



QUANERGY®

Qortex – Milestone Plug-in User Guide



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Notices

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Revision History

Version	Date	What Changed	Change Location
1.0.43.30904	09/09/2023	n/a	n/a

Text Styles

In this guide certain fonts are applied to provide a visual means to interpret text. See [Table 1. Text Styles and Meanings](#).

Table 1. Text Styles and Meanings

Font Style	Meaning
Blue underline	Hyperlink that opens a file outside of this document. Typically, this is a web page.
Italic underline	Hyperlink that moves you to a location within the document. Typically, this is a section, table, or figure.
Bold	General term for emphasis. Typically, this introduces a definition or description.
Bold	An item in a Graphical User Interface (GUI). This includes page, window, or panel labels, fields where you enter or select information, or checkboxes and buttons you click.
Bold colors	Examples of colors used in GUIs.
<i>Italic</i>	Identifies book or section titles. Provides emphasis for terms or ideas. Used to identify options for selecting from a menu, entering in a field, or replacing in a command string.
<code>Code <i>italic</i></code>	Identifies a variable, where the intent is you provide a literal value in place of the variable. Used in paragraphs and code strings.
<code>Code</code>	Examples of commands you enter in a field or terminal, or responses from the system.
<code>Code on gray</code>	Examples of commands you enter into a command line interface (CLI) terminal or responses from the system.
<div style="border: 1px solid gray; padding: 2px;">Text in box</div>	Notes and Tips. Useful related information. Format used to call attention to the content or to describe side-bar content.

Font Style	Meaning
 <p>Text in box</p>	<p>Cautions and Warnings. Read these and comply with the information provided. Comply with Cautions or Warnings to prevent equipment damage or injury to humans and other living things.</p>

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1. Introduction

The following section introduces the Qortex – Milestone plug-in.

Qortex Plug-in Features

The Quanergy Qortex plug-in for Milestone XProtect 2022 offers the following features:

- Retrieve Sensors and Zones from Qortex and send to XProtect.
- Retrieve events from Qortex and send to XProtect.
- Plot Qortex Sensors and Zones on Milestone maps.
- Create Qortex Event Zones in XProtect Smart Client.
- Overlay tracking of live Qortex assets in Milestone maps.
- Encrypted connection using the Quanergy Qortex DTC API
- Supports connection for up to 8 Qortex servers.

Qortex Plug-in Limitations

The Qortex plug-in for Milestone XProtect has the following known limitations:

- Properties of Qortex Sensors and Zones are read-only in the XProtect Management Client.
- Due to auto-synchronisation of Sensors and Zones from Qortex to Milestone, a Qortex server must be disabled, and any child Sensors and Zones deleted before the server may be deleted from XProtect Management Client.
- The primary Qortex sensor will not be visible on Qortex Maps in Xprotect Smart Client.
- Zones or Sensors deleted from the Management Client will be re-synced automatically while the Qortex server is enabled:
 - Zones may be deleted from the Qortex Map in the XProtect Smart Client.
- Due to Milestone UI design, options for editing Zones, Sensors and Trackers may be obscured on the Qortex map in matrix Views configured in the XProtect Smart Client:

- As a workaround, double-click the map while in Setup mode to expand the map and see all Qortex configuration options. Once configured, double click the map again to restore the matrix view.
- When connecting a Qortex 2.3 server to XProtect in Secure Mode, please configure the user credentials created in Qortex when Secure Mode is enabled.

The Qortex plug-in is installed on the XProtect system and connects to XProtect using the Milestone MIP SDK.

System Architecture

Figure 1 shows the system architecture of the Milestone Plug-in.

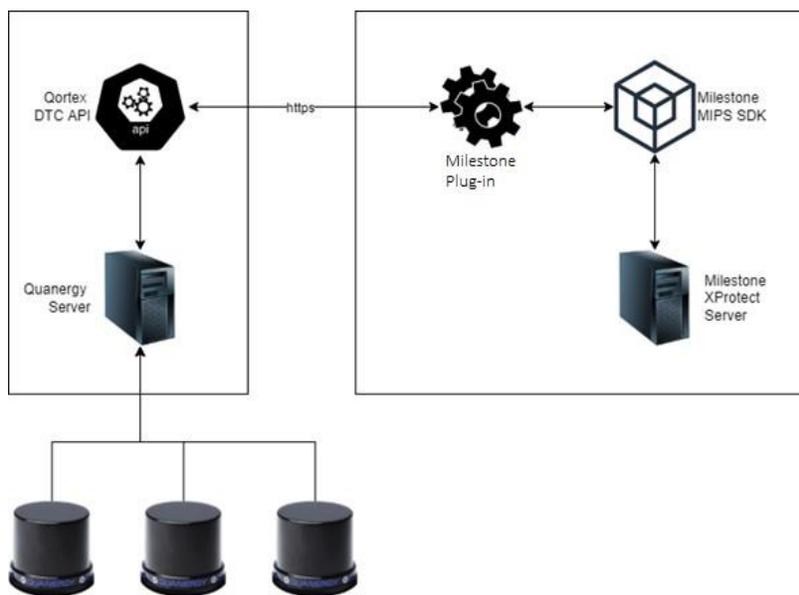


Figure 1. System Architecture

2. Installation

The following section details the steps required to install the plug-in on the XProtect server.

