2025

User Manual

KR Logistics system

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Table of Contents

1. Introduction

1.1. Purpose of the document

The purpose of this document is to establish the implementation principles for the KR Logistics System. It serves as a reference to ensure all relevant parties have a clear understanding of the user flow, principles and standards related to the system.

1.2. Contact information

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2. General

2.1. Introduction

This chapter provides a description of the system, system setup and tips on how to adapt the system to the big screens.

2.2. System setup

KR Logistics System (KRL) consists of four parts/systems that are connected via KRL module and the database:

- Driver log in system
- Overview system
- Operator system
- API

2.2.1. Quick setup steps

1. Install the **KR Logistics module** in Ignition.
2. Configure the **Database Connection Name** in the module settings.
3. Set the **User Source Name** in the module settings (if not using API keys)
4. **Restart the module** to apply changes.
5. **Add the license** to the Ignition platform.

2.2.2. Setup

The KR Logistics module is installed in Ignition. After installation, several settings must be configured for the system to function properly. These settings are in the gateway's configuration section, under a new menu item called **"KR Automasjon"** with a sub-item named **"Logistics"**.

Installing the Module

The module is installed via the Config section of the Ignition gateway.

Setting up the database

Supported databases include MariaDB, PostgreSQL, and Microsoft SQL Server. While it is technically possible to use the same database as Ignition, it is strongly recommended to create a separate database for this module. As with any Ignition-compatible database, the KR Logistics database must be created manually. The associated user account must have sufficient privileges to create schemas and tables. SQL-commands for creating the database with the correct collation follows:

Database	Code
MARIADB:	CREATE DATABASE KRLogistics CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
POSTGRESQL:	CREATE DATABASE KRLogistics ENCODING = 'UTF8' LC_COLLATE = 'C.UTF-8' LC_CTYPE = 'C.UTF-8' TEMPLATE = template0;
MSSQL:	CREATE DATABASE KRLogistics COLLATE Latin1_General_100_CI_AS_SC_UTF8;

The connection is configured via **Config → Databases → Connections**. Once the connection is established and verified, enter the connection name in the field Database Connection Name on the module's configuration page.

On startup, the module will attempt to connect to the specified database. If successful, it will automatically execute migration scripts to create the necessary tables.

User authentication

The system may be set up to use a static token or dynamic user roles. You either specify the **User Source Name** or the **User Api Key**.

Api Key

If the field **User Source Name** is left blank, the **User Api Key** will be used for authentication. A generic user will be used, meaning there are no user logins for the operators.

User Source Name

If the **User Source Name** is a valid user source, the module will attempt to add four predefined roles to the source:

- KR Logistics Admins (Full access)
- KR Logistics Users (Read / write except settings)
- KR Logistics Viewers (Read)
- KR Logistics Drivers (Read / write shipments)

These roles must be used when creating users.

Driver registration

The Ignition Project consists of a of a self-registration view for drivers. To post data to the API from this screen, the **Driver Api Key** specified in the configuration pages should be used.

For user logins, an JWT-token is acquired using the POST /auth-endpoint. This will authenticate the user against Ignition. There is a custom method of creating JWT-tokens inside a Perspective project:

```
from java.util import Arrays

username = self.session.props.auth.user.userName
firstname = self.session.props.auth.user.firstName
lastname = self.session.props.auth.user.lastName
roles = list(self.session.props.auth.user.roles)

token = system.krl.generateJwt(username, firstname, lastname, roles)
```

The generateJwt-method will, when run in the designer script console, return a dummy user with the Viewer-role. This is because the correct JWT-token must be created on the gateway, and the designer script console runs in the designer-scope, not the gateway-scope.

Restarting the module

Navigate to the module installation page and click the “Restart” button for the KR Logistics module.

Once both the Database Connection Name and User Source Name are correctly configured, the module will complete its setup.

License

Licenses are issued by KR Automasjon AS. Once you receive a license key, enter it under the Licensing section of the Ignition gateway. The module will work for two hours without a license, given that the Ignition platform license is valid. When the two-hour period expires, the module must be restarted for an additional two-hour trial period. After trial expiry all attempts to contact the API will result in an HTTP/503 (Service

Unavailable) error. The license state is cached for 60 seconds at a time, so if the license state has been updated, please allow at least 60 seconds to pass.

API

The module has an API that can be used to interact with the system. The documentation for this API is found on the gateway the module is installed on:

http(s)://[gateway address]/res/kra_logistics/api.html

2.3. Configurable items

Field	Description	Default value
Database Connection Name	The name of the database connection, found in the name column of Database Connections. This setting is required.	blank
User Source Name	The name of the user source the, as found in the name column of Users → Roles.	blank
Install demo data	If set to true, the module will add some demo records to the database on startup.	false
Modem Type	Currently only support Teltonika RUTX50.	RUTX50
Modem Username	If the modem requires authentication, this is the username.	blank
Modem Password	If the modem requires authentication, this is the password.	blank
SMS-modem IP	The IPaddress of the modem.	blank
SMS-modem port	The port used on the SMS-modem.	blank
Ignore SSL Warnings	If the modem does not have a valid SSL certificate, the gateway will not be able to send messages unless this is checked.	false
Anonymization age (days)	The minimum age (since actual time of arrival) of shipments to be anonymized.	21
Verbose API Errors	When set to true, the API will provide a detailed stack trace if the request fails.	false

Driver Api Key	A key that is supposed to be used on the Driver Registration. This maps to the internal user "Driver". The default value is randomly generated.	32-bit key
User Api Key	A user token to be used if not using user authentication. This maps to the internal user “User”. The default value is randomly generated.	32-bit key
Log shipmentcalls	Primarily used for debugging. Logs all calls to the endpoint for retrieving shipments.	false

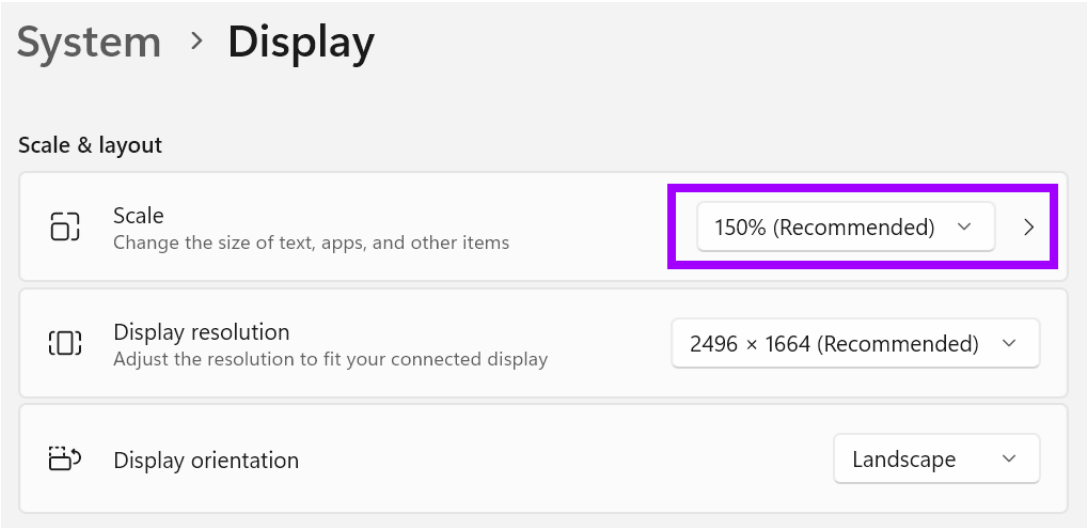
2.4. Adapting to the big screens

If system is wished to be displayed on the big screens, there are several ways to achieve a proper sizing of the elements.

