



# **O-Insights™ Plugin-5.0 User Guide**

# Table of Contents

|  |    |
|--|----|
| About O-insights Plugin .....                                | 5  |
| Prerequisites .....  | 6  |
| Requirements for Ensuring Accurate Data in O-Insights .....  | 6  |
| O-Insights Version Compatibility .....                       | 6  |
| Workspace .....  | 7  |
| Default Workspace .....                                      | 7  |
| Creating and Managing Workspaces .....                       | 8  |
| Modifying Workspaces .....                                   | 10 |
| Adjusting Font Size (General Settings).....                  | 12 |
| Saving Workspace as PDF .....                                | 13 |
| Refresh Cameras.....   | 13 |
| Caching Status .....   | 14 |
| Failover Servers .....                                       | 14 |
| Widget Operations .....                                      | 16 |
| Adding a Widget.....   | 16 |
| Moving/Resizing/Removing/Copying/Pasting/Configuring Widgets | 17 |
| Widget Types.....  | 20 |
| Active User Count Widget .....                               | 20 |
| Camera Status Online/Offline Count Widget .....              | 22 |
| Camera Count Widget.....                                     | 23 |
| Camera Status Count by Tags Widget .....                     | 24 |
| Camera Warranty Widget .....                                 | 28 |
| Recording Server Count.....                                  | 34 |
| Physical Recording Server Count Widget.....                  | 35 |
| Server Status Widget.....                                    | 36 |
| System Monitor Widget .....                                  | 38 |
| Camera List.....   | 40 |
| Live Camera View.....  | 42 |
| Recording Server List Widget .....                           | 43 |
| Live Alarm Widget.....                                       | 44 |
| Speaker Status Count by Tags .....                           | 45 |

|  |     |
|--|-----|
| Microphone Stats by Tags .....         | 48  |
| Alarm Count Widget .....               | 50  |
| Event Count List Widget .....          | 51  |
| Event Count Trend .....                | 55  |
| Trend Chart by Sources.....            | 56  |
| Heatmap Chart .....                    | 58  |
| Donut Chart.....                       | 59  |
| Web Page Widget .....                  | 61  |
| IoT Data Widget.....                   | 61  |
| IoT Data List.....                     | 67  |
| IoT Custom Data Widget.....            | 70  |
| IoT Donut Chart .....                  | 72  |
| IoT Line/Bar Chart.....                | 74  |
| IoT Heatmap Chart.....                 | 78  |
| IoT Comparison Chart Widget .....      | 80  |
| Reports Widget.....                    | 83  |
| Camera Analytics Widget .....          | 84  |
| User Login Analytics Widget .....      | 85  |
| User Login Analytics Chart .....       | 86  |
| Camera Uptime Chart Widget .....       | 87  |
| Camera Disconnection Chart Widget..... | 89  |
| Report Data List.....                  | 91  |
| Ranking Chart Widget .....             | 92  |
| Report Analytics Widget .....          | 94  |
| Weather Widget .....                   | 96  |
| XProtect Licenses Widget.....          | 98  |
| Dynamic Tags.....                      | 99  |
| Creating Dynamic Tags.....             | 99  |
| Adding Dynamic Tags .....              | 100 |
| Camera Details.....                    | 102 |
| Camera Inventory .....                 | 102 |
| Storage Details .....                  | 103 |
| Camera Health.....                     | 104 |

|   |     |
|---|-----|
| Configuring XProtect for Camera Health Report ..... | 105 |
| Recording Server .....                              | 107 |
| Recording Server Details .....                      | 107 |
| Storage Details .....                               | 107 |
| Server Health .....                                 | 109 |
| Trends.....   | 110 |
| Alarm Trends .....                                  | 110 |
| Camera Trends .....                                 | 110 |
| Alarm Console.....                                  | 111 |
| Alarm Console Settings .....                        | 112 |
| Adding and Managing Multiple Alarm Consoles .....   | 114 |
| Assign Alarm Console.....                           | 116 |
| Alarm Details .....                                 | 116 |
| Details .....                                       | 116 |
| Daily Count.....                                    | 117 |
| Settings .....                                      | 119 |
| User Settings .....                                 | 119 |
| Data Manager .....                                  | 120 |
| Branding .....                                      | 120 |
| License Info.....                                   | 121 |
| Notification Settings .....                         | 123 |
| Weather Settings .....                              | 123 |
| Config File.....                                    | 124 |
| Understanding the Config File.....                  | 124 |
| Keys and Functions .....                            | 124 |
| Troubleshooting .....                               | 128 |

## About O-insights Plugin

O-Insights™ Plugin is a comprehensive dashboarding and analytics solution designed to integrate seamlessly with XProtect. This powerful plugin enhances the capabilities of XProtect by providing advanced visualization tools that enable users to effectively monitor and analyze video management data. With O-Insights Plugin, users can create customizable dashboards that display real-time data, historical trends, and analytical insights, all within the XProtect environment.

**Tip:** O-Insights for XProtect VMS picks up the theme from XProtect. To switch to Dark/Light theme, toggle between Dark/Light theme in XProtect as per requirement.

# Prerequisites

## Requirements for Ensuring Accurate Data in O-Insights

For O-Insights to function effectively and display data accurately, it is crucial that all relevant XProtect servers, including Management, Recording, and Event servers, are operational.

If any of these servers are down, data may not display correctly until the affected server(s) are back online and the O-Insights view is refreshed.

- **Refreshing the View:** To update the displayed data in O-Insights, restart the *XProtect Smart Client*.

## O-Insights Version Compatibility

O-Insights is officially tested and supported across the three most recent releases of XProtect. The versions currently supported include XProtect 2024 R1, 2023 R3, and 2023 R2.

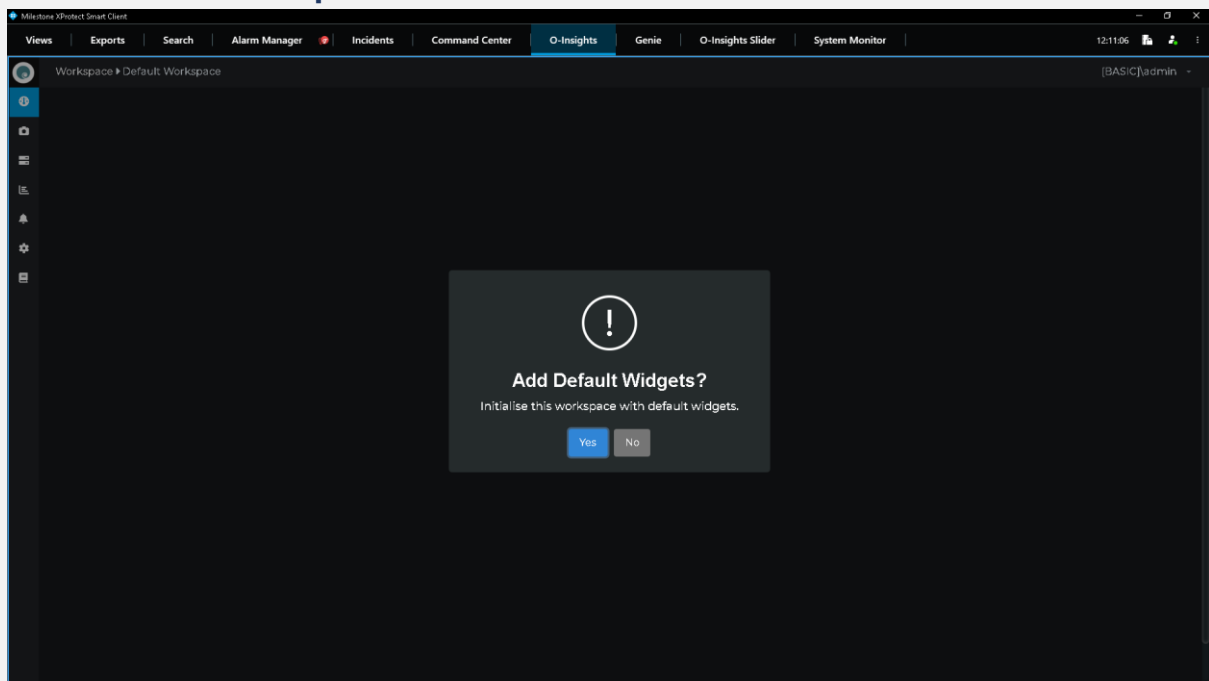
- **Note on Older Versions:** For users running older versions of XProtect, it is advisable to update the Smart Client to the newest version possible before installing the O-Insights Dashboard. O-Insights may not fully support older versions of XProtect, and certain features may not function as intended. For optimal performance and access to all features, using O-Insights with the latest version of XProtect is recommended.

To refresh the view, restart the XProtect Smart Client.

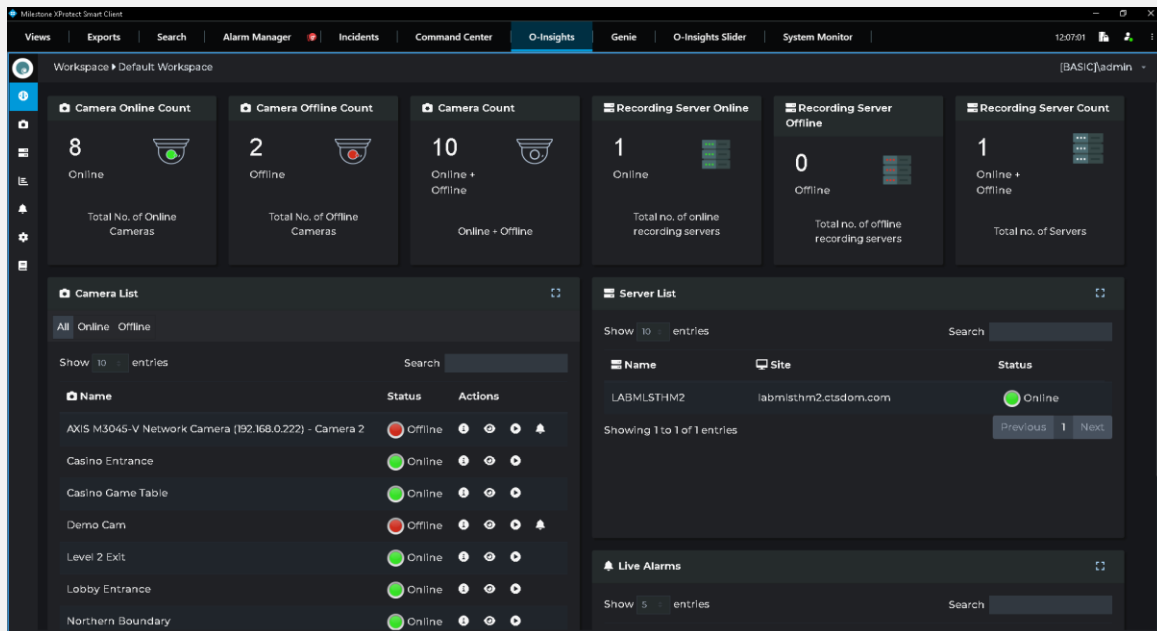
# Workspace

O-Insights for VMS introduces a dynamic and agile workspace environment, enabling users to create and customize their own workspaces tailored to specific operational needs. This flexible system allows for the creation of multiple, exportable workspace configurations that cater to various requirements, taking the XProtect experience to the next level.

## Default Workspace



Upon launching the XProtect Smart Client after installing the O-Insights Dashboard and successfully logging in, users will be greeted with a pop-up as shown in the image. Selecting the *Yes* button will automatically generate a default dashboard.

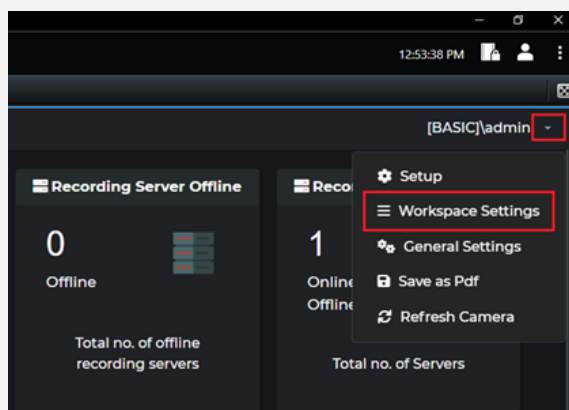


The default dashboard includes several essential widgets designed to provide a comprehensive overview of the system's status. This includes Camera Status, Server Status, List of Cameras, List of Servers and Live Alarm widget, as shown above.

## Creating and Managing Workspaces

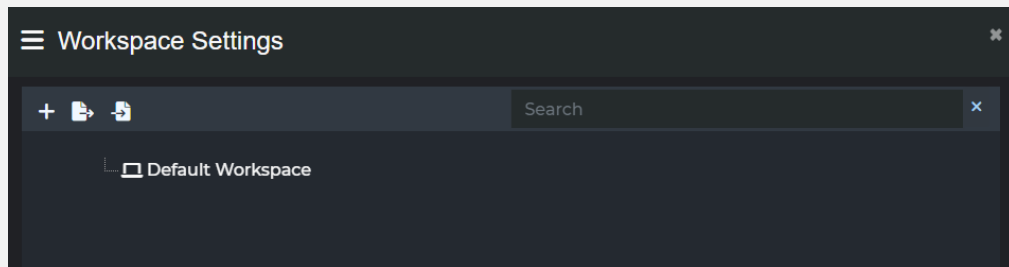
Workspace Settings enable users to effectively manage their workspaces within O-Insights.

- **Access Workspace Settings:**



- Click on the inverted caret icon, highlighted in red, and select *Workspace Settings*.

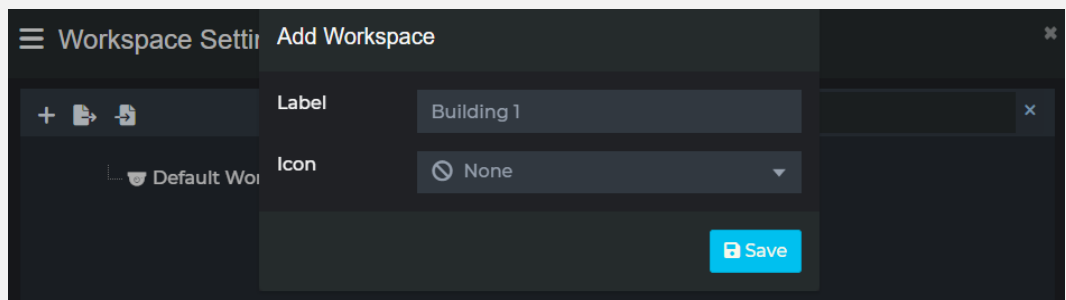




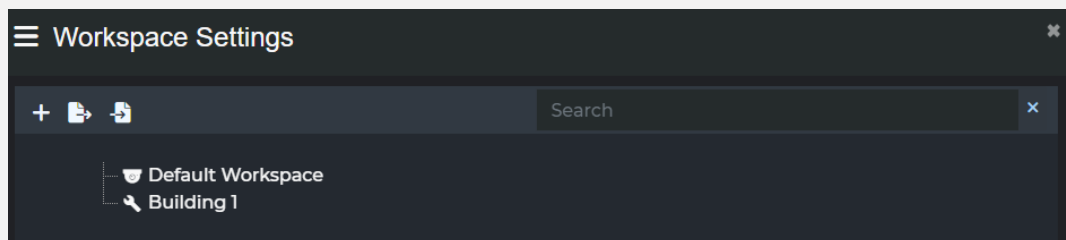
- This action will open a window as shown in the image.

- **Adding a New Workspace:**

- In the Workspace Settings, click the + to add a new workspace.



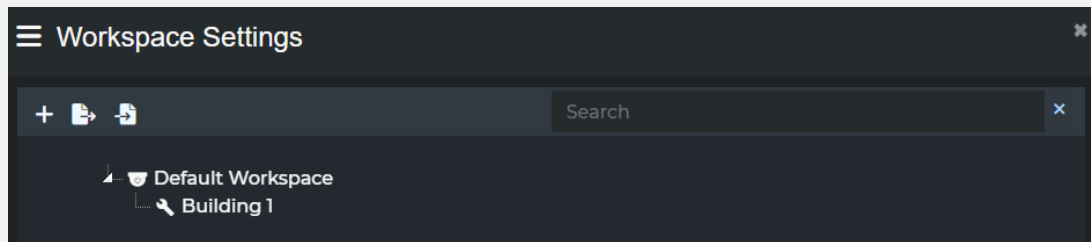
- In the *Add Workspace* popup, enter a name in the *Label* field and choose an icon for the workspace in the *Icon Field*.
- Click *Save* to create the new workspace.



- All newly created workspaces will be displayed as shown in the image. **Any newly created workspace will prompt you to load the default widget during its first use.**

- **Creating Hierarchical Workspaces:**

- Workspaces can be structured in hierarchies, where child workspaces are nested under parent workspaces.
- To add a child workspace:
  - Select the desired parent workspace and click the + icon.
  - Repeat the process for adding a new workspace as described above.

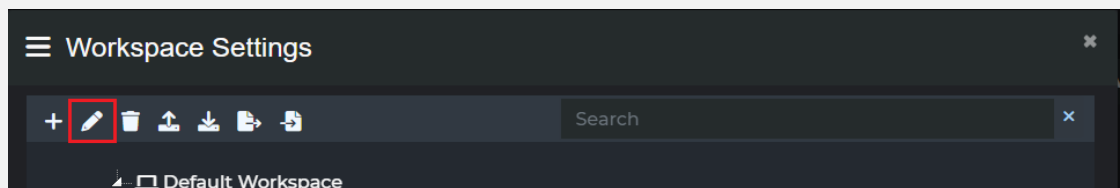


- Click *Save* to apply the changes. The nested workspace arrangement will be displayed as in the image.

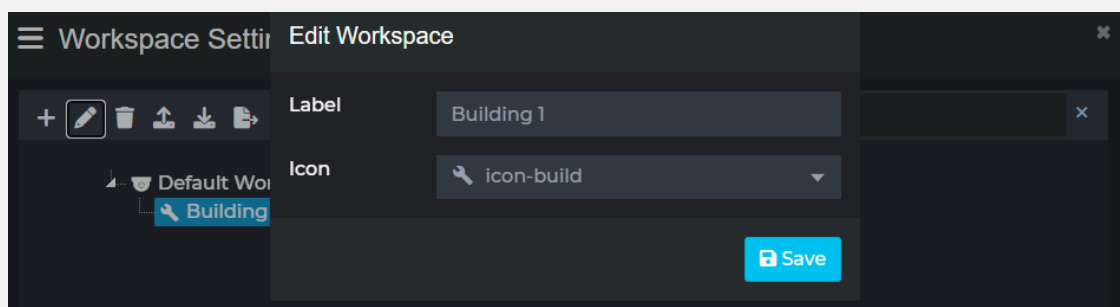
## Modifying Workspaces

To modify a workspace in O-Insights, follow these steps:

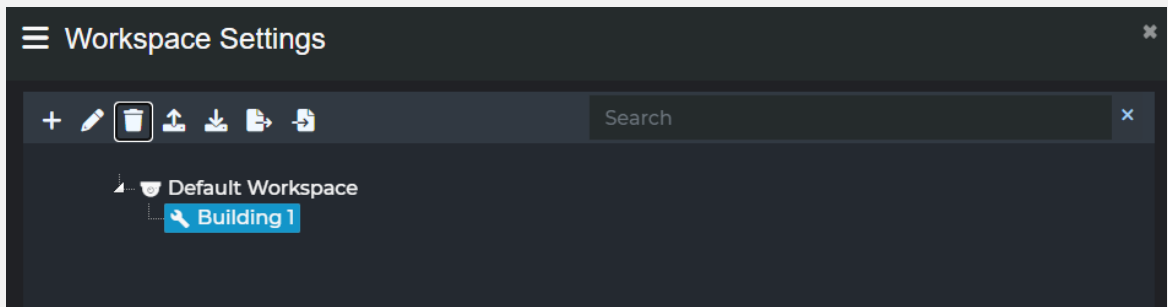
- **Entering Edit Mode:**
  - Click the inverted caret icon and select *Setup* to enter edit mode.
- **Making Modifications:**
  - After making the desired changes, click *Save Setup* from the same menu to apply and save the modifications.
- **Renaming a Workspace:**



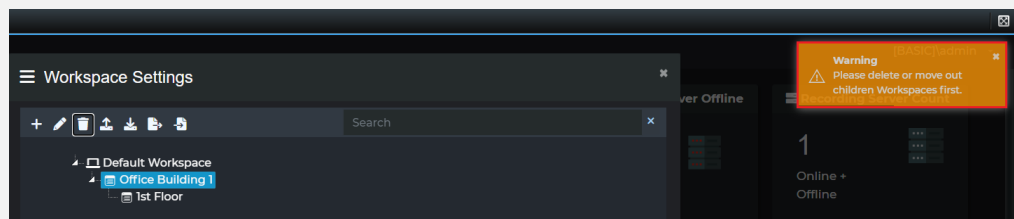
- Select the workspace you wish to rename and click the edit icon.



- Make the necessary changes to the name and click *Save* to update.
- **Deleting a Workspace:**



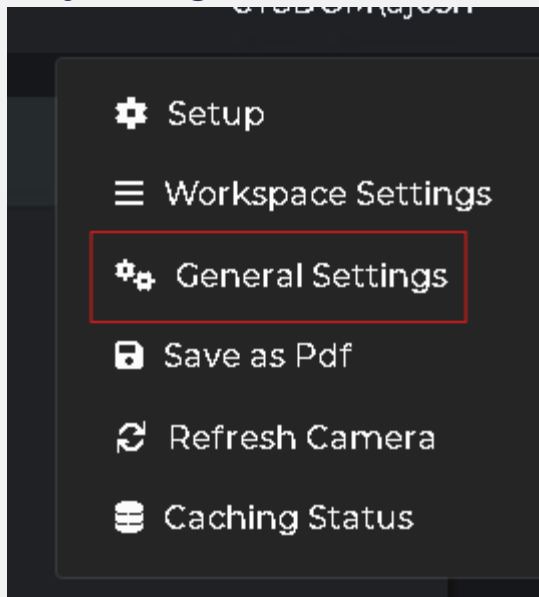
- To remove a workspace, click the trash icon.
  - **Note that the Default Workspace cannot be deleted.**



- Parent workspaces with child workspaces cannot be deleted and will display a warning message upon delete attempt, as shown in the image.

**Note:** While opening a newly created workspace, the users will be prompted to add a set of Default Widgets that are most frequently used. Choosing **Yes** will create the workspace with the default widgets and **No** will leave the workspace blank.

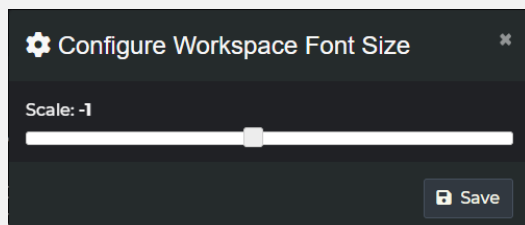
## Adjusting Font Size (General Settings)



To adjust the font size of the workspace elements in O-Insights, follow these steps:

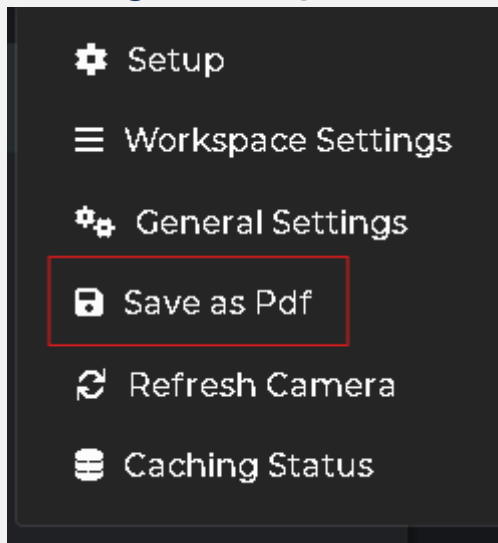
- **Accessing General Settings:**
  - Click on *General Settings* to open the configuration options for workspace elements.

- **Adjusting Font Size:**



- In the popup that appears, use the scroll function to adjust the font size:
  - Scroll up to increase the font size (e.g., entering 2 will increase the font size by two points).
  - Scroll down to decrease the font size (e.g., entering -1 will reduce the font size by one point).

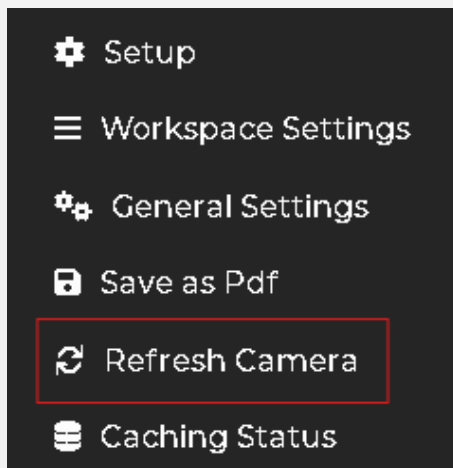
## Saving Workspace as PDF



- **To export the current workspace layout:**
  - Select *Save as PDF* to initiate the export of the current workspace layout.
  - Save the file to the desired directory.

These features enhance the customization and usability of the workspace, allowing for better visibility and documentation of your operational environment.

## Refresh Cameras



The *Refresh Cameras* functionality allows users to reload the Camera cards in instances where the count may not display correctly. This can be especially useful after configuration changes or network issues.

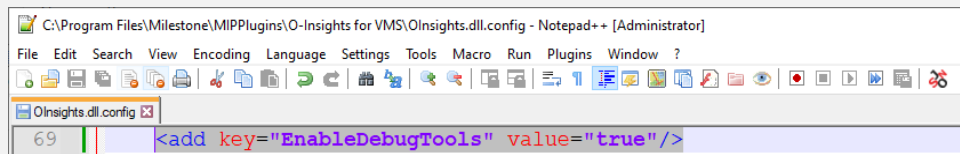
- **How to Refresh:**
  - Click the inverted caret icon to access additional options.

- From the expanded menu, select *Refresh Cameras* to update the camera displays.

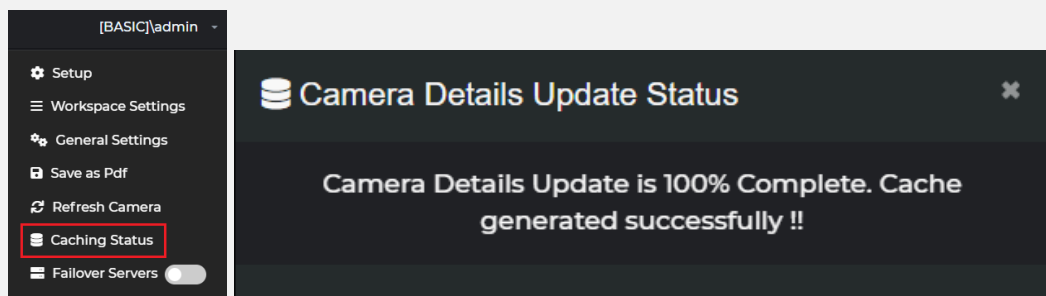
## Caching Status

The *Caching Status* feature lets the users track the data loading progress, particularly useful when large volumes of camera data are being loaded and there is no Query Engine running at the site.

- **Enabling Caching Status:**



- To activate this feature, edit the configuration file and set the *EnableDebugTools* key to true.
  - **Configuration Entry:** `<add key="EnableDebugTools" value="true"/>`
  - **Config File Path:** `C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS`

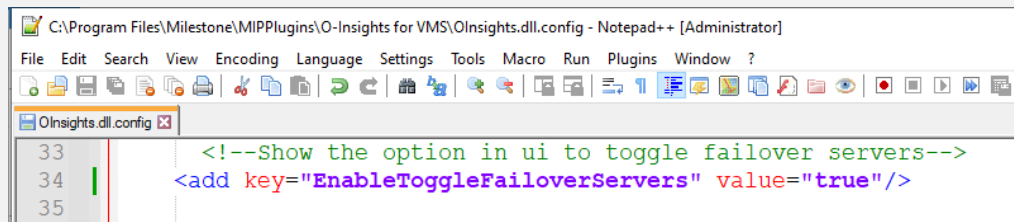


- Restart the Smart Client to see the Caching Status and track the progress of data loading.

## Failover Servers

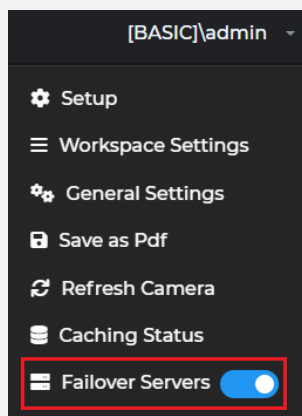
For setups where XProtect is configured with a failover mechanism by adding the same camera to multiple recording servers, the *Failover Servers* option helps to accurately count cameras and prevent duplication.

- **Enabling Failover Server Functionality:**



```
C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS\OInsights.dll.config - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
OInsights.dll.config
33 <!--Show the option in ui to toggle failover servers-->
34 <add key="EnableToggleFailoverServers" value="true"/>
35
```

- Change the *EnableToggleFailoverServers* key to true in the OInsights.dll.config file.
  - **Configuration Path:** C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS\OInsights.dll.config
- Details of duplicate recording servers should be specified in the *FailoverServers.json* config file.
  - **Config File Path:** C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS\Config\FailoverServers.json

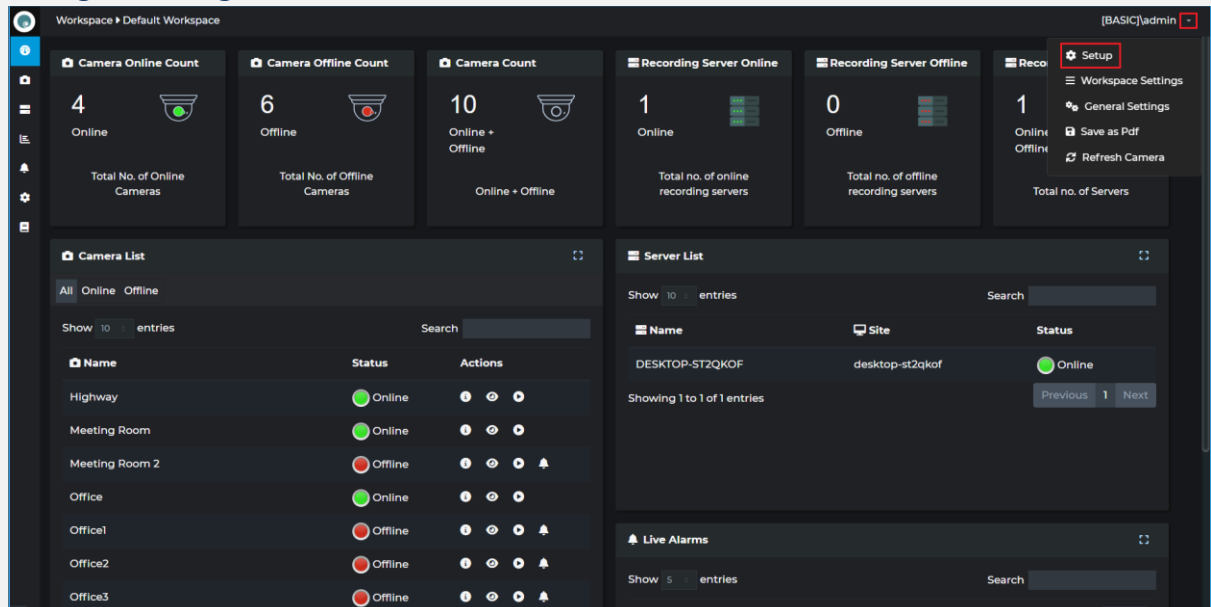


- The failover server can be activated by clicking the caret icon and toggling the switch as shown in the above image.

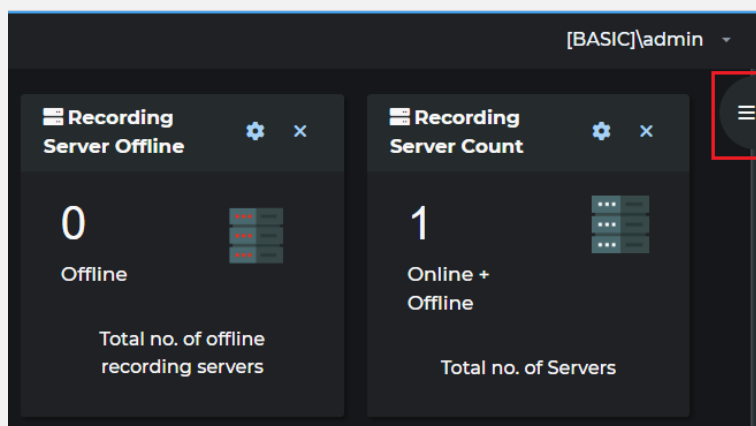
## Widget Operations

The workspace in O-Insights features a modular design, consisting of widgets that provide various analytical information about the VMS.

