

CONFIGURATIONMANUAL

Logistics Analytics

Visualization software for performance monitoring of auto ID Systems

Part Number: XXXX

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SICK
Sensor Intelligence.

Software Versions

Software / Tool	Function	Version
Logistics Analytics	• Automates certificate updates via SSMS. • Enhances API security: hides client secret in /openid/settings, clears browser sessions on Open ID logout, blocks ECDHE/CBC ciphers, sanitizes /encrypt/pemkey errors. • Mimics RDT behavior for Heartbeat errors. • Fixes Shift Statistics for overnight shifts, object counts, and device charts. • Upgrades PandA dashboards with new tables/charts, improved alignment • Adds advanced search by girth/longest side, multi-barcode CSV search, and long barcode fixes. • Includes imageURLs in Search Results/MQTT live-feed, upgrades to MySQL 8.4.5. • Improves UI with Performance Status icons, auto-display of system status/timeline, and device name tooltips. • Supports Epoch strings, stabilizes health status, adds OIDC role support. • Fixes timeline/system state dependencies, System List display, and shift/barcode issues.	Ver 4.6.2

Copyright

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About this Manual

The SICK Logistics Analytics documentation is composed of two separate manuals. Both manuals are available in printed/.pdf format as well as from the SICK LA dashboard, using the online **Help** function.



Logistics Analytics Software Configuration Manual

Learn how to use the LA for your facility. You will learn how to add and modify systems, configure Media servers, software settings and update License & Registration information.

SICK Support

For SICK sales and product support visit:

www.sick.com

For all SICK technical support visit:

<https://support.sick.com>

1 Installation

This section provides step-by-step instructions for installing SICK Logistics Analytics on Windows and Linux systems, as well as applying software patches to an existing installation

1.1 To launch the installer on Windows

This section explains how to install SICK Logistics Analytics (LA) on a Windows system.

1. Launch Installer

- Navigate to the folder containing the SICK Logistics Analytics installation executable.
- Double-click the executable to launch the **InstallAnywhere** installer.

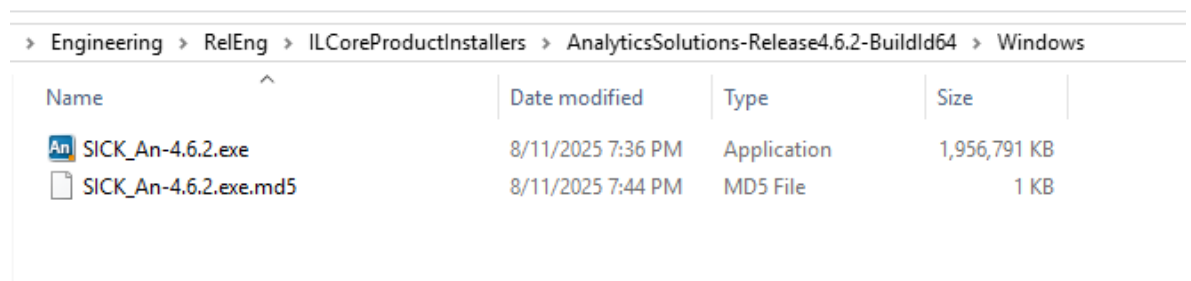


Figure 1.1-1: Installation Executable

2. InstallAnywhere Loading Screen

- The **InstallAnywhere** dialog displays a progress bar.
- Wait until the progress reaches 100%.

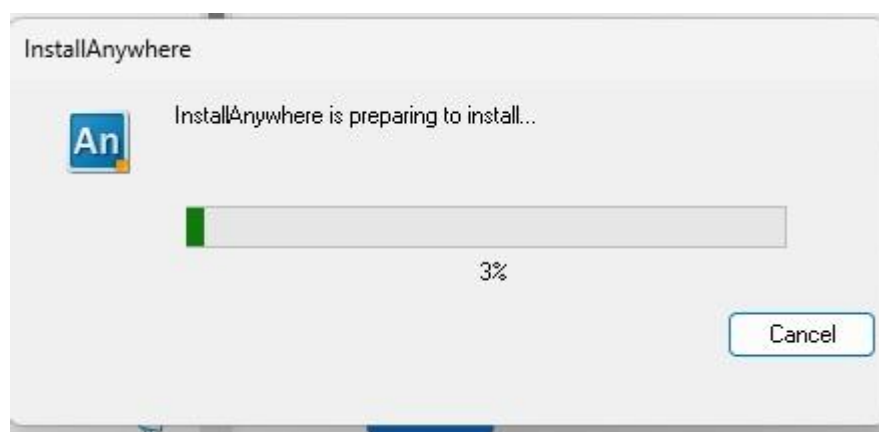


Figure 1.2-1: InstallAnywhere Loading Screen

3. Introduction Screen

- The **Introduction Screen** provides an overview of the installation process.
- Close all running applications.

- Click **Next** to proceed.

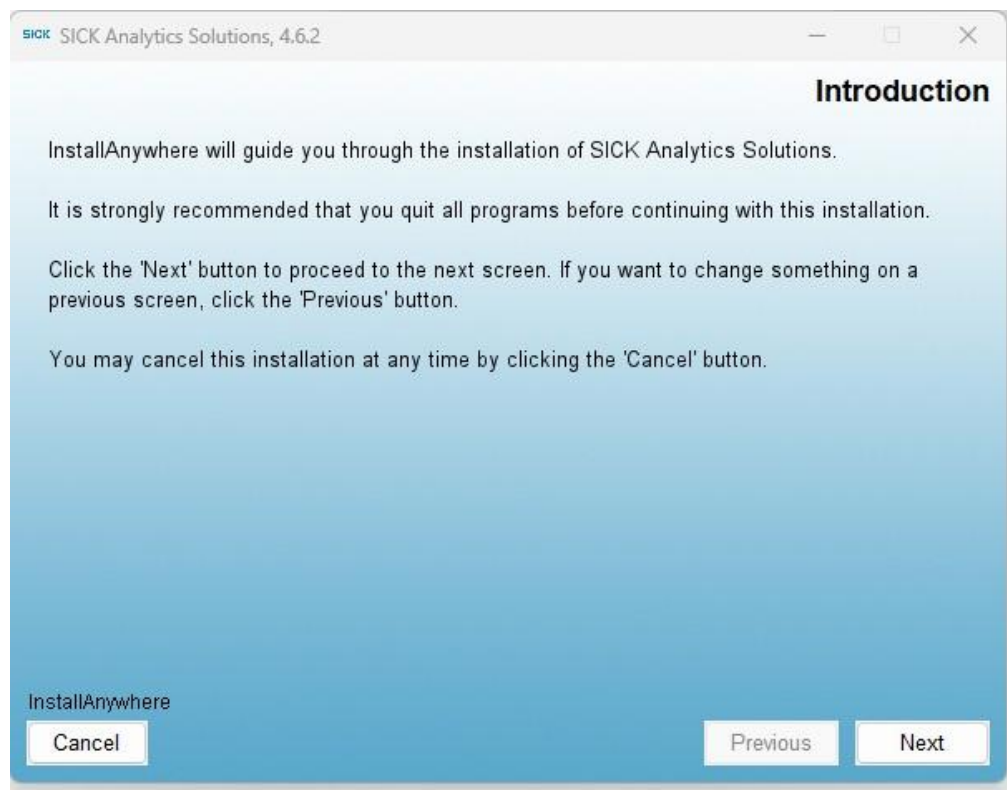


Figure 1.3-1: Introduction Screen

4. License Agreement

- The **License Agreement** screen displays the End User License Agreement (EULA).
- Read the terms and select the checkbox to acknowledge agreement.
- Click **Next** to continue.

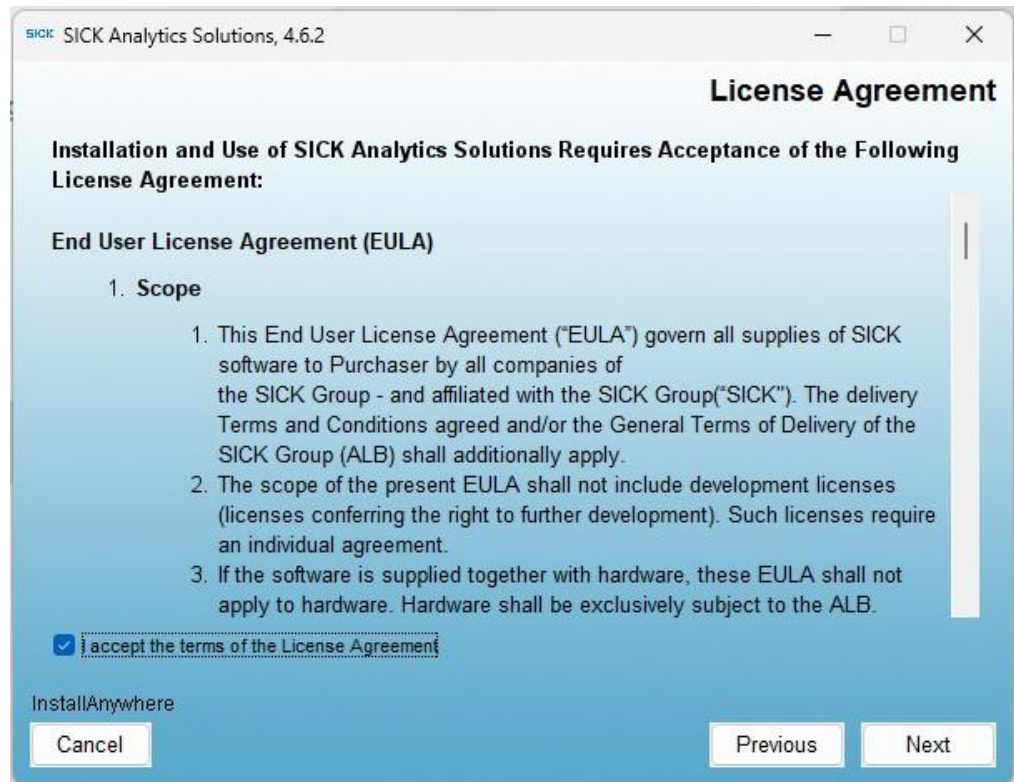
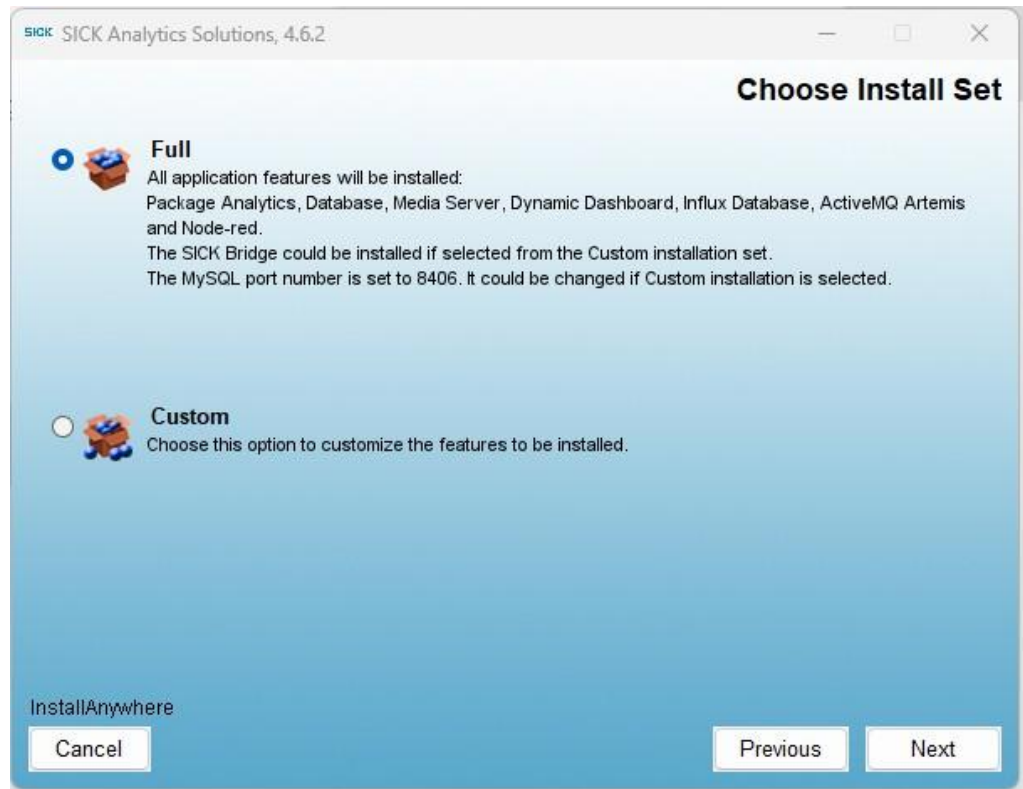
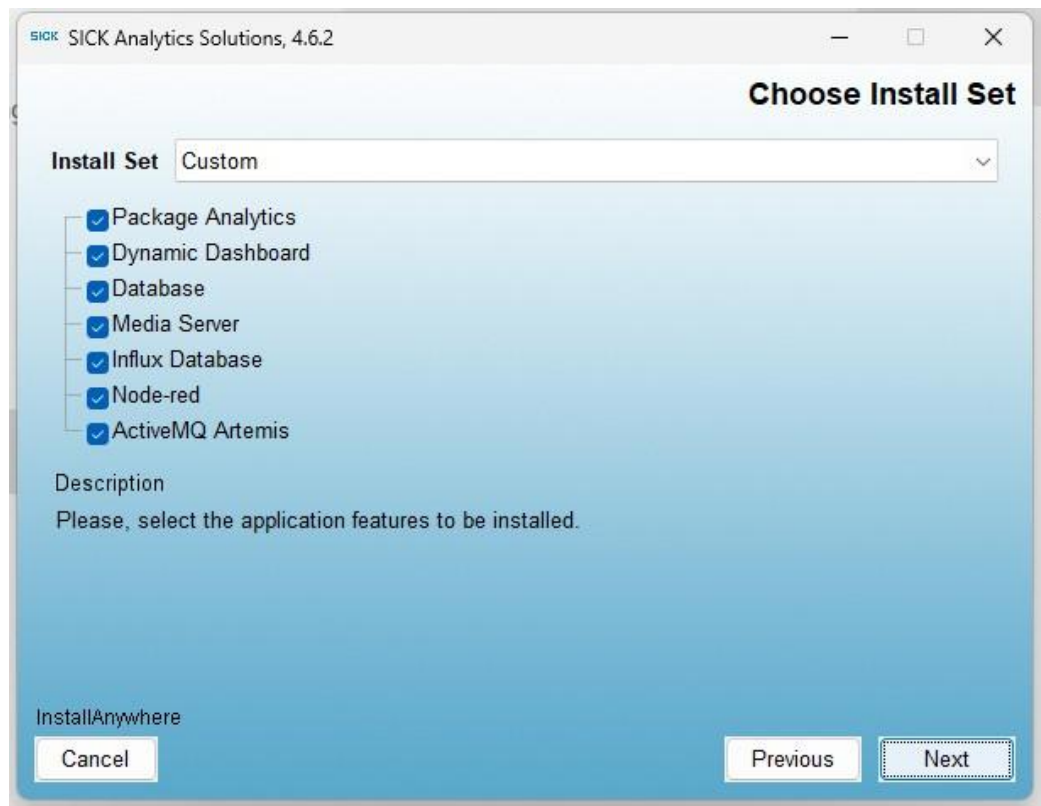


Figure 1.4-1: License Agreement

5. Choose Install Set

- Select the installation type:
 - **Full**: Installs all features.
 - **Custom**: Allows selective installation.
- Click **Next** to proceed.

**Figure 1.5-1: Install Set – Default View****Figure 1.5-2: Install Set – Custom Option**

6. Choose Install Folder

- Select the installation directory or choose a custom path.
- Click **Next** to proceed.

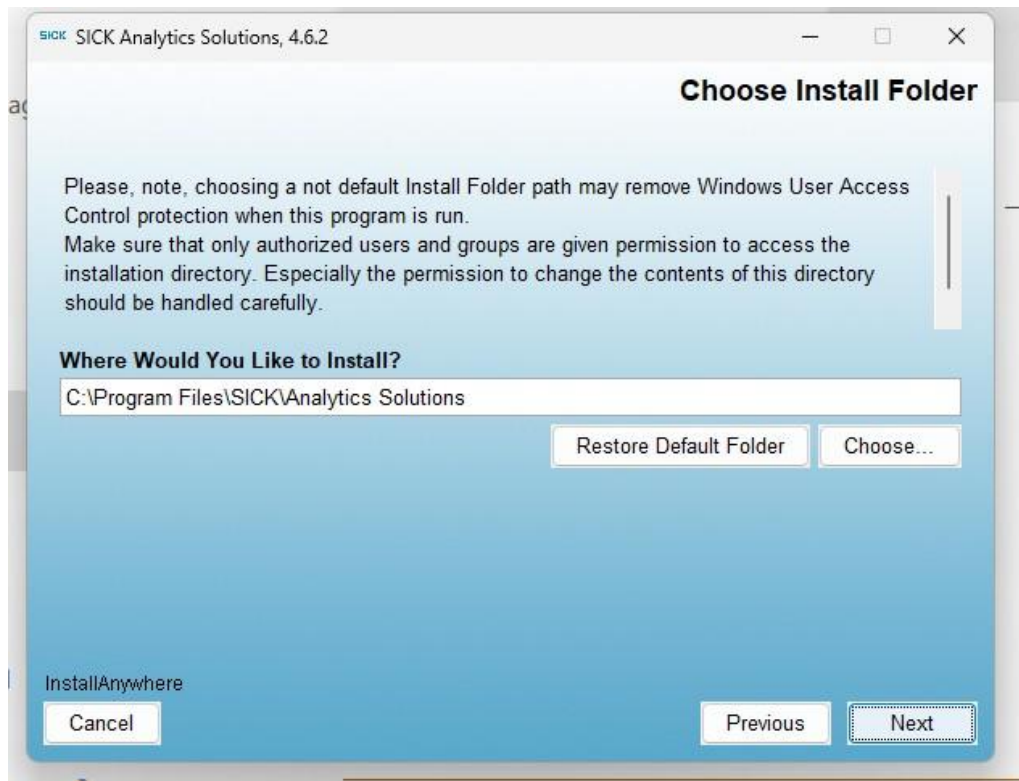


Figure 1.6-1: Choose Install Folder

7. Specify MySQL Data Folder

- Choose a folder for MySQL data storage.
- Click **Next** to proceed.

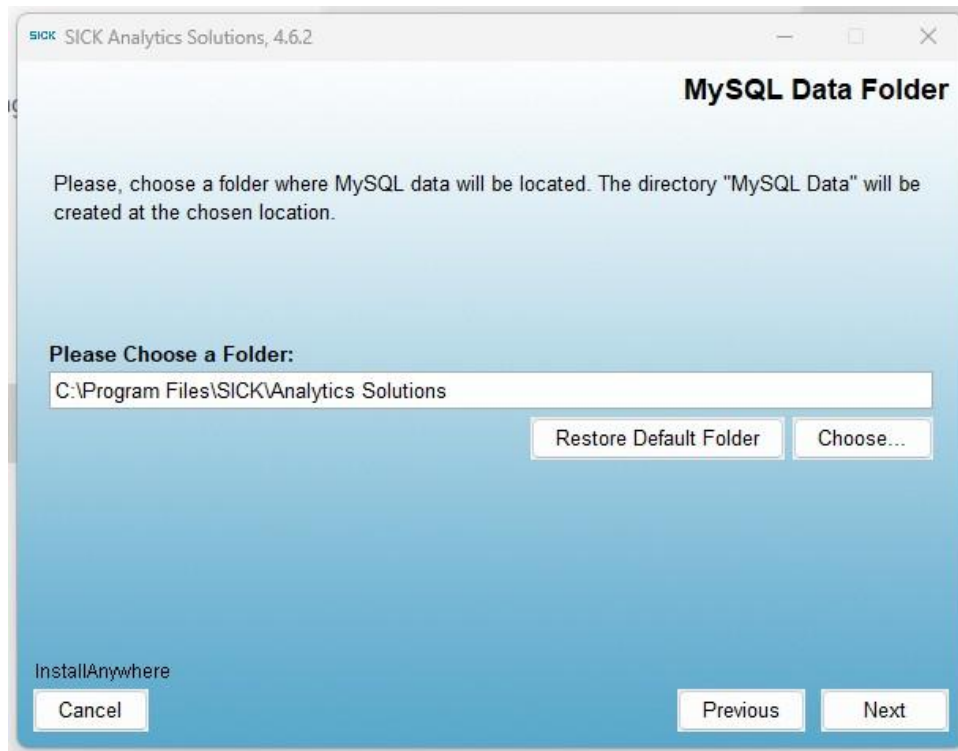


Figure 1.7-1: MySQL Data Folder

8. Configure Media Server Settings

- Specify the **Media Server** installation folder.
- Click **Next** to proceed.

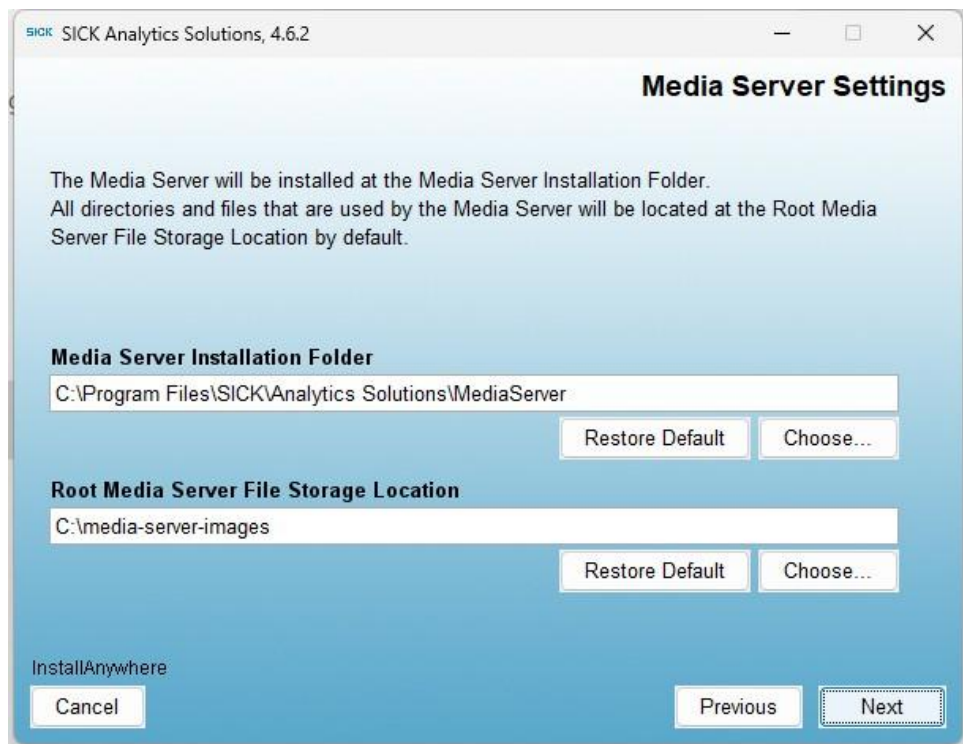
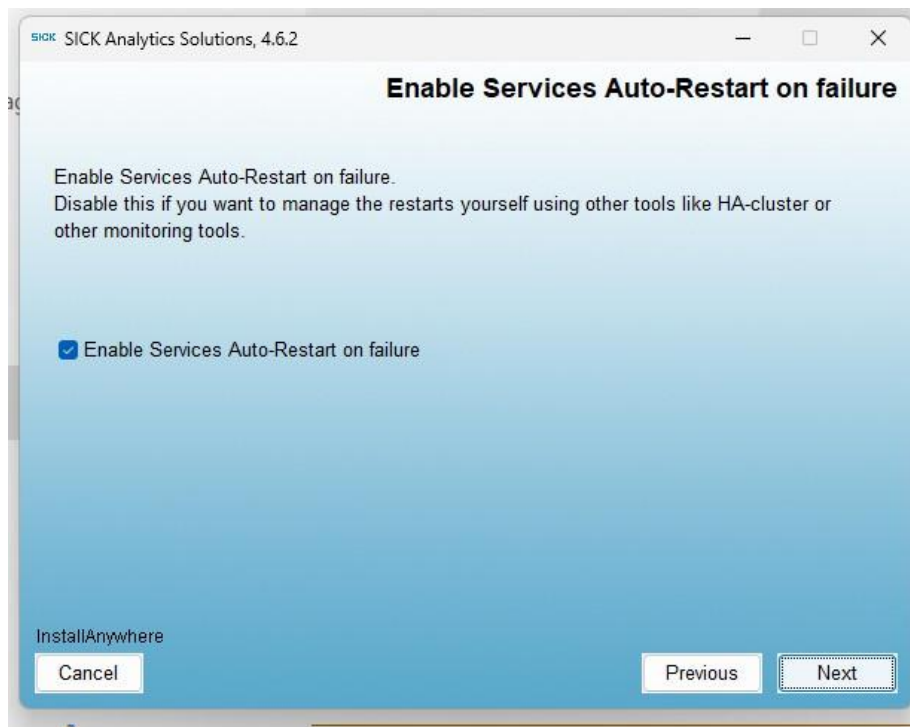


Figure 1.8-1: Media Server Settings**9. Enable Services Auto-Restart on Failure**

- Choose whether to enable automatic service restarts:
 - Checked: Services restart automatically.
 - Unchecked: Manual management required.
- Click **Next** to proceed.

**Figure 1.9-1: Enable Services Auto-Restart on Failure****10. Specify Certificate Properties File**

- During installation, select a certificate properties file for SICK Logistics Analytics to configure periodic certificate updates via the SSM service for secure communication:
 - **Choose...:** Browse to the file .
 - **Restore Default File:** Use the default certificate if no custom file is provided.
- Click **Next** to proceed.

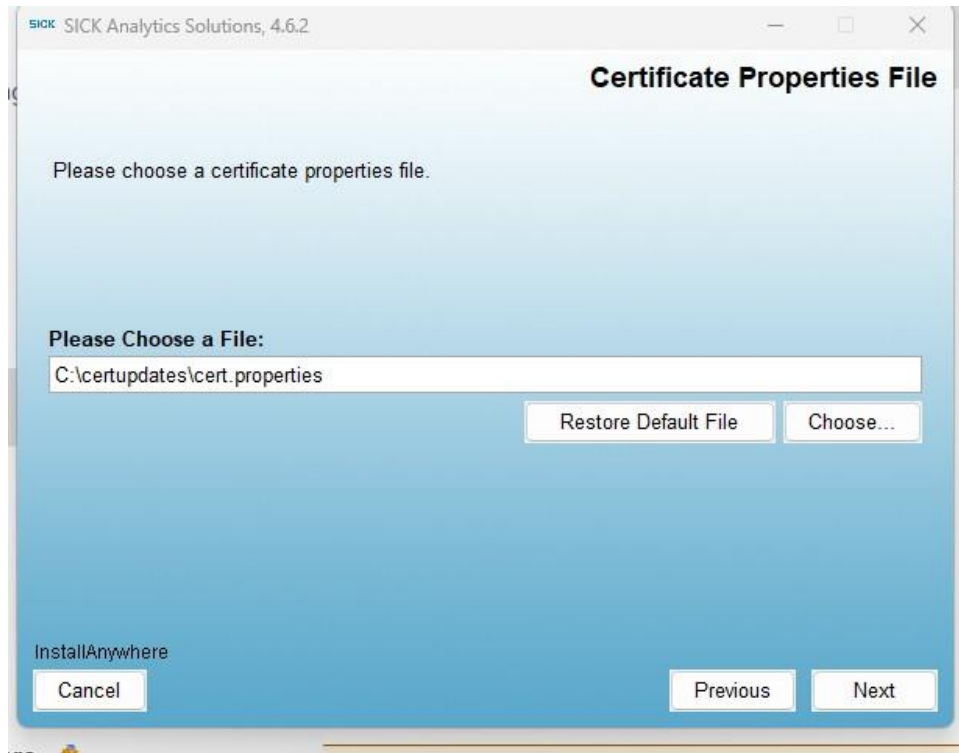


Figure 1.10-1: Specify Certificate Properties File

11. On the "**Manage Product Windows Services as a User**" panel, specify the account to run the application's Windows services (By default the box is unchecked):

- Select the **Manage Product Windows Services as a User** checkbox to enable the fields. If you do not select the checkbox, the default LOCAL SYSTEM account is used, and you can skip the next steps.
- In the **Domain** field, enter the domain (for example, RPCDOMAIN).
- In the **User Name** field, enter the username (for example, gMSA03).
- For a **Group Managed Service Account (gMSA)**, append \$ to the username (for example, gMSA03\$).
- Click **Next**.



Figure 2-9: Manage Product Windows services as a user

12. On the **"Enter Password"** panel, provide the password for the specified user account:

- For a standard user account (local or domain), enter the password in the Please Enter the Password field.
- For a gMSA, leave the password field blank, as gMSAs do not require passwords.
- Click Next.

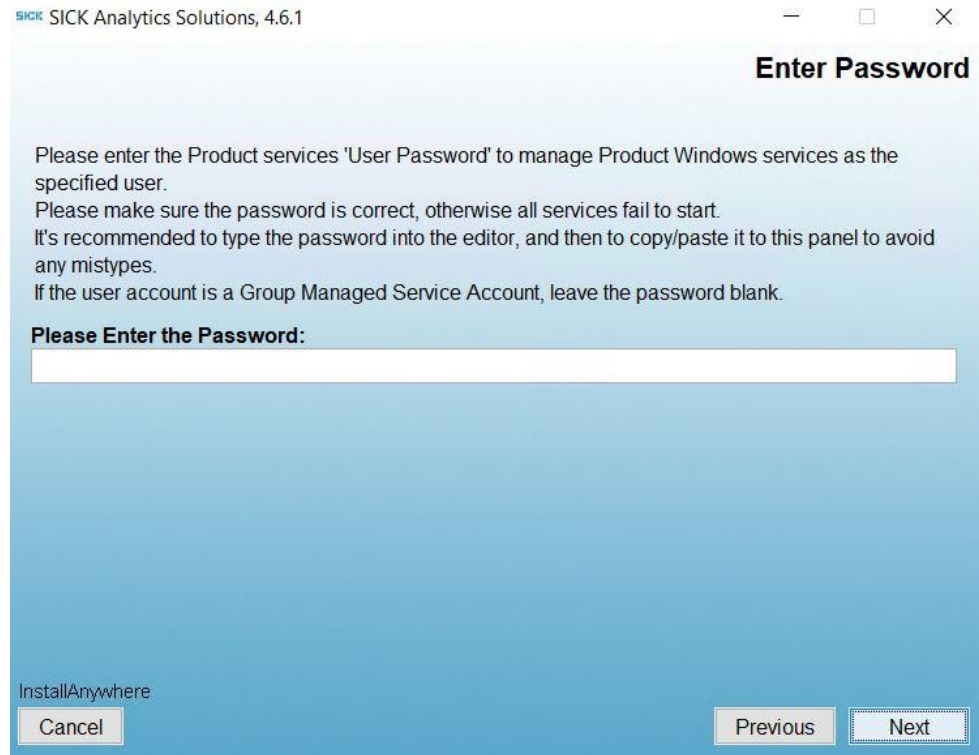


Figure 2-9: Enter Password

13. Pre-Installation Summary

- Review the summary.
- Click **Install** to begin installation.

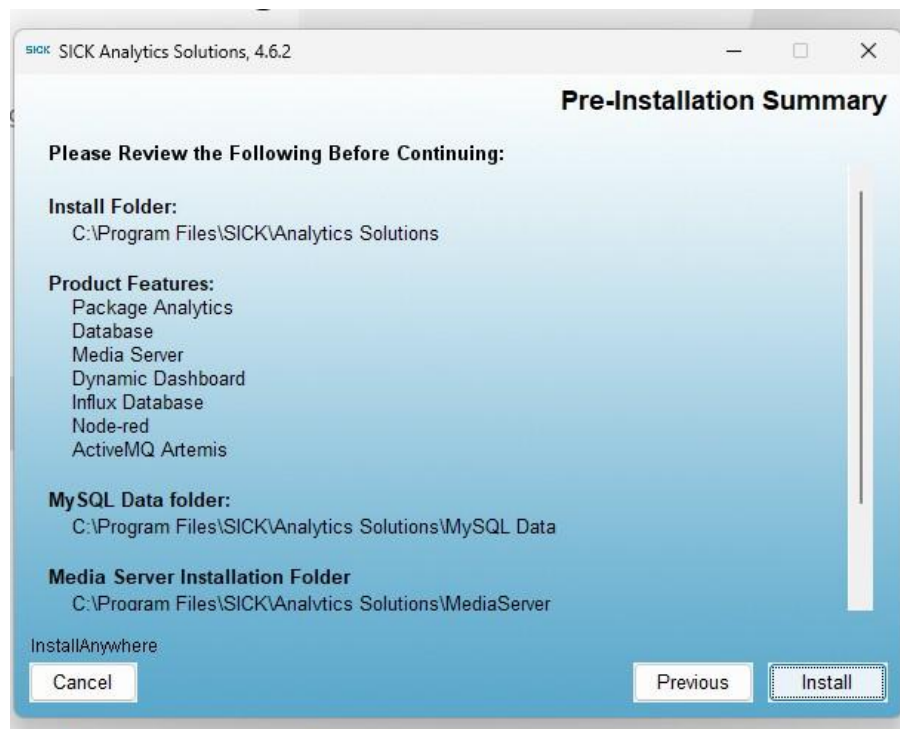


Figure 1.13-1: Pre-Installation Summary

14. Installation in Progress

- The installer begins installation, displaying a progress bar.
- Wait until the process reaches 100%.

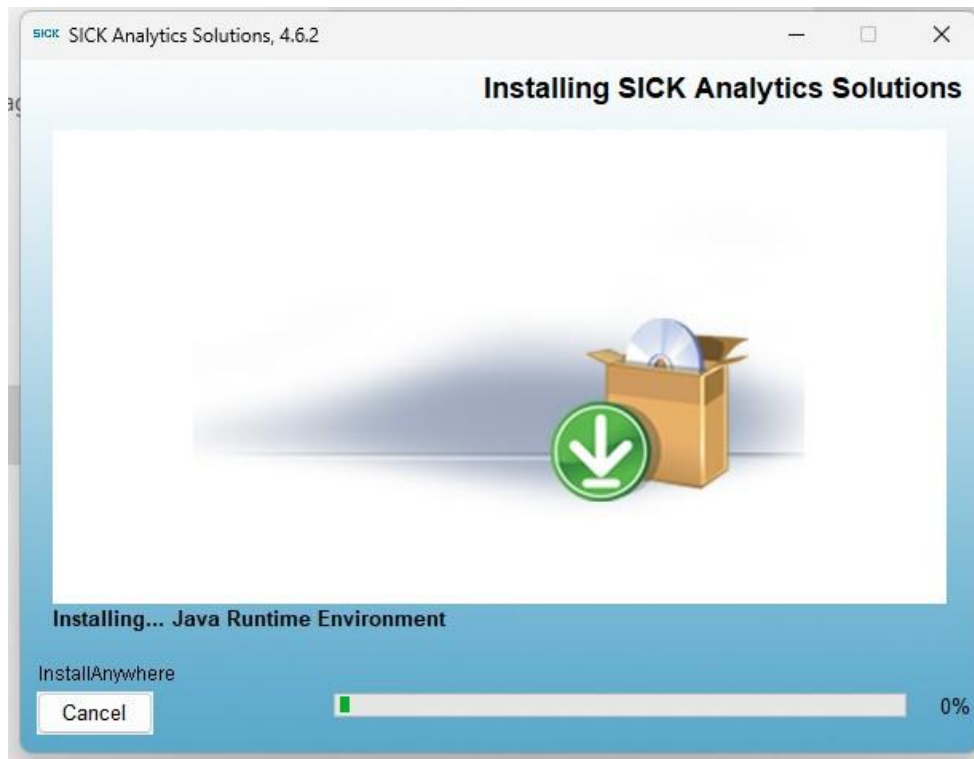


Figure 1.14-1: Installation in Progress

15. Installation Complete

- The **Install Complete** screen confirms successful installation.
- Click **Done** to exit.

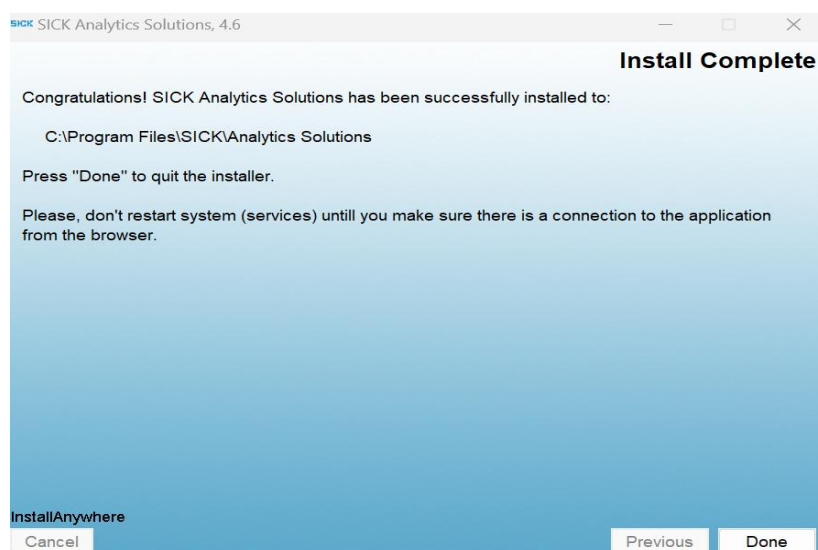


Figure 1.15-1: Installation Complete

1.2 To launch the installer on Linux

This section explains how to install SICK Logistics Analytics (LA) on a Linux system.

1. Launch Installer

- Navigate to the location where the installer .bin file is available.
- Open Terminal in the location where the installer is available.
- Make the .bin file executable by running: `chmod +x SICK_Logistics_Analytics.bin`
- Launch the installer with sudo privileges by running: `sudo ./SICK_Logistics_Analytics.bin`
- Wait for the **InstallAnywhere** installer to start.

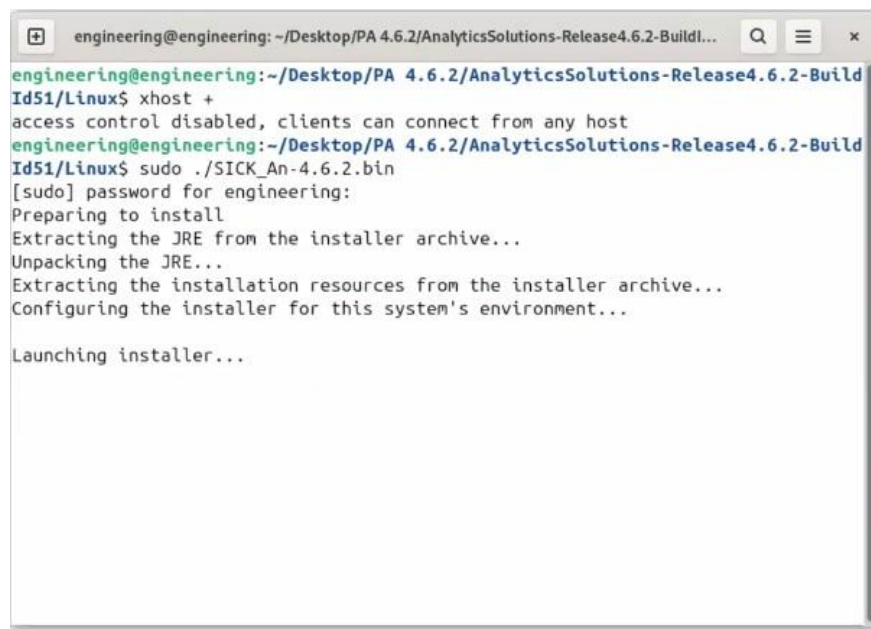


Figure 1.1-1: Installation Executable

2. InstallAnywhere Loading Screen

- The **InstallAnywhere** dialog displays a progress bar.
- Wait until the progress reaches 100%.

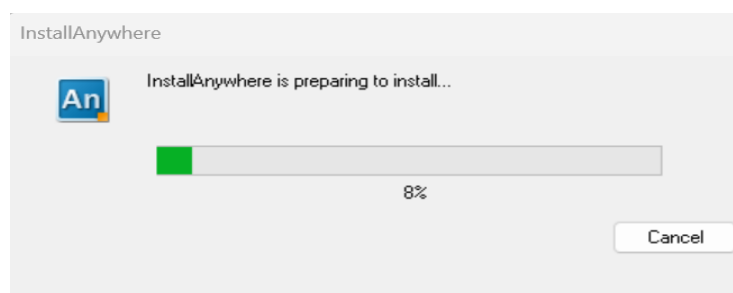
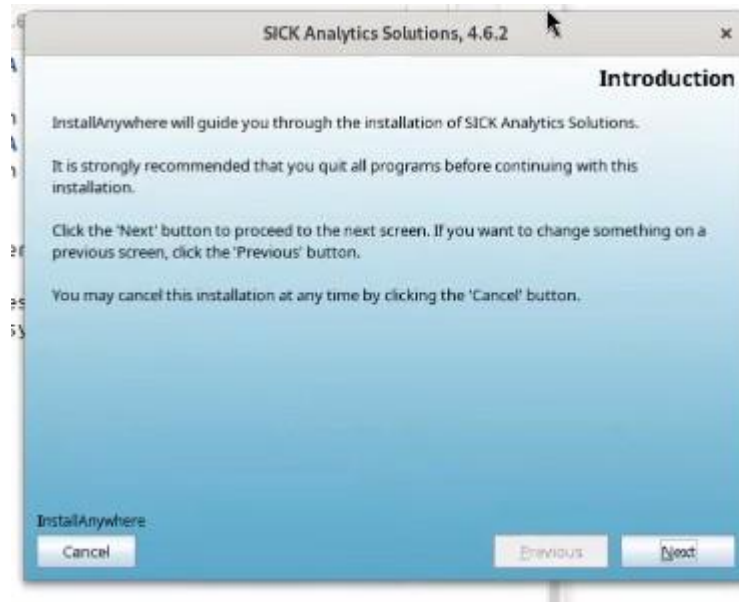


Figure 1.2-1: InstallAnywhere Loading Screen**3. Introduction Screen**

- The **Introduction Screen** provides an overview of the installation process.
- Stop all running applications.
- Click **Next** to proceed.

**Figure 1.3-1: Introduction Screen****4. License Agreement**

- The **License Agreement** screen displays the End User License Agreement (EULA).
- Read the terms and select the checkbox to acknowledge agreement.
- Click **Next** to continue.

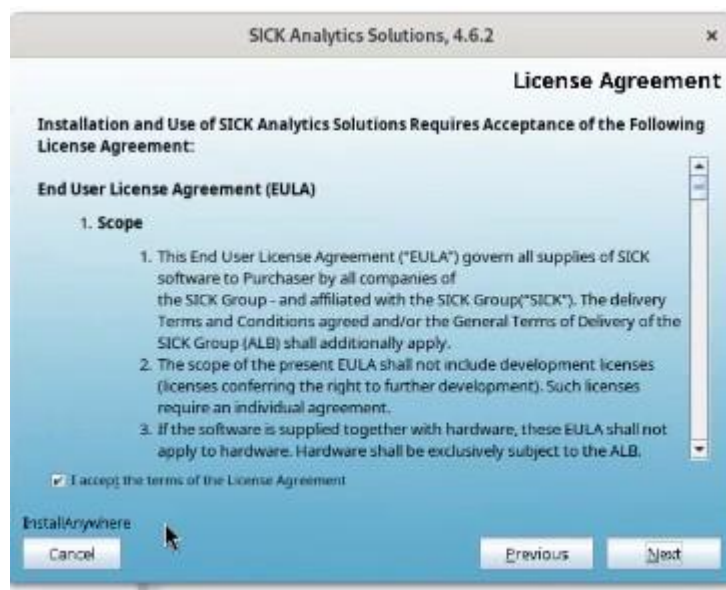


Figure 1.4-1: License Agreement**5. Choose Install Set**

- Select the installation type:
 - **Full:** Installs all features.
 - **Custom:** Allows selective installation.
- Click **Next** to proceed.

**Figure 1.5-1: Install Set – Default View**

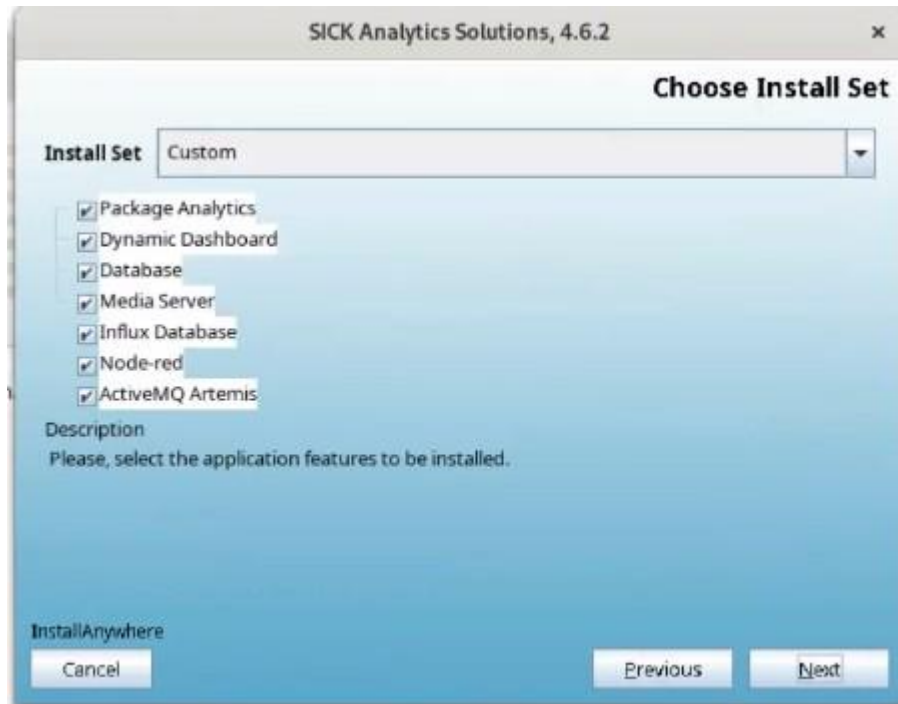


Figure 1.5-2: Install Set – Custom Option

6. **Choose Install Folder**

- Select the installation directory (e.g., /opt/SICK/AnalyticsSolutions) or choose a custom path.
- Click **Next** to proceed.

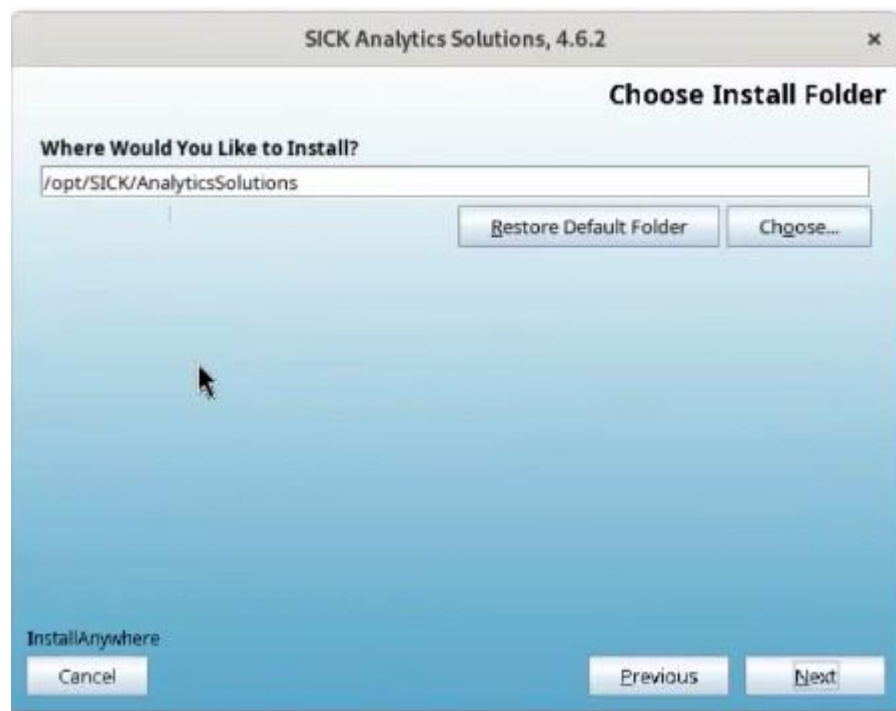
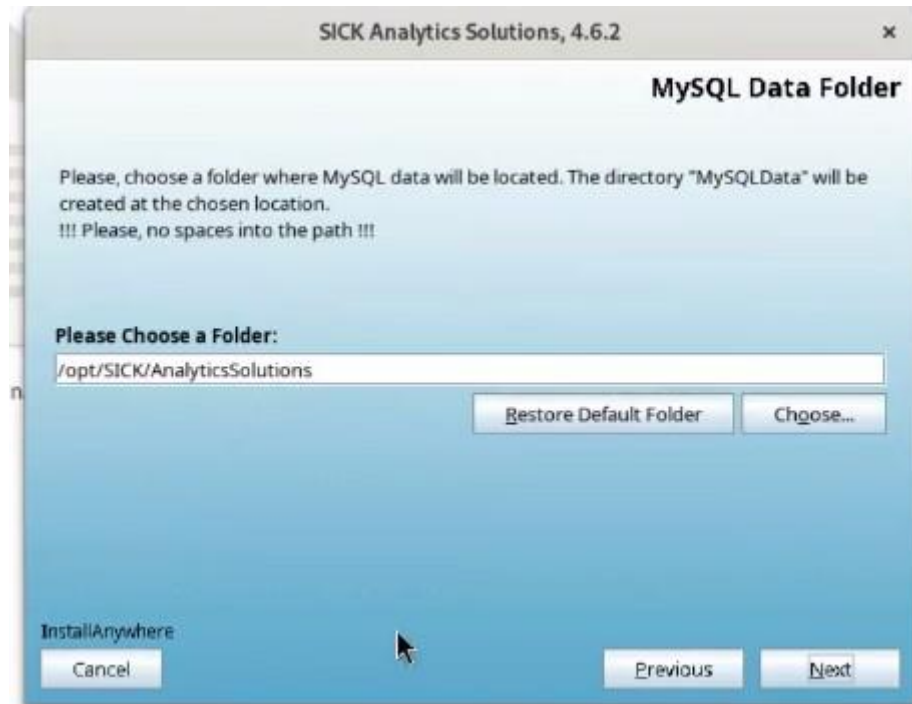


Figure 1.6-1: Choose Install Folder**7. Specify MySQL Data Folder**

- Choose a folder for MySQL data storage (e.g., /var/lib/mysql).
- Click **Next** to proceed.

**Figure 1.7-1: MySQL Data Folder****8. Configure Media Server Settings**

- Specify the **Media Server** installation folder (e.g., /opt/SICK/Media_Server).
- Click **Next** to proceed.

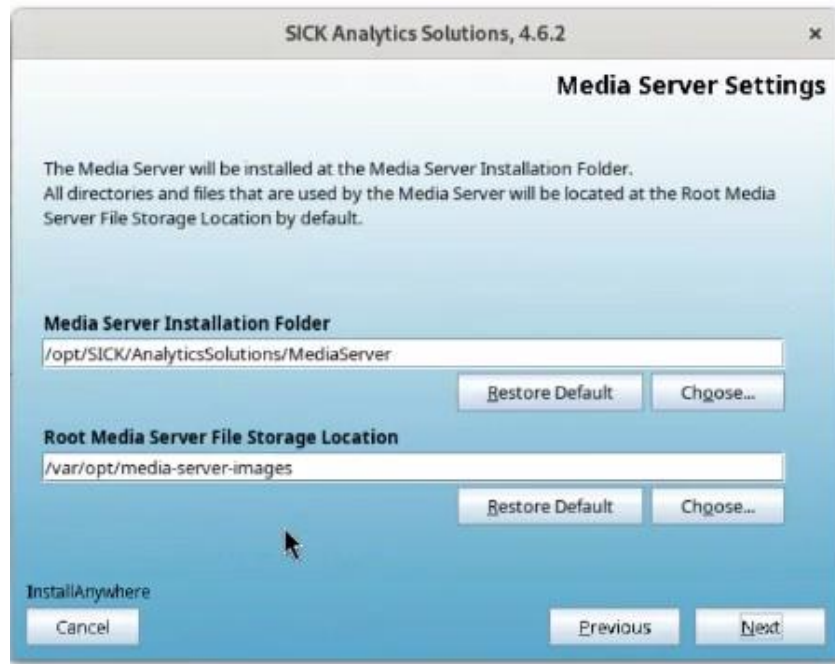


Figure 1.8-1: Media Server Settings

9. Specify Certificate Properties File

- During installation, select a certificate properties file for SICK Logistics Analytics to configure periodic certificate updates via the SSM service for secure communication:
- Options:
 - **Choose...:** Browse to the file location (a valid cert.properties file containing keystore.path, keystore.password, and cert.refresh.interval.minutes).
 - **Restore Default File:** Use the default certificate if no custom file is provided.
- Click **Next** to proceed.



Figure 1.9-1: Specify Certificate Properties File

10. Pre-Installation Summary

- Review the **Pre-Installation Summary**.
- Click **Install** to begin installation.

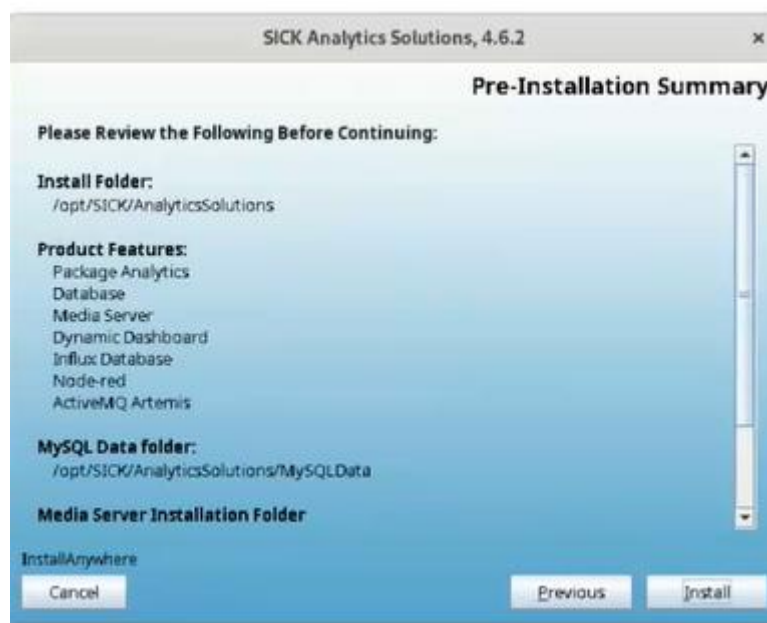


Figure 1.10-1: Pre-Installation Summary

11. Installation in Progress

- The installer begins installation, displaying a progress bar.
- Wait until the process reaches 100%.

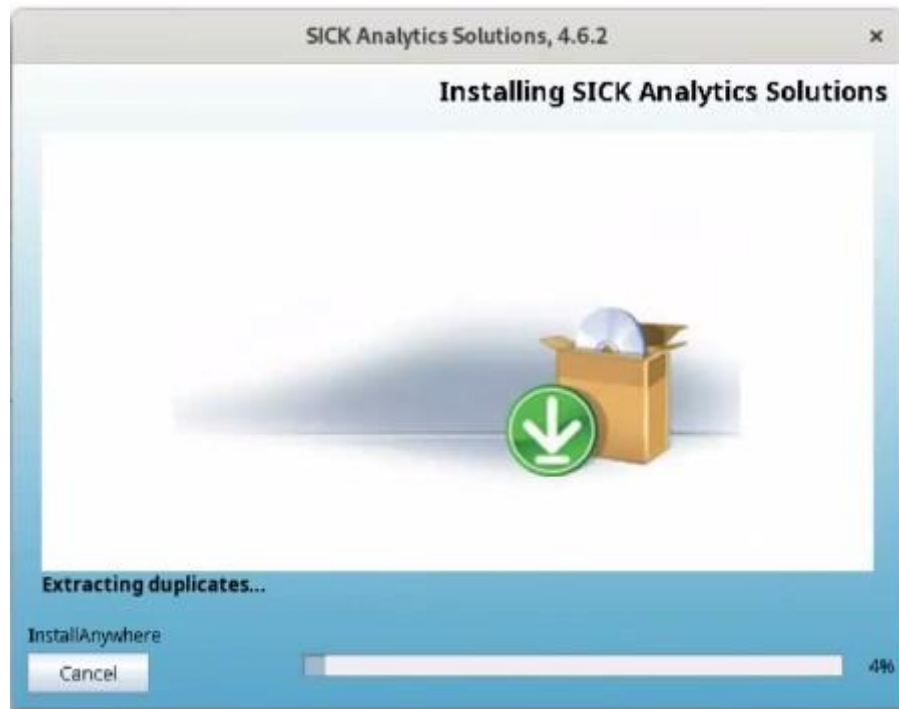


Figure 1.12-1: Installation in Progress

12. Installation Complete

- The **Install Complete** screen confirms successful installation.
- Click **Done** to exit.



Figure 1.13-1: Installation Complete

1.3 To Launch Patch Installer

This section explains how to apply a software patch to update or fix SICK Logistics Analytics (LA).

1. Start Patch Installation

- Navigate to the folder containing the **SICK Logistics Analytics patch installer**.
- Locate the **patch executable file**.
- **Double-click** the file to launch the patch installer.