1. **Use browser zoom.**
   Browser zoom is usually accessible when a user holds “Ctrl” key pressed and scrolls the mouse wheel. This will scale the window where system is open. All the buttons and views will resize according to the zoom set. Zoom will be reset back to 100% if the window is closed and open again.

   Note: This method works best if user needs to use other applications or browser windows together with the system, as only one browser window will be resized.

2. **Use a system zoom.**
   If system is wished to be constantly displayed on a big screen, and other apps are not supposed to be used (e.g. on a TV screen), it will be beneficial to use a system scaling in order to adjust the sizing of the elements.
   In Windows system it can be found under **Settings** → **System** → **Display**.



Note: System scaling is located differently in different systems. And unfortunately we can't provide a clear guidance for all of them. In addition, this method will affect **all the applications** on the machine. Therefore we recommend using it when the device is intended for the **system display only** or if applied scaling doesn't interfere with the display of other applications.

3. Driver log in system

3.1. Introduction

In this section, you will find a description and user flow of the Driver log in system. We will walk through the entire driver registration process step by step.

3.2. System overview

The driver login system starts with a screen that allows the driver to select a preferred language. The chosen language will be applied throughout the login process. To select a language, user needs to click on the white area containing the flag and language name.

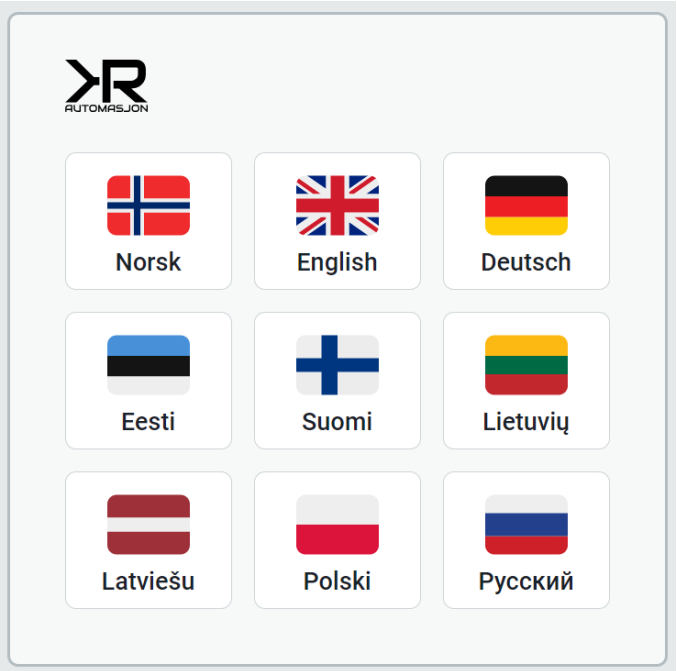


Figure 3.1 Driver log in start view.

After selecting the language, the driver will be redirected to a screen where they need to enter their phone number and the vehicle's license plate number.

If the wrong language was selected, the user can return to the previous page by clicking the "Back" button located in the top right corner of the card.

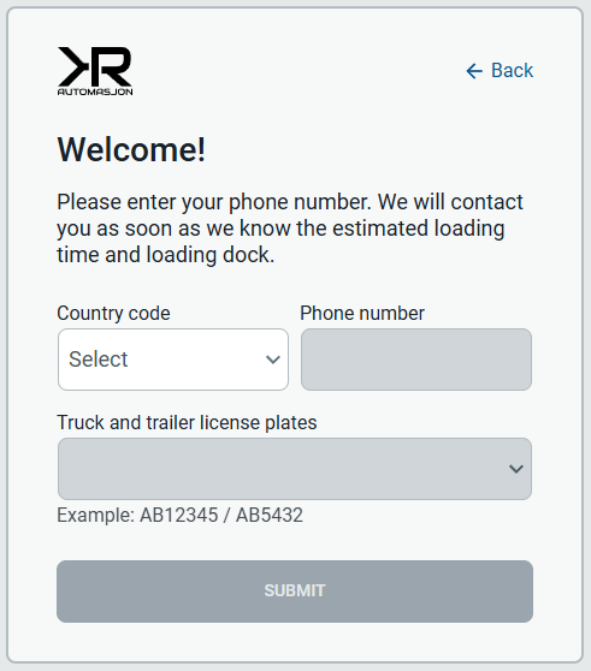


Figure 3.2 Driver information input screen.

First, the driver needs to enter the correct country code and phone number. This information will be used to send important SMS notifications regarding the loading process. The phone number field automatically validates the number based on the selected country code. Further actions are unavailable until the correct information is provided.

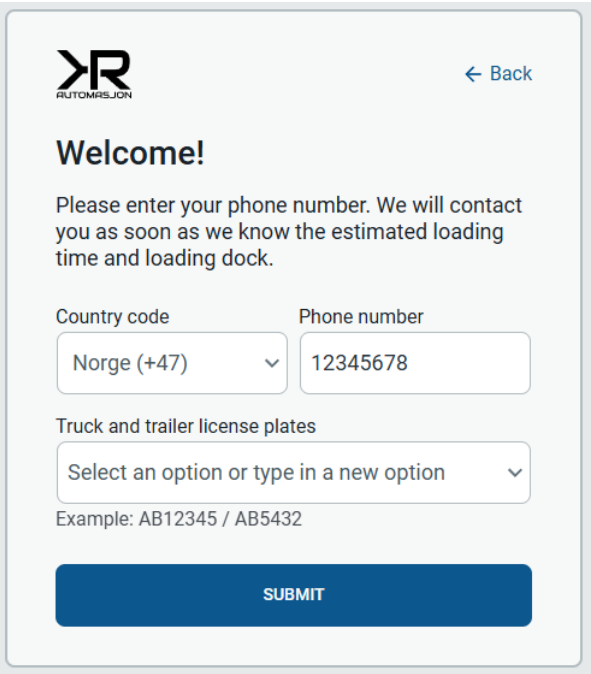


Figure 3.3 Driver information input screen with the complete phone number fields.

