change the order in which the selected items appear in the report.

- 2 Click **Save**.

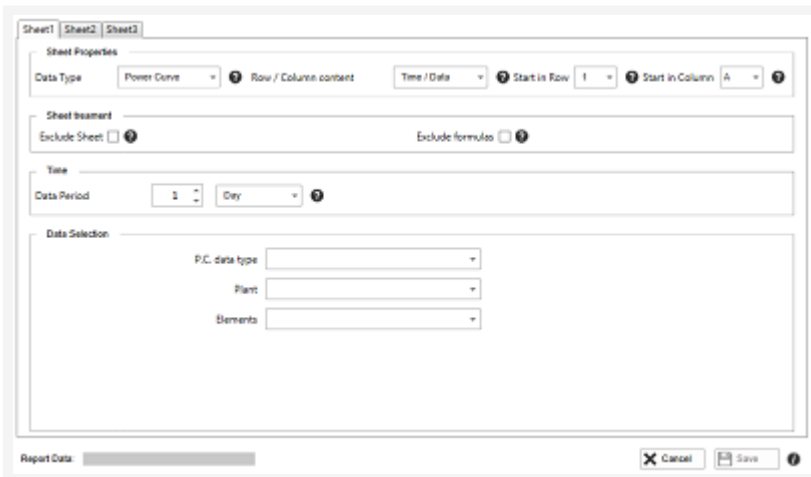
## Result

Plant descriptions are added to your report.

# Add Power Curve to reports

If you selected **Power Curve** as a data type, customize the alarm information to include in the report in the **Data Selection** section:

## Data selection (Power Curve)



To add a power curve to a report, follow these steps:

- 1 In the **Time** section, select the time period for the power curve.
  - **Fitted and reference data**: the report includes fitted power curve and reference data from the elements you select.
  - **Raw data**: the report includes raw data from the elements you select.
- 2 In the **Data Selection** section, configure the data for the power curve:
  - a Click the **P.C. data type** and select an option from the drop-down menu:
  - b Click the **Plant** section and select a Plant from the drop-down menu.
  - c Click the **Elements** section and select an element from the drop-down menu.
- 3 Click **Save**.

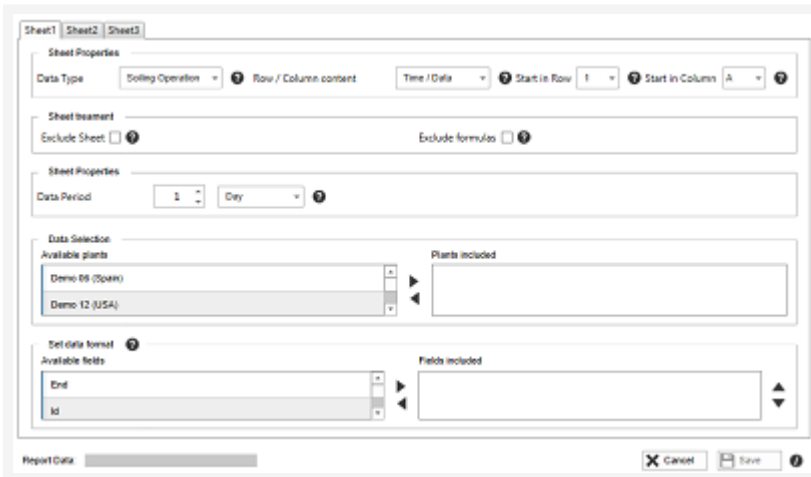
## Result

The Power Curve is added to your report.

# Add soiling loss operations to reports

If you selected **Soiling operations** as a data type, customize the alarm information to include in the report in the **Data Selection** section:

## Data selection (Soiling loss operations)



To add alarms to the report, follow these steps:

- 1 In the **Data Selection** section, select the data and its format.
  - a Click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Selected Plants** panel.
  - b Click on the device types in the **Set data format** panel, then click the ► icon to move them to the **Included fields** panel.

Click the ▲ and ▼ icons to change the order in which the selected items appear in the report.

- 2 Click **Save**.

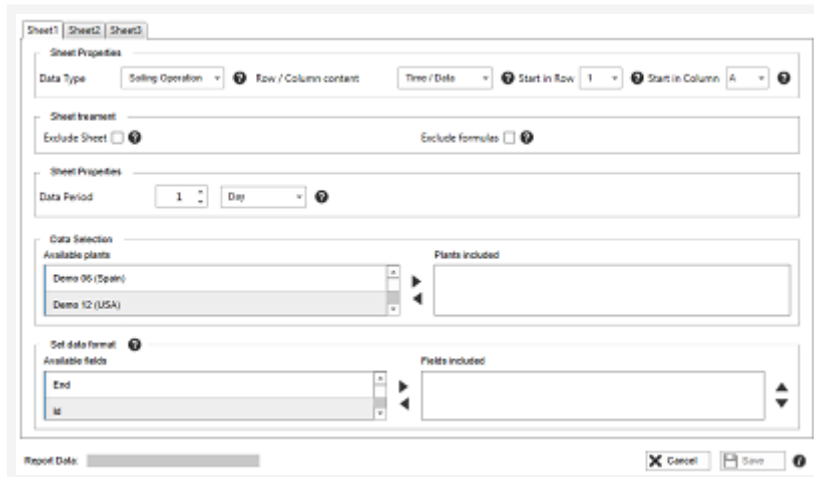
## Result

Soiling loss operations are added to your report.

# Add tickets to reports

If you selected **Tickets** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Tickets)



**NOTE:** The report includes only tickets that are scheduled to start within the time period you define for the report.

To add element descriptions to the report, follow these steps:

- 1 In the **Sheet Properties** section, select the time period for the data.
- 2 In the **Data Selection** section, click on the plant names in the **Available Plants** panel, then click the ► icon to move them to the **Included Plants** panel.
- 3 Click the Section to Export drop-down menu to select the section of the ticket you want to export.

**BEST PRACTICE:** You can export one ticket section per sheet. If you want to export multiple sections, try to export each section on a different sheet.

- 4 Click **Save**.

## Result

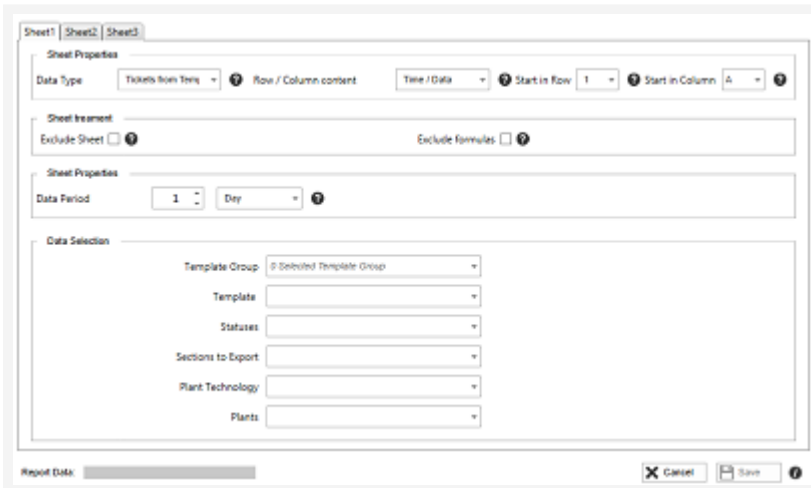
The tickets are added to your report.



# Add tickets from templates to reports

If you selected **Tickets from Template** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Tickets from templates)



To add tickets from a template to your report, follow these steps:

- 1 In the **Sheet Properties** section, select the time period for the data.
- 2 In the **Data Selection** section, click to select the template and the details of the ticket to include in the report:
  - a **Template**: template from which to retrieve the ticket.
  - b **Statuses**: statuses of the tickets to include in the report.
  - c **Sections to export**: sections from the ticket to include in the report.
  - d **Plant technology**: technology of the tickets to include in the report.
  - e **Plants**: plants to include in the report.
- 3 Click **Save**.

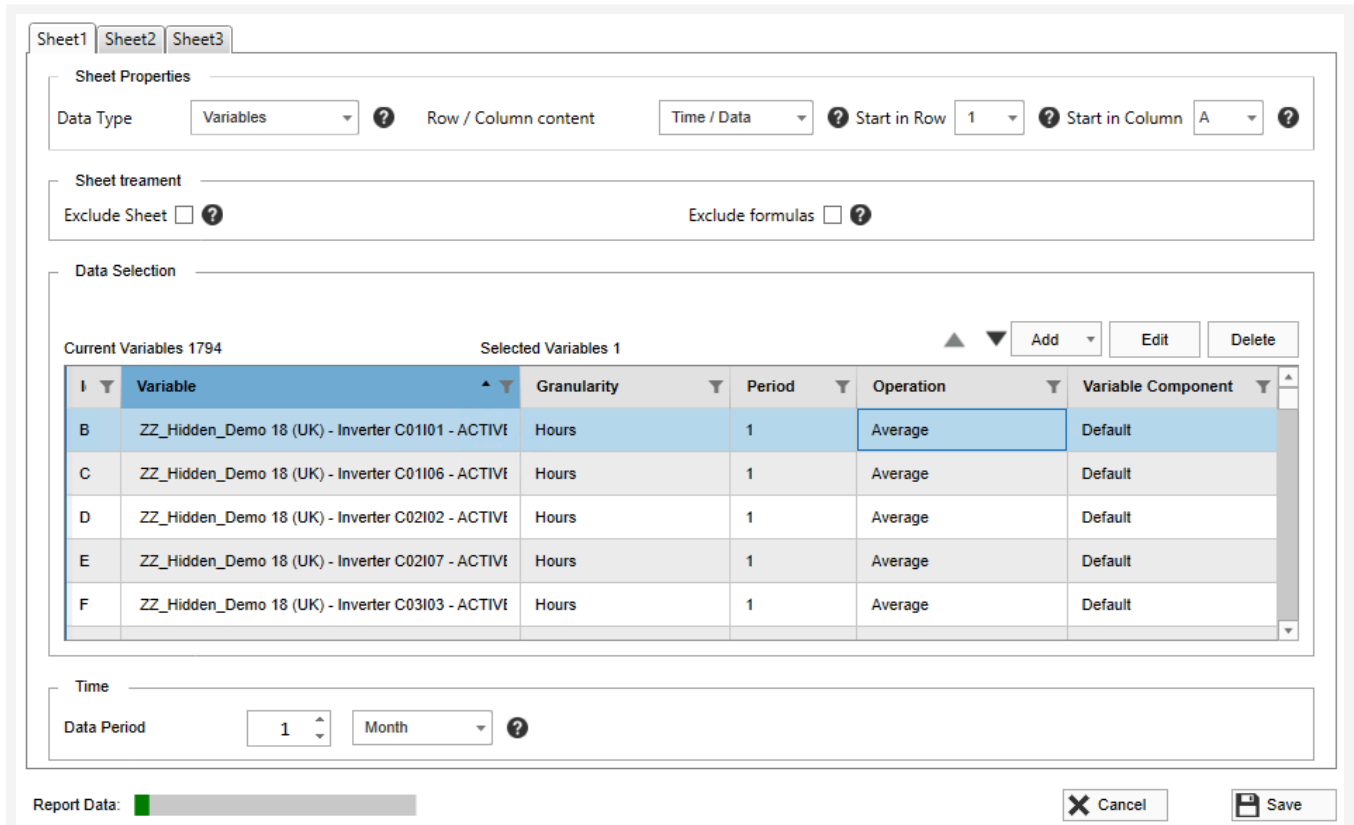
## Result

Tickets that match the selected options are added to your report.

# Add variables to reports

If you selected **Variables** as a data type, customize the element descriptions to include in the report in the **Data Selection** section:

## Data selection (Variables)



Sheet1 Sheet2 Sheet3

Sheet Properties

Data Type: Variables ? Row / Column content: Time / Data ? Start in Row: 1 ? Start in Column: A ?

Sheet treatment

Exclude Sheet  ? Exclude formulas  ?

Data Selection

Current Variables 1794 Selected Variables 1

▲ ▼ Add Edit Delete

I	Variable	Granularity	Period	Operation	Variable Component
B	ZZ_Hidden_Demo 18 (UK) - Inverter C01101 - ACTIVE	Hours	1	Average	Default
C	ZZ_Hidden_Demo 18 (UK) - Inverter C01106 - ACTIVE	Hours	1	Average	Default
D	ZZ_Hidden_Demo 18 (UK) - Inverter C02102 - ACTIVE	Hours	1	Average	Default
E	ZZ_Hidden_Demo 18 (UK) - Inverter C02107 - ACTIVE	Hours	1	Average	Default
F	ZZ_Hidden_Demo 18 (UK) - Inverter C03103 - ACTIVE	Hours	1	Average	Default

Time

Data Period: 1 Month ?

Report Data:

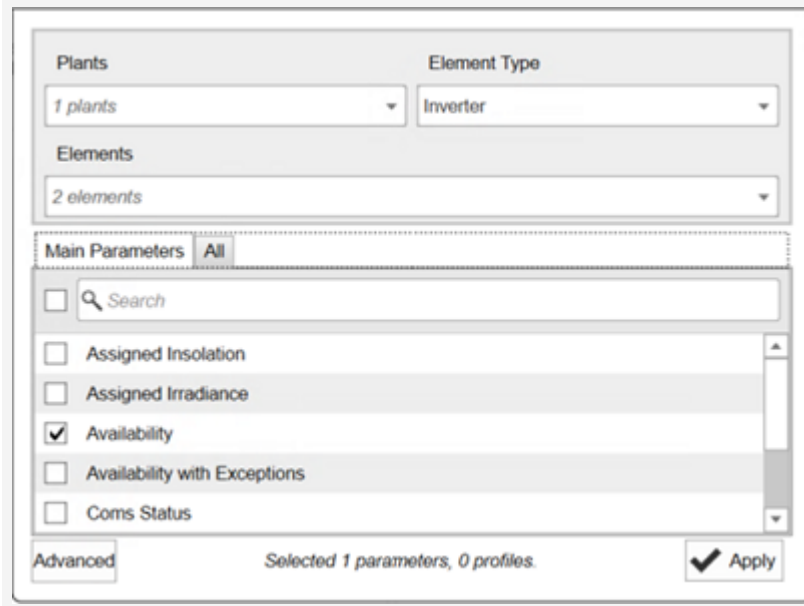
Cancel Save

To add variables to a report, follow these steps:

- 1 In the **Data Selection** section, click the **Add Button** and select where to include the variable in the table.

**Result:** The Add Variable dialog opens:

### Add Variable dialog



- 2 Select the parameters to add:
  - a Click the **Plants** drop-down menu to select one or more plants. You can use the *Search* field to refine the list.
  - b Click the **Element type** drop-down menu to select one or more element types.
 

**NOTE:** You can only select element types after selecting the plants.
  - c Click the **Element** drop-down menu to select one or more elements.
 

**NOTE:** You can only select elements after selecting the element types.
  - d Click the **Parameters** tabs to select one or more parameter or series. You can use the *Search* field to refine the list.
  - e (Optional) Click **Advanced Mode** to open the **Advanced Datasource Selector**. For further information, see the [Advanced Datasource Selector](#) section.
- 3 Click **Apply**.
- 4 In the **Properties** section, customize the variable information by selecting options from the drop-down menu:
  - a Click the Granularity drop-down menu and select the level of granularity for the data (for example, **Hours**).
  - b Click the Period drop-down menu to select the number of time periods to include

in the report (for example, **5** hours).

- c** Click the **Data aggregation method** drop-down menu to select the calculation that applies to the data (for example, **Average**).

- 5** Click **Apply**.

**Result:** The Add Variable dialog closes.

- 6** In the **Data selection** window, click **Save**.

## Result

The variables are added to your report.

# Soiling loss operations

Soiling is the presence of snow, dirt, soil, dust and other particles on the surfaces of your solar panels. It is one of many factors that can affect the irradiance received by the solar panels in your plant.

"Soiling loss" is the industry term for the monetary losses caused by soiling. Registering soiling loss operations allows GPM Plus to take into account the real conditions of the panels in your plant. This allows you to have more accurate KPIs.

The system calculates losses by comparing the irradiance values of soiled panels with two panels that serve as references. The first reference panel is one that receives daily cleaning. The second reference panel is a specific panel from each zone of your plant.

You can register soiling loss operations to inform GPM Plus of when the cleaning of a panel occurs. This also serves to calculate the offset that panels have due to the manufacturing process, aging, or just because they are different models.

Soiling losses are expressed as percentages. The system calculates them using the following

$$\text{SOILING LOSS(\%)} = \left(1 - \frac{\text{Insolation Dirty Ref. Cell} * \text{Offset}}{\text{Insolation Clean Ref. Cell}}\right) * 100$$

formula:

For the calculation to work, you must enter three values in the application:

- the cleaning operation for the reference panel.
- the cleaning operation for the reference zone.
- an offset calculation.

You can track and manage all soiling loss operations from the [Soiling Loss panel](#) in the [Plant Dashboard module](#).

# Tickets

Tickets allow you to create, assign, and track tickets related to maintenance, operations, and management (O&M) tasks. You can create and manage tickets in the [Tickets module](#). For more information, see the section on [Working with tickets](#).

**NOTE:** Depending on your setup, one or more customized tickets may be available.

## Types of tickets

- **Maintenance:** track and resolve issues or conditions in your plant, particularly those related to active alarms. When creating maintenance tickets, you can choose between a ticket for a single occurrence, or a series of tickets for recurring tasks. The procedures are the same, except for the first step in which you choose between the two options.
- **Task:** assign tasks to operators in a plant.
- **Data correction:** correct data by importing files with information and adding it to the system's Data Provider. This allows you, for example, to create and merge layers of data using Data Sources, to eliminate negative values. You can also create advanced algorithms that calculate final values from sources of raw data.

**NOTE:** These tickets require a special configuration. Contact your GPM representative for more information.

# Work with tickets

There are two main types of tasks related to tickets: creation and management.

## Create tickets

You can create individual maintenance tickets or a series of tickets for recurring tasks.

**NOTE:** Information contained in Maintenance tickets is customizable. Each customization is stored as a template. The following instructions use the **GPM Default** template.

You can also create tickets from existing tickets. When you create a new ticket from an existing one, you also choose which relational link to create between the two tickets. Additionally, all the general information from the source ticket is copied to the new ticket, saving you time by filling all the mandatory fields.

### Create and edit tickets in bulk

It is also possible to create tickets in bulk. This requires exporting the template that corresponds to the tickets and configuring it in Microsoft Excel, and then re-importing it to GPM Plus. For more information, see Creating and editing tickets in bulk.