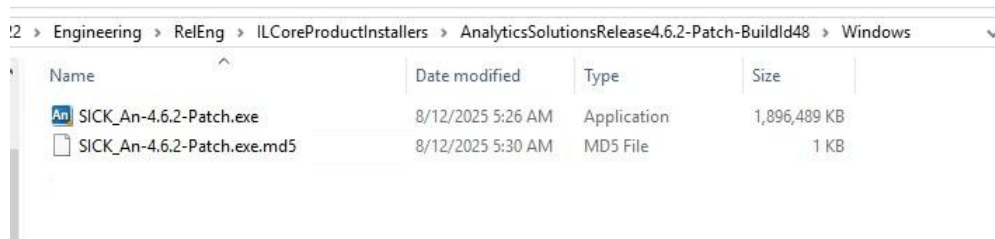
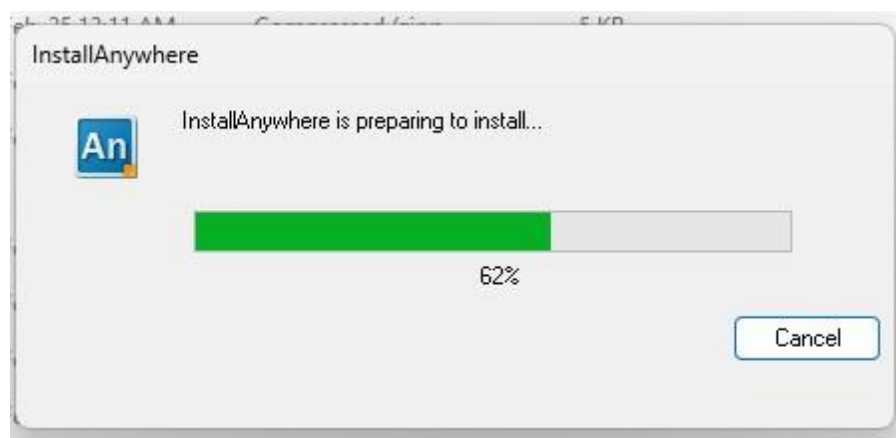


Figure 1.1-1: Patch Executable

2. InstallAnywhere Loading Screen

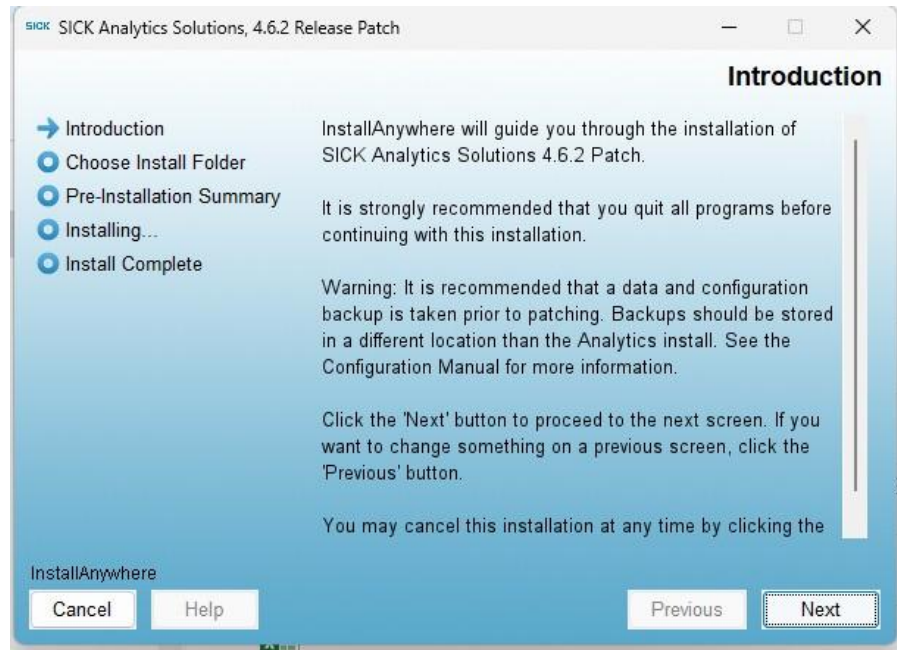
- Once the patch installer is launched, the **InstallAnywhere** dialog appears.
- The installation process prepares to start, showing a **progress bar**.
- Wait until the progress reaches **100%**.



2.1:2 InstallAnywhere Loading Screen

3. Introduction Screen

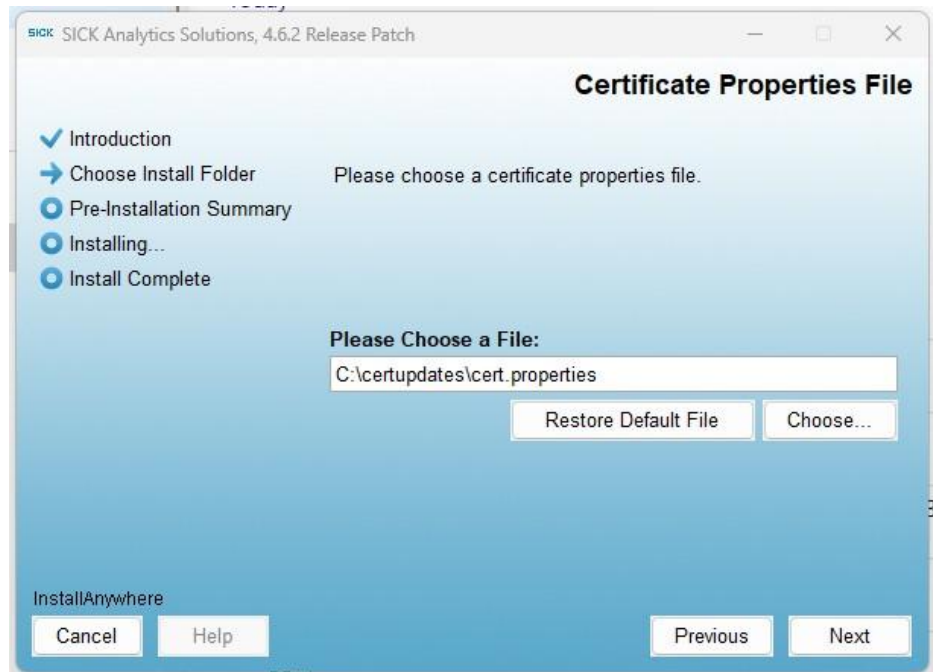
- After **InstallAnywhere** completes preparation, the **Introduction Screen** appears.
- The installer provides an overview of the installation process and recommends closing all running applications before proceeding.
- Click **Next** to continue.



2.1:3 Introduction Screen

4. Specify Certificate Properties File

- During patch installation, select a certificate properties file for SICK Logistics Analytics to configure periodic certificate updates via the SSM service for secure communication:
- Options:
 - **Choose...:** Browse to the file location (a valid cert.properties file containing keystore.path, keystore.password, and cert.refresh.interval.minutes).
 - **Restore Default File:** Use the default certificate if no custom file is provided.
- Click **Next** to proceed.



2.1:4 Certificate Selection

4. Pre-Installation Summary

- Review the Pre-Installation Summary before proceeding.
- It displays the Product Name, Install Folder, and Disk Space Information (Required & Available Space).
- Verify the details and click **Install** to begin.

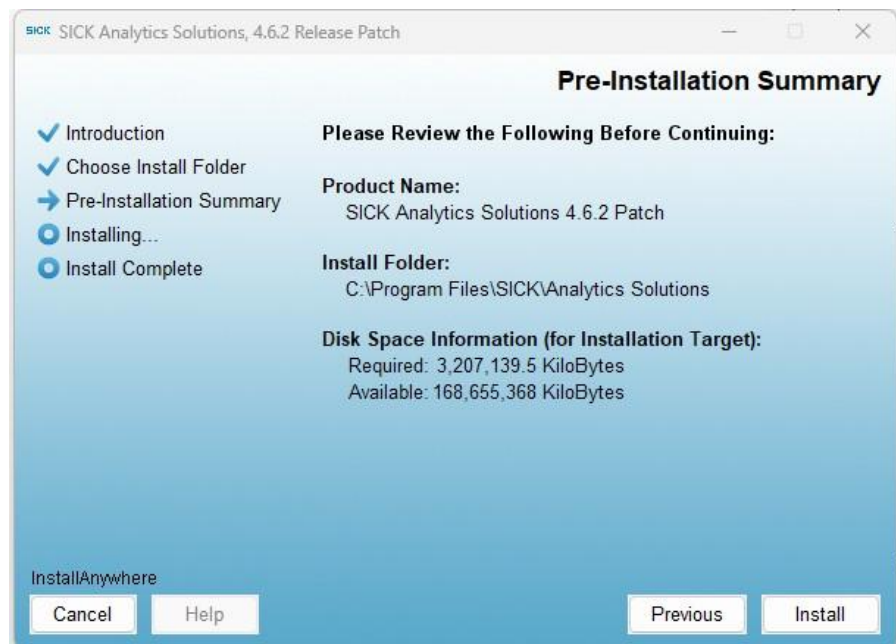


Figure 1.3:1: Pre-Installation Summary

5. Patch Installation in Progress

- The installer begins patch installation and displays a progress bar.
- JRE and dependencies may be installed or updated.
- Wait until the process reaches **100%**.

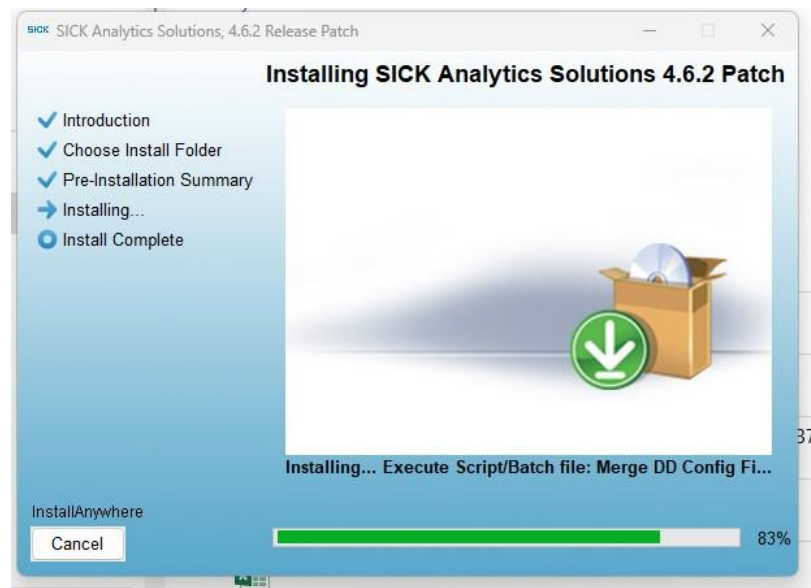


Figure 2.1:6 Patch Installation in Progress

6. Installation Complete

- The **Install Complete** screen confirms that the patch has been successfully installed.
- The **installation directory** is displayed for reference.
- Click **Done** to exit the installer.

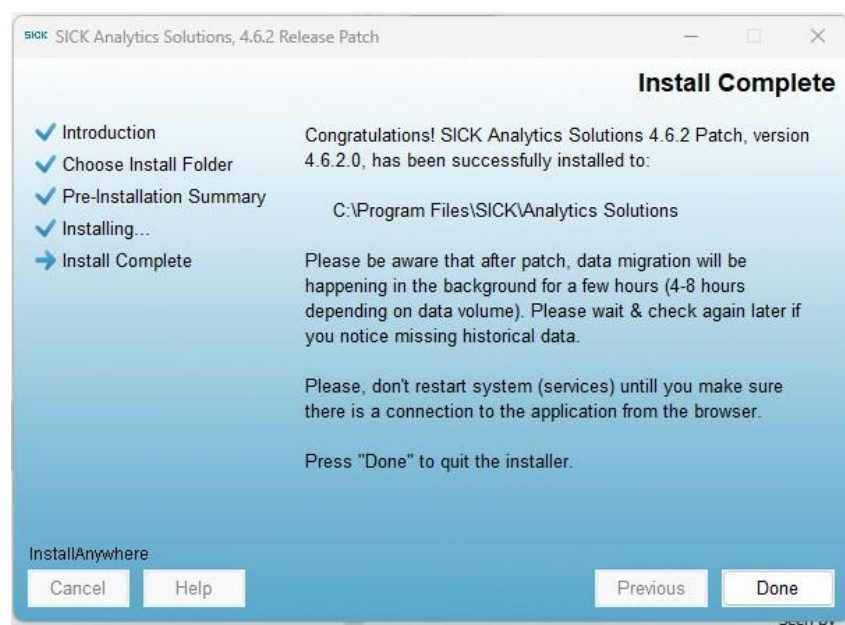


Figure 2.1:7 Install Complete

2 License & Registration

The **License & Registration** app lets you view current Analytics Software license information. You can also add a new license here, if you are updating or reinstalling your LA software.

Note: Upload New License option is only available for the logged in Users having appropriate permissions.

To launch the License & Registration tool:

1. Select License & Registration from the [Configuration](#) home page or from the navigation bar.

Figure 2: License & Registration Page

2.1 Contact

Displays contact information for the LA licensee.

2.2 Permissions

Describes software limitations and permissions for the currently installed license.

Setting	Description
Expiration	Expiration date of the current software license. After this date, LA will continue to acquire, store and process data in the background. However, you will no longer have access to facility configuration and will only be able to access the dashboard features for the first 2 created systems. All restrictions will be lifted when a valid license is applied.
Scan Points	Shows number of scan points still available under the current license. A scan point can include a single device, such as a standalone barcode reader, or a complete scan system with multiple devices reporting to a single SICK System Controller, such as a camera tunnel. Up to 64 scan points are allowed under each LA license. To add scan points, you will need to purchase a new license. SICK will generate the new license with the total new scan points.

Table 1: License Permissions

2.3 MAC Information

The system Media Access Controller is a unique computer ID. It is used by LA to secure your software license to a physical computer. When requesting a new LA license from SICK, you should include this number in your request to SICK.

2.4 Add or Update a License

1. Click the Add icon  at the top right corner.
2. In the **Add/Edit License File** dialog, browse to the file location of the new license file, and then click **APPLY LICENSE**.

3 Configuration Overview

Once Logistics Analytics (LA) is installed, you must add the systems you want to monitor, and configure the software to suit your facility's needs. In addition, you may need to update LA configuration over time, to reflect operational changes in your facility. The LA Configuration tool provides access to the features you need to complete the LA dashboard installation and make changes to ensure that LA can operate optimally for your facility.

3.1 Launch the LA Configuration Tool

The **Configuration** tool is launched from within the LA user interface:

- Launch LA, and then from the navigation bar, select Configuration. The Configuration home page opens in a new tab or page in your browser. To return to the LA dashboard from the Configuration tool, simply navigate the tabs or pages in your browser window.

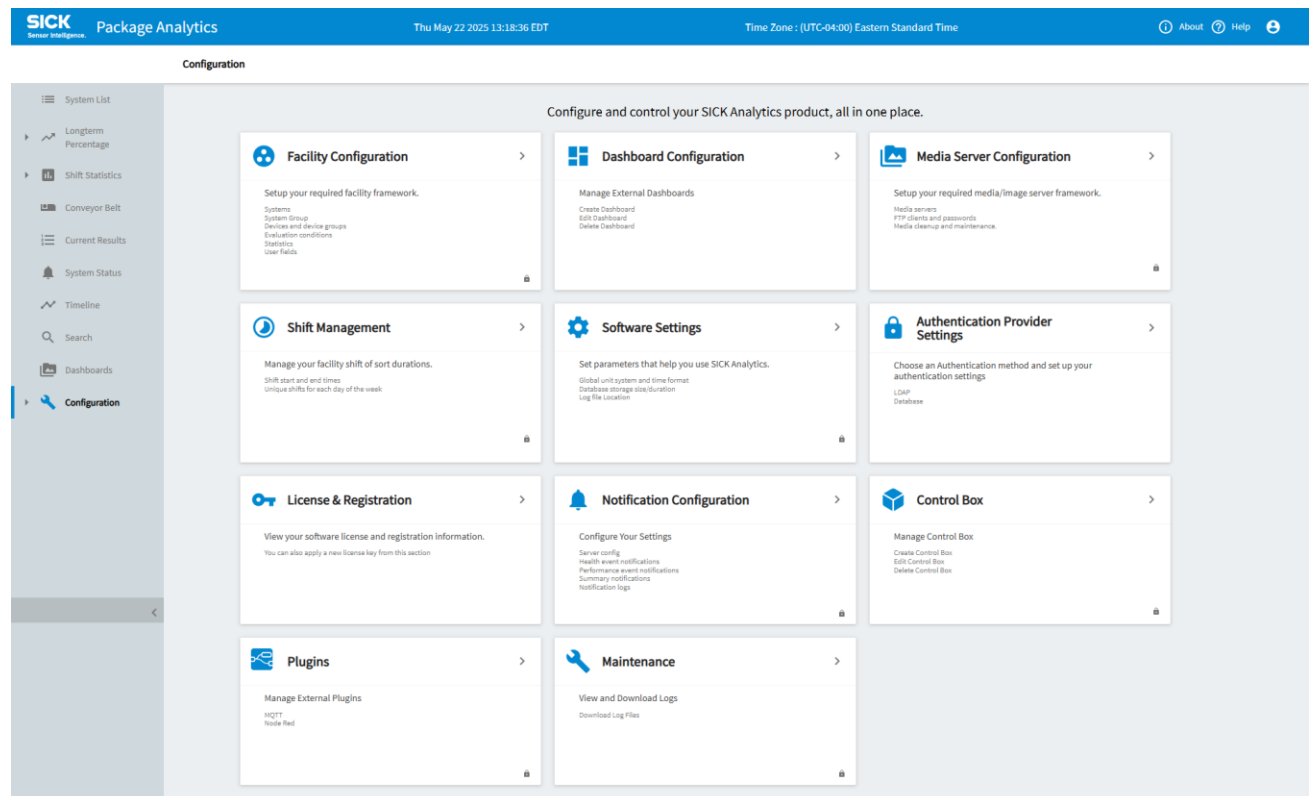


Figure 3: Configuration Home Page

The apps on the Configuration home page allow you to access and configure LA system settings. Please note that all of the above apps may not be available to all users due to licensing or permission restrictions.

Make a selection from the following apps:

Selection	Description
 Configuration Home	Set up your facility's LA framework: 1. Add, delete, or modify data acquisition systems. 2. Add, delete, or modify a system's devices, (for example, controllers, cameras, scales, and barcode readers). Group system devices into logical groups. 3. Identify Evaluation Conditions sent from the system's controller, which you want to monitor. 4. Create and define Performance Statistics which are used to filter Evaluation Conditions (for example side by side, bad gap, or packages per hour) 5. Add, delete, or modify data acquisition User fields.
 Media Servers	Configure Media Server in LA: 1. Add the Media Server to LA 2. Configure the IP, ports, Full and Thumb Image folders. 3. Connect Systems to Media Servers. 4. Edit/Remove Media servers
 Shift Management	Configure LA Shifts: 1. Create/delete modify Daily Shifts and Overnight Shifts.
 Software Settings	Configure LA software settings: 1. Set units of measurement and time formats 2. Configure database parameters like file size limits and storage durations 3. Configure log file locations
 Authentication Provider Settings	Configure LA authentication Provider settings: 1. Select authentication options for LDAP or Database. 2. Set-up the authentication setting for the selected option.
 License & Registration	1. View software and registration information 2. Set units of measurement and time formats 3. Configure database parameters like file size limits and storage durations 4. Identify your PCs media access control (MAC) used by LA to secure your software license

 Notification Configuration	Configure Notifications 1. Configure Server Settings for Notifications 2. Configure Health Event Notifications 3. Configure Performance Event Notifications Configure Summary Event Notifications
 MSC Parameters	MSC Parameters Allow user to view MSC Static parameters Allow user to view/edit MSC application parameters
 Dashboard Configuration	Helps in configuring different type of dashboards like FA, External Dashboard, Norca, Control Box
 Control Box	Configures Control box dimensions and weight
 Plugins	Helps in transferring message between client and broker Setup connection with node-red and application
 Backup and Restore	Helps in downloading facility configurations and importing facility configuration templates into newly installed facilities

Table 2: Configuration Apps

3.2 Help

LA's online Help is available to you from any screen.

- On the header, click  Help.

Help is divided into two manuals. Select a manual to view:

LA User Manual	Go here to learn how to use the LA user interface to support your facility's operations.
LA Software Configuration Manual	Go here to learn how to setup LA after installation, and configure LA to meet your facility's specific needs.

Table 3: Help

4 Facility Configuration

The process of adding a system to Logistics Diagnostic Analytics (LDA) involves first defining the system performance parameters, and then configuring the system by adding devices, device groups, Evaluation Conditions, and Performance Statistics. You can also add system groups to the application and add the systems to the system group.

All these steps are achieved using the Facility Configuration app. You can also edit already connected systems or delete systems from LA using this app, to meet your facility's changing needs over time.

Note: Adding/Editing facility configuration is only available for the logged in Users having appropriate permissions. If you are not logged in or you do not have enough permission, launching Facility Configuration page will not display options to add, edit or delete.

4.1 Overview

To launch the Facility Configuration app:

1. From the Configuration home page, click the Facility Configuration app. OR

On the Configuration tool navigation pane, click  **Facility Configuration**.

2. The Facility Configuration page is displayed.

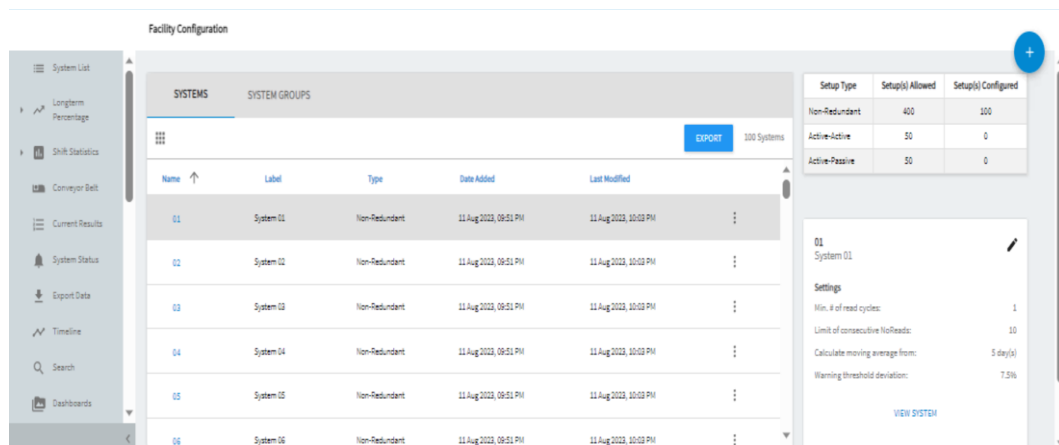


Figure 4: Facility Configuration Page

All connected systems are listed in the table under the **Systems** heading. If no systems have yet been added to LA, the table will be empty.

You can click any heading to sort the table by the heading value in ascending or descending order. You can click a row in the table to view the system's parameters without leaving the **Facility Configuration Systems** page.

1. Add a system, click . Refer to Section **Error! Reference source not found.**
2. To configure a system's devices or statistics click the system ID [02](#). Refer to Section 4.4 to 4.8

3. To configure system parameters or to delete a system, click . Refer to Section 4.13 to 4.16
4. To export the systems, click on  button. Refer to Section 4.11.

About Licensing and Available Systems

On the top right of the page, LA identifies how many systems are currently configured to LA, and how many systems can be configured on the currently applied LA license file.

10 of 64 Available Systems

- The number of available systems is determined by your LA license. If the number of systems currently configured is equal to the number of systems allowed by the license, the add systems icon  will be disabled.

Contact SICK to upgrade your license for additional systems.

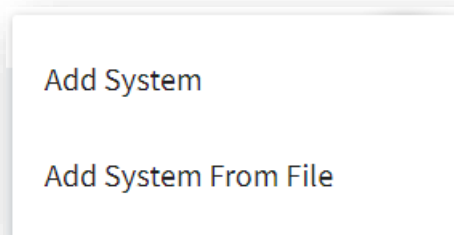
- If the message 0 of 0 available systems is displayed, then the license has become invalid. From the Navigation bar, click **Facility Configuration**, and then select the **License & Registration** app to check the current status of your license. Refer to Section 6.

4.2 Add a System

To add a new system to LA:

1. On the **Facility Configuration** page, click the Add icon . Refer to Figure 4: Facility Configuration Page

Application will display two options: ‘**Add System**’ and ‘**Add System from File**’



2. Click on ‘**Add System**’ option. The **Add New System** dialog box opens.
3. It displays three setup Types:
 - a. **Non-Redundant**: This type allows all objects to pass in a system
4. Below is the example of Non-Redundant type

Add New System(s)

Select Setup Type

1 Setup Type 2 Non-Redundant System

Setup Type

☒ Non-Redundant

☐ Active-Active

☐ Active-Passive

CANCEL NEXT

Figure 5: Add New System (Non-Redundant) - 1

Add New System

Define information and parameters below.

General

System Name* System Label

Define System Parameters ^

Minimum # of read cycles Limit of consecutive NoReads:

Calculate moving average from (days) Moving average deviation threshold (%)

☐ Create another CANCEL SAVE

Figure 6: Add New System (Non-Redundant) -2

5. In the Add New System dialog under General:
 - Type a System Name.

The system name must be identical to the device name of the SICK controller that is sending data for this system. The name is case sensitive. You cannot have more than one system with the same name.

- Type a System Label.

The system label is a user-defined description to provide more context for the system name. You can use system labels to categorize groups of like systems, for example, "Primary Sort" or "Shipping".

6. Optional: Click Define System Parameters.

- In the **Minimum # of read cycles** field, type a minimum number of required read cycles per day.

All system statistics will be calculated only after the number of packages in a day exceed this number. Your entry must be a numerical value between 1 – 1000. Setting the number of minimum read cycles ensures that LA statistics portray an accurate depiction of system status only after enough processing data has been captured to ensure a valid baseline.

- Type a Limit of consecutive NoReads. If the Primary Statistic's condition does not occur for this number of times in a row, a system performance event will be generated, and the system will show a warning state.
- In the Calculate moving average from (days) field, type how many days of operation are used to calculate the system's moving average rate.

The moving average rate is a succession of averages derived from the entered number of days. It helps smooth out fluctuations in the Primary Statistic read rate and is an indicator of the current trend. Between 1-90 days are allowed for this field.

- In the Moving average deviation threshold (%) field, type a permissible threshold percentage for this system's moving average. Any deviation greater than or equal to the specified threshold in the moving average read rate will trigger a performance event.

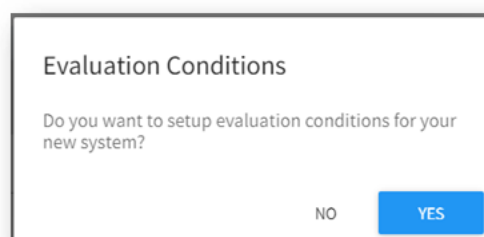
A value between 1-100 may be entered. Your entry can include up to one decimal point.

Note: To allow meaningful interpretation of system performance, consider using the same parameters for like groups of systems. For example, all "Primary Sort" camera tunnels should reference the same Minimum # of read cycles.

7. Click **Save**.

A message will confirm that the new system was successfully added. The system is added to the **Systems** list on the **Facility Configuration** screen.

8. In the **Evaluation Conditions** message, click **YES** if you want to configure Evaluation Conditions for this system now.



The system configuration page will open. From here you can configure Evaluation Conditions as described in Section 2.5.

If you click **NO**, you can always access the system from the **Facility Configuration** page to setup Evaluation Conditions later.

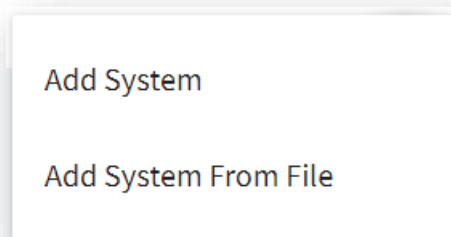
After adding a system, you must configure it, in order for LA to start reporting on the system devices and statistics through the dashboard. Refer to Sections 2.4 through 2.8 describe the configuration of Evaluation Conditions, statistics and devices.

4.3 Add a System from File

To add a new system from existing File to LA:

1. On the **Facility Configuration** page, click the Add icon .

Application will display two options: 'Add System' and 'Add System from File'



2. Click on 'Add System From File' option. The **Add System From File** dialog opens.

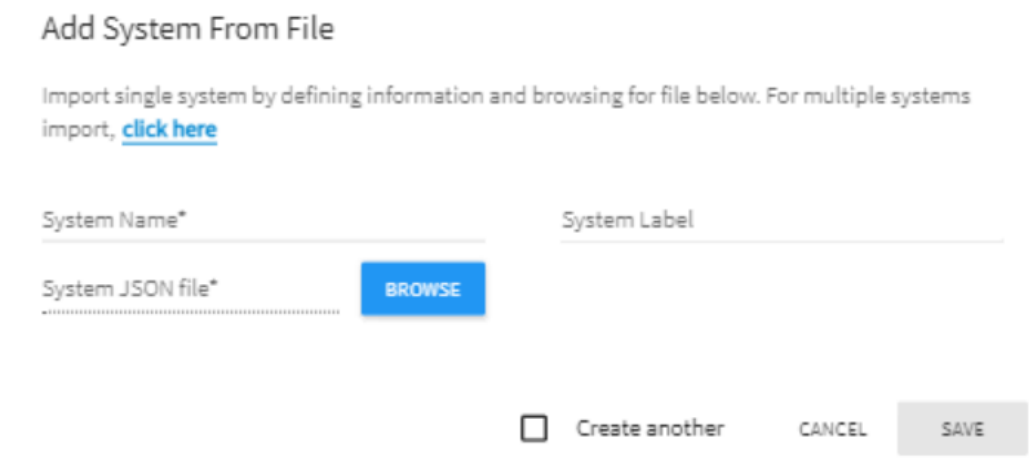
The 'Add System From File' dialog form. It has a title 'Add System From File'. Below the title is a text instruction: 'Import single system by defining information and browsing for file below. For multiple systems import, [click here](#)'. There are two input fields: 'System Name*' and 'System Label'. Below 'System Name*' is a 'System JSON file*' label followed by a dotted line and a blue 'BROWSE' button. At the bottom right, there is a checkbox labeled 'Create another', and two buttons: 'CANCEL' and 'SAVE'.

Figure 7: Add System From File Dialog

3. In the **Add System From File** dialog under **General**, user can either export or import single system or multiple systems based on the preference.
4. When user wants to add **Single System**, provide below fields:
 - Type a System Name.

The system name must be identical to the device name of the SICK controller that is sending data for this system. The name is case sensitive. You cannot have more than one system with the same name.

- Type a System Label.

The system label is a user-defined description to provide more context for the system name. You can use system labels to categorize groups of like systems, for example, "Primary Sort" or "Shipping".

- Browse an existing configuration JSON file. You can get the JSON file by exporting and existing System. Refer [Export System](#) section.

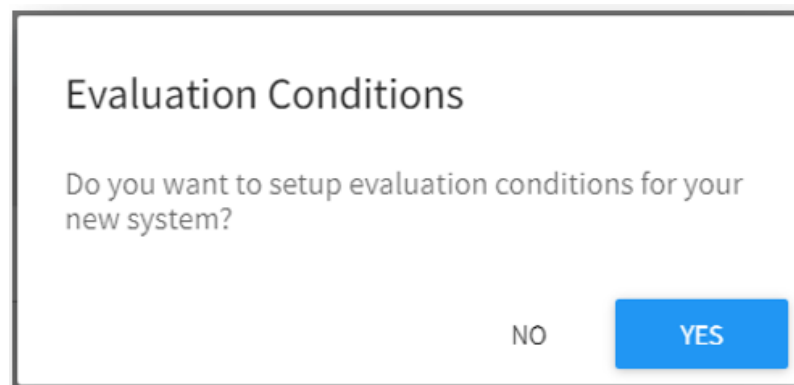
Note: The JSON file being imported will be validated against all the mandatory fields' information. If the validation fails, the import/create operation will be aborted and an appropriate snack bar message to the user will be displayed.

5. When user wants to add **Multiple System**, click on the link '**Click here**'. It redirects to Backup and Restore screen. Refer to **Error! Reference source not found.**
 - Browse an existing configuration JSON file. You can get the JSON file by exporting and existing System. Refer [Export System](#) section.
6. Click **Save**.

A message will confirm that the new system was successfully added. The system is added to the **Systems** list on the **Facility Configuration** screen.

If the import/create operation fails an appropriate snack bar message to the user will be displayed.

7. In the **Evaluation Conditions** message, click **YES** if you want to configure Evaluation Conditions for this system now.



The system configuration page will open. From here you can configure Evaluation Conditions as described in Section 2.5.

If you click **NO**, you can always access the system from the **Facility Configuration** page to setup Evaluation Conditions later.

After adding a system, you must configure it, in order for LA to start reporting on the system devices and statistics through the dashboard. Refer to Sections 4.4 to 4.8 describe the configuration of Evaluation Conditions, statistics and devices.

4.4 System Configuration

You use the system configuration page to set up and configure a system's devices, device groups, Evaluation Conditions, and Performance Statistics. To launch the system configuration page:

1. From the **Facility Configuration** home page under the Systems heading, click a system ID (for example **01**) to configure.

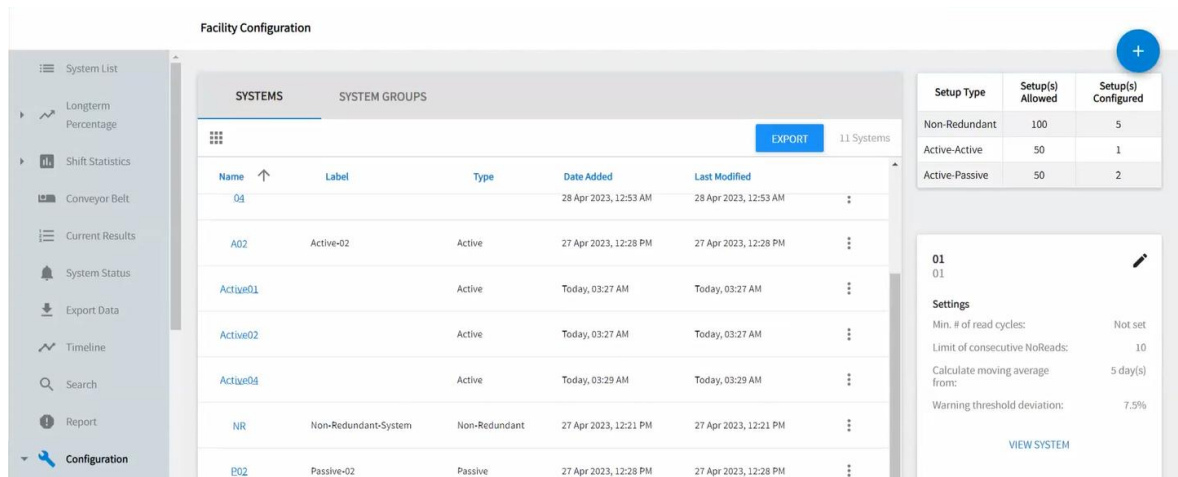


Figure 8: Configuration Home

2. The system configuration page opens.

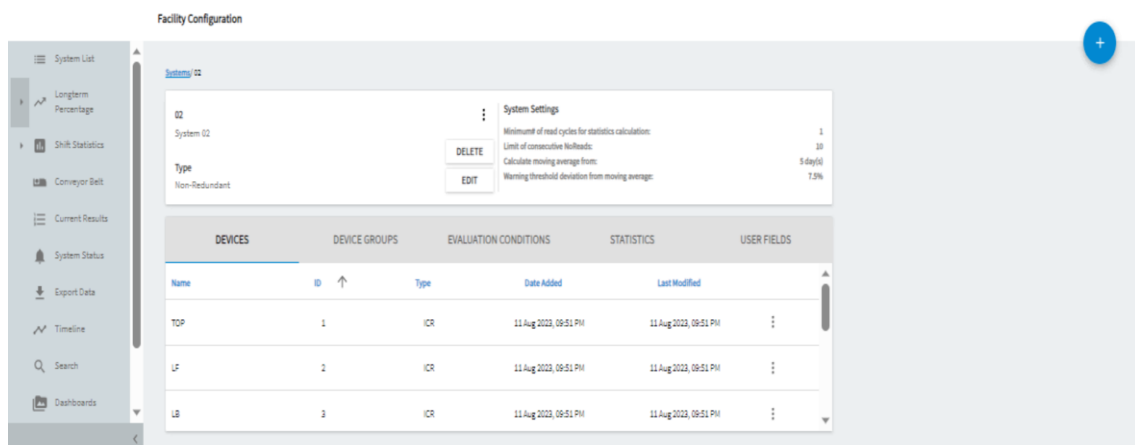


Figure 9: System Configuration Page

3. Click a heading to configure: **DEVICES**, **DEVICE GROUPS**, **EVALUATION CONDITIONS**, **STATISTICS** or **User Fields**.
 - Click on the 3 dots icon to Import System, Export System and Copy Settings from.
 - If you want to edit the System, click on **EDIT** link and it will open Edit System Dialog box. Refer section [Edit System Parameters](#) for further details.
 - If you want to delete the System, click on **DELETE** link. For further details refer [Delete a System](#) section.

OR

To return to the Facility Configuration page, click Systems ([Systems/ 01](#)).

4.5 Configure Evaluation Conditions

Evaluation Conditions are set in the SICK System Controller, which identifies packages that meet criteria have a specific condition such as no read, or valid read.

When you configure Evaluation Conditions for a system in Logistics Analytics (LA), you are telling LA which SICK System Controller Evaluation Conditions you want to monitor and measure. Note that Evaluation Conditions which you add to LA must match the Evaluation Conditions identified in the data acquisition system's MSC. The condition names are case sensitive.

Prior to adding Evaluation Conditions to LA, you must first identify your SICK System Controller Evaluation Conditions using SOPAS. Refer to your system's User Manual for more information.

Note: LA cannot be used to create or modify the definitions of Evaluation Conditions. These changes are made from your SICK System Controller. Refer to your system controller User Manual to add, remove, or modify the definitions of Evaluation Conditions.

Add Evaluation Conditions

To add system Evaluation Conditions:

1. Open the system configuration page.
2. On the system configuration page, click the **EVALUATION CONDITIONS** heading.

All Evaluation Conditions are displayed on the list. If you have not yet added Evaluation Conditions, the list will be empty.

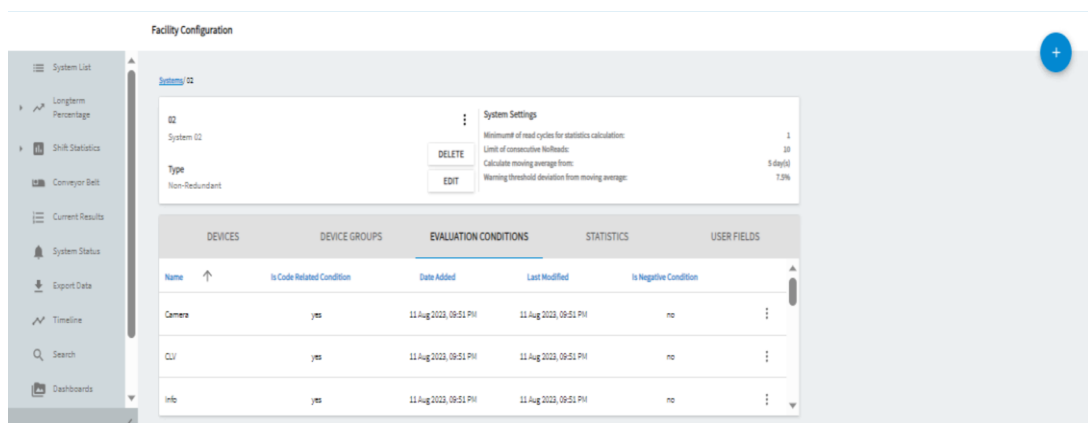


Figure 10: System Configuration Page / Evaluation Conditions

3. Click the Add icon .
4. The **Add New Evaluation Condition** dialog appears

Add New Evaluation Condition

Enter evaluation condition settings below.

General

Name*

☐ Yes, this is a code related condition.

☒ Negative Condition

☐ Create Another CANCEL **SAVE**

Figure 11: Add New Evaluation Condition Dialog

5. In the Add New Evaluation Conditions dialog:
 - Type the **Evaluation Condition Name**. You must type the name exactly as it is shown in SOPAS. This field is case sensitive. Your entry must match the condition name in SOPAS exactly. Do not use conditions which are not identified by SOPAS.
 - **Negative Condition** helps in stat calculation precisely. It analyses an object pushed to a system is valid or not.
 - Check **Yes, this is a code related condition** if a condition evaluates a package barcode or Check **Negative condition** if the condition is like empty tray.

Note: Evaluation Conditions are either package related (conditions which evaluate the complete package) or code related (conditions which evaluate only a code on a package).

- Click the **Save** button. The condition is added to the list.
 - Once the evaluation condition is created, LA differentiates it as either Object level condition or Bar code level condition. For example, empty tray (negative condition) is an Object level condition.
 - Stats are generated according to the defined evaluation condition and displayed in the Shift Statistics and Longterm Statistics tab.
6. Continue to add any additional Evaluation Conditions which you would like to monitor for this system.

After you have added Evaluation Conditions to your system, you can add Statistics to monitor them. Refer to Section 4.8

4.5.1 Delete Evaluation Condition

To delete an existing Evaluation Condition:

Facility Configuration

Systems/01

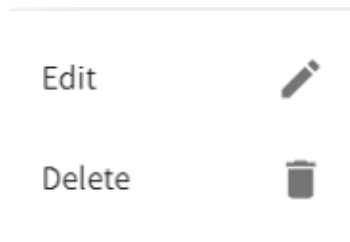
01
System 01
DELETE EDIT

System Settings
Minimum of read cycles for statistics calculation: Not set
Limit of consecutive Nodeads: 10
Calculate moving average from: 5days
Warning threshold deviation from moving average: 7.5%

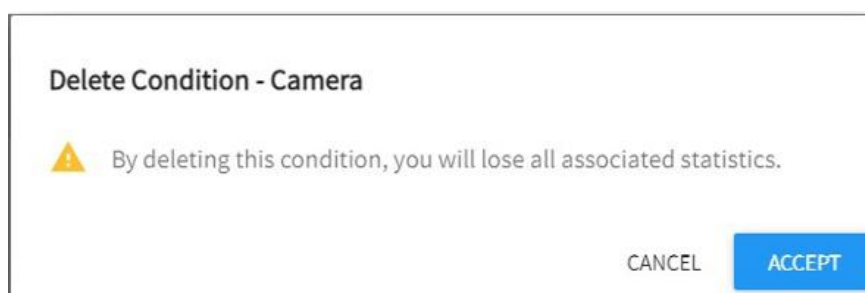
DEVICES	DEVICE GROUPS	EVALUATION CONDITIONS	STATISTICS	USER FIELDS
Name ↑	Is Code Related Condition	Date Added	Last Modified	
Camera	no	28 Jun 2019, 00:57	28 Jun 2019, 09:20	...
CLV	yes	28 Jun 2019, 00:57	28 Jun 2019, 00:57	...
Info	yes	28 Jun 2019, 00:57	28 Jun 2019, 00:57	...
InfoBarcode	yes	28 Jun 2019, 00:57	28 Jun 2019, 00:57	...
IFT	no	28 Jun 2019, 00:57	28 Jun 2019, 00:57	...

Figure 12: Evaluation Condition list

1. Click vertical ellipsis icon for the Evaluation condition you want to delete and then select **Delete**.



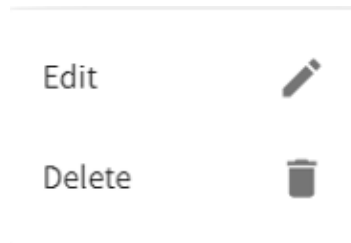
2. Click **ACCEPT** button to confirm the deletion.



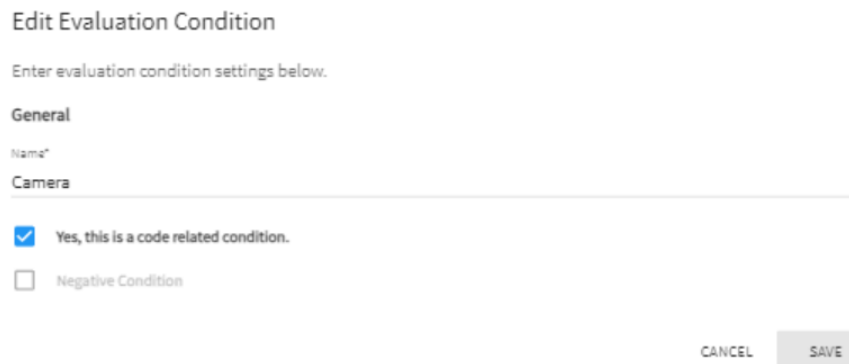
4.5.2 Edit Evaluation Conditions

To edit an existing Evaluation Condition:

1. Click vertical ellipsis icon for the Evaluation condition you want to edit and then select Edit.



2. The Edit Evaluation Condition dialog opens.



3. You cannot edit an Evaluation Condition name; however, you can change the Evaluation Condition code related label. Check (or uncheck) the selection **Yes, this is a code related condition** to indicate if a condition evaluates a package barcode.
4. Click **SAVE** to save changes and exit the dialog.

4.6 Add or Edit Devices

System devices are Intelligent Sensors that collect information about packages which are processed by the system. They include scanners and dimensioners mounted on the system. The sensors generate package related data which is combined into an XML output by each individual system's controller.

When you add devices to your system using the Facility Configuration app, you tell LA how to identify the device (device ID) and configure labels for the device so that you can easily view and monitor its performance on the LA dashboard.

4.6.1 Add Devices

To add system devices:

1. Open the system configuration page.
2. On the system configuration page, click the **DEVICES** heading.

All devices are displayed in the list. If you have not yet added devices for this system, the table will be empty.

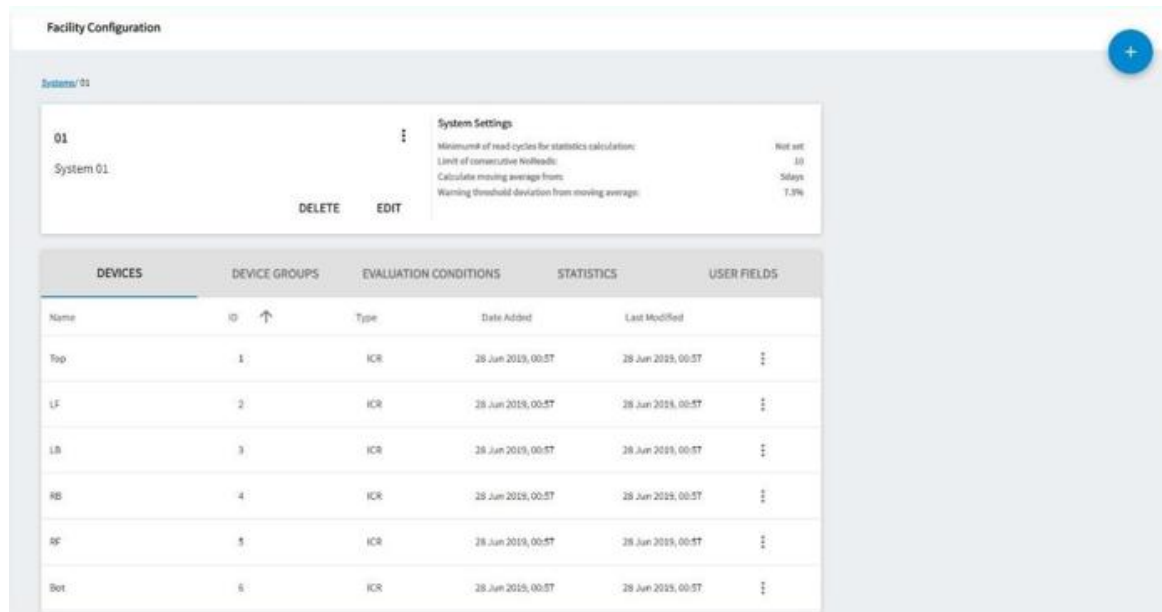


Figure 13: System Configuration / Devices

3. Click the Add icon .

The **Add New Device** wizard opens.

Add New Device

Enter device configurations

General

Device Name*

Select groups (optional)

Device Id*

NoRead Limit

Device Type*



Create Another

CANCEL

SAVE

Figure 14: Add New Device Wizard

4. In the Add New Device wizard under General:
- Type the **Device Name**. You can enter any name you like, but for clarity it is recommended that you use a name that clearly identifies the type of device that is monitored. **Device Name should be unique.**

- The Select groups (optional) dropdown list is not required. If you have not yet added device groups, this list will be blank, and you can skip this field. You can configure device groups and add devices later.
- In the Device ID field, type the device's numerical CAN ID as it is set on the system. The same CAN ID cannot be used by multiple devices.
- In the NoRead Limit field, type a threshold value for no read events. The device will indicate as faulted in LA if this limit is exceeded during operation and the application will generate a performance event indicating there is an issue with the device.
- In the Device Type field, select the type of device you are adding.

Consider adding only devices for which you are interested in generating statistics and performing analysis. Dimensioners and controllers do not need to be defined for LA software to work.

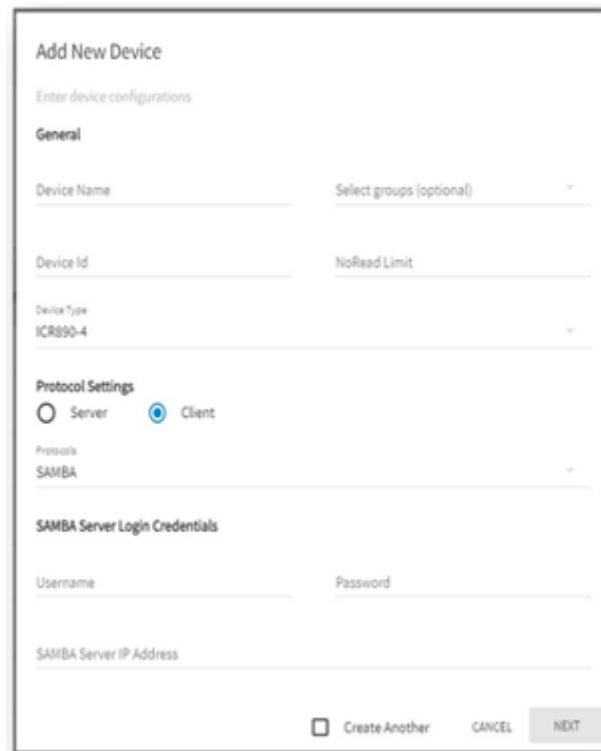
- If Media Server device type (which includes IPCam - 2 Text Files, LECTOR, IPCam, ICR, ICR890-4, IPCam – UDS, SEC 100) is selected, you will be shown additional fields for Protocol Settings and Login credentials to add FTP Username and FTP Password.

Figure 15: Connection Settings

Note: The Device Types field list types of devices which LA can receive data from. This list is fixed and is determined by SICK. Because this list is universal, it may include devices which are not installed at your facility. If your system includes devices that are not included on this list, contact SICK Technical Support.

- If Media Server device type ICR890-4 is selected, then the option to select Client under Protocol Settings will be enabled and user can select SAMBA protocol and provide SAMBA server login credentials.

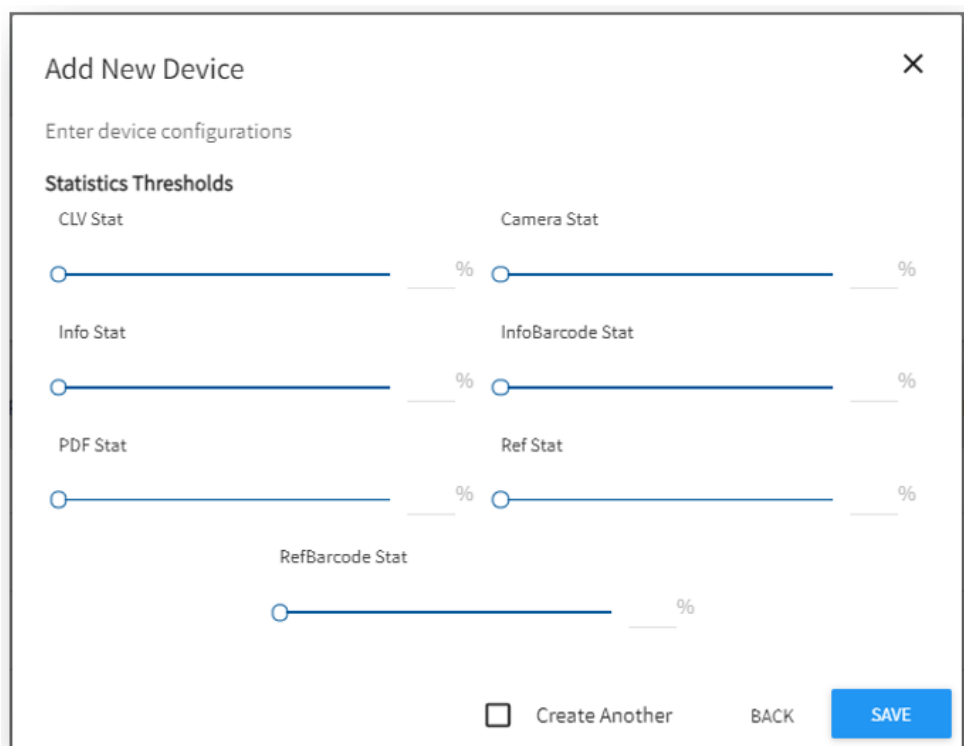
- Click NEXT.



The 'Add New Device' window shows the 'General' tab for configuring a device. It includes fields for 'Device Name', 'Device Id', 'Device Type' (set to ICR890-4), 'Select groups (optional)', 'NoRead Limit', 'Protocol Settings' (with 'Client' selected), 'Protocol' (set to SAMBA), 'Samba Server Login Credentials' (Username, Password), and 'Samba Server IP Address'. At the bottom, there are checkboxes for 'Create Another', 'CANCEL', and 'NEXT'.

Figure 16: ICR890-4 Client Settings

Enter the Statistics thresholds and then click **SAVE** to save changes and exit the wizard.



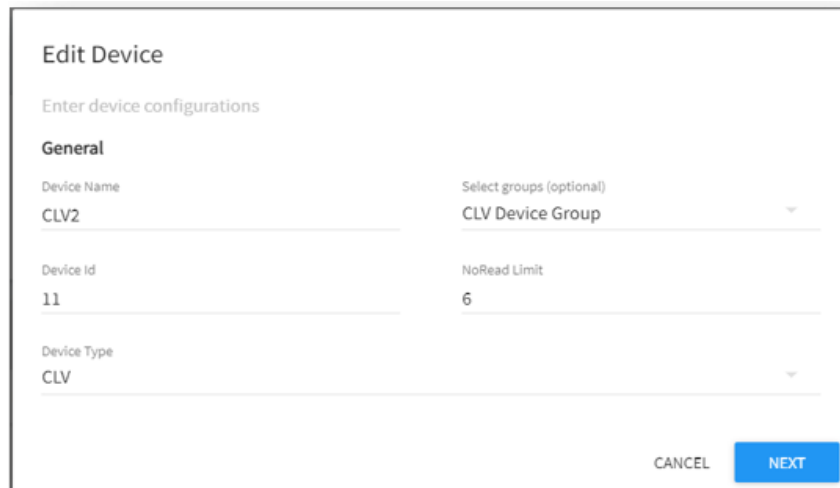
The 'Add New Device' window shows the 'Statistics Thresholds' tab. It features seven sliders for setting percentages: 'CLV Stat', 'Camera Stat', 'Info Stat', 'InfoBarcode Stat', 'PDF Stat', 'Ref Stat', and 'RefBarcode Stat'. Each slider has a blue handle and a percentage label. At the bottom, there are checkboxes for 'Create Another', 'BACK', and a blue 'SAVE' button.

Figure 17: Statistics Thresholds

4.6.2 Edit an Existing Device

To edit an existing device:

1. Click vertical ellipsis icon for the device you wish to edit and then select Edit.
The Edit Device wizard opens.



The screenshot shows the 'Edit Device' wizard interface. At the top, it says 'Edit Device' followed by 'Enter device configurations'. Below this, there is a 'General' section. It contains four input fields: 'Device Name' with the value 'CLV2', 'Select groups (optional)' with a dropdown menu showing 'CLV Device Group', 'Device Id' with the value '11', and 'NoRead Limit' with the value '6'. There is also a 'Device Type' dropdown menu showing 'CLV'. At the bottom right, there are two buttons: 'CANCEL' and 'NEXT'.

Figure 18: Edit Device Wizard

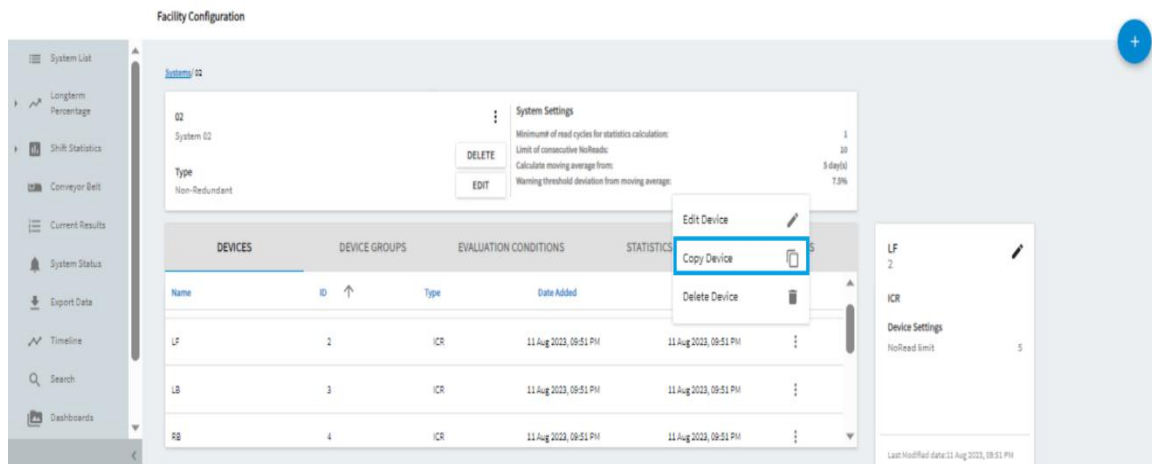
2. Make the required changes for the device, click **NEXT** to complete the process, and then click **SAVE** to save changes and exit the wizard.

To exit the wizard without saving changes, click CANCEL.

