O-INSIGHTS™

O-Insights™ Reporting – 5.0 User Guide

Contents

About O-Insights Reporting Engine

O-Insights™ Reporting Engine is a reporting engine designed to work natively with XProtect that facilitates automated report generation for Access Control Events, Alarms, Events, Audit Data, Bookmark, Evidence Lock, Camera Details and Health, Camera Status Count, Devices, Disabled Devices, Recording Server Details and Health, Storage, User, LPR and IoT Analytics. Reports can be created and accessed using O-Insights plugin in the XProtect smart client.

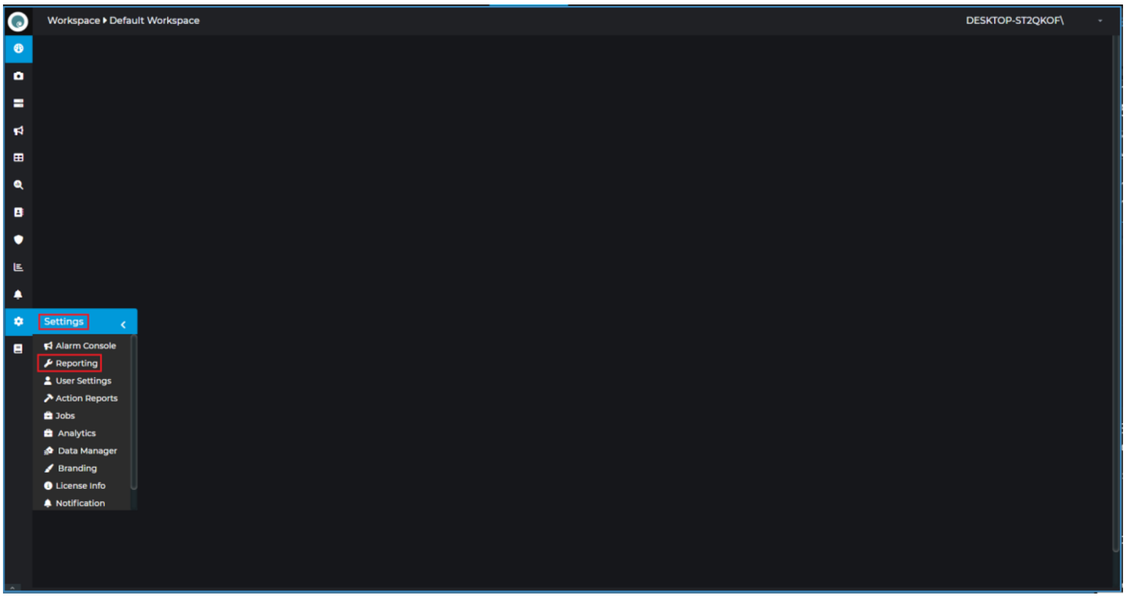
Installation

For installation instructions and prerequisites, please refer to the *Installation Guide*.

> **Note:** If your API gateway URL differs from the VMS Server URL, you will need to manually update the `QueryEngine.exe.config` file or make the necessary changes via the Query Engine Configuration Tray Tool.

Report Configuration

Report Configuration helps to configure the settings for the entire reporting engine like Date/Time Formats, Email Configurations, Reporting permissions for Users and Roles, Multisite permission, and the Storage path of the shared drive where the reports generated need to be stored (Default Path is *C:\Program Files\Reports* on the machine on which Query Engine is installed). This can be accessed by expanding the settings menu as shown in the image below:



Report Configuration

Settings

Reporting

Reports Settings lets the users configure various reporting-related settings.

Reporting Engine Config

- *Reporting Engine:* The reporting engine that is to be used. Set it to default for the O-Insights Reporting Engine.
- *Storage Path:* Path where a report is saved. The Default path is C:\Program Files\Reports. Any shared folder path can be provided here.

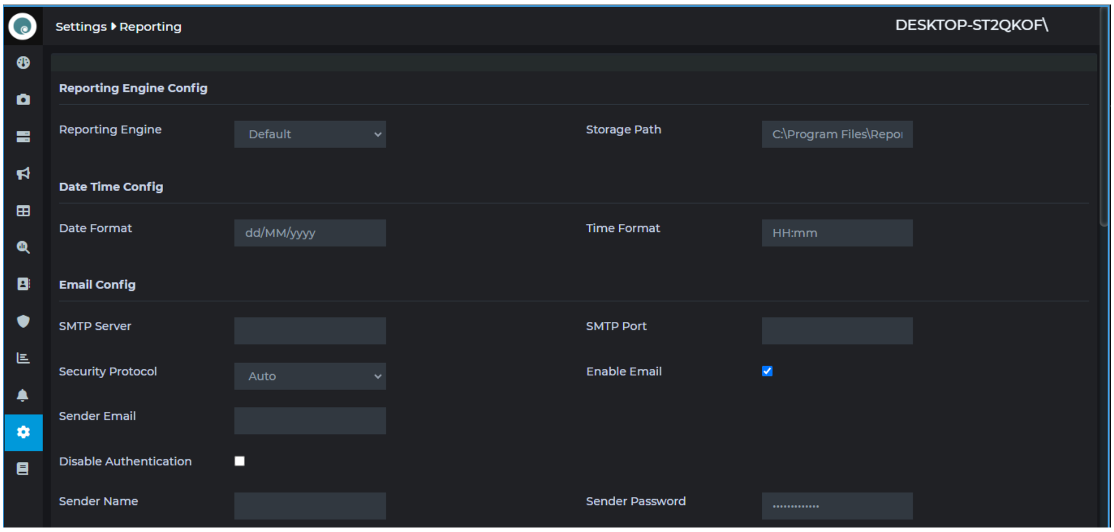
Date Time Config

- *Time Format:* The time format in *HH:mm,* where HH denotes the hour and mm the minutes.
- *Date Format:* The date format in *dd/MM/yyyy* where dd denotes the date, MM the month, and yyyy the year.

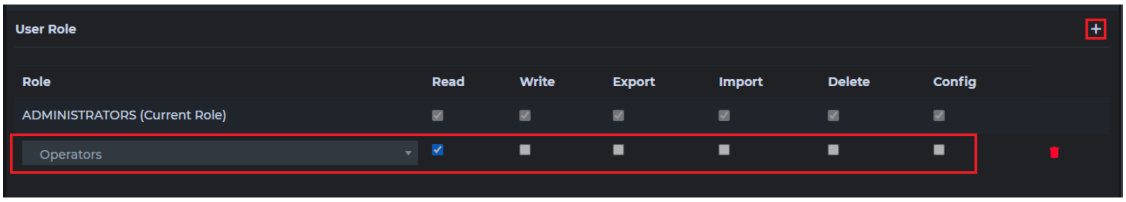
Email Config

- *Sender Email:* Email of the sender’s account, from which the Emails will be mailed.
- *Sender Password:* The sender's account password.
- *SMTP Server:* SMTP Server address.
- *SMTP Port:* SMTP Port number.
- *Security Protocol:* Security protocol.
- *Disable Authentication:* Disabling authentication removes the requirement for user credentials for sending email. This can be used in case the sender does not have a password.
- *Enable Email:* Enable/disable email of reports.

Email Settings needs to be correctly configured with the *Enable Email* checked for automatic emailing for scheduled reports.



Permissions for other Roles and Users can be managed from the below settings:

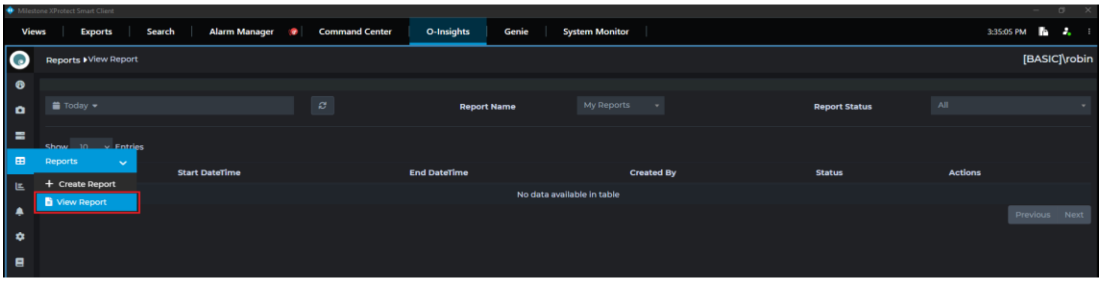


User Role

Click on + to add another Row from which the admin can select a different Role for which permissions can be selected from the checkbox

Example: A user with an operator role will only be able to *View Reports* created by a user with an Administrator role. He will not be able to edit the report configurations and will also not be able to *cancel* or *delete* the report.

The user can access all the reports whose *Access Types* are *Public* from the *View Report* section.

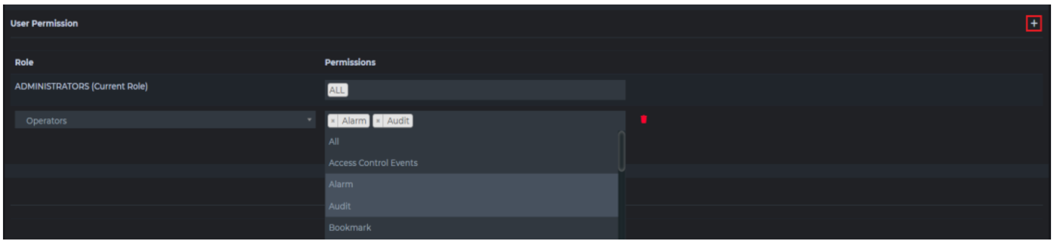


View Report

In case, the Write permissions are granted for the Operator role then the user will be able to create a report / edit a previously created report / cancel the previous run of the report. The user is not allowed to delete/import or export the report as permissions are not assigned. The user will not have access to the reporting configuration menu.

Similarly, if check boxes for Import/Export/Delete/Config are checked then the user with that particular role will be able to Import a report /Export a report and Delete a report. He will also have access to the reporting settings.

User permission settings can be modified to control the access to the type of report based on their Role access. This allows the administrator to restrict which user role has permission to view the type of report.



User permission

The O-Insights reporting engine can be used to connect to the independent sites which are neither federated nor interconnected with the Multisite connectivity feature. The Reporting permissions for multisite for each user role can be configured in multisite permission settings.

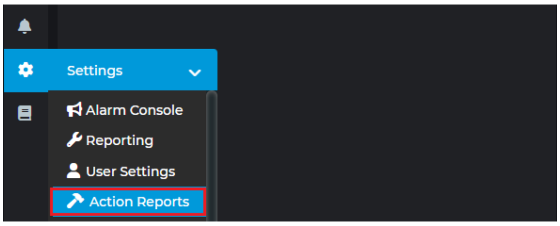
Permissions

Click on **+** to add a role and then select the site from the dropdown to give reporting permissions to the role. The user with a particular role will need access to generate reports only for a selected site.

Note: Access to the site will allow the users to run reports for all devices in the site based on the permissions configured while adding the site.

Action Report Settings

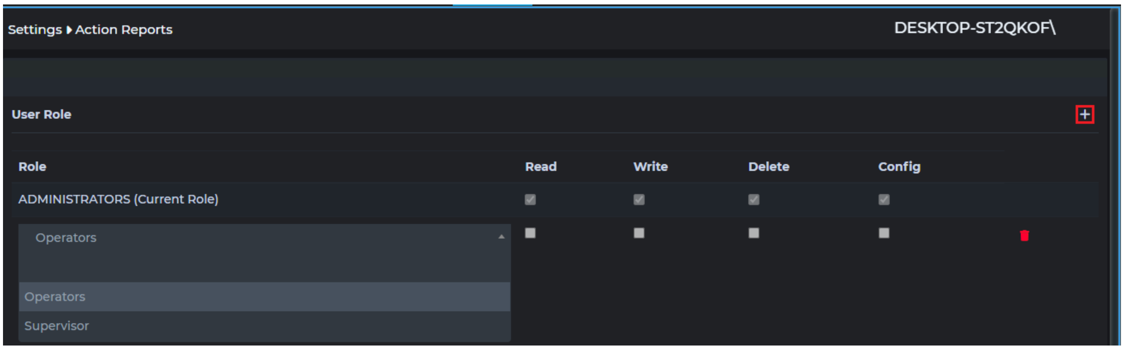
Action Report allows the administrator to change the camera properties such as Frame Rate, Resolution or Passwords from the camera detail report and it allows you to change the MaxSize or Retention Time from the Storage Report. Action report settings can be accessed from the settings menu.



Action Reports

Action Report settings contain the user roles based on which access and operations will be restricted and allowed in the Action Reports. To assign the permissions, check the desired permissions next to the user and click Save to save the preferences. The following permissions are available:

- *Read*: Access the action reports.
- *Write*: Create and modify action reports.
- *Delete*: Delete the action reports.
- *Config*: Configure the action reports.



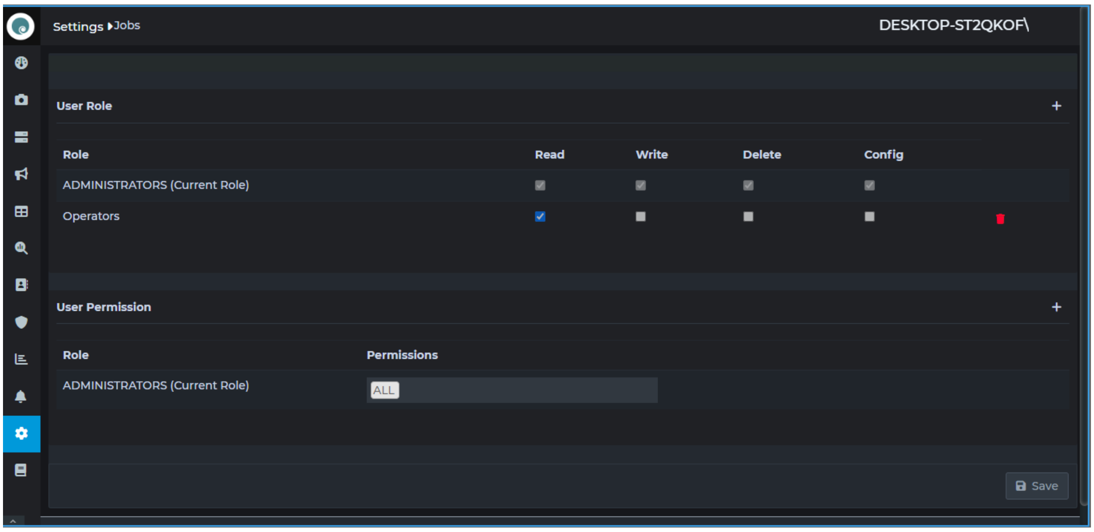
Action Reports Settings

Jobs Settings

Jobs settings contain the user roles based on which access and operations will be restricted and allowed in the User Jobs. To assign the permissions, check the desired permissions next to the Role and click Save to save the preferences. The following permissions are available:

- *Read*: Access the user jobs.
- *Write*: Create and modify user jobs.
- *Delete*: Delete the user jobs.
- *Config*: Configure the user jobs.

User Permission settings allow the administrator to restrict which role has the right to view/edit jobs.



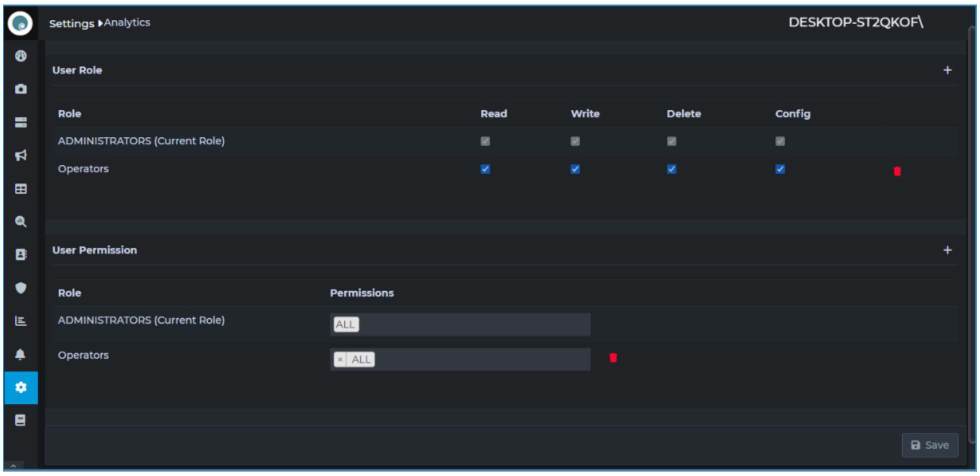
Jobs Settings

Analytics Settings

Analytics settings contain the settings using which access and operations will be restricted and allowed in the Analytics reports. To assign the permissions, check the desired permissions next to the Role and click Save to save the preferences. The following permissions are available:

- *Read*: Access the user jobs.
- *Write*: Create and modify user jobs.
- *Delete*: Delete the user jobs.
- *Config*: Configure the user jobs.

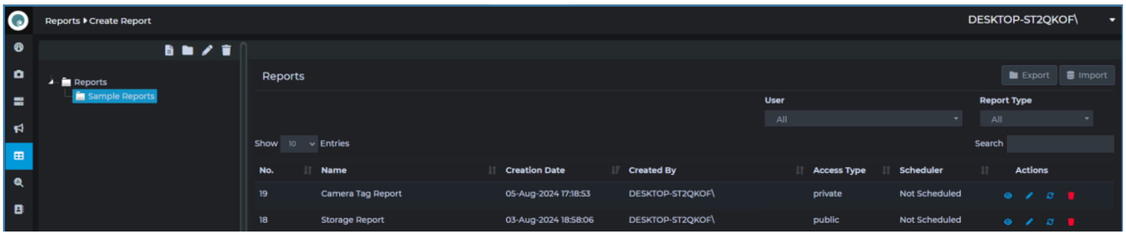
User Permission settings allow the administrator to restrict which role has the right to view/edit the camera/user analytics report.



Analytics Settings

Creating/Scheduling Reports

The Create Reports option allows users to create, schedule, email, and/or generate PDF, Excel, or CSV copies of various reports based on their preferences. The reports are nested within folders on the left and on selection of the folders the reports that belong to those folders will show up on the right. The various reports can be selected by switching between the *Report Type* options. To close the *Create Report* popup without saving changes, click the *Cancel* button or click the Generate button to generate and save the report.

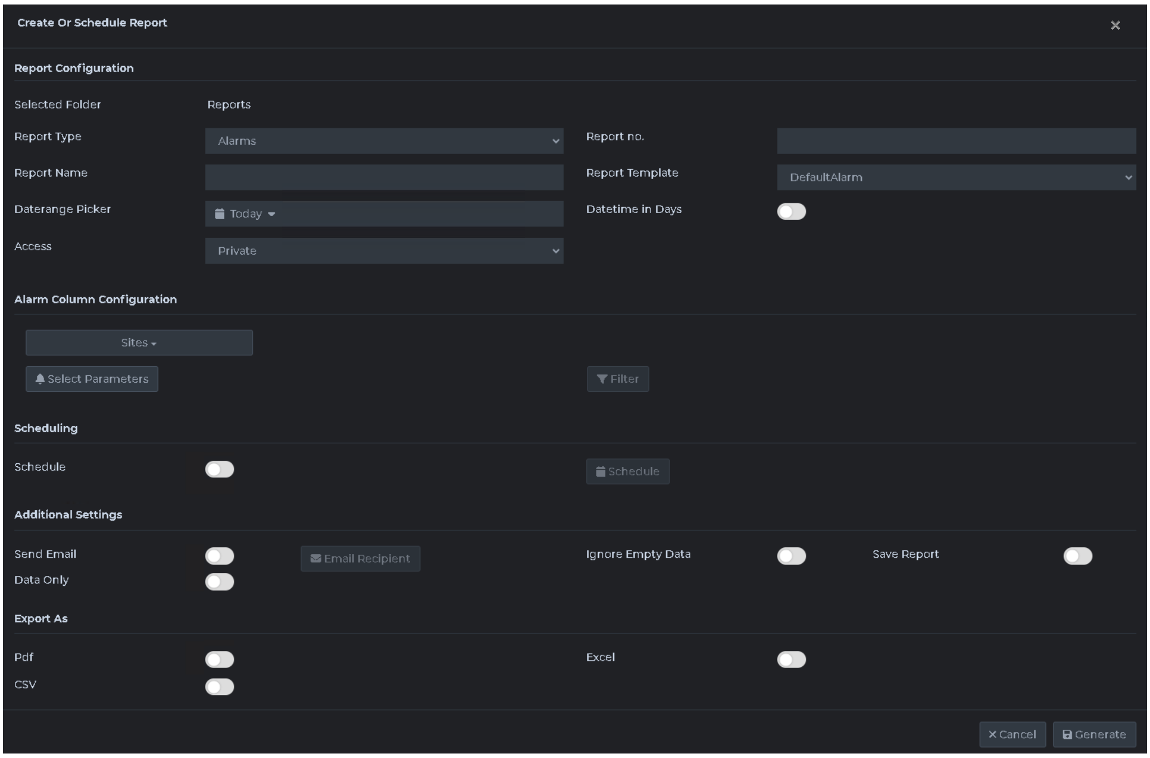


Create Report View

- To create a new folder, click the folder icon. Reports and sub-folders can be organized within these folders by clicking the folder icon and clicking the report icon and/or the container/folder icon.
- To create a new report, click the first report icon .
- To create a new folder, click the folder icon .
- To rename a folder, click on the pen icon after choosing the desired folder.
- To delete a folder and all the reports within, click on the trash icon after choosing the desired folder, and in the prompt choose OK. **This action cannot be undone.** *Please note that the root folder cannot be deleted.*

Alarm Report

The Alarm Report provides tools for generating detailed reports based on alarms within the XProtect system.



Create/Schedule Alarm Report

Report Configuration

- The *Reporting No.* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Alarm Report has only one template named *DefaultAlarm.*
- Report *templates can be customized to have Logos, custom report names, etc.* In case, there has been a change in templates or new templates are added, click reload template by expanding the context menu (triangle next to username) to clear the cache and reload the new / modified templates.
- The *Daterange Picker* lets the user select the duration of time for which the alarm records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, Y*esterday* to select Yesterday's records, *Last 24 hours* to select the records for the last 24

hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last 7 days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to specify the respective start and end times.
- The *Access* option lets the Admin user restrict users with roles other than admin from accessing the report or lets them access the report. For Restricting the report to the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with administrator role.

Alarm Column Configuration

- The *Select Parameters* button opens the *Configure Alarm Column* popup, where the users can select all the alarm parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

  Below are the Columns available for selection:

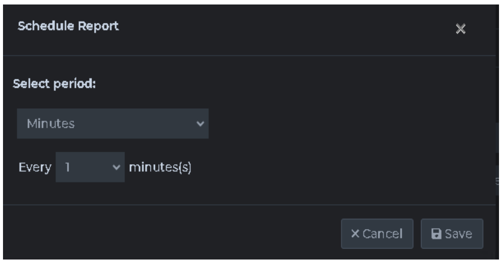
Serial No	Record No.
Acknowledgment Date Time	Date and time of alarm acknowledgment.
Activity Name	Column contains details of the state / priority of alarm and the Initial Alarm Owner

ActivityOwner	Details of who acknowledged the alarm or changed the state of alarm.
Activity Time	Shows data and time details of each of the changed state/priority.
Alarm	Shows name of the Alarm.
Alarm Definition	Shows Alarm Definition.
Alarm Duration	Shows duration of Alarm.
Alarm Type	Shows Alarm Type.
Comment	Shows Comment.
Description	Shows Description.
Owner	Shows Owner of the alarm.
Close Datetime	Shows details of when the alarm was closed.
Date	Shows the Alarm Date.
Local Id - Alarm ID	Shows Alarm ID.
Message	Shows Alarm Message.
Open Duration	Shows Open duration of Alarm.
Priority	Shows Alarm Priority.
Remarks	Shows details entered during closing / changing state of an alarm.
Site	Shows site details.
Source	Shows details of Alarm Source.
Source IP	Shows Camera IP Address.
Source Type	Shows Type of source based on Tags added in O-Insights custom properties Tab.
Source Location	Shows Location of source based on Tags added in O-Insights custom properties Tab.
Source RecordingServer	Shows name of Recording Server.
State	Shows State of the Alarm.
Snapshot	Shows a Snapshot of the Alarm.
Time	Shows Alarm Time.
Timestamp	Shows Date and Time of Alarm in a single Column.
Time Taken for First Action	Shows Time duration to attend the alarm.

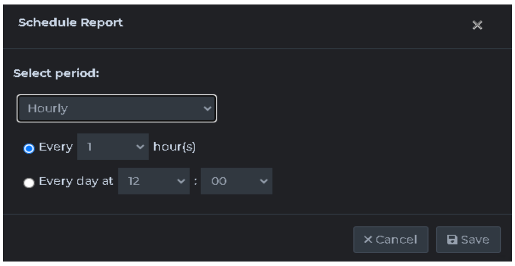
- Once the parameters are selected, the sort dropdowns will show up. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.
- Below columns support Comma-separated values (CSV). This will help the user to filter out report data based on the below mentioned CSV values:
    - *Message*
    - *Remarks*
    - *Sources*
    - *Source Type*
    - *Source Location*
    - *Source Recording Server*

Scheduling

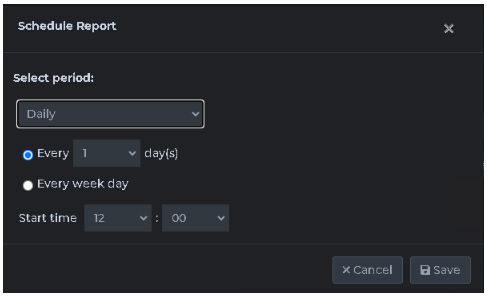
- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).



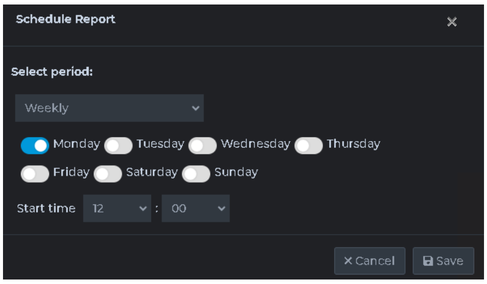
    - *Hourly:* Choose to generate the report for every selected hour(s).



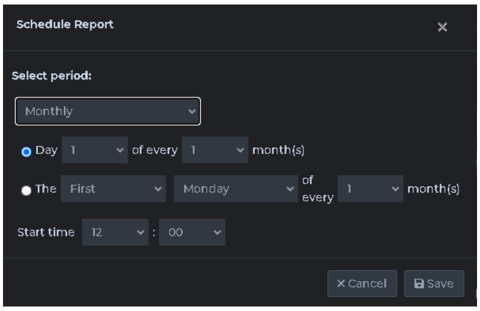
- *Daily*: Generate a report for either every selected number of days or every weekday at the selected time.