## Manage tickets

Depending on the type of ticket, there are several other actions you can take:

**NOTE:** Click on any item in the list to see the instructions to perform that action.

- **Add information to tickets:**
  - Add interventions to tickets: track physical actions performed on site to fix an issue.
  - Add conversations to tickets: provide additional comments and information regarding the ticket. You can add them as notes.
  - Link tickets: establish relationships between them. This relationship is useful to track tickets when multiple tickets are required to resolve the same issue. For more information, see the table on Ticket relationship types.
  - Edit tickets in bulk: download multiple tickets in an XLS file to easily edit several fields and re-import them into the system.
- Archive tickets: hide tickets from the list when they no longer require your attention. This helps to reduce the loading time of the tickets list.

**NOTE:** This action requires an administrator password.

It is possible to restore archived tickets in order to edit them. You can access archived tickets by toggling the archiving option in the Filtering Options panel.

- Restore archived tickets: enable editing for tickets that were previously archived. Restoring is only possible for archived tickets, which you can display by toggling the archiving option in the Filtering Options panel.
- Delete tickets: permanently remove tickets and the information they contain from the application. You can only delete archived tickets.

**NOTE:** This action requires an administrator password.

**NOTE:** You can delete any additional information section in a ticket by clicking **Delete Section** at the bottom of that section.

## Configure tickets

GPM's ticketing system is highly customizable, allowing organizations to adapt them to their different operations and management (O&M) processes.

There are three main areas of work to configure tickets:

- Ticket fields: define the information that appears in the ticket.
- Ticket statuses: define the stages in the workflow of a ticket.
- Ticket templates: define the information (fields) that appear on a particular type of ticket, and the workflow (transitions between statuses). You can also configure tickets templates for use with the GPM Ticket Manager app.

# Create maintenance tickets

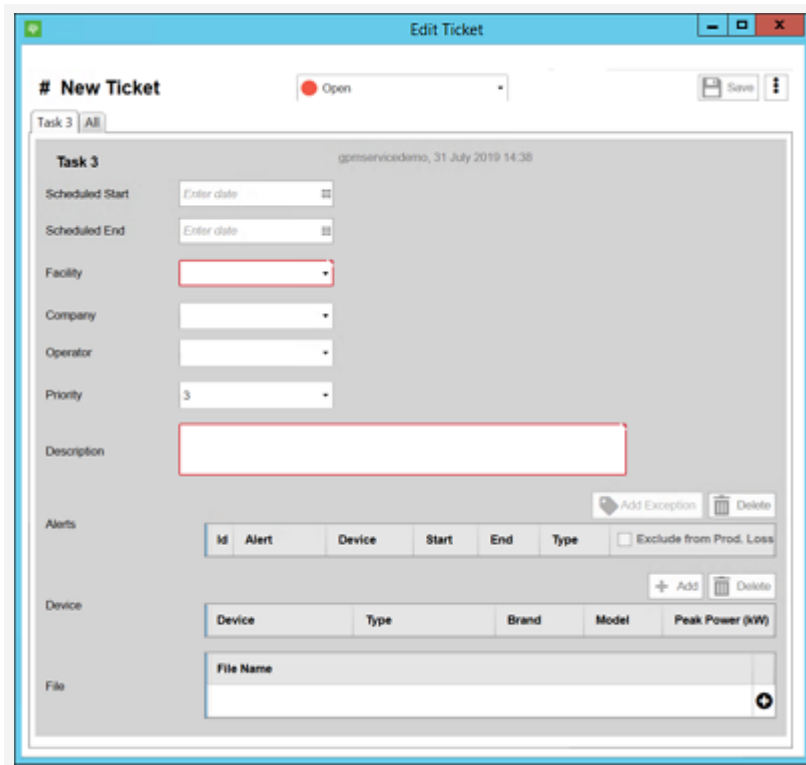
To create a maintenance ticket, follow these steps:

**NOTE:** Information contained in Maintenance tickets is customizable. Each customization is stored as a template. The following instructions use the **GPM Default** template.

- 1 In the Tickets module, click the **+** icon and select **Single occurrence**.
- 2 In the menu, select **Maintenance**, then select the **GPM Default** template.


**Result:** The **Edit Ticket** dialog appears:


## Edit Ticket dialog



The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and has a status dropdown set to 'Open'. Below this is a 'Task 3' section with a date '31 July 2019 14:38'. The form contains several input fields: 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholder), 'Facility' (a dropdown menu), 'Company' (a dropdown menu), 'Operator' (a dropdown menu), 'Priority' (a dropdown menu set to '3'), and 'Description' (a large text area). Below the description are two sections: 'Alerts' and 'Device'. Each section has a table with columns for adding and deleting items. The 'Alerts' table has columns: Id, Alert, Device, Start, End, Type, and a checkbox for 'Exclude from Prod. Loss'. The 'Device' table has columns: Device, Type, Brand, Model, and Peak Power (kW). At the bottom, there is a 'File' section with a 'File Name' input field and a plus icon.

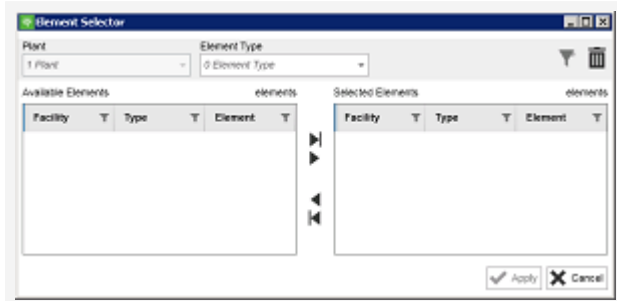
- 3 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.

- e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
- f **Priority:** select a priority from the drop-down list.  
Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
- g **Description:** enter a description in the text input field.
- h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
- i (Optional) **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).



 **NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.


- 4 (Optional) In the Device section click **+ Add** to link the ticket to specific elements:  
The Element selector dialog appears:

### Element selector



- a Click the **Element Type** drop-down menu and select the types of element you want to add, then select the element types.

 **BEST PRACTICE:** You can type a term into the *Search* field and click the  icon to narrow down the options available on the list.

- b In the **Available Elements** panel select the element you want to add to the ticket, then click the  icon.

OR: Click the  icon to select all the elements on the list.

 **TIP:** Hold down the shift key to select multiple elements.

**c** Click **Apply**.

**Result:** The element is added to the list.

**5** (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).

**6** Click  **Save**.

## Result

The ticket is created and assigned to the operator you selected.

# Create series of maintenance tickets

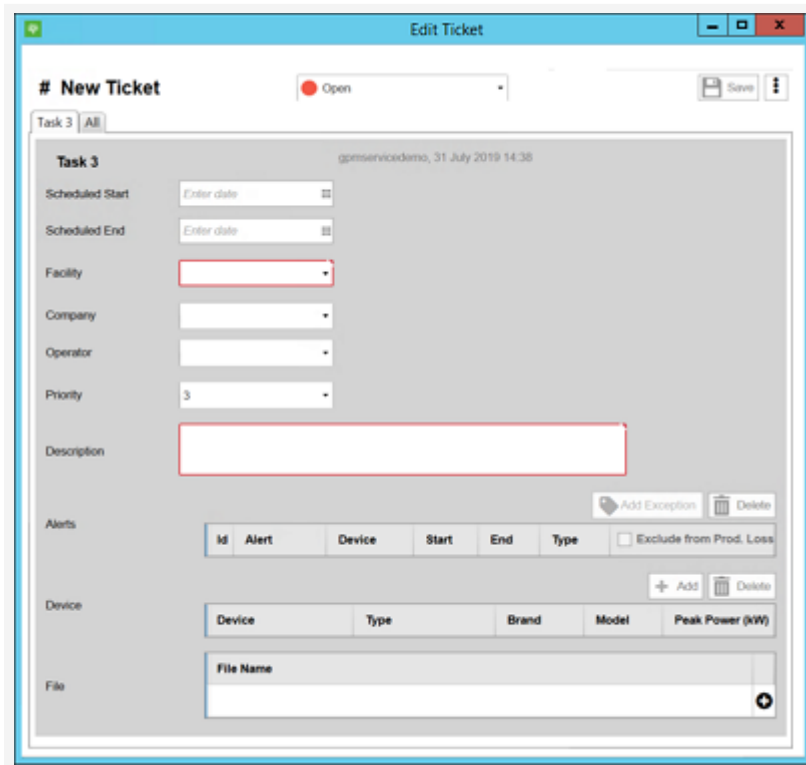
To create a series of maintenance tickets, follow these steps:

**NOTE:** Information contained in Maintenance tickets is customizable. Each customization is stored as a template. The following instructions use the **GPM Default** template.

- 1 In the Tickets module, click the **+** icon and select **Series**.
- 2 In the menu, select **Maintenance**, then select the **GPM Default** template.


**Result:** The **Edit Ticket** dialog appears:


## Edit Ticket dialog



The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and has a status indicator 'Open'. Below that, there's a 'Task 3' section with a date 'gpmservicodemo, 31 July 2019 14:38'. The form contains several input fields: 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholder), 'Facility' (a dropdown menu), 'Company' (a dropdown menu), 'Operator' (a dropdown menu), 'Priority' (a dropdown menu with '3' selected), and 'Description' (a large text area). Below these are sections for 'Alerts' and 'Device'. The 'Alerts' section has a table with columns 'Id', 'Alert', 'Device', 'Start', 'End', 'Type' and a checkbox 'Exclude from Prod. Loss'. The 'Device' section has a table with columns 'Device', 'Type', 'Brand', 'Model', 'Peak Power (kW)'. There are also buttons for 'Add Exception', 'Delete', '+ Add', and 'Delete'.

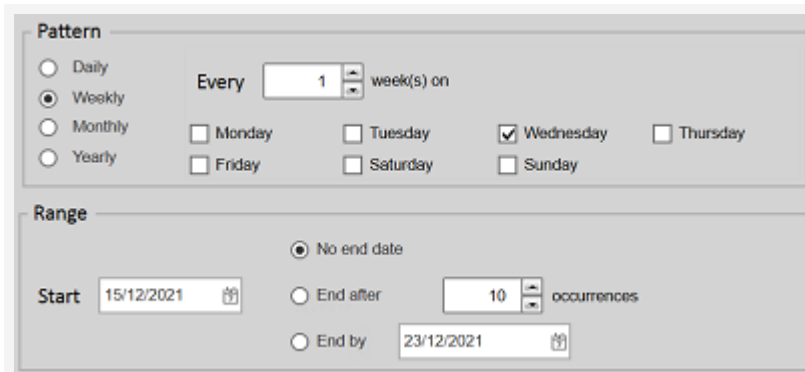
- 3 In the **Edit Ticket** dialog, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.

- e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
- f **Priority:** select a priority from the drop-down list.  
Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
- g **Description:** enter a description in the text input field.
- h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
- i (Optional) **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).

 **NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.

- 4 (Optional) Change the status of the ticket from the drop-down list (for example, **Open**).
- 5 Click the **Recurrence** tab.

### Recurrence tab




The screenshot shows the 'Recurrence' configuration form. It is divided into two main sections: 'Pattern' and 'Range'.

**Pattern Section:**

- Radio buttons for frequency: Daily, Weekly (selected), Monthly, Yearly.
- Text input: 'Every' followed by a spinner box containing '1' and the text 'week(s) on'.
- Checkboxes for days of the week: Monday, Tuesday, Wednesday (checked), Thursday, Friday, Saturday, Sunday.

**Range Section:**

- Radio buttons for end conditions: No end date (selected), End after, End by.
- Text input: 'Start' followed by a date field containing '15/12/2021' and a calendar icon.
- Text input: 'End after' followed by a spinner box containing '10' and the text 'occurrences'.
- Text input: 'End by' followed by a date field containing '23/12/2021' and a calendar icon.

- 6 In the **Pattern** section of the Recurrence tab, configure the frequency of the recurrence:
  - a Select a period for the recurrence (for example, **Weekly**).
  - b Select a frequency for the recurrence (for example, "Every **1** week").
  - c Select the day of the week on which the occurrence takes place (for example, **Wednesday**).
- 7 In the **Range** section of the Recurrence tab, select the dates on which the recurrence starts and ends.
- 8 Click  **Save**.

## Result

The series of tickets is created and assigned to the operator you selected.



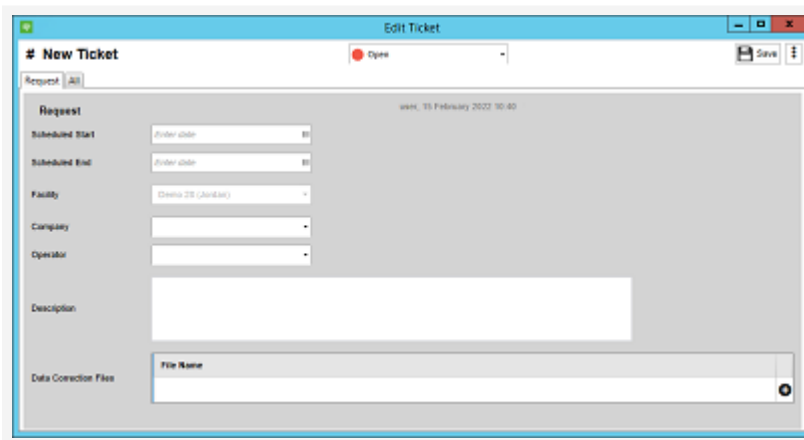
# Create data correction tickets

To create a data correction ticket, follow these steps:

- 1 In the Tickets module, click the **+** icon and select **Single occurrence**.
- 2 In the menu, select **Data Cleansing**, then select **GPM Data Correction**.

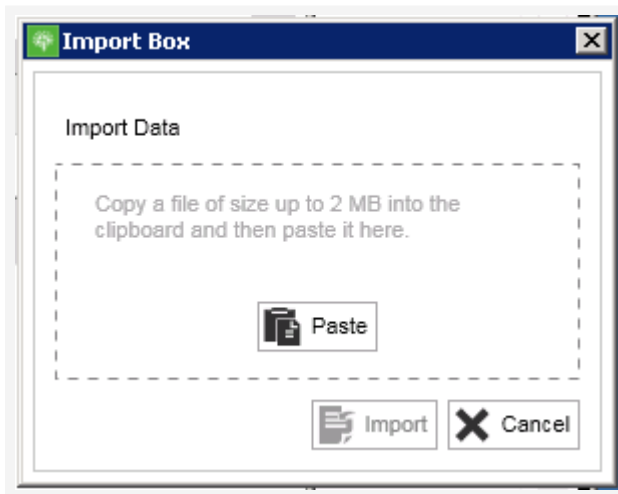
**Result:** The Edit ticket dialog appears:

## Edit ticket dialog (Data cleansing)



- 3 In the Request section, enter the information for the ticket:
  - a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Description:** enter a description in the text input field.
- 4 In the Data Correction Files section, click the **+** icon to open the Import Box and import an XLS file from which to add the corrected data:

## Import Box



**NOTE:** You can only import XLS files.

- a In your computer's File Explorer, select and copy the file you want to import by pressing CTRL + C, or by right-clicking the file and selecting **Copy**.
- b In the Import Box dialog, click **Paste**.
- c Click **Import**.

**Result:** The file is imported to the ticket.

5 (Optional) To add a note, follow these steps:

- a Click the **:** icon, hover over **Add section** and select **Note**.
- Result:** The Note tab appears.

### Note tab in ticket edition



- b Enter text in the *Note* field and click **Save**.
- Result:** The note is added to the ticket.


6 Click **Save**.

## Result

The ticket is created and assigned to the operator you selected.

# Create new tickets from existing tickets

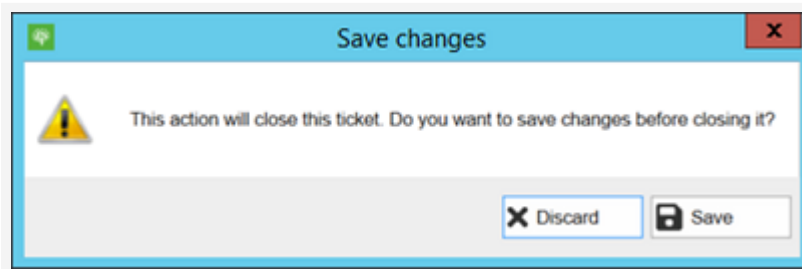
To create a new ticket from an existing ticket, follow these steps:

- 1 Open the ticket that you want to use as the source ticket.
- 2 Click the  icon and go to **Add New Ticket**, then select the relationship and the ticket type.

**NOTE:** Alternatively, you can create a new ticket from an existing ticket from the context menu in the ticket list.

**Result:** The **Save changes** dialog appears:

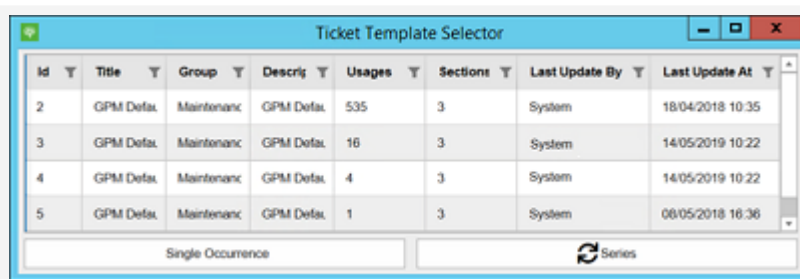
## Save changes dialog



- 3 On the **Save changes** dialog, select whether you want to save your latest changes to the source ticket.