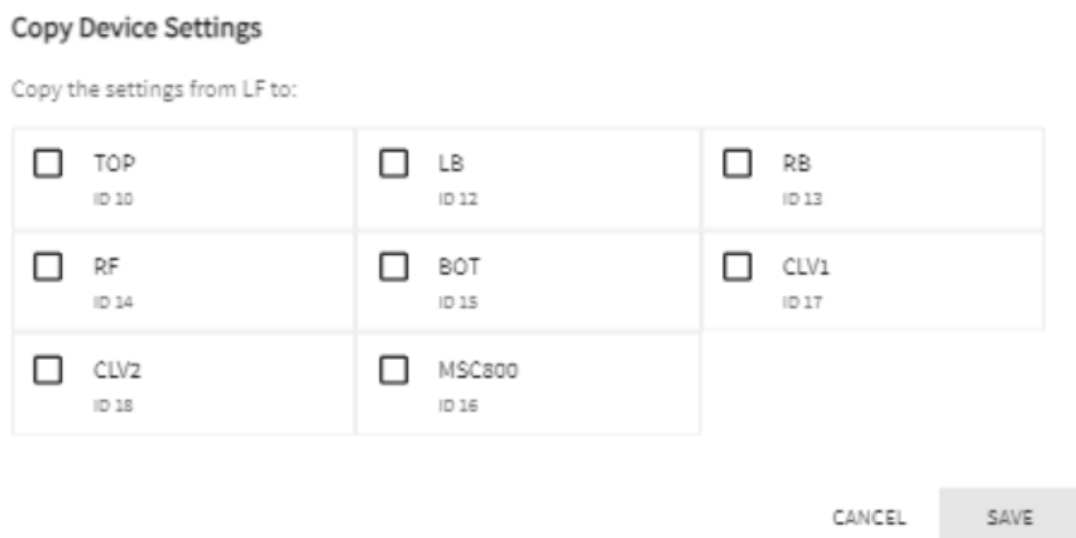
4.6.3 Copy an Existing Device

To copy Devices:

1. On the **Facility Configuration** page, click on the System name of the system to which you want to copy the device.
2. It will take you to the System View page.
3. Navigate to **DEVICES** tab.
4. Click on the 3 dots icon  in front of the Device from which you want to copy the device settings to an existing device.
5. Application will display three options: 'Edit Device', 'Copy Device' and 'Delete Device'

**Figure 19: Copy Device Option**

- Click on 'Copy Device' option. The Copy Device Settings dialog opens.

**Figure 20: Copy Device Settings Dialog**

- In the Copy Device Settings dialog:
 - Select the device/device(s) to which you want the settings to be copied.

Copy Device Settings

Copy the settings from LF to:

☒ TOP ID 10	☐ LB ID 12	☐ RB ID 13
☐ RF ID 14	☐ BOT ID 15	☐ CLV1 ID 17
☐ CLV2 ID 18	☐ MSC800 ID 16	

CANCEL **SAVE**

Figure 21: Copy Device Settings-Device Selected

- Once you select the device, the SAVE button will be enabled.
- Clicking on CANCEL button will close the dialog. Clicking on SAVE button will display a Warning Dialog for Overwrite Settings.

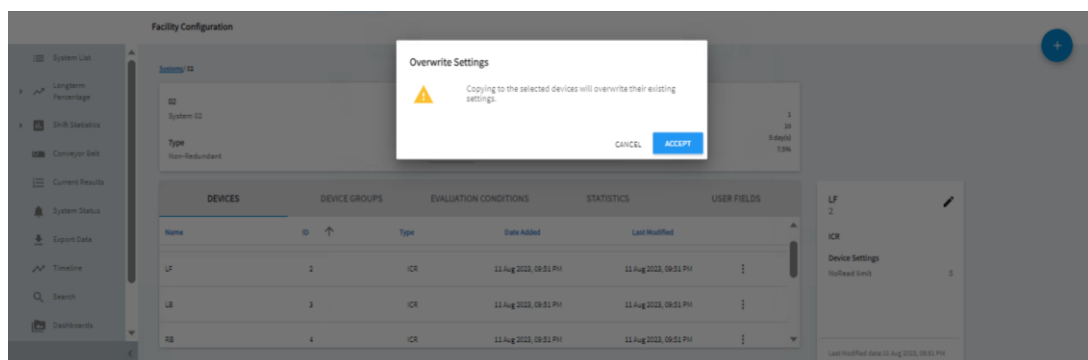


Figure 22: Overwrite Settings

- Clicking on CANCEL will close the dialog. Clicking on ACCEPT will copy the settings to the selected Device and will display a success snack bar message.

Device is copied successfully. UNDO

- Once the components are successfully copied, you will be taken back to Facility Configuration screen.
- You can view the updated/modified device.

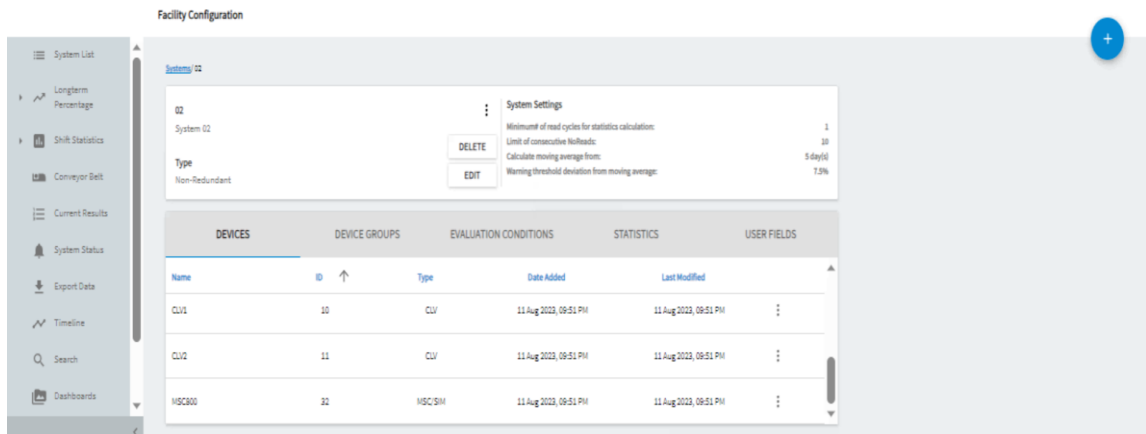


Figure 23: Device Copied

- If due to any reason, the **Copy Device** operation fails, application will display a proper snack bar message.

4.6.4 Delete an Existing Device

To delete an existing device from a system:

1. Click  icon for the device you wish to delete, then select **Delete**.
2. Click **YES** to confirm the deletion.

4.7 Add or Edit Device Groups

Device groups allow you to logically relate member devices, so that Logistics Analytics (LA) can report on them as a group. You can group any devices on a system, however typical groups include like members, for example all CLVs, or all barcode readers.

Note: You must add devices before configuring device groups.

4.7.1 Add a Device Group

To add a new device group:

1. Open the system configuration page.
2. On the system configuration page, click the **DEVICE GROUPS** heading.

All device groups are displayed in the list. If you have not yet added device groups for this system, the table will be empty.

3. Click the Add icon  .

The **Add New Group** window opens.

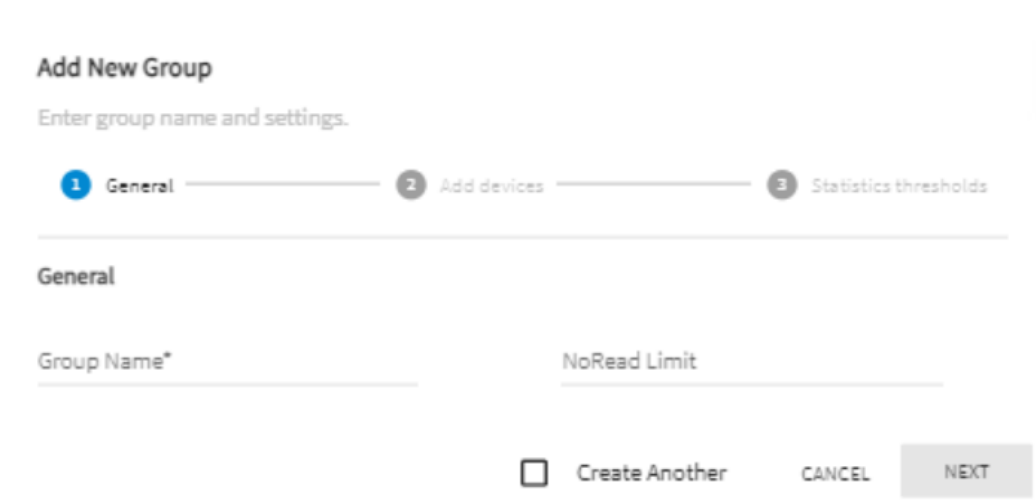


Figure 24: Add New Group Window

4. In the **Add New Group** window under **General**:
 - Type the **Group Name**. You can enter any name you like, but for clarity it is recommended that you use a name that clearly identifies the type of devices that will be added to this group.
 - In the **NoRead Limit** field, type a threshold value for no read packages. The device group will indicate as faulted in LA if this limit is exceeded during operation.
 - In the **Add New Devices** dialog check the devices to include in the group.
 - Click **NEXT**.
5. Enter the Statistics thresholds and then click **SAVE** to save your changes and exit the window.

4.7.2 Add or Remove Devices in an Existing Group

You can easily add or remove devices which are part of an existing group:

1. Click  icon for the group you want to add device to, then select Add Devices.
2. Under the Add Devices heading, check or uncheck devices to add or remove them.
3. Click SAVE to exit the dialog and save your changes.

4.7.3 Delete a Device Group

To delete an existing device group:

1. Click  icon for the group you want to delete, then select Delete.
2. Click YES to confirm the group deletion.

4.7.4 Edit a Device Group

You can edit a device group's no read limit, and modify included devices and statistics thresholds:

1. Click  for the group you want to edit, then select Edit. The Edit Group wizard opens.
2. Make the required changes for the device group, click NEXT to complete the wizard, and then click SAVE to save changes and exit the wizard.

OR

To exit the wizard without saving changes, click CANCEL.

Note: The group name cannot be modified once the group has been created and saved.

4.8 Add or Edit Statistics

In Logistics Analytics (LA) Statistics are read rates (% ratios) for specific Evaluation Conditions. The STATISTICS configuration page allows you to define statistics and associate them with the Evaluation Condition which you want to monitor.

Note: Understanding Evaluation Conditions and Statistics: To contrast Evaluation Conditions and Statistics, think of Evaluation Conditions as a binary value. LA Evaluation Conditions return either true or false indicating if a condition is met. For example, the Evaluation Condition ValidRead, may report if a package has a valid barcode (true), or not (false). Statistics, on the other hand, are a count or a ratio. For example, the Statistic Valid Read counts the Evaluation Condition ValidRead, and returns a value indicating how many packages have a valid barcode.

Note: Because Statistics are linked to Evaluation Conditions, you should add your system's Evaluation Conditions prior to adding Statistics.

4.8.1 Add Statistics

To add Statistics:

1. On the Facility Configuration Systems screen, click the system name for the data acquisition system which you would like to define Statistics. The system configuration screen opens.
2. Select **STATISTICS**.

The screenshot shows the 'Facility Configuration' interface for 'System 02'. The 'STATISTICS' tab is selected, displaying a table of statistics. The table has columns for Name, Evaluation Condition, Expected Percentage, Date Added, and Last Modified. There are three rows of statistics listed.

DEVICES	DEVICE GROUPS	EVALUATION CONDITIONS	STATISTICS	USER FIELDS	
Name		Evaluation Condition	Expected Percentage	Date Added	Last Modified
Camera Stat	Non-Redundant	Camera	80.0%	11 Aug 2023, 09:51 PM	11 Aug 2023, 09:51 PM
CUV Stat	Non-Redundant	CUV	80.0%	11 Aug 2023, 09:51 PM	11 Aug 2023, 09:51 PM
Info Stat	Non-Redundant	Info	80.0%	11 Aug 2023, 09:51 PM	11 Aug 2023, 09:51 PM

Figure 25: Statistics Tab

3. Click the Add icon to add new statistics.

The Add New Statistic dialog opens.

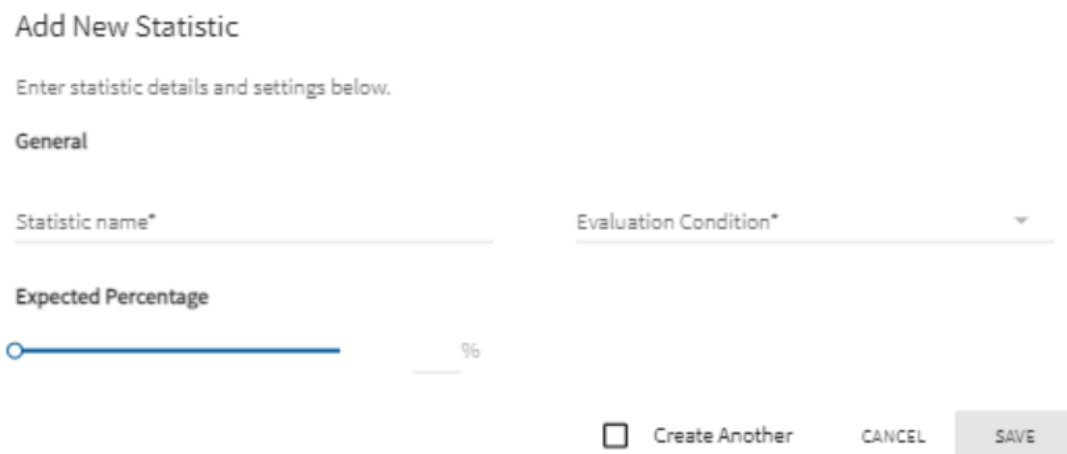


Figure 26: Add New Statistic Dialog

4. In the Add New Statistic dialog under General:
 - Type the Statistic name. You can enter any name you like, but for clarity it is recommended that you use a name that closely matches the name of the Evaluation Condition that is monitored.
 - In the Evaluation condition dropdown list, select the Evaluation Condition to monitor.
 - Adjust the Expected read rate slider to set the expected read rate percentage for the Statistic. For example, if the Statistic Valid Read is expected to be 98% of all packages processed by this system, enter the value 98.
5. Click **SAVE**.
6. Continue to add as many Statistics as you need for this system.

4.8.2 Edit or Delete an Existing Statistic

To edit or delete an existing Statistic from a system:

1. Click vertical ellipsis icon for the statistic you want to edit/delete, then select **Edit** or **Delete**.

4.9 Add, Edit and Delete User Fields

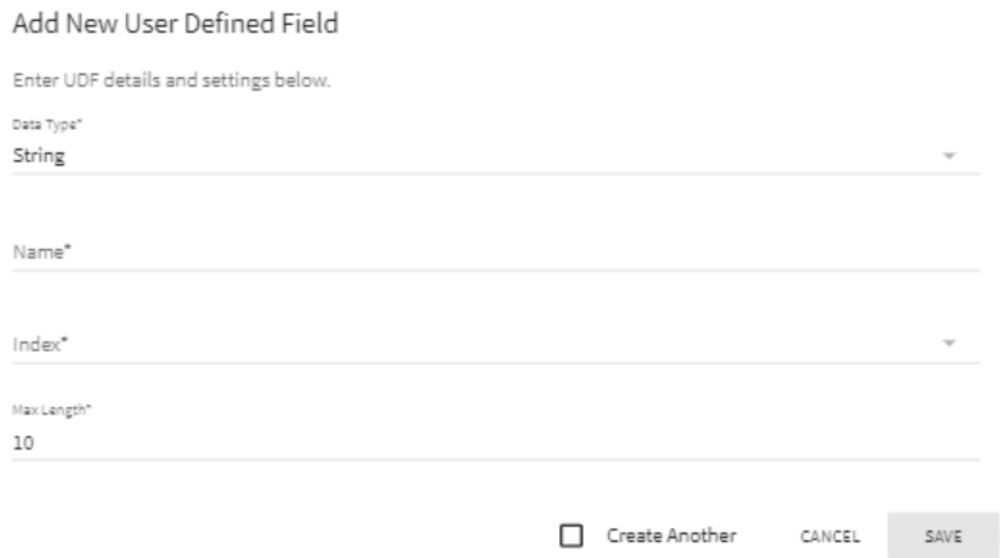
User Fields or UDF's are user defined fields. You can configure and add String, Integer and Float type fields to capture data as per your requirement.

Note:

By default, with **udf.preserve.configured.only** set to **false**, the system stores UDF data for all systems, even those without configured UDFs. To store UDF data only for systems with configured UDFs and improve performance by reducing database size, set this property to **true**. For more information, refer to the [Application Properties](#) section.

4.9.1 To Add a UDF

1. On the **Facility Configuration** page, click on the System name of the System you want to export.
2. It will take you to the System View page.
3. Navigate to **USER FIELDS** tab.
4. Click on + icon at the top right corner.
5. It will open up Add New User Defined Field dialog with fields Data Type, Name, Index and **Max-Length**.



The dialog box is titled "Add New User Defined Field". Below the title, it says "Enter UDF details and settings below." There are four input fields: "Data Type*" with a dropdown menu showing "String", "Name*", "Index*" with a dropdown menu, and "Max Length*" with the value "10". At the bottom right, there are three buttons: "Create Another" (disabled), "CANCEL", and "SAVE".

Figure 27: Add New UDF Dialog

6. The Data Type dropdown will have three options **String**, **Float** and **Integer**.

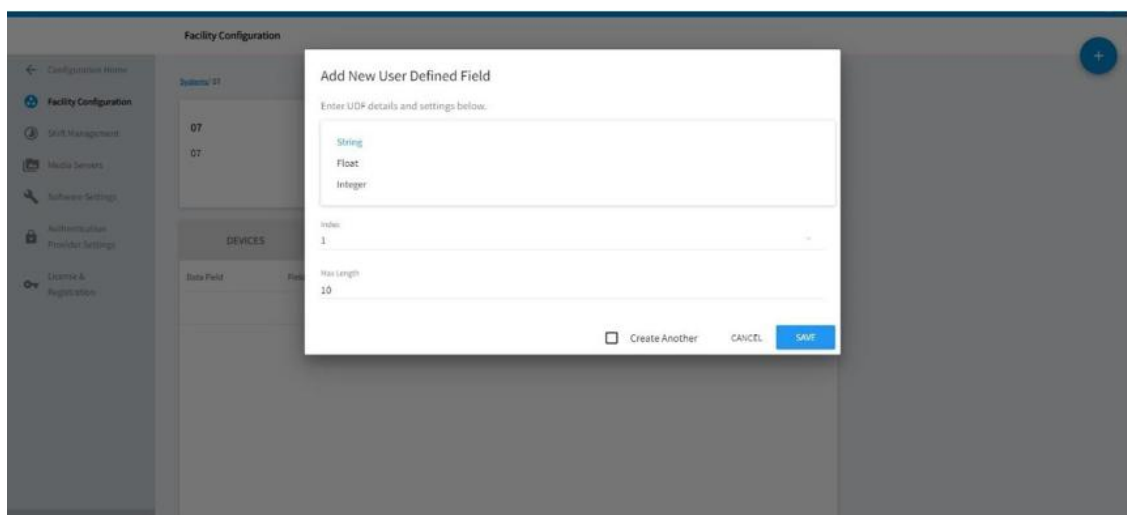


Figure 28: Data Type Options

7. For each Data Type there will be indexes from 1-10.
8. In the Add New User Defined Field dialog:
 - Select Data Type.

- You can select any of the three Data Types i.e., String, Integer or Float.
- Type a **Name**

The name must be unique. You cannot have more than one User field with the same name.

- Select **Index**.
- You can add up to 10 fields with index 1-10 for each data type.
- Enter **Max Length**.

You can provide the Max Length for the UDF.

- Enter **Precision** (Only for Float Type UDF). Provide the Precision (decimal point) value.
- Once you enter all the above fields, the **SAVE** button will be enabled.

Add New User Defined Field

Enter UDF details and settings below.



Figure 29: Save Enabled

- Clicking on CANCEL button will close the dialog. Clicking on SAVE button will save and create an UDF and will display a success snack bar message.

User Defined Field is added successfully.

UNDO

- If you selected **Create Another** checkbox while creating UDF, you will remain on the **Add New User Defined Field** screen else you will be navigated back to User Fields screen.

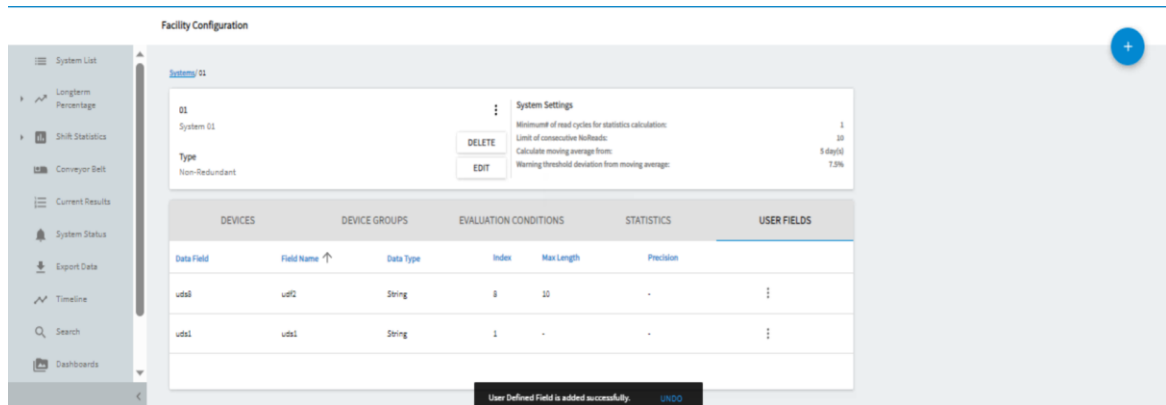


Figure 30: UDF Created

- The newly created UDF will be displayed under USER FIELDS.
- If due to any reason, the Add UDF operation fails, application will display a proper snack bar message

4.9.2 To Edit a UDF

1. On the **Facility Configuration** page, click on the System name of the System you want to export.

It will take you to the System View page.

2. Navigate to **USER FIELDS** tab.
3. Click on the 3 dots icon in front of the UDF you want to edit.
4. Application will display two options: Edit and Delete.
5. Click on Edit option.

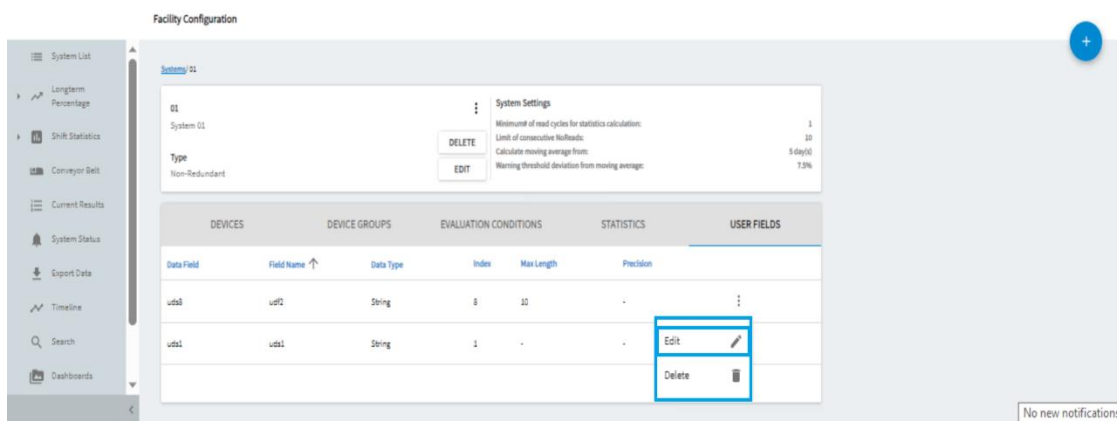
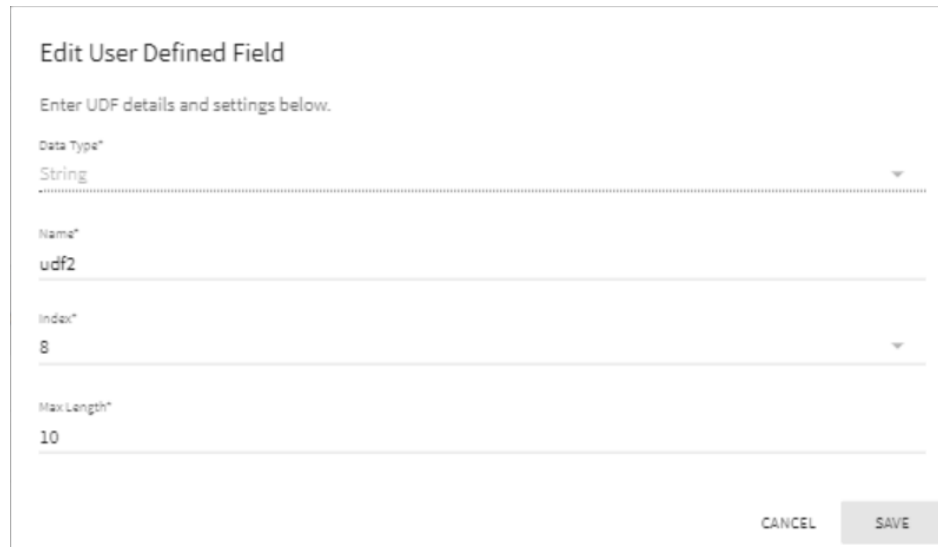


Figure 31: Edit Option

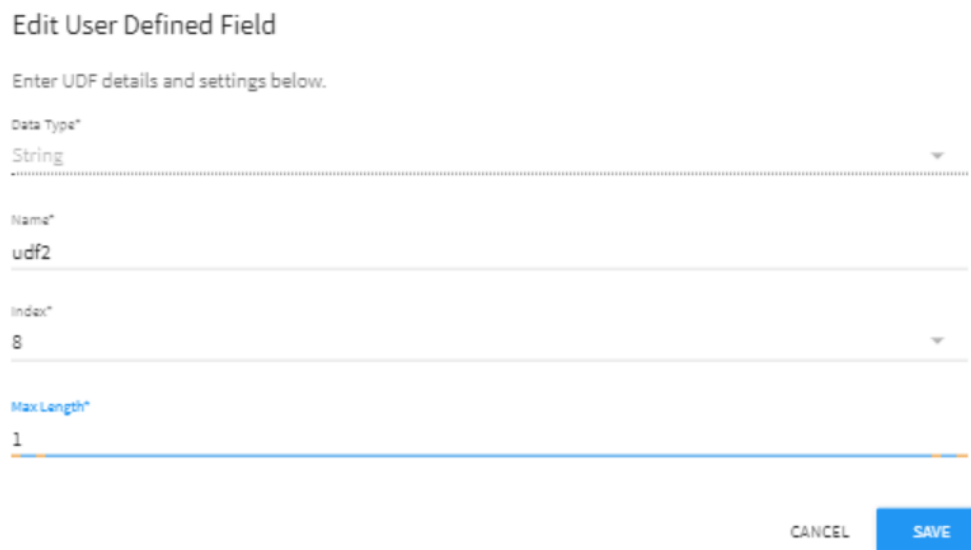
Edit User Defined Field dialog appears.



The dialog box is titled "Edit User Defined Field". Below the title is a subtitle "Enter UDF details and settings below.". There are four input fields: "Data Type*" with a dropdown menu showing "String", "Name*" with a text input containing "udf2", "Index*" with a dropdown menu showing "8", and "Max Length*" with a text input containing "10". At the bottom right, there are two buttons: "CANCEL" and "SAVE".

Figure 32: Edit UDF Dialog

6. Update the fields you want to edit.
7. Updating any of the field will enable the **SAVE** button.



The dialog box is titled "Edit User Defined Field". Below the title is a subtitle "Enter UDF details and settings below.". There are four input fields: "Data Type*" with a dropdown menu showing "String", "Name*" with a text input containing "udf2", "Index*" with a dropdown menu showing "8", and "Max Length*" with a text input containing "1". The "Max Length*" field has a blue border and a blue underline. At the bottom right, there are two buttons: "CANCEL" and "SAVE". The "SAVE" button is highlighted in blue.

Figure 33: Save Enabled

8. Clicking on **CANCEL** button will close the dialog. Clicking on **SAVE** button will update the UDF and will display a success snack bar message.

User Defined Field is edited successfully. [UNDO](#)

9. Once the changes are saved, you will be navigated back to User Fields screen.

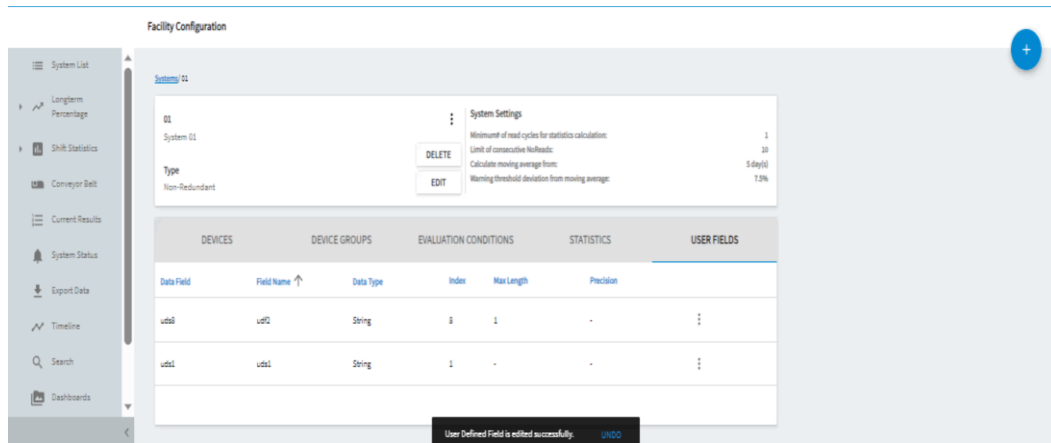


Figure 34: UDF Edited

10. If due to any reason, the **Edit UDF** operation fails, application will display a proper snack bar message.

4.9.3 To Delete a UDF

1. On the **Facility Configuration** page, click on the System name of the System for which you want to edit the UDF.
2. It will take you to the System View page.
3. Navigate to **USER FIELDS** tab.
4. Click on the 3 dots icon  in front of the UDF you want to delete.
5. Application will display two options: **Edit** and **Delete**.
6. Click on **Delete** option.

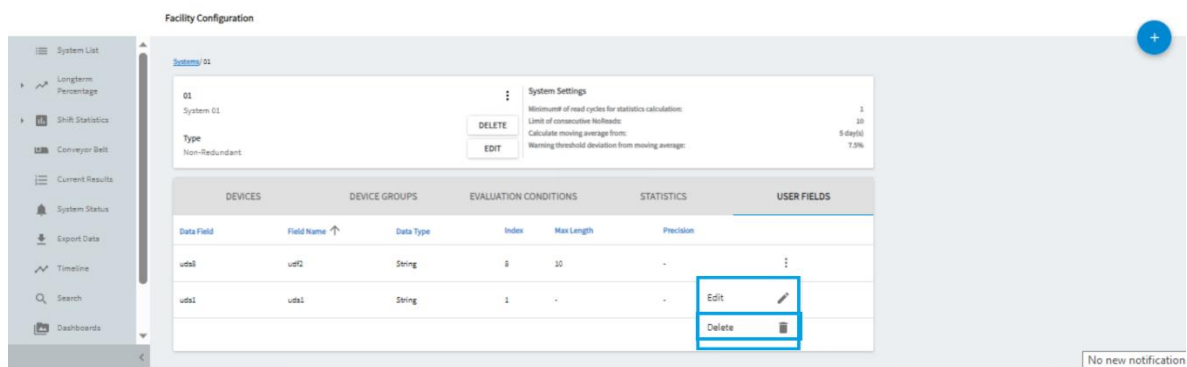


Figure 35: Delete Option

7. **Remove User Defined Field** confirmation pop-up will be displayed.

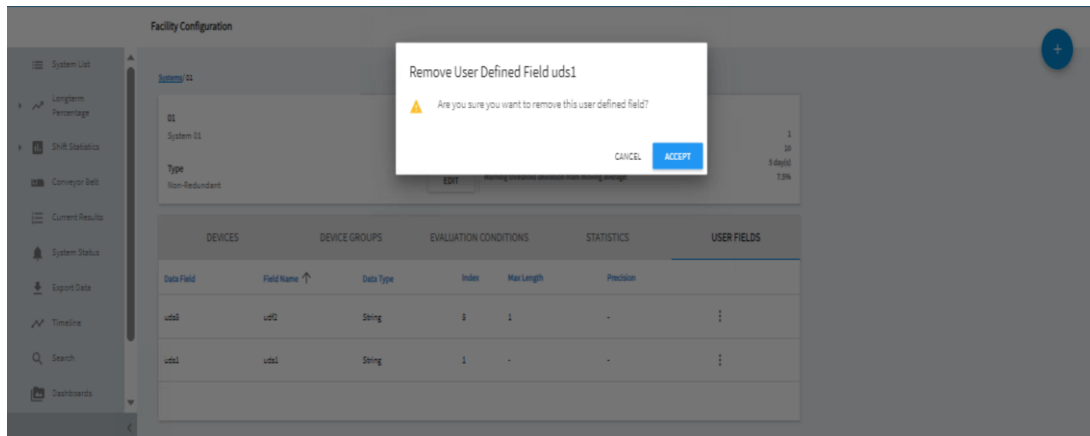


Figure 36: Confirmation Dialog

8. Clicking on **CANCEL** button will close the dialog. Clicking on **ACCEPT** button will delete the UDF and will display a success snack bar message.

User Defined Field is deleted successfully. **UNDO**

9. Once the UDF is deleted, you will be navigated back to User Fields screen.
 10. If due to any reason, the **Delete UDF** operation fails, application will display a proper snack bar message

4.10 Import System

To import a system:

1. On the **Facility Configuration** page, click on the System name of the System to which you want to import the components.

It will take you to the **System View** page.

2. Click on the 3 dots icon in front of the System name.
3. Application will display three options: **'Import System'**, **'Export System'** and **'Copy Settings from'**

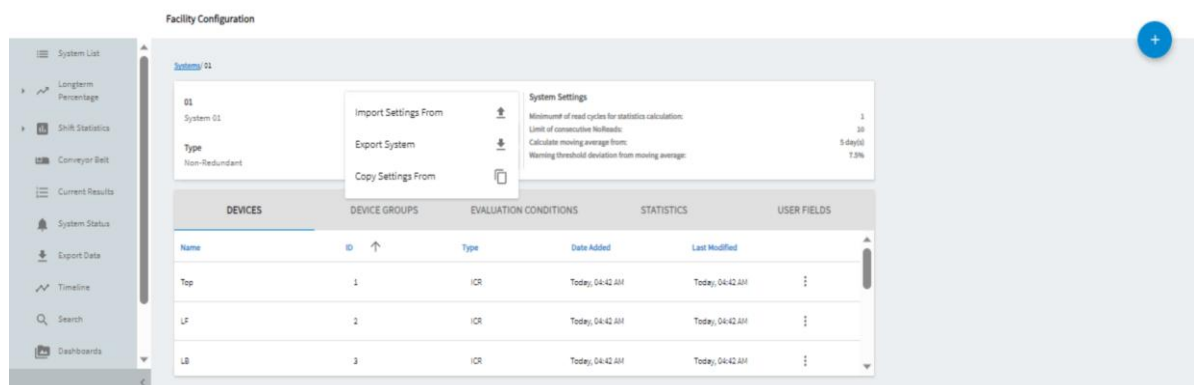


Figure 37: Import System Option

4. Click on 'Import System' option. The **Import System** dialog opens with a **BROWSE**, **CANCEL** and **IMPORT** button.

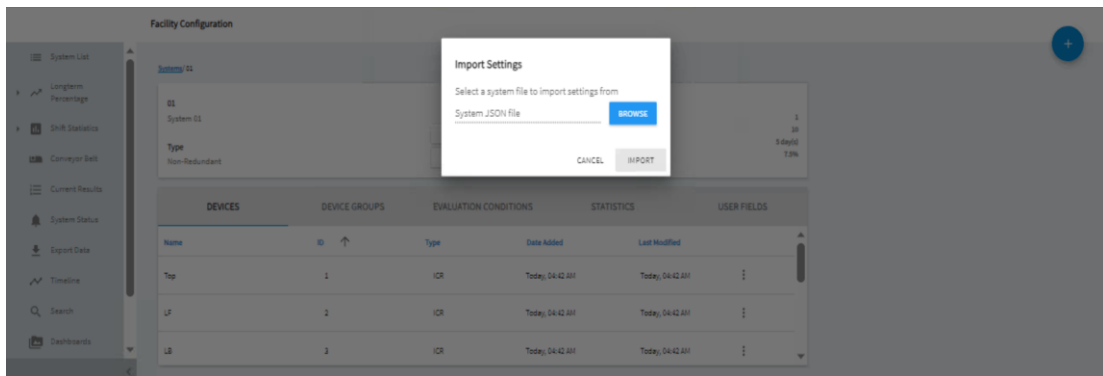


Figure 38: Import System Dialog

5. In the **Import System** dialog:

- Browse a valid System json file.
- On browsing and selecting the System JSON file, options for settings to import will be displayed.

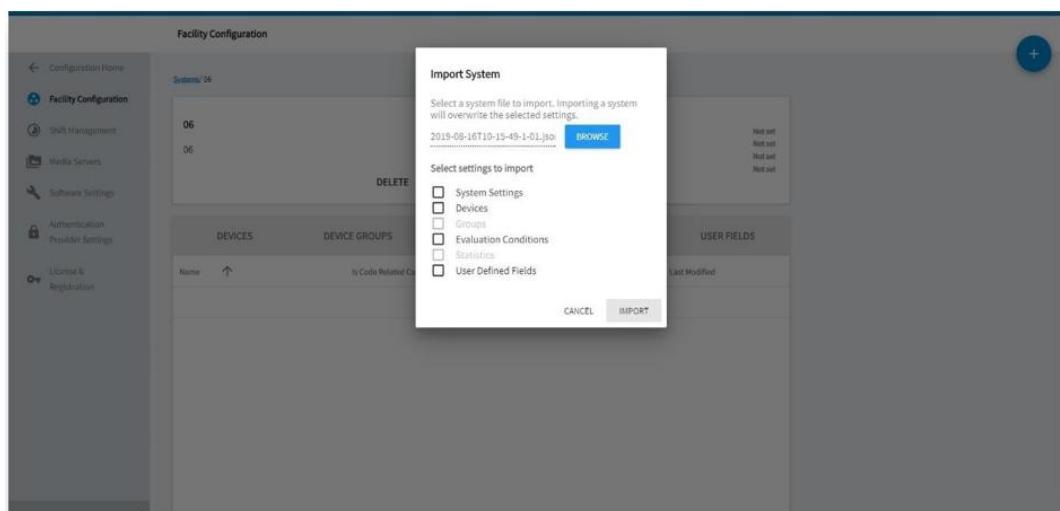


Figure 39: Select JSON File

The **Groups** i.e., the Device Group option will be enabled only when **Devices** option is selected. Similarly, the **Statistics** option will be enabled only when **Evaluation Condition** Option is enabled.

Once you select the settings to be imported, the **IMPORT** button will be enabled.

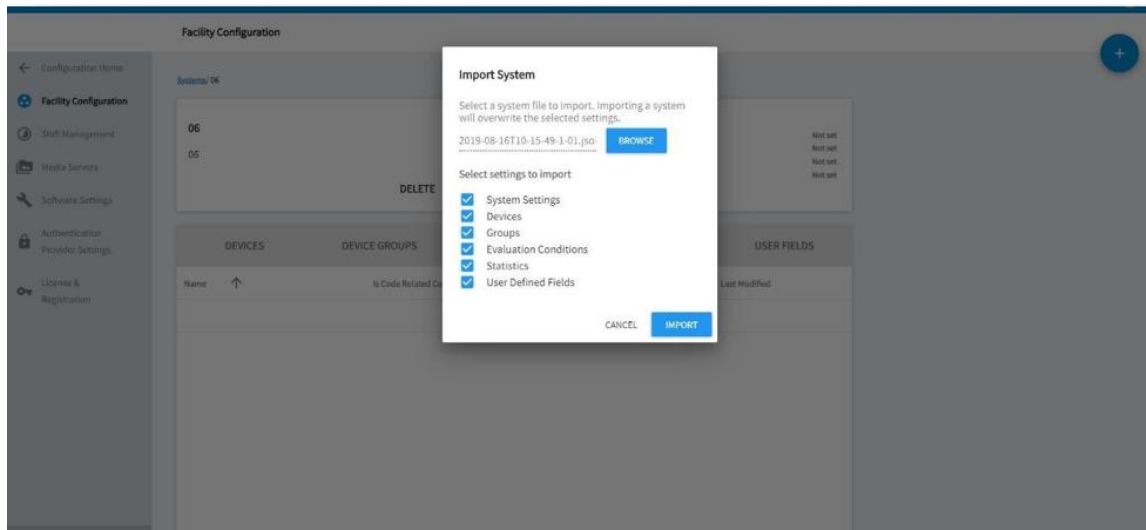


Figure 40: Import Button enabled

- Clicking on CANCEL button will close the dialog. Clicking on IMPORT button will import and overwrite the selected settings and a success snack bar message will be displayed.

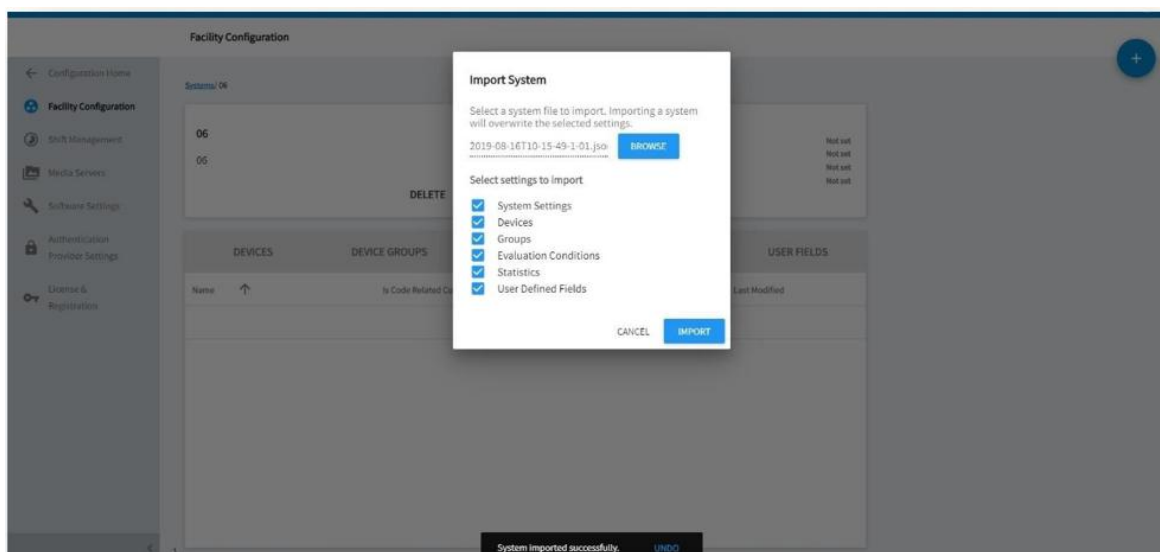


Figure 41: Imported Successfully

- Once the settings are imported successfully you will be navigated back to System View page and the updated settings/components will be displayed.

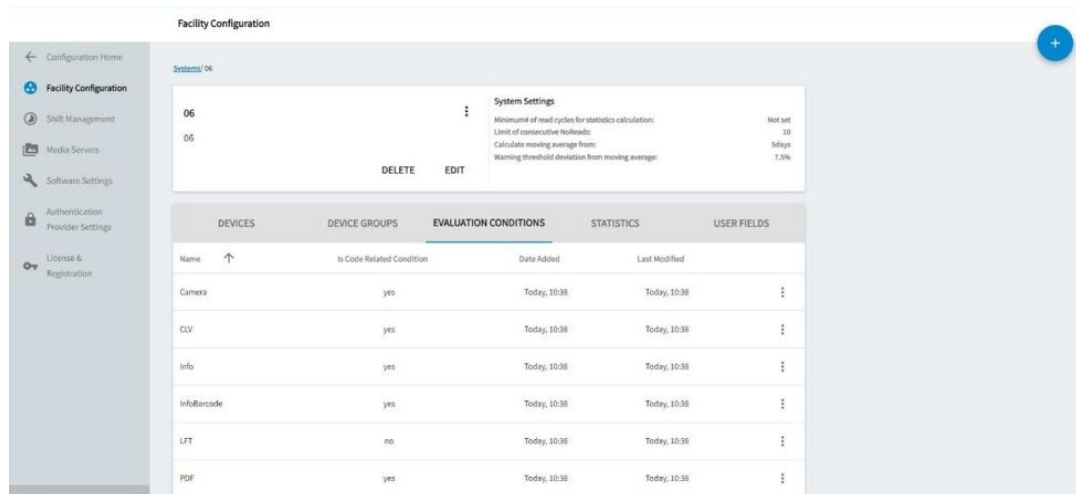


Figure 42: Settings updated after importing

- If due to any reason, the Import System operation fails, application will display a proper snack bar message

4.11 Export System

To export a system:

1. On the **Facility Configuration** page, click on the **EXPORT** button.
2. Select the systems to export and click the **Export** button
3. It downloads the system json file to default download folder OR
4. Click on the System name of the System you want to export.
5. It will take you to the System View page.
6. Click on the 3 dots icon in front of the System name.

Application will display three options: **Import System**, **Export System** and **Copy Settings from**

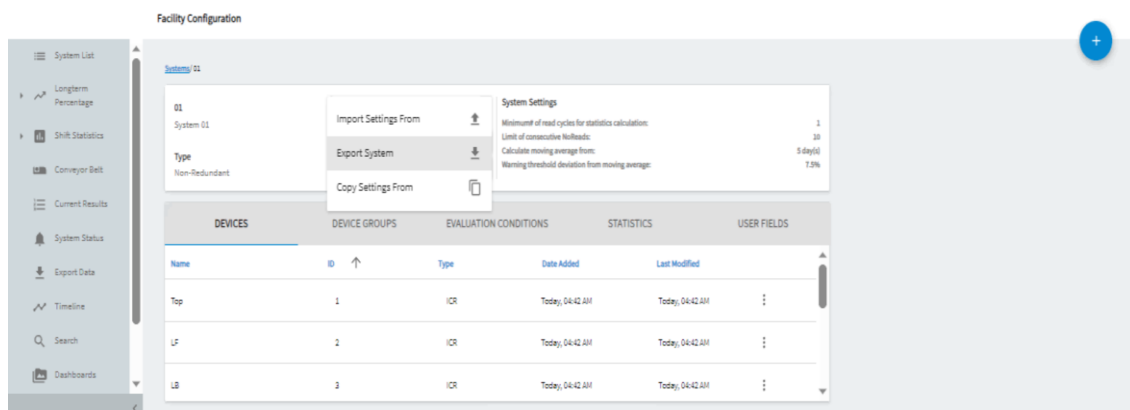


Figure 43: Export System Option

7. Click on **Export System** option.
8. The System JSON file will be exported to your default downloads folder.

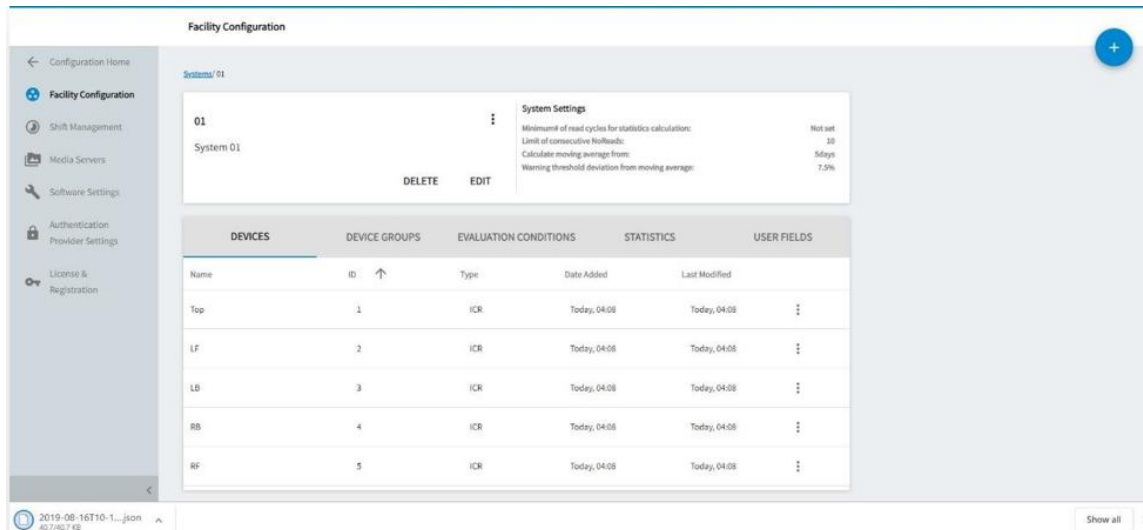


Figure 44: JSON File exported successfully

9. If due to any reason, the Import System operation fails, application will display a proper snack bar message

4.12 Copy Settings

To copy settings from another system:

1. On the Facility Configuration page, click on the System name of the System to which you want to Copy the settings.
2. It will take you to the System View page.
3. Click on the 3 dots icon in front of the System name.

Application will display three options: **‘Import System’**, **‘Export System’** and **‘Copy Settings from’**

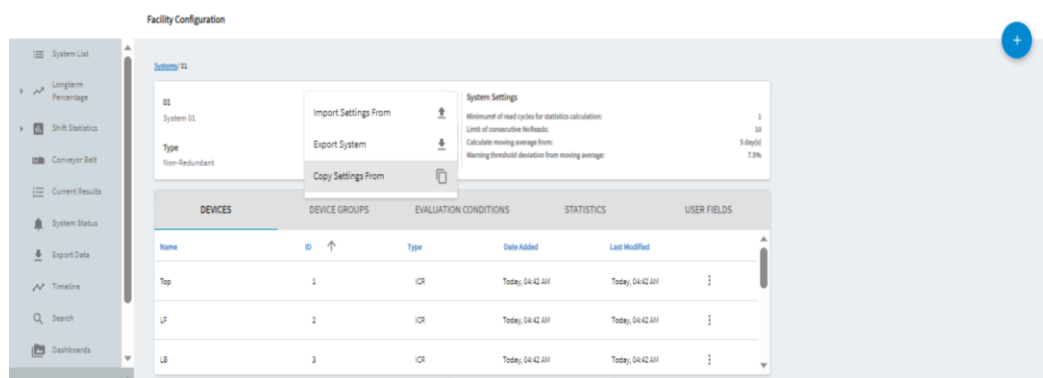


Figure 45: Copy Settings From Option

4. Click on **‘Copy Settings From’** option. The **Copy Device Settings** dialog opens.
5. In the Copy Device Settings dialog:
 - Select the Source system from Source System dropdown.

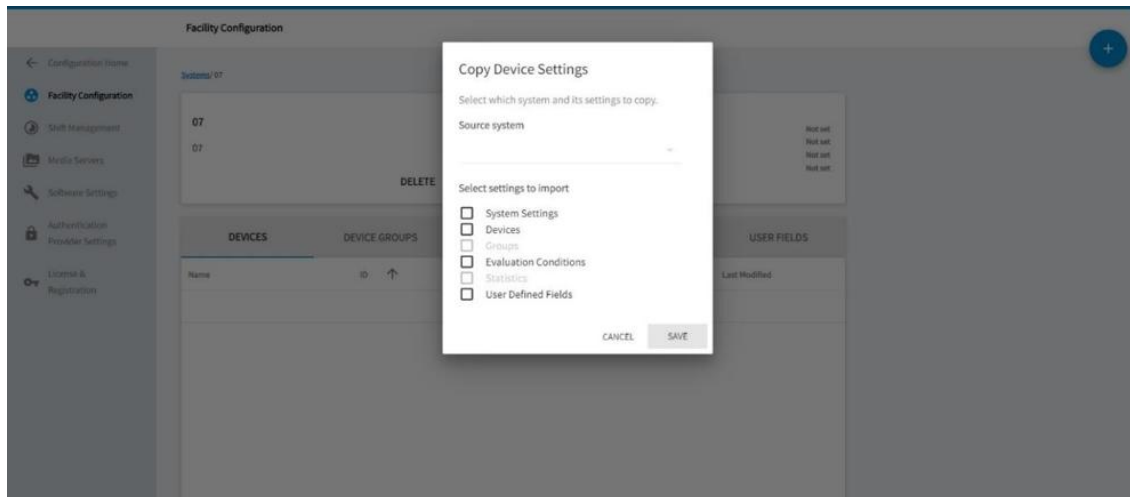


Figure 46: Copy Setting From System List

- Select the checkboxes for the components you wish to copy.

The **Groups** i.e., the Device Group option will be enabled only when **Devices** option is selected. Similarly, the **Statistics** option will be enabled only when **Evaluation Condition** Option is enabled.

- Once you select the components to be copied, the SAVE button will be enabled.

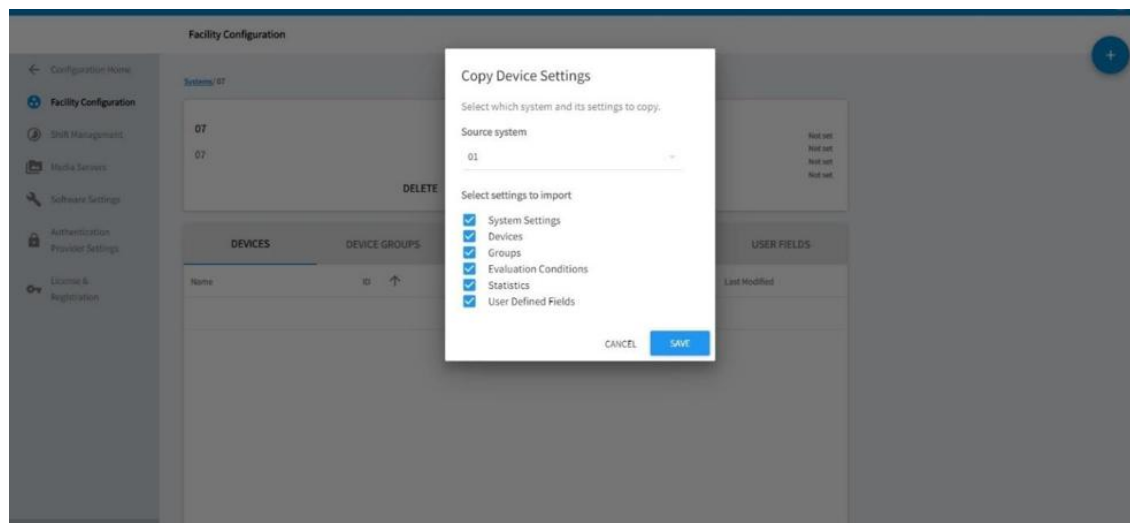


Figure 47: Copy Settings From Options selected

- Clicking on CANCEL button will close the dialog. Clicking on SAVE button will display a Warning Dialog for Overwrite Settings.

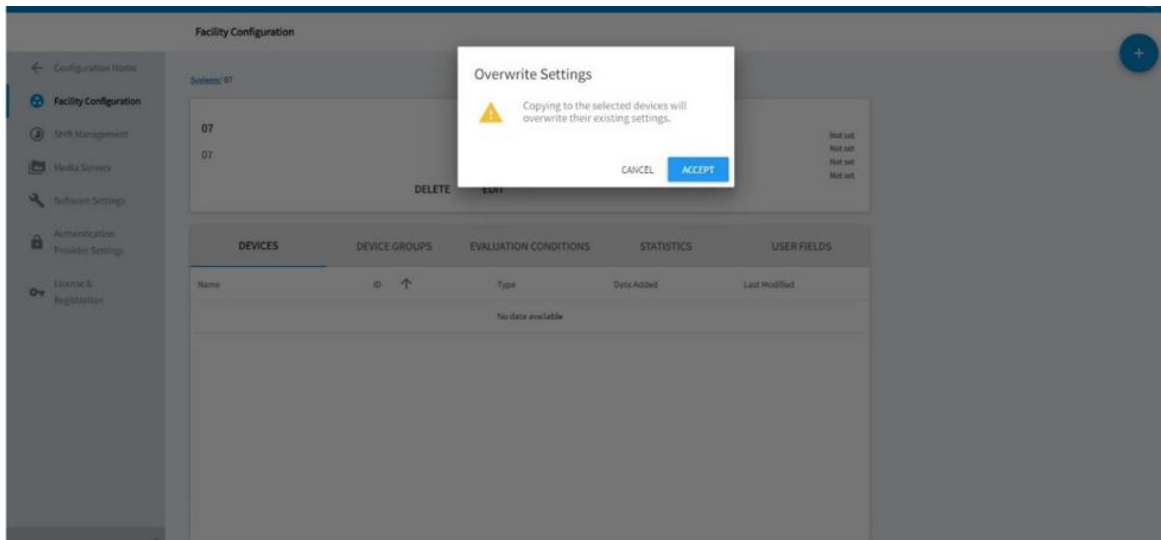
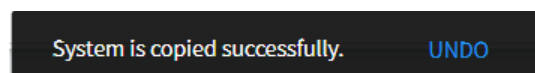


Figure 48: Overwrite Settings

- Clicking on CANCEL will close the dialog. Clicking on ACCEPT will copy the components to the selected System and will display a success snack bar message.



- Once the components are successfully copied, you will be taken back to Facility Configuration screen.
- You can view the updated/modified components.

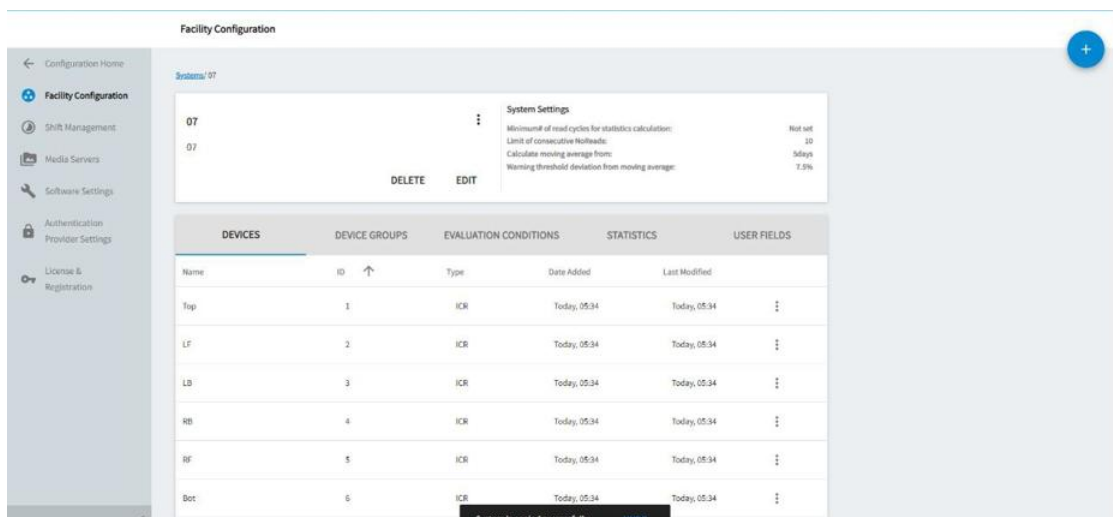


Figure 49: Settings Copied

- If due to any reason, the Copy Settings from operation fails, application will display a proper snack bar message

4.13 Edit System Parameters

4.13.1 View System Parameters

System settings include system definitions, such as the system's label and parameters.