- *Weekly*: Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.

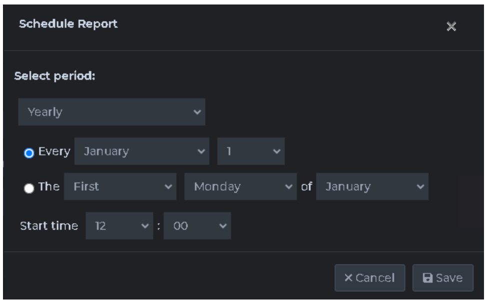


- *Monthly*: For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.



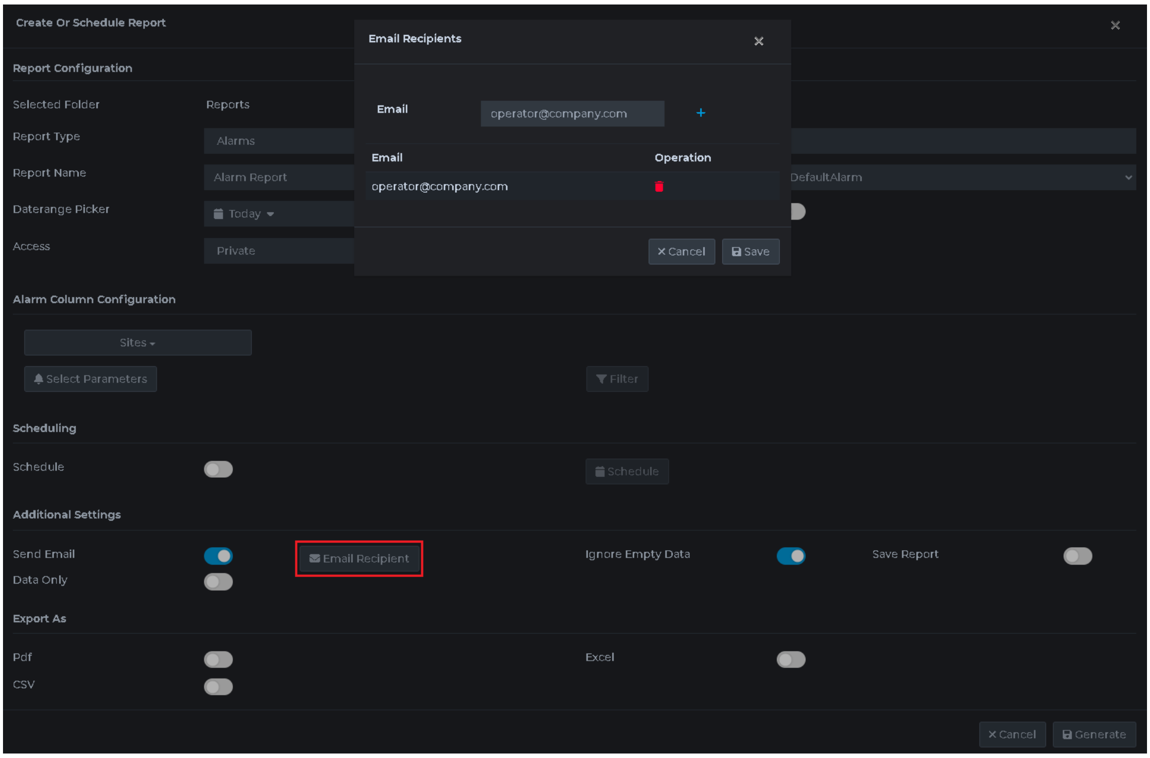
- *Yearly*: For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Tip: Any data which is to be reported out will require it to be available in the XProtect.



Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
  - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the *+* button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
  - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
  - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

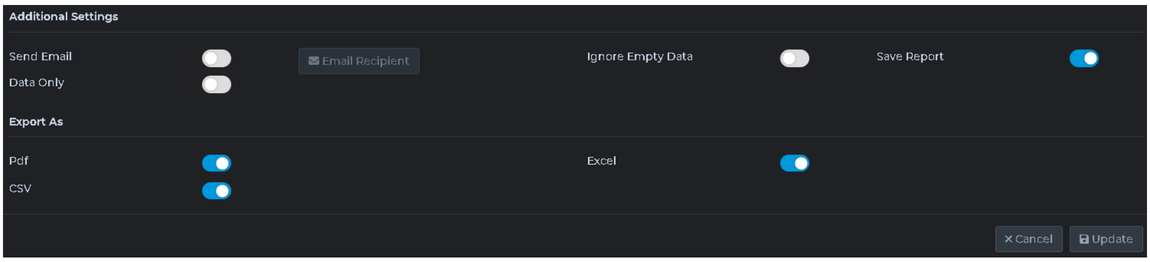


Save Reports

- To save a report to a preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is *C:\Program Files\Reports*.

Export As

- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *Pdf* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.



Generating and Saving Report Configuration

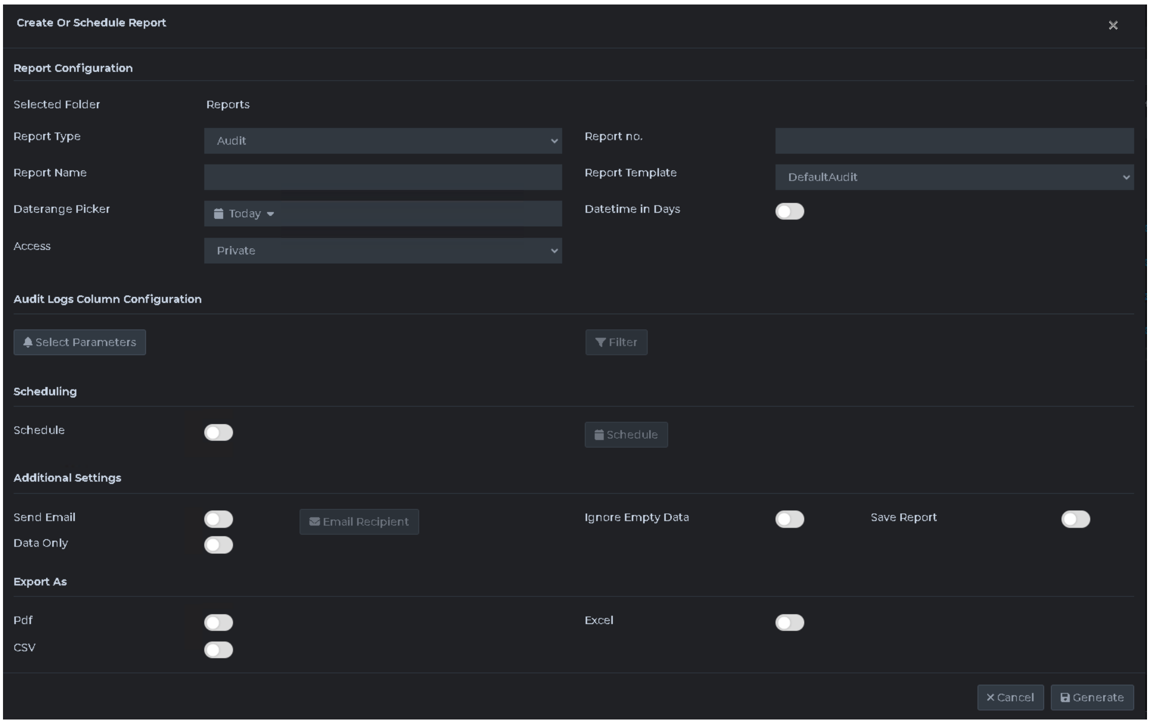
- To save the configuration and/or generate the report, click the *Generate button.*
- To exit without saving changes, click the *Cancel* button.

Note:

The Filter option lets users to selectively narrow down records based on specified parameters.
Here are the regular expressions (regex) for this functionality:
- *Regex for an empty string*: '**^$**'
- *Regex for a non-empty string*: '**.+**'

Audit Report

The Audit Report facilitates the creation of detailed reports derived from XProtect Audit logs.



Create/Schedule Audit Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Audit Report has only one template named *DefaultAudit*.
- The *Daterange Picker* lets the user select the duration of time for which the audit logs need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to also specify the respective start and end times.
- The *Access* option lets the Admin user restrict users with roles other than admin from accessing the report or lets them access the report. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Audit Logs Column Configuration

- The *Select* Parameters button triggers the *Configure Audit Columns* popup, where the users can select all the audit history parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- Below are the Columns available for selection:

Serial No	Record no.
Category	Shows the category of the particular entry in the audit logs.
Local time	Shows the Date and Time of the log.
Message text	Shows the message text of a particular log.
Permission	Shows whether permission was granted or denied for the user.
Source type	Shows the type of source to which the log belongs to.

Source name	Shows the name of the source to which the log belongs.
User	Shows the details of the user who initiated the log.
User location	Shows the location of the user to which the log belongs to.

- To close the popup without saving changes, click the *Cancel* button or click the *Save* button to save changes.
- Once the columns are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

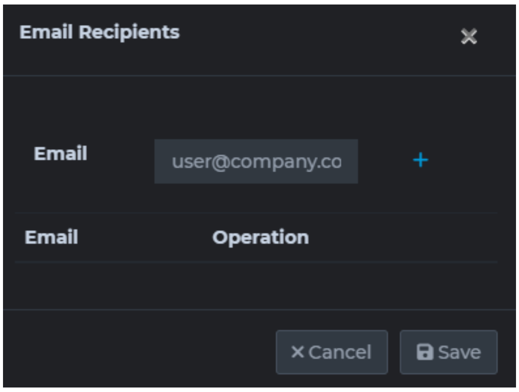
Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

- *Yearly*: For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - Now click on Email Recipient and the below popup opens.



    - Enter your Email ID click on + to add and then click on save.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

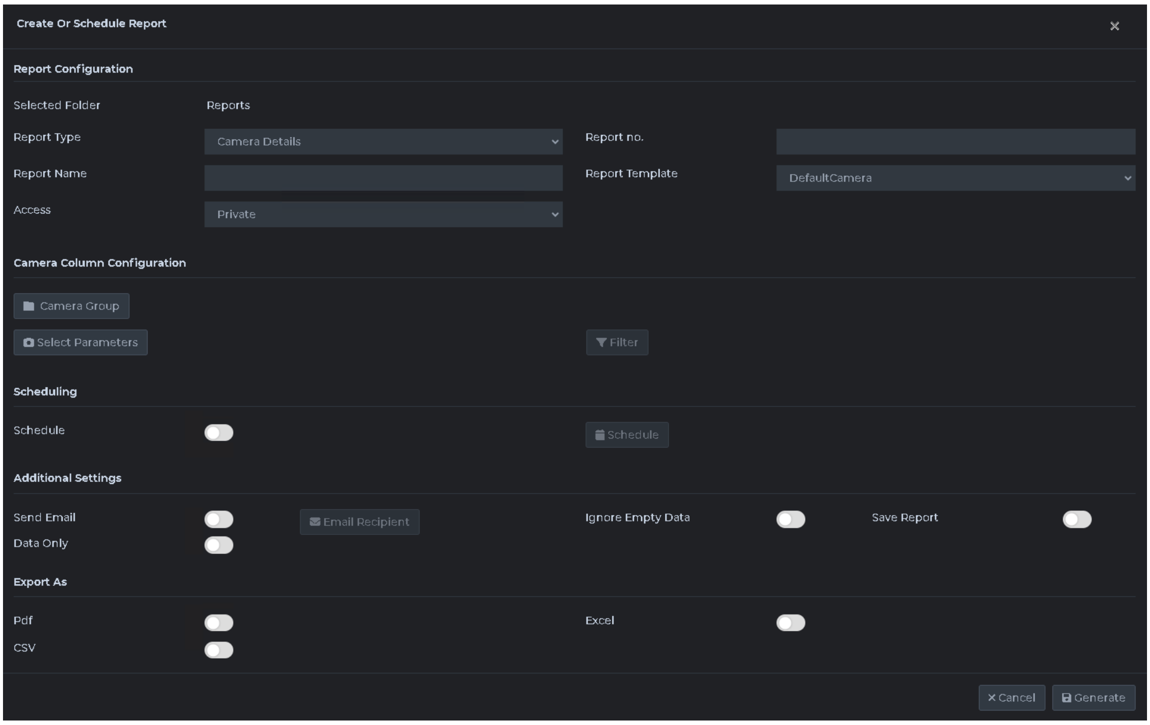
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration or to generate the report, click the *Update button/generate button.*
- To exit without saving changes, click the *Cancel* button.

Camera Report

The Camera Report compiles detailed reports of cameras that have been added to XProtect.



Create/Schedule Camera Report

Report Configuration

- **The** *Reporting No* **field lets the user add the Report Number if needed.**
- **The** *Report Name* **option lets the user configure the report name, which should be unique.**
- **Select the desired report template from the** *Report Template* **dropdown, based on which the reports will be generated. Camera Report has only one template named** *DefaultCamera.*
- **The** *Access* **option lets the Admin user restrict users with roles other than admin from accessing the report or lets them access the report. To restrict the report to only the user, select** *Private* **or leave it as** *Public* **for access to all users. All private reports can be viewed and edited by any user with an administrator role.**

Camera Column Configuration

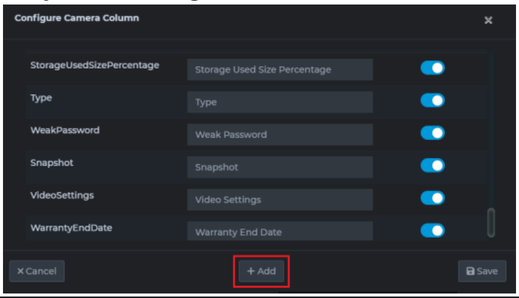
- The *Select Parameters* button triggers the *Configure Camera Column* popup, where the users can select all the Camera parameters that are required by switching the toggle on. The *Snapshot* toggle lets the users include a snapshot of that camera for that timestamp. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- Below are the Columns available for selection:

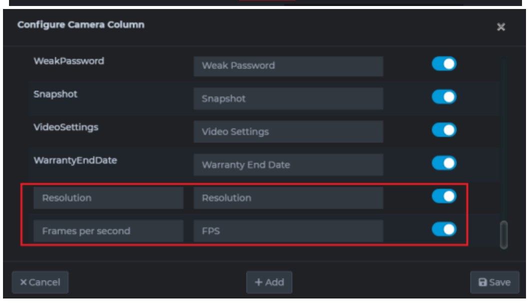
Serial No	Record no.
Address	Shows the IP Address of the camera.
Camera Age	Shows the camera age based on the camera installation date in the O-Insights custom camera properties section in the management client.
Camera Serial Number	Shows the camera serial number.
Firmware	Shows the camera firmware version.
Hardware	Shows name given to camera hardware.
Hardware Path	Shows the Hardware Path.
Installed Date	Shows the camera installed date picked up from the installation date in the O-Insights custom properties section in the management client.
Last Password Change Date	Shows the date of the last password change for the camera.
Location	Shows camera location picked up from the O-Insights custom properties section in the management client.
MAC Address	Shows the camera Mac address.
Manufacturer	Shows the name of the camera manufacturer.
Model	Shows the model number of the camera.
Motion Detection	Shows if motion detection is enabled for the camera.
Name	Shows the name of the camera.
No Password	Shows true if there is no password for the camera.
Password Age	Shows the camera password age based on the last password change date.

Recording Enabled	Shows True if recording is enabled for the camera.
Recording Server	Shows the name of the recording server for the camera.
Server	Shows the name of the management server to which the recording server for the camera is connected.
Status	Shows the camera's online/offline status
Storage Actual Retention Time	Shows the actual retention time for each camera.
Storage Available Size	Shows the free space in GB for storage to which camera recording is saved.
Storage Available Size Percentage	Shows the percentage of space available for storage.
Storage Encryption Method	Shows details of encryption if configured.
Storage Max Size	Shows the maximum assigned size of a storage.
Storage Name	Shows the name of the storage.
Storage Disk Path	Shows the path of storage.
Storage Retention Time	Shows the configured retention time for the live database. If it is configured for less than a day, then the value will be zero.
Storage Signing	Shows if storage signing is enabled.
Storage Used Size	Shows the used size of the storage.
Storage Used Size Percentage	Shows used size of the storage in percentage.
Type	Shows camera type picked up from the O-Insights custom properties section in the management client.
Weak Password	Shows True for cameras with weak passwords based on default passwords stored in the configuration file.
Snapshot	Shows a snapshot of the camera.
Video Settings	Shows the video settings of the camera
Warranty End Date	Shows warranty end date picked up from the Warranty End date in the O-Insights custom properties section in the management client.

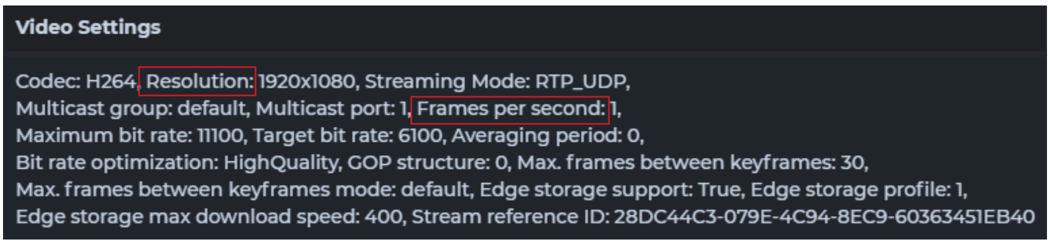
> **Note:** The serial number column for the interconnect child site camera is currently displaying the SLC rather than the actual serial number.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.
- Additional rows like Frames per second, Resolution, etc can be added to the configure camera column by clicking the add button and then by entering the column name display name.





- The column name entered should exactly match the video settings of the camera as in the example below.



Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
  - *Minutes:* Generate reports for every selected minute(s).
  - *Hourly:* Choose to generate the report for every selected hour(s).
  - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
  - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
  - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
  - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable the mailing of reports, toggle the *Send Email* toggle on:
  - To send to custom recipients, select *Email* from the in the *Email* field, enter the desired email address click the *+* button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
  - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
  - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

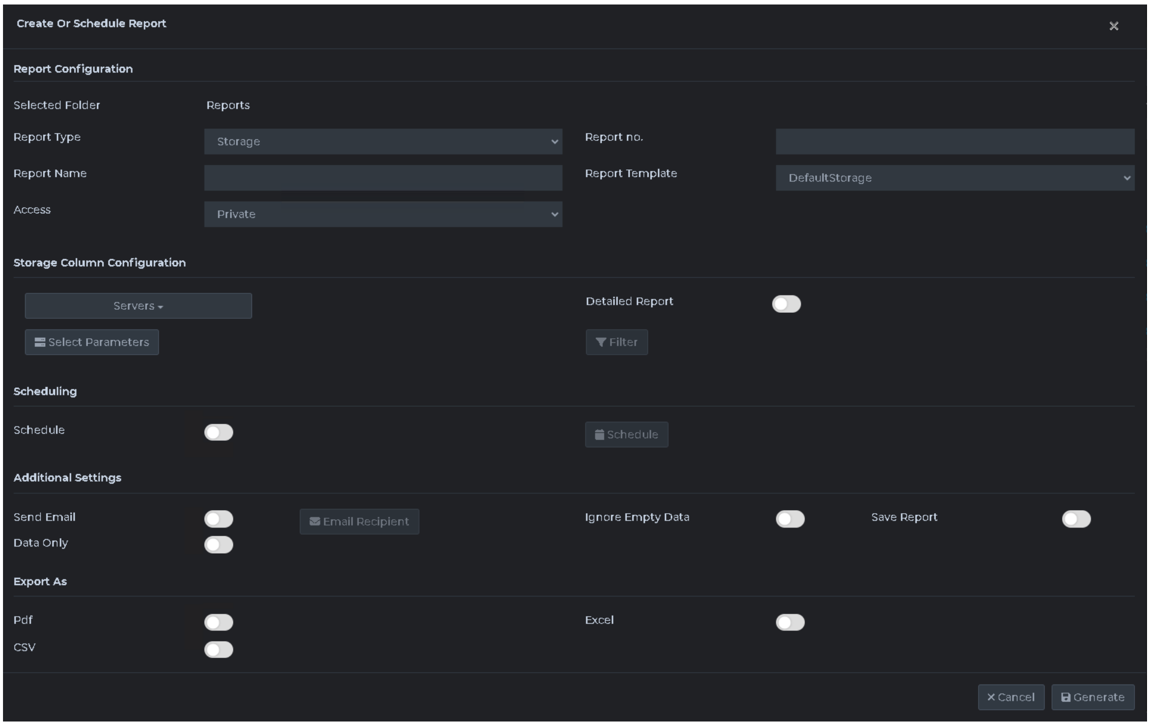
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Storage Report

The Storage Report generates detailed reports for all storage configurations on the recording server.



Create/Schedule Storage Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Storage Report has 2 templates named DefaultStorage *and DefaultStorage(Detailed).*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Storage Column Configuration

- The *Select Parameters* button triggers the *Configure Storage Column* popup, where the users can select all the Storage parameters that are required by switching the toggle on. In the

Display Name field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- The Columns available for selection are given below:

Serial No	Record no.
Recording Server Name	Shows the name of the Recording Server.
Available Size	Shows the storage available size in GB/TB.
Available Size Percentage	Shows the storage available size percentage in %.
Available Status	Shows the status of storage based on the configuration in "QueryEngine.exe.config ("storage usage up to 60% will be shown as normal, if 90% space is used it will be shown as a Warning and if more than 90 % space is used it will be shown as critical").
Disk Path	Shows the storage path.
Encryption Method	Shows the encryption method.
Max Size	Shows the size of allocated storage.
Retention Time	Shows the total configured retention time for the storage and its archive.
Storage Name	Shows the name given to the storage.
Signing	Shows if storage signing is enabled.
Site	Shows the name of the management server to which the recording server is connected.
Used Size	Shows the storage used size in GB/TB.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore

case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable the mailing of reports, toggle the *Send Email* toggle on:
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the **+** button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.

- Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
- Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Generate button.*
- To exit without saving changes, click the *Cancel* button.

Camera Health Report

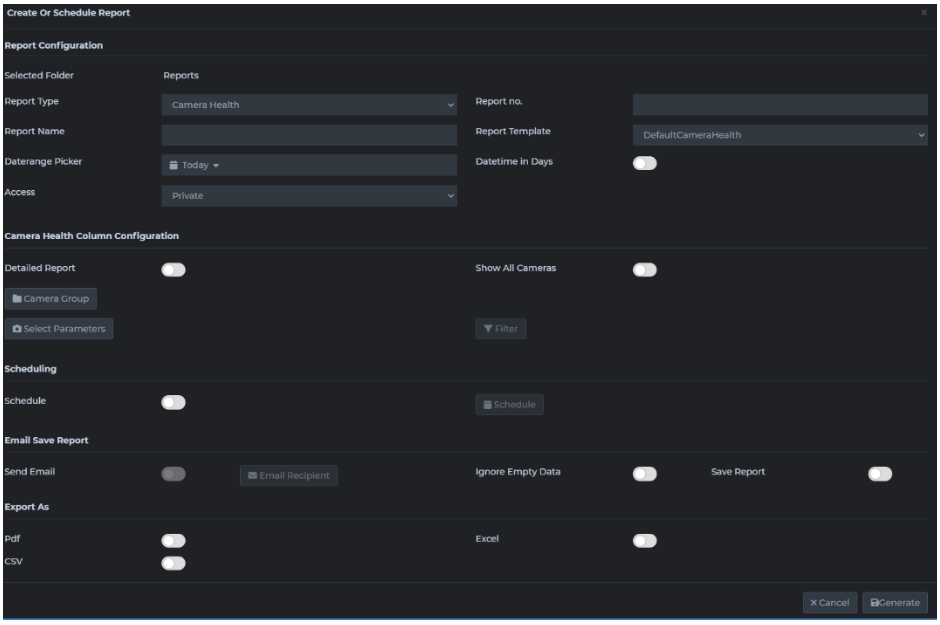
The Camera Health Report provides detailed analysis of the health status for all cameras integrated with XProtect.

Data Collector Job

The *Data Collector* job is tasked with daily gathering and storage of data for camera storage size and camera health, according to a predefined schedule.

Camera health data is leveraged in reports to identify instances where a camera has been offline for an extended period without corresponding *Not Responding* Alarms in the database for the selected report duration.

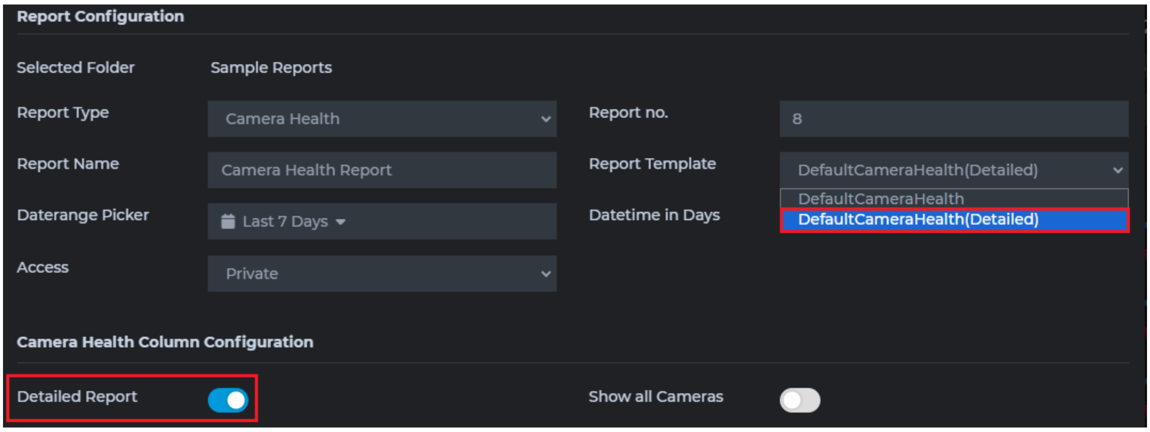
Note: To make the report function correctly, it is necessary to configure *Not Responding Alarms* specifically for all cameras with the auto-close option checked to get accurate health status. Whenever a camera is offline for a longer duration of time and there are no *Not Responding* alarms in XProtect for the selected duration of the report, the reporting engine uses data from Data Collector Job to check for any not responding events available to calculate the camera health status. The Data collector job will log the online offline status of the camera when the job runs Daily.



Create/Schedule Camera Health Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Camera Health Report has 2 templates named *DefaultCameraHealth and DefaultCameraHealth (Detailed).*
- Select *DefaultCameraHealth (Detailed) and Toggle DetailedReport to get more information like camera downtime stamp, camera uptime stamp, camera downtime & alarm status for each camera.*



Report Configuration

- Show All cameras if toggled will add all cameras to the report which does not have a not responding alarm for the selected time range.