### Adding a Widget

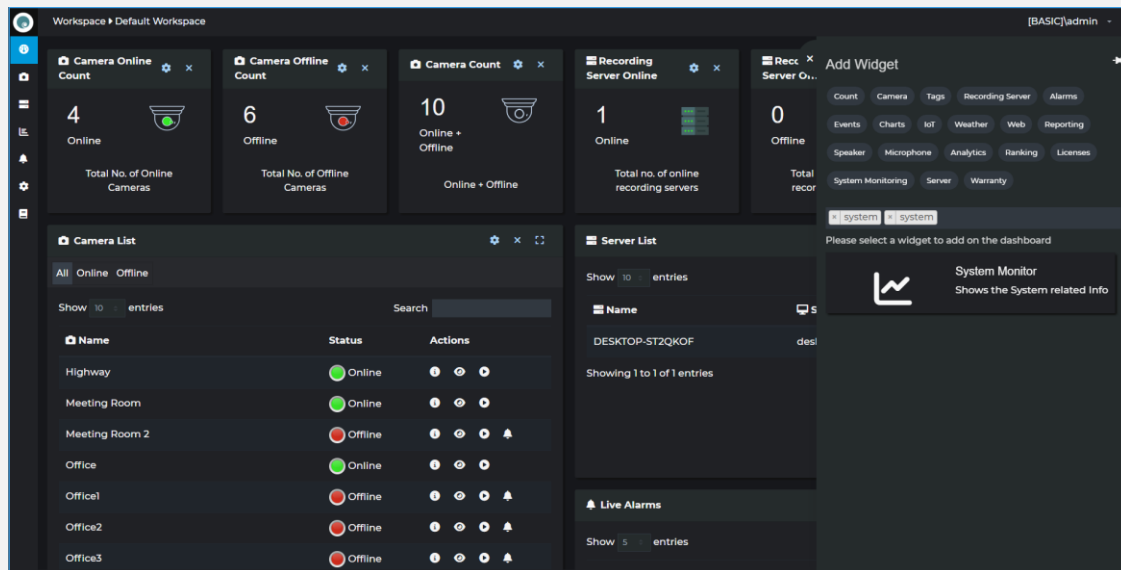


- **Enter Setup Mode:** To add any widget, you must be in setup mode. Click on *Setup* to reveal widget configuration options.



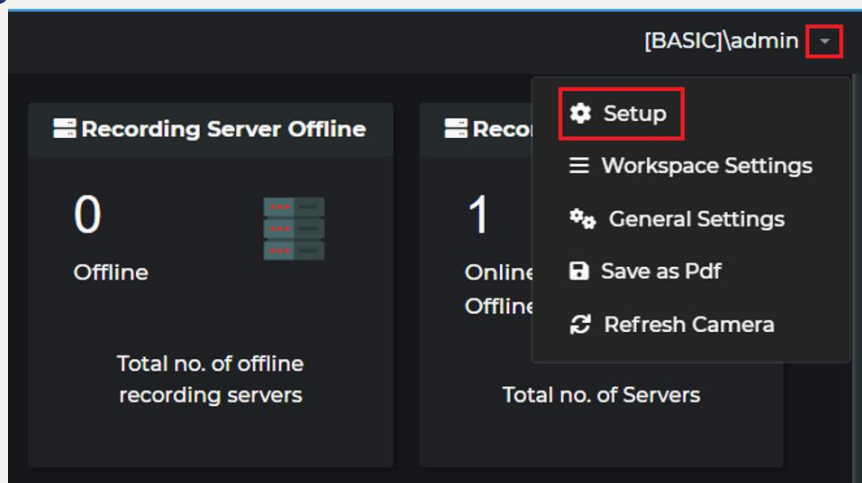
- **Access Widget Menu:** Click on the three lines highlighted in the image above to open the "Add Widget" popup.



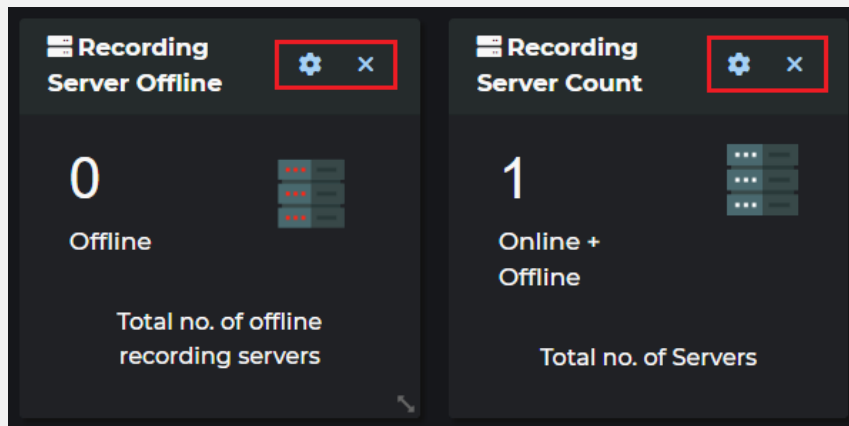


- **Widget Selection:** The popup displays all available widgets. You can select a category, scroll through the list, or use the search function to find a specific widget. Click on the widget box to add it to the workspace.

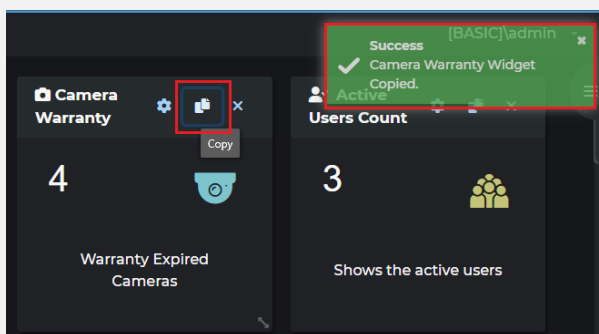
## Moving/Resizing/Removing/Copying/Pasting/Configuring Widgets



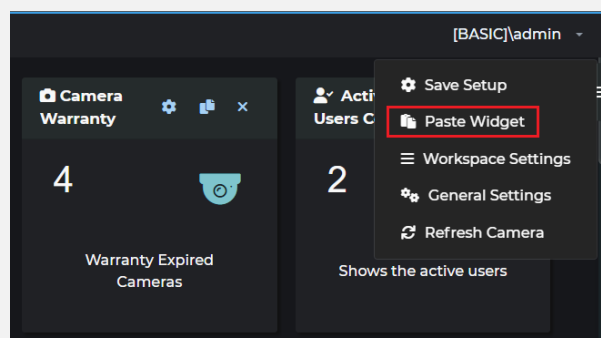
- **Enter Setup Mode:** To modify any widget, you must be in setup mode. Click on *Setup* to reveal widget configuration options.



- **Move a Widget:** Click the title of the widget and drag it to the desired location within the workspace.
- **Resize a Widget:** Click the corner arrow (↖) of the widget and drag to adjust its size.
- **Remove a Widget:** Click the cross icon (✕) in the right corner of the widget to remove it from the workspace.
- **Expand Widget:** To view the widget in full view, click the full view icon (⛶) in the right corner.



- **Copy and Paste a Widget:** Select the widget you want to copy. Then:
  - Click the copy widget icon (⛶).

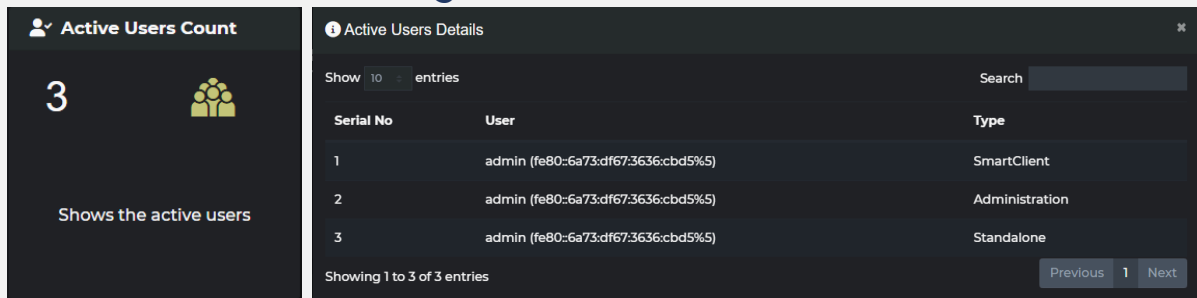


- Go to the desired workspace and paste it by clicking the *Paste Widget*.
- **Configure Widgets:** Click the gear icon (\*) on any widget to open its configuration page. Make necessary adjustments and click *Save* to apply changes or *Close* to exit without saving.

**Tip:** Each table in the system includes a search function to filter results. By entering text in the search field, the table will display only those entries that match the input. Additionally, the “Show Entries” dropdown allows users to adjust how many rows are visible at one time, enabling customization of data visibility according to user

# Widget Types

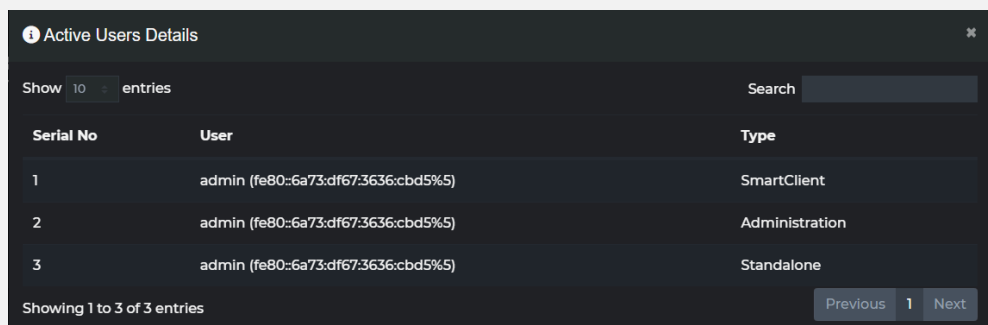
## Active User Count Widget



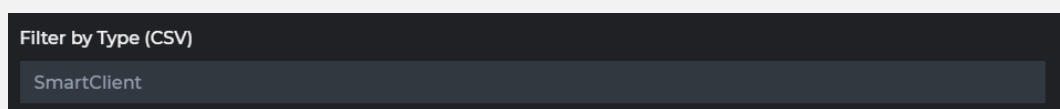
Displays the total number of active users by default, allowing for detailed drilldowns to see more specifics.

- **Configuration:**

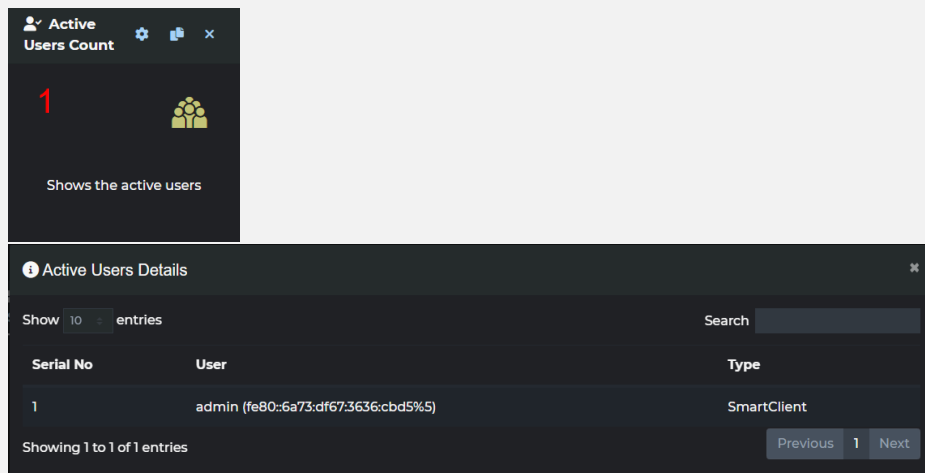
- **Title:** Specifies the title that appears at the top of the widget.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Widget Description:** A brief description of the widget.



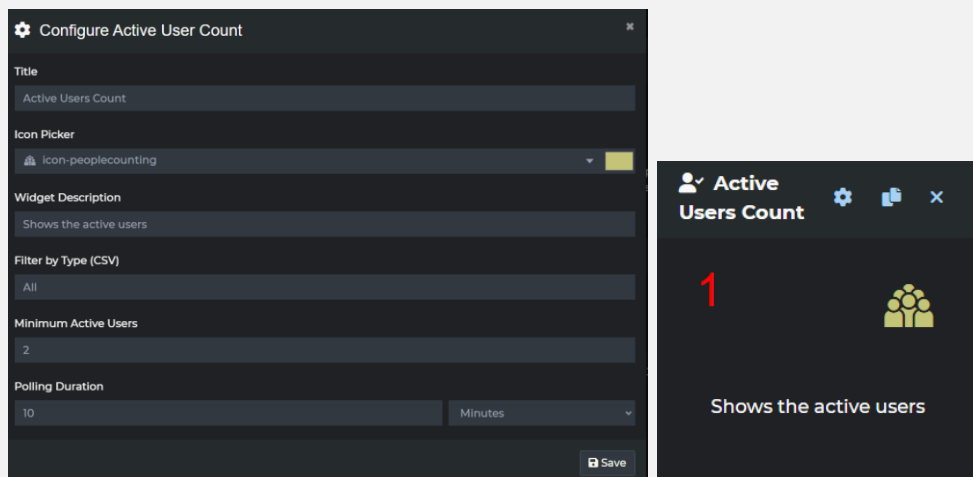
- **Filter by Type:** Accepts comma-separated values (CSV) to specify the user types to be included in the count. This feature filters the data to display active users based on the specified criteria:
  - **Standalone:** Users logged in as a service.
  - **Administration:** Users logged in through the XProtect Management Client.
  - **SmartClient:** Users logged in via the Smart Client.



- **Application of Filter:** If there is a need to display only the number of Smart Client logins at any point, a specific filter can be applied. Adjust the settings as needed and click save.

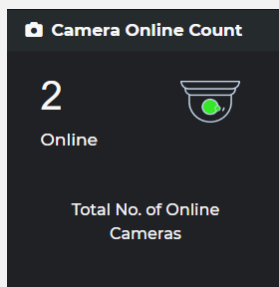


Once the filter is applied, the widget updates to show the count and details of users logged in through the Smart Client only.



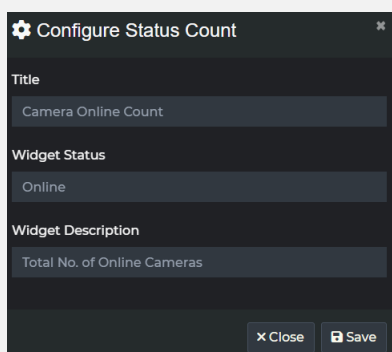
- **Minimum Active Users:** This setting allows the entry of an integer value to specify the minimum number of users that should be online. If the actual number of online users falls below this threshold, the count on the widget will change color to red. This feature helps supervisors ensure that a sufficient number of operators are always logged into the system, aiding in effective system monitoring and management.
- **Polling Duration:** This setting adjusts the frequency at which data is fetched from XProtect. Enter the desired interval number and choose the unit of time—Minutes, Seconds, Hours, etc.—from the dropdown menu as per requirement.

## Camera Status Online/Offline Count Widget



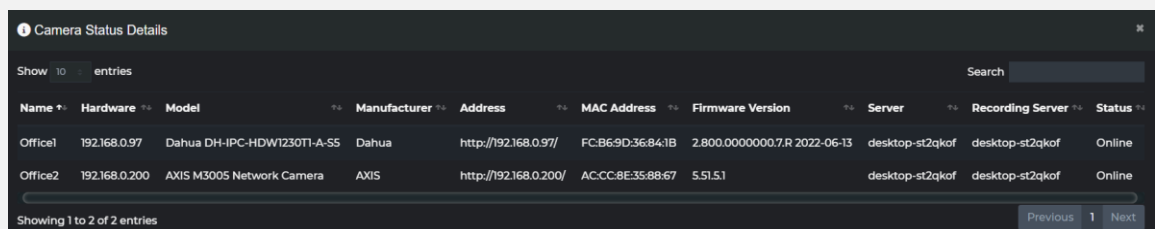
This widget provides a comprehensive count of cameras that are currently online or offline, allowing for immediate visibility into the operational status of the surveillance system.

### Configuration



- **Title:** Specifies the title that appears at the top of the widget.
- **Widget Status:** Allows the user to select whether to display cameras that are online or offline. This choice determines the data that the widget will show.
- **Widget Description:** Offers a brief description of the widget, positioned at the bottom, explaining its function.

### Drilldown Features

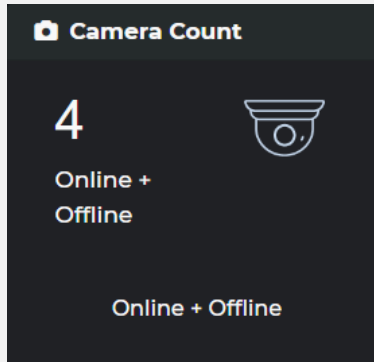


| Name    | Hardware      | Model                       | Manufacturer | Address               | MAC Address       | Firmware Version             | Server          | Recording Server | Status |
|---------|---------------|-----------------------------|--------------|-----------------------|-------------------|------------------------------|-----------------|------------------|--------|
| Office1 | 192.168.0.97  | Dahua DH-IPC-HDW1230TI-A-S5 | Dahua        | http://192.168.0.97/  | FC:B6:9D:36:84:1B | 2.800.0000000.7.R 2022-06-13 | desktop-st2qkof | desktop-st2qkof  | Online |
| Office2 | 192.168.0.200 | AXIS M3005 Network Camera   | AXIS         | http://192.168.0.200/ | AC:CC:8E:35:88:67 | 5.51.5.1                     | desktop-st2qkof | desktop-st2qkof  | Online |

- **Viewing Camera Details:** To view the in-depth details of camera status, click on the count number (either online or offline). This action will open a popup displaying a detailed list of cameras, segmented by their current operational status as depicted in the image. Once you have finished reviewing the details, you can close

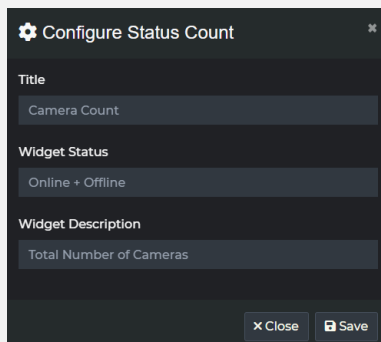
the popup by clicking the close button located at the corner of the popup.

## Camera Count Widget



This widget shows the total count of cameras that are operational within the system, excluding any that are disabled.

## Configuration



- **Title:** Sets the title that appears at the top of the widget.
- **Widget Status:** Configured to display the status of both online and offline cameras.
- **Widget Description:** Provides a brief description of the widget's purpose, located at the bottom.

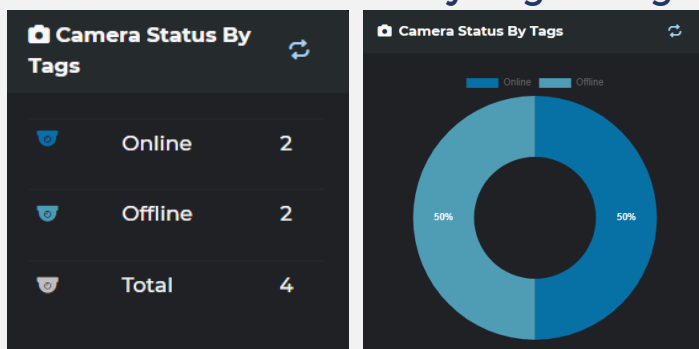
## Drilldown

| Name    | Hardware      | Model                       | Manufacturer | Address               | MAC Address       | Firmware Version             | Server          | Recording Server | Status  |
|---------|---------------|-----------------------------|--------------|-----------------------|-------------------|------------------------------|-----------------|------------------|---------|
| Office1 | 192.168.0.97  | Dahua DH-IPC-HDW1230T1-A-S5 | Dahua        | http://192.168.0.97/  | FC:B6:9D:36:84:1B | 2.800.0000000.7.R 2022-06-13 | desktop-st2qkof | desktop-st2qkof  | Online  |
| Office2 | 192.168.0.200 | AXIS M3005 Network Camera   | AXIS         | http://192.168.0.200/ | AC:CC:8E:35:88:67 | 5.51.5.1                     | desktop-st2qkof | desktop-st2qkof  | Online  |
| Office3 | 192.168.0.223 | AXIS M3005 Network Camera   | AXIS         | http://192.168.0.223/ | AC:CC:8E:35:7B:24 | 5.51.7.6                     | desktop-st2qkof | desktop-st2qkof  | Offline |
| Office4 | 192.168.0.222 | AXIS M3045-V Network Camera | AXIS         | http://192.168.0.222/ | AC:CC:8E:02:B6:85 | 9.10.1                       | desktop-st2qkof | desktop-st2qkof  | Offline |

Showing 1 to 4 of 4 entries

- Viewing Detailed Camera Information:** To access detailed information about each camera, click on the total number of cameras displayed by the widget. This action will open a popup listing all the cameras, categorized by their current status. The popup can be closed by clicking the close button located at the corner of the popup.

## Camera Status Count by Tags Widget



This widget offers a dynamic view of the operational status of cameras, for the chosen tags, with the ability to switch between a list view and a donut chart for visual representation of the camera status.



## Configuration

**Configure Camera Status By Tags**

Title

Camera Stats By Tags

**Camera Online**

Online

Icon Picker

icon-cctv

**Camera Offline**

Offline

Icon Picker

icon-cctv

**Total Camera**

Total

Icon Picker

icon-cctv

**Polling Duration**

10

Minutes

**Use Multisite**

☒

**Select Site**

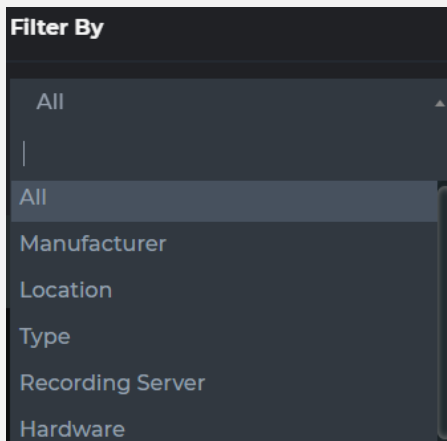
**Filter By**

All

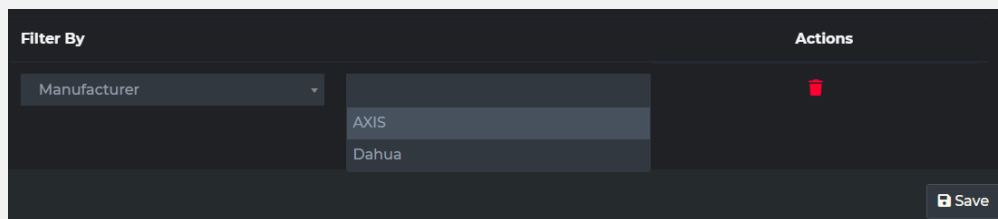
**Actions**

**Save**

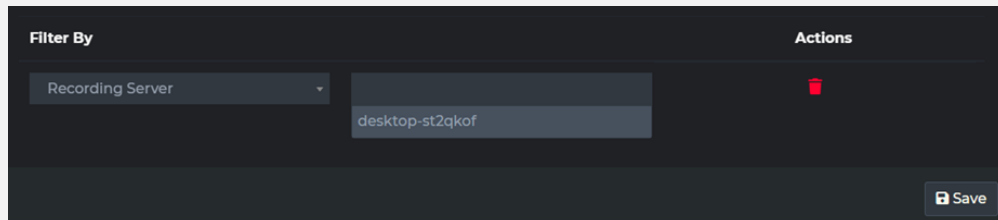
- **Title:** Sets the title that appears at the top of the widget.
- **Camera Online:** Label for the count of online cameras.
- **Camera Offline:** Label for the count of offline cameras.
- **Total:** The combined total of online and offline camera counts.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Polling Duration:** Set the frequency for data updates on the widget. Options range from seconds to minutes, hours, and days.
- **Select Site:** Choose the site from which you want to see the camera status. Only sites assigned to your role and enabled by multisite permissions in reporting settings will be available.



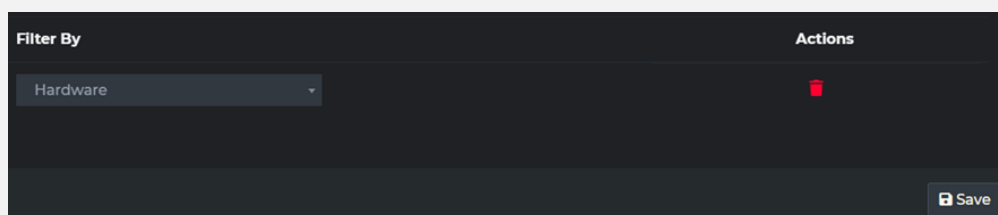
- **Filter by:** Utilize tags configured in XProtect to filter camera status:
  - **All:** Displays the status of all cameras accessible to the user.



- **Manufacturer:** Shows camera status based on the manufacturer filter.



- **Recording Server:** Reflects camera status based on the selected recording server.



- **Hardware:** Useful for monitoring the status of physical hardware, which may include multiple lenses or cameras.

**Note:** Applying hardware filter will only display the number of Hardware in an installation. If User needs information on the number of cameras, then this filter should not be applied.

- **Location:** Shows camera status based on the selected location.
- **Type:** Displays camera status based on the camera type.

## Tags

- Tags such as *Location*, *Type*, *Installed Date*, and *Warranty End Date* can be assigned to cameras from the *O-Insights Custom Properties* tab in the management client, enhancing filter capabilities. After adding tags, restart the *Smart Client* to update changes on the client side.

## Configuring Tags on a Smart Client Without Management Client

In scenarios where the Query Engine and Workspace are installed on a smart client instead of a server, and the management client is not installed on the smart client while the server does not have the smart client needed for Workspace installation, follow these steps to configure the system:

### 1. Copy the Configuration File:

- Locate the *O-InsightsCustomCameraProperties* file on the client machine at *C:\Program Files\XProtect\MIPPlugins\O-Insights for VMS*.

### 2. Paste the File on the Server:

- Transfer and paste this file into the *MIPPlugins* folder on the server machine.

### 3. Verify Configuration Path:

```

1 <?xml version="1.0" encoding="utf-8" ?>
2 <configuration>
3   <appSettings>
4     <add key="QueryEngineProtocol" value="http" />
5     <add key="QueryEngineServer" value="localhost" />
6     <add key="QueryEnginePort" value="9011" />
7   </appSettings>
8 </configuration>
9

```

Ensure that the Query Engine installation path is correctly specified in the *O-InsightsCustomCameraProperties.dll.config* configuration file. This step is crucial for the custom properties tab to appear in the management client.

**Note:** Further tagging details are available in the *Dynamic Tags Section*, which details configuration and management of tags in the system.

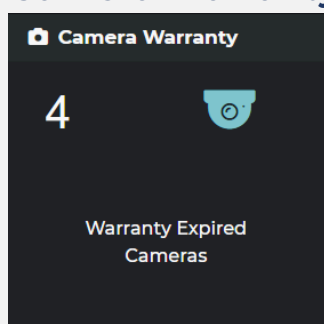
**Note:** For larger installation, it is recommended to use O-Insights query engine for faster loading of data on the widgets as well as in the inventory list.

Additional Dynamic tags can be created once query engine is installed, and reporting is enabled in the configuration.

## Drilldown

- **Detailed View:** Click on the number of online, offline, or total cameras to open a popup that lists the cameras based on the selected tag and status. The popup can be closed by clicking the close button in the corner.

## Camera Warranty Widget



The Camera Warranty widget offers detailed insights into the warranty status of cameras, enabling effective management of warranty periods and maintenance schedules.

## Configuration

**Configure Camera Warranty**

**Title**  
Camera Warranty

**Icon Picker**  
icon-cctv

**Filter By**  
Expired

**Description**  
Warranty Expired Cameras

Save

- **Title:** Specifies the title that appears at the top of the widget.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Filter by:** Allows selection from the dropdown to filter cameras based on warranty status:

**Filter By**

Not Expired

Expired

**Not Expired**

Date Range

- **Expired:** Displays all cameras whose warranty has expired.
- **Not Expired:** Shows all cameras currently under warranty.

**Filter By**  
Date Range

**Date Range**  
5/1/2023, 12:00:00 AM - 5/31/2023, 10:00:00 PM

- **Date Range:** Filters cameras whose warranty will expire within a selected date range.

- Upon selecting *Date Range*, an additional date range selection dropdown appears. Users can choose pre-configured options (like last 30 days, next 30 days) or select specific dates from a calendar. To set the date, click once on the from date, then select the to date, and click on Apply and save.
- **Widget Description:** A brief description of the widget that appears at the bottom.
- **Restart the Management Client:** After adding dates to the O-Insights custom properties tab in the management client, it is crucial to restart the smart client for the updates to take effect.

## Date Picker Job for Automatically picking Install Dates (for Query Engine Installations)

- **Installation Date Retrieval:** In installations with Query Engine, installation dates can be promptly retrieved by executing the *Install Date Picker Job* found in the *User Jobs* Section. This job should be run immediately after adding cameras (initially recognized as Hardware Device 1) and before any modifications to camera names.

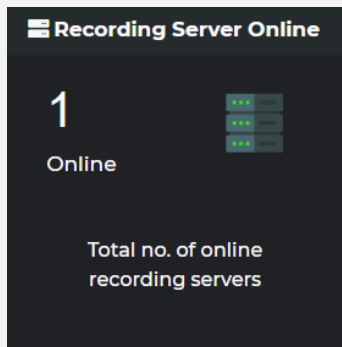
```

1 // This is the document for adding Manufacturer model - Warranty information for updating automatically in custome camera properties
2 // use '*' as model name for considering all models
3 // use ',' for seperating models
4 // "Model name": "Warranty Years"
5 {
6   "Camera Model 1": "5",
7   "Camera Model 2": "10"
8 }

```

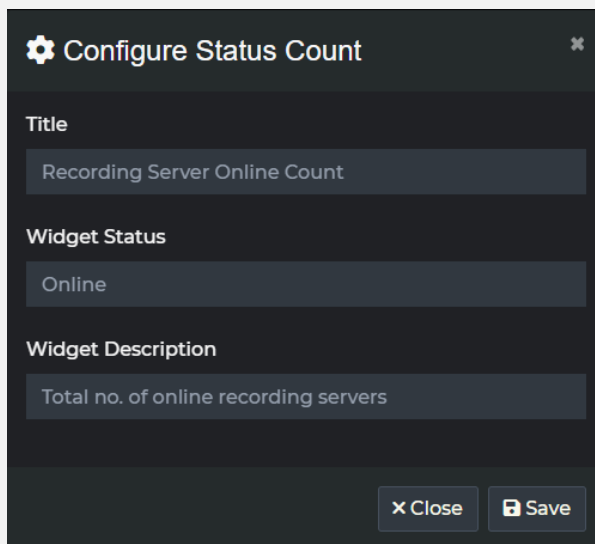
- **Automated Warranty Tracking:** If the camera model and warranty period are updated in *ModelWarrantyDetails.json* at the path *C:\Program Files\O-Insights Query Engine\Config\ModelWarrantyDetails.json*, the warranty end date is automatically populated in the O-Insights custom properties tab.

## Recording Server Status Online/Offline



This widget provides a count of all recording servers that are currently online or offline, allowing administrators to monitor the operational status of their recording infrastructure.

### Configuration



- **Title:** Sets the title that appears at the top of the widget.
- **Widget Status:** Choose to display either online or offline recording servers based on user selection.

- **Widget Description:** Offers a brief description of what the widget monitors and displays, positioned at the bottom.
- **Drilldown:** For a detailed view of server statuses, double-click on the number representing online or offline servers. This action will open a popup displaying a detailed list of servers according to their current operational state. The popup can be closed by clicking the close button located in the corner of the popup window.