**Result:** The **Ticket Template Selector** appears:

## Ticket Template Selector

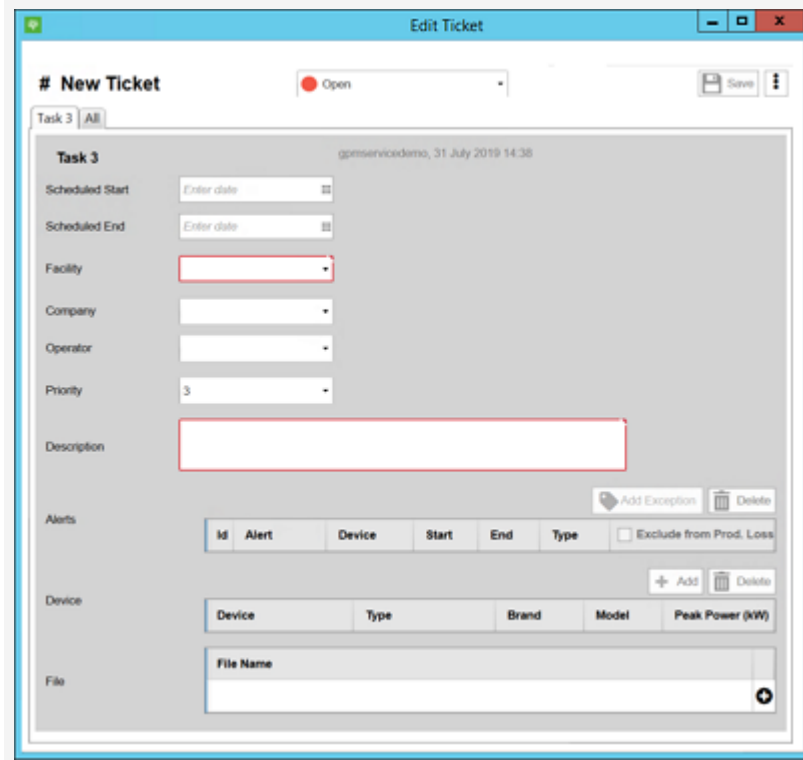


Id	Title	Group	Description	Usages	Sections	Last Update By	Last Update At
2	GPM Defa.	Maintenanc	GPM Defa.	535	3	System	18/04/2018 10:35
3	GPM Defa.	Maintenanc	GPM Defa.	16	3	System	14/05/2019 10:22
4	GPM Defa.	Maintenanc	GPM Defa.	4	3	System	14/05/2019 10:22
5	GPM Defa.	Maintenanc	GPM Defa.	1	3	System	06/05/2018 16:36


- 4 On the **Ticket Template Selector** dialog, select the ticket template, and click **Single Occurrence**.

**Result:** The **Edit Ticket** dialog appears:


### Edit Ticket dialog



The screenshot shows the 'Edit Ticket' dialog box. At the top, it says '# New Ticket' and has a status indicator 'Open'. Below that, there's a 'Task 3' section with a date '31 July 2019 14:38'. The form contains several input fields: 'Scheduled Start' and 'Scheduled End' (both with 'Enter date' placeholder), 'Facility', 'Company', 'Operator', and 'Priority' (set to '3'). A large 'Description' text area is also present. Below the description, there are sections for 'Alerts' and 'Device', each with a table and an 'Add' button. The 'Alerts' table has columns for Id, Alert, Device, Start, End, Type, and a checkbox for 'Exclude from Prod. Loss'. The 'Device' table has columns for Device, Type, Brand, Model, and Peak Power (KW). At the bottom, there is a 'File' section with a 'File Name' input field and a '+' icon.

- 5 In the **Edit Ticket** dialog, enter the information for the ticket:
- a **Scheduled Start:** select the date on which the ticket starts.
  - b **Scheduled End:** select the date on which you expect the ticket to close.
  - c **Facility:** if your portfolio has more than one plant, select a plant from the drop-down list.
  - d **Company:** select the company that must resolve the issue related to the ticket.
  - e **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - f **Priority:** select a priority from the drop-down list.  
Priority is calculated on a scale from one to five, where one is the highest priority and five is the lowest priority.
  - g **Description:** enter a description in the text input field.
  - h **Device:** if you have selected a plant, you can specify the elements to which the ticket applies
  - i (Optional) **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).

① **NOTE:** The **Alarms** field is unavailable when creating a maintenance ticket.



6 When you have entered all the details, click  **Save**.

## Result

A new ticket is created and a link is generated between the two tickets.

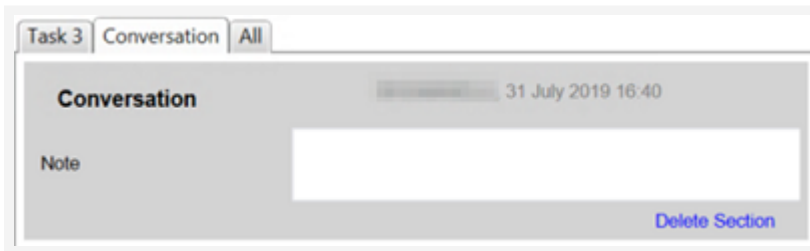
# Add conversations to tickets


To add a conversation to a ticket, follow these steps:

- 1 Open the ticket to which you want to add the conversation.
- 2 Click the  icon and select  **Add Conversation**.

**Result:** The **Conversation** tab appears:

## Conversation dialog





- 3 In the *Note* section of the **Conversation** tab, enter the text you want to add.
- 4 Click  **Save**.

## Result

The conversation is added to the ticket.

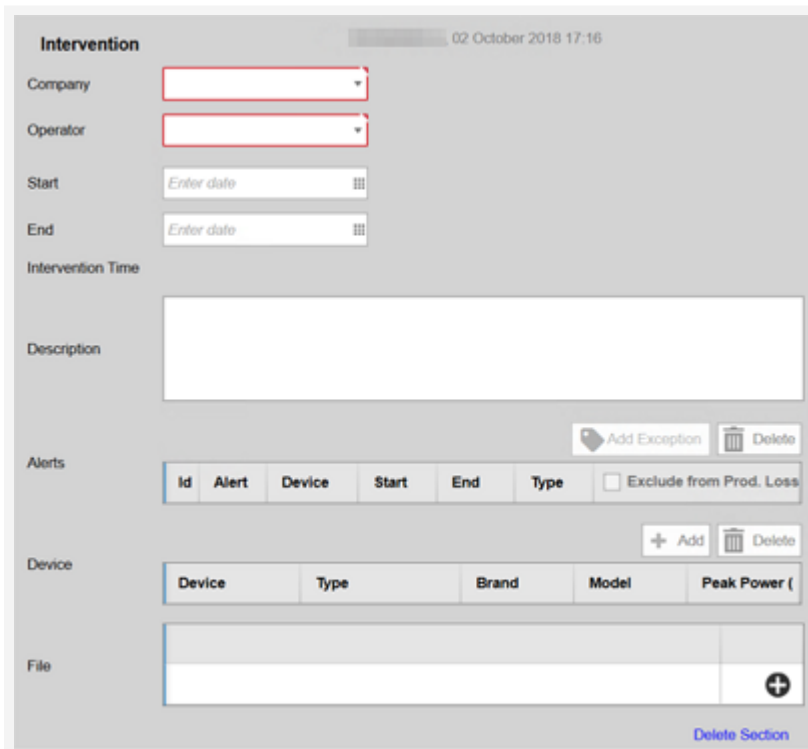
# Add interventions to tickets

To add an intervention to a ticket, follow these steps:

- 1 Open the ticket to which you want to add the intervention.
- 2 Click the  icon and select  **Add Intervention**.

**Result:** The **Intervention** dialog appears:

## Intervention dialog



**Intervention** 02 October 2018 17:16

Company

Operator

Start

End

Intervention Time

Description

Alerts

Id	Alert	Device	Start	End	Type	<input type="checkbox"/> Exclude from Prod. Loss
<input type="button" value="+ Add"/> <input type="button" value="Delete"/>						

Device


Device	Type	Brand	Model	Peak Power (
<input type="button" value="+"/>				


File

[Delete Section](#)

- 3 In the **Intervention** dialog, enter the information for the intervention:
  - a **Company:** select the company that must resolve the issue related to the ticket.
  - b **Operator:** select the username of an operator from the drop-down list to assign the ticket to them.
  - c **Start:** select the date on which the intervention starts.
  - d **End:** select the date on which you expect the intervention to end.
  - e **Description:** enter a description for the intervention in the text input field.
  - f **Device:** if you have selected a plant, you can specify the elements to which the ticket applies



**g** **File:** click the  icon to add files to the ticket. For more information, see [Import data from a file](#).

 **NOTE:** The **Alarms** field is unavailable when adding interventions to a maintenance ticket.


**4** Click  **Save**.

## Result

The intervention is added to the ticket and assigned to the operator you selected.

# Link tickets

To link a ticket to another ticket, follow these steps:

- 1 Open the ticket you want to link.
- 2 Click the  icon and go to **Link to Ticket**.

**NOTE:** Alternatively, you can add a link to a ticket from the context menu in the ticket list.

- 3 In the **Link to Ticket** menu, select the relationship type you want to establish with the link:

Relationship type	Description
<b>Hierarchical</b>	Tree structure between tickets, where a parent ticket contains one or more child tickets: <ul style="list-style-type: none"> <li>▪ Parent: ticket contains other entities.</li> <li>▪ Child: ticket has a parent entity.</li> </ul>
<b>Sequential</b>	Temporal order in which tickets should be completed: <ul style="list-style-type: none"> <li>▪ Predecessor: ticket should be completed before another ticket.</li> <li>▪ Successor: the ticket should be completed after another ticket.</li> </ul>
<b>Related</b>	Non-directional relationship between tickets.





- 4 In the *Ticket ID* field, enter a valid ticket ID and press **Enter**.

- 5 Click  **Save**.

## Result


A link is created between the two tickets. The link appears in the **Links** tab of the two tickets and in the **Links** column of the **Tickets** module.

# Archive tickets

## Before you begin

This task requires an administrator password.

To archive a ticket, follow these steps:


- 1 On the ticket list, select the tickets you want to archive.
- 2 Right-click the selection and select  **Archive** from the context menu.  
**Result:** The **Security Validation** dialog appears.
- 3 On the **Security Validation** dialog, enter the administrator password and click **Accept**.

## Result

The tickets are archived and hidden from the ticket list.

## Restore archived tickets

To restore archived tickets, follow these steps:

- 1 In the Tickets module, expand the Filtering options panel and set the toggle to **Archived**.  
**Result:** The tickets list appears.
- 2 On the tickets list, select the tickets you want to restore and right-click them to open the context menu.
- 3 In the context menu, click  **Restore**.

### Result


The tickets are restored and become available in the default ticket list.

# Delete tickets

## Before you begin

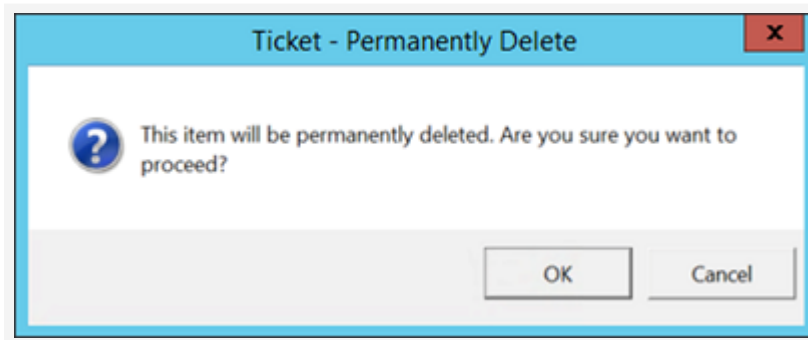
This task requires an administrator password.

To delete tickets, follow these steps:

- 1 In the Tickets module, expand the filtering options panel and set the toggle to **Archived**.
- 2 On the ticket list, select the tickets you want to delete.
- 3 Right-click the selection, then select  **Delete** from the context menu.

**Result:** The **Confirmation** dialog appears:

### Confirmation dialog



- 4 In the **Confirmation** dialog, click **OK**.  
**Result:** The **Security Validation** dialog appears.
- 5 In the **Security Validation** dialog, enter the administrator password and click **Accept**.

## Result

The tickets are deleted and the information they contain is permanently removed from the application.

# Creating and editing tickets in bulk

To create or edit tickets in bulk, you must export the template that corresponds to the tickets and configure it in Microsoft Excel, and then re-import the XLS file to GPM Plus.

## Create


To create tickets in bulk, you must export a ticket template as an XLS file, which you then edit in Microsoft Excel. When you import the XLS file to GPM Plus, the tickets are automatically added to the system and assigned to the operators you defined in the configuration.

There are two main methods to create tickets in bulk:

- [Create single tickets in bulk](#)
- [Create a series of recurring tickets in bulk](#)

## Edit

To [edit tickets in bulk](#), you first export them as an XLS file, which you then edit in Microsoft Excel. Each ticket has its own unique ID, which together with the reference from the template, allows the system to map the tickets when you import the XLS file to GPM Plus.

 **TIP:** You can create new tickets by adding them to the table in the XLS file, and filling in the information for the fields.

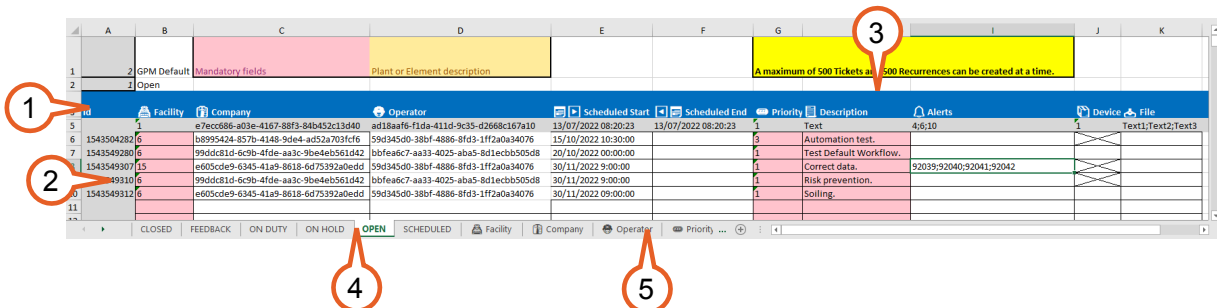
## Ticket templates

In Microsoft Excel, column headers display the fields of the ticket template. The row immediately below the column headers provides clear examples of how to fill in each field. This makes it easy to add and edit information, and it allows you to easily add new tickets when editing a list of existing tickets.

### Fields

- **Mandatory:** cells marked in red (for example, "Plant"). Gray rows are blocked or non-editable cells.
- **Descriptions:** cells marked in yellow. These fields include pre-configured metadata for Plants and Elements, that the system automatically fills in when the XLS file is re-imported to GPM Plus.
- **Pre-defined values:** cells with a limited list of available options that correspond to entities in GPM Plus (for example, "Company" and "Operator"). The XLS file includes references to correctly input these values, which the system automatically maps to the entity when re-importing the file. For more information, see [Field reference tabs](#) below.

### Ticket template in XLS



A	B	C	D	E	F	G	H	I	J	K
1	GPM Default	Mandatory fields	Plant or Element description							
2	Open									
3	A maximum of 500 Tickets at 500 Recurrences can be created at a time.									
4	1543504282	6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	13/07/2022 08:20:23	13/07/2022 08:20:23	1	Text	4/6:10	1
5	1543549307	6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	20/10/2022 00:00:00		1	Automation test.		
6	1543549310	6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	30/11/2022 9:00:00		1	Test Default Workflow.		
7	1543549312	6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	30/11/2022 9:00:00		1	Correct data.	92039;92040;92041;92042	
8		6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	30/11/2022 9:00:00		1	Risk prevention.		
9		6	99d9c81d-6c9b-4fde-aa3c-9be4eb561d42	59d345d0-38bf-4886-8f43-1ff2a0a34076	30/11/2022 09:00:00		1	Soiling.		
10										
11										
12										

1. Ticket fields: each column corresponds to a field in the ticket configuration. The first row provides an example of the format for inputting data.

**NOTE:** The cells that inform the fields of the tickets must have the same format as the one provided in the template (for example, the **Scheduled Start** column must have date format).

2. Ticket IDs: each ticket has a unique ID automatically assigned to it, to correctly identify it when re-importing the file. When creating new tickets, this field must remain blank.
3. Maximum tickets: the maximum number of tickets you can edit and import at a



---

time.

**NOTE:** The maximum number of tickets that you can upload at a time depends on your product configuration. For more information, contact your GPM representative.


4. Ticket status tabs: tickets are sorted by status. Click on a tab to see the tickets that have that status (for example, "Open").
  5. Field reference tabs: click to see the available values for each field of the template.
-

# Create tickets in bulk

## Before you begin

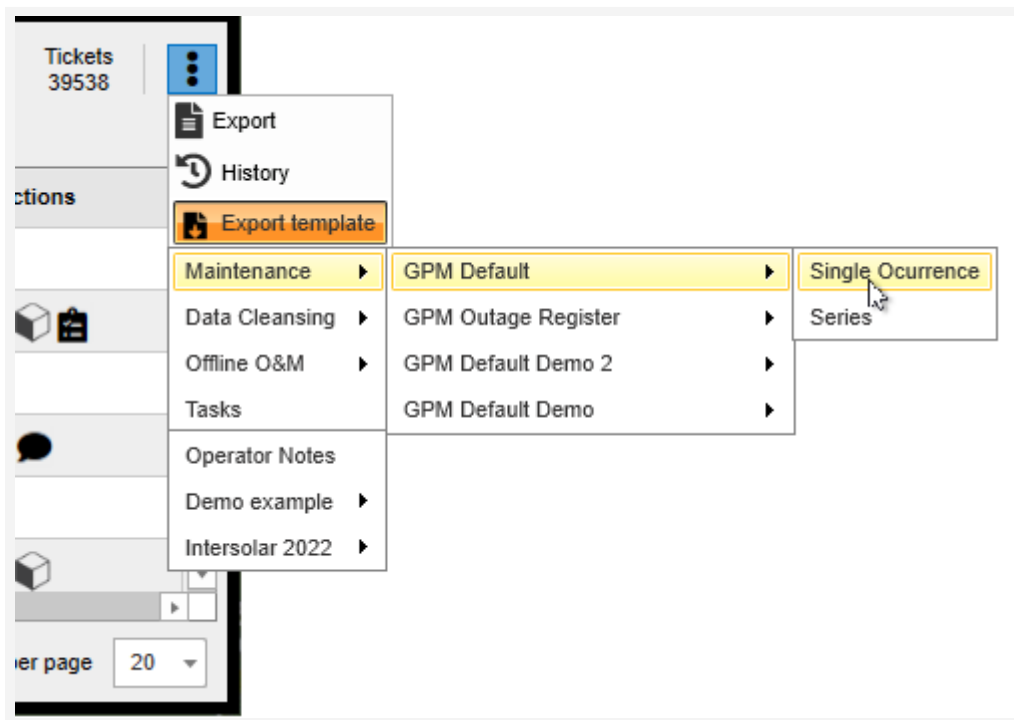
This task requires an administrator password.

To create tickets in bulk, follow these steps:

- 1 In the Tickets module, click the  icon to open the actions menu and select **Export template**.