The screenshot shows the 'Facility Configuration' page. On the left is a sidebar with navigation options: System List, Longterm Percentage, Shift Statistics, Conveyor Belt, Current Results, System Status, Export Data, Timeline, Search, and Dashboards. The main area has two tabs: 'SYSTEMS' and 'SYSTEM GROUPS'. The 'SYSTEMS' tab is active, displaying a table with columns: Name, Label, Type, Date Added, and Last Modified. The table lists five systems (01 to 05), all of type 'Non-Redundant'. An 'EXPORT' button is visible next to the table. On the right, there is a summary table for 'Setup Type', 'Setup(s) Allowed', and 'Setup(s) Configured'. Below this, a 'VIEW SYSTEM' dialog is open for 'System 01', showing settings: 'Min. # of read cycles' (1), 'Limit of consecutive NoReads' (10), 'Calculate moving average from:' (5 day(s)), and 'Warning threshold deviation:' (7.5%).

Setup Type	Setup(s) Allowed	Setup(s) Configured
Non-Redundant	100	5
Active-Active	50	0
Active-Passive	50	0

Name	Label	Type	Date Added	Last Modified
01	System 01	Non-Redundant	Today, 04:42 AM	Today, 04:42 AM
02	System 02	Non-Redundant	Today, 04:42 AM	Today, 04:42 AM
03	System 03	Non-Redundant	Today, 04:42 AM	Today, 04:42 AM
04	System 04	Non-Redundant	Today, 04:42 AM	Today, 04:42 AM
05	System 05	Non-Redundant	Today, 04:42 AM	Today, 04:42 AM

Setup Type	Setup(s) Allowed	Setup(s) Configured
Non-Redundant	100	5
Active-Active	50	0
Active-Passive	50	0

01 System 01

Settings

Min. # of read cycles: 1

Limit of consecutive NoReads: 10

Calculate moving average from: 5 day(s)

Warning threshold deviation: 7.5%

[VIEW SYSTEM](#)

Figure 50: System Settings on the Facility Configuration Page

From the **Facility Configuration** page, on the **Systems** list, click a system to view. The system settings are displayed on the right side of the page.

4.13.2 Edit System Parameters

To edit system parameters for an existing system:

1. From the Facility Configuration page, on the Systems list, click and then select Edit.

The **Edit System** dialog opens.

The 'Edit System' dialog is shown. It has a title 'Edit System' and a subtitle 'Define information and parameters below.' The dialog is divided into two main sections: 'General' and 'Define System Parameters'. In the 'General' section, there are two input fields: 'System Name*' with the value '01' and 'System Label' with the value 'System 01'. In the 'Define System Parameters' section, there are four input fields: 'Minimum # of read cycles' (1), 'Limit of consecutive NoReads' (10), 'Calculate moving average from (days)' (5), and 'Moving average deviation threshold (%)' (7.5). At the bottom right, there are 'CANCEL' and 'SAVE' buttons.

Edit System

Define information and parameters below.

General

System Name*
01

System Label
System 01

Define System Parameters

Minimum # of read cycles
1

Limit of consecutive NoReads
10

Calculate moving average from (days)
5

Moving average deviation threshold (%)
7.5

CANCEL SAVE

Figure 51: Edit System Dialog

2. In the Edit System dialog under General you can make the following changes:

Selection	Description
System Name	You can change the system name.
System Group	You can add/remove the system group.
System Label	The system label is a user-defined description to provide more context for the system name. You can use system labels to categorize groups of like systems, for example, "Primary Sort" or "Shipping".
Minimum # of read cycles	All system statistics will be calculated only after the number of packages in a day exceed this number. Your entry must be a numerical value between 1 – 1000. Setting the number of minimum read cycles ensures that LA statistics portray an accurate depiction of system status only after enough processing data has been captured to ensure a valid baseline.
Limit of consecutive NoReads	This limit applies to the system's Primary Statistic. If the Primary Statistic's condition does not occur for this number of times in a row, a system performance event will be generated and the system will show a warning state.
Calculate moving average from (days)	Type how many days of operation are used to calculate the system's moving average rate. The moving average rate is a succession of averages derived from the entered number of days. It helps smooth out fluctuations in the Primary Statistic read rate and is an indicator of the current trend. Between 1- 90 days are allowed for this field.
Moving average deviation threshold (%)	Type a permissible threshold percentage for this system's moving average. A value between 1-100 may be entered. Your entry can include up to one decimal point.

Table 4: Edit System

Note: To allow meaningful interpretation of system performance, consider using the same parameters for like groups of systems. For example, all "Primary Sort" camera tunnels should reference the same Minimum # of read cycles.

3. Click **Save**.

A message will confirm that the system was successfully edited, and you will be returned to the **Facility Configuration Systems** page.

4. To confirm the new system settings, click row in the table corresponding to the system you just modified, and check the system settings on the right side of the page.

4.14 Copy System

To copy a system:

1. On the **Facility Configuration** page, click on the 3 dots icon in front of the System from which you wish to copy the components.

Application will display four options: 'Edit', 'Copy', 'Clone' and 'Delete'

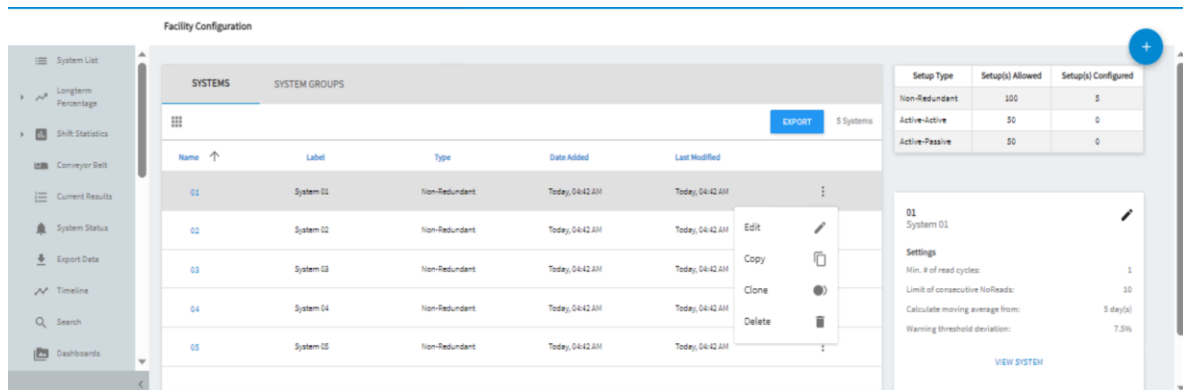


Figure 52: Copy Option

2. Click on 'Copy' option. The **Copy a system** dialog opens.

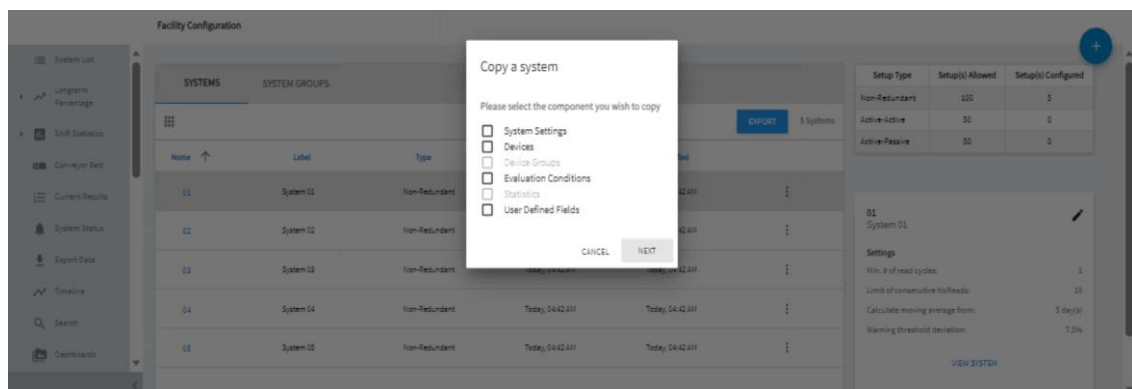


Figure 53: Copy a system Dialog

3. In the **Copy a system** dialog:

- Select the checkboxes for the components you wish to copy.

The **Groups** i.e., the Device Group option will be enabled only when **Devices** option is selected. Similarly, the **Statistics** option will be enabled only when **Evaluation Condition** Option is enabled.

- Once you select the components to be copied, the **NEXT** button will be enabled.

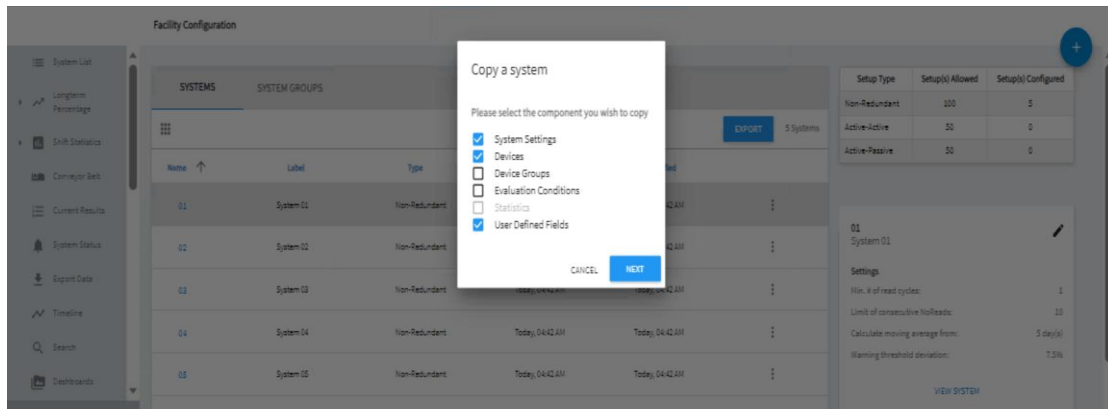


Figure 54: Copy a system - Options selected

- Clicking on **CANCEL** button will close the dialog. Clicking on **NEXT** button will take you to next screen where you can select the System to which you want to copy.

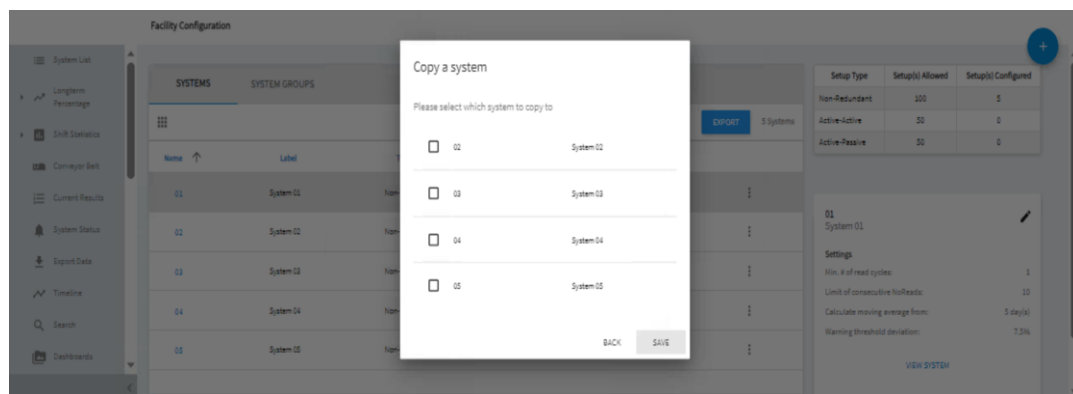


Figure 55: Select system

- Selecting the System will enable the **SAVE** button.

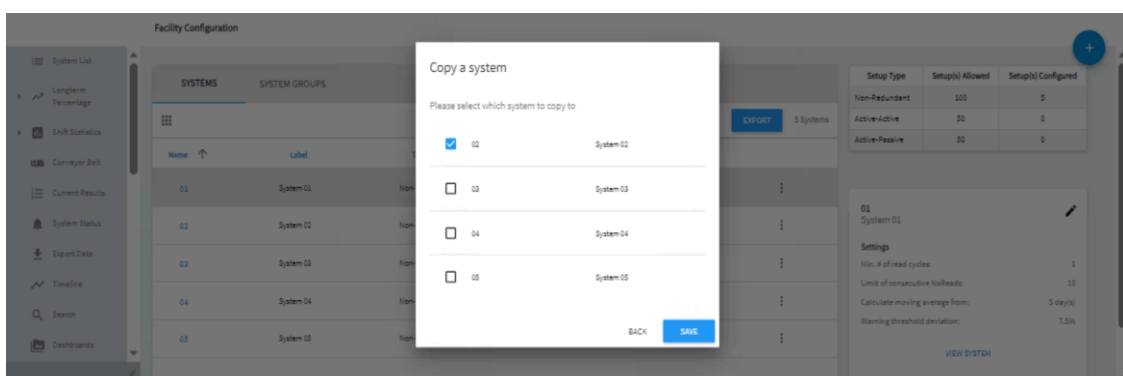


Figure 56: Save Enabled

- Clicking on **BACK** button will take you to the previous screen. Clicking on **SAVE** button will display a Warning Dialog for Overwrite Parameters.

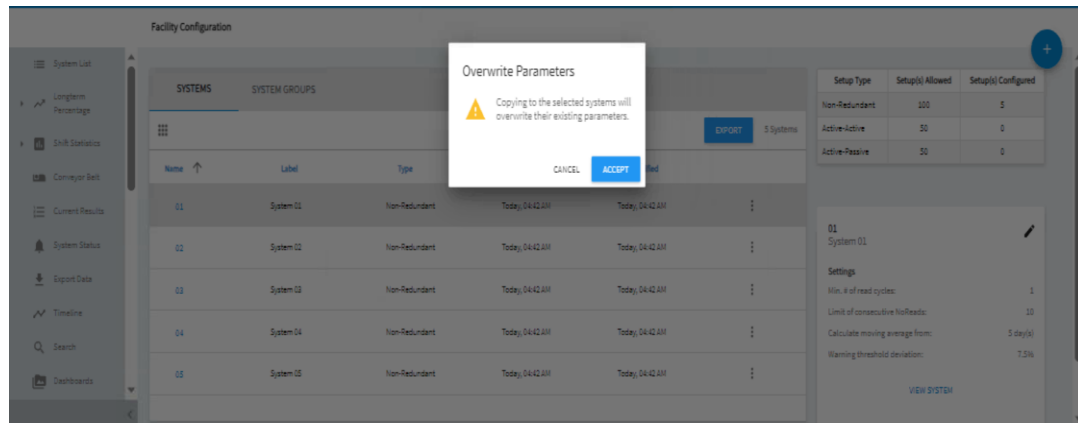


Figure 57: Overwrite parameters

- Clicking on **NO** will close the dialog. Clicking on **YES** will copy the components to the selected System and will display a success snack bar message.

System is copied successfully. UNDO

- Once the components are successfully copied, you will be taken back to Facility Configuration screen.
- The Date modified for the System to which the components were copied will get updated.

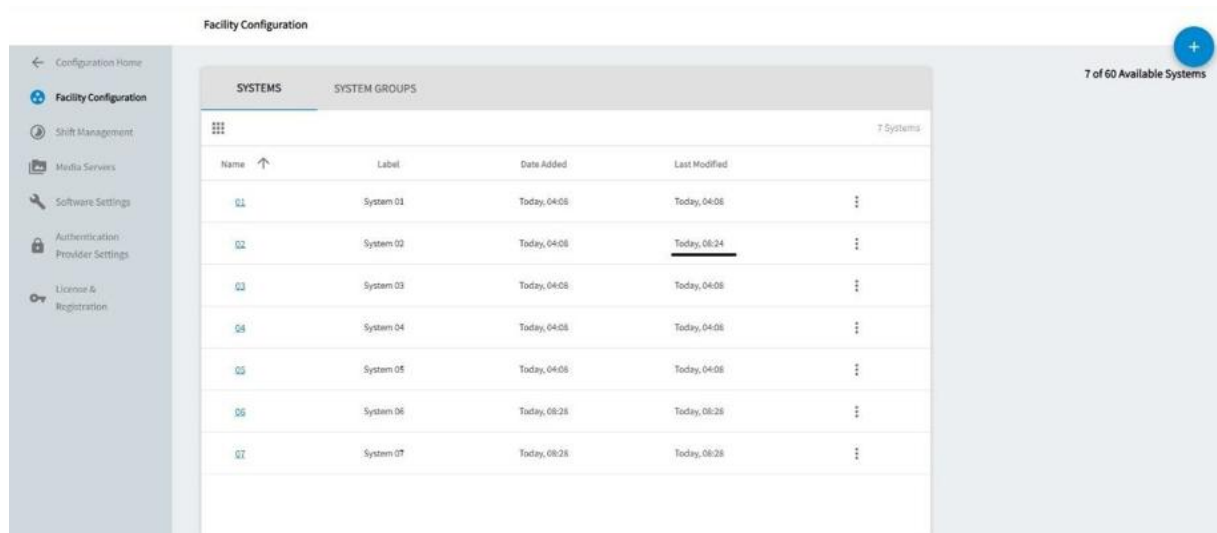


Figure 58: Last Modified

- The selected component will be copied/overwritten.
- If due to any reason, the Copy System operation fails, application will display a proper snack bar message

4.15 Clone System

To clone a system:

1. On the **Facility Configuration** page, click on the 3 dots icon in front of the System from which you wish to clone the system.

Application will display four options: 'Edit', 'Copy', 'Clone' and 'Delete'

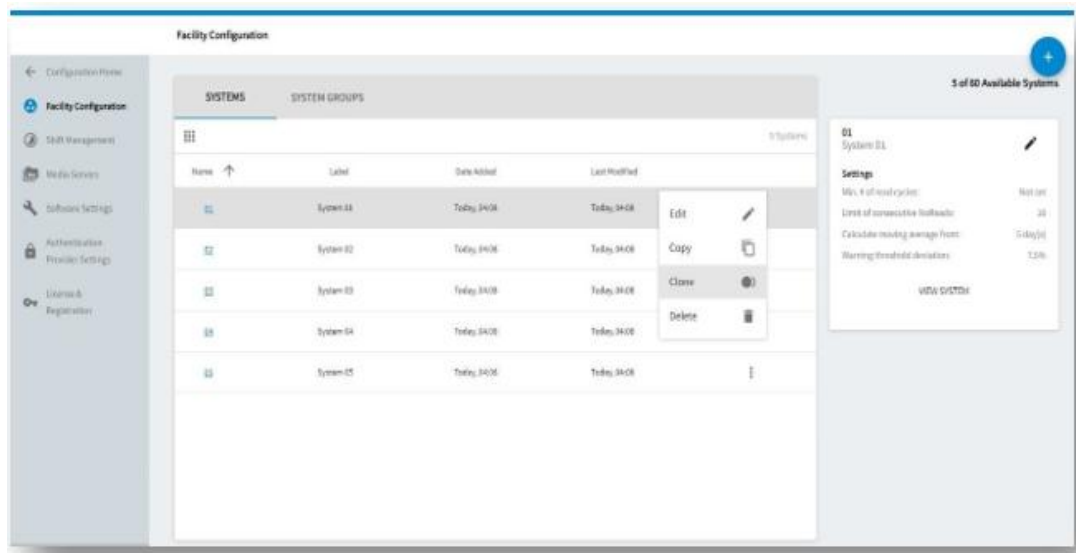


Figure 59: Clone Option

2. Click on 'Clone' option. The Clone System dialog opens.

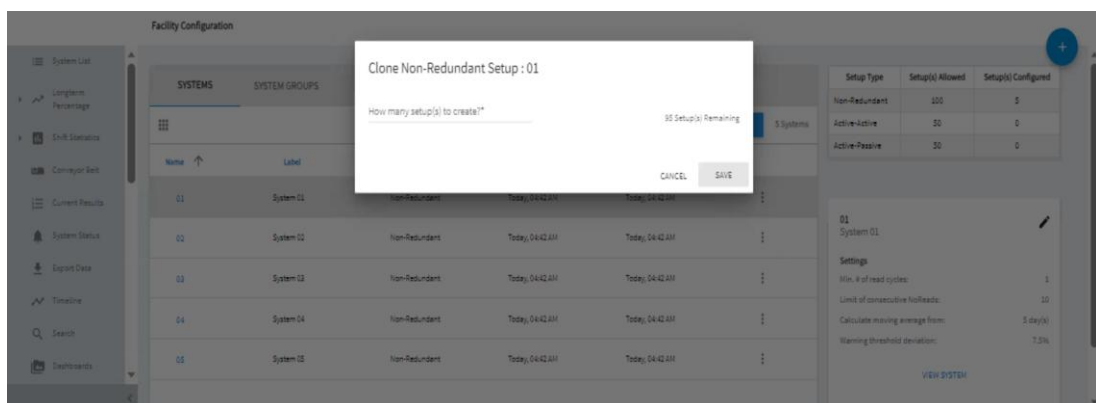


Figure 60: Clone System Dialog

3. In the **Clone System** dialog:
 - Enter the no. of Systems you wish to clone.
 - Once you enter the no. of Systems to be cloned, fields for **System name** and **System label** will be displayed based on the number entered.

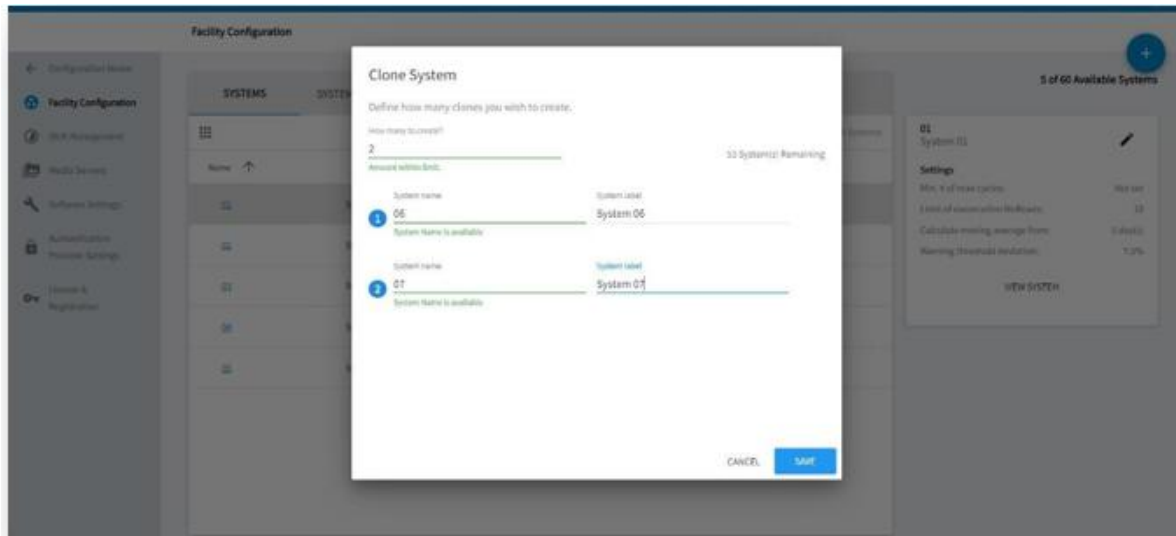


Figure 61: Clone System-System Name field

- At the top right corner of the dialog shows the no. of remaining systems

Application will display an error message if you enter the no. of systems to be cloned greater than the remaining.
53 System(s) Remaining



Figure 62: Exceeds limit error

- Enter no. of Systems to be cloned within limit.
- Enter the System name and System label.
- On entering System name and System label, SAVE button will get enabled.
- Clicking on **CANCEL** button will close the dialog. Clicking on **SAVE** button will clone the System and will display a success message.

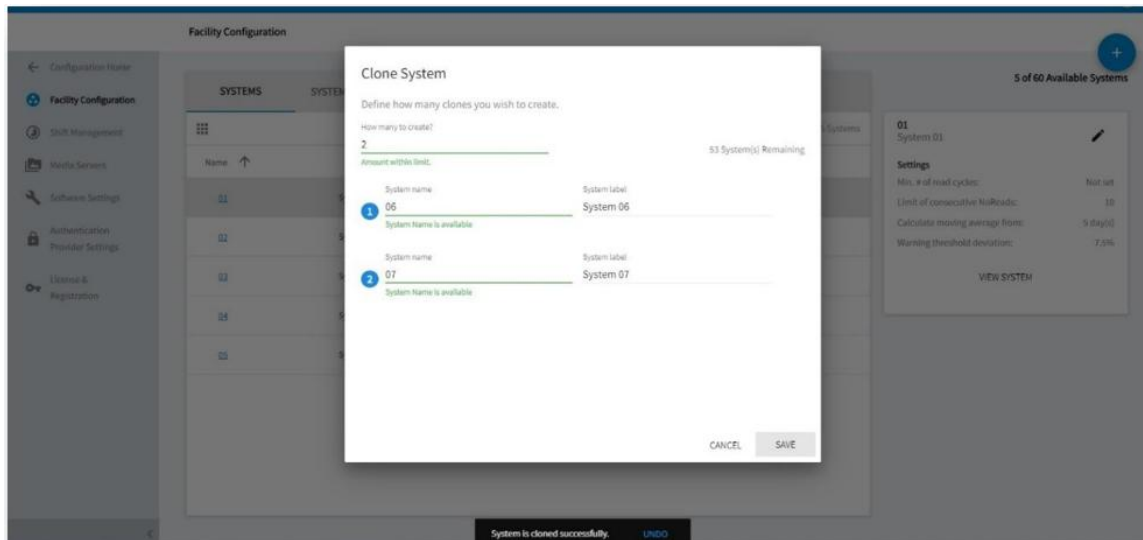


Figure 63: Cloned Successfully

- Once system is created successfully you will be navigated back to Facility Configuration page and the newly created system will be listed.

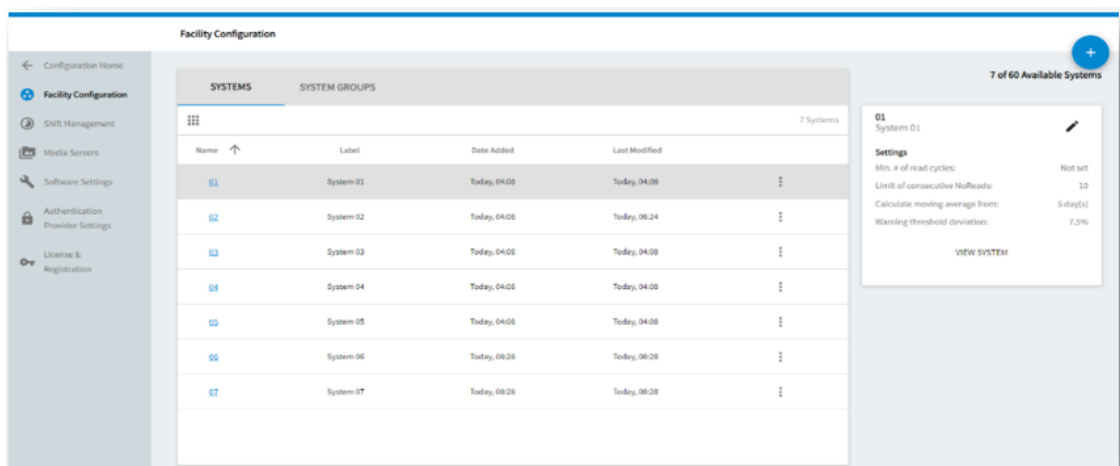


Figure 64: Cloned Systems listed on Facility Configuration page

- If due to any reason, the Clone System operation fails, application will display a proper snack bar message.

4.16 Delete a System

To delete a system:

- From the **Facility Configuration** page, on the Systems list, click  and then click Delete. Application will open Delete System confirmation dialog box
- Click on ACCEPT button on Delete System confirmation dialog box.

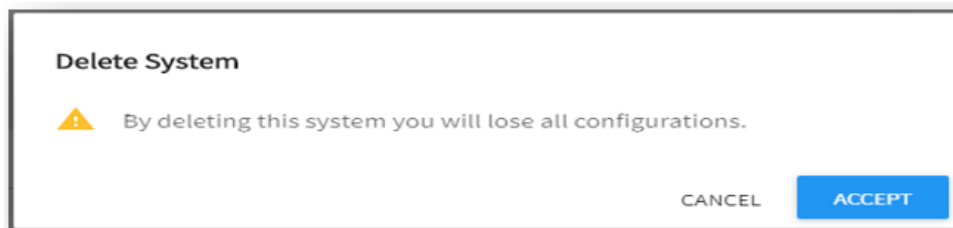


Figure 65: Delete System Confirmation

3. A message will confirm that the system was successfully deleted, and you will be returned to the **Facility Configuration Systems** page.

4.17 Add a System Group

In Logistics Analytics (LA) system groups can be created and you can select systems to belong to a group.

1. On the **Configuration** Screen, click  **Facility Configuration**.
2. The Facility Configuration screen is displayed.
3. Click on System Groups tab.

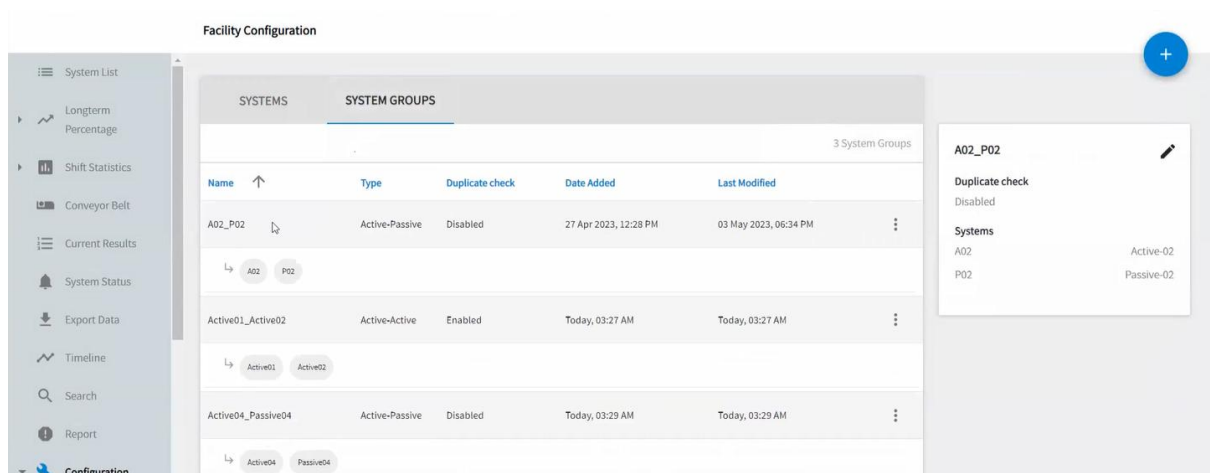


Figure 66: System Group Tab

All system groups are listed in the table under the Systems Groups heading. If no system group is added to LA, then table will be empty.

You can click any heading to sort the table by the heading value in ascending or descending order. You can click a row in the table to view the system's parameters without leaving the System Groups page.

To add a new system group to LA:

1. Navigate to '**System Groups**' tab on the **Facility Configuration** page and click the Add icon . The **Add New System Group** dialog opens having General, Add Systems and Common Statistics screen. By default, General tab is selected.

Add New System Group

Enter name of the System Group

1 General ————— 2 Add Systems ————— 3 Common Statistics

General

Group Name*

☐ Duplicate check

Systems in this group discard duplicates in scenarios like redundant-controller setup where duplicate data might be sent from 1 or more systems

CANCEL

NEXT

Figure 67: Add New System Group Dialog

2. In the Add New System Group dialog under General:
 - (i) Type a Group Name.

The System Group name is case sensitive and must be unique. You cannot have more than one system group with the same name. Also, System Group Name allow a space in the name but cannot start and end with a space.

- Enable the **Duplicate check** toggle button if you want to configure redundancy group. This helps to check the duplicate packages between two or more Systems within a timeframe while data processing in real-time.

Note: In Release 4.6.1, the **Duplicate Check** toggle for redundancy groups is disabled due to performance improvements. This option is visible but non-editable, and duplicate package checking is not supported.

- On entering System Group name, the **NEXT** button will be enabled.
- Click the **NEXT** button to navigate to **Add Systems** screen.
- Add Systems

This option allows you to select and add the systems to the group. A system can be part of multiple System Groups based on the user requirements.

Add New System Group

Add systems to the System Group

General Add Systems Common Statistics

Add Systems

☐ 04 Label: System 04	☐ 05 Label: System 05	☐ 06 Label: System 06
☐ 07 Label: System 07	☐ 08 Label: System 08	☐ 09 Label: System 09
☐ 10 Label: System 10		

BACK NEXT

Figure 68: Add Systems tab under Add New System Group Dialog

- On selecting the Systems on **Add Systems** screen, the **NEXT** button will be enabled. Click the **NEXT** button to navigate to **Common Statistics** screen.

Add New System Group

Set the values for Common Statistics

General Add Systems Common Statistics

Common Statistics

CLV Stat 80 %	Camera Stat 80 %
Info Stat 80 %	InfoBarcode Stat 80 %
LFT Stat 80 %	PDF Stat 80 %
PDFw9612 Stat 80 %	Ref Stat 80 %
RefBarcode Stat	Shape Stat

☐ Create Another BACK SAVE

Figure 69: Common Statistics tab under Add New System Group Dialog

- This screen will list all the common statistics of the Systems selected. Set expected percentage for the Statistics.

Note: **SAVE** button will not be enabled and you won't be able to add System Group if there is no common Statistics between the selected systems. Application will display a message on **Common Statistics** screen stating **No Common Statistics available for the added systems in this group.**

3. Click **Save**.

A message will confirm that the new system group was successfully added. The system group is added to the **System Groups** list on the **Facility Configuration** screen.

Note: Only users having appropriate permissions and Redundant Controller option turned ON from the License will be able to add/edit System Group.

System List 10 systems 03 Jun 2022 Updates every 5 second(s)

Total Objects: 0		Redundant Systems / System-groups		Expand All		System Name	
System Name	System Label	Belt Speed	System State	Media Server State	Total Objects	Statistic	Percentage
08	System 08	Stopped	⚠	Not Set	0	Camera Stat	0.0%
09	System 09	Stopped	⚠	Not Set	0	Camera Stat	0.0%
10	System 10	Stopped	⚠	Not Set	0	Camera Stat	0.0%
▼ RedundantGroup	RedundantGroup	Stopped	⚠	Not Set	0	Camera Stat	0.0%
01	System 01	Stopped	⚠	Not Set	0	Camera Stat	0.0%
02	System 02	Stopped	⚠	Not Set	0	Camera Stat	0.0%
03	System 03	Stopped	⚠	Not Set	0	Camera Stat	0.0%

Figure 70: Redundancy Systems/System Groups

Note: System which is a part of Redundant Group cannot be the part of other groups. This constraint is to provide simplicity while configuring groups

Duplicity will be check within 5sec timeframe by default but can be configured through DACQ properties, named duplicate.objects.scantime.

Redundant Group/System will be seen in different color in System List page to clearly distinguish it from other Groups/Systems to avoid any confusion.

4.18 Edit System Group

4.18.1View System Group Parameters

System settings include system definitions, such as the system's label and parameters.

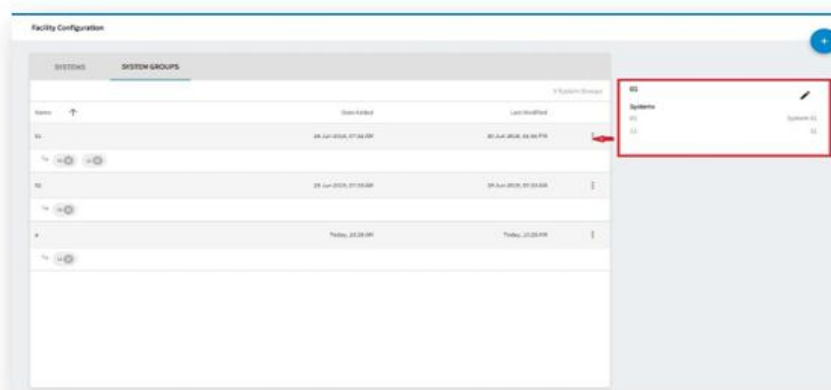


Figure 71: System Group Info on the Facility Configuration Page

4.18.2 To view a system's settings:

From the **Facility Configuration** page, on the **System Groups** list, click a system group to view. The system group details are displayed on the right side of the page.

4.18.3 Edit System Group Parameters

To edit system group parameters for an existing system group:

1. From the Facility Configuration page, on the System Groups list, click the  icon for the system group you want to edit, then select Edit System Group.



2. The Edit System Group dialog opens having General, Add Systems and Common Statistics screen.

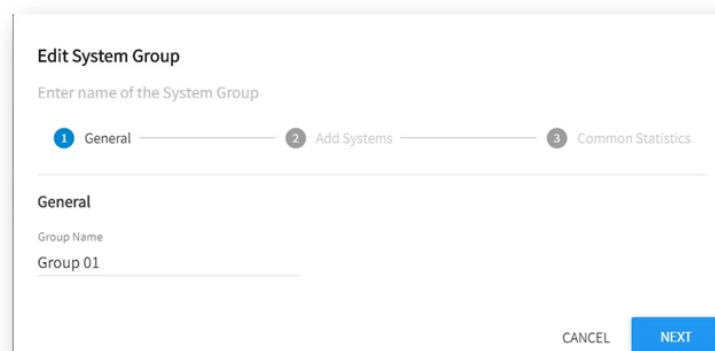


Figure 72: Edit System Group Dialog

3. In the **Edit System Group** dialog under **General** you can make the following changes:

Selection	Description
System Group Name	You can change the system Group name.
Add Systems	You can add/remove the systems to the group.
Common Statistics	You can set expected percentage for Statistics from this screen.

Table 5: Edit System Group

4. Click **Save**.

A message will confirm that the system group was successfully edited, and you will be returned to the **Facility Configuration System Groups** page.

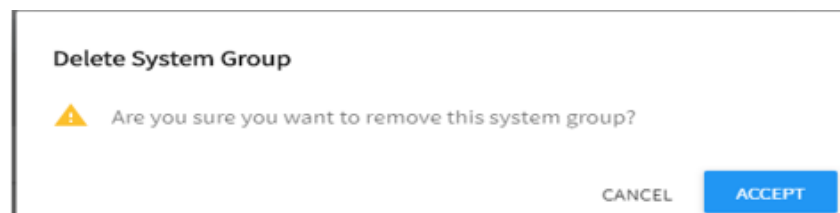
4.19 Delete a System Group

To delete a system Group:

1. From the Facility Configuration page, on the System Groups list, click  icon for the system group you want to delete, then select Delete System Group.



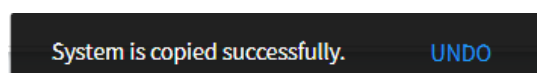
2. Click on **ACCEPT** button on **Delete System Group** confirmation dialog box.



A message will confirm that the system group was successfully deleted, and you will be returned to the **Facility Configuration System Groups** page.

4.20 Undo

The System configuration related actions for adding/editing/deleting System Configuration are accompanied by a snack bar alert with an UNDO link.



On clicking UNDO link, the configuration change that was made will be rolled back, and the UI will reloaded/updated accordingly.

5 Dashboard Configuration

In LA application, Dashboards are configured into two types which are as follows:

- Field Analytics Dashboard
- External Dashboard

To add the dashboards, navigate to **Configuration** screen and select **Dashboard Configuration**.

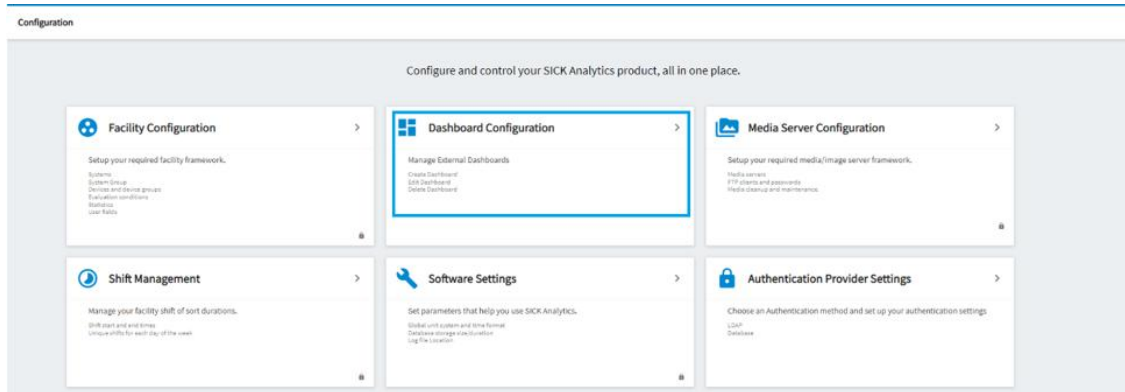


Figure 73: Dashboard Configuration

Dashboard Configuration screen appears

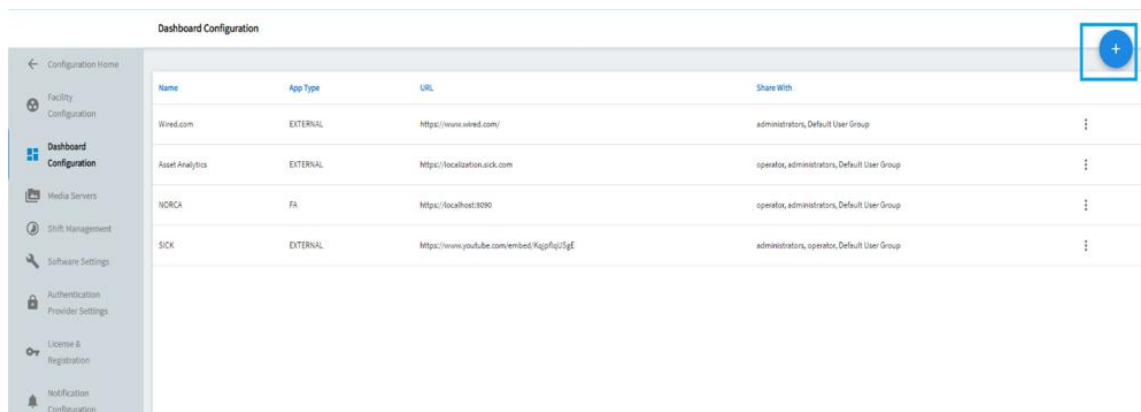


Figure 74: Dashboard Configuration Screen

6 FA Dashboard

It allows users to navigate to various LA pages directly from dynamic dashboard integration.

User can add widgets and view the data in the dashboard. For more details, refer to Field Analytics user manual.

Click on Add icon  to add the dashboards. **Add Dashboard** window appears with following fields:

- **Name:** Provide a name for the dashboard
- **App Type:** Select the application type from the drop-down as **Field Analytics application** which has two types that are **Field Analytics application** and **External Dashboard**

- **URL:** Provide the URL
- **Username:** If app type is selected as FA application, then username field appears. Provide username
- **Password:** If app type is selected as FA application, then Password field appears. Provide password
- **Share with:** Select the user groups configured like operators, administrators, default user groups etc.

Click the **Save** button.

Add Dashboard

Name*

Field Analytics Application
External Application

URL*

User Name*

Password*

Share With*

CANCEL SAVE

Figure 75: Add Dashboard

The Added dashboards can be edited and deleted by clicking on vertical ellipsis  on Dashboard Configuration screen.

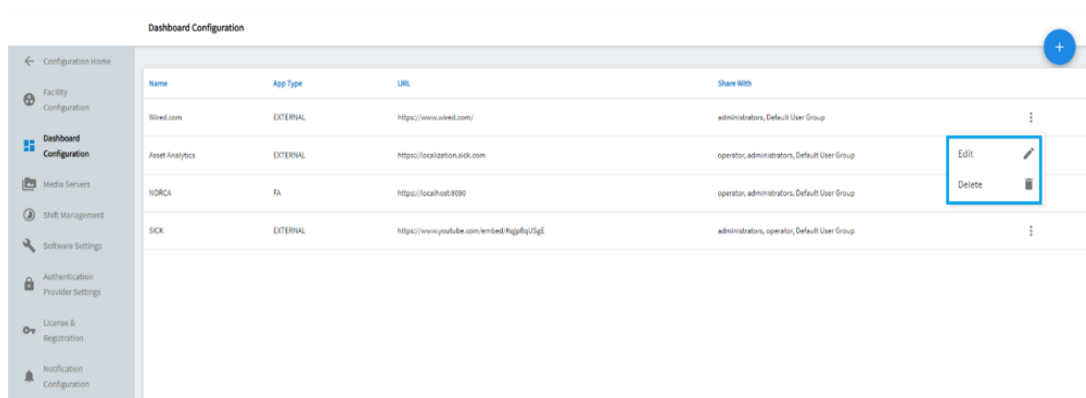


Figure 76: Edit and Delete Icons

When clicked on Edit icon  , **Edit Dashboard** window appears. Update the changes and click the **Save** button.

Edit Dashboard

Name*

NORCA

App Type*

Field Analytics Application

URL*

https://localhost:8090

User Name*

administrator

Password*

UNCHANGED

Share With*

operator, administrators, Default User Group

CANCEL

SAVE

Figure 77: Edit Dashboard

When clicked on delete icon  , **Delete Dashboard** confirmation box appears. Click the **Delete** button to delete the dashboard or click the **Cancel** button to cancel the deletion request.

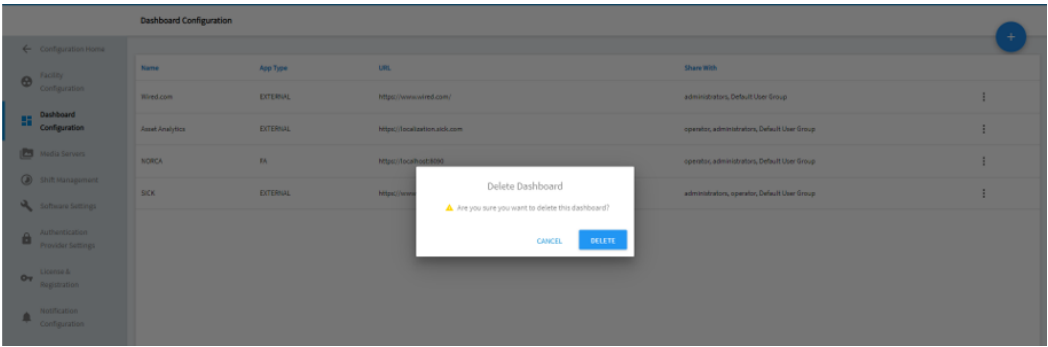


Figure 78: Delete Dashboard

The added dashboards appear under Dashboard tab on the home page menu list.

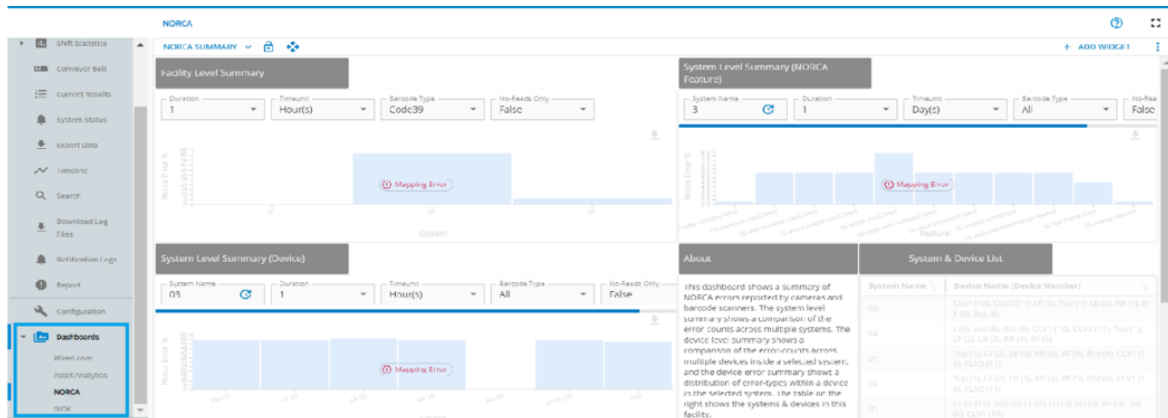


Figure 79: Dashboard List

7 Norca Dashboard

It allows user to integrate with norca features in the LA application. Refer to Figure 79: Dashboard List.

8 External Dashboard

It allows users to open and view the external websites or URLs in the LA dashboard.

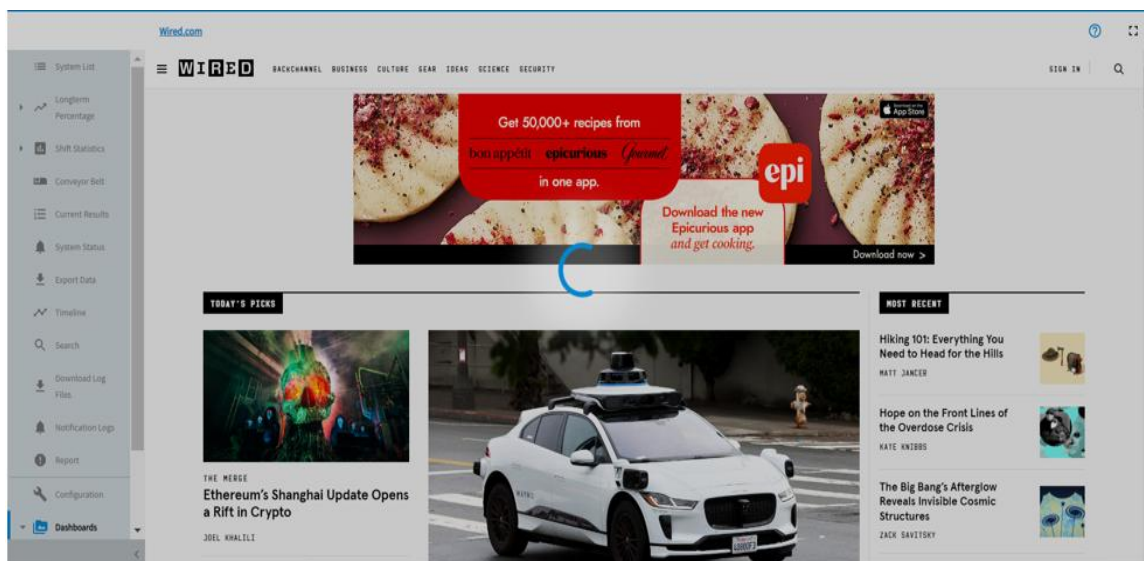


Figure 80: External Dashboard

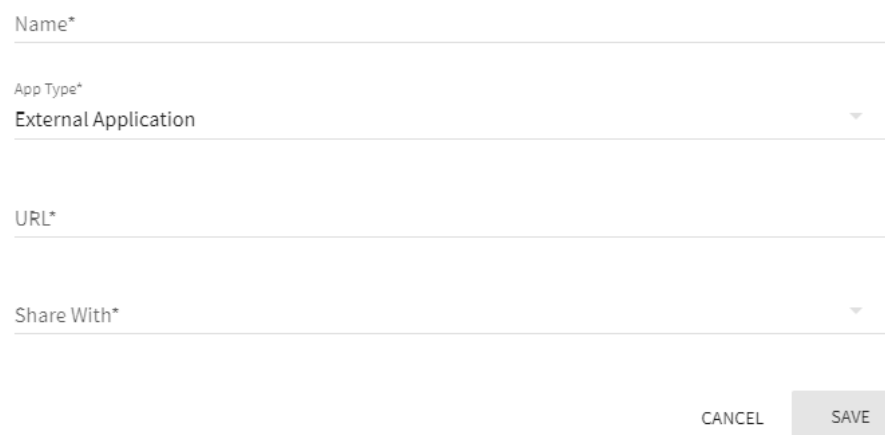
To configure the external dashboard, Click on Add icon  to add the dashboards. **Add Dashboard** window appears with following fields:

- **Name:** Provide a name for the dashboard
- **App Type:** Select the application type as **External Dashboard** from the drop-down which has two types that are **Field Analytics application** and **External Dashboard**
- **URL:** Provide the URL

- **Share With:** Select the user group from the drop-down list who can view the configured dashboard

Click the **Save** button.

Add Dashboard



The screenshot shows a web form titled "Add Dashboard". It contains four input fields: "Name*" (a text box), "App Type*" (a dropdown menu with "External Application" selected), "URL*" (a text box), and "Share With*" (a dropdown menu). At the bottom right of the form are two buttons: "CANCEL" and "SAVE".

Name*	
App Type*	External Application ▼
URL*	
Share With*	

CANCEL SAVE

Figure 81: External Dashboard Configuration

9 Control Box Dashboard

Control Box Dashboard is located under the Dashboard Module.

Control box Dashboard displays facility view of control box dimensions & weight read by sensors across systems, System view timeseries and any device level deviations across all systems.



Figure 82: Control Box Dashboard

User can view specific control box facility view by selecting specific control box from “Choose Control box” drop-down and click the **Update** button.

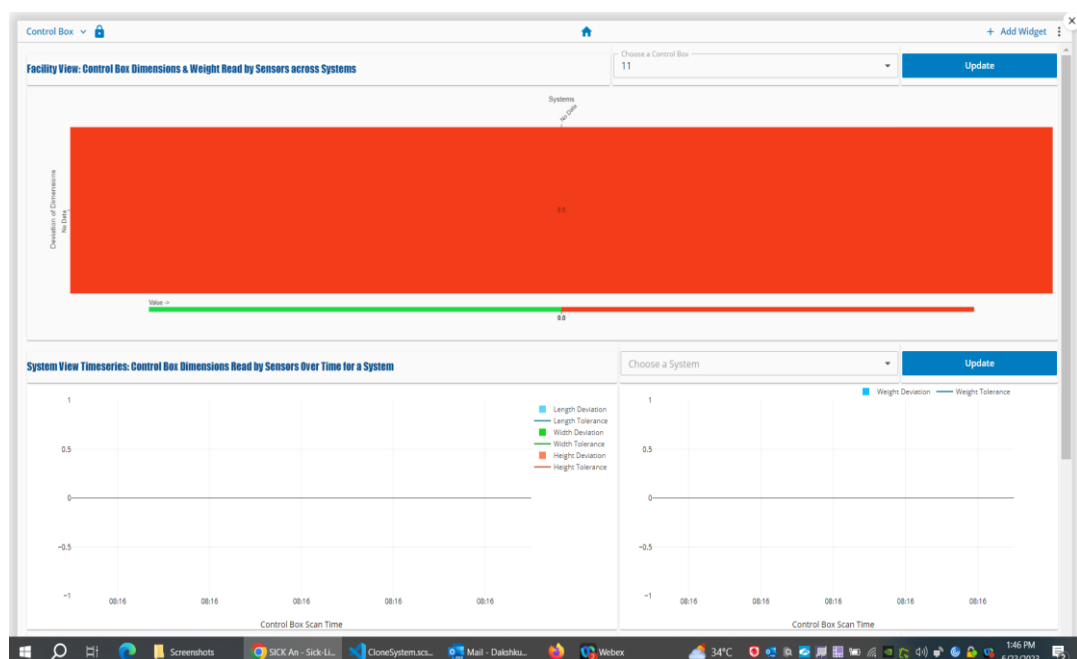
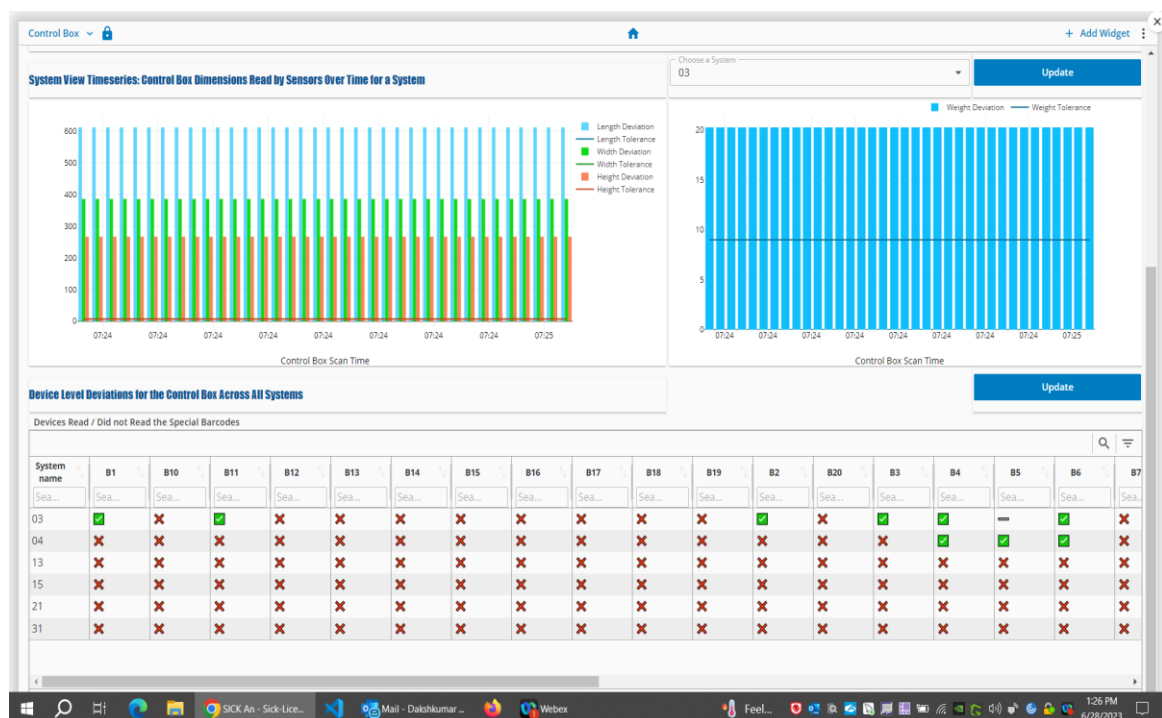


Figure 83: Specific Control Box Dashboard

Similarly, user can view specific system view by selecting specific system from “**Choose a system**” drop-down and click the **Update** button. User can view maximum of 71 latest objects in system level bar chart. Refer to Figure 84: Specific System View Timeseries.

To view the latest device level deviation update, click the **Update** button in the device level deviations section.

In device level deviations table, **✗**-symbol for device indicates that it did not read the special barcode, **✓**-symbol for device indicates read the special barcode and **—** symbol indicates if device is not configured for that particular system.

**Figure 84: Specific System View Timeseries**

10 Media Server

The Media Server software application is responsible for aggregating, storing and managing images that are acquired by SICK's image-capturing devices. The Media Server can be hosted on the same hardware as the SICK Analytics products or standalone depending on your architecture requirements. All user access to the Media Server is through the Media Server dashboard. The Media Server dashboard is accessible from the SICK Analytics application installed at your facility.