Once the phone number is entered, the “Truck and trailer license plates” field will become available. Here, the user can select an existing truck and trailer number (if already registered in the system) or create a new entry.

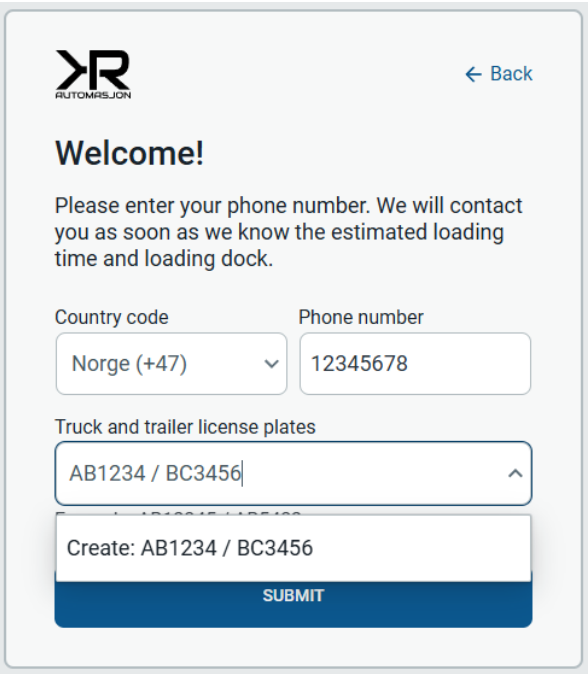


Figure 3.4 Driver information input screen. The phone number is not in the system, and the driver needs to create a new entry for the "Truck and trailer license plates" field.

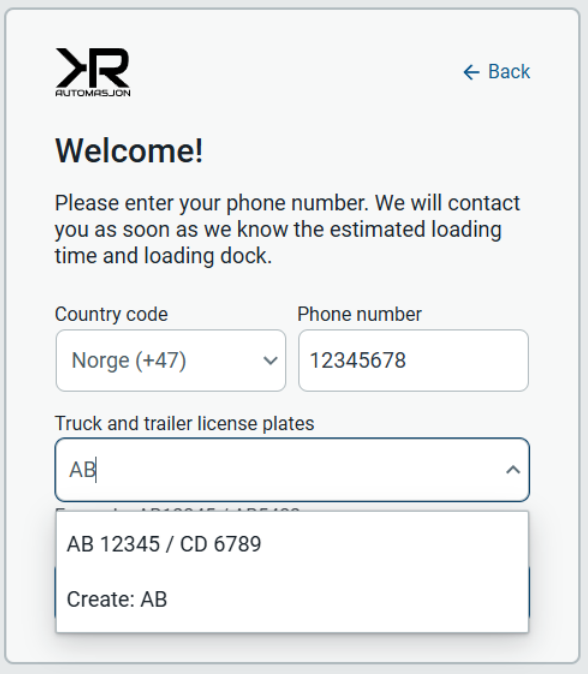


Figure 3.5 Driver information input screen. The phone number exists in the system, and the driver can select the correct license plate number or create a new one.

To create a new entry, the driver should click on the “Truck and Trailer License Plates” field and start typing the correct number. Then, select the dropdown option “Create new: ***”.

Once all the required information is filled in, the “Submit” button will become active, allowing the driver to send the information to the operator.

After submitting the information, the driver will see the final screen with instructions on what to do next. The driver can close the screen by clicking the “Close” button, which will reset the system. By default, the system will return to the first screen after 15 seconds if the “Close” button is not pressed. This duration can be adjusted upon request.

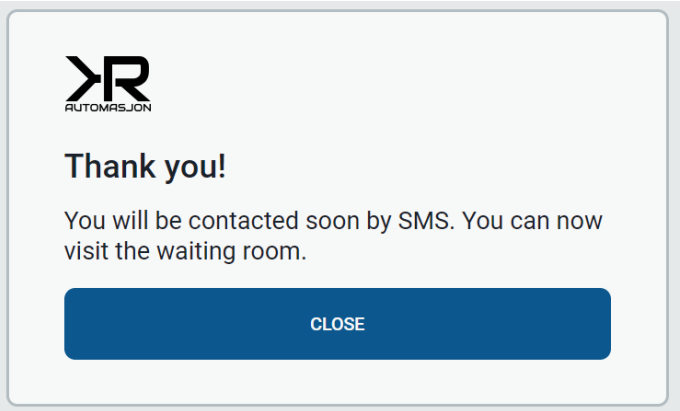


Figure 3.6 The last screen in Driver log in system provides further instructions for the driver.

4. Overview system

4.1. Introduction

In this section, you will find a description of the Overview system.

4.2. System overview

The Overview system is used to display and monitor the loading process in real time. Drivers can follow their truck number to view the estimated loading time, cargo details, assigned loading dock, and the current loading status.

The estimated loading time is assigned by the operator. The cargo and loading dock are also assigned by the operator but are pre-defined in each system configuration to match the specific needs of the company. Each load can have one of the following six statuses:

- Not Arrived
- Arrived
- Loading
- Loaded
- Departed
- Archived

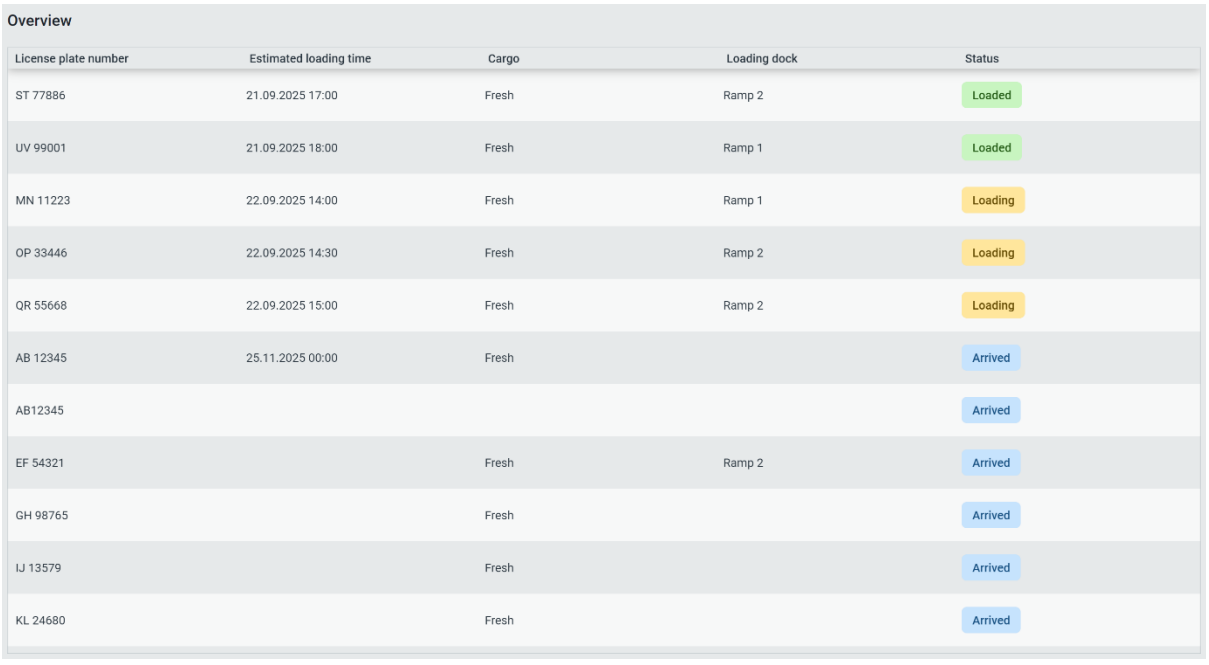


Figure 4.1 An illustration of the Overview system.

5. Operator system

5.1. Introduction

In this section, you can find a description of the pages and their setup. We will talk in detail about the functionality of the following pages:

5.2. Menu

An illustration of the menu setup is shown below. The company's logo is placed at the top of the menu. It is clickable and can be used to navigate to the system's home page.

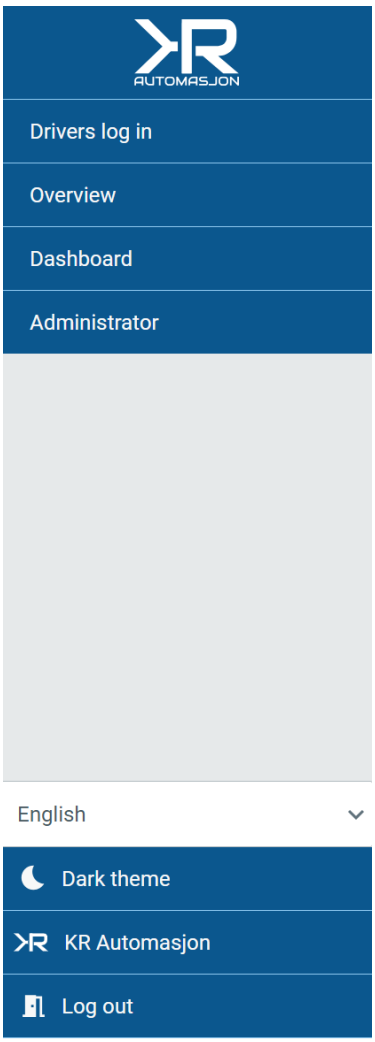


Figure 5.1 An illustration of the menu.

Navigation within the different sections of the system is positioned below the logo. It consists of:

- A “Driver log in” page, that allows drivers to register their arrival,
- An "Overview" page with the Overview system,
- A "Dashboard" page that provides the loading statistics,
- An "Administrator" page, where users can create and edit driver entries.

Additional functions are located at the bottom of the menu. From there, users can log out of the system, change the theme and the language of the system.

5.3. Dashboard

On the Dashboard page, operators can view monthly statistics of the loading process. The cards at the top of the page display key metrics, including:

- Active loads,
- Loads this month,
- Average loads per day for the current month,
- Total number of loads for the last 12 months.

All these parameters are compared against the average performance of the previous 12 months. A graph below the cards shows the number of loads per month over the last 12 months.

This statistical overview provides valuable insight into the company’s performance and can help optimize not only the loading department but also overall management strategies.

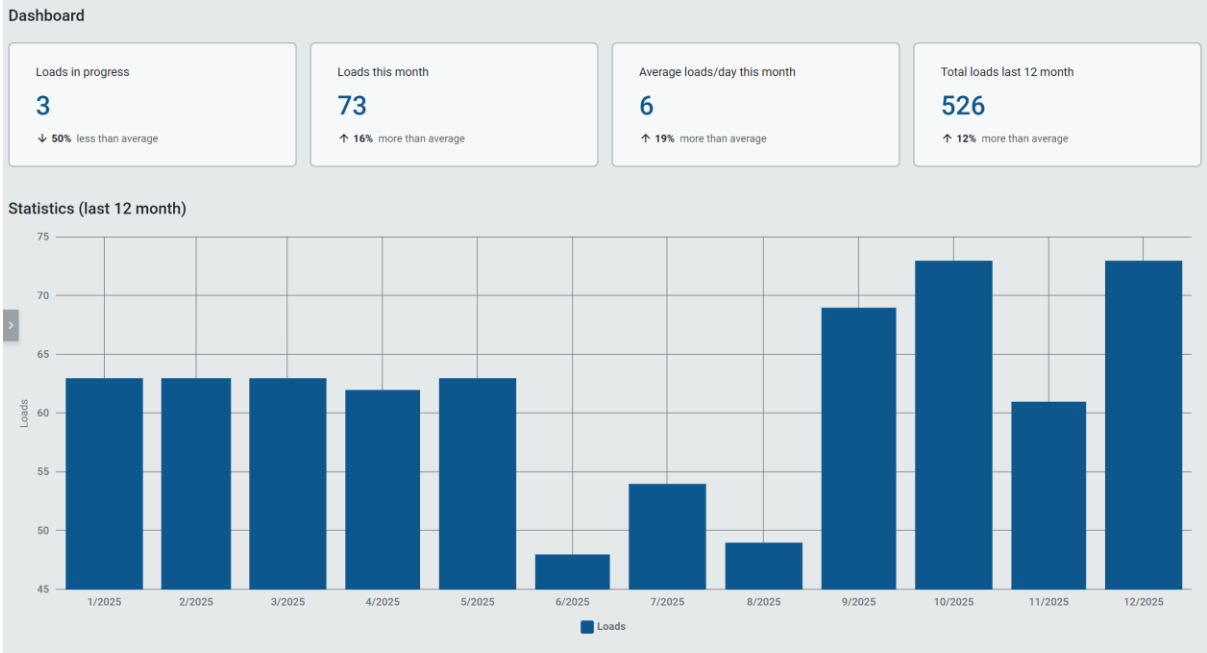


Figure 5.2 An illustration of the Dashboard page.

5.4. Administrator

On the Administrator page operators can:

- Create new entries for the drivers (planned or actual arrivals),
- Edit existing entries,
- Send messages to the drivers,
- Delete entries,
- Filter displayed entries by status,
- Merge selected entries,
- Archive entries.