## Server Status by Tags

This widget provides a comprehensive view of the operational status of servers for the chosen tag, displaying counts for online, offline, and total servers, and offering visual insights through a donut chart.

### Configuration

**Configure Server Status by Tags**

Title  
Server Status by Tags

Server online  
Online

Icon Picker  
icon-server

Server offline  
Offline

Icon Picker  
icon-server

Server Total  
Total

Icon Picker  
icon-server

Polling Duration  
10 Minutes

- **Title:** Sets the title that appears at the top of the widget.
- **Server Online:** Label for the count of online servers.

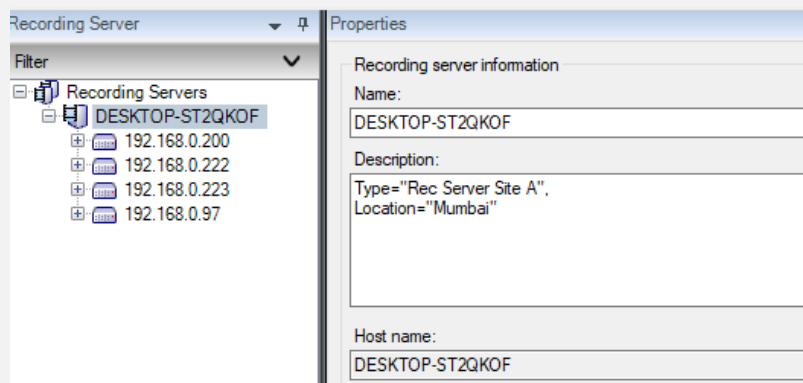


- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Server Offline:** Label for the count of offline servers.
- **Filter by:** The tag (as configured in XProtect) by which the servers must be filtered.
- **Server Total:** The combined total of online and offline server counts.
- **Polling Duration:** Specifies how often the widget updates its data. This can be set to seconds, minutes, hours, or days.

- **Select Site:** Toggle *Use Multisite* on and choose the site from which you wish to view the server status. This will display only the sites assigned to your role and enabled by multisite permissions in reporting settings.
  - **Filter by Location:** Displays the status (Online/Offline/Total) of servers based on the selected location tag.
  - **Filter by Type:** Displays the status (Online/Offline/Total) of servers based on the selected type tag.

**Note:** Tags can be helpful when site specific dashboards are to be created.

## Adding Tags in Management Client

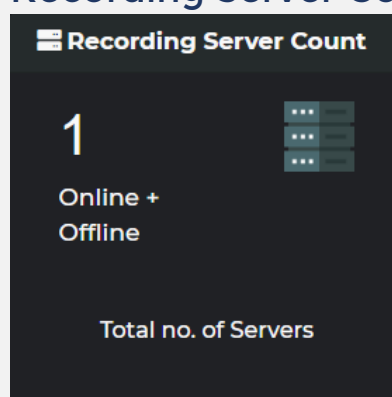


- **Tagging Servers:** Tags can be added to recording servers in the management client as follows: In the description box, enter the location and type in the format Type="Rec Server Site A", Location="Mumbai".
- **Updating Tags:** Once tags are added in the management client, restart the smart client for the changes to be updated on the smart client side.

## Drilldown

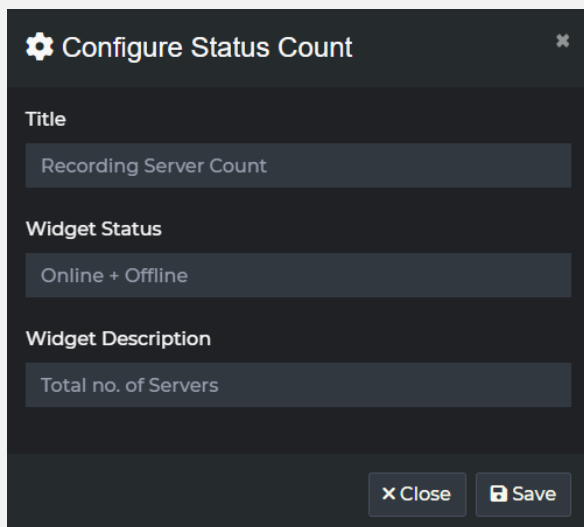
- **Detailed View:** Click on the number of online, offline, or total servers to open a popup displaying a detailed list of servers according to the selected tag and status. This detailed view allows for in-depth analysis of server statuses. The popup can be closed by clicking the close button located in the corner of the popup window.

## Recording Server Count



This widget provides a comprehensive count of all recording servers, enabling administrators to monitor the availability of their recording infrastructure.

## Configuration



**Configure Status Count**

Title  
Recording Server Count

Widget Status  
Online + Offline

Widget Description  
Total no. of Servers

Close Save

- **Title:** Sets the title that appears at the top of the widget.
- **Widget Status:** Configured to display both online and offline recording servers.
- **Widget Description:** Offers a brief description of the widget's functionality, located at the bottom.
- **Drilldown:** Double-click on the total number of recording servers to open a popup that lists all servers with detailed information. The popup can be closed by clicking the close button in the corner.
  - **Export Options:** The table data can be exported by clicking the *Export with PDF* button to save as PDF or the *Export with Excel* icon to save as an XLS file.

## Physical Recording Server Count Widget

This widget displays the count of physical recording servers, differentiating from virtual or cloud-based servers.

## Configuration

**Configure Status Count**

Title  
Physical Recording Server Count

Widget Status  
Physical Recording Servers

Widget Description  
Total Number of Physical Recording Servers

Close Save

- **Title:** Sets the title that appears on top of the widget.
- **Widget Status:** Shows only physical recording servers.
- **Widget Description:** Offers a brief description of the widget's functionality, located at the bottom.

### Configure Physical Recording Server Count

- **Detailed View:** Double-click on the total number of physical recording servers to access a popup that presents a detailed list of these servers.
- **Closing the Popup:** The popup can be closed by clicking the close button in the corner.
- **Export Options:** Detailed server information can be exported directly from the popup by selecting either the "Export with PDF" or "Export with Excel" options, facilitating easy sharing and record-keeping.

### Server Status Widget

**Server Status**

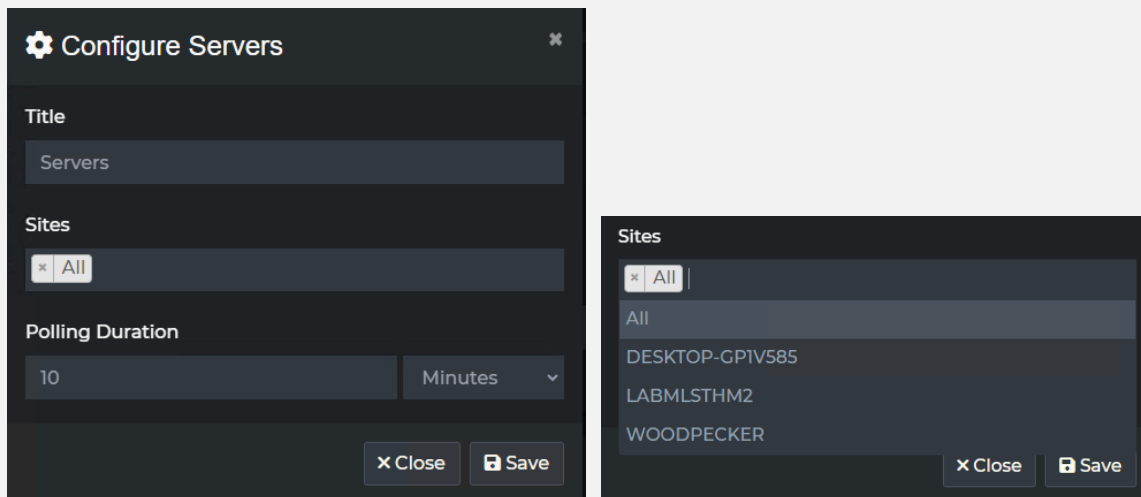
Show 10 entries

| Server Type       | Online | Offline | Total |
|-------------------|--------|---------|-------|
| Recording Server  | 3      | 0       | 3     |
| Management Server | 3      | 0       | 3     |
| Failover Server   | -      | -       | 1     |

This widget provides a comprehensive overview of the status of various servers within the system, including Management Servers, Recording Servers, and Failover Servers. It displays counts of servers that are online and offline, offering users a quick way to assess the operational status across different server types.

**Note:** Server Status widget will work only when Query Engine is installed and the key `<add key="ReportingEnabled" value="false"/>` located in `C:\Program Files\XProtect\MIPPlugins\O-Insights for VMS\OInsights.dll.config` is turned to true.

## Configuration



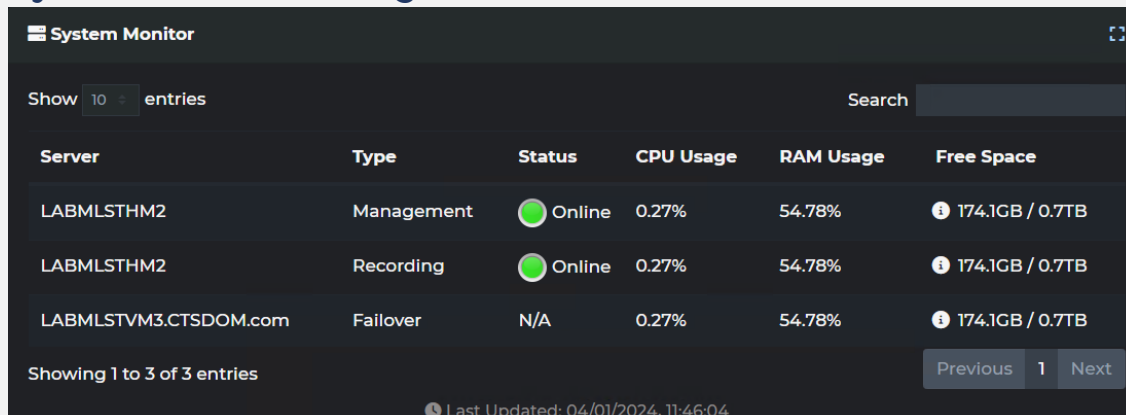
The image shows two screenshots of the 'Configure Servers' dialog box. The left screenshot shows the main configuration form with the following fields: 'Title' (set to 'Servers'), 'Sites' (set to 'All'), and 'Polling Duration' (set to '10' minutes). The right screenshot shows the 'Sites' dropdown menu expanded, displaying a list of sites: 'All', 'DESKTOP-GPIV585', 'LABMLSTHM2', and 'WOODPECKER'. Both screenshots include 'Close' and 'Save' buttons at the bottom right.

- **Title:** Sets the title that appears at the top of the widget.
- **Site:** Allows selection of specific sites from a dropdown.
- **Polling Duration:** Configures the frequency at which server status data is fetched from XProtect. Users can type the number and select the unit of time (Minutes/Seconds/Hours) from the dropdown.

## Drilldown

- To gain an in-depth view of server details, double-click on the server counts. This action triggers a popup that displays a comprehensive list of all servers, categorized by their current operational status.

## System Monitor Widget



| Server               | Type       | Status | CPU Usage | RAM Usage | Free Space      |
|----------------------|------------|--------|-----------|-----------|-----------------|
| LABMLSTHM2           | Management | Online | 0.27%     | 54.78%    | 174.1GB / 0.7TB |
| LABMLSTHM2           | Recording  | Online | 0.27%     | 54.78%    | 174.1GB / 0.7TB |
| LABMLSTM3.CTSDOM.com | Failover   | N/A    | 0.27%     | 54.78%    | 174.1GB / 0.7TB |

Showing 1 to 3 of 3 entries

Last Updated: 04/01/2024, 11:46:04

The System Monitor Widget provides critical insights into the resource utilization of systems hosting various servers such as Management Servers, Recording Servers, and Failover Servers. It displays current status, CPU usage, RAM usage, and available disk space, allowing for effective monitoring and management of system resources to ensure optimal performance.

### Prerequisites for Operation

- **Query Engine Configuration:** The Server Status widget requires the Query Engine (Reporting Service) to be installed. Ensure the following keys in configuration files are set to true:

- **Reporting Enabled:**

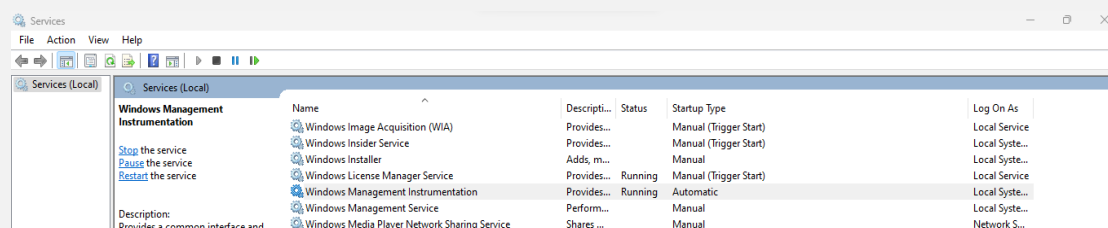
```
<add key="ReportingEnabled" value="true"/>
```

Located in `C:\Program Files\XProtect\MIPPlugins\O-Insights for VMS\OInsights.dll.config`.

- **Fetch Server Statistics:**

```
<add key="FetchServerStatistics" value="true" />
```

located in `C:\Program Files\O-Insights Query Engine\QueryEngine.exe.config`.



- **WMI Service:** Ensure that the Windows Management Instrumentation (WMI) service is active, as it is crucial for retrieving data on system resources like CPU usage, RAM usage, and disk space.
- **Remote WMI Calls:** For making remote WMI calls, appropriate privileges and configurations are required for the logon user of the Query Engine service.

**Note:** Failover server status will be shown as N/A in the widget as Online/Offline status of failover servers is not exposed over MIP

## Configuration

**Configure System Monitor**

Title  
System Monitor

Server Type  
Management Recording Failover

Sites  
LABMLSTHM2

Polling Duration  
10 Minutes

Results may not be real-time and are based on the time that data was retrieved from the server. For live resource usage, use XProtect's System Monitor.

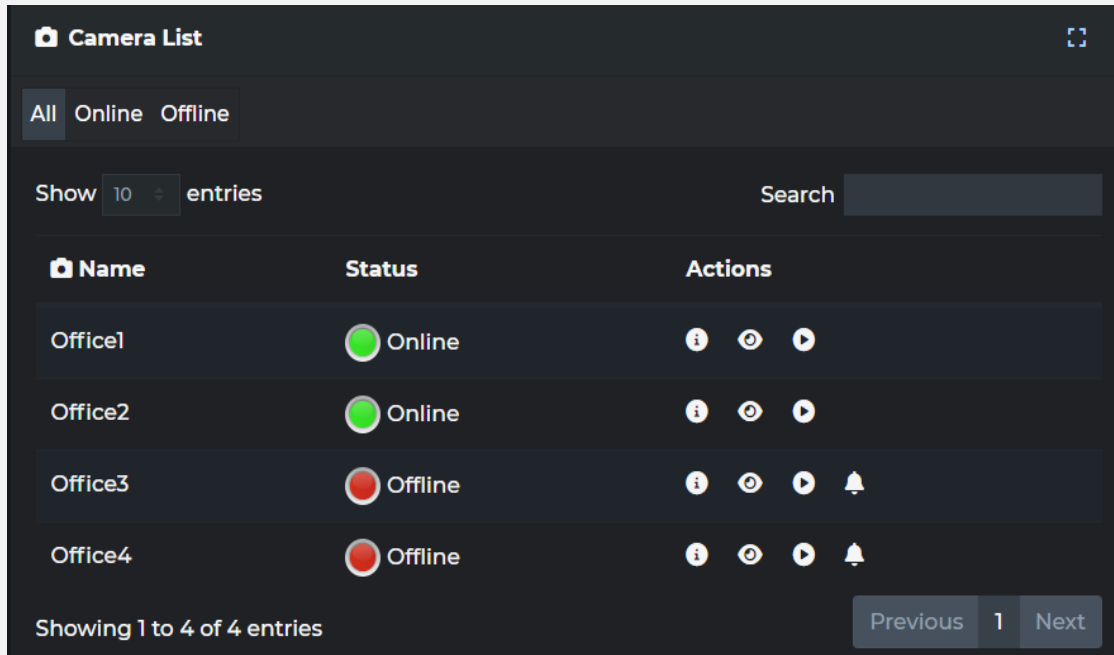
Close Save

- **Title:** Sets the title that appears at the top of the widget.
- **Server Type:** Selects the type of server (Management, Recording, or Failover) from the dropdown to focus on the resource monitoring.
- **Site:** Allows selection of specific sites from a dropdown, providing a site-specific resource usage overview.
- **Polling Duration:** Determines how frequently system resource data is fetched from XProtect. Users can type the number and select the unit of time (Minutes/Seconds/Hours) from the dropdown as needed.

## Drilldown

- **Detailed View:** To examine the storage details in-depth, click on the ⓘ icon. This will display a popup with detailed information about the system resources, helping users identify potential issues or optimize resource allocation.

## Camera List



| Name    | Status  | Actions |
|---------|---------|---------|
| Office1 | Online  | ⓘ ⓘ ⓘ   |
| Office2 | Online  | ⓘ ⓘ ⓘ   |
| Office3 | Offline | ⓘ ⓘ ⓘ 🔔 |
| Office4 | Offline | ⓘ ⓘ ⓘ 🔔 |

Showing 1 to 4 of 4 entries

Previous 1 Next

This widget provides a comprehensive list of all cameras configured in XProtect, displaying their current operational status. *Green* icons indicate online cameras, while *Red* icons signify offline cameras.

**Note:** Above data of camera offline will be displayed only if “*Not Responding*” alarms are configured with auto-close and enabled in alarm definitions.

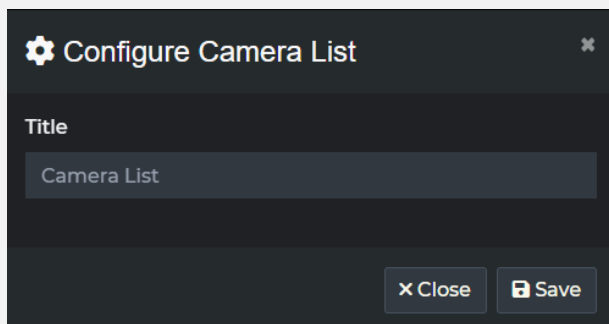
## Icons and Functions

- **Info Icon ( ⓘ ):** Displays detailed information about the camera.
- **Live View Icon ( ⓘ ):** Opens a live feed of the camera.
- **Playback Icon ( ⓘ ):** Provides playback with controls for the camera’s recordings.



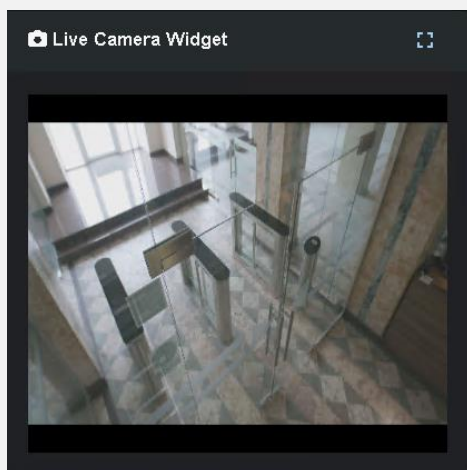
- **Alarm Icon (🔔):** Indicates cameras that are not responding. Clicking the bell icon will open a popup where users can select a date range and refresh the status.

## Configuration



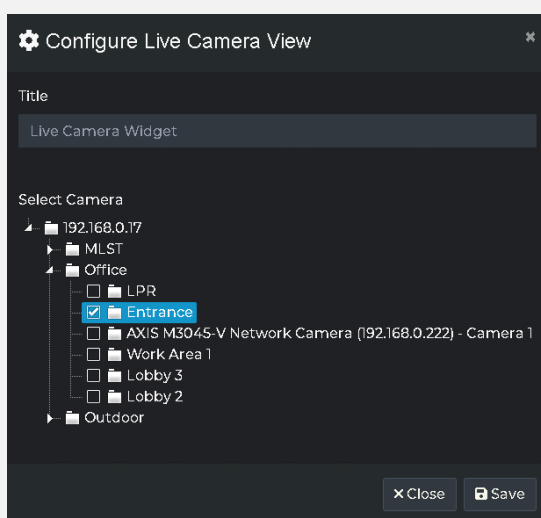
- **Title:** Sets the title that appears at the top of the widget.

## Live Camera View

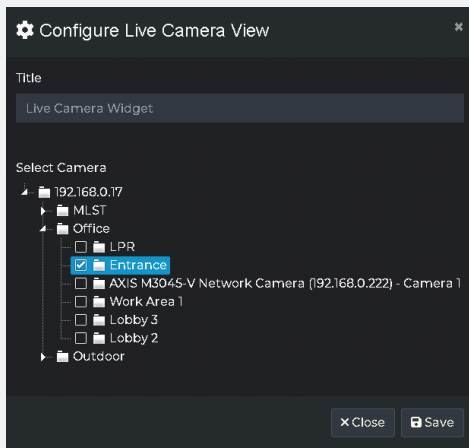


This widget enables the display of live camera feeds directly on the workspace, allowing users to monitor activities in real-time.

## Configuration



- **Title:** Sets the title that appears at the top of the widget.



- **Select Camera:** Users can choose which camera feed to display within the widget. To select a camera, expand the camera tree, check the desired camera, and click *Save* to apply changes.

## Recording Server List Widget

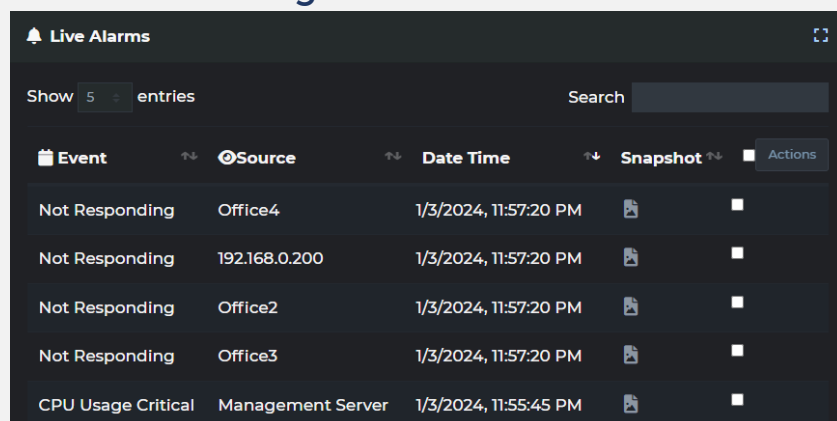
| Recording Server List       |                            |                 |
|-----------------------------|----------------------------|-----------------|
| Show 10 entries             |                            | Search          |
| Name                        | Site                       | Status          |
| DESKTOP-GPIV585             | desktop-gpiv585.ctsdom.com | Online          |
| LABMLSTHM2                  | labmlsth2.ctsdom.com       | Online          |
| WOODPECKER                  | woodpecker.ctsdom.com      | Online          |
| Showing 1 to 3 of 3 entries |                            | Previous 1 Next |

This widget provides a detailed list of all recording servers configured in XProtect, indicating their current operational status with color-coded icons. A *green* icon denotes an online server, while a *red* icon signifies an offline server.

### Configuration

- **Title:** Sets the title that appears at the top of the widget.
- **Site:** Allows the user to select specific sites or opt for *All Sites* from the dropdown menu to display the status of servers across different locations.

## Live Alarm Widget



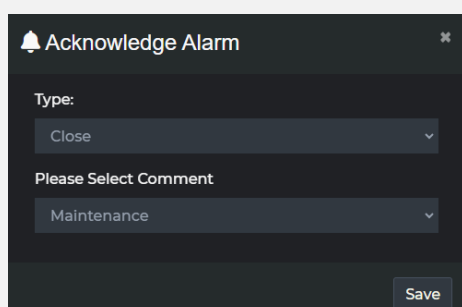
The screenshot shows a 'Live Alarms' widget with a dark theme. At the top, there's a title 'Live Alarms' with a bell icon and a search bar. Below the title, it says 'Show 5 entries'. The main part of the widget is a table with columns: Event, Source, Date Time, Snapshot, and Actions. There are five rows of data, each representing an alarm.

| Event              | Source            | Date Time             | Snapshot | Actions                  |
|--------------------|-------------------|-----------------------|----------|--------------------------|
| Not Responding     | Office4           | 1/3/2024, 11:57:20 PM |          | <input type="checkbox"/> |
| Not Responding     | 192.168.0.200     | 1/3/2024, 11:57:20 PM |          | <input type="checkbox"/> |
| Not Responding     | Office2           | 1/3/2024, 11:57:20 PM |          | <input type="checkbox"/> |
| Not Responding     | Office3           | 1/3/2024, 11:57:20 PM |          | <input type="checkbox"/> |
| CPU Usage Critical | Management Server | 1/3/2024, 11:55:45 PM |          | <input type="checkbox"/> |

This widget displays live alarms occurring within the workspace, allowing for immediate action and monitoring.

### Alarm Management

- **Acknowledging Alarms:** To acknowledge an alarm, select the alarm, and click the 'Action' button that shows up on top of the table. To dismiss multiple alarms simultaneously, use the checkbox at the top of the table to select all alarms, then choose *Acknowledge* and click 'Save'.



The screenshot shows a dialog box titled 'Acknowledge Alarm'. It has a 'Type:' dropdown menu with 'Close' selected. Below it is a 'Please Select Comment' dropdown menu with 'Maintenance' selected. At the bottom right is a 'Save' button.

- **Closing Alarms:** To close an alarm, select it, choose a reason for closure from the pre-configured list in the dropdown (modifiable via the `OInsights.dll.config` file), and click *Save*.
  - Users have the capability to customize the reasons listed in the dropdown menu for closing alarms by adding predefined reasons. To do this, navigate to the O-Insights folder located typically at `C:\Program Files\Milestone\MIPPlugins\OInsights`. Open the `Oinsights.dll.config` file in a text editor and modify the `AlarmCloseReasons` key. Append additional reasons, separated by commas, to the existing list after the default entry of "Maintenance". For example, to add 'Camera Failure' and 'Network Issue' to the list, modify the line to read:

```

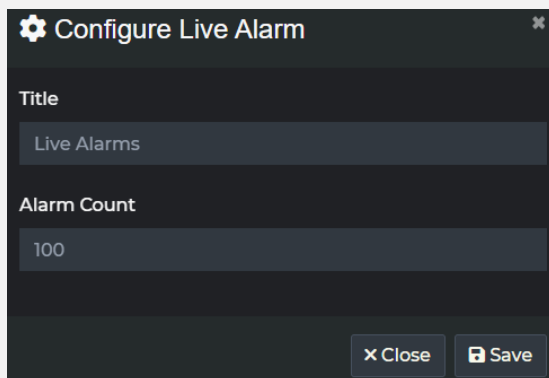
C:\Program Files\Milestone\MIIPPlugins\O-Insights for VMS\OInsights.dll.config - Notepad++ [Administrator]
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
OInsights.dll.config
16
17
18 <!--Predefined reasons for Alarm Close-->
19 <add key="AlarmCloseReasons" value="Maintenance,Camera Failure,Network Issue"/>
20
21 <!--Sub-reason for alarm action-->
22 <add key="ReasonWithSubText" value="Other"/>

```

`<add key="AlarmCloseReasons" value="Maintenance,Camera Failure,Network Issue"/>`

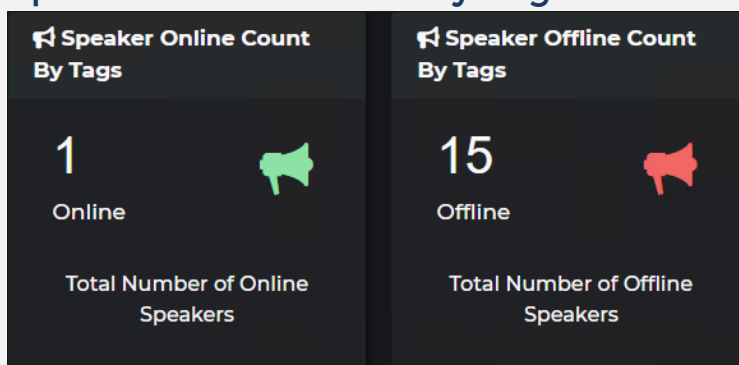
- **Setting Alarms on Hold:** Similar to closing but selecting 'Set on Hold' from the actions.
- **Snapshot View:** The snapshot icon provides a view of the last captured image or event, helpful for understanding the context of the alarm.

## Configuration



- **Title:** Sets the title that appears on top of the widget.
- **Count of Alarms:** Determines the number of alarms to be displayed at any given time.

## Speaker Status Count by Tags



This widget displays the status of speakers based on selected tags, providing an overview of online and offline speakers.

## Configuration

**Configure Status Count By Tag**

Title  
Speaker Online Count By Tags

Widget Status  
Online

Icon Picker  
icon-speaker

Polling Duration  
5 Minutes

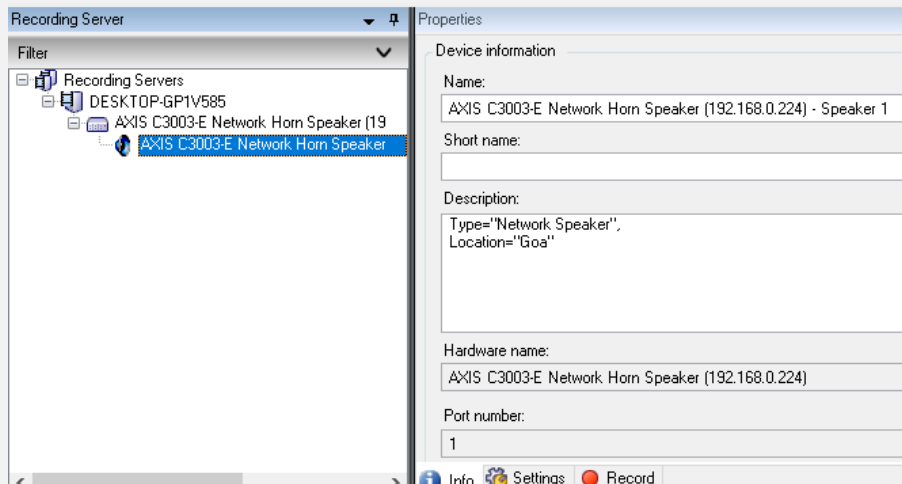
Filter By  
All

Widget Description  
Total Number of Online Speakers

Close Save

- **Title:** Sets the title that appears on top of the widget.
- **Widget Status:** Choose to display either Online or Offline speakers, based on user selection.
- **Widget Description:** A brief description that appears at the bottom of the widget.
- **Polling Duration:** Set the frequency at which data is fetched from XProtect. Type the number and select the unit (Minutes/Seconds/Hours) from the dropdown.
- **Icon Picker:** Custom icons for the widget. Click the dropdown to select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Filter by Tag:** Choose to filter by tags as defined in XProtect.
  - **All:** Displays the status of all speakers (Online/Offline/Total) for which the user has access.
  - **Manufacturer:** Shows the status of speakers based on the manufacturer filter.

- **Recording Server:** Displays the status of speakers based on the selected recording server.
- **Hardware:** Shows the status of speakers based on hardware configurations.
- **Location:** Displays the status of speakers based on their location tag.
- **Type:** Shows the status of speakers based on their type.

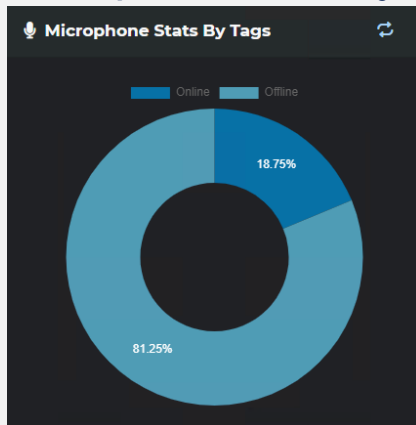


- **Filter by Tag:** Custom tags can be added to speakers in the management client with details like:
  - **Type:** "Network Speaker"
  - **Location:** "Goa"

## Drilldown

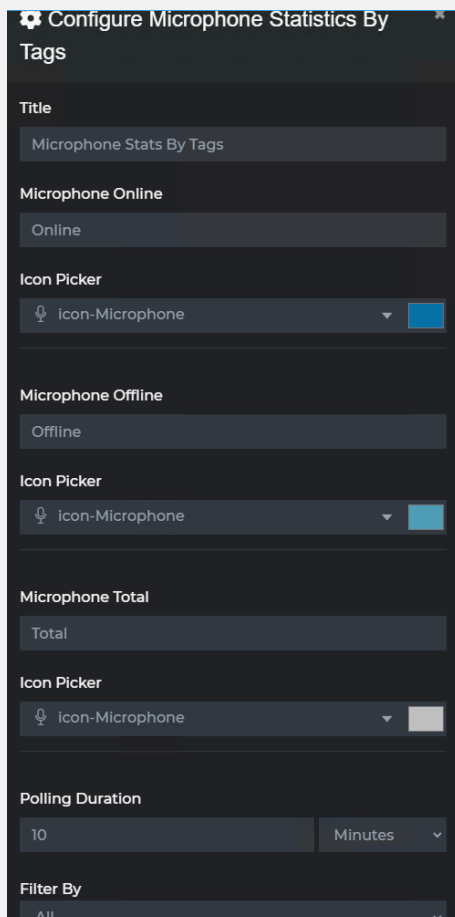
To explore speaker details in-depth, double-click on the number of online/offline speakers. A detailed list for the tag and chosen status will appear in a popup. This popup can be closed by clicking the close button in the corner. For further analysis, the information can be exported by clicking the *Export with PDF* icon for PDF format or the *Export with Excel* icon for an Excel file.