Note: For those cameras which do not have *Not Responding* alarms for the selected time range, the *Camera status* is picked up by the Data collector job. This job is used to check if the camera is online or offline when it runs during the scheduled time. Any offline camera during that time is considered offline for the day in calculating the camera health.

- The *Daterange Picker* lets the user select the duration of time for which the camera health records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to also specify the respective start and end times.
- The *Access* option lets the Admin user restrict users with roles other than admin from accessing the report or lets them access the report. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Camera Health Column Configuration

- The *Select Parameters* button triggers the *Configure Camera Health Column* popup, where the users can select all the Camera Health parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- Below are the columns available for selection:

Serial No	Record no.
Name	Shows the name of the camera
Source IP	Shows the IP Address of the camera
Recording Server	Shows the name of the recording server for the camera
Up Time	Shows the time for which the camera is Online for a selected time range of the report
Down Time	Shows the time for which the camera is Offline for a selected time range of the report
Up Time Percentage	Shows the % uptime for which the camera is Online for a selected time range of the report
Down Time Percentage	Shows the % downtime for which the camera is Offline for a selected time range of the report
Server	Shows the name of the management server to which the recording server for the camera is connected
Source Location	Shows camera location picked up from the O-Insights custom properties section in the management client
Source Type	Shows camera type picked up from the O-Insights custom properties section in the management client

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.

- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address, and click the **+** button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in

Export as Section. The Default location is C:\Program Files\Reports.

Export As

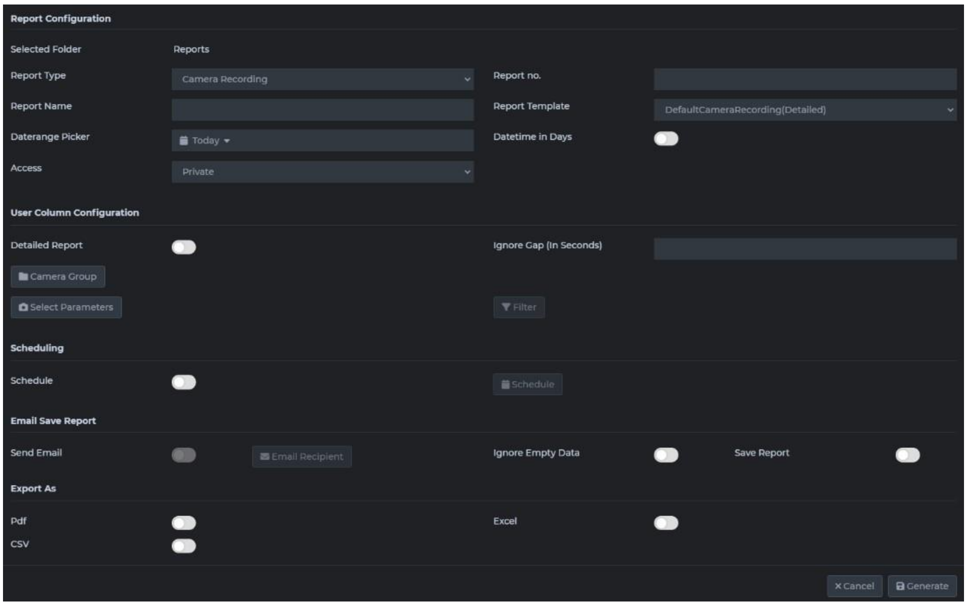
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Camera Recording Report

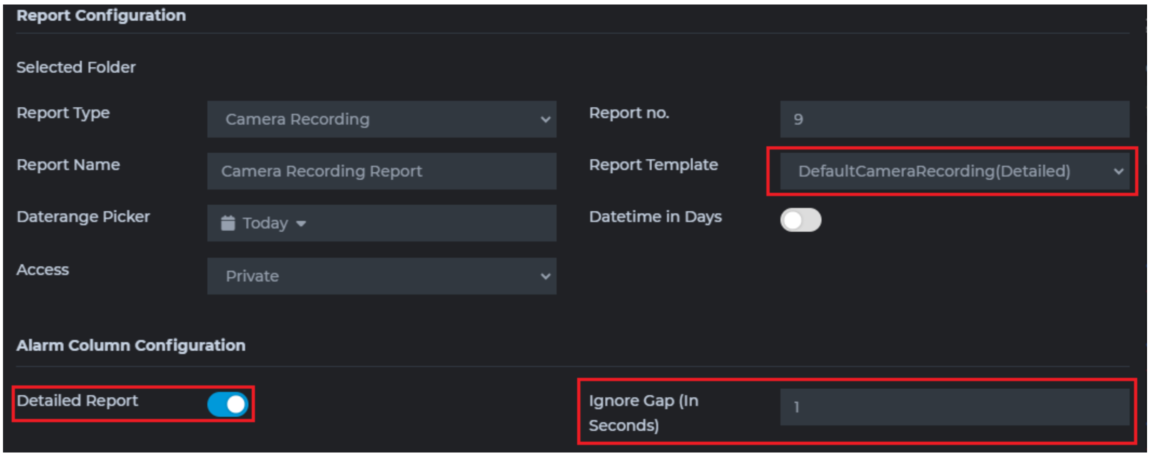
The Camera Recording Report provides detailed information on *Recording Available* and *Recording Gaps* for each camera connected to XProtect. This report is particularly useful for identifying any gaps in recording, especially in systems set for continuous recording.



Create/Schedule Camera Recording Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Camera Health Report has 2 templates named *DefaultCameraRecording and DefaultCameraRecording (Detailed).*
- Select *DefaultCameraHealth (Detailed) and Toggle DetailedReport to get more information on when the recording has stopped/started for each of the cameras.*
- The Recording Gap *in seconds needs to be entered here to ignore minimum gaps in recording which is acceptable.*



Report Configuration

- The *Daterange Picker* lets the user select the duration of time for which the records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* for selecting Yesterday's records, *Last 24 hours* to select the records for last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.
- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Camera Recording Column Configuration

- The *Select Parameters* button triggers the *Configure Camera Recording Column* popup, where the users can select the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter. *To generate a camera recording report, it is essential to include the Name column in your selection. The report cannot be generated without the inclusion of the Name column.*
- The columns available for selection are given below:

Serial No	Record no.
Name	Shows the name of the camera
Server	Shows the name of the management server to which the recording server for camera is connected.
Recording Server	Shows the name of the recording server for the camera.
IP Address	Shows the IP Address of the camera.
Location	Shows camera location picked up from the O-Insights custom properties section in the management client.
Type	Shows camera type picked up from the O-Insights custom properties section in the management client.
Recording Available	Shows the time for which the recording is available for a selected time range of the report.
Recording Gap	Shows the time for which the recording is not available for a selected time range of the report.
Recording Available%	Shows the % of available recordings for a selected time range of the report.
Recording Gap %	Shows the % of recordings not available for a selected time range of the report.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore

case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
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Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the + button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.

- Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

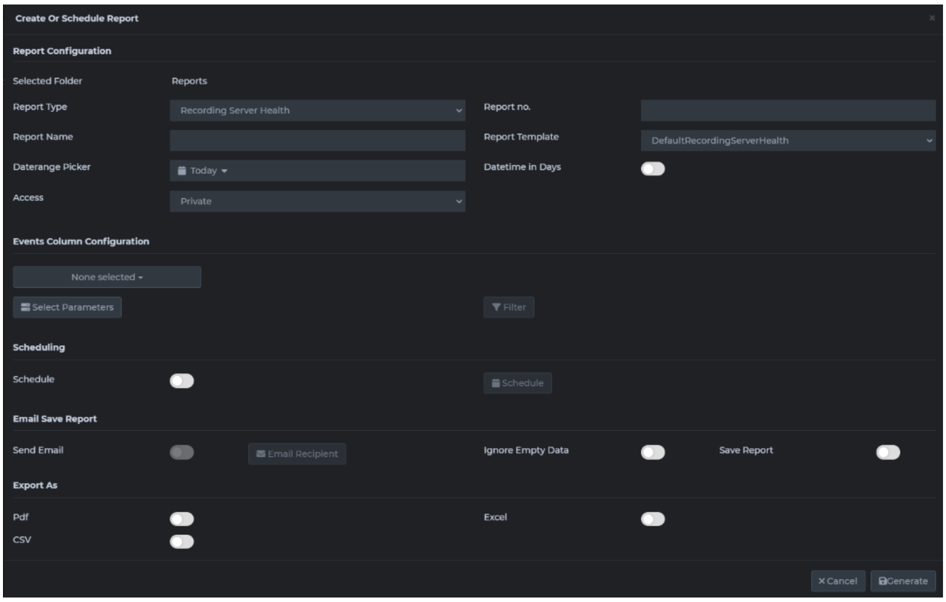
Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Recording Server Health Report

The Recording Server Health Report generates a report of the health status of all recording servers added to the management server.

Note: To make the report function correctly, it is necessary to configure *Not Responding Alarms* specifically for all recording servers with the auto-close option checked to get accurate health status.



Create/Schedule Recording Server Health Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Camera Report has only one template named *DefaultRecordingServerHealth.*
- Show All Recording Servers if toggled will add all recording servers to the report which does not have a *server not responding* alarm for the selected time range.
- The *Daterange Picker* lets the user select the duration of time for which the records need to be fetched, based on which the report will be generated. The users can select *Today* to select

Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records for the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.

- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Recording Server Health Column Configuration

- The *Select Parameters* button triggers the *Configure Recording Server Health Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The Columns available for selection are given below:

Serial No	*Record no.*
Name	*Shows the name of the camera*
Server	*Shows the name of the management server to which recording server for camera is connected*
Up Time	*Shows the time for which the server is Online for a selected time range of the report*
Down Time	*Shows the time for which the server is Offline for a selected time range of the report*
Up Time Percentage	*Shows the % uptime for which the server is Online for a selected time range of the report*
Down Time Percentage	*Shows the % downtime for which the server is Offline for a selected time range of the report*

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort

the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, and enter the desired email address. Click the + button and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* on if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

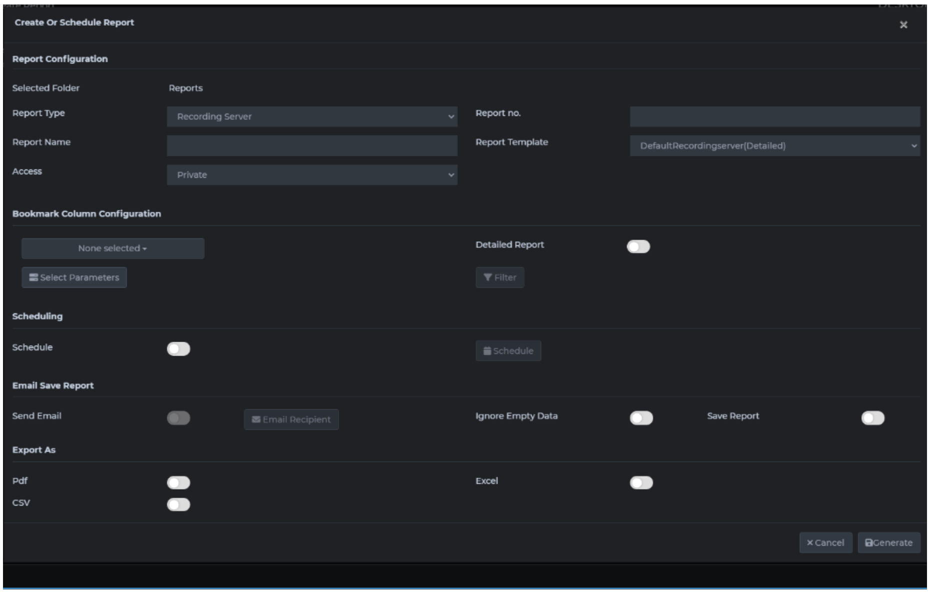
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Recording Server Report

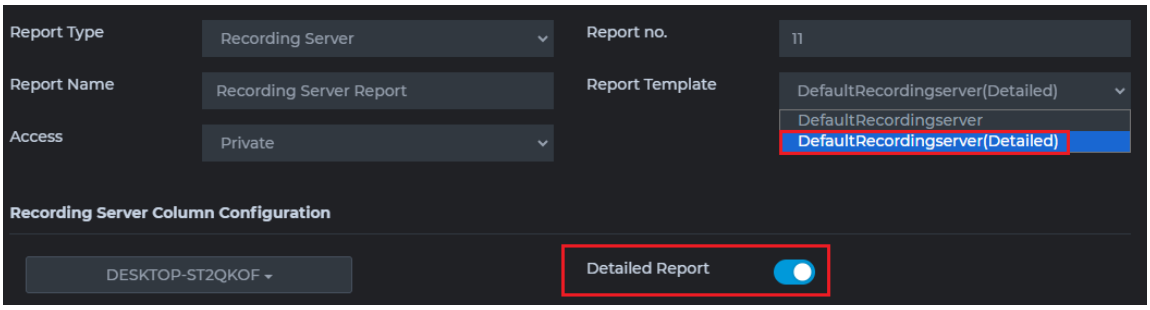
The Recording Server Report generates comprehensive reports for all recording servers added to the XProtect Management Server.



Create/Schedule Recording Server Report

Report Configuration

- **The** *Reporting No* **field lets the user add the Report Number if needed.**
- **The** *Report Name* **option lets the user configure the report name, which should be unique.**
- **Select the desired report template from the** *Report Template* **dropdown, based on which the reports will be generated. The default is** *DefaultRecordingServer[Detailed].*
- **Select the desired report template from the** *Report Template* **dropdown, based on which the reports will be generated. Recording Server Report has 2 templates named** *DefaultRecordingServer and DefaultRecordingServer (Detailed).*
- **Select** *DefaultRecordingServer (Detailed) and Toggle DetailedReport to get more information like Storage Name/Available Size/Available Size Percentage/Storage Available Status/Disk Path/Encryption Status/Max Size/Used Size/Storage Signing Status for each storage configured for the recording server*



- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All the reports that are private can be viewed and edited by any user with an administrator role.

Recording Server Column Configuration

- The *Select Parameters* button triggers the *Configure Recording Server Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Host Name	Shows the Host Name.
Web Server Address	Shows the Web Server Address.
Max Size (In GB)	Shows the Sum of all storage (GB) configured for the recording server.
Used Size (In GB)	Shows the total used size for all configured storage in GB.
Available Size (In GB)	Shows the total available size for all configured storage in GB.
Available Size Percentage	Shows the % of total available space.
Status	Shows the status of the recording server.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.

- The required servers for which the report must be generated can be selected from the server dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the *+* button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

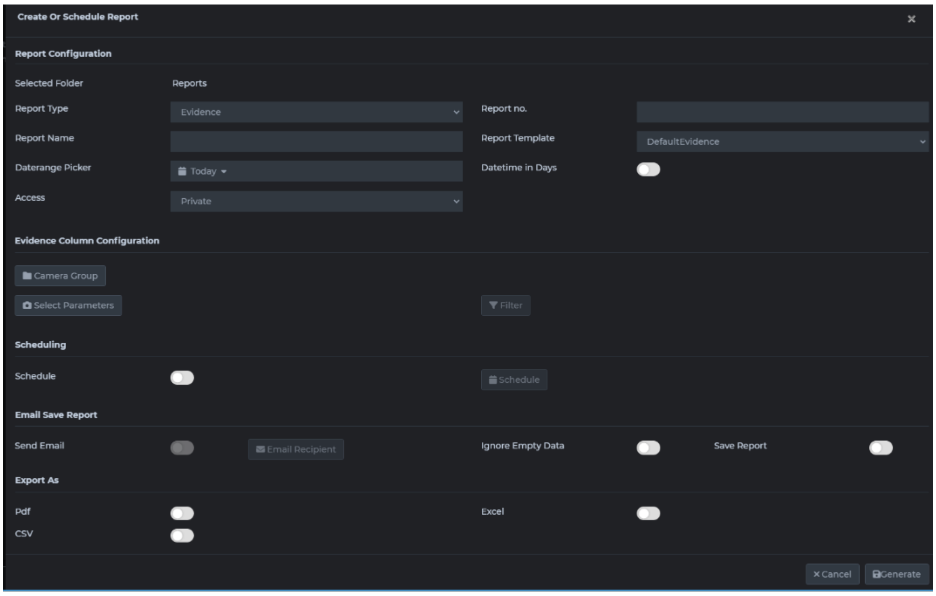
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Evidence Report

The Evidence Report generates detailed reports on evidence locks created within XProtect.



Create/Schedule Evidence Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Evidence Lock Report has only one template named *DefaultEvidence.*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Evidence Column Configuration

- The *Select Parameters* button triggers the *Configure Evidence Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Camera	Shows the name of the camera.
Created Time	Show the time and date of creation of the evidence lock.
Description	Shows the description entered while creating an evidence lock.
End Time	Shows the end date & time of the evidence locked video.
Header	Shows the Headline entered while creating evidence lock.
Last Modified	Shows the date and time of modification of an existing evidence lock.
Retention Expire	Shows the date and time of expiry of the evidence lock.
Snapshot	Shows the snapshot of the camera at the time of locking the evidence.
Start Time	Shows the start date and time of evidence locked video.
Tag Time	Shows the tag date and time of evidence lock
User	Shows details of the user who created the evidence lock.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- To select the desired camera groups on which the report must be generated, click the *Camera Group* button, and from the popup, choose the required camera group.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).

- *Hourly:* Choose to generate the report for every selected hour(s).
- *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
- *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the *+* button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

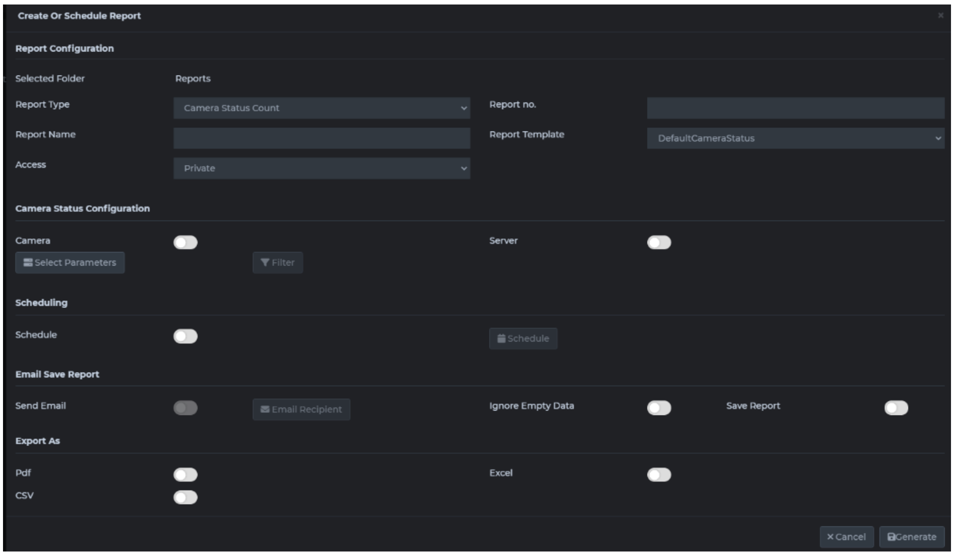
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Camera Status Count Report

The Camera Status Report generates detailed reports on the number of cameras that are online and offline, as well as the status of the recording server.



Create/Schedule Camera Status Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Camera Status Count Report has only one template named *DefaultCameraStatus.*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Camera Status Column Configuration

- The *Select Parameters* button triggers the *Configure Camera Status Column* popup, where the users can select all the Camera Status parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- The columns available for selection are given below:

Serial No	Record no.
Item Type	Shows the row item as the camera or recording server based on the options selected.
Total Count	Shows the total count of the cameras/ recording servers.
Online Count	Shows the Online count of cameras/ recording servers.
Offline Count	Shows the Offline count of cameras/ recording servers.
Location	Shows the Type of camera/ recording server based on tags added in O-Insights custom camera properties.
Type	Shows the Type of camera/ recording server based on tags added in O-Insights custom camera properties.
Recording Server	Shows the recording server to which the camera is added.
Site	Shows the management server details.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).

- *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
- *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the *+* button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

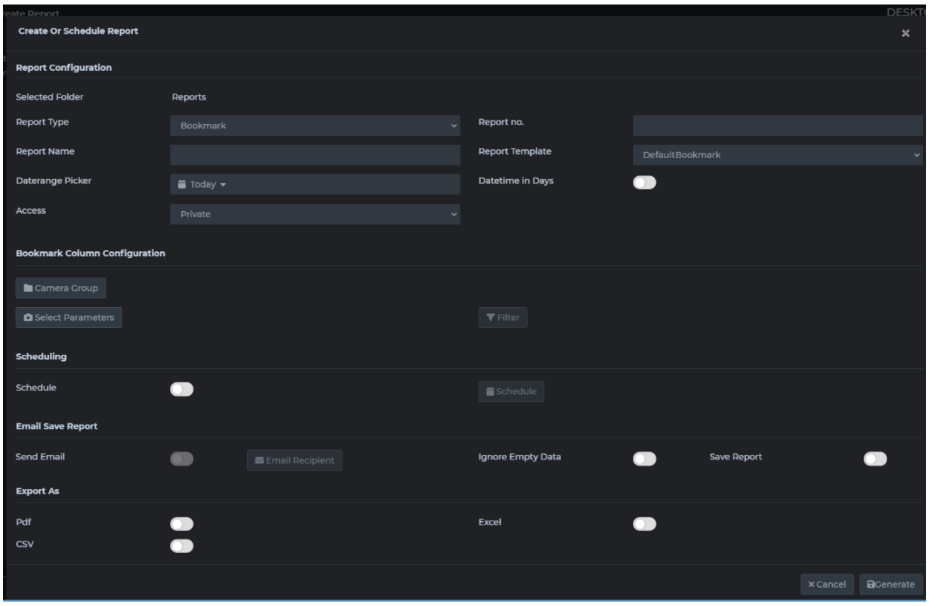
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Bookmark Report

The Recording Server Report generates reports based on Bookmark done in XProtect.



Create/Schedule Bookmark Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Bookmark Report has only one template named *DefaultBookmark*.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave as *Public* for access to all users. All reports which are private can be viewed and edited by any user with administrator role.

Bookmark Column Configuration

- The *Select Parameters* button triggers the *Configure Bookmark Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- The columns available for selection are given below:

Serial No	Record no.
Time Triggered	Shows the time and date of creation of the Bookmark.
Camera	Shows the name of the camera.
Description	Shows the description entered while creating a Bookmark.
Header	Shows the Headline entered while creating a Bookmark.
User	Shows details of the user who created the Bookmark.
Snapshot	Shows the snapshot of the camera.
Time Begin	Shows the start date and time of Bookmark.
Time End	Shows the end date and time of the Bookmark.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- To select the desired camera groups on which the report must be generated, click the *Camera Group* button, and from the popup, choose the required camera group.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).

  - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
  - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
  - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
  - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
  - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address click the **+** button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
  - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
  - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

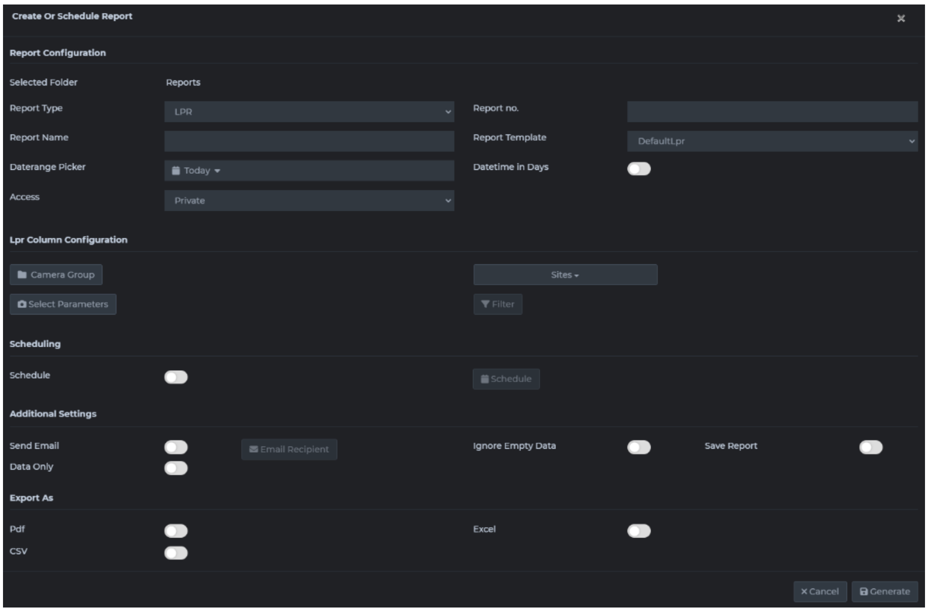
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

LPR Report

The LPR Report generates detailed reports based on License Plate Recognition (LPR) data available in XProtect. It utilizes the XProtect® module equipped with LPR technology to capture and analyze license plates. This system categorizes vehicles by plate color and generates comprehensive reports, providing advanced insights based on the collected license plate data.

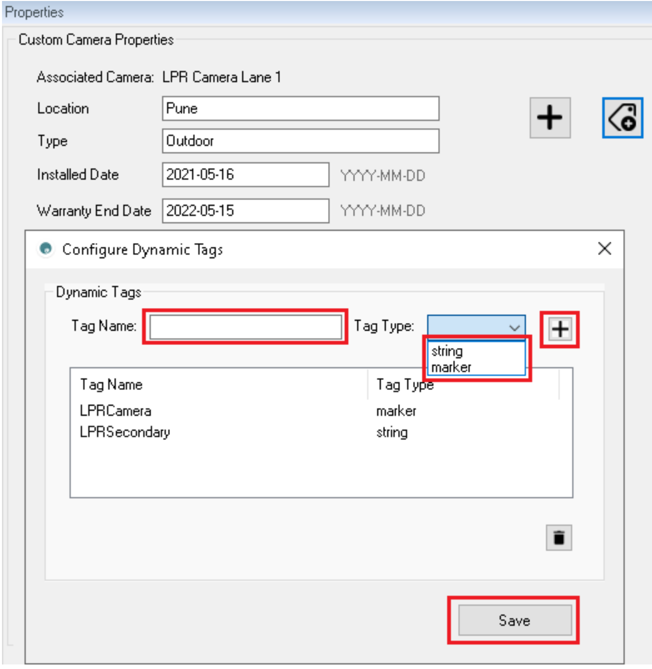


Create/Schedule LPR Report

Setting Up LPR with Dynamic Tags

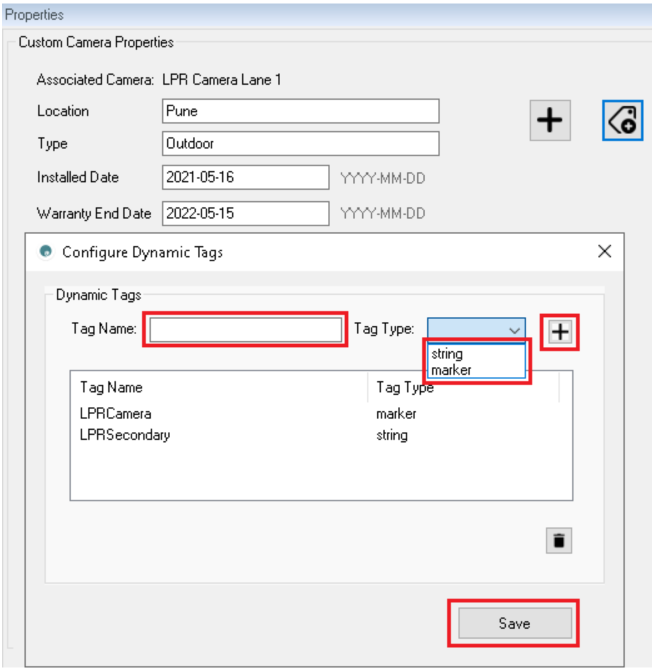
For LPR to function properly, cameras must be tagged within the XProtect Management Client. This process involves Dynamic Tags, which can be created and added as properties:

- **Accessing Tag Settings**: Navigate to *Management Client -> Cameras -> O-InsightsCustomProperties.*
- **Adding a Tag**:
    - Click on the  icon will open the below window.