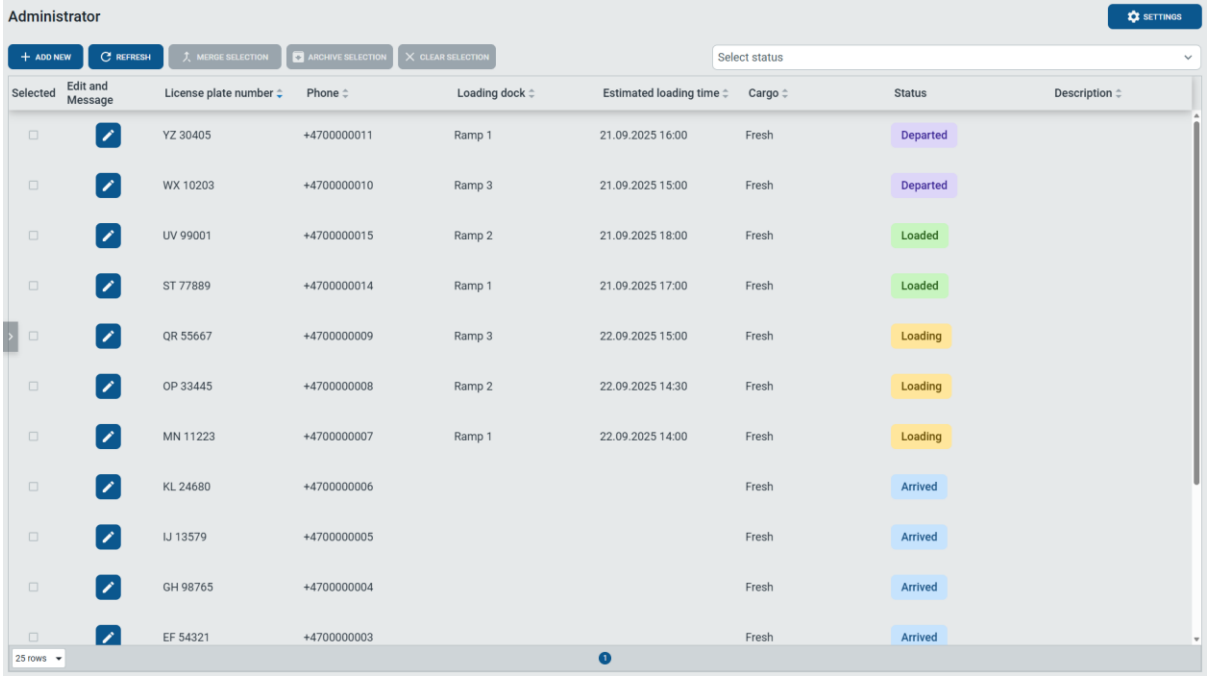


Figure 5.3 An illustration of the Administrator page.

5.4.1. New entry

To create a new entry, the operator needs to click the “Add new” button. This action opens a popup window where the operator can fill in the following information:

- License plate number of the vehicle,
- Driver information,
- Transporter,
- Loading dock,
- Cargo type,
- Status of the loading,
- Planned and actual times,
- Description.

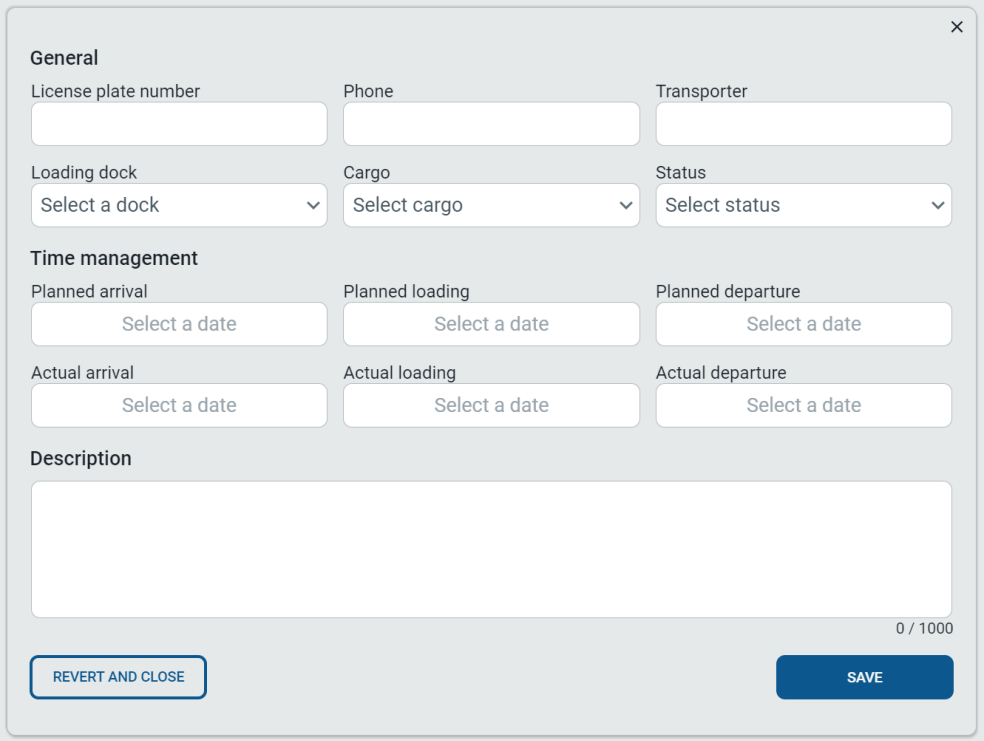


Figure 5.4 An "Add new" popup.

5.4.2. Edit entry

If the operator wants to edit a specific entry, send a message to the driver, or view the change history, one needs to click the “Edit” button in the “Edit & Message” column. This will open a popup window with three sections:

- Information
- Messaging
- Log

In the Information section, the operator can modify general details, planned and actual times, and the description of the entry.