**Result:** The Template types menu appears:

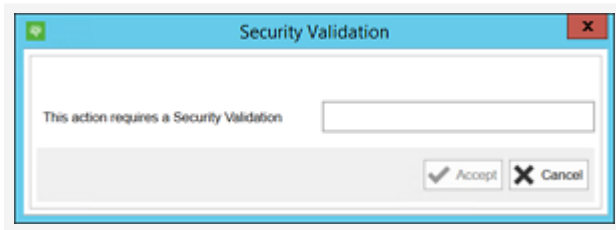
### Template types menu



- 2 Hover over the type of ticket you want to create (for example, **Maintenance**) and select the template you want to export. Then, select **Single occurrence**.

**Result:** The Security validation dialog appears:

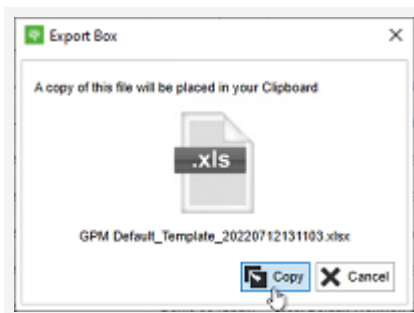
### Security validation dialog



- 3 Enter the administrator password.

**Result:** The **Export box** appears:

### Export box



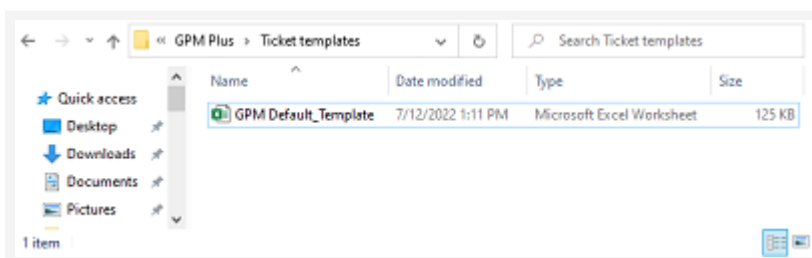
- 4 Click the  **Copy** button.

**Result:** The XLS file is copied to your clipboard.

- 5 In your computer's File Explorer, navigate to the folder in which you want to save the XLS file and press CTRL+V, or right-click and select **Paste**.

**Result:** The XLS file is copied to the folder you selected:

### File Explorer



- 6 Open the XLS file, where each row corresponds to a ticket, and each column corresponds to a field.

ⓘ **NOTE:** For more information, or to see the fields in context, see the [Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#).

**Result:**

**Ticket template in Microsoft Excel**

☆ **IMPORTANT:** The column headers display examples of the format for each field. Each page in the XLS file provides an ID and a reference for the available options in your system.

**Sample IDs and references for the "Operator" field**

	A	B	C	D	E	F	G	F	G
1	Facility	Company	Operator	Id					
2	Demo 04	GPM	Operator 1	cb474d74-18f0-41ba-4d43-1be29843c7e2			d43-1be29843c7e2		
3	Demo 04	GPM	Operator 2	9d715d74-a94c-4d43-8d06-b1e5254f4a7c			8d06-b1e5254f4a7c		
4	Demo 04	GPM	Operator 3	b7e41d74-f912-4d43-848f-5dbff0f0fa06			848f-5dbff0f0fa06		
5	Demo 04	GPM	Operator 4	d7449fff-9c42-4d43-ba54-a7d52ac812a4			a54-a7d52ac812a4		
6	Demo 04	GPM	Operator 5	d74f4073-51f4-4d43-be31-a028212bf8ba			ie31-a028212bf8ba		

7 Fill in the columns of the template to configure the corresponding fields.

④ **NOTE:** The columns of mandatory fields are marked in red (for example, "Facility" in column 1).

⑤ **TIP:** For each field, you can go to the corresponding page in the XLS file, select and copy the relevant ID, and paste it in the column of the corresponding field.

- a *Facility:* if your portfolio has more than one plant, enter the ID of the plant for which you want to create the ticket.
- b (Optional) *Company:* enter the ID of the company that must resolve the issue related to the ticket.
- c (Optional) *Operator:* enter the ID of an operator to assign the ticket to them.
- d (Optional) *Scheduled Start:* enter the date and time on which the ticket starts, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- e (Optional) *Scheduled End:* enter the date and time on which the ticket ends, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- f *Priority:* enter a level of priority (for example, 1).
- g *Description:* enter a description for the ticket.
- h (Optional) *Alarms:* enter the ID for the alarms to which you want to link the ticket.
- i (Optional) *Element:* enter the ID for the elements to which you want to link the ticket.
- j (Optional) *File:* enter the IDs of the files to which you want to link the ticket.
- k Repeat sub-steps (a) to (j) for each ticket you want to create.

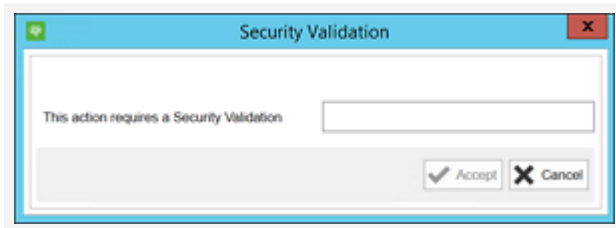
8 Press **CTRL+S**, or click on **File** and select **Save**.

**Result:** The changes to the XLS file are saved.

9 In the Tickets module of GPM Plus, click the **+** icon and select **Create/Edit in bulk**.

**Result:** The **Security validation** dialog appears:

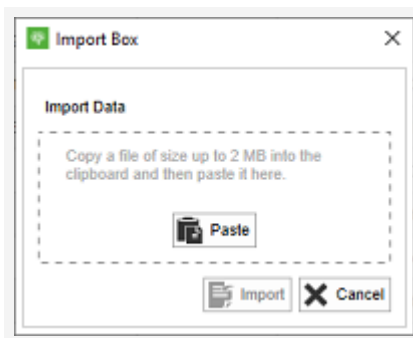
### Security validation dialog



- 10 Enter the administrator password.

**Result:** The **Import box** appears:

### Import box



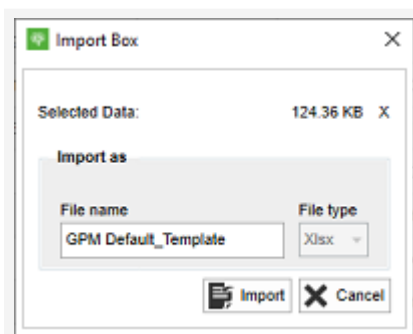
- 11 In your computer's File Explorer, select the XLS file with the ticket template and press **CTRL+S**, or right-click the XLS file and select **Copy**.

**Result:** The XLS file is copied to your clipboard.

- 12 In the Import box, click **Paste**.

**Result:** The XLS file is copied to the Import box.

### Import box

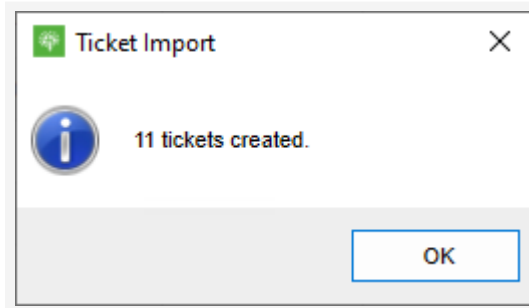


- 13 (Optional) Enter a new name for the file in the *File name* field.

14 Click  **Import**.

**Result:** The **Ticket Import** dialog appears:

### Ticket Import dialog

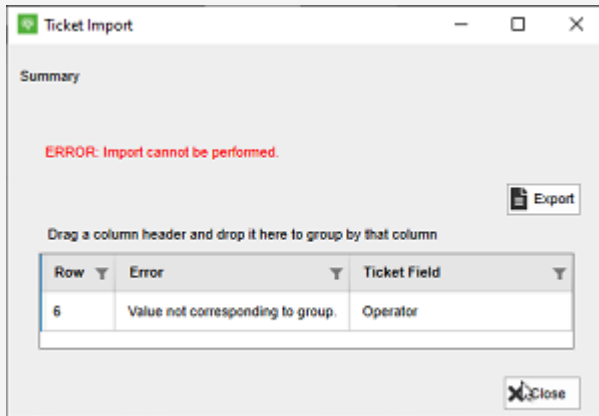


## Result

The XLS file is imported and the tickets are added to the system.

**NOTE:** If the import fails, an error dialog appears providing details about the issue. To fix it, go back to Step 7 (above) and correct the errors in the specified fields.

### Error message in Ticket Import dialog




# Create series of tickets in bulk

## Before you begin

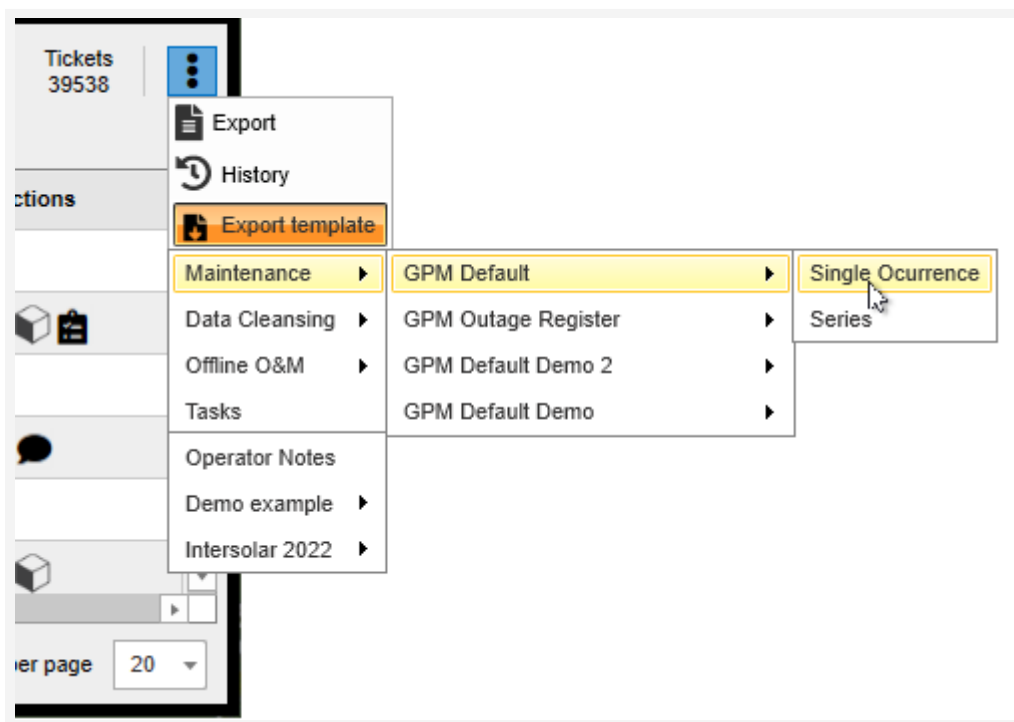
This process requires an administrator password.

To create a series of recurring tickets in bulk, follow these steps:

- 1 In the Tickets module, click the  icon to open the actions menu and select **Export template**.

**Result:** The Template types menu appears:

### Template types menu

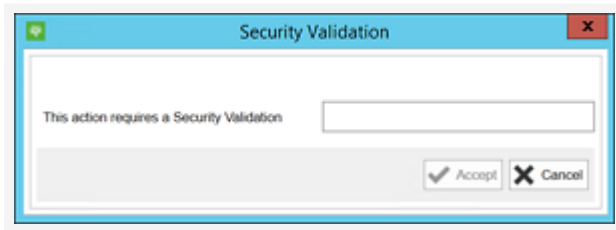


- 2 Hover over the type of ticket you want to create (for example, **Maintenance**) and select the template you want to export. Then, select **Series**.



**Result:** The Security validation dialog appears:

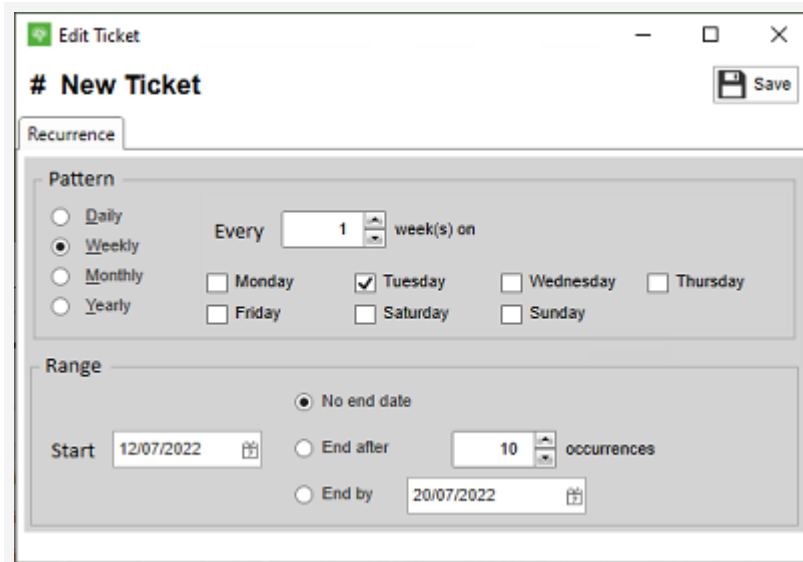
### Security validation dialog



- 3 Enter the administrator password.

**Result:** The **Recurrence configuration** dialog appears:

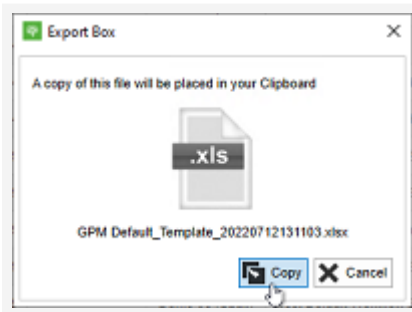
### Recurrence configuration dialog



- 4 In the Recurrence dialog, define how often and for how long the tickets will recur:
- a In the Pattern section, define the pattern for the recurrence.
  - b In the Range section, define the time period during which the tickets will recur.
  - c Click **Save**.

**Result:** The export box appears:

### Export box



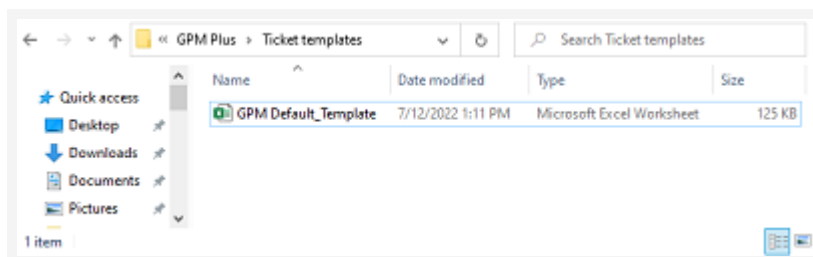
- 5 Click the  **Copy** button.

**Result:** The XLS file is copied to your clipboard.

- 6 In your computer's File Explorer, navigate to the folder in which you want to save the XLS file and press CTRL+V, or right-click and select **Paste**.

**Result:** The XLS file is copied to the folder you selected:

### File Explorer

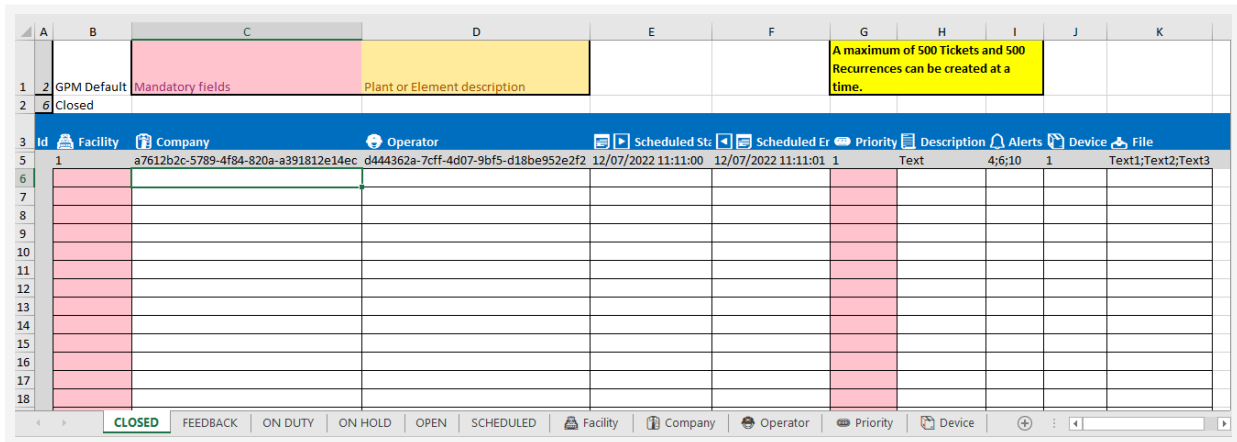


- 7 Open the XLS file, where each row corresponds to a ticket, and each column corresponds to a field.

**NOTE:** For more information, or to see the fields in context, see the [Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#).

**Result:**

**Ticket template in Microsoft Excel**



	A	B	C	D	E	F	G	H	I	J	K
1		GPM Default	Mandatory fields	Plant or Element description			A maximum of 500 Tickets and 500 Recurrences can be created at a time.				
2		Closed									
3	Id	Facility	Company	Operator	Scheduled St:	Scheduled Er	Priority	Description	Alerts	Device	File
5	1	a7612b2c-5789-4f84-820a-a391812e14ec	d444362a-7c7f-4d07-9bf5-d18be952e2f2		12/07/2022 11:11:00	12/07/2022 11:11:01	1	Text	4;6;10	1	Text1;Text2;Text3
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											

☆ **IMPORTANT:** The column headers display examples of the format for each field. Each page in the XLS file provides an ID and a reference for the available options in your system.

**Sample IDs and references for the "Operator" field**

	A	B	C	D	E	F	G	F	G
1	Facility	Company	Operator	Id					
2	Demo 04	GPM	Operator 1	cb474d74-18f0-41ba-4d43-1be29843c7e2			d43-1be29843c7e2		
3	Demo 04	GPM	Operator 2	9d715d74-a94c-4d43-8d06-b1e5254f4a7c			8d06-b1e5254f4a7c		
4	Demo 04	GPM	Operator 3	b7e41d74-f912-4d43-848f-5dbff0f0fa06			848f-5dbff0f0fa06		
5	Demo 04	GPM	Operator 4	d7449fff-9c42-4d43-ba54-a7d52ac812a4			a54-a7d52ac812a4		
6	Demo 04	GPM	Operator 5	d74f4073-51f4-4d43-be31-a028212bf8ba			e31-a028212bf8ba		

8 Fill in the columns of the template to configure the corresponding fields.

ⓘ **NOTE:** The columns of mandatory fields are marked in red (for example, "Facility" in column 1).