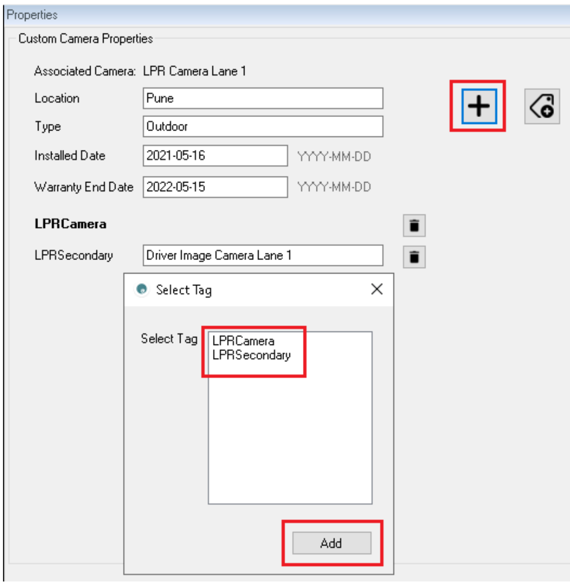


- Enter a tag name and choose either *string* or *marker*.
- Click on the **+** to add the new tag, then click *Save*.

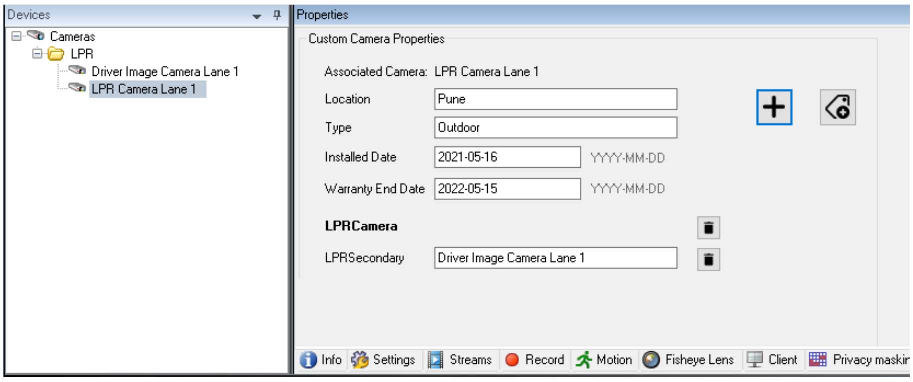
- **Configuring Tags for LPR:**



- Add *LPRCamera* as a marker tag and *LPRSecondary* as a string tag.



- After adding tags, click on the + icon, select the tags from the *Select Tag* popup click on *Add*.



- In the *LPRSecondary* tag field, specify the camera used to capture the driver's image.
- Color Classification keys

  These are the default color classifications. If you wish to make changes to these keys, you can modify the configuration at this path *C:\Program Files\O-Insights Query Engine\DominantColor.dll.config*

  <add key="White" value="Private Vehicle"/>
  <add key="Yellow" value="Commercial Vehicle"/>
  <add key="Green" value="Electric Vehicle"/>
  <add key="Blue" value="Diplomat Vehicle"/>
  <add key="Black" value="Rental Vehicle"/>
  <add key="DarkGreen" value="Army Vehicle"/>
  <add key="Red" value="VIP Vehicle"/>
  <add key="Undefined" value="Undefined Vehicle"/>

- **Updating System Settings:**
    - Once tags are configured, run a cache update job.
    - Restart the Smart Client to update the dashboard/reporting system with these changes.

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. The default is *DefaultLPR.*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

LPR Column Configuration

- The *Select Parameters* button triggers the *Configure LPR Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Timestamp	Shows the Date and Time of License plate capture
Camera Name	Shows the name of the camera.
Secondary Camera Name	Shows the name of the camera used for Driver's Image.
Date	Shows the Date of License plate capture.
Time	Shows the Time of License plate capture.
Hour	Hour column can be used in the report if the Data is to be plotted on a Ranking Chart and the user wants to see how many vehicles have passed per hour for a particular lane.
Plate Number	Shows the Plate Number.

Plate Image	Shows the Image of the Number Plate.
Complete Image	Shows the complete image from which the Plate Image is taken.
Driver Image	Shows the driver's Image.
Vehicle Category	Shows the vehicle category based on number plate colour.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- To select the desired camera groups on which the report must be generated, click the *Camera Group* button, and from the popup, choose the required camera group.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, and enter the desired email address. Click the + button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

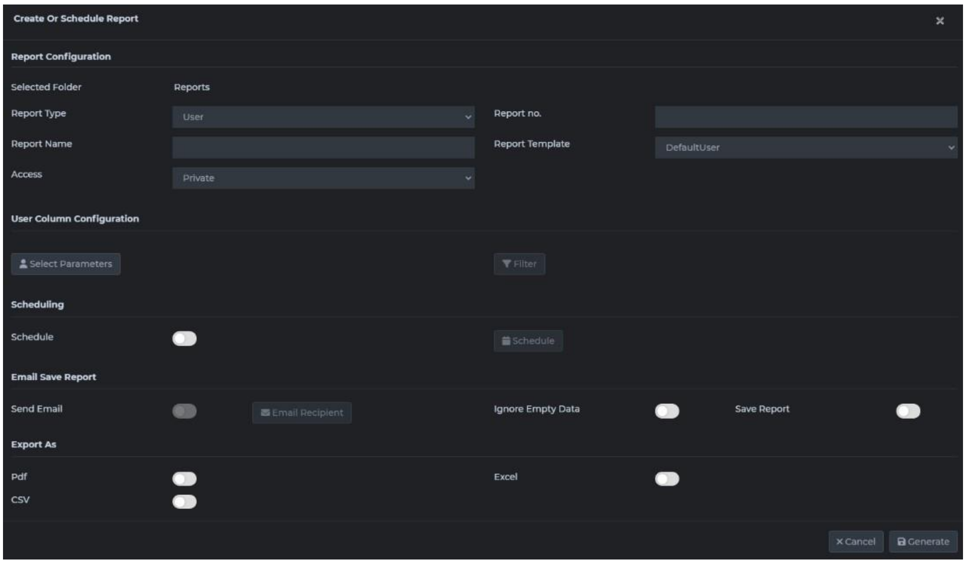
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

User Report

The User Report generates detailed reports on user details and their respective roles within XProtect.



Create/Schedule User Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. User Report has only one template named *DefaultUser.*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

User Column Configuration

- The *Select Parameters* button triggers the *Configure User Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- The columns available for selection are given below:

Serial No	Record no.

ID	Shows the XProtect User ID.
Name	Shows the name of the user.
Roles	Shows the Role to which the user is assigned to.
Site	Shows the site name.
Description	Shows the description entered while creating a basic user.
Created Date	Shows the date and time of creation of a particular user.
Last Modified	Shows the date and time of modification of a particular user.
SID	Shows the XProtect User ID.
Can Change Password	Shows True if the user is allowed to change the password from the smart client login screen using a browser.
Force Password Change	Shows True if the user is forced to change the password on the next login.
Status	Shows if the user is enabled or locked out by the admin.
LockoutEnd	Shows the Lockout End Datetime.
Is External	Shows True for Windows users and False for Basic User.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
  - *Minutes:* Generate reports for every selected minute(s).
  - *Hourly:* Choose to generate the report for every selected hour(s).

- *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
- *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from the in the *Email* field, enter the desired email address. Click the + button and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

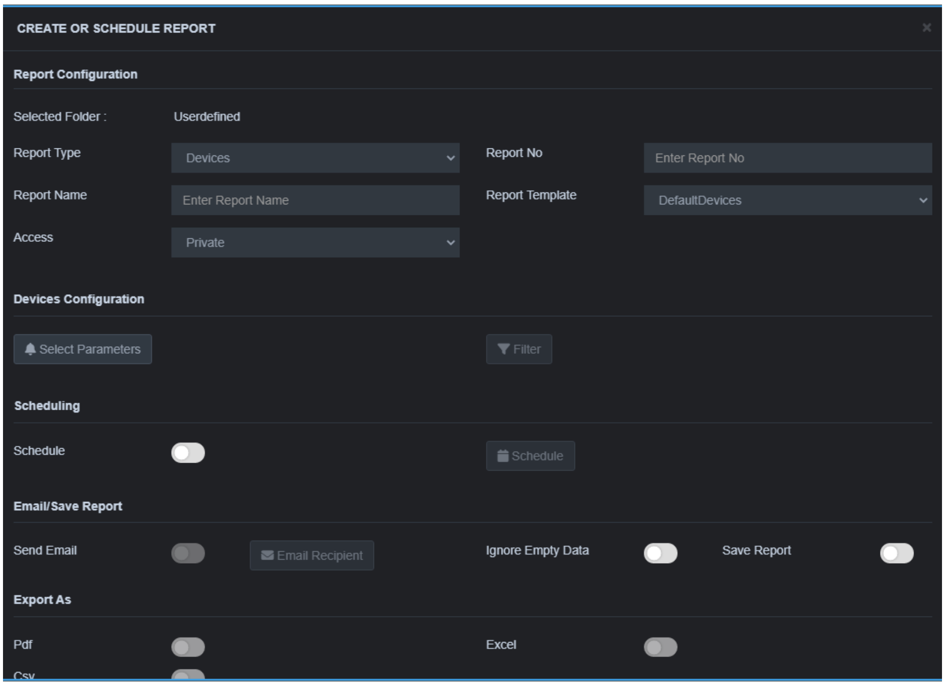
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Devices Report

The Device Report generates detailed reports on cameras, microphones, speakers, recording servers, outputs, which also includes disabled devices within XProtect.



Create/Schedule Devices Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Devices Report has only one template named *DefaultDevices.*
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the use, select *Private* or leave as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Events Column Configuration

- The *Select Parameters* button triggers the *Configure Devices Column* popup, where the users can select all the Devices parameters that are required by switching the toggle on. In the

Display Name field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

- The columns available for selection are given below:

Serial No	Record no.
Name	Shows the device name of the camera, Microphone, Speaker & Outputs.
Type	Type of device such as Camera, Microphone, Speaker & Outputs.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address. Click the + button and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

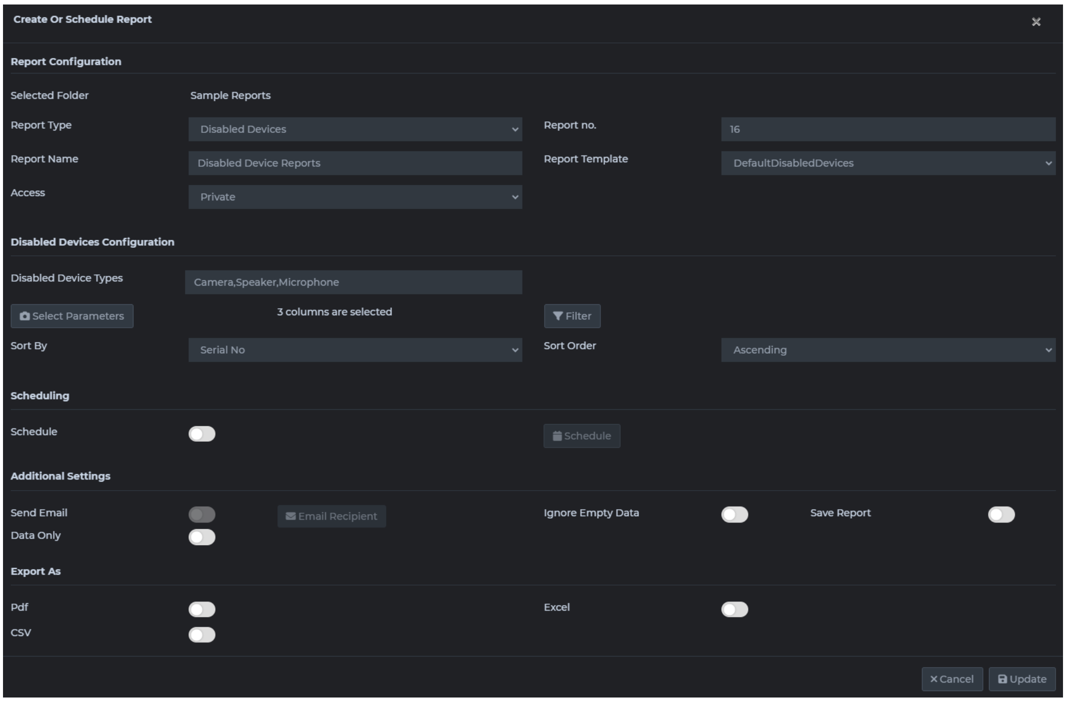
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *Pdf* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Disabled Device Report

The Disabled Devices Report generates a report of devices disabled in XProtect.



Create/Schedule Disabled Devices Report

Report Configuration

- **The** *Reporting No* **field lets the user add the Report Number if needed.**
- **The** *Report Name* **option lets the user configure the report name, which should be unique.**
- **Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Disabled Devices Report has only one template named** *DefaultDisabledDevices.*
- **The** *Access* **option lets the user with administrator role restrict users with roles other than admin from accessing the report or lets them access the report. To restrict the report to only the user, select** *Private* **or leave as** *Public* **for access to all users. All reports which are private can be viewed and edited by any user with administrator role.**

Disabled Devices Column Configuration

- **To add device types, enter the device types in the** *Disabled Device Type* **field separated by commas if multiple device types should be considered in report. For example, to generate a report for all disabled cameras, speakers, and microphones** then data should be entered as Camera, Speaker, and Microphone.

- The *Select Parameters* button triggers the *Configure Disabled Devices Column* popup, where the users can select all the parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Name	Shows the device name of the Camera/Microphone/Speaker & Outputs
Type	Type of device such as Camera, Microphone, Speaker, Outputs.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.

- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

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    - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address. Click the **+** button and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* on if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

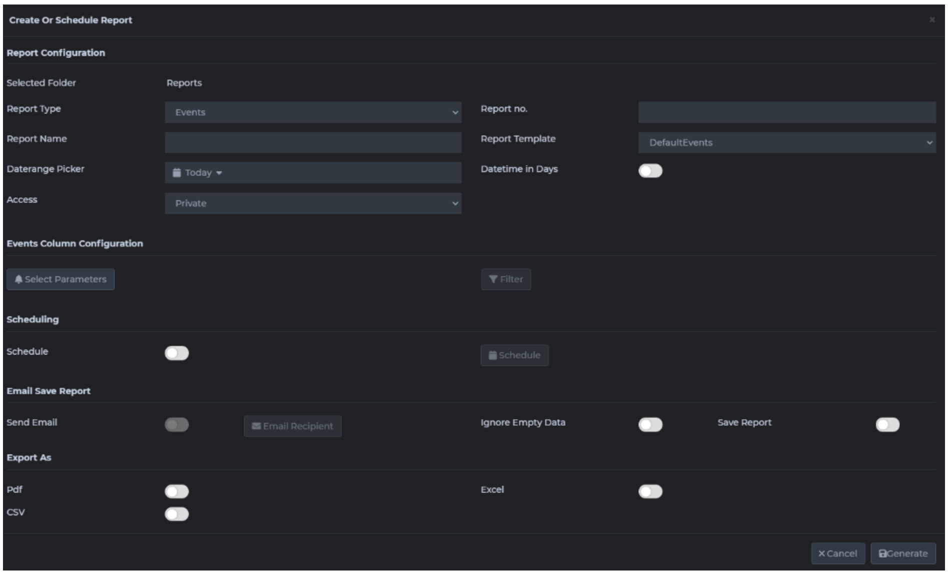
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Events Report

The Events Report generates a report of all saved Events in XProtect.



Create/Schedule Events Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated.Events Report has only one template named *DefaultEvents.*
- The *Daterange Picker* lets the user select the duration of time for which the records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.
- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
- Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Events Column Configuration

- The *Select Parameters* button triggers the *Configure Events Column* popup, where the users can select all the Events parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Type	Shows the Type of Event.
Message	Shows the Message.
Time	Shows the Date and Time of Event.
Source	Shows the Source of the Event.
Site	Shows the name of the Management Server.
Source IP	Shows the IP Address of the Source (In case the event is from the camera).
Source Location	Shows camera location picked up from the O-Insights custom properties section in the management client.
Source Type	Shows camera type picked up from the O-Insights custom properties section in the management client.
Source Recording Server	Shows the name of the recording server for the camera.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.

- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.

  - To send to custom recipients, select *Email* from in the *Email* field, enter the desired email address. Click the + button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
  - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
  - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

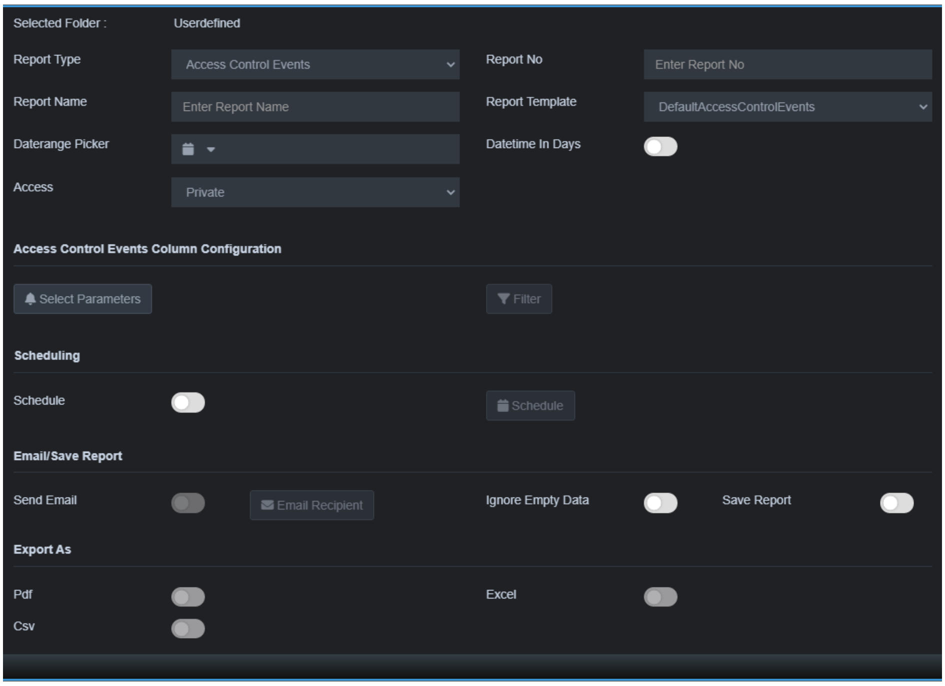
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Access Control Events Report

The Access Control Events Report generates a report of all access control Events saved in XProtect.



Create/Schedule Access Control Events Report

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Access Control Report has only one template named *DefaultAccessControlEvents.*
- The *Daterange Picker* lets the user select the duration of time for which the records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* for selecting Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
- Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Access Control Events Column Configuration

- The *Select Parameters* button triggers the *Configure Access Control Events Column* popup, where the users can select all the *Access Control Events* parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Access System	Shows details of the access control system.
Credential Holder	Shows ID of card holder.
Message	Shows the message.
Source	Shows the source from which the message originated.
Type	Shows the Type of event as access control system events.
Time	Shows the Date and Time of the Event.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.

- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.

    - To send to custom recipients, select *Email* from the in the *Email* field, enter the desired email address click the **+** button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

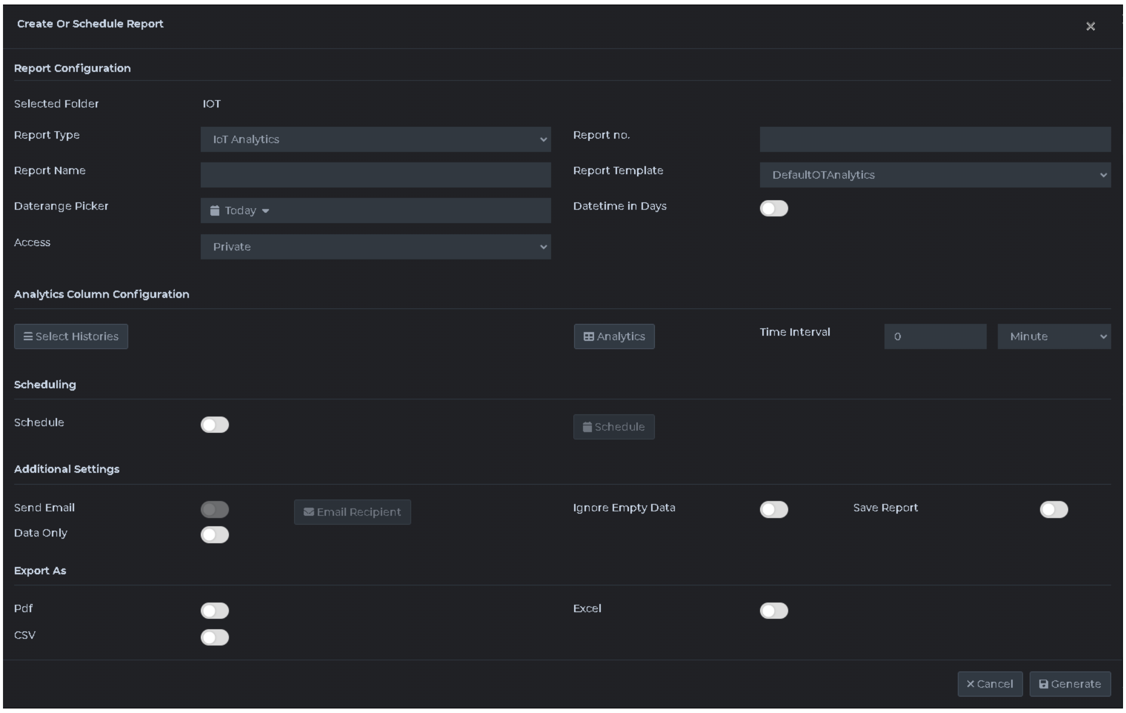
Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

IoT Analytics Report

The Analytics report type produces analytic reports for selected points, aggregating point values based on chosen criteria to provide insights.

For instance, a point could be a temperature sensor transmitting temperature values, or in the context of a camera, it could involve people counting information sent by the camera.



Create/Schedule IoT analytics Report

Report Configuration

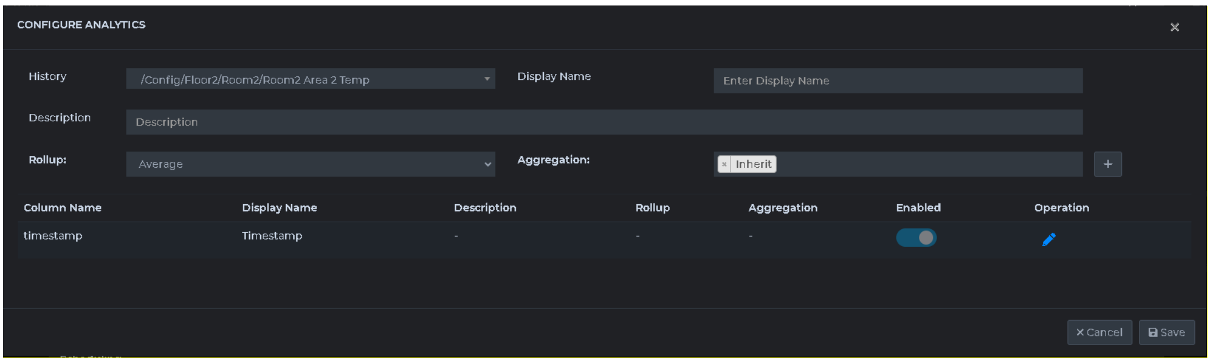
- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Report template helps to Select the desired report template from the dropdown, based on which the reports will be generated. Access Control Report has only one template named *DefaultAccessControlEvents.*
- The *Daterange Picker* lets the user select the duration of time for which the records need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days*

or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.
If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
  Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

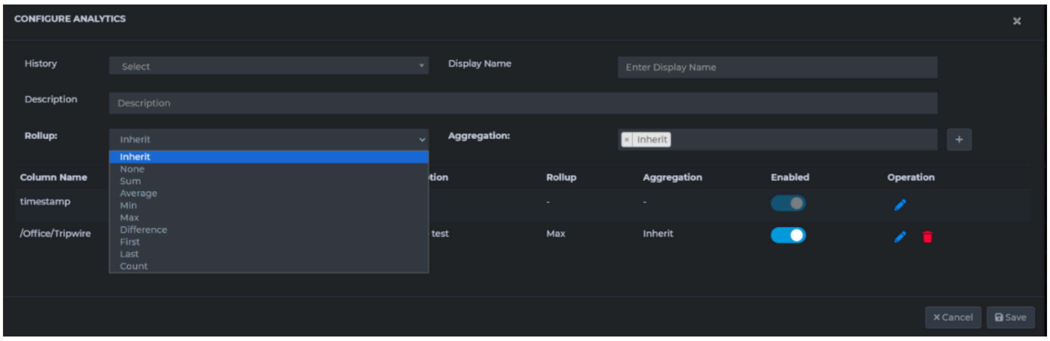
Analytics Configuration

The *Select Histories* button triggers the *Configure History* popup, where the users can add the histories for points on which analytic operations are to be performed.



Configure Analytics

- From the History dropdown, select the required history on which analytic operations are to be performed, and in the Display Name field, add the name to be displayed for the row and click the **+** icon. Repeat the process until all the required histories are added. Click the trash icon to delete an entry or the pen icon to edit an existing entry.



- The *Rollup* option is for performing the selected operation on the records between intervals for the selected historical records. For instance,

We have a temperature sensor integrated, and we need to find a peak of temperature value on an hourly basis.

Another example would be getting an hourly or daily average of count of vehicles in the parking area.