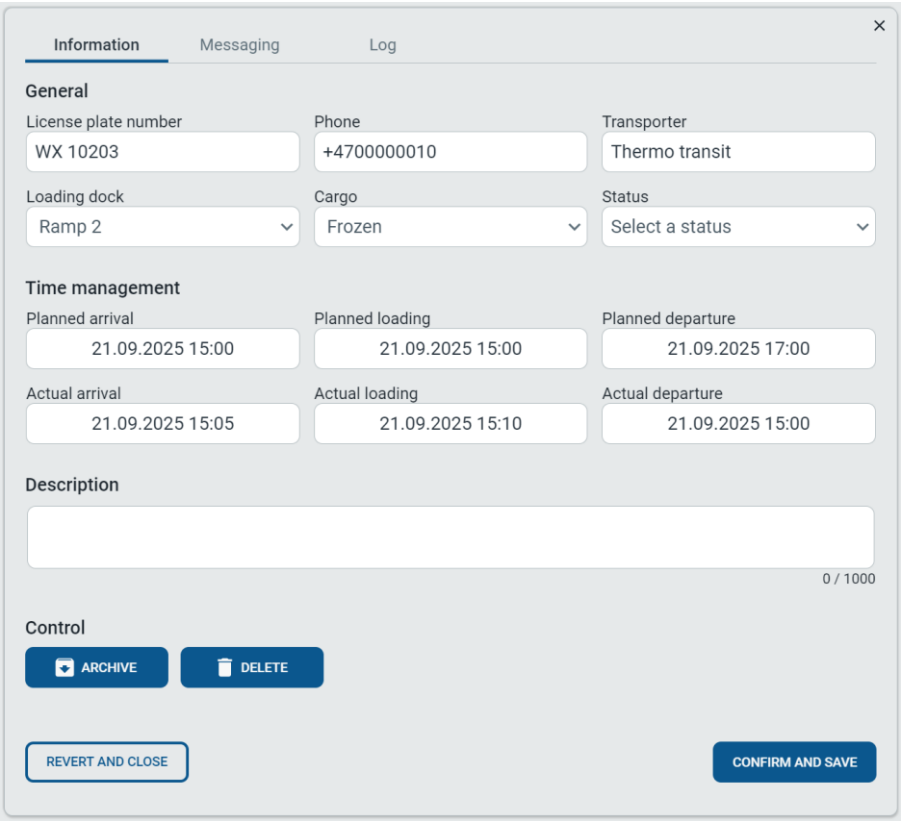


Figure 5.5 An "Edit & Message" popup. Information section.

In the Messaging section, the operator can send a new message in English or Norwegian using pre-defined templates, or compose a custom message. To send a custom message, the operator needs to select “Custom message” and type the message into the text field. Custom messages cannot be translated. In order to be able to send a message, the phone field must be filled and the phone number must be valid.

There are several default messages available depending on the status of the process:

1. **“Your load is estimated to be ready for loading at ***”.**
   This message becomes available when **Estimated loading time** is set and the status changed to **“Arrived”**.
2. **“Your load is ready to be loaded, please come to ***”.**
   This message becomes available when the **Loading dock** is assigned and the status changed to **“Arrived”**.
3. **“The loading of your truck is complete, please come to the office for the papers”.**
   This message becomes available when the status is changed to **“Loaded”**.

After the SMS is sent, a pop-up message indicating “Success” or “Error” will appear. The popup will close automatically after 5 seconds, or you can manually close it by clicking the close icon.

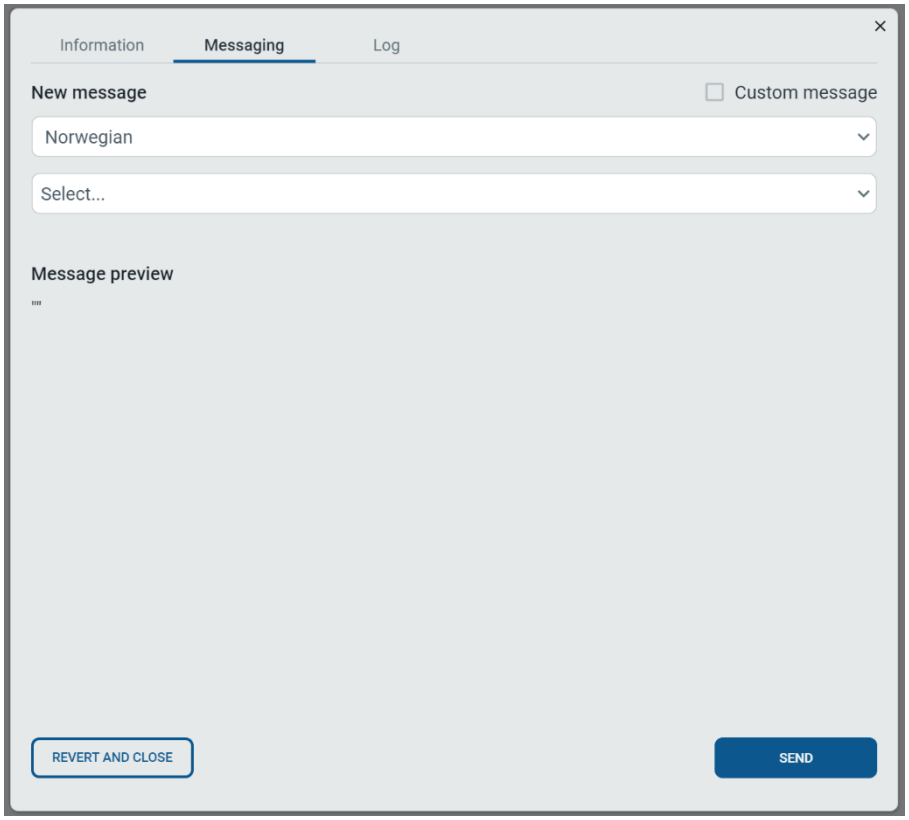


Figure 5.6 An "Edit & Message" popup. Messaging section.