## Microphone Stats by Tags



This widget displays the comprehensive status of microphones categorized by tags into online, offline, and total counts.

### Configuration



The configuration panel for the "Microphone Stats By Tags" widget. It includes fields for Title, Microphone Online, Microphone Offline, Microphone Total, and Polling Duration, each with an associated icon picker.

**Configure Microphone Statistics By Tags**

**Tags**

**Title**  
Microphone Stats By Tags

**Microphone Online**  
Online

**Icon Picker**  
icon-Microphone

**Microphone Offline**  
Offline

**Icon Picker**  
icon-Microphone

**Microphone Total**  
Total

**Icon Picker**  
icon-Microphone

**Polling Duration**  
10 Minutes

**Filter By**  
All

- **Title:** The title displayed at the top of the widget.
- **Microphone Online:** Label for the count of online microphones.
- **Microphone Offline:** Label for the count of offline microphones.

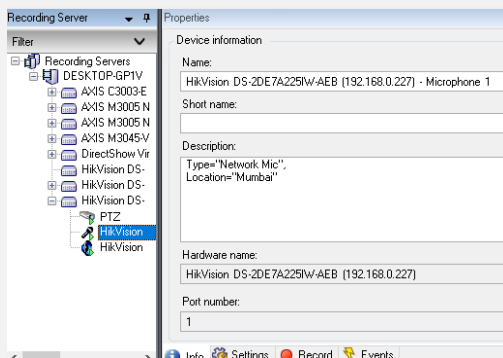


- **Microphone Total:** Label for the total count of microphones.
- **Icon Picker:** Custom icons for each status. Click the dropdown to select icons from the icon gallery and choose the desired color from the color picker box. This applies separately to Online, Offline, and Total labels.
- **Polling Duration:** Set the frequency at which data is fetched from XProtect. Enter the number and select the time unit (Minutes/Seconds/Hours) from the dropdown.

## Filter by

The tag (as configured in XProtect) by which the Microphones have to be filtered.

- **All:** Shows the status of all microphones accessible to the user.
- **Manufacturer:** Displays microphones based on the manufacturer filter.
- **Recording Server:** Shows microphones based on the recording server they are connected to.
- **Hardware:** Displays microphones based on hardware specifications.
- **Location:** Shows microphones based on their installation location.
- **Type:** Displays microphones based on their type.



Additional tagging can be applied in the management client with the below format:

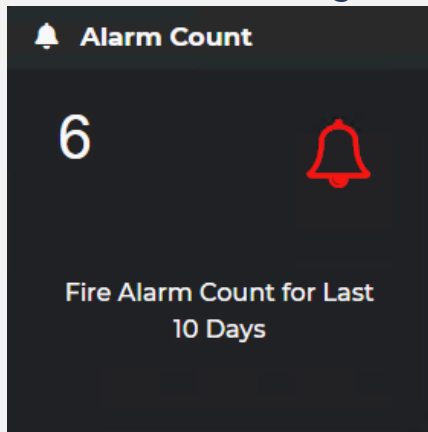
- **Type:** "Network Mic"
- **Location:** "Mumbai"

## Drilldown

To delve deeper into microphone details, click on the count of online/offline microphones. A detailed list of microphones for the

selected tag and status will appear in a popup. This popup can be closed by clicking the close button at the corner.

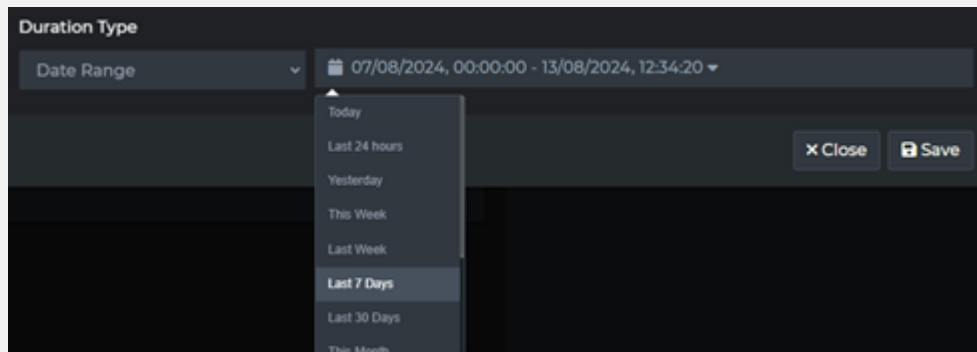
## Alarm Count Widget



This widget is designed to display the count of alarms for selected types, offering insights into their occurrences based on the configuration.

### Configuration


- **Title:** The title displayed at the top of the widget.
- **Icon Picker:** Customize icons for the widget. Click the dropdown to select an icon from the icon gallery and choose the desired color from the color picker box.
- **Widget Description:** A brief description of the widget's purpose, displayed at the bottom.
- **Alarms:** To select specific alarms, click the arrow in the field to expand a searchable list. Check the boxes for the required alarms, confirm selections with the ✓ button, and clear selections with the X.
- **Duration:** Specifies the duration for displaying data. Input the number and choose the unit (Minutes/Seconds/Hours/Days) from the dropdown. Additionally, select a date range for which alarms are displayed.



- In the example, the widget will display fire alarms for the last 10 days only. Type the number and select Minutes/Seconds/Hours etc from the dropdown as per requirement.

## Drilldown

| Alarm Details   |            |              |       |                |                     |               |
|-----------------|------------|--------------|-------|----------------|---------------------|---------------|
| Show 10 entries |            | Search       |       |                |                     |               |
| Alarm           | Source     | Type         | State | Message        | Timestamp           | Recorded View |
| Fire Alarm      | Fire Alarm | System Alarm | New   | External Event | 04-01-2024 18:02:37 |               |

Clicking on the alarm count provides detailed information on each selected alarm. For device event alarms, pressing the play button () displays the recorded view associated with the alarm, allowing for an in-depth review of the event context.

## Event Count List Widget

This widget displays a list of event counts for selected events, tailored to custom configurations.

### Configuration

**Configure Event Count List**

Title  
Event Count List

Duration  
10 Minutes

Polling Duration  
10 Minutes

Widget Description

Operation Description

Icon Picker  
None

Select Operation  
None

Show Result in List View ☐

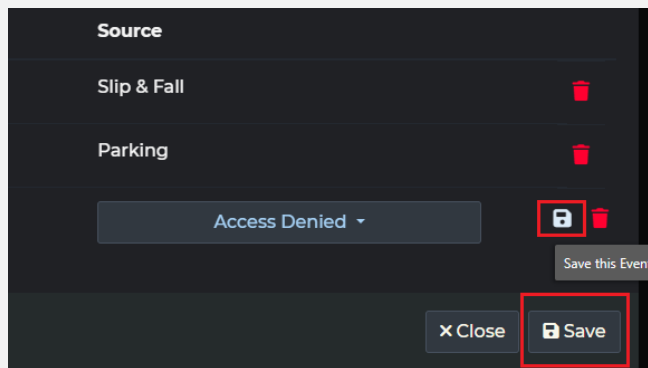
+ Add X Close Save

- **Title:** Title displayed at the top of the widget.
- **Duration:** Select the time duration for which events are counted.
- **Polling Duration:** Frequency at which data is fetched from XProtect. Input the number and select the unit (Minutes/Seconds/Hours/Days) from the dropdown.
- **Widget Description:** A brief description of the widget's purpose at the bottom.
- **Operation:** Perform various operations on the data:
  - **Minimum (Min):** Find the smallest value in a dataset.
  - **Maximum (Max):** Find the largest value in a dataset.
  - **Average (Mean):** Calculate the average value of a dataset.
  - **Sum:** Add up all values in a dataset.
  - **Expression:** Perform custom mathematical operations or transformation on the data.
- **Add Event:** Add events to be displayed in the list. Click the Add (+ Add) button to add a row. To remove a row, click the delete button. Save changes by clicking the save icon. Configure each row with:

| Icon               | Display Name   | Events         | Source      |  |
|--------------------|----------------|----------------|-------------|--|
|                    | Slip & Fall    | External Event | Slip & Fall |  |
|                    | Camera Offline | Not Responding | Parking     |  |
| + Add X Close Save |                |                |             |  |

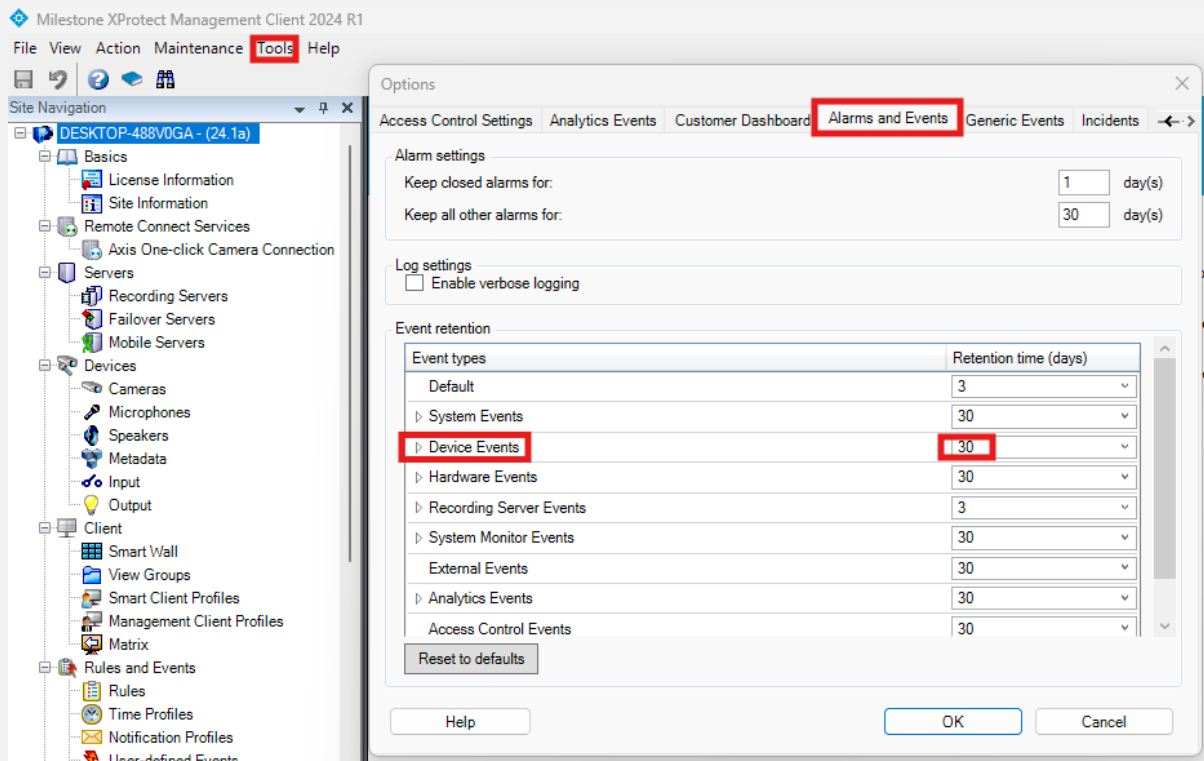
- **Icon:** Click the dropdown and select an icon from the icon gallery; choose a color from the color picker box.
- **Display Name:** Assign a display name for the event.
- **Events:** Select from a searchable list of events:
  - **External Event** (single events, user-defined events populate in the Event column)
  - Events under categories such as **Analytics Events, Device Events, Hardware Events, Match List, Recording Server Events, System Events, System Monitor Events.**

**Note:** Events under categories like **Access Control Event, LPR Server, and Transaction Event** are not included in this list.



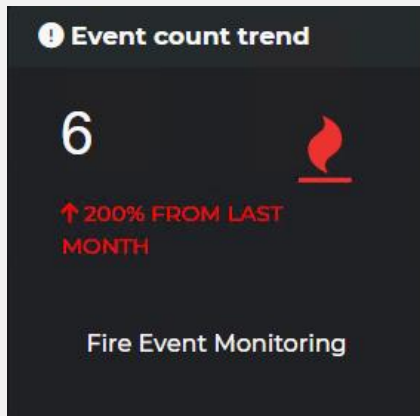
- **Source:** Provides a list of available sources. Select your desired source from the list. After making your selection, click the *OK* button to apply the chosen source. To finalize and save the event configuration, click the save icon (save this event) and then click save to confirm. The source dropdown will have the below Event/Event Categories:
  - **All User Defined Events**
  - **All Management Servers**
  - **All Cameras**

## Important



- The event count list will display data only if events are stored in the XProtect database for the specified duration.
- Ensure events and sources are accurately selected to reflect the correct data within the widget.

## Event Count Trend



This widget illustrates the event count trend for selected events over a specified time range, comparing it with a corresponding previous time period. This provides a clear visual indication of how event counts have changed over time.

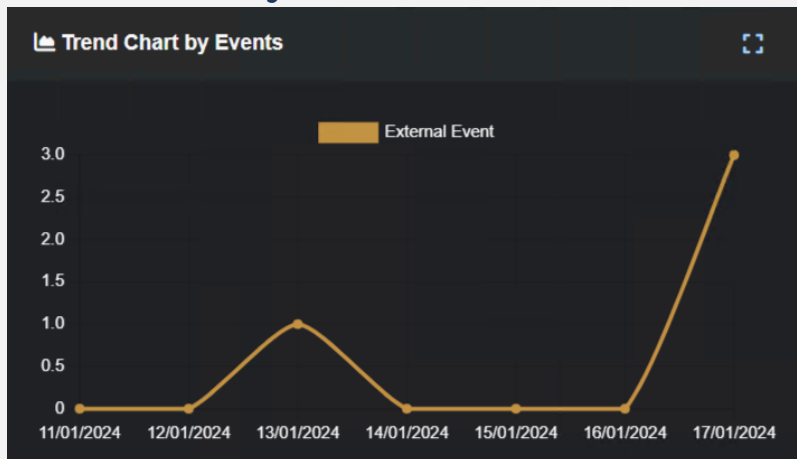
### Configuration

- **Title:** The name displayed at the top of the widget.
- **Icon Picker:** Enhance your widget's appearance by selecting an icon from the icon gallery. Click the dropdown, choose your desired icon, and select a color from the color picker box.
- **Widget Description:** A brief explanation of what the widget does, displayed at the bottom.
- **Event Name:** To select one or multiple events, click the arrow in the field to expand a searchable list of events. Check the desired events, click *OK*, and they will display at the top. To remove all selections, click *X*.
- **Target Source:** Choose the sources of the events to be displayed. Select your sources as you did with the events, click *OK*, and the selected sources will appear at the top. To clear the selections, click *X*.
- **Data Type:** Specify whether the data should be treated as Alarms or Events by toggling the selection; blue indicates active selection.
- **Polling Duration:** Set how frequently the widget updates from XProtect. Type in the number and select the unit from Minutes/Seconds/Hours etc. from the dropdown.
- **Time Range:** Select the period for the events from the dropdown. To synchronize this with your target source's time range, check the *match time range* option.

- **Compare Time Range:** Defines the past time period against which current data is compared.
- **Trend Comparison:** Configure the trend comparison percentages with up/down values.
  - Set the color coding for trend percentages indicating higher or lower values. Options include *Green for higher values, Red for lower values*, or vice versa.

**Note:** Events will be displayed only if they are stored in the XProtect database. For selections regarding **Event Name** and **Target Source**, refer to the configurations outlined in the **Event Count List** section.

## Trend Chart by Sources



The Trend Chart by Sources widget visualizes the trends based on selected sources and events. This interactive chart can display data either by events or sources, offering insights into temporal patterns.

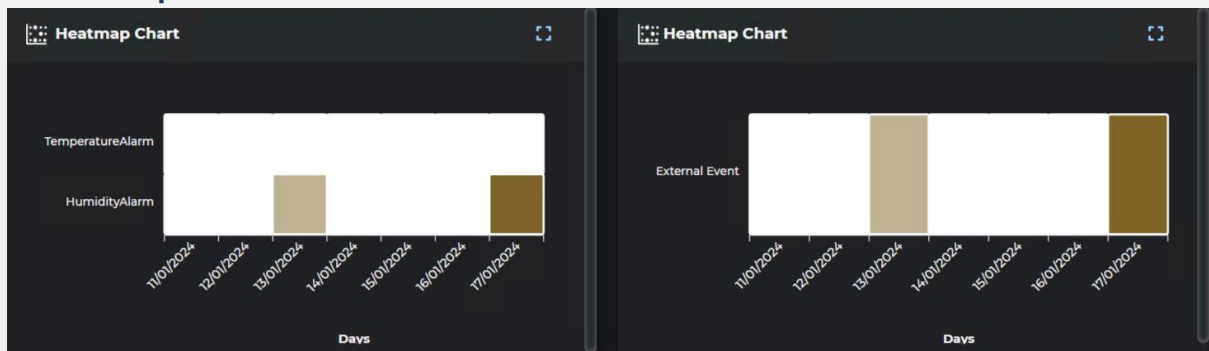
### Configuration



- **Title:** The title that appears at the top of the widget.
- **Events:** To select an event, click the arrow in the field, which expands to show a searchable list of events. Click on the desired event and then click the + button to add it. In the added row, select the color from the color picker box. To remove a selected event, click the delete icon (🗑️) in the corresponding row.
- **Sources:** To choose sources of events to be displayed, check the desired sources from the list. Once selected, click the checkmark (✓) button to apply the selections, post which the selected sources will show up on top. To remove a source, click the delete icon (✕) beside the source name in the list.
- **Date:** For setting the date range, click the date field to open the calendar. Select the start and end dates, then click *Apply*. For a custom date range, click once on the start date and once on the end date before applying.
- **Data Type:** Toggle to choose whether the chart should be based on events or alarms. The dark blue indicator shows the selected option.
- **Polling Duration:** Set the frequency at which data is fetched from XProtect. Enter the time interval and select the unit from the dropdown (Minutes, Seconds, Hours, etc.).

**Note:** Events will be displayed only if they are saved in the XProtect. For details on selecting *Event Name* and *Target Source*, refer to the *Event Count List* section.

## Heatmap Chart



The Heatmap chart widget provides a two-dimensional representation of event frequencies over a selected date and time range, offering insights into the pattern/intensity of events. The widget offers flexibility in visualization, allowing users to choose between displaying data based on events or sources, as shown above.

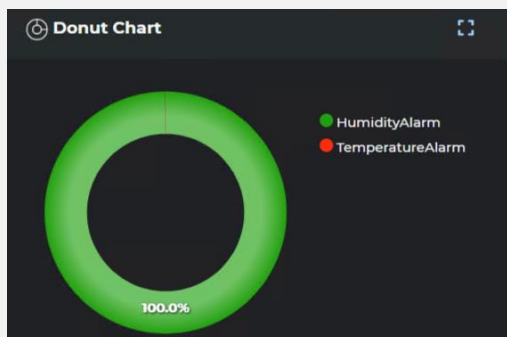
## Configuration

The configuration panel for the Heatmap Chart widget includes the following settings:

- Title:** Heatmap Chart
- Events:** External Event x
- Source:** HumidityAlarm x, TemperatureAlarm x
- Date:** 11/01/2024, 00:00:00 - 17/01/2024, 14:29:00
- Data Type:** Alarms (selected), Events
- Aggregate By:** Source (selected), Events
- Chart Color:** [Color selection box]
- Polling Duration:** 10 Minutes

- **Title:** The title of the widget that appears at the top.
- **Events:** To select events, click the arrow in the field to expand a searchable list of events. Check the desired events by clicking the checkboxes next to the events and click the *OK* button to apply the selections. To deselect events, click *Clear*.
- **Sources:** To choose sources of the events that are to be displayed, follow the same steps as for selecting events. After selections are made, click *OK* to apply. To clear selections, choose *Clear*.
- **Date:** For setting the date range, click the date field to open the calendar. Select the start and end dates, then click *Apply*. For a custom date range, click once on the start date and once on the end date before applying.
- **Data Type:** Toggle to select the data type—either based on events or alarms—with dark blue indicating the current selection.
- **Aggregate By:** Toggle to choose whether data should be aggregated by Events or Sources, with dark blue showing the selected option.
- **Chart Color:** Choose the color for the heatmap, where the color's intensity varies according to the value, with 100% representing the selected color and 0% being transparent.
- **Polling Duration:** Set the frequency at which data should be fetched from XProtect. Enter the number and select the unit (Minutes/Seconds/Hours) from the dropdown.

## Donut Chart



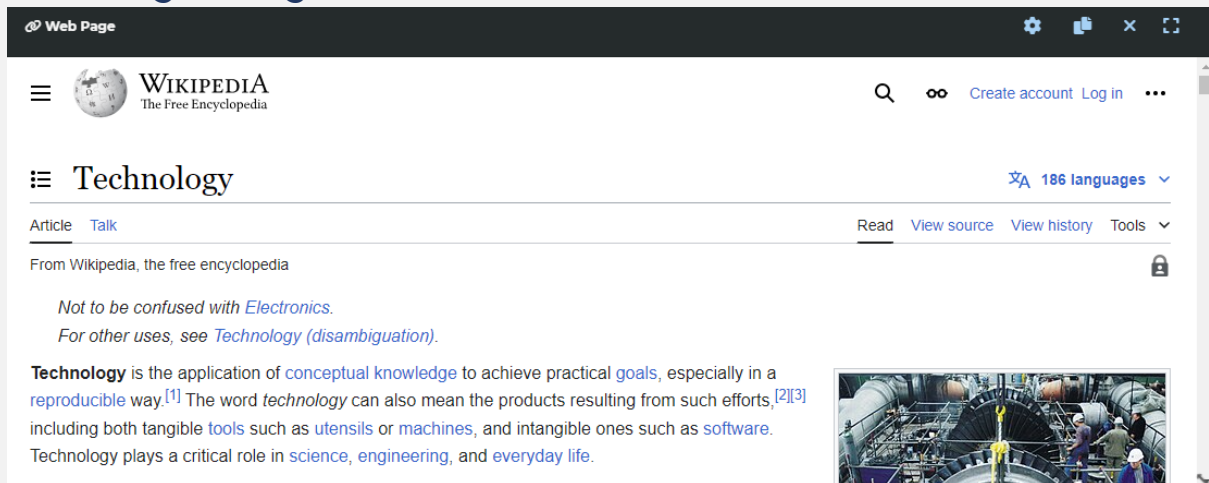
The Donut Chart widget displays the instances of selected events by percentage, offering a visual representation in donut chart form. This allows for an intuitive view of event distributions.

## Configuration

The screenshot shows a configuration window titled 'Configure Donut Chart'. It contains several sections: 'Title' with a text field 'Donut Chart'; 'Events' with a list containing 'External Event' and a 'None selected' dropdown, plus check and clear buttons; 'Source' with a list containing 'TemperatureAlarm' and 'HumidityAlarm', a 'None selected' dropdown, and check/clear buttons; 'Date' with a date range field '11/01/2024, 00:00:00 - 17/01/2024, 17:14:00'; 'Data Type' with a toggle for 'Alarms' (off) and 'Events' (on); 'Aggregate By' with a toggle for 'Source' (off) and 'Events' (on); and 'Polling Duration' with a text field '10' and a unit dropdown 'Minutes'.

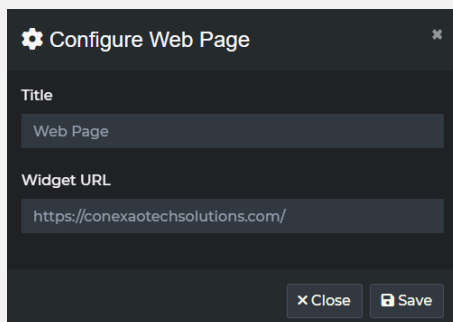
- **Title:** The title of the widget that appears at the top.
- **Events:** To select events, click the arrow in the field to expand a searchable list of events. Select the desired events by checking the boxes next to them. Once done, click the ✓ button to apply. To clear selections, click the ✕ button.
- **Sources:** To choose sources, follow the same procedure as selecting events. After selections are made, click the ✓ button to apply. To clear selections, click the ✕ button.
- **Date:** For setting the date range, click the date field to expand the calendar and select the start and end dates in sequence. For a custom date range, click only once on the start date and once on the end date, then click *Apply*.
- **Data Type:** Toggle to select whether the data is based on events or alarms, with dark blue indicating the current selection.
- **Aggregate By:** Toggle to decide whether data should be aggregated by Events or Sources, with dark blue indicating the selected option.
- **Polling Duration:** Set the frequency at which data should be fetched from XProtect. Enter the number and choose the unit (Minutes/Seconds/Hours) from the dropdown.

## Web Page Widget



The Web Page widget allows the integration of any iframe-supported web page directly into the workspace, offering a seamless viewing experience right within the widget. This widget adapts to the content of the web page; if the web page is responsive, it will adjust to fit the widget dimensions appropriately.

### Configuration



- **Widget Title:** The title that appears at the top of the widget.
- **Widget URL:** Input the URL of the web page you wish to embed. Ensure that the URL is iframe-compatible to ensure it displays correctly within the widget.

## IoT Data Widget

The IoT Data widget displays live data from IoT data points provided by the O-Insights IoT Driver.

### Configuring Data Manager:

Settings > IoT

### IoT Configuration

Data Manager Url

\* Query Engine service should be installed to configure Data Manager base url.

To access the features of the new IoT driver, configure the *Data Manager* settings from the O-Insights Plugin in XProtect Smart Client by first entering the address of the *Data Manager Service*. This setup ensures seamless integration and functionality of the IoT driver within your existing system.

### Configuration for IoT Driver 4.0:

Configure IoT Data Widget

Title  
IoT Data

Widget Description  
Shows IoT Data Points

Polling Duration  
10 Minutes

Icon Picker  
None

Driver Type  
Current

Select Point  
Select

Classify ☐

In Alarm ☐

Hyperlink ☐


+ Save X Close



- **Title:** Specify the title that appears at the top of the widget.
- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Polling Duration:** Set the frequency at which the data should be fetched from the respective O-Insights Driver. Enter the number

and select the time unit (Seconds/Minutes/Hours) from the dropdown as per your requirement.

- **Icon Picker:** Customize the widget's icon. Click the dropdown to select an icon from the icon gallery and choose a colour from the colour picker box.
- **Driver Type:** Choose between *Current* (new IoT driver) and *Legacy* (old driver). If *Legacy* is chosen, the configurations will be of the old driver and the options will be limited to that of the older versions. This has been provided to offer backwards compatibility for users having the older versions (below 4.0) of O-Insights IoT Drivers. Legacy configurations are listed in the Legacy Driver section.

| Label  | Min | Max | Color | Action |
|--------|-----|-----|-------|--------|
| Low    | 0   | 20  | Green | Delete |
| Medium | 21  | 30  | Blue  | Delete |
| High   | 31  | 100 | Red   | Delete |

- **Select Point:** Choose the sensor point from the *Point* dropdown.
- **Display Name:** Add the display name for the points that will be shown on the widget.
- **Classify:** To map the value of a point to a label based on conditions, click the + button to add conditions. Click the  icon next to each row to delete a row. You can also choose the desired color for the range with the color picker.

In Alarm  

- **In Alarm:** For a numeric point, if the value goes above or below the set limit, the value on the card will change its colour to the selected colour.

- **Hyperlink:** Add a hyperlink to any desired location. Select the desired browser, such as Firefox or Chrome, to open the hyperlink in a new tab.

### Configuration for Legacy Drivers:

If you choose the legacy driver in case you're using the older version of O-Insights IoT Drivers, the following configuration applies, besides the *Current* driver configurations.

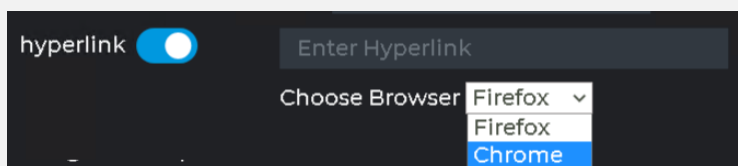
- **Endpoint:** Specify the address of the IoT Data Points endpoint.
- **Parameter:** Define the specific IoT parameter name.



- **Boolean Point:** Activate this option if the point is of Boolean type, allowing you to toggle it on or off.
- **Custom Tag/State:** Users can define a custom tag or state which will change when the point's state changes from true to false.
- **Examples of Endpoint & Parameter for Different Protocols**
  - **MQTT:**
    - **Endpoint:**  
*http://[ServerName]:8094/api/TopicDataApi/GetTopicData*
    - **Parameter:** *v3/devices/eui-24e1140348/up/temperature*
  - **OPC:**
    - **Endpoint:**  
*http://[ServerName]:8091/api/opcClient/getPointData/*
    - **Parameter:** *points/FireAlarm2*
  - **BACnet:**
    - **Endpoint:**  
*http://[ServerName]:8089/api/bacnet/getPointData*
    - **Parameter:** *Drivers.Layout.Z1\_L1\_D1\_FireAlarm*
- **Additional Configurations:**



- **In Alarm:** Configure the widget to change the color of the numeric point value on the card if it goes above or below a set limit.



- **Hyperlink:** Add a hyperlink to any desired location. Specify which browser (e.g., Firefox, Chrome) should be used to open the hyperlink in a new tab.
- **BACnet Point Naming and Event Configuration**

To ensure seamless integration of alarms in the Alarm Manager when working with BACnet, it's crucial to standardize naming conventions across different configuration files due to character restrictions:

- **BACnetClient.json:** In scenarios where the *PointName* includes dots (e.g., *Drivers.Layout.Z1\_L1\_D1\_FireAlarm*), this format is typical within the BACnet client configuration. This file can be found at:
  - *C:\Program Files\O-Insights BACnet\O-Insights Bacnet\Client-Config\BacnetClient.json*
- **Events.json:** When integrating with the Alarm Manager, any dots in the event name derived from *PointNames* must be removed to avoid issues. For instance, *Drivers.Layout.Z1\_L1\_D1\_FireAlarm* should be altered to *DriversLayoutZ1\_L1\_D1\_FireAlarm* in this file, which is located at:
  - *C:\Program Files\O-Insights BACnet\O-Insights Service\Config*

This naming adjustment ensures that the alarm system recognizes and responds correctly to the events triggered by the BACnet system.

## IoT Data List

| Garbage Bin Status     |    |
|------------------------|----|
| Bins > 75 % Noord      | 6  |
| Bins > 75 % Diemen     | 5  |
| Bins > 75 % Amstelpark | 6  |
| Bins > 75 % Amstelveen | 5  |
| Total                  | 22 |

The IoT Data List widget displays live values from multiple IoT data sources. The above example shows an instance of tracking smart bins by tracking the fill level over 75%.

### Configuration:

**Configure IoT Data List**

**Title**  
IoT Data List

**Widget Description**  
Shows IoT Data List

**Driver Type**  
Current

**Polling Duration**  
10 Minutes

**Icon Picker**  
None





**Point Configuration**  
Select Display Name Classify

**Summary Configuration**  
Aggregation: None Aggregation Display Name: Show Result in List View: Classify

+ Add Point x Close Save

- **Title:** Title of the widget that appears on top.
- **Widget Description:** A brief description of the widget displayed at the bottom.
- **Driver Type:** Choose between *Current* (new IoT driver) and *Legacy* (old driver). If *Legacy* is chosen, the configurations will be of the old driver and the options will be limited to that of the older versions. This has been provided to offer backwards compatibility for users

having the older versions (below 4.0) of O-Insights IoT Drivers. Legacy configurations are listed in the Legacy Driver section.