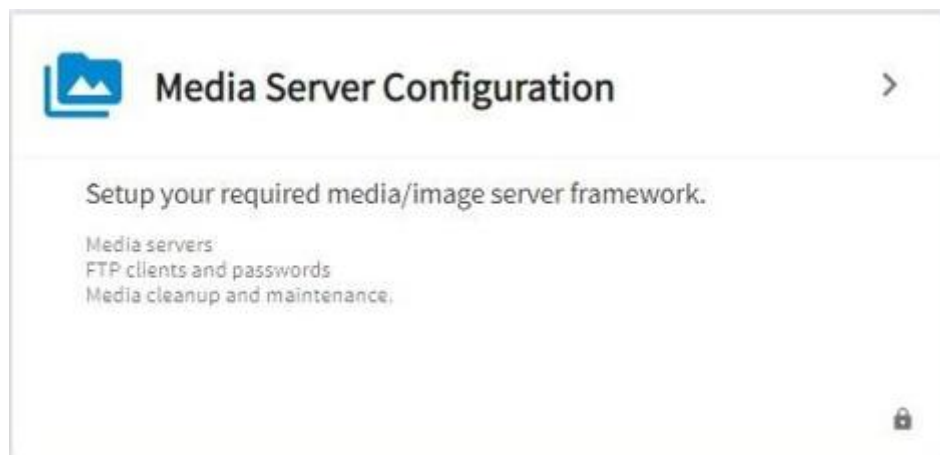
You can configure the Media Server in LA using Media Server Configuration app. You can also edit already connected Media Servers or delete/remove them from LA using this app.

Note: Adding/Editing Media Server is only available for the logged in Users having appropriate permissions. If you are not logged in or you do not have enough permissions, launching Media Server page will not display options to add, edit or delete.

10.1 Overview

To launch the **Media Server** app:

1. From the **Configuration** home page, click the **Media Server** app.



OR

2. On the Configuration tool navigation pane, click  Media Servers .
3. The **Media Server** page is displayed.

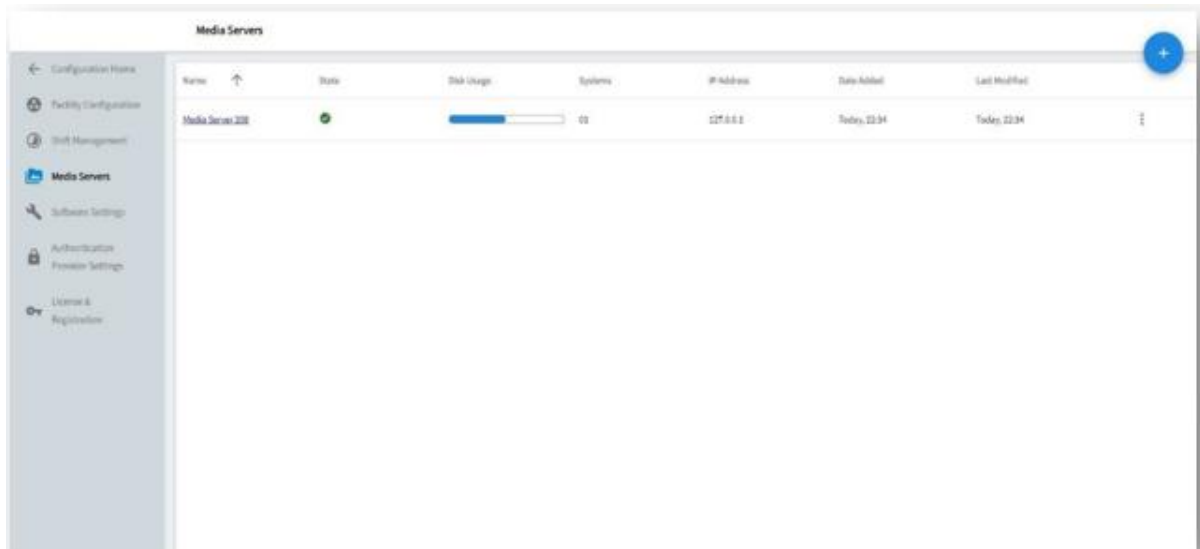


Figure 85: Media Servers page

- All connected Media Servers are listed in the table under the Media Servers heading. If no Media Server have yet been added to LA, the table will be empty.
- The Media Servers table will display 'Name', 'Status', 'Disk Usage', 'Systems', 'IP Address', 'Date Added' and 'Last Modified' columns.
- The Name Column will display the 'Media Server' name as hyperlink. You can click on the Media Server name in the table to open the Media Server application in a new tab.
- The Status Column displays Green Icon 🟢 if Media Server is properly set up,

connected and is running. The Status will show error icon in red 🟡 if there is an issue with the configured Media Server. The Disk Usage displays the indicator for used and free disk space.



- The Systems column displays the systems connected to the Media Server.
- The IP Address column displays the IP Address of the Media Server.
- The Date Added column displays the date on which the Media Server was added.
- The Last Modified column displays the date on which the Media Server was last modified.
- You can click any heading to sort the table by the heading value in ascending or descending order.
- If Media Server is not up or not configured properly, then the Status of the Media Server will be shown in Red.

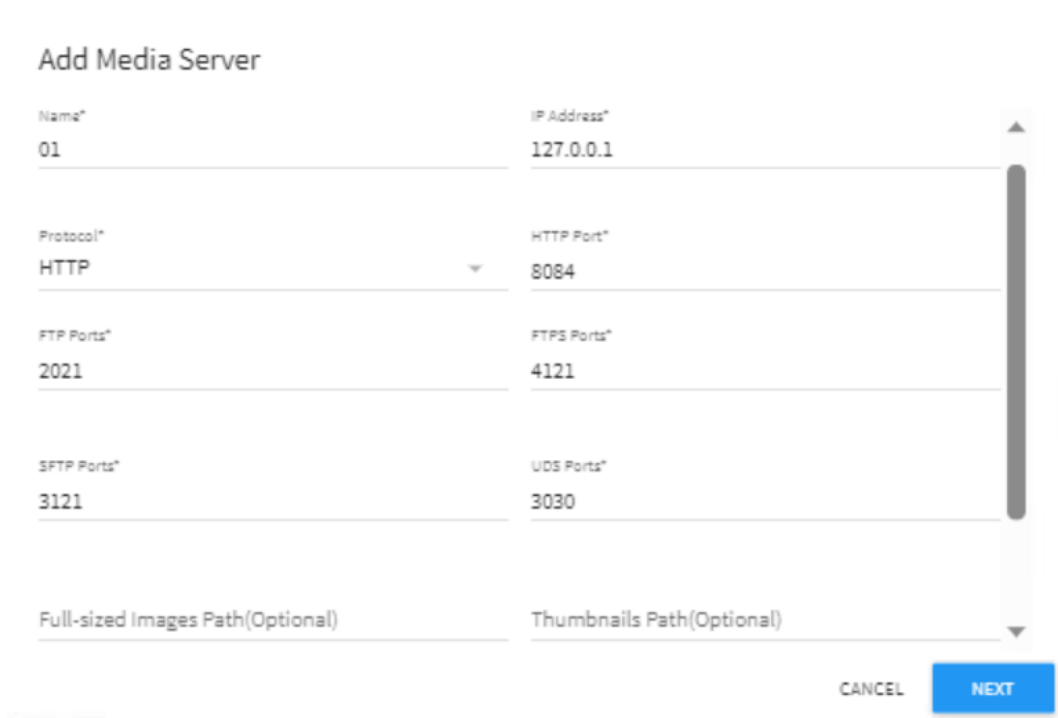
Media Servers						
Name	State	Disk Usage	Systems	IP Address	Date Added	Last Modified
Media Server 197	🔴		02	10.102.11.197	Today, 01:20	Today, 01:20
Media Server 208	🟢		01	127.0.0.1	21 Jun 2019, 22:34	21 Jun 2019, 22:34

Figure 86: Media Servers Not Up

10.2 Add a New Image Server

To add a new Image Server to LA:

1. On the **Media Servers** page, click the Add icon .
2. The **Add New Image Server** dialog opens with a 'Cancel' and 'Next'  button.
3. Clicking on 'Cancel' button will close the 'Add New Image Server' dialog box.



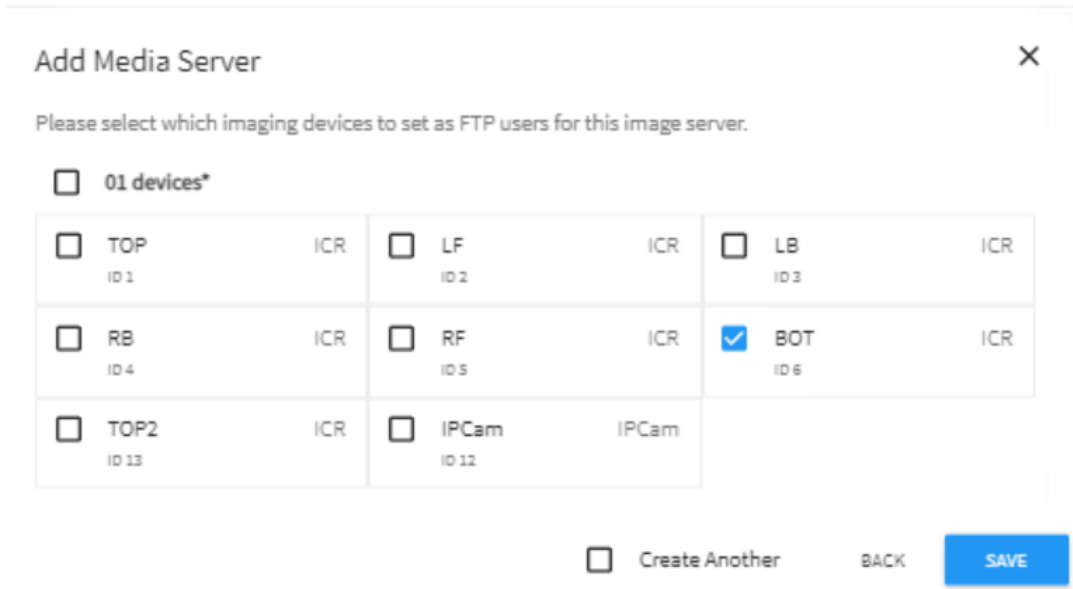
Add Media Server

Name*	IP Address*
01	127.0.0.1
Protocol*	HTTP Port*
HTTP	8084
FTP Ports*	FTPS Ports*
2021	4121
SFTP Ports*	UDS Ports*
3121	3030
Full-sized Images Path(Optional)	Thumbnails Path(Optional)

CANCEL NEXT

Figure 87: Add New Image Server Configuration Screen 1

4. Enter Media Server name, IP Address, HTTP Port, FTP Port, Full and Thumb Folder path.
5. Make sure that the Ports, IP Address, Full and Thumb folder path is properly configured else the Media server will display error. Incorrect Full and Thumb folder path may end up in error querying disk.
6. Select **System/Systems** and click on 'Next' button.
7. Clicking on 'Next' button will take you to next screen of the 'Add New Image Server' dialog box with 'Create Another' checkbox ☐ Create Another, 'BACK' and 'SAVE'  button. On this screen you can select the Media Server Devices.



Add Media Server ✕

Please select which imaging devices to set as FTP users for this image server.

☐ 01 devices*

☐ TOP ID 1	ICR	☐ LF ID 2	ICR	☐ LB ID 3	ICR
☐ RB ID 4	ICR	☐ RF ID 5	ICR	☒ BOT ID 6	ICR
☐ TOP2 ID 13	ICR	☐ IPCam ID 12	IPCam		

☐ Create Another
 BACK
SAVE

Figure 88: Add New Image Server Configuration Screen 2

8. Selecting the Media Server Device and clicking on 'Save' button will save the changes and the newly created Media Server will get listed on 'Media Servers' page.
9. If the Device is not configured properly, then clicking on 'Save' button will throw an error "Device(s) <DeviceName> is (are) not configured properly. Proper connection settings are required for image server."

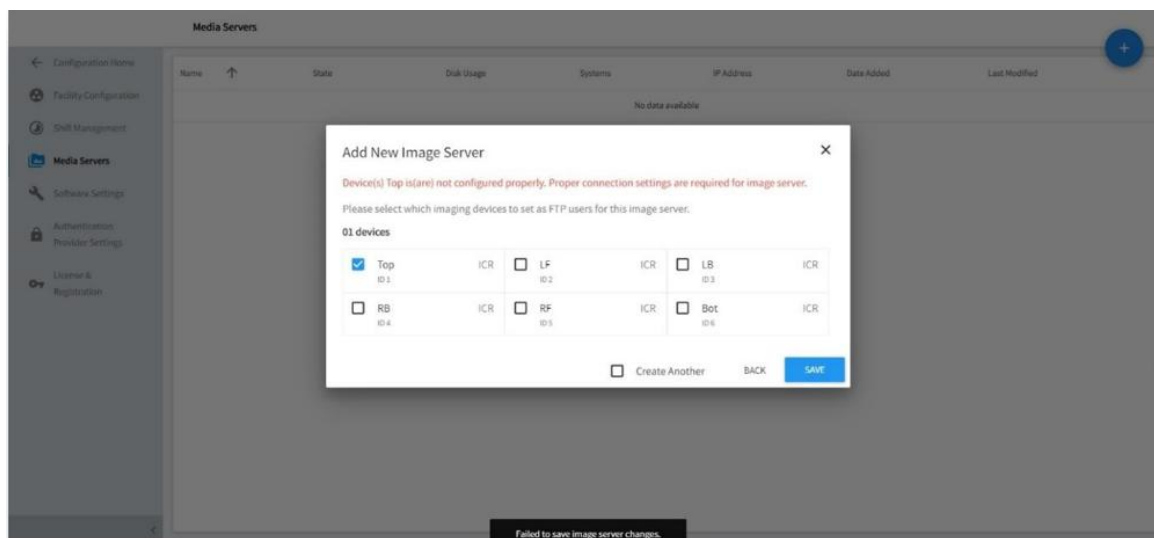


Figure 89: Device Not Configured Properly

10. Selecting 'Create Another' checkbox and clicking on 'Save' button will save the changes and the user will remain on 'Add New Image Server' dialog box.
11. Clicking on 'BACK' button will take user back to 'Add New Image Server Screen 1'.
12. Refer to **Add New Image Server Configuration Screen 1**

10.3 Edit Media Server

To edit a Media Server:

1. From the **Media Servers** page, click on the vertical ellipsis in front of the listed Media Server , and then select **Edit**.

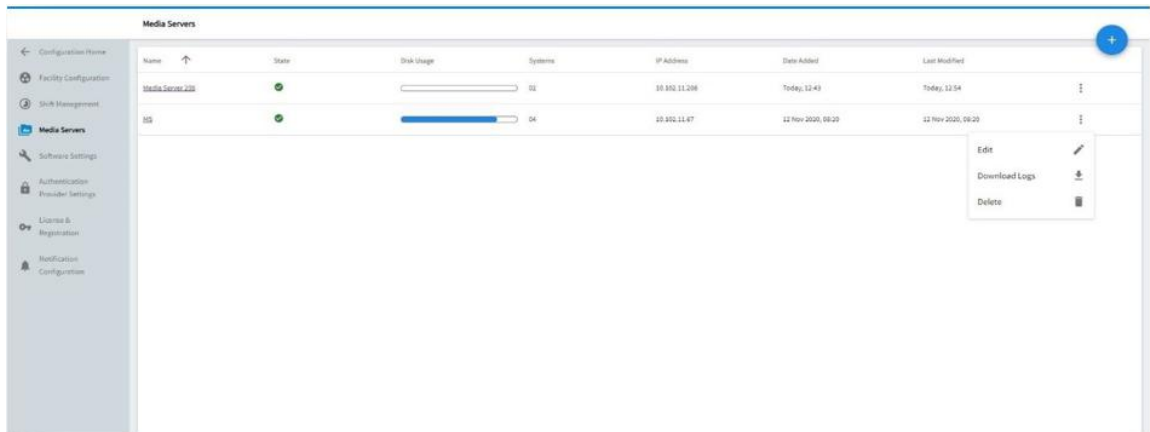


Figure 90: Edit Image Server Option

2. The Edit Image Server dialog opens.

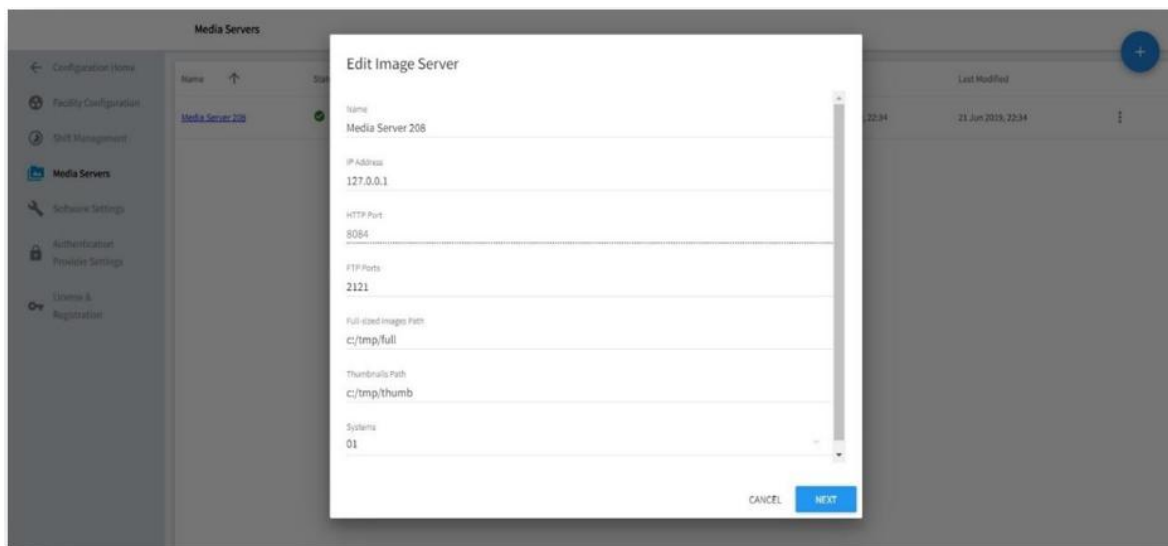


Figure 91: Edit Image Server Configuration

3. Clicking upon 'Cancel' button will close the 'Edit Image Server' dialog box.
4. You can make changes to the Media Server configuration and click on 'Next' button.
5. Make sure that the Ports, IP Address, Full and Thumb folder path is properly configured else the Media server will display error. Incorrect Full and Thumb folder path may end up in error querying disk.
6. Clicking on 'Next' button will take you to next screen of the 'Add New Image Server' dialog box with 'BACK' BACK and 'SAVE' SAVE button. On this screen you can select/edit the Media Server Devices.

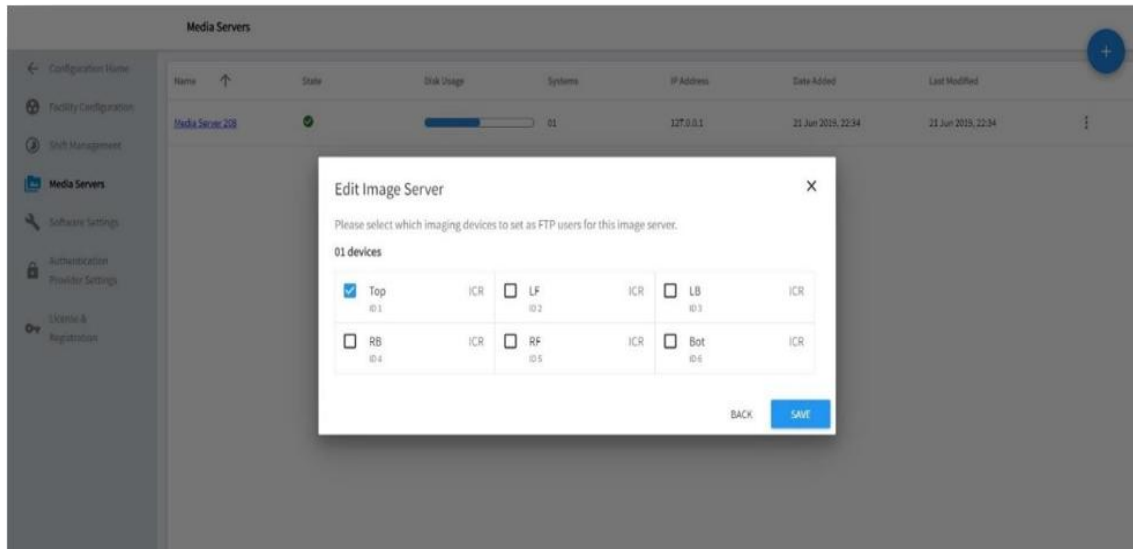


Figure 92: Edit Image Server Configuration page-Screen2

- Clicking on 'Save' button will save the changes.

Note: Edit option is disabled if Media Server shows error state i.e., either Media Server is not reachable/offline, or the Media Server License has expired.

- If the Device is not configured properly, then clicking on 'Save' button will throw an error "Device(s) <DeviceName> is (are) not configured properly. Proper connection settings are required for image server."

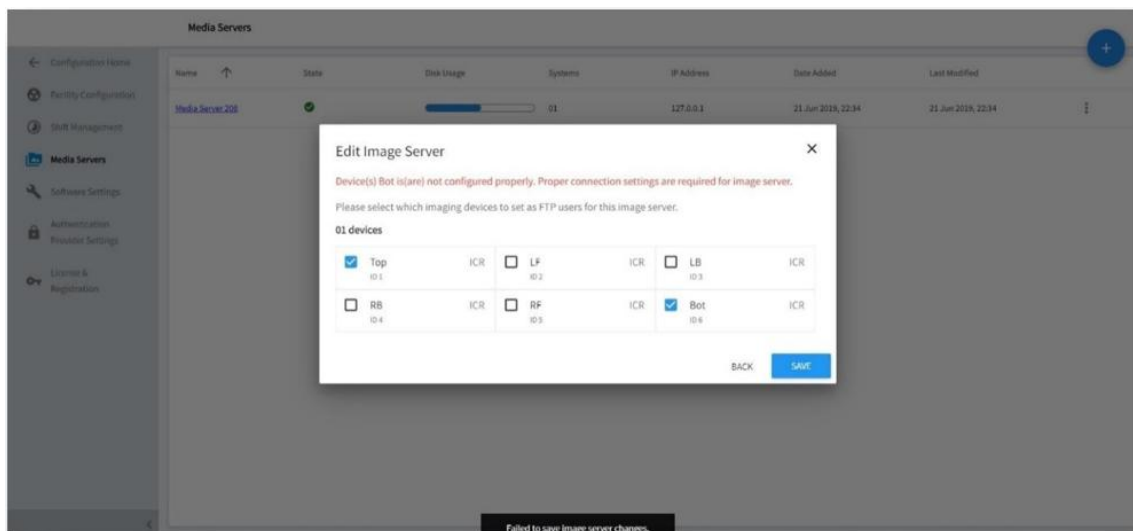


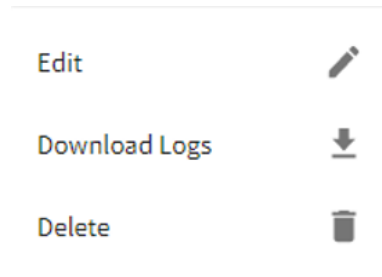
Figure 93: Device Not Configured Properly

- Clicking on 'BACK' button will take user back to 'Edit Image Server Screen 1'.

10.4 Delete/Remove Media Server:

To remove a Media Server:

- From the **Media Servers** page, click on the vertical ellipsis icon in front of the listed Media Server, and then select **Delete**.



The **Remove System** dialog appears.

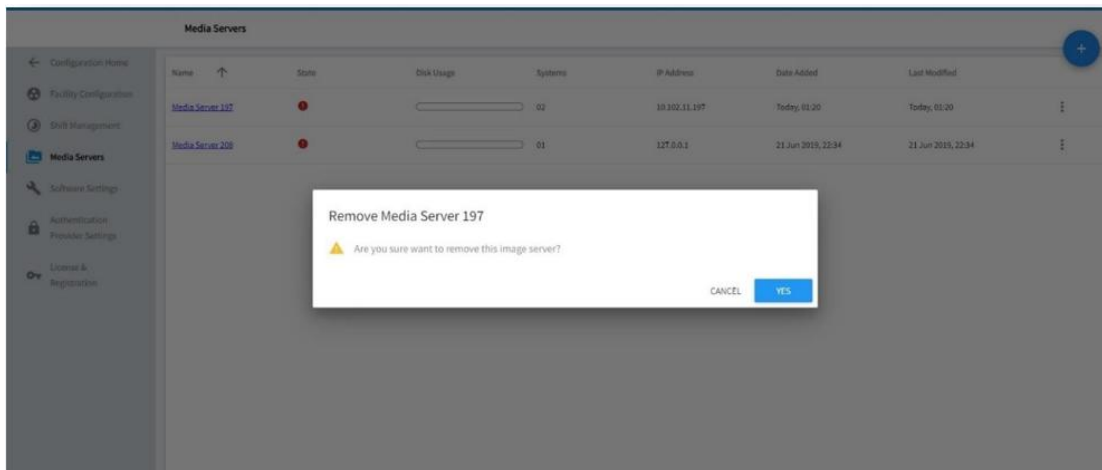
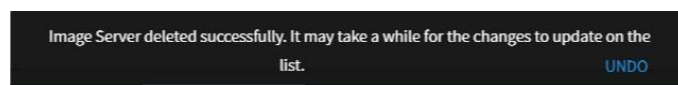


Figure 94: Remove Media Server

2. Clicking upon 'Cancel' button will close the 'Remove Media Server' dialog box.
3. Clicking upon 'Yes' button will delete the Media Server. The Media Server will be removed from the 'Media Servers' page.

10.5 Undo

The Media Server configuration related actions for adding/editing/removing Media Server are accompanied by a snack bar alert with an UNDO link.



On clicking UNDO link, the configuration change that was made will be rolled back, and the UI will reloaded/updated accordingly.

10.6 Download Media Server Log files

To download a Media Server Log Files:

1. From the Media Servers page, click on the vertical ellipsis icon in front of the listed Media Server, and then select Download Logs.
2. This will download the log files of the selected media server to your default download location.

Note: This feature is only available for the logged in Users having Download Log Files permission. If you do not have enough permission, Download Logs option will not be displayed.

Download Log Files is Licensed. This option is only available if it is permitted from the License file.

11 Shift Management

The Shift Management app allow you to create and manage shifts. You can add/manage daily shifts and Overnight Shift to the application. You can configure the Shifts for LA application using **Shift Management** app. You can also edit already existing shifts or delete them from LA using this app.

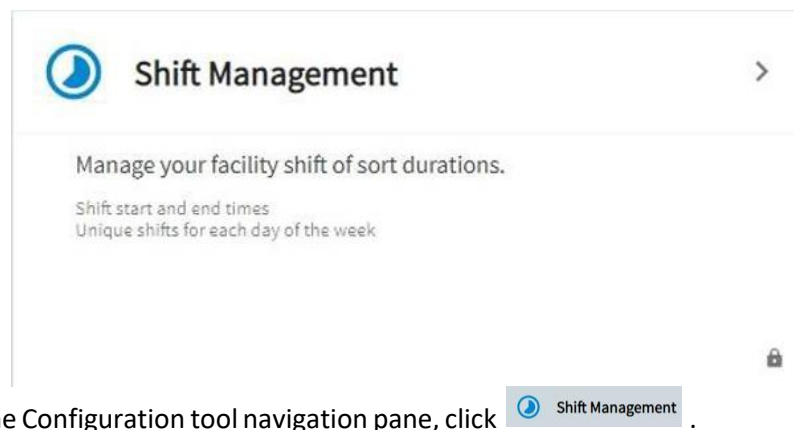
Note: Adding/Editing Shifts is only available for the logged in Users having appropriate permissions. If you are not logged in or you do not have enough permissions, launching Shift Management page will not display options to add, edit or delete shifts.

11.1 Overview

To launch the **Shift Management** app:

1. From the **Configuration** home page, click the **Shift Management** app.

OR



2. On the Configuration tool navigation pane, click **Shift Management**.

3. The **Shift Management** page is displayed.

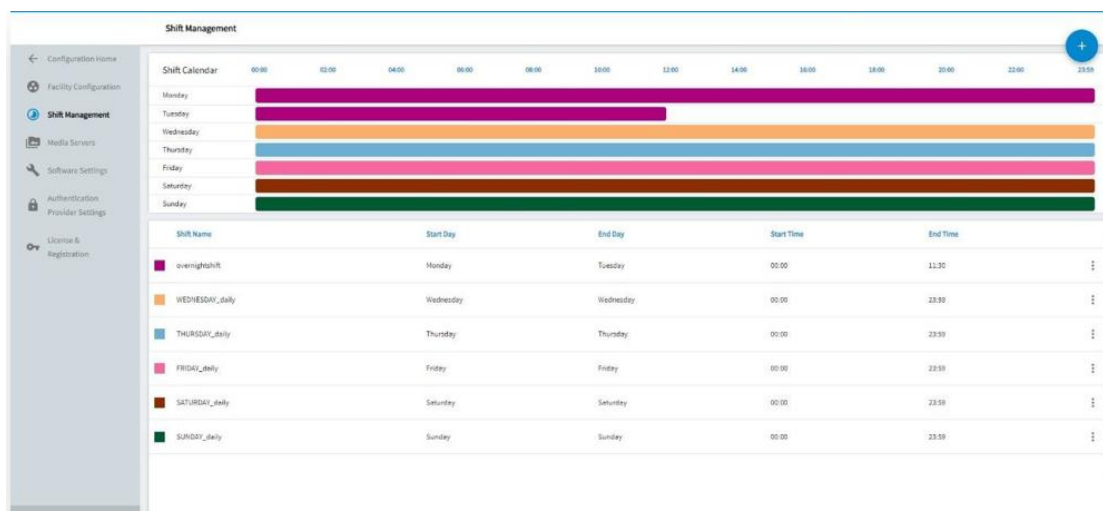


Figure 95: Shift Management Page

4. The upper part of 'Shift Management' page displays the 'Shift Calendar'. The lower part displays the table listing the shifts with columns 'Shift Name', 'Start Day', 'End Day', 'Start Time' and 'End Time' of the shifts.

5. Clicking on a shift in the Calendar will highlight the shift in the calendar and the table, and also scroll to the shift's spot in the table.
6. Clicking on the row in the table will highlight the shift in the calendar and the table

11.2 Adding a New Shift

To add a new Shift to LA:

1. On the **Shift Management** page, click the Add icon .
2. Application will display two options '**Add Shift**' and '**Add Overnight Shift**'.

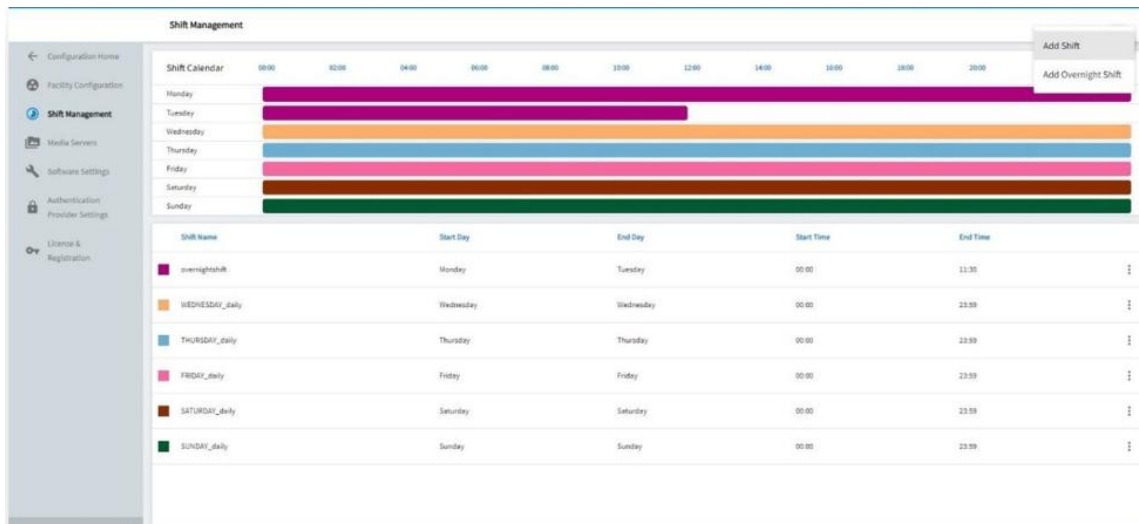


Figure 96: Add Shift Options

3. If you want to add a normal shift, click on '**Add Shift**' option. If you want to create Overnight Shift that can be extended to next day, click on '**Add Overnight Shift**' link.

11.2.1 Adding a Daily / Normal Shift

To add a new daily shift:

1. Click on '**Add Shift**' option.
2. The **Add Shift** dialog opens with a 'Create Another' checkbox ☐ Create Another a **CANCEL** and an **ADD** button.

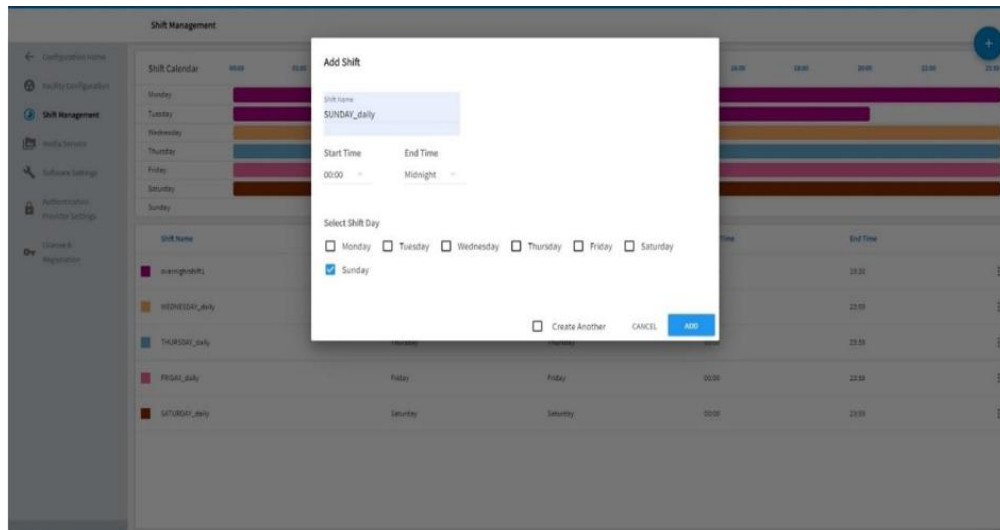


Figure 97: Add Shift Dialog

3. Clicking upon 'Cancel' button will close the 'Add Shift' dialog box.
4. Enter Shift name, Start Time, End Time, Select Shift Day checkbox.
5. Entering Shift Details and clicking on 'Add' button will create the shift and the newly created shift will get listed on 'Shift Management' page.

Note: Add button on dialog will be disabled if there is any Validation error. Example: Shift Overlaps or Start Time and End Time is same.

6. If the Shift is overlapping with any other shift, then clicking on 'Save' button will throw an error "<Shift day> shift overlaps with existing <Shift Name> <Shift Time>."

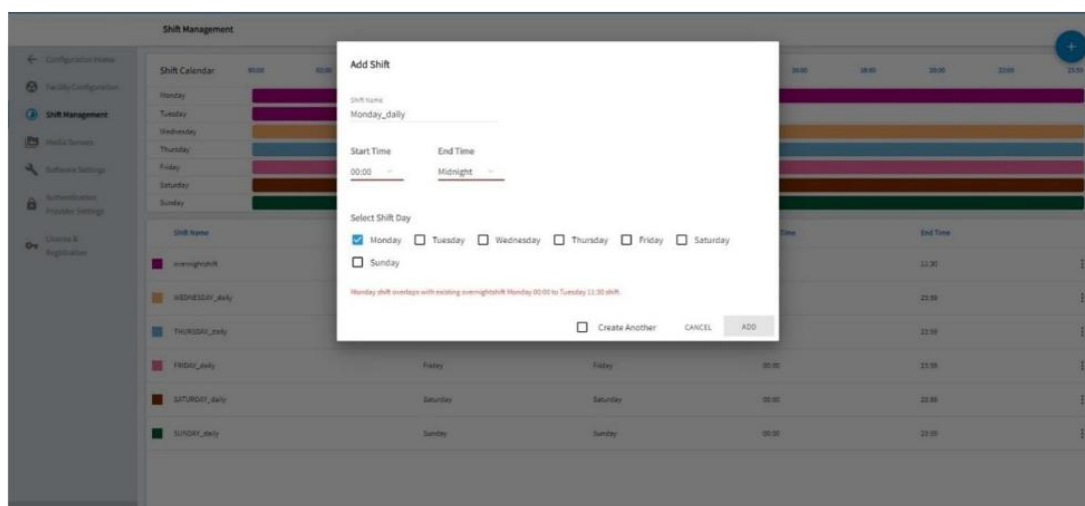


Figure 98: Shift Overlap

7. Selecting 'Create Another' checkbox and clicking on 'Add' button will create the shift and the user will remain on 'Add Shift' dialog box.

11.2.2 Adding an Overnight Shift

To add a new Overnight shift:

1. Click on 'Add Overnight Shift' option.
2. The **Add Overnight Shift** dialog opens with a **Create Another** checkbox, a **CANCEL** and an **ADD** button.

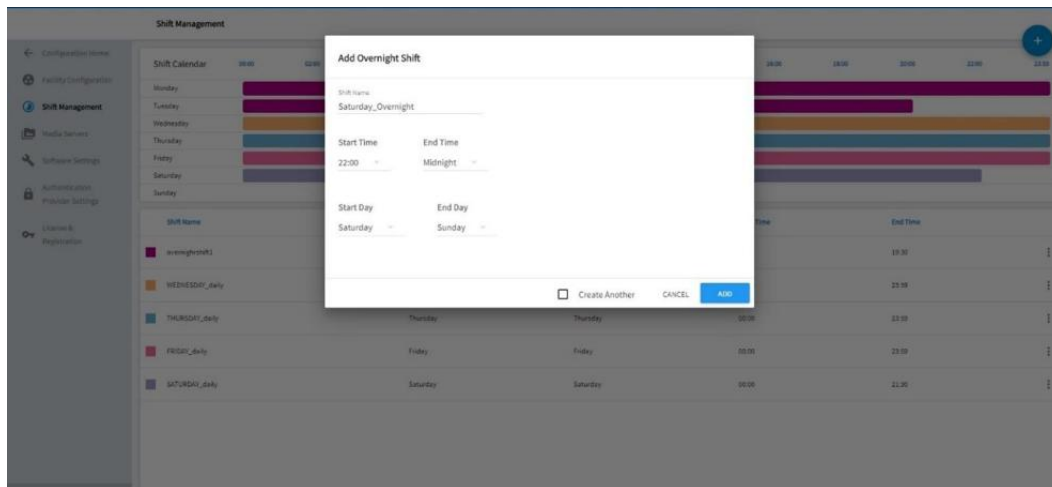


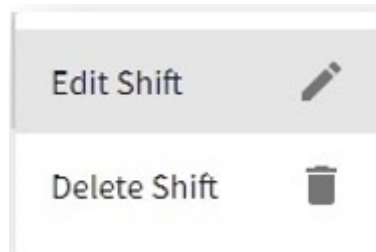
Figure 99: Add Overnight Shift

3. Clicking 'Cancel' button will close the 'Add Overnight Shift' dialog box.
4. Enter Shift name, Start Time, End Time, Start Day and End Day.
5. Thank you for reminding
6. If the Shift is overlapping with any other shift, then clicking on 'Save' button will throw an error "<Shift day> shift overlaps with existing <Shift Name> <Shift Time>."
7. The 'Create Another' checkbox provides the ability to quickly create another shift without having to close the dialog box. Selecting 'Create Another' checkbox and clicking on 'Add' button will create the overnight shift and the user will remain on 'Add Overnight Shift' dialog box.

11.3 Editing Shift

To edit a shift:

1. From the **Shift Management** page, click on the vertical ellipsis icon in front of the list of Shifts, and then select **Edit**.



2. The Edit Shift/Edit Overnight Shift dialog opens.

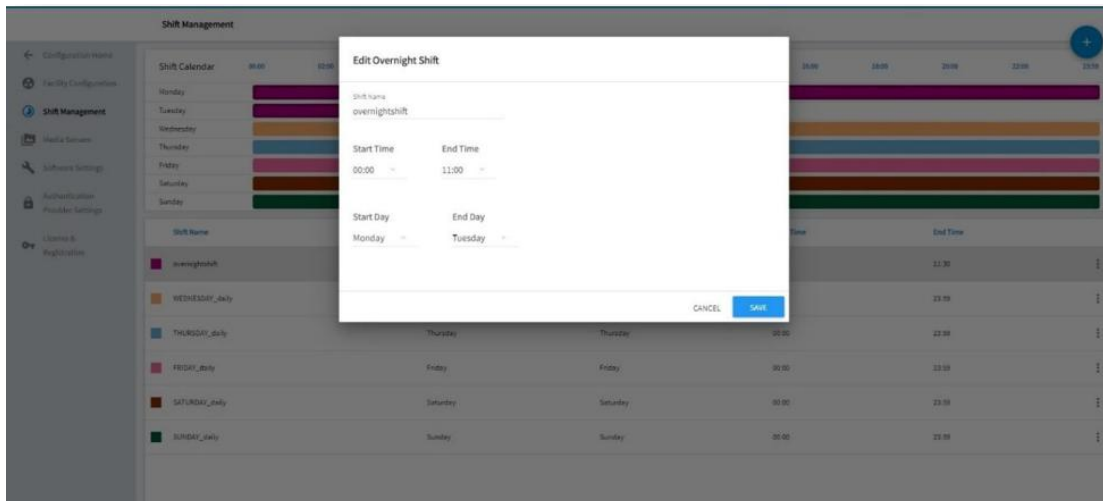


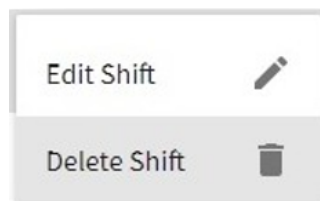
Figure 100: Edit Image Server Configuration

3. Clicking 'Cancel' button will close the 'Edit Shift/Edit Overnight Shift' dialog box.
4. You can make changes to the shifts and click on 'SAVE' button.
5. Clicking on 'Save' button will save the changes.

11.4 Deleting Shift

To delete a shift:

1. From the **Shift Management** page, click on the vertical ellipsis icon $\vdots$ in front of the listed Shifts, and then select **Delete Shift**.



The **Remove Shift** dialog appears.

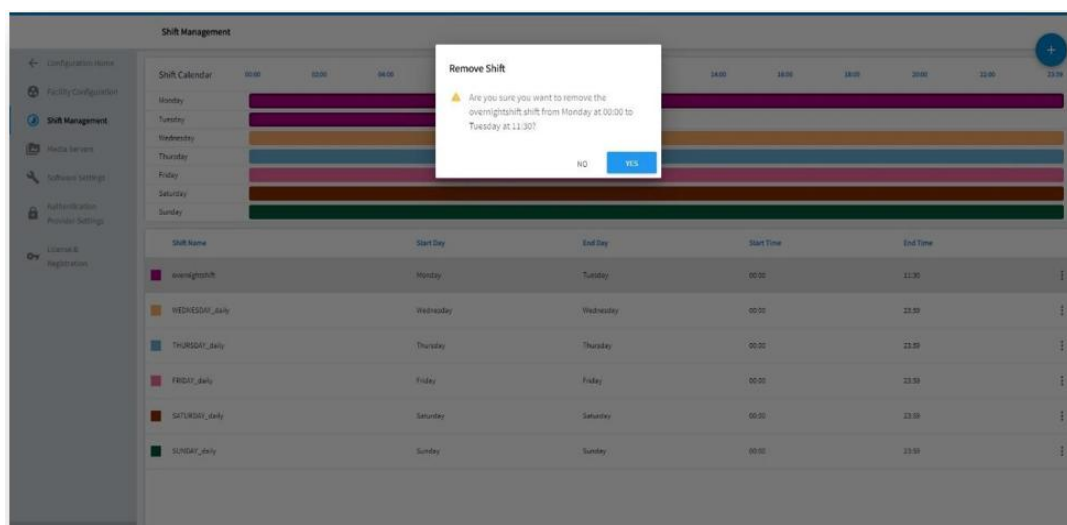
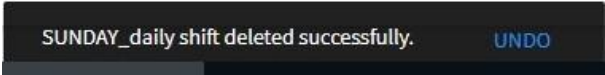


Figure 101: Remove Shift Configuration

2. Clicking 'No' button will close the 'Remove Shift' dialog box.
3. Clicking on 'YES' button will remove the shift. The shift will be removed from the 'Shift Management' page.

11.5 Undo

The shift configuration related actions for adding/editing/removing shift are accompanied by a snack bar alert with an UNDO link.



SUNDAY_daily shift deleted successfully. [UNDO](#)

On clicking **UNDO** link, the configuration change that was made will be rolled back, and the UI will reloaded/updated accordingly.

11.6 Additional Information

- If you edit/delete current shift i.e., the shift configuration while an active shift in progress, the changes will not take effect until the running shift / current shift is completed.

Example: If Current daily Shift is running for example say Tuesday and you deleted the shifts for Tuesday, Wednesday, Thursday and Friday and added an overnight shift from Wednesday 00.00 to Friday 23.59 then the currently running shift is unaffected. After Tue midnight, the configurations take effect and wed overnight shift will begin.

- If there is a gap between the end of one shift and the start of another shift, then a gap shift will be created automatically, and all the packages pushed to the system within that gap will be processed/displayed in the gap shift.

12 Control Box

12.1 Add Control Box

User can configure the dimensions of control box in the application. To configure follow below procedure:

1. Click **Configuration** from left side menu and select **Control Box** module from the list

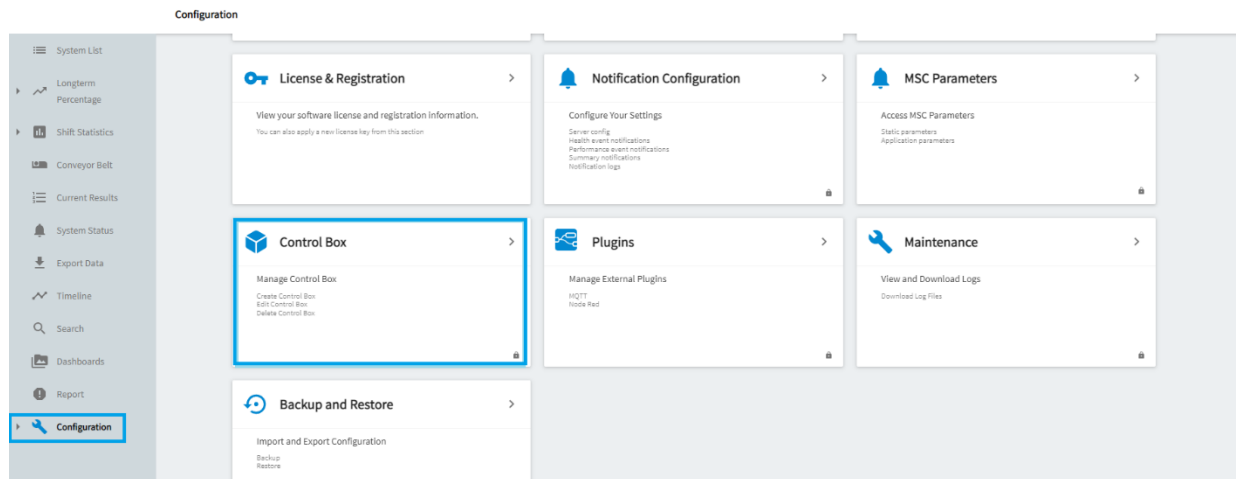


Figure 102: Control Box

2. Click Add icon  on top right side of the screen
3. Add Control Box window appears with following fields:
 - **Name:** Enter name of the control box
 - **Barcode:** Enter the barcode number of the control box
 - **Distance Measuring Unit:** Select the unit from the drop-down options that are inch or millimeter
 - **Weight Measuring Unit:** Select the unit from the drop-down options that are Kilogram or Pounds
 - **Length:** Enter the length of the control box
 - **Length Tolerance:** Enter the length tolerance limit of the control box length dimension
 - **Width:** Enter the width of the control box
 - **Width Tolerance:** Enter the width tolerance limit of the control box width dimension
 - **Height:** Enter the height of the control box
 - **Height Tolerance:** Enter the height tolerance limit of the control box height dimension
 - **Weight:** Enter the weight of the control box
 - **Weight Tolerance:** Enter the weight tolerance limit of the control box weight dimension
4. Click the **Save** button

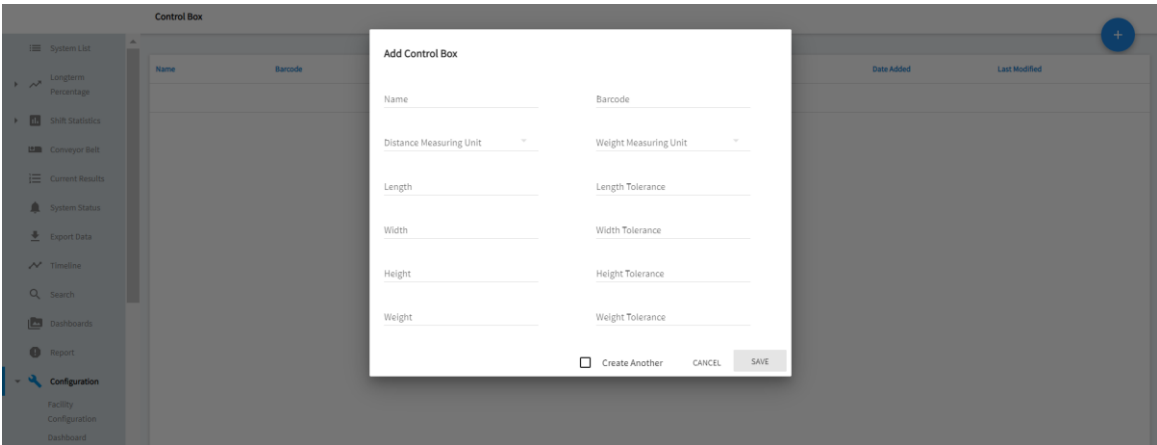


Figure 103: Add Control Box

5. The configured control box details are displayed on the control box screen

The image shows the "Control Box" screen in the system configuration interface. It features a sidebar on the left with various configuration options, including "Dashboard Configuration", "Media Servers", "Shift Management", "Software Settings", "Authentication Provider Settings", "License & Registration", "Notification Configuration", "MSC Parameters", "Control Box" (which is highlighted), "Plugins", "Maintenance", and "Backup and Restore". The main area displays a table with the following columns: Name, Barcode, Length, Width, Height, Weight, Date Added, and Last Modified. The table contains five rows of data for different control boxes.

Name	Barcode	Length	Width	Height	Weight	Date Added	Last Modified
10	12RFVREC1234567890	10 mm (±0.6)	11 mm (±1)	12 mm (±1.5)	13 pound (±1.6)	28 Mar 2023, 08:13:02 AM	28 Mar 2023, 08:13:02 AM
11	11	11 inch (±1)	11 inch (±1)	11 inch (±1)	11 kg (±1)	25 May 2023, 02:27:49 AM	25 May 2023, 02:27:49 AM
A	A	24 inch (±2)	3 inch (±1)	123 inch (±11)	12 kg (±11)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CB003	55-BB065D15LOF-WOC0001	10 mm (±7)	10 mm (±7)	20 mm (±7)	30 pound (±9)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CBNew	12RFVREC1234567892	27.8 inch (±0.1)	19.3 inch (±0.1)	17.4 inch (±0.1)	10.65 pound (±0.5)	28 Feb 2023, 04:18:57 AM	28 Feb 2023, 04:34:15 AM

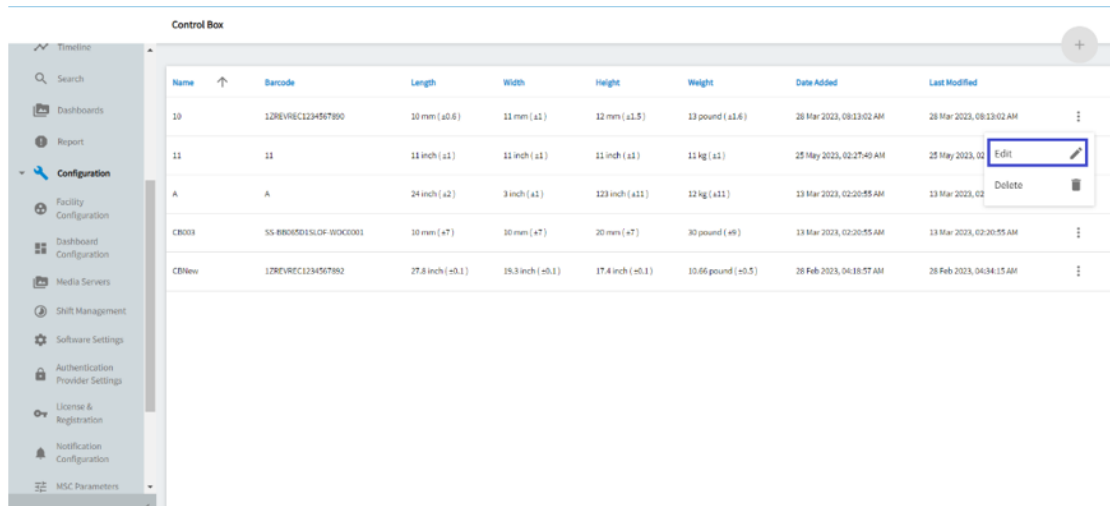
Figure 104: Control Box Screen

Note: Refer to Control Box Dashboard for facility view of control box dimensions, weight read by sensors across systems, System view timeseries and any device level deviations.

12.2 Edit Control Box

To edit the control box:

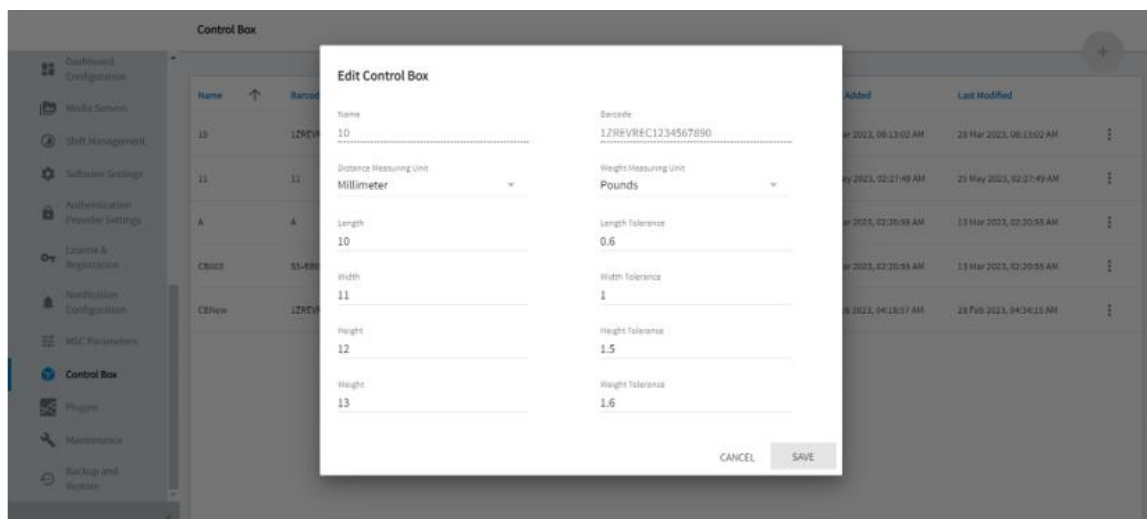
- 1. Click on the vertical ellipsis of the control box to be edited
- 2. Select **Edit** option



Name	Barcode	Length	Width	Height	Weight	Date Added	Last Modified
10	12REVREC1234567890	10 mm (±0.6)	11 mm (±1)	12 mm (±1.5)	13 pound (±1.6)	28 Mar 2023, 08:13:02 AM	28 Mar 2023, 08:13:02 AM
11	11	11 inch (±1)	11 inch (±1)	11 inch (±1)	11 kg (±1)	25 May 2023, 02:27:49 AM	25 May 2023, 02:27:49 AM
A	A	24 inch (±2)	3 inch (±1)	123 inch (±11)	12 kg (±11)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CB003	55-BB04501SL0F-W000001	10 mm (±7)	10 mm (±7)	20 mm (±7)	30 pound (±9)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CBNew	12REVREC1234567890	27.8 inch (±0.1)	15.3 inch (±0.1)	17.4 inch (±0.1)	10.66 pound (±0.5)	28 Feb 2023, 04:18:57 AM	28 Feb 2023, 04:18:57 AM

Figure 105: Edit Option

3. Edit Control Box Window appears
4. Update the changes and click the **SAVE** button



Name
10

Barcode
12REVREC1234567890

Distance Measuring Unit
Millimeter

Weight Measuring Unit
Pounds

Length
10

Length Tolerance
0.6

Width
11

Width Tolerance
1

Height
12

Height Tolerance
1.5

Weight
13

Weight Tolerance
1.6

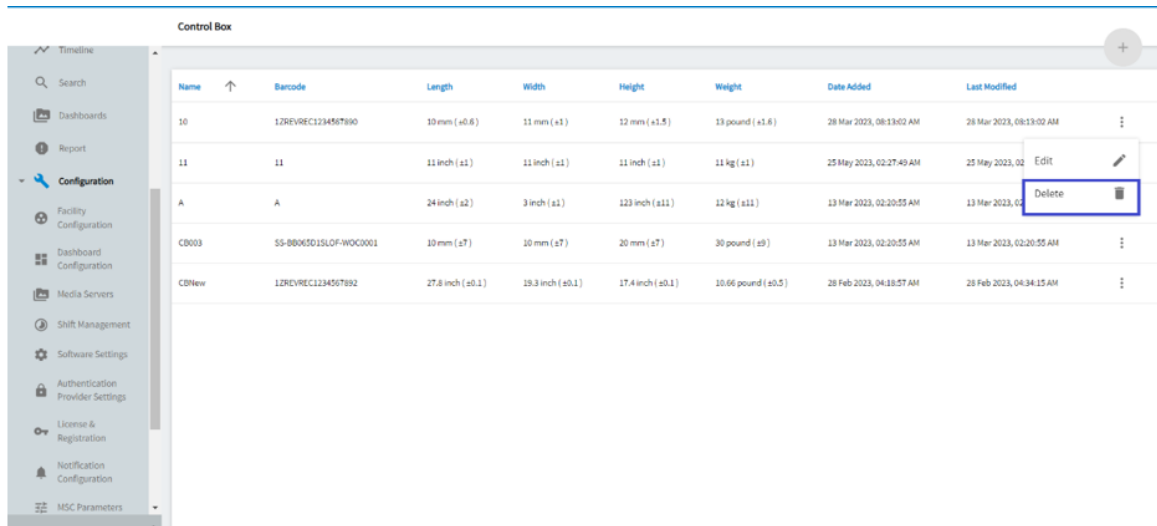
CANCEL SAVE

Figure 106: Edit Control Box

12.3 Delete Control Box

To delete the control box:

1. Click on the vertical ellipsis  of the control box to be deleted
2. Select **Delete** option



The screenshot shows the 'Control Box' configuration page. On the left is a sidebar with navigation options: Timeline, Search, Dashboards, Report, Configuration (selected), Facility Configuration, Dashboard Configuration, Media Servers, Shift Management, Software Settings, Authentication Provider Settings, License & Registration, Notification Configuration, and MSC Parameters. The main area displays a table of control boxes. The table has columns: Name, Barcode, Length, Width, Height, Weight, Date Added, and Last Modified. A row with Name 'A' and Barcode 'A' is selected, and a context menu is open showing 'Edit' and 'Delete' options. The 'Delete' option is highlighted with a red box.