Pre-requisites

The following software versions are required for the plug-in:

- Milestone XProtect 2022R2
- Quanergy Qortex server v2.2 or 2.3
- Microsoft .NET Framework v4.8

Firewall

The connection to Qortex servers uses port 8080 by default. Please configure a firewall rule on the Milestone server to allow communication using this port.

Installing the Plug-in

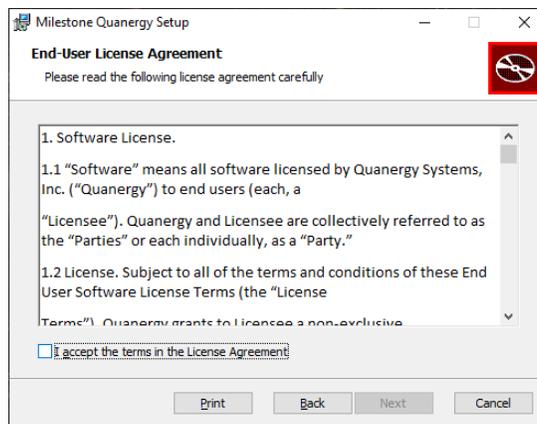
The plug-in installation is performed on the XProtect server. To install the plug-in, carry out the following steps:

Warning: The installation will restart the Event Management Service which might result in missed alarms. Please perform the installation during a maintenance window.

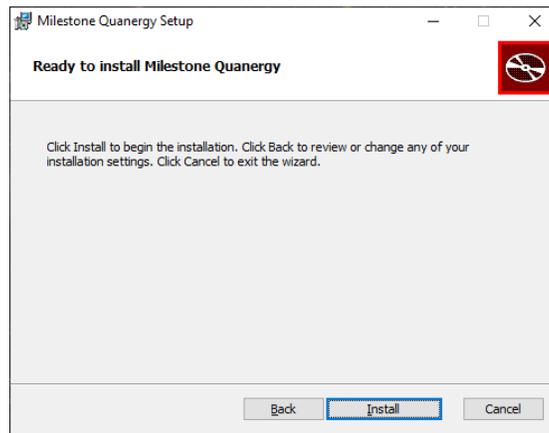
1. Double click the installer to open.



2. Check the **End User License Agreement** checkbox to agree to the terms and conditions. Click **Next**.



3. Click **Install** to proceed with the installation.



4. A success screen will be displayed when installation completes.

Note: Installation log files are located in the Windows user's Temp folder (%TEMP%) and can be used to troubleshoot installation issues.

Uninstalling the Plug-in

The plug-in may be uninstalled by:

- Re-running the installer
- Opening **Control Panel/Programs and Features**, right-clicking **Milestone – Quanergy** and selecting **Uninstall**.