- **Polling Duration:** Set the frequency for data fetch from O-Insights Driver. Choose units like Minutes, Seconds, or Hours from the dropdown.
- **Icon Picker:** Select custom icons by clicking the dropdown, choosing from the icon gallery, and selecting the desired color.
- **Point Configuration:** Click "+Add Point" to add sensor points; click the  icon next to a row to delete it.
- **Select:** Choose sensor points from a list, adding multiple points and assigning classifications to each.
- **Classify:** Map the value of a point to a label based on conditions by clicking the + button. Remove a condition by clicking the  icon next to a row.
- **Duplicate:** Duplicate a point by clicking the  icon next to a row.
- **Aggregation:** Various operations that can be performed on selected points:
  - **None:** No operation is performed for roll-up if none is selected.
  - **Sum:** Sum of all the records for the selected time interval.
  - **Average:** Calculate the average of all the records from the selected time interval.
  - **Max:** Identify the highest recorded value of the selected time interval.
  - **Min:** Determine the lowest recorded value of the selected time interval.
  - **Expression:** Perform custom mathematical operations or transformations on the data.
- **Aggregation Display name:** Specify a name for the aggregation to be displayed on the widget.
- **Show result in List view:** Toggle to display the aggregation result in list view.
- **Classify:** To map the value of a point to a label based on conditions, click the + button to add conditions. Click the  icon next to each

row to delete a row. You can also choose the desired color for the range with the color picker.

## Configuration for Legacy Drivers:

**Configure IoT Data List**

**Title**  
IoT Data List

**Widget Description**  
Shows IoT Data List

**Driver Type**  
Legacy

**Polling Duration**  
10 Minutes

**Icon Picker**  
None

**Endpoint**

**Point Configuration**

**Parameter:**

Point Name Alias True Alias False


**Summary Configuration**



**Aggregation**  
None

**Aggregation Display Name**

Show Result in List View

+ Add Point x Close Save

- **Endpoint Configuration:**
  - **Endpoint:** Specify the address for the IoT Data Points.
  - **Point Configuration:** Click "+Add Point" to add sensor points; click the  icon next to a row to delete.
  - **Parameter:** Define the IoT parameter name.
  - **In Alarm:** Set conditions for numeric points to change the card's color when specified limits are exceeded.
  - **Boolean Point:** Toggle for Boolean type points to customize the tag/state when the point's state changes.

After configuration, toggle the  icon to switch between list view and count. Click the  icon to copy a widget.

## IoT Custom Data Widget

This widget displays single value or point data provided by the O-Insights IoT Drivers.

**Note:** The Custom Card is only meant for displaying numeric point-based data.

### Configuration:

**Configure IoT Custom Data Widget**

**Title**  
IoT Custom Data

**Icon Picker**  
None

**Histories**  
Select

**Date**  
06/06/2024, 00:00:00 - 12/06/2024, 12:40:39

**Aggregation**  
Sum

**Group Aggregation**  
Sum

**Hyperlink**  
☐

**Widget Description**  
Shows history value from IoT Data

**Precision**  
2

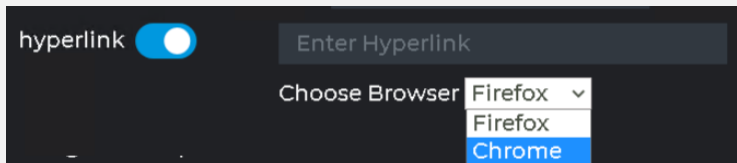
**Polling Duration**  
10 Minutes

**Classify**  
☐ +

Close Save

- **Title:** Title of the widget that appears on top of the widget.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Histories:** Choose the points from the list.
- **Date:** Select the date range for the chart to be plotted. Click the field to expand the calendar and select the start date and end date to choose the desired range. To select a custom date range, click only once on the from date and only once on the to date range and click Apply.

- **Aggregation:** Various operations you can perform on selected points data for the selected date:
  - **Sum:** Sum of all the records for the selected time interval.
  - **Average:** The average of all the records from the selected time interval.
  - **Difference:** Difference between the first and last records for the selected time interval.
  - **Max:** The highest recorded value of the selected time interval.
  - **Min:** The lowest recorded value of the selected time interval.
  - **First:** Returns the first value of the selected time interval.
  - **Last:** Returns the last value of the selected time interval.
  - **Count:** Counts the number of items of the selected time interval.
- **Group Aggregation:** Select the group aggregation operation to aggregate all points data to get a single value.







- **Hyperlink:** Hyperlink to any desired location. The Desired Browser such as Firefox / Chrome can be selected to open the hyperlink.
- **Widget Description:** The brief description of the widget that shows up at the bottom.
- **Precision:** Decimal precision of the value shown on the widget.
- **Polling Duration:** The frequency at which the data should be fetched from the respective O-Insights Driver. Type the number and select Minutes/Seconds/Hours etc from the dropdown as per requirement.

Select Point

/Config/Floor2/Room1/MQTT\_Temp

Classify ☒ +

|        |    |     |   |   |
|--------|----|-----|---|---|
| Low    | 0  | 20  | <div style="width: 100%; height: 10px; background-color: green;"></div> |  |
| Medium | 21 | 30  | <div style="width: 100%; height: 10px; background-color: blue;"></div>  |  |
| High   | 31 | 100 | <div style="width: 100%; height: 10px; background-color: red;"></div>   |  |

- **Classify:** To map the value of a point to a label based on conditions, click the + button to add conditions. Click the  icon next to each row to delete a row.

## IoT Donut Chart




The IoT Donut Chart renders live/historical data in the form of a donut chart, updating dynamically as the underlying data changes. This visualization is useful for quickly understanding proportions and trends within the selected data set.

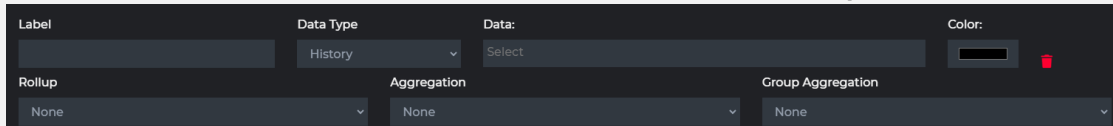


## Configuration

- **Title:** Title of the widget that appears on top.



- **Date:** Select the date range for the chart. Click the field to expand the calendar, select the start and end dates to choose the desired range. For custom date ranges, click only once on the from and to dates and then click Apply.
- **Polling Duration:** The frequency at which data is fetched from the Data Manager. Input the number and choose the unit (Minutes/Seconds/Hours) from the dropdown.
- **Rollup Interval:** Sets the frequency of data for the chart. Enter the desired number and select the unit (Minute, Hour, Day, or Month).
- **Consider Additional Days:** If using the Range rollup type, you can choose to include the first value of the next period as the last value of the current period. **This is only applicable if Rollup is set as Range.**
- **Show Label on Top:** Toggles visibility of labels directly on the donut chart instead of only on hover.
- **Show Sum Value:** Displays the sum of all data points in the center of the donut chart.
- **Point Configuration:** Add data points by clicking "+Add Point". Each point can be deleted by clicking the  icon next to it.

- **Label:** Name for the data being plotted.
- **Data Type:** Select whether the chart is based on live data (Point) or historical data (History). Toggle to choose, where dark blue indicates selection.
- **Data:** Select the points or histories for which the data will be plotted.
- **Color:** Choose the color for the chart from the color picker box.



- **Rollup (if History is selected as Data Type):** Determines how data values are aggregated:
  - **None:** No aggregation is performed.
  - **Sum:** Sum of all records for the period.
  - **Average:** Average of all records.
  - **Difference:** Difference between the first and last records.
  - **Max:** Highest value recorded.
  - **Min:** Lowest value recorded.
  - **First:** First value in the period.
  - **Last:** Last value in the period.
  - **Count:** Total number of records.
- **Aggregation:** Decide how to aggregate values into a single figure:
  - **None:** No aggregation is performed.
  - **Sum:** Sum of all records for the period.
  - **Average:** Average of all records.
  - **Max:** Highest value recorded.
  - **Min:** Lowest value recorded.

**Group Aggregation:** Choose how to combine multiple data sets into a single value using the same options as in Aggregation.

After configuration Use the maximize icon () to enlarge the widget or the copy icon () to duplicate it.


## IoT Line/Bar Chart


The IoT Line/Bar Chart facilitates analytics by plotting historical data for a common date span.





### Configuration

- **Title:** Title of the widget that appears on top of the widget.
- **Default View:** Dropdown lets the user select the default (on load) mode for the card – select the Chart option for the chart or Summary option for an analytical summary of the historical points.
- **Polling Duration:** The frequency at which the data should be fetched from the Data Manager. Type the number and select Minutes/Seconds/Hours etc from the dropdown as per requirement.
- **Rollup Interval:** Sets the frequency of the data for the chart. In the field, enter the desired number, and from the dropdown, select Minute, Hour, Day, or Month as desired.
- **Date:** Select the date range for the chart to be plotted. Click the field to expand the calendar and select the start date and end date in that order to choose the desired range. To select a custom date range, click only once on the from date and only once on the to date range and click Apply.
- **Left Y-Axis Label:** Text to be shown on the Left Y-Axis of the line/bar chart. (Points facets will be shown by default).
- **Right Y-Axis Label:** Text to be shown on the Right Y-Axis of the line/bar chart. (Points facets will be shown by default).
- **Rollup:** The operation decides how the values are aggregated as per the rollup interval:
  - **Sum:** Sum of all the records for the selected time interval.

- **Average:** The average of all the records from the selected time interval.
  - **Difference:** Difference between the first and last records for the selected time interval.
  - **Range:** The same as "Difference," but the last record is the first record of the next day within the selected date range.
  - **Max:** The highest recorded value of the selected time interval.
  - **Min:** The lowest recorded value of the selected time interval.
  - **First:** Returns the first value of the selected time interval.
  - **Last:** Returns the last value of the selected time interval.
  - **Count:** Counts the number of items of the selected time interval.
- **Missing Data Strategy:** An advanced analytic feature that fills in missing data using either Linear Interpolation or the k-Nearest Neighbour Algorithm, ensuring continuity even when historical records have gaps. (Applied only if rollup interval is > 0)
  - **Limit Left Y-Axis:** Adds Limit for the left Y-Axis. To add the limit, toggle on Limit Left Y-Axis and add the desired top limit.
  - **Limit Right Y-Axis:** Adds Limit for the Right Y-Axis. To add the limit, toggle on Limit Right Y-Axis and add the desired top limit.
  - **Consider Additional Days:** For Range to get the difference between the first and last records for the selected period, where it lets the user choose the first value of the chosen day as the last value. (Consider additional day is applied only if rollup is selected as range.)
  - **Limit Color:** Limit Color, if toggled on, lets the user assign custom colors for High Limit and Low Limit. Click the color box next to the limits and choose the desired color from the color picker to assign a color.
  - **Span Gaps:** Span gaps involve filling in missing values between data points in a dataset.
  - **Show Labels on Top:** If toggled on, the data values are to be shown on top of the bars/lines.

- **Point Configuration:** Click "+Add Point" at the bottom right of the widget config to add. Click the  icon next to each row to delete a row.
- **Label:** Name for the data, which is being plotted.
- **Type:** The selected data type determines whether the displayed graph on the chart is based on Bar/Line/Low Limit/High Limit. Click to toggle and select the desired option, where Dark blue indicates selection.
- **Color:** Choose the desired colour from the colour picker box.
- **Data type:** Lets the user choose the point type: History or Value.
- **Value:** Depending on the selected data type, this field enables the user to enter either a constant value or a historical data point.
- **Rollup:** If the specific history is to have a separate rollup type that is different from the global rollup type configured above, the user can choose the desired option from the Rollup Type dropdown. If the point is to have the same rollup type, leave the option as Inherit.
- **Y-Axis:** To assign the data point to a separate Y axis (with the left Y axis being the default), select "Right" from the Y Axis dropdown. This will make the values for the selected data point correspond to the right Y axis.
- **Multiplier:** Enable the Multiplier field to multiply each data point by a specified number. Enter the desired number to apply the multiplication.
- **Fill Area:** Toggles the filling of the area under a line chart or within a bar chart. The opacity of the fill depends on the specified value, ranging from 0 to 1.

After saving the configuration, to zoom into a chart area, simply click and drag across covering the required area (as per the date/time range) and the area will be zoomed/magnified. To reset the zoom, click the reset icon () and the chart will revert to its original zoom level.

Use the toggle icon () to switch between summary view and chart view, the maximize icon () to enlarge the chart, the download icon () to save the chart data, and the copy icon to copy the widget ()

## IoT Heatmap Chart

### Configure IoT Heatmap Chart

Title

IoT Heatmap Chart

Polling Duration

10

Minute

Date

Last 7 Days

Rollup Interval

1

Days

Rollup

Sum

Consider Additional Days

☐

Histories

Select

Y-Axis Label

Labels

Min Color

Max Color

Close


Save





The IoT Heatmap Chart plots historical data in the form of a heatmap, using colors to represent data values over a selected date/time range. This visual representation helps in identifying data intensity and trends effectively.

### Configuration

- **Title:** The name displayed at the top of the widget.
- **Polling Duration:** Specifies how often the widget should fetch data. Enter a number and choose the time unit (Minutes, Seconds, Hours, etc.) from the dropdown menu.
- **Date:** Select the date range for the chart to be plotted. Click the field to expand the calendar and select the start date and end date in that order to choose the desired range. To select a custom date range, click only once on the from date and only once on the to date range and click Apply.

- **Rollup Interval:** Defines the time granularity for data aggregation. Input the desired time interval and select the unit (Minute, Hour, Day, Month) from the dropdown.
- **Rollup:** Choose how data should be aggregated within the selected rollup interval:
  - **Sum:** Total of all records.
  - **Average:** Mean value of records.
  - **Difference:** Difference between the first and last records.
  - **Range:** Difference from the first record of the period to the first record of the following period.
  - **Max:** Maximum value.
  - **Min:** Minimum value.
  - **First:** First record's value.
  - **Last:** Last record's value.
  - **Count:** Total number of records.
- **Consider Additional Days:** For Range to get the difference between the first and last records for the selected period, where it lets the user choose the first value of the chosen day as the last value. (Consider additional day is applied only if rollup is selected as range.)
- **Histories:** Select the data points for which historical data will be displayed on the heatmap.
- **Y-Axis Label:** Set the label for the Y-axis.
- **Color Settings:**
  - **Min Color:** Set the color for the minimum value in the data range.
  - **Max Color:** Set the color for the maximum value in the data range.

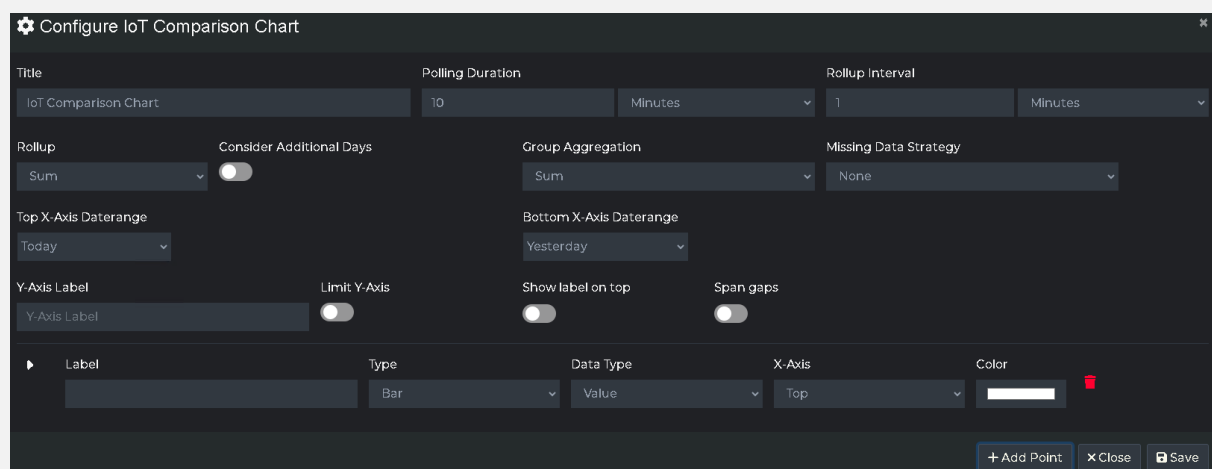
After saving the configuration, to zoom into a chart area, simply click and drag across covering the required area (as per the date/time range) and the area will be zoomed/magnified. To reset the zoom, click the reset icon (  ) and the chart will revert to its original zoom level.

Use the toggle icon () to switch between summary view and chart view, the maximize icon () to enlarge the chart, the download icon () to save the chart data, and the copy icon to copy the widget ()

## IoT Comparison Chart Widget

The IoT Comparison Chart widget enables the visualization of data comparisons between two distinct periods. This feature is especially useful for analyzing trends, changes, and patterns over time.


### Configuration



- **Title:** Name displayed on top of the widget.
- **Polling Duration:** Specify the interval for data updates. Enter a number and select the unit of time (Minutes, Seconds, Hours, etc.) from the dropdown menu.
- **Rollup Interval:** Sets the frequency at which data is aggregated. Enter a number and select the unit (Minute, Hour, Day, or Month) from the dropdown.
- **Rollup:** Determines how data values are aggregated:
  - **Sum:** Total of all values.
  - **Average:** Mean of all values.
  - **Difference:** Variation between the first and last records.
  - **Range:** Like "Difference," but adjusts to include the start of the next period.



- **Max:** Maximum value recorded.
- **Min:** Minimum value recorded.
- **First:** The first recorded value.
- **Last:** The last recorded value.
- **Count:** Total number of records.
- **Consider Additional Days:** For Range to get the difference between the first and last records for the selected period, where it lets the user choose the first value of the chosen day as the last value. (Consider additional day is applied only if rollup is selected as range.)
- **Group Aggregation:** Choose how to aggregate data from multiple points or histories:
  - **None:** No aggregation.
  - **Sum:** Total sum.
  - **Average:** Average value.
  - **Max:** Highest value.
  - **Min:** Lowest value.
- **Missing Data Strategy:** Fills gaps in data using Linear Interpolation or k-Nearest Neighbour techniques, useful when data has missing intervals.
- **Top X-Axis Daterange and Bottom X-Axis Daterange:** Select the date ranges for the top and bottom axes respectively.
- **Adjust weekdays:** Aligns weekdays for easier comparison. If a selected range starts and ends on different weekdays across months (e.g., "This Month - Last Month" with different start days), it aligns the starting weekdays of each month for accurate comparison. For example, if the current month starts on a Wednesday and the previous month started on a Tuesday, the comparison starts from the first Wednesday of the previous month.
- **Y-Axis Label:** Text to be shown on the Y-Axis of the line/bar chart. (Points facets will be shown by default).
- **Limit Y-Axis:** Set a numerical limit for the Y-axis to define the scale of the chart.

- **Show Labels on Top:** Toggle this to display data values directly above their corresponding bars or lines on the chart.
- **Span Gaps:** Enable this to automatically fill in missing data points in the dataset, creating a continuous line or bar display.
- **Point Configuration:** Click "+Add Point" at the bottom right of the widget config to add. Click the  icon next to each row to delete a row.
- **Label:** Assign a label to each data series displayed on the chart.
- **Type:** Determine how the data is displayed: as Bar, Line, Low Limit, or High Limit.
- **Data Type:** Choose whether the data represents a historical record ("History") or a numeric value ("Value").
- **X-Axis:** Assign the data points to either the Top or Bottom X-axis as defined.
- **Color:** Select a color for the data series from the color picker.
- **Value:** For values set as "Value" in Data Type, enter the numeric data directly.
- **Rollup (specific to history):** If a specific data point history should have a different rollup type from the overall configuration, select it here. If it should follow the overall settings, leave it as "Inherit."
- **Group Aggregation:** Choose how data points are aggregated into a single value.
  - **Inherit:** If the point is to have the same rollup type.
  - **Sum:** Total sum.
  - **Average:** Average value.
  - **Max:** Highest value.
  - **Min:** Lowest value.
- **Multiplier:** Apply a multiplier to each data point to scale the data as needed.
- **Fill Area:** Decide whether to fill the area beneath the line in a line chart or the interior of bars in a bar chart. Set the opacity of the fill from 0 (completely transparent) to 1 (completely opaque).

## Reports Widget

Reports Widgets are designed to show the count of report data for the report, offering a detailed view when drilled down. Each widget is designed to reflect the counts from its associated report on the interface. While all widgets share a common configuration, the primary distinction is that each widget allows selection and display for only its respective report.

Available widgets include those for the *Camera Report*, *Alarm Report*, *Audit Report*, *Storage Report*, *Camera Health Report*, *Recording Server Health Report*, *Disabled Devices Report*, *Devices Report*, *Events Report*, *Access Control Events Report*, *Evidence Report*, *LPR Report*, *Recording Server Report*, *User Report*, *Camera Recording Report*, and *Bookmark Report*.

For example, to display data related to the Camera Report, select the camera widget and configure it to show the specific information you want to visualize about camera reports.

### Common Configuration Across All Report Widgets:

- **Title:** This is customizable and allows the user to enter text in any language to define the title of the widget.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Widget Description:** This brief description at the bottom of the widget can be customized, allowing the user to enter text in any language.
- **Reports:** Select the specific report from a list that corresponds to the type of report data you wish to showcase.
- **Polling Duration:** Set the frequency at which the report data should be refreshed on the widget. For instance, if a report is scheduled to run every 2 hours, you might set the polling duration to 15 minutes or more to reflect updates in the report data on the widget.
- **Show Datetime:** If toggled, this will display the date and time when the report was generated.

Above is the example of the configurations of *Camera Report* widget.

## Camera Analytics Widget

The Camera Analytics Report widget displays data from the camera analytics report. It is designed to show the count of report data for the report and enables users to drill down into the count to view detailed information. This feature enhances user understanding by providing specific insights directly related to camera analytics.

### Configuration:

- **Title:** Specify the title that appears at the top of the widget.

- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Icon Picker:** Allows for the selection of custom icons. Click the dropdown to choose an icon from the gallery and select a color from the color picker box.
- **Analytics:** Select the specific camera analytic report from the list that you wish to display.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates promptly.
- **Show Datetime:** If toggled, this will display the date and time when the report was generated.

## User Login Analytics Widget

The User Login Analytics Report Widget displays data from the User Analytics report. It is designed to show the count of report data for the report and allows users to drill down on this count to access detailed information. This functionality enhances the visibility of user login patterns and behaviours within the report.

### Configuration:

**Configure User Login Analytics**

**Title**  
UserLogin Analytics Report

**Icon Picker**  
None

**Widget Description**  
UserLogin Analytics Report Data

**Analytics**  
user today

**Show Datetime** Hide ☒ Show

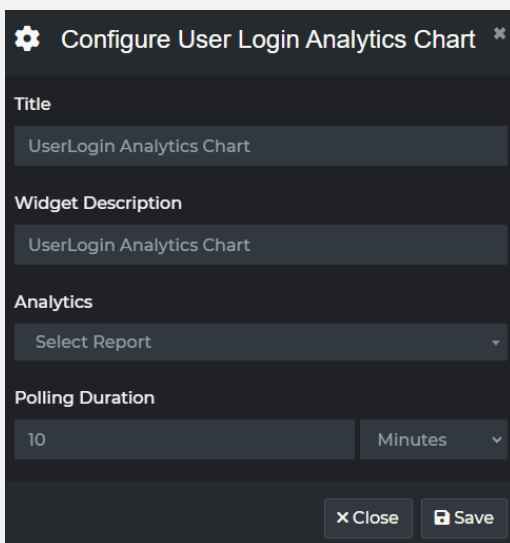
**Polling Duration**  
10 Minutes

- **Title:** Specify the title that appears at the top of the widget.
- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Icon Picker:** Custom icons can be chosen through a dropdown, where users can select the desired icon and its color.
- **Analytics:** Choose the specific report from the list for which you want to showcase the data count.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates promptly. Typing a number and selecting a time unit (*Minutes/Seconds/Hours*) from the dropdown configures this.
- **Show Datetime:** This toggle will display the date and time of the report's generation when activated.

## User Login Analytics Chart

The User Login Analytics chart offers a visual representation, specifically a bar chart, of the frequency of user logins to the smart client, using data from the User Analytics report. Users can hover over each bar to view the login counts for individual users, providing an interactive way to quickly assess user activity.

### Configuration



**Configure User Login Analytics Chart** ✕

**Title**  
UserLogin Analytics Chart

**Widget Description**  
UserLogin Analytics Chart

**Analytics**  
Select Report ▼

**Polling Duration**  
10 Minutes ▼

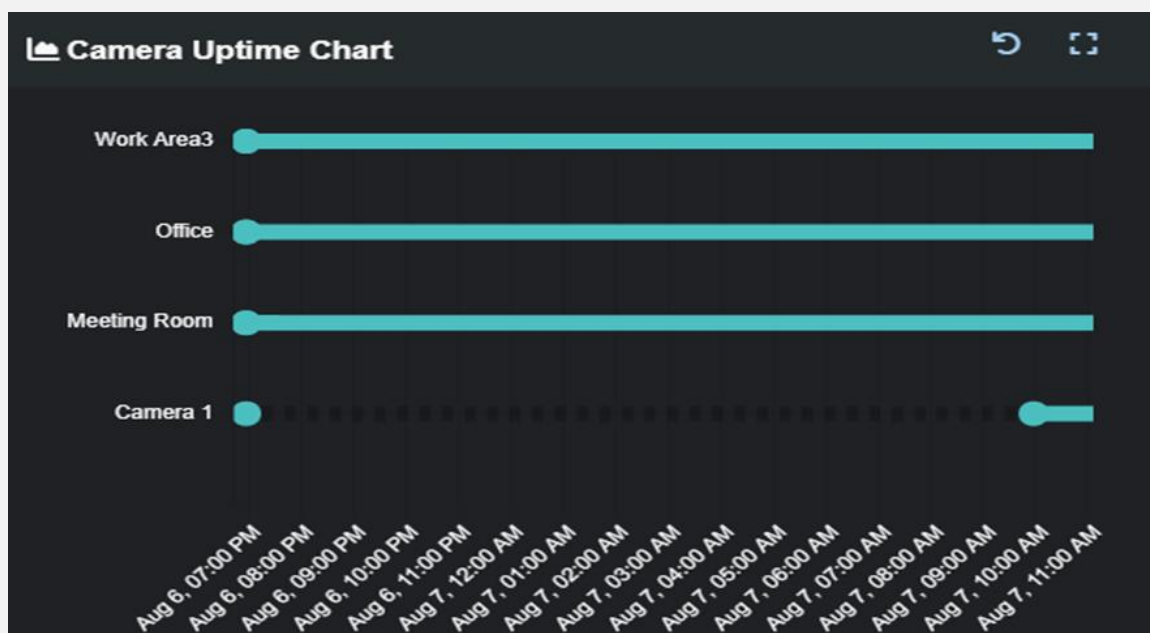
✕ Close Save

- **Title:** Specify the title that appears at the top of the widget.

- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Analytics:** Choose the specific User Analytic Report from the list that you wish to showcase the count for.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates promptly. Typing a number and selecting a time unit (Minutes/Seconds/Hours) from the dropdown configures this.

## Camera Uptime Chart Widget

The Camera Uptime Chart offers a visual representation of the historical operational durations of cameras, providing a snapshot of their reliability and performance over time. This chart helps quickly assess how consistently cameras have been functioning.




In the chart above, users can easily identify specific disconnection events, such as when Camera 1 got disconnected around 7:00 PM on August 6th and reconnected on August 7th at approximately 10:00 AM.

By hovering over a blue dot corresponding to a disconnection event on the chart, users can view the exact disconnection and reconnection times, providing detailed insights into each incident.

### Interactive Chart Features

- Users can hover over specific points on the chart to view detailed information about disconnection and reconnection times.



- The chart supports zooming in for a detailed view by clicking and dragging with the mouse.
- To reset the zoom level of the chart, users can click the reset icon (  ) located at the top of the chart.

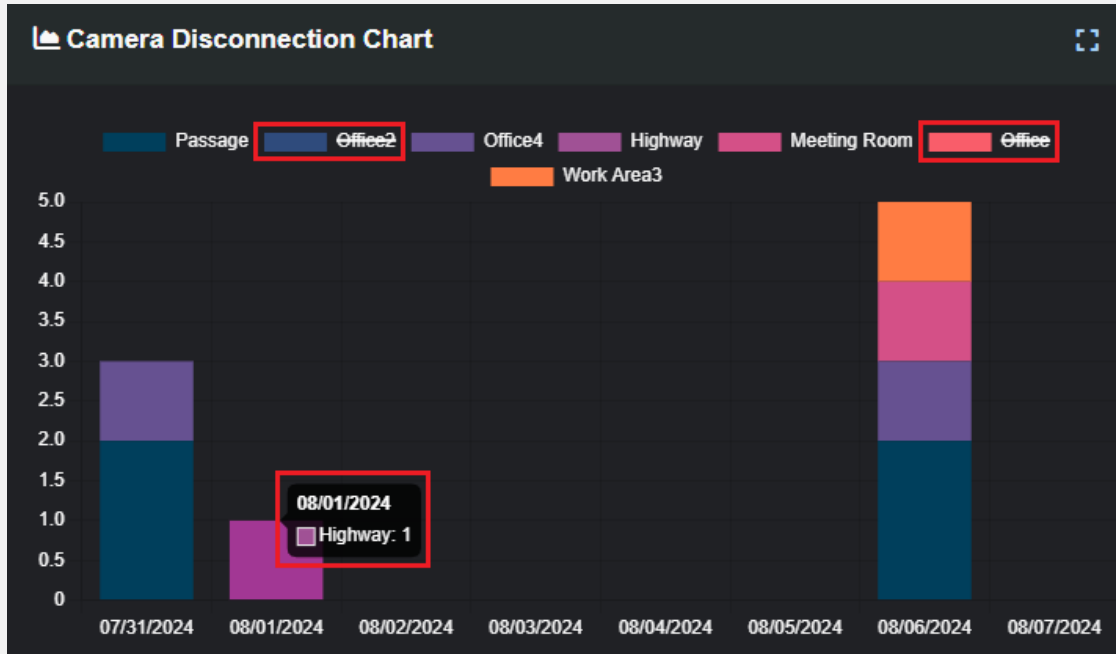
## Configuration

- **Title:** Specify the title that appears at the top of the widget.
- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Analytics:** Choose the specific Camera Analytic Report from the list that you wish to showcase the count for.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates



promptly. Typing a number and selecting a time unit (Minutes/Seconds/Hours) from the dropdown configures this.

## Camera Disconnection Chart Widget

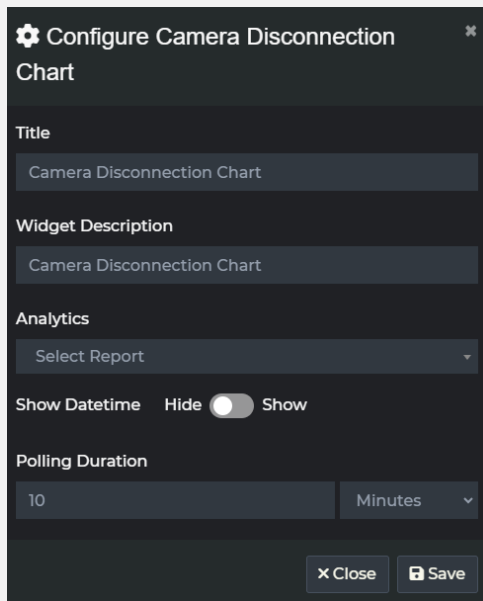


The Camera Disconnection Chart provides a visual representation of the frequency of disconnections for each camera over time, offering a clear graphical overview of connectivity issues. Users can hover over the chart to view the number of disconnections for each camera.