💡 **TIP:** For each field, you can go to the corresponding page in the XLS file, select and copy the relevant ID, and paste it in the column of the corresponding field.

- a **Facility:** if your portfolio has more than one plant, enter the ID of the plant for which you want to create the ticket.
- b (Optional) **Company:** enter the ID of the company that must resolve the issue related to the ticket.

- c (Optional) *Operator*: enter the ID of an operator to assign the ticket to them.
- d (Optional) *Scheduled Start*: enter the date and time on which the ticket starts, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- e (Optional) *Scheduled End*: enter the date and time on which the ticket ends, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- f *Priority*: enter a level of priority (for example, 1).
- g *Description*: enter a description for the ticket.
- h (Optional) *Alarms*: enter the ID for the alarms to which you want to link the ticket.
- i (Optional) *Element*: enter the ID for the elements to which you want to link the ticket.
- j (Optional) *File*: enter the IDs of the files to which you want to link the ticket.
- k Repeat sub-steps (a) to (j) for each ticket you want to create.

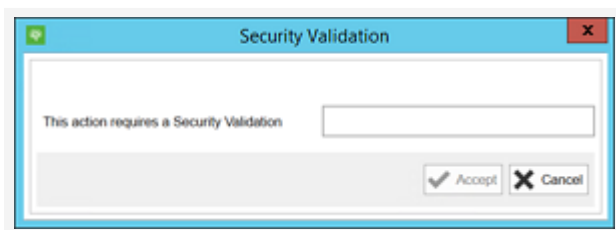
9 Press **CTRL+S**, or click on **File** and select **Save**.

**Result:** The changes to the XLS file are saved.

10 In the Tickets module of GPM Plus, click the  icon and select **Create/Edit in bulk**.

**Result:** The **Security validation** dialog appears:

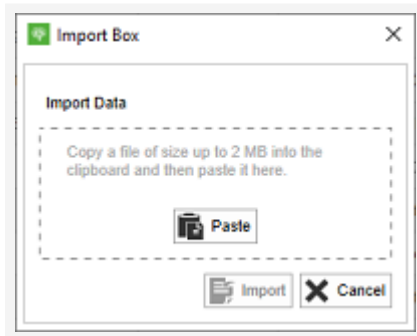
#### Security validation dialog



11 Enter the administrator password.

**Result:** The **Import box** appears:

### Import box



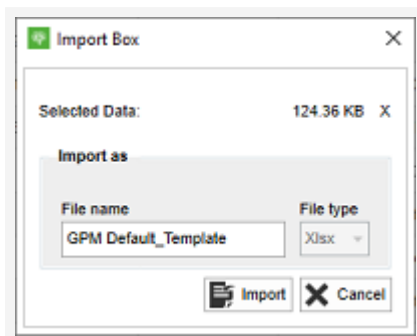
- 12 In your computer's File Explorer, select the XLS file with the ticket template and press **CTRL+S**, or right-click the XLS file and select **Copy**.

**Result:** The XLS file is copied to your clipboard.

- 13 In the Import box, click **Paste**.

**Result:** The XLS file is copied to the Import box.

### Import box

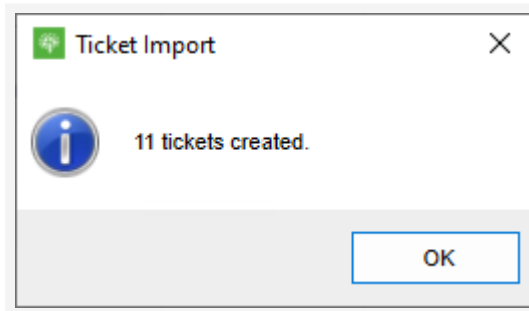


- 14 (Optional) Enter a new name for the file in the *File name* field.

- 15 Click **Import**.

**Result:** The **Ticket Import** dialog appears:

### Ticket Import dialog

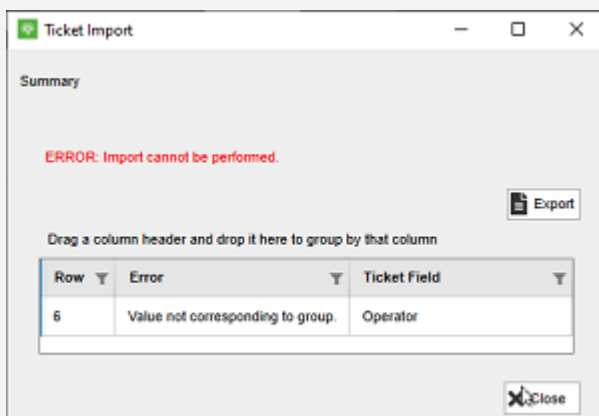


## Result

The XLS file is imported and the tickets are added to the system.

① **NOTE:** If the import fails, an error dialog appears providing details about the issue. To fix it, go back to Step 7 (above) and correct the errors in the specified fields.

### Error message in Ticket Import dialog



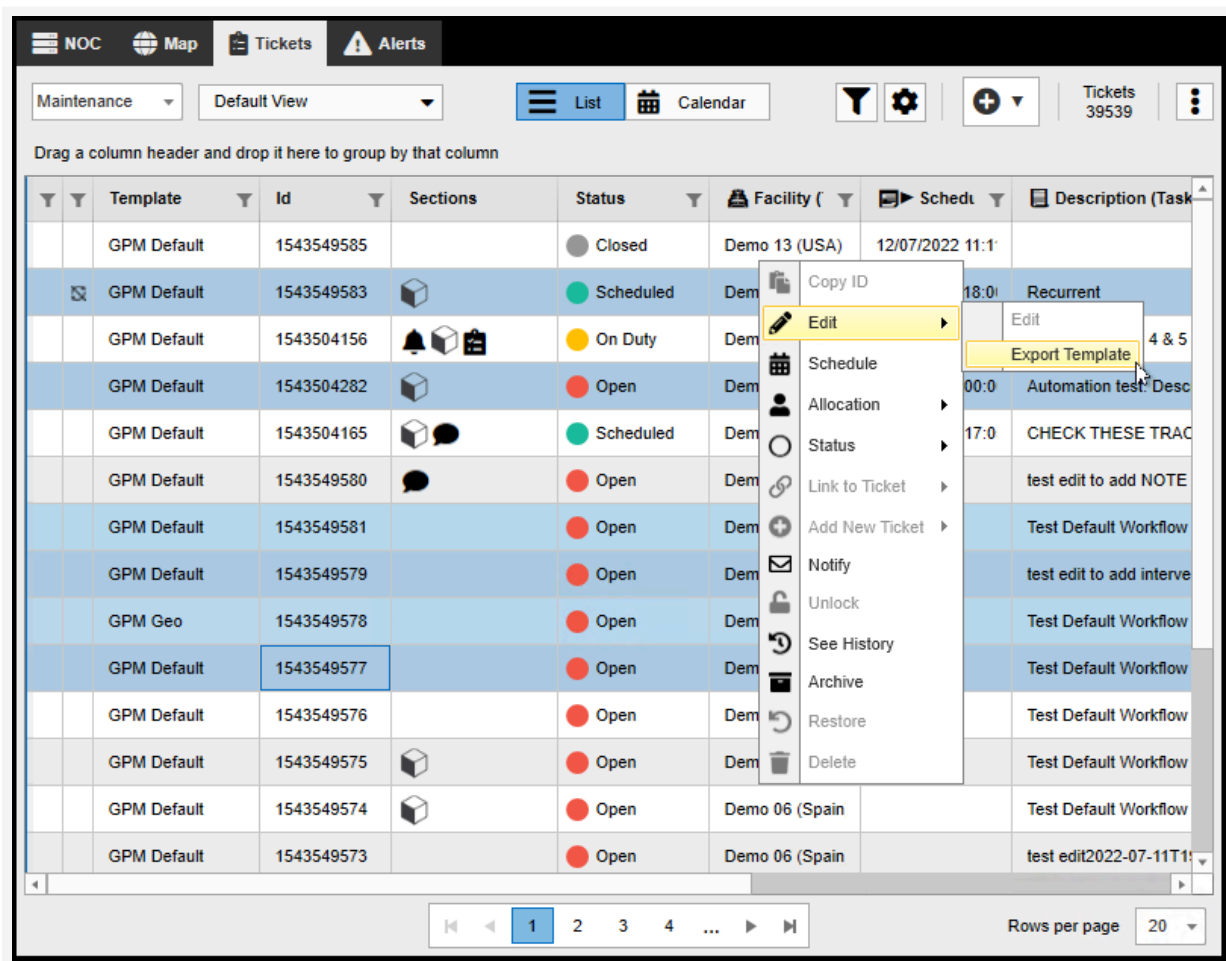
# Edit tickets in bulk

## Before you begin

This task requires an administrator password for security validation.

To edit tickets in bulk, follow these steps:

- 1 In the Tickets module, hold CTRL and click all the tickets you want to edit, then right-click the list to open the options menu, then select **Edit** and click **Export Template**.



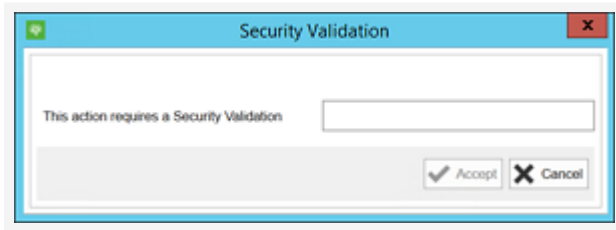
The screenshot displays the 'Tickets' module interface. At the top, there are navigation tabs for 'NOC', 'Map', 'Tickets', and 'Alerts'. Below these, there are filters for 'Maintenance' and 'Default View', along with 'List' and 'Calendar' views. A search bar shows 'Tickets 39539'. The main area is a table with columns: Template, Id, Sections, Status, Facility, Schedt, and Description (Task). The table contains multiple rows of tickets. A context menu is open over the table, showing options like 'Copy ID', 'Edit', 'Schedule', 'Allocation', 'Status', 'Link to Ticket', 'Add New Ticket', 'Notify', 'Unlock', 'See History', 'Archive', 'Restore', and 'Delete'. The 'Export Template' option is highlighted.

Template	Id	Sections	Status	Facility	Schedt	Description (Task)
GPM Default	1543549585		Closed	Demo 13 (USA)	12/07/2022 11:1	
GPM Default	1543549583		Scheduled	Dem	18:0	Recurrent
GPM Default	1543504156		On Duty	Dem		4 & 5
GPM Default	1543504282		Open	Dem	00:0	Automation test: Desc
GPM Default	1543504165		Scheduled	Dem	17:0	CHECK THESE TRAC
GPM Default	1543549580		Open	Dem		test edit to add NOTE
GPM Default	1543549581		Open	Dem		Test Default Workflow
GPM Default	1543549579		Open	Dem		test edit to add interve
GPM Geo	1543549578		Open	Dem		Test Default Workflow
GPM Default	1543549577		Open	Dem		Test Default Workflow
GPM Default	1543549576		Open	Dem		Test Default Workflow
GPM Default	1543549575		Open	Dem		Test Default Workflow
GPM Default	1543549574		Open	Demo 06 (Spain)		Test Default Workflow
GPM Default	1543549573		Open	Demo 06 (Spain)		test edit2022-07-11T11

☆ **IMPORTANT:** The tickets must belong to the same template (for example, "GPM Default").

**Result:** The **Security validation** dialog appears:

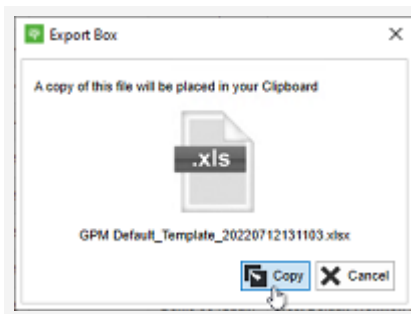
### Security validation dialog



- 2 Enter the administrator password.

**Result:** The **Export box** appears:

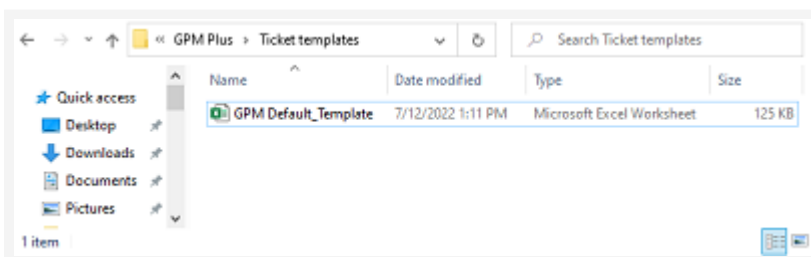
### Export box



- 3 In your computer's File Explorer, navigate to the folder in which you want to save the XLS file and press CTRL+V, or right-click and select **Paste**.

**Result:** The XLS file is copied to the folder you selected:

### File Explorer

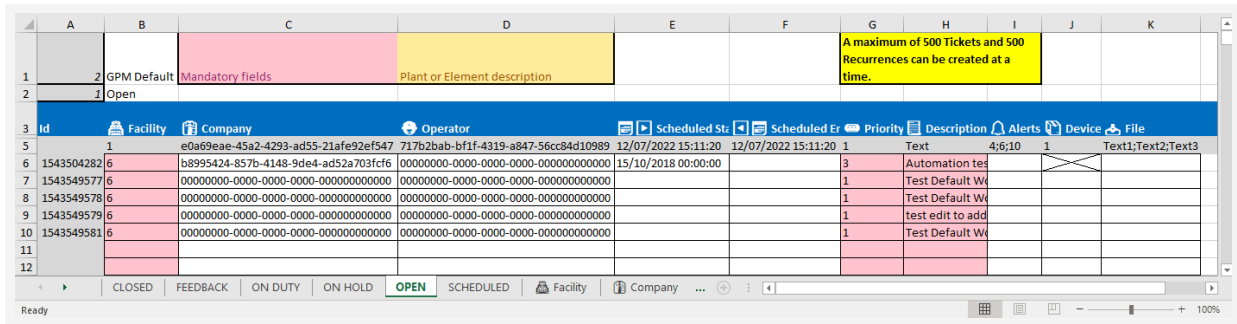


- 4 Open the XLS file, where each row corresponds to a ticket, and each column corresponds to a field.



**NOTE:** For more information, or to see the fields in context, see the [Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#)[Edit Ticket dialog in the instructions to create a maintenance ticket](#).

### Ticket edition in Microsoft Excel



**IMPORTANT:** The column headers display examples of the format for each field. Each page in the XLS file provides an ID and a reference for the available options in your system.

#### Sample IDs and references for the "Operator" field

	A	B	C	D	E	F	G	F	G
1	Facility	Company	Operator	Id					
2	Demo 04	GPM	Operator 1	cb474d74-18f0-41ba-4d43-1be29843c7e2				d43-1be29843c7e2	
3	Demo 04	GPM	Operator 2	9d715d74-a94c-4d43-8d06-b1e5254f4a7c				8d06-b1e5254f4a7c	
4	Demo 04	GPM	Operator 3	b7e41d74-f912-4d43-848f-5dbff0f0fa06				848f-5dbff0f0fa06	
5	Demo 04	GPM	Operator 4	d7449fff-9c42-4d43-ba54-a7d52ac812a4				a54-a7d52ac812a4	
6	Demo 04	GPM	Operator 5	d74f4073-51f4-4d43-be31-a028212bf8ba				ie31-a028212bf8ba	

### 5 Edit the cells corresponding to the fields you want to edit.

**TIP:** For each field, you can go to the corresponding page in the XLS file, select and copy the relevant ID, and paste it in the column of the corresponding field.

- a** *Facility:* if your portfolio has more than one plant, enter the ID of the plant for which you want to create the ticket.
- b** (Optional) *Company:* enter the ID of the company that must resolve the issue related to the ticket.

- c (Optional) *Operator*: enter the ID of an operator to assign the ticket to them.
- d (Optional) *Scheduled Start*: enter the date and time on which the ticket starts, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- e (Optional) *Scheduled End*: enter the date and time on which the ticket ends, using the format displayed on the column header (for example, DD/MM/YY 00:00:00).
- f *Priority*: enter a level of priority (for example, 1).
- g *Description*: enter a description for the ticket.
- h (Optional) *Alarms*: enter the ID for the alarms to which you want to link the ticket.
- i (Optional) *Element*: enter the ID for the elements to which you want to link the ticket.
- j (Optional) *File*: enter the IDs of the files to which you want to link the ticket.
- k Repeat sub-steps (a) to (j) for each ticket you want to create.

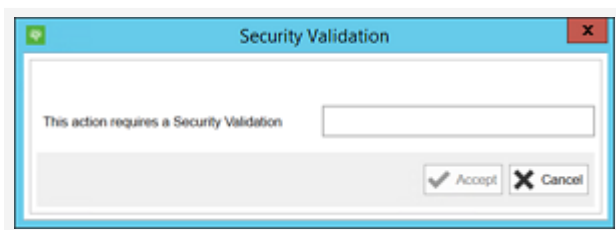
6 Press **CTRL+S**, or click on **File** and select **Save**.

**Result:** The changes to the XLS file are saved.

7 In the Tickets module of GPM Plus, click the  icon and select **Create/Edit in bulk**.

**Result:** The **Security validation** dialog appears:

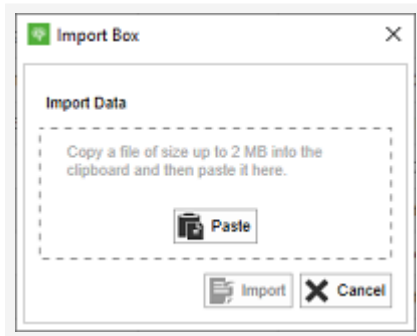
### Security validation dialog



8 Enter the administrator password.

**Result:** The **Import box** appears:

### Import box



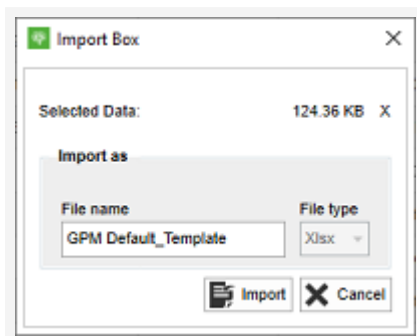
- 9 In your computer's File Explorer, select the XLS file with the ticket template and press **CTRL+S**, or right-click the XLS file and select **Copy**.

**Result:** The XLS file is copied to your clipboard.

- 10 In the Import box, click **Paste**.