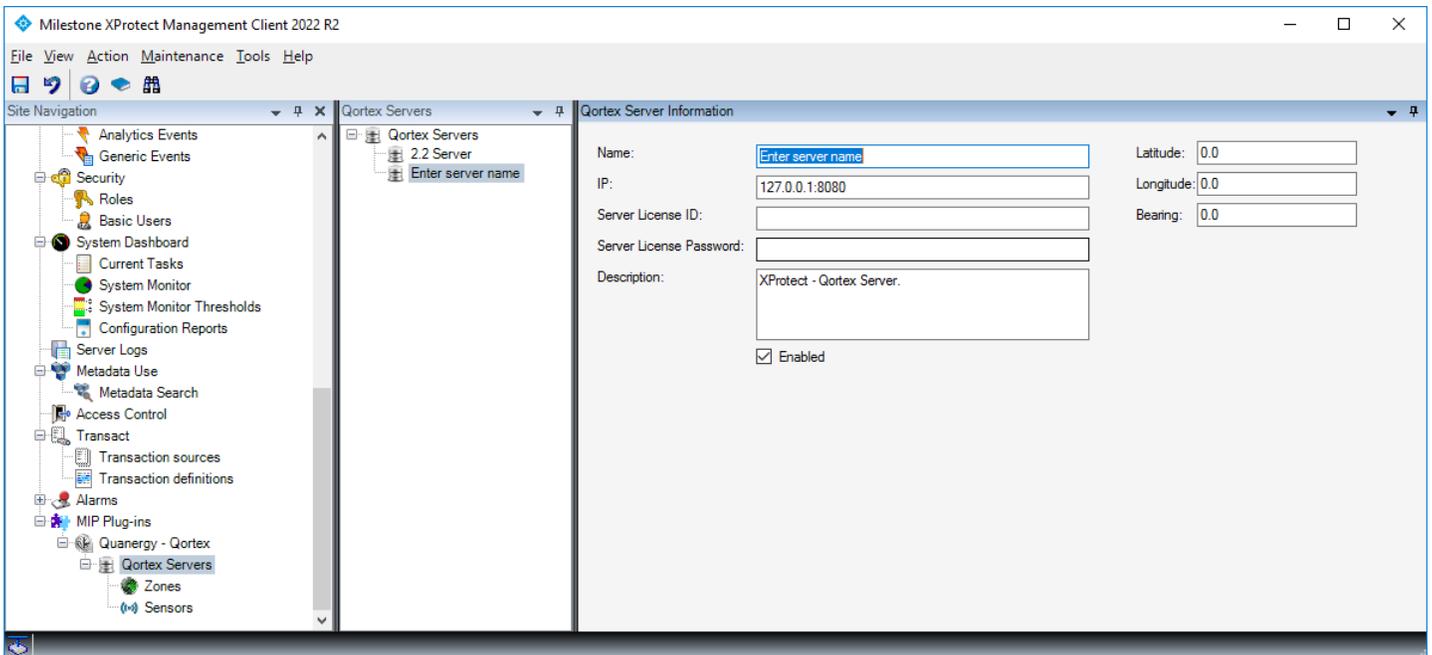
3. Configuration

The following section details the steps required to configure Qortex objects on the XProtect server.

Add Qortex Server to XProtect

To add a Qortex server to XProtect, carry out the following steps after installation:

1. Login to the XProtect Management Client.
2. Expand **MIP Plug-ins** at the bottom of the left margin.
3. Right-click **Qortex Servers** and select **Add New**. A form appears in the main section of the Management Client allowing you to configure the server.



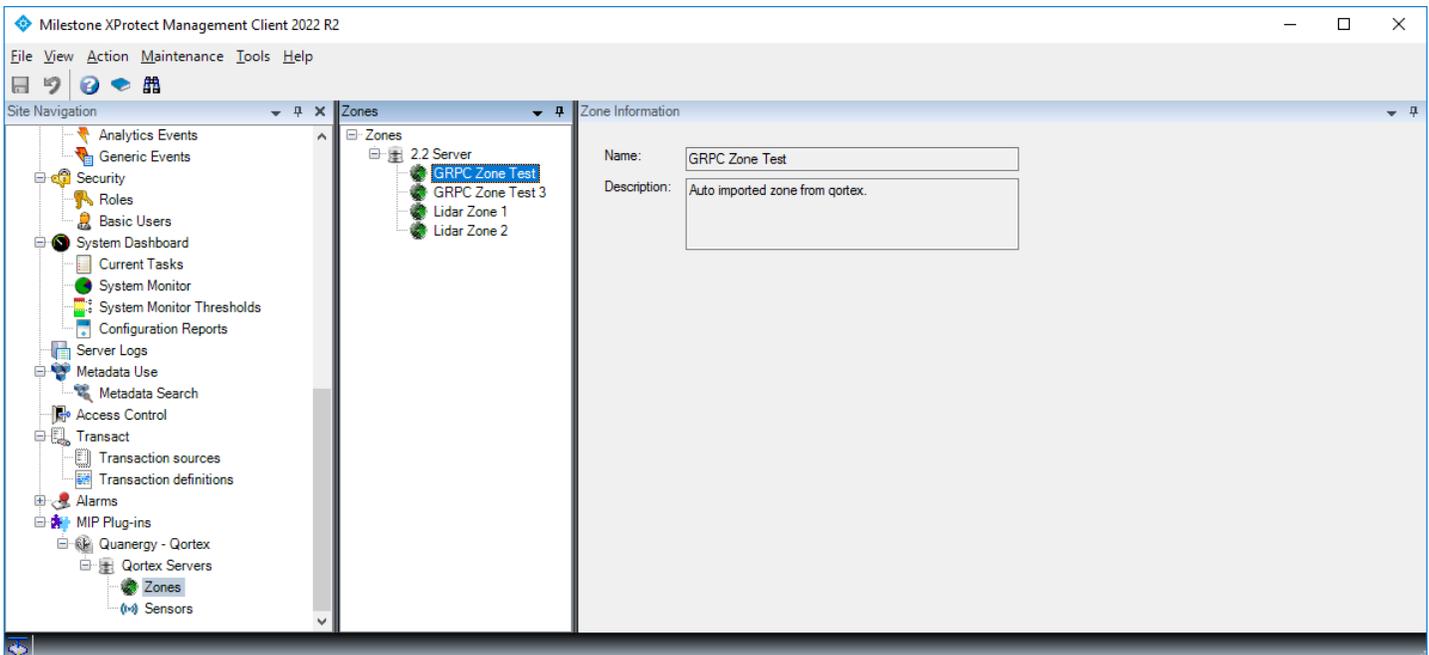
4. Enter the following details for your Qortex server:

- **Name**
- **IP**
- **Server License ID**
- **Server License Password**

- **Description**
- **Enabled** (checked by default)
- **Latitude**
 - Represents the latitude of the primary sensor.
- **Longitude**
 - Represents the longitude of the primary sensor.
- **Bearing**
 - Represents the bearing of the primary sensor.

Note: If you are connecting to a Qortex 2.3 server with Secure Mode enabled, please configure the user credentials created in Qortex when Secure Mode was enabled.

5. Click the **Save** icon. The Qortex server is saved in XProtect.
6. Qortex **Zones** and **Sensors** will be imported automatically to XProtect on successful connection to the Qortex server.



7. **Zones** and **Sensors** subsequently added to the Qortex server will be synchronized automatically to XProtect.

Note: If the server fails to connect, or Qortex Zones and Sensors are not imported to XProtect, right-click the Event Server from the Windows' taskbar and select **Show MIP logs**. The log messages journaled here will assist with troubleshooting.

Licensing

The Qortex – Milestone plug-in requires a valid Qortex server license to run. When initiating connection to a Qortex server, a license check will be carried out by the plug-in for a valid Qortex license. If an invalid or no license is detected on the Qortex server, the plug-in will not work. Please check the **MIP logs** to validate the Qortex server you are connecting to has a valid license.

Delete Qortex Server from XProtect

1. To delete a Qortex server, disable the server by unchecking the **Enabled** button. This will stop the automatic synchronization of zones and sensors.
2. Proceed with deleting each individual zone and sensor from Milestone.
3. Once all zones and sensors are removed you can now proceed with deleting the Qortex Server.

Note: If Qortex Sensors and Zones are deleted from the Management Client while the server is enabled, they will be re-synced to XProtect.

4. Alarm Definitions

The following section details the steps required to configure Qortex alarms on the XProtect server.

The Qortex – Milestone plug-in supports triggering Qortex Alarms in the XProtect Smart Client. The following alarm types are supported by the plug-in:

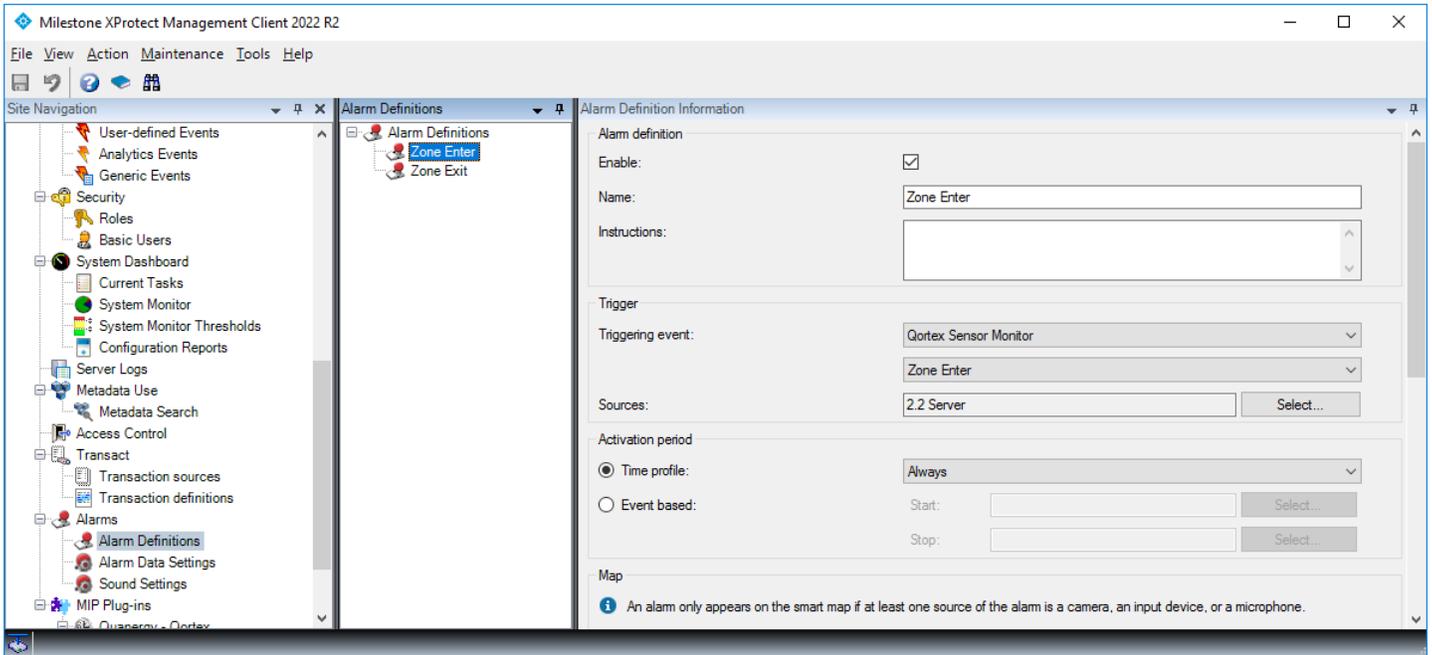
- **Zone Enter**
- **Zone Exit**

Configuring Qortex Alarms

The following is an example of how to create a simple Alarm for Qortex servers in XProtect. For more information on **Alarm Definitions** options in XProtect, please see the Milestone documentation.

To create a simple Alarm for Qortex server/s in XProtect, carry out the following steps:

1. In the Management Client, expand **Alarms** from the left margin.
2. Right-click **Alarm Definitions** and select **Add New**. The New Alarm Definition screen appears.
3. Configure the following:
 - **Name**
 - **Triggering event:**
 - Select **Qortex Sensor Monitor** from this drop-down
 - Select **Zone Enter** or **Zone Exit** from the drop-down underneath
 - **Sources:**
 - Click the **Select** button. **Select Sources** screen appears.
 - Go to **Servers** tab and expand **Qortex Servers**.
 - Select the Qortex server/s in your configuration you wish to configure the alarm for and click the **Add** button. Select **All Qortex Servers** if you wish to trigger the alarm for all Qortex servers.
 - Click **OK** to confirm your settings.



4. Click the **Save** icon to save your Alarm configuration. The alarm is configured and will appear in the Smart Client each time it is triggered on the Qortex server.

5. Qortex Maps in XProtect

The following section details the steps required to configure Qortex maps on the XProtect server.

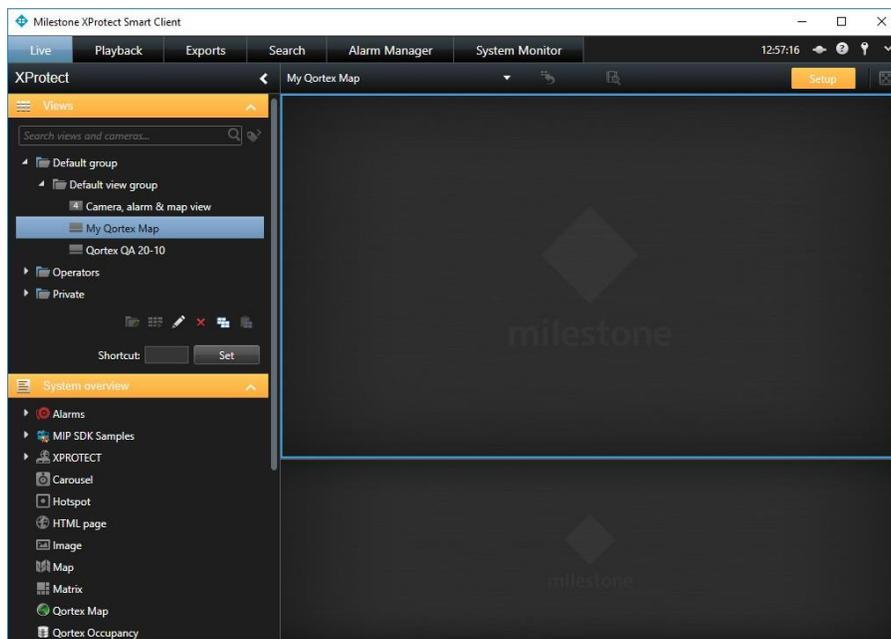
The Qortex – Milestone plug-in introduces **Qortex Map** and **Qortex Occupancy** panes into XProtect, which may be configured in a **View** in the XProtect Smart Client.

Configuring Views in XProtect

The following is an example of creating a **View** in XProtect containing Qortex panes. For more information on creating and editing XProtect Views, please see the Milestone documentation.