### Interactive Features

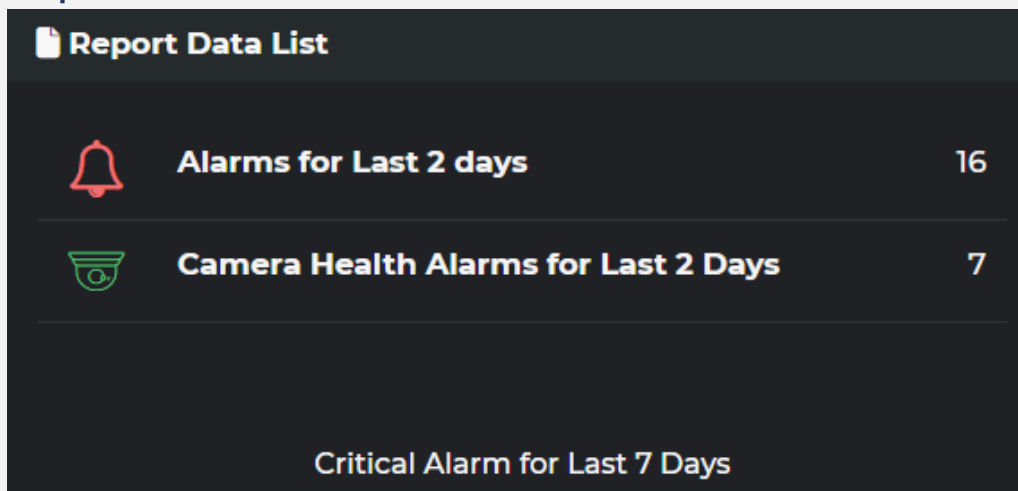
- Users can hover over specific points on the chart to view the exact number of disconnections for each camera.
- Clicking on camera names at the top of the chart allows users to toggle the display of disconnection data for those cameras, helping to focus on specific data points or declutter the view.

## Configuration

The image shows a configuration window titled 'Configure Camera Disconnection Chart'. It has a dark theme. The window contains several sections: 'Title' with a text input field containing 'Camera Disconnection Chart'; 'Widget Description' with a text input field containing 'Camera Disconnection Chart'; 'Analytics' with a dropdown menu labeled 'Select Report'; 'Show Datetime' with a toggle switch currently set to 'Hide'; and 'Polling Duration' with a numeric input field set to '10' and a dropdown menu set to 'Minutes'. At the bottom right, there are two buttons: 'X Close' and 'Save'.

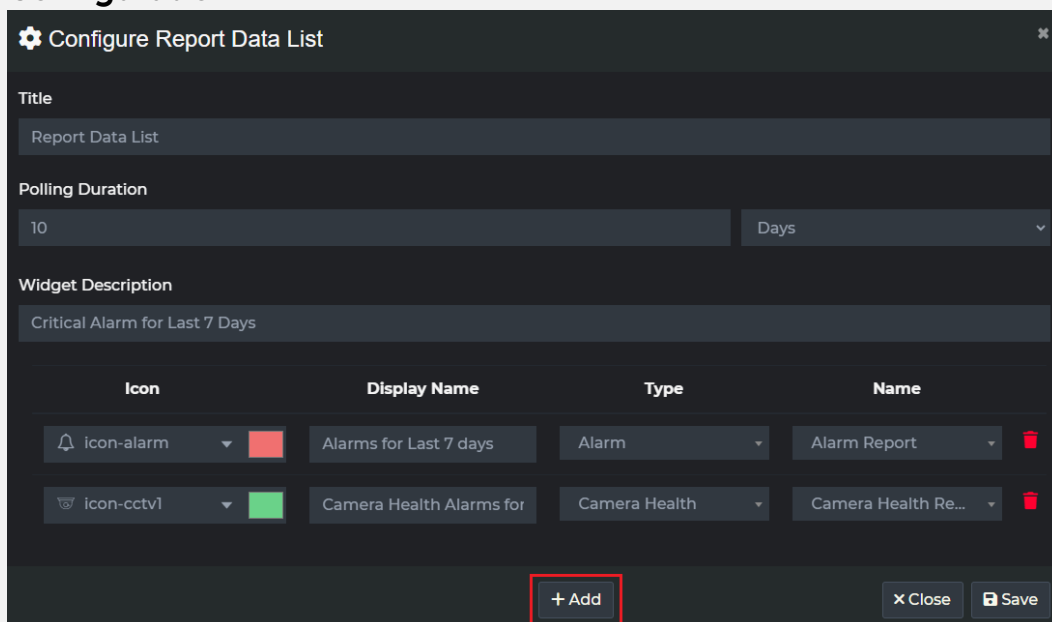
- **Title:** Specify the title that appears at the top of the widget.
- **Widget Description:** Provide a brief description of the widget that appears at the bottom.
- **Analytics:** Choose the specific report from the list that you wish to showcase the count for.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates promptly. Typing a number and selecting a time unit (Minutes/Seconds/Hours) from the dropdown configures this.
- **Show Datetime:** This toggle will display the date and time of the report's generation when activated.

## Report Data List



The Report Data List widget is designed to display count information from multiple reports, providing a consolidated view of key data across various reports.

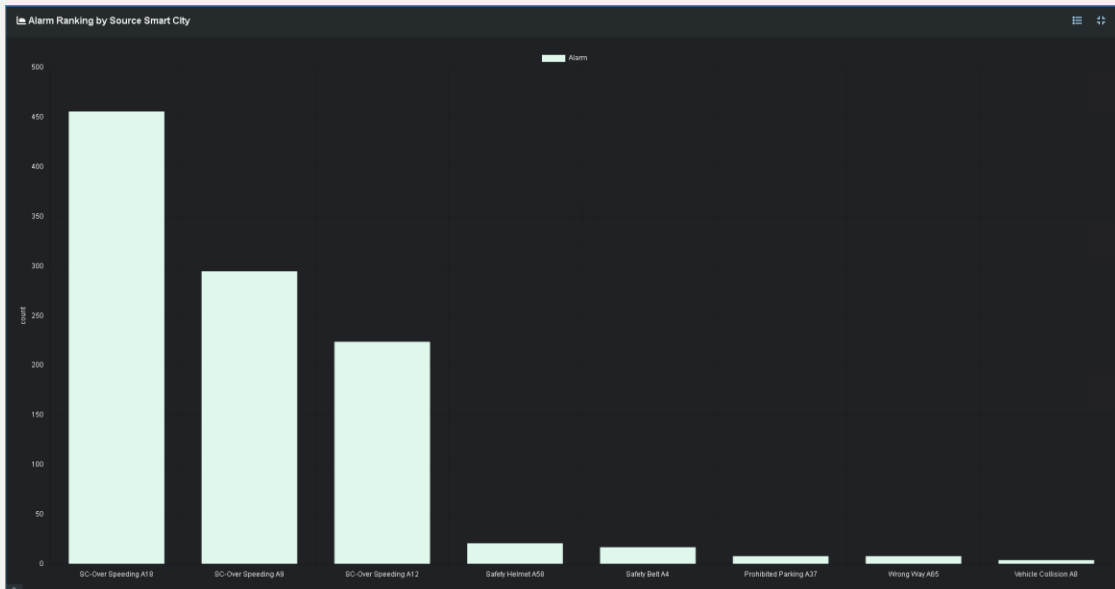
### Configuration



- **Title:** Specify the title that appears at the top of the widget. This field can be customized to include text in any language.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For instance, if a report runs every 2 hours, set the polling duration to at least 15 minutes to reflect updates promptly. Typing a number and selecting a time unit (Minutes/Seconds/Hours) from the dropdown configures this.

- **Widget Description:** Provide a brief description of the widget that appears at the bottom. This field can be customized to include text in any language.
- **Add Report:** This feature allows the user to add all the reports that are to be shown in the list. Clicking the *Add* button adds a row. To remove a row, click the 'delete' button, and to save the configuration once completed, click the save icon. In each row, you can configure the following:
  - **Icon:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
  - **Display Name:** Specify the name that will appear on the widget for the report.
  - **Type:** Choose the specific report type from the dropdown menu.
  - **Name:** Select the actual report from another dropdown menu.

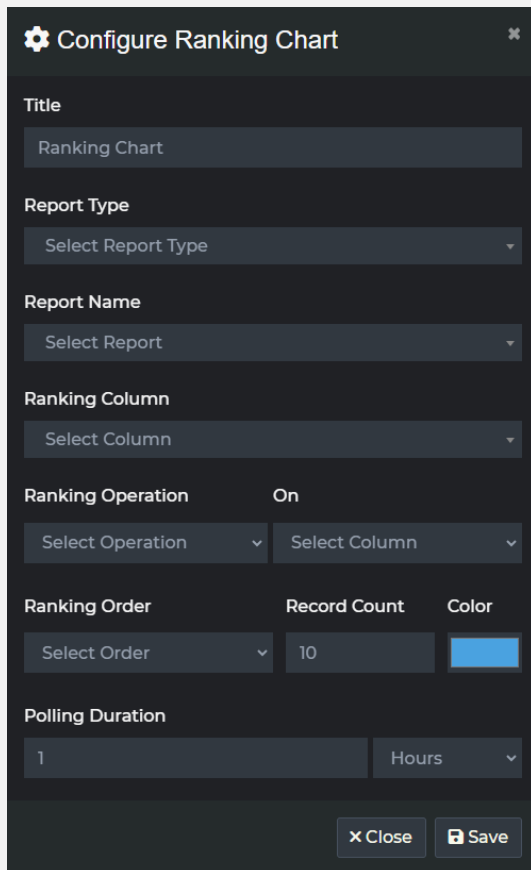
## Ranking Chart Widget



The Ranking Chart displays ranking data based on the selected report, tailored to the type of report and the specific Ranking column chosen. Users can customize the chart by selecting the Report Type and the specific report, specifying the property for grouping (Ranking Column) within the widget, and selecting the ranking operation. To ensure

compatibility, users must create a report that aligns with the chart's specifications.

## Configuration



The screenshot shows a dark-themed dialog box titled "Configure Ranking Chart" with a close button (X) in the top right corner. The dialog contains several configuration fields:

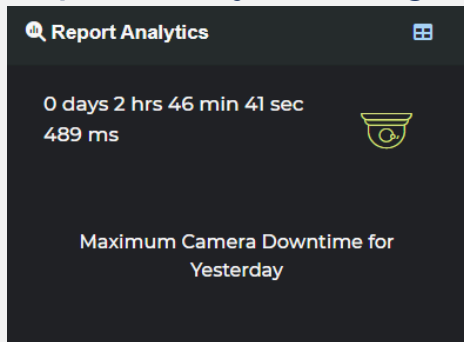
- Title:** A text input field containing "Ranking Chart".
- Report Type:** A dropdown menu with "Select Report Type" as the placeholder.
- Report Name:** A dropdown menu with "Select Report" as the placeholder.
- Ranking Column:** A dropdown menu with "Select Column" as the placeholder.
- Ranking Operation:** A section with a toggle switch labeled "On" and two dropdown menus: "Select Operation" and "Select Column".
- Ranking Order:** A dropdown menu with "Select Order" as the placeholder.
- Record Count:** A text input field containing "10".
- Color:** A color selection button showing a blue square.
- Polling Duration:** A section with a text input field containing "1" and a dropdown menu with "Hours" as the selected unit.

At the bottom right of the dialog are two buttons: "X Close" and "Save".

- **Title:** Specify the title that appears at the top of the widget. This field can be customized, and users are allowed to enter free text in any language.
- **Report Type:** Choose the type of report from the dropdown list provided.
- **Report Name:** Select the specific report you want to visualize in the ranking chart.
- **Ranking Column:** This dropdown will list all parameters available in the chosen report. Users need to select the column based on which the ranking will be performed.
- **Ranking Operation:** Choose the operation from the dropdown that will determine how the data is ranked (e.g., Sum, Average, Max, Min).

- **Ranking On:** After selecting the ranking operation, choose the specific column to apply the ranking on.
- **Ranking Order:** Specify whether the graph should display data in ascending or descending order.
- **Record Count:** Define the number of records to display on the chart.
- **Color:** Select the desired color from the color picker box for the chart display.
- **Polling Duration:** Set the frequency at which report data is refreshed within the widget. For example, if a report runs every 2 hours, set the polling duration to at least 15 minutes to ensure the widget reflects recent data updates. Type the number and select a time unit (Minutes/Seconds/Hours) from the dropdown.

## Report Analytics Widget



The Report Analytics Widget is designed to analyse and display report data based on user configurations. This widget allows for operations such as counting, and determining the minimum, maximum, average, and sum of a specific column within the selected report, effectively visualizing the data for easy interpretation.

## Configuration

**Configure Report Analytics**

**Title**  
Report Analytics

**Widget Description**  
Maximum Camera Downtime for Yesterday

**Icon Picker**  
icon-cctv1

**Report Type**  
Camera Health

**Report Name**  
Camera Health Report

**Analytics Operation**      On  
Maximum      Down Time

**Polling Duration**  
1      Hours

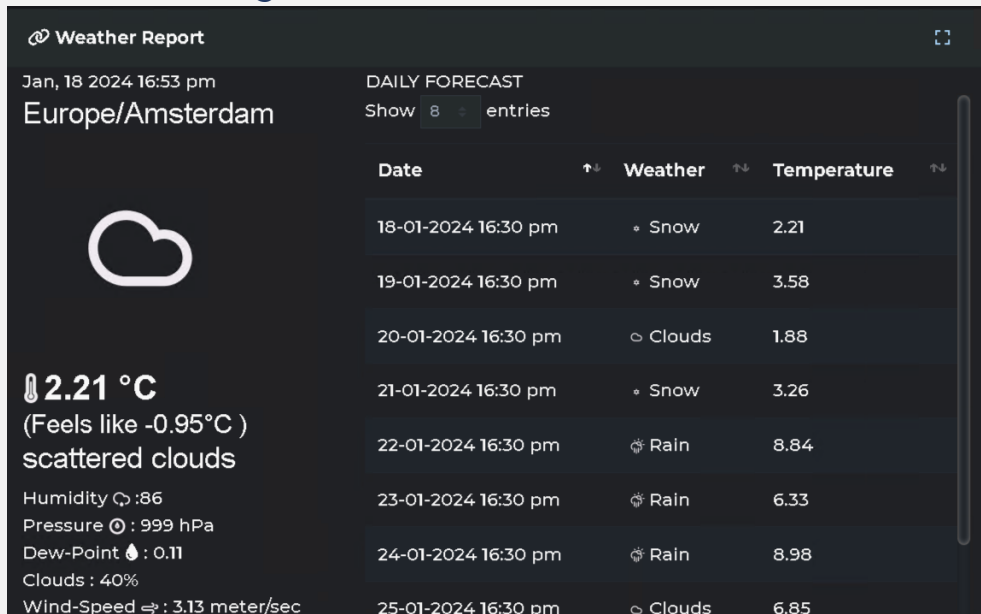
Close Save

- **Title:** Specify the title that appears at the top of the widget. This field can be customized to reflect the content or purpose of the widget.
- **Widget Description:** Provide a brief description of the widget that appears at the bottom. This description can also be customized to provide more context or instructions.
- **Icon Picker:** Custom icons for the widget. Click the dropdown and select the desired icon from the icon gallery and choose the desired color from the color picker box.
- **Report Type:** Choose the type of report from the list. This selection will determine which reports are available in the subsequent dropdown.

- **Report Name:** After selecting a report type, this dropdown will populate with all reports associated with the chosen type. Select the specific report you wish to analyze.
- **Analytics Operation:** Choose from operations such as count, minimum, maximum, average, and sum. This selection defines the calculation that will be applied to the data.
- **Analytics On:** This dropdown will list columns from the selected report that are eligible for the chosen analytics operation, typically numeric or time duration fields. For example, to monitor maximum downtime from a camera health report, select "Maximum" as the operation and "Downtime" as the column.

**Polling Duration:** Set the frequency at which report data is refreshed within the widget. If a report is scheduled to run every 2 hours, you might set the polling duration to 15 minutes or more to ensure the widget displays the latest data. Type the number and select a time unit (Minutes/Seconds/Hours) from the dropdown.

## Weather Widget

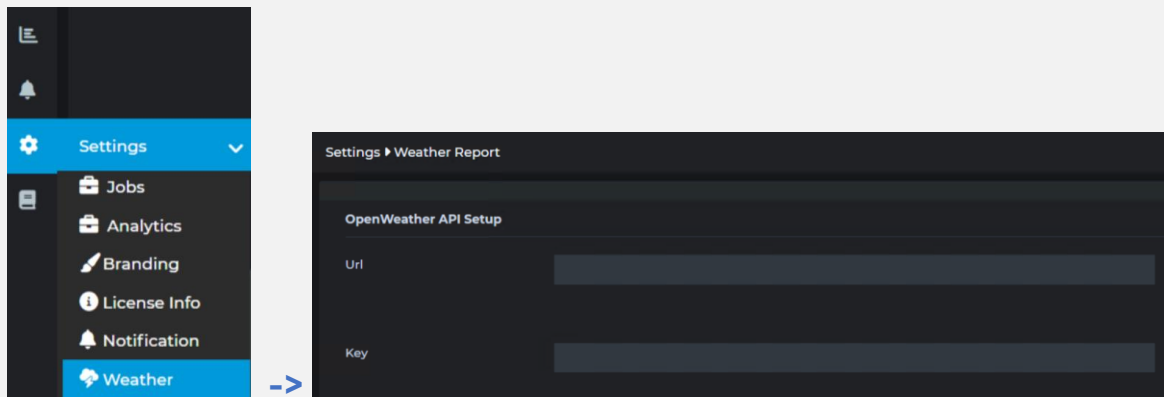


The screenshot shows a dark-themed weather widget. On the left, it displays the current date and time (Jan, 18 2024 16:53 pm), location (Europe/Amsterdam), a cloud icon, and current weather details: 2.21 °C, (Feels like -0.95°C), scattered clouds, Humidity 86%, Pressure 999 hPa, Dew-Point 0.11, Clouds 40%, and Wind-Speed 3.13 meter/sec. On the right, there is a 'DAILY FORECAST' section with a 'Show 8 entries' button. Below this is a table with columns for Date, Weather, and Temperature.

| Date                | Weather  | Temperature |
|---------------------|----------|-------------|
| 18-01-2024 16:30 pm | • Snow   | 2.21        |
| 19-01-2024 16:30 pm | • Snow   | 3.58        |
| 20-01-2024 16:30 pm | ☁ Clouds | 1.88        |
| 21-01-2024 16:30 pm | • Snow   | 3.26        |
| 22-01-2024 16:30 pm | ☔ Rain   | 8.84        |
| 23-01-2024 16:30 pm | ☔ Rain   | 6.33        |
| 24-01-2024 16:30 pm | ☔ Rain   | 8.98        |
| 25-01-2024 16:30 pm | ☁ Clouds | 6.85        |

The Weather widget integrates data from Open Weather to display current weather conditions and forecasts for a specified location directly on the workspace.





For the widget to display weather information, a URL and key need to be provided in the Weather settings under the Settings menu as shown above.

## Configuration

 The image shows a 'Configure Weather Widget' dialog box with a title bar containing a gear icon and a close button. The dialog contains several configuration fields:
 

- Title:** A text input field containing 'Weather Report'.
- Latitude:** A text input field containing '15.2993'.
- Longitude:** A text input field containing '74.1240'.
- Data Type:** A dropdown menu currently set to 'Daily'.
- Temperature Units:** A dropdown menu currently set to 'Metric (Temperature in Celsius)'.
- Polling Duration:** A numeric input field set to '2' and a unit dropdown menu set to 'Hours'.

 At the bottom right of the dialog are two buttons: 'Close' and 'Save'.

- **Title:** Name of the widget displayed at the top.
- **Latitude:** Enter the latitude for the location you want to fetch weather data for.
- **Longitude:** Enter the longitude for the same location.
- **Data Type:** Select what data should be displayed—'Daily' or 'Hourly'.

- **Temperature Units:** Choose the temperature scale:
  - **Metric:** Temperature in Celsius.
  - **Standard:** Temperature in Kelvin.
  - **Imperial:** Temperature in Fahrenheit.
- **Polling Duration:** Set the interval at which weather data is updated. Enter a number and choose Minutes, Hours, or Days from the dropdown menu.

## XProtect Licenses Widget

| Serial No | Product Name                    | Care Plus    | Care Premium | Version  | Expiration Date | Site            |
|-----------|---------------------------------|--------------|--------------|----------|-----------------|-----------------|
| 1         | XProtect Corporate 2023 RI Test | N/A          | N/A          | 23.1.0.1 | 4/17/2024       | desktop-488v0ga |
| 2         | Milestone XProtect Smart Wall   | Unrestricted |              | 23.1.0.1 | Unrestricted    | desktop-488v0ga |
| 3         | XPIM                            | 4/17/2024    |              | 23.1.0.1 | 4/17/2024       | desktop-488v0ga |

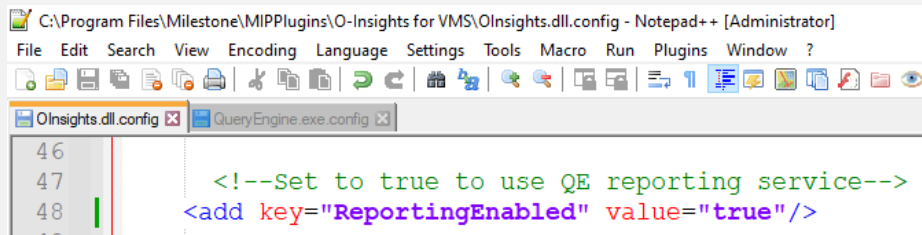
The XProtect Licenses Widget provides a concise overview of the warranty statuses for XProtect licenses, specifically detailing **Care Plus** and **Care Premium** plans along with their expiration dates.

This widget enhances operational visibility by alerting users to upcoming license expirations, changing color to yellow two months before expiry and to red one month before, prompting timely renewal.

## Configuration

- **Title:** Name of the widget displayed at the top.

# Dynamic Tags

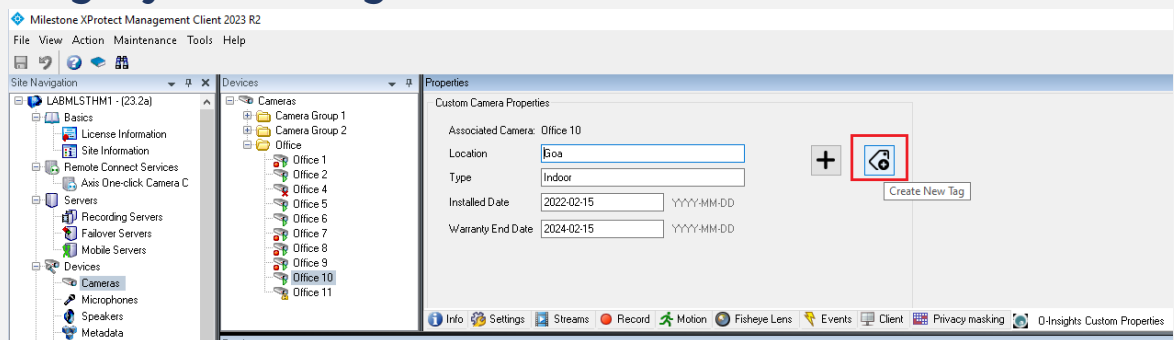


Dynamic Tags allow users to add custom tags to the existing options like Location and Type within the custom property plugin.

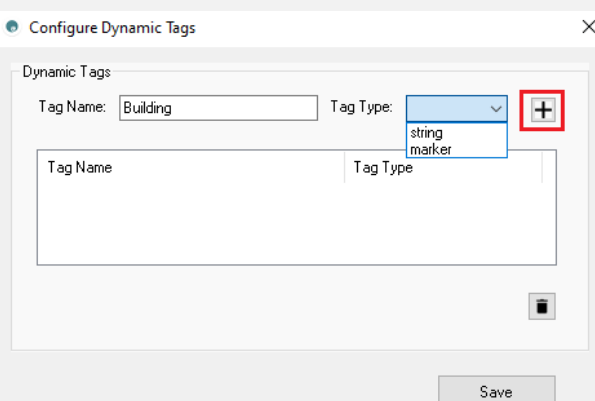
**For Dynamic Tags to be enabled, Query Engine must be licensed and installed, and reporting must be enabled in the configuration file at:**

*C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS\OInsights.dll.config*

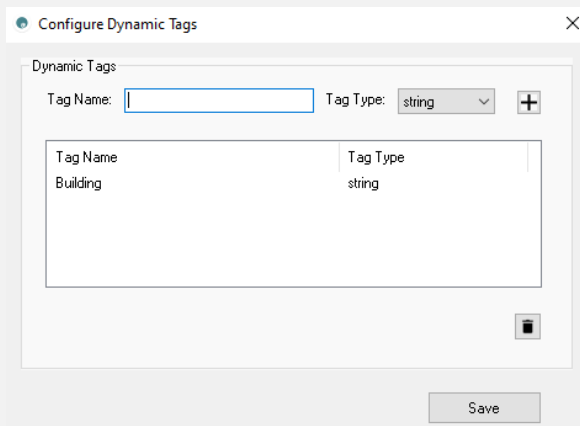
## Creating Dynamic Tags



1. Open the O-Insights Custom Properties Tab and click on "Create new Tag".



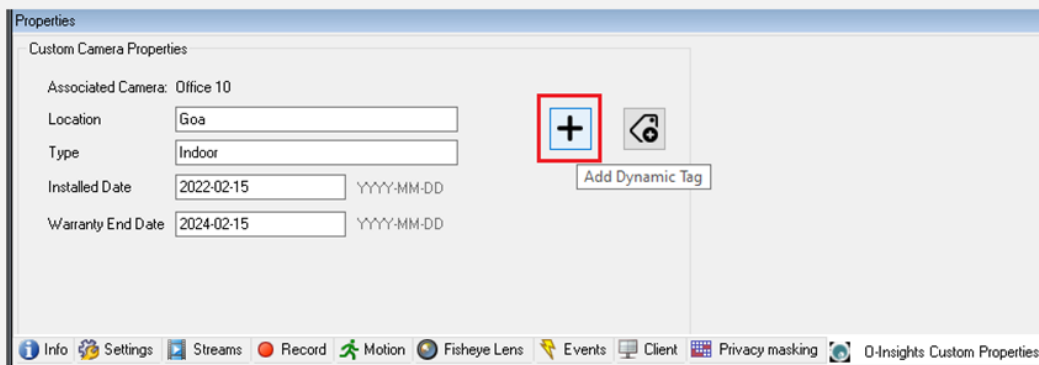
2. In the ensuing window, enter a new Tag Name, select Tag Type, and click the "+" button. *String* tags are used for text data, while *Marker* tags are used to identify or highlight specific data points within a dataset, serving as a reference or annotation.



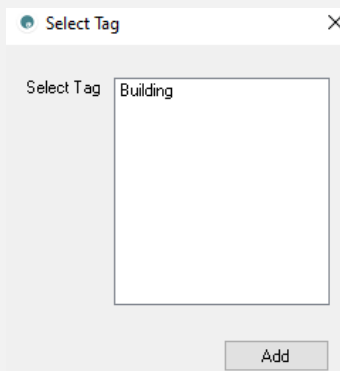
3. The new tags will appear as shown above. Click "Save" to store the settings.

## Adding Dynamic Tags

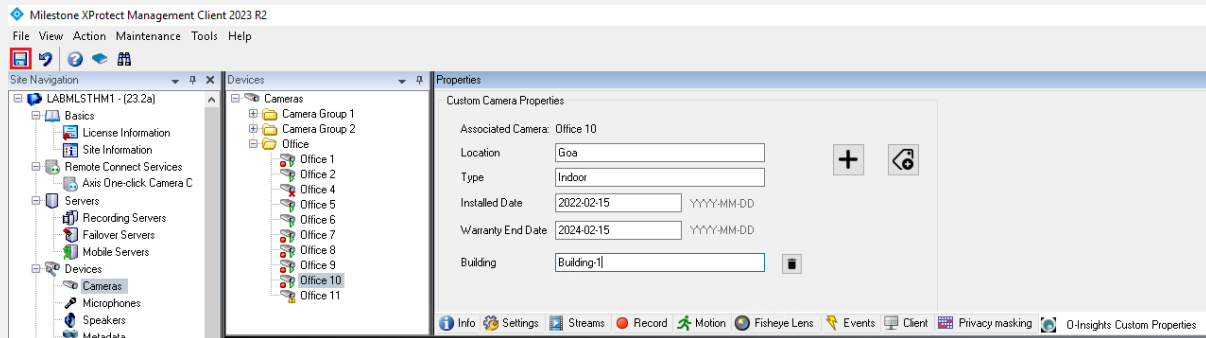
1. To add Dynamic Tags, open the XProtect Management Client and navigate to the required camera properties.



2. Click the O-Insights Custom Properties button, then click the "+" button. In the popup, select the desired dynamic tag previously created.
3. If a string type tag is selected, fill in the required fields. For marker tags, simply add the tag without additional data.



4. In this example, you can see the “Building” tag in the resulting window. Select the tag "Building" and click "Add". If the Dynamic tag added is a string type, assign a name to it (e.g., "Building-1"). Marker type tags do not require a name.
5. Click "Save" as shown below to apply the tag to the camera.



**Finalizing Tags:** After tagging, run the Cache Update Job (ensure Query Engine is running). Once the job is completed, restart the Smart Client to update the changes. If a tag name is provided but left blank, the Dynamic tag will not appear on the camera.

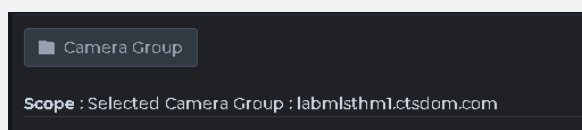
**For more details on the bulk update of *Dynamic Tags*, refer to the O-Insights Reporting User Guide.**

# Camera Details

## Camera Inventory

| Serial No | Name      | Manufacturer | MAC Address  | Firmware Version                          | Installed Date | Warranty End Date | Status  | Location | Type   | Recording Server      |
|-----------|-----------|--------------|--------------|---|----------------|-------------------|---------|----------|--------|-----------------------|
| 1         | Office 11 | AXIS         | ACCC8E02B6B5 | 9.30.1                                    | 16-11-2020     | 16-11-2022        | Offline | Goa      | Indoor | labmlsthml.ctsdom.com |
| 2         | Office 5  | HikVision    | 4CB0BF2C2C81 | V5.4.5                                    | 03-12-2021     | 03-12-2023        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 3         | Office 7  | HikVision    | BC9B5E514D09 | V5.7.3                                    | 15-02-2022     | 15-02-2024        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 4         | Office 2  | AXIS         | ACCC8E357B24 | 5.517.6                                   | 03-12-2021     | 03-12-2023        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 5         | Office 10 | ONVIF        | CB2202427DAA | 1.03.03980341.6786347.10772               | 15-02-2022     | 15-02-2024        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 6         | Office 9  | Dahua        | FCB69D36843B | 2.800.00000007R 2022-05-13                | 03-12-2021     | 03-12-2023        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 7         | Office 8  | General      | D42DC5B89A3  | 2.622.00P5000.0.R, Build Date: 2018-07-24 | 03-12-2021     | 03-12-2023        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 8         | Office 1  | AXIS         | ACCC8E358B57 | 5.515.1                                   | 03-05-2022     | 02-05-2024        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |
| 9         | Office 6  | HikVision    | 94EBAC2C539D | V5.4.5                                    | 15-02-2022     | 15-02-2024        | Online  | Goa      | Indoor | labmlsthml.ctsdom.com |

The Camera Inventory page details information about cameras such as Name, Hardware, Model, Manufacturer, Address, Mac Address, Firmware Version, Server, Recording Server, Installed Date, Warranty End Date, Status, Location, Type, and real-time snapshots. These details can be exported to Excel or PDF using the Export buttons.



- The Camera Group button allows users to select desired camera groups for rendering in the table. This data is cached from the Query Engine. To fetch updated camera details from XProtect directly, set the configuration:  
`<add key="FetchUpdatedData" value="true"/>`

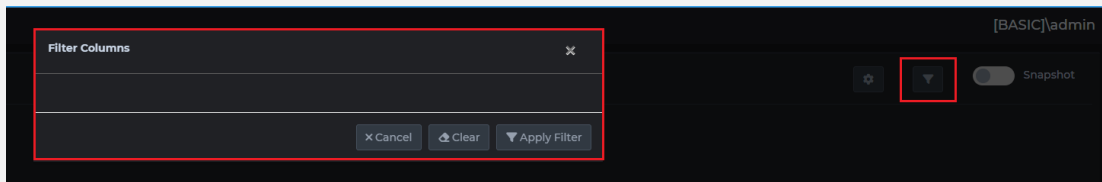
### Column Selector

- The gear button triggers the Column Selector popup, which assists the user in selecting and arranging the columns they want to display on the Camera Inventory page. Users can easily reorder the columns by dragging them to their desired positions.

### Filtering the Data

- The filter helps filter the dataset based on Custom and Dynamic Tags.