- *Inherit:* The roll-up selected in the Analytics button option will get inherited.
- *Sum:* Sum of all the records within the chosen Time Interval.
- *Difference:* Difference between the first and last records within the chosen Time Interval.
- *Max:* The highest recorded value within the chosen Time Interval.
- *Min:* The lowest recorded value within the chosen Time Interval.
- *First:* First record within the chosen Time Interval.
- *Last:* Last record within the chosen Time Interval.
- *Average:* The average of all the records within the chosen Time Interval.
- *Count:* Counts the number of records.
- The *Aggregation* option lets the user aggregate all the records for a single point in a separate table. Aggregation types are like rollup operations mentioned above, the

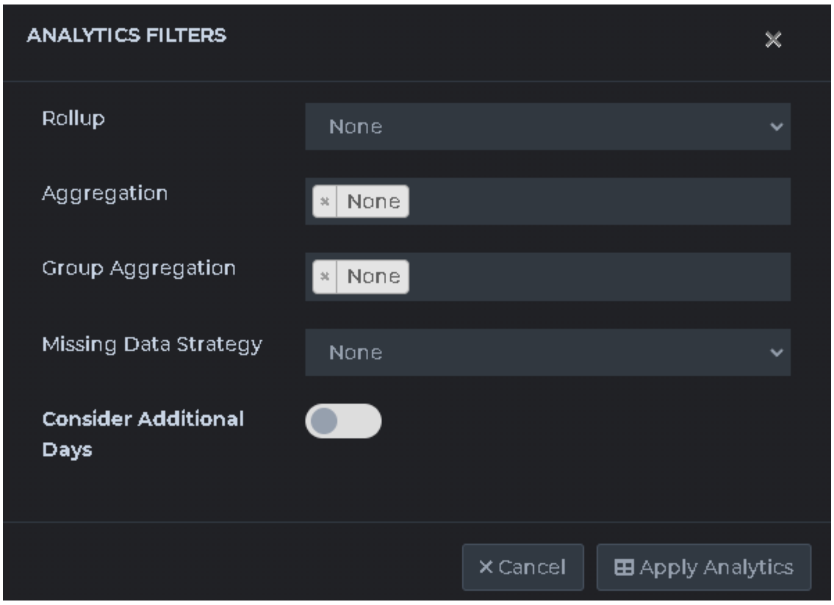
values will be aggregated as a single value based on the operation chosen.

For example, if a temperature sensor is integrated, you might need to identify the peak temperature for a particular day.

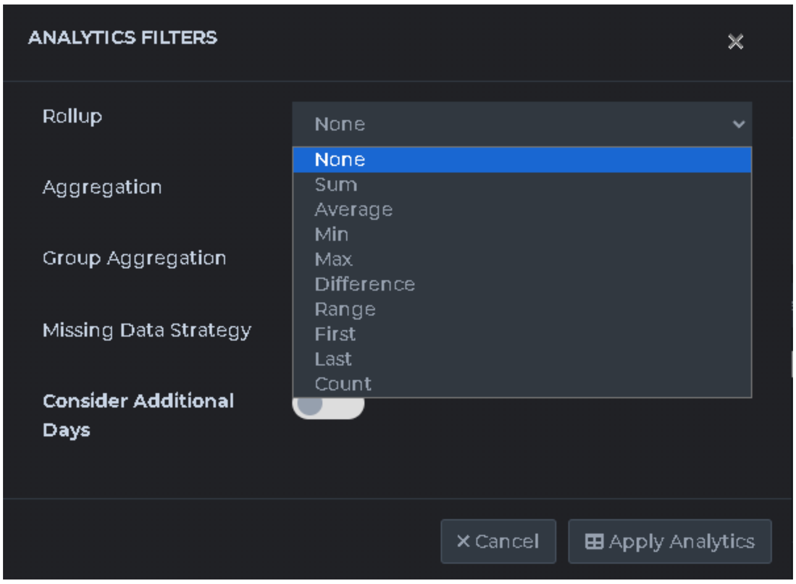
Another example could involve calculating the total count of vehicles in a parking area for a day or month.

- To close the popup without saving changes, click the Cancel button or click the *Save* button to save changes.
- The *Enable/Disable* option is used to either enable or disable a specific history to be plotted in the report.
- The *Operation* option allows you to edit or delete the configurations per history.

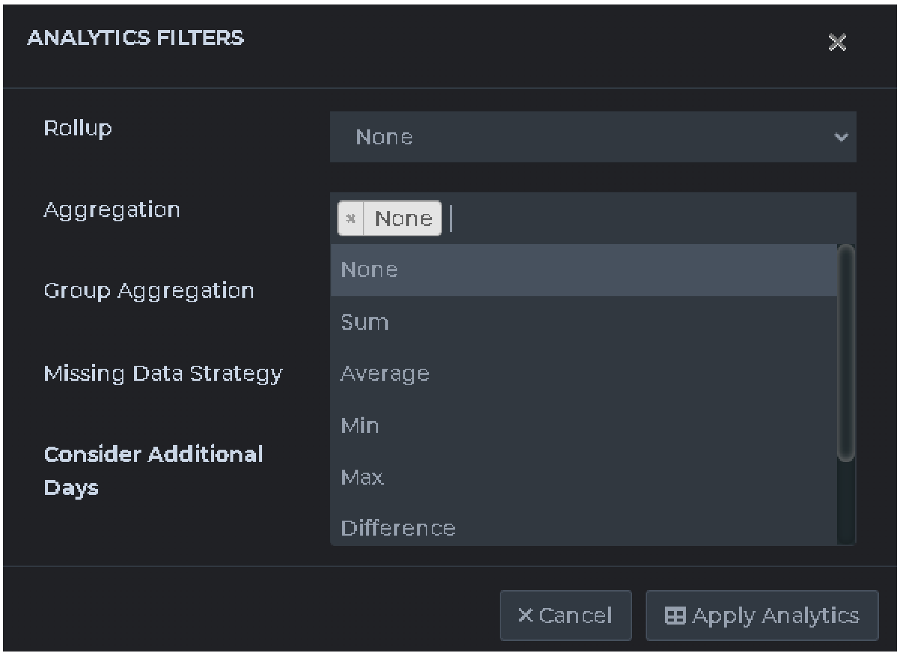
- The *Time Interval* field allows the user to specify the time interval between records in minutes. All the records within the specified interval will be rolled up.
- The *Analytics* button enables performing analytics on the selected histories. Common analytics configuration can be done on the selected histories.



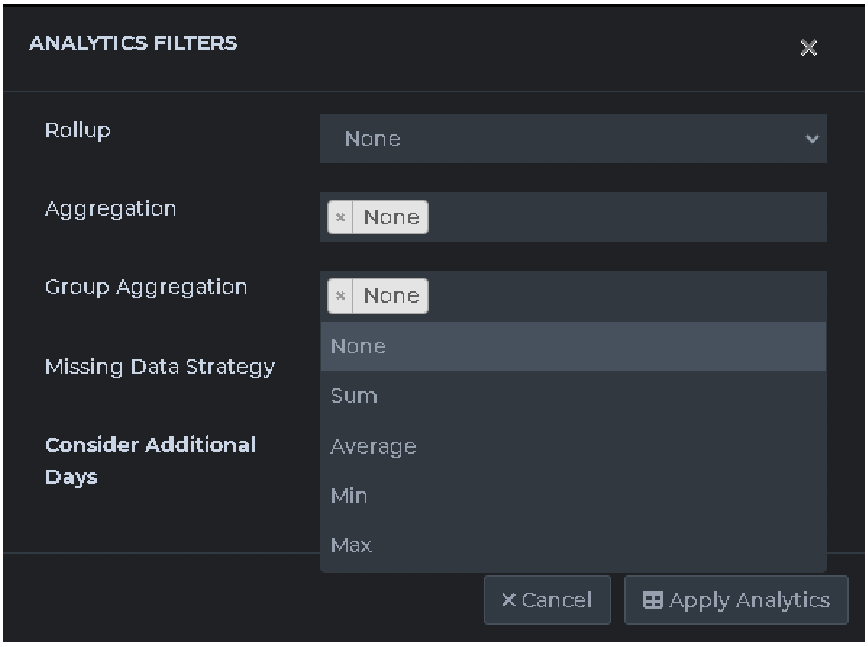
Configure Analytics Filters



- The Rollup option is for performing the selected operation on the records between intervals for the selected historical records.
- Sum: Sum of all the records within the chosen Time Interval.
- Difference: Difference between the first and last records within the chosen Time Interval.
    - Max: The highest recorded value within the chosen Time Interval.
    - *Min:* The lowest recorded value within the chosen *Time Interval*.
    - *First:* First record within the chosen *Time Interval.*
    - *Last:* Last record within the chosen *Time Interval.*
    - *Average:* The average of all the records within the chosen *Time Interval*.
    - *Count:* Counts the number of records.
    - *Range:* The *Range* option is the same as *Difference,* but the last record in this case is like the first record of the next day of the date range selected. For instance, if five days are selected in the date range, the first record of the sixth day will be the last record. If there are no records available within the next day after the chosen date range, then the last record within the chosen interval will be considered. As in the above instance, if there are no records on the sixth day, then the last record of the fifth day will be considered.

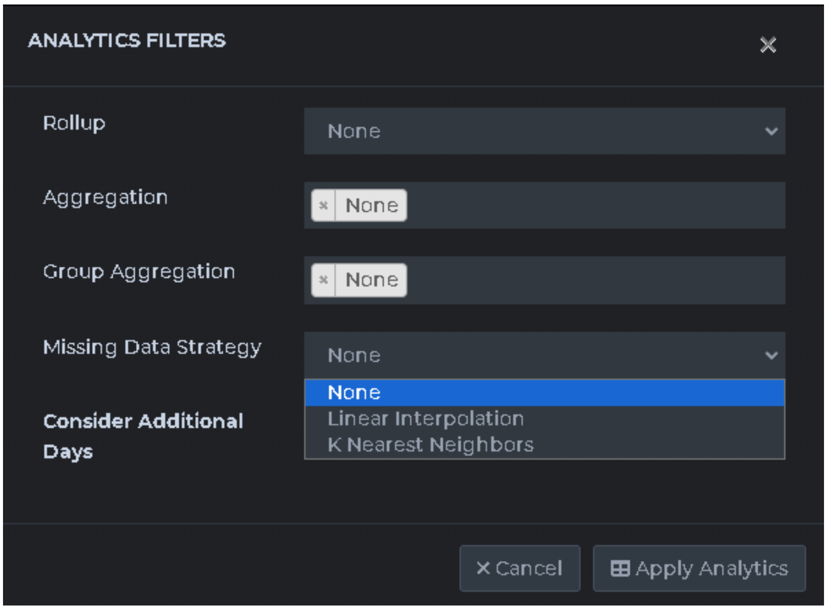


- The *Aggregation* option lets the user aggregate all the records for a single point as a column in a separate table.



- The *Group Aggregation* aggregates different points of the same timestamp based on the aggregation type. Aggregation types are similar to rollup operations mentioned above, the values will be aggregated as a single value based on the operation chosen.

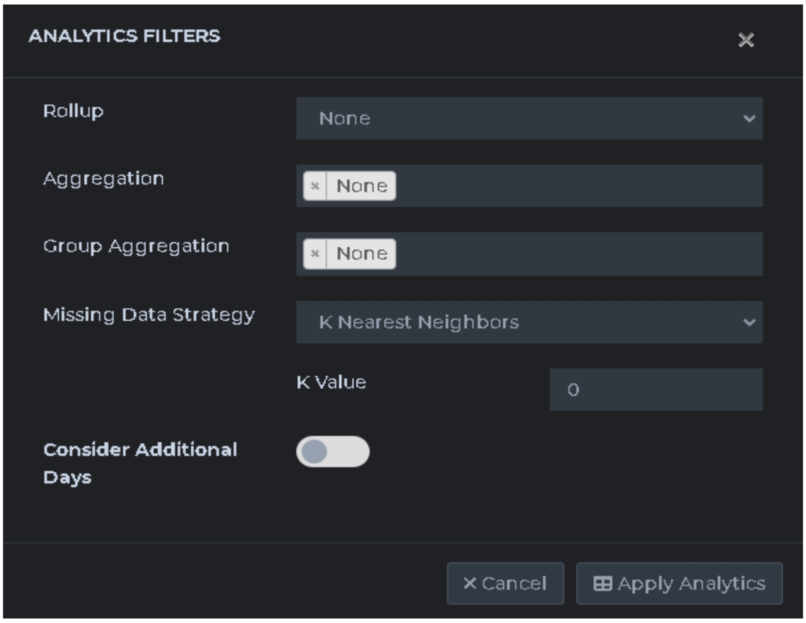
- For instance, if multiple temperature sensors are integrated, you might need to determine the peak temperatures recorded by these sensors over the course of a day.
- Another example could involve cameras installed on different floors to count people; you might need to aggregate the total count of people across all floors.



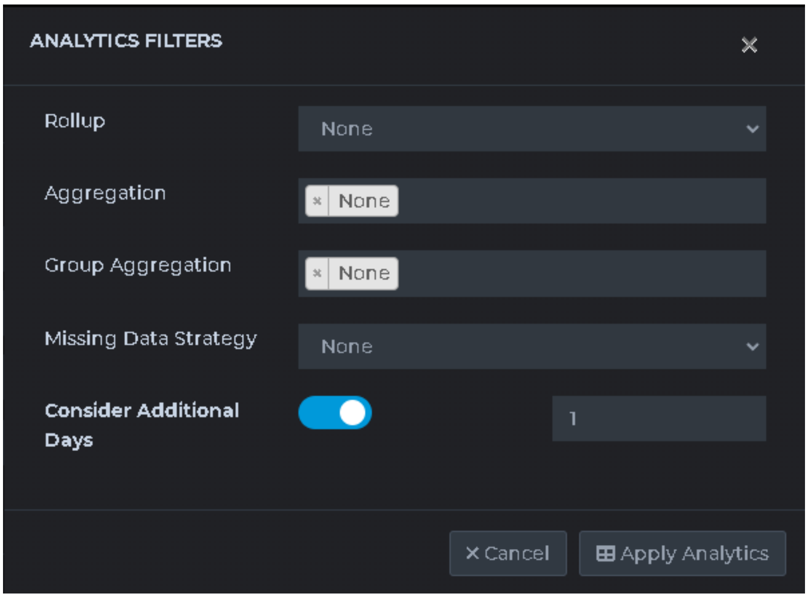
- The *Missing Data Strategy* lets the user use missing data strategies like *K-Nearest Neighbour* and *Linear Interpolation* to fill in the missing data.
  - *K-Nearest Neighbour* is for numeric and Boolean records. For intervals, other than none, this strategy replaces a missing value by calculating the majority value recorded for the item's k nearest neighbours. The number of neighbours to consider is k. The system selects k's previous and next nearest neighbours to calculate the missing value. If a tie occurs between two values, the algorithm selects the lowest timestamp value.

- The interpolation algorithm linearly interpolates the missing values based on the surrounding values in the series.

- There are three locations where data can be missing:
    - At the beginning of the series.
    - Interspersed among the series.
    - At the end of the series.



- *K Value*: The number of neighbouring values to be considered while using the *K-Nearest Neighbour* missing strategy.



Consider Additional Days: This option is applicable only when using *Range* as the roll-up type. For example, for calculating last month's consumption, it's necessary to take the difference between the value on the first day of the last month and the value on the first day of the current month.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from the in the *Email* field, and enter the desired email address. Click the **+** button and repeat until all

email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

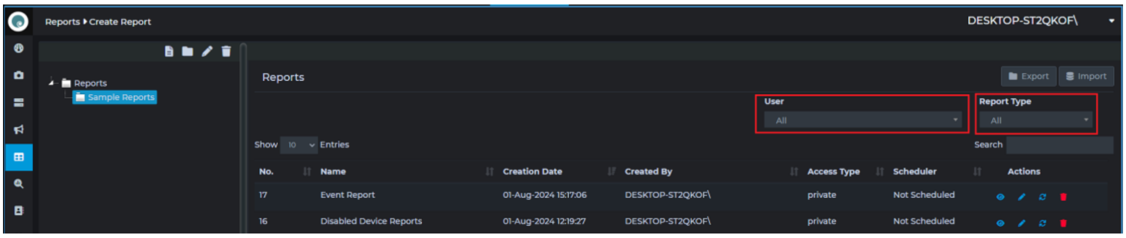
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

Report Information & Report Actions

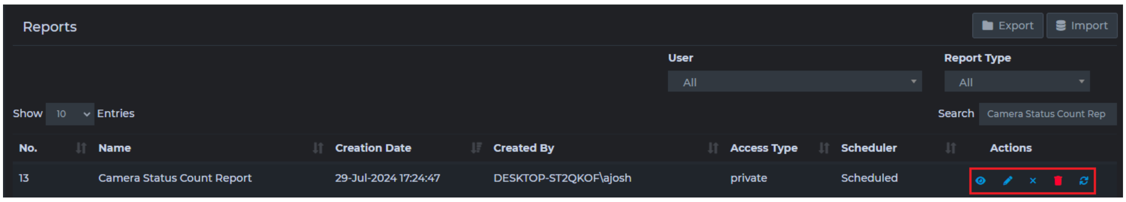
The user can perform various actions on the existing reports that are created and listed on the Create Reports page.



Created Reports

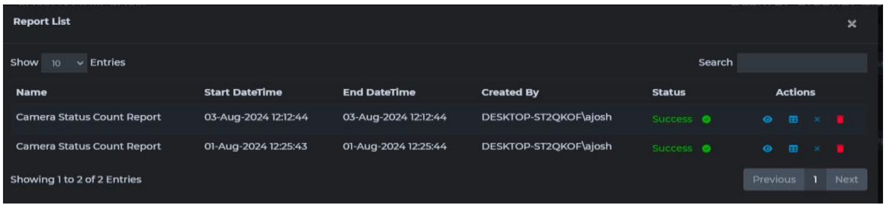
Report Table

- The users can filter the reports by applying a filter on User or Report Type from the dropdown above the table.
- The user can also search for any report where the report type is public.
- The *Name* column shows the report name as configured by the user while creating/scheduling the report.
- The *Creation Date* field shows the date/time of report creation.
- The Created by Field shows details of the user who created the report.
- The Access Type shows if the report is private or public.
- The *Scheduler* Column shows if a report is configured to run on a schedule or is not scheduled.



- Below are the functions of buttons under the *Action* Column

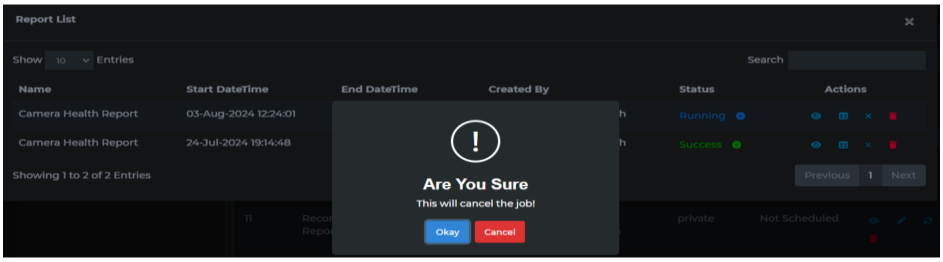
 button opens a window that shows all the runs of the report as below:



Clicking on  icon opens the report in PDF format.

Clicking on icon will open the report within the *Smart Client*.

Clicking on icon will cancel a run of the report when its status is *Running* if *Okay* is clicked on the pop-up screen after the icon is clicked.



Clicking on icon will delete the run of the report if *Okay* is clicked on the pop-up screen after the icon is clicked.

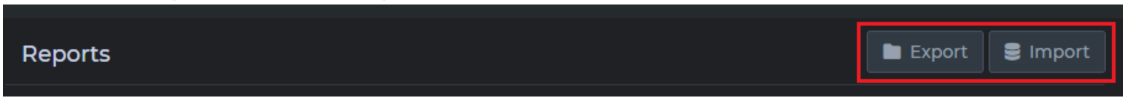
Clicking on icon will allow a user to edit the report parameters.

Clicking on icon will cancel the report schedule.

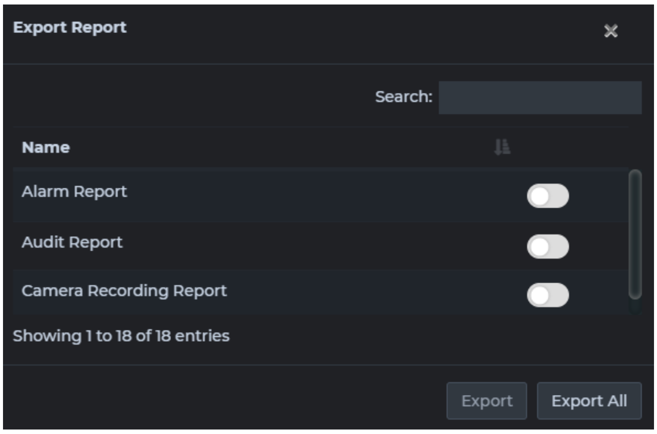
Clicking on icon on the report table page will delete the report.

Clicking on icon will run the report once.

Exporting/Importing Report

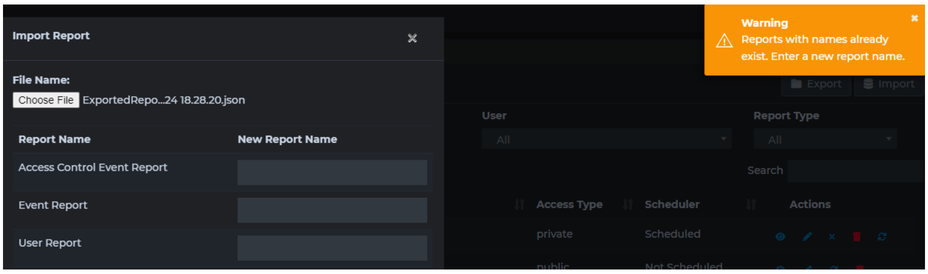


The reports can be imported and exported with the *Export/Import* options.



- *Export report*: Click *Export* to export all the reports generated or choose any report from the options. Save the file to the desired directory. This can be later imported as per requirement.

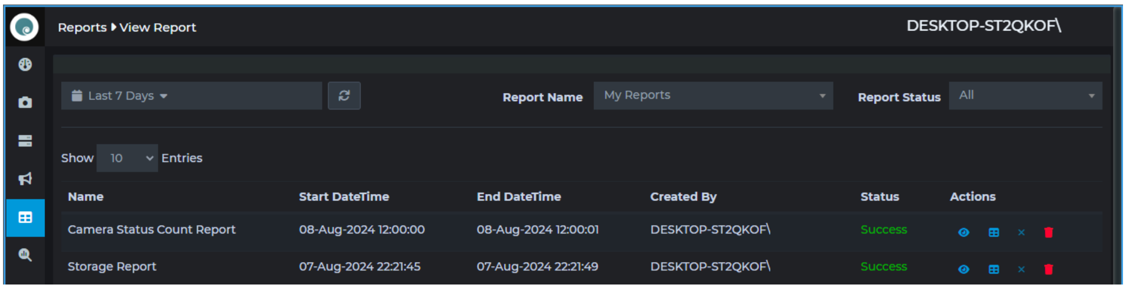
- *Import report:* Click *Import* to import report. From the Explorer window, choose an exported report file and click open.



- If the user already has reports with the same name, then a warning message will be displayed to enter a new name for the report. After entering a new name click on *Import* in the same window.

View Reports

The *View Reports* page lists all the reports that are generated based on the reports created/scheduled by the user. The report table shows information such as *Name* (Report Name), *Start Datetime* (Start Time of the run), *End Datetime* (End Time of the run), Created By, *Status* (report status), and *Actions*.



View Reports

Filtering View Reports Table

- Click the date range picker dropdown at the top corner of the table area to expand and select the date for which the job records are to be shown. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option and select the start date/time in the first and the end date/time in the second.
- The *Report Name* dropdown field has two categories, *My Reports*, and *Public Reports*. Under *My Reports*, all the reports created by the user are nested, and under *Public Reports*, all the reports created by the other users that are of public access type are listed. The list can be filtered by entering the partial/complete report name in the dropdown text field.
- The *Report Status* dropdown lets the user filter the table by the status of the report job, where *Success* is completed, *Running* is a job that is in progress, *Queued* is a report that is queued and will start as the other reports running ahead are completed, *Cancelled* is a user cancelled report, and *Incomplete* is a report that has aborted without completion.
- The Refresh button next to the date range picker dropdown refreshes the table and shows the updated report status.

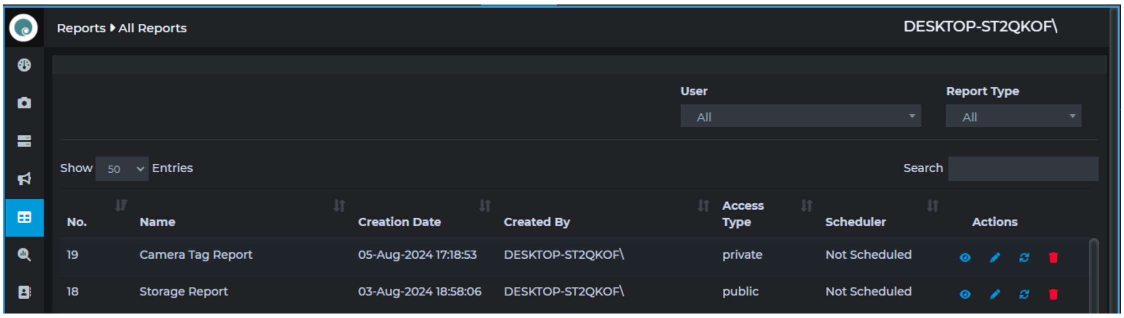
Report Actions

- In the action column of each record, the eye views the report in PDF, the table icon opens the report within the Smart Client, the cross icon stops the generation of the report if it is running, and the trash icon deletes the run of the report.

All Reports

The *All Reports* page compiles all generated reports based on user-created or scheduled reports. Notably, an Admin User has the privilege to access and view reports created by other users, even those marked as private.

The report table shows information such as *Name* (Report Name), *Creation Date* (Start Time of the report), *Created by* (user), *Access Type* (Public/Private), *Scheduler*, and *Actions*.



All Reports

Filtering All Reports Table

- The *User* dropdown lets the Admin user filter the table by the user who created it.
- The *Report Type* dropdown lets the Admin user filter the table by the type of the report.

Report Actions

- The first eye icon triggers a *Report List* popup which shows all the generated instances of the report. In the popup, click the eye icon to view the report, the cross icon to stop the generation of the report if it is running, and the trash icon to delete the instance of the report from the database. To search/filter items, type the text in the *Search* field. To close the popup, click the close button (x) in the right top corner of the popup.
- The second pen icon edits the report, where the user can modify the date-time range, column configuration, scheduling, email/save options, and export formats. To close the popup without saving changes, click the *Cancel* button or click the *Update* button to save changes.
- The third generate icon generates a single instance of the report. To cancel the generation, click the eye icon, and from the list, click the second *x* button in the row. The state will

change from *Running* to *Cancelled.* Alternatively, the same can be done from the *View Report* page.