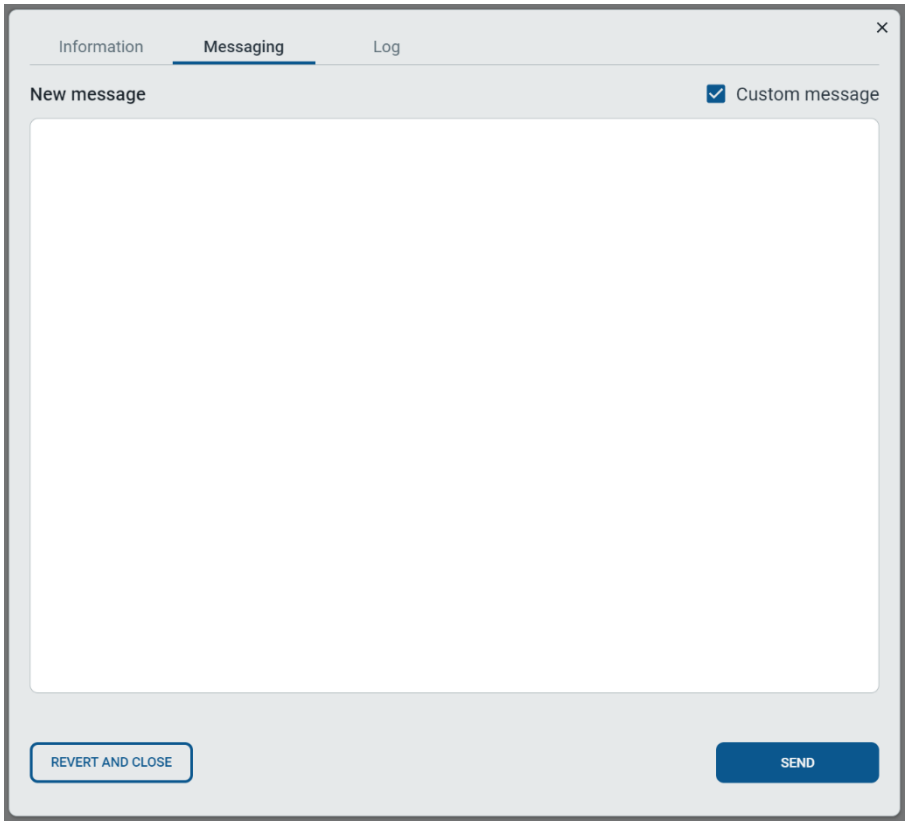


Figure 5.7 An "Edit & Message" popup. Messaging section with the “Custom message” selected.

In the Log section, the operator can view the changes that were made to the entry and messages that were sent to the driver.

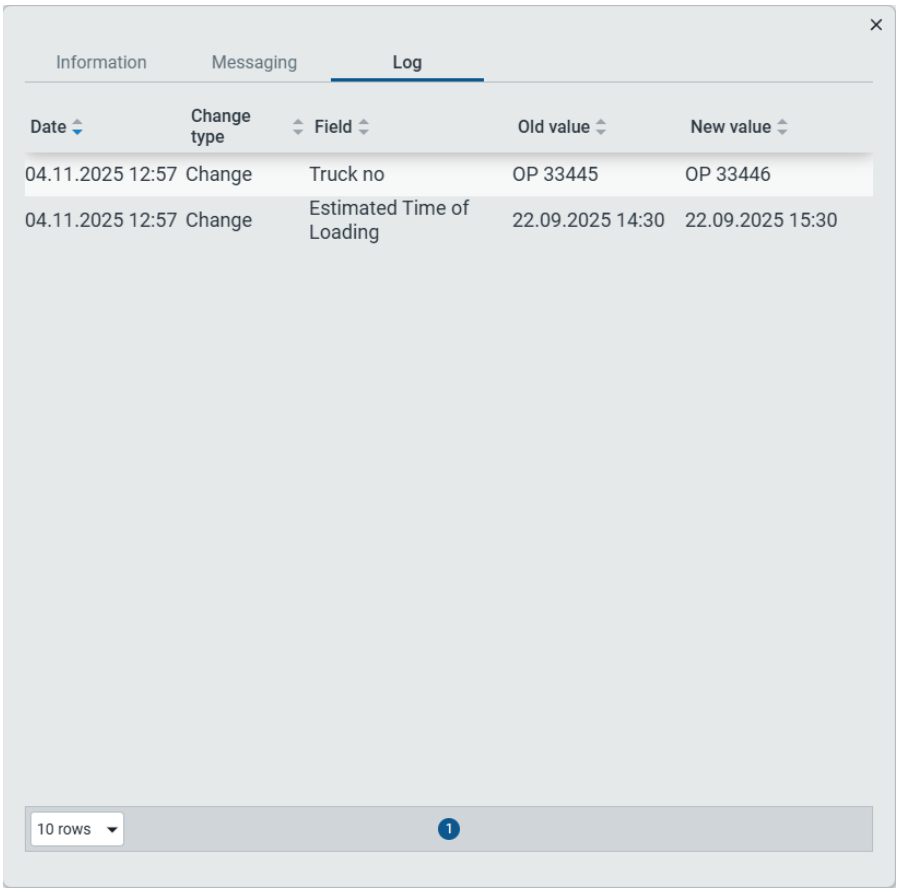


Figure 5.8 An "Edit & Message" popup. Log section.

5.4.3. Filter by status, merge, archive

The “Select status” dropdown allows to filter the table by status. User can select multiple statuses to be displayed.

Selecting an entry requires two clicks on the corresponding checkbox: the first activates the cell, and the second selects the checkbox. The “Clear selection” option allows the user to deselect all entries.

If the user selects one or more entries with the “Departed” status, those entries can be archived. If the user selects entries with different statuses, and clicks “Archive selection”, only entries with the “Departed” status will be archived.

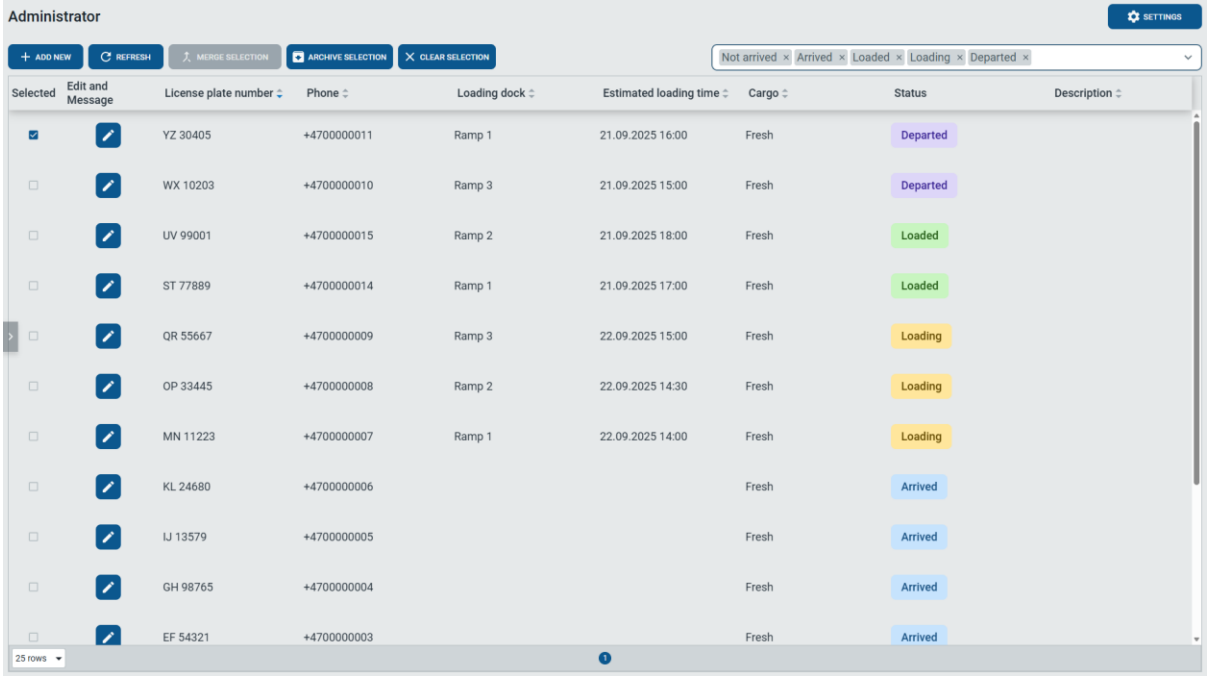


Figure 5.9 An illustration of the Administrator page with the one entry selected.