- On clicking, the filter button launches the Hierarchical Column Filter. This feature allows for multi-level data filtering based on Dynamic Tags. Each selection in a filter acts as a parent to the subsequent dropdown, automatically updating to reflect relevant options based on the previous choices.
- Users can apply the selected filters by clicking "Apply Filter", clear all selections by clicking "Clear Filter", or exit without making changes by clicking "Close".



- Filter options will be blank if custom tags are not added to the cameras, as depicted above.

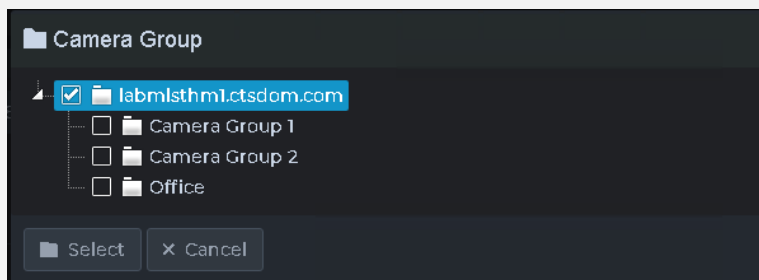
**Note:** Any Camera which is not added to the camera group will not be a part of this list.

## Storage Details

| Serial No | Name    | Recording Server           | Database  | Disk Path       | Max Size | Used Size | Available Size | Available Percentage | Configured Retention Time | Actual retention time       |
|-----------|---------|----------------------------|-----------|-----------------|----------|-----------|----------------|----------------------|---------------------------|-----------------------------|
| 21        | Lobby 2 | desktop-gplv585.ctsdom.com | Temp      | E:\Temp Storage | 10 GB    | 3.09 GB   | 6.91 GB        | 69.07 %              | 5 Days                    | 8 days, 0 hours, 11 minutes |
| 22        | Lobby 2 | desktop-gplv585.ctsdom.com | Archive 1 | E:\Archive      | 2 GB     | 591 MB    | 1.42 GB        | 71.14 %              | 8 Days                    | -                           |

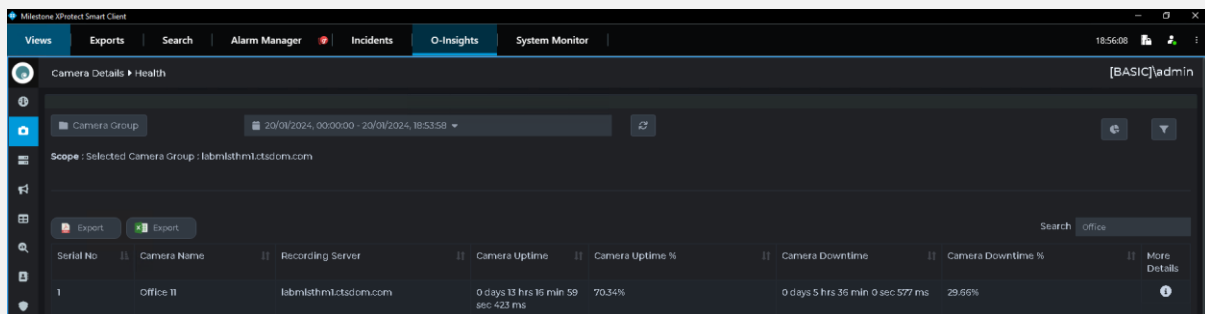
The Storage Details page shows information on camera storage, with text colors indicating available space (**red** for 0-10%, **orange** for 10-60%, **green** for 60-100%). Enabling "Show archive storage" adds an archive row for each camera, and "Actual retention time" shows the total recording time, including gaps, in the live and archive databases. Details can be exported to Excel or PDF with the *Export* buttons.

## Camera Health



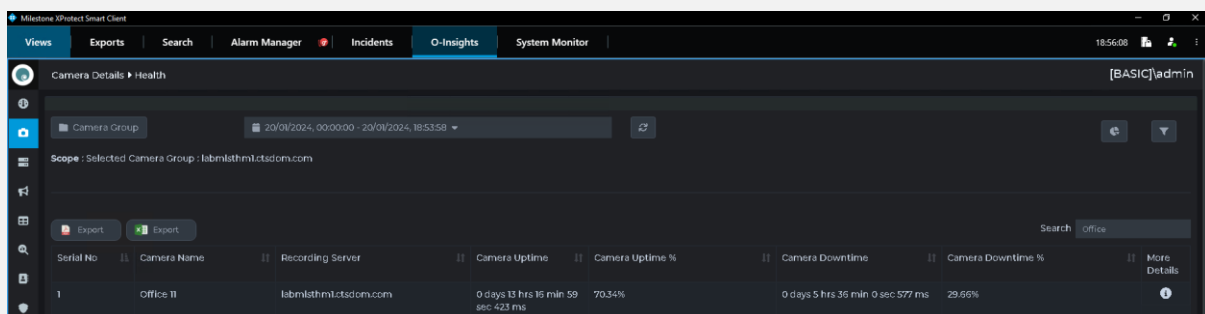
Camera Health reports the uptime and downtime for each camera for selected dates. The dropdown as shown above allows the selection of camera groups for data rendering.

## Filtering the Data



- The filter button triggers the Hierarchical Column Filter that assists in filtering data based on Dynamic Tags data. The subsequent filter dropdown will automatically adjust based on the previously chosen filter that forms the parent to the latest filter in the hierarchy. Once the filters are selected, choose *Apply Filter* to apply the filter or *Clear Filter* to clear the filters. Click *Close* to discard the filters.

## Drilldown

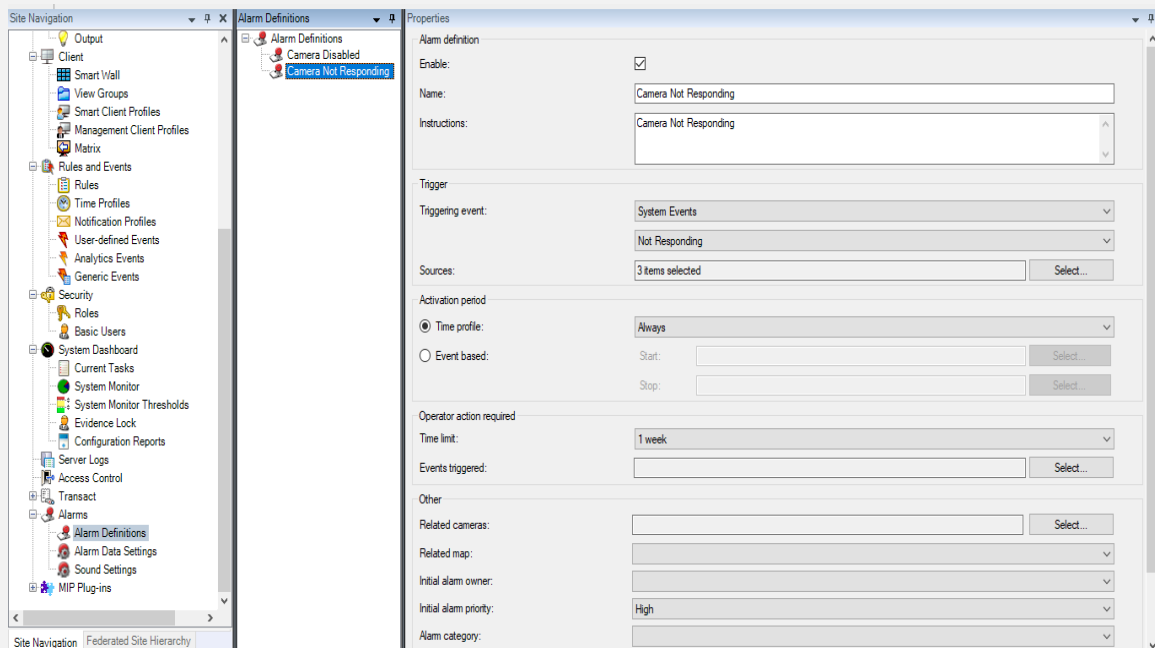


To view camera health details in-depth, click on the (i) icon and the details will be rendered in the popup. The popup can be closed by clicking the close button in the corner. The table can be exported by clicking the Export with PDF icon to export to PDF or the Export with Excel icon to export to XLS.

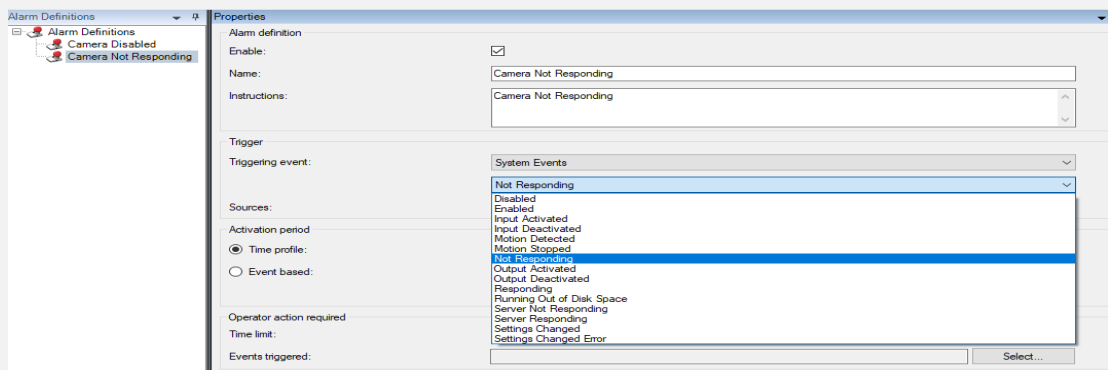


## Configuring XProtect for Camera Health Report

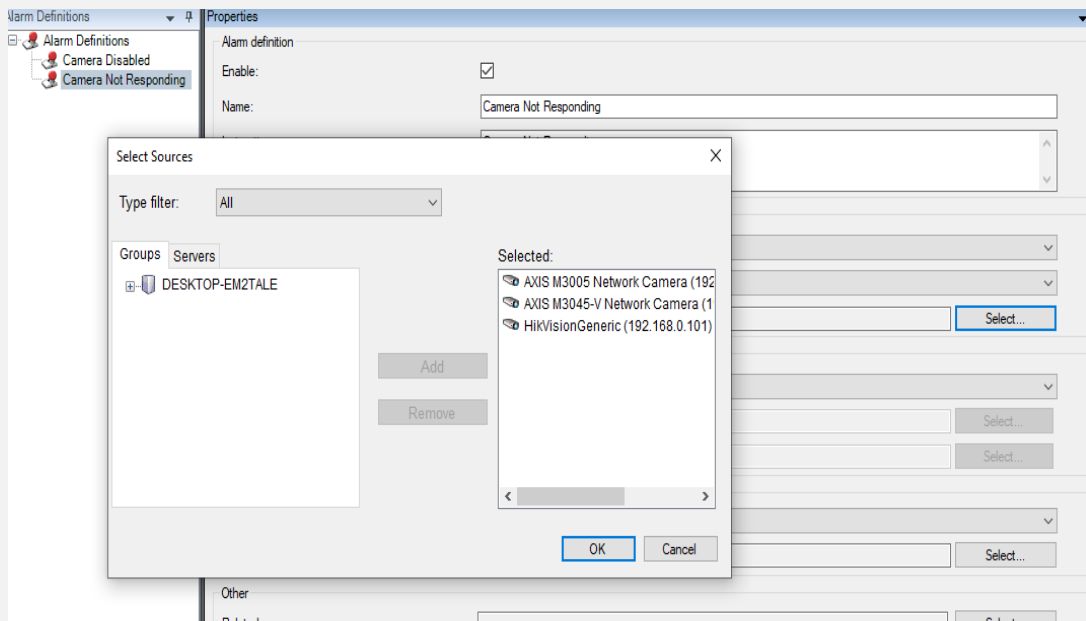
For the Camera Health Report to function properly, configure XProtect using the following steps:



1. Navigate to **Alarm Definitions** from the Site Navigation pane. Create alarm definitions as required. The example provided below is for *Camera Not Responding*.



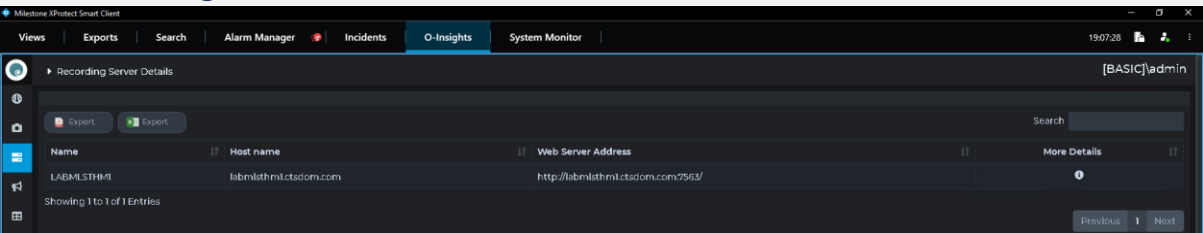
2. In the Triggering event section, select **System Events** and choose the desired event from the drop-down (in this case, *Not Responding*).



3. Click the **Select** button in the Sources section to choose the required cameras.

# Recording Server

## Recording Server Details



The Recording Server Details page showcases essential information such as the Recording Server Name, Host Name, and Web Server Address. Users can select the recording server from the dropdown menu to display the data relevant to the chosen server.

### Drilldown

Clicking the info icon (i) will open a popup that provides detailed storage information related to the selected recording server.

| Sr No | Name      | Disk Path    | Max Size | Used Size | Available Size | Available Percentage | Estimated Available Size | Available Status | Retention Time | Signing | Encryption Method |
|-------|-----------|--------------|----------|-----------|----------------|----------------------|--------------------------|------------------|----------------|---------|-------------------|
| 1     | Storage 1 | D:\Storage 1 | 80 GB    | 79.6 GB   | 410 MB         | 0.50 %               | 410 MB                   | Critical         | 2 Days         | False   | None              |
| 2     | Storage 2 | E:\Storage 2 | 70 GB    | 0 Bytes   | 70 GB          | 100.00 %             | 70 GB                    | Normal           | 5 Days         | False   | None              |
| 3     | Storage 3 | E:\Storage 3 | 50 GB    | 0 Bytes   | 50 GB          | 100.00 %             | 70 GB                    | Normal           | 3 Days         | False   | None              |
| 4     | Storage 4 | E:\Storage 4 | 20 GB    | 0 Bytes   | 20 GB          | 100.00 %             | 70 GB                    | Normal           | 4 Days         | False   | None              |
|       | TOTAL     |              | 220 GB   | 79.6 GB   | 149.4 GB       | 63.82 %              |                          |                  |                |         |                   |

## Storage Details

| Serial No | Server Name | Storage Name            | Item Type      | Used Size | Available Size | Available Percentage | Available Status | Disk Path    | Encryption Method | Max Size | Retention Time | Signing | Framerate | Target Framerate | Locked Data |
|-----------|-------------|-------------------------|----------------|-----------|----------------|----------------------|------------------|--------------|-------------------|----------|----------------|---------|-----------|------------------|-------------|
| 1         | LABMLSTHM1  | Storage 1               | Storage        | 78.5GB    | 15GB           | 18%                  | Critical         | D:\Storage 1 | None              | 80.0GB   | 2 Days         | False   |           |                  | 0 Bytes     |
| 2         | LABMLSTHM1  | Archive 1 for Storage 1 | ArchiveStorage | 119.9GB   | 97.2MB         | 0.08%                | Critical         | D:\          |                   | 120.0GB  | 14 Days        | False   |           | 5                | 0 Bytes     |
| 3         | LABMLSTHM1  | Storage 2               | Storage        | 0 Bytes   | 70.0GB         | 100%                 | Normal           | E:\Storage 2 | None              | 70.0GB   | 5 Days         | False   |           |                  | 0 Bytes     |
| 4         | LABMLSTHM1  | Storage 3               | Storage        | 0 Bytes   | 50.0GB         | 100%                 | Normal           | E:\Storage 3 | None              | 50.0GB   | 3 Days         | False   |           |                  | 0 Bytes     |
| 5         | LABMLSTHM1  | Storage 4               | Storage        | 0 Bytes   | 20.0GB         | 100%                 | Normal           | E:\Storage 4 | None              | 20.0GB   | 4 Days         | False   |           |                  | 0 Bytes     |

The Storage Details page displays comprehensive data about server storage. The text color indicates the storage status:

- Red:** Indicates critical status when only 0-10% storage is available.

- **Orange:** Marks a warning status for 10-60% storage availability.
- **Green:** Shows a normal condition when 60-100% storage is available.

These details can be exported using the Excel or PDF options available.

## Archive Storage

| Available Size | Available Percentage | Available Status |
|----------------|----------------------|------------------|
| 1.5GB          | 1.88                 | Critical         |
| 97.0MB         | 0.08                 | Critical         |
| 70.0GB         | 100                  | Normal           |
| 50.0GB         | 100                  | Normal           |
| 20.0GB         | 100                  | Normal           |

Activating the *Show Archive Storage* toggle adds an archive row to the storage page, displaying both live and archived data. Disabling this option will show only the live database information.

## Storage Status Thresholds

```

53      <!-- Storage status -->
54      <add key="AvailableStatusNormalValue" value="60" />
55      <add key="AvailableStatusWarningValue" value="10" />
56      <add key="AvailableStatusCriticalValue" value="0" />

```

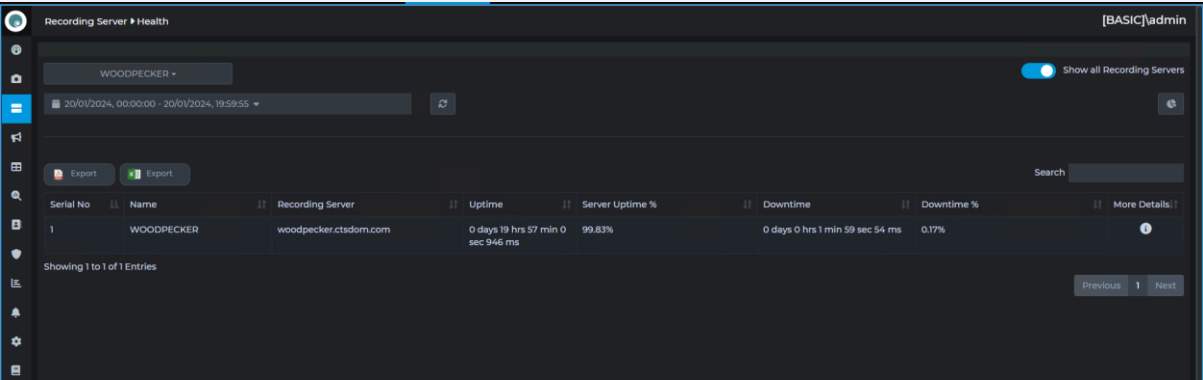
The thresholds for changing the storage status to Normal, Warning, or Critical are configurable in the QueryEngine.exe.config file, located at:

*C:\Program Files\O-Insights Query Engine*

These settings help manage and monitor storage effectively, ensuring that users are alerted about potential storage issues in a timely manner.

**Tip:** Above settings can be changed only if Query Engine is installed.

# Server Health



The screenshot shows a web interface for 'Recording Server Health'. At the top, there's a dropdown menu for 'WOODPECKER' and a toggle for 'Show all Recording Servers'. Below this is a date range selector set to '20/01/2024, 00:00:00 - 20/01/2024, 19:59:55'. There are 'Export' buttons for PDF and Excel. A table displays server health data with columns: Serial No, Name, Recording Server, Uptime, Server Uptime %, Downtime, and Downtime %. One entry is shown for 'WOODPECKER' with a recording server of 'woodpecker.ctsdom.com'. The uptime is '0 days 19 hrs 57 min 0 sec 946 ms' (99.83%) and downtime is '0 days 0 hrs 1 min 59 sec 54 ms' (0.17%). A 'More Details' link is present. At the bottom, it says 'Showing 1 to 1 of 1 Entries' and has 'Previous', '1', and 'Next' navigation buttons.

| Serial No | Name       | Recording Server      | Uptime                            | Server Uptime % | Downtime                        | Downtime % | More Details      |
|-----------|------------|-----------------------|-----------------------------------|-----------------|---------------------------------|------------|-------------------|
| 1         | WOODPECKER | woodpecker.ctsdom.com | 0 days 19 hrs 57 min 0 sec 946 ms | 99.83%          | 0 days 0 hrs 1 min 59 sec 54 ms | 0.17%      | <a href="#">i</a> |

The Server Health section provides a detailed report on the uptime and downtime of each server for the selected dates. Users can select a recording server from the dropdown menu above the table to view the specific data.

## Drilldown

To delve deeper into the server health check details, click on the info icon (i). A popup will appear displaying extensive information. This popup can be closed by clicking the close button in the corner. Additionally, the data can be exported to *PDF* or *Excel* using the respective export buttons.

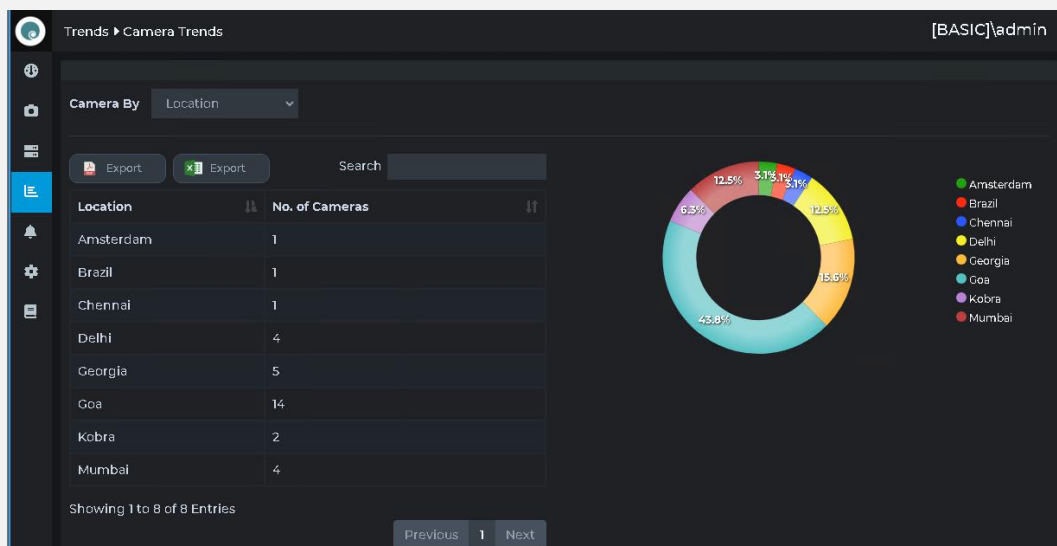
# Trends

## Alarm Trends



The Alarm Trends page visualizes the alarm trends over a selected date range. Users can view trends by different categories such as Event (Disabled, Enabled, Not Responding, etc.), Location (Location of the Alarms), Type of the camera, and Reason for the alarm. The data is presented in both line and bar chart formats, with corresponding pie charts below for a visual summary.

## Camera Trends



The Camera Trends section displays a comprehensive inventory of cameras, organized by *Location*, *Manufacturer*, *Type*, *Recording Server*, and *Status*. This helps in tracking and analyzing the distribution and operational status of cameras across different dimensions.

# Alarm Console

The Alarm Console in XProtect is a centralized console that provides a real-time overview of all alarms, offering detailed control and management options akin to XProtect's native console but with enhanced functionality and controls. The Alarm Console can be accessed from the sidebar.

**Note:** For the alarm console to function, it's essential to have Query Engine installed and operational.

## Features of the Alarm Console

- **Alarm Status Filter:** Located at the top left, this dropdown allows users to filter alarms by their current status: *New Alarms, In Progress, On Hold, and Closed*.
- **Show (x) Entries:** A dropdown to adjust the number of alarm records displayed per page, with the default setting at 20 entries.
- **Alarm Console Table:** Displays comprehensive alarm details including *Alarm Info, Actions, Timestamp, Source, Alarm Name, Category, Modified Timestamp, Priority, Alarm Type, Message, and Alarm Duration*.
  - **AlarmDuration Column:** This column shows the duration for which an alarm was active before being normalized.
- **Record Selection:** Checkboxes next to each alarm record allow for multiple selections to perform actions like Acknowledge, Hold, Close, or Notify.
- **Alarm Actions:**
  - **Acknowledge:** Marks the alarm as acknowledged.
  - **Hold:** Puts the alarm on hold.
  - **Close:** Closes the alarm.
  - **Notify:** Sends a notification email regarding the alarm, utilizing preconfigured email settings from the reporting settings. Users can customize the recipient and message, which will include prepopulated alarm data.
  - **Auto Update:** Toggles the automatic updating of the console. If turned off, alarms will not update automatically.

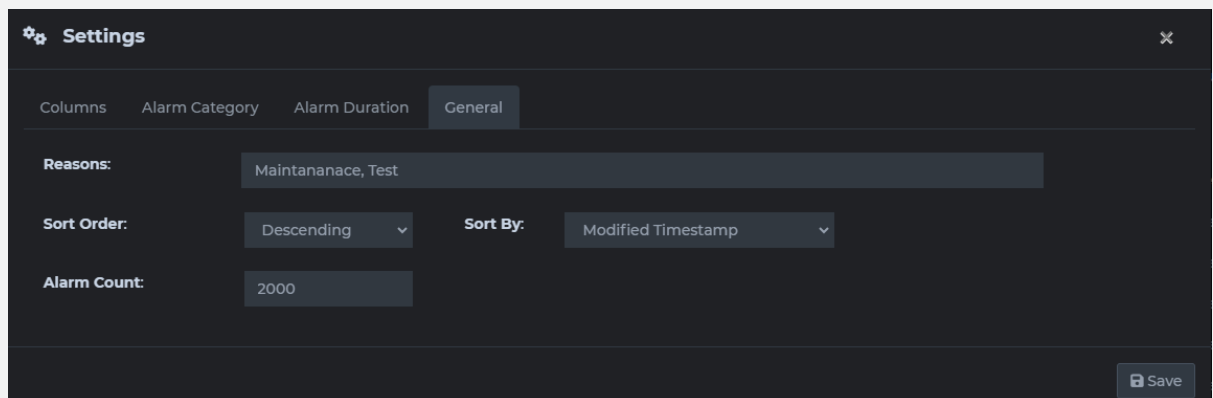
- **Info Column Indicators:** Different colors indicate alarm states—Red for active/open, Green for normalized, and Grey for acknowledged alarms. Icons represent additional information:
  - A note icon (📌) indicates that the alarm has attached notes.
  - A hyperlink icon to the left of the alarm suggests an associated link with the alarm.
- **Advanced Filtering:** The Filter button opens a popup where users can refine alarms based on specific criteria such as Alarm Name, Message, Priority, Source, Category, or Assigned To. Filters are applied by entering the desired parameters and clicking **Apply Filter**.

## Alarm Console Settings

The Alarm Console Configuration offers customizable settings to tailor the console's functionality according to operational needs. These settings are accessible via the Settings button located at the top of the console.

### Configurations

- **General Tab:**

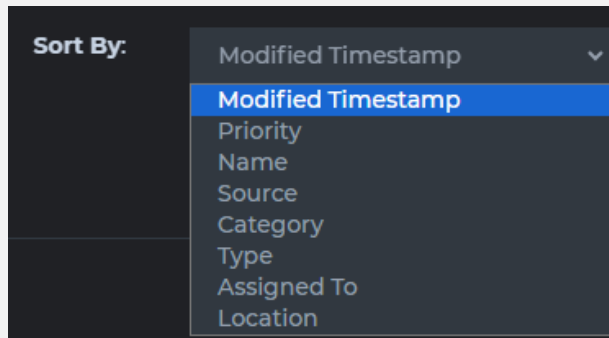


The screenshot shows a 'Settings' dialog box with a dark theme. It has a title bar with a gear icon and a close button. Below the title bar are four tabs: 'Columns', 'Alarm Category', 'Alarm Duration', and 'General' (which is selected). The 'General' tab contains three settings: 'Reasons' with a text input field containing 'Maintanance, Test'; 'Sort Order' with a dropdown menu set to 'Descending'; and 'Sort By' with a dropdown menu set to 'Modified Timestamp'. There is also an 'Alarm Count' setting with a text input field containing '2000'. A 'Save' button is located in the bottom right corner.

- **Reasons:** Users can define a list of reasons for acknowledging or closing alarms. These reasons help in classifying alarms in the Alarm Trends analysis.
- **Columns:** This field allows users to select which columns to display in the console, ensuring only relevant information is visible.
- **Alarm Count:** Sets the maximum number of alarm records that can be displayed at one time within the console.

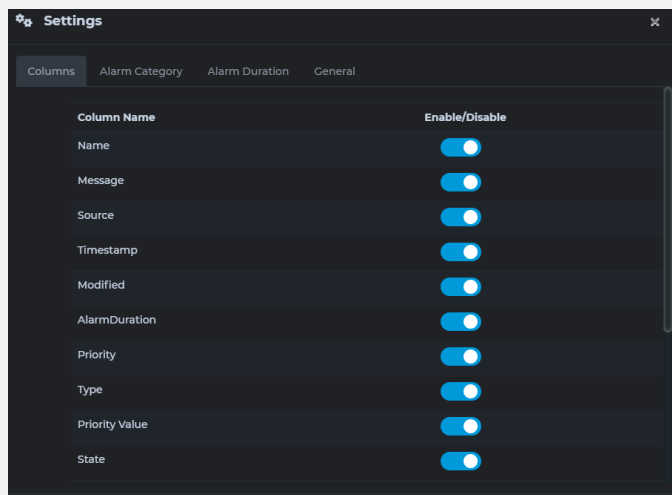


- **Sort Order:** Users can determine the order in which alarms are displayed based on their preferences.



- **Sort By:** Provides options to sort alarms by specific criteria as shown above, enhancing the ability to quickly find and manage alarms.

- **Columns Tab:**



- Enables toggling of individual columns on or off, providing a customized view of the alarm data within the console.

- **Alarm Category Tab:**

Users can assign colors to different alarm categories for visual differentiation. Categories must be predefined within the management client and linked to the respective alarms.

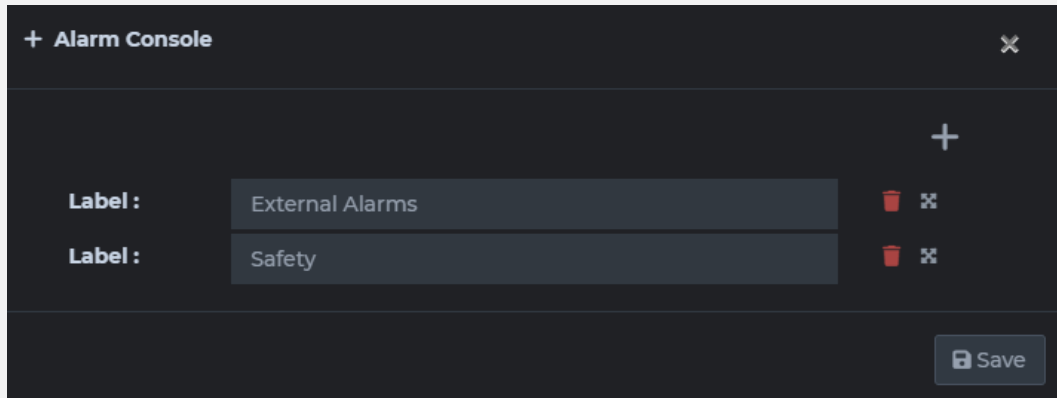
- **Modification Options:** Adding a new category involves selecting the '+' button, entering the category name, selecting a color, and saving the configuration by clicking the save icon. Alternatively, use the trash icon to delete an entry. Existing categories can be edited or deleted using the corresponding icons.

- **Alarm Duration Tab:**

If an alarm's duration exceeds a specified limit while in a new state, the corresponding icon will flash to alert the user.

Users can set the duration threshold in the *Time (in minutes)* field that triggers the alert.

## Adding and Managing Multiple Alarm Consoles



The Alarm Console allows for the creation of multiple user-defined consoles for users in addition to the master alarm console. The master console exists by default and cannot be removed.

**Note:** The Columns, Alarm Category and Alarm Duration options can be configured by accessing settings through the gear icon in the corner. Rest of the settings should be configured through the master console and shall be applicable for all consoles.

### Steps to Add a New Alarm Console:

1. **Access the Master Console:** Navigate to the master alarm console, which is the default and central management hub for all alarms.
2. **Initiate a New Console:** Click the + *Consoles* icon located at the top of the master console to bring up the console management interface.
3. **Create a Console:** Within the popup, click the + icon to start the process of adding a new console.
4. **Name the Console:** Enter a name for the new console in the label field to identify it among other consoles.