- To delete a report, click the trash icon, and in the popup that appears, click *Okay* or *Cancel* to not delete the report. **Deleting the report will delete all the jobs associated with the report and cannot be undone.**

Action Reports

Action Reports facilitate taking direct remediating action of camera properties or storage size based on generated reports.

It is important to note that video settings can vary among different cameras, so you must specify the video setting and its corresponding value for updates to be applied.

> **Note:** In the Camera Report, you can modify both the camera password and various video settings such as resolution and frames per second (FPS).

Regarding the storage report, you can adjust the MaxSize and RetentionTime settings.

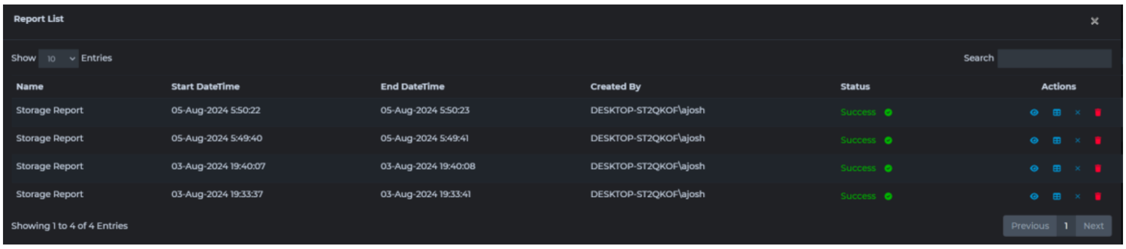
In case we run the action on storage retention (number of days of storage) and if the storage has an archive configured for it, Only the number of days of retention of the live database will be updated and the of days of retention of archive storage is not changed.

Similarly, when the storage size is updated from action reports then the storage size of only the live database is changed, and the archive is not changed.

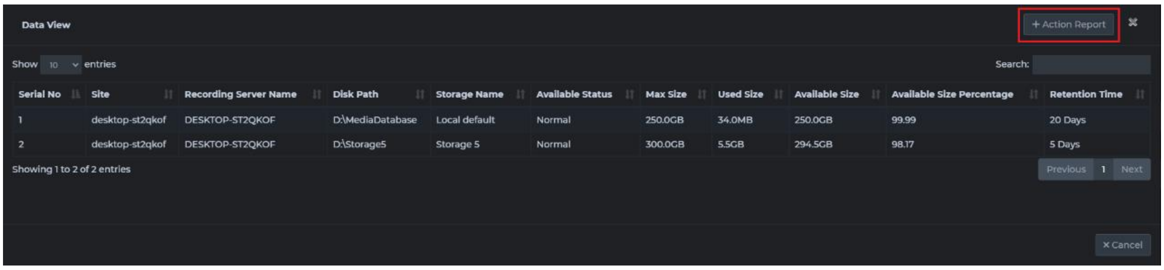
Create Action Report

The first step to creating an action report is to create a camera detail report or storage report.

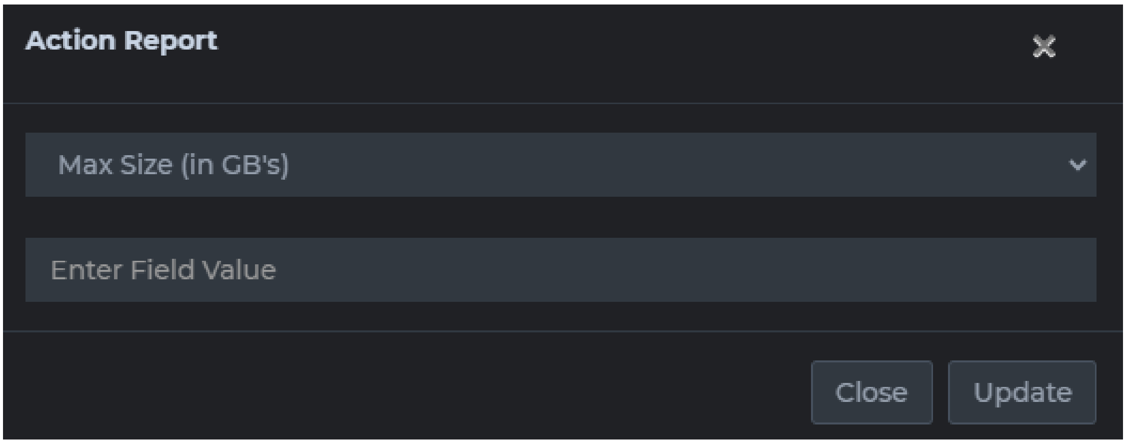
To act on a report, go to the reports list, and click on the eye icon. This will show all the runs of the report.



Now click on the  icon to open the Data View pop up as below:



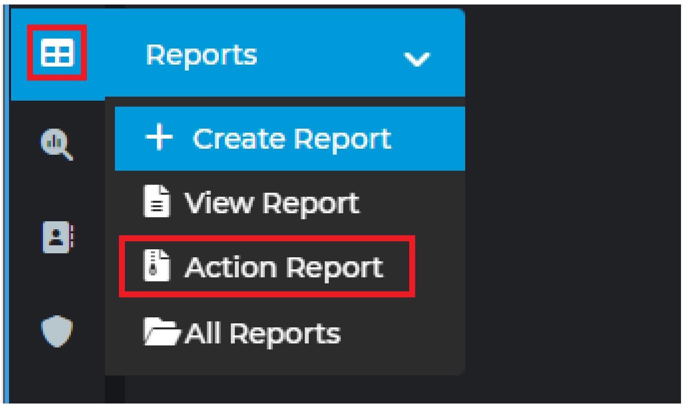
In the data view pop up click on Action Report to open the pop up to make changes to the parameter.



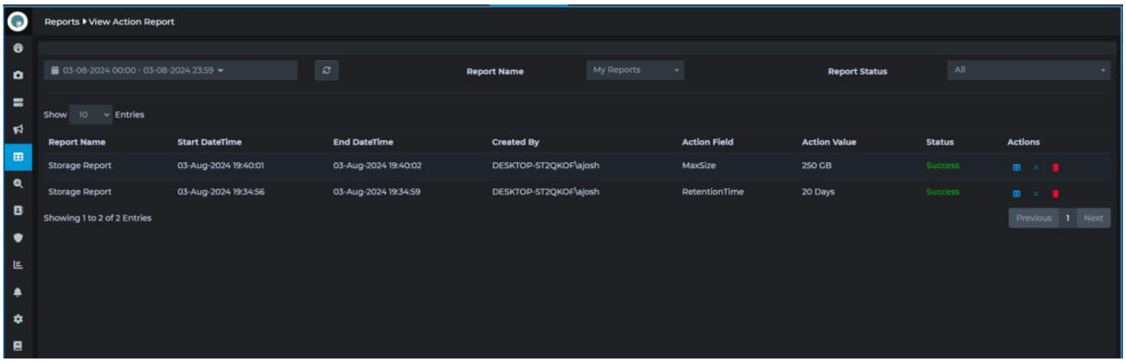
The dropdown will show the list of parameters that can be changed for the report. The user must select the parameter, enter the value in the field below, and click the update button to update the value on the management server.

View Action Report

Once done, the executed action reports can be viewed in the *Action Report* option under *Reports*.



Click on Action Report to open the view action report window.



View Action Report

Filtering View Action Report Table

- Click the date range picker dropdown at the top corner of the table area to expand and select the date for which the action report records are shown. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records for the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.
- The *Report Name* dropdown field has two categories, *My Reports*, and *Public Reports.* Under *My Reports*, all the reports created by the user are nested, and under *Public Reports*, all the reports created by the other users that are of public access

type are listed. The list can be filtered by entering the partial/complete report name in the dropdown text field.

- The *Report Status* dropdown lets the user filter the table by the status of the user report, where *Success* is completed*, Running* is a job that's in progress, *Queued* is a report that's queued and will start as the other reports running ahead are completed, *Cancelled* is a user cancelled report, and *Incomplete* is a report that has aborted without completion.
- The refresh button next to the date range picker dropdown refreshes the table and shows the updated Report Status.

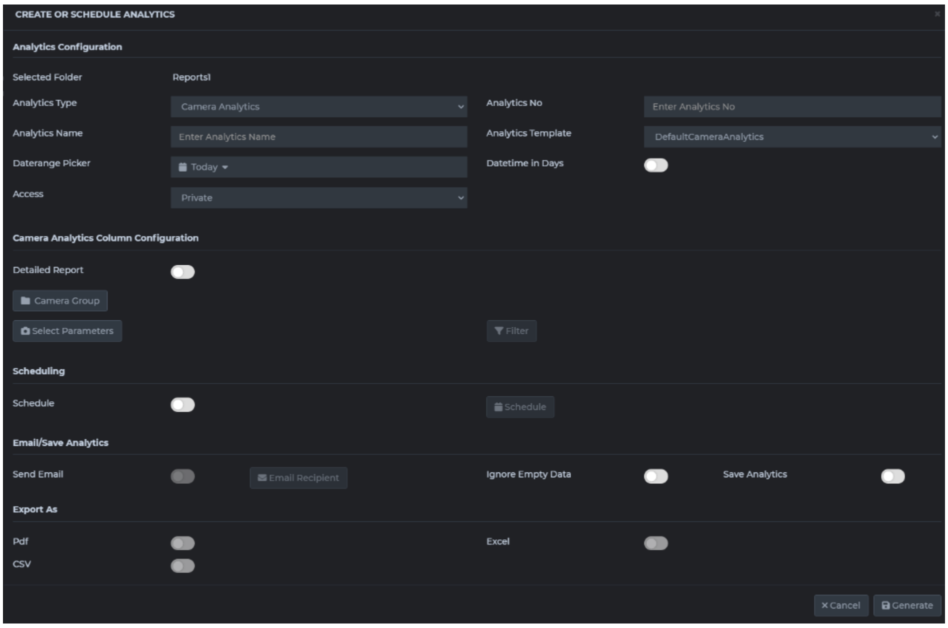
Action Report - Actions

- In the Actions column of each record, the table views the report details, the cross icon stops the generation of the report if it is currently running, and the trash icon deletes the report record.

Analytics

Camera Analytics

The Camera Analytics Report provides an analysis of data such as the frequency of camera disconnections and the average disconnection time in hours, organized on a daily, weekly, or monthly basis.



Create/Schedule Camera Analytics

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. Camera Analytics Report has 2 templates named *DefaultCameraAnalytics and DefaultCameraAnalytics (Detailed).*
- Select *DefaultCameraAnalytics (Detailed) and Toggle DetailedReport to get more information like camera downtime stamp, camera uptime stamp, camera downtime & alarm status for each camera.*

- The *Daterange Picker* lets the user select the duration of time for which the audit logs need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once on time and then the end date by clicking only once on date and only once on time in the calendar box.
- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
- Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

Camera Analytics Column Configuration

- The *Select Parameters* button triggers the *Configure Camera Analytics Column* popup, where the users can select all the Camera parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.
- The columns available for selection are given below:

Serial No	Record no.
Name	Shows the name of the camera.
Server	Shows the management server.
Recording Server	Shows the recording server for the camera.
Total uptime (In Hours)	Shows the total uptime for the camera in hours for the selected duration of the report.
Total uptime (In Percent)	Shows the percentage uptime for the camera for the selected duration of the report.
Disconnection Count	Shows how many numbers of times the camera got disconnected for the selected duration of the report.
Disconnection Daily Avg (In Hours)	Shows the average disconnection time in hours per day for the camera.
DisconnectionWeekly Avg (In Hours)	Shows the average disconnection time in hours per week for the camera.
Disconnection Monthly Avg (In Hours)	Shows the average disconnection time in hours per month for the camera.
Last Password Change Date	Shows the last password change for the camera.
Age of password (In Days)	Shows the age of the password.
Oldest Date of recording	Shows the oldest date of available recording.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the camera list by *Camera Name, Server, Recording Server, Total Uptime In Hours, Total Uptime In Percent, Disconnection Count, etc.* Type the filter input in the required fields and click on *Apply Filter.*

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.

- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, and enter the desired email address. Click the **+** button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in

Export as Section. The Default location is C:\Program Files\Reports.

Export As

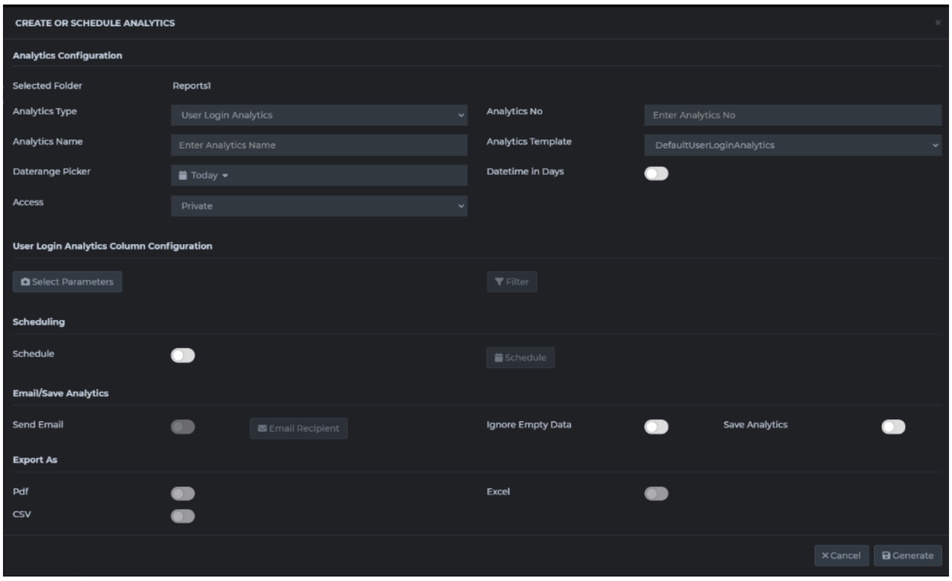
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

User Login Analytics

The User Login Analytics Report offers detailed insights into user login activities within XProtect, including the number of logins, average login duration, maximum and minimum login times, days without login activity, date of last password change, and days since the password was last updated. Analytics report uses the XProtect audits log.



Create/Schedule User Login Analytics

Report Configuration

- The *Reporting No* field lets the user add the Report Number if needed.
- The *Report Name* option lets the user configure the report name, which should be unique.
- Select the desired report template from the *Report Template* dropdown, based on which the reports will be generated. User Analytics Report has only one template named *DefaultUserLoginAnalytics.*
- The *Daterange Picker* lets the user select the duration of time for which the audit logs need to be fetched, based on which the report will be generated. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option. Select the start date/time in the first calendar by clicking only once on date and only once

on time and then the end date by clicking only once on date and only once on time in the calendar box.

- If records are to be selected dynamically to the current date, toggle on *Datetime in days* and fill in the *From* and *To* ranges where *days* are relative to the present day.

- If you need to consider records from a specific range of days, for example, from the last days until today, follow these instructions:
  From days: Enter 7.
  To days: Enter 0.
- Make sure to also specify the respective start and end times.
- The Access option allows an administrator to restrict or grant access to reports for non-admin users. To restrict the report to only the user, select *Private* or leave it as *Public* for access to all users. All private reports can be viewed and edited by any user with an administrator role.

User Login Analytics Column Configuration

- The *Select Parameters* button triggers the *Configure User Login Analytics Column* popup, where the users can select all the User Login parameters that are required by switching the toggle on. In the *Display Name* field next to the selected parameters, add the name to be displayed in the report for the selected parameter.

Serial No	Record no.
Username	Shows the name of the user.
No. of Logins	Shows the number of times the user has logged in to the system for the selected duration of the report.
Average Time	Shows the average login time in hours for the selected duration of the report.
Max Time	Shows the maximum login time in hours for the selected duration of the report.
Min Time	Shows the minimum login time in hours for the selected duration of the report.
Days Not Logged In	Shows the number of days the user has not logged in for the selected duration of the report.
Password Last Changed	Shows the date and time of password change for the user.

Days Since Password Changed	Shows the number of days since the last password change.

- Once the parameters are selected, the sort dropdowns will show up below. From the dropdown, select the column to sort the table from the *Sort By* dropdown and select whether to sort in ascending or descending order from the *Sort Order* dropdown.
- The *Filter* option lets the user filter the records by the given parameters. Enter the desired parameters and click *Apply Filter* and the filter will be applied. Toggle *Case Insensitive* to ignore case sensitivity. Click *Cancel* to close the *Filter Results* without saving the filters.

Scheduling

- To schedule report generation based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Report* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate a report for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use *the nth day of every month(s)* radio button. Select

the time when the report is to be generated in the *Start Time* dropdown.

Emailing Reports

- To enable mailing of reports, toggle the *Send Email* toggle on.
    - To send to custom recipients, select *Email* from in the *Email* field, and enter the desired email address. Click the + button, and repeat until all email addresses are added. Click the trash icon to remove an added email address.
    - Toggle *Ignore Empty Data* if the report is not to be mailed in case there is no data in the report.
    - Click *Save* to save the configuration or *Cancel* to discard without saving changes.

Save Reports

- To save a report to the preconfigured location, toggle *Save Report* on and select the required format (CSV, PDF, Excel) in Export as Section. The Default location is C:\Program Files\Reports.

Export As

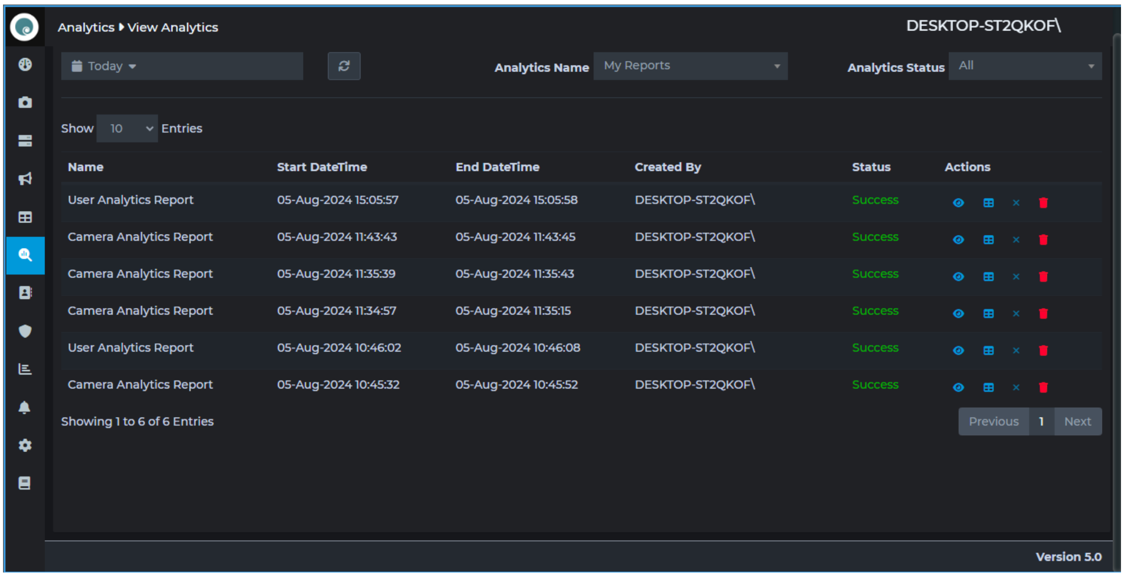
- The user can select the format in which the report will be saved to disk or emailed. To export as PDF, toggle the *PDF* toggle on, to export as Excel, toggle *Excel* on and to export as CSV, toggle CSV on.

Generating and Saving Report Configuration

- To save the configuration and/or generate the report, click the *Update button.*
- To exit without saving changes, click the *Cancel* button.

View Analytics

The View *Analytics* **page lists all the runs of analytics reports created/scheduled by the user. The table shows information such as** *Name* **(Job Name),** *Start DateTime*, *End DateTime*, *Created By* **(User who created the job),** *Status* **(Job Status), and** *Actions.*



View Analytics

Filtering View Analytics Table

- **Click the date range picker dropdown at the top corner of the table area to expand and select the date for which the job records are to be shown. The users can select** *Today* **to select Today's records,** *Yesterday* **for selecting Yesterday's records,** *Last 24 hours* **to select the records from the last 24 hours,** *This Month* **to select the current month's records, and** *Last 30 days* **or** *Last 7 days* **to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the** *Custom Range* **option and select the start date/time in the first and the end date/time in the second.**
- **The** *Analytics Name* **dropdown field has two categories,** *My Reports*, **and** *Public Reports.* **Under** *My Reports*, **all the reports created by the user are listed, and under** *Public Reports*, **all the reports created by the other users that are of public access type are listed. The list can be filtered by entering the partial/complete name in the dropdown text field.**
- **The** *Analytics Status* **dropdown lets the user filter the table by the status of the analytics report, where** *Success* **is completed,** *Running* **is a report that is in progress,** *Queued* **is a report that's queued and will start as the other report running ahead is**

completed, *Cancelled* is a user cancelled report, and *Incomplete* is a report that has aborted without completion.
- The refresh button next to the date range picker dropdown refreshes the table and shows the updated report status.

Analytics Actions

- In the action column of each record, the eye icon opens the report in pdf format, the table views the report details within XProtect, the cross icon stops the generation of the report if it's running, and the trash icon deletes the job record.

Widgets for O-Insights VMS Plugin

O-Insights Reporting enhances data visualization and insights by displaying data generated by the Reporting in O-Insights VMS Plugin. This integration allows users to access and interpret complex data through a user-friendly interface, providing a clear and comprehensive view of operations.

Currently, the following widgets are supported in the O-Insights Reporting for VMS Workspace.

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.

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.

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.

User Login Analytics Chart Widget

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.

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.

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.

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.

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.

Report Analytics Widget

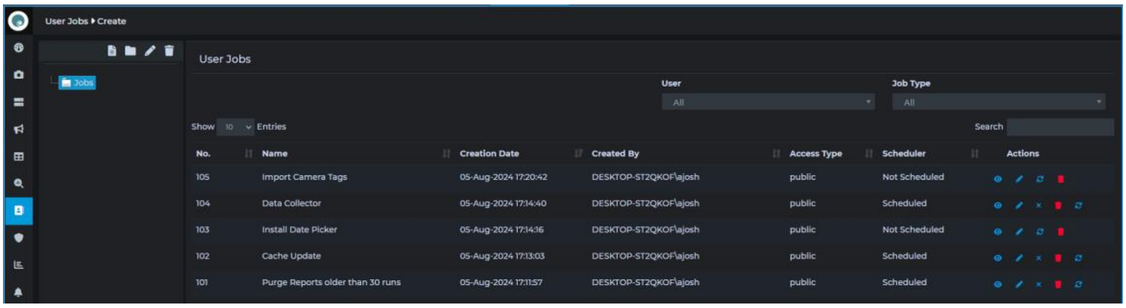
The Report Analytics Widget is designed to analyse and display report data based on user configurations. This widget allows for operations such as counting, and determining the minimum, maximum, average, and sum of a specific column within the selected report, effectively visualizing the data for easy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

User Jobs

The *User Job* section lets the users create and view jobs.

Click on 📄 above the tree after selecting the desired folder to create a new user job. Only one user is allowed to create/edit/delete User Jobs and the Access Type is always set to public. Other users can only view the instances of the job.

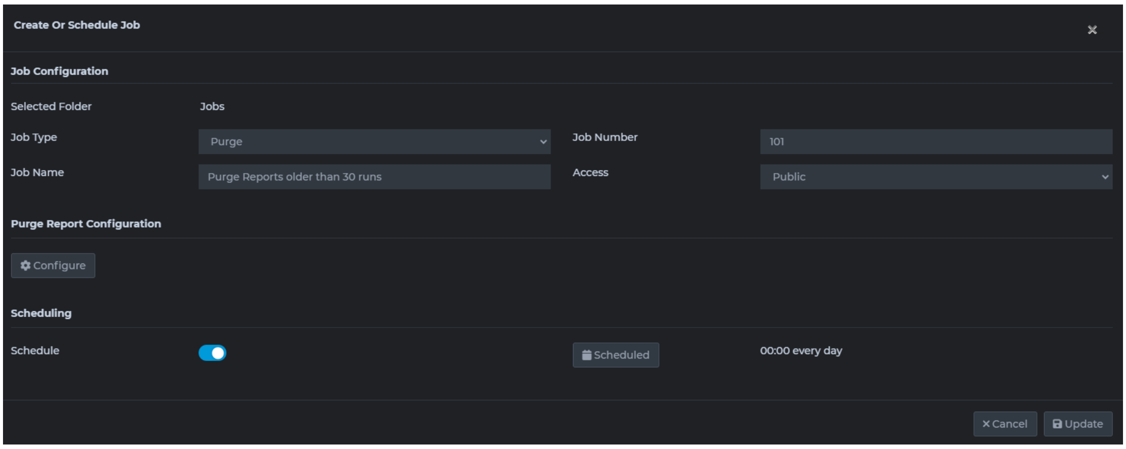
> **Note:** In Query Engine, you are limited to creating just one user job of the same type. Having multiple user jobs of the same type is not allowed, as it prevents the concurrent execution of multiple instances of the same user job.



Create User Job

Purge Reports

The *Purge Reports* job lets the users purge reports periodically based on the number of reports generated or the age of reports by each report type. **Purging the reports is permanent and purged reports cannot be recovered.**



- From the dropdown, choose the *Purge* option to create a purge job.
- Fill in the *Job No.* and *Job Name* fields as desired.
- The access option is left as public by default and only one user is allowed to create/edit/delete Purge Job. Other users will only be able to view it.