If user selects two or more entries with either “Not arrived” or “Arrived” statuses, they can be merged together. Clicking on the “Merge selection” button will open a merge popup window, where user can retain the information from the entries to be sent to the new entry that will be created after merging.

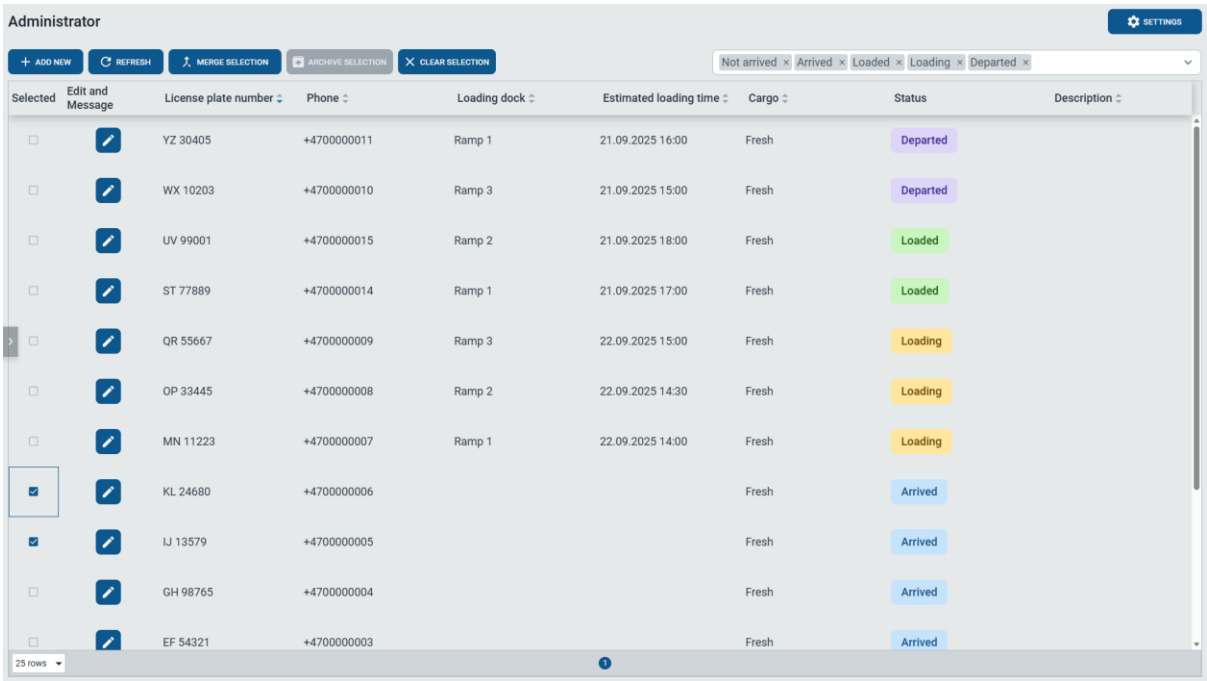


Figure 5.10 An illustration of the Administrator page with the two entries selected.

Figure 5.11 A merge popup.

5.4.4. Settings

The list of available loading docks and cargo types can be maintained by clicking on the settings-button in the top right corner.

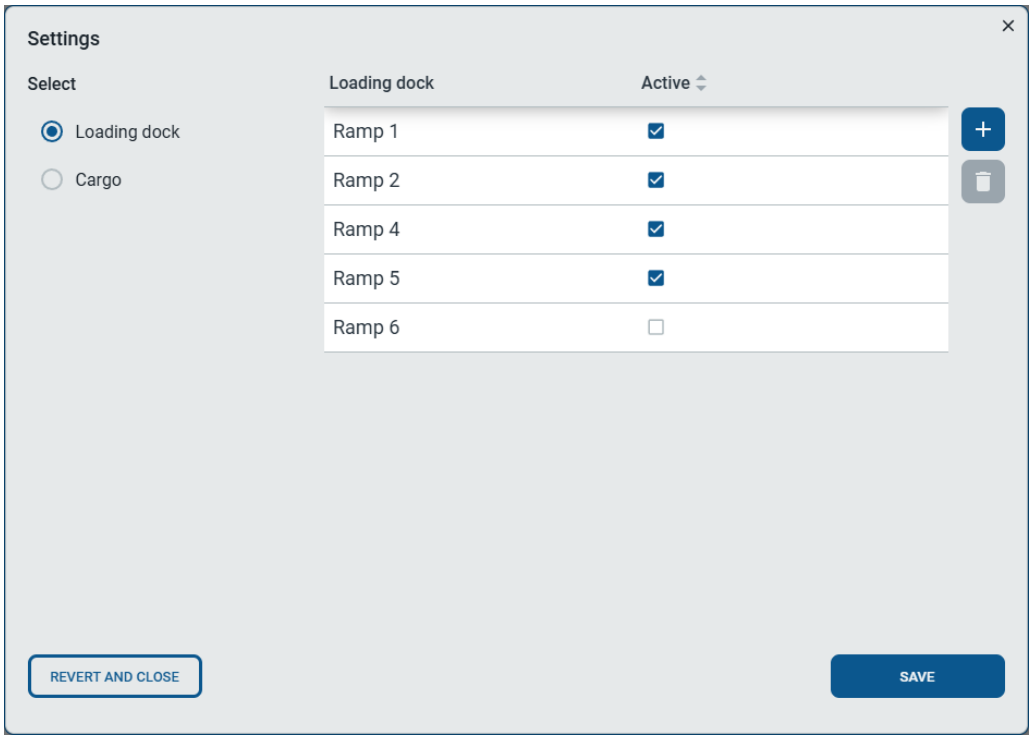


Figure 5.12 Maintaining loading docks and cargo type.

The operations are the same for both loading docks and cargo: The user adds items by clicking on the plus-button, deactivates them by removing the check mark, and deletes items by clicking on them and pressing the trash-can button.

6. Conclusion

This user manual provides an overview of the KR Logistics System, describing the system setup, user flow and available features.

In the event of changes to the system's functionality or design, this document shall be updated accordingly. The updated version will be made available together with future system revisions.

7. Version History

All modifications and updates to this document shall be recorded in the table below.

Version	Date	Description	Responsible
1.0	17.11.2025	First edition	MD
1.1	16.12.2025	Updated some images and installation instr.	SS