Repeat the above steps to add as many consoles as needed.

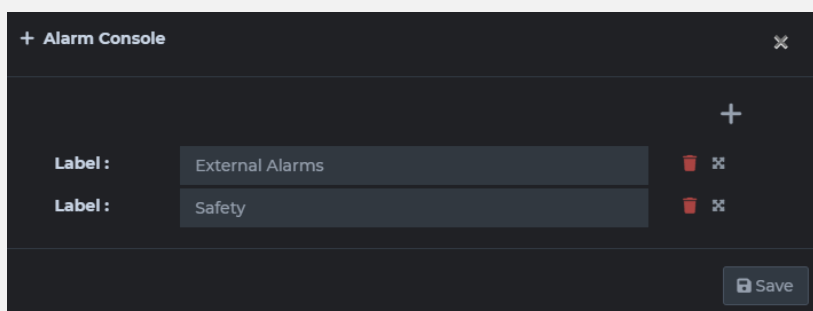
## Reordering and Managing Consoles:

- **Reordering:** To change the order of the consoles, click the move icon (⌘), then drag the console entry to the desired position within the list.
- **Deleting Consoles:** To remove a console, click the trash icon next to the console you wish to delete.
- **Editing Consoles:** Modifications to console settings can be made by clicking on the console entry.

## Saving/Discarding Changes:

- **Save Changes:** Click *Save Console* after making any adjustments to finalize the updates.
- **Cancel Changes:** If you decide not to keep the changes, click *Cancel* to discard any modifications made during the session.

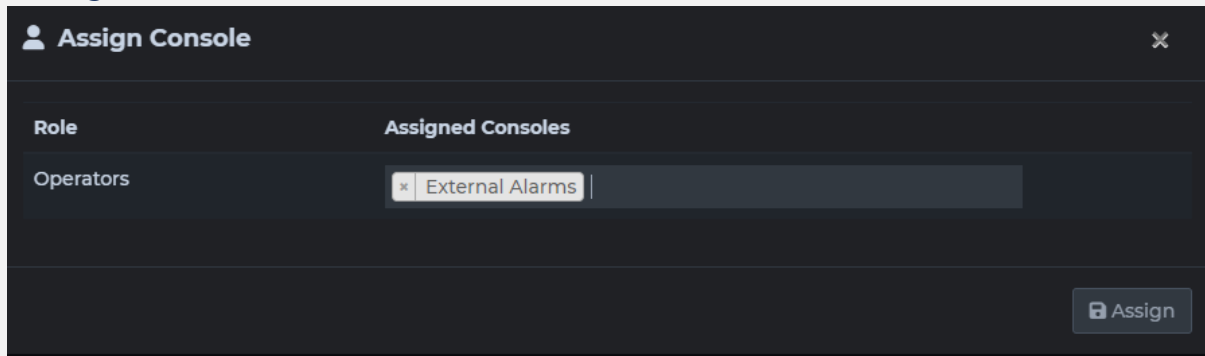
The Alarm Console has the provision to create multiple consoles for users. To add an alarm console, go to the master alarm console (which exists by default and can't be removed) and click the *+ Consoles* icon on top. In the popup that shows up, click *+* icon to add a new console. In the label field, type the desired name for the console. Repeat the process to add any desired number of consoles. To reorder the consoles, click the move icon ⌘ and drag the row to the top or bottom, to delete, click the trash icon to delete and edit the console. Once done, click *Save Console* to save or *cancel* to discard the changes.



Managing Alarm Consoles

**Note:** The Columns, Alarm Category and Alarm Duration options can be configured by accessing settings through the gear icon in the corner. Rest of the settings should be configured through the master console and shall be applicable for all consoles.

## Assign Alarm Console

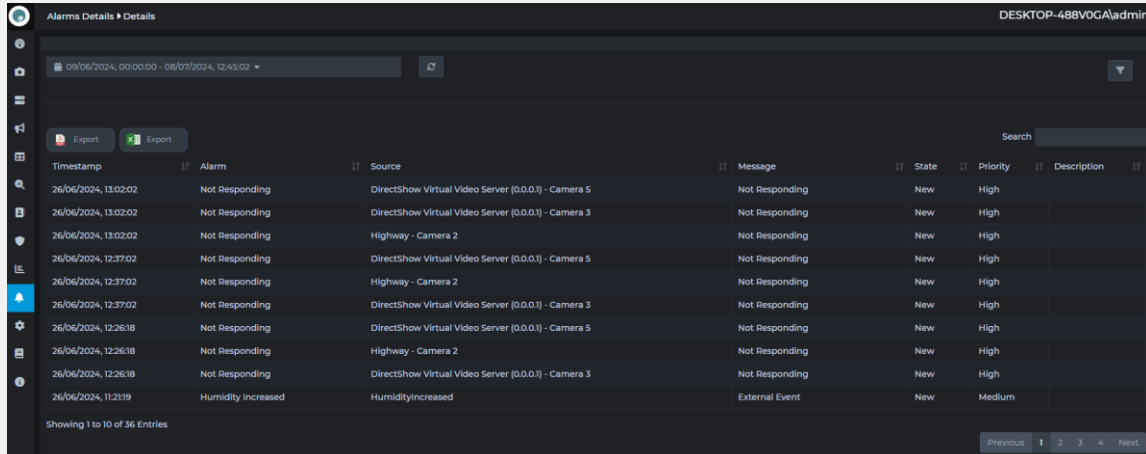


The Alarm Console can be specifically assigned to users with administrative privileges, ensuring that only authorized personnel can access and manage alarm settings. To assign an alarm console to a user:

1. **Navigate to the Console:** Open the alarm console you wish to assign.
2. **Access User Settings:** Click on the user icon (👤) located in the corner of the console interface.

## Alarm Details

### Details

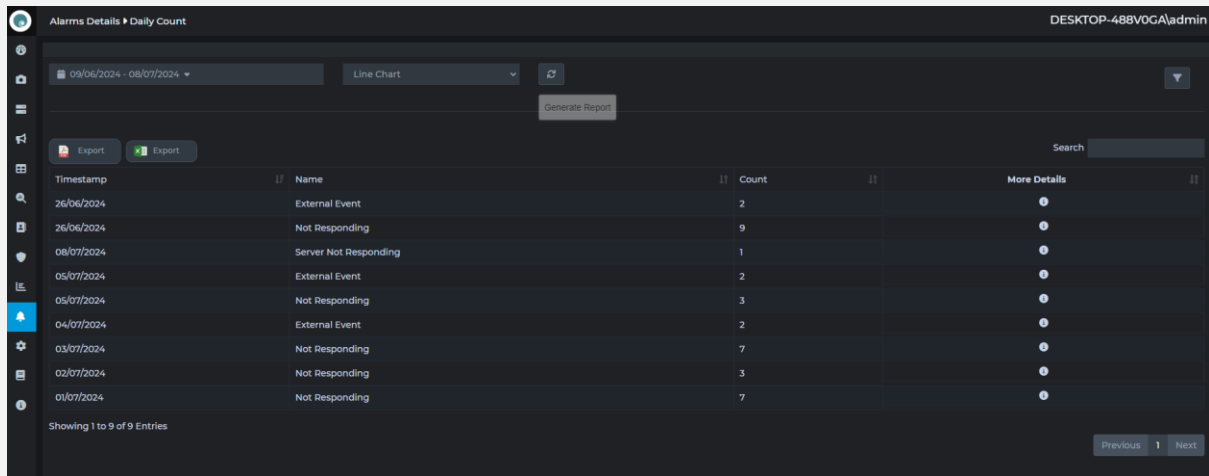


| Timestamp            | Alarm              | Source   | Message        | State | Priority | Description |
|----------------------|--------------------|--|----------------|-------|----------|-------------|
| 26/06/2024, 13:02:02 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 5 | Not Responding | New   | High     |             |
| 26/06/2024, 13:02:02 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 3 | Not Responding | New   | High     |             |
| 26/06/2024, 13:02:02 | Not Responding     | Highway - Camera 2                                   | Not Responding | New   | High     |             |
| 26/06/2024, 12:37:02 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 5 | Not Responding | New   | High     |             |
| 26/06/2024, 12:37:02 | Not Responding     | Highway - Camera 2                                   | Not Responding | New   | High     |             |
| 26/06/2024, 12:37:02 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 3 | Not Responding | New   | High     |             |
| 26/06/2024, 12:26:18 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 5 | Not Responding | New   | High     |             |
| 26/06/2024, 12:26:18 | Not Responding     | Highway - Camera 2                                   | Not Responding | New   | High     |             |
| 26/06/2024, 12:26:18 | Not Responding     | DirectShow Virtual Video Server [0.0.0.1] - Camera 3 | Not Responding | New   | High     |             |
| 26/06/2024, 11:21:19 | Humidity increased | Humidityincreased                                    | External Event | New   | Medium   |             |

This section provides a comprehensive report of all alarms generated within a specified date range. Users can utilize the search function to locate specific alarms easily.

- **Filter Button:** Activates when reporting is enabled, and the Query Engine is operational. It initiates the Hierarchical Column Filter which aids in data filtration based on Dynamic Tags. The filters in the dropdown adjust automatically based on the hierarchy of selected tags. Users can apply or clear filters as needed and close the filter dialog to discard changes.

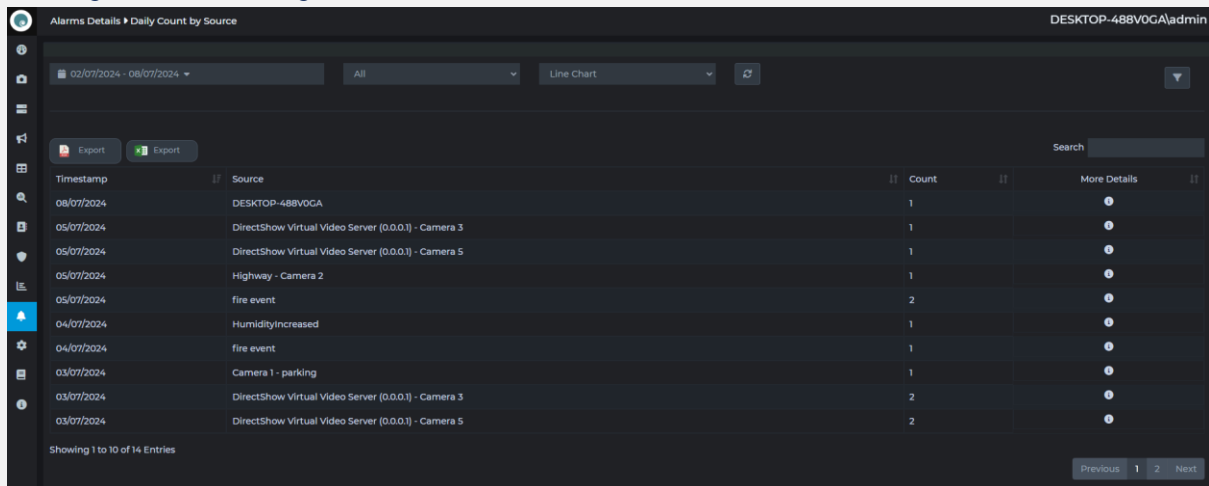
## Daily Count



Displays the count of daily events within the selected date range. Clicking the 'i' icon reveals the Alarm Detail popup, providing detailed insights into each event occurrence throughout the day.

- Filter Button:** Activates when reporting is enabled, and the Query Engine is operational. It initiates the Hierarchical Column Filter which aids in data filtration based on Dynamic Tags. The filters in the dropdown adjust automatically based on the hierarchy of selected tags. Users can apply or clear filters as needed and close the filter dialog to discard changes.

## Daily Count by Source

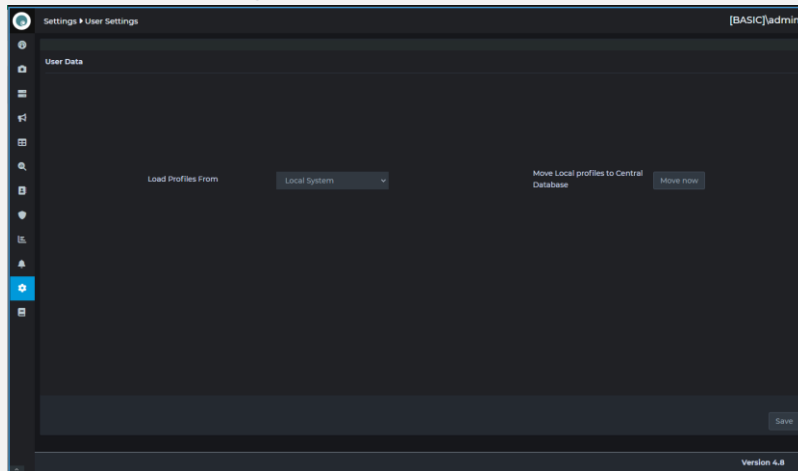


This feature presents the daily alarm count segmented by the source for the selected date range. Detailed alarm information for each camera on a given day is accessible through the *Alarm Detail* popup.

- Filter Button:** Activates when reporting is enabled, and the Query Engine is operational. It initiates the Hierarchical Column Filter which aids in data filtration based on Dynamic Tags. The filters in the dropdown adjust automatically based on the hierarchy of selected tags. Users can apply or clear filters as needed and close the filter dialog to discard changes.

# Settings

## User Settings

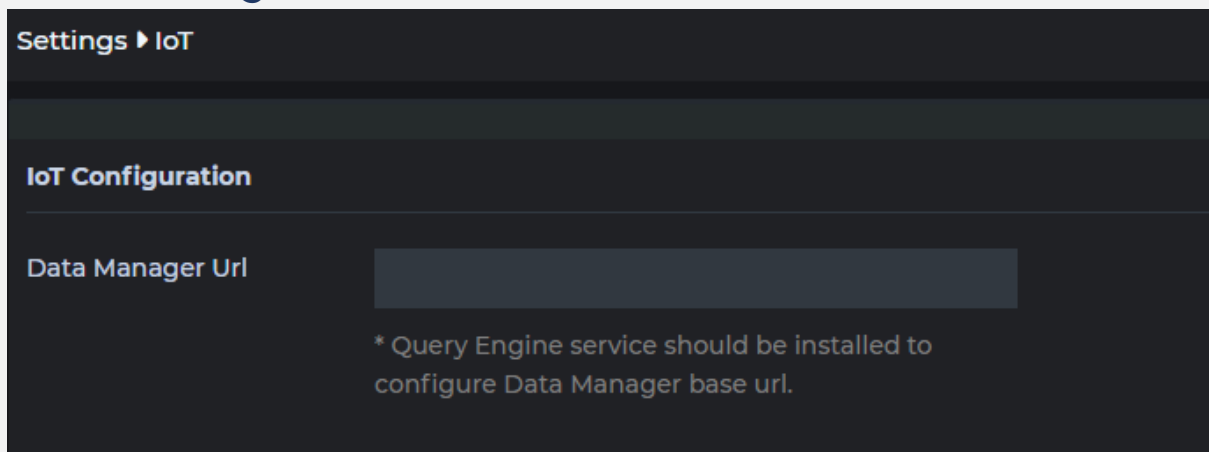


This section allows users to manage where their profiles are stored, enhancing accessibility and backup of user profiles.

- **Load Profiles From:** Users can choose to load profiles from either the current machine or a central database. Selecting the central database backs up the profiles to the DB.
- **Move Local Profiles to Central Database:** This option enables users to transfer their profiles from the local system to the central database. It facilitates uniform access to dashboards across different *Smart Client* installations. To initiate the transfer, click on *Move Now*.

**Note:** Central database option can be used only if Query Engine is licensed, and the service is running.

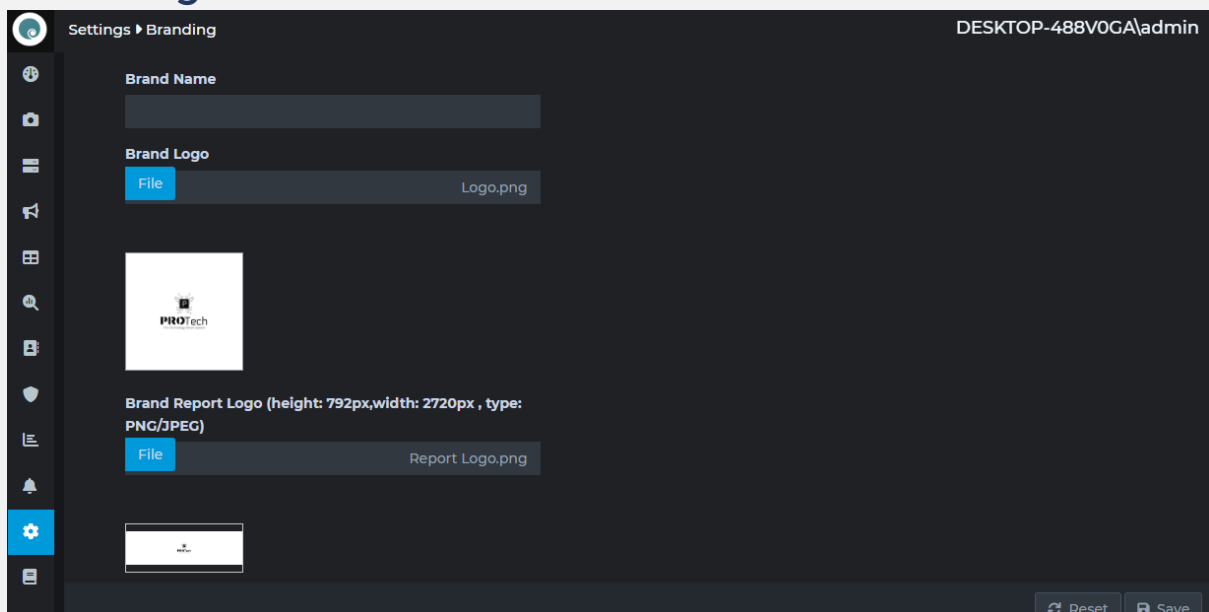
## Data Manager



The screenshot shows the 'Settings' menu with 'IoT' selected. Under 'IoT Configuration', there is a 'Data Manager Url' field with a text input box. Below the field, a note states: '\* Query Engine service should be installed to configure Data Manager base url.'

Configuration of the Data Manager is required for utilizing the new IoT 4.0 driver features. Begin by entering the address of the Data Manager Service to enable connectivity and functionality.

## Branding



The screenshot shows the 'Settings' menu with 'Branding' selected. The page has a dark theme. On the left is a sidebar with various icons, including a gear icon for settings. The main area contains the following fields:

- Brand Name:** A text input field.
- Brand Logo:** A file upload section with a blue 'File' button and a text box containing 'Logo.png'. Below it is a preview of a logo with the text 'PROTech'.
- Brand Report Logo (height: 792px,width: 2720px , type: PNG/JPEG):** A file upload section with a blue 'File' button and a text box containing 'Report Logo.png'. Below it is a preview of a report logo.

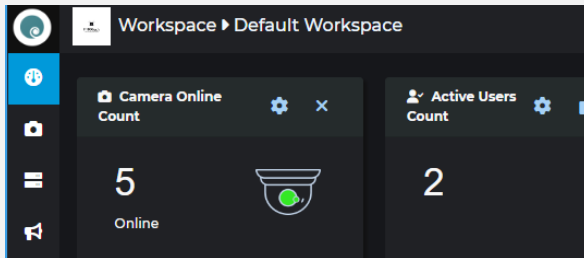
At the bottom right, there are 'Reset' and 'Save' buttons.

Branding settings allow customization of the workspace and reports to align with corporate branding.

- **Brand Name:** Enter the name that will appear at the top of the workspace.



- **Brand Title Logo:** Upload a logo that will appear at the top of the workspace. Use the *Choose File* button to upload and preview the logo.
- **Brand Report Logo:** Set a logo for the reports generated by O-Insights. The logo should be 2720x792 pixels in PNG or JPEG format. Preview the logo upon uploading.
- To apply or discard changes to branding, use the *Save* or *Reset* buttons, respectively.



- Once the Brand name and logo are saved, it will appear on the Workspace as shown above.

## License Info

 A screenshot of the 'Settings - License Info' page in the O-Insights interface. The page shows license details for 'Conexao'. It includes a table with columns: Product, Host ID, Type, Camera Licensed, Expiration Date, and Support Expiry Date. The data row shows 'O-Insights™ 5.0', a Host ID, 'Trial' type, '8 out of 50' cameras licensed, an expiration date of '16-10-2024 21:47:44', and a support expiry date of '18-09-2024 02:59:58'.
 

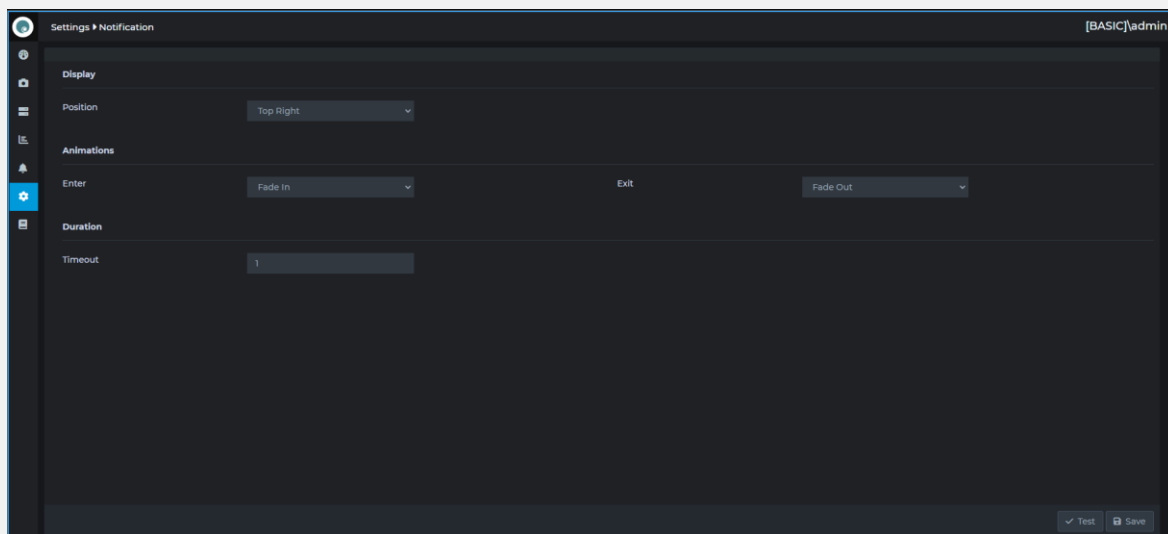
| Product         | Host ID | Type  | Camera Licensed | Expiration Date     | Support Expiry Date |
|-----------------|---------|-------|-----------------|---------------------|---------------------|
| O-Insights™ 5.0 |         | Trial | 8 out of 50     | 16-10-2024 21:47:44 | 18-09-2024 02:59:58 |

Displays detailed information about the O-Insights for VMS licensing.

- **Product:** Lists the Product Name and Version.
- **Host ID:** Displays the XProtect SLC associated with the license.
- **Type:** Indicates whether the license is Standard or Trial.
- **Camera Licensed:** Shows the number of cameras currently licensed versus the total permitted.
- **Expiration Date:** The date on which the license expires.
- **Support Expiry Date:** Indicates the end date of support services for the product.

**Note:** If the total number of cameras configured exceeds the limit allowed by your license, only the permitted number of cameras will be considered. Any additional cameras will be ignored until the license is upgraded to accommodate the extra devices.

## Notification Settings



This page allows users to customize how notifications are displayed within O-Insights for VMS.

- Customize the animation, position, and duration of notification pop-ups by choosing and adding the desired options.
- Test the notification settings to preview how notifications will appear by clicking on the *Test* button.

## Weather Settings

Configuration necessary for utilizing the Weather Widget with real-time data from OpenWeather with the OpenWeather API key.

- **URL:** Input the URL for the OpenWeather API. The Following APIs are supported.
  - <https://api.openweathermap.org/data/2.5/onecall>
  - <https://api.openweathermap.org/data/2.5/weather>
- **API Key:** Enter the provided API key to authenticate requests to the OpenWeather service.
- **Save or Reset** the settings as needed to initiate or discard changes.

# Config File

## Understanding the Config File

The config file plays a crucial role in the customization and functionality of the O-Insights for VMS. Located typically at *C:\Program Files\Milestone\MIPPlugins\O-Insights for VMS\OInsightsdll.config*, this file contains several key-value pairs that users can modify to tailor advanced properties to their specific needs.

Changes in this file can affect various aspects of the system's behaviour, so it's essential to understand what each key represents and the implications of modifying its value. Always ensure to back up the original configuration before making any changes to prevent any unintended system behaviours.

## Keys and Functions

| Key  | Function  | Default     |
|--|---|-------------|
| <code>&lt;add key="LazyLoading"&gt;</code>                                 | Enable/disable lazy loading. Lazy Loading is used to load dashboard faster as only few key properties of the devices are picked up first and allows the dashboard to load. If disabled, all properties are loaded before dashboard is rendered. | True        |
| <code>&lt;add key="ShowNotifications"&gt;</code>                           | Show notification alerts. Leave as <i>true</i> to enable or <i>false</i> to disable.  | False       |
| <code>&lt;add key="ShowNotificationForQueryEngineNotConnected" &gt;</code> | Show notification when Query Engine is not connected when smart client is opened, and O-Insights plugin is loaded.  | True        |
| <code>&lt;add key="AlarmCloseReasons"&gt;</code>                           | To provide predefined alarm reasons. Applicable only to O-Insights alarm console and alarm widget. Reason is recorded as part of alarm activity.  | Maintenance |
| <code>&lt;add key="FetchUpdatedData"&gt;</code>                            | The inventory tab in the workspace plugin fetches camera and its detailed   | False       |

|  |  |                                    |
|--|--|------------------------------------|
|  | properties. By setting this key value as true, O-Insights will always query XProtect to fetch each property value of every device. If false, then it will pick from O-Insights Query Engine cache. Using Query Engine cache is always faster in performance and recommended. Periodic Cache update is required to keep the cache regularly updated.                      |                                    |
| <code>&lt;add key="IgnoreEvents"&gt;</code>  | To ignore certain events from generating notification updates from dashboard. Specify all events that are to be ignored. For instance, to ignore motion detection, add <i>Motion Detected</i> . Add multiple events by comma separating them. Used to improve performance if there are frequent triggering of certain events which need not be tracked in the workspace. | Motion Detected,<br>Motion Stopped |
| <code>&lt;add key="IgnoreAlarms"&gt;</code>  | To ignore certain alarms from generating notification updates from dashboard. Specify all alarms that are to be ignored. For instance, to ignore motion detection, add <i>Motion Detected</i> . Add multiple alarms by comma separating them. Used to improve performance if there are frequent triggering of certain alarms which need not be tracked in the workspace. | Motion Detected,<br>Motion Stopped |
| <code>&lt;add key="EnableCaching"&gt;</code> | Get Camera and Recording Server data from Query Engine.  | True                               |

|  |   |       |
|--|---|-------|
| <code>&lt;add<br/>key="DelayInUpdateCameraDetails"&gt;</code>  | The amount of time to wait between camera details fetch from XProtect in milliseconds. This option reduces resource load. Default is set to 100ms and in case of performance issue, delay can be increased (which will result in more interval between update of camera details). | 100   |
| <code>&lt;add<br/>key="EnableToggleFailoverServer"&gt;</code>  | To enable failover server toggle (In case XProtect is configured to have a failover mechanism by adding same camera to multiple recording servers then this option is used to show the accurate count of the cameras), set to true.   | False |
| <code>&lt;add<br/>key="EnableDebugTools"&gt;</code>  | To enable Caching Status set to true. The Caching Status functionality lets the users track the data loading progress, which can be handy in case details is being loaded for a large volume of Cameras and there is no Query Engine running at site.                             | False |
| <code>&lt;add<br/>key="MaximumLegendsToDisplayForCharts"&gt;</code>  | Maximum number of legends that will be shown in the chart.  | 20    |
| <code>&lt;add key="ReportingEnabled"&gt;</code>  | Set as <i>true</i> to enable reporting in the O-Insights workspace plugin. A reporting license is required.   |       |
| <code>&lt;add key="AvailableStatusNormalValue" value="60" /&gt;<br/>&lt;add key="AvailableStatusWarningValue" value="10" /&gt;<br/>    &lt;add key="AvailableStatusCriticalValue" value="0" /&gt;</code> | Displays storage status, with percentage greater than 60% then as normal, between 10% and 60% as warning and less than 10% as critical  |       |

|  |  |                               |
|--|--|-------------------------------|
| <code>&lt;add<br/>key="EnableCommandCenter" value&gt;</code>   | <b>Set as <i>true</i> to enable or <i>false</i> to disable.</b>  | <b>False</b>                  |
| <code>&lt;add<br/>key="CommandCenterServiceUrl" value&gt;</code>   | <b>O-Insights Command center URL</b>   |                               |
| <code>&lt;add<br/>key="DefaultSequenceIntervalInMinutes"&gt;</code>  | <b>When creating an incident for an alarm in the Command Center, specify the duration of recording to be added to the sequence.</b>      | <b>5</b>                      |
| <code>&lt;add<br/>key="AutoAcknowledge" value&gt;</code>   | <b>When creating an incident for an alarm in the alarm manager, the system can be configured to automatically acknowledge the alarm.</b> | <b>True</b>                   |
| <code>&lt;add<br/>key="IoTChartDateFormat" value/&gt;<br/>&lt;add<br/>key="IoTChartTimeFormat" value/&gt;</code> | <b>This is the datetime format to be used for displaying dates in IoT charts.</b>  | <b>YYYY/MM/DD<br/>H:mm:ss</b> |
| <code>&lt;add<br/>key="DurationForSnapshotInMinutes" value="1" /&gt;</code>                                      | <b>The permissible time deviation for camera images from the actual required time, measured in minutes.</b>                              |                               |
| <code>&lt;add<br/>key="DefaultLPREnabled" value/&gt;</code>  | <b>Set to true if LPR Enabled</b>  | <b>False</b>                  |

# Troubleshooting

- **Why does the Camera Status Count widget show fewer cameras than the actual count?**
  - When the number of licensed cameras is fewer than the total number of cameras, the widget will only display the number of cameras covered under the license. Another potential reason could be user permissions that restrict access to certain cameras.
- **Why does the Inventory show fewer cameras than the actual count?**
  - Similar to the Camera Status Count widget, if the number of licensed cameras is fewer than the total number, only the licensed cameras are displayed. Another potential reason as above, could be user permissions that restrict access to certain cameras. Additionally, if cameras are not added to the specified camera groups in the Inventory settings, this can result in fewer cameras being shown.
- **What are the steps to take if a white screen appears in the O-Insights tab?**
  - Verify the system meets all prerequisites or try restarting the application.
- **What should you do if you configure a dashboard, and some widgets appear to be missing?**
  - Ensure administrative permissions are granted to the directory located at *C:\ProgramData\CTS*. If the issue persists, check the specific user folder within the CTS directory and grant full rights to both the "Administrator" and "Users" for each file.
- **Why are some sidebar tabs, specifically those related to the Reporting Service (Query Engine), not visible?**
  - Check that the Query Engine is running properly.
  - If the Smart Client has been inactive for over an hour, refresh the page.
  - Verify that the features are included in your O-Insights License.
  - Confirm that user roles have the necessary permissions to view the tab.



- Ensure that the connection configuration matches the Query Engine settings, including the URL and credentials.
- If the Query Engine (QE) is on a different system, check that port 9011 is open and the Query Engine APIs are accessible by visiting *http://<QEAddress>:9011/api/query/getSystemStatus* in your browser.
- **What should be done when installing a plugin on a previously installed version and an error occurs instructing to close all client components?**
  - Open the Task Manager and close any client components or folders related to the plugin or client.
- **How to address sluggish performance or lag in the plugin?**
  - Improve performance by setting the "Enable-gpu" key to true in the *OInsightsdll.config* file by adding `<add key="Enable-gpu" value="true"/>`.
- **Why is the BASIC Administrator user not able to see all recording servers in a multisite architecture?**
  - This is due to XProtect restrictions on BASIC users. Only Domain Administrators have access to view all recording and storage details across sites.
- **Why is the Custom Properties tab not being displayed?**
  - If the Smart Client and Management Client are installed on separate systems, ensure that the necessary plugins are also installed on the system hosting the Management Client to make the Custom Properties tab visible.