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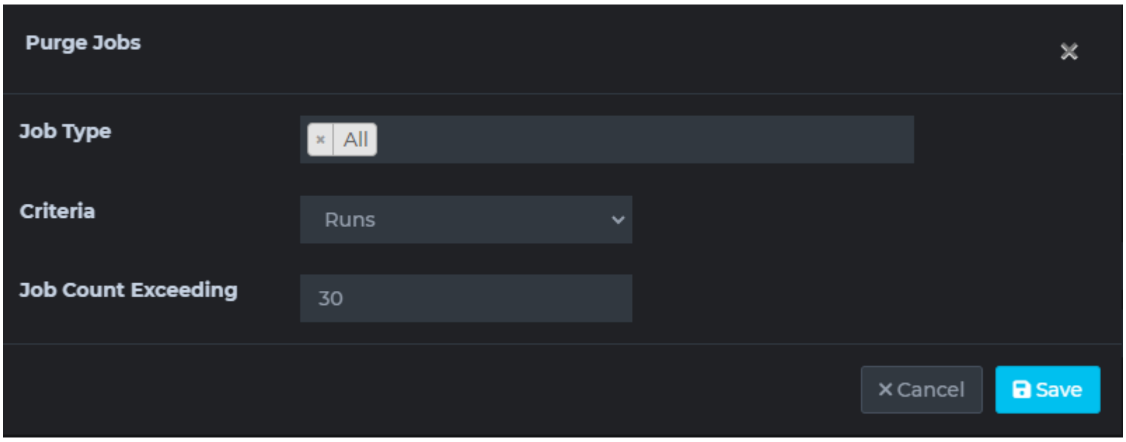
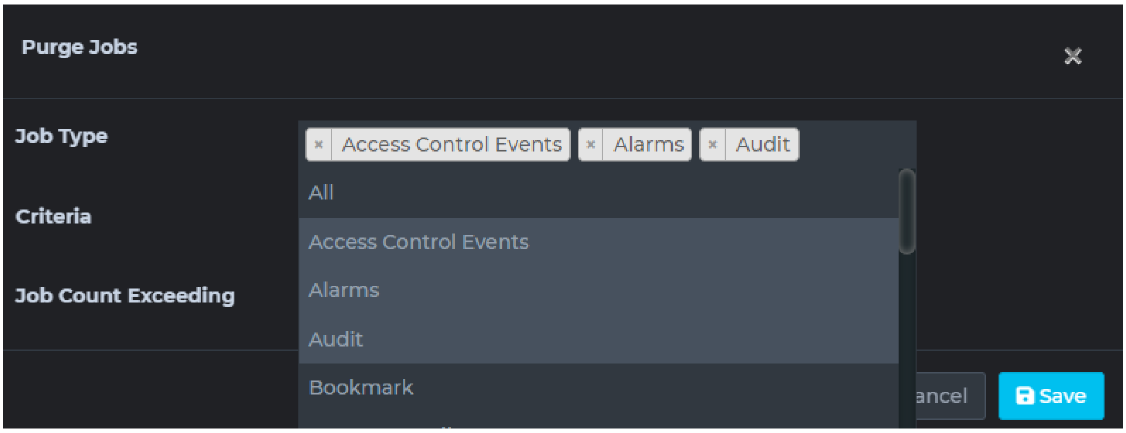
Configuring Purge

- To configure the purge settings, click the *Configure* button. The *Purge Jobs* popup will show up.

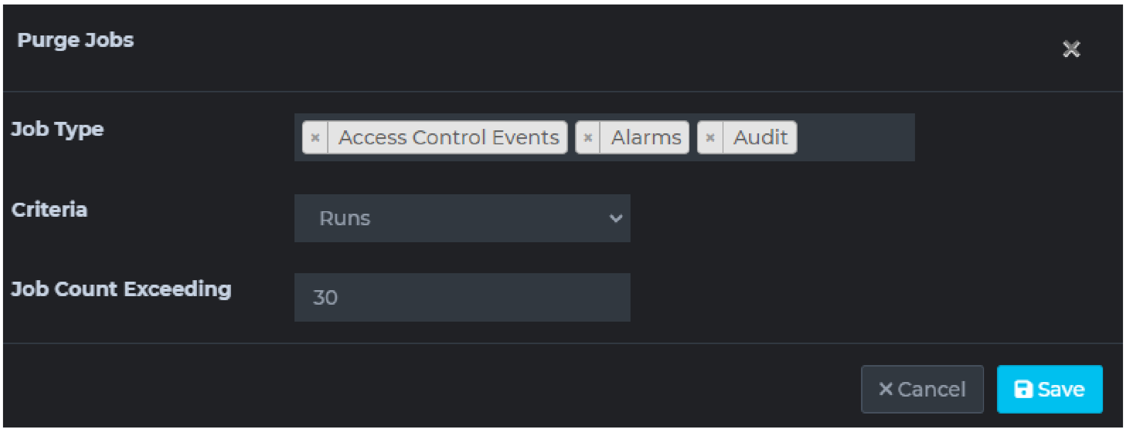


- *Job type* lets the user choose the report types that are to be considered for purging. Users can select All or can do a multi-select of different report types.

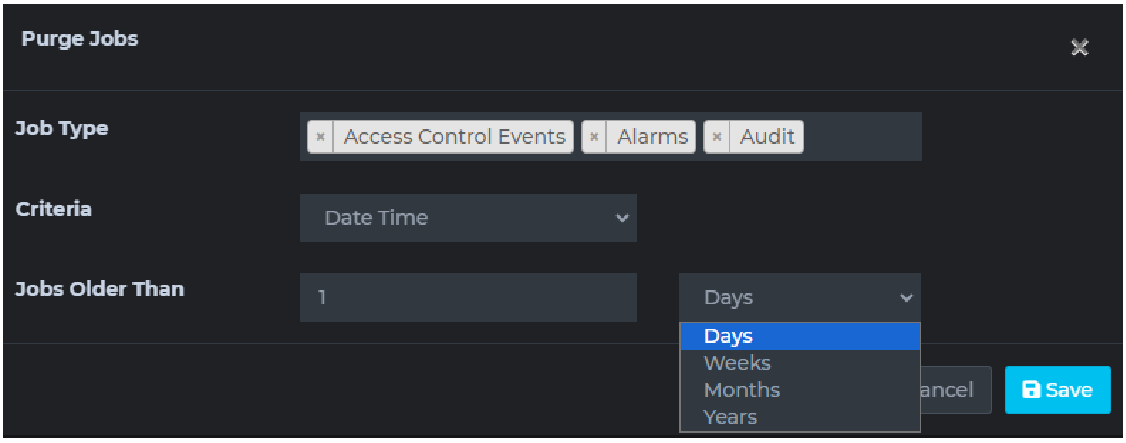


- *Criteria* lets the user specify the criteria based on which the purging is to be carried out:

- *Runs:* Purge reports based on many runs of the reports.



- *Duration:* Purge reports exceeding specified days/Weeks/Months/Years.



- To save the configurations, click *Save* or click *Cancel* to discard.

Scheduling

- To schedule a purge job based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Job* popup where the user can choose the schedule timing.
  - *Minutes:* Generate reports for every selected minute(s).
  - *Hourly:* Choose to generate the report for every selected hour(s).
  - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.

- *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
- *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Saving Purge Job Configuration

- To save the configuration, click the *Generate/Update* button.
- To exit without saving changes, click the *Cancel* button.

Cache Update

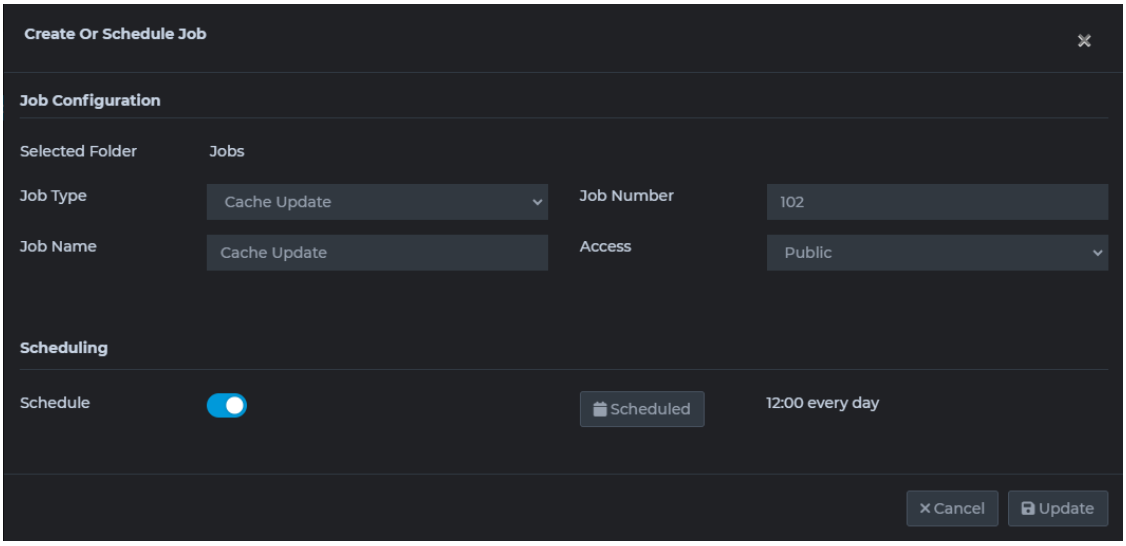
The *Cache Update* job fetches the properties of the Camera, Recording Server, Microphone, and Speakers, and saves them in the Cache. The data that is Cached is used in the Camera Details- Inventory, Camera/Server status by Tags Widget as well as in reporting.

- To ensure that the changes made to the camera / recording server/ microphone/ speaker properties in the management server are reflected in Query Engine, the User needs to initiate a cache update job.
- **To maintain smooth and proper functionality, it is advisable to run the cache update job at least once a day/once a week depending on the frequency of changes made at the management server end.**

Note: To reflect the changes done in XProtect configuration, the dashboard smart client needs to be restarted.

Cache Update

- From the dropdown, choose the *Cache Update* option to create a cache update.



- Fill in the *Job No.* and *Job Name* fields as desired.
- The access option is left as public by default and only one user is allowed to create/edit/delete cache Job. Other users will only be able to view it.

Scheduling

- To schedule a cache job based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Job* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

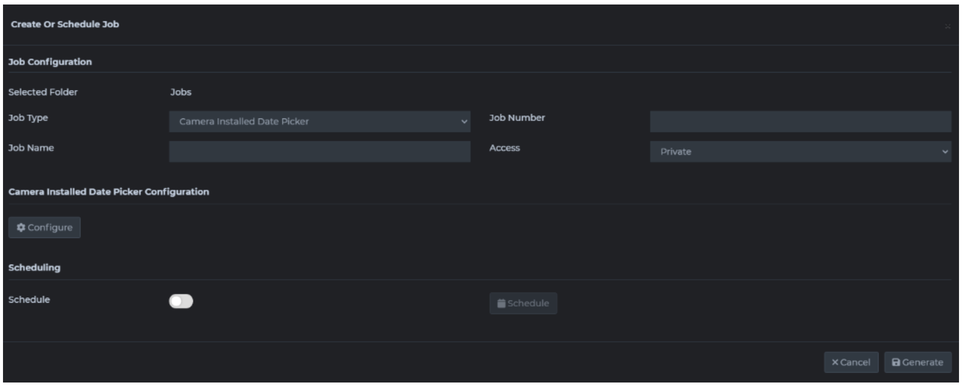
Saving Cache Job Configuration

- To save the configuration, click the Generate/Update button.
- To exit without saving changes, click the *Cancel* button.

Camera Installed Date Picker Job

The *Camera Installed Date Picker* job enables users to retrieve the installation dates of new cameras added to the recording server, and automatically populate these dates into the *Installation Date* field within the O-Insights custom properties tab in the Management Client. The installation date is extracted from the XProtect Logs. To ensure accuracy, this job should be executed immediately after cameras are added to the recording server, and before any modifications are made to the default hardware or device names (e.g., added as Hardware Device 1, Hardware Device 2, etc.).

Once the Camera Installed Date Picker job is executed, it's necessary to run the Cache Update Job. This ensures that the Query Engine recognizes and incorporates the changes made.

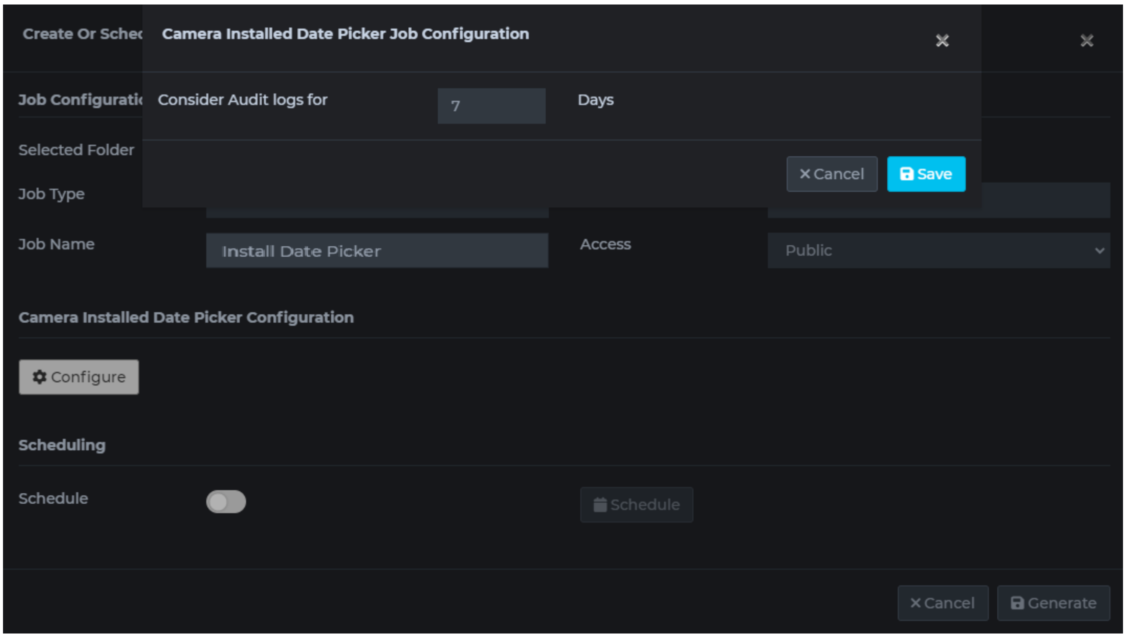


Camera Installed Date Picker

- From the dropdown, choose the *Camera Installed Date Picker*.
- Fill in the *Job No.* and *Job Name* fields as desired.
- The access option is left as public by default and only one user is allowed to create/edit/delete camera installed date picker Job. Other users will only be able to view it.

Configuring Camera Installed Date Picker Job

- To configure the camera-installed date picker, click the *Configure* button. The *Configure Camera Installed Date Picker Job* popup will show up.



- In the *Consider Audit logs for* x *Days* field, add the number of days for which the log needs to be checked.
- To save the configurations, click S*ave* or click *Cancel* to discard.

Scheduling

- To schedule a camera-installed date picker job based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Job* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

- *Yearly*: For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Saving Camera Installed Date Picker Job Configuration

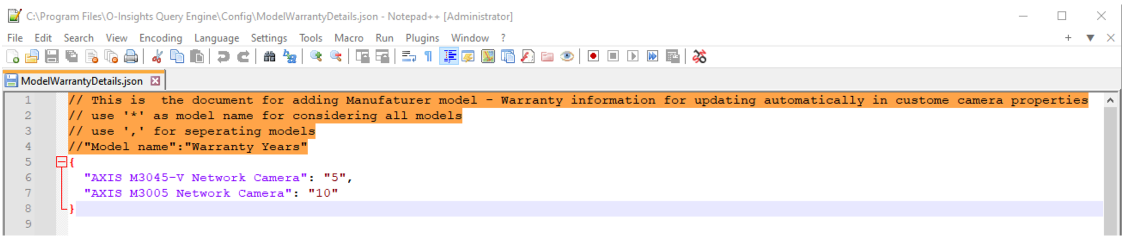
- To save the configuration, click the Generate/Update button.
- To exit without saving changes, click the *Cancel* button.

Auto-Populating Warranty End Date

The warranty end date for each camera can be automatically populated by specifying the warranty period for each camera model in the *ModelWarrantyDetails.json* file, located at:

C:\Program Files\O-Insights Query Engine\Config\ModelWarrantyDetails.json

For example, the configuration for two different camera models with different warranty periods will be detailed in this file. Below is the screenshot depicting the JSON configuration for these models:

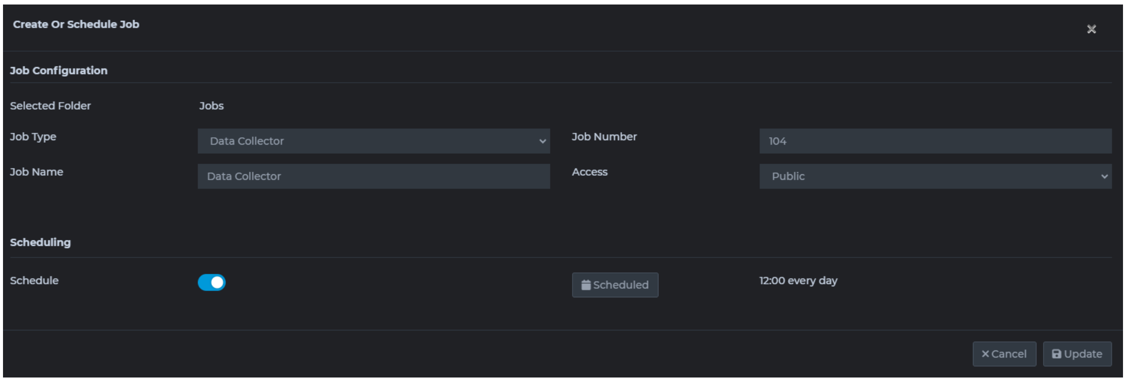


This method ensures that each camera's warranty end date is calculated and updated based on the specific warranty period provided for its model in the configuration file.

Data Collector Job

The *Data Collector Job* is responsible for daily collection of data on camera storage size and camera health according to a set schedule. Here's how the collected data is utilized:

- **Storage Data**: Utilized by Genie to display historical information related to camera storage, helping in trend analysis and storage management.
- **Camera Health Information**: Used in reporting to identify instances where a camera remains offline for an extended period without triggering any *Not Responding* alarms in the database for the specified report duration.



Data Collector Job

- From the dropdown, choose the *Data Collector* option.
- Fill in the *Job No.* and *Job Name* fields as desired.
- The access option is left as public by default and only one user is allowed to create/edit/delete data collector Job. Other users will only be able to view it.

Scheduling

- **The job should be scheduled to run once daily, ideally at 00:01 hours. This timing ensures that each day's data is collected promptly after midnight, providing a consistent and accurate daily snapshot.**
- **It is important to note that if the job is run multiple times in a single day, subsequent runs will overwrite the data captured in the previous run for that day. Therefore, scheduling it to run only once daily is crucial to maintain data accuracy and avoid redundancy.**
- To schedule a data collector job based on a custom schedule, toggle the *Schedule* toggle on.

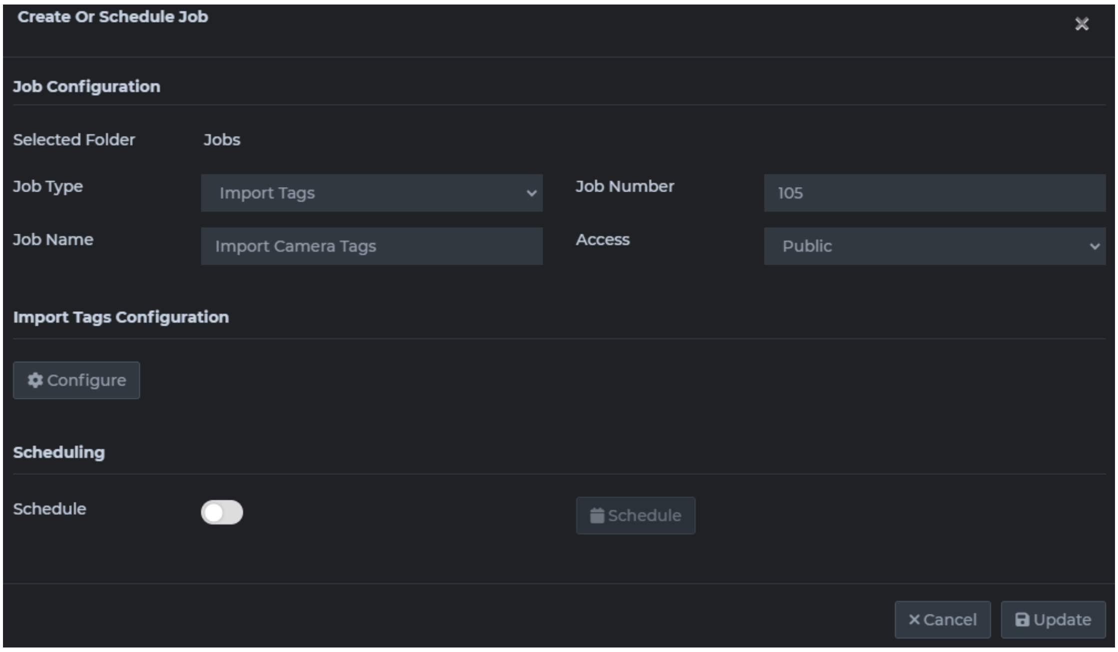
- The *Schedule* button triggers the *Schedule Job* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.
    - *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

Saving Data Collector Job

- To save the configuration, click the Generate/Update button.
- To exit without saving changes, click the *Cancel* button.

Import Tags Job

The *Import Tags Job* can be utilized to efficiently tag multiple cameras using a CSV file. This method helps the process of applying tags across numerous cameras simultaneously, enhancing the management and categorization within the system.



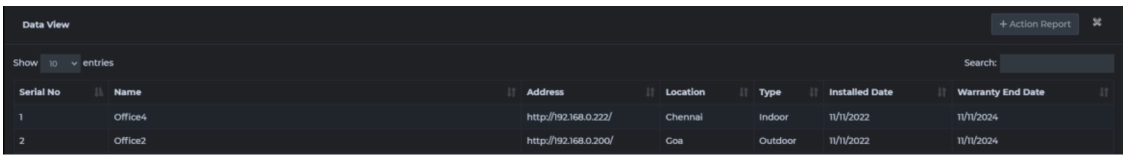
Import Tags Job

- From the dropdown, choose the *Import Tags* option.
- Fill in the *Job No.* and *Job Name* fields as desired.
- The access option is left as public by default and only one user is allowed to create/edit/delete import tag Job. Other users will only be able to view it.
- Click on configure, provide the CSV file location and save.
- Click Generate to import the data from CSV into XProtect

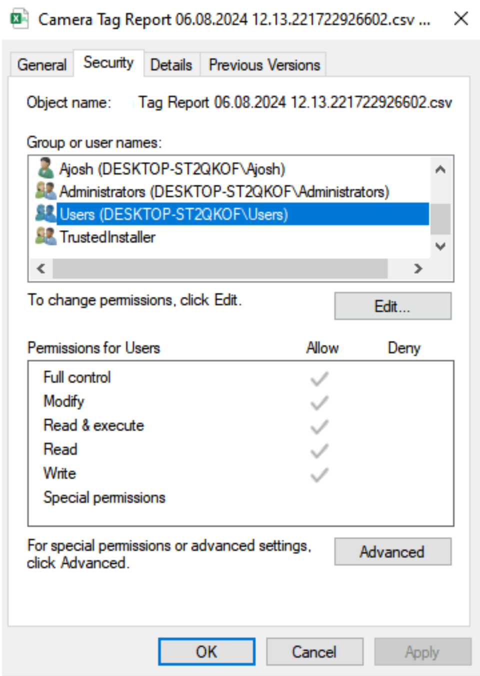
Bulk tagging of cameras

The below-mentioned steps need to be done for bulk tagging of cameras:

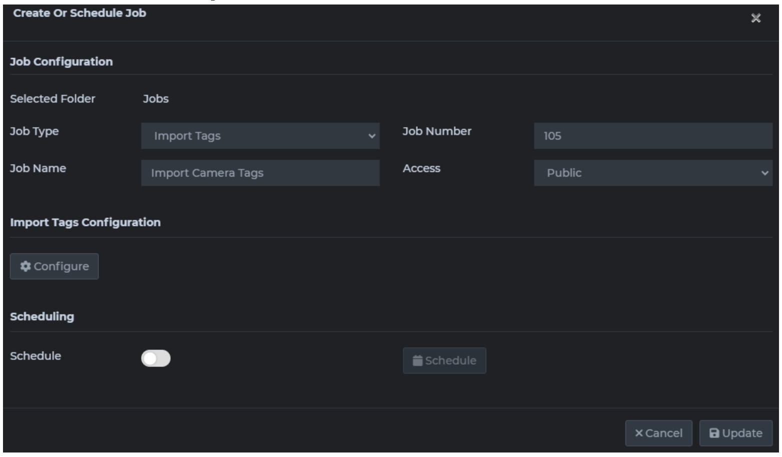
1. Create a Camera detail report with *Name, Address, Location, Type, Install Date*, and *Warranty End Date*. *Name* and *Address* columns are mandatory.



2. In the report configuration toggle, both save the report and CSV options and click on *Generate*.
3. The default location for CSV file is *C:\Program Files\Reports*.
4. Ensure the folder and file has right permissions for Query Engine Logon user.

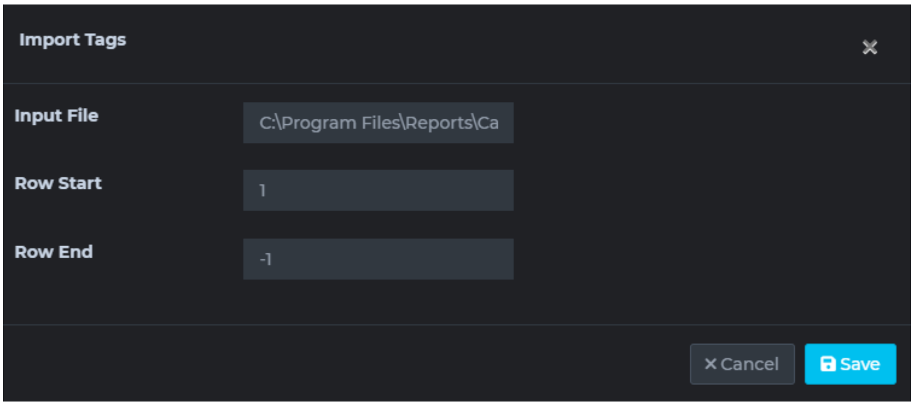


5. Right-click on the file and open it with Excel.
6. Assign the cameras with the appropriate tags in the CSV file and save.
7. Use the *Import Tags Job* to import the file, ensuring that all tags are assigned at once. This significantly speeds up the tagging process.
8. Create *Import Tag job* from *User jobs* by choosing *Import Tags* from the drop-down.