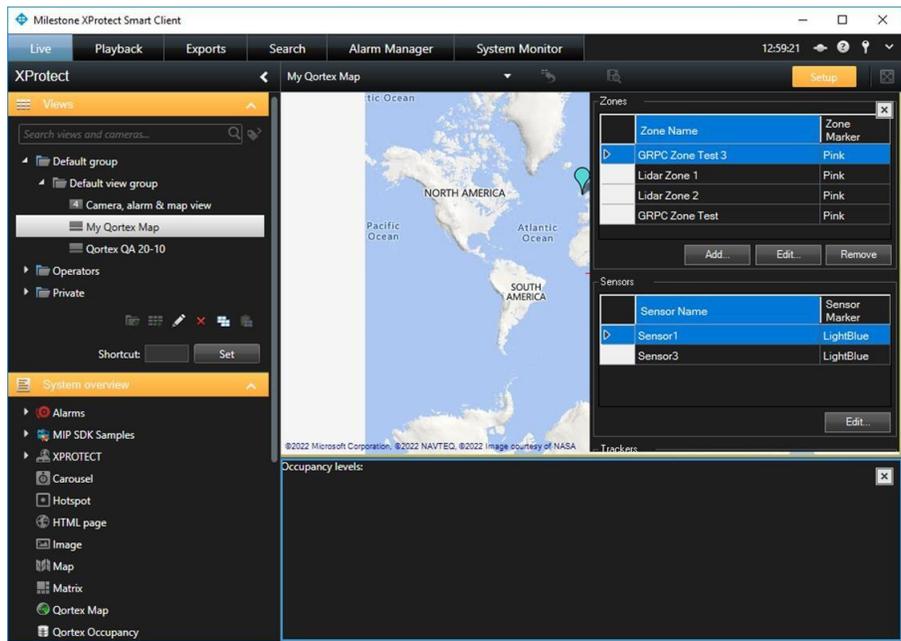
To configure a simple View in XProtect for the Qortex plug-in, carry out the following steps:

1. In the Smart Client, select the **Live** tab and activate **Setup** from the button at the top right of the view.
2. Right-click **Default view group** from the left margin and select **New View**.
3. Select a suitable ratio setting, and the number of panes for the view. (E.g., **1 + 1** for Qortex Map and Occupancy)
4. Assign a name for the view.



5. In the **System Overview** section, drag **Qortex Map** onto a pane of the view.

6. Drag **Qortex Occupancy** onto another pane of the view.



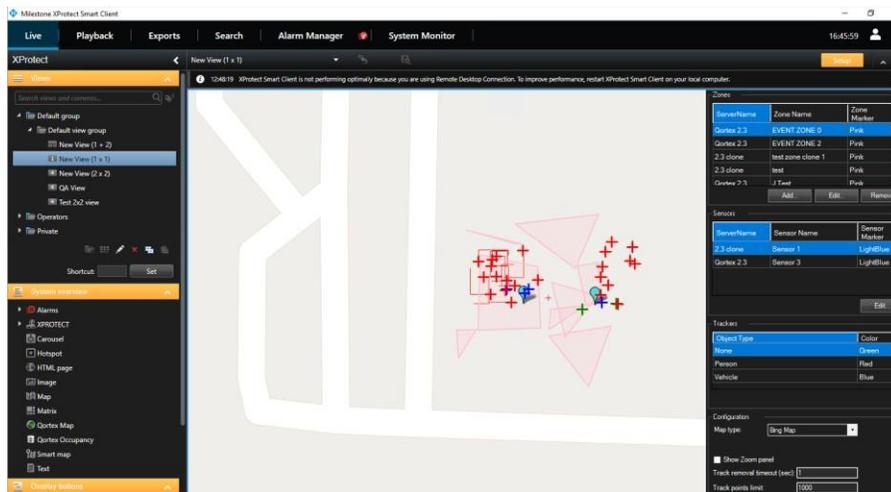
7. Configure any additional panes as required for your view, e.g., **Alarms** pane, **Camera** stream etc.

8. Save the view. The view is saved and may be accessed from the Smart Client.

Customizing Qortex objects on Map

Qortex objects may be customized to display in several colors on the map. To change colors of Qortex objects on the map, carry out the following steps:

1. In the Smart Client, select the **Live** tab and activate **Setup** from the button at the top right of the view.
2. Select a view that contains a Qortex Map.



3. The configuration options are displayed on the right-hand panel.

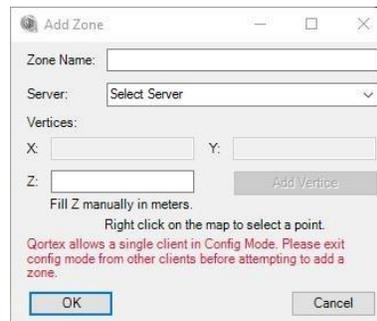
Note: If the Qortex Map is open in a matrix View in XProtect, the Qortex Sensor and Zone configuration options may be partially obscured. As a workaround, please double-click the map to expand to full-screen view to configure. When configuration is complete, double-click the map again to restore the matrix view.