Name	Barcode	Length	Width	Height	Weight	Date Added	Last Modified
10	12REVREC1234567890	10 mm (±0.6)	11 mm (±1)	12 mm (±1.5)	13 pound (±1.6)	28 Mar 2023, 08:13:02 AM	28 Mar 2023, 08:13:02 AM
11	11	11 inch (±1)	11 inch (±1)	11 inch (±1)	11 kg (±1)	25 May 2023, 02:27:49 AM	25 May 2023, 02:27:49 AM
A	A	24 inch (±2)	3 inch (±1)	123 inch (±11)	12 kg (±11)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CB003	SS-BB065015LOF-WOC0001	10 mm (±7)	10 mm (±7)	20 mm (±7)	30 pound (±9)	13 Mar 2023, 02:20:55 AM	13 Mar 2023, 02:20:55 AM
CBNew	12REVREC1234567892	27.8 inch (±0.1)	19.3 inch (±0.1)	17.4 inch (±0.1)	10.66 pound (±0.5)	28 Feb 2023, 04:18:57 AM	28 Feb 2023, 04:18:57 AM

Figure 107: Delete Option

3. Delete Control Box confirmation dialog box appears
4. Click the **DELETE** button

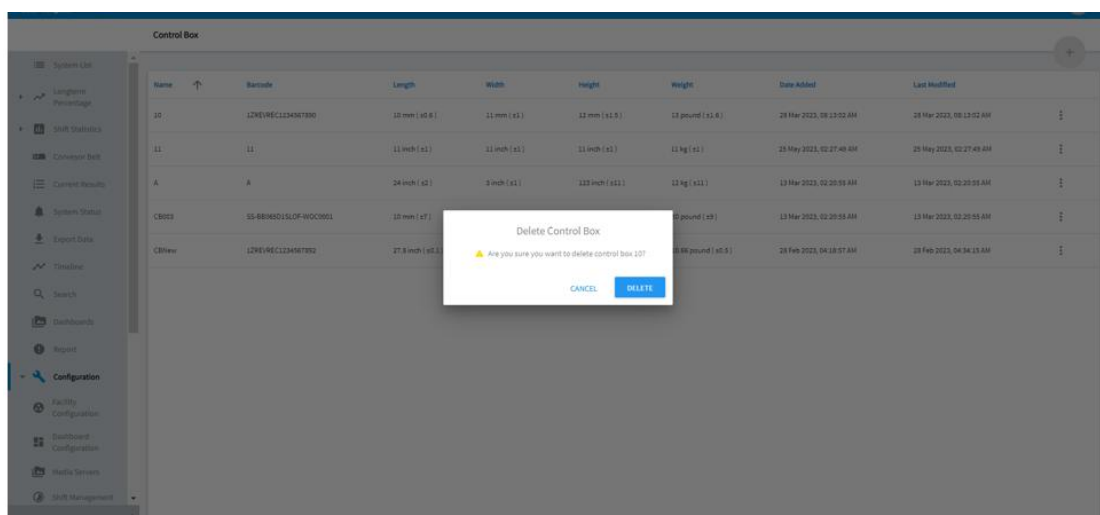


Figure 108: Delete Control Box

13 Plugins

To navigate to Plugins, follow below procedure:

1. Click **Configuration** from left side menu and select **Plugins** module from the list

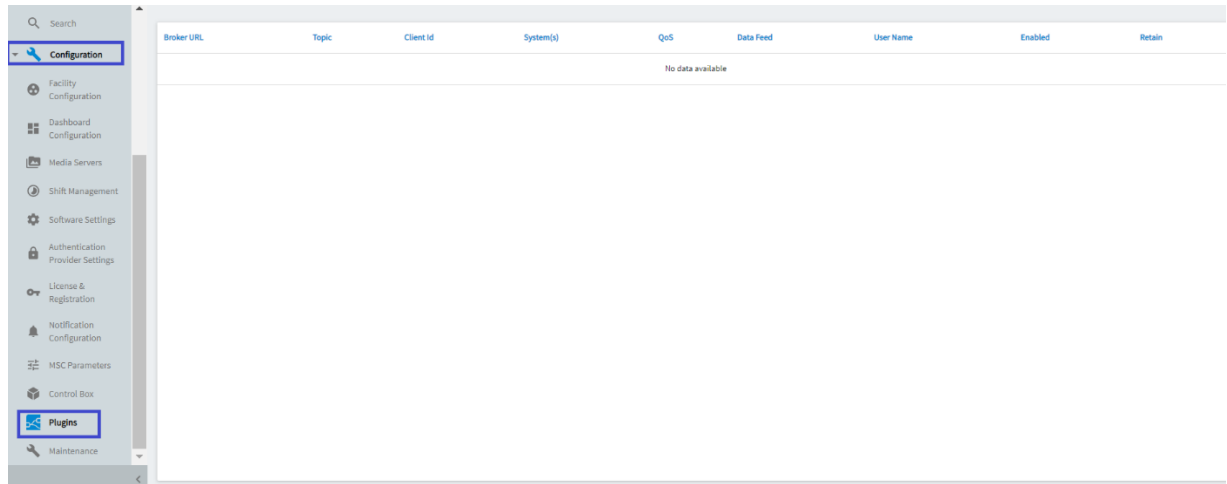


Figure 109: Plugins Screen

2. On Plugins screen, we have two options from the drop-down located on top left of the screen that are **MQTT** and **Node-red**

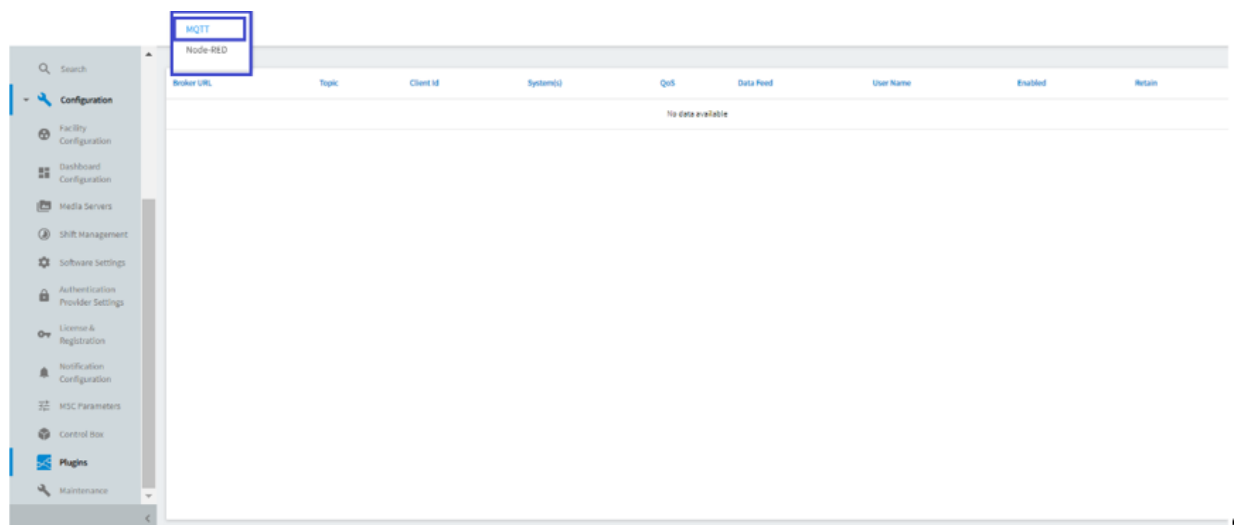


Figure 110: MQTT Option

13.1 MQTT

MQTT helps in transferring messages between client and broker. Users need to add the MQTT feed for transferring messages. It allows to add multiple feeds using same broker URL.

1. Click on  Add icon to add MQTT Feed. **Add MQTT** window appears with following fields:
 - **Broker URL:** It is the URL of the broker that receives messages that are sent from clients, and they are later addressed to the specified destination. Enter the broker URL

- **Topic:** Form of addressing messages that allows MQTT clients to share information. This method can have subdivisions, thus acting similar to a folder file on a computer.
 - **System:** Select system or systems from the drop-down list
 - **Qos:** Quality of service is a pre-number given for a latest message transfer between client and broker
 - **Username:** Provide username credentials
 - **Password:** Provide Password credentials
 - **Data Feed:** Select the Data feed from drop-down options
 - **Enabled:** Enable the **Enabled** toggle button to receive the messages from the server
 - **Retain:** Enable the **Retain** toggle button to retain the latest MQTT message
2. Click the **SAVE** button to add the MQTT feed.
 3. Added MQTT feed is displayed on the Plugins Screen.

Add MQTT

Broker URL*	Topic*
System(s)*	QoS*
User Name	Password
Data Feed*	

☒ Enabled
☐ Retain

CANCEL **SAVE**

Figure 111: Add MQTT Window

4. Added MQTT feed is displayed on the Plugins MQTT screen. Unique client ID is generated for every MQTT feed.

Broker URL	Topic	Client Id	QoS	User Name	Enabled	Retain
http://localhost:1883	topic1	259ab64a-18a1-4099-9645-1a9590b05ed	1	admin	✓	✓

Figure 112: MQTT Feed

5. User can edit the MQTT feed by clicking on the vertical ellipsis  of the feed to be modified.
6. Click on the Edit option.

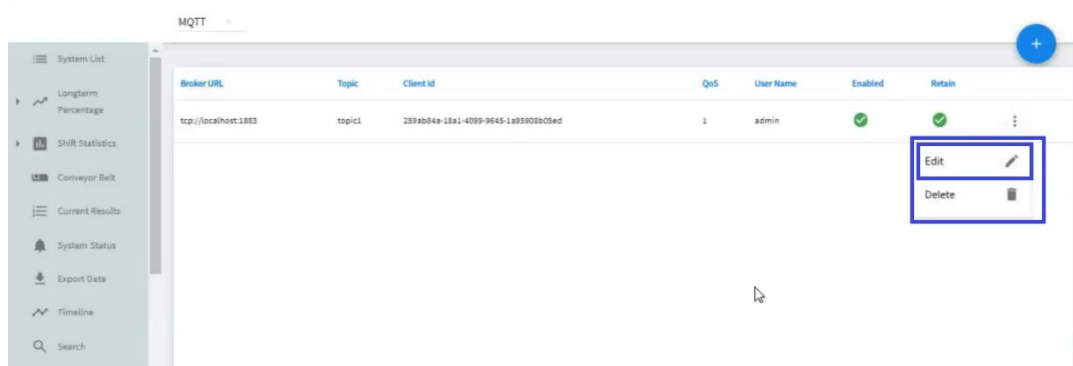


Figure 113: Edit Option

7. Edit MQTT window appears.
8. Update the changes and click the **SAVE** button



The screenshot shows the 'Edit MQTT' window. It contains the following fields and controls:

- Broker URL*: tcp://localhost:1883
- Topic*: topic1
- QoS*: 1
- User Name: admin
- Password: *****
- Enabled: ☒
- Retain: ☒
- CANCEL button
- SAVE button (highlighted with a blue box and a mouse cursor)

Figure 114: Edit MQTT

9. User can delete the MQTT feed by clicking on the vertical ellipsis  of the feed to be deleted.
10. Click on the Delete option

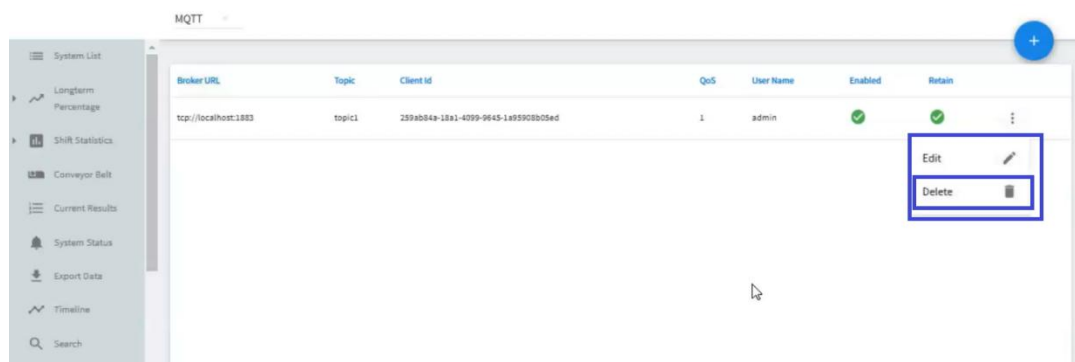


Figure 115: Delete Option

11. Delete MQTT confirmation dialog box appears
12. Click the **DELETE** button

13.2 Node-red

Node-red is an open-source utility programming tool which is integrated in application for wiring hardware devices together.

To integrate node-red feature, user need to have the node-red feature privilege in their assigned role and the uploaded license need to have the node-red feature.

To Navigate to node-red:

1. Click on the **Configuration** from left side menu list and select **Plugins** module from the list
2. Plugins Screen appears. There are two options from the drop-down located on top left of the screen that are **MQTT** and **Node-red**
3. Click on the Node-red option
4. Sometimes, node-red connection is not rendered and reasons for the failure are displayed on the screen
5. Click on the possible reason Node-red link

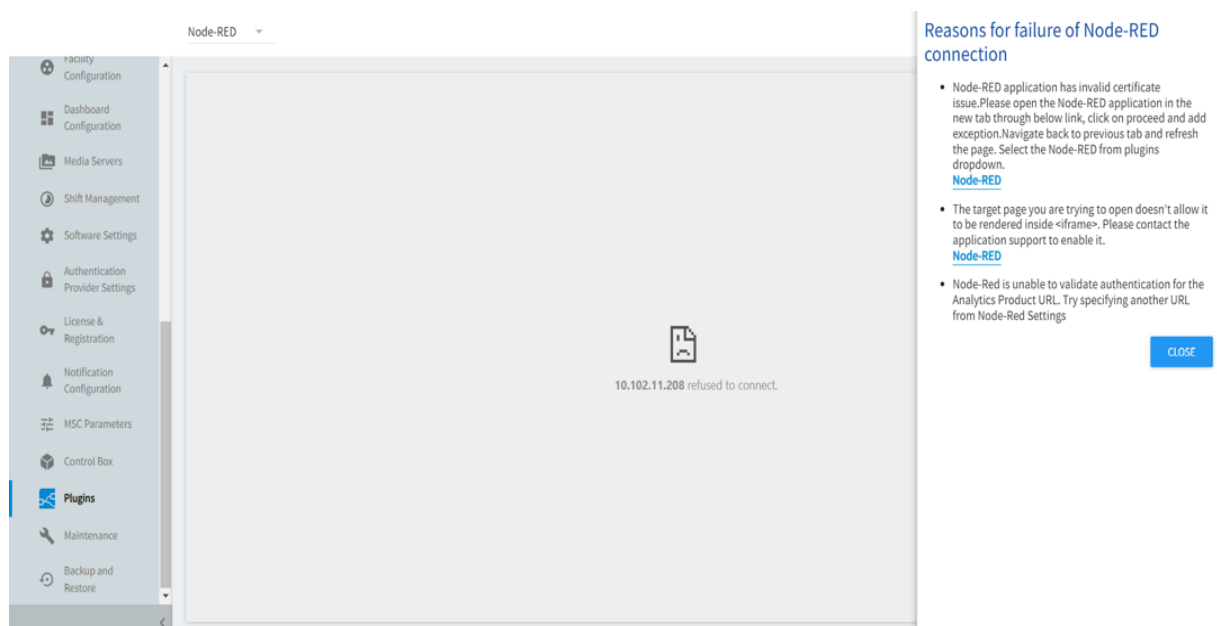
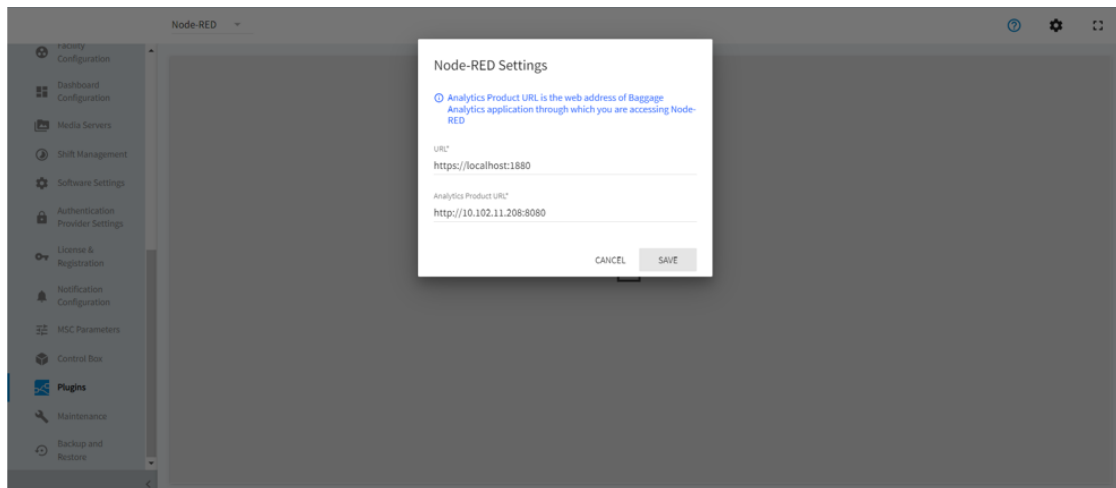


Figure 116: Node-red Connection Failure

6. Node-red screen displays settings, help and full screen icon
7. Click the settings icon 
8. Node-Red Settings window appears with following fields:
 - **URL:** Enter the URL of the server where node-red is running
 - **Analytics Product URL:** It is the web address of LA application through which node-red is accessed
9. Click the **SAVE** button

**Figure 117: Node-Red Settings**

10. Once the connection is established, user can view node-red successfully running screen

14 Software Settings

The **Software Settings** app lets you modify how Logistics Analytics (LA) stores data and log files. You can also configure LA user settings including time formats and units of measurement from here.

Note: Edit option for Software Settings is only available for the logged in Users having appropriate permissions. If you are not logged in or you do not have enough permissions, launching Software Settings page will not allow you to edit the settings.

14.1 Overview

To navigate to software settings, click the **Software Settings** from Left navigation pane of **Configuration Home** OR clicking **Software Settings app** on **Configuration** page. It will list settings for User Settings, Enterprise Settings, Guess Access Control and MQTT. Values without the configure arrow  are informational only and cannot be modified.

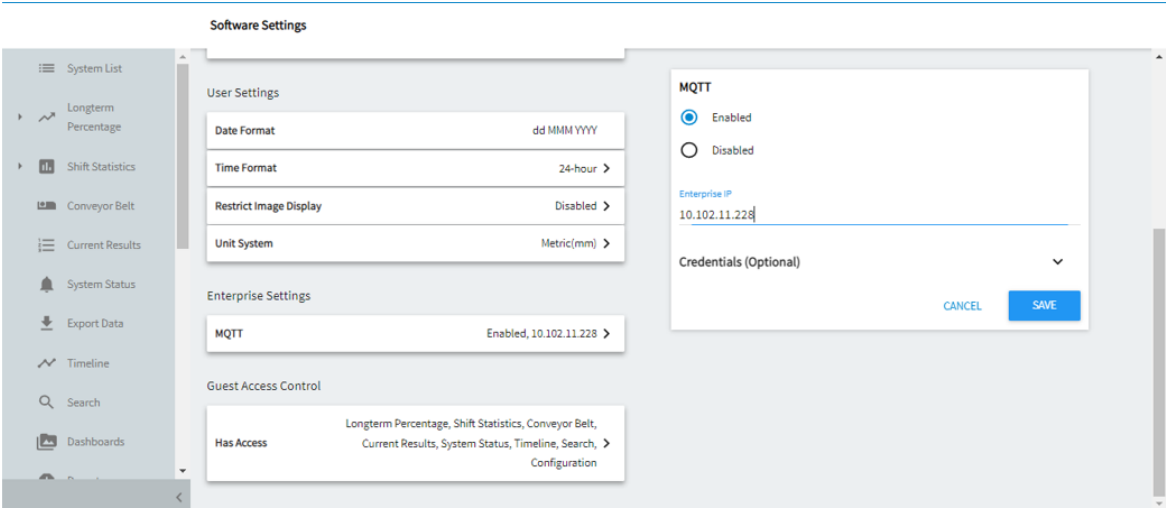


Figure 118: Software Settings Page

14.2 User Settings

User settings change the way LA displays information in the user interface.

Setting	Description
Date format	Informational only Shows data mask for dates
Time format	Select 12-hour or 24-hour time format for LA user screens.
Restrict Image Display	When Restrict Image Display setting is turned on, the user must have the 'View Images' privilege to view the image. When setting is turned off, images are shown to all users if available.
Unit system	Select unit of measure which is used for all user screens: Imperial or Metric(cm) or Metric(mm)

14.3 Enterprise Settings

In Enterprise Settings, user can modify the enterprise IP of the enabled enterprise protocol and click the Save button to save the enterprise settings.

14.4 Guest Access Control

User can provide guest access by clicking on ➤ icon and selecting the specific modules.

15 Authentication Provider Settings

Authentication provider settings allow you to choose an authentication method and configure its settings. Available methods include Database, Open LDAP, Active Directory, and OpenID.

All of these steps are achieved using the LA **Authentication Provider Settings** app.

Note: *Authentication Provider Settings page is only available for the logged in Users having appropriate permissions. If you are not logged in or you do not have enough permissions, you won't be able to access this page.*

15.1 Overview

To launch the Authentication Provider Settings app:

1. From the Configuration home page, click the Authentication Provider Settings app. OR

On the Configuration tool navigation pane, click



2. The Authentication Provider Settings page is displayed.

Authentication Provider Settings

Current Authentication Provider: Database

LDAP Type*
Active Directory

Url*
ldap://10.102.11.192:389

Distinguished name (dn)*
dc=sickad,dc=com

Search Filter
(&(objectClass=user)(userPrincipalName={0}))

Authentication options

☒ LDAP
☐ Database
☐ OPENID

VERIFY SETTINGS SAVE

Figure 119: Authentication Provider Settings Page

3. The authentication options LDAP and Database are displayed at the Right-hand side of the page. The current authentication method is selected by default.
4. The middle pane displays the settings of the selected authentication mechanism.
5. To change the Authentication mechanism, navigate to Authentication Provider Settings page.

15.2 Switch to Active Directory Authentication

1. Select the LDAP radio button from the Right-hand side.
2. Select Active Directory option from the 'LDAP Type' dropdown.

Current Authentication Provider: Database

OpenLDAP
Active Directory

ldap://10.102.11.192:389

Distinguished name (dn)*
dc=sickad,dc=com

Search Filter
(&(objectClass=user)(userPrincipalName={0}))

Authentication options

☒ LDAP
☐ Database
☐ OPENID

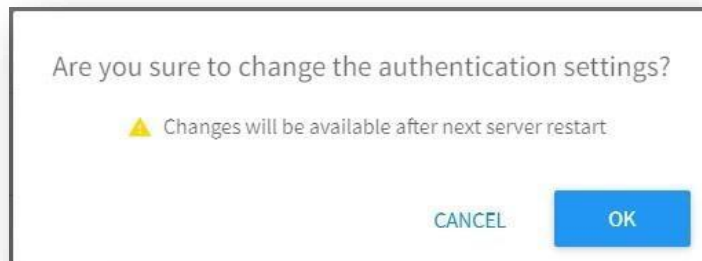
VERIFY SETTINGS SAVE

Figure 120: Active Directory Option

3. Enter URL of the Active Directory server.
4. Enter Distinguished Name, Username and Password.
5. Enter 'Search Filter' if you want to select users which are within the requested scope of DN i.e., Distinguished Name.
6. Click on 'Verify Settings' button .
7. If all the values entered are valid, clicking on 'Verify Settings' button will display a snackbar message 'LDAP Connection is successful' and 'SAVE' button will be enabled.
8. If any of the field is incorrect, the connection will be failed and a proper snack bar message will be displayed.

LDAP connection failed. Please check the LDAP properties.

- Click on 'SAVE' button. A confirmation pop-up will be displayed.



- Click on 'OK' button. The changes will be saved and a success snack bar message will be displayed.
- These settings will take effect only when the services are restarted. A message in red will be displayed at the top of the page unless you restart the application services.

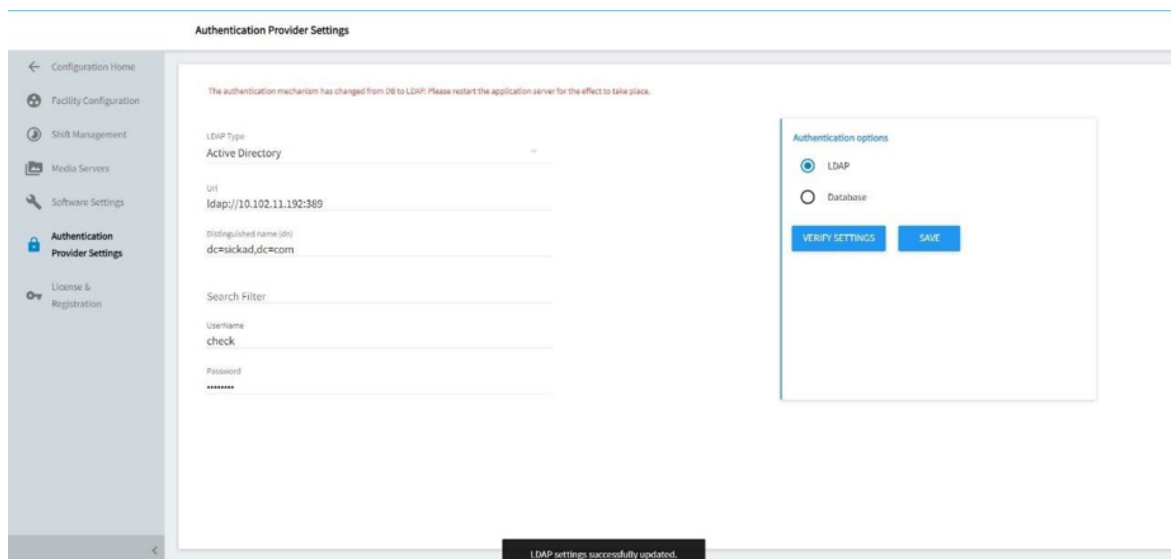
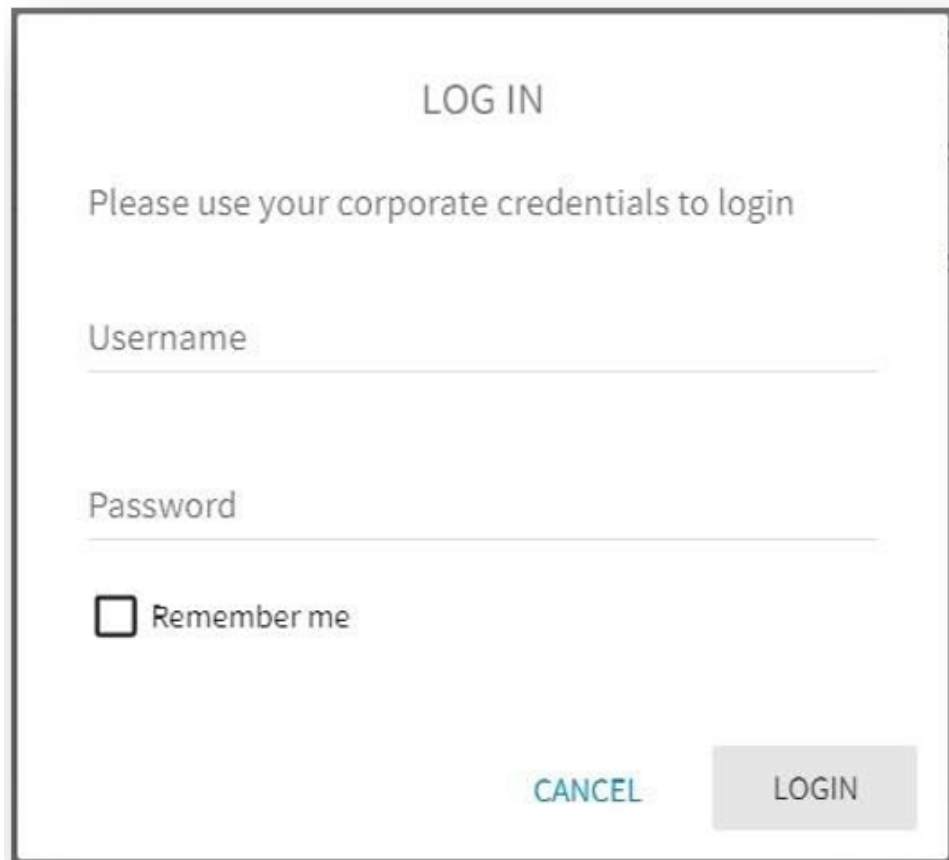


Figure 121: Service Restart Required

- Once you restart the application services, you will be able to login to the application using your Active Directory Credentials. Also, the message in red will disappear. Refer [How to Restart Services](#) for more details.
- If the AD group already exists in LA, the newly logged in user will be added to that AD group. If the AD group does not exist user will be added to the default group.



LOG IN

Please use your corporate credentials to login

Username

Password

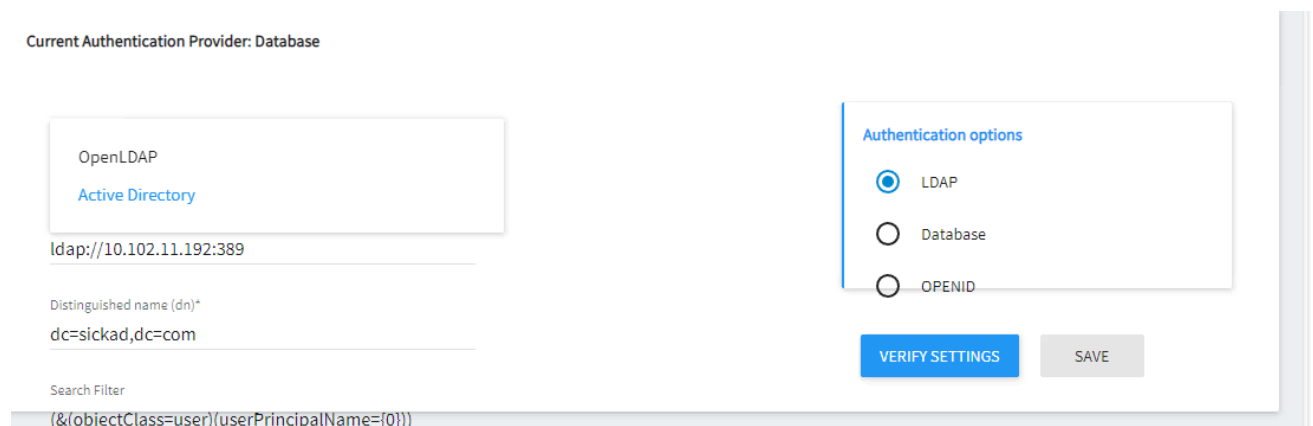
☐ Remember me

CANCEL LOGIN

Figure 122: Login with Corporate Credentials

15.3 Switch to Open LDAP Authentication

1. Select the LDAP radio button from the Right-hand side.
2. Select OpenLDAP option from the 'LDAP Type' dropdown.



Current Authentication Provider: Database

OpenLDAP
Active Directory

ldap://10.102.11.192:389

Distinguished name (dn)*
dc=sickad,dc=com

Search Filter
(&(objectClass=user)(userPrincipalName={0}))

Authentication options

☒ LDAP
☐ Database
☐ OPENID

VERIFY SETTINGS SAVE

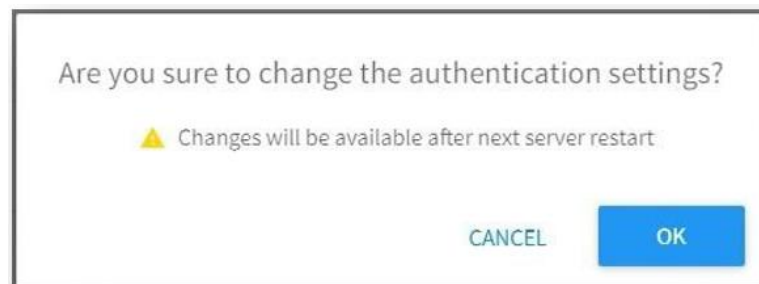
Figure 123: OpenLDAP Option

3. Enter URL of the OpenLDAP Server.
4. Enter Distinguished Name, Username and Password.
5. Enter 'Search Filter' if you want to select users which are within the requested scope of Distinguished Name.

6. Click on 'Verify Settings' button .
7. If all the values entered are valid, clicking on 'Verify Settings' button will display a snackbar message 'LDAP Connection is successful' and 'SAVE' button will be enabled.
8. If any of the field is incorrect, the connection will be failed and a proper snack bar message will be displayed.

LDAP connection failed. Please check the LDAP properties.

9. Click on 'SAVE' button. A confirmation pop-up will be displayed.



10. Click on 'OK' button. The changes will be saved and a snack bar message will be displayed.
11. These settings will take effect only when the services are restarted. A message in red will be displayed at the top of the page unless you restart the services. Refer [How to Restart Services](#) for more details.
12. Once you restart the services, you will be able to login to the application using OpenLDAP Credentials. Also, the message in red will disappear.

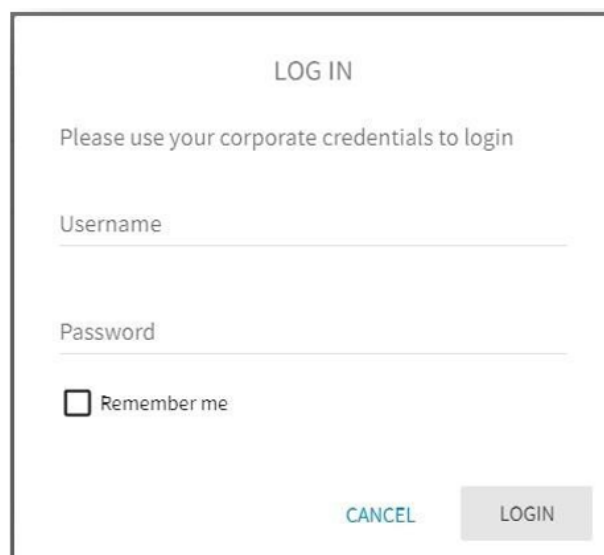


Figure 124: Login screen-LDAP

15.4 Switch to Database Authentication

1. Select the Database radio button from the Right-hand side.
2. Application will display the current Database Settings by default filled in. Editing is disabled and you cannot modify the DB settings.

Current Authentication Provider: Database

Database name
MySQL

Host
127.0.0.1

Port
8406

Username

Authentication options

☐ LDAP

☒ Database

☐ OPENID

SAVE

Figure 125: Active Directory Option

3. Click on 'SAVE' button. A confirmation pop-up will be displayed.

Are you sure to change the authentication settings?

⚠ Changes will be available after next server restart

CANCEL

OK

4. Clicking on 'CANCEL' button will close the pop-up.
5. Click on 'OK' button. The changes will be saved.
6. These settings will take effect only when the services are restarted. A message in red will be displayed at the top of the page unless you restart the services. Please refer [Appendix B](#) for steps to restart windows services.

Authentication Provider Settings

The authentication mechanism has changed from LDAP to DB. Please restart the application server for the effect to take place.

Database name
sick_ep_login

Host
127.0.0.1

Port
8406

Username
sick_ep_user

Password
password

Authentication options

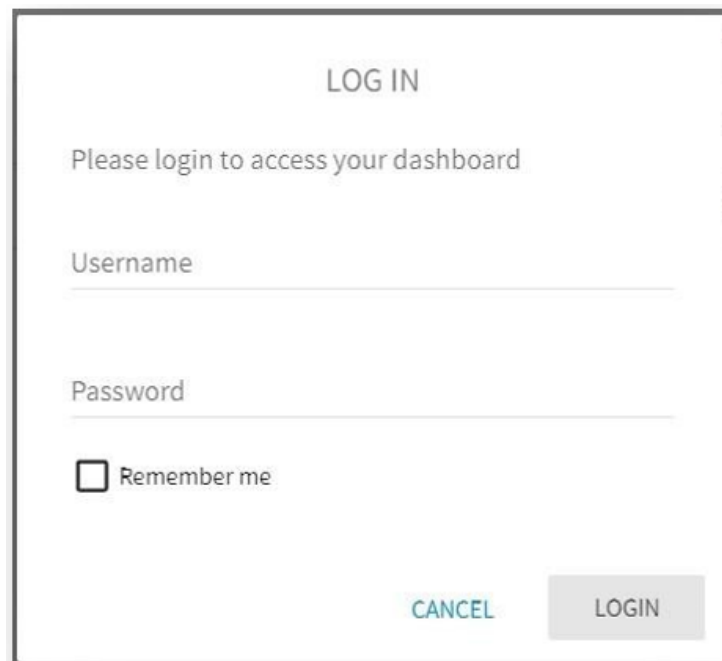
☐ LDAP

☒ Database

SAVE

Figure 126: Changes saved and Service Restart Required

7. Once you restart the services, you will be able to login to the application using your Database Credentials. Also, the message in red will disappear.



A login form titled "LOG IN" with a subtitle "Please login to access your dashboard". It contains two input fields: "Username" and "Password". Below the password field is a checkbox labeled "Remember me". At the bottom right, there are two buttons: "CANCEL" (in teal text) and "LOGIN" (in a grey button).

LOG IN

Please login to access your dashboard

Username

Password

☐ Remember me

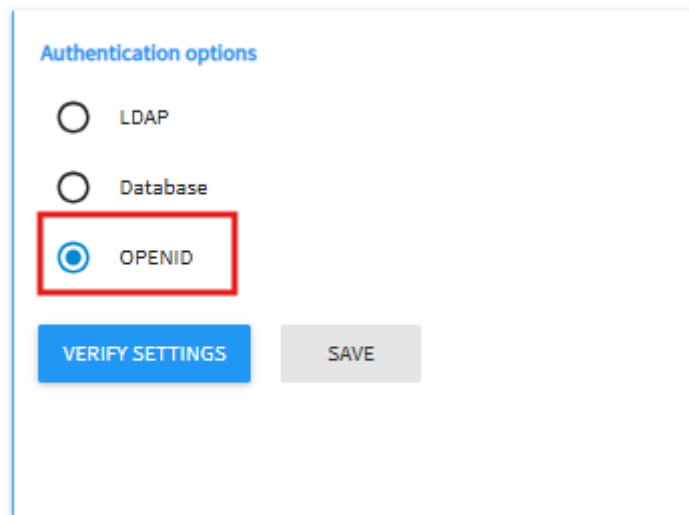
CANCEL LOGIN

Figure 127: Login Screen-Database

15.5 Switch to OpenID Authentication

This section provides instructions on how to configure and switch to OpenID authentication, allowing users to log in using OpenID credentials. The OpenID authentication method supports two verification mechanisms: Client Secret and JWT Assertion.

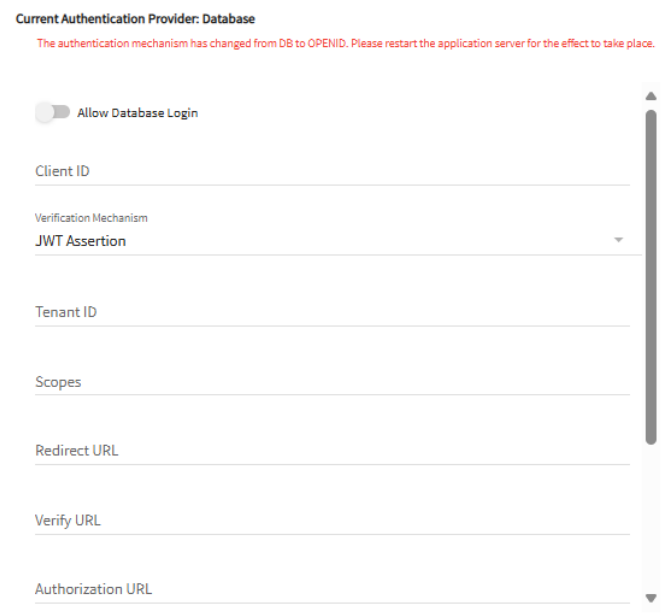
1. Select the **OpenID** radio button from the right-hand side under **Authentication Options**.



The image shows a configuration panel titled "Authentication options". It contains three radio buttons: "LDAP", "Database", and "OPENID". The "OPENID" radio button is selected and highlighted with a red rectangular box. Below the radio buttons are two buttons: "VERIFY SETTINGS" (blue) and "SAVE" (grey).

Figure 133: Authentication Options with OpenID Selected

2. The **OpenID configuration fields** are displayed in the middle pane.



The image shows a configuration panel for OpenID. At the top, it says "Current Authentication Provider: Database" and a red message: "The authentication mechanism has changed from DB to OPENID. Please restart the application server for the effect to take place." Below this is a toggle switch for "Allow Database Login" which is turned off. The main section contains several input fields: "Client ID", "Verification Mechanism" (a dropdown menu currently showing "JWT Assertion"), "Tenant ID", "Scopes", "Redirect URL", "Verify URL", and "Authorization URL". A vertical scrollbar is on the right side of the input fields.

Figure 134: OpenID Configuration Fields

3. Fill in the following fields):
 - **Allow Database Login** – Turn this on if users should also be allowed to log in using database credentials.
 - **Client ID** – Enter the client ID provided by your OpenID provider.
 - **Verification Mechanism** – Choose the appropriate verification method:
 - **Client Secret**: If selected, the **Client Secret** field appears. Enter the secret value provided by your OpenID provider.
 - **JWT Assertion**: If selected, the **Tenant ID** field appears. Enter the tenant or realm ID as required by your OpenID provider.
 - **Scope** – Specify the scope required for authentication.
 - **Redirect URL** – Enter the URL where the OpenID provider will redirect after authentication.
 - **Verify URL** – Enter the URL for the OpenID provider's configuration endpoint.
 - **Authorization URL** – Enter the URL for the OpenID provider's authorization endpoint.
 - **Token URL** – Enter the URL for the OpenID provider's token endpoint.
 - **JWK URL** – Enter the URL for the OpenID provider's JSON Web Key Set (JWKS) endpoint.
 - **Logout URL** – Enter the URL for the OpenID provider's logout endpoint.
4. Select **VERIFY SETTINGS**.

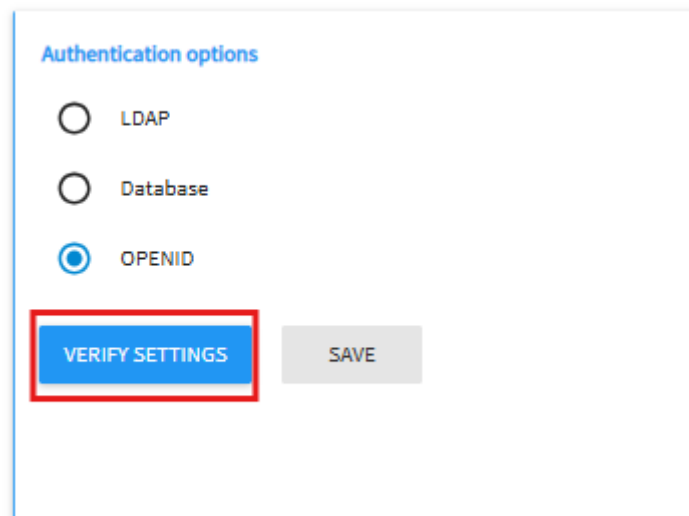
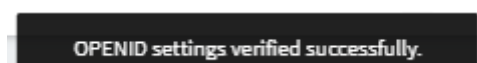
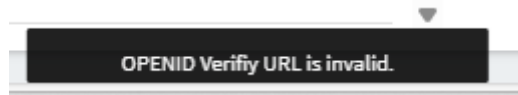


Figure 135: Verify Settings Button

5. If the settings are valid, a snackbar message confirms that the connection is successful. The **SAVE** button becomes enabled.



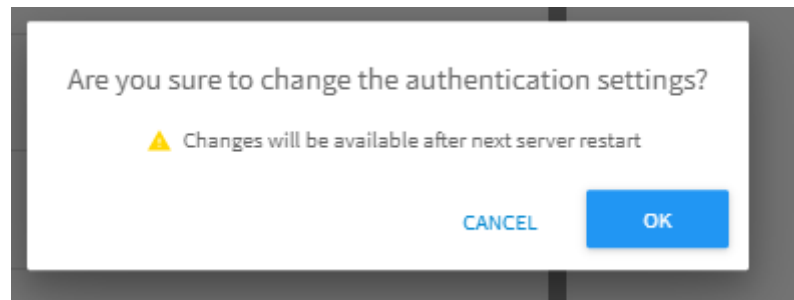
6. If any of the entered details are incorrect, a snackbar message is displayed indicating the error.



In this case, the **SAVE** button will remain disabled. Correct the input details and select **VERIFY SETTINGS** again.

7. Select **SAVE**.
8. A confirmation popup appears with the message:

Select **OK** to confirm or **CANCEL** to exit.



9. A red banner appears at the top of the page, prompting you to restart the services.

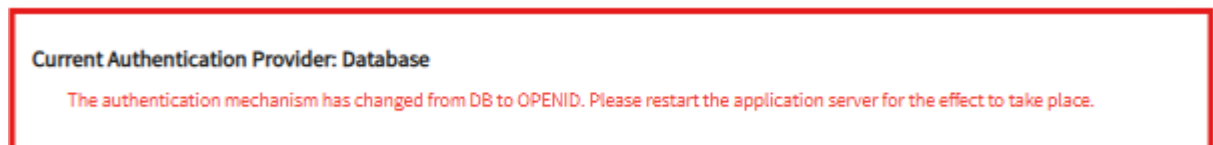


Figure 136: Restart Services Banner

10. Restart the application services. For more information, refer to *How to Restart Services*.
11. After the restart:
 - Users can log in using their OpenID credentials.

LOG IN

Please login to access your dashboard

LOG IN WITH ENTRA ID

OR

Username
abc

Password
...

☐ Remember me

CANCEL LOGIN

Figure 137: Login Screen - OpenID

16 Notification Configuration

You can configure Notification Configuration Servers and Events from **Notification Configuration** page. On navigation to Notification Configuration, application will display two tabs **Notification Config** and **Server Config**.

You can configure **Health Event Notifications**, **Performance Event Notifications** and **Summary Event Notifications** under **Notification Config** screen.

Please note that this is a **licensed feature** and is only available if it is enabled from the License.

The SMS and E-mail servers can be configured from **Server Config** screen. Once the SMS and E-mail server settings are correctly configured, and you have subscribed to a notification, you will start receiving the events notification based on the configuration and frequency. For example: If you subscribed for a Performance events e-mail notification for which the frequency is set to 1 minute, then you will receive the notification e-mail every minute for the Performance events generated.

```

End of HOURLY SUMMARY,
System: System 01,
Start:2020-03-19 12:00:00,
End:2020-03-19 12:59:59,
Volume:500,

Statistic Summary
Statistic Name:InfoBarcode Stat(InfoBarcode-BLC)
Read Rate:0
Expected Read Rate:80.0

Statistic Name:Ref Stat(Ref-BLC)
Read Rate:1
Expected Read Rate:80.0

Statistic Name:ValidWeight Stat(ValidWeight-OLC)
Read Rate:1
Expected Read Rate:80.0

Statistic Name:Shape Stat(Shape-OLC)
Read Rate:2
Expected Read Rate:80.0

```

Figure 128: Notification Email

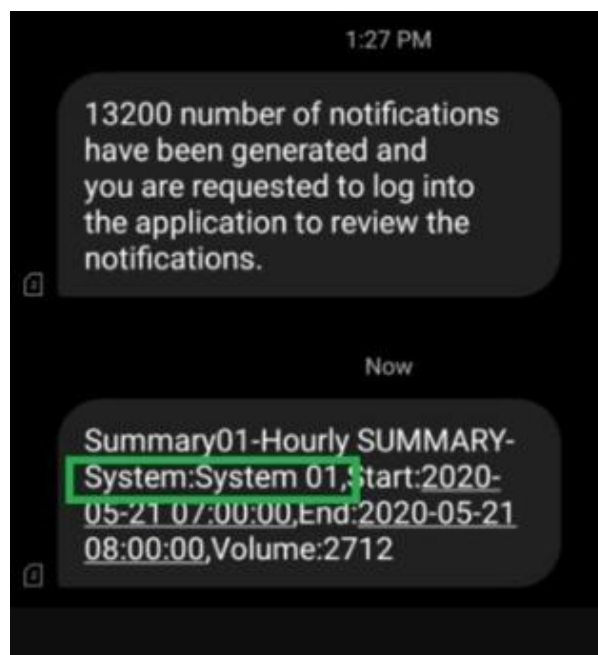


Figure 129: SMS Notification

The Health Event notification email provides a link to navigate to the System Status page of the System for which the Health Event notification is generated. Refer image below:

```

4 Error health event(s) occurred in system System 04
Please click the link to view additional details
http://localhost:8080/system-status?systemName=04

```

Figure 130: Health Event Notification

The e-mail contains a link for localhost which will work only if the application is locally installed. If your application is installed on a different machine, you need to make few changes in the application services properties file in order to display the server address instead of localhost.

In services_application.properties file, update following values:

Key	Current/Default Value	Updated Value
http.externalUrl	http://localhost:8080	http://<IPAddress>:8080
https.externalUrl	https://localhost:8443	https://<IPAddress>:8443

Table 6: Application Properties

Note: This Notification configuration is not implemented for System groups. So, if the System is assigned to a System Group, the Notification and Configuration may not work properly.

Also, the subject line of the e-mail depends on the Notification Type. If multiple notifications are set with same frequency, all the notification will get collated and sent in an e-mail with a generic subject line.

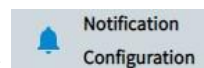
16.1 Overview

To launch the Notification Config page:

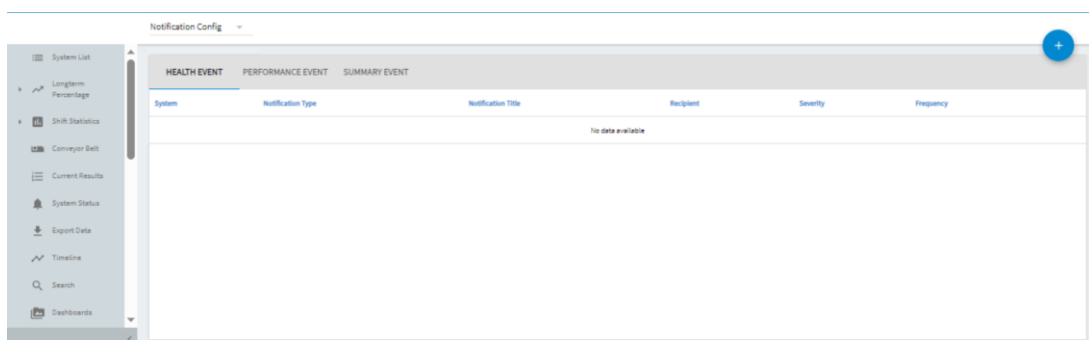
1. From the Configuration home page, click the Notification Configuration app.

OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page will be displayed. From here you can add/edit/delete Health Events, Performance Events and Summary Events.

**Figure 131: Notification and Server Config page**

To launch the **Server Config** page:

2. The **Notification Configuration** page is displayed with three options **Notification Config**, **Server Config** and **Notification Logs** at the top of the page.

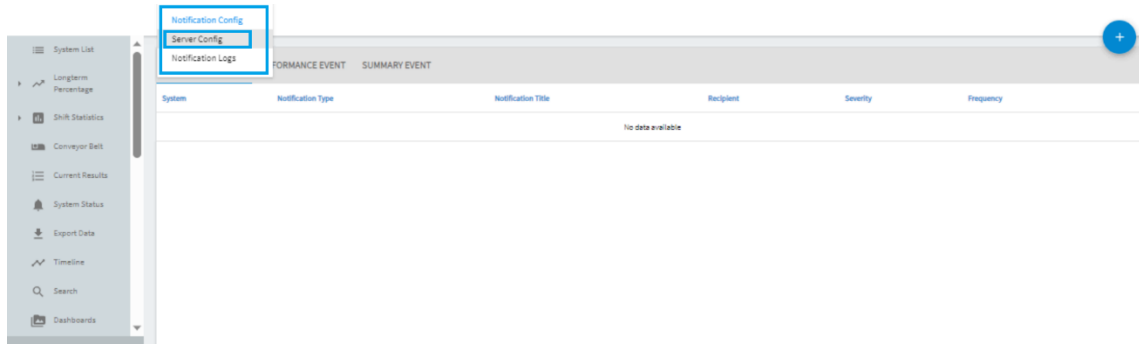


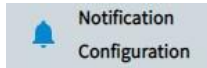
Figure 132: Server Config link

3. Click on **Server Config** link. Application will navigate you to SMS Settings page. This page will allow you to configure SMS and E-mail Server Settings.

16.2 SMS Settings

To launch the **Server Config** page:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click  . The **Notification Configuration** page is displayed.

2. Click on **Server Config** link. Application will navigate you to SMS Settings page. This page will display fields for SMS Sender, SMS Provider, Client ID, Maximum Characters and Secret text fields along with a SAVE button to save the changes and a SMS Notification Enabled toggle button to enable/disable the SMS notifications.

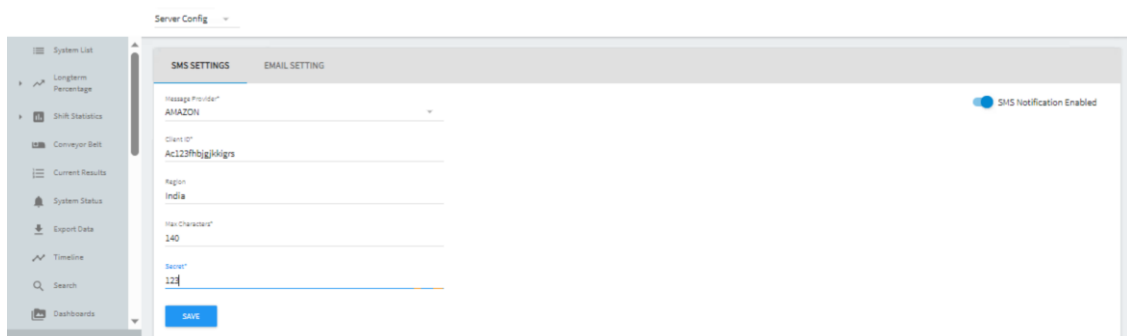


Figure 133: SMS Settings

3. Select any one of the **SMS Provider**, **AMAZON** or **TWILIO**.

AMAZON

TWILIO

4. On selecting Amazon, you will have SMS Sender, Client ID, Maximum characters and **Secret** fields.
5. Enter **SMS Sender** i.e., the phone number with Country code preceding with +.
6. Enter Client ID
7. Enter **Maximum characters** i.e., the number of characters to be allowed in SMS
8. Enter **Secret** provided by the Service Provider while creating the account.
9. Hit **SAVE** button.
10. Application will display a confirmation pop-up with a **CANCEL** and **OK** button.

Please Confirm

 Are you sure to change the SMS Settings ?

CANCEL

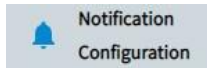
OK

11. Click on OK button to save the changes.
12. Application will display a success snack bar message if the settings are successfully saved.
13. Application will display error in the snack bar message in case of error while saving.
14. If you have selected **AMAZON** in Step 3, you will have to provide value for an additional field **Region**.
15. You can also enable/disable SMS Notifications by clicking the **SMS Notification Enabled** toggle button.

16.3 Email Settings

To launch the **Server Config** page:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click  . The **Notification Configuration** page is displayed.

2. Click on **Server Config** link.
3. Click on EMAIL SETTING tab.
4. Application will navigate you to EMAIL SETTING page. This page will display fields for **Host**, **Sender mail address**, **Username**, **Password**, **Port** fields along with toggle button for **Mail Authentication Enabled** and **TLS Enabled** and a **SAVE** and **TEST CONNECTION** button.
5. Enter Host.

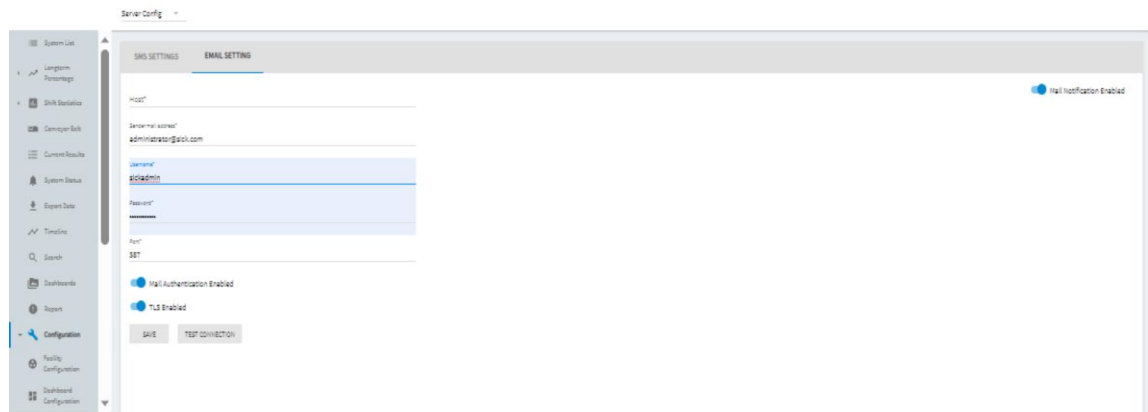


Figure 134: EMAIL Settings

6. Enter Sender mail address.
7. Enter Username.
8. Enter Password.
9. Enter Port.
10. Enable toggle button for **Mail Authentication Enabled** if you want mail authentication to be enabled.
11. Enable **TLS Enabled** if you want TLS protocol to be enabled for end-to-end communications security.
12. Click on **TEST CONNECTION** button to test the connection.
13. Once the **TEST CONNECTION** is successful, **SAVE** button will get enabled.
14. Click on **SAVE** button to save the settings.
15. Application will display a confirmation pop-up with a **CANCEL** and **OK** button.
16. Click on OK button to save the changes.
17. Application will display a success snack bar message if the settings are successfully saved.
18. Application will display error in the snack bar message in case of error while saving.
19. You can also enable/disable Email Notifications by clicking the **Mail Notification Enabled** toggle button.