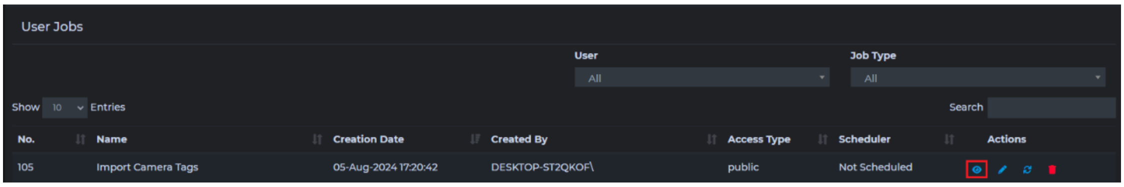


9. Fill in the *Job No.* and *Job Name* fields as desired.

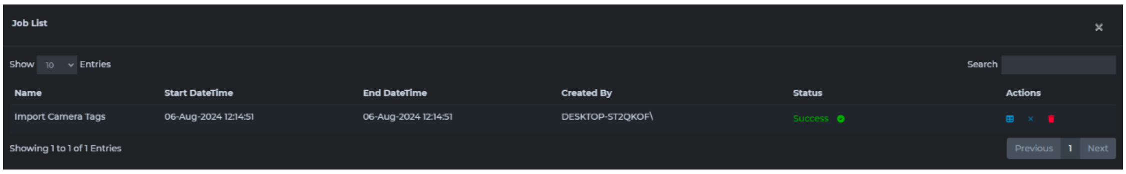
10. The access option is public by default and only one user is allowed to create/edit/delete import tag Job. Other users will only be able to view it.
11. Now click on *Configure* and enter the file location in *Input File*.
12. Keep the Row Start and Row End unchanged to update all rows and click on Save.



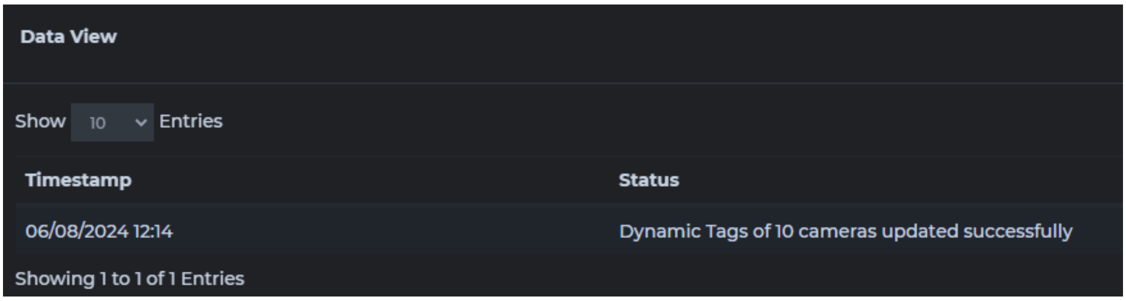
13. On the *Import Tag Job* (Create or Schedule job) click *Generate*.
14. Now click on the Eye icon to see the report status.



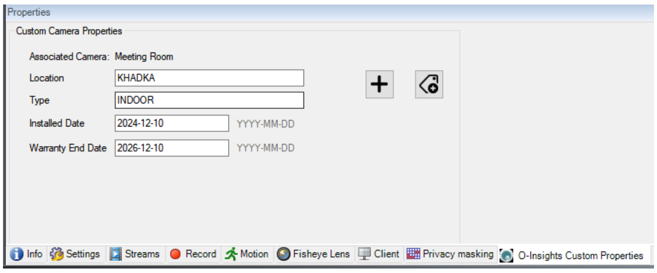
15. Below pop up will open.



16. The status of the job will be shown as *Running* if the job is in progress and will show as *Success* once it's completed.
17. The user can click on the and see the details below:



18. To verify the tagging, the user can log in to the management client and check the O-Insights Custom Properties tab.



19. The user can also do a cache update job and then run the camera tag report for verification.
- When generating the CSV report, ensure that the tag you intend to use is initially added to at least one camera via the *Custom Properties* plugin. This setup is necessary to establish the tag within the system.
- To successfully import the CSV file using the *Import Tags Job*, store the CSV file on the same system where the Query Engine is installed. This placement ensures that the Query Engine can access and process the file correctly.

Scheduling

- To schedule an import tags job based on a custom schedule, toggle the *Schedule* toggle on.
- The *Schedule* button triggers the *Schedule Job* popup where the user can choose the schedule timing.
    - *Minutes:* Generate reports for every selected minute(s).
    - *Hourly:* Choose to generate the report for every selected hour(s).
    - *Daily:* Generate reports for either every selected number of days or every weekday at the selected time.
    - *Weekly:* Check the days of the week and the time when the report is to be generated from the *Start Time* dropdown.
    - *Monthly:* For generating a report on a specific day of every nth month, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

- *Yearly:* For generating a report on a specific day of every nth year, use the *Day* radio button. For selecting a specific weekday of every month, use the *nth day of every month(s)* radio button. Select the time when the report is to be generated in the *Start Time* dropdown.

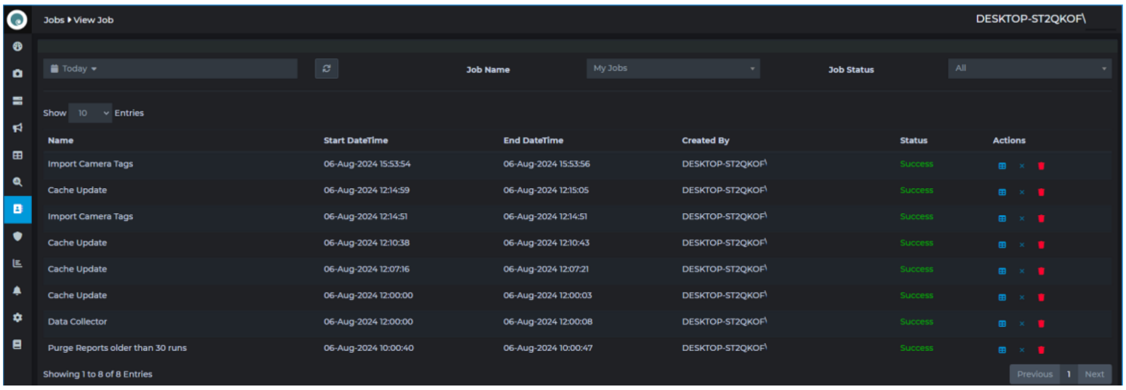
Saving Import Tags Job

- To save the configuration, click the Generate/Update button.
- To exit without saving changes, click the *Cancel* button.

View User Job

The *View User Job* page lists all the runs of the user jobs that are created by the user. The table shows information such as *Name* (Job Name), *Start DateTime*, *End DateTime*, *Created By* (User who created the job), *Status* (Job Status), and *Actions*.

For any other user who wants to see the jobs, you need to click on the drop-down *job name* and then select the *type* of job under the public report.



Filtering View User Job Table

- Click the date range picker dropdown at the top corner of the table area to expand and select the date for which the job records are to be shown. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option and select the start date/time in the first and the end date/time in the second.
- The *Job Name* dropdown field has two categories, *My Jobs*, and *Public Jobs*. Under *My Jobs*, all the jobs created by the user are nested, and under *Public Jobs*, all the jobs created by the other users that are of public access type are listed. The list can be filtered by entering the partial/complete job name in the dropdown text field.
- The *Report Status* dropdown lets the user filter the table by the status of the user job, where *Success* is completed, *Running* is a job that is in progress, *Queued* is a job that is queued and will start as the other jobs running ahead are completed, *Cancelled* is a user cancelled job, and *Incomplete* is a job that has aborted without completion.

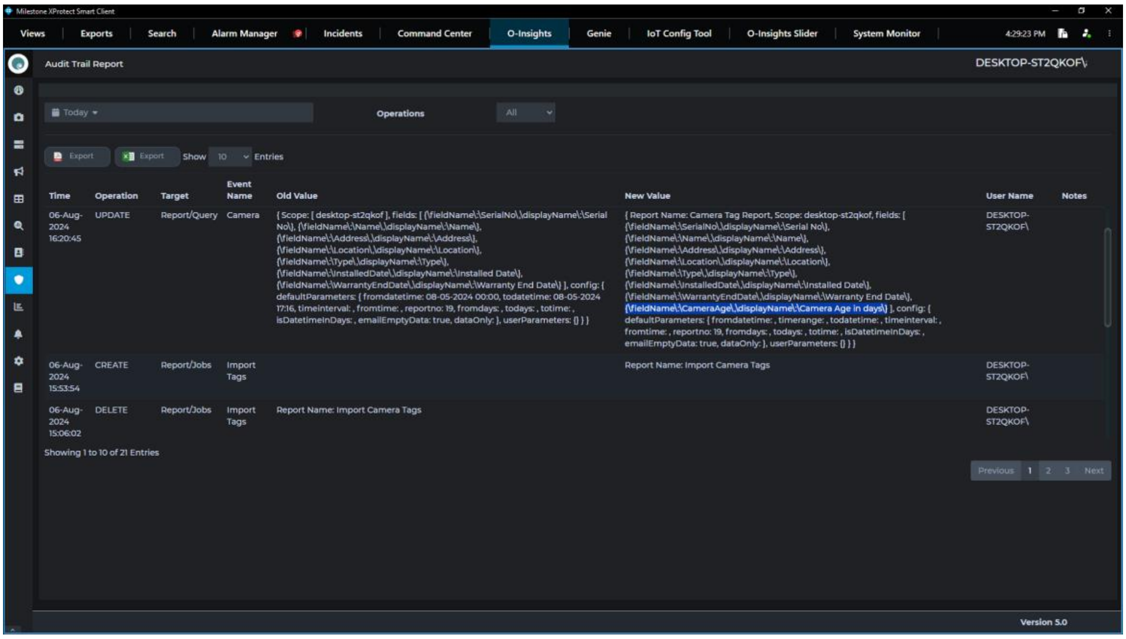
- The refresh button next to the date range picker dropdown refreshes the table and shows the updated Job Status.

User Job Actions

- In the action column of each record, the table views the job details, the cross icon stops the generation of the job if it is running, and the trash icon deletes the job record.

Audit Trail

The *Audit Trail* shows a detailed audit trail for each action performed within O-Insights Reporting (Create/Update/Delete). The audit trail can be accessed from the sidebar by selecting *Audit Trail.*



Audit Trail

- Click the date range picker dropdown at the top corner of the table area to expand and select the date for which the audit trail records are to be shown. The users can select *Today* to select Today's records, *Yesterday* to select Yesterday's records, *Last 24 hours* to select the records from the last 24 hours, *This Month* to select the current month's records, and *Last 30 days* or *Last 7 days* to select the records for the past 30 days or the past 7 days, respectively. To choose any custom date range, select the *Custom Range* option and select the start date/time in the first and the end date/time in the second.
- The *Time* column lists the timestamp of the audit trail event, *Operation* lists whether the entry is for *Creation/updating/deletion of job/report*, *Target* shows whether the entry is related to reports/jobs/Action Reports, *Event Name* shows the type of report, *Old Value* shows the initial name/ details /parameters of the job or reports, *New Value* shows the current details/parameters, *User Name* shows the user who acted, and *Notes* show the notes.
- The *Operations* dropdown lets the user filter the table by operation (Create/Update/Delete).

- The Audit Trail can be exported to PDF and Excel by clicking the export button. The current records in view will be exported to PDF. To export all, choose *All* from the *Show* x *Entries* dropdown and repeat the same process. This may be a time and resource-consuming process.

Right to Left Script Support

The right-to-left script is currently supported in reports for Arabic and Hebrew languages.

The configuration file for the same is available in:

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

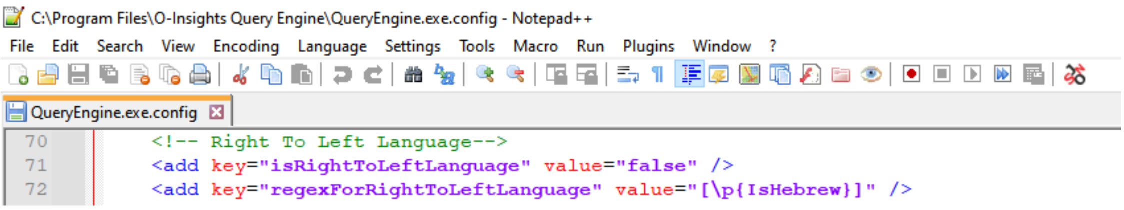
To modify, edit the *QueryEngine.exe.config* in the reporting folder in any text editor.

To enable left to right script support, make sure that the *value* in the <*add key="isRightToLeftLanguage" value="true" />* is set to *true.*

To choose the language,

either let the *<add key="regexForRightToLeftLanguage" value="[\p{IsHebrew}]" />* line remain as is for **Hebrew**

or change it to *<add key="regexForRightToLeftLanguage" value="^[\u0020-\u002F|\u0600-\u06FF|\d]+$"/>* for **Arabic**

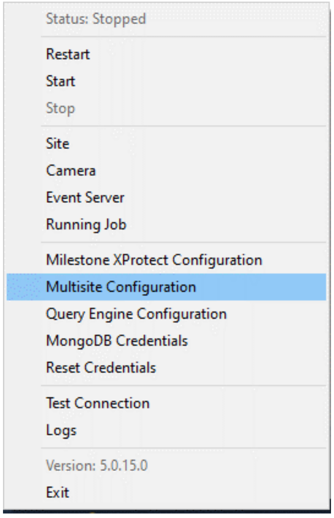


Multisite Configuration

O-Insights reporting engine can be used to connect to independent sites which are neither federated not interconnected with Multisite connectivity feature . This capability allows for seamless integration and centralized reporting for various sites, enhancing operational oversight and data aggregation.

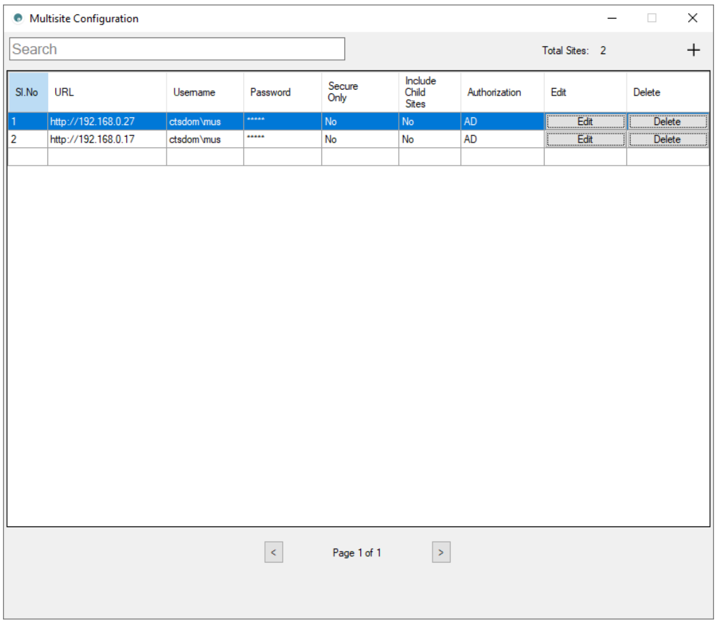
O-Insights Multisite

1. **Access Multisite Configuration**



   - Right-click on the Query Engine System tray tool.
   - Select *Multisite Configuration* from the context menu.

2. **View Existing Sites**

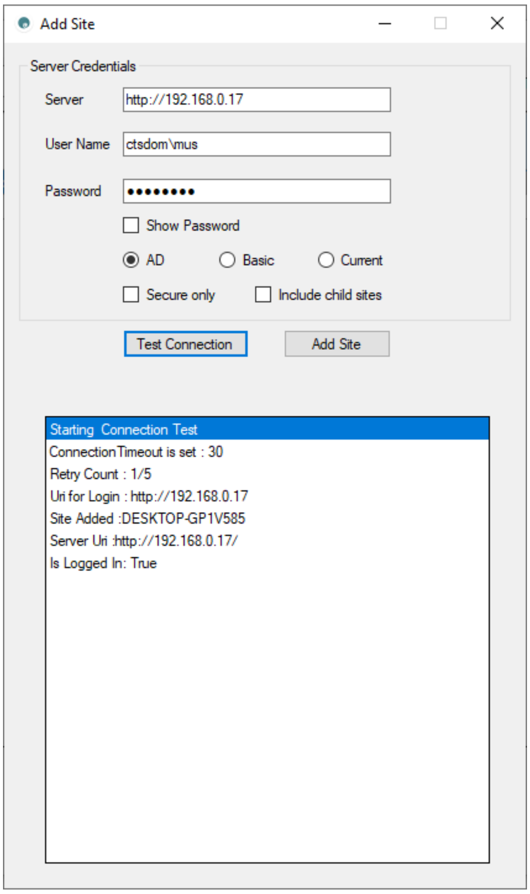


- A table view will be displayed, listing all the sites that have been added.

3. **Add a New Site**

- Click the + button located at the top right corner of the table view.
- A new form will launch, prompting you to enter the required credentials for the new site.

4. **Enter Site Credentials**



   - Fill in the necessary credentials in the form. It is supported to use Windows credentials for basic users and logon user types.
   - It is recommended to use the credentials of a user with an administrator role to ensure the QUERY ENGINE can fetch all the data.

5. **Test Connection**
   - Use the *Test Connection* button to verify the entered credentials.
   - If the test connection is successful, proceed to add the site by clicking the *Add Site* button.

6. **Add Child Sites**
   - There is an *Include Child Site* checkbox available. If checked, this will add the child sites of the site which are added to the configuration.

7. **Edit or Delete Sites**

- Each row in the table view has a *Delete* button to remove the site and an *Edit* button to update the site credentials or details.

Tips for Optimal Configuration

- *Use Administrator Credentials*: For comprehensive data retrieval, ensure you use the credentials of a user with an administrator role.
- *Verify Connections*: Always test the connection before adding a new site to ensure the configuration is correct and the site is accessible.
- *Regularly Update Credentials*: Keep the credentials updated to avoid any disruptions in data aggregation.
- *Network Configuration*: Ensure that all sites are connected on a stable network.
- *Port Configuration:* Make sure that port numbers 22331 and 22333 are open for communication between the query engine and the sites.

By following these tips, you can optimize the configuration of the Multisite feature, ensuring efficient and reliable data aggregation across multiple sites.

Configuring Multisite Permissions for Different Roles

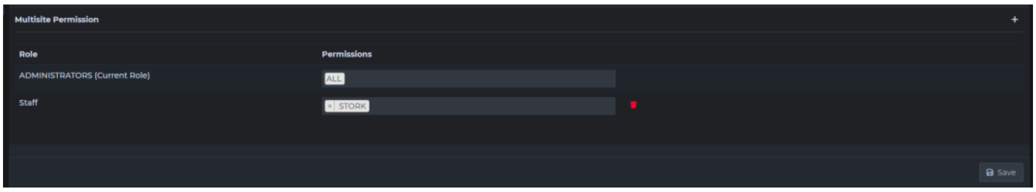
In addition to configuring the Multisite feature, it is important to manage permissions and assign site access to different user roles. This ensures that only authorized users can view and manage data from specific sites.

Steps to Configure Multisite Permissions

1. **Access Reporting Settings**
   - Navigate to the Reporting Settings page in the O-Insights plugin.
2. **Multisite Configuration**
   - Within the Reporting Settings page, locate the Multisite Configuration section.

- This section allows the Admin User to assign site access to different user roles.

3. **Assign Site Access**



- Select the user role for which you want to configure site access.
- A list of available sites will be displayed.
- Select the sites that you want to grant access for the selected user role.

4. **Save Changes**
- Once the site access for the user role is configured, save the changes to apply the permissions.

By following these steps, you can effectively configure multisite permissions and ensure that site access is appropriately managed across different user roles within your organization. This setup helps maintain secure and organized access to critical data and system functionalities.

> **Note:** Camera Statistics by Tags widget, Server Statistics by Tags widget, and all reports except *Audit reports* and *User analytics* supports multisite.

Config File

Understanding Config file

Users can modify various advanced properties by modifying the *QueryEngine.exe.config* file located in the plugin's directory. The configuration file contains several keys, the values of which can be altered to implement changes.

Keys and Functions

Key	Function	Default
<add key="HostingPort">	Port on which the Query Engine will run.	9011
<add key="ReviveJobs" />	This is used to rerun incomplete jobs if Query Engine stops and restarts.	True
<add key="EnableSSL">	Whether to enable SSL or not. *0* to disable and *1* to enable.	0
<add key="MongoUserName">	MongoDB Username for Reporting/Query Engine.	
<add key="MongoPassword">	MongoDB Password.	
<add key="MongoPort">	Port on which MongoDB will run.	
<add key="VMSServer">	XProtect Management Server URL.	
<add key="VMSLoginType">	The login type of VMS User.	
<add key="ReloadFromCacheUpdate">	To enable caching in O-Insights, set this as *True* or set this as *False* to disable.	True
<add key="GenieSupport">	Set to *True* if O-Insights Genie is installed.	False
<add key="MaxParallelTaskCount">	Maximum parallel reports/jobs to be run together.	4

	Increase count for faster results or lower count for better performance/ resource allocation.	
<add key="CheckAllocatedMemoryIntervalInSeconds">	Intervals at which the Query Engine will check Memory it consumes. If it exceeds the threshold, QUERY ENGINE will stop.	30
<add key="EnableMemoryCapping">	Cap Memory usage for Query Engine. Leave it as *True* to cap memory usage.	True
<add key="MaxAllocatedMemoryInGB">	Currently, a maximum of 40% of available memory can be used by the Query Engine. To override this property, add the required memory cap in GBs.	
<add key="ConnectionTimeout">	Timeout duration for connecting to the XProtect server.	30
<add key="RetryDelay">	The delay for a retry after a failed attempt at establishing a connection with the XProtect Server.	30
<add key="RetryCount">	Maximum number of retries that are to be attempted to establish a connection with the XProtect Server.	10
<add key="FetchServerStatistics" value="" />	To Enable the "System Monitor" set this as *True* or set this as *False* to disable.	False
<add key="RefreshServerStatistics	The interval between data fetch for the O-	30

DurationInMinutes" value="" />	Insights System Monitor widget, value is in minutes.	
<add key="ExcludeSitesHostName" value="" />	Sites to be excluded from O-Insights System Monitor widget.	
<add key="MaxEmailRequests">	Email sending rate-limit per minute.	30
<add key="LPREvent" value="" />	*LPR Event* is the event name for LPR event data.	*LPR Event*
<add key="LPRCamera" value="" />	Used to identify the LPR image camera. To be tagged as a marker to the LPR camera.	LPRCamera
<add key="LPRSecondary" value=" " />	Used to identify the Driver image camera. LPRSecondary should be tagged as a String to the LPR camera.	LPRSecondary
<add key="ImageQuality" value="" />	Quality Of Images in reports. Integer from 1-100. (Recommended to keep value below 75 as it can impact the performance for large amount of data).	20
<add key="IdentityProvider" />	The address where the XProtect IDP server is installed.	
<add key="IdentityProviderUrl" />	The URL of the IDP server.	
<add key="APIGateway" />	The address where the XProtect API server is installed.	
<add key="APIGatewayUrl"/>	The URL of the API server.	
<add key="ResultsPerPage"/>	Specifies default pagination size for all the XProtect REST API.	100

<add key="IncludeChildSites" />	This configuration key dictates whether child sites in a federated architecture are automatically included in queries processed by the QUERY ENGINE. If set to "False," only the parent site's data is considered. The users can then add child sites through the *Multisite* configuration.	True
<add key="LogoutAfterInactivityDurationInMinutes" />	The duration of inactivity (in minutes) after which the user is automatically logged out of the O-Insights web plugin.	15
<add key="Origins" />	If you want to set up CORS (Cross-origin resource sharing) then put allowed domains here. * means all origins allowed. file:// allowed by default. This is used by O-Insights Web Client.	*

Federated Architecture Support

Following features in O-Insights will NOT be available for Child Sites data when Smart Client is connected to the master site.

Workspace

Feature	Remarks
Live Alarms	Only the Alarms of Master site will be shown.
Camera Details Health View	In the camera details health view, health status of camera from child sites will not be available. To fetch the camera health of child sites, please use the *camera health report* in reporting section.
Widget Filters for Alarms and Event Names	O-Insights will only pull Alarms and Event names from the Master Site.
Event List and Trend Widget	Only shows data from the Master Site.

Reporting

Feature	Remarks
User Report	Role details for users of child site won't be available.

Analytics

Feature	Remarks
User Analytics	Certain features of user analytics report will not work for child site.

* All the results are based on XProtect version 2024 R1 and O-Insights 5.0

Interconnect Architecture Support

The following features in O-Insights will **NOT** be available for remote site data when the Smart Client is connected to the master site:

All recording server and storage related information will NOT be available for remote sites.

The dashboard and reporting can fetch data for remote sites only when the sites can communicate to the master

Workspace

Feature	Remarks
Live Alarms	Will show data from Master Site
Camera Widgets	For filters applicable to recording servers only that of master site will be displayed
All recording Server View's and Widgets	Will show data from Master Site
Widget Filters for Alarms and Event Names	Alarms and Event from the Master Site only.
Event List and Trend Widget	Will show data from Master Site
User count	Will show data from Master Site
License Widget	Will show data from Master Site

Reporting

Feature	Remarks
Alarm Report	Alarm Report will be fetched only for Master Site by default . If alarms from child are sent to Master site using XProtect rule engine, Alarm report will include data for child Sites also
Audit Report	Will show data from Master Site
Evidence Lock Report	Will show data from Master Site
Bookmark Report	Will show data from Master Site
Event Report	Will show data from Master Site
Camera Health Report	Health Report for cameras of child site will only work if not responding alarms

	are created for All cameras in Master site.
Camera Recording report	Camera Recording report will have recording details of child site camera only if its being recorded on Master site
Recording Server Report	Will show data from Master Site
Recording Server Health report	Will show data from Master Site
Storage Report	Will show data from Master Site
User Report	Will show data from Master Site

Analytics

Feature	Remarks
User Analytics Report	Will show data from Master Site

* All the results are based on XProtect version 2024 R1 and O-Insights 5.0

Multisite Support

Following features in O-Insights will NOT be available for other Sites data when Smart Client and QE is connected to the master site.

Workspace

Feature	Remarks
Widgets	**All widgets,** *except for Camera Status by Tags, Recording Server Status by Tags, Microphones Status by Tags, and Speakers Status by Tags*, **will not include added sites data.**
Live Alarms	Only the Alarms of the Master Site will be shown.
Camera Details Health Views	In the camera details health view, health status of camera from child sites will not be available. To fetch the camera health of child sites, please use the *camera health report* in reporting section.
Widget Filters for Alarms and Event Names	O-Insights will only pull Alarms and Event names from the Master Site.
Event List and Trend Widget	Only shows data from the Master Site.

Reporting

Feature	Remarks
User Report	Role details for users of child site won't be available

Analytics

Feature	Remarks
User Analytics	Certain features of user analytics report will not work for child site.

* All the results are based on XProtect version 2024 R1 and O-Insights 5.0

Troubleshooting

1. ***How can you restrict access for reporting users?***
   Configurations in the reporting settings tab determines user access. It is essential to note that user visibility is based on these settings; however, all data is pulled from QUERY ENGINE, with reports presented through the user interface.

2. ***How many reporting engines are needed?***
   One reporting engine per XProtect installation suffices, as all Smart Clients communicate with this central reporting engine.

3. ***What access privileges does QUERY ENGINE receive in XProtect?***
   QUERY ENGINE operates with access privileges according to the configured account, running either as a Windows user or the XProtect basic user based on the established settings.