Creating Qortex Event Zones on a Milestone Map

Note: Please ensure any connected Qortex clients are not in Configuration Mode before adding or deleting Qortex Zones from Milestone.

To create a Qortex Event Zone on the Milestone map, carry out the following steps:

1. On the Zone section click Add. A new **Add Zone** window will appear.
2. In the new window, type the zone’s name. Select the server and enter the **Z** height in meters.
3. Right-click on the map to select the first point for your polygon and click **Add Vertice**.



4. Continue to add the vertices as above, in a clockwise direction on the map.
5. Once all the points are selected and the polygon is complete, click **OK** to save the changes.
6. The new zone will appear in both Milestone and Qortex.
7. To change a zone color click **Edit** and select the new color.
8. To remove a zone, select the zone from the list and click **Remove**.
9. To edit the color of sensors, select a sensor from the list and click the **Edit** button.
10. If you wish to use a different Map provider, please do so by selecting a different **Map Type**.
11. We can change the value of **Track Removal Timeout** to set the time for which object disappears from the map when stop tracking. This time is in sec.
12. If you wish to change the limit of tracks being displayed simultaneously you can do that by changing the value in **Track Point Limit**. Please note that a high limit might decrease performance.

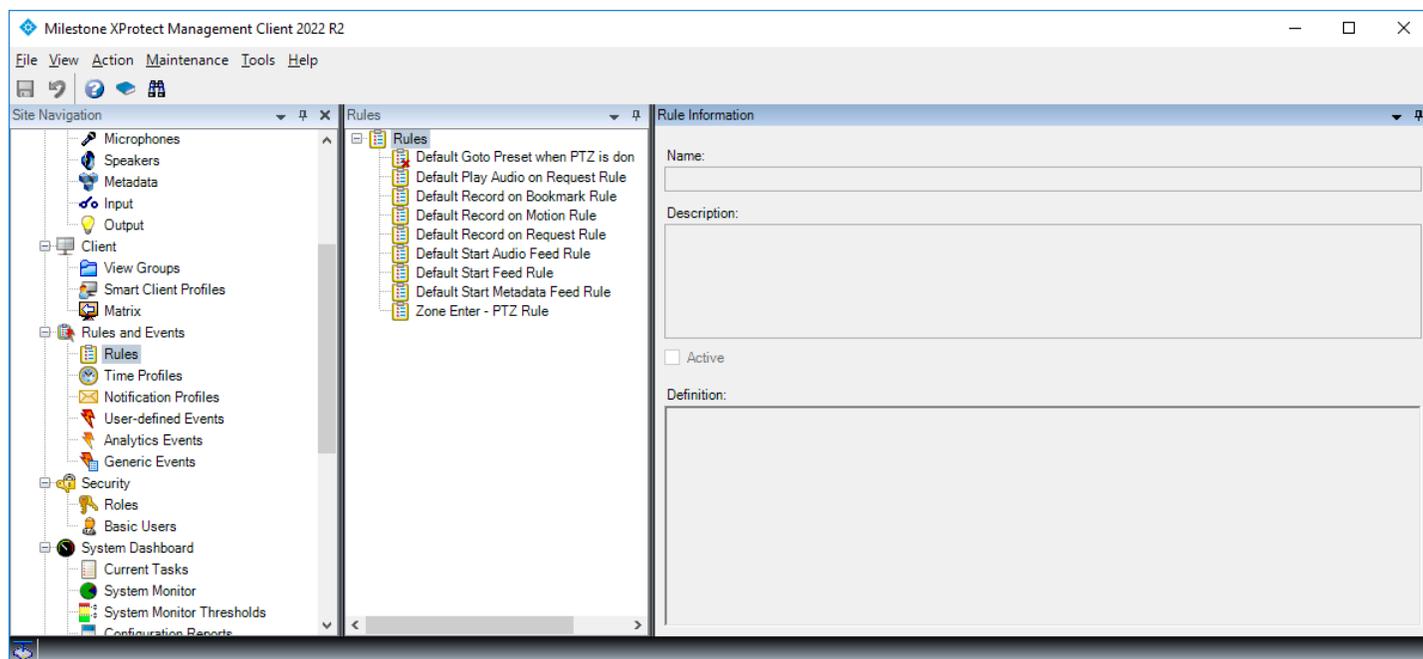
6. XProtect Rules

Milestone XProtect allows Rules to be configured which may trigger an action on the server when an alarm is logged. The Qortex plug-in supports configuration of XProtect rules, e.g., driving a camera to a preset when a tracked object enters a Qortex Zone.