**Result:** The XLS file is copied to the Import box.

### Import box

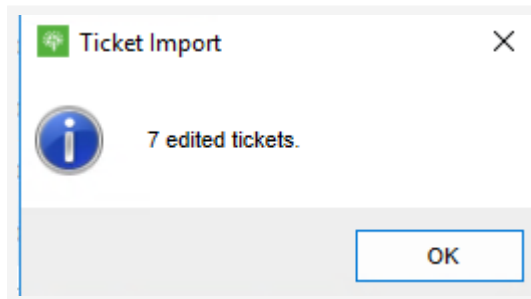


- 11 (Optional) Enter a new name for the file in the *File name* field.

- 12 Click **Import**.

**Result:** The **Ticket Import** dialog appears:

### Ticket Import dialog

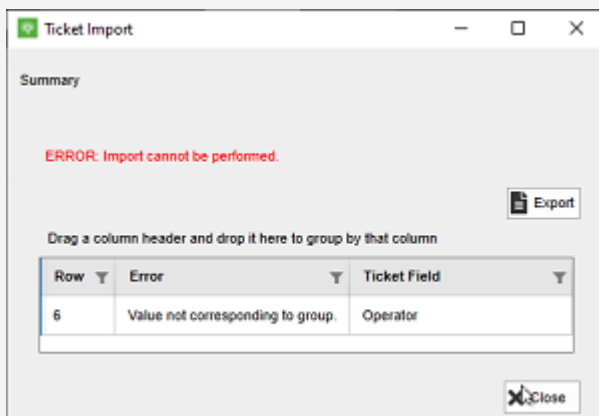


## Result

The XLS file is imported and the tickets are added to the system.

ⓘ **NOTE:** If the import fails, an error dialog appears providing details about the issue. To fix it, go back to Step 7 (above) and correct the errors in the specified fields.

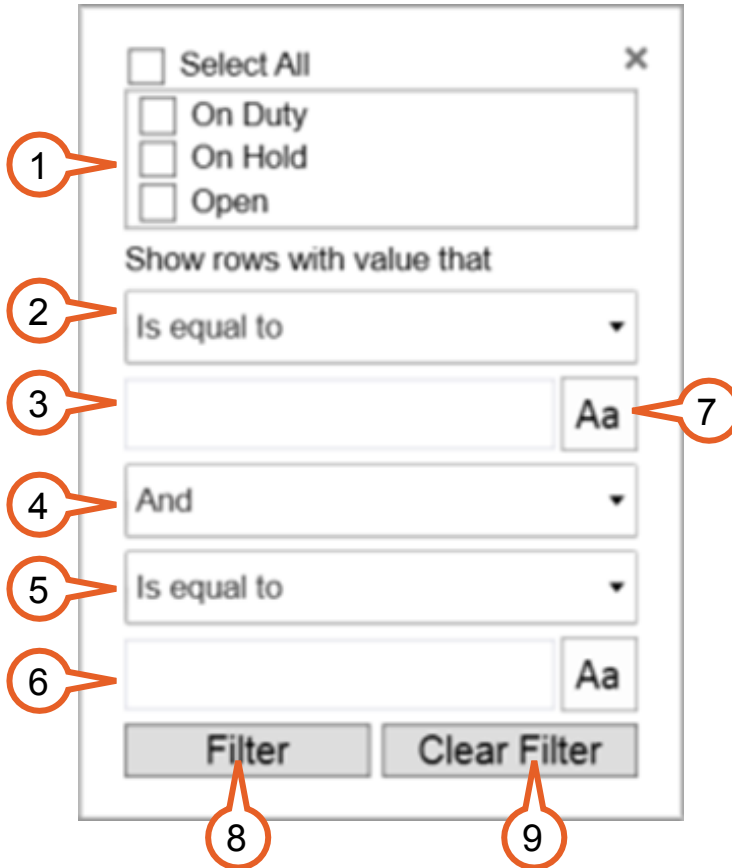
### Error message in Ticket Import dialog



# Advanced filters

Advanced filters allow you to filter the content of specific columns in a table using two mechanisms. The first mechanism allows you to select the values that you want to display from a list containing all the values of a column. The second mechanism allows you to apply a simple Boolean expression with two conditions to filter the values of a column.

## Advanced filter




The screenshot shows an 'Advanced filter' dialog box. At the top left, there is a 'Select All' checkbox. Below it is a list of three unchecked checkboxes: 'On Duty', 'On Hold', and 'Open'. A close button 'X' is in the top right corner. Below the list, the text 'Show rows with value that' is followed by a dropdown menu set to 'Is equal to'. Below this is a text input field with a case-sensitivity button 'Aa' to its right. Below the input field is another dropdown menu set to 'And'. Below that is a second dropdown menu set to 'Is equal to', followed by another text input field with a case-sensitivity button 'Aa'. At the bottom, there are two buttons: 'Filter' and 'Clear Filter'. Numbered callouts (1-9) point to these elements: 1 points to the 'On Duty' checkbox, 2 to the first dropdown, 3 to the first input field, 4 to the 'And' dropdown, 5 to the second dropdown, 6 to the second input field, 7 to the 'Aa' button next to the second input field, 8 to the 'Filter' button, and 9 to the 'Clear Filter' button.

1. **Available values**
2. **First Boolean condition**
3. *First values*
4. **Boolean operator**
5. **Second Boolean condition**
6. *Second values*
7. **Case-sensitive button**
8. **Apply filter**
9. **Clear filtering criteria**


# Use advanced filters

To use advanced filters, follow these steps:

- 1 Click the  icon on any column where the advanced filtering option is available.


**Result:** The **Advanced Filtering** dialog appears.


- 2 (Optional) Select the values that you want to display on the table.

 **NOTE:** Selecting values automatically displays them on the table.

- 3 In the **Show rows with value that** section, select the first Boolean condition from the drop-down list.


- 4 In the first *Values* input field, enter the first values.


(Optional) Toggle the  button to turn the case-sensitive option on or off.

 **NOTE:** The case-sensitive button is not available when you are filtering numerical values.

- 5 Click the second **Boolean operator** drop-down menu and select the second Boolean condition from the drop-down list.

- 6 In the second *Values* input field, enter the second values.


(Optional) Toggle the  button to turn the case-sensitive option on or off.

 **NOTE:** The case-sensitive button is not available when you are filtering numerical values.

- 7 Click **Filter**.

## Result

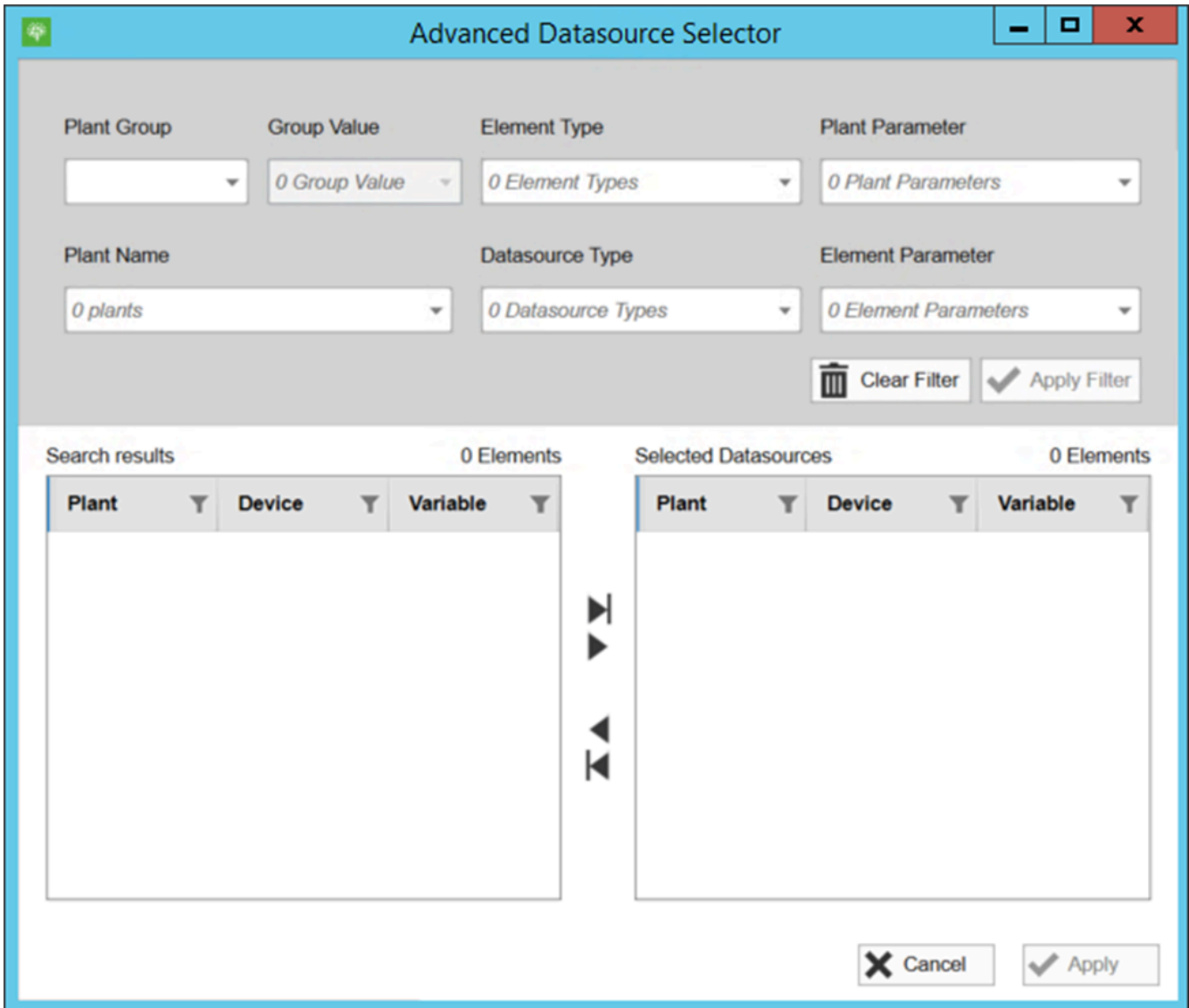
The filter is applied and elements matching the filtering criteria are displayed on the table. The icon on the column turns blue.

 **NOTE:** You can clear all the criteria by clicking **Clear Filter**.

# Advanced Datasource Selector

The Advanced Datasource Selector allows you to select source parameters and add them to queries. You may also export data to a file or import a file to process its data.

## Advanced Datasource Selector



Advanced Datasource Selector
- □ ×

Plant Group

Group Value

Element Type

Plant Parameter

Plant Name

Datasource Type

Element Parameter

Search results 0 Elements

Plant	Device	Variable

▼  
▼  
▼  
▼

Selected Datasources 0 Elements

Plant	Device	Variable



# Add parameters to queries

To add parameters to a query using the Advanced Datasource Selector, follow these steps:

- 1 In the **Plant Group** drop-down menu, select the group to which the plant belongs.
- 2 In the **Group Value** drop-down menu, select one or more values.
- 3 In the **Element Type** drop-down menu, select one or more types of element.
- 4 In the **Plant Parameter** drop-down menu, select one or more parameters.
- 5 In the **Plant Name** drop-down menu, select one or more plants.
- 6 In the **Datasource Type** drop-down menu, select one or more types of datasource.
- 7 In the **Element Parameter** drop-down menu, select one or more parameters.
- 8 Click **Apply filter**.

④ **NOTE:** You can clear a filter that was already applied by clicking **Clear Filter**.



- 9 In the **Search Results** panel, click to select the parameters, then click the ► icon to move them to the **Selected Datasources** panel.
- 10 Click **Apply**.



## Result

The selected parameters are added to your query.

# Import and export data

Some areas of the user interface allow you to use the Import and the Export features.

Importing data from files lets you add configurations or process external data. Depending on the user interface, the import icon may appear as  or as .

Exporting data allows you to create files in the most common formats to analyze it outside of GPM Plus. Depending on the user interface, the export icon may appear as  or as .

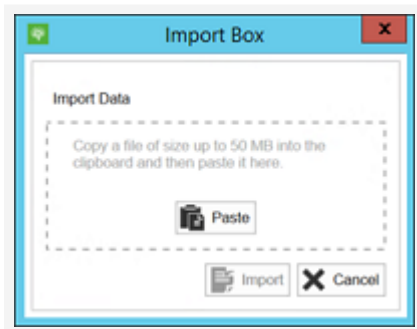
# Import data from a file

To import data from a file to GPM Plus, follow these steps:

- 1 Click the  or the  icon.

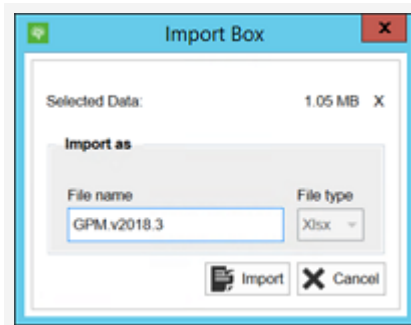
**Result:** The **Import Box** dialog opens:

## Import Box



- 2 On your local machine, copy the file tht you want to import to your clipboard.
- 3 On the **Import Box** dialog, click **Paste**.
- 4 Review the information and click **Import**.

## Import Box with file





## Result

The file is imported to GPM Plus.

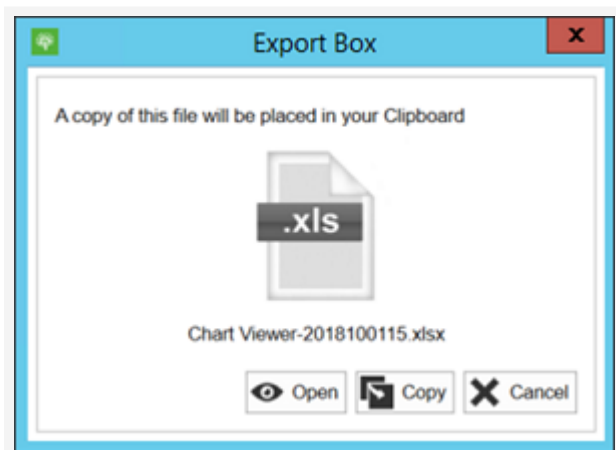
# Export data to a file

To export data to a file, follow these steps:

- 1 Click the  or the  icon.

**Result:** The **Export Box** dialog opens:

## Export Box



- 2 (Optional) If exporting to multiple formats is enabled, select the export format:
  - **Clipboard:** copy data to your clipboard as text.
  - **Data file:** export the data to a Microsoft Excel format.
  - **JPG image:** export the data as a JPEG image.
- 3 On the **Export Box** dialog, click one of the following options:
  - **Open:** open the data in the in-app viewer.
  - **Copy:** copy the exported file to your clipboard.
  - **Cancel:** cancel the export operation.
- 4 If you selected **Copy**, paste the copied file to a location on your machine.

## Result

The file is exported to your local machine in the format of your choice.

# GPM Ticket Manager User Guide

## Welcome!

**Welcome to the Technical Documentation space for GPM Ticket Manager.**

Here you can download all the official documentation that we create to help you use our software. If you have any questions or feedback, please contact [help@greenpowermonitor.com](mailto:help@greenpowermonitor.com).

## Latest release

- Current release: version 2022.3
  - User Guide: Version 2022.3

# About this guide

## Disclaimer

The content of this document is not representative of every product configuration. Each product instance is configured to meet the needs of the intended users, who may or may not require certain features and options. Therefore, the features and options covered in this document may differ from those available on your product configuration.

# Conventions


## Typographical conventions


---


<b>UI control</b>	User interface controls, commands, and keywords in body text.
<b>Blue-bold</b>	Option in a menu.
<i>Input field</i>	Input field where user input is expected.
<u>Underline</u>	Link to another section of the guide.
<code>monospace</code>	Snippets of code that the user must input or can use as a reference.
<...>	Generic parameters that must be replaced by specific code or text.
[...]	Generic parameters that are replaced by dynamic text.

---

## Notes and recommendations

 **NOTE:** Designates a note or reference related to the surrounding text.

 **BEST PRACTICE:** Designates a usage recommendation related to the surrounding text.

 **CAUTION:** Designates a warning or alert related to the surrounding text. You should exercise caution to avoid an undesirable outcome.



# Before you begin

**NOTE:** The GPM Ticket Manager App is only available on Android devices.

To work with the GPM Ticket Manager, your GPM Plus system must be configured to link with the app. You must also ensure that your user account has an Operator profile, and that the tickets are correctly configured.

## Prerequisites

- User account linked to an Operator profile in the GPM Plus system. For more information, see the [instructions to link a user account to an Operator profile](#).
- Active GPM Ticket Manager key in your GPM Plus server.

**NOTE:** To configure GPM Plus to support linking with the GPM Ticket Manager, contact your GPM representative.


- Tickets configured with the template for the GPM Ticket Manager. For more information, see the [instructions to configure the template for tickets](#).

# Configure tickets for the GPM Ticket Manager app

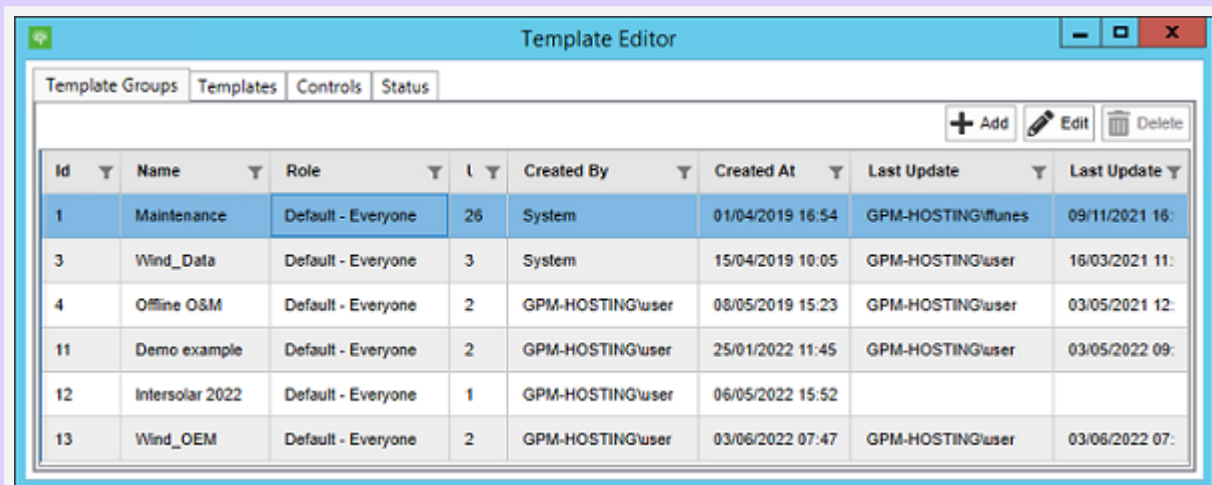
## Before you begin

This task requires an administrator password.