16.4 Health, Performance and Summary Events Overview

In order to receive the event notifications, you need to configure Health Event Notification, Performance and Summary Events Notifications from Notification Config screen.

Health Event Notifications notifies subscriber about the Health of the System by sending the notifications about errors and warning based on the configuration and settings.

Performance Event Notifications notifies subscriber about the performance of the System by sending the notifications about read rate fell below expected, consecutive NoReads and moving average Read rate deviations based on the configuration and settings.

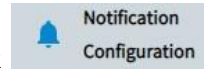
Summary Event Notifications provides the subscriber a summary of the notification generated on Hourly OR at End of Sort based on the configuration and settings.

16.5 Add Health Event

To add the **HEALTH EVENT**:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page with **HEALTH EVENT** tab as active will be displayed.

2. Click on the **Add icon**  at the top right corner.

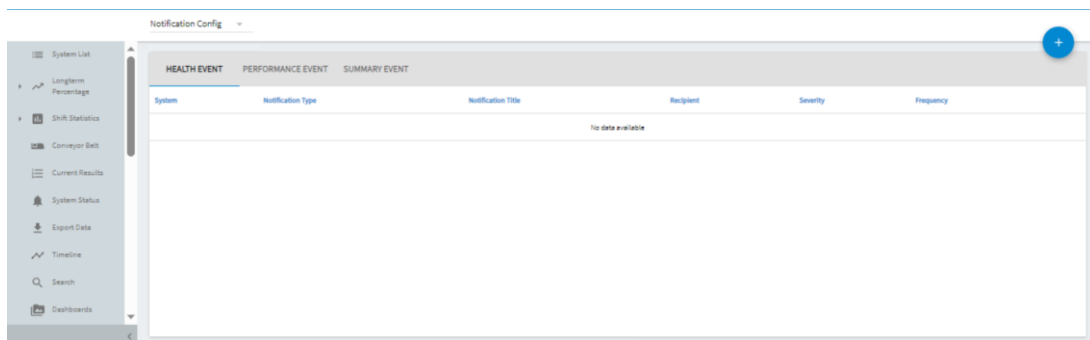
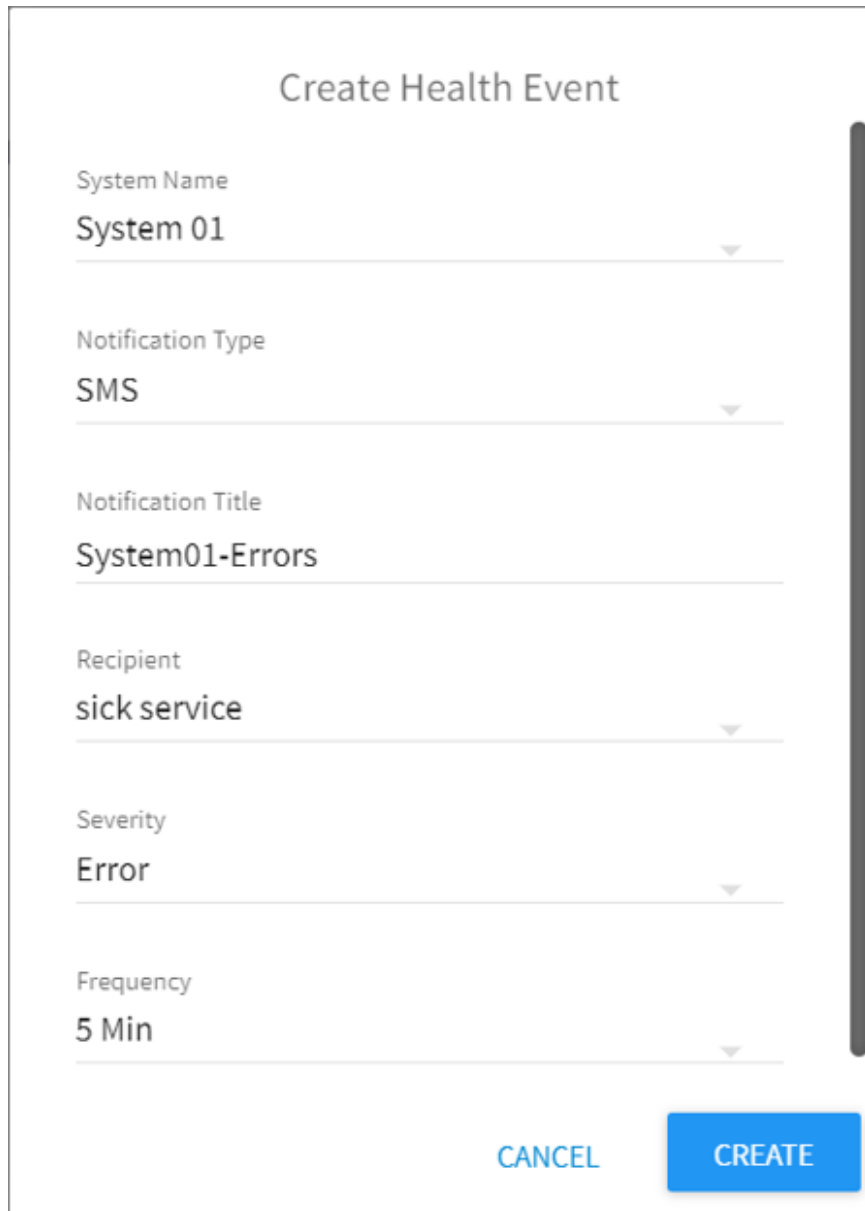


Figure 135: HEALTH EVENTS page

3. Application will open **Create Health Event** screen having following fields **System Name** dropdown, **Notification Type** dropdown, **Notification Title** field, **Recipients** dropdown, **Severity** dropdown and **Frequency** dropdown. All fields are required.



Create Health Event

System Name
System 01

Notification Type
SMS

Notification Title
System01-Errors

Recipient
sick service

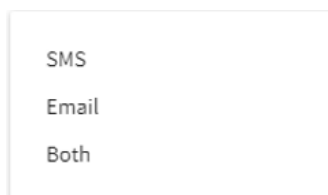
Severity
Error

Frequency
5 Min

CANCEL CREATE

Figure 136: Create Health Event

4. Select System for which you want to configure the Health Notifications from **System Name** dropdown.
5. Select **Notification Type** as **SMS** OR **EMAIL** OR select **BOTH** option if you want the notification over email and SMS both.



SMS
Email
Both

6. Enter Notification Title.
7. Select **Recipient** from the Recipients dropdown. You can select multiple recipients. Please note that the Recipients dropdown have groups as option. All the users associated with the selected groups will receive the notifications.

8. Select **Severity** from **All Severity, Fatal Error, Error, Warning, Information** option for the notification you want to be notified.

All Severity
Fatal Error
Error
Warning
Information

Select Frequency from 1 Min, 5 Min, 10 Min options for the notification frequency.

1 Min
5 Min
10 Min

9. Once all the field is entered, CREATE button will get enabled.
10. Click on CREATE button. Application will display a success snack bar message on successful creation and the Health Event will get listed on the **HEALTH EVENTS** page.

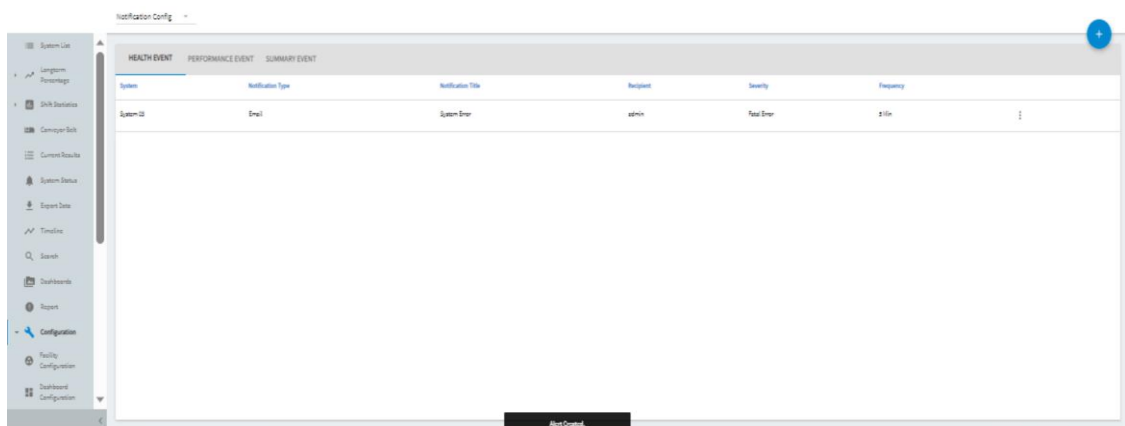
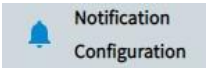


Figure 137: Health Events Created

16.6 Edit Health Event

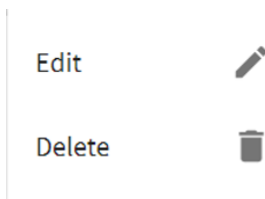
To edit the **HEALTH EVENT**:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click  .

The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed listing all the health events.

2. Click on the vertical ellipsis  icon in front of the Health Event. **Edit** and **Delete** option will be displayed.



3. Click on **Edit** option.
4. Application will open **Edit Health Event** page.

A form titled 'Edit Health Event' with several dropdown menus. The fields are: System Name (System 02), Notification Type (Email), Notification Title (System 02-Error Email Notification), Recipient (sick service), Severity (Error), and Frequency (1 Min). At the bottom right are 'CANCEL' and 'SAVE' buttons. A vertical scrollbar is on the right side of the form.

System Name

System 02

Notification Type

Email

Notification Title

System 02-Error Email Notification

Recipient

sick service

Severity

Error

Frequency

1 Min

CANCEL SAVE

Figure 138: Edit Health Event Dialog

5. Make changes and click on **SAVE** button.
6. Application will display a success snack bar message on successful save and the Health Event will get updated on the **HEALTH EVENTS** page.

16.7 Delete Health Event

To delete the **HEALTH EVENT**:

1. From the Configuration home page, click the Notification Configuration app.

OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed listing all the health events.

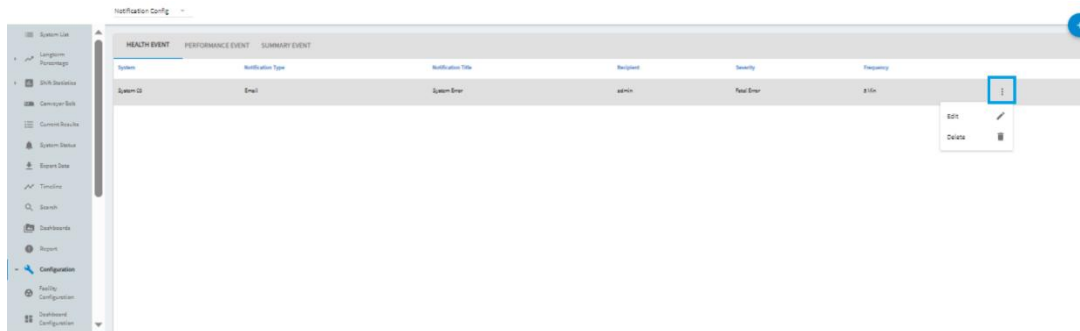
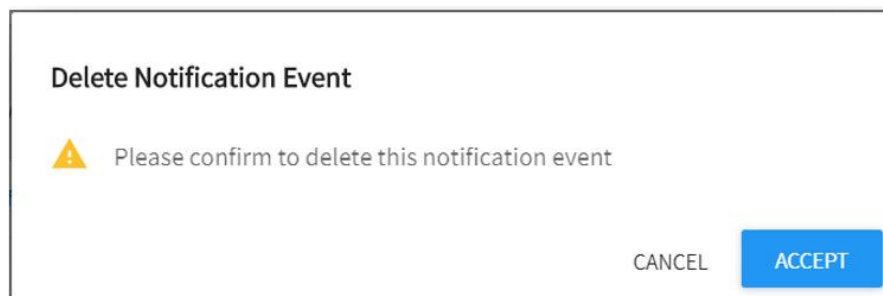


Figure 139: 3 dot icon

2. Click on the vertical ellipsis  icon in front of the Health Event. **Edit** and **Delete** option will be displayed.
3. Click on **Delete** option.
4. Application will display a confirmation pop-up with a CANCEL and ACCEPT button.



5. Click on ACCEPT button.
6. Application will display a success snack bar message on successful delete and the **HEALTH EVENTS** page will get updated.

Notification Delete Success.

16.8 Add Performance Event

To launch the **Server Config** page:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

2. Click on the **PERFORMANCE EVENT** tab next to HEALTH EVENT tab.
3. Click on the **Add icon** at the top right corner.

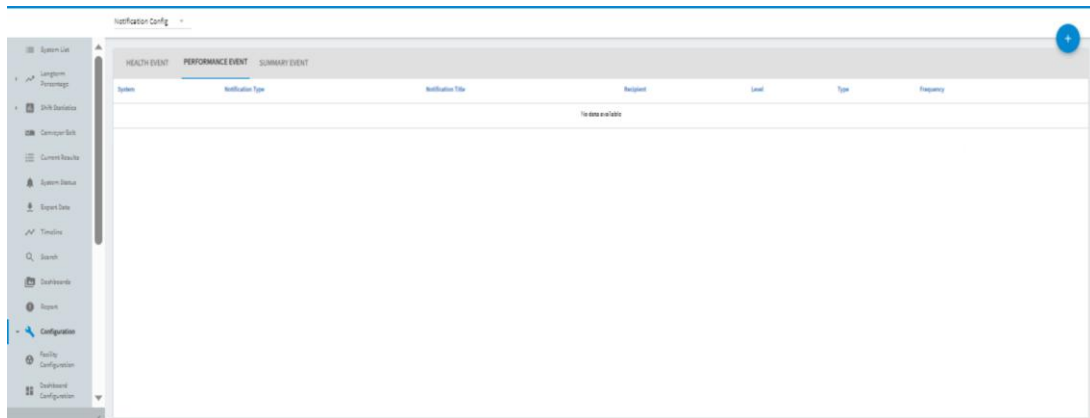


Figure 140: Performance Event

4. Application will open **Create Performance Event** screen containing the following fields **Notification Type** dropdown, **Notification Title** field, **Recipients** dropdown, **System Name** dropdown, **Level** dropdown and **Type** dropdown. All fields are required.

Create Performance Event

Notification Type

SMS

Notification Title

System 01- System Stat Performance Notification

Recipient

sick service

System Name

System 01

Level

System

Type

Stat Fell Below Expected

CANCEL
CREATE

Figure 141: Create Performance Event Dialog

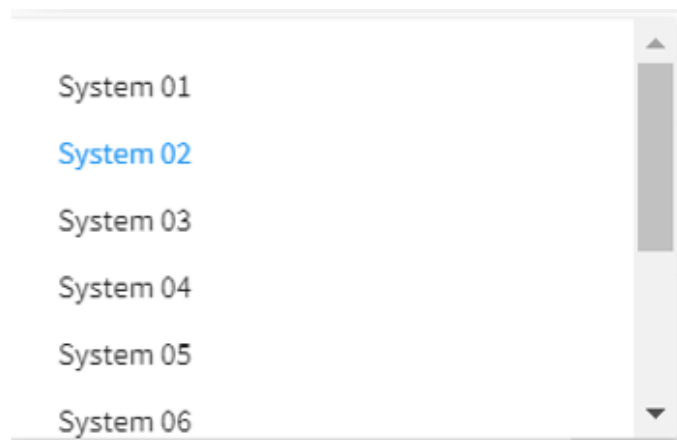
5. Select **Notification Type** as **SMS** OR **EMAIL** OR select **BOTH** option if you want the notification over email and SMS both.

SMS

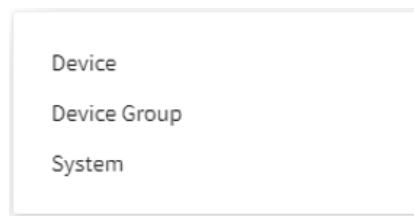
Email

Both

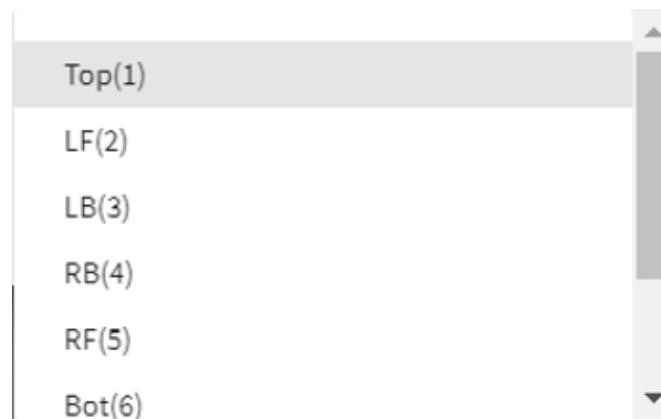
6. Enter Notification Title.
7. Select **Recipient** from the Recipients dropdown. You can select multiple recipients. Please note that the Recipients dropdown have groups as option. All the users associated with the selected groups will receive the notifications.
8. Select System for which you want to configure the Health Notifications from **System Name** dropdown.



9. On selecting **System Name**, **Level** dropdown will get enabled. Select **Level** from **Device**, **Device Group** and **System**.



10. On selecting **Device** from the **Level** dropdown, a dropdown for **Device** listing all the Devices will be displayed.



Similarly, on selecting **Device Group** from the **Level** dropdown, a dropdown for **Device Group** listing all the Device Groups will be displayed.

CLV Device Group

Camera Device Group

11. Select **Device** OR **Device Group** for which you want to receive the notifications
12. Select Type from Type dropdown having options Stat Fell Below Expected, Consecutive No Read Limit Exceeded and Moving Avg Read Rate Deviation

Stat Fell Below Expected

Consecutive No Read Limit Exceeded

Moving Avg Read Rate Deviation

13. Select **Frequency** from **1 Min**, **5 Min**, **10 Min** options for the notification frequency.

1 Min

5 Min

10 Min

14. Once all the fields are entered, **CREATE** button will get enabled.
15. Click on **CREATE** button. Application will display a success snack bar message on successful creation and the Performance Event will get listed on the **PERFORMANCE EVENTS** page.

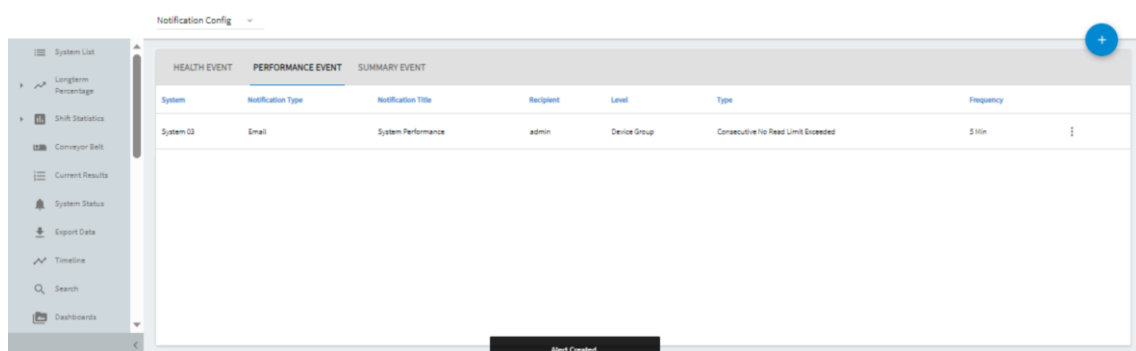


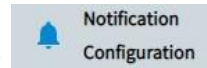
Figure 142: Performance Event Created

16.9 Edit Performance Event

To edit the PERFORMANCE EVENT:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

- Click on the **PERFORMANCE EVENT** tab next to **HEALTH EVENT** tab and navigate to **PERFORMANCE EVENT** page.

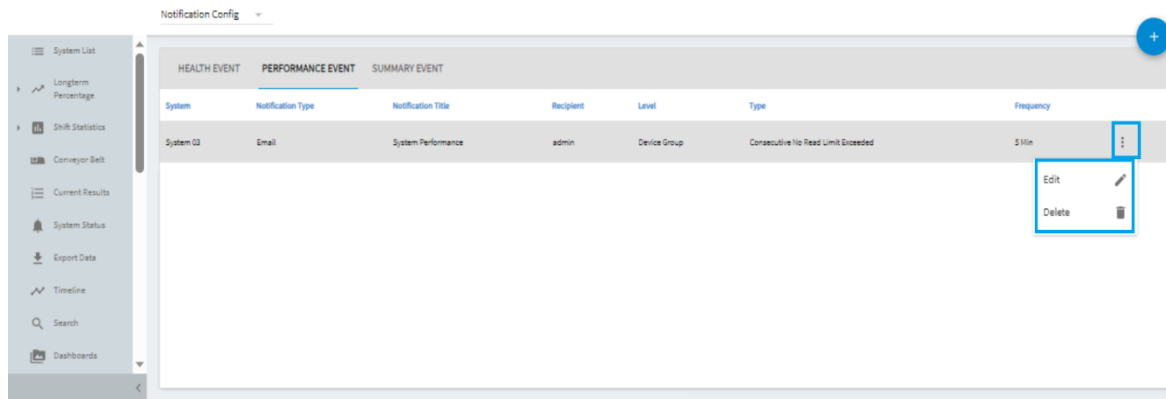


Figure 143: 3 dot icon

- Click on the vertical ellipsis icon in front of the Performance Event. **Edit** and **Delete** options will be displayed.
- Click on **Edit** option.
- Application will open **Edit Performance Event** screen.

Edit Performance Event

Notification Type: **Email**

Notification Title: **System Performance**

Recipient: **administrators**

System: **System 03**

Level: **Device Group**

Type: **Consecutive No Read Limit Exceeded**

CANCEL **SAVE**

Figure 144: Edit Performance Event Dialog

6. Make changes and click on **SAVE** button.
7. Application will display a success snack bar message on successful save and the Performance Event will get updated on the **PERFORMANCE EVENTS** page.

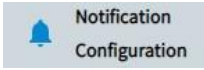
Notification Update Success.

16.10 Delete Performance Event

To delete the PERFORMANCE EVENT:

1. From the Configuration home page, click the Notification Configuration app.

OR

On the Configuration tool navigation pane, click  .

The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

2. Click on the **PERFORMANCE EVENT** tab next to HEALTH EVENT tab and navigate to **PERFORMANCE EVENT** page.

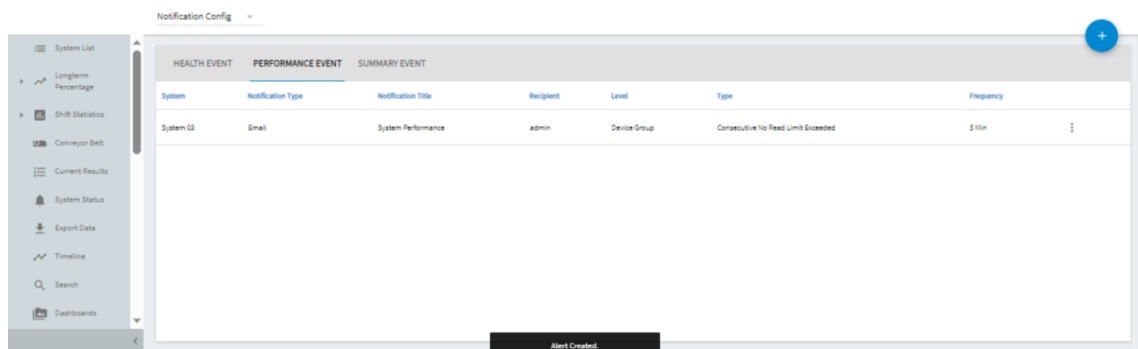
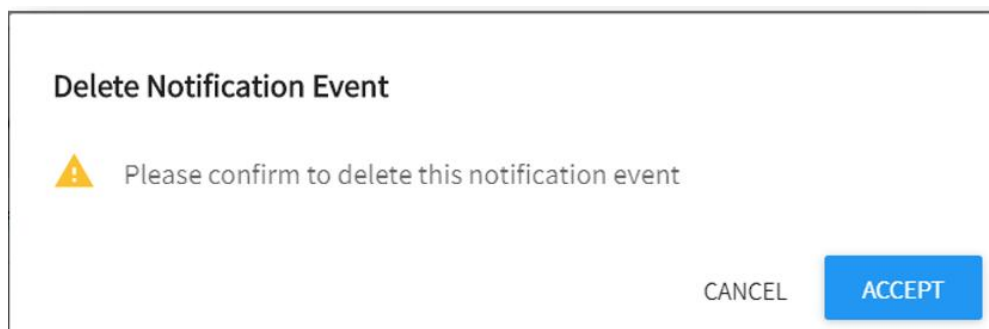


Figure 145: Performance Event Created

3. Click on the vertical ellipsis  icon in front of the Performance Event. **Edit** and **Delete** option will be displayed.
4. Click on **Delete** option.
5. Application will display a confirmation pop-up with a CANCEL and ACCEPT button.



6. Click on **ACCEPT** button.
7. Application will display a success snack bar message on successful delete and the **PERFORMANCE EVENTS** page will get updated.

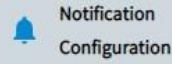
Notification Delete Success.

16.11 Add Summary Event

To launch the **Server Config** page:

1. From the Configuration home page, click the Notification Configuration app. OR

On the Configuration tool navigation pane, click



The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

2. Click on the **SUMMARY EVENT** tab next to PERFORMANCE EVENT tab.
3. Click on the **Add icon** at the top right corner.

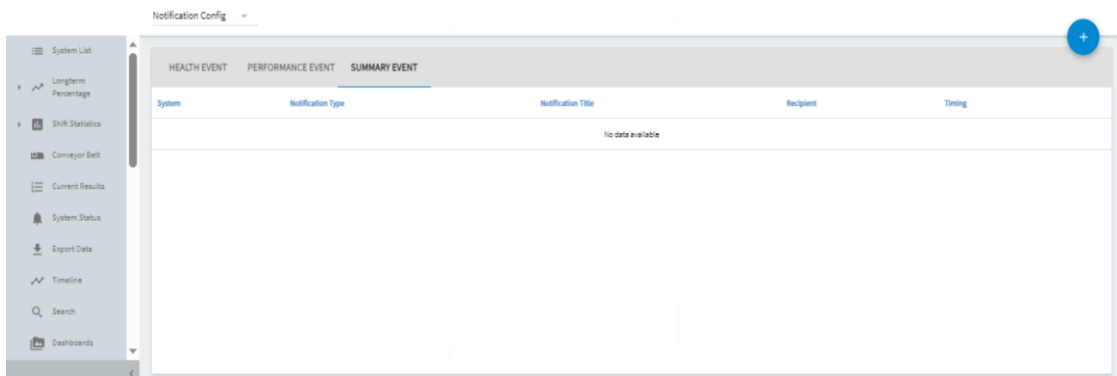


Figure 146: Summary Event Tab

4. Application will open **Create Summary Event** screen containing following fields: **System Name** dropdown, **Notification Type** dropdown, **Notification Title** field, **Recipients** dropdown, **Severity** dropdown and **Timing** dropdown. All fields are required.
5. Select System for which you want to configure the Health Notifications from System Name dropdown.
6. Select **Notification Type** as **SMS** OR **EMAIL** OR select **BOTH** option if you want the notification over email and SMS both.

SMS

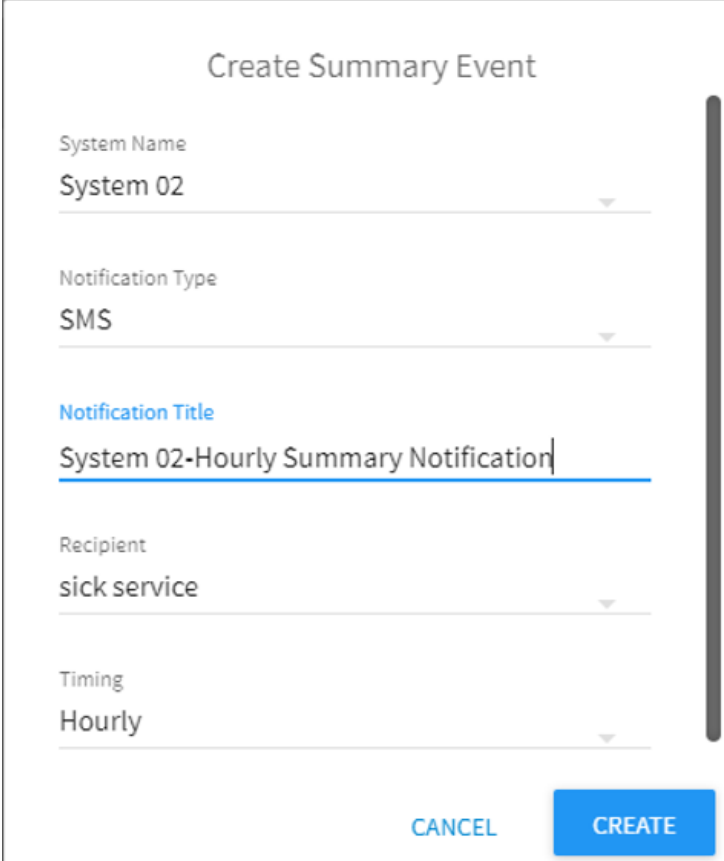
Email

Both

7. Enter Notification Title.
8. Select **Recipient** from the Recipients dropdown. You can select multiple recipients. Please note that the Recipients dropdown have groups as option. All the users associated with the selected groups will receive the notifications.
9. Select **Timing** from **End of Shift** and **Hourly** options for the notification frequency.

End of Sort
Hourly

10. Once all the field is entered, **CREATE** button will get enabled.



The form is titled "Create Summary Event". It contains the following fields:

- System Name:** System 02
- Notification Type:** SMS
- Notification Title:** System 02-Hourly Summary Notification
- Recipient:** sick service
- Timing:** Hourly

At the bottom right, there are two buttons: "CANCEL" and "CREATE". The "CREATE" button is highlighted in blue, indicating it is enabled.

Figure 147: Create Summary Event

11. Click on **CREATE** button. Application will display a success snack bar message on successful creation and the Summary Event will get listed on the **SUMMARY EVENTS** page.

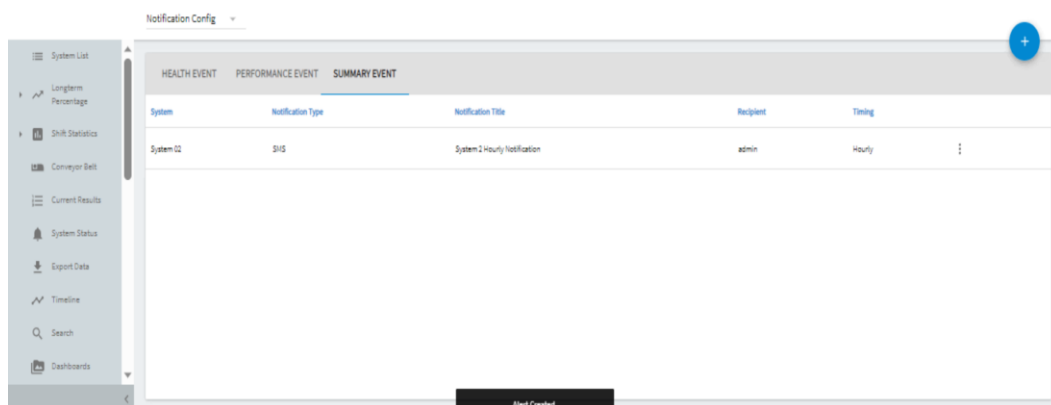


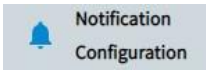
Figure 148: Summary Event Created

16.12 Edit Summary Event

To edit the **SUMMARY EVENT**:

1. From the Configuration home page, click the Notification Configuration app.

OR

On the Configuration tool navigation pane, click  .

The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

2. Click on the **SUMMARY EVENT** tab next to PERFORMANCE EVENT tab and navigate to **SUMMARY EVENT** page.

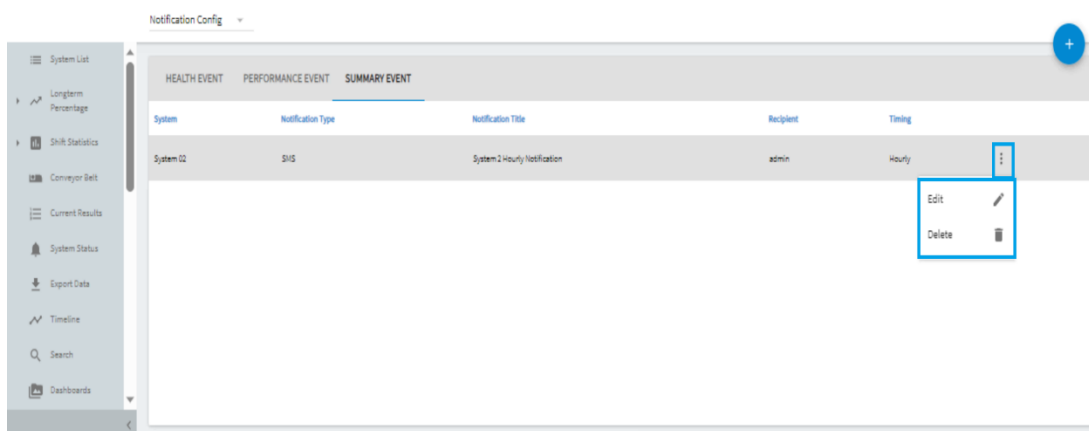


Figure 149: Summary Event- 3 dot icon

3. Click on the vertical ellipsis icon  in front of the Summary Event. **Edit** and **Delete** option will be displayed.
4. Click on **Edit** option.
5. Application will open **Edit Summary Event** screen.

Edit Summary Event

System
System 02

Notification Type
SMS

Notification Title
System 2 Hourly Notification

Recipient
administrators

Timing
Hourly

CANCEL SAVE

Figure 150: Edit Summary Event

6. Make changes and click on **SAVE** button.
7. Application will display a success snack bar message on successful save and the Performance Event will get updated on the **PERFORMANCE EVENTS** page.

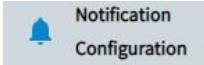
Notification Update Success.

16.13 Delete Summary Event

To delete the **SUMMARY EVENT**:

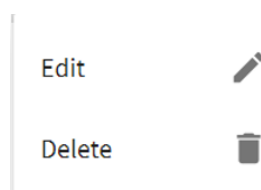
1. From the Configuration home page, click the Notification Configuration app.

OR

On the Configuration tool navigation pane, click .

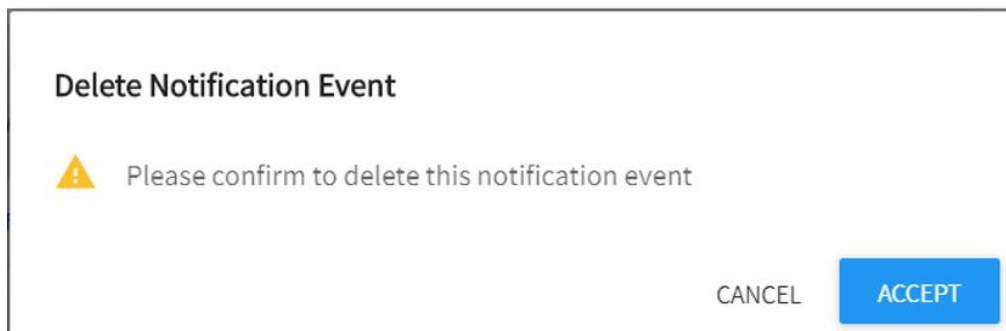
The **Notification Configuration** page with **HEALTH EVENT** tab as selected will be displayed.

2. Click on the **SUMMARY EVENT** tab next to **PERFORMANCE EVENT** tab and navigate to **SUMMARY EVENT** page.
3. Click on the vertical ellipsis icon in front of the Summary Event. Edit and Delete options will be displayed.



4. Click on **Delete** option.

5. Application will display a confirmation pop-up with a CANCEL and ACCEPT button.



6. Click on ACCEPT button.
7. Application will display a success snack bar message on successful delete and the **SUMMARY EVENTS** page will get updated.

Notification Delete Success.

17 Backup and Restore Overview

The **Backup and Restore** feature enable users to:

- **Backup:** Download all facility configurations as a file.
- **Restore:** Import previously saved configurations into a new or existing facility.

To access this feature, go to the **Configuration** menu and select **Backup and Restore** panel.

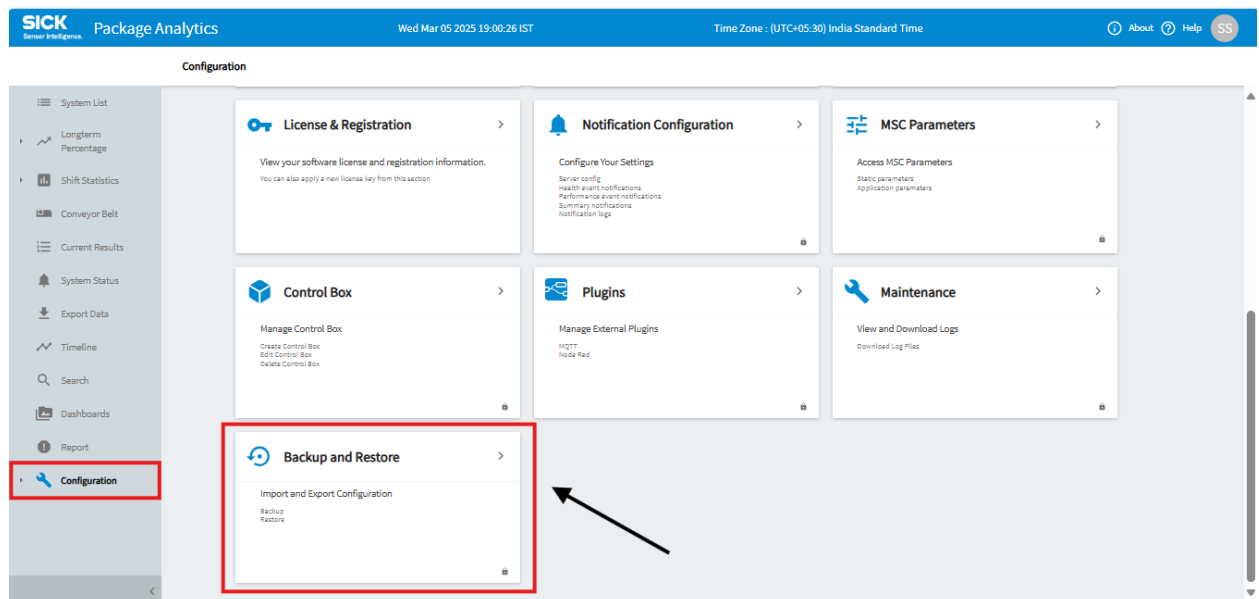


Figure 156: Accessing Backup and Restore

Backup Process

To back up facility configurations:

1. Go to the **Configuration** menu and select **Backup and Restore**.
2. Select the **Backup** tab.
3. Select the configurations to back up by selecting the relevant checkboxes, such as **Systems**, **Shifts**, and **Control Box**.
4. Select the **Export** button to generate a backup file.
5. The selected configurations are downloaded to the local **Downloads** folder.

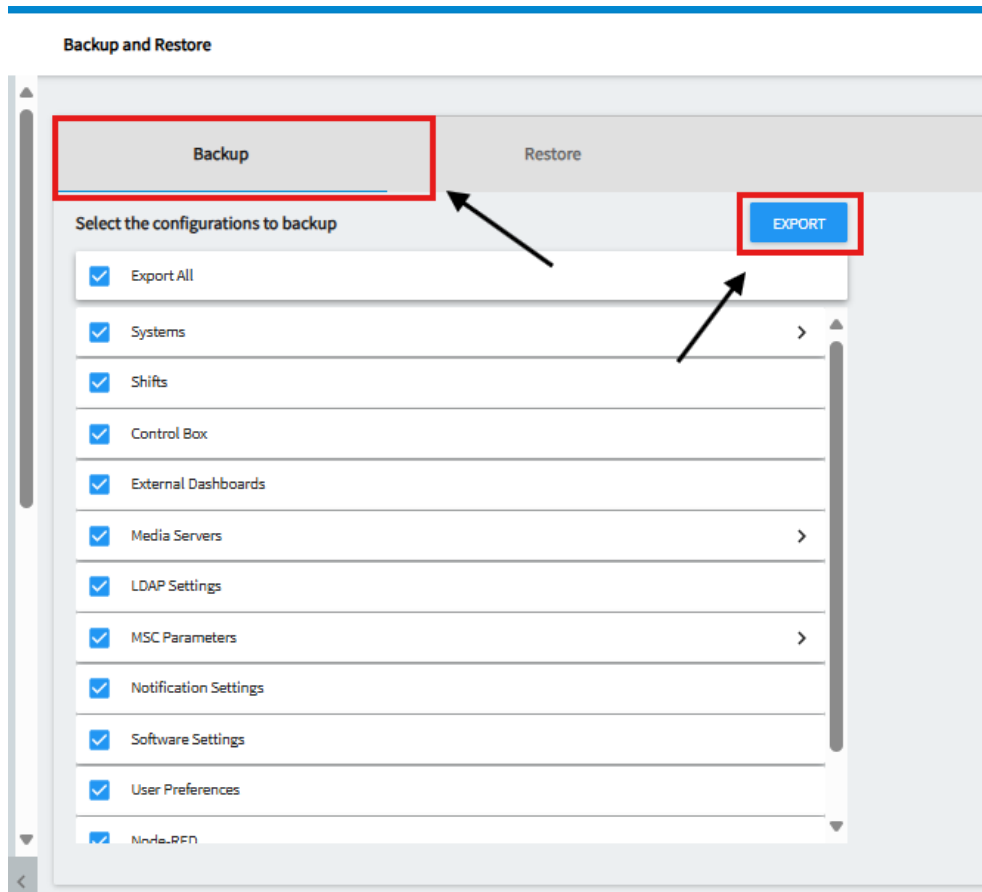


Figure 157: Backup and Restore Screen

Restore Process

To restore exported configurations:

1. Go to the **Configuration** menu and select **Backup and Restore**.
2. Select the **Restore** tab.
3. Select the **Browse File** button and choose the exported configuration file.

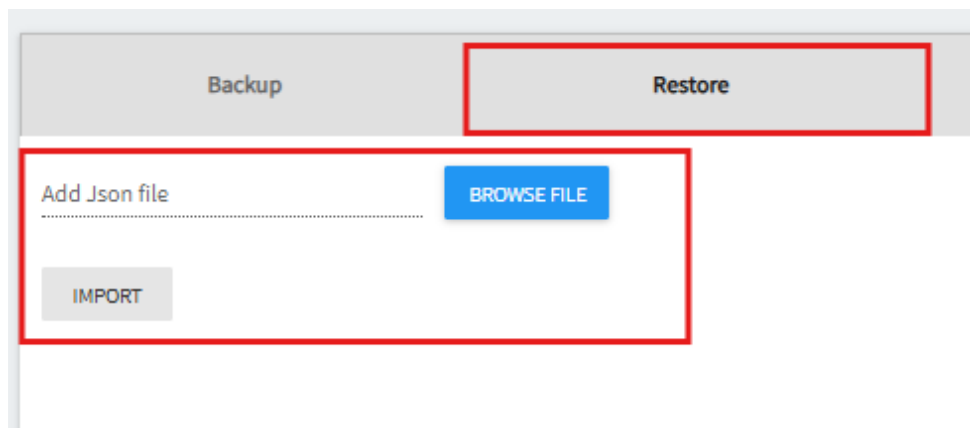


Figure 159: Restore Tab

4. Select the **Import** button to restore the selected configurations.
 - If the imported configuration file contains **shifts that overlap with existing shifts** in the system, an **alert message** appears:

"New shifts cannot be restored if there are existing overlapping shifts."

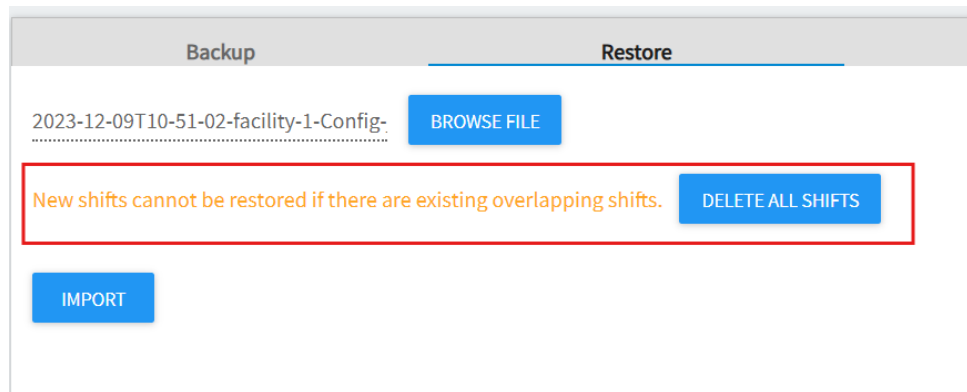


Figure 160: Shift Deletion Alert Message

5. To resolve this issue:
 - Select **DELETE ALL SHIFTS** to remove existing shifts before importing.
 - Select the **Import** button again to restore the selected configurations.

18 MSC Parameters

MSC Parameters page allows you to view/edit parameters on the controller from the application. You can view and configure MSC parameters for Systems that has the MSC configured. On navigating to MSC Parameters page, application will display two tabs **STATIC PARAMETERS** and **APPLICATION PARAMETERS**. In order to view/modify these parameters, while configuring system, one needs to configure the IP Address of the MSC controller.

STATIC PARAMETERS are parameters from the controller that cannot be edited.

APPLICATION PARAMETERS are controller parameters that can be edited.

Figure 151: MSC Parameters

Note: MSC Parameters page is available only if it is enabled from the License file.

This feature is only available for Windows OS

18.1 To add controller ID for a System

1. Launch application.
2. Click on Configuration link from Left navigation panel.
3. From the **Configuration** home page, click the **Facility Configuration** app.

OR

On the Configuration tool navigation pane, click .

The **Facility Configuration** page will be displayed with all systems listed.

SYSTEMS	SYSTEM GROUPS
Name	Label
01	Active-02
A02	Active
Active01	Active
Active02	Active
Active04	Active
NR	Non-Redundant-System
E02	Passive-02

Figure 152: System List

4. Click on the **System Name** of the system to which you want to add the controller.
5. Clicking on System Name will open Devices tab on **System View** page.
6. Add/Edit MSC800 device with **Device Type** as MSC/SIM.

7. Enter IP address of the controller under **IP field**.

Figure 153: Edit Device

8. Click on **SAVE** button. Clicking on SAVE button will add/update the MSC controller device of the System.

18.2 To view MSC Parameters for a System

1. Launch application.
2. Click on Configuration link from Left navigation panel.
3. From the **Configuration** home page, click the **MSC Parameter** app.

OR

On the Configuration tool navigation pane, click  **MSC Parameters**.

The **MSC Parameters** page with **Static Parameters** tab as selected by default will be displayed.

Figure 154: View MSC Parameters

4. To view/edit application parameters, click on **APPLICATION PARAMETERS** tab.

18.3 MSC Static Parameters

MSC Static Parameters are parameters from the controller that cannot be edited.

The screenshot displays the 'STATIC PARAMETERS' section of the configuration interface. It features a sidebar with navigation options like 'Configuration Home', 'Facility Configuration', 'Shift Management', 'Media Servers', 'Software Settings', 'Authentication Provider Settings', 'License & Registration', 'Notification Configuration', and 'MSC Parameters'. The main content area shows a table of static parameters with their current values.

Parameter Name	Value
ApplicationName	Walmart
ApplicationVersion	3.2
CurrentTemperature	35.5
DeviceIdent	Name: MSC800 Version: 53.43-17.02.2018
LocationName	04
MaxTemperature	88.9
OperationHours	22089
OrderNumber	284071
SerialNumber	28121877

Figure 155: Static Parameters

Sr. No.	MSC Static Parameters
1	ApplicationName
2	ApplicationVersion
3	CurrentTemperature
4	DeviceIdent
5	LocationName
6	MaxTemperature
7	OperationHours
8	OrderNumber

Table 7: Static Parameters

18.4 MSC Application Parameters

MSC Application parameters are Gate Control parameters that can be edited from Logistics Analytics. You can edit the application parameters like SBS Filters to match different labels, Box Factor, Log Level, ports and other relevant information about external devices like VMS etc.

Figure 156: MSC Application Parameters

Sr. No.	MSC Application Parameters	Name	Description
1	Barcode Condition Parameters	Barcode condition 1- Barcode condition 20	Configure 'Match' code for barcodes. Once Barcode Data is received, only labels which match barcode conditions 1-20 are kept. All other barcodes are dropped.
2	Corner Data	Corner Data: Printer Side	Options: Left Right Disabled Default Value: Left
3	Debug Port	Debug Port	Options: Serial Auxiliary Interface Ethernet Aux Port NONE Default Value: None
4		Debug Port Suffix	Options: CR, LF, CR LF Default Value: CR

5	Disable	Disable SbS	Side By Side or SBS is condition reported to SVP, just like a dimension characteristic of the box, i.e., length, or LFT. Walmart wants to enable/disable when/how the SBS is reported to the PLC. - Disable SbS (1 or 0) = 1 -> SBS is disabled. - Disable SbS (1 or 0) = 0 -> SBS is enabled. Default Value: 1
6		Disable Setting Increment (1 or 0)	Disable Changing VMS Tach Settings = 1 (disabled) Disable Changing VMS Tach Settings = 0 (enabled) Default Value: 1
7	External Device: Device 2 Position	External Device: Device 2 Xmit At Max X-Position (mm)	External Device 2 Max X-Position Range: 0-1000000 (mm)
8		External Device: Device 2 Xmit At Min X-Position (mm)	External Device 2 Min X-Position Range: 0-1000000 (mm)
9		External Device: Device 2 Xmit Related To	External Device 2 Position Related To Leading/Trailing Edge
10		External Device: Device Xmit At Max X-Position (mm)	External Device Max X-Position Range: 0-1000000 (mm)
11		External Device: Device Xmit At Min X-Position (mm)	External Device Min X-Position Range: 0-1000000 (mm)
12		External Device: Device Xmit Related To Trailing Edge	External Device Position Related To Leading/Trailing Edge
13	External Device: Host Input	External Device: Host 2 Input Prefix	Host 2 Input Prefix for External Device Range: 0-127
14		External Device: Host 2 Input Prefix 2	Host 2 Input Prefix 2 for External Device Range: 0-127
15		External Device: Host 2 Input Suffix	Host 2 Input Suffix for External Device

			Range: 0-127
1 6		External Device: Host 2 Input Suffix 2	Host 2 Input Suffix 2 for External Device Range: 0-127
1 7		External Device: Host Input Prefix	Host Input Prefix for External Device Range: 0-127
1 8		External Device: Host Input Prefix 2	Host Input Prefix 2 for External Device Range: 0-127
1 9		External Device: Host Input Suffix	Host Input Suffix for External Device Range: 0-127
2 0		External Device: Host Input Suffix 2	Host Input Suffix 2 for External Device Range: 0-127
2 1	External Device: Host Port	External Device: Host Port	External Device Host Port Options: Ethernet Aux2 Port
			Ethernet IP Serial Auxiliary2 Interface Serial Host Interface Ethernet Aux Port Ethernet Host 2 Port Serial Host2 Interface Ethernet Host Port Serial Auxiliary Interface NONE Profibus Default Value: None
22		External Device: Host Port 2	External Device Host Port 2 Options: Ethernet Aux2 Port Ethernet IP Serial Auxiliary2 Interface Serial Host Interface

			Ethernet Aux Port Ethernet Host 2 Port Serial Host2 Interface Ethernet Host Port Serial Auxiliary Interface NONE Profibus Default Value: None
23	External Device: Host Port Protocol	External Device: Host Port 2 Protocol	External Device Host Port 2 Protocol Options: Framing - ID = 1000 Framing - ID = 1004 S2000 - ID = 1005 S2000 - ID = 1001 Framing - ID = 1003 S2000 - ID = 1006 Framing - ID = 1002 NONE Default Value: None
24		External Device: Host Port Protocol	External Device Host Port Protocol Options: Framing - ID = 1000 Framing - ID = 1004 S2000 - ID = 1005 S2000 - ID = 1001
			Framing - ID = 1003 S2000 - ID = 1006 Framing - ID = 1002 NONE Default Value: None
25	Belt Speed	Fixed Speed Value (ft per min)	Conveyor Belt speed. Range: 0-700 ft per min Default Value: 350

26	Log	Log Level	Options: FAT AL ERR OR WAR NING FIELD SERVICE APP DEBUG DETAILED DEBUG Default Value: Warning
27		Log Level Data Processing	Options: FAT AL ER RO R WA RNI NG FIELD SERVICE APP DEBUG DETAILED DEBUG Default Value: Fatal
28		Log Timestamp	Options: Yes/No Default Value: Yes
29	SBS BC Filter	SBS BC Filter 1- SBS BC Filter 40	An 11- or 16-digit barcode that overrides the SBS condition for a box. If Use SBS BC Filter is enabled (= 1), and a barcode matching one of the SBS Bc Filter strings is on the box, the SBS condition will be overridden and the box will no longer be a SBS. Entries in the 'SBS Bc Filter List' will be a combination of "?" for wildcards, and actual digits. Default Value: Null

30	Box Factor	SideBySideBoxFactor	If Disable SBS= 0, boxes with a BoxFactor < this value set the BF under evaluation Condition. Default Value: 85						
31	Tote length	Tote length (mm)	Totes are flat trays about 30"x30x10 high. This value shows the Tote length. Range: 0-10000 (mm) Default Value: 180 mm						
32	Use SBS BC Filter	Use SBS BC Filter (1 or 0)	Determines if SBS will be overridden based on Barcode. Use SBS BC Filter =1 => SBS will be overridden based on Barcode Use SBS BC Filter =0 => Barcode is not used to override SBS. Default Value: 0						
33	VMS	VMS Incr Source (1-3 Enc, 4=Fixed)	VMS Increment Source Value: 0 is Disable 1 -3 is for Increment 4 is for Fixed Speed Parameter can only be set to 1-4! Default Value: 1 VMS Increment Source Settings: <table><tr><th colspan="2">Increment settings</th></tr><tr><td>Increment source</td><td>Direction recognition (phase) D Disable DIn2</td></tr><tr><td>Encoder resolution</td><td>Direction recognition (phase) D Direction recognition (level) DI Fixed speed</td></tr></table>	Increment settings		Increment source	Direction recognition (phase) D Disable DIn2	Encoder resolution	Direction recognition (phase) D Direction recognition (level) DI Fixed speed
Increment settings									
Increment source	Direction recognition (phase) D Disable DIn2								
Encoder resolution	Direction recognition (phase) D Direction recognition (level) DI Fixed speed								

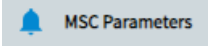
34		VMS Port	Port used by VMS Options: NONE Ethernet Host 2 Port Ethernet Host Port Ethernet Aux2 Port Ethernet Aux Port Default Value: Ethernet Host 2 Port
----	--	----------	---

Table 8: MSC Application Parameters

18.5 Edit MSC Application Parameters

MSC Application parameters can be edited/updated by following steps:

1. Launch application.
2. Click on Configuration link from Left navigation panel.
3. From the **Configuration** home page, click the **MSC Parameter** app. OR

On the Configuration tool navigation pane, click  .

The **MSC Parameters** page with **Static Parameters** tab as selected will be displayed.

4. Click on APPLICATION PARAMETERS tab and navigate to APPLICATION PARAMETER Screen.
5. Click on the input field for the parameter you want to edit.
6. Enter value. As soon as you edit the value **SAVE** button will get enabled.

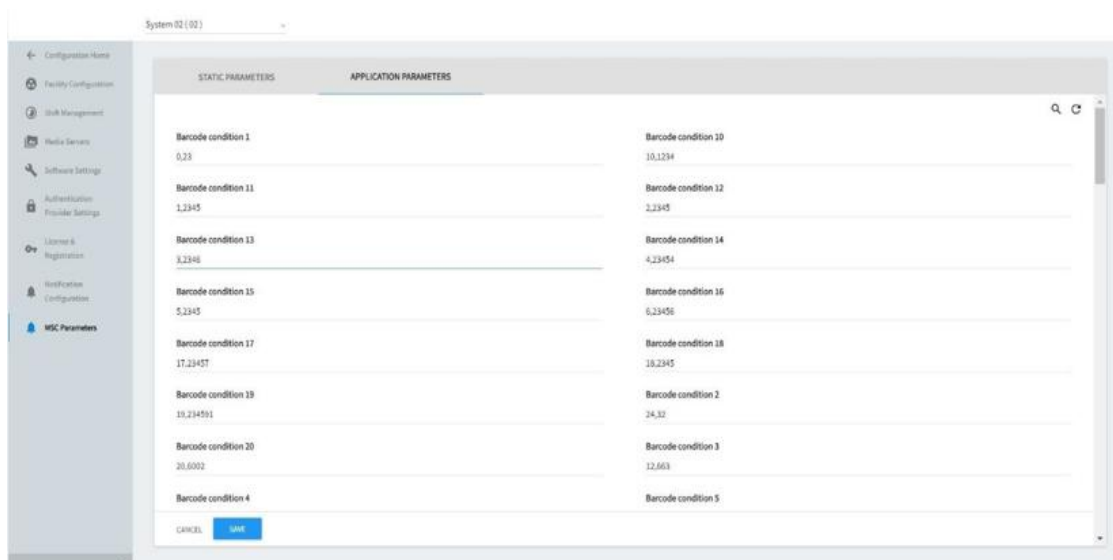


Figure 157: Edit MSC Parameters

7. Click on **SAVE** button to save the changes.

Note: You can only edit MSC Application parameters.