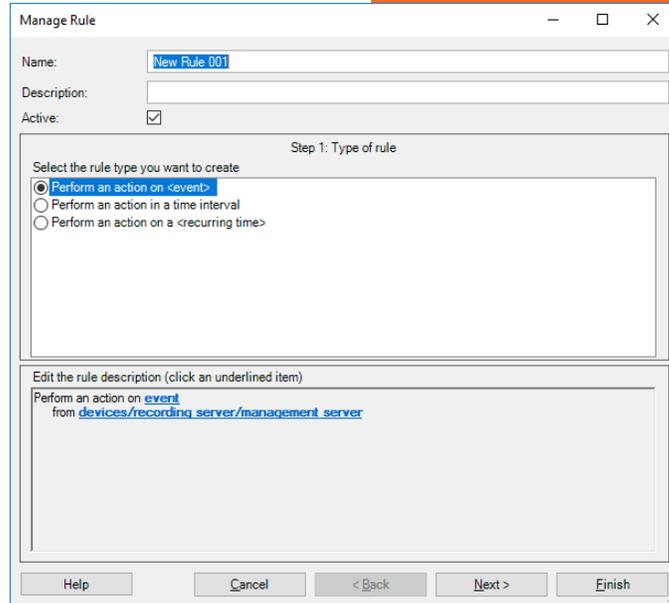
Configuring Rules in XProtect

The following is an example of creating a **Rule** in XProtect for a Qortex event. For more information on creating and editing XProtect Rules, please see the Milestone documentation.

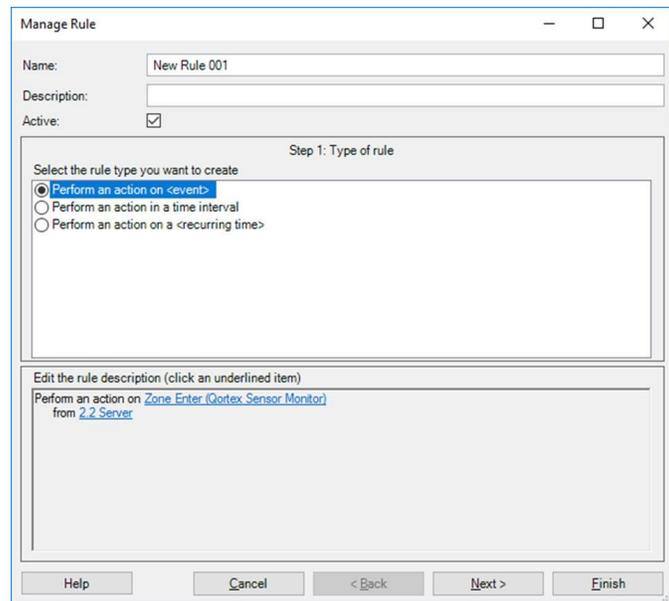
1. In the Management Client, expand **Rules and Events** from the left margin.
2. In Rules, right click and select **Add Rule**.



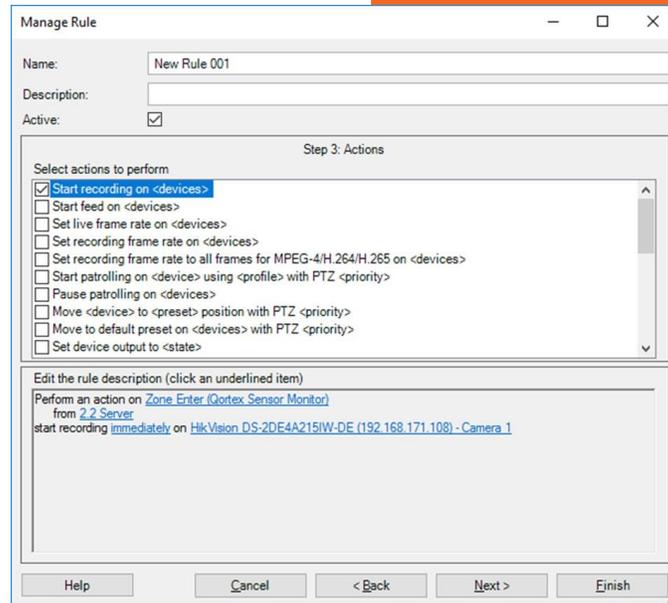
3. A new window appears to guide you through adding a rule.



4. Type the rule’s name and select the first option. “Perform an action on Event”.
5. On the bottom panel click on Event and expand Quanergy – Qortex and then Qortex Sensor Monitor.
6. Select **Zone Enter**.
7. Click on from “devices...” and select your server.
8. It should now look like this:



9. Click **Next** and select your schedule in the next screen.
10. Click **Next** and select a built-in action that you wish to perform.



11. Once your configuration is complete. Click **Finish** to save the new rule.



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