To configure a ticket template for use with the GPM Ticket Manager, follow these steps in GPM Plus:

- 1 Click the  icon in the top navigation bar to open the **Setup** screen and select **Tickets configuration** to open the Template Editor screen:

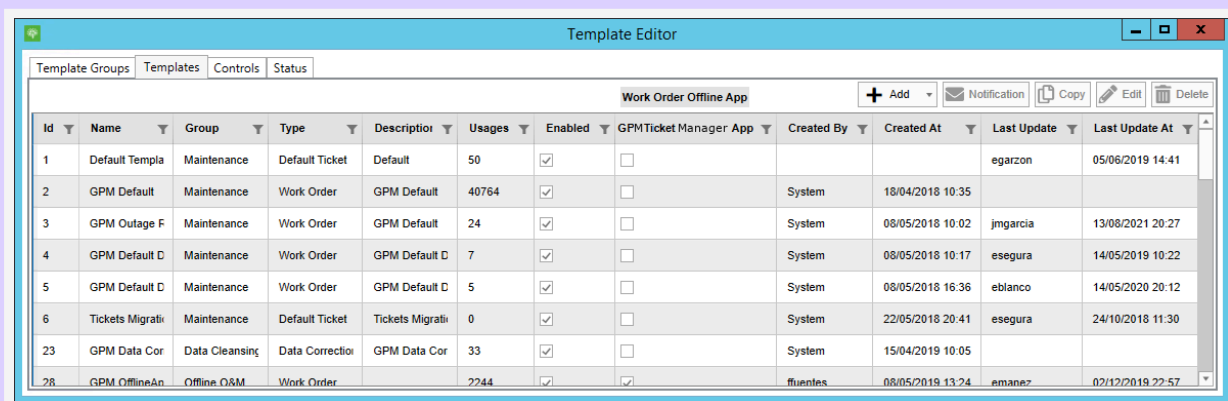
### Template Editor



Template Editor									
Template Groups   Templates   Controls   Status									
+ Add Edit Delete									
Id	Name	Role	l	Created By	Created At	Last Update	Last Update		
1	Maintenance	Default - Everyone	26	System	01/04/2019 16:54	GPM-HOSTING\ifunes	09/11/2021 16:		
3	Wind_Data	Default - Everyone	3	System	15/04/2019 10:05	GPM-HOSTING\user	16/03/2021 11:		
4	Offline O&M	Default - Everyone	2	GPM-HOSTING\user	08/05/2019 15:23	GPM-HOSTING\user	03/05/2021 12:		
11	Demo example	Default - Everyone	2	GPM-HOSTING\user	25/01/2022 11:45	GPM-HOSTING\user	03/05/2022 09:		
12	Intersolar 2022	Default - Everyone	1	GPM-HOSTING\user	06/05/2022 15:52				
13	Wind_OEM	Default - Everyone	2	GPM-HOSTING\user	03/06/2022 07:47	GPM-HOSTING\user	03/06/2022 07:		

- 2 Select the **Templates** tab.

### Templates tab

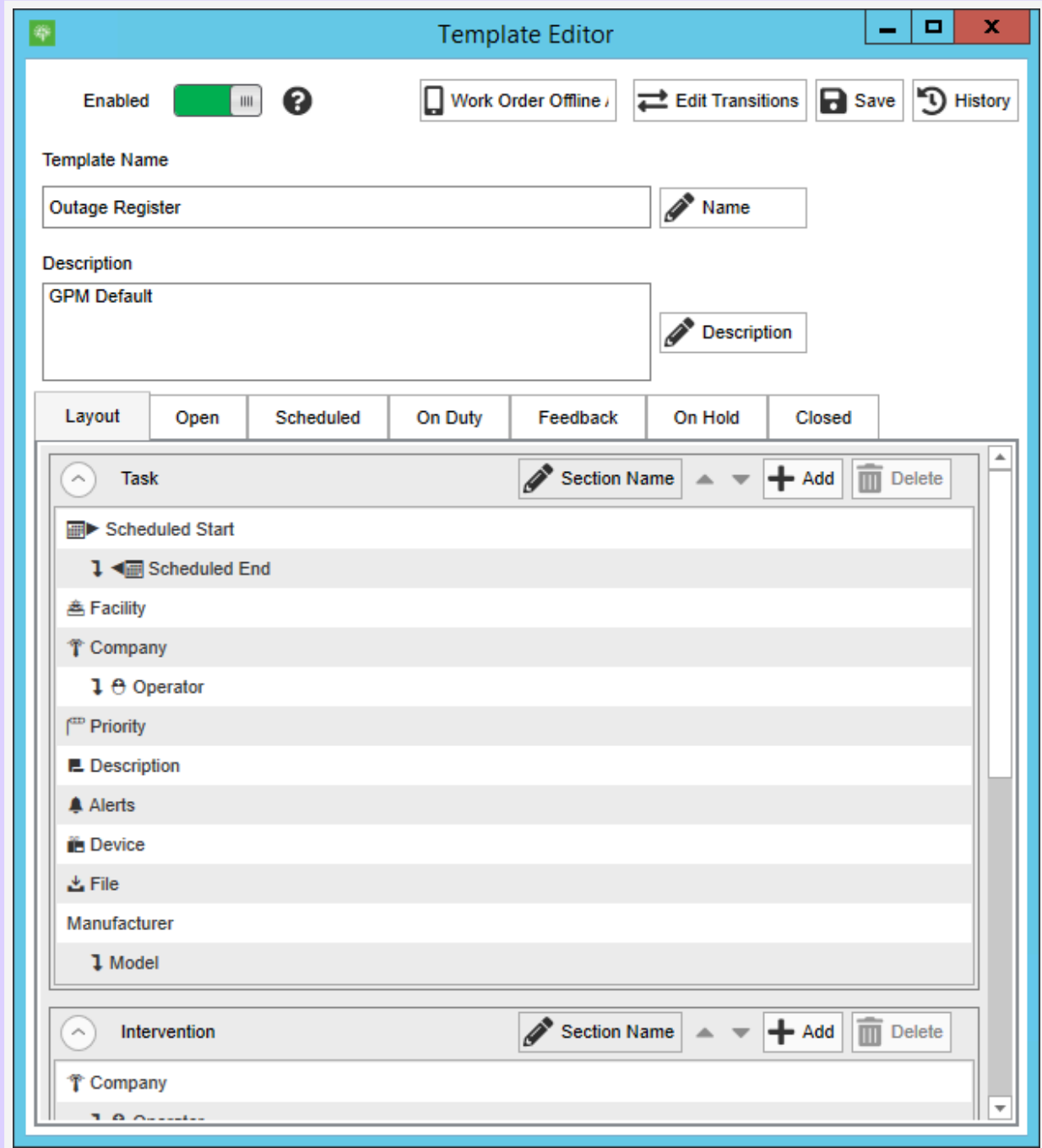


Template Editor												
Template Groups   Templates   Controls   Status												
Work Order Offline App + Add Notification Copy Edit Delete												
Id	Name	Group	Type	Description	Usages	Enabled	GPM Ticket Manager App	Created By	Created At	Last Update	Last Update At	
1	Default Templa	Maintenance	Default Ticket	Default	50	<input checked="" type="checkbox"/>	<input type="checkbox"/>			egarzon	05/06/2019 14:41	
2	GPM Default	Maintenance	Work Order	GPM Default	40764	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	18/04/2018 10:35			
3	GPM Outage F	Maintenance	Work Order	GPM Default	24	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	08/05/2018 10:02	jmgarcia	13/08/2021 20:27	
4	GPM Default D	Maintenance	Work Order	GPM Default D	7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	08/05/2018 10:17	esegura	14/05/2019 10:22	
5	GPM Default D	Maintenance	Work Order	GPM Default D	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	08/05/2018 16:36	eblanco	14/05/2020 20:12	
6	Tickets Migrati	Maintenance	Default Ticket	Tickets Migrati	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	22/05/2018 20:41	esegura	24/10/2018 11:30	
23	GPM Data Cor	Data Cleansing	Data Correctio	GPM Data Cor	33	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System	15/04/2019 10:05			
28	GPM OfflineAn	Offline D&M	Work Order		2244	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	fuentes	08/05/2019 13:24	amanez	02/12/2019 22:57	

- 3 Select the template you want to make available on the GPM Ticket Manager, then click **Edit**.

**Result:** The Template Editor dialog appears:

### Template Editor



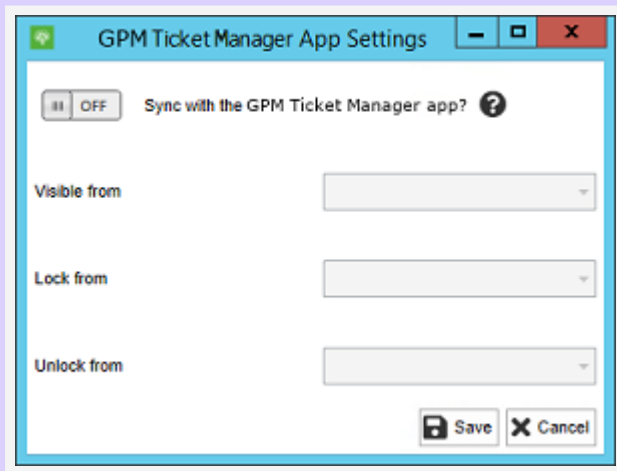
The Template Editor dialog is shown with the following details:

- Title Bar:** Template Editor
- Toolbar:** Enabled (checked), Work Order Offline, Edit Transitions, Save, History
- Template Name:** Outage Register (with edit icon)
- Description:** GPM Default (with edit icon)
- Tabs:** Layout, Open, Scheduled, On Duty, Feedback, On Hold, Closed
- Task Section:**
  - Section Name: [ ]
  - Buttons: + Add, Delete
  - Items: Scheduled Start, Scheduled End, Facility, Company, Operator, Priority, Description, Alerts, Device, File, Manufacturer, Model
- Intervention Section:**
  - Section Name: [ ]
  - Buttons: + Add, Delete
  - Item: Company

- 4 Click **GPM Ticket Manager**.


**Result:** The GPM Ticket Manager settings menu appears:

### GPM Ticket Manager settings



- 5 Toggle on **Sync with the GPM Ticket Manager app?**

**Result:** The drop-down menus become available.

- 6 Open the **Visible from** drop-down menu and select the status from which the tickets become visible on the app.
- 7 Open the **Lock from** drop-down menu and select the status from which the tickets become locked in GPM Plus.
- 8 Open the **Unlock from** drop-down menu and select the status from which the tickets become unlocked in GPM Plus.
- 9 Click  **Save**.

### Result

The changes are saved, and tickets from the selected template become available to operators using the GPM Ticket Manager.

# Get started with GPM Ticket Manager

To use the GPM Ticket Manager, you must first download the app from the Google Play Store, then sync it with your GPM Plus system and log in using your credentials.

# Download the GPM Ticket Manager

To download the GPM Ticket Manager to your mobile device from the Google Play Store, follow these steps:

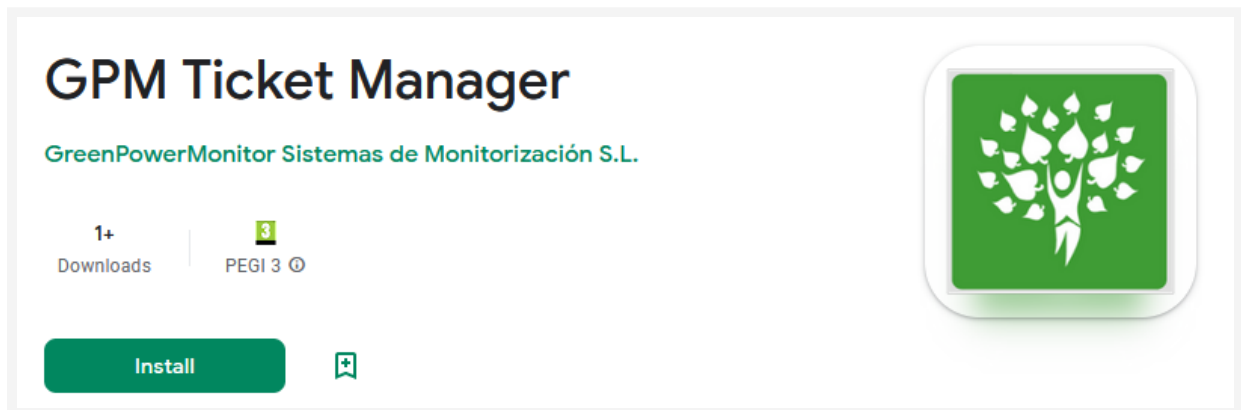
**NOTE:** These instructions relate to a third-party platform that does not depend on GreenPowerMonitor. All information is to the best of our knowledge, and may be subject to change.

1 In your web browser, go to

```
https://play.google.com/store/apps/  
details?id=com.greenpowermonitor.TicketsOfflineApp
```

**Result:**

**Download page**



2 Click **Install**.

## Result

The GPM Ticket Manager is downloaded to your device.

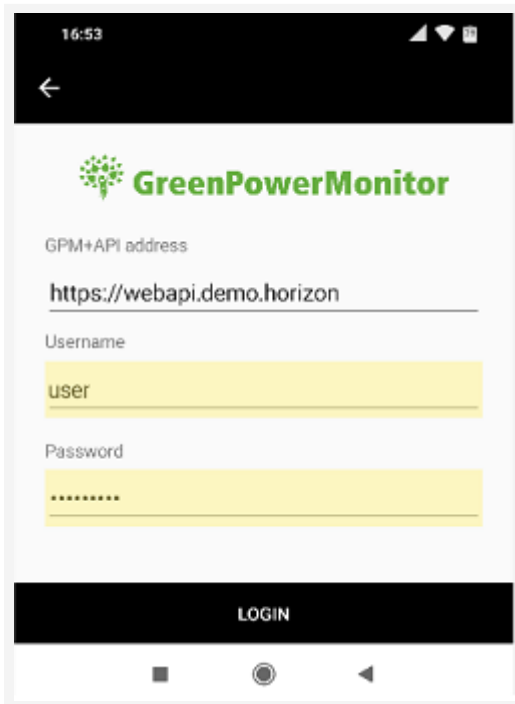
# Log in and sync with GPM Plus

To log into the GPM Ticket Manager and sync the app with GPM Plus, follow these steps:

- 1 Open the GPM Ticket Manager app.


**Result:**

## GPM Ticket Manager



16:53

←

 **GreenPowerMonitor**

GPM+API address

https://webapi.demo.horizon

Username

user

Password

\*\*\*\*\*

LOGIN

- 2 Enter the *GPM+API address* provided by your system administrator.
- 3 Enter your *User name*.
- 4 Enter your *Password*.
- 5 Click **Log in**.

## Result

The app is linked to the GPM Plus system and you are logged in.

## Manage tickets

The Inbox of the GPM Ticket Manager displays all the tickets that have been assigned to you. From here, you can view the information and [download tickets](#) to work with them.

**NOTE:** Downloaded tickets become blocked in the GPM Plus, where the icon appears next to them to notify users that someone is working on them offline. When the operator goes back online and updates the ticket, it becomes unblocked. Administrators can unlock tickets if needed (for example, if the operator's mobile device is lost); this action is logged over the ticket ID.

You can make the following changes to a ticket:

- [Add interventions](#)
- [Add notes](#)
- [Change status](#)

When you finish working with a ticket, you can [upload it to the system](#).



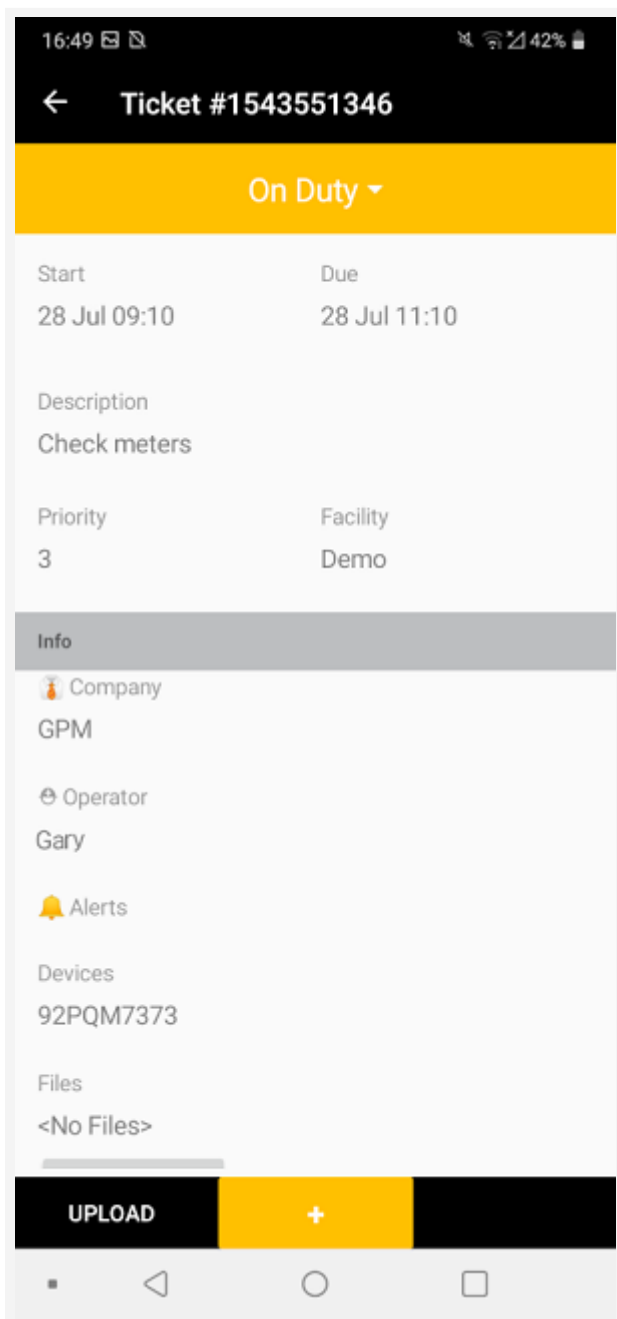
# Add interventions to tickets

To add an intervention to a ticket, follow these steps:

- 1 In the Inbox of the GPM Ticket Manager, select a downloaded ticket to open it.