Make sure to click on 'Read from device' button In SOPAS to get latest data into SOPAS if you are making changes to application parameters in Facility View.

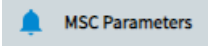
if you are making any changes to application parameters in SOPAS, please click on Save Permanent and save the changes. This will save the changes permanently and Facility View can get the updated values from the device.

18.6 Search MSC Parameters

You can perform search on Static and Application parameters by clicking on the Search icon.

This Search option will search and display all the matching MSC Parameters. To search for a MSC Parameter:

1. Launch application.
2. Click on Configuration link from Left navigation panel.
3. From the **Configuration** home page, click the **MSC Parameter** app. OR

On the Configuration tool navigation pane, click  .

The **MSC Parameters** page with **Static Parameters** tab as selected will be displayed.

4. Click on the search icon  and enter the string to search the parameter.
5. Application will display all the parameters having matching header or value.

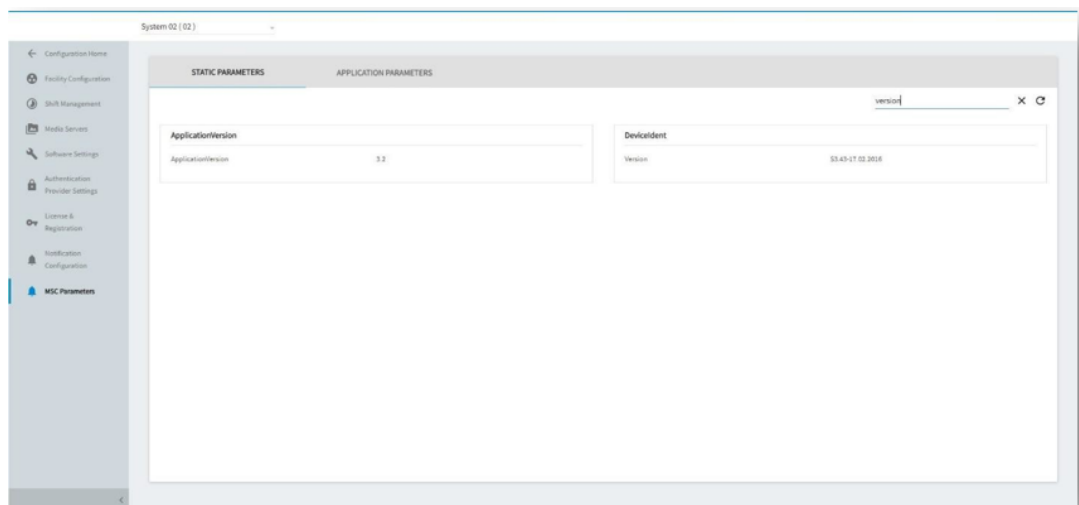


Figure 158: Search MSC Static Parameters

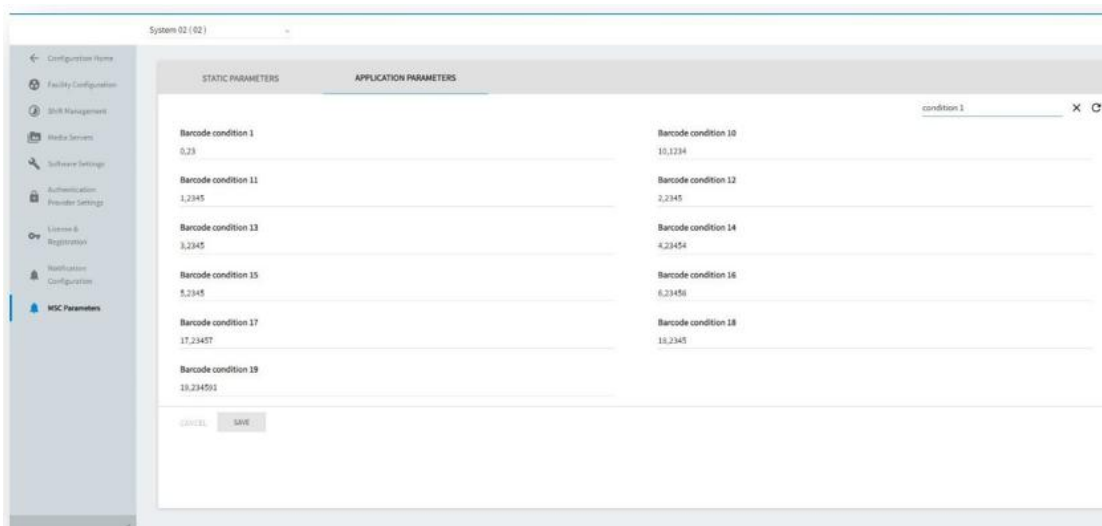


Figure 159: Search MSC Application Parameters

18.7 Refresh MSC Parameters Page

You can reload the Static and Application parameters page by clicking on the reload icon.

1. Launch application.
2. Click on Configuration link from Left navigation panel.
3. From the **Configuration** home page, click the **MSC Parameter** app. OR

On the Configuration tool navigation pane, click  **MSC Parameters**.

The **MSC Parameters** page with **Static Parameters** tab as selected will be displayed.

4. Click on the reload icon. This will reload the page.

19 About Object and Code Related Conditions

Evaluation Conditions sent from the system MSC may be either object related or code related conditions.

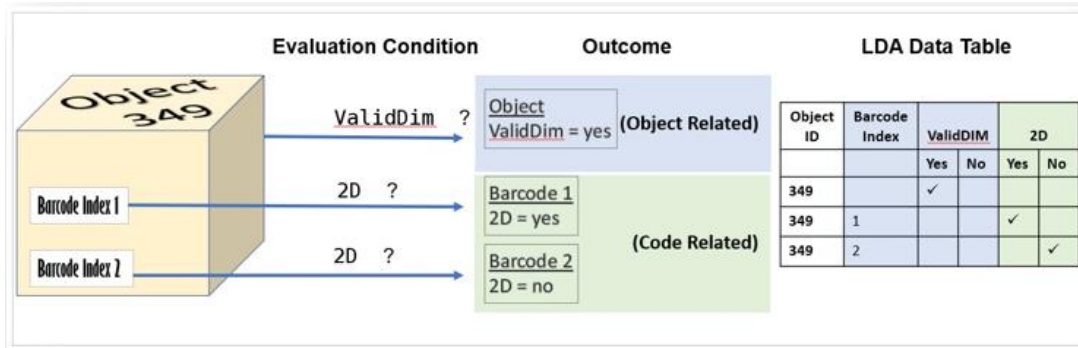


Figure 160: Object and Code Related Conditions

Object related conditions evaluate attributes or states related to the entire object being processed. For example, the Evaluation Condition ValidDim is either true for an object, or not. These conditions return only a single outcome for the object being evaluated.

- Code related Evaluation Conditions monitor conditions related to individual barcodes. For example, the Evaluation Condition 2D evaluates if a barcode on the object is a 2D barcode type, or not. Because an object may have multiple barcodes, it is possible for a code related Evaluation Condition to have multiple outcomes for the same object.

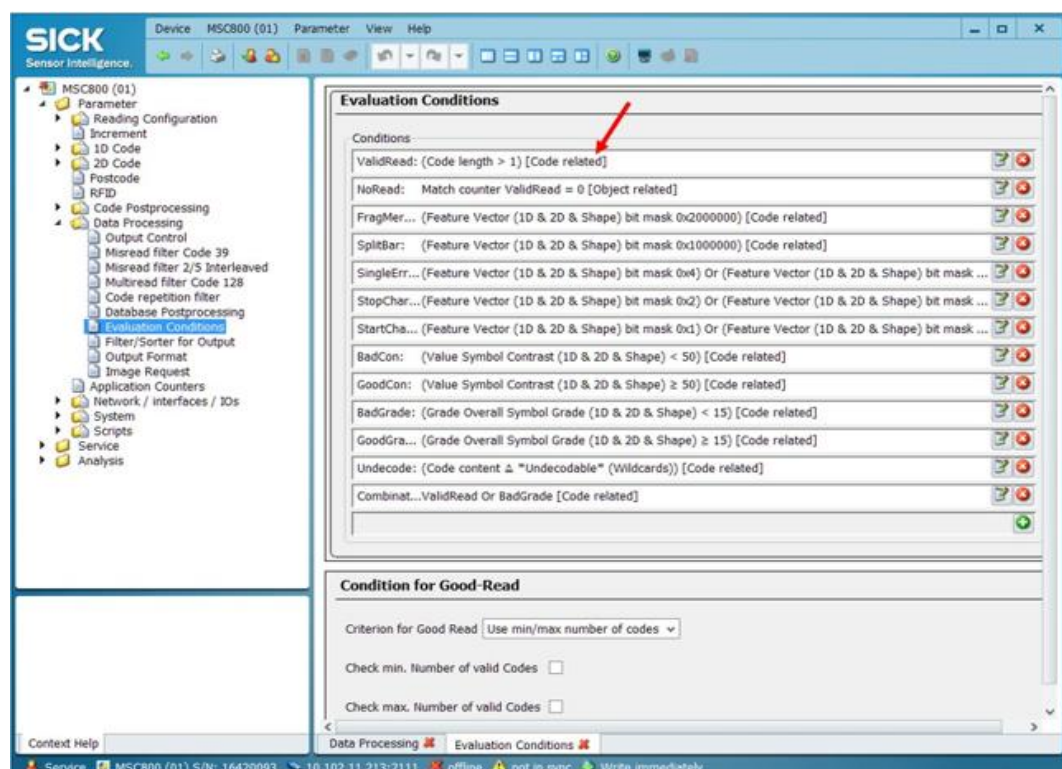


Figure 160: Object and Code Related Conditions in SOPAS

Code related Evaluation Conditions are defined in the SICK System Controller and sent to the Analytics software. The image above is a screenshot from the SOPAS configuration tool for the SIM, showing the condition relation for Code and Object along with their associated icons. All Evaluation Conditions are identified as either code related or object related in the SOPAS Evaluation Conditions dialog.

During LA system setup, you must manually identify any code related conditions by selecting this option in the Add/Edit Evaluation Conditions wizard. Because system statistics are tied to specific Evaluation Conditions, each statistic automatically adopts the object or code related status of the Evaluation Condition it is linked to.

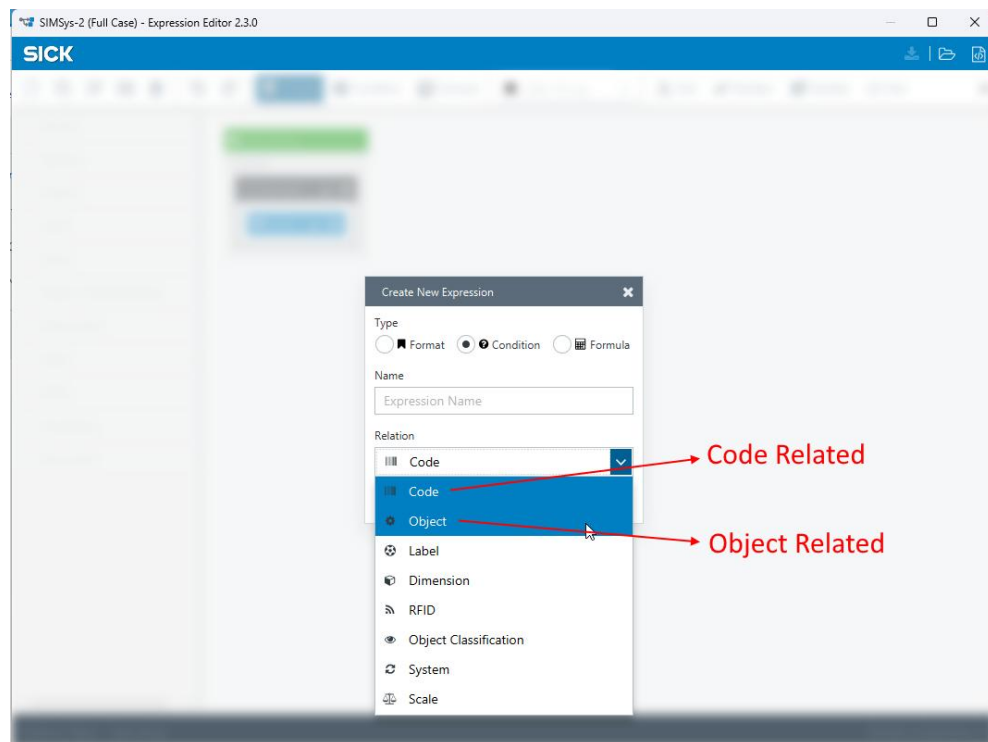


Figure 160: Object and Code Related Conditions in SIMSys-2 Expression Editor

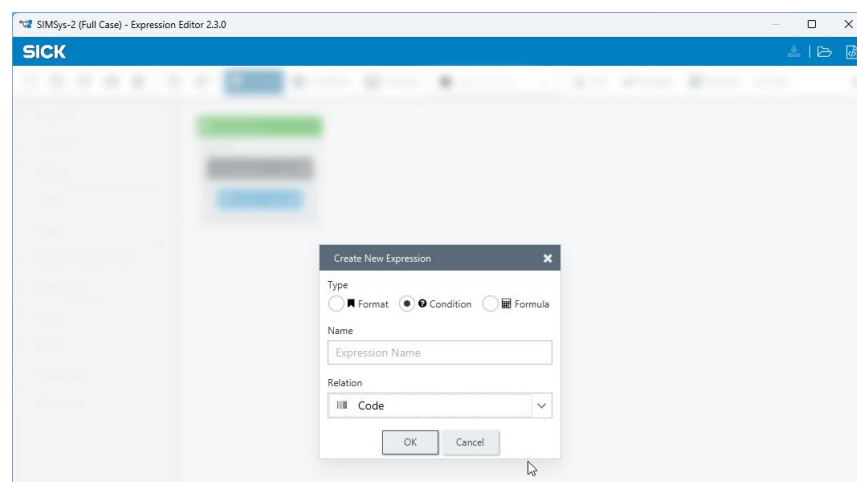


Figure 161: Configuring Code Related Conditions in SIMSys-2

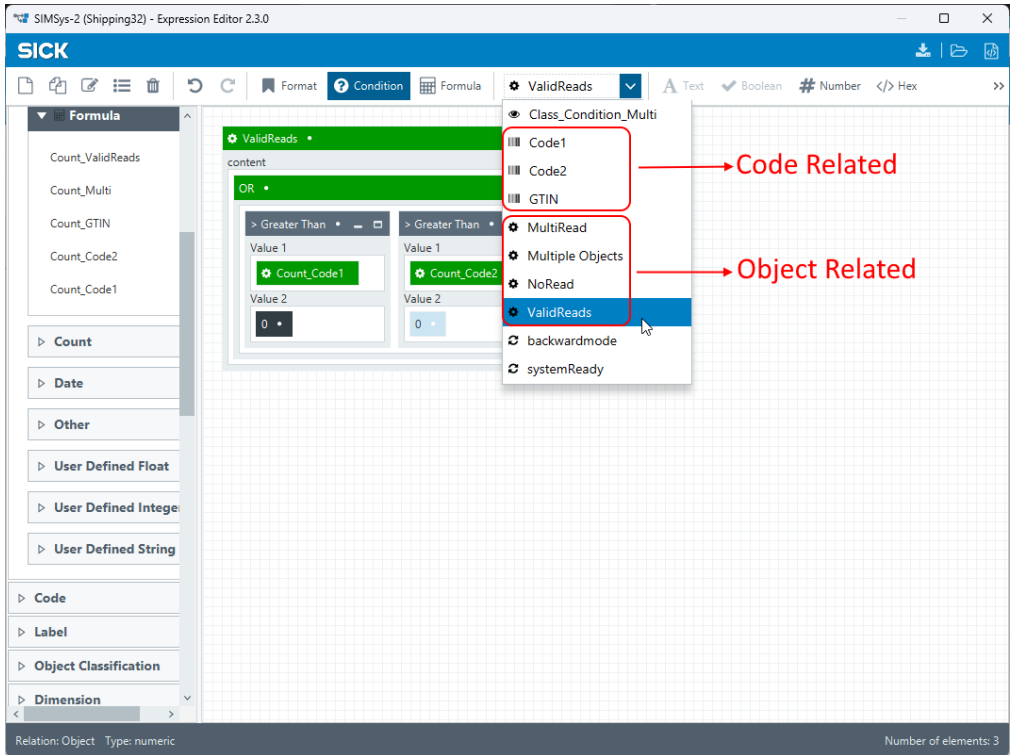


Figure 162: Building Expressions with Object and Code Related Conditions in SIMSys-2

20 Application Properties

Property File	Property/Key	Description
aap_application.properties	https.server.port	Port on which aap api's will run over https Default value: 8442
	http.server.port	Port on which aap api's will run over http Default value: 8081
	http.enabled	If true, AAP level API's will be enabled over http Value: true/false
	https.services.enabled	Protocol information on which Services is running/enabled Value: true/false
	https.dacq.enabled=false	Protocol information on which DACQ is running/enabled Value: true/false
	https.services.url	Services url for https Value: https://localhost:8443
	http.services.url	Services url for http Value: http://localhost:8080
	http.dacq.url	DACQ url for http Value: http://localhost:8181
	https.dacq.url	DACQ url for https Value: https://localhost:8441
	dacq.wss.url	DACQ Secure websocket URL Value: wss://localhost:8441/websocket/sockjs
	dacq.ws.url	DACQ Websocket URL Value: ws://localhost:8181/websocket/sockjs
	image.server.polling.frequency	image service ping frequency in seconds Default Value: 30
	system.polling.frequency	System ping frequency in seconds Default Value: 30
	system.activity.idletime.frequency	Acceptable time for non-occurrence of system activity (object data and heartbeat) in minutes

		Default Value: 1 After this window system status changes to disconnected
	<code>persist.realtime.data.enabled</code>	To enable/disable storing data in real-time tables Default Value: true/false
	<code>drop.unpartitioned.tables</code>	Controls whether to delete old unpartitioned data when converting specific tables to partitioned ones. - Set to true to delete old data and create partitioned tables. - Set to false to retain existing unpartitioned data. Value: <code>true / false</code> Default value: <code>true</code>
	<code>data.use.rdt.healthStatus</code>	Controls whether PA mimics RDT behavior for Heartbeat error codes. - Set to true to enable RDT-like error categorization. - Set to false (default) to use SIM documentation-based categorization. Value: true / false Default value: false Refer Appendix C: Mimicking RDT Behavior Using Configuration Properties for more details.
	<code>data.use.rdt.errorList</code>	Specifies the comma-separated list of error codes to be treated as Errors when <code>data.use.rdt.healthStatus</code> is true. Examples: 03000400,03000401,....,0300050b Value: comma-separated error codes Refer Appendix C: Mimicking RDT Behavior Using Configuration Properties for more

		details.
dacq_application.properties	https.server.port	Port on which dacq api's will run over https Default value: 8441
	http.server.port	Port on which dacq api's will run over http Default value: 8181
	http.enabled=true	If true, Dacq level API's will be enabled over http
	https.services.enabled=false	Protocol information on which Services is running
	https.aap.enabled=false	Protocol information on which AAP is running
	https.services.url=	Service URL over https Value: https://localhost:8443
	http.services.url	Service URL over https Value: http://localhost:8080
	https.aap.url	Service URL over https Value: https://localhost:8442
	http.aap.url	Service URL over https Value: http://localhost:8081
	tcp.ports	TCP Port Value: 2008
	duplicate.objects.check	Enable or disable Duplicate objects check functionality Value: true/false
		If the object received by a System which is part of a System group, is a duplicate object (having same barcodes) then it will not be processed.
	udf.preserve.configured.only	Controls UDF data storage. - Set this property to true to store UDF data only for systems that have UDFs configured. - Set it to false (default) to store UDF data for all systems, regardless of configuration. Value: true / false

		Default value: false
services_application.properties	https.server.port	Port on which service API's will run over https Default value: 8443
	http.server.port	Port on which service api's will run over http Default value: 8080
	http.enabled=true	If true, service level API's will be enabled over http
	server.domain.address	Domain Address Value: http://localhost:8080
	https.dacq.enabled=false	Protocol information on which DACQ is running
	https.aap.enabled=false	Protocol information on which AAP is running
	http.dacq.url=http://localhost:8181	DACQ url for http Value: http://localhost:8181
	https.dacq.url=https://localhost:8441	DACQ url for https Value: https://localhost:8441
	dacq.wss.url	DACQ secure websocket url Value: wss://localhost:8441/websocket/sockjs
	dacq.ws.url	DACQ websocket url Value: ws://localhost:8181/websocket/sockjs
	https.aap.url	AAP url for https Value: https://localhost:8442
	http.aap.url	AAP url for http Value: http://localhost:8081
	undo.enabled	Enable/disable undo service in the application Value: true/false
	shift.length	Configure maximum duration of a shift (in days) Should not be more than 7 days. Default Value: 7
	reportingModuleType	Reporting Engine Type Value: metabase

	http.externalUrl	Update this url to server IP Address to make it usable in email and SMS notification content Value: http://localhost:8080
	https.externalUrl	Update this url to server IP Address to make it usable in email and SMS notification content Value: https://localhost:8443
openid.properties	tenant.id	Stores the Entra ID tenant ID for JWT assertion-based authentication
	use.client.secret	Determines authentication method: true for client secret, false for JWT assertion.
application.properties	ssm.cert-manager.certPropertiesLocation	Location of the customer-provided certificate details file (must use forward slashes) Value: C:/certupdates/cert.properties
	ssm.cert-manager.updateMsCert	Whether to update Media Server certificates and properties Value: true
	ssm.cert-manager.certRefreshIntervalMs	Interval to check for updates to the customer-provided props file (in milliseconds) Default value: 3600000 (1 hour)
	ssm.cert-manager.backup.retention.count	Backup retention count Value: 10
	ssm.app-manager.pa-service-names	Service configurations for Package Analytics components Value: Ida-aap,Ida-dacq,Ida-dd,Ida-services,sick-nodered,sick-telegraf
	ssm.app-manager.ms-service-names	Service configurations for Media Server components Value: sick-bip-is
	ssm.app-manager.ea-service-names	Service configurations for Enterprise Analytics components Value: artemis-service,influx-service,sick-enterprise
	ssm.app-manager.pa-restart-enabled	Restart configurations for Package Analytics services Value: false

	ssm.app-manager.ea-restart-enabled	Restart configurations for Enterprise Analytics services Value: false
	ssm.app-manager.ms-restart-enabled	Restart configurations for Media Server services Value: true

21 SSMS – Automatic Certificate Update

The **Supporting Maintenance Service (SSMS)** is a background service that runs alongside **Analytics**, **Media Server**, and **Enterprise Analytics**. It automates certificate updates by monitoring a customer-supplied **properties file** and applying changes without manual intervention.

When a customer updates their certificate file, **SSMS**:

- Detects the change.
- Updates the relevant services.
- Optionally restarts them, depending on configuration.

21.1 Configuration Steps

1. Create a Certificate Properties File

- File name example: cert.properties
- Add the following parameters:

Parameter	Description
certificate_alias	Alias name of the service certificate inside the PFX file.
LimaKilo	Password for the PFX (keystore) file (plain text).
certLocation	Full file path to the PFX file containing the certificate(s).

Example:

```
certificate_alias=domain-cert
LimaKilo=^chQbddT.,,/kR[jgR}/=Ea]qdM(x)TT
certLocation=C:/Certificates/domain-cert.pfx
```

2. Configure the application.properties File

- Create or edit the application.properties file for SSMS.
- Add the following key parameters:

Parameter	Description	Example
ssm.cert-manager.certPropertiesLocation	Path to the cert.properties file.	C:/certupdates/cert.properties
ssm.cert-manager.certRefreshIntervalMs	Interval (in milliseconds) for checking cert.properties for updates. Default: 3600000 (1 hour).	3600000
ssm.cert-manager.backup.retention.count	Number of backup copies of certificate files to retain.	10

Example:

```
ssm.cert-manager.certPropertiesLocation=C:/certupdates/cert.properties
ssm.cert-manager.certRefreshIntervalMs=3600000
ssm.cert-manager.backup.retention.count=10
```

3. (Optional) Configure Automatic Service Restarts

- Control whether **PA**, **EA**, or **MS** restart automatically after a certificate update.
- Refer to the [Application Properties Table](#) for parameter names, descriptions, and default values.

4. (Optional) OS-Specific Overrides

- application-windows.properties → Override paths/service names for **Windows**.
- application-linux.properties → Override paths/service names for **Linux**.

5. Apply the Configuration

1. Save all file changes.
2. Restart the **SSMS** service.
3. On startup, SSMS will:
 - Monitor cert.properties at the configured interval.
 - Apply new certificate details when detected.
 - Restart services if auto-restart is enabled.

6. Verification

- Check the application.log file for entries confirming:
 - **Certificate change detected.**
 - **Alias, password, and location updates applied.**

22 Troubleshooting

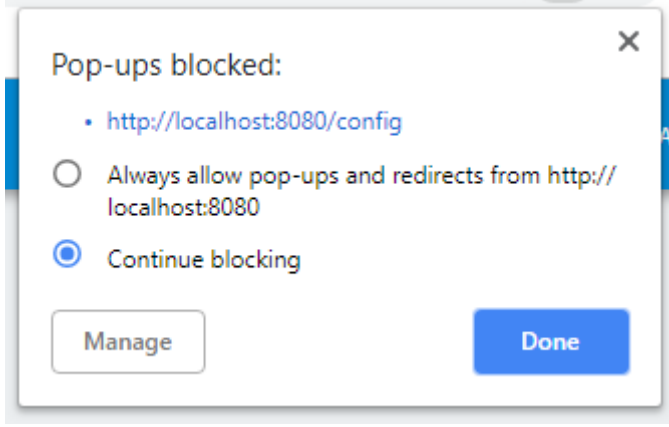
Acronyms	Meaning
DACQ	The data acquisition service installed as part of LA software bundle which is named as 'SICK An DACQ'
AAP	The data analytics service installed as part of LA software bundle which is named as 'SICK An AAP'

#	Known Conflicts
1	McAfee uses 8081 port for one of its services which conflicts with AAP and AAP cannot start on default port

How to clean a PC of an Analytics Solutions 4.0 Installation

1. Use the same installer to uninstall the software
2. Delete the hidden folder - "C:\Program Files\Zero G Registry"
3. Go to C:\Users\<username> folder
4. Delete Folder of these types -
 - .InstallAnywhere
 - _SICK Analytics Solutions
5. Delete "C:\Program Files\UsMySQL" and all contents
6. Delete any **MySQL** folders from C:\ProgramData
7. Delete below registry entries if any -
 - HKEY_CURRENT_USER\Software\MySQL AB
 - HKEY_LOCAL_MACHINE\SOFTWARE\MySQL AB
8. Delete any MySQL files from C:\Users\<username>\Roaming\MySQL folder

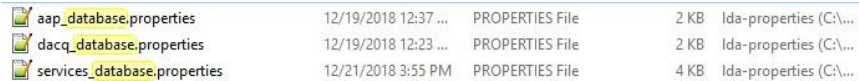
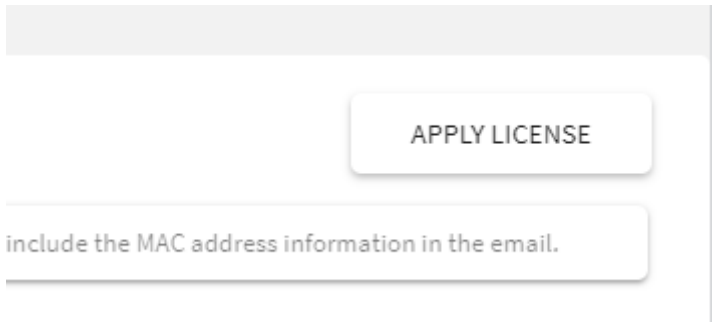
#	Issue	Possible Known Causes & Resolution/Workaround
1	Installer message - "Error while Checking for Instances" or Installer says "Repair".	Delete the hidden folder -"C:\Program Files\Zero G Registry"
2	Dashboard not loading after all services are started (SICK An Services, SICK An AAP, SICK An DACQ, SICK An MySQL)	Cause 'SICK An Services' hasn't started yet as first time starting can take a long time due to database and localization initialization Resolution Wait for a few minutes (3-5 minutes) Cause 'SICK An Services' failed to start due to errors in 'lda-services.log' Resolution Rectify the error and restart Cause 8080 port is blocked by Network Firewall or Windows Firewall (this is only when the dashboard is accessed via the IP instead of localhost) Resolution Confirm if it's a firewall block by accessing the dashboard from the machine where LA is installed using http://localhost:8080. If this works and accessing via IP doesn't work, its possibly a firewall block. Contact network/infrastructure team to unblock 8080 port for Network Firewall block and add inbound rules for Windows Firewall to allow TCP connections on port-8080

		Note:- If any firewall block was identified, it's likely the other ports needed for LA software are also blocked. Below are the ports to be unblocked - http ports - 8080, 8081, 8181 https ports - 8441, 8442, 8443 MySQL port - 8406 MQTT port - 1883, 1885 Email port - 587 Media Server - 8084 (or what is configured in Media Server) TCP ports - 2008
3	Configuration page is not displayed or loaded on a separate browser tab	Cause Pop-ups are blocked by browser. Enable them -  Resolution Allow Pop-ups

4	Empty dashboard with only Configuration Link enabled	Cause License is not valid or not uploaded yet. Resolution Navigate to Configuration → License & Registration → Apply License, upload the correct license file and reload the dashboard.
5	Security error while accessing dashboard using https://	Cause This is a warning from browser trying to convey that the certificate used by the application is not trusted. This happens when a self-signed certificate is used. Resolution Click Advanced → proceed to site(unsafe) to ignore the warning and proceed to dashboard http-url - http://localhost:8080 https-url - https://localhost:8443
6	'System Status' and 'System List' is empty	Cause The systems were not configured OR 'SICK An AAP' is not running OR 8081 port is blocked by Firewall. Resolution Configure the systems OR start 'SICK An AAP' OR refer Troubleshooting Guide#Firewall Info to resolve firewall issues
7	Incorrect labels in dashboard	Cause The browser language is not supported. Resolution Go to browser settings and change the language to English (en-US) or any other supported language Cause Localized labels are not loaded properly. Resolution

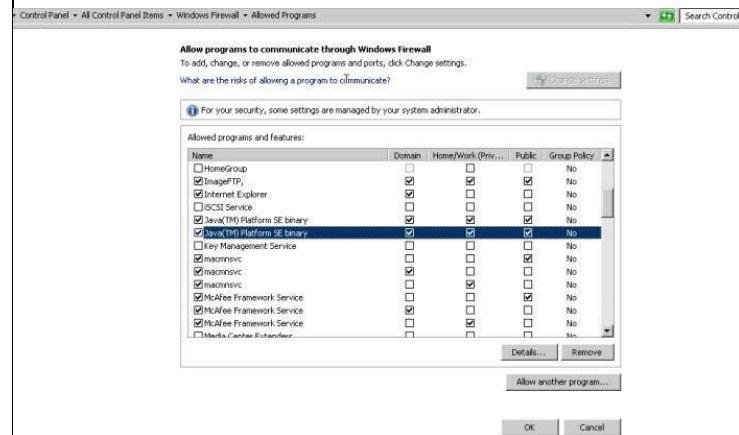
		Stop 'SICK An Services' and execute below queries in mysql - <pre>DROP TABLE `SICK_IL_SERVICES` . `LOCALIZED_MESSAGES_FILES_STATUS`;</pre> <pre>DROP DATABASE `SICK_AP_I18N`;</pre> Start 'SICK An Services' and retry the dashboard. PS - Seek expert opinion before performing on production systems.
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8	Out of Memory Error in application log files	Cause It is caused by insufficient Heap available to Java. Resolution It can be fixed by allocating more heap to the application if the host machine has memory to spare. - Go to installation folder and find the startup script for the failed application - <table><tr><td> Run-AAP-Service.bat</td><td>10/22/2018 2:05 AM</td><td>Windows Batch File</td><td>2 KB</td></tr><tr><td> Run-DACQ-Service.bat</td><td>12/6/2018 4:56 PM</td><td>Windows Batch File</td><td>2 KB</td></tr><tr><td> Run-Services-Service.bat</td><td>12/6/2018 4:54 PM</td><td>Windows Batch File</td><td>2 KB</td></tr></table> - Edit the variable below and change the highlighted value to a higher value (768M, 1024M etc.). Snapshot below shows 512 MB of RAM allocated to 'SICK An Services' - <pre>:: JAVA_OPTS set JAVA_OPTS=-Xmx512M -Dcom.sun.management.jmxremote.host=127.0.0.1</pre> Note:- If any orphaned records are created inside sick_il_services.system_config table, please stop 'SICK An Services', drop sick_il_services schema and start 'SICK An Services' - - Stop SICK An Services - drop the schema - change the Heap allocation by increasing it from 256M → 512M - Start SICK An Services Queries- select * from sick_il_services.system_config; –to check for records drop schema sick_il_services; –to drop schema Beware that this will delete all facility configuration from the software, so seek expert opinion before doing on production systems	 Run-AAP-Service.bat	10/22/2018 2:05 AM	Windows Batch File	2 KB	 Run-DACQ-Service.bat	12/6/2018 4:56 PM	Windows Batch File	2 KB	 Run-Services-Service.bat	12/6/2018 4:54 PM	Windows Batch File	2 KB
 Run-AAP-Service.bat	10/22/2018 2:05 AM	Windows Batch File	2 KB											
 Run-DACQ-Service.bat	12/6/2018 4:56 PM	Windows Batch File	2 KB											
 Run-Services-Service.bat	12/6/2018 4:54 PM	Windows Batch File	2 KB											

9	Media Server Storage location change not taking effect	Cause This can happen when the folders specified does not exist as the application does not create the folders for itself Resolution Create the folders manually and change the storage location again.
10	Services doesn't start if installed without MySQL (when you want to use your own pre- installed MySQL)	If you want to use an existing MySQL - Resolution Change the MySQL ports on application property files-  Change below variable to use the port of the existing MySQL- <pre># My SQL DB Port database.port=8406</pre>
11	Media Server Dashboard is locked/buttons are disabled	Cause Used a wrong license file for Media Server. The license file for LA and Media Server are different. If same license was used for both, Media Server Dashboard will have this issue. Resolution Upload the Media Server license to enable the dashboard - 

12	Media Server License is applied but MAC does not match	Cause The license generated is with a MAC that is not present in the list. Resolution Request a new license with all MACs added to it.
13	Not seeing data in "Current Results" page	Cause MSC is not sending data Resolution Check System Status in SOPAS and look for any connection errors to the PA Server IP. If it is an MSC issue, fix it. Cause MSC cannot connect to LA Server Resolution Contact network support for resolving issues in network connectivity between MSC and LA Server Cause DACQ is not receiving data, but other TCP server software's like Hercules is receiving data on same port-2008. It can happen when Firewall is blocking Java that is installed along with the Analytics Software. Resolution If you faced this issue, refer also - Troubleshooting Guide#firewall-media-server-block

Allow the java that came with Analytics Software and give required permissions-
C:/Program Files/SICK/Analytics software/jre/bin/java.exe



Cause

LA Server cannot connect to Media Server

Resolution

Contact network support for resolving issues in network connectivity between LA Server & Media Server

Cause

DACQ is not running fine

Resolution

If DACQ is not running or not listening on port-2008, restart DACQ to see if issue is resolved.

If issue persists, check logs and find exceptions/errors. Rectify the error and restart DACQ.

Cause

Browser web socket connection was disconnected/interrupted

Resolution

		Reload the page and see if issue is fixed Cause Services has issues related to web socket connection Resolution Check lida-services.log file for any errors or exceptions, rectify it and restart services
14	No images are displayed in dashboard	Cause Media Server is not running Resolution Start Media Server Cause Media Server is crashing Resolution Make sure disk is not full Cause MSC/Camera configuration is wrong Resolution Correct the configuration Cause MSC/Camera cannot connect to Media Server Resolution

Fix network connectivity issues or firewall blocks with the help of network team

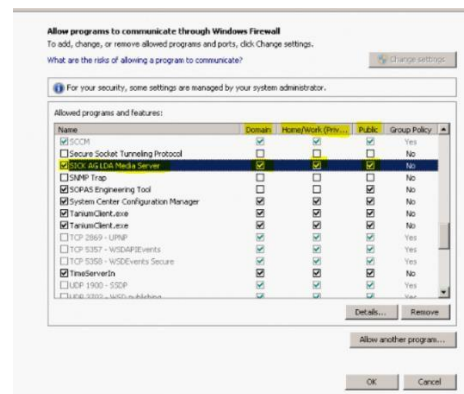
Cause

Media Server is blocked by Windows Firewall

Resolution

If you faced this issue, refer also - [Troubleshooting Guide#firewall-java-block](#)

Go to Windows Firewall settings → Allow a program on firewall → Add "C:\LDA\Medi- aServer\Windows x64\sick-bip-is.exe" to the allowed programs and select all networks -



Cause

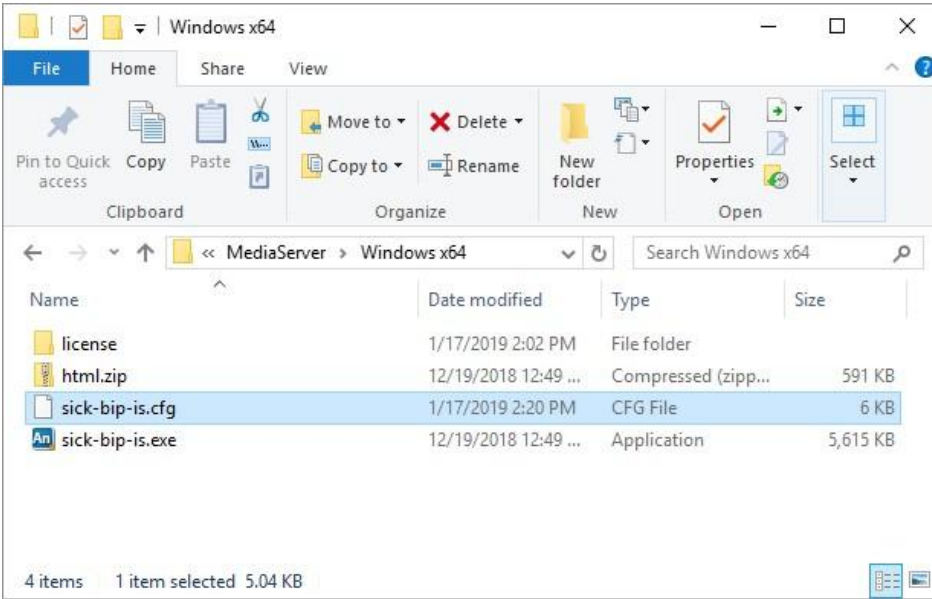
FTP credentials are wrong at MSC OR Cameras OR Media Server

Resolution

Make sure the credentials match what's configured in Media Server and what's configured in MSC/Cameras

Note-

If you want to check any configuration in Media Server, go to the Media Server installation folder and open the file called 'sick-bip-is.cfg' in vi editor or notepad. This file contains all configurations.

		It is also possible to change configuration from here which will need a restart of Media Server to take effect. 
15	LA services cannot start	Cause nssm.exe is blocked or quarantined by Anti-virus software. The LA services need this executable to start. Resolution Add an exception for nssm.exe program in anti-virus Cause Other issues preventing app startup Resolution Open a command prompt and navigate to the installation folder. Run the batch file for the failing service from the command prompt and check for errors on the sysout or log files. If it starts without issues, its related to permissions or other issues related to the windows service and not with the LA application.

		 Ida-analytics-processing.jar 12/19/2018 12:36 ... Executable Jar File 44,716 KB  Ida-data-acquisition-control.jar 12/19/2018 12:23 ... Executable Jar File 58,040 KB  Ida-services.jar 12/21/2018 3:58 PM Executable Jar File 87,097 KB  Run-AAP-Service.bat 1/15/2019 4:55 PM Windows Batch File 2 KB  Run-DACQ-Service.bat 1/15/2019 4:55 PM Windows Batch File 2 KB  Run-Services-Service.bat 1/15/2019 4:55 PM Windows Batch File 2 KB
16	Unable to start/stop/restart services using Services application in windows	Cause The services are installed with admin privileges, so a non-admin user may not have permissions to start/stop/restart an admin process Resolution Log in as admin or as a user with admin privileges
17	Only 2 systems are visible in dashboard	Cause The license of LA application expired. In this case it will only show 2 systems and some features maybe disabled. Resolution Request SICK for a new license following the established process.
18	Incorrect labels in the activity table or activity table not displayed	Resolution Click on another feature (system status) and then return to the current results page
19	Media Server not installed as service	Cause Resolution / Workaround Install service manually: • Open DOS-Box • Enter: <pre>sc create SickAnMediaServer binpath= "<PATH TO MEDIA-SERVER>\sick-bip-is.exe" \ displayname= "SICK An MediaServer" start= auto</pre>
20	Windows power management causing issues	Cause We've seen with some PCs that the Windows Power management causes issues and impacts Analytics Software's performance.

		Resolution 1. Enable high performance mode in power settings. 2. Disable "Turn off hard-disk after x idle mins" option
21	Image Overlay not displayed on IP-Cam	Cause Facility is configured for the wrong device type for an IPCam that has overlays. Most systems with an IPCam won't provide an overlay, and these should be device type "IP- Cam" Resolution Configure the device type to be "IPCam-UDS.
22	Dashboard is not loading anymore in Browser	Cause services.log shows: Table './mysql/proc' is marked as crashed and should be repaired Resolution Login to mysql command line and run: repair table mysql.proc;
23	A few days after facility's are added to an enterprise the "Facility State" becomes "Unknown"	Cause TBD Resolution Current work around is to remote into each specific facility and restart SICK AN Services using the Windows Services App. This is only a temporary solution.
24	Images are not getting displayed on Package Details page	Cause Images are missing/getting discarded due to file-writer-queue at max-depth Resolution Increase the file-writer-queue size in media server config file

		Cause The cameras are generating image names internal to them Resolution Update the File Name Generation settings in SOPAS Cause Images are getting discarded due to low disk space Resolution Clear the disk space Cause Image type is not licensed Resolution Request for updated license with supported image type Cause Media Server IP Address mentioned as 127.0.0.1 and bind IP is mentioned as localhost in the config file Resolution Update the IP Address to Global IP 0.0.0.0 OR Machine IP if the Media Server is installed locally and IP Address is mentioned as 127.0.0.1
25	Media Server showing Error Querying disk	Cause Updating the Full and Thumb folder path from Logistics Analytics UI may not convert the forward slash to backward slash in Full and Thumb folder path which causes error Resolution Update the Thumb and Full folder path by launching the Media Server or from the Config file

26	Updated values for MSC Parameters are not getting reflected	Cause Updated values are not fetched by SOPAS or Facility View Resolution Make sure to click on 'Read from device' button to get latest data to SOPAS if you make any changes to application parameters in Facility View. If you are making any changes to application parameters in SOPAS, please click on Save Permanent and save the changes. This will save the changes permanently and Facility View can get the updated values from the device.
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23 Appendix A. User Privileges

User privileges are assigned by LA administrators and define what screens and functions a user has access to and can modify.

A Privilege name is comprised of two segments. The first segment represents an action and the second segment represent the module that action is applied to.

For example, in the privilege

List Logs: **List** is the action which the user can apply to **Logs** module.

Privileges are assigned to users through roles. Individual privileges may be assigned to an unlimited number of roles.

Sr. No.	Module	Privilege Name	Privilege Description
1	User	Create User	Gives ability to create user profile
2		List User	Gives ability to list all users (Except Super Admin)
3		Reset Password	Gives ability to reset password for another user (Except Super Admin)
4		Edit Profile	Gives ability to modify own profile details
5		Modify User	Gives ability to modify other user profile
6		Delete User	Gives ability to remove a user profile
7	Role	Create Role	Gives ability to create new role(s)
8		List Roles	Gives ability to list roles (Except Super User role)
9		Modify Role	Gives ability to modify an existing role(s)
10		Delete Role	Gives ability to permanently remove role(s) from database
11	Group	Create Group	Gives ability to create new group(s)
12		Modify Group	Gives ability to modify group(s)
13		Delete Group	Gives ability to permanently remove group(s) from database
14		List Group	Gives ability to get list of groups
15	User Preferences	Create Preference	Gives ability to user to create/save preferences for another user
16		Modify Preference	Gives ability to user to modify preferences of another user
		Delete Preference	Gives ability to user to delete preferences of another user
17		Disable Preference	Gives ability to user to disable preferences of another user
18	Global Preferences	Create Global Preference	Gives ability to create/publish Global preferences

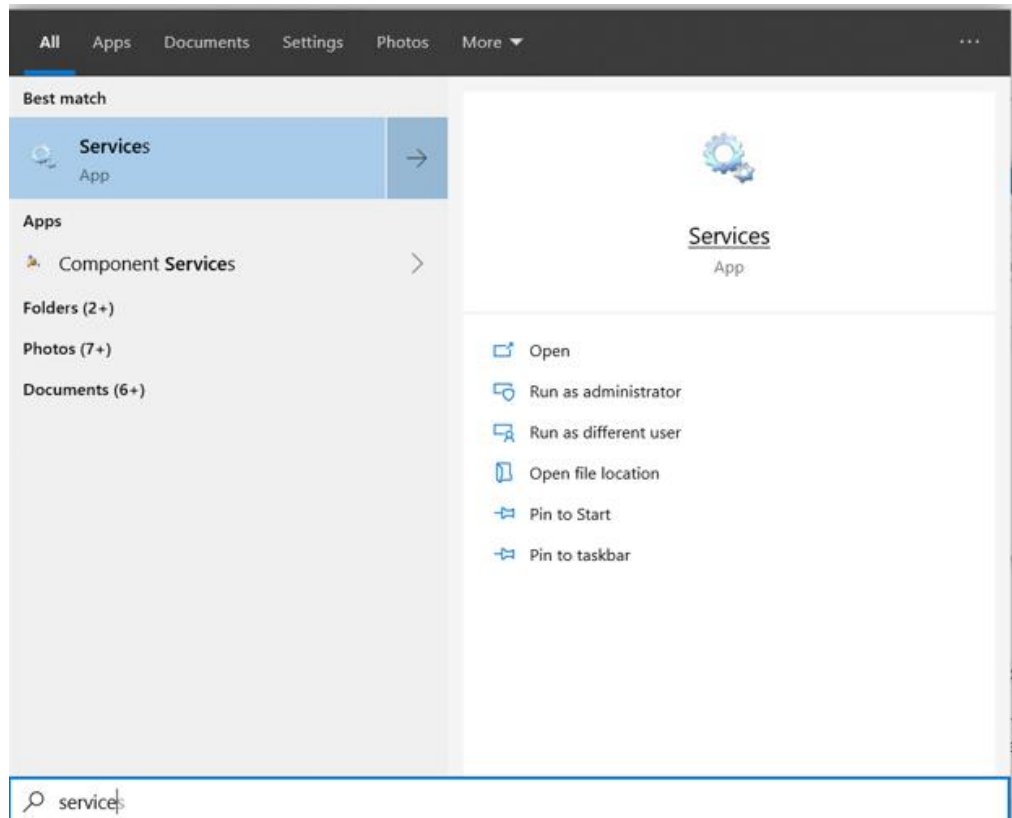
Sr. No.	Module	Privilege Name	Privilege Description
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19		Modify Global Preference	Gives ability to modify Global preferences
20		Delete Global Preference	Gives ability to delete Global preferences
21	Settings	Modify Setting	Gives ability to modify an already existing setting(s)
22		Modify SMS Settings	Gives ability to modify an already existing SMS setting(s)
23		List Application Settings	Lists all the Application setting(s)
24		Modify Application Settings	Gives ability to modify an already existing Application setting(s)
25		Modify SMTP Setting	Gives ability to modify an already existing SMTP setting(s)
26	List Country/State/City	List Country	Gives ability to list country
27		List State	Gives ability to list states
28		List City	Gives ability to list cities
29	Configuration	Read Configuration	Gives ability to view configuration example systems, devices, statistics etc.
30		Delete Configuration	Gives ability to delete configuration example deleting systems, devices, statistics etc.
31		Create Configuration	Gives ability to create configuration example creating systems, devices, statistics etc.
32		Modify Configuration	Gives ability to modify configuration example editing systems, devices, statistics etc.
33		Export Configuration	Gives ability to export configuration example exporting systems.
34		Show Configuration	Displays configuration button in menu
35	Search	Delete Search Query	Gives ability to delete a saved search query
36		Create Search Query	Gives ability to create a saved search query
37		Download Search	Gives ability to download Search results
38		Update Search Query	Gives ability to update a saved search query
39		Access Search page and options	Gives ability to access Search page and Search options.
40	Logs	List Logs	Gives ability to list log files
41		Download Log files	Gives ability to download log files
42		Download Media Server Logs	Gives ability to download Media Server log files

Sr. No.	Module	Privilege Name	Privilege Description
43		Show Log Button	Gives ability to show log button in menu
44	About/Info	Show About info	Gives ability to show version information about the application
45	Global Setting	List Global Setting	Gives ability to show global application setting
46		Modify Global Setting	Gives ability to modify global setting
47	Export/Download	Export Data	Allow user to access 'Export Data' page to search and export the data
48		Export Long term Data	Gives ability to export/download Longterm Data as .png and .csv
49		Export Shift Statistics Data	Gives ability to export/download Shift Statistics Data as .png and .csv
50		Download Object Details	Gives ability to export Object Details data, metadata XML and images.
51		Download Timeline	Gives ability to download Object Details data, metadata XML and images from Timeline.
52		Download Current Result	Gives ability to download Object Details data, metadata XML and images from Current Results.
53	Reports	Report Operator	Provides an ability to login as Operator user in Metabase
54		Report Super Access	Provides an ability to login as Super user in Metabase
55		Report Admin	Provides an ability to login as an Admin user in Metabase
56	Email & Notifications	Read Notification logs	Provides ability to view Notification logs
57		Read Subscribe Notification	Provides ability to view subscribed Notifications
58		Read Notification	Provides ability to view Notifications
59		Delete Notification	Provides ability to delete Notifications
60		Create Notification	Provides ability to create new Notifications
61		Modify Notification	Provides ability to modify existing Notifications
62	System Status	Reset Status Data	Provides ability to reset System Status Data.
63	Access Read Rate	Access Read Rate for Charts	Gives ability to access read rates in the application

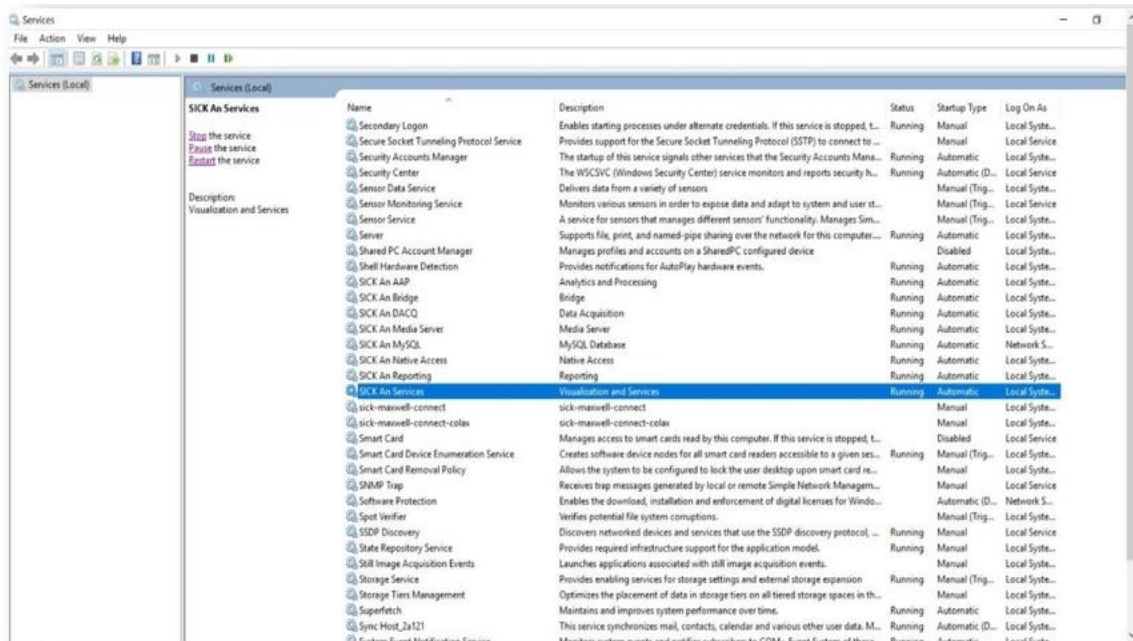
24 Appendix B. How to Restart Services

Navigate to windows services app by clicking on windows search icon and search for Services OR via Task Manager.



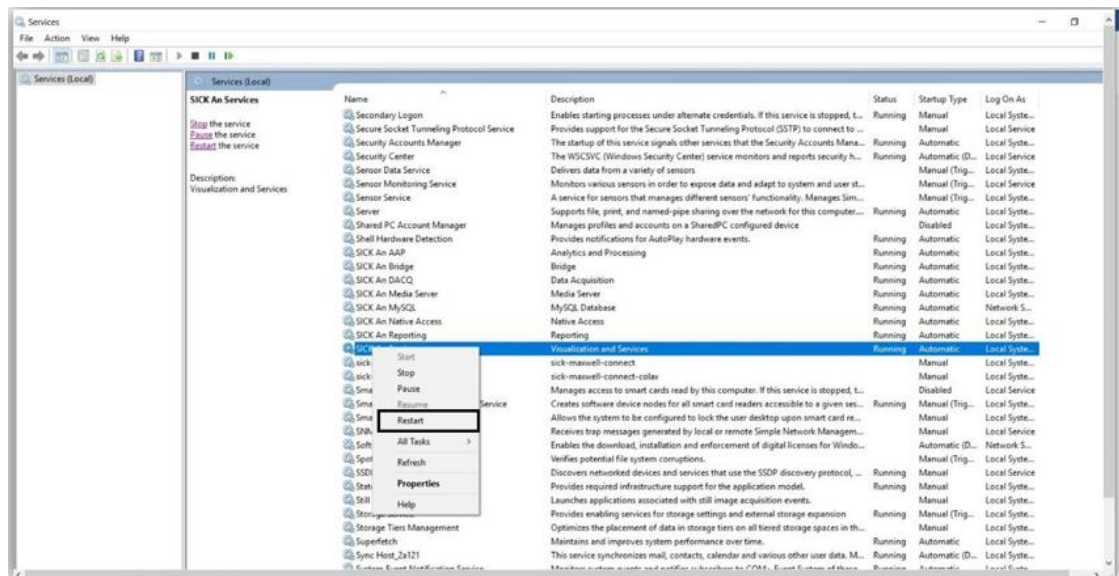
Appendix B 13: Windows Services

1. Click on services. This will open the windows services screen.
2. Locate SICK An Services.



Appendix B 14: Analytics Solutions Service

- Restart SICK Analytics Solutions windows Service by right clicking on SICK An Services and selecting restart option.



Appendix B 15: Restart Service

25 Appendix C: Mimicking RDT Behavior Using Configuration Properties

This appendix provides instructions to configure the system to emulate the behavior of the Remote Diagnostic Tool (RDT) by modifying configuration properties.

Understand System Status Logic

The **Health Status** and **Performance Status** are determined by **Heartbeat (HB)** messages from connected devices, such as controllers (e.g., SIM, MSC). These messages contain error codes that map to one of three visual states:

- **Green:** Normal operation or informational message
- **Yellow:** Warning
- **Red:** Error

By default, the system categorizes error IDs based on the SIM documentation. When **RDT Mode** is enabled, it overrides this categorization with simplified logic aligned with the Remote Diagnostic Tool (RDT).

RDT Mode Logic

When RDT Mode is enabled by setting `data.use.rdt.healthStatus=true`:

- Error IDs listed in `data.use.rdt.errorList` result in a **Red (Error)** state.
- Non-fatal errors not listed in `data.use.rdt.errorList` result in a **Green (Informational)** state.
- Fatal error codes (e.g., 9990) result in a **Red (Error)** state.
- No errors or informational messages result in a **Green (Informational)** state.

Note: In RDT Mode, the **Yellow (Warning)** state is not used, and non-listed errors are treated as **Green (Informational)**.

25.1 Instructions to Update Analytics to Mimic RDT System Status

Follow these steps to configure RDT Mode. Ensure you have administrative privileges, as they may be required.

Step 1: Stop Services

1. Press **Win + R**, type `services.msc`, and press **Enter**.
2. In the **Services** window, locate all services starting with **AAP**.
3. Right-click each service and select **Stop**.

Note: Administrative privileges may be required to stop these services.

Step 2: Replace the Processing JAR File

1. Navigate to:
C:\Program Files\Analytics Solutions
2. Rename the existing file:
Ida-analytics-processing.jar to Ida-analytics-processing-old.jar
3. Copy the updated Ida-analytics-processing.jar file to the same directory, ensuring it has the exact same name and is not blocked by the operating system.

Step 3: Modify the Configuration File

1. Navigate to:
C:\Program Files\Analytics Solutions\lda-properties
2. Open aap_application.properties in a text editor.
3. Add the following lines at the end of the file to enable RDT Mode and specify the error list:
4. # Enable RDT-like Health Status behavior
5. data.use.rdt.healthStatus=true
6. data.use.rdt.errorList=03000400,03000401,03000406,03000407,03001500,03001501,03001502,03001503,03000106,0300010a,0300010b,03000120,0300010c,0300010d,0300010e,0300010f,03000110,03000111,03000126,03000127,02000108,03000100,03000101,03000121,03001705,0300050b

If the file is locked:

1. Right-click aap_application.properties and select **Properties**.
2. Go to the **Security** tab.
3. Click **Edit**, select your user account, and grant **Read** and **Write** permissions.
4. Click **Apply**, then **OK**.
5. Ensure no other applications are accessing the file before editing.

Step 4: Restart Services

1. Return to the **Services** window (services.msc).
2. Right-click each **AAP** service and select **Start**.
3. Wait 2–5 minutes for the services to stabilize.

Step 5: Verify RDT Mode

1. Navigate to the **System Status** page.
2. Confirm the following behavior:
 - Errors listed in data.use.rdt.errorList display as **Red**.
 - Non-listed errors display as **Green**.
 - No **Yellow** statuses appear.

25.2 Disable RDT Mode

To revert to the default SIM-based categorization:

1. Open aap_application.properties in a text editor.
2. Set:
data.use.rdt.healthStatus=false
3. Save the file.
4. Restart all **AAP** services as described in Step 4.
5. Verify the system status reflects the default SIM-based categorization.