**Result:** The ticket opens.

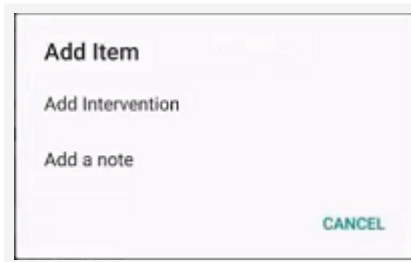
## Ticket



- 2 Click the + icon.

**Result:** The **Add item** dialog appears:

### Add item dialog

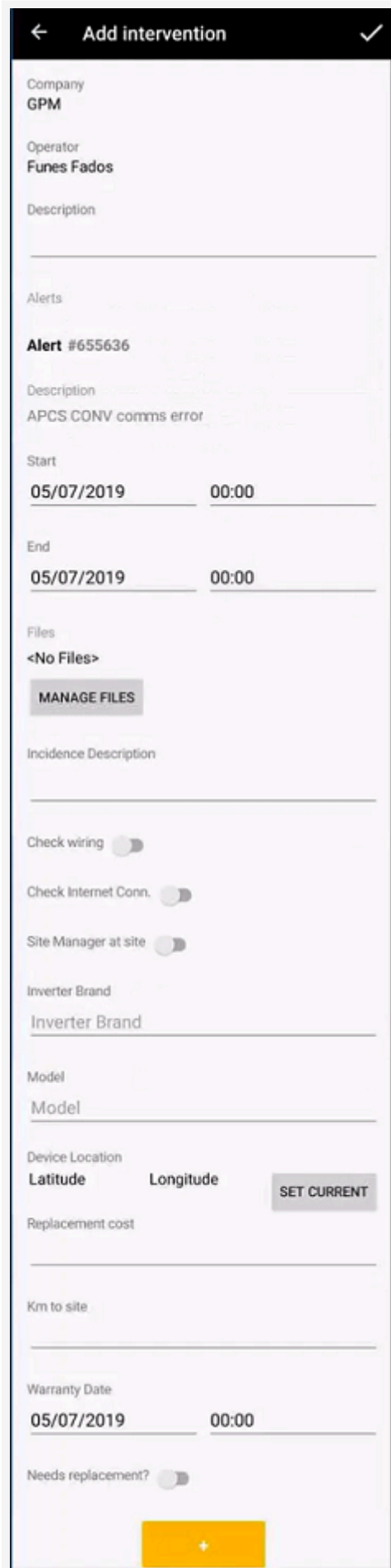


**3** Click **Add intervention**.

**Result:** The **Add intervention** screen appears:

④ **NOTE:** The fields available in this screen depend on the configuration of the ticket template in GPM Plus.

## Add intervention screen



**Add intervention**

Company  
**GPM**

Operator  
**Funes Fados**

Description

Alerts

**Alert #655636**

Description  
APCS CONV comms error

Start  
**05/07/2019** **00:00**

End  
**05/07/2019** **00:00**

Files  
**<No Files>**  
**MANAGE FILES**

Incidence Description

Check wiring

Check Internet Conn.

Site Manager at site

Inverter Brand  
Inverter Brand

Model  
Model

Device Location  
**Latitude** **Longitude** **SET CURRENT**

Replacement cost

Km to site

Warranty Date  
**05/07/2019** **00:00**

Needs replacement?

**+**

- 4 Enter the information for the intervention:
  - a Enter a *Description* (for example, "Replaced wire").
  - b In the *Start* fields, enter the date and time at which the intervention began.
  - c In the *End* fields, enter the date and time at which the intervention ended.
  - d (Optional) Click **Manage files** to add files to the intervention.
  - e Enter an *Incidence description* (for example, "Wire was damaged").
  - f Enter any other relevant information.
- 5 Click the ✓ icon.

## Result

The intervention is added to the ticket. After you upload the ticket, your note appears in the "On field operation" tab of the ticket screen in GPM Plus.

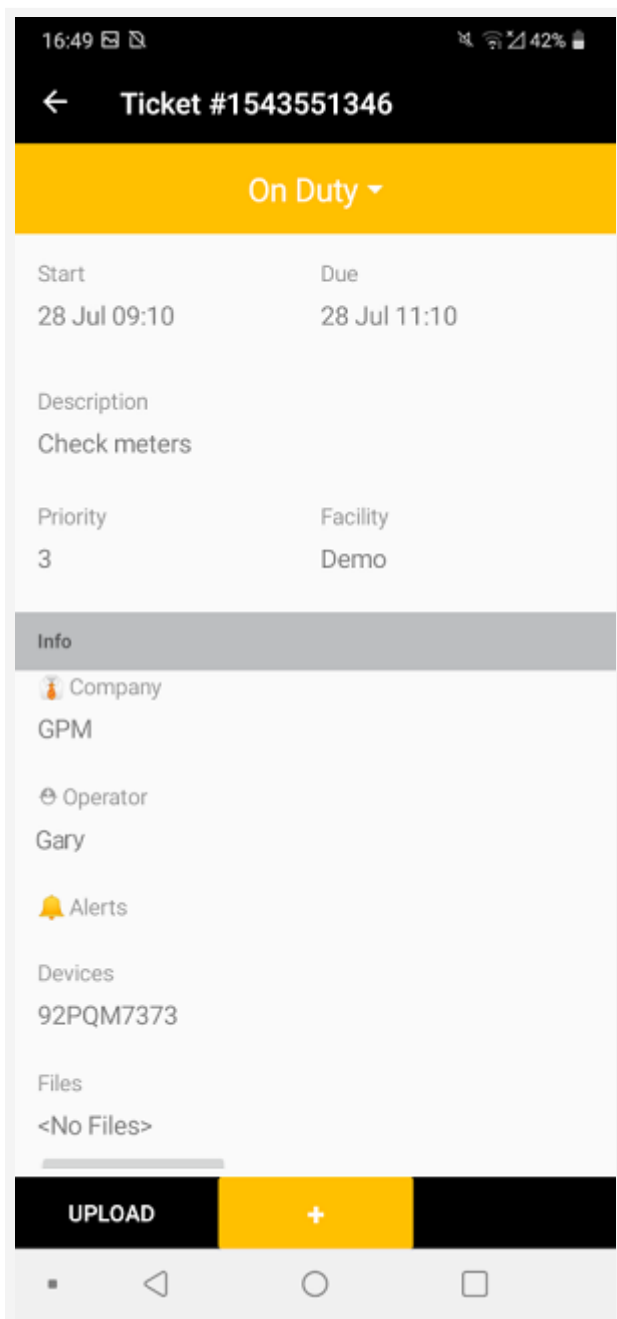
# Add notes to tickets

To add a note to a ticket, follow these steps:

- 1 In the Inbox of the GPM Ticket Manager, select a downloaded ticket to open it.

**Result:** The ticket opens.

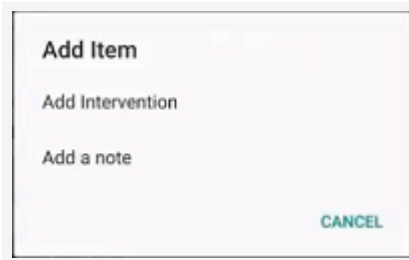
## Ticket



- 2 Click the + icon.

**Result:** The **Add item** dialog appears:

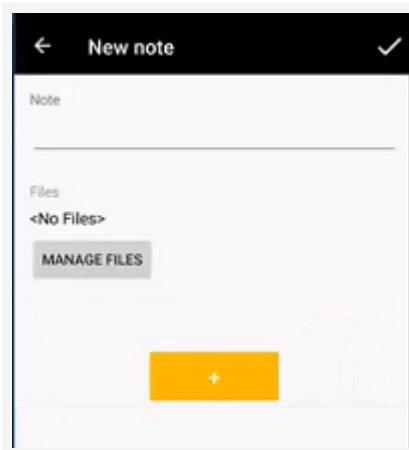
### Add item dialog



- 3 Click **Add a note**.

**Result:** The **New note** screen appears:

### New note



- 4 Enter the text in the *Note* field.
- 5 (Optional) Click **Manage files** to upload files.
- 6 Click the ✓ icon.

## Result

The note is added to the ticket. After you upload the ticket, your note appears in the "Conversation" tab of the ticket screen in GPM Plus.

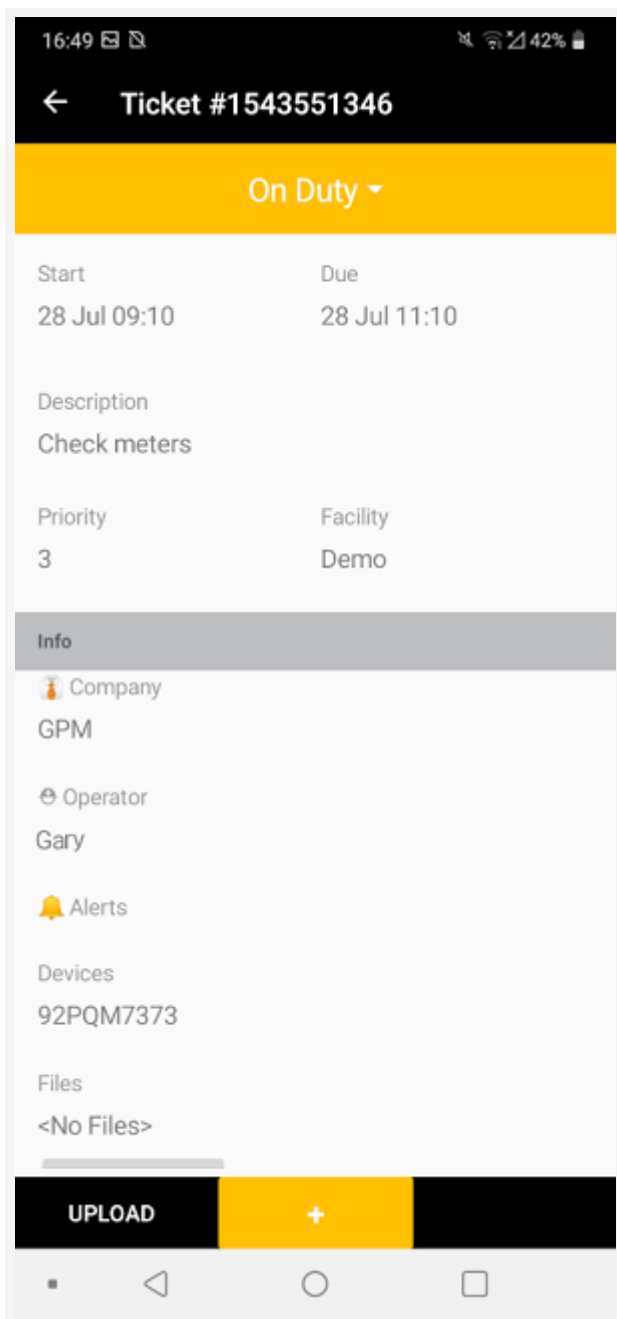
# Change ticket statuses

To change the status of a ticket, follow these steps:

- 1 In the Inbox of the GPM Ticket Manager, select a downloaded ticket to open it.

**Result:** The ticket opens.

## Ticket

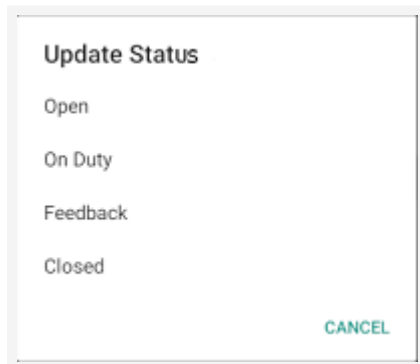


- 2 Click the status of the ticket.



**Result:** The **Update status** dialog appears:

### Update status dialog



- 3 Select the status to which you want to set the ticket.

## Result

The status is changed. After you upload the ticket, the status change is registered in GPM Plus.

# Download tickets

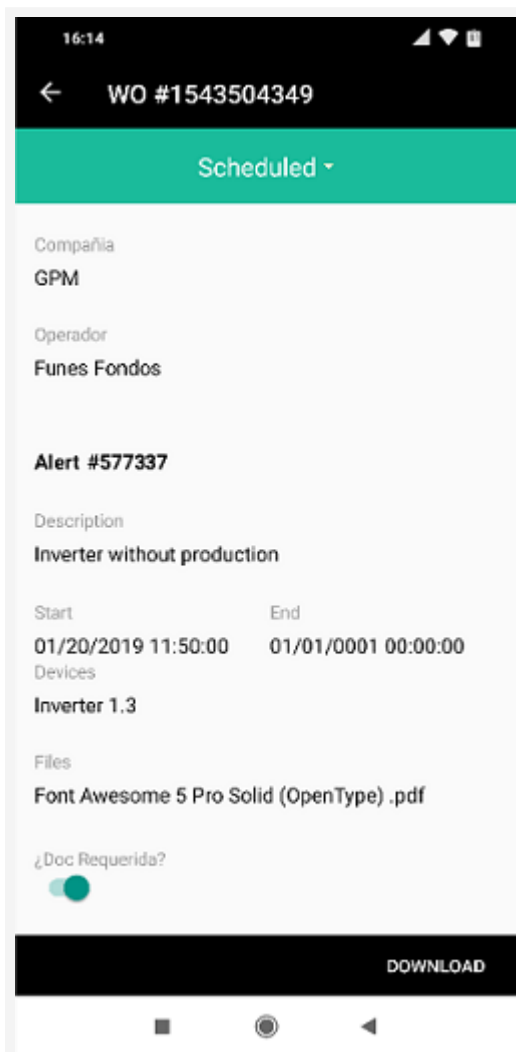
To download a ticket, follow these steps:

**NOTE:** Downloaded tickets become blocked in the GPM Plus, where the icon appears next to them to notify users that someone is working on them offline. When the operator goes back online and updates the ticket, it becomes unblocked. Administrators can unlock tickets if needed (for example, if the operator's mobile device is lost); this action is logged over the ticket ID.

- 1 In the Inbox of the GPM Ticket Manager, select the ticket to open it.

**Result:** The ticket opens.

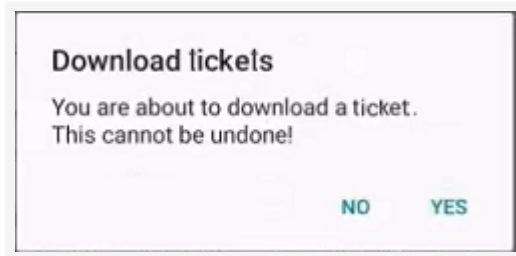
## Ticket



2 Click **Download**.

**Result:** The **Download tickets** dialog appears:

### Download tickets dialog



3 Click **Yes**.

## Result

The ticket is downloaded and its status changes to "On Duty". It also appears as "Locked" in GPM Plus.

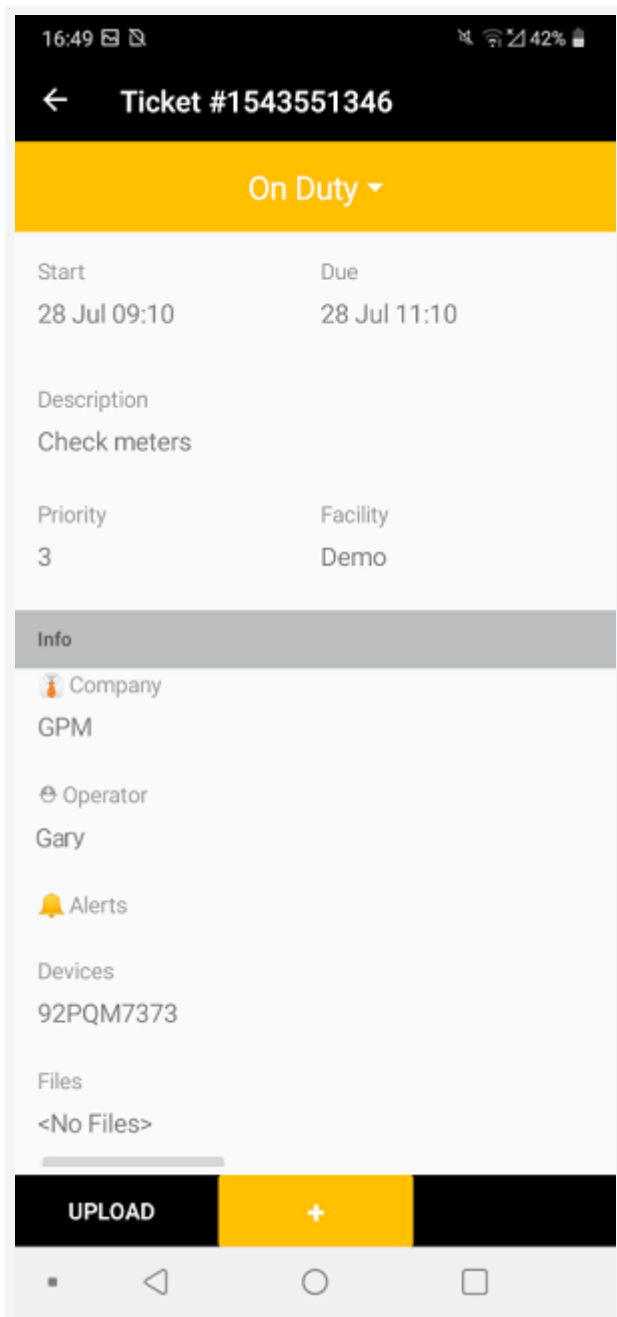
# Upload tickets to GPM Plus

To upload a ticket to GPM Plus, follow these steps:

- 1 In the Inbox of the GPM Ticket Manager, select a downloaded ticket to open it.

**Result:** The ticket opens.

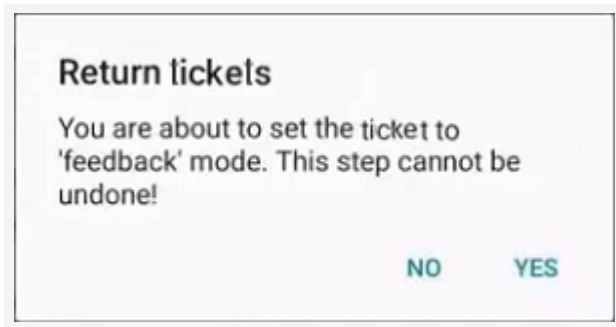
## Ticket



- 2 Click **Upload**.

**Result:** A confirmation dialog appears:

### Return ticket dialog



**3** Click **Yes**.

## Result

The ticket is uploaded to GPM Plus and unlocked.

Disclaimer: All information is correct to the best of our knowledge. Contributions by external authors do not necessarily reflect the views of the editors and GreenPowerMonitor, a DNV company.